

# Rotating tools

MILLING | DRILLING | BORING | TOOLING SYSTEMS

# 2012



### How to select tool holding

#### 1 Select tool assembly method

- For modular or solid, from the table of content on page G6.

#### 2 Select an adaptor style

- Use the programme overview for the system to choose an adaptor based on the type of machining and machine tool application.
- Coromant Capto® rotating, page G6

#### 3 Select a coupling size

- Turn to the ordering page and
- Select the right coupling size
  - Select adaptor for assembly

#### 4 Select basic holder

- Use the programme overview to choose a holder based on machine type.
- Select the right coupling type and taper size.

#### 5 Add extensions if necessary when using Coromant Capto®

- Add extensions where needed to complete gauge length requirements. Use the programme overview to find suitable extension.



For more technical information, see our Metalcutting Technical guide



#### Symbols for page references:



How to choose tool, overview



Tool holding Systems, overview



Spare parts/accessories



Conversion table, formulas and definitions

# TOOLING SYSTEMS

## Tooling guide

Machining centres

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## Products

### For machining centres - rotating tools

#### Modular tools - Coromant Capto®

Tool holder overview

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Extension/reduction adaptors

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Tool adaptors

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#### Solid tools

Solid holding tools - Overview

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HSK solid holding tools - Overview

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#### Hydro-Grip® high precision chuck

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Modular tools - Coromant Capto®

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Coromant solid holding tools

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HSK solid holding tools

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#### Holders for exchangeable head system

Coromant Capto adaptor

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Solid holder

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HSK solid holder

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Bridge port holder

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#### Tapping holders

Overview

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SynchroFlex® ER tapping chuck

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Quick change tapping chuck

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Floating rubber collet chuck

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Tool holders for CoroMill modular tools with threaded coupling

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## Spare parts and accessories

G126

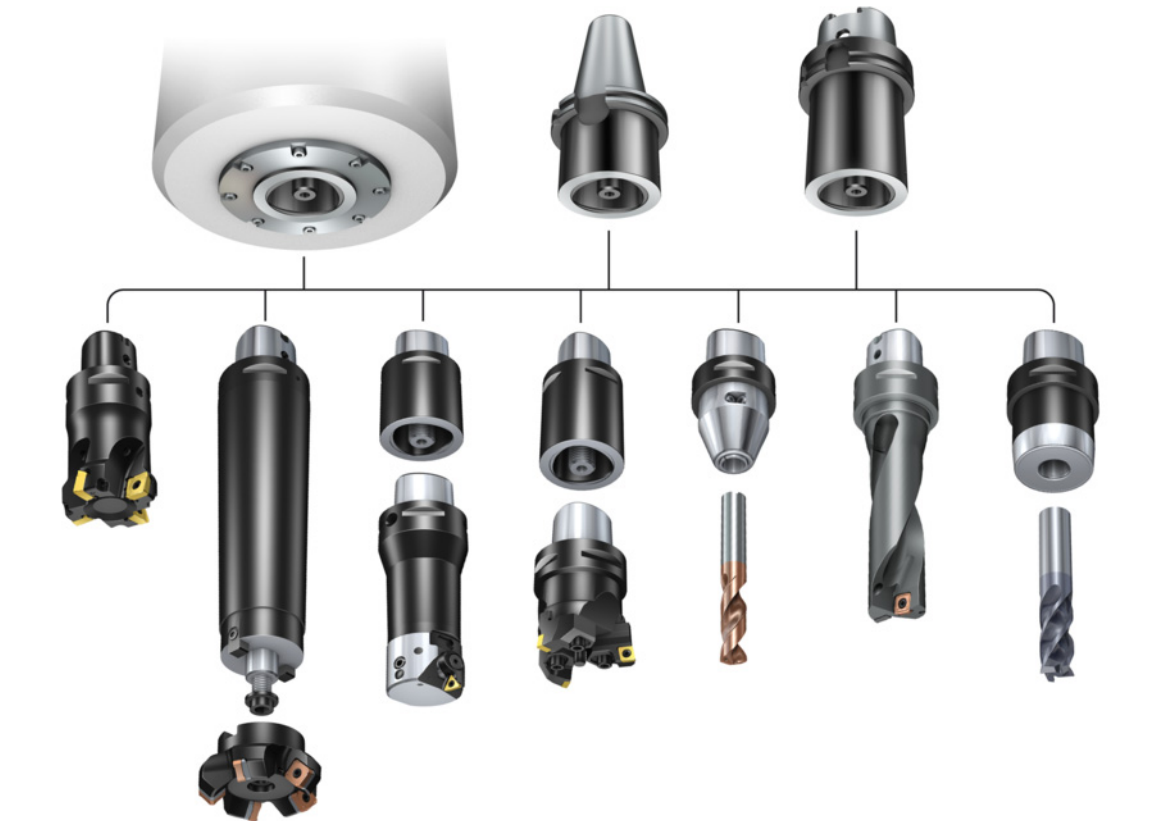
### For turning centres - non rotating tools

See main catalogue for turning tools.

# Coromant Capto®

## Tooling system

Machine tool interface and true modular tooling system



### Coromant Capto® - the coupling

Provides a unique combination of properties:

- high torque transmission
- high bending strength
- balanced and concentric
- self centering
- high basic stability and accuracy
- flexibility with extensive modularity
- quick-change and automated tool change
- through-tool delivery of coolant, from machine to cutting edge



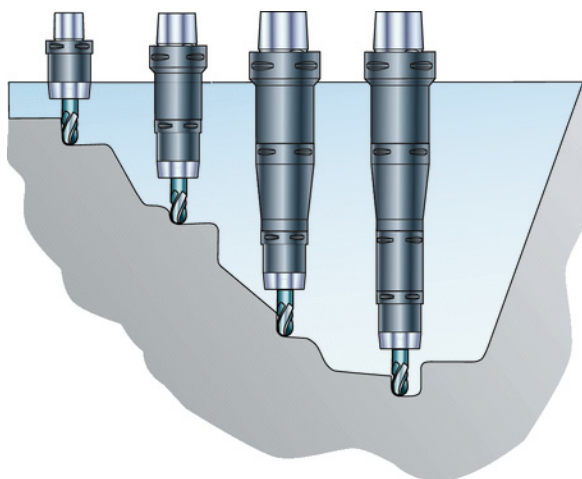
Fulfills the needs of a tooling system in all machine types:

- lathes and turning centres - quick-change, modular tooling and high pressure coolant delivery.
- multi-task machines and machining centres - rotating spindle interface and modular tooling.









## The right combination is the optimum solution




### Coromant Capto® modular holding tools



- When changing production there is a demand for flexibility from the tool holding system, as different component sizes often lead to varying gauge lengths. Coromant Capto allows the correct length of tool to be built, in order to maintain maximum performance.
- When tooling is required for a variety of machines with different taper size or designs.
- When component complexity demands a high number of special tools.
- Coromant Capto offers significant reductions in tool inventory and makes it possible to have only one standard system of modular tools for a variety of operations on lathes and machining centres.



Basic holders


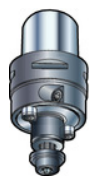














|   |   |   |   |   |  |   |   |
|---|---|---|---|---|--|---|---|
|  |  |  |  |  |  |  |  |
| Cat V-Flange  | Cat V-Flange<br>DIN 69871<br>Form B   | <b>BIG-PLUS</b><br>Cat V-Flange<br>90° rotated                                    | ISO 7388/1  | <b>BIG-PLUS</b><br>ISO 7388/1   | DIN 69871<br>Form B  | MAS BT  | <b>BIG-PLUS</b><br>MAS BT<br>90° rotated  |
| <b>Cx-A390.45</b>   | <b>Cx-A390.455</b>  | <b>Cx-A390.545/<br/>546/547</b>   | <b>Cx- 390.140</b>  | <b>Cx-390.540</b>   | <b>Cx-390.272</b>  | <b>Cx-390.55/58</b>   | <b>Cx-390.555/558/<br/>562/605</b>  |
| Page G19  | G20   | G21   | G8  | G10   | G11  | G12   | G13   |





| Integrated Coromant Capto® tools  |   |   |
|---|---|---|
|  |  |  |
| Milling<br>Chapter D  | Drilling<br>Chapter E   | Boring<br>Chapter F   |







| Extension/reduction adaptors  |   |
|---|---|
|  |  |
| <b>Cx-391.01</b>  | <b>Cx-391.02</b>  |
| Page G26  | G27   |



Coromant capto adaptors for exchangeable - head milling system, see page G97.

Tool holding for turning and multi-task machines, see main catalogue for turning tools.














|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |  |  |
| Face mill adaptor   | Hydro-Grip face mill adaptor  | <b>Silent Tools®</b><br>Dampened milling adaptor                                    | Side and face mill adaptor  | Exchangeable head system EH for CoroMill® 316                                       | Hydro-Grip® slender/pencil/ Heavy Duty  | Shrink fit adaptor  | Collet chuck adaptor  | Weldon shank adaptor  |
| <b>Cx391.05C/<br/>Cx-A391.05C</b>   | <b>Cx-391.05CG</b>  | <b>Cx391.05CD/<br/>Cx-A391.05CD</b>   | <b>Cx-391.10/Cx-A391.10</b>   | <b>Cx-391.EH</b>  | <b>Cx-391.CGB/<br/>CGC/CGD/<br/>CGA</b>   | <b>Cx-391.19</b>  | <b>Cx-391.14</b>  | <b>Cx-391.20<br/>Cx-A391.20</b>   |
| Page G29  | G87   | G33   | G35   | G99   | G86   | G38   | G37   | G40   |
|  |   |  |   |  |  |  |  |  |

|   |   |   |   |
|---|---|---|---|
|  |  |  |  |
| MAS BT<br>Form B  | HSK 50,63,100 &<br>125-A/C<br>HSK 80-F  | DIN 2080<br>NMTB<br>Form B  | Camshaft<br>DIN 2079  |
| <b>Cx-390.369</b>   | <b>Cx-390.410/ 419/<br/>612</b>   | <b>Cx- 390.00</b><br><b>Cx-A390.00</b>  | <b>Cx-390.34705</b>   |
| Page G15  | G16   | G23   | G24   |

| Basic holders Front clamp  |   |   |
|--|---|---|
|  |  |  |
| Cat V-Flange   | ISO 7388/1  | MAS BT  |
| <b>Cx-A390.4504</b>  | <b>Cx-390.14004</b>   | <b>Cx-390.5504 / .5804</b>  |
| Page G20   | G9  | G12   |
|  |  |  |
| NMTB<br>DIN 2080   | DIN 2079  | Blank adaptor   |
| <b>Cx-390.0004</b><br><b>Cx-A390.0004</b>  | <b>Cx-390.34704</b>   | <b>Cx-391.50</b>  |
| Page G23   | G24   | G47   |

| Extension/reduction adaptors  |   |
|---|---|
| Front clamp   |   |
|  |  |
| <b>Cx-391.04</b>  | <b>Cx-391.0204</b>  |
| Page G28  | G28   |

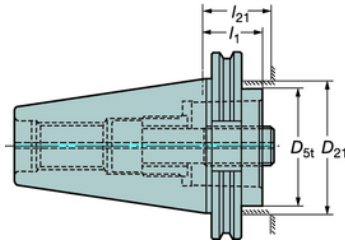
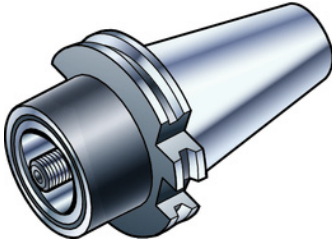


|   |   |   |   |   |  |   |   |   |
|---|---|---|---|---|--|---|---|---|
|  |  |  |  |  |  |  |  |  |
| Whistle Notch<br>shank adaptor  | Weldon / Drill<br>shank / ISO<br>9766   | Whistle Notch<br>drill adaptor  | Drill adaptor<br>ISO 9766   | Adjustable drill<br>adaptor   | Drill chuck  | SynchroFlex®<br>ER tapping<br>chuck   | Quick change<br>tapping chuck   | Floating rubber<br>collet chuck   |
| <b>Cx-391.21</b>  | <b>Cx-391.23</b>  | <b>Cx-391.25</b>  | <b>Cx-391.27</b>  | <b>Cx-391.277</b>   | <b>Cx-391.31</b>   | <b>Cx-391.62/63</b>   | <b>Cx-391.60/.61</b>  | <b>Cx-391.60B</b>   |
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|  |  |  |  |  |   |  |  |  |

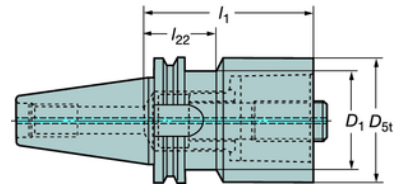
## Basic holder

ISO 7388/1 (DIN 69871-A)

390.140



For light machining only.



C6-390.140-40 085

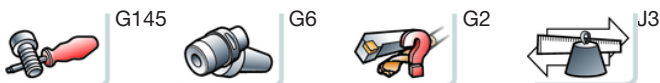
$l_1$  = programming length

### Metric thread

| Taper | Coupling size | Ordering code      | Coolant <sup>1)</sup> | Dimensions, mm |       |              |       |              |          |          |                              | Balanced by design |
|-------|---------------|--------------------|-----------------------|----------------|-------|--------------|-------|--------------|----------|----------|------------------------------|--------------------|
|       |               |                    |                       | $D_{5t}$       | $D_1$ | $D_{21}$ max | $l_1$ | $l_{21}$ min | $l_{22}$ | $D_{th}$ | $\frac{\Delta}{\mu\text{m}}$ |                    |
| 30    | C3            | C3-390.140-30 030  | 1                     | 32             |       | 45           | 30    | 35           |          | 12       | 0.5                          |                    |
| 30    |               | C3-390.140-30 060  | 1                     | 32             |       | 45           | 60    | 35           |          | 12       | 0.7                          |                    |
| 40    |               | C3-390.140-40 030  | 1                     | 32             |       | 50           | 30    | 35           |          | 16       | 0.8                          | ⊙                  |
| 40    |               | C3-390.140-40 060  | 1                     | 32             |       | 50           | 60    | 35           |          | 16       | 1.2                          | ⊙                  |
| 50    |               | C3-390.140-50 030  | 1                     | 32             |       | 80           | 30    | 35           |          | 24       | 2.6                          |                    |
| 50    |               | C3-390.140-50 060  | 1                     | 32             |       | 80           | 60    | 35           |          | 24       | 2.8                          |                    |
| 40    | C4            | C4-390.140-40 030  | 1                     | 40             |       | 50           | 30    | 35           |          | 16       | 0.8                          | ⊙                  |
| 40    |               | C4-390.140-40 060  | 1                     | 40             |       | 50           | 60    | 35           |          | 16       | 1.2                          | ⊙                  |
| 50    |               | C4-390.140-50 030  | 1                     | 40             |       | 80           | 30    | 35           |          | 24       | 2.6                          |                    |
| 50    |               | C4-390.140-50 060  | 1                     | 40             |       | 80           | 60    | 35           |          | 24       | 2.8                          |                    |
| 40    | C5            | C5-390.140-40 030  | 1                     | 50             |       | 50           | 30    | 35           |          | 16       | 0.8                          | ⊙                  |
| 40    |               | C5-390.140-40 070  | 1                     | 50             |       | 50           | 70    | 35           |          | 16       | 1.2                          | ⊙                  |
| 50    |               | C5-390.140-50 030  | 1                     | 50             |       | 80           | 30    | 35           |          | 24       | 2.6                          |                    |
| 50    |               | C5-390.140-50 070  | 1                     | 50             |       | 80           | 70    | 35           |          | 24       | 2.8                          |                    |
| 40    | C6            | C6-390.140-40 085  | 1                     | 63             | 50    |              | 85    |              | 35       | 16       | 2.3                          |                    |
| 50    |               | C6-390.140-50 030  | 1                     | 63             |       | 80           | 30    | 35           |          | 24       | 2.6                          |                    |
| 50    |               | C6-390.140-50 080  | 1                     | 63             |       | 80           | 80    | 35           |          | 24       | 3.7                          |                    |
| 50    | C8            | C8-390.140-50 070  | 1                     | 80             |       | 80           | 70    | 35           |          | 24       | 3.9                          |                    |
| 50    |               | C8-390.140-50 120  | 1                     | 80             |       | 80           | 120   | 35           |          | 24       | 5.5                          |                    |
| 60    | C10           | C10-390.140-60 050 | 1                     | 100            |       | 130          | 50    | 38           |          | 30       | 9.2                          |                    |

<sup>1)</sup> 1 = coolant through centre

Note! Tighten the screw with a torque wrench. Information on page G131.



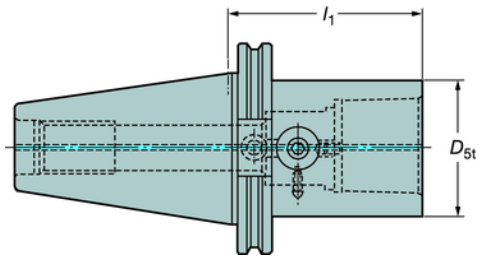
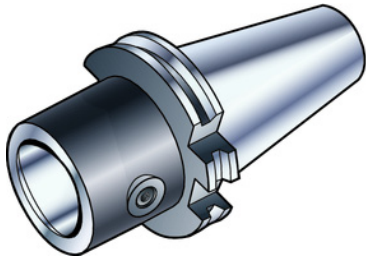


# Basic holder

ISO 7388/1 (DIN 69871-A)

Front clamp


390.14004



Note! One drawbolt for each adaptor/cutting tool is required.

$l_1$  = programming length

## Metric thread

| Taper | Coupling size | Ordering code       | Coolant <sup>1)</sup> | Dimensions, mm |       |   |
|-------|---------------|---------------------|-----------------------|----------------|-------|---|
|       |               |                     |                       | $D_{st}$       | $l_1$ |  |
| 40    | C5            | C5-390.14004-40 080 | 1                     | 50             | 80    | 1.6   |
| 50    |               | C5-390.14004-50 080 | 1                     | 50             | 80    | 3.3   |
| 50    | C6            | C6-390.14004-50 090 | 1                     | 63             | 90    | 3.9   |
| 50    | C8            | C8-390.14004-50 105 | 1                     | 80             | 105   | 4.3   |

<sup>1)</sup> 1 = coolant through centre

Note! Tighten the screw with a torque wrench. Information on page G131.  
For drawbolt, see page G128



D  
E  
F  
G  
J

ROT - ENG

TOOLING SYSTEMS

Coromant Capto® - Basic holders

### Basic holder

BIG-PLUS, ISO 7388/1 (DIN 69871-ADB)

390.540

Holders with coolant through centre and optional flange coolant

Holders with coolant through centre only

C6-390.540-40 085  
For light machining only.

$l_1$  = programming length

**BIG-PLUS SYSTEM - Licence BIG DAISHOWA**

Metric thread

| Taper | Coupling size | Ordering code      | Coolant <sup>1)</sup> | Dimensions, mm |       |          |       |          |          |                              | Balanced by design |
|-------|---------------|--------------------|-----------------------|----------------|-------|----------|-------|----------|----------|------------------------------|--------------------|
|       |               |                    |                       | $D_{5t}$       | $D_1$ | $D_{21}$ | $l_1$ | $l_{21}$ | $l_{22}$ | $\frac{\sigma}{\mu\text{m}}$ |                    |
| 40    | C3            | C3-390.540-40 030  | 1                     | 32             |       | 50       | 30    | 35       |          | 0.8                          | ⊙                  |
| 50    |               | C3-390.540-50 030A | 7                     | 32             |       | 80       | 30    | 35       |          | 2.6                          |                    |
| 50    |               | C3-390.540-50 060  | 7                     | 32             |       | 60       |       |          |          | 2.8                          |                    |
| 40    | C4            | C4-390.540-40 040  | 1                     | 40             |       |          | 40    |          |          | 0.8                          | ⊙                  |
| 50    |               | C4-390.540-50 030A | 7                     | 40             |       | 80       | 30    | 35       |          | 2.6                          |                    |
| 50    |               | C4-390.540-50 060  | 7                     | 40             |       | 60       |       |          |          | 2.9                          |                    |
| 40    | C5            | C5-390.540-40 050  | 1                     | 50             |       |          | 50    |          |          | 0.8                          | ⊙                  |
| 50    |               | C5-390.540-50 030A | 7                     | 50             |       | 80       | 30    | 35       |          | 2.6                          |                    |
| 50    |               | C5-390.540-50 070  | 7                     | 50             |       | 70       |       |          |          | 3.2                          |                    |
| 40    | C6            | C6-390.540-40 085  | 1                     | 63             | 50    |          | 85    |          | 35       | 2.3                          |                    |
| 50    |               | C6-390.540-50 050A | 7                     | 63             |       | 50       |       |          |          | 2.6                          |                    |
| 50    |               | C6-390.540-50 100  | 7                     | 63             |       | 100      |       |          |          | 4.1                          |                    |
| 50    | C8            | C8-390.540-50 070A | 7                     | 80             |       |          | 70    |          |          | 3.7                          |                    |
| 50    |               | C8-390.540-50 120  | 7                     | 80             |       |          | 120   |          |          | 5.6                          |                    |

<sup>1)</sup> 1 = coolant through centre, 7 = coolant through centre and through flange

Note! Tighten the screw with a torque wrench. Information on page G131.

G 10

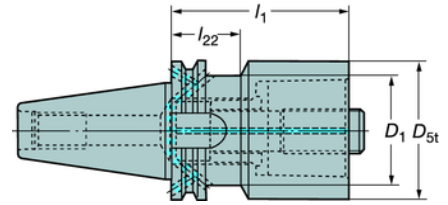
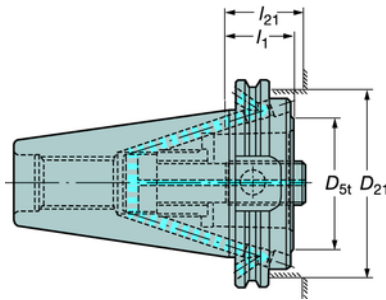
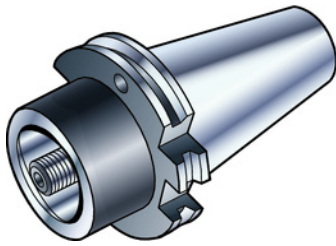
# Basic holder

DIN 69871 Form B

Coolant through flange

390.272

For light machining only.



C6-390.272-40 085

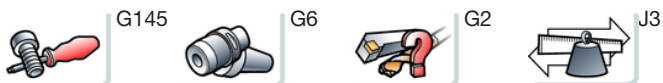
l<sub>1</sub> = programming length

## Metric thread

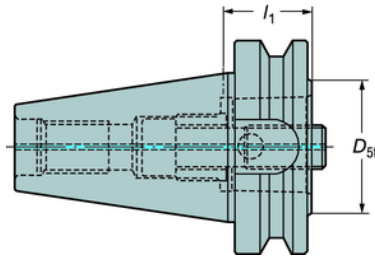
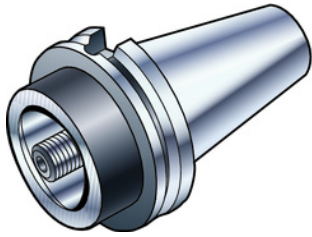
| Taper | Coupling size | Ordering code     | Coolant <sup>1)</sup> | Dimensions, mm  |                |                 |                |                 |                 |     | Balanced by design |
|-------|---------------|-------------------|-----------------------|-----------------|----------------|-----------------|----------------|-----------------|-----------------|-----|--------------------|
|       |               |                   |                       | D <sub>5t</sub> | D <sub>1</sub> | D <sub>21</sub> | h <sub>1</sub> | h <sub>21</sub> | h <sub>22</sub> |     |                    |
| 40    | C3            | C3-390.272-40 030 | 6                     | 32              |                | 50              | 30             | 35              | 0.8             | ⊙   |                    |
| 40    |               | C3-390.272-40 060 | 6                     | 32              |                | 50              | 60             | 35              | 1.2             | ⊙   |                    |
| 50    |               | C3-390.272-50 030 | 6                     | 32              |                | 80              | 30             | 35              | 2.6             |     |                    |
| 50    |               | C3-390.272-50 060 | 6                     | 32              |                | 80              | 60             | 35              | 2.8             |     |                    |
| 40    | C4            | C4-390.272-40 030 | 6                     | 40              |                | 50              | 30             | 35              | 0.8             | ⊙   |                    |
| 40    |               | C4-390.272-40 060 | 6                     | 40              |                | 50              | 60             | 35              | 1.2             | ⊙   |                    |
| 50    |               | C4-390.272-50 030 | 6                     | 40              |                | 80              | 30             | 35              | 2.6             |     |                    |
| 50    |               | C4-390.272-50 060 | 6                     | 40              |                | 80              | 60             | 35              | 2.8             |     |                    |
| 40    | C5            | C5-390.272-40 040 | 6                     | 50              |                | 50              | 40             | 35              | 0.9             | ⊙   |                    |
| 40    |               | C5-390.272-40 080 | 6                     | 50              |                | 50              | 80             | 35              | 1.5             | ⊙   |                    |
| 50    |               | C5-390.272-50 030 | 6                     | 50              |                | 80              | 30             | 35              | 2.9             |     |                    |
| 50    |               | C5-390.272-50 070 | 6                     | 50              |                | 80              | 70             | 35              | 3.4             |     |                    |
| 40    | C6            | C6-390.272-40 085 | 6                     | 63              | 50             |                 | 85             |                 | 35              | 2.3 |                    |
| 50    |               | C6-390.272-50 030 | 6                     | 63              |                | 80              | 30             | 35              |                 | 2.9 |                    |
| 50    |               | C6-390.272-50 080 | 6                     | 63              |                | 80              | 80             | 35              |                 | 4.0 |                    |
| 50    | C8            | C8-390.272-50 070 | 6                     | 80              |                | 80              | 70             | 35              |                 | 3.9 |                    |
| 50    |               | C8-390.272-50 120 | 6                     | 80              |                | 80              | 120            | 35              |                 | 5.6 |                    |

<sup>1)</sup> 6 = coolant through centre

Note! Tighten the screw with a torque wrench. Information on page G131.



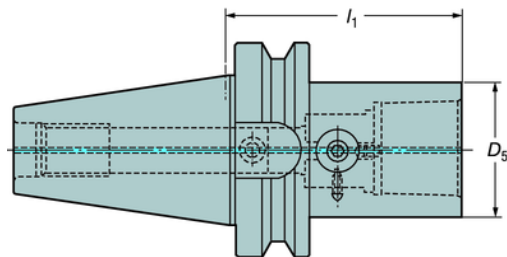
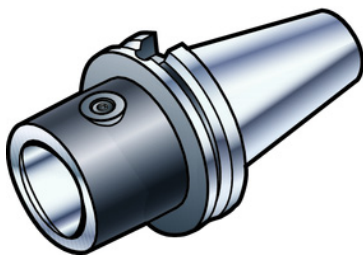
## Basic holder

MAS-BT 403  
390.55/ .58 $l_1$  = programming length

## Metric thread

| Taper | Coupling size | Ordering code    | Coolant <sup>1)</sup> | Dimensions, mm |       |                       | Balanced by design |
|-------|---------------|------------------|-----------------------|----------------|-------|-----------------------|--------------------|
|       |               |                  |                       | $D_{5t}$       | $l_1$ | $\frac{\sigma}{\rho}$ |                    |
| 30    | C3            | C3-390.55-30 030 | 1                     | 32             | 30    | 0.5                   | ⊙                  |
| 30    |               | C3-390.55-30 060 | 1                     | 32             | 60    | 0.7                   | ⊙                  |
| 40    |               | C3-390.55-40 060 | 1                     | 32             | 60    | 0.7                   | ⊙                  |
| 40    |               | C3-390.55-40 030 | 1                     | 32             | 30    | 1.0                   | ⊙                  |
| 50    | C4            | C3-390.58-50 040 | 1                     | 32             | 40    | 2.5                   |                    |
| 50    |               | C3-390.58-50 070 | 1                     | 32             | 70    | 2.7                   |                    |
| 40    |               | C4-390.55-40 030 | 1                     | 40             | 30    | 1.0                   | ⊙                  |
| 40    |               | C4-390.55-40 060 | 1                     | 40             | 60    | 1.2                   | ⊙                  |
| 50    | C5            | C4-390.58-50 040 | 1                     | 40             | 40    | 2.5                   |                    |
| 50    |               | C4-390.58-50 070 | 1                     | 40             | 70    | 2.7                   |                    |
| 40    |               | C5-390.55-40 030 | 1                     | 50             | 30    | 0.9                   | ⊙                  |
| 40    |               | C5-390.55-40 070 | 1                     | 50             | 70    | 1.4                   | ⊙                  |
| 50    | C6            | C5-390.58-50 040 | 1                     | 50             | 40    | 3.5                   |                    |
| 50    |               | C5-390.58-50 080 | 1                     | 50             | 80    | 4.0                   |                    |
| 40    |               | C6-390.55-40 075 | 1                     | 63             | 75    | 1.6                   |                    |
| 50    |               | C6-390.58-50 040 | 1                     | 63             | 40    | 3.4                   |                    |
| 50    | C8            | C6-390.58-50 090 | 1                     | 63             | 90    | 4.5                   |                    |
| 50    |               | C8-390.58-50 070 | 1                     | 80             | 70    | 4.1                   |                    |
| 50    |               | C8-390.58-50 120 | 1                     | 80             | 120   | 5.8                   |                    |

1) 1 = coolant through centre

MAS-BT 403  
Front clamp  
390.5504/ .5804 $l_1$  = programming length

Note! One drawbolt for each adaptor/cutting tool is required.

## Metric thread

| Taper | Coupling size | Ordering code      | Coolant <sup>1)</sup> | Dimensions, mm |       |                       |
|-------|---------------|--------------------|-----------------------|----------------|-------|-----------------------|
|       |               |                    |                       | $D_{5t}$       | $l_1$ | $\frac{\sigma}{\rho}$ |
| 40    | C5            | C5-390.5504-40 090 | 1                     | 50             | 90    | 1.8                   |
| 50    |               | C5-390.5804-50 100 | 1                     | 50             | 100   | 4.2                   |
| 50    | C8            | C6-390.5804-50 110 | 1                     | 63             | 110   | 4.7                   |
| 50    |               | C8-390.5804-50 125 | 1                     | 80             | 125   | 4.6                   |

1) 1 = coolant through centre

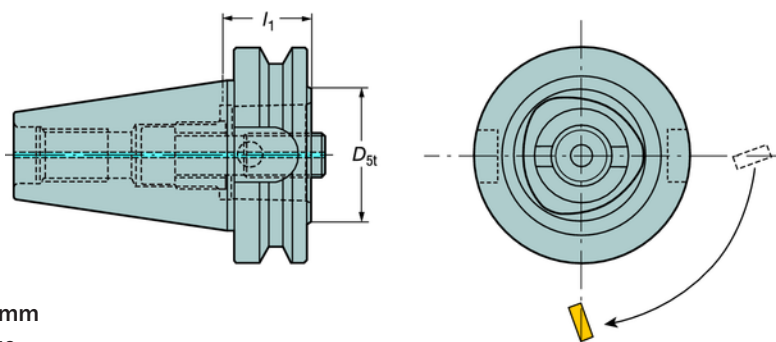
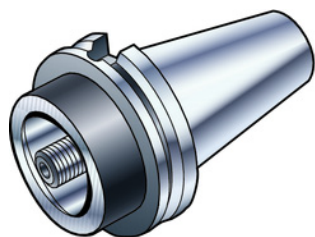
Note! Tighten the screw with a torque wrench. Information on page G131.  
For drawbolt, see page G128

## Basic holder

90° rotated polygon for precision tool tip control

Designed for Mazak™ e-machine and Mori Seiki NT™ -Series

MAS-BT 403  
390.605



Note: Tolerances for key way width, mm

|                |                     |
|----------------|---------------------|
| Taper ISO 40   | Taper ISO 50        |
| 16.12 +/- 0.02 | 25.54 + 0.022/-0.03 |

l<sub>1</sub> = programming length

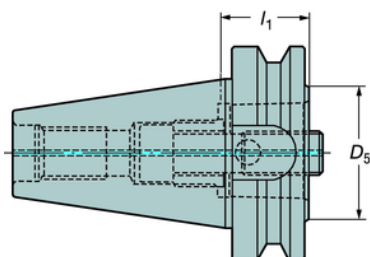
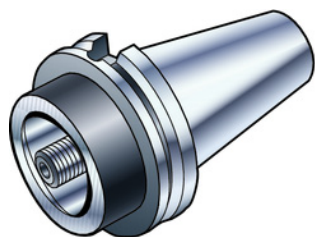
### Metric thread

| Taper | Coupling size | Ordering code     | Coolant <sup>1)</sup> | Dimensions, mm  |                |                 |
|-------|---------------|-------------------|-----------------------|-----------------|----------------|-----------------|
|       |               |                   |                       | D <sub>St</sub> | l <sub>1</sub> | ⊕ <sub>KG</sub> |
| 40    | C5            | C5-390.605-40 030 | 1                     | 50              | 30             | 0.8             |
| 50    | C6            | C6-390.605-50 040 | 1                     | 63              | 40             | 3.3             |
| 50    | C8            | C8-390.605-50 070 | 1                     | 80              | 70             | 4.0             |

<sup>1)</sup> 1 = coolant through centre

Note! Tighten the screw with a torque wrench. Information on page G131.

BIG-PLUS  
MAS-BT 403  
390.555/ .558



BIG-PLUS SYSTEM - Licence BIG DAISHOWA

l<sub>1</sub> = programming length

### Metric thread

| Taper | Coupling size | Ordering code     | Coolant <sup>1)</sup> | Dimensions, mm  |                |                 | Balanced by design |
|-------|---------------|-------------------|-----------------------|-----------------|----------------|-----------------|--------------------|
|       |               |                   |                       | D <sub>St</sub> | l <sub>1</sub> | ⊕ <sub>KG</sub> |                    |
| 40    | C3            | C3-390.555-40 030 | 1                     | 32              | 30             | 1.0             | ⊙                  |
| 50    |               | C3-390.558-50 070 | 1                     | 32              | 70             | 3.7             |                    |
| 40    | C4            | C4-390.555-40 040 | 1                     | 40              | 40             | 1.0             | ⊙                  |
| 50    |               | C4-390.558-50 040 | 1                     | 40              | 40             | 3.6             |                    |
| 50    |               | C4-390.558-50 070 | 1                     | 40              | 70             | 3.8             |                    |
| 40    | C5            | C5-390.555-40 050 | 1                     | 50              | 50             | 1.2             | ⊙                  |
| 50    |               | C5-390.558-50 040 | 1                     | 50              | 40             | 3.5             |                    |
| 50    |               | C5-390.558-50 080 | 1                     | 50              | 80             | 3.8             |                    |
| 40    | C6            | C6-390.555-40 075 | 1                     | 63              | 75             | 1.7             | ⊙                  |
| 50    |               | C6-390.558-50 050 | 1                     | 63              | 50             | 3.6             |                    |
| 50    |               | C6-390.558-50 100 | 1                     | 63              | 100            | 4.6             |                    |
| 50    | C8            | C8-390.558-50 070 | 1                     | 80              | 70             | 4.1             | ⊙                  |
| 50    |               | C8-390.558-50 120 | 1                     | 80              | 120            | 5.9             |                    |

<sup>1)</sup> 1 = coolant through centre

Note! Tighten the screw with a torque wrench. Information on page G131.



## Basic holder

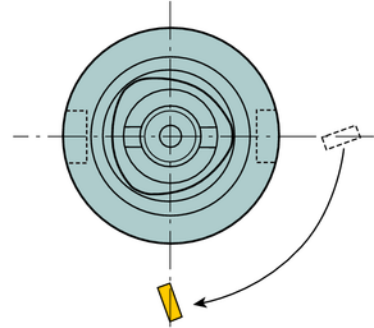
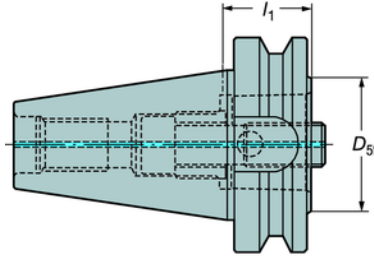
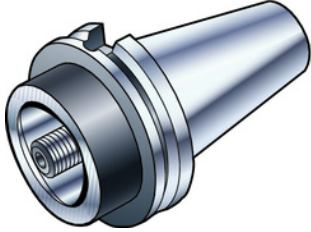
### BIG-PLUS

90° rotated polygon for precision tool tip control

Designed for Mazak™ e-machine and Mori Seiki NT™ -Series

MAS-BT 403

390.562



Note: Tolerances for key way width, mm

Taper ISO 40  
16.12 +/- 0.02

Taper ISO 50  
25.54 + 0.022/-0.03

BIG-PLUS SYSTEM - Licence BIG DAISHOWA

$l_1$  = programming length

### Metric thread

| Taper | Coupling size | Ordering code     | Coolant <sup>1)</sup> | Dimensions, mm |       |                              | Balanced by design |
|-------|---------------|-------------------|-----------------------|----------------|-------|------------------------------|--------------------|
|       |               |                   |                       | $D_{st}$       | $l_1$ | $\frac{\sigma}{\mu\text{m}}$ |                    |
| 40    | C5            | C5-390.562-40 050 | 1                     | 50             | 50    | 1.4                          | ⊙                  |
| 50    | C6            | C6-390.562-50 050 | 1                     | 63             | 50    | 3.6                          |                    |
| 50    | C8            | C8-390.562-50 070 | 1                     | 80             | 70    | 4.1                          |                    |

<sup>1)</sup> 1 = coolant through centre

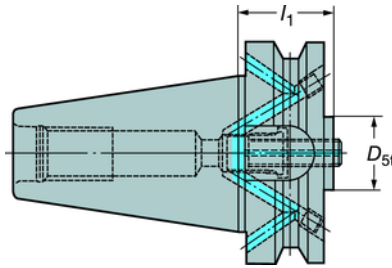
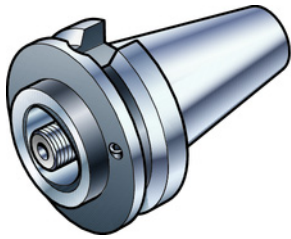


## Basic holder

MAS-BT 403 Form B

Coolant through flange

390.369

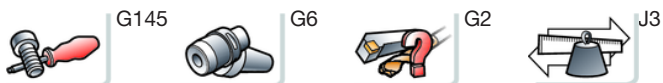


$l_1$  = programming length

### Metric thread

| Taper | Coupling size | Ordering code     | Coolant <sup>1)</sup> | Dimensions, mm |       |                         | Balanced by design |
|-------|---------------|-------------------|-----------------------|----------------|-------|-------------------------|--------------------|
|       |               |                   |                       | $D_{5t}$       | $l_1$ | $\frac{\sigma}{\rho g}$ |                    |
| 40    | C3            | C3-390.369-40 030 | 6                     | 32             | 30    | 1.0                     | ⊙                  |
| 50    |               | C3-390.369-50 040 | 6                     | 32             | 40    | 2.3                     |                    |
| 40    | C4            | C4-390.369-40 030 | 6                     | 40             | 30    | 1.0                     | ⊙                  |
| 50    |               | C4-390.369-50 040 | 6                     | 40             | 40    | 2.3                     |                    |
| 40    | C5            | C5-390.369-40 050 | 6                     | 50             | 50    | 1.8                     | ⊙                  |
| 50    |               | C5-390.369-50 040 | 6                     | 50             | 40    | 3.2                     |                    |
| 50    | C6            | C6-390.369-50 050 | 6                     | 63             | 50    | 3.4                     |                    |
| 50    | C8            | C8-390.369-50 070 | 6                     | 80             | 70    | 4.1                     |                    |

<sup>1)</sup> 6 = coolant through centre



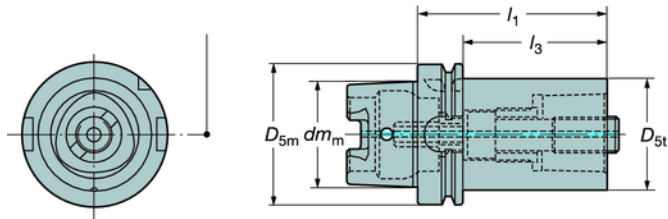
## Basic holder

HSK form A/C

390.410



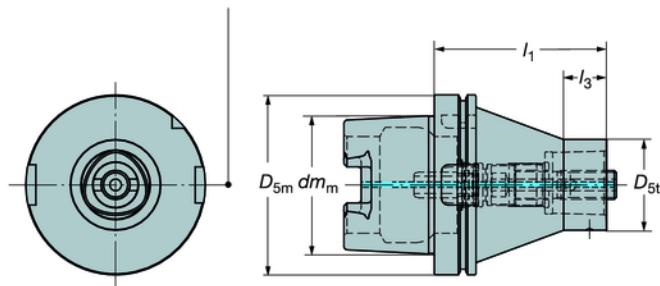
Zero point



390.410HD



Zero point

 $l_1$  = programming length

| HSK size | Coupling size | Ordering code       | Coolant <sup>1)</sup> | Dimensions, mm, inch |          |          |       |       |          |
|----------|---------------|---------------------|-----------------------|----------------------|----------|----------|-------|-------|----------|
|          |               |                     |                       | $dm_m$               | $D_{5m}$ | $D_{5t}$ | $l_1$ | $l_3$ | $R_{KO}$ |
| 50       | C3            | C3-390.410-50 075A  | 1                     | 38                   | 50       | 32       | 75    | 49    | 0.6      |
|          | C4            | C4-390.410-50 080A  | 1                     | 38                   | 50       | 40       | 80    | 54    | 0.8      |
| 63       | C3            | C3-390.410-63 075C  | 1                     | 48                   | 63       | 32       | 75    | 49    | 1.4      |
|          | C4            | C4-390.410-63 080C  | 1                     | 48                   | 63       | 40       | 80    | 54    | 1.6      |
|          | C5            | C5-390.410-63 090C  | 1                     | 48                   | 63       | 50       | 90    | 64    | 1.5      |
| 80       | C6            | C6-390.410-80 110   | 1                     | 60                   | 80       | 63       | 110   | 84    | 2.7      |
|          | C3            | C3-390.410-100 080A | 1                     | 75                   | 100      | 32       | 80    | 51    | 3.8      |
| 100      | C4            | C4-390.410-100 090A | 1                     | 75                   | 100      | 40       | 90    | 61    | 4.1      |
|          | C5            | C5-390.410-100 100A | 1                     | 75                   | 100      | 50       | 100   | 71    | 3.0      |
|          |               | C5-390.410-100100HD | 1                     | 75                   | 100      | 50       | 100   | 30    | 3.5      |
|          | C6            | C6-390.410-100 110A | 1                     | 75                   | 100      | 63       | 110   | 81    | 3.6      |
|          |               | C6-390.410-100110HD | 1                     | 75                   | 100      | 63       | 110   | 30    | 4.1      |
|          | C8            | C8-390.410-100 120A | 1                     | 75                   | 100      | 80       | 120   | 91    | 4.7      |
|          |               |                     |                       | 2.953                | 3.937    | 3.150    | 4.724 | 3.583 |          |

<sup>1)</sup> 1 = coolant through centre

Continued ...

A special coolant tube is delivered together with the HSK basic holders.

Note!  
In machines with automatic tool change the coolant tube must be assembled in the basic holder. The outpush function of the clamping mechanism can be jeopardized without an assembled coolant tube/thread ring.

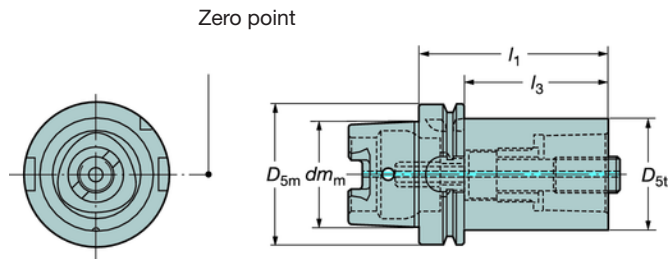




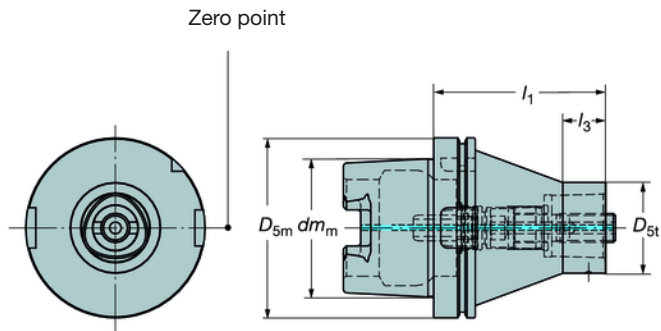
# Basic holder

HSK form A/C

390.410



390.410HD



$l_1$  = programming length

The holders HSK A/C sizes 125 and 160 don't have the holes on the conical surface according to DIN69893  
 ... Continued

| HSK size | Coupling size       | Ordering code       | Coolant <sup>1)</sup> | Dimensions, mm, inch |          |          |       |       |       |     |
|----------|---------------------|---------------------|-----------------------|----------------------|----------|----------|-------|-------|-------|-----|
|          |                     |                     |                       | $dm_m$               | $D_{5m}$ | $D_{5t}$ | $l_1$ | $l_3$ | $l_6$ |     |
| 125      | C4                  | C4-390.410-125 095  | 1                     | 95                   | 125      | 40       | 95    | 66    | 4.0   |     |
|          |                     |                     |                       | 3.740                | 4.921    | 1.575    | 3.740 | 2.598 |       |     |
|          | C5                  | C5-390.410-125 105  | 1                     | 95                   | 125      | 50       | 105   | 76    | 4.3   |     |
|          |                     |                     |                       | 3.740                | 4.921    | 1.968    | 4.134 | 2.992 |       |     |
|          | C6                  | C6-390.410-125 120  | 1                     | 95                   | 125      | 63       | 120   | 91    | 5.2   |     |
|          |                     |                     |                       | 3.740                | 4.921    | 2.480    | 4.724 | 3.583 |       |     |
|          |                     |                     | C6-390.410-125120HD   | 1                    | 95       | 125      | 63    | 120   | 30    | 6.5 |
|          |                     |                     |                       |                      | 3.740    | 4.921    | 2.480 | 4.724 | 1.181 |     |
| C8       | C8-390.410-125 130  | 1                   | 95                    | 125                  | 80       | 130      | 101   | 6.5   |       |     |
|          |                     |                     | 3.740                 | 4.921                | 3.150    | 5.118    | 3.976 |       |       |     |
|          |                     | C8-390.410-125130HD | 1                     | 95                   | 125      | 80       | 130   | 30    | 7.6   |     |
|          |                     |                     |                       | 3.740                | 4.921    | 3.937    | 6.299 | 5.158 |       |     |
| C10      | C10-390.410-125 160 | 1                   | 95                    | 125                  | 100      | 160      | 131   | 9.5   |       |     |
|          |                     |                     | 3.740                 | 4.921                | 3.150    | 5.118    | 1.181 |       |       |     |
| 160      | C8                  | C8-390.410-160 135  | 1                     | 120                  | 160      | 80       | 135   | 104   | 9.6   |     |
|          |                     |                     |                       | 4.724                | 6.299    | 3.150    | 5.315 | 4.094 |       |     |
| C10      | C10-390.410-160 160 | 1                   | 120                   | 160                  | 100      | 160      | 129   | 12.4  |       |     |
|          |                     |                     | 4.724                 | 6.299                | 3.937    | 6.299    | 5.079 |       |       |     |

<sup>1)</sup> 1 = coolant through centre

A special coolant tube is delivered together with the HSK basic holders.

**Note!**

In machines with automatic tool change the coolant tube must be assembled in the basic holder. The outpush function of the clamping mechanism can be jeopardized without an assembled coolant tube/thread ring.

HSK125A - Compatible with the Makino T4 and MAG Cincinnati Ti profiler, for titanium machining.



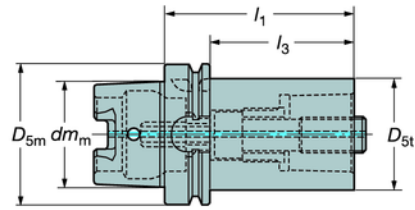
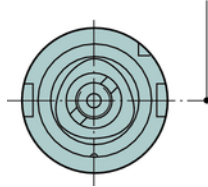
## Basic holder

HSK form A/C/T

390.419



Zero point



$l_1$  = programming length

| HSK size | Coupling size | Ordering code      | Coolant <sup>1)</sup> | Dimensions, mm, inch |          |          |       |       |                 |
|----------|---------------|--------------------|-----------------------|----------------------|----------|----------|-------|-------|-----------------|
|          |               |                    |                       | $dm_m$               | $D_{5m}$ | $D_{st}$ | $l_1$ | $l_3$ | $\frac{kg}{kg}$ |
| 40       | C4            | C4-390.419-40 075  | 1                     | 28                   | 40       | 40       | 75    |       | 0.6             |
|          |               |                    |                       | 1.102                | 1.575    | 1.575    | 2.953 |       |                 |
| 63       | C5            | C5-390.419-63 090  | 1                     | 35                   | 63       | 50       | 90    | 64    | 1.4             |
|          | C6            | C6-390.419-63 110  | 1                     | 44                   | 63       | 63       | 110   |       | 2.1             |
| 100      | C6            | C6-390.419-100 110 | 1                     | 44                   | 100      | 63       | 110   | 81    | 3.6             |
|          | C8            | C8-390.419-100 120 | 1                     | 55                   | 100      | 80       | 120   | 91    | 4.8             |
|          |               |                    |                       | 2.165                | 3.937    | 3.150    | 4.724 | 3.583 |                 |

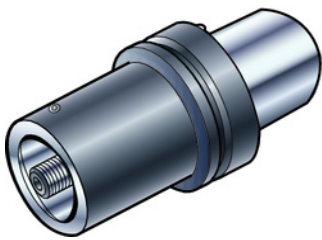
<sup>1)</sup> 1 = coolant through centre

A special coolant tube is delivered together with the HSK basic holders.

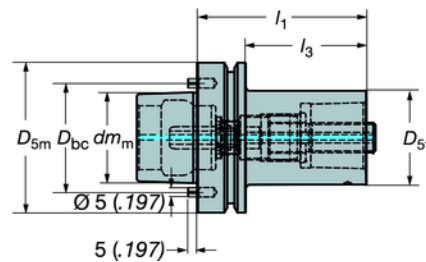
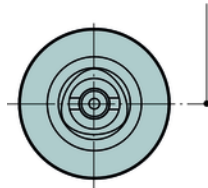
### Note!

In machines with automatic tool change the coolant tube must be assembled in the basic holder. The outpush function of the clamping mechanism can be jeopardized without an assembled coolant tube/thread ring.

HSK F  
Pin style  
390.612



Zero point



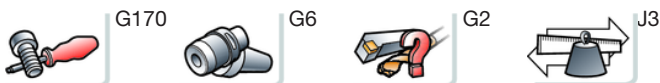
$l_1$  = programming length

| HSK    |       |               |                   | Dimensions, mm, inch  |        |          |          |       |       |                 |
|--------|-------|---------------|-------------------|-----------------------|--------|----------|----------|-------|-------|-----------------|
| Flange | Taper | Coupling size | Ordering code     | Coolant <sup>1)</sup> | $dm_m$ | $D_{5m}$ | $D_{st}$ | $l_1$ | $l_3$ | $\frac{kg}{kg}$ |
| 80     | (63)  | C5            | C5-390.612-80 090 | 1                     | 35     | 80       | 50       | 90    | 64    | 1.9             |
|        |       | C6            | C6-390.612-80 105 | 1                     | 44     | 80       | 63       | 105   | 79    | 2.6             |
|        |       |               |                   |                       | 1.378  | 3.150    | 1.968    | 3.543 | 2.520 | 1.9             |
|        |       |               |                   |                       | 1.732  | 3.150    | 2.480    | 4.134 | 3.110 | 2.6             |

<sup>1)</sup> 1 = coolant through centre

A special coolant tube is delivered together with the HSK basic holders.

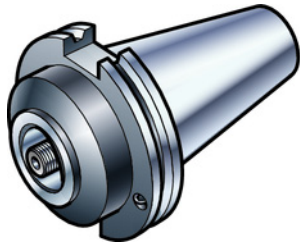
**HSK80F** - Compatible with the Makino MAG1, MAG3, MAG4, MAG7, A7 - for Aerospace frame aluminium machining.



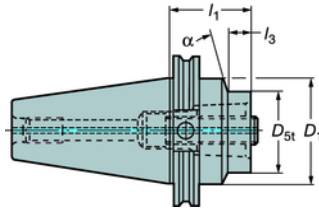
# Basic holder

Cat V-Flange

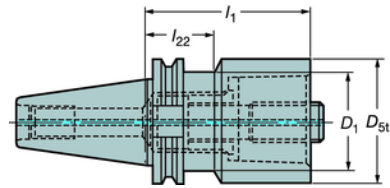
A390.45



Design 1



Design 2



$l_1$  = programming length

Inch thread

| Taper | Coupling size | Ordering code      | Design | Coolant <sup>1)</sup> | Dimensions, inch |          |       |       |          |                |          |                   | Torque Nm |    |
|-------|---------------|--------------------|--------|-----------------------|------------------|----------|-------|-------|----------|----------------|----------|-------------------|-----------|----|
|       |               |                    |        |                       | $D_1$            | $D_{5t}$ | $l_1$ | $l_3$ | $l_{22}$ | $\alpha^\circ$ | $D_{th}$ | $\frac{\mu}{100}$ |           |    |
| 40    | C3            | C3-A390.45-40 040  | 1      | 1                     | 1.760            | 1.260    | 1.575 | .197  |          |                | 20°      | .625              | 4.0       | 45 |
|       |               | C3-A390.45-40 070  | 1      | 1                     | 1.760            | 1.260    | 2.756 | 1.378 |          |                | 30°      | .625              | 5.7       | 45 |
| 50    |               | C3-A390.45-50 040  | 1      | 1                     | 2.760            | 1.260    | 1.575 | .197  |          |                | 10°      | 1.000             | 10.1      | 45 |
|       |               | C3-A390.45-50 070  | 1      | 1                     | 2.760            | 1.260    | 2.756 | 1.378 |          |                | 15°      | 1.000             | 15.0      | 45 |
| 40    | C4            | C4-A390.45-40 040  | 1      | 1                     | 1.760            | 1.575    | 1.575 | .197  |          |                | 30°      | .625              | 4.0       | 45 |
|       |               | C4-A390.45-40 070  | 1      | 1                     | 1.760            | 1.575    | 2.756 | 1.378 |          |                | 30°      | .625              | 5.7       | 45 |
| 50    |               | C4-A390.45-50 040  | 1      | 1                     | 2.760            | 1.575    | 1.575 | .197  |          |                | 10°      | 1.000             | 14.1      | 45 |
|       |               | C4-A390.45-50 070  | 1      | 1                     | 2.760            | 1.575    | 2.756 | 1.378 |          |                | 10°      | 1.000             | 15.0      | 45 |
| 40    | C5            | C5-A390.45-40 050  | 2      | 1                     | 1.760            | 1.968    | 1.969 |       | 1.378    |                |          | .625              | 4.9       | 45 |
|       |               | C5-A390.45-40 090  | 2      | 1                     | 1.760            | 1.968    | 3.543 |       | 1.378    |                |          | .625              | 6.4       | 45 |
| 45    |               | C5-A390.45-45 040  | 1      | 1                     | 2.260            | 1.968    | 1.575 | .118  |          |                | 30°      | .750              | 8.4       | 45 |
| 50    |               | C5-A390.45-50 040  | 2      | 1                     | 2.760            | 1.968    | 1.575 | .091  |          |                | 15°      | 1.000             | 13.2      | 45 |
|       |               | C5-A390.45-50 080  | 1      | 1                     | 2.760            | 1.968    | 3.150 | 1.693 |          |                | 15°      | 1.000             | 14.1      | 45 |
| 40    | C6            | C6-A390.45-40 090  | 2      | 1                     | 1.760            | 2.480    | 3.543 |       | 1.378    |                |          | .625              | 9.9       | 65 |
|       |               | C6-A390.45-45 050  | 2      | 1                     | 2.260            | 2.480    | 1.969 |       | 1.378    |                | 20°      | .750              | 10.8      | 65 |
| 50    |               | C6-A390.45-50 040  | 1      | 1                     | 2.760            | 2.480    | 1.575 | .118  |          |                | 30°      | 1.000             | 14.6      | 65 |
|       |               | C6-A390.45-50 090  | 1      | 1                     | 2.760            | 2.480    | 3.543 | 2.087 |          |                | 30°      | 1.000             | 19.8      | 65 |
|       | C8            | C8-A390.45-50 100  | 2      | 1                     | 2.760            | 3.150    | 3.937 | 2.559 | 1.378    |                | 20°      | 1.000             | 22.9      | 65 |
|       |               | C8-A390.45-60 050  | 1      | 1                     | 4.260            | 3.150    | 1.969 | 1.220 |          |                | 30°      | 1.250             | 47.2      | 65 |
|       | C10           | C10-A390.45-60 050 | 1      | 1                     | 4.250            | 3.937    | 1.968 | .413  |          |                |          | 1.250             | 19.8      | 90 |

<sup>1)</sup> 1 = coolant through centre

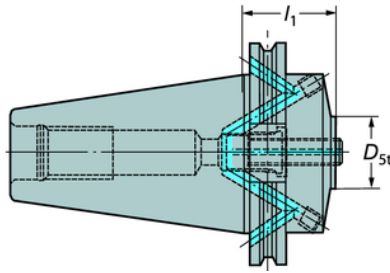
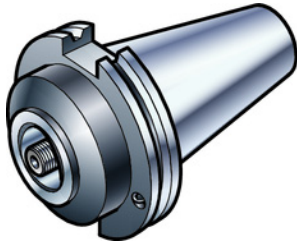
Note! Tighten the screw with a torque wrench. Information on page G131.



## Basic holder

CAT V-Flange, similar to DIN 69871, form B

Coolant through flange  
A390.455



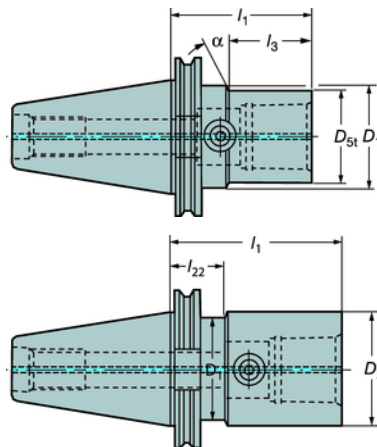
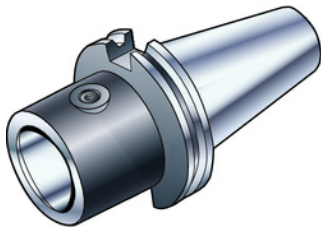
$l_1$  = programming length

Inch thread

| Taper | Coupling size | Ordering code      | Coolant <sup>1)</sup> | Dimensions, inch |       |                           | Balanced by design |
|-------|---------------|--------------------|-----------------------|------------------|-------|---------------------------|--------------------|
|       |               |                    |                       | $D_{st}$         | $l_1$ | $\frac{L_{max}}{L_{min}}$ |                    |
| 40    | C3            | C3-A390.455-40 040 | 6                     | 1.260            | 1.575 | 4.4                       | ⊙                  |
| 50    |               | C3-A390.455-50 040 | 6                     | 1.260            | 1.575 | 14.1                      |                    |
| 40    | C4            | C4-A390.455-40 040 | 6                     | 1.575            | 1.575 | 4.4                       | ⊙                  |
| 50    |               | C4-A390.455-50 040 | 6                     | 1.575            | 1.575 | 13.2                      |                    |
| 40    | C5            | C5-A390.455-40 050 | 6                     | 1.968            | 1.969 | 4.9                       | ⊙                  |
| 50    |               | C5-A390.455-50 040 | 6                     | 1.968            | 1.575 | 13.2                      |                    |
| 50    | C6            | C6-A390.455-50 040 | 6                     | 2.480            | 1.575 | 14.1                      |                    |
| 50    | C8            | C8-A390.455-50 100 | 6                     | 3.150            | 3.937 | 22.9                      |                    |

<sup>1)</sup> 6 = coolant through flange

Cat V-Flange  
Front clamp  
A390.4504



Note! One drawbolt for each adaptor/cutting tool is required.

$l_1$  = programming length

Inch thread

| Taper | Coupling size | Ordering code       | Coolant <sup>1)</sup> | Dimensions, inch |          |       |       |       |          |                           |
|-------|---------------|---------------------|-----------------------|------------------|----------|-------|-------|-------|----------|---------------------------|
|       |               |                     |                       | $D_1$            | $D_{st}$ | $l_1$ | $l_2$ | $l_3$ | $\alpha$ | $\frac{L_{max}}{L_{min}}$ |
| 40    | C5            | C5-A390.4504-40 100 | 1                     | 1.760            | 1.968    | 3.937 |       | 1.378 |          | 4.0                       |
| 50    |               | C5-A390.4504-50 080 | 1                     | 2.760            | 1.968    | 3.150 | 1.634 |       | 20°      | 8.6                       |
|       | C6            | C6-A390.4504-50 090 | 1                     | 2.760            | 2.480    | 3.543 | 2.087 |       | 30°      | 9.0                       |
|       | C8            | C8-A390.4504-50 125 | 1                     | 2.760            | 3.150    | 4.921 |       | 1.378 |          | 12.3                      |

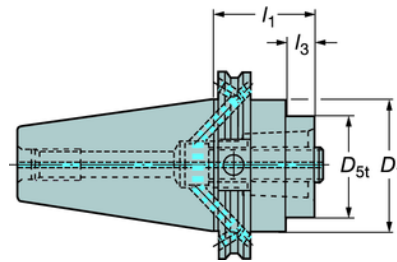
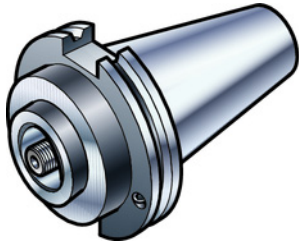
<sup>1)</sup> 1 = coolant through centre

Note! Tighten the screw with a torque wrench. Information on page G131.  
For drawbolt, see page G128



# Basic holder

BIG-PLUS  
Cat V-Flange  
A390.545



BIG-PLUS SYSTEM - Licence BIG DAISHOWA

$l_1$  = programming length

## Inch thread

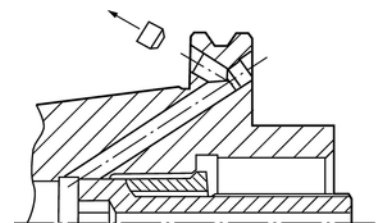
| Taper | Coupling size | Ordering code       | Coolant <sup>1)</sup> | Dimensions, inch |          |       |       |                     |
|-------|---------------|---------------------|-----------------------|------------------|----------|-------|-------|---------------------|
|       |               |                     |                       | $D_1$            | $D_{st}$ | $l_1$ | $l_3$ | $\frac{L}{L_{ref}}$ |
| 40    | C3            | C3-A390.545-40 040A | 7                     | 1.750            | 1.260    | 1.575 | .106  | 2.0                 |
| 50    | C3            | C3-A390.545-50 040A | 7                     | 2.750            | 1.260    | 1.575 | .063  | 6.8                 |
| 50    | C3            | C3-A390.545-50 070  | 7                     | 2.750            | 1.260    | 2.756 | 1.181 | 7.1                 |
| 40    | C4            | C4-A390.545-40 040A | 7                     | 1.750            | 1.575    | 1.575 | .142  | 2.2                 |
| 50    | C4            | C4-A390.545-50 040A | 7                     | 2.750            | 1.575    | 1.575 | .091  | 6.8                 |
| 50    | C4            | C4-A390.545-50 070  | 7                     | 2.750            | 1.575    | 2.756 | 1.220 | 7.3                 |
| 40    | C5            | C5-A390.545-40 050A | 7                     | 1.750            | 1.968    | 1.968 |       | 2.2                 |
| 50    | C5            | C5-A390.545-50 040A | 7                     | 2.750            | 1.968    | 1.575 | .091  | 6.6                 |
| 50    | C5            | C5-A390.545-50 080  | 7                     | 2.750            | 1.968    | 3.150 | 1.665 | 7.7                 |
| 50    | C6            | C6-A390.545-50 040A | 7                     | 2.750            | 2.480    | 1.575 | .118  | 6.4                 |
| 50    | C6            | C6-A390.545-50 090  | 7                     | 2.750            | 2.480    | 3.543 | 2.087 | 8.7                 |
| 50    | C8            | C8-A390.545-50 100A | 7                     | 2.750            | 3.150    | 3.937 |       | 10.4                |
| 50    | C8            | C8-A390.545-50 150  | 7                     | 2.750            | 3.150    | 5.906 |       | 14.4                |

<sup>1)</sup> 7 = coolant through centre and through flange

### Ordering code

5514 011-02 (CAT 40)

5514 011-01 (CAT 50)



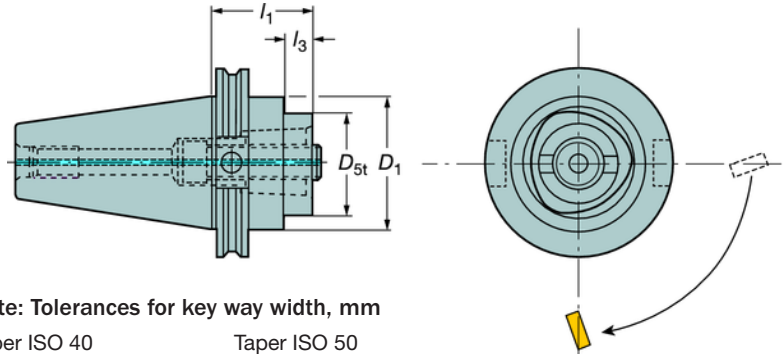
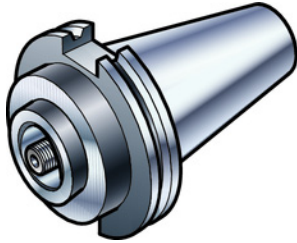
### Basic holder

**BIG-PLUS**

90° rotated polygon for precision tool tip control

Designed for Mazak™ e-machine and Mori Seiki NT™ -Series

Cat V-Flange  
A390.546



**Note: Tolerances for key way width, mm**

Taper ISO 40  
16.12 +/- 0.02

Taper ISO 50  
25.54 + 0.022/-0.03

l<sub>1</sub> = programming length

BIG-PLUS SYSTEM - Licence BIG DAISHOWA

**Inch thread**

F

|       |               |                    |                       | Dimensions, inch |                 |                |                |     |
|-------|---------------|--------------------|-----------------------|------------------|-----------------|----------------|----------------|-----|
| Taper | Coupling size | Ordering code      | Coolant <sup>1)</sup> | D <sub>1</sub>   | D <sub>st</sub> | l <sub>1</sub> | l <sub>3</sub> |     |
| 40    | C4            | C4-A390.546-40 040 | 1                     | 1.750            | 1.575           | 1.575          | .142           | 2.2 |
| 40    | C5            | C5-A390.546-40 050 | 1                     | 1.750            | 1.968           | 1.968          | .591           | 2.3 |
| 50    | C6            | C6-A390.546-50 050 | 1                     | 2.750            | 2.480           | 1.968          | .512           | 6.8 |
| 50    | C8            | C8-A390.546-50 070 | 1                     | 2.750            | 3.150           | 2.756          | 1.378          | 7.9 |

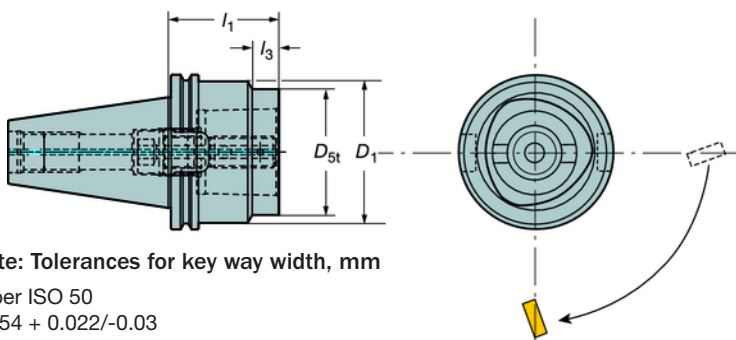
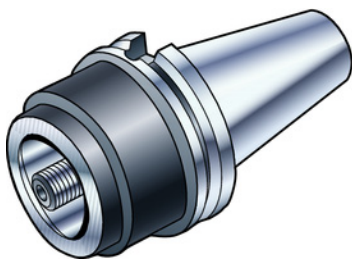
<sup>1)</sup> 1 = coolant through centre

**BIG-PLUS**

90° rotated polygon

Designed for Mazak™ e-machine and Mori Seiki NT™ -Series

Cat V-Flange  
A390.547



**Note: Tolerances for key way width, mm**

Taper ISO 50  
25.54 + 0.022/-0.03

l<sub>1</sub> = programming length

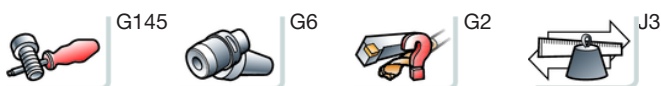
BIG-PLUS SYSTEM - Licence BIG DAISHOWA

**Inch thread**

J

|       |               |                    |                       | Dimensions, inch |                 |                |                |     |
|-------|---------------|--------------------|-----------------------|------------------|-----------------|----------------|----------------|-----|
| Taper | Coupling size | Ordering code      | Coolant <sup>1)</sup> | D <sub>1</sub>   | D <sub>st</sub> | l <sub>1</sub> | l <sub>3</sub> |     |
| 50    | C8            | C8-A390.547-50 070 | 1                     | 3.543            | 3.150           | 2.756          | .669           | 9.0 |

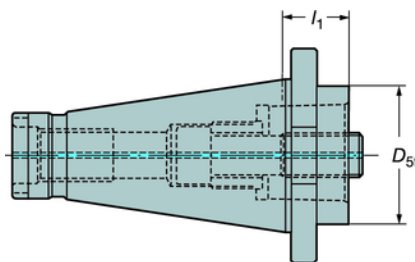
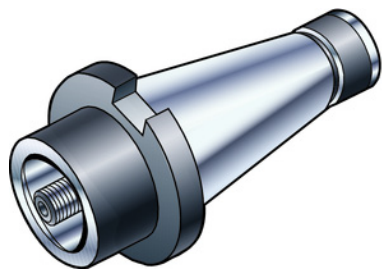
<sup>1)</sup> 1 = coolant through centre



# Basic holder

DIN 2080

For manual tool change  
390.00



$l_1$  = programming length

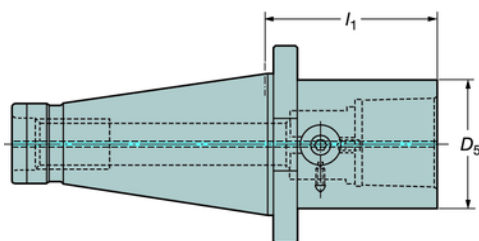
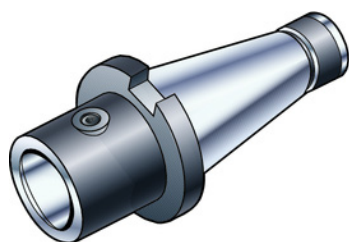
## Metric thread

| Taper | Coupling size | Ordering code    | Coolant <sup>1)</sup> | Dimensions, mm |       |     |
|-------|---------------|------------------|-----------------------|----------------|-------|-----|
|       |               |                  |                       | $D_{st}$       | $l_1$ |     |
| 40    | C3            | C3-390.00-40 030 | 1                     | 32             | 30    | 0.8 |
| 50    |               | C3-390.00-50 030 | 1                     | 32             | 30    | 2.5 |
| 50    |               | C3-390.00-50 060 | 1                     | 32             | 60    | 2.5 |
| 40    | C4            | C4-390.00-40 030 | 1                     | 40             | 30    | 0.8 |
| 40    |               | C4-390.00-40 060 | 1                     | 40             | 60    | 0.8 |
| 50    |               | C4-390.00-50 030 | 1                     | 40             | 30    | 2.5 |
| 50    |               | C4-390.00-50 060 | 1                     | 40             | 60    | 2.5 |
| 40    | C5            | C5-390.00-40 030 | 1                     | 50             | 30    | 0.9 |
| 40    |               | C5-390.00-40 070 | 1                     | 50             | 70    | 1.4 |
| 50    |               | C5-390.00-50 030 | 1                     | 50             | 30    | 2.6 |
| 50    |               | C5-390.00-50 070 | 1                     | 50             | 70    | 3.1 |
| 40    | C6            | C6-390.00-40 075 | 1                     | 63             | 75    | 1.9 |
| 50    |               | C6-390.00-50 030 | 1                     | 63             | 30    | 2.6 |
| 50    |               | C6-390.00-50 080 | 1                     | 63             | 80    | 3.7 |
| 50    | C8            | C8-390.00-50 070 | 1                     | 80             | 70    | 3.8 |
| 50    |               | C8-390.00-50 120 | 1                     | 80             | 120   | 5.6 |

<sup>1)</sup> 1 = coolant through centre

## DIN 2080

For manual tool change  
Front clamp  
390.0004



Note! One drawbolt for each adaptor/cutting tool is required.

$l_1$  = programming length

## Metric thread

| Taper | Coupling size | Ordering code      | Coolant <sup>1)</sup> | Dimensions, mm |       |     |
|-------|---------------|--------------------|-----------------------|----------------|-------|-----|
|       |               |                    |                       | $D_{st}$       | $l_1$ |     |
| 40    | C5            | C5-390.0004-40 075 | 1                     | 50             | 75    | 1.5 |
| 50    |               | C5-390.0004-50 080 | 1                     | 50             | 80    | 3.4 |
| 50    | C6            | C6-390.0004-50 085 | 1                     | 63             | 85    | 3.8 |
| 50    |               | C8-390.0004-50 100 | 1                     | 80             | 100   | 5.0 |

<sup>1)</sup> 1 = coolant through centre

Note! Tighten the screw with a torque wrench. Information on page G131.

For drawbolt, see page G128

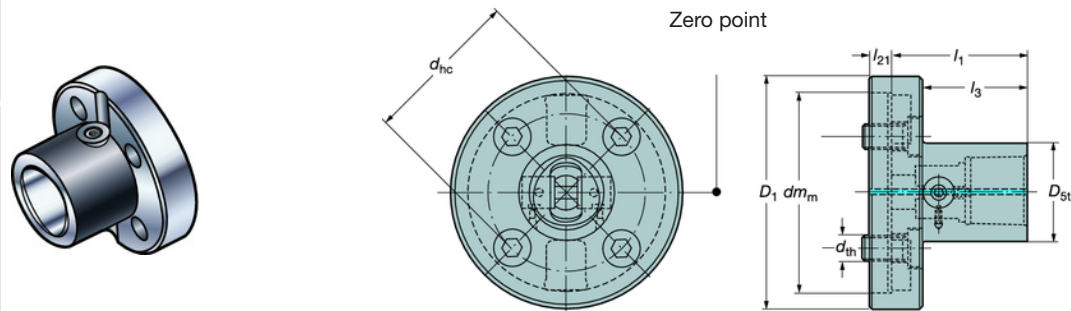


## Basic holder

DIN 2079

For manual tool change

Front clamp  
390.34704



Note! One drawbolt for each adaptor/cutting tool is required.

$l_1$  = programming length

### Metric thread

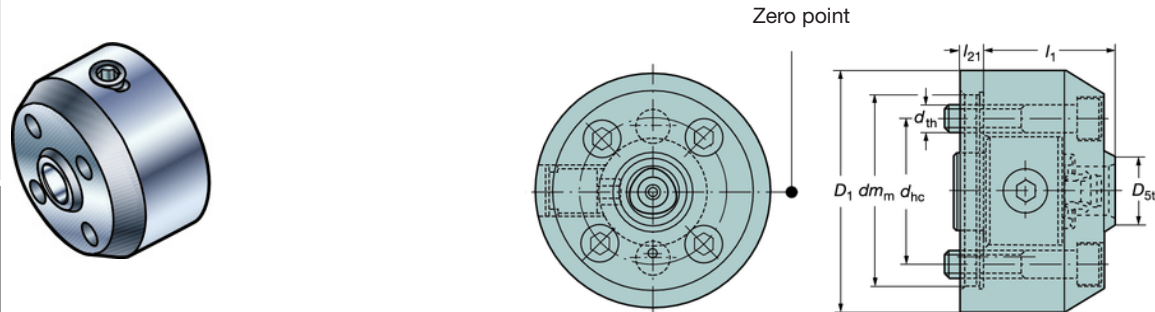
|       |               |                     |                       | Dimensions, mm |          |       |          |       |       |          |          |     |  |
|-------|---------------|---------------------|-----------------------|----------------|----------|-------|----------|-------|-------|----------|----------|-----|--|
| Taper | Coupling size | Ordering code       | Coolant <sup>1)</sup> | $d_m$          | $d_{hc}$ | $D_1$ | $D_{st}$ | $h_1$ | $l_3$ | $l_{21}$ | $d_{th}$ |     |  |
| 40    | C5            | C5-390.34704-40 075 | 1                     | 35             | 66.7     | 110   | 50       | 75    | 61    | 10       | M12      | 2.2 |  |
| 50    | C6            | C6-390.34704-50 090 | 1                     | 44             | 101.6    | 150   | 63       | 90    | 69    | 14       | M16      | 4.2 |  |
| 50    | C8            | C8-390.34704-50 100 | 1                     | 55             | 101.6    | 150   | 80       | 100   | 79    | 14       | M16      | 4.4 |  |

<sup>1)</sup> 1 = coolant through centre

DIN 2079

For manual tool change, flange mounting

Camshaft clamping  
390.34705



$l_1$  = programming length

### Metric thread

|       |               |                     |                       | Dimensions, mm |       |          |       |          |       |          |     |
|-------|---------------|---------------------|-----------------------|----------------|-------|----------|-------|----------|-------|----------|-----|
| Taper | Coupling size | Ordering code       | Coolant <sup>1)</sup> | $d_{hc}$       | $d_m$ | $d_{th}$ | $D_1$ | $D_{st}$ | $h_1$ | $l_{21}$ |     |
| 40    | C3            | C3-390.34705-40 060 | 0                     | 66.7           | 22    | M12      | 110   | 32       | 60    | 10       | 4.4 |
| 40    | C4            | C4-390.34705-40 070 | 0                     | 66.7           | 28    | M12      | 110   | 40       | 70    | 10       | 5.2 |

<sup>1)</sup> 0 = no coolant

Note! These flange mounted holders fit many standard spindle configurations. The bolt hole configurations and pilot diameter are standard 40 and 50 taper solutions for CAT V-Flange and NMTB tapers.

Note! Tighten the screw with a torque wrench. Information on page G131.  
For drawbolt, see page G128

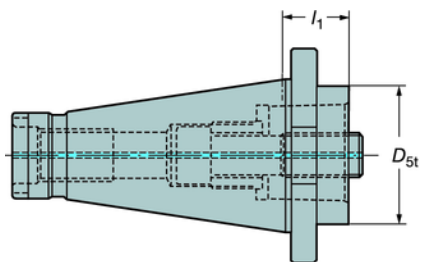
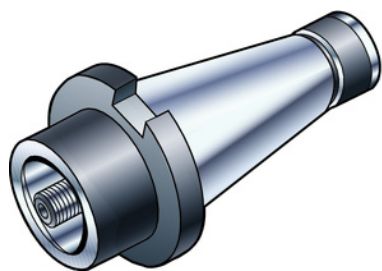




# Basic holder

NMTB

A390.00



$l_1$  = programming length

## Inch thread

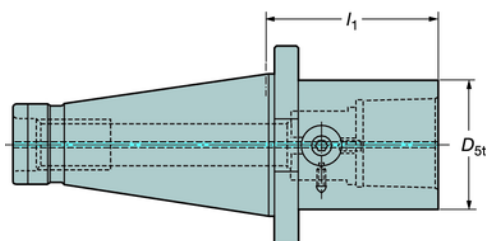
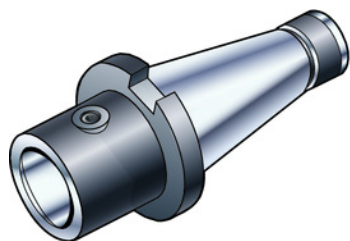
| Taper | Coupling size | Ordering code     | Coolant <sup>1)</sup> | Dimensions, inch |       |      |
|-------|---------------|-------------------|-----------------------|------------------|-------|------|
|       |               |                   |                       | $D_{st}$         | $l_1$ |      |
| 40    | C5            | C5-A390.00-40 030 | 1                     | 1.968            | 1.181 | 4.2  |
| 50    | C5            | C5-A390.00-50 070 | 1                     | 1.968            | 2.756 | 15.0 |
| 50    | C5            | C5-A390.00-50 030 | 1                     | 1.968            | 1.181 | 12.6 |
| 50    | C6            | C6-A390.00-50 030 | 1                     | 2.480            | 1.181 | 12.6 |
| 50    | C8            | C8-A390.00-50 070 | 1                     | 3.150            | 2.756 | 18.5 |

<sup>1)</sup> 1 = coolant through centre

## NMTB

Front clamp

A390.0004



Note! One drawbolt for each adaptor/cutting tool is required.

$l_1$  = programming length

## Inch thread

| Taper | Coupling size | Ordering code       | Coolant <sup>1)</sup> | Dimensions, inch |       |      |
|-------|---------------|---------------------|-----------------------|------------------|-------|------|
|       |               |                     |                       | $D_{st}$         | $l_1$ |      |
| 50    | C5            | C5-A390.0004-50 080 | 1                     | 1.968            | 3.150 | 16.5 |
| 50    | C6            | C6-A390.0004-50 085 | 1                     | 2.480            | 3.346 | 18.5 |
| 50    | C8            | C8-A390.0004-50 100 | 1                     | 3.150            | 3.937 | 24.3 |

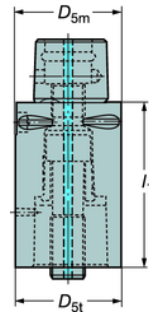
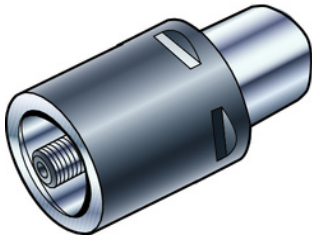
<sup>1)</sup> 1 = coolant through centre

Note! Tighten the screw with a torque wrench. Information on page G131.  
For drawbolt, see page G128



## Extension adaptor

### 391.01

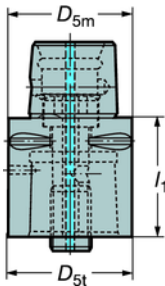
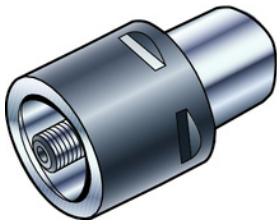

 $l_1$  = programming length

| Coupling size |           | Ordering code      | Coolant <sup>1)</sup> | Dimensions, millimeter, inch (mm, in.) |              |             |              |          |           |          |
|---------------|-----------|--------------------|-----------------------|--|--------------|-------------|--------------|----------|-----------|----------|
| Machine side  | Tool side |                    |                       | $D_{5m}$ mm                            | $D_{5m}$ in. | $D_{5t}$ mm | $D_{5t}$ in. | $l_1$ mm | $l_1$ in. | $R_{KS}$ |
| C3            | C3        | C3-391.01-32 060A  | 1                     | 32                                     | 1.260        | 32          | 1.260        | 60       | 2.362     | 0.4      |
|               |           | C3-391.01-32 080A  | 1                     | 32                                     | 1.260        | 32          | 1.260        | 80       | 3.150     | 0.5      |
| C4            | C4        | C4-391.01-40 060A  | 1                     | 40                                     | 1.575        | 40          | 1.575        | 60       | 2.362     | 0.5      |
|               |           | C4-391.01-40 080A  | 1                     | 40                                     | 1.575        | 40          | 1.575        | 80       | 3.150     | 0.7      |
| C5            | C5        | C5-391.01-50 080A  | 1                     | 50                                     | 1.968        | 50          | 1.968        | 80       | 3.150     | 1.1      |
|               |           | C5-391.01-50 100A  | 1                     | 50                                     | 1.968        | 50          | 1.968        | 100      | 3.937     | 1.4      |
| C6            | C6        | C6-391.01-63 100A  | 1                     | 63                                     | 2.480        | 63          | 2.480        | 100      | 3.937     | 2.2      |
|               |           | C6-391.01-63 140A  | 1                     | 63                                     | 2.480        | 63          | 2.480        | 140      | 5.512     | 3.1      |
| C8            | C8        | C8-391.01-80 100A  | 1                     | 80                                     | 3.150        | 80          | 3.150        | 100      | 3.937     | 3.6      |
|               |           | C8-391.01-80 125A  | 1                     | 80                                     | 3.150        | 80          | 3.150        | 125      | 4.921     | 4.6      |
| C10           | C10       | C10-391.01-100 140 | 1                     | 100                                    | 3.937        | 100         | 3.937        | 140      | 5.512     | 8.5      |

<sup>1)</sup> 1 = coolant through centre

## Short version, for segment clamping only

### 391.01



#### Note!

Not possible to use together with basic holders using centre bolt clamping.

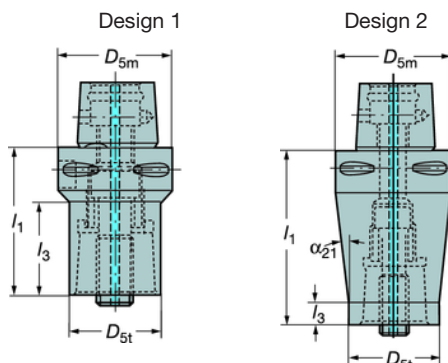
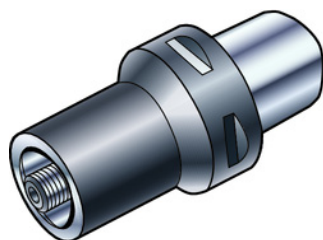
 $l_1$  = programming length

| Coupling size |           | Ordering code    | Coolant <sup>1)</sup> | Dimensions, millimeter, inch (mm, in.) |              |             |              |          |           |          |
|---------------|-----------|------------------|-----------------------|--|--------------|-------------|--------------|----------|-----------|----------|
| Machine side  | Tool side |                  |                       | $D_{5m}$ mm                            | $D_{5m}$ in. | $D_{5t}$ mm | $D_{5t}$ in. | $l_1$ mm | $l_1$ in. | $R_{KS}$ |
| C3            | C3        | C3-391.01-32 035 | 1                     | 32                                     | 1.260        | 32          | 1.260        | 35       | 1.378     | 0.2      |
| C4            | C4        | C4-391.01-40 040 | 1                     | 40                                     | 1.575        | 40          | 1.575        | 40       | 1.575     | 0.4      |
| C5            | C5        | C5-391.01-50 050 | 1                     | 50                                     | 1.968        | 50          | 1.968        | 50       | 1.968     | 0.9      |
| C6            | C6        | C6-391.01-63 060 | 1                     | 63                                     | 2.480        | 63          | 2.480        | 60       | 2.362     | 1.3      |
| C8            | C8        | C8-391.01-80 065 | 1                     | 80                                     | 3.150        | 80          | 3.150        | 65       | 2.559     | 2.3      |

<sup>1)</sup> 1 = coolant through centre


# Reduction adaptor

391.02



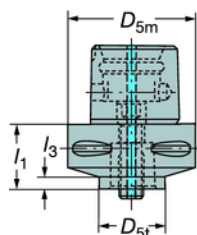
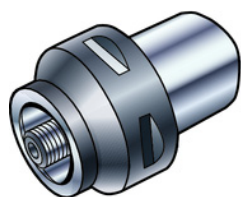
l<sub>1</sub> = programming length

| Coupling size |           |                   |                       |        | Dimensions, millimeter, inch (mm, in.) |                     |                    |                     |                   |                    |                   |                    |                 |                 |
|---------------|-----------|-------------------|-----------------------|--------|--|---------------------|--------------------|---------------------|-------------------|--------------------|-------------------|--------------------|-----------------|-----------------|
| Machine side  | Tool side | Ordering code     | Coolant <sup>1)</sup> | Design | D <sub>5m</sub> mm                     | D <sub>5m</sub> in. | D <sub>5t</sub> mm | D <sub>5t</sub> in. | l <sub>1</sub> mm | l <sub>1</sub> in. | l <sub>3</sub> mm | l <sub>3</sub> in. | α <sub>21</sub> | ⊕ <sub>KG</sub> |
| C4            | C3        | C4-391.02-32 055A | 1                     | 1      | 40                                     | 1.575               | 32                 | 1.260               | 55                | 2.165              | 31                | 1.220              |                 | 0.5             |
|               |           | C4-391.02-32 070A | 1                     | 2      | 40                                     | 1.575               | 32                 | 1.260               | 70                | 2.756              | 12                | .472               | 6.0°            | 0.6             |
| C5            | C3        | C5-391.02-32 060A | 1                     | 1      | 50                                     | 1.968               | 32                 | 1.260               | 60                | 2.362              | 34.8              | 1.370              |                 | 0.6             |
|               |           | C5-391.02-40 065A | 1                     | 1      | 50                                     | 1.968               | 40                 | 1.575               | 65                | 2.559              | 40                | 1.575              |                 | 0.8             |
|               |           | C4                | C5-391.02-40 085A     | 1      | 2                                      | 50                  | 1.968              | 40                  | 1.575             | 85                 | 3.346             | 12                 | .472            | 5.4°            |
| C6            | C3        | C6-391.02-32 070A | 1                     | 1      | 63                                     | 2.480               | 32                 | 1.260               | 70                | 2.756              | 39                | 1.535              |                 | 1.1             |
|               | C4        | C6-391.02-40 080A | 1                     | 1      | 63                                     | 2.480               | 40                 | 1.575               | 80                | 3.150              | 51.4              | 2.024              |                 | 1.2             |
|               | C5        | C6-391.02-50 080A | 1                     | 1      | 63                                     | 2.480               | 50                 | 1.968               | 80                | 3.150              | 51.5              | 2.028              |                 | 1.5             |
|               |           | C6-391.02-50 110A | 1                     | 2      | 63                                     | 2.480               | 50                 | 1.968               | 110               | 4.331              | 12                | .472               | 4.9°            | 2.2             |
| C8            | C3        | C8-391.02-32 060A | 1                     | 1      | 80                                     | 3.150               | 32                 | 1.260               | 60                | 2.362              | 29.3              | 1.154              |                 | 1.7             |
|               | C4        | C8-391.02-40 070A | 1                     | 1      | 80                                     | 3.150               | 40                 | 1.575               | 70                | 2.756              | 36.5              | 1.437              |                 | 1.9             |
|               | C5        | C8-391.02-50 080A | 1                     | 1      | 80                                     | 3.150               | 50                 | 1.968               | 80                | 3.150              | 49.3              | 1.941              |                 | 2.2             |
|               | C6        | C8-391.02-63 080A | 1                     | 1      | 80                                     | 3.150               | 63                 | 2.480               | 80                | 3.150              | 53.1              | 2.091              |                 | 2.5             |
|               |           | C8-391.02-63 120A | 1                     | 2      | 80                                     | 3.150               | 63                 | 2.480               | 120               | 4.724              | 12                | .472               |                 | 4.0             |
| C10           | C3        | C10-391.02-32 085 | 1                     | 1      | 100                                    | 3.937               | 32                 | 1.260               | 85                | 3.346              | 29.4              | 1.158              |                 | 4.0             |
|               | C4        | C10-391.02-40 090 | 1                     | 1      | 100                                    | 3.937               | 40                 | 1.575               | 90                | 3.543              | 36.7              | 1.445              |                 | 4.1             |
|               | C5        | C10-391.02-50 095 | 1                     | 1      | 100                                    | 3.937               | 50                 | 1.968               | 95                | 3.740              | 44.6              | 1.756              |                 | 4.3             |
|               | C6        | C10-391.02-63 095 | 1                     | 1      | 100                                    | 3.937               | 63                 | 2.480               | 95                | 3.740              | 48.3              | 1.902              |                 | 4.5             |
|               | C8        | C10-391.02-80 100 | 1                     | 1      | 100                                    | 3.937               | 80                 | 3.150               | 100               | 3.937              | 58.2              | 2.291              |                 | 5.1             |

1) 1 = coolant through centre

## Short version, for segment clamping only

391.02



**Note!** Not possible to use together with basic holders using centre bolt clamping.

l<sub>1</sub> = programming length

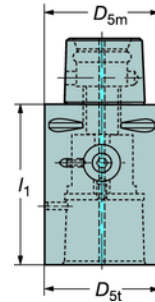
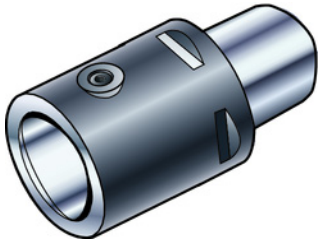
| Coupling size |           |                   |                       |        | Dimensions, millimeter, inch (mm, in.) |                     |                    |                     |                   |                    |                   |                    |                 |  |
|---------------|-----------|-------------------|-----------------------|--------|--|---------------------|--------------------|---------------------|-------------------|--------------------|-------------------|--------------------|-----------------|--|
| Machine side  | Tool side | Ordering code     | Coolant <sup>1)</sup> | Design | D <sub>5m</sub> mm                     | D <sub>5m</sub> in. | D <sub>5t</sub> mm | D <sub>5t</sub> in. | l <sub>1</sub> mm | l <sub>1</sub> in. | l <sub>3</sub> mm | l <sub>3</sub> in. | ⊕ <sub>KG</sub> |  |
| C5            | C3        | C5-391.02-32 033  | 1                     |        | 50                                     | 1.968               | 32                 | 1.260               | 33                | 1.299              | 10                | .394               | 0.5             |  |
|               | C4        | C5-391.02-40 040  | 1                     |        | 50                                     | 1.968               | 40                 | 1.575               | 40                | 1.575              | 18                | .709               | 0.6             |  |
| C6            | C3        | C6-391.02-32 032  | 1                     |        | 63                                     | 2.480               | 32                 | 1.260               | 32                | 1.260              | 6                 | .236               | 0.8             |  |
|               | C4        | C6-391.02-40 040  | 1                     |        | 63                                     | 2.480               | 40                 | 1.575               | 40                | 1.575              | 11                | .433               | 0.9             |  |
|               | C5        | C6-391.02-50 050  | 1                     |        | 63                                     | 2.480               | 50                 | 1.968               | 50                | 1.968              | 26.5              | 1.043              | 1.0             |  |
| C8            | C5        | C8-391.02-50 045  | 1                     |        | 80                                     | 3.150               | 50                 | 1.968               | 45                | 1.772              | 10                | .394               | 1.8             |  |
|               | C6        | C8-391.02-63 055  | 1                     |        | 80                                     | 3.150               | 63                 | 2.480               | 55                | 2.165              | 20                | .787               | 2.0             |  |
| C10           | C6        | C10-391.02-63 055 | 1                     |        | 100                                    | 3.937               | 63                 | 2.480               | 55                | 2.165              | 14                | .551               | 3.2             |  |
|               | C8        | C10-391.02-80 065 | 1                     |        | 100                                    | 3.937               | 80                 | 3.150               | 65                | 2.559              | 25.4              | 1.000              | 3.5             |  |

1) 1 = coolant through centre




## Front clamp extension adaptor

391.04



Note! One drawbolt for each adaptor/cutting tool is required.

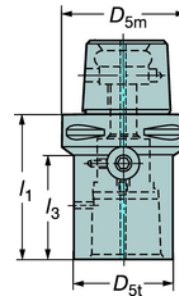
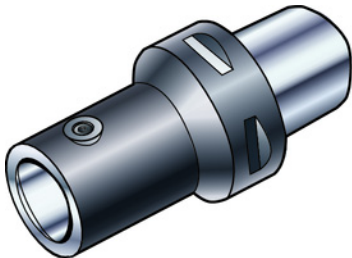
$l_1$  = programming length

| Coupling size |         |                  |                       | Dimensions, millimeter, inch (mm, in.) |                 |                |                 |             |              |   |  |
|---------------|---------|------------------|-----------------------|--|-----------------|----------------|-----------------|-------------|--------------|---|--|
| Basic holder  | Adaptor | Ordering code    | Coolant <sup>1)</sup> | $D_{5m}$<br>mm                         | $D_{5m}$<br>in. | $D_{5t}$<br>mm | $D_{5t}$<br>in. | $l_1$<br>mm | $l_1$<br>in. |  |  |
| C5            | C5      | C5-391.04-50 075 | 1                     | 50                                     | 1.968           | 50             | 1.968           | 75          | 2.953        | 1.4   |  |
| C6            | C6      | C6-391.04-63 085 | 1                     | 63                                     | 2.480           | 63             | 2.480           | 85          | 3.346        | 2.0   |  |
| C8            | C8      | C8-391.04-80 100 | 1                     | 80                                     | 3.150           | 80             | 3.150           | 100         | 3.937        | 3.8   |  |

<sup>1)</sup> 1 = coolant through centre


## Front clamp reduction adaptor

391.0204



Note! One drawbolt for each adaptor/cutting tool is required.

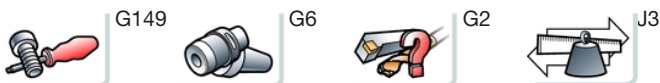
$l_1$  = programming length

| Coupling size |         |                    |                       | Dimensions, millimeter, inch (mm, in.) |                 |                |                 |             |              |             |              |   |
|---------------|---------|--------------------|-----------------------|--|-----------------|----------------|-----------------|-------------|--------------|-------------|--------------|---|
| Basic holder  | Adaptor | Ordering code      | Coolant <sup>1)</sup> | $D_{5m}$<br>mm                         | $D_{5m}$<br>in. | $D_{5t}$<br>mm | $D_{5t}$<br>in. | $l_1$<br>mm | $l_1$<br>in. | $l_3$<br>mm | $l_3$<br>in. |  |
| C6            | C5      | C6-391.0204-50 080 | 1                     | 63                                     | 2.480           | 50             | 1.968           | 80          | 3.150        | 54          | 2.126        | 1.4   |
| C8            | C5      | C8-391.0204-50 080 | 1                     | 80                                     | 3.150           | 50             | 1.968           | 80          | 3.150        | 49          | 1.929        | 2.3   |
|               | C6      | C8-391.0204-63 090 | 1                     | 80                                     | 3.150           | 63             | 2.480           | 90          | 3.543        | 63          | 2.480        | 2.3   |

<sup>1)</sup> 1 = coolant through centre

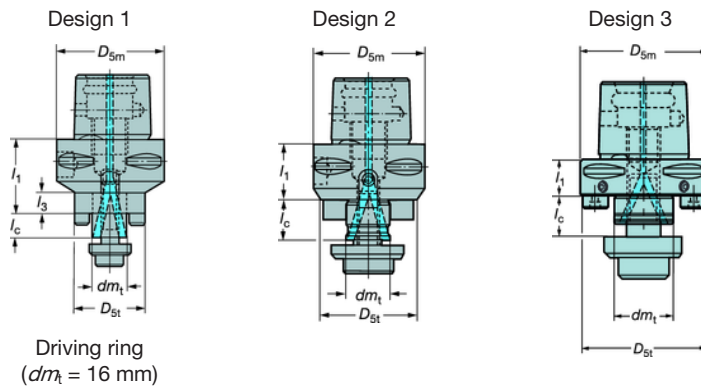
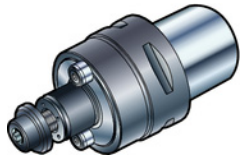
Note! Tighten the screw with a torque wrench. Information on page G131.

For drawbolt, see page G128



# Adaptor for face mills and square shoulder face mills

With coolant through arbor  
391.05C



$l_i$  = programming length

## Metric pilot

| Coupling size | Ordering code      | Coolant <sup>1)</sup> |      |   | Design | Dimensions, mm |          |          |       |       |       |                         | Balanced by design |
|---------------|--------------------|-----------------------|------|---|--------|----------------|----------|----------|-------|-------|-------|-------------------------|--------------------|
|               |                    | Entry                 | Exit |   |        | $dm_k$         | $D_{sm}$ | $D_{st}$ | $l_c$ | $l_i$ | $l_s$ | $\frac{\sigma}{K_{MG}}$ |                    |
| C3            | C3-391.05C-16 030  | 1                     | 4    | 1 | 16     | 32             | 32       | 11       | 30    | 10    | 0.3   | ⊙                       |                    |
| C4            | C4-391.05C-16 032  | 1                     | 4    | 1 | 16     | 40             | 32       | 11       | 32    | 10    | 0.3   | ⊙                       |                    |
|               | C4-391.05C-22 025  | 1                     | 4    | 2 | 22     | 40             | 40       | 16       | 25    |       | 0.4   | ⊙                       |                    |
| C5            | C5-391.05C-16 035  | 1                     | 4    | 1 | 16     | 50             | 32       | 11       | 35    | 10    | 0.6   | ⊙                       |                    |
|               | C5-391.05C-22 025  | 1                     | 4    | 3 | 22     | 50             | 50       | 16       | 25    |       | 0.6   | ⊙                       |                    |
|               | C5-391.05C-27 025  | 1                     | 4    | 3 | 27     | 50             | 56       | 18       | 25    |       | 0.7   | ⊙                       |                    |
|               | C5-391.05C-32 040  | 1                     | 4    | 2 | 32     | 50             | 63       | 20       | 40    |       | 1.2   | ⊙                       |                    |
| C6            | C6-391.05C-16 040  | 1                     | 4    | 1 | 16     | 63             | 32       | 11       | 40    | 10    | 0.9   |                         |                    |
|               | C6-391.05C-22 025  | 1                     | 4    | 3 | 22     | 63             | 55       | 16       | 25    |       | 0.9   |                         |                    |
|               | C6-391.05C-27 025  | 1                     | 4    | 3 | 27     | 63             | 63       | 18       | 25    |       | 1.0   |                         |                    |
|               | C6-391.05C-32 025  | 1                     | 4    | 3 | 32     | 63             | 65       | 20       | 25    |       | 1.1   |                         |                    |
|               | C6-391.05C-40 040  | 1                     | 4    | 2 | 40     | 63             | 70       | 23       | 40    |       | 1.6   |                         |                    |
| C8            | C8-391.05-40 030B  | 1                     | 4    | 3 | 40     | 80             | 80       | 23       | 30    |       | 2.1   |                         |                    |
|               | C8-391.05C-16 050  | 1                     | 4    | 1 | 16     | 80             | 32       | 11       | 50    | 10    | 1.6   |                         |                    |
|               | C8-391.05C-22 030  | 1                     | 4    | 3 | 22     | 80             | 55       | 16       | 30    |       | 1.8   |                         |                    |
|               | C8-391.05C-27 030  | 1                     | 4    | 3 | 27     | 80             | 65       | 18       | 30    |       | 1.9   |                         |                    |
|               | C8-391.05C-32 030  | 1                     | 4    | 3 | 32     | 80             | 79       | 20       | 30    |       | 2.0   |                         |                    |
|               | C8-391.05C-40 030  | 1                     | 4    | 3 | 40     | 80             | 80       | 23       | 30    |       | 2.1   |                         |                    |
| C10           | C10-391.05C-22 075 | 1                     | 4    | 2 | 22     | 100            | 48       | 16       | 75    | 27    | 4.1   |                         |                    |
|               | C10-391.05C-27 075 | 1                     | 4    | 2 | 27     | 100            | 60       | 18       | 75    | 29    | 4.4   |                         |                    |
|               | C10-391.05C-32 075 | 1                     | 4    | 2 | 32     | 100            | 78       | 20       | 75    | 33    | 4.9   |                         |                    |
|               | C10-391.05C-40 040 | 1                     | 4    | 3 | 40     | 100            | 100      | 23       | 40    |       | 4.0   |                         |                    |

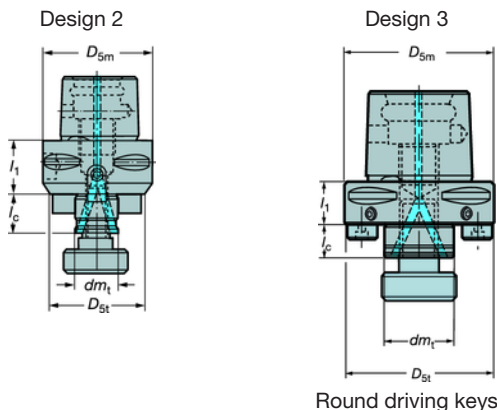
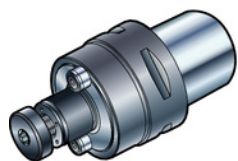
<sup>1)</sup> 0 = no coolant, 1 = coolant through centre, 4 = coolant through arbor



# Adaptor for face mills and square shoulder face mills

With coolant through arbor

A391.05C



l<sub>1</sub> = programming length

Inch pilot

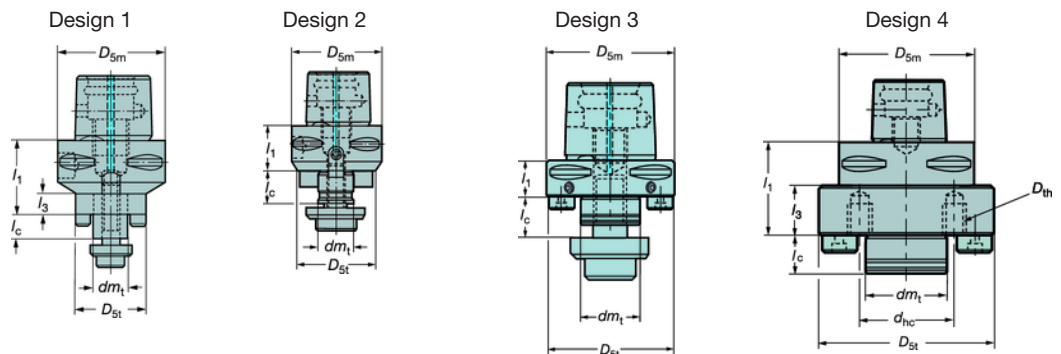
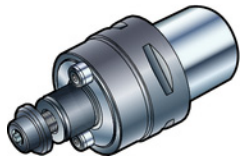
| Coupling size | Ordering code       | Coolant <sup>1)</sup> |      |   | Design | Dimensions, inch |                 |                 |                |                |               | Balanced by design |
|---------------|---------------------|-----------------------|------|---|--------|------------------|-----------------|-----------------|----------------|----------------|---------------|--------------------|
|               |                     | Entry                 | Exit |   |        | dm <sub>1</sub>  | D <sub>5m</sub> | D <sub>st</sub> | l <sub>c</sub> | l <sub>1</sub> | $\frac{D}{L}$ |                    |
| C3            | C3-A391.05C-19 030  | 1                     | 4    | 2 | .750   | 1.260            | 1.575           | .709            | 1.181          | 0.8            | ⊙             |                    |
| C4            | C4-A391.05C-19 025  | 1                     | 4    | 3 | .750   | 1.575            | 1.575           | .709            | .984           | 0.8            | ⊙             |                    |
|               | C4-A391.05C-25 035  | 1                     | 4    | 2 | 1.000  | 1.575            | 1.968           | .709            | 1.378          | 1.2            | ⊙             |                    |
| C5            | C5-A391.05C-19 025  | 1                     | 4    | 3 | .750   | 1.968            | 1.968           | .709            | .984           | 1.4            | ⊙             |                    |
|               | C5-A391.05C-25 025  | 1                     | 4    | 3 | 1.000  | 1.968            | 2.126           | .709            | .984           | 1.4            | ⊙             |                    |
|               | C5-A391.05C-31 040  | 1                     | 4    | 2 | 1.250  | 1.968            | 2.480           | .709            | 1.575          | 2.6            | ⊙             |                    |
| C6            | C5-A391.05C-38 045  | 1                     | 4    | 2 | 1.500  | 1.968            | 3.150           | .906            | 1.772          | 4.0            | ⊙             |                    |
|               | C6-A391.05C-19 030  | 1                     | 4    | 3 | .750   | 2.480            | 2.047           | .709            | 1.181          | 2.2            |               |                    |
|               | C6-A391.05C-25 030  | 1                     | 4    | 3 | 1.000  | 2.480            | 2.480           | .709            | 1.181          | 2.4            |               |                    |
|               | C6-A391.05C-31 030  | 1                     | 4    | 3 | 1.250  | 2.480            | 2.559           | .709            | 1.181          | 2.6            |               |                    |
| C8            | C6-A391.05C-38 045  | 1                     | 4    | 2 | 1.500  | 2.480            | 3.150           | .906            | 1.772          | 4.4            |               |                    |
|               | C8-A391.05C-19 030  | 1                     | 4    | 3 | .750   | 3.150            | 2.047           | .709            | 1.181          | 4.0            |               |                    |
|               | C8-A391.05C-25 030  | 1                     | 4    | 3 | 1.000  | 3.150            | 2.480           | .709            | 1.181          | 4.2            |               |                    |
|               | C8-A391.05C-31 030  | 1                     | 4    | 3 | 1.250  | 3.150            | 2.835           | .709            | 1.181          | 4.2            |               |                    |
| C10           | C8-A391.05C-38 030  | 1                     | 4    | 3 | 1.500  | 3.150            | 3.150           | .906            | 1.181          | 4.6            |               |                    |
|               | C10-A391.05C-19 075 | 1                     | 4    | 2 | .750   | 3.937            | 1.693           | .709            | 2.953          | 8.9            |               |                    |
|               | C10-A391.05C-25 075 | 1                     | 4    | 2 | 1.000  | 3.937            | 1.968           | .709            | 2.953          | 9.1            |               |                    |
|               | C10-A391.05C-38 040 | 1                     | 4    | 3 | 1.500  | 3.937            | 3.937           | .906            | 1.575          | 8.6            |               |                    |

<sup>1)</sup> 0 = no coolant, 1 = coolant through centre, 4 = coolant through arbor



# Adaptor for face mills and square shoulder face mills

391.05



Driving ring  
( $dm_1 = 16$ )

Round driving keys

$l_1$  = programming length

## Metric pilot

| Coupling size | Ordering code                   | Design | Coolant <sup>1)</sup> | Dimensions, mm |          |          |     |       |          |          |       |                | Balanced by design |
|---------------|---------------------------------|--------|-----------------------|----------------|----------|----------|-----|-------|----------|----------|-------|----------------|--------------------|
|               |                                 |        |                       | $dm_1$         | $D_{sm}$ | $D_{st}$ | $l$ | $l_1$ | $D_{th}$ | $d_{nc}$ | $l_3$ | $\frac{m}{kg}$ |                    |
| C3            | C3-391.05-16 030                | 1      | 1                     | 16             | 32       | 32       | 11  | 30    |          |          | 10    | 0.3            | ⊙                  |
| C4            | C4-391.05-16 032                | 1      | 1                     | 16             | 40       | 32       | 11  | 32    |          |          | 10    | 0.3            | ⊙                  |
|               | C4-391.05-16 055                | 1      | 1                     | 16             | 40       | 32       | 11  | 55    |          |          | 33    | 0.4            | ⊙                  |
|               | C4-391.05-22 025                | 2      | 1                     | 22             | 40       | 40       | 16  | 25    |          |          |       | 0.4            | ⊙                  |
|               | C4-391.05-22 055                | 2      | 1                     | 22             | 40       | 40       | 16  | 55    |          |          |       | 0.7            | ⊙                  |
| C5            | C5-391.05-16 035                | 1      | 1                     | 16             | 50       | 32       | 11  | 35    |          |          | 10    | 0.6            | ⊙                  |
|               | C5-391.05-16 070                | 1      | 1                     | 16             | 50       | 32       | 11  | 70    |          |          | 44.8  | 0.7            | ⊙                  |
|               | C5-391.05-22 025A               | 3      | 1                     | 22             | 50       | 50       | 16  | 25    |          |          |       | 0.6            | ⊙                  |
|               | C5-391.05-22 070                | 2      | 1                     | 22             | 50       | 40       | 16  | 70    |          |          | 47    | 1.0            | ⊙                  |
|               | C5-391.05-27 025A               | 3      | 1                     | 27             | 50       | 56       | 18  | 25    |          |          |       | 0.7            | ⊙                  |
|               | C5-391.05-32 040                | 2      | 1                     | 32             | 50       | 63       | 20  | 40    |          |          |       | 1.2            | ⊙                  |
| C6            | C6-391.05-16 040                | 1      | 1                     | 16             | 63       | 32       | 11  | 40    |          |          | 10    | 0.9            |                    |
|               | C6-391.05-22 025A               | 3      | 1                     | 22             | 63       | 55       | 16  | 25    |          |          |       | 0.9            |                    |
|               | C6-391.05-27 025A               | 3      | 1                     | 27             | 63       | 63       | 18  | 25    |          |          |       | 1.0            |                    |
|               | C6-391.05-32 025A               | 3      | 1                     | 32             | 63       | 65       | 20  | 25    |          |          |       | 1.1            |                    |
|               | C6-391.05-40040A                | 2      | 1                     | 40             | 63       | 70       | 23  | 40    |          |          |       | 1.6            |                    |
| C8            | C8-391.05-16 050                | 1      | 1                     | 16             | 80       | 32       | 11  | 50    |          |          | 10    | 1.6            |                    |
|               | C8-391.05-22 030A               | 3      | 1                     | 22             | 80       | 55       | 16  | 30    |          |          |       | 1.8            |                    |
|               | C8-391.05-27 030A               | 3      | 1                     | 27             | 80       | 65       | 18  | 30    |          |          |       | 1.9            |                    |
|               | C8-391.05-32 030A               | 3      | 1                     | 32             | 80       | 72       | 20  | 30    |          |          |       | 2.0            |                    |
|               | C8-391.05-40 030B <sup>2)</sup> | 3      | 1                     | 40             | 80       | 80       | 23  | 30    |          |          |       | 2.1            |                    |
|               | C8-391.05-60 060                | 4      | 0                     | 60             | 80       | 130      | 29  | 60    | M16      | 101.6    |       | 5.3            |                    |
| C10           | C10-391.05-40 040               | 3      | 1                     | 40             | 100      | 90       | 23  | 40    |          |          |       | 0.5            | 4.0                |
|               | C10-391.05-60 075               | 4      | 0                     | 60             | 100      | 130      | 29  | 75    | M16      | 101.6    | 37.8  | 7.9            |                    |

1) 0 = no coolant, 1 = coolant through centre

2) Coolant for boring

All holders are delivered with a standard screw without hole for coolant.

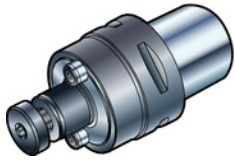
For cutters with coolant channels a new screw with radial coolant holes is necessary and can be ordered separately.

See page G152

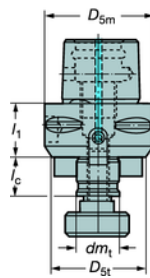


## Adaptor for face mills and square shoulder face mills

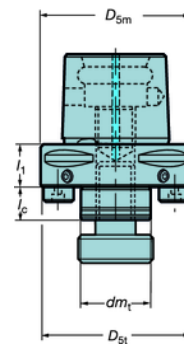
A391.05



Design 2

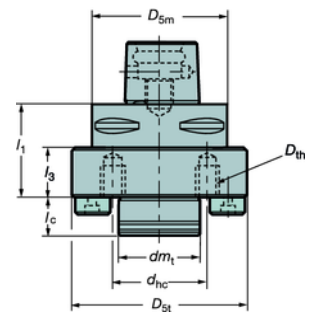


Design 3



Round driving keys

Design 4

 $l_1$  = programming length

Inch pilot

| Coupling size | Ordering code      | Design | Coolant <sup>1)</sup> | Dimensions, inch |          |          |       |       |           |          |       |                    | Balanced by design |   |
|---------------|--------------------|--------|-----------------------|------------------|----------|----------|-------|-------|-----------|----------|-------|--------------------|--------------------|---|
|               |                    |        |                       | $dm_1$           | $D_{5m}$ | $D_{st}$ | $l_c$ | $l_1$ | $D_{th}$  | $d_{hc}$ | $l_3$ | $\frac{\sigma}{E}$ |                    |   |
| C3            | C3-A391.05-19 030  | 2      | 1                     | .750             | 1.260    | 1.575    | .709  | 1.181 |           |          |       |                    | 2.0                | ⊙ |
| C4            | C4-A391.05-19 025A | 3      | 1                     | .750             | 1.575    | 1.575    | .709  | .984  |           |          |       |                    | 0.8                | ⊙ |
|               | C4-A391.05-19 055  | 2      | 1                     | .750             | 1.575    | 1.575    | .709  | 2.165 |           |          |       |                    | 2.9                | ⊙ |
|               | C4-A391.05-25 035  | 2      | 1                     | 1.000            | 1.575    | 1.968    | .709  | 1.378 |           |          |       |                    | 2.9                | ⊙ |
| C5            | C5-A391.05-19 025A | 3      | 1                     | .750             | 1.968    | 1.968    | .709  | .984  |           |          |       |                    | 1.4                | ⊙ |
|               | C5-A391.05-19 070  | 2      | 1                     | .750             | 1.968    | 1.693    | .709  | 2.756 |           |          |       |                    | 5.3                | ⊙ |
|               | C5-A391.05-25 025A | 3      | 1                     | 1.000            | 1.968    | 2.126    | .709  | .984  |           |          |       |                    | 1.4                | ⊙ |
|               | C5-A391.05-31 040  | 2      | 1                     | 1.250            | 1.968    | 2.480    | .709  | 1.575 |           |          |       |                    | 5.7                | ⊙ |
|               | C5-A391.05-38 045  | 2      | 1                     | 1.500            | 1.968    | 3.150    | .906  | 1.772 |           |          |       |                    | 8.8                | ⊙ |
| C6            | C6-A391.05-19 030A | 3      | 1                     | .750             | 2.480    | 2.047    | .709  | 1.181 |           |          |       |                    | 2.2                |   |
|               | C6-A391.05-25 030A | 3      | 1                     | 1.000            | 2.480    | 2.480    | .709  | 1.181 |           |          |       |                    | 2.4                |   |
|               | C6-A391.05-31 030A | 3      | 1                     | 1.250            | 2.480    | 2.559    | .709  | 1.181 |           |          |       |                    | 2.6                |   |
|               | C6-A391.05-38 045  | 2      | 1                     | 1.500            | 2.480    | 3.150    | .906  | 1.772 |           |          |       |                    | 9.7                |   |
|               | C6-A391.05-50 060  | 4      | 0                     | 2.000            | 3.150    | 5.118    | 1.142 | 2.362 | 5/8"11UNC | 4.000    |       |                    | 12.6               |   |
| C8            | C8-A391.05-19 030A | 3      | 1                     | .750             | 3.150    | 2.047    | .709  | 1.181 |           |          |       |                    | 4.0                |   |
|               | C8-A391.05-25 030A | 3      | 1                     | 1.000            | 3.150    | 2.480    | .709  | 1.181 |           |          |       |                    | 4.2                |   |
|               | C8-A391.05-31 030A | 3      | 1                     | 1.250            | 3.150    | 2.835    | .709  | 1.181 |           |          |       |                    | 4.2                |   |
|               | C8-A391.05-38 030A | 3      | 1                     | 1.500            | 3.150    | 3.150    | .906  | 1.181 |           |          |       |                    | 4.6                |   |
|               | C8-A391.05-50 060  | 4      | 0                     | 2.000            | 3.150    | 5.118    | 1.142 | 2.362 | 5/8"11UNC | 4.000    |       |                    | 13.2               |   |
| C10           | C10-A391.05-38 040 | 3      | 1                     | 1.500            | 3.937    | 3.543    | .906  | 1.575 |           |          |       | .020               | 8.6                |   |
|               | C10-A391.05-63 075 | 4      | 0                     | 2.500            | 3.937    | 5.118    | 1.142 | 2.953 | 5/8"11UNC | 4.000    | 1.488 |                    | 17.6               |   |

<sup>1)</sup> 0 = no coolant, 1 = coolant through centre

All holders are delivered with a standard screw without hole for coolant.

For cutters with coolant channels a new screw with radial coolant holes is necessary and can be ordered separately.

See page G151



G151



G6



G2



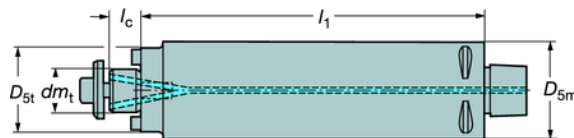
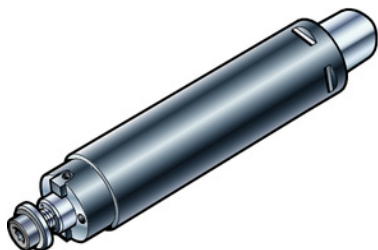
J3



# Dampened adaptor for face mills and square shoulder face mills

With coolant through arbor

391.05CD

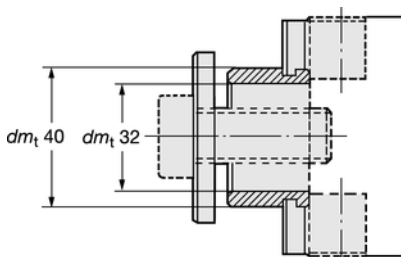


$l_1$  = programming length

## Metric pilot

| Coupling size | Ordering code      | Coolant <sup>1)</sup> |      | Dimensions, mm |          |          |       |       |           |                |
|---------------|--------------------|-----------------------|------|----------------|----------|----------|-------|-------|-----------|----------------|
|               |                    | Entry                 | Exit | $dm_t$         | $D_{5m}$ | $D_{st}$ | $l_c$ | $l_1$ | $n_{max}$ | $\frac{R}{mm}$ |
| C4            | C4-391.05CD-16 130 | 1                     | 4    | 16             | 40       | 40       | 11    | 130   | 10000     | 1.5            |
|               | C4-391.05CD-16 200 | 1                     | 4    | 16             | 40       | 40       | 11    | 200   | 7000      | 2.1            |
| C5            | C5-391.05CD-22 180 | 1                     | 4    | 22             | 50       | 48       | 16    | 180   | 10000     | 3.4            |
|               | C5-391.05CD-22 270 | 1                     | 4    | 22             | 50       | 48       | 16    | 270   | 7000      | 4.6            |
| C6            | C6-391.05CD-22 200 | 1                     | 4    | 22             | 63       | 48       | 16    | 200   | 10000     | 5.7            |
|               | C6-391.05CD-22 310 | 1                     | 4    | 22             | 63       | 48       | 16    | 310   | 7000      | 9.1            |
|               | C6-391.05CD-27 200 | 1                     | 4    | 27             | 63       | 55       | 18    | 200   | 10000     | 5.8            |
|               | C6-391.05CD-27 310 | 1                     | 4    | 27             | 63       | 55       | 18    | 310   | 7000      | 9.2            |
| C8            | C8-391.05CD-27 220 | 1                     | 4    | 27             | 80       | 55       | 18    | 220   | 8000      | 9.9            |
|               | C8-391.05CD-27 360 | 1                     | 4    | 27             | 80       | 55       | 18    | 360   | 5000      | 16.2           |
|               | C8-391.05CD-32 220 | 1                     | 4    | 32             | 80       | 70       | 20    | 220   | 8000      | 10.0           |
|               | C8-391.05CD-32 360 | 1                     | 4    | 32             | 80       | 70       | 20    | 360   | 5000      | 16.3           |

<sup>1)</sup> 1 = coolant through centre, 4 = coolant through arbor

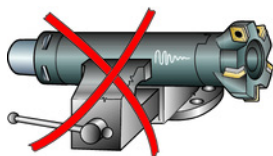


Sleeve set

Sleeve set to allow 40 mm pilot diameter to be mounted on adaptor C8-391.05CD-32 xxx.

Ordering code: 5638 035-011

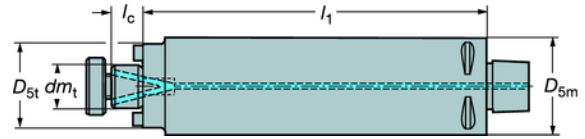
For proper assembly fixtures, see information in Metal cutting technical guide



## Dampened adaptor for face mills and square shoulder face mills

With coolant through arbor

A391.05CD



Silent Tools®

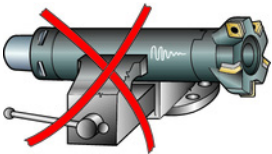
$l_1$  = programming len

Inch pilot

| Coupling size | Ordering code       | Coolant <sup>1)</sup> |      | Dimensions, inch |        |          |          |       |        |           |                 |
|---------------|---------------------|-----------------------|------|------------------|--------|----------|----------|-------|--------|-----------|-----------------|
|               |                     | Entry                 | Exit | $dm_m$           | $dm_t$ | $D_{sm}$ | $D_{st}$ | $l_c$ | $l_1$  | $n_{max}$ | $\frac{m}{lbs}$ |
| C5            | C5-A391.05CD-19 180 | 1                     | 4    | 1.378            | .750   | 1.968    | 1.575    | .709  | 7.087  | 10000     | 7.5             |
|               | C5-A391.05CD-19 270 | 1                     | 4    | 1.378            | .750   | 1.968    | 1.575    | .709  | 10.630 | 7000      | 10.1            |
| C6            | C6-A391.05CD-25 200 | 1                     | 4    | 1.732            | 1.000  | 2.480    | 2.165    | .710  | 7.874  | 10000     | 12.6            |
|               | C6-A391.05CD-25 310 | 1                     | 4    | 1.732            | 1.000  | 2.480    | 2.165    | .710  | 12.205 | 7000      | 20.1            |
| C8            | C8-A391.05CD-38 220 | 1                     | 4    | 2.165            | 1.500  | 3.150    | 2.756    | .910  | 8.661  | 8000      | 22.0            |
|               | C8-A391.05CD-38 360 | 1                     | 4    | 2.165            | 1.500  | 3.150    | 2.756    | .910  | 14.173 | 5000      | 35.9            |

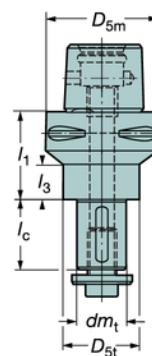
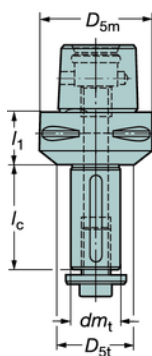
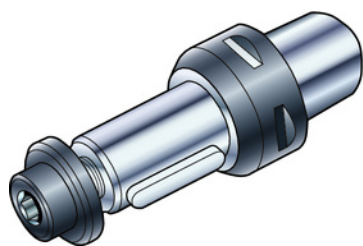
1) 1 = coolant through centre, 4 = coolant through arbor

For proper assembly fixtures, see information in Metal cutting technical guide



# Adaptor for side and face mills

391.10



Coupling size C10

Spacing collars must be ordered separately.

$l_1$  = programming length

## Metric pilot

| Coupling size | Ordering code     | Coolant <sup>1)</sup> | Dimensions, mm |          |          |       |       |       |       | $\frac{\text{kg}}{\text{kg}}$ |
|---------------|-------------------|-----------------------|----------------|----------|----------|-------|-------|-------|-------|-------------------------------|
|               |                   |                       | $dm_t$         | $D_{5m}$ | $D_{5t}$ | $l_c$ | $l_1$ | $l_3$ | $l_2$ |                               |
| C3            | C3-391.10-16 020  | 0                     | 16             | 32       | 28       | 30    | 20    | 0.2   |       |                               |
| C4            | C4-391.10-16 025  | 0                     | 16             | 40       | 28       | 30    | 25    | 0.3   |       |                               |
|               | C4-391.10-22 025  | 0                     | 22             | 40       | 36       | 40    | 25    | 0.4   |       |                               |
|               | C4-391.10-27 025  | 0                     | 27             | 40       | 40       | 60    | 25    | 0.6   |       |                               |
| C5            | C5-391.10-22 025  | 0                     | 22             | 50       | 36       | 40    | 25    | 0.7   |       |                               |
|               | C5-391.10-27 025  | 0                     | 27             | 50       | 43       | 60    | 25    | 0.8   |       |                               |
|               | C5-391.10-32 025  | 0                     | 32             | 50       | 50       | 60    | 25    | 0.9   |       |                               |
| C6            | C6-391.10-16 030  | 0                     | 16             | 63       | 28       | 30    | 30    | 0.9   |       |                               |
|               | C6-391.10-22 030  | 0                     | 22             | 63       | 36       | 40    | 30    | 1     |       |                               |
|               | C6-391.10-27 030  | 0                     | 27             | 63       | 43       | 60    | 30    | 1.2   |       |                               |
|               | C6-391.10-32 025  | 0                     | 32             | 63       | 48       | 60    | 25    | 1.2   |       |                               |
|               | C6-391.10-40 025  | 0                     | 40             | 63       | 56       | 60    | 25    | 1.4   |       |                               |
| C8            | C8-391.10-22 040  | 0                     | 22             | 80       | 36       | 40    | 40    | 2     |       |                               |
|               | C8-391.10-27 030  | 0                     | 27             | 80       | 43       | 60    | 30    | 2.1   |       |                               |
|               | C8-391.10-32 030  | 0                     | 32             | 80       | 48       | 60    | 30    | 2.2   |       |                               |
|               | C8-391.10-40 030  | 0                     | 40             | 80       | 56       | 60    | 30    | 2.5   |       |                               |
|               | C8-391.10-50 030  | 0                     | 50             | 80       | 70       | 60    | 30    | 2.8   |       |                               |
|               | C8-391.10-60 030  | 0                     | 60             | 80       | 80       | 60    | 30    | 3.4   |       |                               |
| C10           | C10-391.10-32 065 | 0                     | 32             | 100      | 48       | 60    | 65    | 20    | 4.3   |                               |
|               | C10-391.10-40 070 | 0                     | 40             | 100      | 56       | 60    | 70    | 25    | 4.8   |                               |
|               | C10-391.10-50 055 | 0                     | 50             | 100      | 84       | 80    | 55    | 10    | 5.8   |                               |
|               | C10-391.10-60 040 | 0                     | 60             | 100      | 70       | 90    | 40    | 5.4   |       |                               |

<sup>1)</sup> 0 = no coolant

## Spacing collars

| For milling adaptor 391.10<br>ISO 839/2 1977 | Ordering code          | For adaptor  | Dimensions, mm |     |     |     |     |     |     |     |     |      |      |      |    |    |
|--|------------------------|--------------|----------------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|----|----|
|  |                        |              | $dm_t$         | 0.5 | 1.0 | 1.5 | 2.0 | 3.0 | 4.0 | 5.0 | 6.0 | 10.0 | 20.0 | 30.0 |    |    |
|  | <b>Spacing collars</b> |              |                |     |     |     |     |     |     |     |     |      |      |      |    |    |
|  | 5549 091-011           | 391.10-16... | 16             | 25  | 25  | 25  | 26  | 26  | 26  | 26  | 26  | 26   | 26   | 26   | 26 | —  |
|  | 5549 091-021           | 391.10-22... | 22             | 33  | 33  | 33  | 34  | 34  | 34  | 34  | 34  | 34   | 34   | 34   | 34 | 34 |
|  | 5549 091-031           | 391.10-27... | 27             | 39  | 39  | 39  | 40  | 40  | 40  | 40  | 40  | 40   | 40   | 40   | 40 | 40 |
|  | 5549 091-041           | 391.10-32... | 32             | 45  | 45  | 45  | 46  | 46  | 46  | 46  | 46  | 46   | 46   | 46   | 46 | 46 |
|  | 5549 091-051           | 391.10-40... | 40             | 54  | 54  | 54  | 55  | 55  | 55  | 55  | 55  | 55   | 55   | 55   | 55 | 55 |
|  | 5549 091-061           | 391.10-50... | 50             | 67  | 67  | —   | 68  | 68  | 68  | 68  | 68  | 68   | 68   | 68   | 68 | 68 |
| 5549 091-071                                 | 391.10-60...           | 60           | 84             | 84  | —   | 84  | 84  | 84  | 84  | 84  | 84  | 84   | 84   | 84   | 84 |    |



G149



G6



G2

D  
E  
F  
G  
J

ROT - ENG

TOOLING SYSTEMS

Coromant Capto® - Adaptors for rotating tools

# Adaptor for side and face mills

## A391.10

Spacing collars must be ordered separately.

$l_1$  = programming length

### Inch pilot

| Coupling size | Ordering code     | Coolant <sup>1)</sup> | Dimensions, inch |          |          |       |       |      |  |
|---------------|-------------------|-----------------------|------------------|----------|----------|-------|-------|------|--|
|               |                   |                       | $dm_t$           | $D_{5m}$ | $D_{5t}$ | $l_c$ | $l_1$ |      |  |
| C4            | C4-A391.10-25 025 | 0                     | 1.000            | 1.575    | 1.575    | 1.969 | .984  | 2.4  |  |
|               | C4-A391.10-31 035 | 0                     | 1.250            | 1.575    | 1.969    | 2.362 | 1.378 | 4.0  |  |
| C5            | C5-A391.10-25 025 | 0                     | 1.000            | 1.968    | 1.693    | 1.969 | .984  | 3.7  |  |
|               | C5-A391.10-31 025 | 0                     | 1.250            | 1.968    | 1.969    | 2.362 | .984  | 4.4  |  |
|               | C5-A391.10-38 030 | 0                     | 1.500            | 1.968    | 2.244    | 2.362 | 1.181 | 5.5  |  |
| C6            | C6-A391.10-25 030 | 0                     | 1.000            | 2.480    | 1.693    | 1.969 | 1.181 | 5.3  |  |
|               | C6-A391.10-31 025 | 0                     | 1.250            | 2.480    | 1.890    | 2.362 | .984  | 6.2  |  |
|               | C6-A391.10-38 025 | 0                     | 1.500            | 2.480    | 2.205    | 2.362 | .984  | 6.8  |  |
| C8            | C8-A391.10-25 030 | 0                     | 1.000            | 3.150    | 1.693    | 1.969 | 1.181 | 9.7  |  |
|               | C8-A391.10-31 030 | 0                     | 1.250            | 3.150    | 1.890    | 2.362 | 1.181 | 10.1 |  |
|               | C8-A391.10-38 030 | 0                     | 1.500            | 3.150    | 2.205    | 2.362 | 1.181 | 12.1 |  |
|               | C8-A391.10-50 030 | 0                     | 2.000            | 3.150    | 2.756    | 2.362 | 1.181 | 13.7 |  |
|               | C8-A391.10-63 040 | 0                     | 2.500            | 3.150    | 3.346    | 2.362 | 1.575 | 17.4 |  |

<sup>1)</sup> 0 = no coolant

### Spacing collars

| Inch sizes<br>For milling adaptor A391.10 | For adaptor       | Dimensions, inch |       |          |       |       |       |       |       |       |       |       |
|---|-------------------|------------------|-------|----------|-------|-------|-------|-------|-------|-------|-------|-------|
|   |                   | $dm_t$           | $D_1$ | $B_{KW}$ | $l_2$ |       |       |       |       |       |       |       |
|   |                   |                  |       |          | 1/4   | 3/8   | 7/16  | 1/2   | 5/8   | 3/4   | 1     | 1 1/2 |
|   | Cx-A391.10-25 xxx | 1.000            | 1.500 | 1/4      | -     | -     | SC407 | SC408 | SC410 | -     | -     | -     |
|   | Cx-A391.10-31 xxx | 1.250            | 1.750 | 5/16     | -     | SC506 | -     | SC508 | -     | -     | SC516 | -     |
|   | Cx-A391.10-38 xxx | 1.500            | 2.125 | 3/8      | SC604 | SC606 | -     | SC608 | -     | -     | SC616 | -     |
|   | Cx-A391.10-50 xxx | 2.000            | 2.750 | 1/2      | -     | SC806 | -     | -     | -     | SC812 | SC816 | -     |
|   | Cx-A391.10-63 xxx | 2.500            | 3.250 | 5/8      | SC904 | SC906 | -     | -     | -     | SC912 | SC916 | SC920 |

G149

G6

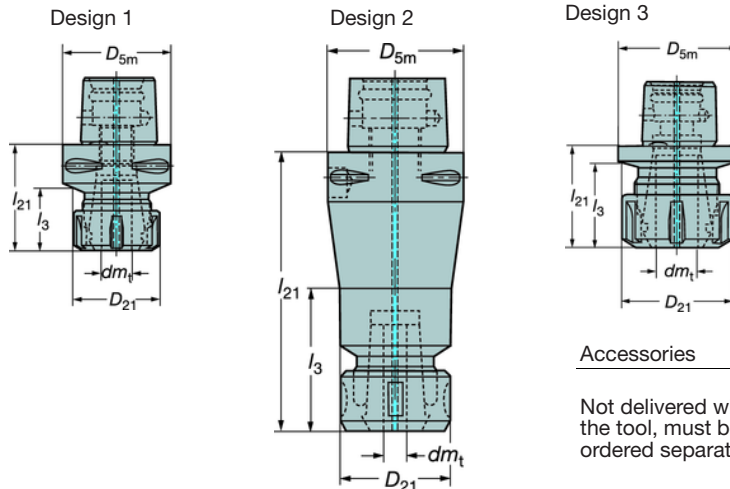
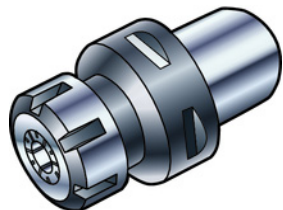
G2

G 36

# ER collet chuck adaptor

391.14

DIN6499



|  |                      |                                 |
|--|----------------------|---------------------------------|
| Accessories  | Open style<br>393.14 | Metallic sealed style<br>393.15 |
| Not delivered with the tool, must be ordered separately. |                      |                                 |
| See page   | G138                 | G139                            |

| Coupling size | Design           | Ordering code    | Coolant <sup>1)</sup> | Dimensions, millimeter, inch (mm, in.) |                     |                        |                        |                         |                         |                    |                     |                   |                    |                    |                     |                 |       |   |  | Collet size | Balanced by design |
|---------------|------------------|------------------|-----------------------|--|---------------------|------------------------|------------------------|-------------------------|-------------------------|--------------------|---------------------|-------------------|--------------------|--------------------|---------------------|-----------------|-------|---|--|-------------|--------------------|
|               |                  |                  |                       | D <sub>5m</sub> mm                     | D <sub>5m</sub> in. | dm <sub>1</sub> min mm | dm <sub>1</sub> max mm | dm <sub>1</sub> min in. | dm <sub>1</sub> max in. | D <sub>21</sub> mm | D <sub>21</sub> in. | l <sub>3</sub> mm | l <sub>3</sub> in. | l <sub>21</sub> mm | l <sub>21</sub> in. | ⊕ <sub>kg</sub> |       |   |  |             |                    |
| C3            | 1                | C3-391.14-16 045 | 1                     | 32                                     | 1.260               | 1                      | 10                     | .039                    | .394                    | 28                 | 1.102               | 29                | 1.142              | 45                 | 1.772               | 0.2             | ER 16 | ⊕ |  |             |                    |
|               | 3                | C3-391.14-20 036 | 1                     | 32                                     | 1.260               | 1                      | 13                     | .039                    | .512                    | 35                 | 1.378               | 36                | 1.417              | 36                 | 1.417               | 0.3             | ER 20 | ⊕ |  |             |                    |
|               | 1                | C3-391.14-20 045 | 1                     | 32                                     | 1.260               | 1                      | 13                     | .039                    | .512                    | 35                 | 1.378               | 45                | 1.772              | 45                 | 1.772               | 0.3             | ER 20 | ⊕ |  |             |                    |
| C4            | 2                | C4-391.14-16 070 | 1                     | 40                                     | 1.575               | 1                      | 10                     | .039                    | .394                    | 28                 | 1.102               | 44                | 1.732              | 70                 | 2.756               | 0.4             | ER 16 | ⊕ |  |             |                    |
|               | 3                | C4-391.14-20 035 | 1                     | 40                                     | 1.575               | 1                      | 13                     | .039                    | .512                    | 35                 | 1.378               | 27                | 1.063              | 35                 | 1.378               | 0.2             | ER 20 | ⊕ |  |             |                    |
|               | 1                | C4-391.14-20 052 | 1                     | 40                                     | 1.575               | 1                      | 13                     | .039                    | .512                    | 35                 | 1.378               | 31                | 1.220              | 52                 | 2.047               | 0.3             | ER 20 | ⊕ |  |             |                    |
|               | 3                | C4-391.14-25 038 | 1                     | 40                                     | 1.575               | 1                      | 16                     | .039                    | .630                    | 42                 | 1.654               |                   |                    | 38                 | 1.496               | 0.3             | ER 25 | ⊕ |  |             |                    |
|               | 1                | C4-391.14-25 052 | 1                     | 40                                     | 1.575               | 1                      | 16                     | .039                    | .630                    | 42                 | 1.654               | 52                | 2.047              | 52                 | 2.047               | 0.4             | ER 25 | ⊕ |  |             |                    |
|               | 1                | C4-391.14-32 054 | 1                     | 40                                     | 1.575               | 2                      | 20                     | .079                    | .787                    | 50                 | 1.968               | 54                | 2.126              | 54                 | 2.126               | 0.5             | ER 32 | ⊕ |  |             |                    |
| C5            | 2                | C5-391.14-16 100 | 1                     | 50                                     | 1.968               | 1                      | 10                     | .039                    | .394                    | 28                 | 1.102               | 60                | 2.362              | 100                | 3.937               | 0.9             | ER 16 | ⊕ |  |             |                    |
|               | 1                | C5-391.14-20 055 | 1                     | 50                                     | 1.968               | 1                      | 13                     | .039                    | .512                    | 35                 | 1.378               | 31                | 1.220              | 55                 | 2.165               | 0.5             | ER 20 | ⊕ |  |             |                    |
|               | 1                | C5-391.14-25 055 | 1                     | 50                                     | 1.968               | 1                      | 16                     | .039                    | .630                    | 42                 | 1.654               | 33                | 1.299              | 55                 | 2.165               | 0.5             | ER 25 | ⊕ |  |             |                    |
|               | 3                | C5-391.14-32 045 | 1                     | 50                                     | 1.968               | 2                      | 20                     | .079                    | .787                    | 50                 | 1.968               |                   |                    | 45                 | 1.772               | 0.5             | ER 32 | ⊕ |  |             |                    |
|               | 1                | C5-391.14-32 057 | 1                     | 50                                     | 1.968               | 2                      | 20                     | .079                    | .787                    | 50                 | 1.968               | 57                | 2.244              | 57                 | 2.244               | 0.6             | ER 32 | ⊕ |  |             |                    |
| C6            | 2                | C6-391.14-16 100 | 1                     | 63                                     | 2.480               | 1                      | 10                     | .039                    | .394                    | 28                 | 1.102               | 60                | 2.362              | 100                | 3.937               | 1.3             | ER 16 | ⊕ |  |             |                    |
|               | 1                | C6-391.14-20 060 | 1                     | 63                                     | 2.480               | 1                      | 13                     | .039                    | .512                    | 35                 | 1.378               | 31                | 1.220              | 60                 | 2.362               | 0.8             | ER 20 | ⊕ |  |             |                    |
|               | 1                | C6-391.14-25 060 | 1                     | 63                                     | 2.480               | 1                      | 16                     | .039                    | .630                    | 42                 | 1.654               | 33                | 1.299              | 60                 | 2.362               | 0.9             | ER 25 | ⊕ |  |             |                    |
|               | 2                | C6-391.14-25 100 | 1                     | 63                                     | 2.480               | 1                      | 16                     | .039                    | .630                    | 42                 | 1.654               | 75                | 2.953              | 100                | 3.937               | 1.3             | ER 25 | ⊕ |  |             |                    |
|               | 1                | C6-391.14-32 060 | 1                     | 63                                     | 2.480               | 2                      | 20                     | .079                    | .787                    | 50                 | 1.968               | 35                | 1.378              | 60                 | 2.362               | 0.9             | ER 32 | ⊕ |  |             |                    |
|               | 2                | C6-391.14-32 100 | 1                     | 63                                     | 2.480               | 2                      | 20                     | .079                    | .787                    | 50                 | 1.968               | 75                | 2.953              | 100                | 3.937               | 1.5             | ER 32 | ⊕ |  |             |                    |
| C8            | 1                | C6-391.14-40 065 | 1                     | 63                                     | 2.480               | 3                      | 26                     | .118                    | 1.024                   | 63                 | 2.480               | 65                | 2.559              | 65                 | 2.559               | 1.1             | ER 40 | ⊕ |  |             |                    |
|               | 1                | C8-391.14-20 065 | 1                     | 80                                     | 3.150               | 1                      | 13                     | .039                    | .512                    | 35                 | 1.378               | 30                | 1.181              | 65                 | 2.559               | 1.4             | ER 20 | ⊕ |  |             |                    |
|               | 1                | C8-391.14-25 070 | 1                     | 80                                     | 3.150               | 1                      | 16                     | .039                    | .630                    | 42                 | 1.654               | 32                | 1.260              | 70                 | 2.756               | 1.6             | ER 25 | ⊕ |  |             |                    |
|               | 1                | C8-391.14-32 070 | 1                     | 80                                     | 3.150               | 2                      | 20                     | .079                    | .787                    | 50                 | 1.968               | 35                | 1.378              | 70                 | 2.756               | 1.8             | ER 32 | ⊕ |  |             |                    |
|               | 1                | C8-391.14-40 070 | 1                     | 80                                     | 3.150               | 3                      | 26                     | .118                    | 1.024                   | 63                 | 2.480               | 38                | 1.496              | 70                 | 2.756               | 2.0             | ER 40 | ⊕ |  |             |                    |
| 1             | C8-391.14-50 080 | 1                | 80                    | 3.150                                  | 6                   | 34                     | .236                   | 1.339                   | 78                      | 3.071              | 50                  | 1.968             | 80                 | 3.150              | 2.3                 | ER 50           | ⊕     |   |  |             |                    |

## Long version

| Coupling size | Design | Ordering code     | Coolant <sup>1)</sup> | Dimensions, millimeter, inch (mm, in.) |                     |                        |                        |                         |                         |                    |                     |                   |                    |                    |                     |                 |       |   |  | Collet size | Balanced by design |
|---------------|--------|-------------------|-----------------------|--|---------------------|------------------------|------------------------|-------------------------|-------------------------|--------------------|---------------------|-------------------|--------------------|--------------------|---------------------|-----------------|-------|---|--|-------------|--------------------|
|               |        |                   |                       | D <sub>5m</sub> mm                     | D <sub>5m</sub> in. | dm <sub>1</sub> min mm | dm <sub>1</sub> max mm | dm <sub>1</sub> min in. | dm <sub>1</sub> max in. | D <sub>21</sub> mm | D <sub>21</sub> in. | l <sub>3</sub> mm | l <sub>3</sub> in. | l <sub>21</sub> mm | l <sub>21</sub> in. | ⊕ <sub>kg</sub> |       |   |  |             |                    |
| C5            | 2      | C5-391.14-20 100  | 1                     | 50                                     | 1.968               | 1                      | 13                     | .039                    | .512                    | 35                 | 1.378               | 55                | 2.165              | 100                | 3.937               | 1.0             | ER 20 | ⊕ |  |             |                    |
|               | 2      | C5-391.14-20 130  | 1                     | 50                                     | 1.968               | 1                      | 13                     | .039                    | .512                    | 35                 | 1.378               | 55                | 2.165              | 130                | 5.118               | 1.3             | ER 20 | ⊕ |  |             |                    |
|               | 2      | C5-391.14-25 100  | 1                     | 50                                     | 1.968               | 1                      | 16                     | .039                    | .630                    | 42                 | 1.654               | 65                | 2.559              | 100                | 3.937               | 1.1             | ER 25 | ⊕ |  |             |                    |
|               | 1      | C5-391.14-32 100  | 1                     | 50                                     | 1.968               | 1                      | 16                     | .039                    | .630                    | 50                 | 1.968               | 100               | 3.937              | 100                | 3.937               | 1.3             | ER 32 | ⊕ |  |             |                    |
| C6            | 2      | C6-391.14-25 130  | 1                     | 63                                     | 2.480               | 1                      | 16                     | .039                    | .630                    | 42                 | 1.654               | 65                | 2.559              | 130                | 5.118               | 1.9             | ER 25 | ⊕ |  |             |                    |
|               | 2      | C6-391.14-25 160  | 1                     | 63                                     | 2.480               | 1                      | 16                     | .039                    | .630                    | 42                 | 1.654               | 65                | 2.559              | 160                | 6.299               | 2.5             | ER 25 | ⊕ |  |             |                    |
|               | 2      | C6-391.14-32 130  | 1                     | 63                                     | 2.480               | 2                      | 20                     | .079                    | .787                    | 50                 | 1.968               | 75                | 2.953              | 130                | 5.118               | 2.2             | ER 32 | ⊕ |  |             |                    |
|               | 1      | C6-391.14-40 130  | 1                     | 63                                     | 2.480               | 3                      | 26                     | .118                    | 1.024                   | 63                 | 2.480               | 130               | 5.118              | 130                | 5.118               | 2.8             | ER 40 | ⊕ |  |             |                    |
| C8            | 2      | C8-391.14-32 160  | 1                     | 80                                     | 3.150               | 2                      | 20                     | .079                    | .787                    | 50                 | 1.968               | 75                | 2.953              | 160                | 6.299               | 4.1             | ER 32 | ⊕ |  |             |                    |
|               | 2      | C8-391.14-40 160  | 1                     | 80                                     | 3.150               | 3                      | 26                     | .118                    | 1.024                   | 63                 | 2.480               | 95                | 3.740              | 160                | 6.299               | 4.6             | ER 40 | ⊕ |  |             |                    |
| C10           | 2      | C10-391.14-32 160 | 1                     | 100                                    | 3.937               | 2                      | 20                     | .079                    | .787                    | 50                 | 1.968               | 75                | 2.953              | 160                | 6.299               | 5.7             | ER 32 | ⊕ |  |             |                    |
|               | 2      | C10-391.14-40 160 | 1                     | 100                                    | 3.937               | 3                      | 26                     | .118                    | 1.024                   | 63                 | 2.480               | 95                | 3.740              | 160                | 6.299               | 5.9             | ER 40 | ⊕ |  |             |                    |
|               | 2      | C10-391.14-50 160 | 1                     | 100                                    | 3.937               | 6                      | 34                     | .236                    | 1.339                   | 78                 | 3.071               | 100               | 3.937              | 160                | 6.299               | 6.6             | ER 50 | ⊕ |  |             |                    |

1) 1 = coolant through centre



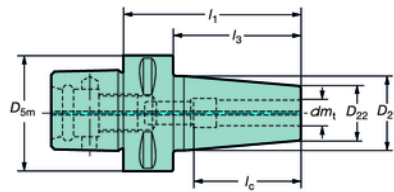
# Coromant Capto® shrink fit adaptor

For cylindrical shanks

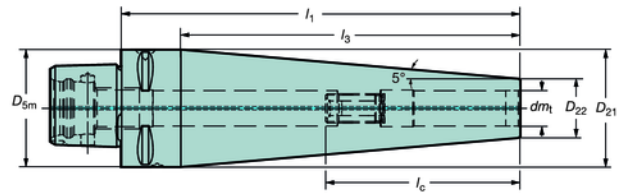
391.19



Design 1  
Short design



Design 2  
Conical design



Metric bore

| Coupling size    | Ordering code     | Design           | Coolant <sup>1)</sup> | Dimensions, mm |        |          |          |           |           |       |       |                |
|------------------|-------------------|------------------|-----------------------|----------------|--------|----------|----------|-----------|-----------|-------|-------|----------------|
|                  |                   |                  |                       | $D_{5m}$       | $dm_1$ | $D_{21}$ | $D_{22}$ | $l_c$ min | $l_c$ max | $l_1$ | $l_3$ | $\sigma_{HVT}$ |
| C3               | C3-391.19-06 118  | 2                | 1                     | 32             | 6      | 32       | 14       | 26        | 36        | 118   | 103   | 0.4            |
|                  | C3-391.19-08 107  | 2                | 1                     | 32             | 8      | 32       | 16       | 26        | 36        | 107   | 92    | 0.4            |
|                  | C3-391.19-10 095  | 2                | 1                     | 32             | 10     | 32       | 18       | 31        | 41        | 95    | 80    | 0.4            |
|                  | C3-391.19-12 084  | 2                | 1                     | 32             | 12     | 32       | 20       | 36        | 46        | 84    | 69    | 0.4            |
| C4               | C4-391.19-06 075  | 1                | 1                     | 40             | 6      | 27       | 20       | 26        | 36        | 75    | 55    | 0.4            |
|                  | C4-391.19-08 075  | 1                | 1                     | 40             | 8      | 27       | 20       | 26        | 36        | 75    | 55    | 0.4            |
|                  | C4-391.19-10 075  | 1                | 1                     | 40             | 10     | 32       | 24       | 31        | 41        | 75    | 55    | 0.5            |
|                  | C4-391.19-12 075  | 1                | 1                     | 40             | 12     | 32       | 24       | 36        | 46        | 75    | 55    | 0.5            |
|                  | C4-391.19-12 135  | 2                | 1                     | 40             | 12     | 40       | 20       | 36        | 46        | 135   | 115   | 0.8            |
|                  | C4-391.19-14 080  | 1                | 1                     | 40             | 14     | 34       | 27       | 36        | 46        | 80    | 60    | 0.5            |
|                  | C4-391.19-16 080  | 1                | 1                     | 40             | 16     | 34       | 27       | 39        | 49        | 80    | 60    | 0.5            |
|                  | C4-391.19-16 112  | 2                | 1                     | 40             | 16     | 40       | 24       | 39        | 49        | 112   | 92    | 0.7            |
|                  | C4-391.19-18 080  | 1                | 1                     | 40             | 18     | 42       | 33       | 39        | 49        | 80    |       | 0.7            |
|                  | C4-391.19-20 085  | 1                | 1                     | 40             | 20     | 42       | 33       | 41        | 51        | 85    |       | 0.7            |
|                  | C4-391.19-20 089  | 2                | 1                     | 40             | 20     | 40       | 28       | 41        | 51        | 89    | 69    | 0.6            |
|                  | C5                | C5-391.19-06 075 | 1                     | 1              | 50     | 6        | 27       | 20        | 26        | 36    | 75    | 55             |
| C5-391.19-08 075 |                   | 1                | 1                     | 50             | 8      | 27       | 20       | 26        | 36        | 75    | 55    | 0.6            |
| C5-391.19-10 075 |                   | 1                | 1                     | 50             | 10     | 32       | 24       | 31        | 41        | 75    | 55    | 0.7            |
| C5-391.19-12 075 |                   | 1                | 1                     | 50             | 12     | 32       | 24       | 36        | 46        | 75    | 55    | 0.6            |
| C5-391.19-14 080 |                   | 1                | 1                     | 50             | 14     | 34       | 27       | 36        | 46        | 80    | 60    | 0.7            |
| C5-391.19-16 080 |                   | 1                | 1                     | 50             | 16     | 34       | 27       | 39        | 49        | 80    | 60    | 0.7            |
| C5-391.19-18 080 |                   | 1                | 1                     | 50             | 18     | 42       | 33       | 39        | 49        | 80    | 60    | 0.9            |
| C5-391.19-20 085 |                   | 1                | 1                     | 50             | 20     | 42       | 33       | 41        | 51        | 85    | 65    | 0.9            |
| C5-391.19-20 146 |                   | 2                | 1                     | 50             | 20     | 50       | 28       | 41        | 51        | 146   | 126   | 1.4            |
| C5-391.19-25 090 |                   | 1                | 1                     | 50             | 25     | 53       | 44       | 47        | 57        | 90    |       | 1.2            |
| C5-391.19-25 118 | 2                 | 1                | 50                    | 25             | 50     | 33       | 47       | 57        | 118       | 98    | 1.2   |                |
| C6               | C6-391.19-06 080  | 1                | 1                     | 63             | 6      | 27       | 20       | 26        | 36        | 80    | 58    | 0.9            |
|                  | C6-391.19-08 080  | 1                | 1                     | 63             | 8      | 27       | 20       | 26        | 36        | 80    | 58    | 0.9            |
|                  | C6-391.19-10 080  | 1                | 1                     | 63             | 10     | 32       | 24       | 31        | 41        | 80    | 58    | 1.0            |
|                  | C6-391.19-12 080  | 1                | 1                     | 63             | 12     | 32       | 24       | 36        | 46        | 80    | 58    | 1.0            |
|                  | C6-391.19-14 085  | 1                | 1                     | 63             | 14     | 34       | 27       | 36        | 46        | 85    | 63    | 1.1            |
|                  | C6-391.19-16 085  | 1                | 1                     | 63             | 16     | 34       | 27       | 39        | 49        | 85    | 63    | 1.1            |
|                  | C6-391.19-18 085  | 1                | 1                     | 63             | 18     | 42       | 33       | 39        | 49        | 85    | 63    | 1.3            |
|                  | C6-391.19-20 085  | 1                | 1                     | 63             | 20     | 42       | 33       | 41        | 51        | 85    | 63    | 1.2            |
|                  | C6-391.19-25 090  | 1                | 1                     | 63             | 25     | 53       | 44       | 47        | 57        | 90    | 68    | 1.5            |
|                  | C6-391.19-32 095  | 1                | 1                     | 63             | 32     | 53       | 44       | 51        | 61        | 95    | 73    | 1.3            |
| C8               | C8-391.19-10 090  | 1                | 1                     | 80             | 10     | 32       | 24       | 31        | 41        | 90    | 60    | 2.0            |
|                  | C8-391.19-12 090  | 1                | 1                     | 80             | 12     | 32       | 24       | 36        | 46        | 90    | 60    | 2.0            |
|                  | C8-391.19-16 095  | 1                | 1                     | 80             | 16     | 34       | 27       | 39        | 49        | 95    | 65    | 2.0            |
|                  | C8-391.19-20 095  | 1                | 1                     | 80             | 20     | 42       | 33       | 41        | 51        | 95    | 65    | 2.1            |
|                  | C8-391.19-25 100  | 1                | 1                     | 80             | 25     | 53       | 44       | 47        | 57        | 100   | 70    | 2.5            |
| C10              | C10-391.19-12 095 | 1                | 1                     | 100            | 12     | 32       | 24       | 36        | 46        | 95    | 59    | 3.6            |
|                  | C10-391.19-16 100 | 1                | 1                     | 100            | 16     | 34       | 27       | 39        | 49        | 100   | 64    | 3.6            |
|                  | C10-391.19-20 100 | 1                | 1                     | 100            | 20     | 42       | 33       | 41        | 51        | 100   | 64    | 3.7            |
|                  | C10-391.19-25 110 | 1                | 1                     | 100            | 25     | 53       | 44       | 47        | 57        | 110   | 74    | 4.2            |

<sup>1)</sup> 1 = coolant through centre



G159



G6

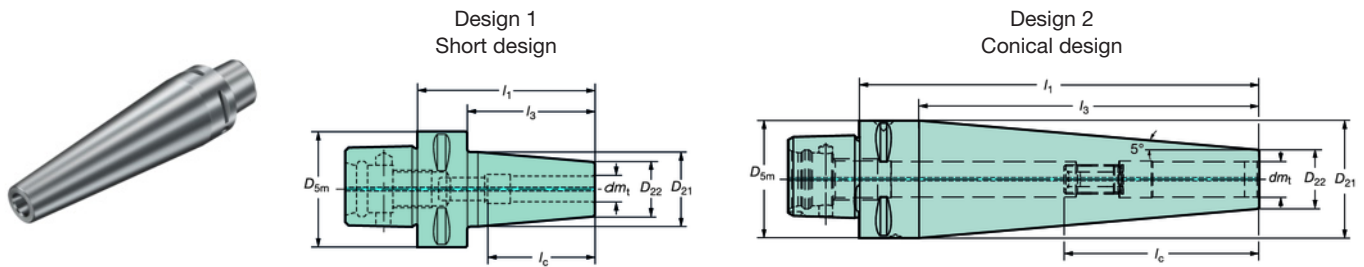


G2

# Coromant Capto® shrink fit adaptor

For cylindrical shanks

391.19



Inch bore

| Coupling size | Ordering code      | Design | Coolant <sup>1)</sup> | Dimensions, inch |                 |                 |                 |                    |                    |                |                |                  |  |
|---------------|--------------------|--------|-----------------------|------------------|-----------------|-----------------|-----------------|--------------------|--------------------|----------------|----------------|------------------|--|
|               |                    |        |                       | D <sub>5m</sub>  | dm <sub>1</sub> | D <sub>21</sub> | D <sub>22</sub> | l <sub>c</sub> min | l <sub>c</sub> max | l <sub>1</sub> | l <sub>3</sub> | ⌀ <sub>Lbs</sub> |  |
| C3            | C3-A391.19-06 116  | 2      | 1                     | 1.260            | .250            | 1.260           | .567            | 1.024              | 1.417              | 4.567          | 3.976          | .44              |  |
|               | C3-A391.19-09 098  | 2      | 1                     | 1.260            | .375            | 1.260           | .689            | 1.220              | 1.614              | 3.858          | 3.268          | .40              |  |
|               | C3-A391.19-12 080  | 2      | 1                     | 1.260            | .500            | 1.260           | .815            | 1.417              | 1.811              | 3.150          | 2.559          | .35              |  |
| C4            | C4-A391.19-12 131  | 2      | 1                     | 1.575            | .500            | 1.575           | .815            | 1.417              | 1.811              | 5.158          | 4.370          | .80              |  |
|               | C4-A391.19-15 112  | 2      | 1                     | 1.575            | .625            | 1.575           | .941            | 1.535              | 1.929              | 4.409          | 3.622          | .74              |  |
|               | C4-A391.19-19 094  | 2      | 1                     | 1.575            | .750            | 1.575           | 1.067           | 1.614              | 2.008              | 3.701          | 2.913          | .63              |  |
| C5            | C5-A391.19-19 151  | 2      | 1                     | 1.968            | .750            | 1.968           | 1.067           | 1.614              | 2.008              | 5.945          | 5.158          | 1.44             |  |
|               | C5-A391.19-25 115  | 2      | 1                     | 1.968            | 1.000           | 1.968           | 1.315           | 1.850              | 2.244              | 4.528          | 3.740          | 1.83             |  |
| C6            | C6-A391.19-09 080  | 1      | 1                     | 2.480            | .375            | 1.260           | .945            | 1.220              | 1.614              | 3.150          | 2.284          | 1.00             |  |
|               | C6-A391.19-12 080  | 1      | 1                     | 2.480            | .500            | 1.260           | .945            | 1.417              | 1.811              | 3.150          | 2.284          | 1.00             |  |
|               | C6-A391.19-15 085  | 1      | 1                     | 2.480            | .625            | 1.339           | 1.063           | 1.535              | 1.929              | 3.346          | 2.480          | 1.06             |  |
|               | C6-A391.19-19 085  | 1      | 1                     | 2.480            | .750            | 1.654           | 1.299           | 1.614              | 2.008              | 3.346          | 2.480          | 1.20             |  |
| C8            | C8-A391.19-09 090  | 1      | 1                     | 3.150            | .375            | 1.260           | .945            | 1.220              | 1.614              | 3.543          | 2.362          | 2.00             |  |
|               | C8-A391.19-12 090  | 1      | 1                     | 3.150            | .500            | 1.260           | .945            | 1.417              | 1.811              | 3.543          | 2.362          | 2.00             |  |
|               | C8-A391.19-15 095  | 1      | 1                     | 3.150            | .625            | 1.339           | 1.063           | 1.535              | 1.929              | 3.740          | 2.559          | 2.05             |  |
|               | C8-A391.19-19 095  | 1      | 1                     | 3.150            | .750            | 1.654           | 1.299           | 1.614              | 2.008              | 3.740          | 2.559          | 2.18             |  |
| C10           | C10-A391.19-09 095 | 1      | 1                     | 3.937            | .375            | 1.260           | .945            | 1.220              | 1.614              | 3.740          | 2.323          | 3.59             |  |
|               | C10-A391.19-12 095 | 1      | 1                     | 3.937            | .500            | 1.260           | .945            | 1.417              | 1.811              | 3.740          | 2.323          | 3.57             |  |
|               | C10-A391.19-15 100 | 1      | 1                     | 3.937            | .625            | 1.339           | 1.063           | 1.535              | 1.929              | 3.937          | 2.520          | 3.64             |  |
|               | C10-A391.19-19 100 | 1      | 1                     | 3.937            | .750            | 1.654           | 1.299           | 1.614              | 2.008              | 3.937          | 2.520          | 3.77             |  |

<sup>1)</sup> 1 = coolant through centre

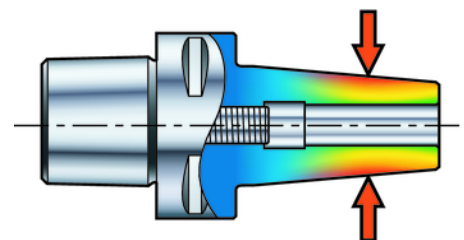
The cylindrical tool shank should be kept free from dirt and burrs before mounting into the adaptor to maintain a safe grip and precision. It should be mounted without use of any collets.

Note: Tolerance on tool shank diameter must be h6, or closer.

### Heating equipment

- Controlled heat from the shrink fit machine expands inner diameter of the tool holder bore
- Tool shank inserted into adaptor
- Natural cooling contracts the bore to grip tool with high clamping force for strong tool holding and safe machining

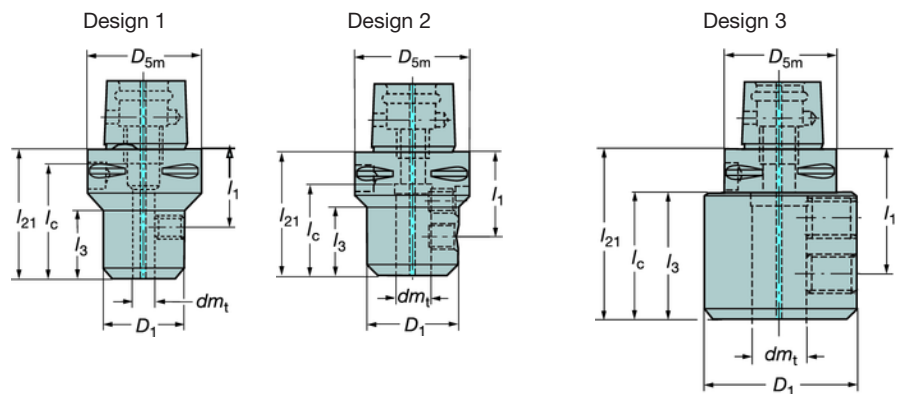
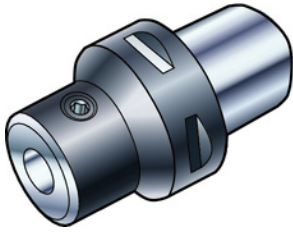
Shrink fit adaptors are an essential link in the machining chain: High technology machines, secure adaptors and productive tools



## Weldon shank adaptor

For shanks according to DIN 6535-HB

391.20



$l_1$  = programming length

### Metric bore

| Coupling size | Ordering code     | Design | Coolant <sup>1)</sup> | Dimensions, mm |        |       |       |       |          |       |          |   | Balanced by design |
|---------------|-------------------|--------|-----------------------|----------------|--------|-------|-------|-------|----------|-------|----------|---|--------------------|
|               |                   |        |                       | $D_{5m}$       | $dm_1$ | $D_1$ | $h_1$ | $l_3$ | $l_{21}$ | $l_c$ | $l_{KB}$ |   |                    |
| C3            | C3-391.20-06 045A | 1      | 1                     | 32             | 6      | 25    | 28    | 27.5  | 46       | 37    | 0.3      | ⊙ |                    |
|               | C3-391.20-08 045A | 1      | 1                     | 32             | 8      | 28    | 28    | 29    | 46       | 37    | 0.3      | ⊙ |                    |
|               | C3-391.20-10 050  | 1      | 1                     | 32             | 10     | 35    | 30    | 35    | 50       | 41    | 0.4      | ⊙ |                    |
|               | C3-391.20-12 055  | 1      | 1                     | 32             | 12     | 42    | 32.5  | 40    | 55       | 48    | 0.3      | ⊙ |                    |
| C4            | C4-391.20-06 050  | 1      | 1                     | 40             | 6      | 25    | 32    | 25.5  | 50       | 40    | 0.4      | ⊙ |                    |
|               | C4-391.20-08 050  | 1      | 1                     | 40             | 8      | 28    | 32    | 26.5  | 50       | 40    | 0.4      | ⊙ |                    |
|               | C4-391.20-10 050A | 1      | 1                     | 40             | 10     | 35    | 30    | 29.6  | 51       | 41    | 0.5      | ⊙ |                    |
|               | C4-391.20-12 055A | 1      | 1                     | 40             | 12     | 42    | 33.5  | 36    | 56       | 46    | 0.6      | ⊙ |                    |
|               | C4-391.20-14 055  | 1      | 1                     | 40             | 14     | 44    | 35    | 32.5  | 55       | 48    | 0.6      | ⊙ |                    |
|               | C4-391.20-16 055  | 1      | 1                     | 40             | 16     | 48    | 31    | 35    | 55       | 50    | 0.7      | ⊙ |                    |
| C5            | C5-391.20-06 050  | 1      | 1                     | 50             | 6      | 25    | 32    | 25.5  | 50       | 39    | 0.6      | ⊙ |                    |
|               | C5-391.20-08 050  | 1      | 1                     | 50             | 8      | 28    | 32    | 26    | 50       | 39    | 0.7      | ⊙ |                    |
|               | C5-391.20-10 055  | 1      | 1                     | 50             | 10     | 35    | 35    | 27.5  | 55       | 44    | 0.7      | ⊙ |                    |
|               | C5-391.20-12 060  | 1      | 1                     | 50             | 12     | 42    | 37.5  | 36    | 60       | 49    | 0.9      | ⊙ |                    |
|               | C5-391.20-14 060  | 1      | 1                     | 50             | 14     | 44    | 37.5  | 37    | 60       | 49    | 0.8      | ⊙ |                    |
|               | C5-391.20-16 060  | 1      | 1                     | 50             | 16     | 48    | 36    | 39    | 60       | 53    | 1.0      | ⊙ |                    |
|               | C5-391.20-18 060  | 1      | 1                     | 50             | 18     | 50    | 36    |       | 60       | 53    | 1.0      | ⊙ |                    |
|               | C5-391.20-20 060  | 1      | 1                     | 50             | 20     | 52    | 35    | 40    | 60       | 54    | 1.0      | ⊙ |                    |
|               | C5-391.20-25 080  | 3      | 1                     | 50             | 25     | 65    | 56    | 60    | 80       | 60    | 1.8      | ⊙ |                    |
| C6            | C6-391.20-06 055  | 1      | 1                     | 63             | 6      | 25    | 37    | 25    | 55       | 41    | 0.9      |   |                    |
|               | C6-391.20-08 055  | 1      | 1                     | 63             | 8      | 28    | 37    | 26    | 55       | 41    | 0.9      |   |                    |
|               | C6-391.20-10 060  | 1      | 1                     | 63             | 10     | 35    | 40    | 30    | 60       | 46    | 1.0      |   |                    |
|               | C6-391.20-12 060  | 1      | 1                     | 63             | 12     | 42    | 37.5  | 33    | 60       | 46    | 1.1      |   |                    |
|               | C6-391.20-14 060  | 1      | 1                     | 63             | 14     | 44    | 37.5  | 33.5  | 60       | 46    | 1.1      |   |                    |
|               | C6-391.20-16 065  | 1      | 1                     | 63             | 16     | 48    | 41    | 35.5  | 65       | 51    | 1.2      |   |                    |
|               | C6-391.20-18 065  | 1      | 1                     | 63             | 18     | 50    | 41    | 39    | 65       | 51    | 1.2      |   |                    |
|               | C6-391.20-20 065  | 1      | 1                     | 63             | 20     | 52    | 40    | 37.5  | 65       | 54    | 1.5      |   |                    |
|               | C6-391.20-25 080  | 1      | 1                     | 63             | 25     | 65    | 56    | 58    | 80       | 60    | 1.9      |   |                    |
|               | C6-391.20-32 090  | 3      | 1                     | 63             | 32     | 72    | 66    | 68    | 90       | 64    | 2.4      |   |                    |
|               | C6-391.20-40 100  | 3      | 1                     | 63             | 40     | 90    | 70    | 77    | 100      | 74    | 3.7      |   |                    |
| C8            | C8-391.20-06 070  | 1      | 1                     | 80             | 6      | 25    | 52    | 27    | 70       | 59    | 2.1      |   |                    |
|               | C8-391.20-08 070  | 1      | 1                     | 80             | 8      | 28    | 52    | 28    | 70       | 59    | 2.1      |   |                    |
|               | C8-391.20-10 070  | 1      | 1                     | 80             | 10     | 35    | 50    | 29.5  | 70       | 59    | 2.2      |   |                    |
|               | C8-391.20-12 070  | 1      | 1                     | 80             | 12     | 42    | 47.5  | 31    | 70       | 59    | 2.2      |   |                    |
|               | C8-391.20-14 070  | 1      | 1                     | 80             | 14     | 44    | 47.5  | 31.6  | 70       | 59    | 2.3      |   |                    |
|               | C8-391.20-16 070  | 1      | 1                     | 80             | 16     | 48    | 46    | 32.5  | 70       | 59    | 2.3      |   |                    |
|               | C8-391.20-18 070  | 1      | 1                     | 80             | 18     | 50    | 46    | 33    | 70       | 59    | 2.3      |   |                    |
|               | C8-391.20-20 070  | 1      | 1                     | 80             | 20     | 52    | 45    | 35    | 70       | 54    | 2.4      |   |                    |
|               | C8-391.20-25 080  | 2      | 1                     | 80             | 25     | 65    | 56    | 53.7  | 80       | 60    | 2.3      |   |                    |
|               | C8-391.20-32 080  | 2      | 1                     | 80             | 32     | 72    | 56    | 53.7  | 80       | 64    | 2.9      |   |                    |
|               | C8-391.20-40 110  | 3      | 1                     | 80             | 40     | 90    | 80    | 79    | 110      | 74    | 4.5      |   |                    |
|               | C8-391.20-50 120  | 3      | 1                     | 80             | 50     | 100   | 85    | 89    | 120      | 84    | 5.5      |   |                    |

<sup>1)</sup> 1 = coolant through centre



G156



G6

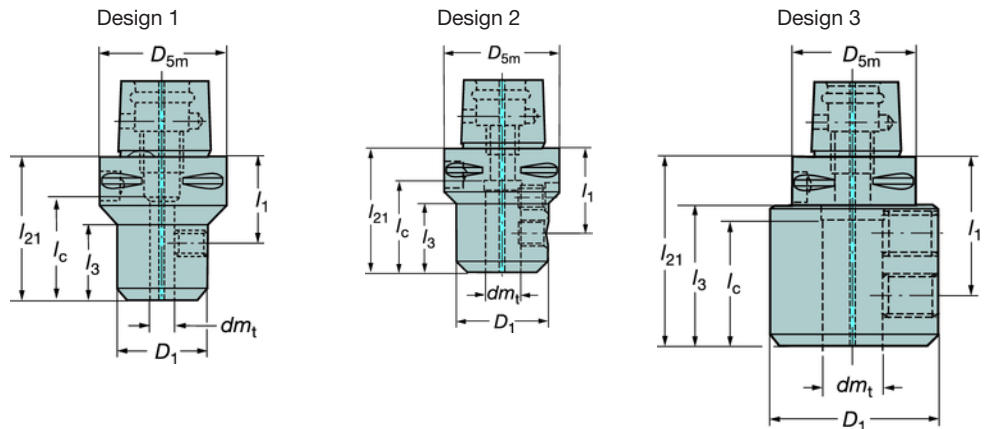
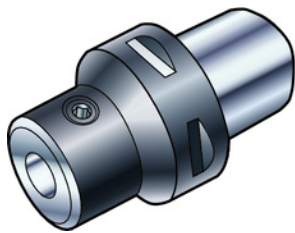


G2



# Weldon shank adaptor

A391.20



$l_1$  = programming length

## Inch bore

| Coupling size | Ordering code      | Design            | Coolant <sup>1)</sup> | Dimensions, inch |          |       |       |       |          |       |       | Balanced by design |  |
|---------------|--------------------|-------------------|-----------------------|------------------|----------|-------|-------|-------|----------|-------|-------|--------------------|--|
|               |                    |                   |                       | $dm_t$           | $D_{5m}$ | $D_1$ | $l_1$ | $l_2$ | $l_{21}$ | $l_c$ | $l_3$ |                    |  |
| C3            | C3-A391.20-09 050  | 1                 | 1                     | .375             | 1.260    | .984  | 1.181 | 1.248 | 1.969    | 1.575 | 0.9   | ⊙                  |  |
|               | C3-A391.20-12 055  | 1                 | 1                     | .500             | 1.260    | 1.260 | 1.280 | 1.563 | 2.165    | 1.772 | 2.0   | ⊙                  |  |
| C4            | C4-A391.20-09 050A | 1                 | 1                     | .375             | 1.575    | 1.000 | 1.220 | 1.114 | 2.008    | 1.575 | 1.3   | ⊙                  |  |
|               | C4-A391.20-12 055A | 1                 | 1                     | .500             | 1.575    | 1.250 | 1.319 | 1.252 | 2.205    | 1.772 | 1.3   | ⊙                  |  |
|               | C4-A391.20-15 055  | 1                 | 1                     | .625             | 1.575    | 1.625 | 1.213 | 1.378 | 2.165    | 1.890 | 3.3   | ⊙                  |  |
|               | C4-A391.20-19 060  | 1                 | 1                     | .750             | 1.575    | 1.752 | 1.378 | 1.575 | 2.362    | 2.008 | 4.0   | ⊙                  |  |
| C5            | C5-A391.20-09 055  | 1                 | 1                     | .375             | 1.968    | 1.000 | 1.378 | 1.102 | 2.165    | 1.575 | 3.3   | ⊙                  |  |
|               | C5-A391.20-12 060  | 1                 | 1                     | .500             | 1.968    | 1.250 | 1.476 | 1.406 | 2.362    | 1.772 | 4.4   | ⊙                  |  |
|               | C5-A391.20-15 060A | 1                 | 1                     | .625             | 1.968    | 1.625 | 1.409 | 1.472 | 2.362    | 1.890 | 4.9   | ⊙                  |  |
|               | C5-A391.20-19 060  | 1                 | 1                     | .750             | 1.968    | 1.752 | 1.378 | 1.512 | 2.362    | 2.008 | 4.9   | ⊙                  |  |
|               | C5-A391.20-22 075  | 3                 | 1                     | .875             | 1.968    | 1.969 | 1.953 | 2.166 | 2.953    | 2.244 | 5.3   | ⊙                  |  |
|               | C5-A391.20-25 085  | 3                 | 1                     | 1.000            | 1.968    | 2.248 | 2.402 | 2.559 | 3.346    | 2.362 | 8.8   | ⊙                  |  |
|               | C5-A391.20-31 085  | 3                 | 1                     | 1.250            | 1.968    | 2.480 | 2.402 | 2.559 | 3.347    | 2.520 | 8.8   | ⊙                  |  |
| C6            | C6-A391.20-09 060  | 1                 | 1                     | .375             | 2.480    | 1.000 | 1.575 | 1.142 | 2.362    | 1.575 | 4.9   |                    |  |
|               | C6-A391.20-12 060  | 1                 | 1                     | .500             | 2.480    | 1.250 | 1.484 | 1.260 | 2.362    | 1.772 | 5.3   |                    |  |
|               | C6-A391.20-15 065  | 1                 | 1                     | .625             | 2.480    | 1.625 | 1.595 | 1.441 | 2.560    | 1.890 | 5.7   |                    |  |
|               | C6-A391.20-19 065A | 1                 | 1                     | .750             | 2.480    | 1.752 | 1.575 | 1.484 | 2.560    | 2.008 | 6.4   |                    |  |
|               | C6-A391.20-22 080  | 3                 | 1                     | .875             | 2.480    | 1.969 | 2.150 | 2.205 | 2.560    | 2.244 | 6.8   |                    |  |
|               | C6-A391.20-25 085  | 3                 | 1                     | 1.000            | 2.480    | 2.248 | 2.402 | 2.402 | 3.347    | 2.262 | 8.4   |                    |  |
|               | C6-A391.20-31 085  | 3                 | 1                     | 1.250            | 2.480    | 2.480 | 2.402 | 3.347 | 3.347    | 2.520 | 8.8   |                    |  |
|               | C6-A391.20-38 090  | 3                 | 1                     | 1.500            | 2.480    | 2.756 | 2.362 | 2.677 | 3.543    | 2.717 | 9.7   |                    |  |
| C8            | C8-A391.20-09 070  | 1                 | 1                     | .375             | 3.150    | 1.000 | 1.968 | 1.083 | 2.756    | 1.428 | 4.4   |                    |  |
|               | C8-A391.20-12 070  | 1                 | 1                     | .500             | 3.150    | 1.248 | 1.870 | 1.220 | 2.756    | 1.628 | 4.4   |                    |  |
|               | C8-A391.20-15 070  | 1                 | 1                     | .625             | 3.150    | 1.614 | 1.803 | 1.339 | 2.756    | 1.823 | 4.6   |                    |  |
|               | C8-A391.20-19 075  | 1                 | 1                     | .750             | 3.150    | 1.752 | 1.968 | 1.437 | 2.953    | 1.890 | 4.9   |                    |  |
|               | C8-A391.20-22 080  | 2                 | 1                     | .875             | 3.150    | 1.968 | 2.150 | 1.634 | 3.150    | 2.008 | 5.2   |                    |  |
|               | C8-A391.20-25 080  | 2                 | 1                     | 1.000            | 3.150    | 2.248 | 2.205 | 2.024 | 3.150    | 2.126 | 5.2   |                    |  |
|               | C8-A391.20-31 080  | 2                 | 1                     | 1.250            | 3.150    | 2.480 | 2.205 | 2.091 | 3.150    | 2.284 | 5.3   |                    |  |
|               | C8-A391.20-38 085  | 2                 | 1                     | 1.500            | 3.150    | 2.756 | 2.165 | 2.366 | 3.346    | 2.559 | 5.8   |                    |  |
|               |                    | C8-A391.20-50 115 | 3                     | 1                | 2.000    | 3.150 | 3.681 | 3.402 | 3.307    | 4.528 | 3.071 | 10.6               |  |

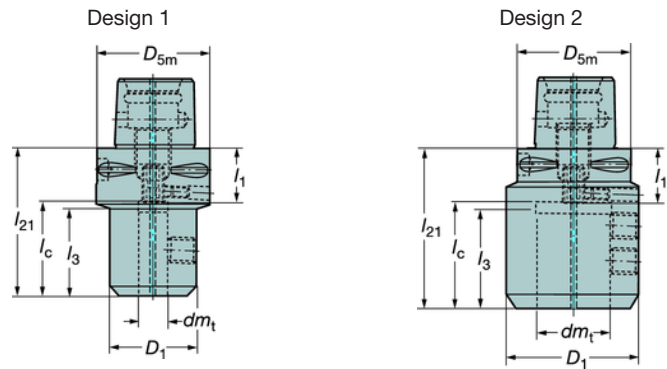
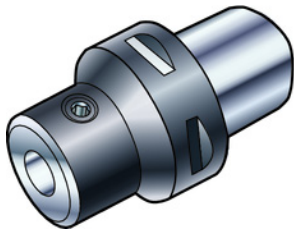
<sup>1)</sup> 1 = coolant through centre



## Whistle Notch shank adaptor

For shanks according to DIN 6535-HE

391.21



$l_1$  = programming length

### Metric bore

| Coupling size     | Ordering code     | Design            | Coolant <sup>1)</sup> | Dimensions, mm |          |       |           |     |          |       |       |                       |     | Balanced by design |
|-------------------|-------------------|-------------------|-----------------------|----------------|----------|-------|-----------|-----|----------|-------|-------|-----------------------|-----|--------------------|
|                   |                   |                   |                       | $dm_t$         | $D_{5m}$ | $D_1$ | $l_1$ min | max | $l_{21}$ | $l_3$ | $l_c$ | $\frac{D_{5m}}{dm_t}$ |     |                    |
| C3                | C3-391.21-06 070A | 1                 | 1                     | 6              | 32       | 25    | 32        | 40  | 70       | 53    | 30    | 0.3                   | ⊙   |                    |
|                   | C3-391.21-08 070A | 1                 | 1                     | 8              | 32       | 28    | 32        | 40  | 70       | 53    | 30    | 0.4                   | ⊙   |                    |
|                   | C3-391.21-10 070  | 1                 | 1                     | 10             | 32       | 35    | 28        | 38  | 70       | 55    | 32    | 0.5                   | ⊙   |                    |
|                   | C3-391.21-12 075  | 1                 | 1                     | 12             | 32       | 42    | 28        | 40  | 75       | 60    | 35    | 0.7                   | ⊙   |                    |
| C4                | C4-391.21-06 070A | 1                 | 1                     | 6              | 40       | 25    | 32        | 40  | 70       | 37    | 30    | 0.5                   | ⊙   |                    |
|                   | C4-391.21-08 070A | 1                 | 1                     | 8              | 40       | 28    | 32        | 40  | 70       | 37    | 30    | 0.5                   | ⊙   |                    |
|                   | C4-391.21-10 070  | 1                 | 1                     | 10             | 40       | 35    | 28        | 38  | 70       | 39    | 32    | 0.6                   | ⊙   |                    |
|                   | C4-391.21-12 075  | 1                 | 1                     | 12             | 40       | 42    | 28        | 40  | 75       | 45    | 35    | 0.8                   | ⊙   |                    |
| C4                | C4-391.21-14 075  | 1                 | 1                     | 14             | 40       | 44    | 28        | 40  | 75       | 45    | 35    | 0.8                   | ⊙   |                    |
|                   | C5-391.21-06 070A | 1                 | 1                     | 6              | 50       | 25    | 32        | 40  | 70       | 37    | 30    | 0.7                   | ⊙   |                    |
|                   | C5-391.21-08 070A | 1                 | 1                     | 8              | 50       | 28    | 32        | 40  | 70       | 37    | 30    | 0.8                   | ⊙   |                    |
|                   | C5-391.21-10 070  | 1                 | 1                     | 10             | 50       | 35    | 28        | 38  | 70       | 38    | 32    | 0.9                   | ⊙   |                    |
| C5                | C5-391.21-12 075  | 1                 | 1                     | 12             | 50       | 42    | 28        | 40  | 75       | 43    | 35    | 1.1                   | ⊙   |                    |
|                   | C5-391.21-14 075  | 1                 | 1                     | 14             | 50       | 44    | 28        | 40  | 75       | 44    | 35    | 1.1                   | ⊙   |                    |
|                   | C5-391.21-16 080  | 1                 | 1                     | 16             | 50       | 48    | 30        | 42  | 80       | 48    | 38    | 1.2                   | ⊙   |                    |
|                   | C5-391.21-18 080  | 1                 | 1                     | 18             | 50       | 50    | 30        | 42  | 80       |       | 38    | 1.3                   | ⊙   |                    |
| C5                | C5-391.21-20 085  | 1                 | 1                     | 20             | 50       | 52    | 33        | 45  | 85       | 65    | 40    | 1.4                   | ⊙   |                    |
|                   | C6-391.21-06 075A | 1                 | 1                     | 6              | 63       | 25    | 37        | 45  | 75       | 35    | 30    | 1.3                   |     |                    |
|                   | C6-391.21-08 075A | 1                 | 1                     | 8              | 63       | 28    | 37        | 45  | 75       | 35    | 30    | 1.3                   |     |                    |
|                   | C6-391.21-10 075  | 1                 | 1                     | 10             | 63       | 35    | 33        | 43  | 75       | 36    | 32    | 1.4                   |     |                    |
| C6                | C6-391.21-12 080  | 1                 | 1                     | 12             | 63       | 42    | 33        | 45  | 80       | 42    | 35    | 1.5                   |     |                    |
|                   | C6-391.21-14 080  | 1                 | 1                     | 14             | 63       | 44    | 33        | 45  | 80       | 42    | 35    | 1.6                   |     |                    |
|                   | C6-391.21-16 080  | 1                 | 1                     | 16             | 63       | 48    | 30        | 42  | 80       | 47    | 38    | 1.6                   |     |                    |
|                   | C6-391.21-18 080  | 1                 | 1                     | 18             | 63       | 50    | 30        | 42  | 80       | 47    | 38    | 1.6                   |     |                    |
| C6                | C6-391.21-20 085  | 1                 | 1                     | 20             | 63       | 52    | 33        | 45  | 85       | 51    | 40    | 1.7                   |     |                    |
|                   | C6-391.21-25 090  | 2                 | 1                     | 25             | 63       | 65    | 32        | 44  | 90       | 60    | 46    | 2.3                   |     |                    |
|                   | C6-391.21-32 095  | 2                 | 1                     | 32             | 63       | 72    | 33        | 45  | 95       | 73    | 50    | 2.5                   |     |                    |
|                   | C8                | C8-391.21-06 065A | 1                     | 1              | 6        | 80    | 25        | 27  | 35       | 65    | 25    | 30                    | 2.1 |                    |
| C8-391.21-08 065A |                   | 1                 | 1                     | 8              | 80       | 28    | 27        | 35  | 65       | 25.5  | 30    | 2.2                   |     |                    |
| C8-391.21-10 065  |                   | 1                 | 1                     | 10             | 80       | 35    | 23        | 33  | 65       | 27    | 32    | 2.2                   |     |                    |
| C8-391.21-12 070  |                   | 1                 | 1                     | 12             | 80       | 42    | 23        | 35  | 70       | 33    | 35    | 2.4                   |     |                    |
| C8-391.21-14 070  |                   | 1                 | 1                     | 14             | 80       | 44    | 23        | 35  | 70       | 33.5  | 35    | 2.5                   |     |                    |
| C8-391.21-16 075  |                   | 1                 | 1                     | 16             | 80       | 48    | 25        | 37  | 75       | 39    | 38    | 2.6                   |     |                    |
| C8-391.21-18 075  |                   | 1                 | 1                     | 18             | 80       | 50    | 25        | 37  | 75       | 39.5  | 38    | 2.6                   |     |                    |
| C8-391.21-20 080  |                   | 1                 | 1                     | 20             | 80       | 52    | 28        | 40  | 80       | 45    | 40    | 2.7                   |     |                    |
| C8                | C8-391.21-25 090  | 2                 | 1                     | 25             | 80       | 65    | 32        | 44  | 90       | 57    | 46    | 3.1                   |     |                    |
|                   | C8-391.21-32 095  | 2                 | 1                     | 32             | 80       | 72    | 33        | 45  | 95       | 63    | 50    | 3.4                   |     |                    |

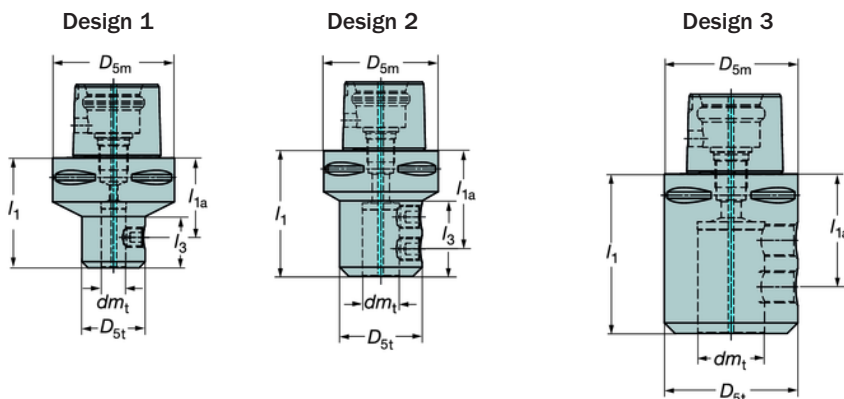
<sup>1)</sup> 1 = coolant through centre

Note! Tighten the screw with a torque wrench. Information on page G131.



# Combination adaptor for Weldon and drill shank (ISO 9766)

391.23 / A391.23



$l_1$  = programming length

## Metric bore

| Coupling size | Ordering code     | Design | Coolant <sup>1)</sup> | Dimensions, mm |          |        |       |          |       |                |
|---------------|-------------------|--------|-----------------------|----------------|----------|--------|-------|----------|-------|----------------|
|               |                   |        |                       | $D_{5m}$       | $D_{St}$ | $dm_t$ | $l_1$ | $l_{1a}$ | $l_3$ | $\frac{m}{kg}$ |
| C10           | C10-391.23-20 090 | 1      | 1                     | 100            | 52       | 20     | 90    | 65       | 42    | 4.3            |
|               | C10-391.23-25 105 | 2      | 1                     | 100            | 65       | 25     | 105   | 81       | 61    | 5.0            |
|               | C10-391.23-32 110 | 2      | 1                     | 100            | 72       | 32     | 110   | 86       | 66    | 5.3            |
|               | C10-391.23-40 115 | 2      | 1                     | 100            | 90       | 40     | 115   | 85       | 76    | 6.4            |
|               | C10-391.23-50 120 | 3      | 1                     | 100            | 100      | 50     | 120   | 85       |       | 7.1            |

<sup>1)</sup> 1 = coolant through centre

## Inch bore

| Coupling size | Ordering code      | Design | Coolant <sup>1)</sup> | Dimensions, inch |          |        |       |          |       |                  |
|---------------|--------------------|--------|-----------------------|------------------|----------|--------|-------|----------|-------|------------------|
|               |                    |        |                       | $D_{5m}$         | $D_{St}$ | $dm_t$ | $l_1$ | $l_{1a}$ | $l_3$ | $\frac{lbs}{kg}$ |
| C6            | C6-A391.23-19 066  | 1      | 1                     | 2.480            | 1.750    | .750   | 2.598 | 1.614    | 1.524 | 1.20             |
|               | C6-A391.23-25 085  | 2      | 1                     | 2.480            | 2.248    | 1.000  | 3.346 | 2.402    | 2.402 | 1.70             |
|               | C6-A391.23-31 085  | 3      | 1                     | 2.480            | 2.480    | 1.250  | 3.346 | 2.402    |       | 1.80             |
|               | C6-A391.23-38 090  | 3      | 1                     | 2.480            | 2.756    | 1.500  | 3.543 | 2.362    |       | 2.10             |
|               | C8-A391.23-19 075  | 1      | 1                     | 3.150            | 1.750    | .750   | 2.953 | 1.969    | 1.437 | 2.20             |
| C8            | C8-A391.23-25 080  | 2      | 1                     | 3.150            | 2.248    | 1.000  | 3.150 | 2.205    | 2.024 | 2.30             |
|               | C8-A391.23-31 080  | 2      | 1                     | 3.150            | 2.480    | 1.250  | 3.150 | 2.205    | 2.091 | 2.40             |
|               | C8-A391.23-38 085  | 2      | 1                     | 3.150            | 2.756    | 1.500  | 3.346 | 2.165    | 2.366 | 2.60             |
|               | C8-A391.23-50 115  | 3      | 1                     | 3.150            | 3.681    | 2.000  | 4.528 | 3.402    |       | 4.70             |
|               | C10-A391.23-19 090 | 1      | 1                     | 3.937            | 1.750    | .750   | 3.543 | 2.559    | 1.496 | 4.18             |
| C10           | C10-A391.23-25 105 | 2      | 1                     | 3.937            | 2.248    | 1.000  | 4.134 | 3.189    | 2.421 | 4.58             |
|               | C10-A391.23-31 110 | 2      | 1                     | 3.937            | 2.480    | 1.250  | 4.331 | 3.386    | 2.441 | 4.88             |
|               | C10-A391.23-38 115 | 2      | 1                     | 3.937            | 2.756    | 1.500  | 4.528 | 3.347    | 2.835 | 5.11             |
|               | C10-A391.23-50 120 | 2      | 1                     | 3.937            | 3.681    | 2.000  | 4.724 | 3.598    | 3.248 | 6.43             |

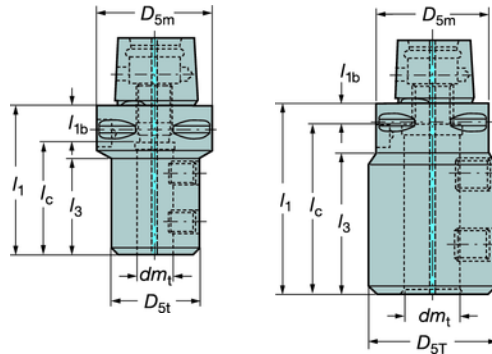
<sup>1)</sup> 1 = coolant through centre



## Adaptor for drills

Shank according to ISO 9766

391.27



l1, l1b= programming length

### Metric bore

| Coupling size | Ordering code     | Coolant <sup>1)</sup> | Dimensions, mm  |                 |                 |                 |                              |                |                |                            |
|---------------|-------------------|-----------------------|-----------------|-----------------|-----------------|-----------------|------------------------------|----------------|----------------|----------------------------|
|               |                   |                       | dm <sub>1</sub> | D <sub>5m</sub> | D <sub>5t</sub> | l <sup>2)</sup> | l <sub>b</sub> <sup>3)</sup> | l <sub>1</sub> | l <sub>3</sub> | $\frac{\sigma}{\text{kg}}$ |
| C3            | C3-391.27-16 056  | 1                     | 16              | 32              | 36              | 56              | 6.5                          | 41             | 49.5           | 0.4                        |
|               | C3-391.27-20 060  | 1                     | 20              | 32              | 40              | 60              | 8.5                          | 45             | 51.5           | 0.4                        |
| C4            | C4-391.27-16 056  | 1                     | 16              | 40              | 36              | 56              | 6.5                          | 32.5           | 49.5           | 0.6                        |
|               | C4-391.27-20 060  | 1                     | 20              | 40              | 40              | 60              | 8.5                          | 60             | 51.5           | 0.6                        |
|               | C4-391.27-25 077  | 1                     | 25              | 40              | 45              | 77              | 19.5                         | 57             | 57.5           | 0.7                        |
| C5            | C5-391.27-16 065  | 1                     | 16              | 50              | 36              | 65              | 15.5                         | 41.7           | 49.5           | 0.7                        |
|               | C5-391.27-20 060  | 1                     | 20              | 50              | 40              | 60              | 8.5                          | 37.7           | 51.5           | 0.7                        |
|               | C5-391.27-25 071  | 1                     | 25              | 50              | 45              | 71              | 8.5                          | 46.7           | 62.5           | 0.8                        |
|               | C5-391.27-32 075  | 1                     | 32              | 50              | 52              | 75              | 13.5                         | 55             | 61.5           | 1                          |
| C6            | C6-391.27-16 070  | 1                     | 16              | 63              | 36              | 70              | 20.5                         | 43             | 49.5           | 1.2                        |
|               | C6-391.27-20 070  | 1                     | 20              | 63              | 40              | 70              | 18.5                         | 43.8           | 51.5           | 1.1                        |
|               | C6-391.27-25 070A | 1                     | 25              | 63              | 45              | 72              | 12.5                         | 45.8           | 59.5           | 1.2                        |
|               | C6-391.27-32 075  | 1                     | 32              | 63              | 52              | 75              | 13.5                         | 49.8           | 61.5           | 1.3                        |
|               | C6-391.27-40 085  | 1                     | 40              | 63              | 65              | 85              | 13.5                         | 63             | 71.5           | 1.6                        |
|               | C6-391.27-50 115  | 1                     | 50              | 63              | 75              | 115             | 33.5                         | 93             | 81.5           | 2.6                        |
| C8            | C8-391.27-16 080  | 1                     | 16              | 80              | 36              | 80              | 30.5                         | 42             | 49.5           | 2.1                        |
|               | C8-391.27-20 080  | 1                     | 20              | 80              | 40              | 80              | 28.5                         | 43.8           | 51.5           | 2.2                        |
|               | C8-391.27-25 085  | 1                     | 25              | 80              | 45              | 85              | 27.5                         | 49.8           | 57.5           | 2.4                        |
|               | C8-391.27-32 090  | 1                     | 32              | 80              | 52              | 90              | 28.5                         | 53.8           | 61.5           | 2.6                        |
|               | C8-391.27-40 095  | 1                     | 40              | 80              | 65              | 95              | 23.5                         | 62.8           | 71.5           | 2.8                        |
|               | C8-391.27-50 100  | 1                     | 50              | 80              | 75              | 100             | 18.5                         | 68.6           | 81.5           | 3.1                        |

<sup>1)</sup> 1 = coolant through centre

<sup>2)</sup> Programming length for Coromant U and CoroDrill® 880 drills.

<sup>3)</sup> Programming length for Coromant Delta drills.



G159



G6

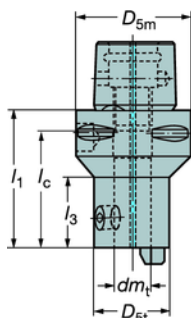
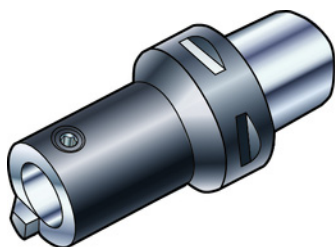


G2

# Adaptor for drills

For Coromant Whistle Notch shank

391.25



$l_1$  = programming length

## Metric bore

| Coupling size | Ordering code    | Coolant <sup>1)</sup> | Dimensions, mm |          |          |       |       |       |     |
|---------------|------------------|-----------------------|----------------|----------|----------|-------|-------|-------|-----|
|               |                  |                       | $dm_t$         | $D_{5m}$ | $D_{6t}$ | $l_1$ | $l_3$ | $l_c$ |     |
| C4            | C4-391.25-16 060 | 1                     | 16             | 40       | 32       | 60    | 36    | 51    | 0.5 |
|               | C4-391.25-20 060 | 1                     | 20             | 40       | 32       | 60    | 36    | 51    | 0.4 |
|               | C4-391.25-25 075 | 1                     | 25             | 40       | 40       | 75    |       | 56    | 0.5 |
| C5            | C5-391.25-16 060 | 1                     | 16             | 50       | 32       | 60    | 31    | 51    | 0.7 |
|               | C5-391.25-20 060 | 1                     | 20             | 50       | 32       | 60    | 31    | 51    | 0.6 |
|               | C5-391.25-25 065 | 1                     | 25             | 50       | 40       | 65    | 42    | 56    | 0.7 |
|               | C5-391.25-32 070 | 1                     | 32             | 50       | 50       | 70    |       | 60    | 0.7 |
| C6            | C6-391.25-16 060 | 1                     | 16             | 63       | 32       | 60    | 29    | 60    | 0.8 |
|               | C6-391.25-20 060 | 1                     | 20             | 63       | 32       | 60    | 29    | 51    | 0.7 |
|               | C6-391.25-25 065 | 1                     | 25             | 63       | 40       | 65    | 36    | 56    | 1.1 |
|               | C6-391.25-32 070 | 1                     | 32             | 63       | 50       | 70    | 41.5  | 60    | 1.2 |
|               | C6-391.25-40 085 | 1                     | 40             | 63       | 60       | 85    | 61.5  | 70    | 1.4 |

<sup>1)</sup> 1 = coolant through centre



G159



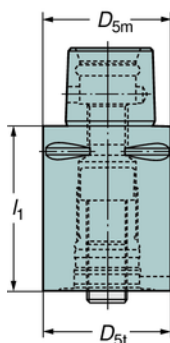
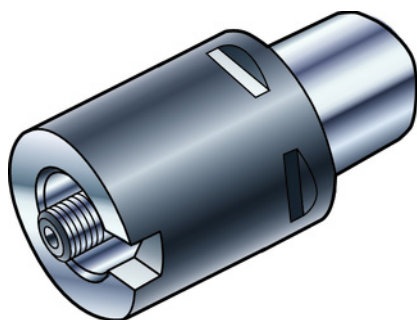
G6



G2

## Coromant Capto® adaptor for Varilock tools

391.01

 $l_1$  = programming length

| Coupling size   |          |                   | Coolant <sup>1)</sup> | Dimensions, millimeter, inch (mm, in.) |                 |                |                 |             |              |                         |
|-----------------|----------|-------------------|-----------------------|--|-----------------|----------------|-----------------|-------------|--------------|-------------------------|
| Coromant Capto® | Varilock | Ordering code     |                       | $D_{5m}$<br>mm                         | $D_{5m}$<br>in. | $D_{5t}$<br>mm | $D_{5t}$<br>in. | $l_1$<br>mm | $l_1$<br>in. | $\frac{\sigma}{K_{10}}$ |
| C5              | 50       | C5-391.01-V50 060 | 1                     | 50                                     | 1.968           | 50             | 1.968           | 60          | 2.362        | 1                       |
| C6              | 63       | C6-391.01-V63 080 | 1                     | 63                                     | 2.480           | 63             | 2.480           | 80          | 3.150        | 1.9                     |
| C8              | 80       | C8-391.01-V80 065 | 1                     | 80                                     | 3.150           | 80             | 3.150           | 65          | 2.559        | 3.2                     |

<sup>1)</sup> 0 = no coolant, 1 = coolant through centre



G148



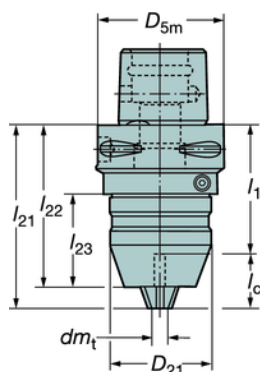
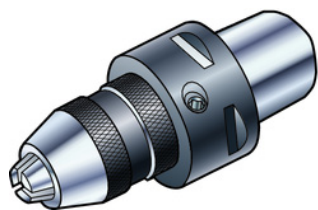
G6



G2

## Drill chuck

391.31



$l_1$  = programming length

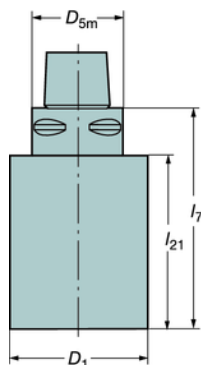
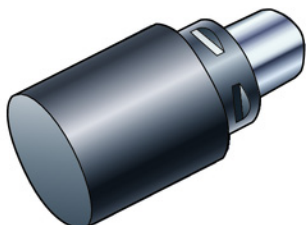
### Metric bore

| Coupling size | Ordering code     | Coolant <sup>1)</sup> | Dimensions, mm |               |     |          |           |     |              |          |          |       |               |
|---------------|-------------------|-----------------------|----------------|---------------|-----|----------|-----------|-----|--------------|----------|----------|-------|---------------|
|               |                   |                       | $D_{5m}$       | $dm_t$<br>min | max | $D_{21}$ | $l_1$ min | max | $l_{21}$ max | $l_{22}$ | $l_{23}$ | $l_c$ | $\sigma_{KB}$ |
| C3            | C3-391.31-10 083M | 0                     | 32             | 1             | 10  | 44.0     | 43        | 56  | 83           | 72.0     | 42.0     | 27    | 0.4           |
|               | C3-391.31-13 100  | 0                     | 32             | 1             | 13  | 49.5     | 56        | 73  | 100          | 89.5     | 46.5     | 27    | 0.7           |
| C4            | C4-391.31-10 087M | 0                     | 40             | 1             | 10  | 44.0     | 47        | 60  | 87           | 76.0     | 42.0     | 27    | 0.9           |
|               | C4-391.31-13 100  | 0                     | 40             | 1             | 13  | 49.5     | 56        | 73  | 100          | 89.5     | 46.5     | 27    | 1.1           |
| C5            | C5-391.31-10 085M | 0                     | 50             | 1             | 10  | 44.0     | 45        | 58  | 85           | 74.0     | 42.0     | 27    | 1.0           |
|               | C5-391.31-13 090  | 0                     | 50             | 1             | 13  | 49.5     | 46        | 63  | 90           | 79.5     | 46.5     | 27    | 1.3           |
| C6            | C6-391.31-13 092  | 0                     | 63             | 1             | 13  | 49.5     | 48        | 65  | 92           | 81.5     | 46.5     | 27    | 1.8           |

<sup>1)</sup> 0 = no coolant

## Blank adaptor

391.50



Coromant Capto® coupling blanks have a “soft” front, which allows machining of special shapes.

The blanks for making rotating units have a centre hole.

The material is 25 CR Mo4, low alloy steel.  
Tensile strength 700 N/mm<sup>2</sup>. HB 270 – 352.

Equilibrium temperature: 840-870°C  
Cooling medium: Polymer  
Tempering: 1 hour 200°C











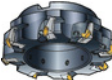

If localized hardening is required, induction type hardening is to be used. Max. hardness which can be attained with this material 50 HRC











| Coupling size | Ordering code       | Coolant <sup>1)</sup> | Dimensions, millimeter, inch (mm, in.) |                 |             |              |             |              |                |                 |               |
|---------------|---------------------|-----------------------|--|-----------------|-------------|--------------|-------------|--------------|----------------|-----------------|---------------|
|               |                     |                       | $D_{5m}$<br>mm                         | $D_{5m}$<br>in. | $D_1$<br>mm | $D_1$<br>in. | $l_7$<br>mm | $l_7$<br>in. | $l_{21}$<br>mm | $l_{21}$<br>in. | $\sigma_{KB}$ |
| C3            | C3-391.50-32 090-B  | 0                     | 32                                     | 1.260           | 32          | 1.260        | 90          | 3.543        |                |                 | 0.6           |
|               | C3-391.50-60 090-B  | 0                     | 32                                     | 1.260           | 60          | 2.362        | 90          | 3.543        | 73.8           | 2.906           | 1.7           |
| C4            | C4-391.50-40 120-B  | 0                     | 40                                     | 1.575           | 40          | 1.575        | 120         | 4.724        |                |                 | 1.3           |
|               | C4-391.50-80 120-B  | 0                     | 40                                     | 1.575           | 80          | 3.150        | 120         | 4.724        | 100            | 3.937           | 4.2           |
| C5            | C5-391.50-50 150-B  | 0                     | 50                                     | 1.968           | 50          | 1.968        | 150         | 5.906        |                |                 | 2.5           |
|               | C5-391.50-95 150-B  | 0                     | 50                                     | 1.968           | 95          | 3.740        | 150         | 5.906        | 130            | 5.118           | 7.7           |
| C6            | C6-391.50-63 180-B  | 0                     | 63                                     | 2.480           | 63          | 2.480        | 180         | 7.087        |                |                 | 4.6           |
|               | C6-391.50-120 180-B | 0                     | 63                                     | 2.480           | 120         | 4.724        | 180         | 7.087        | 158            | 6.220           | 15.0          |
| C8            | C8-391.50-80 200-B  | 0                     | 80                                     | 3.150           | 80          | 3.150        | 200         | 7.874        |                |                 | 8.5           |
|               | C8-391.50-145 200-B | 0                     | 80                                     | 3.150           | 145         | 5.709        | 200         | 7.874        | 169            | 6.654           | 24.5          |
| C10           | C10-391.50-100200-B | 0                     | 100                                    | 3.937           | 100         | 3.937        | 200         | 7.874        |                |                 | 13.5          |
|               | C10-391.50-145200-B | 0                     | 100                                    | 3.937           | 145         | 5.709        | 200         | 7.874        | 163            | 6.417           | 24.5          |

<sup>1)</sup> 0 = no coolant













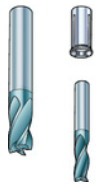
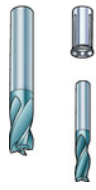
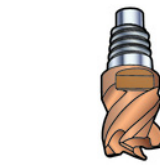














### Solid holding tools

|   |  |  |  |  |   |
|---|--|--|--|--|---|
| <p>Face mill holder</p>  <p>CAT V<br/>MAS-BT 403</p> | <p>Face mill holder</p>  <p>ISO 7388/1<br/>MAS-BT 403</p> | <p>Face mill holder</p>  <p><b>BIG-PLUS</b><br/>ISO 7388/1<br/>MAS-BT 403</p> | <p>Face mill holder</p>  <p><b>BIG-PLUS</b><br/>CAT V</p> | <p>Face mill holder for flange mounting</p>  <p>ISO 7388/1<br/>MAS-BT 403</p> | <p>Face mill holder, Bridgeport</p>  |
| <b>AA2B05/ AA3B05</b>   | <b>A1B05/ A2B05/A205</b>   | <b>392.54005/55505</b>   | <b>392.54505C/54555C</b>   | <b>A1F05/A2F05</b>   | <b>392.R8/A392.R8</b>   |
| Page G52  | G51  | G53  | G54  | G57  | G56   |
|    |   |   |   |   |                                      |

|  |  |  |  |   |  |   |
|--|--|--|--|---|--|---|
| <p>Hydro-Grip® high precision chuck pencil type</p>  <p>ISO 7388/1<br/>MAS-BT 403<br/>CAT V</p> | <p>Collet chuck</p>  <p>CAT V<br/>ISO 7388/1<br/>MAS-BT 403</p> | <p>Collet chuck</p>  <p><b>BIG-PLUS</b><br/>ISO 7388/1<br/>MAS-BT 403<br/>CAT V</p> | <p>End mill holder, Weldon type</p>  <p>CAT V<br/>ISO 7388/1<br/>MAS-BT 403</p> | <p>Short end mill holder, Weldon type</p>  <p>ISO 7388/1<br/>MAS-BT 403</p> | <p>Combination Weldon drill</p> <p>ISO 9766</p>  <p><b>BIG-PLUS</b><br/>ISO 7388/1<br/>MAS-BT 403<br/>CAT V</p> | <p>Holder for drills</p>  <p>ISO 7388/1<br/>MAS-BT 403<br/>CAT V</p> |
| <b>392.272/55/45CGB</b>  | <b>AA3B14/ A1B14 /A2B14</b>  | <b>392.54014/55514/ A392.54514</b>   | <b>AA2B20/AA3B20/AA220-30/ A1B20/392.45520</b>   | <b>A1X20/A2X20</b>  | <b>392.54023/ 55523/ A392.54523</b>  | <b>A1B27/A2B27/ AA3B27</b>  |
| Page G90   | G58  | G60  | G62 G64 G65  | G63   | G67  | G68   |
|   |   |   |   |    |   |    |



# Solid holding tools

|   |  |   |  |   |   |  |
|---|--|---|--|---|---|--|
| <p><b>Hydro-Grip® high precision holder for face mills</b></p>  <p>CAT-V<br/>ISO 7388/1<br/>MAS-BT 403</p> | <p><b>Side and face mill holder/combi holder</b></p>  <p>ISO 7388/1<br/>MAS-BT 403</p>  | <p><b>Side and face mill holder</b></p>  <p>CAT-V</p>        | <p><b>Hydro-Grip Heavy Duty</b></p>  <p>ISO 7388/1<br/>MAS-BT 403<br/>CAT V</p> | <p><b>Hydro-Grip high precision chuck</b></p>  <p>ISO 7388/1<br/>MAS-BT 403</p> | <p><b>Exchangeable - head holder, EH for CoroMill® 316</b></p>  <p>CAT-V<br/>ISO 7388/1<br/>MAS-BT 403</p>  <p>Bridgeport</p> |  |
| <p><b>AA3B05CG/<br/>A1B05CG/<br/>A2B05CG</b></p>  | <p><b>A1B08/A208/<br/>A2B08</b></p>  | <p><b>AA3B10</b></p>  | <p><b>392.45CGD/<br/>.272CGD/.55CGD</b></p>  | <p><b>392.272CG/.55CG/<br/>.45CG</b></p>  | <p><b>392.140EH/55EH/<br/>45EH</b></p>  | <p><b>A392.R8EH</b></p>  |
| <p>Page G91</p>   | <p>G55</p>   | <p>G55</p>  | <p>G88</p>   | <p>G89</p>  | <p>G102</p>   | <p>G103</p>  |
|    |   |    |   |   |    |  |
| <p><b>Adjustable drill holder</b></p>  <p>DIN 69871-A<br/>MAS-BT 403</p>                                 | <p><b>SynchroFlex® ER tapping chuck Collet type</b></p>  <p>Weldon<br/>DIN 7388/1</p> | <p><b>SynchroFlex® ER tapping chuck</b></p>  <p>MAS-BT</p> | <p><b>Quick-change Tap holder</b></p>  <p>Weldon<br/>Quick-change adaptor</p> | <p><b>Tap holder Floating rubber collet chuck</b></p>  <p>CAT-V</p>           | <p><b>Collet chuck extension</b></p>  <p>DIN 6499</p>  | <p><b>Hydro-Grip® high precision chuck</b></p>  |
| <p><b>392.140277/<br/>.272277/.55277/<br/>.58277/.45277</b></p>   | <p><b>A393.2062/.2063</b></p>  | <p><b>392.5563</b></p>  | <p><b>393.2060/2061</b></p>  | <p><b>A392.4560B</b></p>  | <p><b>393.14</b></p>  | <p><b>393.CGP/<br/>393.CGA</b></p>   |
| <p>Page E129</p>  | <p>G110</p>  | <p>G109</p>   | <p>G113</p>  | <p>G118</p>   | <p>G61</p>  | <p>G96</p>   |
|    |   |    |   |    |    |   |

## Code key for solid holding tools

|          |          |          |          |           |   |           |           |            |
|----------|----------|----------|----------|-----------|---|-----------|-----------|------------|
| <b>A</b> | <b>A</b> | <b>1</b> | <b>B</b> | <b>05</b> | - | <b>50</b> | <b>32</b> | <b>060</b> |
| 1        | 2        | 3        | 4        | 5         |   | 6         | 7         | 8          |

**1** Inch version

**2** Coolant through centre

**3** Spindle type

1=ISO 7388/1 (DIN 69871)  
2= MAS-BT  
3=CAT V-Flange

**4**

B= Coolant through flange  
F= Flange mounting  
X= Extra short

**5** Holder type

05 = Face mill holder  
14= ER Collet chuck  
20=End mill holder Weldon type  
27= Short hole drill holder-shank ISO 9766

**6** Taper size 30, 40, 50

**7** Size bore or pilot,  $dm$

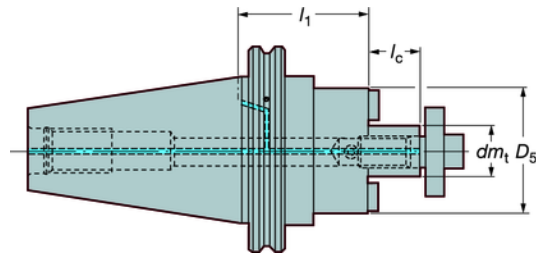
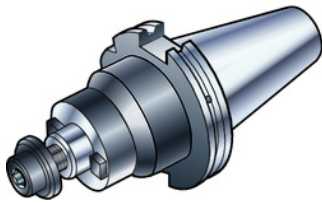
| mm (inch)  | 19 (0.750) | 38 (1.500) |
|------------|------------|------------|
| 09 (0.375) | 25 (1.000) | 51 (2.000) |
| 13 (0.500) | 32 (1.250) | 63 (2.500) |

**8** Programming length, mm

060 = 60 mm

# Face mill holder

A1B05 / A2B05



$l_1$  = programming length

## Metric pilot

| Machine design | Taper                         | Ordering code                 | Coolant <sup>2)</sup> | Dimensions, mm |          |       |       |                |    |     |
|----------------|-------------------------------|-------------------------------|-----------------------|----------------|----------|-------|-------|----------------|----|-----|
|                |                               |                               |                       | $dm_t$         | $D_{st}$ | $l_1$ | $l_c$ | $\frac{R}{mm}$ |    |     |
| ISO7388.1      | 40                            | A1B05-40 16 035               | 7                     | 16             | 36       | 35    | 17    | 0.9            |    |     |
|                |                               | A1B05-40 16 100               | 7                     | 16             | 36       | 100   | 17    | 1.8            |    |     |
|                |                               | A1B05-40 22 035               | 7                     | 22             | 48       | 35    | 19    | 1.0            |    |     |
|                |                               | A1B05-40 22 100               | 7                     | 22             | 48       | 100   | 19    | 1.9            |    |     |
|                |                               | A1B05-40 27 035               | 7                     | 27             | 48       | 35    | 21    | 1.1            |    |     |
|                |                               | A1B05-40 27 100               | 7                     | 27             | 60       | 100   | 21    | 2.4            |    |     |
|                | 50                            | A1B05-40 32 050               | 7                     | 32             | 78       | 50    | 24    | 1.6            |    |     |
|                |                               | A1B05-50 22 035               | 7                     | 22             | 48       | 35    | 19    | 2.8            |    |     |
|                |                               | A1B05-50 22 100               | 7                     | 22             | 48       | 100   | 19    | 3.7            |    |     |
|                |                               | A1B05-50 27 035               | 7                     | 27             | 60       | 35    | 21    | 3.0            |    |     |
|                |                               | A1B05-50 27 100               | 7                     | 27             | 60       | 100   | 21    | 4.4            |    |     |
|                |                               | A1B05-50 32 035               | 7                     | 32             | 78       | 35    | 24    | 3.2            |    |     |
|                |                               | A1B05-50 32 100               | 7                     | 32             | 78       | 100   | 24    | 5.6            |    |     |
|                |                               | A1B05-50 40 050 <sup>1)</sup> | 7                     | 40             | 89       | 50    | 27    | 3.9            |    |     |
|                |                               | MAS-BT 403                    | 30                    | A205-30 16 035 | 1        | 16    | 36    | 35             | 17 | 0.4 |
|                |                               |                               |                       | A205-30 22 035 | 1        | 22    | 42    | 35             | 19 | 0.4 |
| A205-30 27 035 | 1                             |                               |                       | 27             | 42       | 35    | 21    | 0.4            |    |     |
| A205-30 32 050 | 1                             |                               |                       | 32             | 78       | 50    | 24    | 1.2            |    |     |
| 40             | A2B05-40 16 035               |                               | 7                     | 16             | 36       | 35    | 17    | 1.0            |    |     |
|                | A2B05-40 16 100               |                               | 7                     | 16             | 36       | 100   | 17    | 1.9            |    |     |
|                | A2B05-40 22 035               |                               | 7                     | 22             | 48       | 35    | 19    | 1.1            |    |     |
|                | A2B05-40 22 100               |                               | 7                     | 22             | 48       | 100   | 19    | 2.0            |    |     |
|                | A2B05-40 27 035               |                               | 7                     | 27             | 48       | 35    | 21    | 1.2            |    |     |
|                | A2B05-40 27 100               |                               | 7                     | 27             | 59       | 100   | 21    | 2.5            |    |     |
|                | A2B05-40 32 065               |                               | 7                     | 32             | 78       | 65    | 24    | 1.7            |    |     |
|                | A2B05-40 40 070               |                               | 7                     | 40             | 87       | 70    | 27    | 1.8            |    |     |
| 50             | A2B05-50 22 055               |                               | 7                     | 22             | 48       | 55    | 19    | 3.6            |    |     |
|                | A2B05-50 22 100               |                               | 7                     | 22             | 48       | 100   | 19    | 4.5            |    |     |
|                | A2B05-50 27 055               |                               | 7                     | 27             | 60       | 55    | 21    | 3.8            |    |     |
|                | A2B05-50 27 100               |                               | 7                     | 27             | 60       | 100   | 21    | 5.2            |    |     |
|                | A2B05-50 32 055               |                               | 7                     | 32             | 78       | 55    | 24    | 4.0            |    |     |
|                | A2B05-50 32 100               |                               | 7                     | 32             | 78       | 100   | 24    | 6.4            |    |     |
|                | A2B05-50 40 055 <sup>1)</sup> |                               | 7                     | 40             | 89       | 55    | 27    | 4.7            |    |     |

1) Holder for flange clamping. For flange clamping use four screws, 3212 020-514 are used.

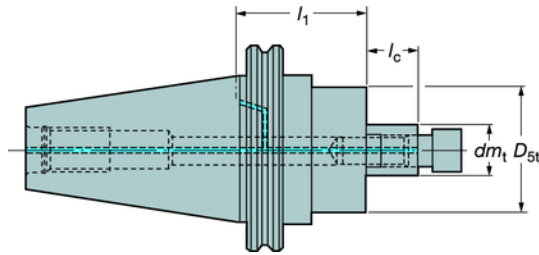
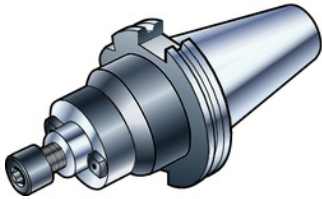
2) 1 = coolant through centre, 7 = coolant through centre and through flange

All holders are delivered with a standard screw without hole for coolant. For cutters with coolant channels a new screw with radial coolant holes is necessary and can be ordered separately. See page G160



## Face mill holder

AA2B05 / AA3B05 / AA205-30

 $l_1$  = programming length

## Inch pilot

| Machine design   | Taper | Ordering code    | Coolant <sup>2)</sup> | Dimensions, inch |          |       |       |      |
|------------------|-------|------------------|-----------------------|------------------|----------|-------|-------|------|
|                  |       |                  |                       | $dm_t$           | $D_{st}$ | $l_1$ | $l_c$ |      |
| CAT V            | 40    | AA3B05-40 16 035 | 7                     | .630             | 1.417    | 1.378 | .669  | 2.1  |
|                  |       | AA3B05-40 19 038 | 7                     | .750             | 1.750    | 1.500 | .687  | 2.4  |
|                  |       | AA3B05-40 22 035 | 7                     | .630             | 1.711    | 1.378 | .748  | 2.2  |
|                  |       | AA3B05-40 25 051 | 7                     | 1.000            | 2.250    | 2.000 | .687  | 3.1  |
|                  |       | AA3B05-40 27 050 | 7                     | 1.063            | 2.362    | 1.968 | .827  | 2.4  |
|                  |       | AA3B05-40 32 050 | 7                     | 1.260            | 3.071    | 1.968 | .945  | 3.5  |
|                  |       | AA3B05-40 32 057 | 7                     | 1.250            | 2.750    | 2.250 | .687  | 4.0  |
|                  |       | AA3B05-40 38 061 | 7                     | 1.500            | 3.750    | 2.400 | .937  | 6.0  |
|                  | 50    | AA3B05-50 19 038 | 7                     | .750             | 1.750    | 1.500 | .687  | 6.8  |
|                  |       | AA3B05-50 19 089 | 7                     | .750             | 1.750    | 3.500 | .687  | 7.9  |
|                  |       | AA3B05-50 22 035 | 7                     | .866             | 1.711    | 1.378 | .748  | 6.5  |
|                  |       | AA3B05-50 25 051 | 7                     | 1.000            | 2.250    | 2.000 | .687  | 7.5  |
|                  |       | AA3B05-50 25 101 | 7                     | 1.000            | 2.250    | 4.000 | .687  | 9.5  |
|                  |       | AA3B05-50 27 035 | 7                     | 1.063            | 2.362    | 1.378 | .827  | 6.6  |
|                  |       | AA3B05-50 32 038 | 7                     | 1.250            | 2.750    | 1.500 | .687  | 7.1  |
|                  |       | AA3B05-50 32 050 | 7                     | 1.260            | 3.071    | 1.968 | .945  | 7.1  |
|                  |       | AA3B05-50 32 089 | 7                     | 1.250            | 2.750    | 3.500 | .687  | 10.1 |
|                  |       | AA3B05-50 38 061 | 7                     | 1.500            | 3.750    | 2.400 | .937  | 10.4 |
|                  |       | AA3B05-50 38 101 | 7                     | 1.500            | 3.750    | 4.000 | .937  | 14.1 |
|                  |       | AA3B05-50 40 050 | 7                     | 1.575            | 3.504    | 1.968 | 1.063 | 8.7  |
| MAS-BT 403       | 30    | AA2B05-30 19 030 | 1                     | .750             | 1.750    | 1.190 | .690  | 1.1  |
| AA2B05-30 25 045 |       | 1                | 1.000                 | 2.390            | 1.770    | .690  | 2.2   |      |
| AA2B05-40 19 051 |       | 7                | .750                  | 1.750            | 2.000    | .687  | 2.9   |      |
| AA2B05-40 25 051 |       | 7                | 1.000                 | 2.250            | 2.000    | .687  | 3.3   |      |
| AA2B05-40 32 057 |       | 7                | 1.250                 | 2.750            | 2.250    | .687  | 4.2   |      |
| AA2B05-40 38 057 |       | 7                | 1.500                 | 3.750            | 2.250    | .937  | 6.0   |      |

1) Includes (4) 5/8-11 tapped holes on 4" bolt circle

2) 1 = coolant through centre, 7 = coolant through centre and through flange

For flange mounting screw, see page G160

## Metric pilot

| Machine design | Taper | Ordering code    | Coolant <sup>1)</sup> | Dimensions, inch |             |          |       |       |     |
|----------------|-------|------------------|-----------------------|------------------|-------------|----------|-------|-------|-----|
|                |       |                  |                       | $dm_t$ mm        | $dm_t$ inch | $D_{st}$ | $l_1$ | $l_c$ |     |
| CAT V          | 40    | AA3B05-40 16 035 | 7                     | 16               | .630        | 1.417    | 1.378 | .669  | 2.1 |
|                |       | AA3B05-40 22 035 | 7                     | 22               | .866        | 1.711    | 1.378 | .748  | 2.2 |
|                |       | AA3B05-40 27 050 | 7                     | 27               | 1.063       | 2.362    | 1.968 | .827  | 2.4 |
|                |       | AA3B05-40 32 050 | 7                     | 32               | 1.260       | 3.071    | 1.968 | .945  | 3.5 |
|                | 50    | AA3B05-50 22 035 | 7                     | 22               | .866        | 1.711    | 1.378 | .748  | 6.5 |
|                |       | AA3B05-50 27 035 | 7                     | 27               | 1.063       | 2.362    | 1.378 | .827  | 6.6 |
|                |       | AA3B05-50 32 050 | 7                     | 32               | 1.260       | 3.071    | 1.968 | .945  | 7.1 |
|                |       | AA3B05-50 40 050 | 7                     | 40               | 1.575       | 3.504    | 1.968 | 1.063 | 8.7 |

1) 7 = coolant through centre and through flange



G160



G48



G2

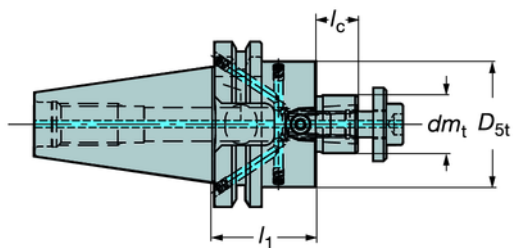
# Face mill holder

BIG-PLUS

ISO taper DIN 69871-A

MAS-BT 403


392.54005 / 55505



BIG-PLUS SYSTEM - Licence BIG DAISHOWA

$l_1$  = programming length

## Metric pilot

| Machine design | Taper | Ordering code     | Coolant | Dimensions, mm |          |       |       |   |
|----------------|-------|-------------------|---------|----------------|----------|-------|-------|---|
|                |       |                   |         | $dm_t$         | $D_{5t}$ | $l_1$ | $l_c$ |  |
| ISO7388.1      | 40    | 392.54005C4016045 | 7       | 16             | 32       | 45    | 11    | 1.0   |
|                |       | 392.54005C4022040 | 7       | 22             | 48       | 40    | 16    | 1.0   |
|                |       | 392.54005C4027050 | 7       | 27             | 60       | 50    | 18    | 1.5   |
|                |       | 392.54005C4032055 | 7       | 32             | 78       | 55    | 20    | 1.9   |
|                |       | 392.54005C4040055 | 7       | 40             | 87       | 55    | 23    | 2.3   |
| MAS-BT 403     | 40    | 392.55505C4016050 | 7       | 16             | 32       | 50    | 11    | 1.1   |
|                |       | 392.55505C4022045 | 7       | 22             | 48       | 45    | 16    | 1.3   |
|                |       | 392.55505C4027045 | 7       | 27             | 60       | 45    | 18    | 1.4   |
|                |       | 392.55505C4032050 | 7       | 32             | 78       | 50    | 20    | 1.9   |
|                |       | 392.55505C4040050 | 7       | 40             | 87       | 50    | 23    | 2.3   |

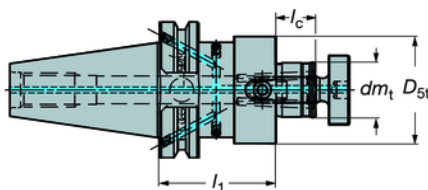
1) 7 = coolant through centre and through flange



# Face mill holder

BIG-PLUS CAT-V

A392.54505C / 55505C



BIG-PLUS SYSTEM - Licence BIG DAISHOWA

$l_1$  = programming length

## Inch pilot

| Machine design | Taper | Ordering code      | Coolant | Dimensions, inch |          |       |       |     |
|----------------|-------|--------------------|---------|------------------|----------|-------|-------|-----|
|                |       |                    |         | $dm_t$           | $D_{st}$ | $l_1$ | $l_c$ |     |
| CAT V          | 40    | A392.54505C4019040 | 7       | .750             | 1.693    | 1.575 | .709  | 2.4 |
|                |       | A392.54505C4025055 | 7       | 1.000            | 1.968    | 2.165 | .709  | 3.1 |
|                |       | A392.54505C4038060 | 7       | 1.500            | 3.150    | 2.362 | .906  | 5.0 |

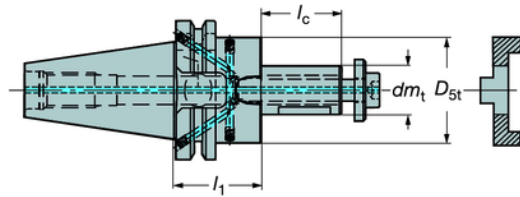
1) 7 = coolant through centre and through flange



# Side and face mill holder

A1B08 / A208 / A2B08 / AA3B10

ISO 7388.1, MAS-BT 403, CAT V



$l_1$  = programming length

## Metric pilot

| Machine design | Taper | Ordering code   | Coolant <sup>1)</sup> | Dimensions, mm |          |       |       |                   |
|----------------|-------|-----------------|-----------------------|----------------|----------|-------|-------|-------------------|
|                |       |                 |                       | $dm_t$         | $D_{st}$ | $l_1$ | $l_c$ | $\frac{kg}{mm^3}$ |
| ISO7388.1      | 40    | A1B08-40 22 055 | 7                     | 22             | 40       | 43    | 31    | 1.2               |
|                |       | A1B08-40 27 055 | 7                     | 27             | 48       | 43    | 33    | 1.4               |
|                |       | A1B08-40 32 060 | 7                     | 32             | 58       | 46    | 38    | 1.8               |
|                |       | A1B08-40 40 060 | 7                     | 40             | 70       | 46    | 41    | 2.1               |
| MAS-BT 403     | 30    | A208-30 16 045  | 1                     | 16             | 32       | 35    | 27    | 0.5               |
|                |       | A208-30 22 047  | 1                     | 22             | 40       | 35    | 31    | 0.6               |
|                |       | A208-30 27 050  | 1                     | 27             | 48       | 38    | 33    | 0.7               |
|                | 40    | A2B08-40 22 055 | 7                     | 22             | 40       | 43    | 31    | 1.3               |
|                |       | A2B08-40 27 055 | 7                     | 27             | 48       | 43    | 33    | 1.5               |
|                |       | A2B08-40 32 060 | 7                     | 32             | 58       | 46    | 38    | 1.8               |
|                |       | A2B08-40 40 070 | 7                     | 40             | 70       | 56    | 41    | 2.3               |

1) 1 = coolant through centre, 7 = coolant through centre and through flange

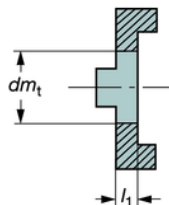
## Inch pilot

| Machine design | Taper | Ordering code                  | Coolant <sup>2)</sup> | Dimensions, inch |          |       |       |                   |
|----------------|-------|--------------------------------|-----------------------|------------------|----------|-------|-------|-------------------|
|                |       |                                |                       | $dm_t$           | $D_{st}$ | $l_1$ | $l_c$ | $\frac{kg}{mm^3}$ |
| CAT V          | 40    | AA3B10-40 25 055 <sup>1)</sup> | 7                     | 1.000            | 1.693    | 2.165 | 1.968 | 2.9               |
|                |       | AA3B10-40 31 060 <sup>1)</sup> | 7                     | 1.250            | 1.890    | 2.362 | 2.362 | 3.5               |
|                |       | AA3B10-40 38 060 <sup>1)</sup> | 7                     | 1.500            | 2.205    | 2.362 | 2.362 | 4.1               |

1) Without combi possibility

2) 7 = coolant through centre and through flange

## Driving rings for combi holder 08.



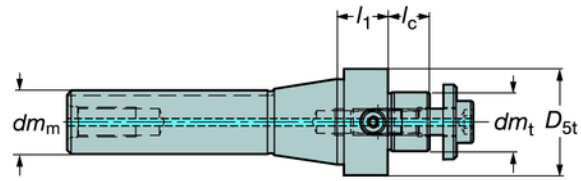
| $dm_t$ | Driving ring | $l_1$ |
|--------|--------------|-------|
| 16     | 3193 010-160 | 10    |
| 22     | 3193 010-220 | 12    |
| 27     | 3193 010-270 | 12    |
| 32     | 3193 010-320 | 14    |
| 40     | 3193 010-400 | 14    |



## Face mill holder

Bridgeport

392.R8.05 / A392.R8.05



$l_1$  = programming length

### Metric pilot

| Machine design | Taper | Ordering code    | Dimensions, mm |        |          |       |       |     |
|----------------|-------|------------------|----------------|--------|----------|-------|-------|-----|
|                |       |                  | $dm_m$         | $dm_t$ | $D_{st}$ | $l_1$ | $l_c$ |     |
| Bridgeport     | R8    | 392.R8.05-16 020 | 24.1           | 16     | 32       | 20    | 11    | 0.5 |
|                |       | 392.R8.05-22 020 | 24.1           | 22     | 40       | 20    | 16    | 0.6 |

### Inch pilot

| Machine design | Taper | Ordering code     | Dimensions, inch |        |          |       |       |     |
|----------------|-------|-------------------|------------------|--------|----------|-------|-------|-----|
|                |       |                   | $dm_m$           | $dm_t$ | $D_{st}$ | $l_1$ | $l_c$ |     |
| Bridgeport     | R8    | A392.R8.05-19 020 | .950             | .750   | 1.575    | .787  | .709  | 1.3 |
|                |       | A392.R8.05-25 020 | .950             | 1.000  | 1.968    | .787  | .709  | 1.7 |



G160



G48

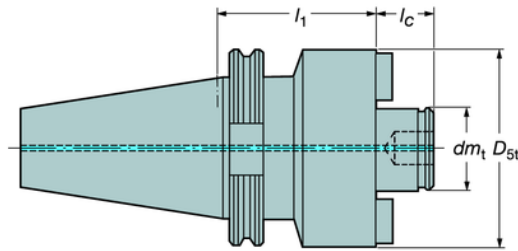
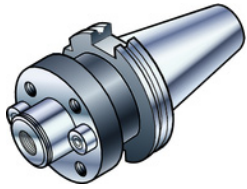


G2



# Face milling holder for flange mounting

A1F05 / A2F05



$l_1$  = programming length

## Metric pilot

| Machine design | Taper | Ordering code   | Coolant | Dimensions, mm |          |       |       |     |
|----------------|-------|-----------------|---------|----------------|----------|-------|-------|-----|
|                |       |                 |         | $dm_1$         | $D_{5t}$ | $l_1$ | $l_c$ |     |
| ISO7388.1      | 50    | A1F05-50 60 070 | 7       | 60             | 127      | 70    | 40    | 6.9 |
| MAS-BT 403     | 50    | A2F05-50 60 080 | 7       | 60             | 127      | 80    | 40    | 7.7 |

1) 7 = coolant through centre and through flange

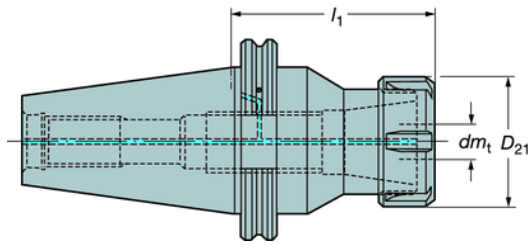
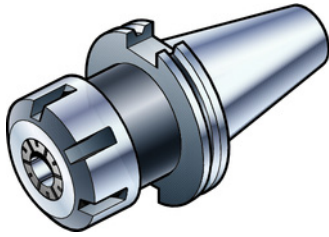


## ER collet chuck

For DIN 6499 collets

ISO 7388, MAS-BT 403

A1B14 / A2B14 / AA3B14



Accessories

Open style  
393.14

Metallic  
sealed style  
393.15

Not delivered with  
the tool, must be  
ordered separately.



See page

G138

G139

| Machine design  | Taper           | Ordering code   | Coolant         | Dimensions, mm  |            |          |       |                     | Collet size |       |       |       |
|-----------------|-----------------|-----------------|-----------------|-----------------|------------|----------|-------|---------------------|-------------|-------|-------|-------|
|                 |                 |                 |                 | $dm_1$ min      | $dm_1$ max | $D_{21}$ | $l_1$ | $\frac{\Omega}{ms}$ |             |       |       |       |
| ISO7388.1       | 40              | A1B14-40 16 070 | 7               | 0.5             | 10         | 28       | 70    | 0.9                 | ER 16       |       |       |       |
|                 |                 | A1B14-40 16 100 | 7               | 0.5             | 10         | 28       | 100   | 1.0                 |             |       |       |       |
|                 |                 | A1B14-40 20 070 | 7               | 1               | 13         | 34       | 70    | 0.9                 |             | ER 20 |       |       |
|                 |                 | A1B14-40 20 100 | 7               | 1               | 13         | 34       | 100   | 1.3                 |             |       |       |       |
|                 |                 | A1B14-40 25 070 | 7               | 1.5             | 16         | 42       | 70    | 1.0                 |             |       |       |       |
|                 |                 | A1B14-40 25 100 | 7               | 1.5             | 16         | 42       | 100   | 1.3                 |             | ER 25 |       |       |
|                 |                 | A1B14-40 32 070 | 7               | 2               | 20         | 50       | 70    | 1.0                 |             |       |       |       |
|                 |                 | A1B14-40 40 070 | 7               | 3               | 26         | 63       | 70    | 1.0                 |             |       |       |       |
|                 |                 | 50              | A1B14-50 20 070 | 7               | 1          | 13       | 34    | 70                  |             | 2.8   | ER 20 |       |
|                 | A1B14-50 20 100 |                 | 7               | 1               | 13         | 34       | 100   | 3.2                 |             |       |       |       |
|                 | A1B14-50 25 070 |                 | 7               | 1.5             | 16         | 42       | 70    | 2.9                 | ER 25       |       |       |       |
|                 | A1B14-50 25 100 |                 | 7               | 1.5             | 16         | 42       | 100   | 3.2                 |             |       |       |       |
|                 | A1B14-50 32 070 |                 | 7               | 2               | 20         | 50       | 70    | 2.9                 |             | ER 32 |       |       |
|                 | A1B14-50 32 100 |                 | 7               | 2               | 20         | 50       | 100   | 3.2                 |             |       |       |       |
|                 | A1B14-50 40 070 |                 | 7               | 3               | 26         | 63       | 70    | 2.8                 |             |       |       |       |
|                 | MAS-BT 403      |                 | 30              | A214-30 16 080  | 1          | 0.5      | 10    | 28                  | 80          | 0.5   |       | ER 16 |
|                 |                 |                 |                 | A214-30 16 100  | 1          | 0.5      | 10    | 28                  | 100         | 0.7   |       |       |
|                 |                 | A214-30 16 130  |                 | 1               | 0.5        | 10       | 28    | 130                 | 0.8         | ER 20 |       |       |
| A214-30 20 090  |                 | 1               |                 | 1               | 13         | 34       | 90    | 0.7                 |             |       |       |       |
| A214-30 20 130  |                 | 1               |                 | 1               | 13         | 34       | 130   | 0.8                 |             |       |       |       |
| A214-30 25 100  |                 | 1               |                 | 1.5             | 16         | 42       | 100   | 1.0                 | ER 25       |       |       |       |
| A214-30 25 130  |                 | 1               |                 | 1.5             | 16         | 42       | 130   | 1.2                 |             |       |       |       |
| A214-30 32 130  |                 | 1               |                 | 2               | 20         | 50       | 130   | 1.1                 |             |       |       |       |
| A2B14-30 11 050 |                 | 1               |                 | 0.75            | 7          | 19       | 50    | 0.4                 | ER 11       |       |       |       |
| A2B14-30 16 050 |                 | 1               |                 | 0.5             | 10         | 28       | 50    | 0.4                 |             |       |       |       |
| A2B14-30 20 050 |                 | 1               |                 | 1               | 13         | 34       | 50    | 0.4                 | ER 20       |       |       |       |
| A2B14-30 25 062 |                 | 1               |                 | 1.5             | 16         | 42       | 62    | 0.5                 |             |       |       |       |
| A2B14-30 32 060 |                 | 1               |                 | 2               | 20         | 50       | 60    | 0.4                 | ER 32       |       |       |       |
| MAS-BT 403      |                 | 40              |                 | A2B14-40 16 070 | 7          | 0.5      | 10    | 28                  | 70          | 1.0   | ER 16 |       |
|                 |                 |                 |                 | A2B14-40 16 100 | 7          | 0.5      | 10    | 28                  | 100         | 1.2   |       |       |
|                 | A2B14-40 20 070 |                 | 7               | 1               | 13         | 34       | 70    | 1.0                 | ER 20       |       |       |       |
|                 | A2B14-40 20 100 |                 | 7               | 1               | 13         | 34       | 100   | 1.4                 |             |       |       |       |
|                 | A2B14-40 25 070 |                 | 7               | 1.5             | 16         | 42       | 70    | 1.0                 |             | ER 25 |       |       |
|                 | A2B14-40 25 100 |                 | 7               | 1.5             | 16         | 42       | 100   | 1.4                 |             |       |       |       |
|                 | A2B14-40 32 070 |                 | 7               | 2               | 20         | 50       | 70    | 1.0                 |             |       |       |       |
|                 | A2B14-40 40 070 |                 | 7               | 3               | 26         | 63       | 70    | 1.0                 | ER 40       |       |       |       |
|                 | 50              |                 | A2B14-50 20 070 | 7               | 1          | 13       | 34    | 70                  | 3.6         | ER 20 |       |       |
|                 |                 | A2B14-50 20 100 | 7               | 1               | 13         | 34       | 100   | 4.0                 |             |       |       |       |
|                 |                 | A2B14-50 25 070 | 7               | 1.5             | 16         | 42       | 70    | 3.7                 | ER 25       |       |       |       |
|                 |                 | A2B14-50 25 100 | 7               | 1.5             | 16         | 42       | 100   | 4.0                 |             |       |       |       |
|                 |                 | A2B14-50 32 070 | 7               | 2               | 20         | 50       | 70    | 3.6                 |             |       | ER 32 |       |
|                 |                 | A2B14-50 32 100 | 7               | 2               | 20         | 50       | 100   | 4.1                 |             |       |       |       |
|                 |                 | A2B14-50 40 080 | 7               | 3               | 26         | 63       | 80    | 3.6                 |             |       |       |       |

1) 1 = coolant through centre, 7 = coolant through centre and through flange

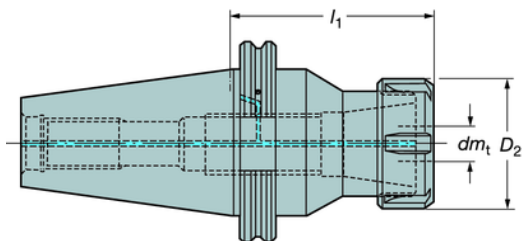
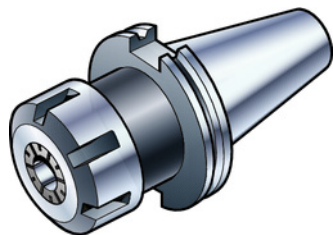


# ER collet chuck

For DIN 6499 collets

ISO 7388, MAS-BT 403

A1B14 / A2B14 / AA3B14



| Accessories  | Open style | Metallic sealed style |
|--|------------|-----------------------|
| Not delivered with the tool, must be ordered separately. | 393.14     | 393.15                |
| See page   | G138       | G139                  |

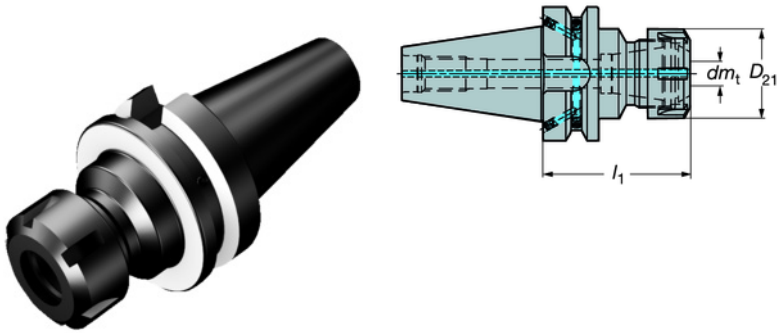
| Machine design   | Taper            | Ordering code    | Coolant <sup>1)</sup> | Dimensions, inch |            |          |       |                | Collet size |
|------------------|------------------|------------------|-----------------------|------------------|------------|----------|-------|----------------|-------------|
|                  |                  |                  |                       | $dm_t$ min       | $dm_t$ max | $D_{21}$ | $l_1$ | $\frac{R}{mm}$ |             |
| CAT V            | 40               | AA3B14-40 11 070 | 7                     | .030             | .276       | .748     | 2.756 | 2.0            | ER 11       |
|                  |                  | AA3B14-40 16 067 | 7                     | .020             | .394       | 1.102    | 2.620 | 2.1            | ER 16       |
|                  |                  | AA3B14-40 16 105 | 7                     | .020             | .394       | 1.102    | 4.120 | 2.7            |             |
|                  |                  | AA3B14-40 20 070 | 7                     | .039             | .512       | 1.339    | 2.756 | 2.0            | ER 20       |
|                  |                  | AA3B14-40 20 105 | 7                     | .039             | .512       | 1.339    | 4.120 | 2.7            |             |
|                  |                  | AA3B14-40 20 156 | 7                     | .039             | .512       | 1.339    | 6.120 | 3.3            |             |
|                  |                  | AA3B14-40 25 070 | 7                     | .059             | .630       | 1.654    | 2.756 | 2.0            | ER 25       |
|                  | AA3B14-40 25 105 | 7                | .059                  | .630             | 1.654      | 4.120    | 2.9   |                |             |
|                  | AA3B14-40 25 156 | 7                | .059                  | .630             | 1.654      | 6.120    | 3.9   |                |             |
|                  | AA3B14-40 32 079 | 7                | .079                  | .787             | 1.968      | 3.120    | 2.7   | ER 32          |             |
|                  | AA3B14-40 32 105 | 7                | .079                  | .787             | 1.968      | 4.120    | 3.3   |                |             |
|                  | AA3B14-40 40 105 | 7                | .118                  | 1.024            | 2.480      | 4.120    | 3.9   | ER 40          |             |
|                  | 50               | AA3B14-50 16 105 | 7                     | .020             | .394       | 1.102    | 4.120 | 7.0            | ER 16       |
|                  |                  | AA3B14-50 20 105 | 7                     | .039             | .512       | 1.339    | 4.120 | 7.0            | ER 20       |
| AA3B14-50 25 105 |                  | 7                | .059                  | .630             | 1.654      | 4.120    | 7.4   | ER 25          |             |
| AA3B14-50 32 105 |                  | 7                | .079                  | .787             | 1.968      | 4.120    | 7.8   | ER 32          |             |
| AA3B14-50 40 105 |                  | 7                | .118                  | 1.024            | 2.480      | 4.120    | 8.6   | ER 40          |             |



1) 1 = coolant through centre, 7 = coolant through centre and through flange



## ER collet chuck

## BIG-PLUS

392.54014 / 392.55514 /  
A392.54514

| Accessories  | Open style  | Metallic sealed style   |
|--|---|---|
| Not delivered with the tool, must be ordered separately. | 393.14<br> | 393.15<br> |
| See page   | G138  | G139  |

BIG-PLUS SYSTEM - Licence BIG DAISHOWA

| Machine design | Taper | Ordering code     | Coolant <sup>1)</sup> | Dimensions, mm |            |          |       |                | Collet size |
|----------------|-------|-------------------|-----------------------|----------------|------------|----------|-------|----------------|-------------|
|                |       |                   |                       | $dm_t$ min     | $dm_t$ max | $D_{21}$ | $l_1$ | $\frac{R}{mm}$ |             |
| ISO7388.1      | 40    | 392.54014-4025070 | 7                     | 1              | 16         | 42       | 70    | 1.0            | ER 25       |
|                |       | 392.54014-4040075 | 7                     | 3              | 26         | 63       | 75    | 1.4            | ER 40       |
| MAS-BT 403     | 40    | 392.55514-4025070 | 7                     | 1              | 16         | 42       | 70    | 1.2            | ER 25       |
|                |       | 392.55514-4040070 | 7                     | 3              | 26         | 63       | 70    | 1.4            | ER 40       |

1) 7 = coolant through centre and through flange

| Machine design | Taper | Ordering code      | Coolant <sup>1)</sup> | Dimensions, inch |            |          |       |                | Collet size |
|----------------|-------|--------------------|-----------------------|------------------|------------|----------|-------|----------------|-------------|
|                |       |                    |                       | $dm_t$ min       | $dm_t$ max | $D_{21}$ | $l_1$ | $\frac{R}{mm}$ |             |
| CAT V          | 40    | A392.54514-4025070 | 7                     | .039             | .630       | 1.654    | 2.756 | 2.4            | ER 25       |
|                |       | A392.54514-4040075 | 7                     | .118             | 1.024      | 2.480    | 2.953 | 3.0            | ER 40       |

1) 7 = coolant through centre and through flange

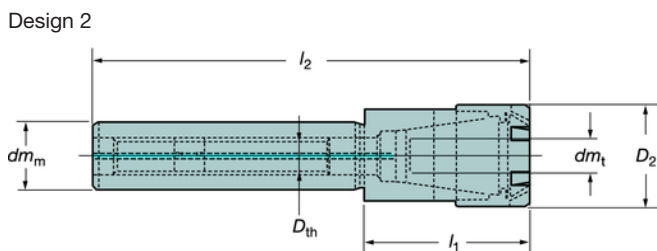
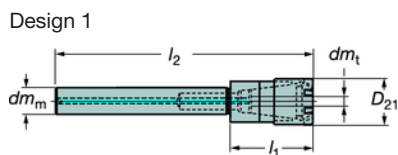
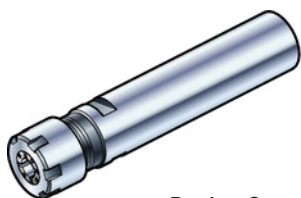


# ER collet chuck extension

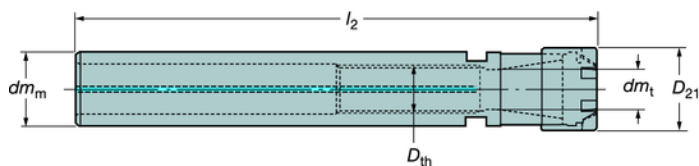
For DIN 6499 collets

Plain parallel shank

A393.14  
393.14



Design 3



| Accessories  | Open style | Metallic sealed style |
|--|------------|-----------------------|
|  | 393.14     | 393.15                |
| Not delivered with the tool, must be ordered separately. |            |                       |
| See page   | G138       | G139                  |

## Metric shank

| Ordering code     | Design | Coolant <sup>1)</sup> | Dimensions, mm |        |          |       |         |          |                               | Collet size |
|-------------------|--------|-----------------------|----------------|--------|----------|-------|---------|----------|-------------------------------|-------------|
|                   |        |                       | $dm_m$         | $dm_t$ | $D_{21}$ | $l_1$ | $l_2$   | $D_{th}$ | $\frac{\sigma}{\sigma_{0.2}}$ |             |
| 393.14-12 16 080  | 1      | 1                     | 12             | 7      | 22       | 38.5  | 118.500 | 0.1      | ER 16                         |             |
| 393.14-08 11 056  | 1      | 1                     | 8              | 4      | 16       | 26.5  | 82.500  | 0.0      | ER 11                         |             |
| 393.14-16 11 150  | 2      | 1                     | 16             | 8      | 16       | 21    | 171.000 | M8x1     | 0.2                           | ER 11       |
| 393.14-20 16 155  | 2      | 1                     | 20             | 12     | 22       | 26.5  | 181.500 | M12x1    | 0.3                           | ER 16       |
| 393.14-25 20 170A | 3      | 1                     | 25             | 13.5   | 28       |       | 182.000 | M14x1    | 0.4                           | ER 20       |

## Inch shank

| Ordering code     | Design | Coolant <sup>1)</sup> | Dimensions, inch |          |       |       |          |                               | Collet size |
|-------------------|--------|-----------------------|------------------|----------|-------|-------|----------|-------------------------------|-------------|
|                   |        |                       | $dm_m$           | $D_{21}$ | $l_1$ | $l_2$ | $D_{th}$ | $\frac{\sigma}{\sigma_{0.2}}$ |             |
| A393.14-13 16 182 | 2      | 1                     | .500             | .866     | 1.457 | 6.968 | M6x1     | 0.7                           | ER 16       |
| A393.14-19 20 187 | 2      | 1                     | .750             | 1.102    | 1.457 | 7.362 | M12x1    | 0.9                           | ER 20       |
| A393.14-19 25 203 | 2      | 1                     | .750             | 1.642    | 1.850 | 7.992 | M12x1    | 2.2                           | ER 25       |
| A393.14-26 25 203 | 2      | 1                     | 1.000            | 1.642    | 1.850 | 7.992 | M18x1.5  | 3.5                           | ER 25       |
| A393.14-26 32 203 | 2      | 1                     | 1.000            | 1.957    | 2.087 | 7.992 | M18x1.5  | 2.6                           | ER 32       |
| A393.14-19 16 182 | 3      | 1                     | .750             | .866     |       | 7.146 | M12x1    | 0.8                           | ER 16       |
| A393.14-26 20 203 | 3      | 1                     | 1.000            | 1.102    |       | 7.992 | M14x1    | 1.8                           | ER 20       |

1) 1 = coolant through centre



G165



G48

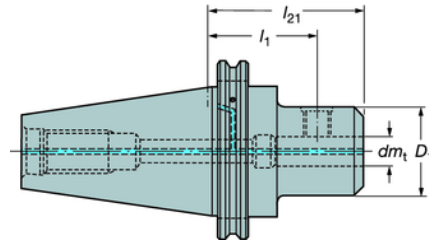
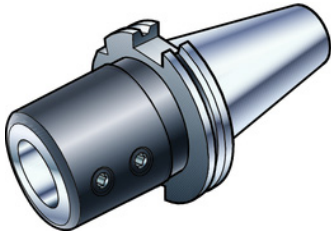


G2

## End mill holder, Weldon type

Shank according to DIN 6535-HB

AA2B20 / AA3B20 / AA220-30



$l_1$  = programming length

### Inch bore

| Machine design   | Taper            | Ordering code    | Coolant <sup>1)</sup> | Dimensions, inch |       |       |          |                |
|------------------|------------------|------------------|-----------------------|------------------|-------|-------|----------|----------------|
|                  |                  |                  |                       | $dm_1$           | $D_1$ | $l_1$ | $l_{21}$ | $\frac{R}{mm}$ |
| CAT V            | 40               | AA3B20-40 03 044 | 7                     | .125             | .688  | 1.375 | 1.750    | 1.8            |
|                  |                  | AA3B20-40 06 063 | 7                     | .250             | .875  | 2.125 | 2.500    | 2.4            |
|                  |                  | AA3B20-40 09 044 | 7                     | .375             | 1.000 | 1.125 | 1.750    | 2.0            |
|                  |                  | AA3B20-40 09 063 | 7                     | .375             | 1.000 | 1.750 | 2.500    | 2.4            |
|                  |                  | AA3B20-40 13 044 | 7                     | .500             | 1.750 | .875  | 1.750    | 2.2            |
|                  |                  | AA3B20-40 13 067 | 7                     | .500             | 1.750 | 1.745 | 2.620    | 2.4            |
|                  |                  | AA3B20-40 16 044 | 7                     | .625             | 1.750 | .875  | 1.750    | 2.2            |
|                  |                  | AA3B20-40 16 070 | 7                     | .625             | 1.750 | 1.812 | 2.750    | 2.6            |
|                  |                  | AA3B20-40 19 044 | 7                     | .750             | 1.750 | .750  | 1.750    | 2.2            |
|                  |                  | AA3B20-40 19 089 | 7                     | .750             | 1.750 | 2.500 | 3.500    | 3.1            |
|                  | AA3B20-40 22 095 | 7                | .875                  | 1.850            | 2.750 | 3.750 | 3.3      |                |
|                  | AA3B20-40 25 044 | 7                | 1.000                 | 1.900            | .625  | 1.750 | 2.0      |                |
|                  | AA3B20-40 25 101 | 7                | 1.000                 | 2.000            | 2.875 | 4.000 | 3.3      |                |
|                  | AA3B20-40 32 101 | 7                | 1.250                 | 2.500            | 2.875 | 4.000 | 4.4      |                |
|                  | AA3B20-40 38 101 | 7                | 1.500                 | 2.620            | 2.875 | 4.000 | 4.6      |                |
|                  | 50               | AA3B20-50 09 063 | 7                     | .375             | 1.000 | 1.750 | 2.500    | 6.6            |
|                  |                  | AA3B20-50 09 165 | 7                     | .375             | 1.000 | 5.750 | 6.500    | 7.5            |
|                  |                  | AA3B20-50 13 067 | 7                     | .500             | 1.250 | 1.775 | 2.625    | 6.8            |
|                  |                  | AA3B20-50 13 168 | 7                     | .500             | 1.250 | 5.750 | 6.625    | 8.4            |
|                  |                  | AA3B20-50 16 095 | 7                     | .625             | 1.500 | 2.812 | 3.750    | 7.3            |
| AA3B20-50 16 197 |                  | 7                | .625                  | 1.500            | 6.812 | 7.750 | 9.3      |                |
| AA3B20-50 19 095 |                  | 7                | .750                  | 1.750            | 2.750 | 3.750 | 7.7      |                |
| AA3B20-50 19 197 |                  | 7                | .750                  | 1.750            | 6.750 | 7.750 | 10.4     |                |
| AA3B20-50 22 095 |                  | 7                | .875                  | 1.850            | 2.750 | 3.750 | 7.7      |                |
| AA3B20-50 22 197 |                  | 7                | .875                  | 1.875            | 6.750 | 7.750 | 10.8     |                |
| AA3B20-50 25 101 | 7                | 1.000            | 2.000                 | 2.875            | 4.000 | 7.9   |          |                |
| AA3B20-50 25 203 | 7                | 1.000            | 2.000                 | 6.866            | 8.000 | 11.5  |          |                |
| AA3B20-50 32 101 | 7                | 1.250            | 2.750                 | 2.885            | 4.000 | 8.8   |          |                |
| AA3B20-50 32 203 | 7                | 1.250            | 2.500                 | 6.875            | 8.000 | 13.7  |          |                |
| AA3B20-50 38 101 | 7                | 1.500            | 2.750                 | 2.875            | 4.000 | 8.6   |          |                |
| AA3B20-50 38 203 | 7                | 1.500            | 2.750                 | 6.875            | 8.000 | 14.8  |          |                |
| AA3B20-50 51 143 | 7                | 2.000            | 3.750                 | 4.219            | 5.625 | 15.7  |          |                |
| AA3B20-50 51 244 | 7                | 2.000            | 3.750                 | 8.219            | 9.625 | 27.6  |          |                |

### Inch bore

| Machine design | Taper | Ordering code    | Coolant <sup>1)</sup> | Dimensions, inch |       |       |          |                |
|----------------|-------|------------------|-----------------------|------------------|-------|-------|----------|----------------|
|                |       |                  |                       | $dm_1$           | $D_1$ | $l_1$ | $l_{21}$ | $\frac{R}{mm}$ |
| MAS-BT 403     | 30    | AA220-30 03 060  | 1                     | .125             | .750  | 2.000 | 2.380    | 1.1            |
|                |       | AA220-30 06 060  | 1                     | .250             | .810  | 2.000 | 2.380    | 1.1            |
|                |       | AA220-30 09 060  | 1                     | .375             | 1.380 | 1.630 | 2.380    | 1.3            |
|                |       | AA220-30 13 060  | 1                     | .500             | 1.380 | 1.500 | 2.380    | 1.3            |
|                | 40    | AA2B20-40 09 057 | 7                     | .375             | 1.000 | 1.500 | 2.250    | 2.2            |
|                |       | AA2B20-40 13 057 | 7                     | .500             | 1.250 | 1.375 | 2.250    | 2.4            |
|                |       | AA2B20-40 16 057 | 7                     | .625             | 1.500 | 1.312 | 2.250    | 2.4            |
|                |       | AA2B20-40 19 086 | 7                     | .750             | 1.750 | 2.375 | 3.375    | 3.1            |
|                |       | AA2B20-40 25 101 | 7                     | 1.000            | 2.000 | 2.875 | 4.000    | 3.7            |
|                |       | AA2B20-40 32 101 | 7                     | 1.250            | 2.500 | 2.875 | 4.000    | 4.9            |

1) 1 = coolant through centre, 7 = coolant through centre and through flange



G167



G48

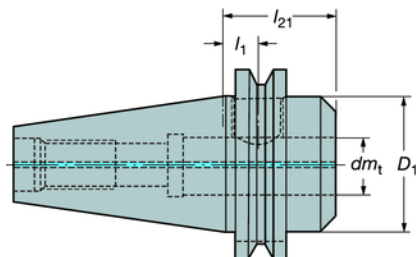
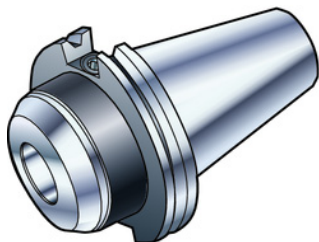


G2

# End mill holder, Weldon type, short version

Shank according to DIN 6535-HB

A1X20 / A2X20



$l_1$  = programming length

## Metric bore

| Machine design | Taper | Ordering code   | Coolant <sup>1)</sup> | Dimensions, mm |       |       |          |                    |
|----------------|-------|-----------------|-----------------------|----------------|-------|-------|----------|--------------------|
|                |       |                 |                       | $dm_t$         | $D_1$ | $l_1$ | $l_{21}$ | $\frac{\mu m}{mm}$ |
| ISO7388.1      | 40    | A1X20-40 16 035 | 1                     | 16             | 48    | 11.5  | 35       | 0.8                |
|                |       | A1X20-40 18 035 | 1                     | 18             | 48    | 11.5  | 35       | 0.9                |
|                |       | A1X20-40 20 040 | 1                     | 20             | 49.8  | 15    | 40       | 0.9                |
|                |       | A1X20-40 25 060 | 1                     | 25             | 62    | 36    | 60       | 1.3                |
|                |       | A1X20-40 32 070 | 1                     | 32             | 72    | 48    | 70       | 1.7                |
| MAS-BT 403     | 40    | A2X20-40 16 035 | 1                     | 16             | 48    | 11    | 35       | 0.9                |
|                |       | A2X20-40 18 035 | 1                     | 18             | 50    | 11    | 35       | 1.0                |
|                |       | A2X20-40 20 035 | 1                     | 20             | 52    | 11    | 35       | 1.0                |
|                |       | A2X20-40 25 060 | 1                     | 25             | 59    | 36    | 60       | 1.4                |
|                |       | A2X20-40 32 065 | 1                     | 32             | 59    | 41    | 65       | 1.8                |

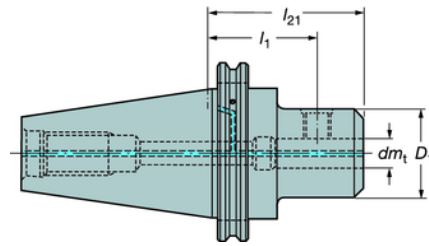
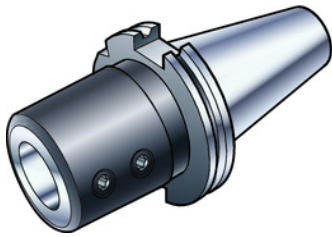
<sup>1)</sup> 1 = coolant through centre



## End mill holder, Weldon type

Shank according to DIN 6535-HB

A1B20



$l_1$  = programming length

### Metric bore

| Machine design  | Taper | Ordering code   | Coolant <sup>1)</sup> | Dimensions, mm |       |       |          |                    |
|-----------------|-------|-----------------|-----------------------|----------------|-------|-------|----------|--------------------|
|                 |       |                 |                       | $dm_1$         | $D_1$ | $l_1$ | $l_{21}$ | $\frac{\mu m}{mm}$ |
| ISO7388.1       | 40    | A1B20-40 06 050 | 7                     | 6              | 25    | 32    | 50       | 0.9                |
|                 |       | A1B20-40 06 100 | 7                     | 6              | 25    | 82    | 100      | 1.0                |
|                 |       | A1B20-40 08 050 | 7                     | 8              | 28    | 32    | 50       | 0.9                |
|                 |       | A1B20-40 08 100 | 7                     | 8              | 28    | 82    | 100      | 1.1                |
|                 |       | A1B20-40 10 050 | 7                     | 10             | 35    | 30    | 50       | 1.0                |
|                 |       | A1B20-40 10 100 | 7                     | 10             | 35    | 80    | 100      | 1.3                |
|                 |       | A1B20-40 12 050 | 7                     | 12             | 42    | 27.5  | 50       | 1.0                |
|                 |       | A1B20-40 12 100 | 7                     | 12             | 42    | 77.5  | 100      | 1.8                |
|                 |       | A1B20-40 16 063 | 7                     | 16             | 48    | 39    | 63       | 1.0                |
|                 |       | A1B20-40 16 100 | 7                     | 16             | 48    | 76    | 100      | 1.8                |
|                 | 50    | A1B20-40 18 063 | 7                     | 18             | 48    | 39    | 63       | 1.2                |
|                 |       | A1B20-40 18 100 | 7                     | 18             | 48    | 76    | 100      | 1.7                |
|                 |       | A1B20-40 20 063 | 7                     | 20             | 52    | 38    | 63       | 1.3                |
|                 |       | A1B20-40 20 100 | 7                     | 20             | 52    | 75    | 100      | 1.8                |
|                 |       | A1B20-40 25 100 | 7                     | 25             | 65    | 76    | 100      | 2.3                |
|                 |       | A1B20-40 32 100 | 7                     | 32             | 72    | 76    | 100      | 2.5                |
|                 |       | A1B20-50 06 063 | 7                     | 6              | 25    | 45    | 63       | 2.8                |
|                 |       | A1B20-50 08 063 | 7                     | 8              | 28    | 45    | 63       | 2.7                |
|                 |       | A1B20-50 10 063 | 7                     | 10             | 35    | 43    | 63       | 2.9                |
|                 |       | A1B20-50 12 063 | 7                     | 12             | 42    | 40.5  | 63       | 3.0                |
| A1B20-50 16 063 | 7     | 16              | 48                    | 39             | 63    | 3.1   |          |                    |
| A1B20-50 18 063 | 7     | 18              | 48                    | 39             | 63    | 3.0   |          |                    |
| A1B20-50 20 063 | 7     | 20              | 52                    | 38             | 63    | 3.1   |          |                    |
| A1B20-50 20 100 | 7     | 20              | 52                    | 75             | 100   | 3.7   |          |                    |
| A1B20-50 25 080 | 7     | 25              | 65                    | 56             | 80    | 3.8   |          |                    |
| A1B20-50 25 100 | 7     | 25              | 65                    | 76             | 100   | 4.3   |          |                    |
| A1B20-50 32 100 | 7     | 32              | 72                    | 76             | 100   | 4.5   |          |                    |
| A1B20-50 32 160 | 7     | 32              | 72                    | 136            | 160   | 6.5   |          |                    |
| A1B20-50 40 120 | 7     | 40              | 78                    | 90             | 120   | 4.7   |          |                    |

1) 7 = coolant through centre and through flange

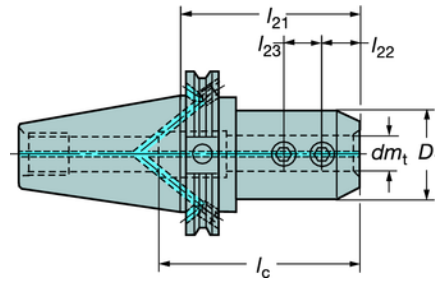
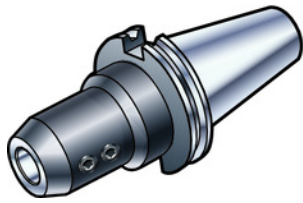




# End mill holder, Weldon type

Convertible to coolant through the flange

392.45520



$l_1$  = programming length

## Metric bore with CAT V-flange

| Machine design | Taper | Ordering code   | Coolant <sup>1)</sup> | Dimensions, mm, inch |               |             |              |             |              |             |              |             |              |          |       |     |  |
|----------------|-------|-----------------|-----------------------|----------------------|---------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|----------|-------|-----|--|
|                |       |                 |                       | $dm_1$<br>mm         | $dm_1$<br>in. | $D_1$<br>mm | $D_1$<br>in. | $l_1$<br>mm | $l_1$<br>in. | $l_2$<br>mm | $l_2$<br>in. | $l_3$<br>mm | $l_3$<br>in. | $R_{MS}$ |       |     |  |
| CAT V          | 40    | 392.45520-40 20 | 7                     | 20                   | .787          | 44.45       | 1.750        | 57.15       | 2.250        | 88.9        | 3.500        | 25.4        | 1.000        |          |       | 1.5 |  |
|                |       | 392.45520-40 25 | 7                     | 25                   | .984          | 50.8        | 2.000        | 76.2        | 3.000        | 101.6       | 4.000        | 28.7        | 1.130        | 25.4     | 1.000 | 1.6 |  |
|                | 50    | 392.45520-50 20 | 7                     | 20                   | .787          | 44.45       | 1.750        | 57.15       | 2.250        | 95.25       | 3.750        | 25.4        | 1.000        |          |       | 3.5 |  |
|                |       | 392.45520-50 25 | 7                     | 25                   | .984          | 50.8        | 2.000        | 76.2        | 3.000        | 101.6       | 4.000        | 28.7        | 1.130        | 24.4     | .961  | 3.8 |  |
|                |       | 392.45520-50 32 | 7                     | 32                   | 1.260         | 63.5        | 2.500        | 66.04       | 2.600        | 101.6       | 4.000        | 28.7        | 1.130        | 25.4     | 1.000 | 4.1 |  |
|                |       | 392.45520-50 40 | 7                     | 40                   | 1.575         | 69.85       | 2.750        | 82.55       | 3.250        | 101.6       | 4.000        | 28.7        | 1.130        | 25.4     | 1.000 | 4.1 |  |

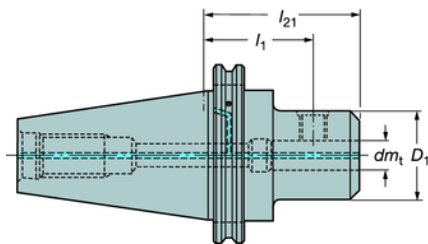
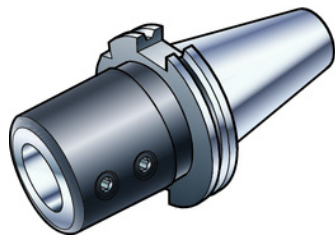
<sup>1)</sup> 7 = coolant through centre and through flange



## End mill holder, Weldon type

Shank according to DIN 6535-HB

A2B20



$l_1$  = programming length

### Metric bore

| Machine design  | Taper           | Ordering code   | Coolant <sup>1)</sup> | Dimensions, mm |       |       |          |                                 |
|-----------------|-----------------|-----------------|-----------------------|----------------|-------|-------|----------|---------------------------------|
|                 |                 |                 |                       | $dm$           | $D_1$ | $l_1$ | $l_{21}$ | $\frac{\mu\text{m}}{\text{MS}}$ |
| MAS-BT 403      | 30              | A2B20-30 06 050 | 1                     | 6              | 24.5  | 32.5  | 50       | 0.5                             |
|                 |                 | A2B20-30 08 050 | 1                     | 8              | 27.5  | 32.5  | 50       | 0.5                             |
|                 |                 | A2B20-30 10 050 | 1                     | 10             | 34.5  | 30.5  | 50       | 0.5                             |
|                 |                 | A2B20-30 12 052 | 1                     | 12             | 41.5  | 30    | 52       | 0.6                             |
|                 |                 | A2B20-30 16 063 | 1                     | 16             | 47.5  | 39.5  | 63       | 0.8                             |
|                 |                 | A2B20-30 20 063 | 1                     | 20             | 51.5  | 38.5  | 63       | 0.8                             |
|                 | 40              | A2B20-40 06 050 | 7                     | 6              | 25    | 32    | 50       | 0.9                             |
|                 |                 | A2B20-40 06 100 | 7                     | 6              | 25    | 82    | 100      | 1.1                             |
|                 |                 | A2B20-40 08 050 | 7                     | 8              | 28    | 32    | 50       | 1.0                             |
|                 |                 | A2B20-40 08 100 | 7                     | 8              | 28    | 82    | 100      | 1.2                             |
|                 |                 | A2B20-40 10 063 | 7                     | 10             | 35    | 43    | 63       | 1.1                             |
|                 |                 | A2B20-40 10 100 | 7                     | 10             | 35    | 80    | 100      | 1.4                             |
|                 |                 | A2B20-40 12 063 | 7                     | 12             | 42    | 40.5  | 63       | 1.2                             |
|                 |                 | A2B20-40 12 100 | 7                     | 12             | 42    | 77.5  | 100      | 1.9                             |
|                 |                 | A2B20-40 16 063 | 7                     | 16             | 48    | 39    | 63       | 1.2                             |
|                 |                 | A2B20-40 16 100 | 7                     | 16             | 48    | 76    | 100      | 1.9                             |
|                 |                 | A2B20-40 20 063 | 7                     | 20             | 52    | 38    | 63       | 1.4                             |
|                 |                 | A2B20-40 20 100 | 7                     | 20             | 52    | 75    | 100      | 1.9                             |
| A2B20-40 25 090 | 7               | 25              | 59                    | 66             | 90    | 2.4   |          |                                 |
| A2B20-40 25 160 | 7               | 25              | 59                    | 136            | 160   | 3.9   |          |                                 |
| A2B20-40 32 100 | 7               | 32              | 72                    | 76             | 100   | 2.6   |          |                                 |
| 50              | A2B20-50 06 063 | 7               | 6                     | 25             | 45    | 63    | 3.6      |                                 |
|                 | A2B20-50 08 063 | 7               | 8                     | 28             | 45    | 63    | 3.5      |                                 |
|                 | A2B20-50 10 070 | 7               | 10                    | 35             | 50    | 70    | 3.7      |                                 |
|                 | A2B20-50 12 080 | 7               | 12                    | 42             | 57.5  | 80    | 3.8      |                                 |
|                 | A2B20-50 16 080 | 7               | 16                    | 48             | 56    | 80    | 3.9      |                                 |
|                 | A2B20-50 20 080 | 7               | 20                    | 52             | 55    | 80    | 3.9      |                                 |
|                 | A2B20-50 20 100 | 7               | 20                    | 52             | 75    | 100   | 4.1      |                                 |
|                 | A2B20-50 25 100 | 7               | 25                    | 65             | 76    | 100   | 4.6      |                                 |
|                 | A2B20-50 25 160 | 7               | 25                    | 65             | 136   | 160   | 6.5      |                                 |
|                 | A2B20-50 32 105 | 7               | 32                    | 72             | 81    | 105   | 5.3      |                                 |
|                 | A2B20-50 32 160 | 7               | 32                    | 72             | 136   | 160   | 7.3      |                                 |
|                 | A2B20-50 40 115 | 7               | 40                    | 78             | 85    | 115   | 5.5      |                                 |

1) 1 = coolant through centre, 7 = coolant through centre and through flange



G168



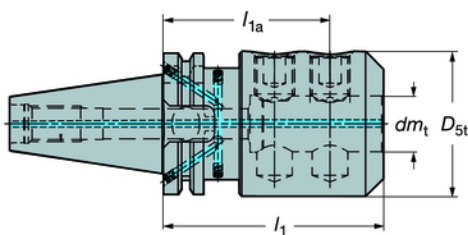
G48



G2

# Combination adaptor for Weldon and drill shank (ISO 9766)

BIG-PLUS



BIG-PLUS SYSTEM - Licence BIG DAISHOWA

$l_1$  = programming length

## Metric bore

| Machine design | Taper | Ordering code     | Coolant <sup>1)</sup> | Dimensions, mm |          |       |     |
|----------------|-------|-------------------|-----------------------|----------------|----------|-------|-----|
|                |       |                   |                       | $dm_t$         | $D_{5t}$ | $l_1$ |     |
| ISO7388.1      | 40    | 392.54023-4020070 | 7                     | 20             | 52       | 70    | 1.5 |
|                |       | 392.54023-4025100 | 7                     | 25             | 65       | 100   | 2.4 |
|                |       | 392.54023-4032105 | 7                     | 32             | 72       | 105   | 2.7 |
|                |       | 392.54023-4040115 | 7                     | 40             | 90       | 115   | 4.1 |
| MAS-BT 403     | 40    | 392.55523-4020065 | 7                     | 20             | 52       | 65    | 1.5 |
|                |       | 392.55523-4025090 | 7                     | 25             | 65       | 90    | 2.3 |
|                |       | 392.55523-4032100 | 7                     | 32             | 72       | 100   | 2.8 |
|                |       | 392.55523-4040110 | 1                     | 40             | 90       | 110   | 4.2 |

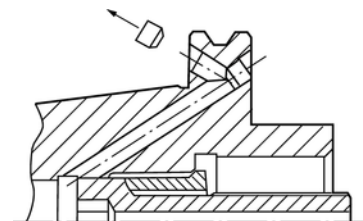
<sup>1)</sup> 1 = coolant through centre, 7 = coolant through centre and through flange

## Inch bore

| Machine design | Taper | Ordering code      | Coolant <sup>1)</sup> | Dimensions, inch |          |       |          |     |
|----------------|-------|--------------------|-----------------------|------------------|----------|-------|----------|-----|
|                |       |                    |                       | $dm_t$           | $D_{5t}$ | $l_1$ | $l_{1a}$ |     |
| CAT V          | 40    | A392.54523-4019065 | 7                     | .750             | 1.750    | 2.559 | 1.575    | 2.4 |
|                |       | A392.54523-4025100 | 7                     | 1.000            | 2.248    | 3.937 | 2.992    | 4.4 |
|                |       | A392.54523-4031100 | 7                     | 1.250            | 2.480    | 3.937 | 2.992    | 4.7 |

<sup>1)</sup> 7 = coolant through centre and through flange

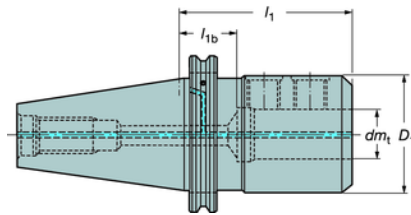
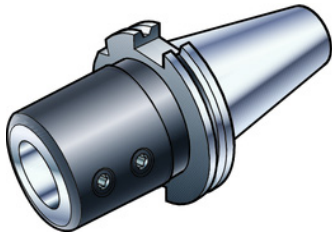
The new design is prepared for coolant also through the flange which means the coolant could be lead either through the centre or through the flange. The inlet channels in the flange are plugged with screws, which can easily be removed when coolant supply should be led through the flange. For technical information, see Metalcutting Technical guide.



## Drill holder, ISO 9766 shank

Shank according to ISO 9766

A1B27 / A2B27 / AA3B27 / A227



$l_1$  = programming length

### Metric bore

| Machine design | Taper | Ordering code   | Coolant <sup>1)</sup> | Dimensions, mm |       |       |          |                              |
|----------------|-------|-----------------|-----------------------|----------------|-------|-------|----------|------------------------------|
|                |       |                 |                       | $dm$           | $D_1$ | $l_1$ | $l_{1b}$ | $\frac{\sigma}{\mu\text{m}}$ |
| ISO7388.1      | 40    | A1B27-40 16 080 | 7                     | 16             | 36    | 80    | 27       | 1.2                          |
|                |       | A1B27-40 20 080 | 7                     | 20             | 40    | 80    | 25       | 1.2                          |
|                |       | A1B27-40 25 085 | 7                     | 25             | 45    | 85    | 25       | 1.4                          |
|                |       | A1B27-40 32 090 | 7                     | 32             | 52    | 90    | 26       | 1.5                          |
|                | 50    | A1B27-50 16 080 | 7                     | 16             | 36    | 80    | 27       | 3.0                          |
|                |       | A1B27-50 20 080 | 7                     | 20             | 40    | 80    | 25       | 3.1                          |
|                |       | A1B27-50 25 085 | 7                     | 25             | 45    | 85    | 25       | 3.3                          |
|                |       | A1B27-50 32 090 | 7                     | 32             | 52    | 90    | 26       | 3.4                          |
|                |       | A1B27-50 40 090 | 7                     | 40             | 76    | 90    | 16       | 3.9                          |
|                |       | A1B27-50 50 100 | 7                     | 50             | 76    | 100   | 16       | 3.7                          |
| MAS/BT403      | 40    | A2B27-40 16 070 | 7                     | 16             | 36    | 70    | 17       | 1.2                          |
|                |       | A2B27-40 20 075 | 7                     | 20             | 40    | 75    | 20       | 1.3                          |
|                |       | A2B27-40 25 080 | 7                     | 25             | 45    | 80    | 20       | 1.4                          |
|                |       | A2B27-40 32 085 | 7                     | 32             | 52    | 85    | 21       | 1.5                          |
|                | 50    | A2B27-50 16 080 | 7                     | 16             | 36    | 80    | 27       | 3.9                          |
|                |       | A2B27-50 20 085 | 7                     | 20             | 40    | 85    | 30       | 3.9                          |
|                |       | A2B27-50 25 090 | 7                     | 25             | 45    | 90    | 30       | 4.0                          |
|                |       | A2B27-50 32 095 | 7                     | 32             | 52    | 95    | 31       | 4.2                          |
|                |       | A2B27-50 40 105 | 7                     | 40             | 76    | 105   | 31       | 4.5                          |
|                |       | A2B27-50 50 113 | 7                     | 50             | 76    | 113   | 29       | 5.0                          |

1) 1 = coolant through centre, 7 = coolant through centre and through flange







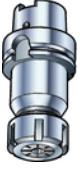




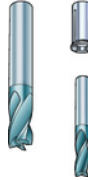


















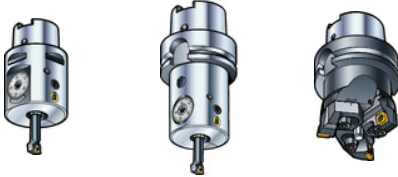

### Inch bore

| Machine design | Taper | Ordering code    | Coolant <sup>1)</sup> | Dimensions, inch |       |       |          |                              |
|----------------|-------|------------------|-----------------------|------------------|-------|-------|----------|------------------------------|
|                |       |                  |                       | $dm$             | $D_1$ | $l_1$ | $l_{1b}$ | $\frac{\sigma}{\mu\text{m}}$ |
| CAT V          | 40    | AA3B27-40 19 080 | 7                     | .750             | 1.575 | 3.150 | 1.024    | 2.9                          |
|                |       | AA3B27-40 25 085 | 7                     | 1.000            | 1.772 | 3.346 | .965     | 3.1                          |
|                |       | AA3B27-40 32 090 | 7                     | 1.250            | 2.047 | 3.543 | 1.024    | 3.3                          |
|                | 50    | AA3B27-50 19 080 | 7                     | .750             | 1.575 | 3.150 | 1.024    | 6.6                          |
|                |       | AA3B27-50 25 085 | 7                     | 1.000            | 1.772 | 3.346 | .965     | 6.8                          |
|                |       | AA3B27-50 32 090 | 7                     | 1.250            | 2.047 | 3.543 | 1.024    | 7.3                          |
|                |       | AA3B27-50 38 090 | 7                     | 1.500            | 2.559 | 3.543 | .846     | 8.2                          |
|                |       | AA3B27-50 51 110 | 7                     | 2.000            | 2.953 | 4.331 | 1.122    | 9.3                          |

1) 7 = coolant through centre and through flange



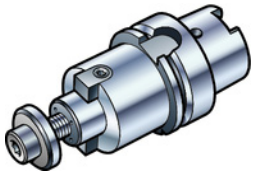
HSK solid holding tools

|  |   |  |   |  |  |  |
|--|---|--|---|--|--|--|
| <p>Face mill holder</p>                     | <p>Dampened milling adaptor</p>          | <p>Hydro-Grip high precision chuck</p> <p>Face mill holder</p>  | <p>Exchangeable head system EH for CoroMill® 316</p>     | <p>Hydro-Grip high precision chuck</p> <p>Slender/ Heavy Duty</p>  | <p>Hydro-Grip high precision chuck</p> <p>Pencil type</p>                 | <p>ER collet chuck</p> <p>DIN 6499</p>  |
| <p>392.41005<br/>A392.41005</p> <p>Page G71</p>  | <p>392.41005CD<br/>A392.41005CD</p> <p>G74</p>  | <p>41005CG</p> <p>G95</p>  | <p>392.410EH</p> <p>G103</p>  | <p>392.410CGA/<br/>392.410CGD</p> <p>G93</p>   | <p>392.410CGB</p> <p>G94</p>   | <p>392.41014</p> <p>G75</p>  |
|   |    |   |    |    |   |   |
| <p>End mill holder, Weldon type</p>       | <p>End mill holder, Whistle Notch</p>  | <p>Adjustable drill holder</p>                                | <p>Holder for drills</p> <p>According to ISO 9766</p>  | <p>SynchroFlex® ER tapping chuck</p>                             | <p>Floating rubber collet chuck</p>                                     | <p>Quick change tapping chuck</p>     |
| <p>392.41020<br/>A392.41020</p> <p>Page G76</p>  | <p>392.14021</p> <p>G78</p>   | <p>392.410227</p> <p>E130</p>  | <p>392.41027</p> <p>G79</p>   | <p>392.41062<br/>392.41063</p> <p>G108</p>   | <p>392.41060B</p> <p>G117</p>  | <p>392.41060<br/>392.41061</p> <p>G112</p>   |
|   |                                        |   |    |    |   |                                       |
| <p>Basic holder with Coromant Capto®</p>  | <p>Blank</p>                           | <p>Integrated tools for boring, see chapter F</p>            |   |  | <p>HSK adaptors for CoroMill® modular cutting tools, see page G121</p>  |  |
| <p>Cx-390.410/612/390.419</p> <p>Page G16</p>  | <p>392.41050</p> <p>G80</p>   |  |   |  |  |  |

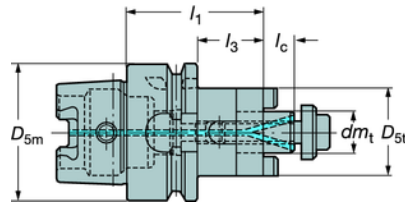
## Face mill holder

392.41005C

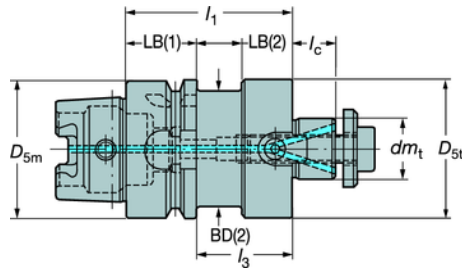
HSK form A/C



Design 1



Design 2



Note: Hole for data carrier is not standard.

 $l_1$  = programming length

## Metric pilot

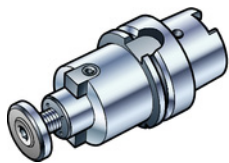
| HSK size | Ordering code      | Coolant <sup>1)</sup> |      |  | Design | Dimensions, mm |        |          |       |          |       |       |          |       |       |       | Balanced by design |                     |   |
|----------|--------------------|-----------------------|------|--|--------|----------------|--------|----------|-------|----------|-------|-------|----------|-------|-------|-------|--------------------|---------------------|---|
|          |                    | Entry                 | Exit |  |        | $D_{5m}$       | $dm_t$ | $D_{st}$ | $l_c$ | $D_{hc}$ | $l_1$ | $l_2$ | $D_{in}$ | LB(2) | LB(1) | BD(2) |                    | $\frac{\sigma}{kg}$ |   |
| 40       | 392.41005C-4022050 | 1                     | 4    |  | 2      | 40             | 22     | 48       | 16    |          | 50    |       |          |       |       |       |                    | 0.6                 | ⊙ |
| 50       | 392.41005C-5022060 | 1                     | 4    |  | 2      | 50             | 22     | 48       | 16    |          | 60    |       |          |       |       |       |                    | 0.9                 | ⊙ |
| 63       | 392.41005C6316050  | 1                     | 4    |  | 1      | 63             | 16     | 32       | 11    |          | 50    | 24    |          |       |       |       |                    | 0.8                 | ⊙ |
|          | 392.41005C6322050  | 1                     | 4    |  | 2      | 63             | 22     | 50       | 16    |          | 50    | 24    |          |       |       |       |                    | 1.1                 | ⊙ |
|          | 392.41005C6327060  | 1                     | 4    |  | 2      | 63             | 27     | 60       | 18    |          | 60    | 34    | 18       | 26    | 53    |       |                    | 1.4                 | ⊙ |
|          | 392.41005C6332060  | 1                     | 4    |  | 2      | 63             | 32     | 78       | 20    |          | 60    |       | 18       | 26    | 53    |       |                    | 1.7                 | ⊙ |
| 100      | 392.41005C6340060  | 1                     | 4    |  | 2      | 63             | 40     | 87       | 23    |          | 60    |       | 18       | 26    | 53    |       |                    | 2.1                 | ⊙ |
|          | 392.41005C10022100 | 1                     | 4    |  | 2      | 100            | 22     | 50       | 16    |          | 100   | 71    |          |       |       |       |                    | 3.1                 | ⊙ |
|          | 392.41005C10027100 | 1                     | 4    |  | 2      | 100            | 27     | 60       | 18    |          | 100   | 71    |          |       |       |       |                    | 3.6                 | ⊙ |
|          | 392.41005C10032100 | 1                     | 4    |  | 2      | 100            | 32     | 78       | 20    |          | 100   | 71    |          |       |       |       |                    | 4.8                 | ⊙ |
| 125      | 392.41005C10040100 | 1                     | 4    |  | 2      | 100            | 40     | 87       | 23    |          | 100   | 71    |          |       |       |       |                    | 5.5                 | ⊙ |
|          | 392.41005C12532100 | 1                     | 4    |  | 2      | 125            | 32     | 78       | 20    |          | 100   | 71    |          |       |       |       |                    | 6.0                 | ⊙ |
|          | 392.41005C12540100 | 1                     | 4    |  | 2      | 125            | 40     | 87       | 23    |          | 100   | 71    |          |       |       |       |                    | 6.8                 | ⊙ |

<sup>1)</sup> 0 = no coolant, 1 = coolant through centre, 4 = coolant through arborCoolant tube must be ordered separately, see page G80.  
For holders with coolant through centre, see page G72

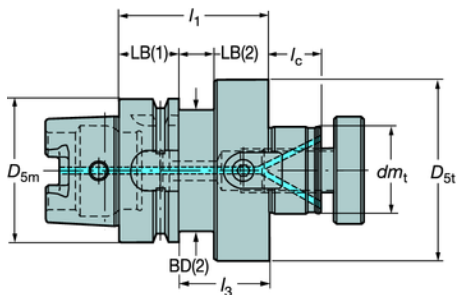
# Face mill holder

A392.41005C

HSK form A/C



Design 2



Note: Hole for data carrier is not standard.

$l_1$  = programming length

## Inch pilot

| HSK size | Ordering code       | Coolant <sup>1)</sup> |      | Design | Dimensions, inch |        |          |       |       |       |       |       |       |  | Balanced by design |  |      |   |
|----------|---------------------|-----------------------|------|--------|------------------|--------|----------|-------|-------|-------|-------|-------|-------|--|--------------------|--|------|---|
|          |                     | Entry                 | Exit |        | $D_{5m}$         | $dm_t$ | $D_{5t}$ | $l_c$ | $l_1$ | $l_3$ | LB(2) | LB(1) | BD(2) |  |                    |  |      |   |
| 63       | A392.41005C6319050  | 1                     | 4    | 2      | 2.480            | .750   | 1.693    | .709  | 1.968 | .945  |       |       |       |  |                    |  | 2.1  | ⊙ |
|          | A392.41005C6325060  | 1                     | 4    | 2      | 2.480            | 1.000  | 1.969    | .709  | 2.362 | 1.339 |       |       |       |  |                    |  | 2.8  | ⊙ |
|          | A392.41005C6338065  | 1                     | 4    | 2      | 2.480            | 1.500  | 3.150    | .906  | 2.559 |       | .630  | 1.024 | 2.087 |  |                    |  | 4.6  | ⊙ |
| 100      | A392.41005C10019100 | 1                     | 4    | 2      | 3.937            | .750   | 1.693    | .709  | 3.937 | 2.795 |       |       |       |  |                    |  | 6.2  | ⊙ |
|          | A392.41005C10025100 | 1                     | 4    | 2      | 3.937            | 1.000  | 1.969    | .709  | 3.937 | 2.795 |       |       |       |  |                    |  | 6.9  | ⊙ |
|          | A392.41005C10038100 | 1                     | 4    | 2      | 3.937            | 1.500  | 3.150    | .906  | 3.937 | 2.795 |       |       |       |  |                    |  | 11.1 | ⊙ |
| 125      | A392.41005C12525100 | 1                     | 4    | 2      | 4.921            | 1.000  | 1.969    | .709  | 3.937 | 2.795 |       |       |       |  |                    |  | 9.7  | ⊙ |
|          | A392.41005C12538100 | 1                     | 4    | 2      | 4.921            | 1.500  | 3.150    | .906  | 3.937 | 2.795 |       |       |       |  |                    |  | 14.0 | ⊙ |

<sup>1)</sup> 0 = no coolant, 1 = coolant through centre, 4 = coolant through arbor

Coolant tube must be ordered separately, see page G80.

For holders with coolant through centre, see page G73



D  
E  
F  
G  
J

ROT - ENG

TOOLING SYSTEMS

HSK solid holding tools

# Face mill holder

392.41005

HSK form A/C

Note: Hole for data carrier is not standard.

$l_1$  = programming length

Metric version

| HSK size | Ordering code                    | Coolant <sup>1)</sup> | Dimensions, mm |          |          |       |       |       |          |       |       |       |                | Balanced by design |     |   |
|----------|----------------------------------|-----------------------|----------------|----------|----------|-------|-------|-------|----------|-------|-------|-------|----------------|--------------------|-----|---|
|          |                                  |                       | $dm_t$         | $D_{5m}$ | $D_{5t}$ | $l_c$ | $l_1$ | $l_3$ | $d_{hc}$ | LB(1) | LB(2) | BD(2) | $\frac{m}{kg}$ |                    |     |   |
| 63       | 392.41005-63 16 050              | 1                     | 16             | 63       | 32       | 11    | 50    | 24    |          |       |       |       |                |                    | 1.0 | ⊙ |
|          | 392.41005-63 22 050B             | 1                     | 22             | 63       | 50       | 16    | 50    | 24    |          |       |       |       |                |                    | 1.1 | ⊙ |
|          | 392.41005-63 27 060B             | 1                     | 27             | 63       | 50       | 18    | 60    | 34    |          |       |       |       |                |                    | 1.4 | ⊙ |
|          | 392.41005-63 32 060B             | 1                     | 32             | 63       | 63       | 20    | 60    |       | 26       | 16    | 53    |       |                |                    | 1.5 | ⊙ |
|          | 392.41005-63 40 060B             | 1                     | 40             | 63       | 80       | 23    | 60    |       | 26       | 16    | 53    |       |                |                    | 2.0 | ⊙ |
| 100      | 392.41005-100 22 050A            | 1                     | 22             | 100      | 50       | 16    | 50    | 21    |          |       |       |       |                |                    | 2.4 | ⊙ |
|          | 392.41005-10022100               | 1                     | 22             | 100      | 50       | 16    | 100   | 71    |          |       |       |       |                |                    | 3.2 | ⊙ |
|          | 392.41005-100 27 050A            | 1                     | 27             | 100      | 50       | 18    | 50    | 21    |          |       |       |       |                |                    | 2.4 | ⊙ |
|          | 392.41005-10027100               | 1                     | 27             | 100      | 50       | 18    | 100   | 71    |          |       |       |       |                |                    | 3.2 | ⊙ |
|          | 392.41005-100 32 050A            | 1                     | 32             | 100      | 63       | 20    | 50    | 21    |          |       |       |       |                |                    | 2.8 | ⊙ |
|          | 392.41005-10032100               | 1                     | 32             | 100      | 63       | 20    | 100   | 71    |          |       |       |       |                |                    | 4.0 | ⊙ |
|          | 392.41005-100 40 060A            | 1                     | 40             | 100      | 80       | 23    | 60    | 31    |          |       |       |       |                |                    | 3.6 | ⊙ |
|          | 392.41005-10040100               | 1                     | 40             | 100      | 80       | 23    | 100   | 71    |          |       |       |       |                |                    | 3.6 | ⊙ |
|          | 392.41005-10060075 <sup>2)</sup> | 0                     | 60             | 100      | 130      | 29    | 75    |       | 101.6    | 29    | 17    | 84    |                |                    | 6.3 | ⊙ |
| 125      | 392.41005-12560085 <sup>2)</sup> | 0                     | 60             | 125      | 130      | 29    | 85    |       | 101.6    | 29    | 17    | 110.5 |                |                    | 9.2 | ⊙ |

<sup>1)</sup> 0 = no coolant, 1 = coolant through centre

<sup>2)</sup> For flange mounting screw, see page G171

Coolant tube must be ordered separately, see page G80.

For holders with coolant through arbor, see page G70

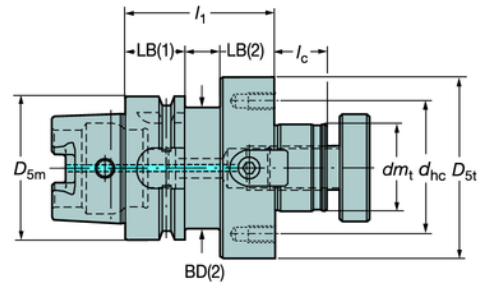
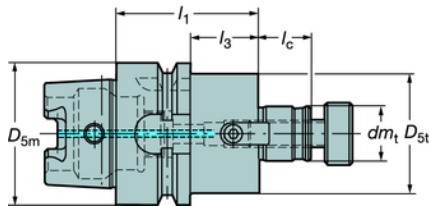
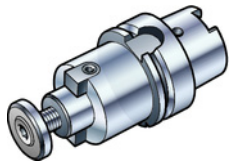
G 72



# Face mill holder

A392.41005

HSK form A/C



$l_1$  = programming length

Note: Hole for data carrier is not standard.

## Inch pilot

| HSK size | Ordering code                     | Coolant <sup>1)</sup> | Dimensions, inch |          |          |       |       |       |          |       |       |       |                           | Balanced by design |     |      |   |
|----------|-----------------------------------|-----------------------|------------------|----------|----------|-------|-------|-------|----------|-------|-------|-------|---------------------------|--------------------|-----|------|---|
|          |                                   |                       | $dm_t$           | $D_{sm}$ | $D_{st}$ | $l_c$ | $l_1$ | $l_3$ | $d_{hc}$ | LB(1) | LB(2) | BD(2) | $\frac{L_{tot}}{L_{tot}}$ |                    |     |      |   |
| 63       | A392.41005-63 19 050B             | 1                     | .750             | 2.480    | 1.693    | .709  | 1.969 | .945  |          |       |       |       |                           |                    |     | 2.4  | ⊙ |
|          | A392.41005-63 25 060B             | 1                     | 1.000            | 2.480    | 1.969    | .709  | 2.362 | 1.339 |          |       |       |       |                           |                    |     | 2.9  | ⊙ |
|          | A392.41005-63 38 065B             | 1                     | 1.500            | 2.480    | 3.150    | .906  | 2.559 |       | 1.024    | 0.630 | 2.087 |       |                           |                    | 4.9 | ⊙    |   |
| 100      | A392.41005-100 19 050A            | 1                     | .750             | 3.937    | 1.693    | .709  | 1.969 | .827  |          |       |       |       |                           |                    |     | 4.9  | ⊙ |
|          | A392.41005-100 25 050A            | 1                     | 1.000            | 3.937    | 1.969    | .709  | 1.969 | .827  |          |       |       |       |                           |                    |     | 5.1  | ⊙ |
|          | A392.41005-100 38 060A            | 1                     | 1.500            | 3.937    | 3.150    | .906  | 2.362 | 1.220 |          |       |       |       |                           |                    |     | 7.9  | ⊙ |
|          | A392.41005-10063075 <sup>2)</sup> | 0                     | 2.500            | 3.937    | 5.118    | 1.142 | 2.953 |       | 4        | 1.142 | .669  | 3.445 |                           |                    |     | 14.2 | ⊙ |
| 125      | A392.41005-12563085 <sup>2)</sup> | 0                     | 2.500            | 4.921    | 5.118    | 1.142 | 3.346 |       | 4        | 1.142 | .669  | 4.350 |                           |                    |     | 20.3 | ⊙ |

<sup>1)</sup> 0 = no coolant, 1 = coolant through centre

<sup>2)</sup> For flange mounting screw, see page G171

Coolant tube must be ordered separately, see page G80.

For holders with coolant through arbor, see page G71



G171



G69

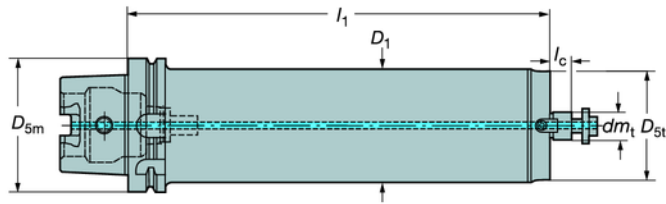


G2

## Dampened milling adaptor

With coolant through arbor


392.41005CD  
A392.41005CD  
HSK form A/C



**Silent** Tools®


$l_1$  = programming length

### Metric pilot

| HSK size | Ordering code       | Coolant <sup>1)</sup> |      | Dimensions, mm |          |       |          |       |       |           |   |
|----------|---------------------|-----------------------|------|----------------|----------|-------|----------|-------|-------|-----------|---|
|          |                     | Entry                 | Exit | $dm_1$         | $D_{5m}$ | $D_1$ | $D_{5t}$ | $l_c$ | $l_1$ | $n_{max}$ |  |
| 63       | 392.41005CD6316160  | 1                     | 4    | 16             | 63       | 40    | 40       | 11    | 160   | 10000     | 2.1   |
|          | 392.41005CD6316230  | 1                     | 4    | 16             | 63       | 40    | 40       | 11    | 230   | 7000      | 2.7   |
|          | 392.41005CD6322210  | 1                     | 4    | 22             | 63       | 50    | 48       | 16    | 210   | 10000     | 4.2   |
|          | 392.41005CD6322300  | 1                     | 4    | 22             | 63       | 50    | 48       | 16    | 300   | 7000      | 5.4   |
| 100      | 392.41005CD10022230 | 1                     | 4    | 22             | 100      | 63    | 48       | 16    | 230   | 10000     | 7.4   |
|          | 392.41005CD10022340 | 1                     | 4    | 22             | 100      | 63    | 48       | 16    | 340   | 7000      | 10.8  |
|          | 392.41005CD10027230 | 1                     | 4    | 27             | 100      | 63    | 55       | 18    | 230   | 10000     | 7.5   |
|          | 392.41005CD10027340 | 1                     | 4    | 27             | 100      | 63    | 55       | 18    | 340   | 7000      | 10.9  |

<sup>1)</sup> 1 = coolant through centre, 4 = coolant through arbor

### Inch pilot

| HSK size | Ordering code       | Coolant <sup>1)</sup> |      | Dimensions, inch |          |          |       |        |           |   |  |
|----------|---------------------|-----------------------|------|------------------|----------|----------|-------|--------|-----------|---|--|
|          |                     | Entry                 | Exit | $dm_1$           | $D_{5m}$ | $D_{5t}$ | $l_c$ | $l_1$  | $n_{max}$ |  |  |
| 63       | A392.41005CD6319210 | 1                     | 4    | .750             | 2.480    | 1.575    | .710  | 8.268  | 10000     | 9.3   |  |
|          | A392.41005CD6319300 | 1                     | 4    | .750             | 2.480    | 1.575    | .710  | 11.811 | 7000      | 11.9  |  |
| 100      | A392.4105CD10025230 | 1                     | 4    | 1.000            | 3.937    | 2.756    | .710  | 9.055  | 10000     | 16.5  |  |
|          | A392.4105CD10025340 | 1                     | 4    | 1.000            | 3.937    | 2.756    | .710  | 13.386 | 7000      | 24.0  |  |

<sup>1)</sup> 1 = coolant through centre, 4 = coolant through arbor

Coolant tube must be ordered separately, see page G80.

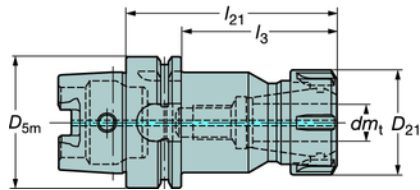
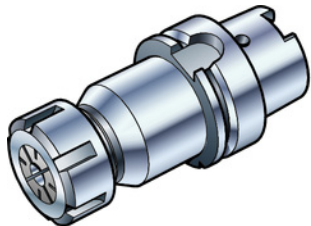


# ER collet chuck

For DIN 6499 collets

392.41014

HSK form A/C



**Accessories**

Open style

Metallic sealed style

393.14

393.15

Not delivered with the tool, must be ordered separately.



See page

G138

G139

Note: Hole for data carrier is not standard.

| Machine design        | Taper                | Ordering code         | Coolant <sup>1)</sup> | Dimensions, mm |                   |                   |          |       |          |                            | Collet size |
|-----------------------|----------------------|-----------------------|-----------------------|----------------|-------------------|-------------------|----------|-------|----------|----------------------------|-------------|
|                       |                      |                       |                       | $D_{5m}$       | $dm_{\text{min}}$ | $dm_{\text{max}}$ | $D_{21}$ | $l_3$ | $l_{21}$ | $\frac{\Omega}{\text{kg}}$ |             |
| HSK                   | 40                   | 392.41014-4025062     | 1                     | 40             | 1                 | 16                | 42       |       | 62       | 0.4                        | ER 25       |
|                       | 50                   | 392.41014-5032072     | 1                     | 1.575          | .039              | .630              | 1.654    |       | 2.441    |                            |             |
|                       |                      |                       |                       | 1.968          | .079              | .787              | 1.968    |       | 2.835    |                            |             |
|                       | 63                   | 392.41014-63 25 100   | 1                     | 63             | 1.5               | 16                | 42       | 74    | 100      | 1.2                        | ER 25       |
|                       |                      | 392.41014-63 32 100B  | 1                     | 2.480          | .059              | .630              | 1.654    | 2.913 | 3.937    |                            |             |
|                       |                      |                       |                       | 63             | 2                 | 20                | 50       | 74    | 100      | 1.2                        | ER 32       |
|                       | 392.41014-63 40 120B | 1                     | 2.480                 | .079           | .787              | 1.968             | 2.913    | 3.937 |          |                            |             |
|                       |                      |                       | 63                    | 3              | 26                | 63                | 94       | 120   | 1.8      | ER 40                      |             |
|                       | 100                  | 392.41014-100 32 100A | 1                     | 100            | 2                 | 20                | 50       | 71    | 100      | 2.6                        | ER 32       |
|                       |                      | 392.41014-100 40 120A | 1                     | 3.937          | .079              | .787              | 1.968    | 2.795 | 3.937    |                            |             |
|                       |                      |                       |                       | 100            | 3                 | 26                | 63       | 91    | 120      | 3.5                        | ER 40       |
|                       |                      |                       |                       | 3.937          | .118              | 1.024             | 2.480    | 3.583 | 4.724    |                            |             |
| 392.41014-100 50 130A | 1                    | 100                   | 6                     | 34             | 78                | 101               | 130      | 4.5   | ER 50    |                            |             |
|                       |                      |                       | 3.937                 | .236           | 1.339             | 3.071             | 3.976    | 5.118 |          |                            |             |

<sup>1)</sup> 1 = coolant through centre

Coolant tube must be ordered separately, see page G80.



G174



G69



G2

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ROT - ENG

TOOLING SYSTEMS HSK solid holding tools

# End mill holder, Weldon type

Shank according to DIN 6535-HB

392.41020  
HSK form A/C

Note: Hole for data carrier is not standard.

$l_1$  = programming length

Metric bore

| HSK size | Ordering code         | Coolant <sup>1)</sup> | Dimensions, mm |          |       |       |       |          |       |       |       |                     | Balanced by design |
|----------|-----------------------|-----------------------|----------------|----------|-------|-------|-------|----------|-------|-------|-------|---------------------|--------------------|
|          |                       |                       | $dm_t$         | $D_{5m}$ | $D_1$ | $l_1$ | $l_2$ | $l_{21}$ | LB(1) | LB(2) | BD(2) | $\frac{\sigma}{kg}$ |                    |
| 63       | 392.41020-63 08 065B  | 1                     | 8              | 63       | 28    | 47    | 39    | 65       |       |       |       | 0.9                 | ⊙                  |
|          | 392.41020-63 10 065B  | 1                     | 10             | 63       | 35    | 45    | 39    | 65       |       |       |       | 1.0                 | ⊙                  |
|          | 392.41020-63 12 080B  | 1                     | 12             | 63       | 42    | 57.5  | 54    | 80       |       |       |       | 1.2                 | ⊙                  |
|          | 392.41020-63 16 080B  | 1                     | 16             | 63       | 48    | 56    | 54    | 80       |       |       |       | 1.4                 | ⊙                  |
|          | 392.41020-63 20 080B  | 1                     | 20             | 63       | 52    | 55    | 54    | 80       |       |       |       | 1.5                 | ⊙                  |
|          | 392.41020-63 25 110B  | 1                     | 25             | 63       | 65    | 86    |       | 110      | 26    | 16    | 53    | 2.6                 | ⊙                  |
| 100      | 392.41020-63 32 110B  | 1                     | 32             | 63       | 72    | 86    |       | 110      | 26    | 16    | 53    | 2.8                 | ⊙                  |
|          | 392.41020-100 12 080A | 1                     | 12             | 100      | 42    | 57.5  | 51    | 80       |       |       |       | 2.8                 | ⊙                  |
|          | 392.41020-100 16 100A | 1                     | 16             | 100      | 48    | 76    | 71    | 100      |       |       |       | 3.0                 | ⊙                  |
|          | 392.41020-100 20 100A | 1                     | 20             | 100      | 52    | 75    | 71    | 100      |       |       |       | 3.2                 | ⊙                  |
|          | 392.41020-100 25 100A | 1                     | 25             | 100      | 65    | 76    | 71    | 100      |       |       |       | 3.7                 | ⊙                  |
|          | 392.41020-100 32 100A | 1                     | 32             | 100      | 72    | 76    | 71    | 100      |       |       |       | 4.0                 | ⊙                  |
|          | 392.41020-100 40 120A | 1                     | 40             | 100      | 90    | 90    |       | 120      | 29    | 16    | 87.5  | 5.8                 | ⊙                  |

<sup>1)</sup> 1 = coolant through centre

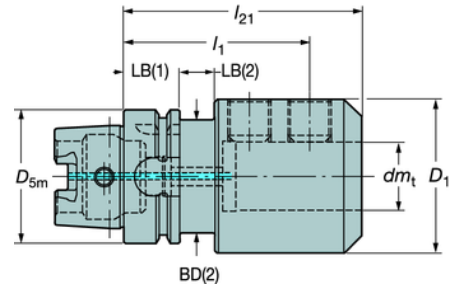
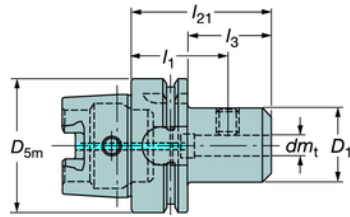
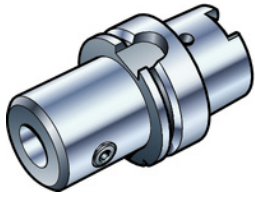
Coolant tube must be ordered separately, see page G80.

G 76

# End mill holder, Weldon type

A392.41020

HSK form A/C



Note: Hole for data carrier is not standard.

$l_1$  = programming length

## Inch bore

| HSK size | Ordering code          | Coolant <sup>1)</sup> | Dimensions, inch |          |       |       |       |          |       |       |       |                    | Balanced by design |   |
|----------|------------------------|-----------------------|------------------|----------|-------|-------|-------|----------|-------|-------|-------|--------------------|--------------------|---|
|          |                        |                       | $dm_t$           | $D_{5m}$ | $D_1$ | $l_1$ | $l_3$ | $l_{21}$ | LB(1) | LB(2) | BD(2) | $\frac{\sigma}{E}$ |                    |   |
| 63       | A392.41020-63 19 080B  | 1                     | .750             | 2.480    | 1.750 | 2.165 | 2.126 | 3.150    |       |       |       |                    | 6.6                | ⊙ |
|          | A392.41020-63 25 105B  | 1                     | 1.000            | 2.480    | 2.250 | 3.189 | 3.110 | 4.134    | 1.024 | 0.630 | 2.087 | 9.7                | ⊙                  |   |
|          | A392.41020-63 31 105B  | 1                     | 1.250            | 2.480    | 2.480 | 3.189 | 3.110 | 4.134    | 1.024 | 0.630 | 2.087 | 10.1               | ⊙                  |   |
| 100      | A392.41020-100 19 090A | 1                     | .750             | 3.937    | 1.750 | 2.598 | 2.402 | 3.543    |       |       |       |                    | 12.6               | ⊙ |
|          | A392.41020-100 25 100A | 1                     | 1.000            | 3.937    | 2.250 | 2.992 | 2.795 | 3.937    |       |       |       |                    | 15.2               | ⊙ |
|          | A392.41020-100 31 100A | 1                     | 1.250            | 3.937    | 2.480 | 2.992 | 2.795 | 3.937    |       |       |       |                    | 16.1               | ⊙ |
|          | A392.41020-100 38 110A | 1                     | 1.500            | 3.937    | 2.756 | 3.150 | 3.189 | 4.331    |       |       |       |                    | 18.5               | ⊙ |
|          | A392.41020-100 50 130A | 1                     | 2.000            | 3.937    | 3.661 | 3.976 | 3.976 | 5.118    | 1.142 | 0.630 | 3.445 | 12.8               | ⊙                  |   |

<sup>1)</sup> 1 = coolant through centre

Coolant tube must be ordered separately, see page G80.



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ROT - ENG

TOOLING SYSTEMS

HSK solid holding tools

# Whistle Notch holder

Shank according to DIN 6535-HE

Short design for carbide drills

Adjustable presetting length

392.41021

HSK form A/C

Note: Hole for data carrier is not standard.

$l_1$  = programming length

Metric bore

| HSK size | Ordering code         | Coolant <sup>1)</sup> | Dimensions, mm |       |          |           |     |       |          |       |       |       |  |     |
|----------|-----------------------|-----------------------|----------------|-------|----------|-----------|-----|-------|----------|-------|-------|-------|--|-----|
|          |                       |                       | $dm_t$         | $D_1$ | $D_{5m}$ | $l_1$ min | max | $l_3$ | $l_{21}$ | LB(1) | LB(2) | BD(2) |  |     |
| 63       | 392.41021-63 06 080B  | 1                     | 6              | 25    | 63       | 42        | 52  | 54    | 80       |       |       |       |  | 1   |
|          | 392.41021-63 08 080B  | 1                     | 8              | 28    | 63       | 42        | 52  | 54    | 80       |       |       |       |  | 1   |
|          | 392.41021-63 10 080B  | 1                     | 10             | 35    | 63       | 38        | 48  | 54    | 80       |       |       |       |  | 1.1 |
|          | 392.41021-63 12 090B  | 1                     | 12             | 42    | 63       | 43        | 53  | 64    | 90       |       |       |       |  | 1.3 |
|          | 392.41021-63 16 100B  | 1                     | 16             | 48    | 63       | 50        | 60  | 74    | 100      |       |       |       |  | 1.6 |
|          | 392.41021-63 20 100B  | 1                     | 20             | 52    | 63       | 48        | 58  | 74    | 100      |       |       |       |  | 1.8 |
|          | 392.41021-63 25 110B  | 1                     | 25             | 65    | 63       | 52        | 62  |       | 110      | 26    | 24    | 53    |  | 2.6 |
| 100      | 392.41021-63 32 110B  | 1                     | 32             | 72    | 63       | 49        | 59  |       | 110      | 26    | 19    | 53    |  | 2.8 |
|          | 392.41021-100 10 090A | 1                     | 10             | 35    | 100      | 48        | 58  | 61    | 90       |       |       |       |  | 2.5 |
|          | 392.41021-100 12 100A | 1                     | 12             | 42    | 100      | 53        | 63  | 71    | 100      |       |       |       |  | 2.7 |
|          | 392.41021-100 16 100A | 1                     | 16             | 48    | 100      | 50        | 60  | 71    | 100      |       |       |       |  | 2.9 |
|          | 392.41021-100 20 110A | 1                     | 20             | 52    | 100      | 58        | 68  | 81    | 110      |       |       |       |  | 3.3 |
|          | 392.41021-100 25 120A | 1                     | 25             | 65    | 100      | 62        | 72  | 91    | 120      |       |       |       |  | 4.2 |
|          | 392.41021-100 32 120A | 1                     | 32             | 72    | 100      | 59        | 69  | 91    | 120      |       |       |       |  | 4.5 |

1) 1 = coolant through centre

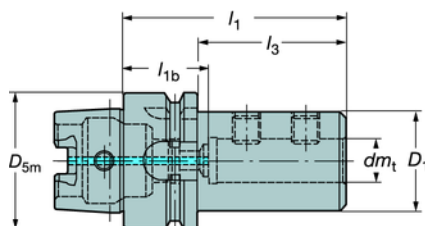
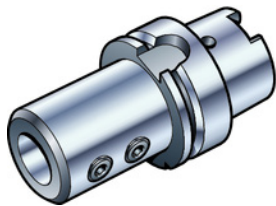
Coolant tube must be ordered separately, see page G80.

G 78

# Drill holder, ISO 9766 shank

392.41027

HSK form A/C



Note: Hole for data carrier is not standard.

$l_1$  = programming length

## Metric bore

| HSK size | Ordering code         | Coolant <sup>3)</sup> | Dimensions, mm |          |       |            |               |       |                 |
|----------|-----------------------|-----------------------|----------------|----------|-------|------------|---------------|-------|-----------------|
|          |                       |                       | $dm_t$         | $D_{5m}$ | $D_1$ | $l_1^{1)}$ | $l_{1b}^{2)}$ | $l_3$ | $\frac{kg}{kg}$ |
| 63       | 392.41027-63 16 080B  | 1                     | 16             | 63       | 36    | 80         | 30.5          | 54    | 1.1             |
|          | 392.41027-63 20 080B  | 1                     | 20             | 63       | 40    | 80         | 28.5          | 54    | 1.1             |
|          | 392.41027-63 25 090B  | 1                     | 25             | 63       | 45    | 90         | 32.5          | 64    | 1.2             |
|          | 392.41027-63 32 090B  | 1                     | 32             | 63       | 52    | 90         | 28.5          | 64    | 1.3             |
| 100      | 392.41027-100 16 090A | 1                     | 16             | 100      | 36    | 90         | 40.5          | 61    | 2.6             |
|          | 392.41027-100 20 090A | 1                     | 20             | 100      | 40    | 90         | 38.5          | 61    | 2.6             |
|          | 392.41027-100 25 100A | 1                     | 25             | 100      | 45    | 100        | 42.5          | 71    | 2.7             |
|          | 392.41027-100 32 100A | 1                     | 32             | 100      | 52    | 100        | 38.5          | 71    | 2.9             |
|          | 392.41027-100 40 110A | 1                     | 40             | 100      | 65    | 110        | 38.5          | 81    | 3.5             |
|          | 392.41027-100 50 120  | 1                     | 50             | 100      | 75    | 120        | 38.5          | 91    | 3.8             |

<sup>1)</sup> Programming length for Coromant U drills and CoroDrill® 880.

<sup>2)</sup> Programming length for Coromant Delta drills.

<sup>3)</sup> 1 = coolant through centre

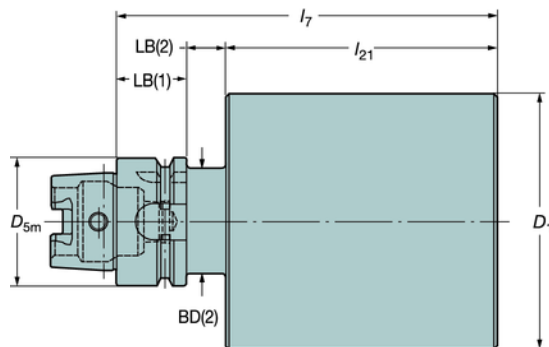
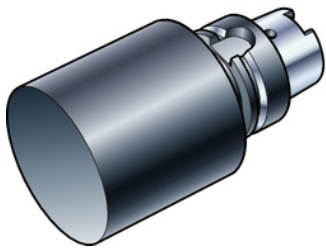
Coolant tube must be ordered separately, see page G80.



## Blanks

392.41050

HSK form A/C



Material: 42 CrMo4  
Tensile strength: 800N/mm<sup>2</sup>  
HB  $\approx$  235

| Coolant <sup>1)</sup> | HSK size | Ordering code          | Dimensions, mm, inch |              |                |                 |             |              |                |                 |             |              |             |              |             |              |                |  |
|-----------------------|----------|------------------------|----------------------|--------------|----------------|-----------------|-------------|--------------|----------------|-----------------|-------------|--------------|-------------|--------------|-------------|--------------|----------------|--|
|                       |          |                        | $D_1$<br>mm          | $D_1$<br>in. | $D_{5m}$<br>mm | $D_{5m}$<br>in. | $l_7$<br>mm | $l_7$<br>in. | $l_{21}$<br>mm | $l_{21}$<br>in. | LB(1)<br>mm | LB(1)<br>in. | LB(2)<br>mm | LB(2)<br>in. | BD(2)<br>mm | BD(2)<br>in. | $\sigma_{K60}$ |  |
| 0                     | 63       | 392.41050-63 64 250A   | 64                   | 2.520        | 63             | 2.480           | 250         | 9.842        | 208            | 8.189           | 26          | 1.024        | 16          | .630         | 53          | 2.087        | 6.3            |  |
| 0                     |          | 392.41050-63 130 150A  | 130                  | 5.118        | 63             | 2.480           | 150         | 5.906        | 108            | 4.252           | 26          | 1.024        | 16          | .630         | 53          | 2.087        | 12.2           |  |
| 0                     | 100      | 392.41050-100104250A   | 104                  | 4.094        | 100            | 3.937           | 250         | 9.842        | 205            | 8.071           | 29          | 1.142        | 16          | .630         | 87.5        | 3.445        | 16.4           |  |
| 0                     |          | 392.41050-100 145 200A | 145                  | 5.709        | 100            | 3.937           | 200         | 7.874        | 155            | 6.102           | 29          | 1.142        | 16          | .630         | 87.5        | 3.445        | 22.4           |  |

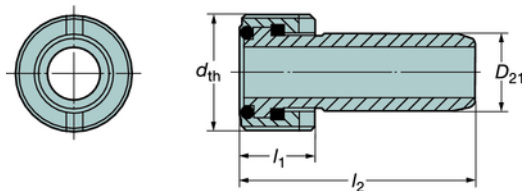
<sup>1)</sup> 0 = no coolant

Note: These HSK blanks are equipped with a thread inside the HSK coupling to allow for connection of a coolant tube.

If localized hardening is required, induction type hardening is suggested.

## Coolant tube

For solid HSK assortment



| HSK size | Ordering code | Dimensions, mm, inch |          |       |       |                |
|----------|---------------|----------------------|----------|-------|-------|----------------|
|          |               | $D_{21}$             | $d_{th}$ | $l_1$ | $l_2$ | $\sigma_{K60}$ |
| 40       | 5692 022-02   | 8                    | M12x1    | 7.5   | 29.5  | 0.01           |
|          |               | .315                 | M12x1    | .295  | 1.161 |                |
| 50       | 5692 022-03   | 10                   | M16x1    | 9.5   | 32.8  | 0.02           |
|          |               | .394                 | M16x1    | .374  | 1.291 |                |
| 63       | 5692 022-04   | 12                   | M18x1    | 11.5  | 36.5  | 0.03           |
|          |               | .472                 | M18x1    | .453  | 1.437 |                |
| 100      | 5692 022-06   | 16                   | M24x1.5  | 15.5  | 44.5  | 0.05           |
|          |               | .630                 | M24x1.5  | .610  | 1.752 |                |
| 125      | 5692 022-07   | 18                   | M30x1.5  | 17.5  | 48    | 0.08           |
|          |               | .709                 | M30x1.5  | .689  | 1.890 |                |

Key for coolant tube must be ordered separately, see spare parts on page G176





# Hydro-Grip® \*

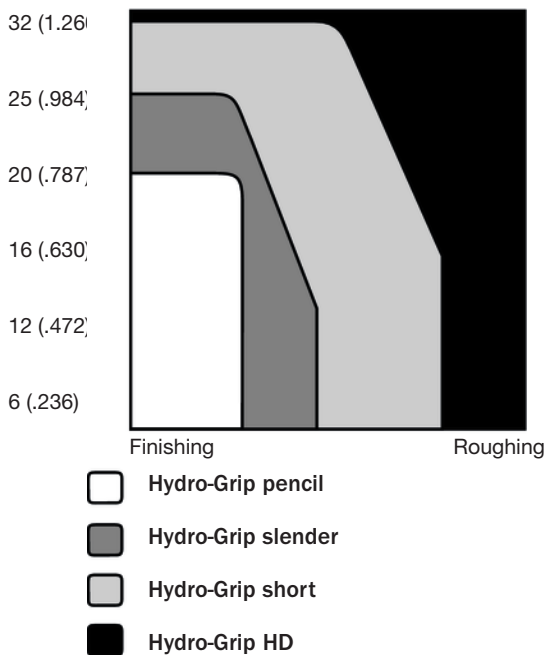
## High precision chuck

Stable and secure machining for every need

The secret with Hydro-Grip is the precise symmetrical clamping. This makes it possible to get very high run-out accuracy. When you have good run-out all teeth of your tool is cutting. When all teeth are cutting you get better surface quality, prevent vibrations and prolong tool life. All together you save money.



Bore diameter, mm (inch)



**Low run-out**

Prolong tool life  
Improve surface quality  
Prevent vibrations

**Highest clamping force on market**

Improved cutting data  
Higher productivity  
Secure machining

**Easy to clamp**

Time saving in set up  
User friendly for operator  
Correct clamping independent of use.

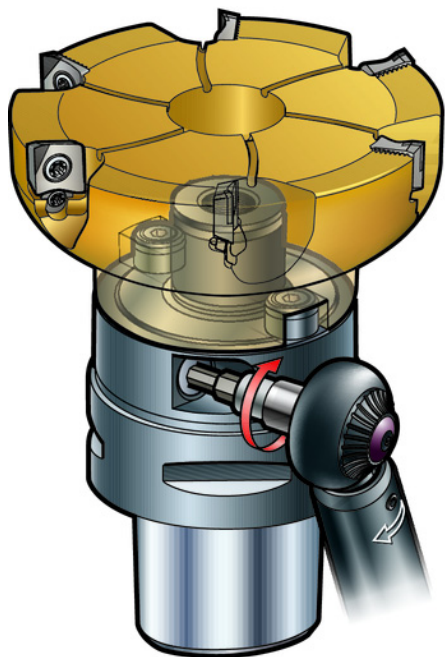
**Individual balanced products**

Enables high speed machining  
Increased productivity

\* Hydro-Grip is a registered trademark of ETP Transmission AB

# Hydro-Grip® \* Face mill holder

Precise concentric location to eliminate radial run out



When machining with high performing Face mills it is very important to also use a high performing tool holder. Otherwise you will not get any advantages compared to a normal face mill. The hydraulic expanding arbor provides precise concentric location to eliminate radial run out. Balanced to g 2.5 at 23 000 rpm for the smallest size. It is your best choice for high speed machining without vibration.

Hydro-Grip® Face mill holder is the perfect partner to Coromill® Centuty in finishing milling, where minimal radial run out ensures an even tooth load and wearpattern. This, in turn, secures an improved tool life and surface finish in high demanding, shoulder face milling operations

### Low run-out

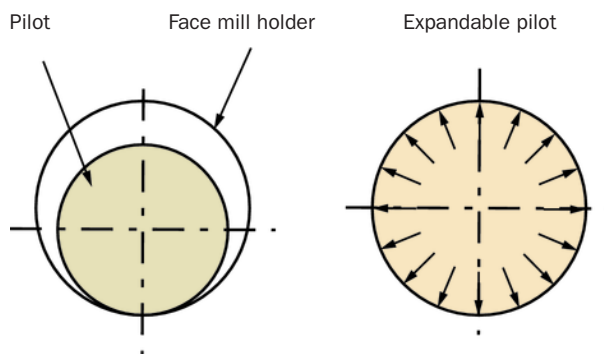
- Prolong tool life
- Improve surface quality
- Prevent vibrations

### Easy to clamp

- Time saving in set up
- User friendly for operator
- Correct clamping independent of use.

### Individual balanced products

- Enables high speed machining
- Increased productivity



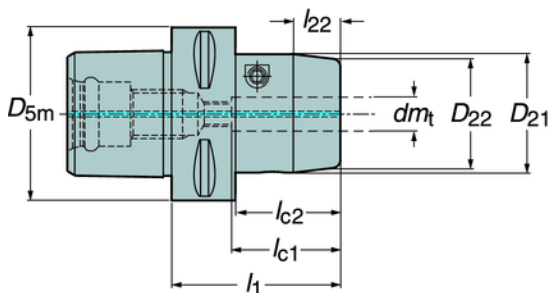
Conventional competitor tool holder

\* Hydro-Grip is a registered trademark of ETP Transmission AB

# Hydro-Grip® HD

High precision chuck adaptor

Coromant Capto®  
391.CGD



**Accessories**

Not delivered with the 393.CG tool, must be ordered 393.CGS separately.

Adjustment screw  
5512 100-03



Page G135

*l*<sub>1</sub> = programming length

| Coupling size      | Ordering code      | Coolant <sup>1)</sup> | Dimensions, mm, inch   |                         |                        |                        |                       |                        |                        |                        |                         |                         | BLQ <sup>2)</sup> | NBLQ <sup>3)</sup> | Collet size |
|--------------------|--------------------|-----------------------|------------------------|-------------------------|------------------------|------------------------|-----------------------|------------------------|------------------------|------------------------|-------------------------|-------------------------|-------------------|--------------------|-------------|
|                    |                    |                       | <i>D</i> <sub>5m</sub> | <i>d</i> <sub>m_t</sub> | <i>D</i> <sub>21</sub> | <i>D</i> <sub>22</sub> | <i>l</i> <sub>1</sub> | <i>l</i> <sub>22</sub> | <i>l</i> <sub>c1</sub> | <i>l</i> <sub>c2</sub> | <i>l</i> <sub>1/2</sub> | <i>l</i> <sub>1/4</sub> |                   |                    |             |
| C5                 | C5-391.CGD-20 079  | 1                     | 50                     | 20                      | 63                     | 59                     | 79                    | 17                     | 52                     |                        |                         | 1.6                     | 2.5               | 25000              | 20          |
|                    |                    |                       | 1.968                  | .787                    | 2.480                  | 2.323                  | 3.110                 | .669                   | 2.047                  |                        |                         |                         |                   |                    |             |
| C6                 | C6-391.CGD-20 073  | 1                     | 63                     | 20                      | 63                     | 59                     | 73                    | 17                     | 52                     |                        |                         | 1.8                     | 2.5               | 25000              | 20          |
|                    |                    |                       | 2.480                  | .787                    | 2.480                  | 2.323                  | 2.874                 | .669                   | 2.047                  |                        |                         |                         |                   |                    |             |
|                    | C6-391.CGD-25 080  | 1                     | 63                     | 25                      | 74                     | 70                     | 80                    | 17                     | 56                     |                        |                         | 2.4                     | 2.5               | 25000              | 25          |
|                    |                    |                       | 2.480                  | .984                    | 2.913                  | 2.756                  | 3.150                 | .669                   | 2.205                  |                        |                         |                         |                   |                    |             |
| C8                 | C6-391.CGD-32 086  | 1                     | 63                     | 32                      | 80                     | 76                     | 86                    | 17                     | 60                     |                        |                         | 2.8                     | 2.5               | 25000              | 32          |
|                    |                    |                       | 2.480                  | 1.260                   | 3.150                  | 2.992                  | 3.386                 | .669                   | 2.362                  |                        |                         |                         |                   |                    |             |
|                    | C8-391.CGD-20 079  | 1                     | 80                     | 20                      | 63                     | 59                     | 79                    | 17                     | 52                     | 49                     |                         | 2.8                     | 2.5               | 14000              | 20          |
|                    |                    |                       | 3.150                  | .787                    | 2.480                  | 2.323                  | 3.110                 | .669                   | 2.047                  | 1.929                  |                         |                         |                   |                    |             |
| C10                | C8-391.CGD-25 083  | 1                     | 80                     | 25                      | 74                     | 70                     | 83                    | 17                     | 56                     | 53                     |                         | 3.3                     | 2.5               | 14000              | 25          |
|                    |                    |                       | 3.150                  | .984                    | 2.913                  | 2.756                  | 3.268                 | .669                   | 2.205                  | 2.087                  |                         |                         |                   |                    |             |
|                    | C8-391.CGD-32 087  | 1                     | 80                     | 32                      | 80                     | 76                     | 87                    | 17                     | 60                     |                        |                         | 3.5                     | 2.5               | 14000              | 32          |
|                    |                    |                       | 3.150                  | 1.260                   | 3.150                  | 2.992                  | 3.425                 | .669                   | 2.362                  |                        |                         |                         |                   |                    |             |
| C10                | C10-391.CGD-20 085 | 1                     | 100                    | 20                      | 63                     | 59                     | 85                    | 17                     | 52                     | 49                     |                         | 4.5                     | 2.5               | 14000              | 20          |
|                    |                    |                       | 3.937                  | .787                    | 2.480                  | 2.323                  | 3.346                 | .669                   | 2.047                  | 1.929                  |                         |                         |                   |                    |             |
|                    | C10-391.CGD-25 089 | 1                     | 100                    | 25                      | 74                     | 70                     | 89                    | 17                     | 56                     | 53                     |                         | 5.0                     | 2.5               | 14000              | 25          |
|                    |                    |                       | 3.937                  | .984                    | 2.913                  | 2.756                  | 3.504                 | .669                   | 2.205                  | 2.087                  |                         |                         |                   |                    |             |
| C10-391.CGD-32 093 | 1                  | 100                   | 32                     | 80                      | 76                     | 93                     | 17                    | 60                     | 57                     |                        | 5.3                     | 2.5                     | 14000             | 32                 |             |
|                    |                    | 3.937                 | 1.260                  | 3.150                   | 2.992                  | 3.661                  | .669                  | 2.362                  | 2.244                  |                        |                         |                         |                   |                    |             |

- 1) 1 = coolant through centre
- 2) Balance quality code.
- 3) Rotational speed at balance quality.

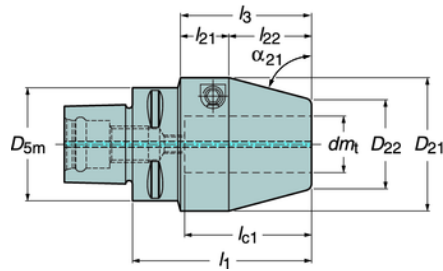
Adjustment screws must be ordered separately, see page G96



# Hydro-Grip® short

High precision chuck adaptor

Short version  
Coromant Capto®  
391.CGA



Accessories

Not delivered with the 393.CG  
tool, must be ordered 393.CGS  
separately.

Adjustment screw  
5512100-xx



Page G135

l<sub>1</sub> = programming length

| Coromant Capto® size | Ordering code      | Coolant <sup>1)</sup> | Dimensions, mm, inch |                 |                 |                |                |                 |                 |                 |                 |     |     | BLQ <sup>2)</sup> | NBLQ <sup>3)</sup> | Collet size |
|----------------------|--------------------|-----------------------|----------------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----|-----|-------------------|--------------------|-------------|
|                      |                    |                       | dm <sub>1</sub>      | D <sub>21</sub> | D <sub>22</sub> | l <sub>1</sub> | l <sub>3</sub> | l <sub>21</sub> | l <sub>22</sub> | l <sub>61</sub> | α <sub>21</sub> |     |     |                   |                    |             |
| C4                   | C4-391.CGA-12 062A | 1                     | 12                   | 43.5            | 19.8            | 62             |                |                 | 21.0            | 20.5            | 40              | 60  | 0.6 | 2.5               | 25000              | 12          |
|                      |                    |                       | .472                 | 1.713           | .780            | 2.441          |                |                 | .827            | .807            | 1.575           |     |     |                   |                    |             |
|                      | C4-391.CGA-12 100  | 1                     | 12                   | 43.5            | 19.8            | 100            |                |                 | 21.0            | 20.5            | 40              | 60  | 1.0 | 2.5               | 25000              | 12          |
| C4                   | C4-391.CGA-20 075  | 1                     | 20                   | 52              | 28.3            | 75             |                |                 | 20.9            | 32.5            | 52              | 70  | 0.8 | 2.5               | 25000              | 20          |
|                      |                    |                       | .787                 | 2.047           | 1.114           | 2.953          |                |                 | .823            | 1.280           | 2.047           |     |     |                   |                    |             |
|                      | C5                 | C5-391.CGA-12 062     | 1                    | 12              | 43.5            | 19.8           | 62             | 42              | 21.5            | 20.5            | 40              | 60  | 0.8 | 2.5               | 25000              | 12          |
| C5                   | C5-391.CGA-20 074A | 1                     | 20                   | 52              | 28.3            | 74             |                |                 | 21.2            | 32.5            | 52              | 70  | 1.0 | 2.5               | 25000              | 20          |
|                      |                    |                       | .787                 | 2.047           | 1.114           | 2.913          |                |                 | .835            | 1.280           | 2.047           |     |     |                   |                    |             |
|                      | C5                 | C5-391.CGA-20 125     | 1                    | 20              | 52              | 28.3           | 125            |                 | 21.2            | 32.5            | 52              | 70  | 1.8 | 2.5               | 25000              | 20          |
| C5                   | C5-391.CGA-25 079  | 1                     | 25                   | 59              | 39.4            | 79             |                |                 | 21.3            | 36.5            | 56              | 75  | 1.3 | 2.5               | 25000              | 25          |
|                      |                    |                       | .984                 | 2.323           | 1.551           | 3.110          |                |                 | .839            | 1.437           | 2.205           |     |     |                   |                    |             |
|                      | C6                 | C6-391.CGA-12 064     | 1                    | 12              | 43.5            | 19.8           | 64             | 42              | 21.5            | 20.5            | 40              | 60  | 1.1 | 2.5               | 25000              | 12          |
| C6                   | C6-391.CGA-20 076  | 1                     | 20                   | 52              | 28.3            | 76             | 54             | 21.5            | 32.5            | 52              | 70              | 1.4 | 2.5 | 25000             | 20                 |             |
|                      |                    |                       | .787                 | 2.047           | 1.114           | 2.992          | 2.126          | .846            | 1.280           | 2.047           |                 |     |     |                   |                    |             |
|                      | C6                 | C6-391.CGA-20 150     | 1                    | 20              | 52              | 28.3           | 150            | 128             | 95.5            | 32.5            | 52              | 70  | 2.6 | 2.5               | 25000              | 20          |
| C6                   | C6-391.CGA-25 080  | 1                     | 25                   | 59              | 39.4            | 80             | 58             | 21.5            | 36.5            | 56              | 75              | 1.6 | 2.5 | 25000             | 25                 |             |
|                      |                    |                       | .984                 | 2.323           | 1.551           | 3.150          | 2.284          | .846            | 1.437           | 2.205           |                 |     |     |                   |                    |             |
|                      | C6                 | C6-391.CGA-32 084A    | 1                    | 32              | 69.5            | 47.8           | 84             |                 | 20.6            | 40.5            | 60              | 75  | 1.9 | 2.5               | 25000              | 32          |
| C6                   |                    |                       | 1.260                | 2.736           | 1.882           | 3.307          |                |                 | .811            | 1.594           | 2.362           |     |     |                   |                    |             |
|                      | C8                 | C8-391.CGA-20 079     | 1                    | 20              | 52              | 28.3           | 79             | 49              | 16.5            | 32.5            | 52              | 70  | 2.3 | 2.5               | 14000              | 20          |
|                      | C8                 | C8-391.CGA-25 083     | 1                    | 25              | 59              | 39.4           | 83             | 53              | 16.5            | 36.5            | 56              | 75  | 2.5 | 2.5               | 14000              | 25          |
|                      |                    |                       | .984                 | 2.323           | 1.551           | 3.268          | 2.087          | .650            | 1.437           | 2.205           |                 |     |     |                   |                    |             |
| C8                   |                    | C8-391.CGA-32 087     | 1                    | 32              | 69.5            | 47.8           | 87             | 57              | 16.5            | 40.5            | 60              | 75  | 2.8 | 2.5               | 14000              | 32          |
|                      |                    |                       | 1.260                | 2.736           | 1.882           | 3.425          | 2.244          | .650            | 1.594           | 2.362           |                 |     |     |                   |                    |             |

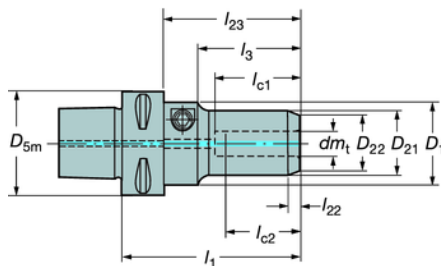
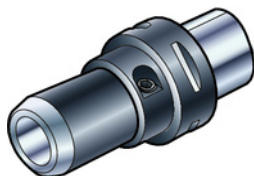
1) 1 = coolant through centre  
2) Balance quality code.  
3) Rotational speed at balance quality.



# Hydro-Grip® slender

High precision chuck adaptor

Slender version  
Coromant Capto®  
391.CGC



**Accessories**

Not delivered with the 393.CG tool, must be ordered 393.CGS separately.

Adjustment screw  
5512100-xx



Page G135

l<sub>1</sub> = programming length

| Coupling size | Ordering code     | Coolant <sup>1)</sup> | Dimensions, mm, inch |                 |                |                 |                 |       |                |                 |                 |                 |                               |                 | BLQ <sup>2)</sup> | NBLQ <sup>3)</sup> | Collet size |
|---------------|-------------------|-----------------------|----------------------|-----------------|----------------|-----------------|-----------------|-------|----------------|-----------------|-----------------|-----------------|-------------------------------|-----------------|-------------------|--------------------|-------------|
|               |                   |                       | D <sub>5m</sub>      | dm <sub>t</sub> | D <sub>1</sub> | D <sub>21</sub> | D <sub>22</sub> | h     | l <sub>3</sub> | l <sub>22</sub> | l <sub>23</sub> | l <sub>c1</sub> | l <sub>c2</sub> <sup>4)</sup> | ⊖ <sub>kg</sub> |                   |                    |             |
| C4            | C4-391.CGC-12 081 | 1                     | 40                   | 12              | 40             | 32              | 28              | 81    | 43             | 10              | 40              | 35              | 0.7                           | 2.5             | 25000             | 12                 |             |
|               |                   |                       | 1.575                | .472            | 1.575          | 1.260           | 1.102           | 3.189 | 1.693          | .394            | 1.575           | 1.378           |                               |                 |                   |                    |             |
|               | C4-391.CGC-12 100 | 1                     | 40                   | 12              | 40             | 32              | 28              | 100   | 43             | 10              | 40              | 35              | 0.9                           | 2.5             | 25000             | 12                 |             |
|               |                   |                       | 1.575                | .472            | 1.575          | 1.260           | 1.102           | 3.937 | 1.693          | .394            | 1.575           | 1.378           |                               |                 |                   |                    |             |
|               | C4-391.CGC-20 101 | 1                     | 40                   | 20              | 50             | 40              | 36              | 101   | 55             | 10              | 52              | 46              | 1.0                           | 2.5             | 25000             | 20                 |             |
|               |                   |                       | 1.575                | .787            | 1.968          | 1.575           | 1.417           | 3.976 | 2.165          | .394            | 2.047           | 1.811           |                               |                 |                   |                    |             |
| C5            | C5-391.CGC-12 085 | 1                     | 50                   | 12              | 40             | 32              | 28              | 85    | 43             | 10              | 20              | 40              | 35                            | 0.9             | 2.5               | 25000              | 12          |
|               |                   |                       | 1.968                | .472            | 1.575          | 1.260           | 1.102           | 3.346 | 1.693          | .394            | .787            | 1.575           | 1.378                         |                 |                   |                    |             |
|               | C5-391.CGC-20 093 | 1                     | 50                   | 20              | 50             | 40              | 36              | 93    | 55             | 10              | 52              | 46              | 1.1                           | 2.5             | 25000             | 20                 |             |
|               |                   |                       | 1.968                | .787            | 1.968          | 1.575           | 1.417           | 3.661 | 2.165          | .394            | 2.047           | 1.811           |                               |                 |                   |                    |             |
|               | C5-391.CGC-25 097 | 1                     | 50                   | 25              | 50             | 45              | 41              | 97    | 59             | 10              | 56              | 50              | 1.2                           | 2.5             | 25000             | 25                 |             |
|               |                   |                       | 1.968                | .984            | 1.968          | 1.772           | 1.614           | 3.819 | 2.323          | .394            | 2.205           | 1.968           |                               |                 |                   |                    |             |
| C6            | C6-391.CGC-12 087 | 1                     | 63                   | 12              | 40             | 32              | 28              | 87    | 43             | 10              | 65              | 40              | 35                            | 1.2             | 2.5               | 25000              | 12          |
|               |                   |                       | 2.480                | .472            | 1.575          | 1.260           | 1.102           | 3.425 | 1.693          | .394            | 2.559           | 1.575           | 1.378                         |                 |                   |                    |             |
|               | C6-391.CGC-20 097 | 1                     | 63                   | 20              | 50             | 40              | 36              | 97    | 55             | 10              | 75              | 52              | 46                            | 1.5             | 2.5               | 25000              | 20          |
|               |                   |                       | 2.480                | .787            | 1.968          | 1.575           | 1.417           | 3.819 | 2.165          | .394            | 2.953           | 2.047           | 1.811                         |                 |                   |                    |             |
|               | C6-391.CGC-20 150 | 1                     | 63                   | 20              | 50             | 40              | 36              | 150   | 55             | 10              | 128             | 52              | 46                            | 2.3             | 2.5               | 25000              | 20          |
|               |                   |                       | 2.480                | .787            | 1.968          | 1.575           | 1.417           | 5.906 | 2.165          | .394            | 5.039           | 2.047           | 1.811                         |                 |                   |                    |             |
|               | C6-391.CGC-25 101 | 1                     | 63                   | 25              | 50             | 45              | 41              | 101   | 59             | 10              | 79              | 56              | 50                            | 1.6             | 2.5               | 25000              | 25          |
|               |                   |                       | 2.480                | .984            | 1.968          | 1.772           | 1.614           | 3.976 | 2.323          | .394            | 3.110           | 2.205           | 1.968                         |                 |                   |                    |             |
| C8            | C8-391.CGC-20 103 | 1                     | 80                   | 20              | 50             | 40              | 36              | 103   | 55             | 10              | 72              | 52              | 46                            | 2.5             | 2.5               | 14000              | 20          |
|               |                   |                       | 3.150                | .787            | 1.968          | 1.575           | 1.417           | 4.055 | 2.165          | .394            | 2.835           | 2.047           | 1.811                         |                 |                   |                    |             |
|               | C8-391.CGC-25 107 | 1                     | 80                   | 25              | 50             | 45              | 41              | 107   | 59             | 10              | 76              | 56              | 50                            | 2.6             | 2.5               | 14000              | 25          |
|               |                   |                       | 3.150                | .984            | 1.968          | 1.772           | 1.614           | 4.213 | 2.323          | .394            | 2.992           | 2.205           | 1.968                         |                 |                   |                    |             |

- 1) 1 = coolant through centre
- 2) Balance quality code.
- 3) Rotational speed at balance quality.
- 4) Min. clamping length



G177



G6



G2

D  
E  
F  
G  
J

ROT - ENG

TOOLING SYSTEMS Hydro-Grip - Coromant Capto tools

# Hydro-Grip® pencil

High precision chuck adaptor  
Coromant Capto®

Pencil type  
391.CGB

**Design 1**

**Design 2**

**Design 3**

Accessories

Not delivered with the tool, must be ordered separately.

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l<sub>1</sub> = programming length

| Coupling size | Design | Ordering code      | Coolant <sup>4)</sup> | Dimensions, mm, inch |                |                 |                 |                 |                |                |                |                 |                 |                 |                 |                 |                 |                 | BLQ <sup>2)</sup> | NBLQ <sup>3)</sup> | Collet size |
|---------------|--------|--------------------|-----------------------|----------------------|----------------|-----------------|-----------------|-----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|--------------------|-------------|
|               |        |                    |                       | dm <sub>t</sub>      | D <sub>1</sub> | D <sub>21</sub> | D <sub>22</sub> | D <sub>5m</sub> | l <sub>1</sub> | l <sub>3</sub> | l <sub>3</sub> | l <sub>21</sub> | l <sub>22</sub> | l <sub>23</sub> | l <sub>24</sub> | l <sub>c1</sub> | l <sub>c2</sub> | l <sub>c2</sub> |                   |                    |             |
| C4            | 1      | C4-391.CGB-06 086  | 1                     | 6                    | 40             | 12              |                 | 40              | 86             | 50             |                |                 |                 |                 | 40              | 37              | 0.5             | 2.5             | 25000             |                    |             |
|               |        |                    |                       | .236                 | 1.575          | .472            |                 | 1.575           | 3.386          | 1.968          |                |                 |                 |                 | 1.575           | 1.457           |                 |                 |                   |                    |             |
|               | 1      | C4-391.CGB-12 098A | 1                     | 12                   | 40             | 19.5            |                 | 40              | 98             | 50             |                |                 |                 |                 | 40              | 37              | 0.7             | 2.5             | 25000             | 12                 |             |
|               |        |                    |                       | .472                 | 1.575          | .768            |                 | 1.575           | 3.858          | 1.968          |                |                 |                 |                 | 1.575           | 1.457           |                 |                 |                   |                    |             |
| C5            | 1      | C4-391.CGB-12 148A | 1                     | 12                   | 40             | 19.5            |                 | 40              | 148            | 100            |                |                 |                 |                 | 40              | 37              | 0.8             | 2.5             | 15000             | 12                 |             |
|               |        |                    |                       | .472                 | 1.575          | .768            |                 | 1.575           | 5.827          | 3.937          |                |                 |                 |                 | 1.575           | 1.457           |                 |                 |                   |                    |             |
|               | 2      | C4-391.CGB-12 198A | 1                     | 12                   | 40             | 19.5            | 24.5            | 40              | 198            | 150            | 50             | 75              |                 |                 | 40              | 37              | 0.9             | 2.5             | 10000             | 12                 |             |
|               |        |                    |                       | .472                 | 1.575          | .768            | .965            | 1.575           | 7.795          | 5.906          | 1.968          | 2.953           |                 |                 | 1.575           | 1.457           |                 |                 |                   |                    |             |
| C5            | 1      | C5-391.CGB-06 086  | 1                     | 6                    | 40             | 12              |                 | 50              | 86             | 50             |                |                 | 66              |                 | 40              | 37              | 0.5             | 2.5             | 25000             |                    |             |
|               |        |                    |                       | .236                 | 1.575          | .472            |                 | 1.968           | 3.386          | 1.968          |                |                 | 2.598           |                 | 1.575           | 1.457           |                 |                 |                   |                    |             |
|               | 1      | C5-391.CGB-12 086  | 1                     | 12                   | 40             | 19.5            |                 | 50              | 86             | 50             |                |                 | 66              |                 | 40              | 37              | 1.0             | 2.5             | 25000             | 12                 |             |
|               |        |                    |                       | .472                 | 1.575          | .768            |                 | 1.968           | 3.386          | 1.968          |                |                 | 2.598           |                 | 1.575           | 1.457           |                 |                 |                   |                    |             |
|               | 1      | C5-391.CGB-12 136  | 1                     | 12                   | 40             | 19.5            |                 | 50              | 136            | 100            |                |                 | 116             |                 | 40              | 37              | 1.1             | 2.5             | 15000             | 12                 |             |
|               |        |                    |                       | .472                 | 1.575          | .768            |                 | 1.968           | 5.354          | 3.937          |                |                 | 4.567           |                 | 1.575           | 1.457           |                 |                 |                   |                    |             |
| C5            | 2      | C5-391.CGB-12 186  | 1                     | 12                   | 40             | 19.5            | 24.5            | 50              | 186            | 150            | 50             | 75              | 166             |                 | 40              | 37              | 1.2             | 2.5             | 10000             | 12                 |             |
|               |        |                    |                       | .472                 | 1.575          | .768            | .965            | 1.968           | 7.323          | 5.906          | 1.968          | 2.953           | 6.535           |                 | 1.575           | 1.457           |                 |                 |                   |                    |             |
|               | 3      | C5-391.CGB-20 158A | 1                     | 20                   | 40             | 32              |                 | 50              | 158            | 110            |                |                 | 138             | 60              | 52              | 49              | 1.3             | 2.5             | 20000             | 20                 |             |
|               |        |                    |                       | .787                 | 1.575          | 1.260           |                 | 1.968           | 6.220          | 4.331          |                |                 | 5.433           | 2.362           | 2.047           | 1.929           |                 |                 |                   |                    |             |
| C6            | 3      | C5-391.CGB-20 238A | 1                     | 20                   | 40             | 32              |                 | 50              | 238            | 190            |                |                 | 218             | 60              | 52              | 49              | 1.7             | 2.5             | 10000             | 20                 |             |
|               |        |                    |                       | .787                 | 1.575          | 1.260           |                 | 1.968           | 9.370          | 7.480          |                |                 | 8.583           | 2.362           | 2.047           | 1.929           |                 |                 |                   |                    |             |
|               | 1      | C6-391.CGB-06 088  | 1                     | 6                    | 40             | 12              |                 | 63              | 88             | 50             |                |                 | 66              |                 | 40              | 37              | 1.9             | 2.5             | 25000             |                    |             |
|               |        |                    |                       | .236                 | 1.575          | .472            |                 | 2.480           | 3.465          | 1.968          |                |                 | 2.598           |                 | 1.575           | 1.457           |                 |                 |                   |                    |             |
|               | 1      | C6-391.CGB-12 092A | 1                     | 12                   | 40             | 19.5            |                 | 63              | 92             | 50             |                |                 | 70              |                 | 40              | 37              | 1.1             | 2.5             | 25000             | 12                 |             |
|               |        |                    |                       | .472                 | 1.575          | .768            |                 | 2.480           | 3.622          | 1.968          |                |                 | 2.756           |                 | 1.575           | 1.457           |                 |                 |                   |                    |             |
| C6            | 1      | C6-391.CGB-12 142A | 1                     | 12                   | 40             | 19.5            |                 | 63              | 142            | 100            |                |                 | 120             |                 | 40              | 37              | 1.3             | 2.5             | 15000             | 12                 |             |
|               |        |                    |                       | .472                 | 1.575          | .768            |                 | 2.480           | 5.591          | 3.937          |                |                 | 4.724           |                 | 1.575           | 1.457           |                 |                 |                   |                    |             |
|               | 2      | C6-391.CGB-12 192A | 1                     | 12                   | 40             | 19.5            | 24.5            | 63              | 192            | 150            | 50             | 75              | 170             |                 | 40              | 37              | 1.5             | 2.5             | 10000             | 12                 |             |
|               |        |                    |                       | .472                 | 1.575          | .768            | .965            | 2.480           | 7.559          | 5.906          | 1.968          | 2.953           | 6.693           |                 | 1.575           | 1.457           |                 |                 |                   |                    |             |
|               | 3      | C6-391.CGB-20 152A | 1                     | 20                   | 40             | 32              |                 | 63              | 152            | 110            |                |                 | 130             | 60              | 52              | 49              | 1.9             | 2.5             | 20000             | 20                 |             |
|               |        |                    |                       | .787                 | 1.575          | 1.260           |                 | 2.480           | 5.984          | 4.331          |                |                 | 5.118           | 2.362           | 2.047           | 1.929           |                 |                 |                   |                    |             |
| C8            | 3      | C6-391.CGB-20 232A | 1                     | 20                   | 40             | 32              |                 | 63              | 232            | 190            |                |                 | 210             | 60              | 52              | 49              | 2.9             | 2.5             | 10000             | 20                 |             |
|               |        |                    |                       | .787                 | 1.575          | 1.260           |                 | 2.480           | 9.134          | 7.480          |                |                 | 8.268           | 2.362           | 2.047           | 1.929           |                 |                 |                   |                    |             |
|               | 1      | C8-391.CGB-12 100  | 1                     | 12                   | 40             | 19.5            |                 | 80              | 100            | 50             |                |                 | 70              |                 | 40              | 37              | 2.2             | 2.5             | 14000             | 12                 |             |
|               |        |                    |                       | .472                 | 1.575          | .768            |                 | 3.150           | 3.937          | 1.968          |                |                 | 2.756           |                 | 1.575           | 1.457           |                 |                 |                   |                    |             |
|               | 1      | C8-391.CGB-12 150  | 1                     | 12                   | 40             | 19.5            |                 | 80              | 150            | 100            |                |                 | 120             |                 | 40              | 37              | 2.4             | 2.5             | 14000             | 12                 |             |
|               |        |                    |                       | .472                 | 1.575          | .768            |                 | 3.150           | 5.906          | 3.937          |                |                 | 4.724           |                 | 1.575           | 1.457           |                 |                 |                   |                    |             |
| C8            | 2      | C8-391.CGB-12 200  | 1                     | 12                   | 40             | 19.5            | 24.5            | 80              | 200            | 150            | 50             | 75              | 170             |                 | 40              | 37              | 2.4             | 2.5             | 14000             | 12                 |             |
|               |        |                    |                       | .472                 | 1.575          | .768            | .965            | 3.150           | 7.874          | 5.906          | 1.968          | 2.953           | 6.693           |                 | 1.575           | 1.457           |                 |                 |                   |                    |             |
|               | 3      | C8-391.CGB-20 160  | 1                     | 20                   | 40             | 32              |                 | 80              | 160            | 110            |                |                 | 130             | 60              | 52              | 49              | 2.7             | 2.5             | 14000             | 20                 |             |
|               |        |                    |                       | .787                 | 1.575          | 1.260           |                 | 3.150           | 6.299          | 4.331          |                |                 | 5.118           | 2.362           | 2.047           | 1.929           |                 |                 |                   |                    |             |
| C8            | 3      | C8-391.CGB-20 240  | 1                     | 20                   | 40             | 32              |                 | 80              | 240            | 190            |                |                 | 210             | 60              | 52              | 49              | 3.3             | 2.5             | 14000             | 20                 |             |
|               |        |                    |                       | .787                 | 1.575          | 1.260           |                 | 3.150           | 9.449          | 7.480          |                |                 | 8.268           | 2.362           | 2.047           | 1.929           |                 |                 |                   |                    |             |

1) Min. clamping length      3) Rotational speed at balance quality.  
2) Balance quality code.      4) 1 = coolant through centre

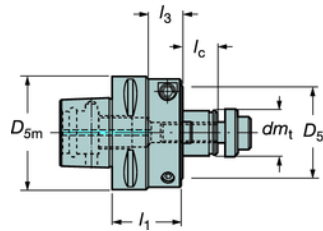
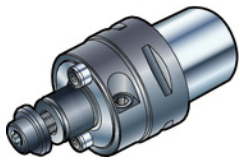
G 86

# Hydro-Grip®

High precision adaptor for face mills and square shoulder face mills

Coromant Capto®

391.05CG



All holders are delivered with a standard screw without hole for coolant.  
 For cutters with coolant channels a new screw with radial coolant holes is necessary and can be ordered separately.  
 See page G173

$l_1$  = programming length

## Metric pilot

| Coupling size | Ordering code      | Coolant <sup>1)</sup> | Dimensions, mm |          |          |       |       |       |                 | BLQ <sup>2)</sup> | NBLQ <sup>3)</sup> |
|---------------|--------------------|-----------------------|----------------|----------|----------|-------|-------|-------|-----------------|-------------------|--------------------|
|               |                    |                       | $dm_t$         | $D_{5m}$ | $D_{5t}$ | $l_c$ | $l_1$ | $l_3$ | $\frac{kg}{kg}$ |                   |                    |
| C5            | C5-391.05CG-22 048 | 1                     | 22             | 50       | 48       | 19    | 48    | 28    | 0.8             | 2.5               | 23000              |
|               | C5-391.05CG-27 048 | 1                     | 27             | 50       | 48       | 21    | 48    | 28    | 1               | 2.5               | 14000              |
|               | C5-391.05CG-32 052 | 1                     | 32             | 50       | 63       | 24    | 52    | 32    | 1.3             | 2.5               | 11200              |
| C6            | C6-391.05CG-22 050 | 1                     | 22             | 63       | 48       | 19    | 50    | 28    | 1.2             | 2.5               | 23000              |
|               | C6-391.05CG-27 050 | 1                     | 27             | 63       | 53       | 21    | 50    | 28    | 1.3             | 2.5               | 14000              |
|               | C6-391.05CG-32 050 | 1                     | 32             | 63       | 63       | 24    | 50    |       | 1.5             | 2.5               | 11200              |
| C8            | C6-391.05CG-40 054 | 1                     | 40             | 63       | 76       | 27    | 54    | 32    | 2               | 2.5               | 8900               |
|               | C8-391.05CG-22 050 | 1                     | 22             | 80       | 48       | 19    | 50    | 20    | 2.1             | 2.5               | 14000              |
|               | C8-391.05CG-27 050 | 1                     | 27             | 80       | 53       | 21    | 50    | 20    | 2.2             | 2.5               | 14000              |
|               | C8-391.05CG-32 050 | 1                     | 32             | 80       | 63       | 24    | 50    | 20    | 2.4             | 2.5               | 11200              |
|               | C8-391.05CG-40 050 | 1                     | 40             | 80       | 76       | 27    | 50    | 20    | 2.6             | 2.5               | 8900               |

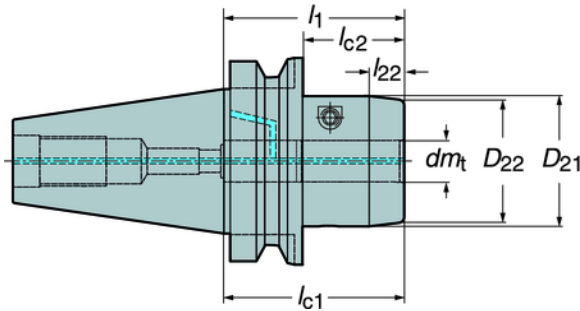
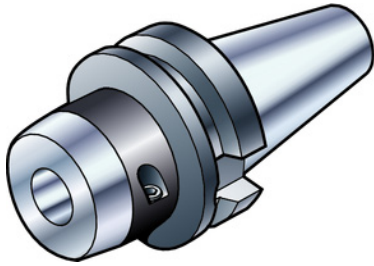
1) 1 = coolant through centre  
 2) Balance quality code.  
 3) Rotational speed at balance quality.



# Hydro-Grip® HD

High precision chuck

392.45CGD/.272CGD/.55CGD



### Accessories

Not delivered with the tool, must be ordered separately.

393.CG

393.CGS

Adjustment screw  
5512 100-03



Page G135

$l_1$  = programming length

### Metric version

| Machine design | Taper | Ordering code        | Coolant <sup>1)</sup> | Dimensions, mm |          |          |       |          |          |          |                 |     | BLQ <sup>2)</sup> | NBLQ <sup>3)</sup> | Collet size |
|----------------|-------|----------------------|-----------------------|----------------|----------|----------|-------|----------|----------|----------|-----------------|-----|-------------------|--------------------|-------------|
|                |       |                      |                       | $dm_t$         | $D_{21}$ | $D_{22}$ | $l_1$ | $l_{22}$ | $l_{c1}$ | $l_{c2}$ | $\frac{kg}{kg}$ |     |                   |                    |             |
| ISO7388.1      | 40    | 392.272CGD-40 20 090 | 7                     | 20             | 63       | 59       | 90    | 17       | 90       | 71       | 2.1             | 2.5 | 25000             | 20                 |             |
|                | 50    | 392.272CGD-50 20 068 | 7                     | 20             | 63       | 59       | 68    | 17       | 68       | 49       | 3.6             | 2.5 | 14000             | 20                 |             |
|                |       | 392.272CGD-50 25 079 | 7                     | 25             | 74       | 70       | 79    | 17       | 79       | 60       | 4.2             | 2.5 | 14000             | 25                 |             |
|                |       | 392.272CGD-50 32 083 | 7                     | 32             | 80       | 76       | 83    | 17       | 83       | 64       | 4.6             | 2.5 | 14000             | 32                 |             |
| MAS-BT 403     | 40    | 392.55CGD-40 20 079  | 7                     | 20             | 63       | 59       | 79    | 17       | 79       | 79       | 2.0             | 2.5 | 25000             | 20                 |             |
|                | 50    | 392.55CGD-50 20 087  | 7                     | 20             | 63       | 59       | 87    | 17       | 87       | 49       | 4.6             | 2.5 | 14000             | 20                 |             |
|                |       | 392.55CGD-50 25 091  | 7                     | 25             | 74       | 70       | 91    | 17       | 91       | 53       | 5.0             | 2.5 | 14000             | 25                 |             |
|                |       | 392.55CGD-50 32 095  | 7                     | 32             | 80       | 76       | 95    | 17       | 95       | 57       | 5.3             | 2.5 | 14000             | 32                 |             |

| Machine design | Taper        | Ordering code       | Coolant <sup>1)</sup> | Dimensions, mm, inch |              |              |              |             |              |              |                 |     | BLQ <sup>2)</sup> | NBLQ <sup>3)</sup> | Collet size |
|----------------|--------------|---------------------|-----------------------|----------------------|--------------|--------------|--------------|-------------|--------------|--------------|-----------------|-----|-------------------|--------------------|-------------|
|                |              |                     |                       | $dm_t$               | $D_{21}$     | $D_{22}$     | $l_1$        | $l_{22}$    | $l_{c1}$     | $l_{c2}$     | $\frac{kg}{kg}$ |     |                   |                    |             |
| CAT V          | 40           | 392.45CGD-40 20 090 | 7                     | 20                   | 63           | 59           | 90           | 17          | 90           | 71           | 2.1             | 2.5 | 25000             | 20                 |             |
|                |              |                     |                       | <i>.787</i>          | <i>2.480</i> | <i>2.323</i> | <i>3.543</i> | <i>.669</i> | <i>3.543</i> | <i>2.795</i> |                 |     |                   |                    |             |
|                | 50           | 392.45CGD-50 20 068 | 7                     | 20                   | 63           | 59           | 68           | 17          | 68           | 49           | 3.5             | 2.5 | 14000             | 20                 |             |
|                |              |                     |                       | <i>.787</i>          | <i>2.480</i> | <i>2.323</i> | <i>2.677</i> | <i>.669</i> | <i>2.677</i> | <i>1.929</i> |                 |     |                   |                    |             |
|                |              |                     |                       | 25                   | 74           | 70           | 92           | 17          | 92           | 73           | 4.6             |     |                   |                    | 2.5         |
| <i>.984</i>    | <i>2.913</i> | <i>2.756</i>        | <i>3.622</i>          | <i>.669</i>          | <i>3.622</i> | <i>2.874</i> |              |             |              |              |                 |     |                   |                    |             |
| 32             | 80           | 76                  | 97                    | 17                   | 97           | 78           | 4.9          | 2.5         | 14000        | 32           |                 |     |                   |                    |             |
| <i>1.260</i>   | <i>3.150</i> | <i>2.992</i>        | <i>3.819</i>          | <i>.669</i>          | <i>3.819</i> | <i>3.071</i> |              |             |              |              |                 |     |                   |                    |             |

<sup>1)</sup> 7 = coolant through centre and through flange

<sup>2)</sup> Balance quality code.

<sup>3)</sup> Rotational speed at balance quality.

Note: Toolholders are convertible to coolant through flange by removing two screws on the back of the V-Flange.

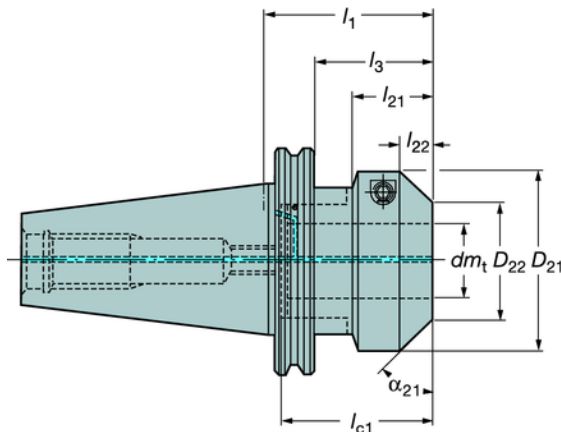
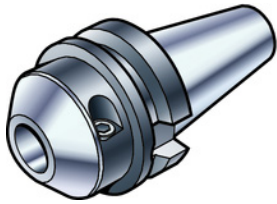




# Hydro-Grip® short

High precision chuck

392.272CG/ .55CG/ .45G



**Accessories**

Not delivered with the tool, must be ordered separately. 393.CG 393.CGS

Adjustment screw 5512100-xx



Page G135

l<sub>1</sub> = programming length

| Machine design | Taper | Ordering code                    | Coolant <sup>4)</sup>            | Dimensions, mm, inch |                 |                 |                |                |                 |                 |                 |                 |                            | BLQ <sup>5)</sup> | NBLQ <sup>6)</sup> | Collet size |       |       |       |    |
|----------------|-------|----------------------------------|----------------------------------|----------------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|----------------------------|-------------------|--------------------|-------------|-------|-------|-------|----|
|                |       |                                  |                                  | dm <sub>1</sub>      | D <sub>21</sub> | D <sub>22</sub> | l <sub>1</sub> | l <sub>3</sub> | l <sub>21</sub> | l <sub>22</sub> | l <sub>c1</sub> | α <sub>21</sub> | $\frac{\sigma}{\text{kg}}$ |                   |                    |             |       |       |       |    |
| CAT V          | 40    | 392.45CG-40 12 056               | 7                                | 12                   | 43.5            | 19.8            | 56             | 36.9           |                 |                 |                 | 20.5            | 40                         | 60                | 1.2                | 2.5         | 25000 | 12    |       |    |
|                |       | 392.45CG-40 20 060 <sup>1)</sup> | 7                                | .472                 | 1.713           | .780            | 2.205          | 1.453          |                 |                 |                 | .807            | 1.575                      |                   |                    | 1.3         | 2.5   | 25000 | 20    |    |
|                |       | 392.45CG-40 25 064               | 7                                | .787                 | 2.047           | 1.075           | 2.362          | 1.610          | 1.453           |                 |                 | .720            | .177                       | 2.047             |                    |             | 2.0   | 2.5   | 14000 | 25 |
|                | 50    | 40                               | 392.45CG-40 20 125               | 7                    | 20              | 52              | 27.3           | 60             | 40.9            | 18.3            | 4.5             | 52              | 70                         | 2.0               |                    |             | 2.5   | 25000 | 20    |    |
|                |       |                                  | 392.45CG-40 20 060 <sup>2)</sup> | 7                    | .787            | 2.047           | 1.114          | 4.921          | 4.169           | .803            | 1.280           | 2.047           |                            |                   |                    |             | 3.2   | 2.5   | 14000 | 20 |
|                |       |                                  | 392.45CG-40 25 064               | 7                    | .984            | 2.323           | 1.480          | 2.520          | 1.768           | 1.055           | .295            | 2.205           |                            |                   |                    |             | 2.0   | 2.5   | 14000 | 25 |
|                |       | 50                               | 392.45CG-50 20 060 <sup>2)</sup> | 7                    | 20              | 52              | 29.2           | 60             | 40.9            |                 |                 |                 | 24.5                       | 52                | 65                 | 3.2         | 2.5   | 14000 | 20    |    |
|                |       |                                  | 392.45CG-50 25 064               | 7                    | .787            | 2.047           | 1.150          | 2.362          | 1.610           |                 |                 |                 | .965                       | 2.047             |                    |             | 3.4   | 2.5   | 14000 | 25 |
|                |       |                                  | 392.45CG-50 32 068 <sup>3)</sup> | 7                    | .984            | 2.323           | 1.508          | 2.520          | 1.768           |                 |                 |                 | 1.122                      | 2.205             |                    |             | 3.6   | 2.5   | 14000 | 32 |
|                |       |                                  |                                  | 1.260                | 2.736           | 1.835           | 2.677          | 1.925          |                 |                 | 1.240           | 2.362           |                            |                   |                    |             |       |       |       |    |

| Machine design | Taper | Ordering code        | Coolant <sup>1)</sup> | Dimensions      |                 |                 |                |                |                 |                 |                 |                 |                            | BLQ <sup>2)</sup> | NBLQ <sup>3)</sup> | Collet size |       |    |
|----------------|-------|----------------------|-----------------------|-----------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|----------------------------|-------------------|--------------------|-------------|-------|----|
|                |       |                      |                       | dm <sub>1</sub> | D <sub>21</sub> | D <sub>22</sub> | l <sub>1</sub> | l <sub>3</sub> | l <sub>21</sub> | l <sub>22</sub> | α <sub>21</sub> | l <sub>c1</sub> | $\frac{\sigma}{\text{kg}}$ |                   |                    |             |       |    |
| ISO7388.1      | 40    | 392.272CG-40 20 060A | 7                     | 20              | 52              | 27.3            | 60             | 40.9           | 23.8            | 4.5             | 70              | 52              | 1.3                        | 2.5               | 25000              | 20          |       |    |
|                |       | 392.272CG-40 20 125  | 7                     | 20              | 52              | 28.3            | 125            | 105.9          | 51.8            | 32.5            | 70              | 52              | 1.9                        | 2.5               | 25000              | 20          |       |    |
|                |       | 392.272CG-40 25 064  | 7                     | 25              | 59              | 37.6            | 64             | 44.9           | 26.8            | 7.5             | 35              | 56              | 1.4                        | 2.5               | 25000              | 25          |       |    |
|                | 50    | 392.272CG-50 20 060  | 7                     | 20              | 52              | 29.2            | 60             | 40.9           |                 |                 |                 | 24.5            | 65                         | 52                | 3.2                | 2.5         | 14000 | 20 |
|                |       | 392.272CG-50 25 064  | 7                     | 25              | 59              | 38.3            | 64             | 44.9           |                 |                 |                 | 28.5            | 70                         | 56                | 3.3                | 2.5         | 14000 | 25 |
|                |       | 392.272CG-50 25 150  | 7                     | 25              | 59              | 39.4            | 150            | 130.9          |                 |                 |                 | 36.5            | 75                         | 56                | 5.1                | 2.5         | 14000 | 25 |
|                |       | 392.272CG-50 32 068A | 7                     | 32              | 69.5            | 46.6            | 68             | 48.9           |                 |                 | 31.5            | 70              | 60                         | 3.5               | 2.5                | 14000       | 32    |    |
| MAS-BT 403     | 40    | 392.55CG-40 12 052   | 7                     | 12              | 43.5            | 19.3            | 52             | 25.0           |                 |                 | 8.5             | 35              | 40                         | 1.2               | 2.5                | 25000       | 12    |    |
|                |       | 392.55CG-40 20 056A  | 7                     | 20              | 52              | 26              | 56             | 29.0           |                 |                 | 13              | 45              | 52                         | 1.3               | 2.5                | 25000       | 20    |    |
|                |       | 392.55CG-40 20 125   | 7                     | 20              | 52              | 28.3            | 125            | 98.0           |                 |                 | 32.5            | 70              | 52                         | 2.3               | 2.5                | 25000       | 20    |    |
|                |       | 392.55CG-40 25 060   | 7                     | 25              | 59              | 39.4            | 60             | 33.0           |                 |                 | 17              | 60              | 56                         | 1.4               | 2.5                | 25000       | 25    |    |
|                | 50    | 392.55CG-50 20 067   | 7                     | 20              | 52              | 26              | 67             | 29.0           |                 |                 | 13              | 45              | 52                         | 4.1               | 2.5                | 14000       | 20    |    |
|                |       | 392.55CG-50 25 071   | 7                     | 25              | 59              | 39.4            | 71             | 33.0           |                 |                 | 17              | 60              | 56                         | 4.2               | 2.5                | 14000       | 25    |    |
|                |       | 392.55CG-50 25 150   | 7                     | 25              | 59              | 39.4            | 150            | 112.0          |                 |                 | 36.5            | 75              | 56                         | 5.7               | 2.5                | 14000       | 25    |    |
|                |       | 392.55CG-50 32 075A  | 7                     | 32              | 69.5            | 45.8            | 75             | 37.0           |                 |                 | 20.5            | 60              | 60                         | 4.3               | 2.5                | 14000       | 32    |    |

- 1) 392.45CG-40 20 060 replaces 40 MM-VF 060 CG20
- 2) 392.45CG-50 20 060 replaces 50 MM-VF 060 CG20
- 3) 392.45CG-50 32 068 replaces 50 MM-VF 068 CG32
- 4) 7 = coolant through centre and through flange
- 5) Balance quality code.
- 6) Rotational speed at balance quality.

Note: Toolholders are convertible to coolant through flange by removing two screws on the back of the V-Flange.



# Hydro-Grip® pencil

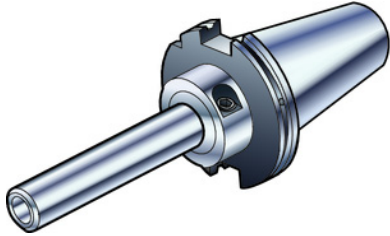
High precision chuck

Pencil type

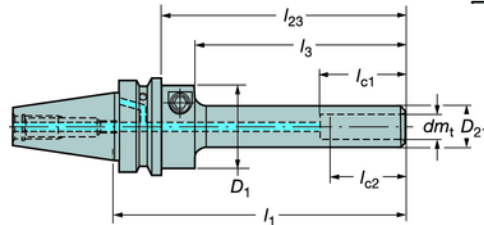
Metric bore

392.272CGB/.55CGB

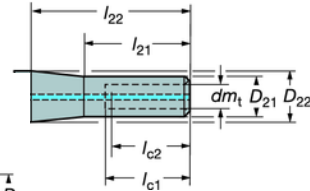
392.45CGB



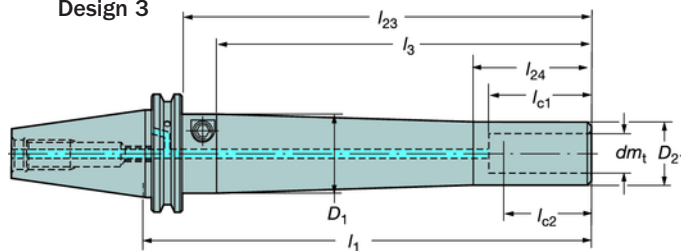
Design 1



Design 2



Design 3



### Accessories

Not delivered with the 393.CG  
tool, must be ordered 393.CGS  
separately.



See page G135.

$l_1$  = programming length

## Cat V-Flange

| Design | Taper | Ordering code       | Coolant <sup>1)</sup> | Dimensions, mm, inch |       |          |       |       |          |          |          |                |                                 |     | BLQ <sup>3)</sup> | NBLQ <sup>4)</sup> | Collet size |
|--------|-------|---------------------|-----------------------|----------------------|-------|----------|-------|-------|----------|----------|----------|----------------|---------------------------------|-----|-------------------|--------------------|-------------|
|        |       |                     |                       | $dm_t$               | $D_1$ | $D_{21}$ | $l_1$ | $l_3$ | $l_{23}$ | $l_{24}$ | $l_{c1}$ | $l_{c2}^{(2)}$ | $\frac{\mu\text{m}}{\text{kg}}$ |     |                   |                    |             |
| 1      | 40    | 392.45CGB-40 12 086 | 7                     | 12                   | 40    | 19.5     | 86    | 50    | 66.95    |          | 40       | 37             | 1.1                             | 2.5 | 25000             | 12                 |             |
|        |       |                     |                       | .472                 | 1.575 | .768     | 3.386 | 1.968 | 2.636    |          | 1.575    | 1.457          |                                 | 2.5 |                   |                    |             |
| 1      |       | 392.45CGB-40 12 136 | 7                     | 12                   | 40    | 19.5     | 136   | 100   | 116.95   |          | 40       | 37             | 1.2                             | 2.5 | 15000             |                    |             |
|        |       |                     |                       | .472                 | 1.575 | .768     | 5.354 | 3.937 | 4.604    |          | 1.575    | 1.457          |                                 | 2.5 |                   |                    |             |
| 3      |       | 392.45CGB-40 20 146 | 7                     | 20                   | 40    | 32       | 146   | 110   | 126.95   | 60       | 52       | 49             | 1.6                             | 2.5 | 20000             | 20                 |             |
|        |       |                     |                       | .787                 | 1.575 | 1.260    | 5.748 | 4.331 | 4.998    | 2.362    | 2.047    | 1.929          |                                 | 2.5 |                   |                    |             |

## ISO 7388/1

| Design | Taper | Ordering code        | Coolant <sup>1)</sup> | Dimensions, mm |       |          |          |       |       |          |          |          |          |          |                |                                 | BLQ <sup>3)</sup> | NBLQ <sup>4)</sup> | Collet size |    |
|--------|-------|----------------------|-----------------------|----------------|-------|----------|----------|-------|-------|----------|----------|----------|----------|----------|----------------|---------------------------------|-------------------|--------------------|-------------|----|
|        |       |                      |                       | $dm_t$         | $D_1$ | $D_{21}$ | $D_{22}$ | $l_1$ | $l_3$ | $l_{21}$ | $l_{22}$ | $l_{23}$ | $l_{24}$ | $l_{c1}$ | $l_{c2}^{(2)}$ | $\frac{\mu\text{m}}{\text{kg}}$ |                   |                    |             |    |
| 1      | 40    | 392.272CGB-40 12 085 | 7                     | 12             | 40    | 19.5     |          | 85    | 50    |          |          |          | 65.9     |          | 40             | 37                              | 1.1               | 2.5                | 25000       | 12 |
| 1      |       | 392.272CGB-40 12 135 | 7                     | 12             | 40    | 19.5     |          | 135   | 100   |          |          |          | 115.9    |          | 40             | 37                              | 1.2               | 2.5                | 15000       |    |
| 2      |       | 392.272CGB-40 12 185 | 7                     | 12             | 40    | 19.5     | 24.5     | 185   | 150   | 50       | 75       |          | 165.9    |          | 40             | 37                              | 1.4               | 2.5                | 10000       |    |
| 3      |       | 392.272CGB-40 20 225 | 7                     | 20             | 40    | 32       |          | 225   | 190   |          |          |          | 205.9    | 60       | 52             | 49                              | 2.2               | 2.5                | 10000       | 20 |

## MAS-BT 403

| Design | Taper | Ordering code       | Coolant <sup>1)</sup> | Dimensions, mm |       |          |          |       |       |          |          |          |          |          |                |                                 | BLQ <sup>3)</sup> | NBLQ <sup>4)</sup> | Collet size |    |
|--------|-------|---------------------|-----------------------|----------------|-------|----------|----------|-------|-------|----------|----------|----------|----------|----------|----------------|---------------------------------|-------------------|--------------------|-------------|----|
|        |       |                     |                       | $dm_t$         | $D_1$ | $D_{21}$ | $D_{22}$ | $l_1$ | $l_3$ | $l_{21}$ | $l_{22}$ | $l_{23}$ | $l_{24}$ | $l_{c1}$ | $l_{c2}^{(2)}$ | $\frac{\mu\text{m}}{\text{kg}}$ |                   |                    |             |    |
| 1      | 30    | 392.55CGB-30 06 088 | 7                     | 6              | 40    | 12       |          | 88    | 50    |          |          |          | 66       |          | 40             | 37                              | 0.6               | 2.5                | 25000       | 12 |
| 1      |       | 392.55CGB-30 12 088 | 7                     | 12             | 40    | 19.5     |          | 88    | 50    |          |          |          | 66       |          | 40             | 37                              | 0.6               | 2.5                | 25000       |    |
| 1      |       | 392.55CGB-30 12 138 | 7                     | 12             | 40    | 19.5     |          | 138   | 100   |          |          |          | 116      |          | 40             | 37                              | 0.7               | 2.5                | 15000       |    |
| 1      | 40    | 392.55CGB-40 12 093 | 7                     | 12             | 40    | 19.5     |          | 93    | 50    |          |          |          | 66       |          | 40             | 37                              | 1.3               | 2.5                | 25000       | 12 |
| 1      |       | 392.55CGB-40 12 143 | 7                     | 12             | 40    | 19.5     |          | 143   | 100   |          |          |          | 116      |          | 40             | 37                              | 1.4               | 2.5                | 15000       |    |
| 2      |       | 392.55CGB-40 12 193 | 7                     | 12             | 40    | 19.5     | 24.5     | 193   | 150   | 50       | 75       |          | 166      |          | 40             | 37                              | 1.6               | 2.5                | 10000       |    |
| 3      |       | 392.55CGB-40 20 153 | 7                     | 20             | 40    | 32       |          | 153   | 110   |          |          |          | 126      | 60       | 52             | 49                              | 1.8               | 2.5                | 20000       | 20 |

1) 7 = coolant through centre and through flange

2) Min. clamping length

3) Balance quality code.

4) Rotational speed at balance quality.

Note: Toolholders are convertible to coolant through flange by removing two screws on the back of the V-Flange.



G179



G48

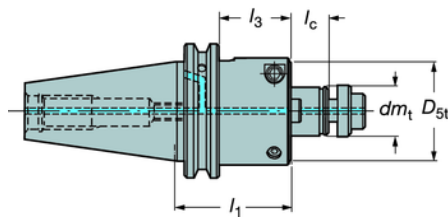
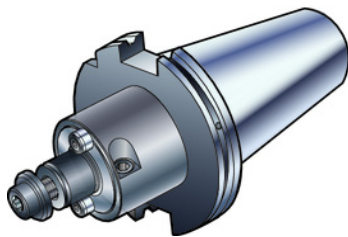


G2

# Hydro-Grip®

High precision holder for face mills and square shoulder face mills

## A1B05CG / A2B05CG



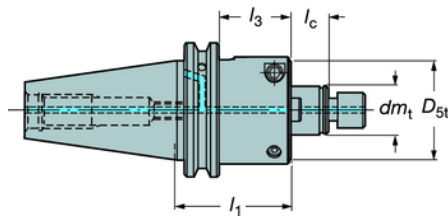
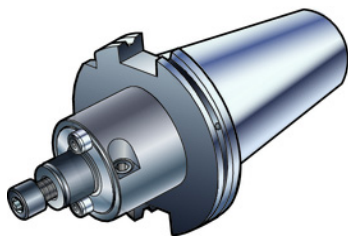
$h$  = programming length

### Metric pilot

| Machine design | Taper | Ordering code     | Coolant <sup>1)</sup> | Dimensions, mm |          |       |     |       |       | BLQ <sup>2)</sup> | NBLQ <sup>3)</sup> |
|----------------|-------|-------------------|-----------------------|----------------|----------|-------|-----|-------|-------|-------------------|--------------------|
|                |       |                   |                       | $dm_t$         | $D_{st}$ | $l_c$ | $h$ | $l_3$ | $l_1$ |                   |                    |
| ISO7388.1      | 40    | A1B05CG-40 22 051 | 7                     | 22             | 48       | 19    | 51  | 31.9  | 1.3   | 2.5               | 23000              |
|                |       | A1B05CG-40 27 067 | 7                     | 27             | 53       | 21    | 67  | 31.9  | 1.6   | 2.5               | 14000              |
|                |       | A1B05CG-40 32 071 | 7                     | 32             | 63       | 24    | 71  | 35.9  | 1.9   | 2.5               | 11200              |
|                | 50    | A1B05CG-50 22 040 | 7                     | 22             | 48       | 19    | 40  | 20.9  | 2.9   | 2.5               | 14000              |
|                |       | A1B05CG-50 27 040 | 7                     | 27             | 53       | 21    | 40  | 20.9  | 3     | 2.5               | 14000              |
|                |       | A1B05CG-50 32 040 | 7                     | 32             | 63       | 24    | 40  | 20.9  | 3.2   | 2.5               | 11200              |
| MAS-BT 403     | 40    | A1B05CG-50 40 052 | 7                     | 40             | 76       | 27    | 52  | 32.9  | 3.9   | 2.5               | 8900               |
|                |       | A2B05CG-40 22 050 | 7                     | 22             | 48       | 19    | 50  | 23    | 1.3   | 2.5               | 23000              |
|                |       | A2B05CG-40 27 050 | 7                     | 27             | 53       | 21    | 50  | 23    | 1.4   | 2.5               | 14000              |
|                | 50    | A2B05CG-40 32 050 | 7                     | 32             | 63       | 24    | 50  |       | 1.6   | 2.5               | 11200              |
|                |       | A2B05CG-50 22 061 | 7                     | 22             | 48       | 19    | 61  | 23    | 4     | 2.5               | 14000              |
|                |       | A2B05CG-50 27 061 | 7                     | 27             | 53       | 21    | 61  | 23    | 4.1   | 2.5               | 14000              |
|                |       | A2B05CG-50 32 061 | 7                     | 32             | 63       | 24    | 61  | 23    | 4.3   | 2.5               | 11200              |
|                |       | A2B05CG-50 40 061 | 7                     | 40             | 76       | 27    | 61  | 23    | 4.6   | 2.5               | 8900               |

- <sup>1)</sup> 7 = coolant through centre and through flange
- <sup>2)</sup> Balance quality code.
- <sup>3)</sup> Rotational speed at balance quality.

## AA3B05CG



$h$  = programming length

### Inch pilot

| Machine design | Taper | Ordering code      | Coolant <sup>1)</sup> | Dimensions, inch |          |       |       |       |       | BLQ <sup>2)</sup> | NBLQ <sup>3)</sup> |
|----------------|-------|--------------------|-----------------------|------------------|----------|-------|-------|-------|-------|-------------------|--------------------|
|                |       |                    |                       | $dm_t$           | $D_{st}$ | $l_c$ | $h$   | $l_3$ | $l_1$ |                   |                    |
| CAT V          | 40    | AA3B05CG-40 19 066 | 7                     | .750             | 1.890    | .748  | 2.598 | 1.216 | 3.1   | 2.5               | 23000              |
|                |       | AA3B05CG-40 25 067 | 7                     | 1.000            | 2.087    | .748  | 2.638 | 1.256 | 3.3   | 2.5               | 14000              |
|                |       | AA3B05CG-40 38 073 | 7                     | 1.500            | 2.992    | .984  | 2.874 | 1.492 | 5.3   | 2.5               | 8900               |
|                | 50    | AA3B05CG-50 19 039 | 7                     | .750             | 1.890    | .748  | 1.535 | .785  | 6.4   | 2.5               | 14000              |
|                |       | AA3B05CG-50 25 039 | 7                     | 1.000            | 2.087    | .748  | 1.535 | .785  | 6.6   | 2.5               | 14000              |
|                |       | AA3B05CG-50 38 067 | 7                     | 1.500            | 2.992    | .984  | 2.638 | 1.256 | 9.5   | 2.5               | 8900               |

- <sup>1)</sup> 7 = coolant through centre and through flange
- <sup>2)</sup> Balance quality code.
- <sup>3)</sup> Rotational speed at balance quality.

Note: Toolholders are convertible to coolant through flange by removing two screws on the back of the V-Flange.

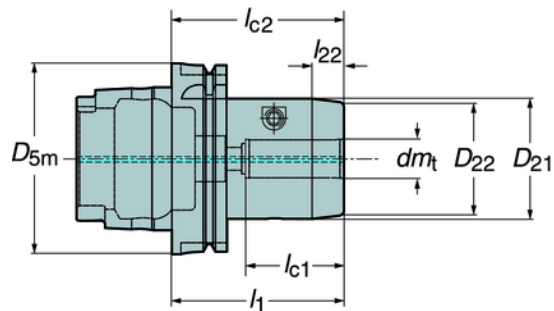
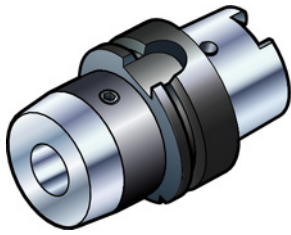
All holders are delivered with a standard screw without hole for coolant. For cutters with coolant channels a new screw with radial coolant holes is necessary and can be ordered separately. See page G161



# Hydro-Grip® HD

High precision chuck adaptor

HSK form A/C  
392.410CGD



### Accessories

Not delivered with the tool, must be ordered separately.

393.CG  
393.CGS

Adjustment screw  
5512100-xx



Page G135

Note: Hole for data carrier is not standard.

$l_1$  = programming length

| HSK size | Ordering code         | Coolant <sup>1)</sup> | Dimensions, mm, inch |        |          |          |       |          |          |          |                   | BLQ <sup>2)</sup> | NBLQ <sup>3)</sup> |
|----------|-----------------------|-----------------------|----------------------|--------|----------|----------|-------|----------|----------|----------|-------------------|-------------------|--------------------|
|          |                       |                       | $D_{5m}$             | $dm_t$ | $D_{21}$ | $D_{22}$ | $l_1$ | $l_{22}$ | $l_{c1}$ | $l_{c2}$ | $\frac{kg}{cm^3}$ |                   |                    |
| 63       | 392.410CGD-63 20 096  | 1                     | 63                   | 20     | 63       | 59       | 96    | 17       | 52       | 70       | 2.0               | 2.5               | 25000              |
| 100      | 392.410CGD-100 20 091 | 1                     | 100                  | 20     | 63       | 59       | 91    | 17       | 52       | 62       | 3.3               | 2.5               | 14000              |
|          | 392.410CGD-100 25 095 | 1                     | 100                  | 25     | 74       | 70       | 95    | 17       | 56       | 66       | 3.9               | 2.5               | 14000              |
|          | 392.410CGD-100 32 099 | 1                     | 100                  | 32     | 80       | 76       | 99    | 17       | 60       | 70       | 4.2               | 2.5               | 14000              |
|          |                       |                       |                      | 3.937  | .787     | 2.480    | 2.323 | 3.780    | .669     | 2.047    | 2.441             |                   |                    |
|          |                       |                       | 3.937                | .984   | 2.913    | 2.756    | 3.740 | .669     | 2.205    | 2.598    |                   |                   |                    |
|          |                       |                       | 3.937                | 1.260  | 3.150    | 2.992    | 3.898 | .669     | 2.362    | 2.756    |                   |                   |                    |

<sup>1)</sup> 1 = coolant through centre

<sup>2)</sup> Balance quality code.

<sup>3)</sup> Rotational speed at balance quality.

Coolant tube must be ordered separately, see page G80.

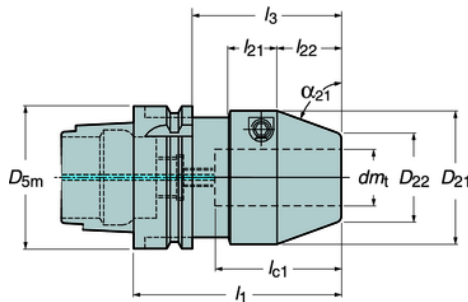
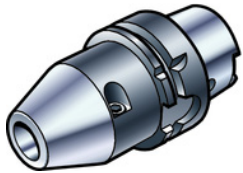


# Hydro-Grip® short

High precision chuck adaptor

Short version

HSK  
392.410CGA



Accessories

Not delivered with the 393.CG tool, must be ordered 393.CGS separately.

Adjustment screw 5512100-xx



Page G135

Note: Hole for data carrier is not standard.

h = programming length

| HSK size               | Ordering code          | Coolant <sup>1)</sup> | Dimensions, mm, inch |                 |                 |                 |                |                |                 |                 |                 |                 |                |     |     | BLQ <sup>2)</sup> | NBLQ <sup>3)</sup> | Collet size |
|------------------------|------------------------|-----------------------|----------------------|-----------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|----------------|-----|-----|-------------------|--------------------|-------------|
|                        |                        |                       | dm <sub>1</sub>      | D <sub>21</sub> | d <sub>22</sub> | D <sub>5m</sub> | h <sub>1</sub> | h <sub>3</sub> | l <sub>21</sub> | l <sub>22</sub> | l <sub>c1</sub> | α <sub>21</sub> | $\frac{R}{mm}$ |     |     |                   |                    |             |
| 63                     | 392.410CGA-63 12 076B  | 1                     | 12                   | 43.5            | 19.8            | 63              | 76             | 50             |                 |                 | 20.5            | 40              | 60             | 1.1 | 2.5 | 25000             | 12                 |             |
|                        |                        |                       | .472                 | 1.713           | .780            | 2.480           | 2.992          | 1.968          |                 |                 | .807            | 1.575           |                |     |     |                   |                    |             |
|                        | 392.410CGA-63 20 088B  | 1                     | 20                   | 52              | 28.3            | 63              | 88             | 62             |                 |                 | 32.5            | 52              | 70             | 1.4 | 2.5 | 25000             | 20                 |             |
|                        |                        |                       | .787                 | 2.047           | 1.114           | 2.480           | 3.465          | 2.441          |                 |                 | 1.280           | 2.047           |                |     |     |                   |                    |             |
|                        | 392.410CGA-63 20 150   | 1                     | 20                   | 52              | 28.3            | 63              | 150            | 124            |                 |                 | 32.5            | 52              | 70             | 2.4 | 2.5 | 25000             | 20                 |             |
|                        |                        | .787                  | 2.047                | 1.114           | 2.480           | 5.906           | 4.882          |                |                 | 1.280           | 2.047           |                 |                |     |     |                   |                    |             |
| 100                    | 392.410CGA-100 12 079B | 1                     | 12                   | 43.5            | 19.8            | 100             | 79             | 50             |                 |                 | 20.5            | 40              | 60             | 2.5 | 2.5 | 14000             | 12                 |             |
|                        |                        |                       | .472                 | 1.713           | .780            | 3.937           | 3.110          | 1.968          |                 |                 | .807            | 1.575           |                |     |     |                   |                    |             |
|                        | 392.410CGA-100 20 091B | 1                     | 20                   | 52              | 28.3            | 100             | 91             | 62             |                 |                 | 32.5            | 52              | 70             | 2.7 | 2.5 | 14000             | 20                 |             |
|                        |                        |                       | .787                 | 2.047           | 1.114           | 3.937           | 3.583          | 2.441          |                 |                 | 1.280           | 2.047           |                |     |     |                   |                    |             |
|                        | 392.410CGA-100 25 095  | 1                     | 25                   | 59              | 39.4            | 100             | 95             | 66             |                 |                 | 36.5            | 56              | 75             | 3.0 | 2.5 | 14000             | 25                 |             |
|                        |                        | .984                  | 2.323                | 1.551           | 3.937           | 3.740           | 2.598          |                |                 | 1.437           | 2.205           |                 |                |     |     |                   |                    |             |
| 392.410CGA-100 32 099B |                        | 1                     | 32                   | 69.5            | 46.5            | 63              | 96             | 70             | 20.3            |                 | 31.5            | 60              | 70             | 1.9 | 2.5 | 25000             | 32                 |             |
|                        |                        |                       | 1.260                | 2.736           | 1.831           | 2.480           | 3.780          | 2.756          | .799            |                 | 1.240           | 2.362           |                |     |     |                   |                    |             |
|                        |                        |                       | 1.260                | 2.736           | 1.882           | 3.937           | 3.898          | 2.756          |                 |                 | 1.594           | 2.362           |                |     |     |                   |                    |             |

- 1) 1 = coolant through centre
- 2) Balance quality code.
- 3) Rotational speed at balance quality.

Coolant tube must be ordered separately, see page G80.

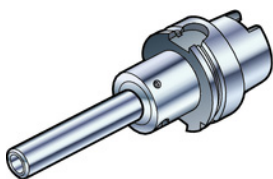


# Hydro-Grip® pencil

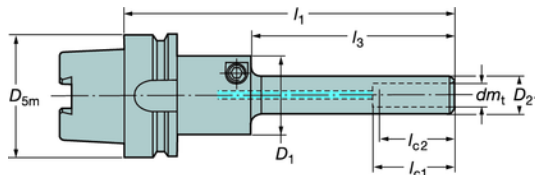
High precision chuck

HSK

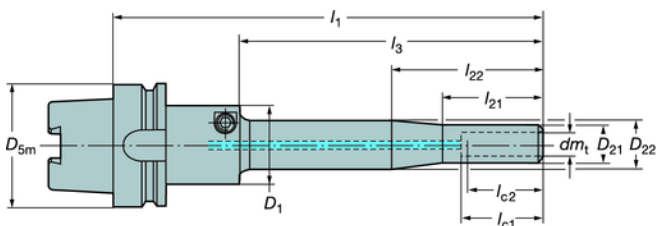
Pencil type  
392.410CGB



Design 1



Design 2



Accessories

Not delivered with the 393.CG tool, must be ordered 393.CGS separately.



Page G135

Note: Hole for data carrier is not standard.

$l_{c2}$  = Min clamping length,  $l_1$  = programming length

| Design | HSK size | Ordering code          | Coolant <sup>1)</sup> | Dimensions, mm, inch |       |          |          |          |       |       |          |          |          |                |                |       | BLQ <sup>3)</sup> | NBLQ <sup>4)</sup> | Collet size |   |
|--------|----------|------------------------|-----------------------|----------------------|-------|----------|----------|----------|-------|-------|----------|----------|----------|----------------|----------------|-------|-------------------|--------------------|-------------|---|
|        |          |                        |                       | $dm_1$               | $D_1$ | $D_{21}$ | $D_{22}$ | $D_{5m}$ | $h_1$ | $l_3$ | $l_{21}$ | $l_{22}$ | $l_{c1}$ | $l_{c2}^{(2)}$ | $\frac{m}{kg}$ |       |                   |                    |             |   |
| 1      | 63       | 392.410CGB-63 06 095   | 1                     | 6                    | 40    | 12       |          | 63       | 94.5  | 50    |          |          |          |                | 40             | 37    | 1                 | 2.5                | 25000       | - |
|        |          |                        |                       | .236                 | 1.575 | .472     |          | 2.480    | 3.720 | 1.968 |          |          |          |                | 1.575          | 1.457 |                   |                    |             |   |
| 1      |          | 392.410CGB-63 12 112B  | 1                     | 12                   | 40    | 19.5     |          | 63       | 112   | 50    |          |          |          | 40             | 37             | 1.2   | 2.5               | 25000              | 12          |   |
|        |          |                        |                       | .472                 | 1.575 | .768     |          | 2.480    | 4.409 | 1.968 |          |          |          | 1.575          | 1.457          |       |                   |                    |             |   |
| 1      |          | 392.410CGB-63 12 162B  | 1                     | 12                   | 40    | 19.5     |          | 63       | 162   | 100   |          |          |          | 40             | 37             | 1.3   | 2.5               | 15000              |             |   |
|        |          |                        |                       | .472                 | 1.575 | .768     |          | 2.480    | 6.378 | 3.937 |          |          |          | 1.575          | 1.457          |       |                   |                    |             |   |
| 2      |          | 392.410CGB-63 12 212B  | 1                     | 12                   | 40    | 19.5     | 24.5     | 63       | 212   | 150   | 50       | 75       | 40       | 37             | 1.6            | 2.5   | 10000             |                    |             |   |
|        |          |                        |                       | .472                 | 1.575 | .768     | .965     | 2.480    | 8.346 | 5.906 | 1.968    | 2.953    | 1.575    | 1.457          |                |       |                   |                    |             |   |
| 1      | 100      | 392.410CGB-100 12 115B | 1                     | 12                   | 40    | 19.5     |          | 100      | 115   | 50    |          |          |          | 40             | 37             | 2.8   | 2.5               | 14000              | 12          |   |
|        |          |                        |                       | .472                 | 1.575 | .768     |          | 3.937    | 4.528 | 1.968 |          |          |          | 1.575          | 1.457          |       |                   |                    |             |   |
| 1      |          | 392.410CGB-100 12 165B | 1                     | 12                   | 40    | 19.5     |          | 100      | 165   | 100   |          |          |          | 40             | 37             | 2.9   | 2.5               | 14000              |             |   |
|        |          |                        |                       | .472                 | 1.575 | .768     |          | 3.937    | 6.496 | 3.937 |          |          |          | 1.575          | 1.457          |       |                   |                    |             |   |
| 2      |          | 392.410CGB-100 12 215B | 1                     | 12                   | 40    | 19.5     | 24.5     | 100      | 215   | 150   | 50       | 75       | 40       | 37             | 3.1            | 2.5   | 10000             |                    |             |   |
|        |          |                        |                       | .472                 | 1.575 | .768     | .965     | 3.937    | 8.465 | 5.906 | 1.968    | 2.953    | 1.575    | 1.457          |                |       |                   |                    |             |   |

1) 1 = coolant through centre

2) Min. clamping length

3) Balance quality code.

4) Rotational speed at balance quality.

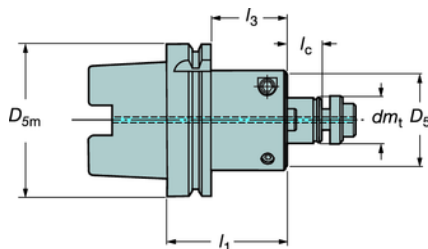
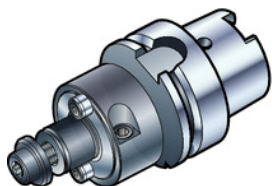
Coolant tube must be ordered separately, see page G80.



# Hydro-Grip®

High precision adaptor for face mills and square shoulder face mills

HSK form A/C  
41005CG



$l_1$  = programming length  
Note: Hole for data carrier is not standard.

### Metric pilot

| HSK size | Ordering code      | Coolant <sup>1)</sup> | Dimensions, mm |          |          |       |       |       |                   | BLQ <sup>2)</sup> | NBLQ <sup>3)</sup> |
|----------|--------------------|-----------------------|----------------|----------|----------|-------|-------|-------|-------------------|-------------------|--------------------|
|          |                    |                       | $dm_t$         | $D_{5m}$ | $D_{5t}$ | $l_c$ | $l_1$ | $l_3$ | $\frac{kg}{mm^3}$ |                   |                    |
| 63       | 41005CG-63 22 057  | 1                     | 22             | 63       | 48       | 19    | 57    | 31    | 1.1               | 2.5               | 23000              |
|          | 41005CG-63 27 057  | 1                     | 27             | 63       | 53       | 21    | 57    | 31    | 1.2               | 2.5               | 14000              |
|          | 41005CG-63 32 074  | 1                     | 32             | 63       | 63       | 24    | 74    | 32    | 1.8               | 2.5               | 11000              |
|          | 41005CG-63 40 079  | 1                     | 40             | 63       | 76       | 27    | 79    | 37    | 2.3               | 2.5               | 9000               |
| 100      | 41005CG-100 22 064 | 1                     | 22             | 100      | 48       | 19    | 64    | 35    | 2.5               | 2.5               | 14000              |
|          | 41005CG-100 27 064 | 1                     | 27             | 100      | 48       | 21    | 64    | 35    | 2.6               | 2.5               | 14000              |
|          | 41005CG-100 32 064 | 1                     | 32             | 100      | 63       | 24    | 64    | 35    | 2.8               | 2.5               | 11000              |
|          | 41005CG-100 40 064 | 1                     | 40             | 100      | 76       | 27    | 64    | 35    | 3.3               | 2.5               | 9000               |

- 1) 1 = coolant through centre
- 2) Balance quality code.
- 3) Rotational speed at balance quality.

All holders are delivered with a standard screw without hole for coolant.  
For cutters with coolant channels a new screw with radial coolant holes is necessary and can be ordered separately.  
See page G173

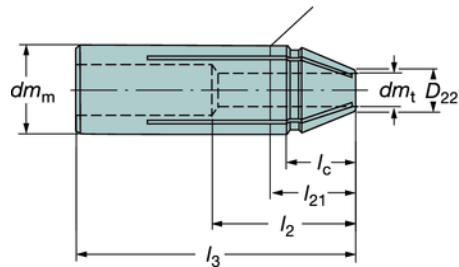
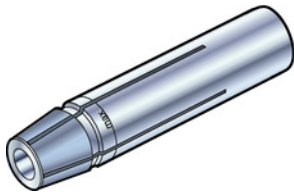


# Hydro-Grip® Pencil collet

Pencil collet

393.CGP

Max recommended protrusion



Metric

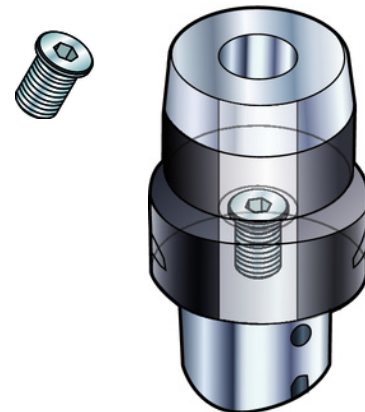
| Collet size | Ordering code    | Dimensions, mm |        |          |       |             |       |          |                 |
|-------------|------------------|----------------|--------|----------|-------|-------------|-------|----------|-----------------|
|             |                  | $dm_m$         | $dm_t$ | $D_{22}$ | $l_c$ | $l_2^{(1)}$ | $l_3$ | $l_{21}$ | $\frac{kg}{kg}$ |
| 20          | 393.CGP-20 06 72 | 20             | 6      | 9        | 17    | 37          | 72    | 21       | 0.1             |
|             | 393.CGP-20 08 72 | 20             | 8      | 11       | 17    | 37          | 72    | 21       | 0.1             |
|             | 393.CGP-20 10 72 | 20             | 10     | 13       | 17    | 41          | 72    | 21       | 0.1             |
|             | 393.CGP-20 12 72 | 20             | 12     | 15       | 17    | 41          | 72    | 21       | 0.1             |

<sup>1)</sup> Min. tool length to be clamped inside collet

## Accessories for Hydro-Grip

Adjustment screw

| Ordering code | For type   |                                      |            |
|---------------|--|--------------------------------------|------------|
|               | Coromant Capto                                     | Solid holder                         | HSK holder |
| 5512 100-01   | C4-391.CGA<br>Cx-391.CGC-12xxx                     |                                      |            |
| 5512 100-02   | C5-C8-391.CGA<br>Cx-391.CGC-20xxx<br>Cx-391.CGC-25 | 392.272CG<br>392.55CG<br>392.45CG    | 392.CGA    |
| 5512 100-03   | Cx-391.CGD   | 392.45CGD<br>392.55CGD<br>392.272CGD | 392.410CGD |

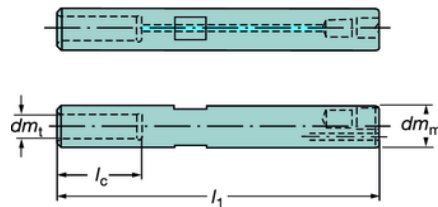
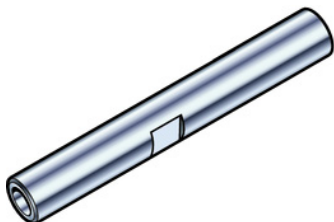


## Hydro-Grip® cylindrical shank

Pencil Hydro-Grip®

High precision chuck

Cylindrical shank  
393.CGA



Accessories

Not delivered with the tool, must be ordered separately.



Page G135

$l_1$  = programming length

| Coupling size | Ordering code     | Coolant <sup>1)</sup> | Dimensions, mm, inch |            |           |            |          |           |          |           |                 |     |       |    | BLQ <sup>2)</sup> | NBLQ <sup>3)</sup> | Collet size |
|---------------|-------------------|-----------------------|----------------------|------------|-----------|------------|----------|-----------|----------|-----------|-----------------|-----|-------|----|-------------------|--------------------|-------------|
|               |                   |                       | $dm_t$ mm            | $dm_t$ in. | $dm_m$ mm | $dm_m$ in. | $l_1$ mm | $l_1$ in. | $l_c$ mm | $l_c$ in. | $\frac{kg}{kg}$ |     |       |    |                   |                    |             |
| 20            | 393.CGA-20 12 150 | 1                     | 12                   | .472       | 20        | .787       | 150      | 5.906     | 40       | 1.575     | 0.4             | 2.5 | 15000 | 12 |                   |                    |             |

<sup>1)</sup> 1 = coolant through centre  
<sup>2)</sup> Balance quality code.  
<sup>3)</sup> Rotational speed at balance quality.





# Exchangeable-head milling system

Flexible system with assortment of holders for different heads

Complete assortment of holders:

Coromant Capto®

- long design
- short design
- conical design

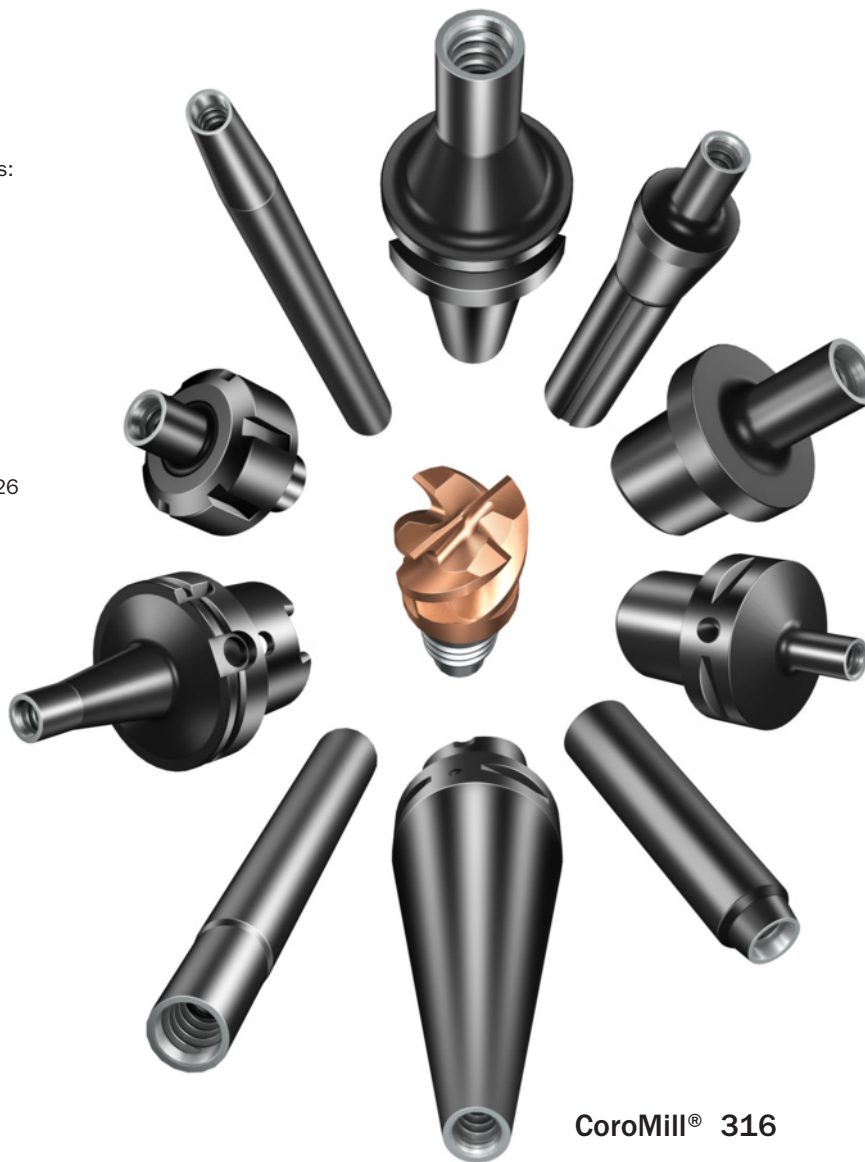
Coromant solid holder

Bridgeport

HSK solid holder

ER integrated collets

Cylindrical holder, see page D226



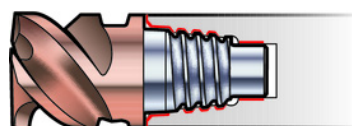
## CoroMill® 316

Flexible system of holders for exchangeable heads



Tool options designed to individual customer requirements are available. For information on our Tailor Made programme see page J4.

Only for cylindrical shank tools



Interface

Self-centering screw thread

See page D211

## Code key for tool holders

Cylindrical holder

|          |            |   |          |           |   |          |          |   |            |
|----------|------------|---|----------|-----------|---|----------|----------|---|------------|
| <b>A</b> | <b>E12</b> | - | <b>A</b> | <b>20</b> | - | <b>S</b> | <b>S</b> | - | <b>140</b> |
| 1        | 2          |   | 3        | 4         |   | 5        | 6        |   | 7          |

Coromant Capto® holder

|           |   |          |               |   |           |            |
|-----------|---|----------|---------------|---|-----------|------------|
| <b>C3</b> | - | <b>A</b> | <b>391.EH</b> | - | <b>10</b> | <b>035</b> |
| 8         |   | 1        | 9             |   | 10        | 7          |

Solid holder

|                 |   |           |   |           |   |            |
|-----------------|---|-----------|---|-----------|---|------------|
| <b>392.45EH</b> | - | <b>40</b> | - | <b>10</b> | - | <b>056</b> |
| 9               |   | 11        |   | 10        |   | 7          |

**1** System of measurement

A = Inch version

**2** Size of interface

E12= EH coupling size

**3** Holder type

A = Cylindrical

**4** Holder diameterE.g.:  $dm_m = 20$  mm**5** Type of holderS = Straight  
C = Conical**6** Holder materialS = Steel  
E = Solid carbide**7** Length of holder

E.g.: 140 = 140 mm

**8** Coupling size

C = Coromant Capto

**9** Family/ holder type391.EH = Coromant Capto® EH holder  
392.140EH = ISO 7388.1  
392.55EH = MAS-BT 403  
A392.45EH = CAT V  
392.410EH = HSK holder Form A/C  
A392.R8EH = Bridgeport holder**10** Size of interface

10 = EH coupling size

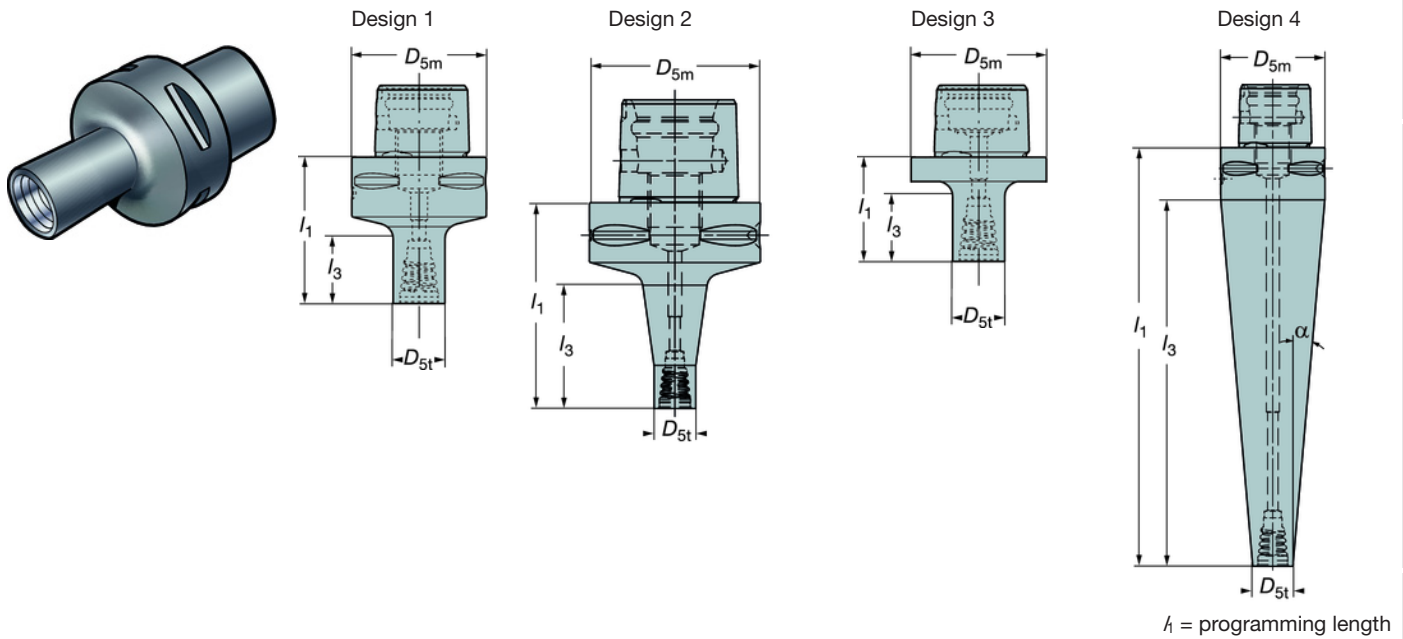
**11** Taper size

11 = Taper size for Coromant solid holders

# Coromant Capto® adaptor for exchangeable head

Cx-391.EH  
Cx-A391.EH

Without gripper grooves for manual tool change



## Metric version

| Coromant Capto size | Coupling size    | Ordering code    | Design | Coolant <sup>1)</sup> | Dimensions, mm |          |       |       |                |                     |
|---------------------|------------------|------------------|--------|-----------------------|----------------|----------|-------|-------|----------------|---------------------|
|                     |                  |                  |        |                       | $D_{5m}$       | $D_{5t}$ | $l_1$ | $l_3$ | $\alpha^\circ$ | $\frac{\Omega}{kg}$ |
| C3                  | E10              | C3-391.EH-10 026 | 3      | 1                     | 32             | 9.6      | 26    | 13    |                | 0.1                 |
|                     |                  | C3-391.EH-10 035 | 1      | 1                     | 32             | 9.6      | 35    | 13.2  |                | 0.1                 |
|                     |                  | C3-391.EH-10 049 | 2      | 1                     | 32             | 9.6      | 49    | 28.5  |                | 0.1                 |
|                     |                  | C3-391.EH-10 143 | 4      | 1                     | 32             | 9.6      | 143   | 128   | 5°             | 0.5                 |
|                     | E12              | C3-391.EH-12 029 | 3      | 1                     | 32             | 11.6     | 29    | 16    |                | 0.1                 |
|                     |                  | C3-391.EH-12 038 | 1      | 1                     | 32             | 11.6     | 38    | 16.4  |                | 0.1                 |
|                     |                  | C3-391.EH-12 054 | 2      | 1                     | 32             | 11.6     | 54    | 33.9  |                | 0.2                 |
|                     |                  | C3-391.EH-12 132 | 4      | 1                     | 32             | 11.6     | 132   | 117   | 5°             | 0.5                 |
|                     | E16              | C3-391.EH-16 043 | 1      | 1                     | 32             | 15.4     | 43    | 21.9  |                | 0.1                 |
|                     |                  | C3-391.EH-16 065 | 2      | 1                     | 32             | 15.4     | 65    | 45.7  |                | 0.2                 |
|                     |                  | C3-391.EH-16 110 | 4      | 1                     | 32             | 15.4     | 110   | 95    | 5°             | 0.4                 |
|                     |                  | C4               | E10    | C4-391.EH-10 026      | 3              | 1        | 40    | 9.6   | 26             | 13                  |
| C4-391.EH-10 041    | 1                |                  |        | 1                     | 40             | 9.6      | 41    | 13.1  |                | 0.3                 |
| C4-391.EH-10 055    | 2                |                  |        | 1                     | 40             | 9.6      | 55    | 28.5  |                | 0.3                 |
| C4-391.EH-10 128    | 4                |                  |        | 1                     | 40             | 9.6      | 128   | 108   | 8°             | 0.7                 |
| E12                 | C4-391.EH-12 029 |                  | 3      | 1                     | 40             | 11.6     | 29    | 16    |                | 0.2                 |
|                     | C4-391.EH-12 044 |                  | 1      | 1                     | 40             | 11.6     | 44    | 16.4  |                | 0.3                 |
|                     | C4-391.EH-12 060 |                  | 2      | 1                     | 40             | 11.6     | 60    | 33.9  |                | 0.3                 |
|                     | C4-391.EH-12 121 |                  | 4      | 1                     | 40             | 11.6     | 121   | 101   | 8°             | 0.7                 |
| E16                 | C4-391.EH-16 035 |                  | 3      | 1                     | 40             | 15.4     | 35    | 22    |                | 0.2                 |
|                     | C4-391.EH-16 049 |                  | 1      | 1                     | 40             | 15.4     | 49    | 21.9  |                | 0.3                 |
|                     | C4-391.EH-16 071 |                  | 2      | 1                     | 40             | 15.4     | 71    | 45.7  |                | 0.4                 |
|                     | C4-391.EH-16 160 |                  | 4      | 1                     | 40             | 15.4     | 160   | 140   | 5°             | 0.9                 |
| E20                 | C4-391.EH-20 046 | 1                | 1      | 40                    | 19.2           | 46       | 19.4  |       | 0.3            |                     |
|                     | C4-391.EH-20 084 | 2                | 1      | 40                    | 19.2           | 84       | 59.6  |       | 0.4            |                     |
|                     | C4-391.EH-20 139 | 4                | 1      | 40                    | 19.2           | 139      | 119   | 5°    | 0.9            |                     |
|                     | E25              | C4-391.EH-25 051 | 1      | 1                     | 40             | 24.1     | 51    | 25    |                | 0.3                 |
| C4-391.EH-25 074    |                  | 2                | 1      | 40                    | 24.1           | 74       | 49.6  |       | 0.4            |                     |

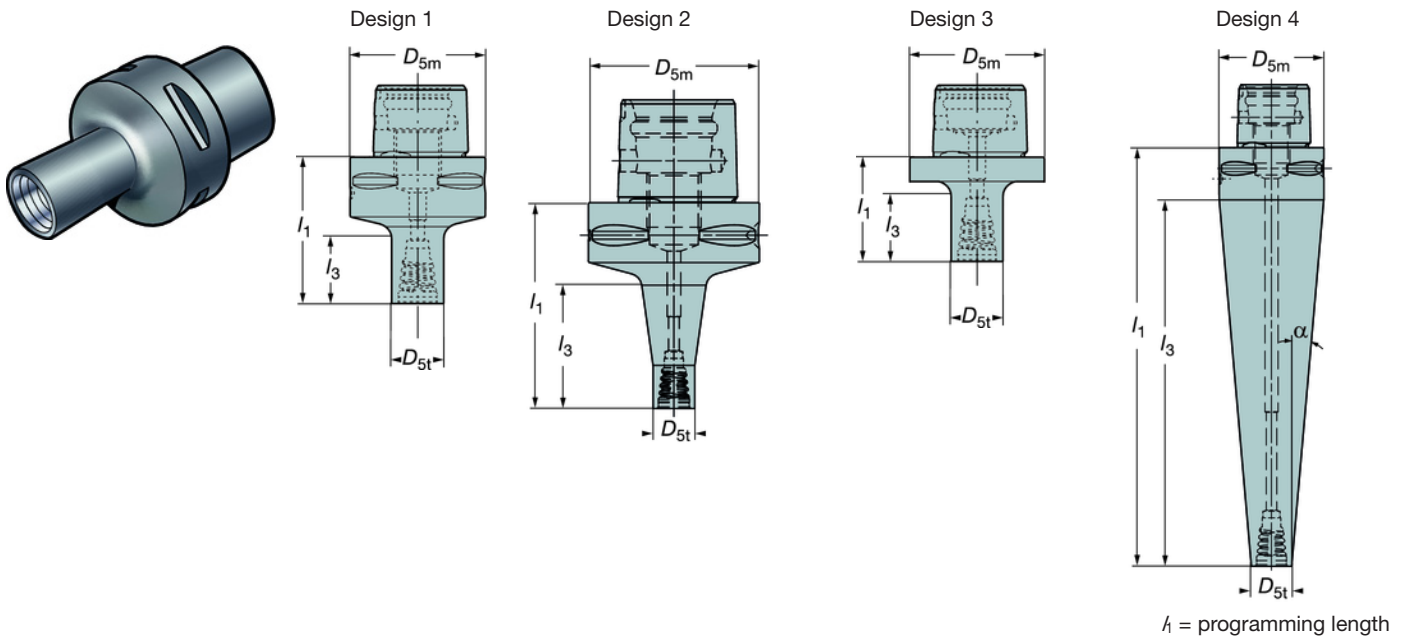
<sup>1)</sup> 1 = coolant through centre



# Coromant Capto® adaptor for exchangeable head

Cx-391.EH

Without gripper grooves for manual tool change



## Metric version

| Coromant Capto size | Coupling size    | Ordering code    | Design           | Coolant <sup>1)</sup> | Dimensions, mm |          |       |       |                |                |     |
|---------------------|------------------|------------------|------------------|-----------------------|----------------|----------|-------|-------|----------------|----------------|-----|
|                     |                  |                  |                  |                       | $D_{5m}$       | $D_{5t}$ | $l_1$ | $l_3$ | $\alpha^\circ$ | $\frac{R}{kg}$ |     |
| C5                  | E10              | C5-391.EH-10 026 | 3                | 3                     | 50             | 9.6      | 26    | 13    |                | 0.3            |     |
|                     |                  | C5-391.EH-10 042 | 1                | 3                     | 50             | 9.6      | 42    | 12.8  |                | 0.5            |     |
|                     |                  | C5-391.EH-10 056 | 2                | 3                     | 50             | 9.6      | 56    | 28.1  |                | 0.5            |     |
|                     |                  | C5-391.EH-12 029 | 3                | 3                     | 50             | 11.6     | 29    | 16    |                | 0.3            |     |
|                     |                  | C5-391.EH-12 045 | 1                | 3                     | 50             | 11.6     | 45    | 16    |                | 0.5            |     |
|                     |                  | C5-391.EH-12 061 | 2                | 3                     | 50             | 11.6     | 61    | 33.5  |                | 0.5            |     |
|                     | E12              | E16              | C5-391.EH-16 035 | 3                     | 3              | 50       | 15.4  | 35    | 22             |                | 0.3 |
|                     |                  |                  | C5-391.EH-16 050 | 1                     | 3              | 50       | 15.4  | 50    | 21.5           |                | 0.5 |
|                     |                  |                  | C5-391.EH-16 072 | 2                     | 3              | 50       | 15.4  | 72    | 45.3           |                | 0.5 |
|                     |                  | E20              | C5-391.EH-16 143 | 4                     | 3              | 50       | 15.4  | 143   | 123            | 8°             | 1.3 |
|                     |                  |                  | C5-391.EH-20 047 | 1                     | 3              | 50       | 19.2  | 47    | 19             |                | 0.5 |
|                     |                  |                  | C5-391.EH-20 085 | 2                     | 3              | 50       | 19.2  | 85    | 59.2           |                | 0.6 |
| E25                 | E25              | C5-391.EH-20 130 | 4                | 3                     | 50             | 19.2     | 130   | 110   | 8°             | 1.2            |     |
|                     |                  | C5-391.EH-25 052 | 1                | 3                     | 50             | 24.1     | 52    | 24.7  |                | 0.5            |     |
|                     |                  | C5-391.EH-25 100 | 2                | 3                     | 50             | 24.1     | 100   | 75.3  |                | 0.8            |     |
|                     | C6               | E10              | C6-391.EH-10 046 | 1                     | 1              | 63       | 9.6   | 46    | 13             |                | 0.8 |
|                     |                  |                  | C6-391.EH-10 060 | 2                     | 1              | 63       | 9.6   | 60    | 28.4           |                | 0.8 |
|                     |                  |                  | C6-391.EH-12 049 | 1                     | 1              | 63       | 11.6  | 49    | 16.3           |                | 0.8 |
| E12                 |                  | C6-391.EH-12 065 | 2                | 1                     | 63             | 11.6     | 65    | 33.8  |                | 0.9            |     |
|                     |                  | E16              | C6-391.EH-16 054 | 1                     | 1              | 63       | 15.4  | 54    | 21.8           |                | 0.8 |
|                     |                  |                  | C6-391.EH-16 076 | 2                     | 1              | 63       | 15.4  | 76    | 45.6           |                | 0.9 |
| E20                 | C6-391.EH-20 051 |                  | 1                | 1                     | 63             | 19.2     | 51    | 19.3  |                | 0.8            |     |
|                     | C6-391.EH-20 088 | 2                | 1                | 63                    | 19.2           | 88       | 58.4  |       | 1.0            |                |     |
|                     | E25              | C6-391.EH-25 056 | 1                | 1                     | 63             | 24.1     | 56    | 25    |                | 0.9            |     |
| C6-391.EH-25 103    |                  | 2                | 1                | 63                    | 24.1           | 103      | 74.5  |       | 1.2            |                |     |
| C8                  |                  | E20              | C8-391.EH-20 100 | 2                     | 1              | 80       | 19.2  | 100   | 60.2           |                | 2.1 |
|                     | E25              | C8-391.EH-25 114 | 2                | 1                     | 80             | 24.1     | 114   | 75.3  |                | 2.2            |     |

<sup>1)</sup> 0 = no coolant, 1 = coolant through centre, 3 = Coolant is possible either through the centre or radially, 6 = coolant through flange, 7 = coolant through centre and through flange



J3

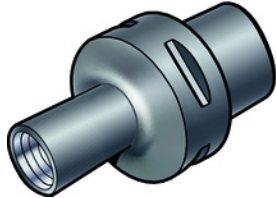


G104

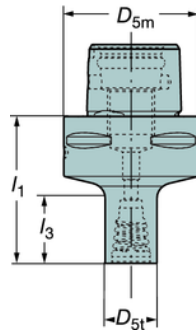
# Coromant Capto® adaptor for exchangeable head

Cx-A391.EH

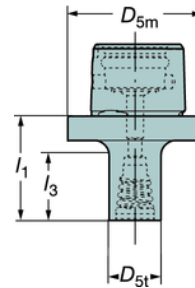
Without gripper grooves for manual tool change



Design 1



Design 3



$l_1$  = programming length

Inch version

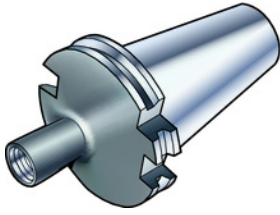
| Coromant Capto size | Coupling size     | Ordering code     | Design            | Coolant <sup>1)</sup> | Dimensions, inch |          |       |       |          |     |
|---------------------|-------------------|-------------------|-------------------|-----------------------|------------------|----------|-------|-------|----------|-----|
|                     |                   |                   |                   |                       | $D_{5m}$         | $D_{5t}$ | $l_1$ | $l_3$ | $l_{ts}$ |     |
| C3                  | E10               | C3-A391.EH-10 034 | 1                 | 1                     | 1.260            | .360     | 1.339 | .476  | 0.3      |     |
|                     |                   | C3-A391.EH-10 025 | 3                 | 1                     | 1.260            | .360     | .984  | .472  | 0.2      |     |
|                     | E12               | C3-A391.EH-12 039 | 1                 | 1                     | 1.260            | .480     | 1.535 | .689  | 0.3      |     |
|                     |                   | C3-A391.EH-12 031 | 3                 | 1                     | 1.260            | .480     | 1.220 | .709  | 0.2      |     |
| C4                  | E16               | C3-A391.EH-16 043 | 1                 | 1                     | 1.260            | .606     | 1.693 | .862  | 0.3      |     |
|                     |                   | C4-A391.EH-10 040 | 1                 | 1                     | 1.575            | .360     | 1.575 | .472  | 0.6      |     |
|                     | E10               | C4-A391.EH-10 025 | 3                 | 1                     | 1.575            | .360     | .984  | .472  | 0.4      |     |
|                     |                   | E12               | C4-A391.EH-12 045 | 1                     | 1                | 1.575    | .480  | 1.772 | .685     | 0.6 |
|                     | E16               | C4-A391.EH-12 031 | 3                 | 1                     | 1.575            | .480     | 1.220 | .709  | 0.4      |     |
|                     |                   | C4-A391.EH-16 049 | 1                 | 1                     | 1.575            | .606     | 1.929 | .862  | 0.6      |     |
|                     | E20               | C4-A391.EH-16 034 | 3                 | 1                     | 1.575            | .606     | 1.339 | .827  | 0.4      |     |
|                     |                   | C4-A391.EH-20 044 | 1                 | 1                     | 1.575            | .724     | 1.732 | .681  | 0.6      |     |
| E25                 |                   | C4-A391.EH-25 052 | 1                 | 1                     | 1.575            | .961     | 2.047 | 1.028 | 0.7      |     |
| C5                  |                   | E10               | C5-A391.EH-10 041 | 1                     | 1                | 1.968    | .360  | 1.614 | .461     | 1.0 |
|                     |                   | C5-A391.EH-10 025 | 3                 | 1                     | 1.968            | .360     | .984  | .472  | 0.6      |     |
| E12                 | C5-A391.EH-12 047 | 1                 | 1                 | 1.968                 | .480             | 1.850    | .713  | 1.0   |          |     |
|                     | C5-A391.EH-12 031 | 3                 | 1                 | 1.968                 | .480             | 1.220    | .709  | 0.6   |          |     |
|                     | E16               | C5-A391.EH-16 050 | 1                 | 1                     | 1.968            | .606     | 1.968 | .846  | 1.1      |     |
|                     | E20               | C5-A391.EH-20 045 | 1                 | 1                     | 1.968            | .724     | 1.772 | .665  | 1.1      |     |
|                     | E25               | C5-A391.EH-25 053 | 1                 | 1                     | 1.968            | .961     | 2.087 | 1.012 | 1.2      |     |
|                     | C6                | E10               | C6-A391.EH-10 045 | 1                     | 1                | 2.480    | .360  | 1.772 | .470     | 1.8 |
| E12                 |                   | C6-A391.EH-12 050 | 1                 | 1                     | 2.480            | .480     | 1.968 | .685  | 1.8      |     |
| E16                 |                   | C6-A391.EH-16 054 | 1                 | 1                     | 2.480            | .606     | 2.126 | .858  | 1.9      |     |
| E20                 |                   | C6-A391.EH-20 049 | 1                 | 1                     | 2.480            | .724     | 1.929 | .677  | 1.9      |     |
| E25                 |                   | C6-A391.EH-25 057 | 1                 | 1                     | 2.480            | .961     | 2.244 | 1.024 | 2.0      |     |

<sup>1)</sup> 1 = coolant through centre

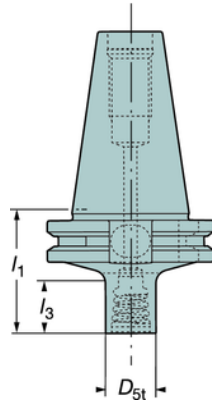


## Solid holder for exchangeable head

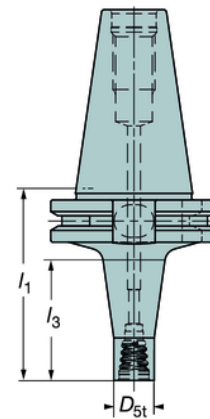
392.140EH  
392.55EH  
A392.45EH



Design 1



Design 2



$l_1$  = programming length

### Metric version

| Machine design     | Taper              | Coupling size      |                     | Design             | Coolant <sup>1)</sup> | Dimensions, mm |       |       |             |
|--------------------|--------------------|--------------------|---------------------|--------------------|-----------------------|----------------|-------|-------|-------------|
|                    |                    | $D_{th}$           | Ordering code       |                    |                       | $D_{st}$       | $l_1$ | $l_3$ | $\rho_{kg}$ |
| ISO7388.1          | 40                 | E10                | 392.140EH-40 10 041 | 1                  | 1                     | 9.6            | 41    | 12.7  | 0.9         |
|                    |                    |                    | 392.140EH-40 10 055 | 2                  | 1                     | 9.6            | 55    | 28.1  | 0.9         |
|                    |                    | E12                | 392.140EH-40 12 044 | 1                  | 1                     | 11.6           | 44    | 16    | 0.9         |
|                    |                    |                    | 392.140EH-40 12 060 | 2                  | 1                     | 11.6           | 60    | 33.5  | 0.9         |
|                    |                    | E16                | 392.140EH-40 16 049 | 1                  | 1                     | 15.4           | 49    | 21.5  | 0.9         |
|                    |                    |                    | 392.140EH-40 16 071 | 2                  | 1                     | 15.4           | 71    | 45.3  | 0.9         |
|                    |                    | E20                | 392.140EH-40 20 046 | 1                  | 1                     | 19.2           | 46    | 19    | 0.9         |
|                    |                    |                    | 392.140EH-40 20 084 | 2                  | 1                     | 19.2           | 84    | 59.1  | 1.0         |
|                    |                    | E25                | 392.140EH-40 25 051 | 1                  | 1                     | 24.1           | 51    | 24.6  | 0.9         |
|                    |                    |                    | 392.140EH-40 25 100 | 2                  | 1                     | 24.1           | 100   | 76.3  | 1.2         |
| MAS-BT 403         | 30                 | E10                | 392.55EH-30 10 044  | 1                  | 1                     | 9.6            | 44    | 13.3  | 0.4         |
|                    |                    |                    | 392.55EH-30 10 057  | 2                  | 1                     | 9.6            | 57    | 27.6  | 0.4         |
|                    |                    | E12                | 392.55EH-30 12 046  | 1                  | 1                     | 11.6           | 46    | 15.6  | 0.4         |
|                    |                    |                    | 392.55EH-30 12 063  | 2                  | 1                     | 11.6           | 63    | 34.1  | 0.4         |
|                    |                    | E16                | 392.55EH-30 16 041  | 2                  | 1                     | 15.4           | 41.3  | 8     | 0.4         |
|                    |                    |                    | 392.55EH-30 16 052  | 1                  | 1                     | 15.4           | 52    | 22.1  | 0.4         |
|                    |                    | E20                | 392.55EH-30 16 056  | 2                  | 1                     | 15.4           | 56.3  | 16    | 0.5         |
|                    |                    |                    | 392.55EH-30 16 074  | 2                  | 1                     | 15.4           | 74    | 45.9  | 0.5         |
|                    |                    | E25                | 392.55EH-30 20 049  | 1                  | 1                     | 19.2           | 49    | 19.6  | 0.4         |
|                    |                    |                    | 392.55EH-30 20 069  | 2                  | 1                     | 19.2           | 68.7  | 25    | 0.5         |
|                    |                    | E25                | 392.55EH-30 20 086  | 2                  | 1                     | 19.2           | 86    | 58.7  | 0.6         |
|                    |                    |                    | 392.55EH-30 25 054  | 1                  | 1                     | 24.1           | 54    | 25.2  | 0.5         |
|                    |                    | E25                | 392.55EH-30 25 077  | 2                  | 1                     | 24.1           | 77    | 49.9  | 0.6         |
|                    |                    |                    | E10                 | 392.55EH-40 10 051 | 1                     | 1              | 9.6   | 51    | 13          |
|                    |                    | 392.55EH-40 10 065 |                     | 2                  | 1                     | 9.6            | 65    | 28.4  | 1.1         |
|                    |                    | E12                | 392.55EH-40 12 054  | 1                  | 1                     | 11.6           | 54    | 16.3  | 1.1         |
|                    |                    |                    | 392.55EH-40 12 070  | 2                  | 1                     | 11.6           | 70    | 33.8  | 1.1         |
|                    |                    | E16                | 392.55EH-40 16 060  | 1                  | 1                     | 15.4           | 60    | 22.8  | 1.1         |
| 392.55EH-40 16 081 | 2                  |                    | 1                   | 15.4               | 81                    | 45.6           | 1.2   |       |             |
| E20                | 392.55EH-40 20 056 | 1                  | 1                   | 19.2               | 56                    | 19.3           | 1.1   |       |             |
|                    | 392.55EH-40 20 094 | 2                  | 1                   | 19.2               | 94                    | 59.5           | 1.2   |       |             |
| E25                | 392.55EH-40 25 062 | 1                  | 1                   | 24.1               | 62                    | 26             | 1.1   |       |             |
|                    | 392.55EH-40 25 108 | 2                  | 1                   | 24.1               | 108                   | 74.5           | 1.4   |       |             |

<sup>1)</sup> 1 = coolant through centre

### Inch version

| Machine design                                 | Taper | Coupling size |                     | Design | Coolant <sup>1)</sup> | Dimensions, inch |       |       |              |
|--|-------|---------------|---------------------|--------|-----------------------|------------------|-------|-------|--------------|
|  |       | $D_{th}$      | Ordering code       |        |                       | $D_{st}$         | $l_1$ | $l_3$ | $\rho_{Lbs}$ |
| Steep taper CAT<br>inch -AD central<br>coolant | 40    | E10           | A392.45EH-40 10 056 | 1      | 1                     | .360             | 2.205 | .472  | 2.3          |
|  |       |               | A392.45EH-40 10 068 | 2      | 1                     | .360             | 2.677 | 1.012 | 2.3          |
|  |       | E12           | A392.45EH-40 12 060 | 1      | 1                     | .480             | 2.362 | .646  | 2.3          |
|  |       |               | A392.45EH-40 12 078 | 2      | 1                     | .480             | 3.071 | 1.433 | 2.4          |
|  |       | E16           | A392.45EH-40 16 065 | 1      | 1                     | .606             | 2.559 | .858  | 2.4          |
|  |       |               | A392.45EH-40 16 086 | 2      | 1                     | .606             | 3.386 | 1.776 | 2.5          |
|  |       | E20           | A392.45EH-40 20 060 | 1      | 1                     | .724             | 2.362 | .677  | 2.4          |
|  |       |               | A392.45EH-40 20 096 | 2      | 1                     | .724             | 3.780 | 2.193 | 2.6          |
|  |       | E25           | A392.45EH-40 25 068 | 1      | 1                     | .961             | 2.677 | 1.024 | 2.5          |
|  |       |               | A392.45EH-40 25 114 | 2      | 1                     | .961             | 4.488 | 3.004 | 3.1          |

<sup>1)</sup> 1 = coolant through centre



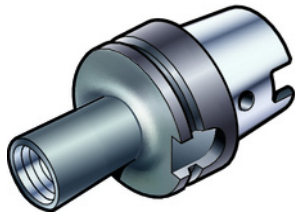
J3



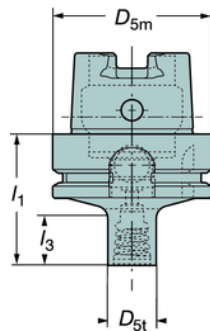
G104

# HSK holder for exchangeable head

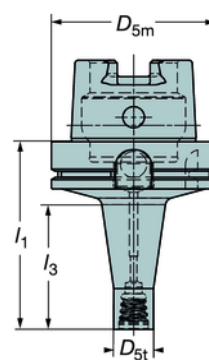
HSK form A/C  
392.410EH



Design 1



Design 2



$l_1$  = programming length

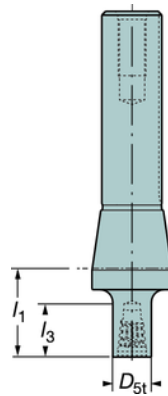
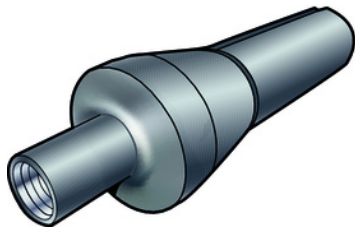
## Metric version

| HSK size | Coupling size       | Ordering code        | Design | Coolant <sup>1)</sup> | Dimensions, millimeter, inch (mm, in.) |              |             |              |          |           |          |           |                 |  |
|----------|---------------------|----------------------|--------|-----------------------|--|--------------|-------------|--------------|----------|-----------|----------|-----------|-----------------|--|
|          |                     |                      |        |                       | $D_{5m}$ mm                            | $D_{5m}$ in. | $D_{5t}$ mm | $D_{5t}$ in. | $l_1$ mm | $l_1$ in. | $l_3$ mm | $l_3$ in. | $\frac{kg}{lb}$ |  |
| 63       | E10                 | 392.410EH-63 10 049  | 1      | 1                     | 63                                     | 2.480        | 9.6         | .378         | 49       | 1.929     | 13.5     | .532      | 0.7             |  |
|          |                     | 392.410EH-63 10 062  | 2      | 1                     | 63                                     | 2.480        | 9.6         | .378         | 62       | 2.441     | 27.9     | 1.098     | 0.7             |  |
|          | E12                 | 392.410EH-63 12 051  | 1      | 1                     | 63                                     | 2.480        | 11.6        | .457         | 51       | 2.008     | 15.8     | .622      | 0.7             |  |
|          |                     | 392.410EH-63 12 068  | 2      | 1                     | 63                                     | 2.480        | 11.6        | .457         | 68       | 2.677     | 34.3     | 1.350     | 0.7             |  |
|          | E16                 | 392.410EH-63 16 056  | 1      | 1                     | 63                                     | 2.480        | 15.4        | .606         | 56       | 2.205     | 21.3     | .839      | 0.7             |  |
|          |                     | 392.410EH-63 16 078  | 2      | 1                     | 63                                     | 2.480        | 15.4        | .606         | 78       | 3.071     | 45.1     | 1.776     | 0.8             |  |
| E20      | 392.410EH-63 20 053 | 1                    | 1      | 63                    | 2.480                                  | 19.2         | .756        | 53           | 2.087    | 18.8      | .740     | 0.7       |                 |  |
|          |                     | 2                    | 1      | 63                    | 2.480                                  | 19.2         | .756        | 91           | 3.583    | 59        | 2.323    | 0.8       |                 |  |
|          | E25                 | 392.410EH-63 25 059  | 1      | 1                     | 63                                     | 2.480        | 24.1        | .949         | 59       | 2.323     | 25.5     | 1.004     | 0.7             |  |
|          |                     | 392.410EH-63 25 105  | 2      | 1                     | 63                                     | 2.480        | 24.1        | .949         | 105      | 4.134     | 74       | 2.913     | 1.0             |  |
| 100      | E20                 | 392.410EH-100 20 100 | 2      | 1                     | 100                                    | 3.937        | 19.2        | .756         | 100      | 3.937     | 60.3     | 2.374     | 2.3             |  |
|          |                     | 392.410EH-100 25 115 | 2      | 1                     | 100                                    | 3.937        | 24.1        | .949         | 115      | 4.528     | 76.4     | 3.008     | 2.5             |  |

<sup>1)</sup> 1 = coolant through centre

# Bridgeport holder for exchangeable head

A392.R8EH



$l_1$  = programming length

## Inch version

| Coupling size | Ordering code       | Coolant <sup>1)</sup> | Dimensions, inch |       |       |                 |
|---------------|---------------------|-----------------------|------------------|-------|-------|-----------------|
|               |                     |                       | $D_{5t}$         | $l_1$ | $l_3$ | $\frac{kg}{lb}$ |
| E10           | A392.R8EH-32 10 025 | 0                     | .360             | .984  | .457  | 0.9             |
| E12           | A392.R8EH-32 12 031 | 0                     | .480             | 1.220 | .693  | 0.9             |
| E16           | A392.R8EH-32 16 035 | 0                     | .606             | 1.378 | .850  | 1.0             |
| E20           | A392.R8EH-32 20 031 | 0                     | .724             | 1.220 | .693  | 1.0             |
| E25           | A392.R8EH-32 25 039 | 0                     | .961             | 1.535 | 1.016 | 1.1             |

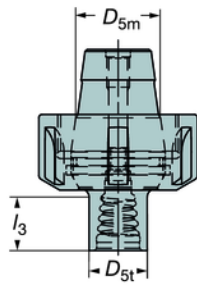
<sup>1)</sup> 0 = no coolant

Assortment of exchangeable heads  
See page G97



## ER integrated collets for exchangeable head

For turning centre and driven tool holders



### Key for integrated collet

| ER size | Key <sup>3)</sup> |
|---------|-------------------|
| ER16    | 5680 096-06       |
| ER20    | 5680 096-01       |
| ER25    | 5680 096-02       |
| ER32    | 5680 096-03       |

<sup>3)</sup> To be ordered separately

| ER size <sup>2)</sup> | Coupling size | Ordering code      | Coolant <sup>1)</sup> | Dimensions, mm |          |       |     | Thread    |
|-----------------------|---------------|--------------------|-----------------------|----------------|----------|-------|-----|-----------|
|                       |               |                    |                       | $D_{5m}$       | $D_{5t}$ | $l_3$ |     |           |
| 16                    | E10           | 392.EREH-16 10 008 | 1                     | 17             | 9.6      | 8     | 0.1 | M22 x 1.5 |
| 20                    |               | 392.EREH-20 10 008 | 1                     | 21             | 9.6      | 8     | 0.1 | M25 x 1.5 |
| 25                    |               | 392.EREH-25 10 012 | 1                     | 26             | 9.6      | 7.2   | 0.2 | M32 x 1.5 |
| 32                    |               | 392.EREH-32 10 012 | 1                     | 33             | 9.6      | 7.6   | 0.4 | M40 x 1.5 |
| 16                    | E12           | 392.EREH-16 12 010 | 1                     | 17             | 11.6     | 10    | 0.1 | M22 x 1.5 |
| 20                    |               | 392.EREH-20 12 010 | 1                     | 21             | 11.6     | 10    | 0.1 | M25 x 1.5 |
| 25                    |               | 392.EREH-25 12 014 | 1                     | 26             | 11.6     | 10.2  | 0.2 | M25 x 1.5 |
| 32                    |               | 392.EREH-32 12 014 | 1                     | 33             | 11.6     | 9.6   | 0.4 | M32 x 1.5 |
| 20                    | E16           | 392.EREH-20 16 014 | 1                     | 21             | 15.4     | 14    | 0.1 | M40 x 1.5 |
| 25                    |               | 392.EREH-25 16 016 | 1                     | 26             | 15.4     | 14.2  | 0.2 | M32 x 1.5 |
| 32                    |               | 392.EREH-32 16 018 | 1                     | 33             | 15.4     | 13.6  | 0.4 | M40 x 1.5 |
| 25                    | E20           | 392.EREH-25 20 019 | 1                     | 26             | 19.2     | 19    | 0.2 | M32 x 1.5 |
| 32                    |               | 392.EREH-32 20 022 | 1                     | 33             | 19.2     | 19.1  | 0.4 | M40 x 1.5 |
| 32                    | E25           | 392.EREH-32 25 025 | 1                     | 33             | 24.1     | 25    | 0.4 | M40 x 1.5 |

### Inch design for 0.375" heads

| ER size <sup>2)</sup> | Coupling size | Ordering code       | Coolant <sup>1)</sup> | Dimensions, inch |          |       |     | Thread    |
|-----------------------|---------------|---------------------|-----------------------|------------------|----------|-------|-----|-----------|
|                       |               |                     |                       | $D_{5m}$         | $D_{5t}$ | $l_3$ |     |           |
| 16                    | E10           | A392.EREH-16 10 007 | 1                     | .669             | .360     | .276  | 0.2 | M22 x 1.5 |
| 20                    |               | A392.EREH-20 10 007 | 1                     | .827             | .360     | .276  | 0.3 | M25 x 1.5 |
| 25                    |               | A392.EREH-25 10 011 | 1                     | 1.024            | .360     | .244  | 0.5 | M32 x 1.5 |
| 32                    |               | A392.EREH-32 10 011 | 1                     | 1.299            | .360     | .260  | 0.8 | M40 x 1.5 |

<sup>1)</sup> 1 = coolant through centre

<sup>2)</sup> DIN 6499

Assortment of exchangeable heads  
See page G97

### Main spare parts

| Coupling size | Key         | Torque wrench head <sup>1)</sup> | Torque wrench head for 2-edge end mill <sup>1)</sup> | Torque value |        | Torque wrench <sup>1)</sup> | Torque range |         |
|---------------|-------------|----------------------------------|--|--------------|--------|-----------------------------|--------------|---------|
|               |             |                                  |  | Nm           | In-lbs |                             | Nm           | In-lbs  |
| E10           | 5680 093-01 | 5680 089-01                      | 5680 089-06  | 12           | 106    | 5680 088-01                 | 10-20        | 88-177  |
| E12           | 5680 093-02 | 5680 089-02                      | 5680 089-07  | 15           | 132    | 5680 088-01                 | 10-20        | 88-177  |
| E16           | 5680 093-03 | 5680 089-03                      | 5680 089-08  | 30           | 265    | 5680 088-02                 | 25-65        | 221-575 |
| E20           | 5680 093-04 | 5680 089-04                      |  | 50           | 442    | 5680 088-02                 | 25-65        | 221-575 |
| E25           | 5680 093-05 | 5680 089-05                      |  | 65           | 575    | 5680 088-02                 | 25-65        | 221-575 |

<sup>1)</sup> Accessories, must be ordered separately





Note!  
The nut is not a standard ER nut and therefore not exchangeable with the spare part series 5533 050-0X. The nut is always included in the package!





# Tapping holder assortment

## SynchroFlex® ER tapping chuck\* - for synchronized tapping operations

|   |  |   |  |
|---|--|---|--|
| <p>Coromant Capto®</p>  <p>Page G106</p> | <p>HSK solid holder</p>  <p>Page G108</p> | <p>MAS-BT solid holder</p>  <p>Page G109</p> | <p>Weldon shank holder</p>  <p>Page G110</p> |
|---|--|---|--|

**To be used with**

ER tapping collet, page G142

**For through coolant tapping use:**

ER sealing disc, page G140

ER collet nut, page G141

## Quick change tapping chuck

|  |   |  |
|--|---|--|
| <p>Coromant Capto®</p>  <p>Page G111</p> | <p>HSK solid holder</p>  <p>Page G112</p> | <p>Weldon shank holder</p>  <p>Page G113</p> |
|--|---|--|

**To be used with**

Quick change tapping adaptors with friction clutch, page G114

Quick change tapping adaptors without friction clutch, page G115

## Floating rubber collet chuck

|   |  |  |
|---|--|--|
| <p>Coromant Capto®</p>  <p>Page G116</p> | <p>HSK solid holder</p>  <p>Page G117</p> | <p>CAT-V solid holder</p>  <p>Page G118</p> |
|---|--|--|

**To be used with**

Rubber collets, page G118

For ordering of taps, see separate Tap catalogue, C-2900:139.

\* SynchroFlex is a registered trademark of Tapmatic Corp.,USA

# SynchroFlex® ER tapping chuck

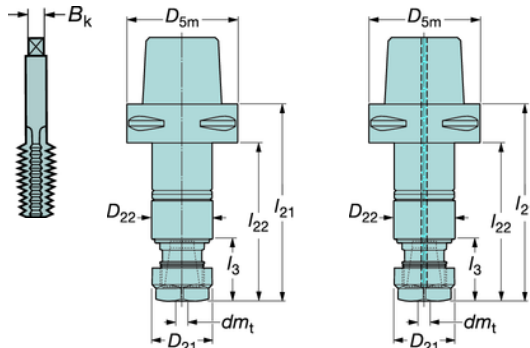
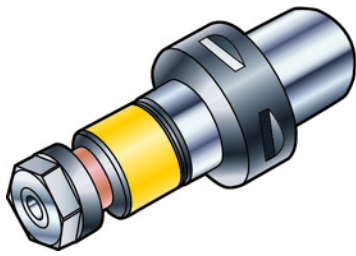
for synchronized tapping operations

Coromant Capto®

391.62 / 391.63

Cx-391.62  
Without through coolant

Cx-391.63  
With through coolant



Accessories

**ER tapping collets**  
Not delivered with the tool, must be ordered separately.



393.14

See page G142.

\* SynchroFlex is a registered trademark of Tapmatic Corp., USA

| Tap range |     | Coupling size | Ordering code    | Collet size | Coolant <sup>1)</sup> | Tap shank dimensions, mm, inch |           | Dimensions, mm, inch |            |            |          |          |       |          |          |          |          |
|-----------|-----|---------------|------------------|-------------|-----------------------|--------------------------------|-----------|----------------------|------------|------------|----------|----------|-------|----------|----------|----------|----------|
| min       | max |               |                  |             |                       | $B_k$ min                      | $B_k$ max | $D_{5m}$             | $dm_{min}$ | $dm_{max}$ | $D_{21}$ | $D_{22}$ | $l_3$ | $l_{21}$ | $l_{22}$ | $l_{22}$ | $l_{22}$ |
| M2        | M5  | C3            | C3-391.63-11 078 | ER 11       | 1                     | 2.0                            | 4.9       | 32                   | 2.8        | 6          | 18.7     | 23.5     | 23.5  | 78       | 63       | 0.3      |          |
|           |     |               |                  |             |                       | .083                           | .193      | 1.260                | .110       | .236       | .736     | .925     | .925  | 3.071    | 2.480    |          |          |
| M4        | M12 |               | C3-391.63-20 105 | ER 20       | 1                     | 3.15                           | 8         | 32                   | 4          | 10         | 34       | 35       | 40.5  | 105      |          | 0.6      |          |
|           |     |               |                  |             |                       | .124                           | .315      | 1.260                | .157       | .394       | 1.339    | 1.378    | 1.594 | 4.134    |          |          |          |
| M4        | M12 | C4            | C4-391.62-20 107 | ER 20       | 0                     | 3.15                           | 8         | 40                   | 4          | 10         | 34       | 35       | 35.4  | 106.5    | 86.5     | 0.7      |          |
|           |     |               |                  |             |                       | .124                           | .315      | 1.575                | .157       | .394       | 1.339    | 1.378    | 1.394 | 4.193    | 3.406    |          |          |
| M8        | M20 |               | C4-391.62-25 126 | ER 25       | 0                     | 6.2                            | 12        | 40                   | 8          | 16         | 42       | 44       | 37    | 125.9    | 105.9    | 1.1      |          |
|           |     |               |                  |             |                       | .244                           | .472      | 1.575                | .315       | .630       | 1.654    | 1.732    | 1.457 | 4.957    | 4.169    |          |          |
| M2        | M5  |               | C4-391.63-11 080 | ER 11       | 1                     | 2.1                            | 4.9       | 40                   | 2.8        | 6          | 18.7     | 23.5     | 23.5  | 80       | 60       | 0.4      |          |
|           |     |               |                  |             |                       | .083                           | .193      | 1.575                | .110       | .236       | .736     | .925     | .925  | 3.150    | 2.362    |          |          |
| M4        | M12 |               | C4-391.63-20 112 | ER 20       | 1                     | 3.15                           | 8         | 40                   | 4          | 10         | 34       | 35       | 40.5  | 111.6    | 91.6     | 0.7      |          |
|           |     |               |                  |             |                       | .124                           | .315      | 1.575                | .157       | .394       | 1.339    | 1.378    | 1.594 | 4.394    | 3.606    |          |          |
| M8        | M20 |               | C4-391.63-25 131 | ER 25       | 1                     | 6.2                            | 12        | 40                   | 8          | 16         | 42       | 44       | 42.2  | 131.1    | 111.1    | 1.1      |          |
|           |     |               |                  |             |                       | .244                           | .472      | 1.575                | .315       | .630       | 1.654    | 1.732    | 1.661 | 5.161    | 4.374    |          |          |
| M4        | M12 | C5            | C5-391.62-20 109 | ER 20       | 0                     | 3.15                           | 8         | 50                   | 4          | 10         | 34       | 35       | 35.4  | 108.5    | 88.5     | 0.9      |          |
|           |     |               |                  |             |                       | .124                           | .315      | 1.968                | .157       | .394       | 1.339    | 1.378    | 1.394 | 4.272    | 3.484    |          |          |
| M8        | M20 |               | C5-391.62-25 128 | ER 25       | 0                     | 6.2                            | 12        | 50                   | 8          | 16         | 42       | 44       | 37    | 127.9    | 107.9    | 1.3      |          |
|           |     |               |                  |             |                       | .244                           | .472      | 1.968                | .315       | .630       | 1.654    | 1.732    | 1.457 | 5.035    | 4.248    |          |          |
| M16       | M30 |               | C5-391.62-40 158 | ER 40       | 0                     | 9                              | 18        | 50                   | 12         | 22         | 63       | 62       | 43    | 157.5    | 137.5    | 2.6      |          |
|           |     |               |                  |             |                       | .354                           | .709      | 1.968                | .472       | .866       | 2.480    | 2.441    | 1.693 | 6.201    | 5.413    |          |          |
| M4        | M12 |               | C5-391.63-20 114 | ER 20       | 1                     | 3.15                           | 8         | 50                   | 4          | 10         | 34       | 35       | 40.5  | 113.6    | 93.6     | 0.9      |          |
|           |     |               |                  |             |                       | .124                           | .315      | 1.968                | .157       | .394       | 1.339    | 1.378    | 1.594 | 4.472    | 3.685    |          |          |
| M8        | M20 |               | C5-391.63-25 133 | ER 25       | 1                     | 6.2                            | 12        | 50                   | 8          | 16         | 42       | 44       | 42.2  | 133.1    | 113.1    | 1.3      |          |
|           |     |               |                  |             |                       | .244                           | .472      | 1.968                | .315       | .630       | 1.654    | 1.732    | 1.661 | 5.240    | 4.453    |          |          |
| M16       | M30 |               | C5-391.63-40 163 | ER 40       | 1                     | 9                              | 18        | 50                   | 12         | 22         | 63       | 62       | 48    | 162.5    | 142.5    | 2.7      |          |
|           |     |               |                  |             |                       | .354                           | .709      | 1.968                | .472       | .866       | 2.480    | 2.441    | 1.890 | 6.398    | 5.610    |          |          |
| M4        | M12 | C6            | C6-391.62-20 113 | ER 20       | 0                     | 3.15                           | 8         | 63                   | 4          | 10         | 34       | 35       | 35.4  | 112.5    | 90.5     | 1.2      |          |
|           |     |               |                  |             |                       | .124                           | .315      | 2.480                | .157       | .394       | 1.339    | 1.378    | 1.394 | 4.429    | 3.563    |          |          |
| M8        | M20 |               | C6-391.62-25 132 | ER 25       | 0                     | 6.2                            | 12        | 63                   | 8          | 16         | 42       | 44       | 37    | 131.9    | 109.9    | 1.6      |          |
|           |     |               |                  |             |                       | .244                           | .472      | 2.480                | .315       | .630       | 1.654    | 1.732    | 1.457 | 5.193    | 4.327    |          |          |
| M16       | M30 |               | C6-391.62-40 162 | ER 40       | 0                     | 9                              | 18        | 63                   | 12         | 22         | 63       | 62       | 43    | 161.5    | 139.5    | 3.0      |          |
|           |     |               |                  |             |                       | .354                           | .709      | 2.480                | .472       | .866       | 2.480    | 2.441    | 1.693 | 6.358    | 5.492    |          |          |
| M4        | M12 |               | C6-391.63-20 118 | ER 20       | 1                     | 3.15                           | 8         | 63                   | 4          | 10         | 34       | 35       | 40.5  | 117.6    | 95.6     | 1.3      |          |
|           |     |               |                  |             |                       | .124                           | .315      | 2.480                | .157       | .394       | 1.339    | 1.378    | 1.594 | 4.630    | 3.764    |          |          |
| M8        | M20 |               | C6-391.63-25 137 | ER 25       | 1                     | 6.2                            | 12        | 63                   | 8          | 16         | 42       | 44       | 42.2  | 137.1    | 115.1    | 1.7      |          |
|           |     |               |                  |             |                       | .244                           | .472      | 2.480                | .315       | .630       | 1.654    | 1.732    | 1.661 | 5.398    | 4.532    |          |          |
| M16       | M30 |               | C6-391.63-40 167 | ER 40       | 1                     | 9                              | 18        | 63                   | 12         | 22         | 63       | 62       | 48    | 166.5    | 144.5    | 3.1      |          |
|           |     |               |                  |             |                       | .354                           | .709      | 2.480                | .472       | .866       | 2.480    | 2.441    | 1.890 | 6.555    | 5.689    |          |          |

<sup>1)</sup> 0 = no coolant, 1 = coolant through centre

Continued ...



G181

# SynchroFlex® ER tapping chuck

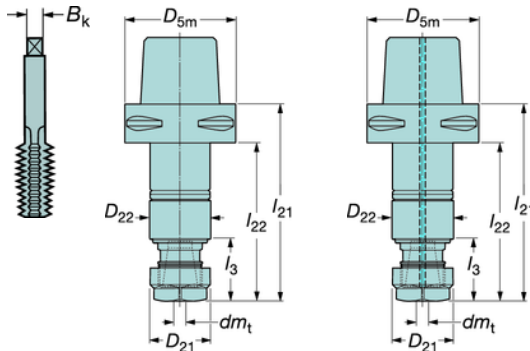
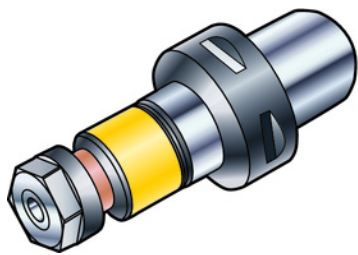
for synchronized tapping operations

Coromant Capto®

391.62 / 391.63

Cx-391.62  
Without through coolant

Cx-391.63  
With through coolant



Accessories

**ER tapping collets**

Not delivered with the tool, must be ordered separately.



393.14

See page G142.

... Continued

\* SynchroFlex is a registered trademark of Tapmatic Corp., USA

| Tap range |     | Coupling size | Ordering code     | Collet size | Coolant <sup>1)</sup> | Tap shank dimensions, mm, inch |           | Dimensions, mm, inch |            |            |          |          |       |          |          |             |
|-----------|-----|---------------|-------------------|-------------|-----------------------|--------------------------------|-----------|----------------------|------------|------------|----------|----------|-------|----------|----------|-------------|
| min       | max |               |                   |             |                       | $B_k$ min                      | $B_k$ max | $D_{5m}$             | $dm_t$ min | $dm_t$ max | $D_{21}$ | $D_{22}$ | $l_3$ | $l_{21}$ | $l_{22}$ | $\rho_{kg}$ |
| M4        | M12 | C8            | C8-391.62-20 107  | ER 20       | 0                     | 3.15                           | 8         | 80                   | 4          | 10         | 34       | 35       | 35.4  | 106.5    | 76.5     | 2.1         |
| M8        | M20 |               | C8-391.62-25 126  | ER 25       | 0                     | .124                           | .315      | 3.150                | .157       | .394       | 1.339    | 1.378    | 1.394 | 4.193    | 3.012    |             |
| M16       | M30 |               | C8-391.62-40 156  | ER 40       | 0                     | .244                           | .472      | 3.150                | .315       | .630       | 1.654    | 1.732    | 1.457 | 4.957    | 3.776    |             |
| M4        | M12 |               | C8-391.63-20 112  | ER 20       | 1                     | 3.15                           | 8         | 80                   | 4          | 10         | 34       | 35       | 40.5  | 111.6    | 81.6     | 2.2         |
| M8        | M20 |               | C8-391.63-25 131  | ER 25       | 1                     | .124                           | .315      | 3.150                | .157       | .394       | 1.339    | 1.378    | 1.594 | 4.394    | 3.213    |             |
| M16       | M30 |               | C8-391.63-40 161  | ER 40       | 1                     | .244                           | .472      | 3.150                | .315       | .630       | 1.654    | 1.732    | 1.661 | 5.161    | 3.980    |             |
| M8        | M20 | C10           | C10-391.63-25 143 | ER 25       | 1                     | 6.2                            | 12        | 100                  | 8          | 16         | 42       | 44       | 42.2  | 143.1    | 107.1    | 4.1         |
| M16       | M30 |               | C10-391.63-40 173 | ER 40       | 1                     | .244                           | .472      | 3.937                | .315       | .630       | 1.654    | 1.732    | 1.661 | 5.634    | 4.216    |             |
|           |     |               |                   |             |                       | .354                           | .709      | 3.937                | .472       | .866       | 2.480    | 2.441    | 1.909 | 6.791    | 5.374    |             |

<sup>1)</sup> 0 = no coolant, 1 = coolant through centre



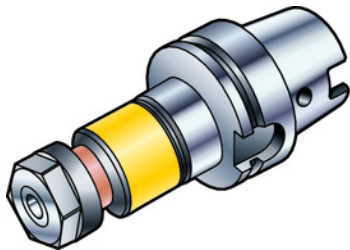
G181

# SynchroFlex® ER tapping chuck

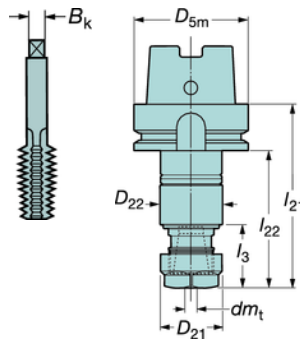
for synchronized tapping operations

HSK form A/C

392.41062 / 392.41063

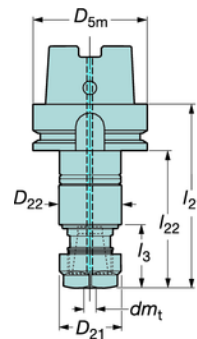


Without through coolant



392.41062

With through coolant



392.41063

Accessories

**ER tapping collets**

Not delivered with the tool, must be ordered separately.



393.14

See page G142.

\* SynchroFlex is a registered trademark of Tapmatic Corp., USA

| Tap range |     | HSK size | Ordering code        | Collet size | Coolant <sup>1)</sup> | Tap shank dimensions, mm, inch |                          | Dimensions, mm, inch  |                           |                           |                       |                       |                      |                       |                       |                      |                      |
|-----------|-----|----------|----------------------|-------------|-----------------------|--------------------------------|--------------------------|-----------------------|---------------------------|---------------------------|-----------------------|-----------------------|----------------------|-----------------------|-----------------------|----------------------|----------------------|
| min       | max |          |                      |             |                       | <i>B<sub>k</sub></i> min       | <i>B<sub>k</sub></i> max | <i>D<sub>5m</sub></i> | <i>dm<sub>t</sub></i> min | <i>dm<sub>t</sub></i> max | <i>D<sub>21</sub></i> | <i>D<sub>22</sub></i> | <i>l<sub>3</sub></i> | <i>l<sub>21</sub></i> | <i>l<sub>22</sub></i> | <i>l<sub>1</sub></i> | <i>l<sub>2</sub></i> |
| M4        | M12 | 63       | 392.41062-63 20 102  | ER 20       | 0                     | 3.15                           | 8                        | 63                    | 4                         | 10                        | 34                    | 35                    | 35.4                 | 102.9                 | 76.9                  | 1.0                  |                      |
|           |     |          |                      |             |                       | .124                           | .315                     | 2.480                 | .157                      | .394                      | 1.339                 | 1.378                 | 1.394                | 4.051                 | 3.028                 |                      |                      |
| M8        | M20 |          | 392.41062-63 25 122  | ER 25       | 0                     | 6.2                            | 12                       | 63                    | 8                         | 16                        | 42                    | 44                    | 37                   | 122.3                 | 96.3                  | 1.4                  |                      |
|           |     |          |                      |             |                       | .244                           | .472                     | 2.480                 | .315                      | .630                      | 1.654                 | 1.732                 | 1.457                | 4.815                 | 3.791                 |                      |                      |
| M16       | M30 |          | 392.41062-63 40 152  | ER 40       | 0                     | 9                              | 18                       | 63                    | 12                        | 22                        | 63                    | 62                    | 43                   | 151.9                 | 125.9                 | 2.8                  |                      |
|           |     |          |                      |             |                       | .354                           | .709                     | 2.480                 | .472                      | .866                      | 2.480                 | 2.441                 | 1.693                | 5.980                 | 4.957                 |                      |                      |
| M4        | M12 |          | 392.41063-63 20 107  | ER 20       | 1                     | 3.15                           | 8                        | 63                    | 4                         | 10                        | 34                    | 35                    | 40.5                 | 108                   | 82                    | 1.1                  |                      |
|           |     |          |                      |             |                       | .124                           | .315                     | 2.480                 | .157                      | .394                      | 1.339                 | 1.378                 | 1.594                | 4.252                 | 3.228                 |                      |                      |
| M8        | M20 |          | 392.41063-63 25 127  | ER 25       | 1                     | 6.2                            | 12                       | 63                    | 8                         | 16                        | 42                    | 44                    | 42.2                 | 127.5                 | 101.5                 | 1.5                  |                      |
|           |     |          |                      |             |                       | .244                           | .472                     | 2.480                 | .315                      | .630                      | 1.654                 | 1.732                 | 1.661                | 5.020                 | 3.996                 |                      |                      |
| M16       | M30 |          | 392.41063-63 40 157  | ER 40       | 1                     | 9                              | 18                       | 63                    | 12                        | 22                        | 63                    | 62                    | 48                   | 157.4                 | 131.4                 | 2.8                  |                      |
|           |     |          |                      |             |                       | .354                           | .709                     | 2.480                 | .472                      | .866                      | 2.480                 | 2.441                 | 1.890                | 6.197                 | 5.173                 |                      |                      |
| M16       | M30 | 100      | 392.41062-100 40 159 | ER 40       | 0                     | 9                              | 18                       | 100                   | 12                        | 22                        | 63                    | 62                    | 43                   | 158.4                 | 129.4                 | 4.2                  |                      |
|           |     |          |                      |             |                       | .354                           | .709                     | 3.937                 | .472                      | .866                      | 2.480                 | 2.441                 | 1.693                | 6.236                 | 5.094                 |                      |                      |
| M4        | M12 |          | 392.41062-10020109   | ER 20       | 0                     | 3.15                           | 8                        | 100                   | 4                         | 10                        | 34                    | 35                    | 35.4                 | 109.4                 | 80.4                  | 2.4                  |                      |
|           |     |          |                      |             |                       | .124                           | .315                     | 3.937                 | .157                      | .394                      | 1.339                 | 1.378                 | 1.394                | 4.307                 | 3.165                 |                      |                      |
| M8        | M20 |          | 392.41062-10025129   | ER 25       | 0                     | 6.2                            | 12                       | 100                   | 8                         | 16                        | 42                    | 44                    | 37                   | 128.8                 | 99.8                  | 2.8                  |                      |
|           |     |          |                      |             |                       | .244                           | .472                     | 3.937                 | .315                      | .630                      | 1.654                 | 1.732                 | 1.457                | 5.071                 | 3.929                 |                      |                      |
| M16       | M30 |          | 392.41063-100 40 164 | ER 40       | 1                     | 9                              | 18                       | 100                   | 12                        | 22                        | 63                    | 62                    | 48                   | 163.4                 | 134.4                 | 4.3                  |                      |
|           |     |          |                      |             |                       | .354                           | .709                     | 3.937                 | .472                      | .866                      | 2.480                 | 2.441                 | 1.890                | 6.433                 | 5.291                 |                      |                      |
| M4        | M12 |          | 392.41063-10020114   | ER 20       | 1                     | 3.15                           | 8                        | 100                   | 4                         | 10                        | 34                    | 35                    | 40.5                 | 114.5                 | 85.5                  | 2.5                  |                      |
|           |     |          |                      |             |                       | .124                           | .315                     | 3.937                 | .157                      | .394                      | 1.339                 | 1.378                 | 1.594                | 4.508                 | 3.366                 |                      |                      |
| M8        | M20 |          | 392.41063-10025134   | ER 25       | 1                     | 6.2                            | 12                       | 100                   | 8                         | 16                        | 42                    | 44                    | 42.2                 | 134                   | 105                   | 2.9                  |                      |
|           |     |          |                      |             |                       | .244                           | .472                     | 3.937                 | .315                      | .630                      | 1.654                 | 1.732                 | 1.661                | 5.276                 | 4.134                 |                      |                      |

<sup>1)</sup> 0 = no coolant, 1 = coolant through centre



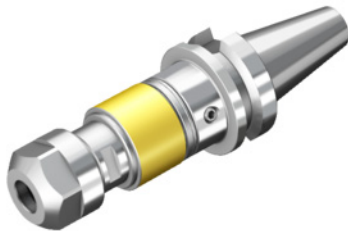
G181

# SynchroFlex® ER tapping chuck

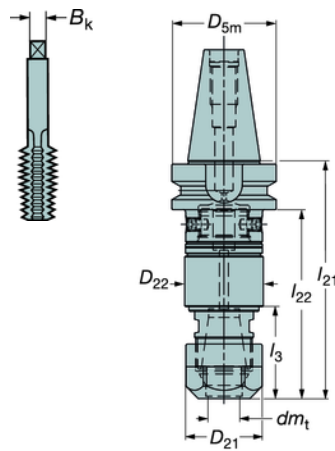
MAS-BT 403

for synchronized tapping operations

392.5563



With through coolant



392.5563

Accessories

**ER tapping collets**

Not delivered with the tool, must be ordered separately.



393.14

See page G142.

\* SynchroFlex is a registered trademark of Tapmatic Corp.,USA

**Metric version**

| Tap range |     | Ordering code      | Coolant <sup>1)</sup> | Tap shank |           | Dimensions, mm |            |            |          |          |       |          |          |                     |       | Collet size |
|-----------|-----|--------------------|-----------------------|-----------|-----------|----------------|------------|------------|----------|----------|-------|----------|----------|---------------------|-------|-------------|
| min       | max |                    |                       | $B_k$ min | $B_k$ max | $D_{5m}$       | $dm_{min}$ | $dm_{max}$ | $D_{21}$ | $d_{22}$ | $l_3$ | $l_{21}$ | $l_{22}$ | $\frac{\sigma}{kg}$ |       |             |
| M2        | M5  | 392.5563-30 11 082 | 1                     | 2.0       | 4.9       | 31.75          | 2.8        | 6.0        | 18.7     | 23.5     | 23.5  | 82       | 60       | 0.6                 | ER 11 |             |
| M4        | M12 | 392.5563-30 20 105 | 1                     | 3.15      | 8         | 31.75          | 4          | 10.0       | 34.0     | 35.0     | 40.5  | 105      | 83       | 0.8                 | ER 20 |             |
| M8        | M20 | 392.5563-30 25 125 | 1                     | 6.2       | 12        | 31.75          | 8          | 16.0       | 42.0     | 44.0     | 42.2  | 124.6    | 102.6    | 1.2                 | ER 25 |             |

<sup>1)</sup> 0 = no coolant, 1 = coolant through centre



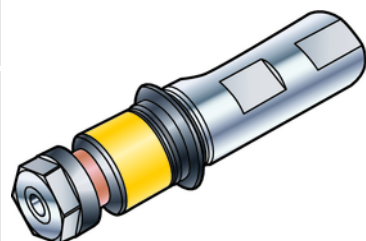
G182

# SynchroFlex® ER tapping chuck

for synchronized tapping operations

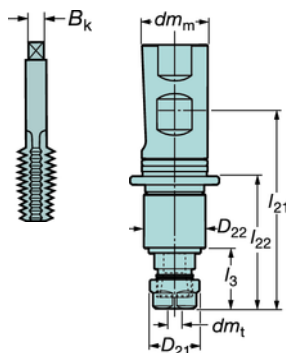
Weldon/Whistle Notch

393.2062 / 393.2063

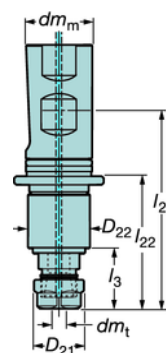


Without through coolant

With through coolant



393.2062



393.2063

Accessories

**ER tapping collets**

Not delivered with the tool, must be ordered separately.



\* SynchroFlex is a registered trademark of Tapmatic Corp., USA

393.14

Metric version

See page G142.

| Tap range |     | Shank size |  | Ordering code      | Coolant <sup>1)</sup> | Tap shank |           | Dimensions, mm |            |          |          |       |       |          |          |     |       |  | Collet size |
|-----------|-----|------------|--|--------------------|-----------------------|-----------|-----------|----------------|------------|----------|----------|-------|-------|----------|----------|-----|-------|--|-------------|
| min       | max | $dm_m$     |  |                    |                       | $B_k$ min | $B_k$ max | $dm_t$ min     | $dm_t$ max | $D_{21}$ | $d_{22}$ | $h_1$ | $h_3$ | $h_{21}$ | $h_{22}$ |     |       |  |             |
| M2        | M5  | 16         |  | 393.2062-16 11 051 | 0                     | 2.0       | 4.9       | 2.8            | 6.0        | 18.7     | 23.5     | 75.4  | 23.5  | 75.4     | 51.4     | 0.2 | ER 11 |  |             |
| M2        | M5  | 20         |  | 393.2062-20 11 051 | 0                     | 2.0       | 4.9       | 2.8            | 6.0        | 18.7     | 23.5     | 75.4  | 23.5  | 75.9     | 51       | 0.2 | ER 11 |  |             |
| M4        | M12 | 20         |  | 393.2063-20 20 068 | 1                     | 3.15      | 8         | 4              | 10.0       | 34.0     | 35.0     | 92.6  | 40.5  | 93.6     | 68.6     | 0.3 | ER 20 |  |             |
| M2        | M5  | 25         |  | 393.2062-25 11 051 | 0                     | 2.1       | 4.9       | 2.8            | 6.0        | 18.7     | 23.5     | 75.4  | 23.5  | 75.4     | 51.4     | 0.3 | ER 11 |  |             |
| M4        | M12 | 25         |  | 393.2062-25 20 063 | 0                     | 3.15      | 8         | 4              | 10.0       | 34.0     | 35.0     | 87.5  | 35.3  | 87.5     | 63.5     | 0.4 | ER 20 |  |             |
| M8        | M20 | 25         |  | 393.2062-25 25 083 | 0                     | 6.2       | 12        | 8              | 16.0       | 42.0     | 44.0     | 106.9 | 36.9  | 106.9    | 82.9     | 0.8 | ER 25 |  |             |
| M4        | M12 | 25         |  | 393.2063-25 20 068 | 1                     | 3.15      | 8         | 4              | 10.0       | 34.0     | 35.0     | 92.6  | 40.5  | 92.6     | 68.6     | 0.4 | ER 20 |  |             |
| M8        | M20 | 25         |  | 393.2063-25 25 088 | 1                     | 6.2       | 12        | 8              | 16.0       | 42.0     | 44.0     | 112.1 | 42.2  | 112.1    | 88.1     | 0.8 | ER 25 |  |             |
| M16       | M30 | 25         |  | 393.2063-25 40 117 | 1                     | 9         | 18        | 12             | 22.0       | 63.0     | 62.0     | 92.6  |       | 141.2    | 117      | 2.1 | ER 40 |  |             |

<sup>1)</sup> 0 = no coolant, 1 = coolant through centre

Inch version

| Tap range |     | Shank size |  | Ordering code       | Coolant <sup>1)</sup> | Tap shank |           | Dimensions, inch |            |          |          |       |       |          |          |     |       |  | Collet size |
|-----------|-----|------------|--|---------------------|-----------------------|-----------|-----------|------------------|------------|----------|----------|-------|-------|----------|----------|-----|-------|--|-------------|
| min       | max | $dm_m$     |  |                     |                       | $B_k$ min | $B_k$ max | $dm_t$ min       | $dm_t$ max | $D_{21}$ | $d_{22}$ | $h_1$ | $h_3$ | $h_{21}$ | $h_{22}$ |     |       |  |             |
| M2        | M5  | 1          |  | A393.2062-25 11 051 | 0                     | .0827     | .1929     | .110             | .236       | .736     | .925     | 3.165 | .925  | 3.165    | 2.024    | 0.7 | ER 11 |  |             |
| M4        | M12 | 1          |  | A393.2062-25 20 063 | 0                     | .124      | .315      | .157             | .394       | 1.339    | 1.378    | 3.642 | 1.390 | 3.642    | 2.500    | 0.9 | ER 20 |  |             |
| M8        | M20 | 1          |  | A393.2062-25 25 083 | 0                     | .2441     | .4724     | .315             | .630       | 1.654    | 1.732    | 4.402 | 1.453 | 4.402    | 3.264    | 1.8 | ER 25 |  |             |
| M4        | M12 | 1          |  | A393.2063-25 20 068 | 1                     | .124      | .315      | .157             | .394       | 1.339    | 1.378    | 3.842 | 1.594 | 3.842    | 2.701    | 0.9 | ER 20 |  |             |
| M8        | M20 | 1          |  | A393.2063-25 25 088 | 1                     | .2441     | .4724     | .315             | .630       | 1.654    | 1.732    | 4.610 | 1.661 | 4.610    | 3.468    | 1.8 | ER 25 |  |             |

<sup>1)</sup> 0 = no coolant, 1 = coolant through centre

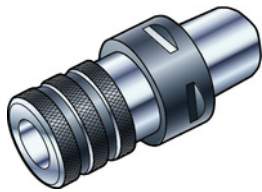


G184

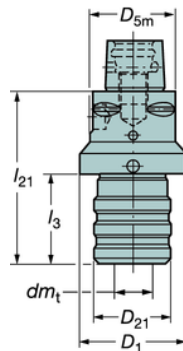
# Quick change tapping chuck

Coromant Capto®

391.60/391.61

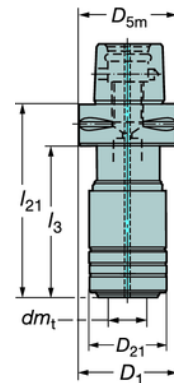


Without coolant through



Cx-391.60

With coolant through



Cx-391.61

| Tap range |     | Dimensions, mm, inch |               |                   |                       |          |       |          |       |       |       |      |      |                   |                  |
|-----------|-----|----------------------|---------------|-------------------|-----------------------|----------|-------|----------|-------|-------|-------|------|------|-------------------|------------------|
| min       | max | $dm_t$               | Coupling size | Ordering code     | Coolant <sup>1)</sup> | $D_{5m}$ | $D_1$ | $D_{21}$ | $h$   | $h_1$ | $h_2$ | - z  | + z  | $\frac{kg}{cm^3}$ | Nm <sup>2)</sup> |
| M3        | M12 | 19<br>.748           | C3            | C3-391.60-01 080A | 0                     | 32       | 50    | 36       | 80    | 40.5  | 80    | 7.5  | 7.5  | 0.4               | 35               |
| M3        | M12 | 19<br>.748           | C4            | C4-391.60-01 080A | 0                     | 1.260    | 1.968 | 1.417    | 3.150 | 1.594 | 3.150 |      |      |                   |                  |
| M8        | M20 | 31<br>1.220          |               | C4-391.60-02 110A | 0                     | 40       | 63    | 53       | 110   | 64.5  | 110   | 12.5 | 12.5 | 1.4               | 110              |
| M3        | M12 | 19<br>.748           |               | C4-391.61-01 096  | 1                     | 1.575    | 2.480 | 2.087    | 4.331 | 2.539 | 4.331 |      |      |                   |                  |
| M3        | M12 | 19<br>.748           |               | C4-391.61-01 096  | 1                     | 40       | 40    | 39       | 96    | 75    | 96    | 7.5  | 7.5  | 1.1               | 35               |
| M3        | M12 | 19<br>.748           | C5            | C5-391.60-01 080A | 0                     | 1.575    | 1.575 | 1.535    | 3.780 | 2.953 | 3.780 |      |      |                   |                  |
| M3        | M12 | 19<br>.748           |               | C5-391.60-01 080A | 0                     | 50       | 50    | 36       | 80    | 40.5  | 80    | 7.5  | 7.5  | 1.0               | 35               |
| M8        | M20 | 31<br>1.220          |               | C5-391.60-02 115A | 0                     | 1.968    | 1.968 | 1.417    | 3.150 | 1.594 | 3.150 |      |      |                   |                  |
| M8        | M20 | 31<br>1.220          |               | C5-391.60-02 115A | 0                     | 50       | 63    | 53       | 115   | 64.5  | 115   | 12.5 | 12.5 | 1.7               | 110              |
| M3        | M12 | 19<br>.748           |               | C5-391.61-01 097  | 1                     | 1.968    | 2.480 | 2.087    | 4.528 | 2.539 | 4.528 |      |      |                   |                  |
| M3        | M12 | 19<br>.748           |               | C5-391.61-01 097  | 1                     | 1.968    | 1.968 | 1.535    | 3.819 | 2.992 | 3.819 |      |      |                   |                  |
| M8        | M20 | 31<br>1.220          |               | C5-391.61-02 129  | 1                     | 50       | 50    | 39       | 97    | 76    | 97    | 10   | 10   | 2.1               | 110              |
| M8        | M20 | 31<br>1.220          |               | C5-391.61-02 129  | 1                     | 1.968    | 2.362 | 5.079    |       | 5.079 |       |      |      |                   |                  |
| M3        | M12 | 19<br>.748           | C6            | C6-391.60-01 090A | 0                     | 63       | 50    | 36       | 90    | 40.5  | 90    | 7.5  | 7.5  | 1.4               | 35               |
| M3        | M12 | 19<br>.748           |               | C6-391.60-01 090A | 0                     | 2.480    | 1.968 | 1.417    | 3.543 | 1.594 | 3.543 |      |      |                   |                  |
| M8        | M20 | 31<br>1.220          |               | C6-391.60-02 120A | 0                     | 63       | 63    | 53       | 120   | 64.5  | 120   | 12.5 | 12.5 | 2.3               | 110              |
| M8        | M20 | 31<br>1.220          |               | C6-391.60-02 120A | 0                     | 2.480    | 2.480 | 2.087    | 4.724 | 2.539 | 4.724 |      |      |                   |                  |
| M14       | M33 | 48<br>1.890          |               | C6-391.60-03 170A | 0                     | 63       | 63    | 78       | 170   | 170   | 20    | 20   | 3.5  | 500               |                  |
| M14       | M33 | 48<br>1.890          |               | C6-391.60-03 170A | 0                     | 2.480    |       | 3.071    | 6.693 |       | 6.693 |      |      |                   |                  |
| M8        | M20 | 31<br>1.220          |               | C6-391.61-02 131  | 1                     | 63       | 63    | 60       | 131   | 108   | 131   | 10   | 10   | 2.4               | 110              |
| M8        | M20 | 31<br>1.220          |               | C6-391.61-02 131  | 1                     | 2.480    | 2.480 | 2.362    | 5.158 | 4.252 | 5.158 |      |      |                   |                  |
| M14       | M33 | 48<br>1.890          |               | C6-391.61-03 196  | 1                     | 63       | 63    | 86       | 196   | 196   | 17.5  | 17.5 | 4.5  | 500               |                  |
| M14       | M33 | 48<br>1.890          |               | C6-391.61-03 196  | 1                     | 2.480    |       | 3.386    | 7.716 |       | 7.716 |      |      |                   |                  |
| M3        | M12 | 19<br>.748           | C8            | C8-391.60-01 085A | 0                     | 80       | 80    | 36       | 85    | 40.5  | 85    | 7.5  | 7.5  | 2.3               | 35               |
| M3        | M12 | 19<br>.748           |               | C8-391.60-01 085A | 0                     | 3.150    | 3.150 | 1.417    | 3.346 | 1.594 | 3.346 |      |      |                   |                  |
| M8        | M20 | 31<br>1.220          |               | C8-391.60-02 110A | 0                     | 80       | 63    | 53       | 110   | 64.5  | 110   | 12.5 | 12.5 | 3.2               | 110              |
| M8        | M20 | 31<br>1.220          |               | C8-391.60-02 110A | 0                     | 3.150    | 2.480 | 2.087    | 4.331 | 2.539 | 4.331 |      |      |                   |                  |
| M14       | M33 | 48<br>1.890          |               | C8-391.60-03 160A | 0                     | 80       | 80    | 78       | 160   | 129   | 160   | 20   | 20   | 3.7               | 500              |
| M14       | M33 | 48<br>1.890          |               | C8-391.60-03 160A | 0                     | 3.150    | 3.150 | 3.071    | 6.299 | 5.079 | 6.299 |      |      |                   |                  |

1) 0 = no coolant, 1 = coolant through centre

2) Tightening torque Nm.

### Recommendations:

In order to get the best result from machines not intended for synchronized tapping operations, the following recommendations should be observed.

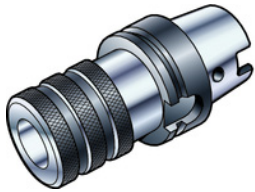
- Program machine feed 10% lower than theoretical value (thread pitch rpm). This enables the tap to cut precisely on pitch.
- Reduce tapping depth by 10% to avoid tap breakage.
- Observe that when tapping deep holes in soft materials e.g. aluminium, feed and depth should only be reduced by 3-5%.



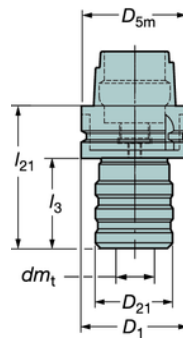
## Quick change tapping chuck

HSK form A/C

392.41060 / 392.41061

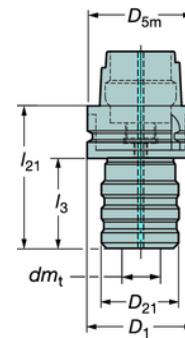


Without through coolant



392.41060

With through coolant



392.41061

| Tap range |     |       |               |                    | Dimensions, mm, inch  |          |       |          |       |          |          |                  |
|-----------|-----|-------|---------------|--------------------|-----------------------|----------|-------|----------|-------|----------|----------|------------------|
| min       | max | $dm$  | Coupling size | Ordering code      | Coolant <sup>1)</sup> | $D_{5m}$ | $D_1$ | $D_{21}$ | $l_3$ | $l_{21}$ | $l_{MS}$ | Nm <sup>2)</sup> |
| M3        | M12 | 19    | 63            | 392.41060-6301072  | 0                     | 63       | 63    | 39       | 46    | 72       | 0.9      | 35               |
|           |     | .748  |               |                    |                       | 2.480    | 2.480 | 1.535    | 1.811 | 2.835    |          |                  |
| M8        | M20 | 31    |               | 392.41060-6302110  | 0                     | 63       | 63    | 60       | 84    | 110      | 1.8      | 110              |
|           |     | 1.220 |               |                    |                       | 2.480    | 2.480 | 2.362    | 3.307 | 4.331    |          |                  |
| M14       | M33 | 48    |               | 392.41060-6303141  | 0                     | 63       | 63    | 86       | 115   | 141      | 3.3      | 500              |
|           |     | 1.890 |               |                    |                       | 2.480    | 2.480 | 3.386    | 4.528 | 5.551    |          |                  |
| M3        | M12 | 19    | 100           | 392.41060-10001080 | 0                     | 100      | 100   | 39       | 50.5  | 80       | 2.3      | 35               |
|           |     | .748  |               |                    |                       | 3.937    | 3.937 | 1.535    | 1.988 | 3.150    |          |                  |
| M14       | M20 | 31    |               | 392.41060-10002100 | 0                     | 100      | 100   | 60       | 71    | 100      | 3.0      | 110              |
|           |     | 1.220 |               |                    |                       | 3.937    | 3.937 | 2.362    | 2.795 | 3.937    |          |                  |
| M14       | M33 | 48    |               | 392.41060-10003144 | 0                     | 100      | 100   | 86       | 115   | 144      | 4.9      | 500              |
|           |     | 1.890 |               |                    |                       | 3.937    | 3.937 | 3.386    | 4.528 | 5.669    |          |                  |
| M3        | M12 | 19    | 63            | 392.41061-6301105  | 1                     | 63       | 63    | 39       | 79    | 105      | 1.1      | 35               |
|           |     | .748  |               |                    |                       | 2.480    | 2.480 | 1.535    | 3.110 | 4.134    |          |                  |
| M8        | M20 | 31    |               | 392.41061-6302140  | 1                     | 63       | 63    | 60       | 114   | 140      | 2.3      | 110              |
|           |     | 1.220 |               |                    |                       | 2.480    | 2.480 | 2.362    | 4.488 | 5.512    |          |                  |
| M14       | M33 | 48    |               | 392.41061-6303203  | 1                     | 63       | 86    | 86       | 177   | 203      | 5.4      | 500              |
|           |     | 1.890 |               |                    |                       | 2.480    | 3.386 | 3.386    | 6.968 | 7.992    |          |                  |
| M3        | M12 | 19    | 100           | 392.41061-10001112 | 1                     | 100      | 100   | 39       | 83    | 112      | 2.5      | 35               |
|           |     | .748  |               |                    |                       | 3.937    | 3.937 | 1.535    | 3.268 | 4.409    |          |                  |
| M8        | M20 | 31    |               | 392.41061-10002144 | 1                     | 100      | 100   | 60       | 115   | 144      | 3.7      | 110              |
|           |     | 1.220 |               |                    |                       | 3.937    | 3.937 | 2.362    | 4.528 | 5.669    |          |                  |
| M14       | M33 | 48    |               | 392.41061-10003210 | 1                     | 100      | 100   | 86       | 181   | 210      | 7.3      | 500              |
|           |     | 1.890 |               |                    |                       | 3.937    | 3.937 | 3.386    | 7.126 | 8.268    |          |                  |

<sup>1)</sup> 0 = no coolant, 1 = coolant through centre

<sup>2)</sup> Max torque, Nm

For Quick change tapping adaptors, see page G114.

### Recommendations:

In order to get the best result from machines not intended for synchronized tapping operations, the following recommendations should be observed.

- Program machine feed 10% lower than theoretical value (thread pitch rpm). This enables the tap to cut precisely on pitch.
- Reduce tapping depth by 10% to avoid tap breakage.
- Observe that when tapping deep holes in soft materials e.g. aluminium, feed and depth should only be reduced by 3-5%.



G185



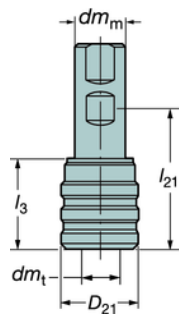
# Quick change tapping chuck

Weldon shank

393.2060 / 393.2061

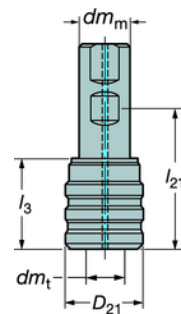


Without through coolant



393.2060

With through coolant



393.2061

## Metric shank

| Tap range |     |        |                          |                    |                       | Length compensation, mm |           | Dimensions, mm |       |          |      |                  |
|-----------|-----|--------|--------------------------|--------------------|-----------------------|-------------------------|-----------|----------------|-------|----------|------|------------------|
| min       | max | $dm_t$ | Coupling size,<br>$dm_m$ | Ordering code      | Coolant <sup>1)</sup> | Compression/            | Expansion | $D_{21}$       | $l_3$ | $l_{21}$ |      | Nm <sup>2)</sup> |
| M3        | M12 | 19     | 25                       | 393.2060-25 01 045 | 0                     | 7.5                     |           | 39             | 45    | 66       | 0.54 | 35               |
| M8        | M20 | 31     |                          | 393.2060-25 02 068 | 0                     | 10                      |           | 60             | 68    | 89       | 1.61 | 110              |
| M3        | M12 | 19     |                          | 393.2061-25 01 062 | 1                     | 7.5                     |           | 39             | 62    | 83       | 0.54 | 35               |
| M8        | M20 | 31     |                          | 393.2061-25 02 098 | 1                     | 10                      |           | 60             | 98    | 119      | 1.61 | 110              |
| M14       | M33 | 48     | 32                       | 393.2060-32 03 099 | 0                     | 17.5                    |           | 86             | 99    | 123      | 4.6  | 500              |
| M14       | M33 | 48     |                          | 393.2061-32 03 147 | 1                     | 17.5                    |           | 86             | 147   | 171      | 4.55 | 500              |

<sup>1)</sup> 0 = no coolant, 1 = coolant through centre

<sup>2)</sup> Max torque, Nm

For Quick change tapping adaptors, see page G114.

## Recommendations:

In order to get the best result from machines not intended for synchronized tapping operations, the following recommendations should be observed.

- Program machine feed 10% lower than theoretical value (thread pitch rpm). This enables the tap to cut precisely on pitch.
- Reduce tapping depth by 10% to avoid tap breakage.
- Observe that when tapping deep holes in soft materials e.g. aluminium, feed and depth should only be reduced by 3-5%.



G185

## Quick change tapping adaptor

with friction clutch and for external and internal coolant supply

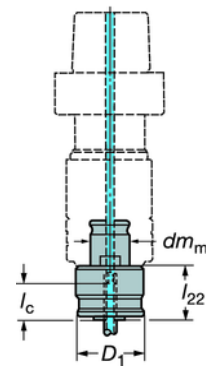
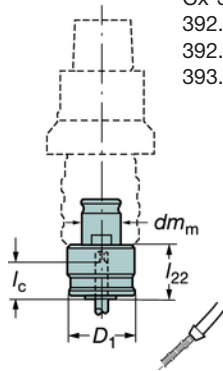
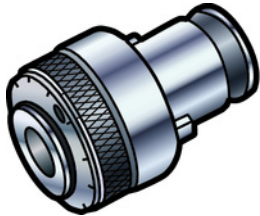
393.03-SES

External coolant supply

Internal coolant supply

Cx-391.60  
392.41060  
392.17660  
393.2060

Cx-391.61  
392.41061  
393.2061



Metric version

| Shank type      | Øx□<br>Tap shank, mm | Preset for <sup>1)</sup> | dm <sub>m</sub>      | Ordering code        | Dimensions, mm |                |                 |     |
|-----------------|----------------------|--------------------------|----------------------|----------------------|----------------|----------------|-----------------|-----|
|                 |                      |                          |                      |                      | D <sub>1</sub> | l <sub>c</sub> | l <sub>22</sub> |     |
| Tapshank<br>DIN | 3.50 x 2.70          | M3                       | 19                   | 393.03-SES1 D035X027 | 32.5           | 17             | 25              | 0.2 |
|                 | 4.00 x 3.00          | M3.5                     | 19                   | 393.03-SES1 D040X030 | 32.5           | 17             | 25              | 0.2 |
|                 | 4.50 x 3.40          | M4                       | 19                   | 393.03-SES1 D045X034 | 32.5           | 17             | 25              | 0.2 |
|                 | 6.00 x 4.90          | M8                       | 19                   | 393.03-SES1 D060X049 | 32.5           | 17             | 25              | 0.2 |
|                 | 7.00 x 5.50          | M10                      | 19                   | 393.03-SES1 D070X055 | 32.5           | 17             | 25              | 0.2 |
|                 | 8.00 x 6.20          | M8                       | 19                   | 393.03-SES1 D080X062 | 32.5           | 17             | 25              | 0.2 |
|                 | 9.00 x 7.00          | M12                      | 19                   | 393.03-SES1 D090X070 | 32.5           | 17             | 25              | 0.2 |
|                 | 6.00 x 4.90          | M8                       | 31                   | 393.03-SES2 D060X049 | 50.5           | 30             | 34              | 0.6 |
|                 | 7.00 x 5.50          | M10                      | 31                   | 393.03-SES2 D070X055 | 50.5           | 30             | 34              | 0.6 |
|                 | 8.00 x 6.20          | M8                       | 31                   | 393.03-SES2 D080X062 | 50.5           | 30             | 34              | 0.6 |
|                 | 9.00 x 7.00          | M12                      | 31                   | 393.03-SES2 D090X070 | 50.5           | 30             | 34              | 0.6 |
|                 | 11.00 x 9.00         | M14                      | 31                   | 393.03-SES2 D110X090 | 50.5           | 30             | 34              | 0.6 |
|                 | 12.00 x 9.00         | M14                      | 31                   | 393.03-SES2 D120X090 | 50.5           | 30             | 34              | 0.6 |
|                 | 14.00 x 11.00        | M18                      | 31                   | 393.03-SES2 D140X110 | 50.5           | 30             | 34              | 0.6 |
|                 | 16.00 x 12.00        | M20                      | 31                   | 393.03-SES2 D160X120 | 50.5           | 30             | 34              | 0.6 |
|                 | 11.00 x 9.00         | M14                      | 48                   | 393.03-SES3 D110X090 | 72             | 44             | 45              | 1.7 |
|                 | 12.00 x 9.00         | M16                      | 48                   | 393.03-SES3 D120X090 | 72             | 44             | 45              | 1.7 |
|                 | 14.00 x 11.00        | M18                      | 48                   | 393.03-SES3 D140X110 | 72             | 44             | 45              | 1.7 |
|                 | 16.00 x 12.00        | M20                      | 48                   | 393.03-SES3 D160X120 | 72             | 44             | 45              | 1.7 |
| 18.00 x 14.50   | M24                  | 48                       | 393.03-SES3 D180X145 | 72                   | 44             | 45             | 1.7             |     |
| 22.00 x 18.00   | M30                  | 48                       | 393.03-SES3 D220X180 | 72                   | 44             | 45             | 1.7             |     |
| Tapshank<br>ISO | 3.15 x 2.50          | M4                       | 19                   | 393.03-SES1 D031X025 | 32.5           | 17             | 25              | 0.2 |
|                 | 4.00 x 3.15          | M5                       | 19                   | 393.03-SES1 D040X031 | 32.5           | 17             | 25              | 0.2 |
|                 | 4.50 x 3.55          | M6                       | 19                   | 393.03-SES1 D045X035 | 32.5           | 17             | 25              | 0.2 |
|                 | 5.00 x 4.00          | M5                       | 19                   | 393.03-SES1 D050X040 | 32.5           | 17             | 25              | 0.2 |
|                 | 6.30 x 5.00          | M8                       | 19                   | 393.03-SES1 D063X050 | 32.5           | 17             | 25              | 0.2 |
|                 | 8.00 x 6.30          | M8                       | 19                   | 393.03-SES1 D080X063 | 32.5           | 17             | 25              | 0.2 |
|                 | 9.00 x 7.10          | M12                      | 19                   | 393.03-SES1 D090X071 | 32.5           | 17             | 25              | 0.2 |
|                 | 10.00 x 8.00         | M10                      | 19                   | 393.03-SES1 D100X080 | 32.5           | 17             | 25              | 0.2 |
|                 | 8.00 x 6.30          | M8                       | 31                   | 393.03-SES2 D080X063 | 50.5           | 30             | 34              | 0.6 |
|                 | 9.00 x 7.10          | M12                      | 31                   | 393.03-SES2 D090X071 | 50.5           | 30             | 34              | 0.6 |
|                 | 10.00 x 8.00         | M10                      | 31                   | 393.03-SES2 D100X080 | 50.5           | 30             | 34              | 0.6 |
|                 | 11.20 x 9.00         | M14                      | 31                   | 393.03-SES2 D112X090 | 50.5           | 30             | 34              | 0.6 |
|                 | 12.50 x 10.00        | M16                      | 31                   | 393.03-SES2 D125X100 | 50.5           | 30             | 34              | 0.6 |
|                 | 14.00 x 11.20        | M18                      | 31                   | 393.03-SES2 D140X112 | 50.5           | 30             | 34              | 0.6 |
|                 | 11.20 x 9.00         | M14                      | 48                   | 393.03-SES3 D112X090 | 72             | 44             | 45              | 1.7 |
|                 | 14.00 x 11.20        | M20                      | 48                   | 393.03-SES3 D140X112 | 72             | 44             | 45              | 1.7 |
|                 | 16.00 x 12.50        | M22                      | 48                   | 393.03-SES3 D160X125 | 72             | 44             | 45              | 1.7 |
|                 | 18.00 x 14.00        | M24                      | 48                   | 393.03-SES3 D180X140 | 72             | 44             | 45              | 1.7 |
|                 | 20.00 x 16.00        | M27                      | 48                   | 393.03-SES3 D200X160 | 72             | 44             | 45              | 1.7 |
|                 | 25.00 x 20.00        | M33                      | 48                   | 393.03-SES3 D250X200 | 72             | 44             | 45              | 1.7 |

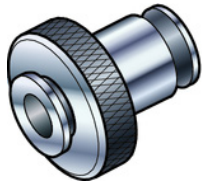
<sup>1)</sup> For more technical information, see our Metalcutting Technical guide

For cutting data, follow tap manufacturer's recommendations.

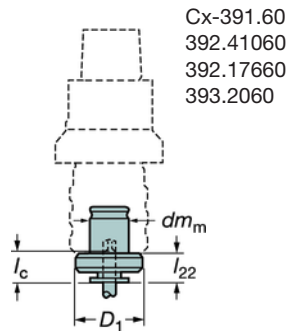
# Quick change tapping adaptor

without friction clutch and for external and internal coolant supply

393.03-SE

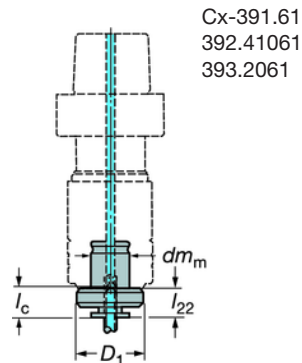


External coolant supply



393.03-SE

Internal coolant supply



393.03-SE

Cx-391.60  
392.41060  
392.17660  
393.2060

Cx-391.61  
392.41061  
393.2061

## Metric version

| Shank type      | Øx□<br>Tap shank, mm | dm <sub>m</sub>     | Ordering code        | Dimensions, mm |                |                 |     |
|-----------------|----------------------|---------------------|----------------------|----------------|----------------|-----------------|-----|
|                 |                      |                     |                      | D <sub>1</sub> | l <sub>c</sub> | l <sub>22</sub> | kg  |
| Tapshank<br>DIN | 4.50 x 3.40          | 19                  | 393.03-SE1 D045X034  | 30             | 17             | 7               | 0.1 |
|                 | 6.00 x 4.90          | 19                  | 393.03-SE1 D060X049  | 30             | 17             | 7               | 0.1 |
|                 | 7.00 x 5.50          | 19                  | 393.03-SE1 D070X055  | 30             | 17             | 7               | 0.1 |
|                 | 8.00 x 6.20          | 19                  | 393.03-SE1 D080X062  | 30             | 17             | 7               | 0.1 |
|                 | 9.00 x 7.00          | 19                  | 393.03-SE1 D090X070  | 30             | 17             | 7               | 0.1 |
|                 | 6.00 x 4.90          | 31                  | 393.03-SE2 D060X049  | 48             | 30             | 11              | 0.1 |
|                 | 7.00 x 5.50          | 31                  | 393.03-SE2 D070X055  | 48             | 30             | 11              | 0.3 |
|                 | 8.00 x 6.20          | 31                  | 393.03-SE2 D080X062  | 48             | 30             | 11              | 0.3 |
|                 | 9.00 x 7.00          | 31                  | 393.03-SE2 D090X070  | 48             | 30             | 11              | 0.3 |
|                 | 11.00 x 9.00         | 31                  | 393.03-SE2 D110X090  | 48             | 30             | 11              | 0.3 |
|                 | 12.00 x 9.00         | 31                  | 393.03-SE2 D120X090  | 48             | 30             | 11              | 0.3 |
|                 | 14.00 x 11.00        | 31                  | 393.03-SE2 D140X110  | 48             | 30             | 11              | 0.3 |
| 16.00 x 12.00   | 31                   | 393.03-SE2 D160X120 | 48                   | 30             | 11             | 0.3             |     |
| Tapshank<br>ISO | 3.15 x 2.24 (rare)   | 19                  | 393.03-SE1 D0315X022 | 30             | 17             | 7               | 0.1 |
|                 | 4.00 x 3.15          | 19                  | 393.03-SE1 D040X031  | 30             | 17             | 7               | 0.1 |
|                 | 5.00 x 4.00          | 19                  | 393.03-SE1 D050X040  | 30             | 17             | 7               | 0.1 |
|                 | 6.30 x 5.00          | 19                  | 393.03-SE1 D063X050  | 30             | 17             | 7               | 0.1 |
|                 | 8.00 x 6.30          | 19                  | 393.03-SE1 D080X063  | 30             | 17             | 7               | 0.1 |
|                 | 9.00 x 7.10          | 19                  | 393.03-SE1 D090X071  | 30             | 17             | 7               | 0.1 |
|                 | 10.00 x 8.00         | 19                  | 393.03-SE1 D100X080  | 30             | 17             | 7               | 0.1 |
|                 | 6.30 x 5.00          | 31                  | 393.03-SE2 D063X050  | 48             | 30             | 11              | 0.1 |
|                 | 8.00 x 6.30          | 31                  | 393.03-SE2 D080X063  | 48             | 30             | 11              | 0.3 |
|                 | 9.00 x 7.10          | 31                  | 393.03-SE2 D090X071  | 48             | 30             | 11              | 0.3 |
|                 | 10.00 x 8.00         | 31                  | 393.03-SE2 D100X080  | 48             | 30             | 11              | 0.3 |
|                 | 11.20 x 9.00         | 31                  | 393.03-SE2 D112X090  | 48             | 30             | 11              | 0.3 |
|                 | 12.50 x 10.00        | 31                  | 393.03-SE2 D125X100  | 48             | 30             | 11              | 0.3 |
|                 | 14.00 x 11.20        | 31                  | 393.03-SE2 D140X112  | 48             | 30             | 11              | 0.3 |

For cutting data, follow tap manufacturer's recommendations.

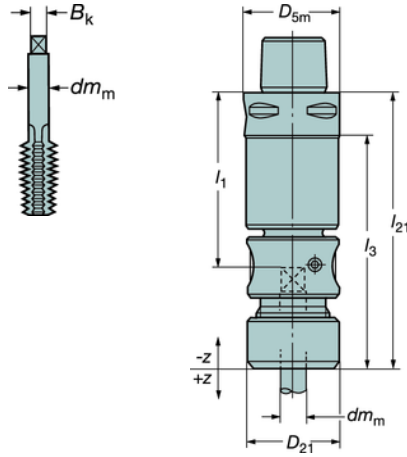
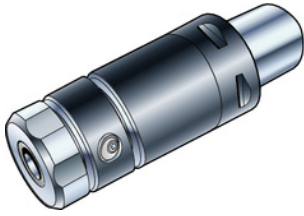
## Floating rubber collet chuck

Coromant Capto

391.60B


"Slim" design, floating (for machining centres)

External coolant supply



E

F

| Tap range |     | Coupling size | Ordering code      | Coolant <sup>1)</sup> | Tap shank mm, inch |              |               |               | Dimensions, mm, inch |          |       |       |       |    |    |  |                  |
|-----------|-----|---------------|--------------------|-----------------------|--------------------|--------------|---------------|---------------|----------------------|----------|-------|-------|-------|----|----|--|------------------|
| min       | max |               |                    |                       | $B_k$<br>min       | $B_k$<br>max | $dm_m$<br>min | $dm_m$<br>max | $D_{5m}$             | $D_{21}$ | $l_1$ | $l_2$ | $l_3$ | -z | +z |  | Nm <sup>2)</sup> |
| M5        | M12 | C3            | C3-391.60B-01 095A | 0                     | 2                  | 8            | 3.5           | 10            | 32                   | 31       | 60    | 80    | 95    | 2  | 10 | 0.6  | 35.0             |
|           |     |               |                    |                       | .079               | .315         | .138          | .394          | 1.260                | 1.220    | 2.362 | 3.150 | 3.740 |    |    |  |                  |
| M7        | M16 | C4            | C4-391.60B-02 101A | 0                     | 4                  | 10           | 2.8           | 13            | 40                   | 40       | 60    |       | 101   | 2  | 10 | 0.7  | 60.0             |
|           |     |               |                    |                       | .157               | .394         | .110          | .512          | 1.575                | 1.575    | 2.362 |       | 3.976 |    |    |  |                  |
| M14       | M32 | C5            | C5-391.60B-03 158A | 0                     | 8                  | 18           | 10            | 23            | 50                   | 56.4     | 103   |       | 158   | 2  | 10 | 2.4  | 380.0            |
|           |     |               |                    |                       | .315               | .709         | .394          | .906          | 1.968                | 2.220    | 4.055 |       | 6.220 |    |    |  |                  |

1) 0 = no coolant

2) Max allowed tightening torque, Nm

Collets must be ordered separately, see page G118.

G

J

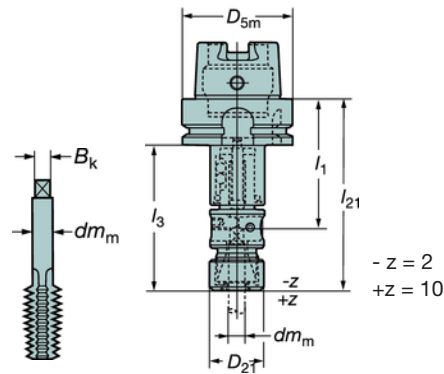
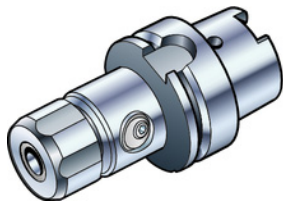


G187

# Floating rubber collet chuck

HSK form A/C

392.41060B



Note: Hole for data carrier is not standard.

## Floating design

| Tap range |     | HSK size | Ordering code           | Coolant <sup>1)</sup> | Tap shank mm, inch |              |               |               | Dimensions, mm, inch |          |       |       |          |                 |                  |
|-----------|-----|----------|-------------------------|-----------------------|--------------------|--------------|---------------|---------------|----------------------|----------|-------|-------|----------|-----------------|------------------|
| min       | max |          |                         |                       | $B_k$<br>min       | $B_k$<br>max | $dm_m$<br>min | $dm_m$<br>max | $D_{5m}$             | $D_{21}$ | $l_1$ | $l_3$ | $l_{21}$ | $\frac{kg}{kg}$ | Nm <sup>2)</sup> |
| M7        | M16 | 63       | 392.41060B-63 02 113B   | 0                     | 2                  | 10           | 2.8           | 13            | 63                   | 40       | 72    | 87    | 113      | 1.1             | 60               |
| M14       | M32 |          | 392.41060B-63 03 165B   | 0                     | .079               | .394         | .110          | .512          | 2.480                | 1.575    | 2.835 | 3.425 | 4.449    |                 |                  |
|           |     |          |                         |                       | .315               | .709         | .394          | .906          | 2.480                | 2.220    | 4.331 | 5.472 | 6.496    |                 |                  |
| M7        | M16 | 100      | 392.41060B-100 02 120 A | 0                     | 2                  | 10           | 2.8           | 13            | 100                  | 40       | 79    | 91    | 120      | 2.6             | 60               |
| M14       | M32 |          | 392.41060B-100 03 172 A | 0                     | .079               | .394         | .110          | .512          | 3.937                | 1.575    | 3.110 | 3.583 | 4.724    |                 |                  |
|           |     |          |                         |                       | .315               | .709         | .394          | .906          | 3.937                | 2.220    | 4.606 | 5.630 | 6.772    |                 |                  |

<sup>1)</sup> 0 = no coolant

<sup>2)</sup> Max allowed tightening torque

Collets must be ordered separately, see page G118.

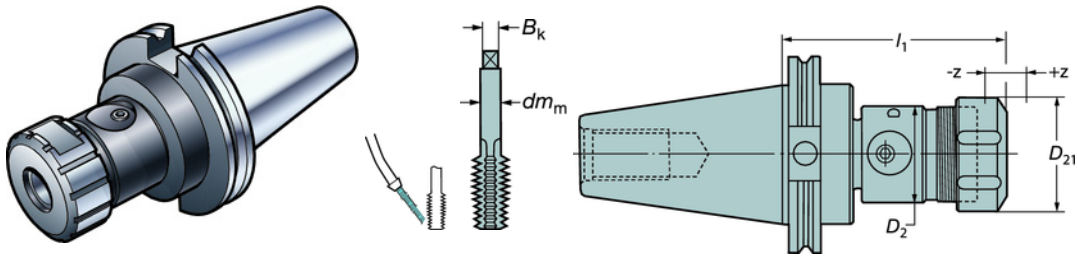


G186

# Floating rubber collet chuck

Cat V-Flange

A392.4560B




$l_1$  = programming length

## Inch bore

| Taper | Ordering code        | Coolant <sup>1)</sup> | Tap size range |           |            |            | Dimensions, inch |          |       |       |        |                             |
|-------|----------------------|-----------------------|----------------|-----------|------------|------------|------------------|----------|-------|-------|--------|-----------------------------|
|       |                      |                       | $B_k$ min      | $B_k$ max | $dm_m$ min | $dm_m$ max | $D_2$            | $D_{21}$ | $l_1$ | -z    | +z     | $\frac{\sigma}{\text{Lib}}$ |
| 40    | A392.4560B-40 01 085 | 0                     | .079           | .315      | .138       | .394       | 1.220            | 1.220    | 3.375 | 2.007 | 10.008 | 6.0                         |
|       | A392.4560B-40 02 089 | 0                     | .157           | .394      | .110       | .512       | 1.575            | 1.575    | 3.515 | 2.007 | 10.008 | 6.2                         |
|       | A392.4560B-40 03 175 | 0                     | .315           | .709      | .394       | .906       | 1.969            | 2.220    | 6.875 | 3.988 | 15.011 | 7.1                         |
| 50    | A392.4560B-50 02 089 | 0                     | .157           | .394      | .110       | .512       | 1.575            | 1.575    | 3.500 | 2.007 | 10.008 | 15.9                        |
|       | A392.4560B-50 03 112 | 0                     | .315           | .709      | .394       | .906       | 1.969            | 2.220    | 4.406 | 3.988 | 15.011 | 17.6                        |

<sup>1)</sup> 0 = no coolant

## Rubber collets must be ordered separately

|             |                     | Ordering code   |         |               |           |
|-------------|---------------------|---|---------|---------------|-----------|
|             |                     |  |         |               |           |
| Collet size | $dm_m$ mm (inch)    | Shank DIN 374 <sup>1)</sup>   |         | Suitable for: |           |
| 1           | 3.5-6.5 (.138-.256) | 391.60A-OZ J421   | M4-M8   | (0-1/4)       | ...01 xxx |
| 2           | 6.5-10 (.256-.394)  | 391.60A-OZ J422   | M6-M12  | (1/4-9/16)    | ...01 xxx |
| 3           | 2.8-7 (.110-.276)   | 391.60A-OZ J440   | M5-M10  | (0-1/4)       | ...02 xxx |
| 4           | 7-13 (.276-.512)    | 391.60A-OZ J443   | M7-M16  | (5/16-5/8)    | ...02 xxx |
| 5           | 10-16 (.394-.630)   | 391.60A-OZ J461   | M10-M16 | (9/16-3/4)    | ...03 xxx |
| 6           | 16-23 (.630-.906)   | 391.60A-OZ J462   | M20-M30 | (13/16-1 1/8) | ...03 xxx |

<sup>1)</sup> For other standards, check shank dimensions  $B_k$  and  $dm_m$



G187

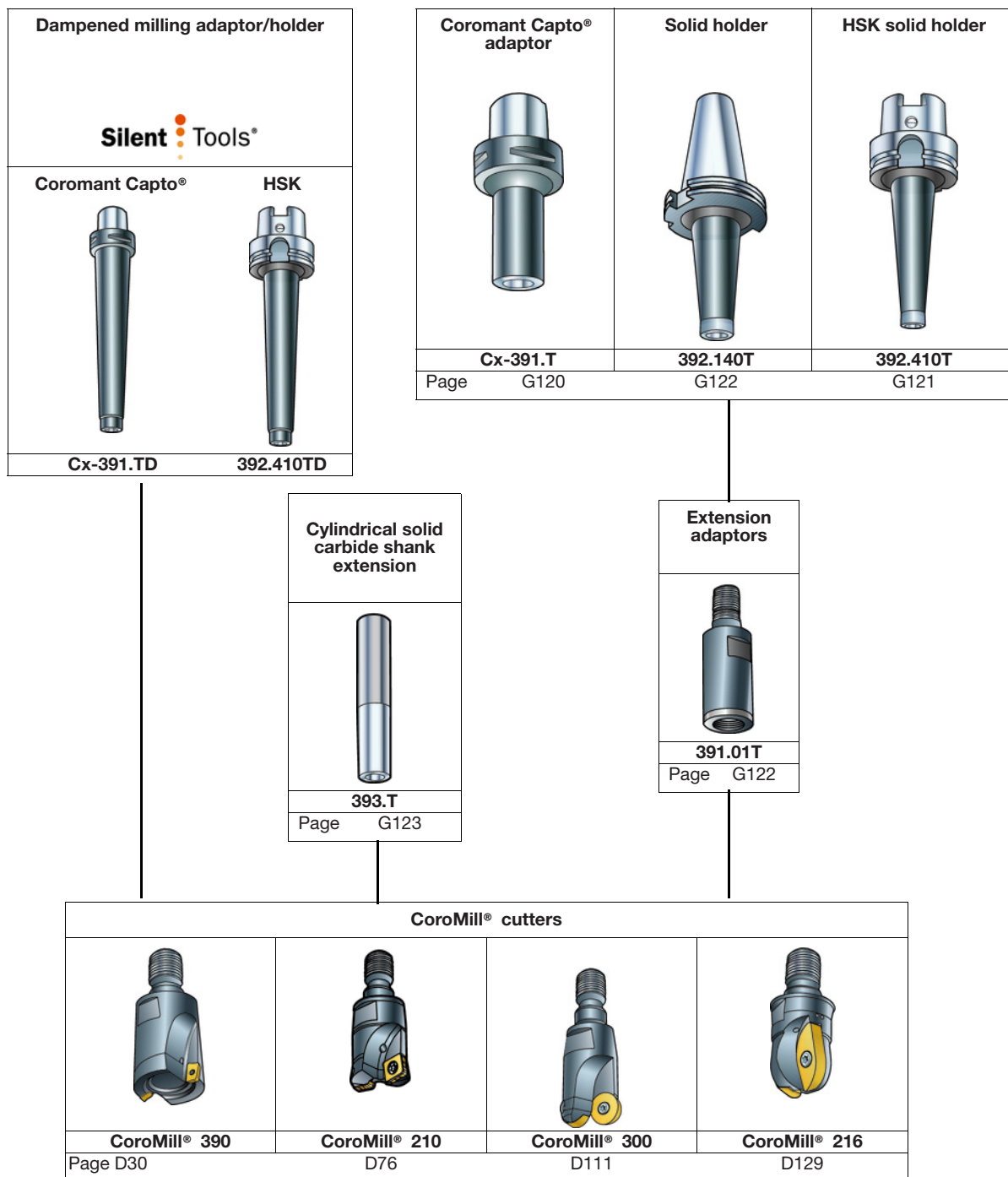
# CoroMill® modular cutting tools with threaded coupling

A system of small CoroMill® screw type cutters and a variety of shanks for demanding die and mould making.

## Tool set-ups with CoroMill® performance

Slim, but rigid assemblies with accessibility for milling of deep and narrow cavities. Opportunities to optimise the total gauge length of the set-up for best performance in each application.

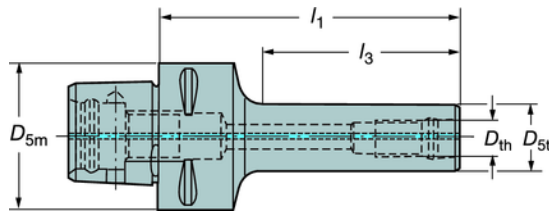
Many tool solutions with minimum number of modules will reduce inventory costs. Dampened milling adaptor for high productivity at extremely long overhangs - with no vibration.



## Coromant Capto® milling adaptor

Shank with threaded coupling (MSSC)

391.T



$l_1$  = programming length

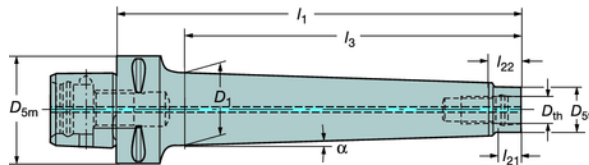
| Coupling size | Thread type | Ordering code   | Coolant <sup>1)</sup> | Dimensions, mm, inch |              |             |              |          |           |          |           |                 |  |
|---------------|-------------|-----------------|-----------------------|----------------------|--------------|-------------|--------------|----------|-----------|----------|-----------|-----------------|--|
|               |             |                 |                       | $D_{5m}$ mm          | $D_{5m}$ in. | $D_{5t}$ mm | $D_{5t}$ in. | $l_1$ mm | $l_1$ in. | $l_3$ mm | $l_3$ in. | $\frac{kg}{kg}$ |  |
| C3            | M8          | C3-391.T-08 060 | 1                     | 32                   | 1.260        | 12.8        | .504         | 60       | 2.362     | 37.8     | 1.488     | 0.2             |  |
|               | M10         | C3-391.T-10 070 | 1                     | 32                   | 1.260        | 17.8        | .701         | 70       | 2.756     | 48.5     | 1.909     | 0.2             |  |
| C4            | M8          | C4-391.T-08 070 | 1                     | 40                   | 1.575        | 12.8        | .504         | 70       | 2.756     | 41.8     | 1.646     | 0.3             |  |
|               | M10         | C4-391.T-10 080 | 1                     | 40                   | 1.575        | 17.8        | .701         | 80       | 3.150     | 52.4     | 2.063     | 0.4             |  |
|               | M12         | C4-391.T-12 080 | 1                     | 40                   | 1.575        | 20.8        | .819         | 80       | 3.150     | 52.8     | 2.079     | 0.4             |  |
| C5            | M10         | C5-391.T-10 080 | 1                     | 50                   | 1.968        | 17.8        | .701         | 80       | 3.150     | 51.1     | 2.012     | 0.5             |  |
|               | M12         | C5-391.T-12 080 | 1                     | 50                   | 1.968        | 20.8        | .819         | 80       | 3.150     | 51.5     | 2.028     | 0.6             |  |
|               | M16         | C5-391.T-16 080 | 1                     | 50                   | 1.968        | 28.8        | 1.134        | 80       | 3.150     | 52.6     | 2.071     | 0.7             |  |
| C6            | M10         | C6-391.T-10 090 | 1                     | 63                   | 2.480        | 17.8        | .701         | 90       | 3.543     | 55.8     | 2.197     | 0.9             |  |
|               | M12         | C6-391.T-12 100 | 1                     | 63                   | 2.480        | 20.8        | .819         | 100      | 3.937     | 66.2     | 2.606     | 1.0             |  |
|               | M16         | C6-391.T-16 100 | 1                     | 63                   | 2.480        | 28.8        | 1.134        | 100      | 3.937     | 67.3     | 2.650     | 1.1             |  |

1) 1 = coolant through centre

## Coromant Capto® Dampened milling adaptor

Shank with threaded coupling (MSSC)

391.TD



$l_1$  = programming length

| Coupling size | Thread type | Ordering code    | Coolant <sup>1)</sup> | Dimensions, mm, inch |          |          |        |       |          |          |          |                 |
|---------------|-------------|------------------|-----------------------|----------------------|----------|----------|--------|-------|----------|----------|----------|-----------------|
|               |             |                  |                       | $D_1$                | $D_{5m}$ | $D_{5t}$ | $l_1$  | $l_3$ | $l_{21}$ | $l_{22}$ | $\alpha$ | $\frac{kg}{kg}$ |
| C4            | M10         | C4-391.TD-10 175 | 1                     | 30                   | 40       | 17.8     | 175    | 150   | 10.5     | 13.5     | 2.1      | 1.0             |
|               |             |                  |                       | 1.181                | 1.575    | .701     | 6.890  | 5.906 | .413     | .532     | 2.098    |                 |
| C5            | M12         | C5-391.TD-12 186 | 1                     | 34                   | 50       | 21       | 186    | 160   | 12       | 15.5     | 1.78     | 1.5             |
|               |             |                  |                       | 1.339                | 1.968    | .827     | 7.323  | 6.299 | .472     | .610     | 1.782    |                 |
|               |             |                  |                       | 50                   | 50       | 29       | 279    | 259   | 15.8     | 19       | 2.15     | 3.4             |
| C6            | M16         | C6-391.TD-16 279 | 1                     | 50                   | 63       | 29       | 279    | 251.6 | 15.8     | 19       | 2.22     | 3.8             |
|               |             |                  |                       | 1.968                | 2.480    | 1.142    | 10.984 | 9.906 | .622     | .748     | 2.148    |                 |

1) 1 = coolant through centre



G6



G2

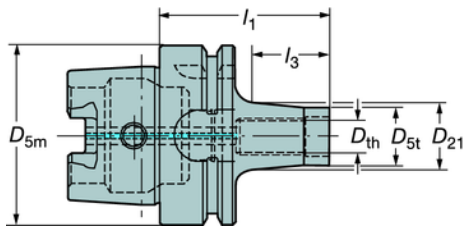


# HSK milling holder

Form A/C

Shank with threaded coupling (MSSC)

392.410T



$l_1$  = programming length

| HSK size | Thread type |                    | Coolant <sup>1)</sup> | Dimensions, mm, inch |              |             |              |             |              |          |           |          |           |                |
|----------|-------------|--------------------|-----------------------|----------------------|--------------|-------------|--------------|-------------|--------------|----------|-----------|----------|-----------|----------------|
|          | $D_{th}$    | Ordering code      |                       | $D_{21}$ mm          | $D_{21}$ in. | $D_{5m}$ mm | $D_{5m}$ in. | $D_{5t}$ mm | $D_{5t}$ in. | $l_1$ mm | $l_1$ in. | $l_3$ mm | $l_3$ in. | $\frac{m}{kg}$ |
| 63       | M8          | 392.410T-63 08 084 | 1                     | 20                   | .787         | 63          | 2.480        | 12.8        | .504         | 84       | 3.307     | 50       | 1.968     | 0.8            |
|          | M10         | 392.410T-63 10 084 | 1                     | 24                   | .945         | 63          | 2.480        | 17.8        | .701         | 84       | 3.307     | 50       | 1.968     | 0.8            |
|          | M12         | 392.410T-63 12 084 | 1                     | 24                   | .945         | 63          | 2.480        | 20.8        | .819         | 84       | 3.307     | 50       | 1.968     | 0.8            |
|          | M16         | 392.410T-63 16 084 | 1                     | 34                   | 1.339        | 63          | 2.480        | 28.8        | 1.134        | 84       | 3.307     | 50       | 1.968     | 1.0            |

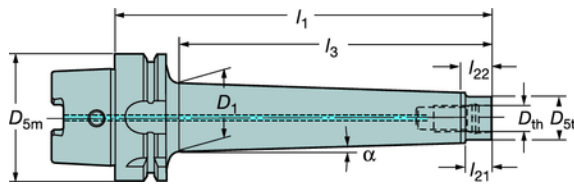
1) 1 = coolant through centre

# HSK 63 dampened milling holder

Form A/C

Shank with threaded coupling (MSSC)

392.410TD



$l_1$  = programming length

| HSK size | Thread type |                      | Coolant <sup>1)</sup> | Dimensions, mm, inch |          |          |        |        |          |          |          |                |  |
|----------|-------------|----------------------|-----------------------|----------------------|----------|----------|--------|--------|----------|----------|----------|----------------|--|
|          | $D_{th}$    | Ordering code        |                       | $D_1$                | $D_{5m}$ | $D_{5t}$ | $l_1$  | $l_3$  | $l_{21}$ | $l_{22}$ | $\alpha$ | $\frac{m}{kg}$ |  |
| 63       | M10         | 392.410TD-63 10 183A | 1                     | 30                   | 63       | 17.8     | 183    | 150.1  | 10.5     | 13.5     | 2.09     | 1.2            |  |
|          |             |                      |                       | 1.181                | 2.480    | .701     | 7.205  | 5.909  | .413     | .532     |          |                |  |
|          | M12         | 392.410TD-63 12 193A | 1                     | 34                   | 63       | 21       | 193    | 160.77 | 12.2     | 15.5     | 1.77     | 1.6            |  |
|          |             |                      |                       | 1.339                | 2.480    | .827     | 7.598  | 6.330  | .480     | .610     |          |                |  |
|          | M16         | 392.410TD-63 16 280A | 1                     | 50                   | 63       | 29       | 280    | 252    | 15.8     | 19       | 2.21     | 3.5            |  |
|          |             |                      |                       | 1.968                | 2.480    | 1.142    | 11.024 | 9.921  | .622     | .748     |          |                |  |

1) 1 = coolant through centre



G69

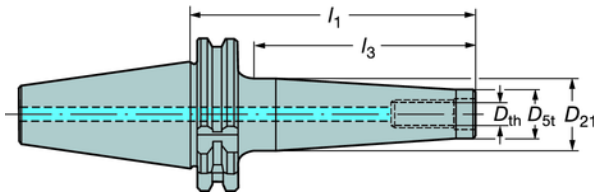


G2

## Solid holders

### Shank with threaded coupling (MSSC)

392.140T / 392.55T



$l_1$  = programming length

#### Metric version

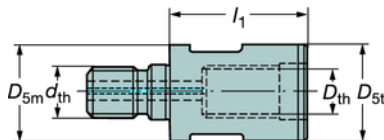
| Machine design | Taper | Thread type |                    | Coolant <sup>1)</sup> | Dimensions, mm |          |       |       |                     |
|----------------|-------|-------------|--------------------|-----------------------|----------------|----------|-------|-------|---------------------|
|                |       | $D_{th}$    | Ordering code      |                       | $D_{st}$       | $D_{21}$ | $l_1$ | $l_3$ | $\frac{\sigma}{AG}$ |
| ISO7388.1      | 40    | M10         | 392.140T-40 10 058 | 1                     | 17.8           | 20       | 58    | 30    | 1.0                 |
|                |       | M12         | 392.140T-40 12 058 | 1                     | 20.8           | 24       | 58    | 30    | 1.0                 |
|                |       | M12         | 392.140T-40 12 098 | 1                     | 20.8           | 31       | 98    | 70    | 1.2                 |
|                |       | M16         | 392.140T-40 16 058 | 1                     | 28.8           | 34       | 58    | 30    | 1.0                 |
|                |       | M16         | 392.140T-40 16 098 | 1                     | 28.8           | 34       | 98    | 70    | 1.3                 |
| MAS/BT403      | 40    | M10         | 392.55T-40 10 098  | 1                     | 17.8           | 28       | 98    | 70    | 1.3                 |
|                |       | M12         | 392.55T-40 12 098  | 1                     | 20.8           | 31       | 98    | 70    | 1.3                 |
|                |       | M16         | 392.55T-40 16 098  | 1                     | 28.8           | 34       | 98    | 70    | 1.4                 |

<sup>1)</sup> 1 = coolant through centre

### Extension adaptor

#### Shank with threaded coupling (MSSC)

391.01T



$l_1$  = programming length

| Thread type |          | Ordering code     | Coolant <sup>1)</sup> | Dimensions, mm, inch |             |             |              |          |           |                     |
|-------------|----------|-------------------|-----------------------|----------------------|-------------|-------------|--------------|----------|-----------|---------------------|
| $d_{th}$    | $D_{th}$ |                   |                       | $D_{st}$ mm          | $D_{st}$ mm | $D_{sm}$ mm | $D_{sm}$ in. | $l_1$ mm | $l_1$ in. | $\frac{\sigma}{AG}$ |
| M8          | 8        | 391.01T-08 08 030 | 1                     | 12.8                 | .504        | 12.8        | .504         | 30       | 1.181     | 0.0                 |
| M10         | 10       | 391.01T-10 10 035 | 1                     | 17.8                 | .701        | 17.8        | .701         | 35       | 1.378     | 0.1                 |
| M12         | 12       | 391.01T-12 12 040 | 1                     | 20.8                 | .819        | 20.8        | .819         | 40       | 1.575     | 0.1                 |
| M16         | 16       | 391.01T-16 16 040 | 1                     | 28.8                 | 1.134       | 28.8        | 1.134        | 40       | 1.575     | 0.2                 |

<sup>1)</sup> 1 = coolant through centre



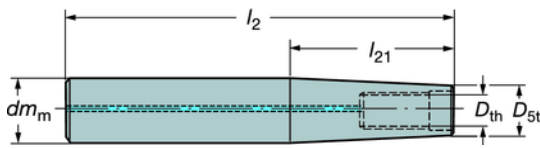
G119



G2

## Cylindrical solid carbide shank extensions

A393.T / A393.T



### Metric version

| Thread type |                 |                       | Dimensions, mm |          |       |              |                    |
|-------------|-----------------|-----------------------|----------------|----------|-------|--------------|--------------------|
| $D_{th}$    | Ordering code   | Coolant <sup>1)</sup> | $d_{m_m}$      | $D_{st}$ | $l_2$ | $l_{21}$ min | $\frac{\mu m}{Ra}$ |
| M8          | 393.T-16 08 110 | 1                     | 16             | 12.8     | 110   | 60           | 0.3                |
| M8          | 393.T-16 08 150 | 1                     | 16             | 12.8     | 155   | 100          | 0.4                |
| M10         | 393.T-20 10 115 | 1                     | 20             | 17.8     | 120   | 60           | 0.2                |
| M10         | 393.T-20 10 175 | 1                     | 20             | 17.8     | 180   | 120          | 0.3                |

### Inch version

| Thread type |                  |                       | Dimensions, inch |          |       |              |                    |
|-------------|------------------|-----------------------|------------------|----------|-------|--------------|--------------------|
| $D_{th}$    | Ordering code    | Coolant <sup>1)</sup> | $d_{m_m}$        | $D_{st}$ | $l_2$ | $l_{21}$ min | $\frac{\mu m}{Ra}$ |
| M8          | A393.T-15 08 110 | 1                     | .625             | .504     | 4.330 | 2.362        | 1.3                |
| M8          | A393.T-15 08 150 | 1                     | .625             | .504     | 5.905 | 3.937        | 1.8                |
| M10         | A393.T-19 10 115 | 1                     | .750             | .701     | 4.527 | 2.362        | 1.8                |
| M10         | A393.T-19 10 175 | 1                     | .750             | .701     | 6.890 | 4.724        | 2.4                |

<sup>1)</sup> 1 = coolant through centre



## Recommended drill diameter

| Metric coarse thread |                          | Unified fine thread |                               | Unified coarse thread |                                   | Pg          | Steel conduit thread         |  |
|----------------------|--------------------------|---------------------|-------------------------------|-----------------------|-----------------------------------|-------------|------------------------------|--|
| M                    |                          | UNF                 |                               | UNC                   |                                   |             |                              |  |
| Thread dim.          | Drill dia. Pitch         | Thread dim.         | Drill dia. Pitch              | Thread dim.           | Drill dia. Pitch                  | Thread dim. | Drill dia. Pitch             |  |
|                      | mm (inch)                |                     | mm (inch)                     |                       | mm (inch)                         |             | mm (inch)                    |  |
| M4                   | 3.30 (.130) 0.7 (.028)   | UNF No 6            | 3.00 (.118) 40                | UNC No 6              | 2.85 (.112) 32                    | Pg7         | 11.40 (.449) 20              |  |
| M4.5                 | 3.70 (.146) 0.75 (.030)  | UNF No 8            | 3.50 (.138) 36                | UNC No 8              | 3.50 (.138) 32                    | Pg9         | 14.00 (.551) 18              |  |
| M5                   | 4.20 (.165) 0.8 (.031)   | UNF No 10           | 4.10 (.161) 32                | UNC No 10             | 3.90 (.154) 24                    | Pg11        | 17.25 (.679) 18              |  |
| M6                   | 5.00 (.197) 1 (.039)     | UNF No 12           | 4.65 (.183) 28                | UNC No 12             | 4.50 (.177) 24                    | Pg13.5      | 19.00 (.748) 18              |  |
| M7                   | 6.00 (.236) 1 (.039)     | UNF 1/4"            | 5.50 (.217) 28                | UNC 1/4"              | 5.20 (.205) 20                    | Pg16        | 21.25 (.837) 18              |  |
| M8                   | 6.80 (.268) 1.25 (.049)  | UNF 5/16"           | 6.90 (.272) 24                | UNC 5/16"             | 6.60 (.260) 18                    | Pg21        | 27.00 (1.063) 16             |  |
| M9                   | 7.80 (.307) 1.25 (.049)  | UNF 3/8"            | 8.50 (.335) 24                | UNC 3/8"              | 8.00 (.315) 16                    | Pg29        | 35.50 (1.398) 16             |  |
| M10                  | 8.50 (.335) 1.5 (.059)   | UNF 7/16"           | 9.90 (.390) 20                | UNC 7/16"             | 9.40 (.370) 14                    | Pg36        | 45.50 (1.791) 16             |  |
| M11                  | 9.50 (.374) 1.5 (.059)   | UNF 1/2"            | 11.50 (.453) 20               | UNC 1/2"              | 10.75 (.423) 13                   |             |                              |  |
| M12                  | 10.20 (.402) 1.75 (.069) | UNF 9/16"           | 12.90 (.508) 18               | UNC 9/16"             | 12.25 (.482) 12                   |             |                              |  |
| M14                  | 12.00 (.472) 2 (.079)    | UNF 5/8"            | 14.50 (.571) 18               | UNC 5/8"              | 13.50 (.531) 11                   |             |                              |  |
| M16                  | 14.00 (.551) 2 (.079)    | UNF 3/4"            | 17.50 (.689) 16               | UNC 3/4"              | 16.50 (.650) 10                   | NTP         | American tapered pipe thread |  |
| M18                  | 15.50 (.610) 2.5 (.098)  | UNF 7/8"            | 20.50 (.807) 14               | UNC 7/8"              | 19.50 (.768) 9                    |             |                              |  |
| M20                  | 17.50 (.689) 2.5 (.098)  | UNF 1"              | 23.25 (.915) 12               | UNC 1"                | 22.25 (.876) 8                    | Thread dim. | Drill dia. Pitch             |  |
|                      |                          |                     |                               |                       |                                   |             | t.p.i. <sup>1)</sup>         |  |
| M22                  | 19.50 (.768) 2.5 (.098)  | UNF 1 1/8"          | 26.50 (1.043) 12              | UNC 1 1/8"            | 25.00 (.984) 7                    |             | mm (inch)                    |  |
| M24                  | 21.00 (.827) 3 (.118)    | UNF 1 1/4"          | 29.75 (1.171) 12              | UNC 1 1/4"            | 28.25 (1.112) 7                   | NPT 1/16"   | 6.10 (.240) 27               |  |
| M27                  | 24.00 (.945) 3 (.118)    | UNF 1 3/8"          | 33.00 (1.299) 12              | UNC 1 3/8"            | 31.00 (1.220) 6                   | NPT 1/8"    | 8.50 (.335) 27               |  |
| M30                  | 26.50 (1.043) 3.5 (.138) | UNF 1 1/2"          | 36.00 (1.417) 12              | UNC 1 1/2"            | 34.00 (1.339) 6                   | NPT 1/4"    | 11.00 (.433) 18              |  |
| M33                  | 29.50 (1.161) 3.5 (.138) |                     |                               | UNC 1 3/4"            | 39.50 (1.555) 5                   | NPT 3/8"    | 14.50 (.571) 18              |  |
| M36                  | 32.00 (1.260) 4 (.157)   |                     |                               | UNC 2"                | 45.25 (1.781) 4 1/2               | NPT 1/2"    | 17.80 (.701) 14              |  |
| M39                  | 35.00 (1.378) 4 (.157)   |                     |                               |                       |                                   | NPT 3/4"    | 23.0 (.906) 14               |  |
| M42                  | 37.50 (1.476) 4.5 (.177) |                     |                               |                       |                                   | NPT 1"      | 29.0 (1.142) 11 1/2          |  |
| M45                  | 40.50 (1.594) 4.5 (.177) |                     |                               |                       |                                   | NPT 1 1/4"  | 37.5 (1.476) 11 1/2          |  |
| M48                  | 43.00 (1.693) 5 (.197)   |                     |                               |                       |                                   | NPT 1 1/2"  | 44.0 (1.732) 11 1/2          |  |
| M52                  | 47.00 (1.850) 5 (.197)   |                     |                               |                       |                                   | NPT 2"      | 56.0 (2.205) 11 1/2          |  |
| M                    | Metric fluteless         | Rc                  | Whitworth tapered pipe thread | G                     | Whitworth cylindrical pipe thread | NPTF        | American tapered pipe thread |  |
| Thread dim.          | Drill dia. Pitch         | Thread dim.         | Drill dia. Pitch              | Thread dim.           | Drill dia. Pitch                  | Thread dim. | Drill dia. Pitch             |  |
|                      | mm (inch)                |                     | mm (inch)                     |                       | mm (inch)                         |             | mm (inch)                    |  |
| M4                   | 3.70 (.146) 0.7          | Rc 1/8"             | 8.40 (.331) 28                | G 1/8"                | 8.80 (.346) 28                    | NPTF 1/16"  | 6.00 (.236) 27               |  |
| M5                   | 4.63 (.182) 0.8          | Rc 1/4"             | 11.20 (.441) 19               | G 1/4"                | 11.80 (.465) 19                   | NPTF 1/8"   | 8.40 (.331) 27               |  |
| M6                   | 5.50 (.217) 1            | Rc 3/8"             | 14.75 (.581) 19               | G 3/8"                | 15.25 (.600) 19                   | NPTF 1/4"   | 10.90 (.429) 18              |  |
| M7                   | 6.51 (.256) 1            | Rc 1/2"             | 18.25 (.719) 14               | G 1/2"                | 19.00 (.748) 14                   | NPTF 3/8"   | 14.25 (.561) 18              |  |
| M8                   | 7.40 (.291) 1.25         | Rc 3/4"             | 23.75 (.935) 14               | G 5/8"                | 21.00 (.827) 14                   | NPTF 1/2"   | 17.75 (.699) 14              |  |
| M10                  | 9.25 (.364) 1.5          | Rc 1"               | 30.00 (1.181) 11              | G 3/4"                | 24.50 (.965) 14                   | NPTF 3/4"   | 23.00 (.906) 14              |  |
| M12                  | 11.12 (.438) 1.75        |                     |                               | G 7/8"                | 28.25 (1.112) 14                  | NPTF 1"     | 29.00 (1.142) 11 1/2         |  |
| M14                  | 13.00 (.512) 2           |                     |                               | G 1"                  | 30.75 (1.211) 11                  | NPTF 1 1/4" | 37.75 (1.486) 11 1/2         |  |
| M16                  | 15.00 (.591) 2           |                     |                               | G 1 1/4"              | 39.50 (1.555) 110                 | NPTF 1 1/2" | 43.75 (1.722) 11 1/2         |  |
|                      |                          |                     |                               | G 1 1/2"              | 45.50 (1.791) 11                  | NPTF 2"     | 55.75 (2.195) 11 1/2         |  |
|                      |                          |                     |                               | G 1 3/4"              | 51.40 (2.024) 11                  |             |                              |  |
|                      |                          |                     |                               | G 2"                  | 57.20 (2.252) 11                  |             |                              |  |

<sup>1)</sup> TPI = No of threads/inch.

### Diameter recommendations when using CoroDrill Delta-C drills

Many tables containing recommended tapping drill sizes are not valid for modern drills such as CoroDrill Delta-C. These drills normally produce a slightly smaller but more accurate hole than conventional HSS drills. If these tables are used therefore, tap breakages may occur.

The drill diameters are chosen for a depth of thread engagement of 75 - 66 %. See section E CoroDrill Delta C for correct drill dimension.

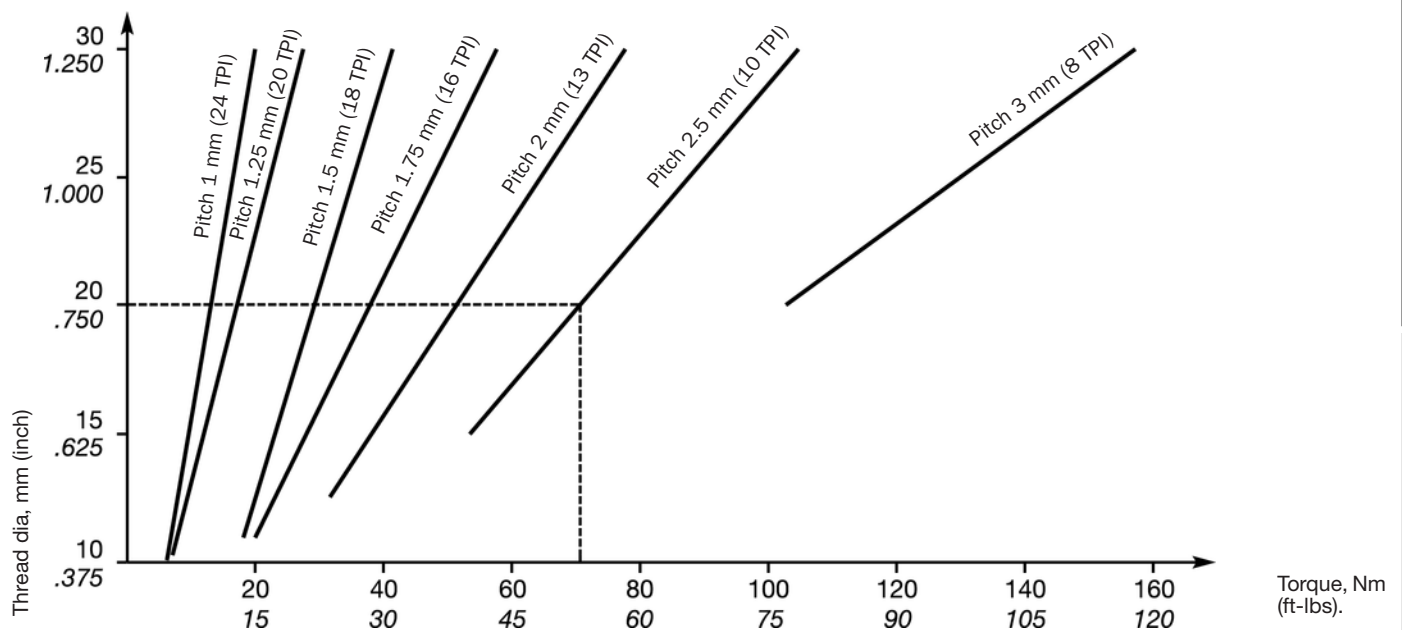
| Recommended drill type | Thread | Drill dia.  | Pitch, mm |
|------------------------|--------|-------------|-----------|
| CoroDrill® Delta-C     | M4     | 3.35 - 3.4  | 0.7       |
|                        | M5     | 4.25 - 4.3  | 0.8       |
|                        | M6     | 5.0 - 5.1   | 1         |
|                        | M8     | 6.85 - 6.9  | 1.25      |
|                        | M10    | 8.6 - 8.7   | 1.5       |
|                        | M12    | 10.3 - 10.4 | 1.75      |
|                        | M14    | 12.1 - 12.2 | 2         |
|                        | M16    | 14.1 - 14.2 | 2         |
|                        | M18    | 15.5        |           |
|                        | M20    | 17.5        |           |

## Recommended torques for tapping operations

| Torque value Nm (ft-lbs)                                     | Metric taps       | Whitworth              | Whitworth G                              | BSF                             | BSP                  | BA                          | Pg                      | NPT              | UNC                          | UNF  | Torque value Nm (ft-lbs)                                     |
|--|-------------------|------------------------|--|---------------------------------|----------------------|-----------------------------|-------------------------|------------------|------------------------------|--|--|
| 0.5 (1)<br>1.2 (1)<br>1.6 (1)<br>2 (1)<br>2.5 (2)            | M 3<br>M 4<br>M 5 | 5/32"                  |  |                                 |                      | No. 7<br><br>No. 3<br>No. 2 |                         |                  | No. 3<br>No. 6<br>No. 8      | No. 4<br>No. 8<br><br>No. 10<br>No. 12     | 0.5 (1)<br>1.2 (1)<br>1.6 (1)<br>2 (1)<br>2.5 (2)            |
| 3 (2)<br>4 (3)<br>5 (4)<br>6 (4)<br>8 (6)                    | M 6<br><br>M 8    | 3/16"<br>7/32"<br>1/4" | G 1/8"                                   | 7/32"<br>1/4"<br>9/32"<br>5/16" |                      | No. 1<br>No. 0              |                         |                  | No. 10<br>No. 12<br><br>1/4" | 1/4"<br><br>5/16"<br>3/8"                  | 3 (2)<br>4 (3)<br>5 (4)<br>6 (4)<br>8 (6)                    |
| 10 (7)<br>12 (9)<br>16 (12)<br>18 (13)<br>20 (15)            | M 10              | 5/16"<br><br>3/8"      | G 1/4"                                   | 3/8"<br><br>7/16"               | 1/8"                 |                             | Pg 7<br><br>Pg 9        |                  | 5/16"<br><br>3/8"            | 7/16"<br>1/2"<br><br>9/16"<br>5/8"         | 10 (7)<br>12 (9)<br>16 (12)<br>18 (13)<br>20 (15)            |
| 22 (16)<br>25 (18)<br>28 (21)<br>32 (24)<br>36 (26)          | M 12<br><br>M 14  | 7/16"<br><br>1/2"      | G 3/8"                                   | 1/2"<br><br>9/16"               | 1/4"<br><br>3/8"     |                             | Pg 11<br>Pg<br>Pg 16    |                  | 7/16"<br><br>1/2"            | <br><br>3/4"                               | 22 (16)<br>25 (18)<br>28 (21)<br>32 (24)<br>36 (26)          |
| 40 (29)<br>45 (33)<br>50 (37)<br>56 (41)<br>63 (46)          | M 16<br><br>M 18  | 9/16"<br><br>5/8"      | G 1/2"<br>G 5/8"                         | 5/8"<br>11/16"                  |                      |                             | Pg 21<br><br>Pg 29      | 1/4"             | 9/16"<br><br>5/8"            | 7/8"                                       | 40 (29)<br>45 (33)<br>50 (37)<br>56 (41)<br>63 (46)          |
| 70 (52)<br>80 (59)<br>90 (66)<br>100 (74)<br>110 (81)        | M 20<br>M 22      | 3/4"<br><br>7/8"       | G 3/4"<br>G 7/8"                         | 3/4"<br>13/16"<br>7/8"          | 1/2"<br>5/8"<br>3/4" |                             | Pg 36<br>Pg 42<br>Pg 48 | 3/8"             | 3/4"<br><br>7/8"             | 1"<br>1.1/8"<br>1.1/4"<br>1.3/8"<br>1.1/2" | 70 (52)<br>80 (59)<br>90 (66)<br>100 (74)<br>110 (81)        |
| 125 (92)<br>140 (103)<br>160 (118)<br>180 (133)<br>200 (147) | M 24<br>M 27      | 1"                     | G 1"<br>G 1.1/8"<br>G 1.1/4"<br>G 1.3/8" | 1"<br><br>1.1/8"<br>1.1/4"      |                      |                             |                         | 1/2"<br><br>3/4" | 1"<br><br>1.1/8"             |  | 125 (92)<br>140 (103)<br>160 (118)<br>180 (133)<br>200 (147) |
| 220 (162)<br>240 (177)                                       | M 30<br>M 33      | 1.1/8"<br>1.1/4"       | G 1.1/2"<br>G 1.3/4"                     |                                 | 1"                   |                             |                         |                  | 1.1/4"                       |  | 220 (162)<br>240 (177)                                       |

### Recommended torque for tapping in material to $\sigma_B$ 1000 N/mm<sup>2</sup>

Torque values include a wear factor of 100%.



**Accessories**

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| Fixtures  | G127 | ER collets, DIN 6499-B             | G138 |
| Drawbolts   | G128 | ER collets, metallic sealed        | G139 |
| Coolant tubes for Coromant Capto®                 | G129 |                                    |      |
| Safe control                                      | G129 | ER Collet sealing discs            | G140 |
| Assembly tools for extension / reduction adaptors | G130 | ER collet nuts for through-coolant | G141 |
| <b>E</b>  |      |                                    |      |
| Torque wrench for tool changing                   | G130 | ER tapping collets                 | G142 |
| Tightening torque recommendations                 | G131 | Master setting gauges              | G143 |
| Cassettes with tapered polygon seating            | G132 | Alignment tool                     | G143 |
|   |      | Lockscrews for arbors              | G144 |
| Locking mechanism for cassettes                   | G133 |                                    |      |
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| Extractor for cylindrical collets                 | G137 |                                    |      |

**F****Spare parts**

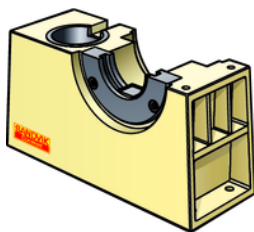
|   | Page |  | Page |
|---|------|--|------|
| <b>Rotating tool holders</b>  |      |  |      |
| Coromant Capto® basic holders   | G145 |  |      |
| <b>Coromant Capto® adaptors</b>   |      |  |      |
| Extension/reduction adaptors  | G148 |  |      |
| Coromant Capto adaptor for Varilock   | G148 |  |      |
| Adaptors for side and face mills  | G149 |  |      |
| Adaptors for face mills and square shoulder face mills                        | G150 |  |      |
| Shrink fit adaptor  | G156 |  |      |
| Adaptors for Weldon shanks  | G156 |  |      |
| Adaptors for drills with Whistle Notch shanks                                 | G157 |  |      |
| Adaptor for Weldon/ ISO 9766  | G158 |  |      |
| Adaptors for drills with Coromant Whistle Notch shank                         | G159 |  |      |
| Adaptors for drills with ISO 9766 shank                                       | G159 |  |      |
| Drill chuck   | G159 |  |      |
| Collet chuck adaptors   | G159 |  |      |
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| Holders for face mills and square shoulder face mills                         | G160 |  |      |
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| Holders for Weldon shanks   | G165 |  |      |
| ER Collet chuck, BIG PLUS   | G166 |  |      |
| Weldon/ ISO 9766  | G166 |  |      |
| Holders for drills  | G168 |  |      |
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| Face mill holder  | G171 |  |      |
| Collet chuck holder   | G174 |  |      |
| Weldon shank holder   | G174 |  |      |
| Whistle Notch holder  | G175 |  |      |
| Holder for drills   | G176 |  |      |
| Tapping chucks  | G181 |  |      |
| Coolant tube  | G176 |  |      |
| <b>Hydro-Grip high precision chuck</b>  |      |  |      |
| Coromant Capto® adaptor for face mills  | G177 |  |      |
| Coromant Capto® chuck adaptor   | G177 |  |      |
| Coromant solid holder for face mills  | G178 |  |      |
| Coromant solid collet chuck   | G178 |  |      |
| Solid holder for facemills  | G179 |  |      |
| Heavy Duty  | G179 |  |      |
| HSK solid holder for face mills   | G180 |  |      |
| HSK solid collet chuck  | G180 |  |      |
| <b>Tapping chucks</b>   |      |  |      |
| SynchroFlex® ER tapping chuck   | G181 |  |      |
| Quick change tapping chuck  | G185 |  |      |
| Floating rubber collet chuck  | G186 |  |      |
| For spare parts for Coromant Capto® multi-task machining tools, see chapter H |      |  |      |

**G****J**

## Assembly fixture

for mounting and dismounting of modular tools

391.500



Fixture body

Ordering code: 391.500

391.501



Fixture body

Ordering code: 391.501

### Ordering code



Sleeve

For holder type, size

|              |                         |
|--------------|-------------------------|
| 391.540-C3   | Coromant Capto Size C3  |
| 391.540-C4   | Coromant Capto Size C4  |
| 391.540-C5   | Coromant Capto Size C5  |
| 391.540-C6   | Coromant Capto Size C6  |
| 391.540-C8   | Coromant Capto Size C8  |
| 391.540-C10  | Coromant Capto Size C10 |
| 391.540-HA05 | HSK 50 Form A/C         |
| 391.540-HA06 | HSK 63 Form A/C         |
| 391.540-HA08 | HSK 80 Form A/C         |
| 391.540-HA10 | HSK 100 Form A/C        |
| 391.540-50   | MAS-BT 50/CAT/ISO       |
| 391.540-30   | MAS-BT 30/CAT/ISO       |
| 391.540-40   | MAS-BT 40/CAT/ISO       |

### Ordering code



Flange



Collar

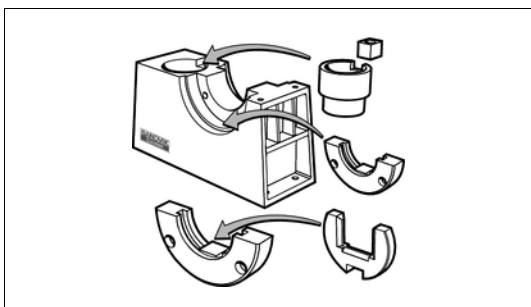
For holder type, size

|                |              |  |
|----------------|--------------|--|
| 391.510-140 50 | 391.530-C3   | Coromant Capto Size C3                             |
| 391.510-140 50 | 391.530-C4   | Coromant Capto Size C4                             |
| 391.510-140 50 | 391.530-C5   | Coromant Capto Size C5                             |
| 391.510-140 50 | 391.530-C6   | Coromant Capto Size C6                             |
| 391.510-140 50 | 391.530-C8   | Coromant Capto Size C8                             |
|                | 391.530-C10* | Coromant Capto Size C10 and C8X                    |
| 391.510-HA05   |              | HSK 50 Form A                                      |
| 391.510-HA06   |              | HSK 63 Form A                                      |
| 391.510-HA08   |              | HSK 80 Form A                                      |
| 391.510-HA10   |              | HSK 100 Form A                                     |
| 391.510-HA12   |              | HSK 125 Form A                                     |
| 391.510-55 30  |              | MAS-BT 30  |
| 391.510-55 40  |              | MAS-BT 40  |
| 391.510-55 50  |              | MAS-BT 50  |
| 391.510-562-40 |              | BIG PLUS, MAS BT 40                                |
| 391.510-562-50 |              | BIG PLUS, MAS BT 50                                |
| 391.510-140 40 |              | DIN 69871/40, ANSIB 5.50-40, ISO7388/1-40, CAT 40  |
| 391.510-140 50 |              | DIN 69871/50, ANSIB 5.50-40, ISO7388/1-50, CAT 50  |
| 391.510-540 40 |              | BIG PLUS DIN69871/1-40, BIG PLUS 7388/1-40, CAT 40 |
| 391.510-540 50 |              | BIG PLUS DIN69871/1-50, BIG PLUS 7388/1-50, CAT 50 |
| 391.510-00 40  |              | DIN 2080-40/NMTB 40                                |
| 391.510-00 50  |              | DIN 2080-50/NMTB 50                                |
| 391.510-140 50 | 391.530-50   | Varilock size 50                                   |
| 391.510-140 50 | 391.530-63   | Varilock size 63                                   |
| 391.510-140 50 | 391.530-80   | Varilock size 80                                   |

\* Combined collar/flange for C10 and C8X

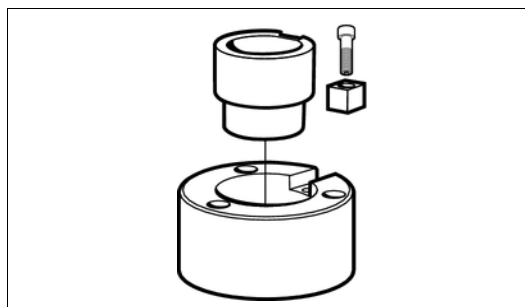
Note: Key is delivered with the sleeve.

Assembly fixture 391.500



Choose flange, collar and sleeve to suit tool to be assembled.

Fixture 391.501 for maintenance of tools with Coromant Capto® and HSK couplings



Choose sleeve to suit coupling. The fixture should be fastened to the bench with three socket head screws (not delivered with fixture)

D  
E  
F  
G  
J

ROT - ENG

TOOLING SYSTEMS Accessories

# Assembly fixture

for assembling and dismantling basic holders  
Pneumatically operated  
391.200

**Note!**  
Assembly fixture 391.200-xx includes foot pedal.  
Instructions are enclosed with fixture.  
Air supply of 6 bar (85 lbs/in<sup>2</sup>) is required.

| Size  |     | Ordering code | Dimensions, mm, inch |          |          |          |          |          |          |          |          |          |          |          |          |
|-------|-----|---------------|----------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Taper | HSK |               | $d_b$                | $D_{21}$ | $D_{22}$ | $l_{21}$ | $l_{22}$ | $l_{23}$ | $l_{24}$ | $l_{25}$ | $l_{x1}$ | $l_{x2}$ | $l_{y1}$ | $l_{y2}$ | $l_{z0}$ |
| 40    | -   | 391.200-40    | 11                   | 160      | 180      | 370      | 150      | 120      | 30       | 67       | 135      | 100      | 15       | 105      | 20       |
|       |     |               | .433                 | 6.299    | 7.087    | 14.567   | 5.906    | 4.724    | 1.181    | 2.637    | 5.315    | 3.737    | .590     | 4.134    |          |
| 45    | -   | 391.200-45    | 11                   | 160      | 180      | 370      | 150      | 120      | 30       | 67       | 135      | 100      | 15       | 105      | 20       |
|       |     |               | .433                 | 6.299    | 7.087    | 14.567   | 5.906    | 4.724    | 1.181    | 2.637    | 5.315    | 3.737    | .590     | 4.134    |          |
| 50    | -   | 391.200-50    | 11                   | 160      | 180      | 370      | 150      | 120      | 30       | 67       | 135      | 100      | 15       | 105      | 20       |
|       |     |               | .433                 | 6.299    | 7.087    | 14.567   | 5.906    | 4.724    | 1.181    | 2.637    | 5.315    | 3.737    | .590     | 4.134    |          |
| -     | 50  | 391.200-H050  | 11                   | 160      | 180      | 370      | 150      | 120      | 30       | 67       | 135      | 100      | 15       | 105      | 20       |
|       |     |               | .433                 | 6.299    | 7.087    | 14.567   | 5.906    | 4.724    | 1.181    | 2.637    | 5.315    | 3.737    | .590     | 4.134    |          |
| -     | 63  | 391.200-H063  | 11                   | 160      | 180      | 370      | 150      | 120      | 30       | 67       | 135      | 100      | 15       | 105      | 20       |
|       |     |               | .433                 | 6.299    | 7.087    | 14.567   | 5.906    | 4.724    | 1.181    | 2.637    | 5.315    | 3.737    | .590     | 4.134    |          |
| -     | 100 | 391.200-H100  | 11                   | 160      | 180      | 370      | 150      | 120      | 30       | 67       | 135      | 100      | 15       | 105      | 20       |
|       |     |               | .433                 | 6.299    | 7.087    | 14.567   | 5.906    | 4.724    | 1.181    | 2.637    | 5.315    | 3.737    | .590     | 4.134    |          |

## Drawbolts for Coromant Capto® front clamp

| Coupling size | Ordering code    |                                |                      |
|---------------|------------------|--------------------------------|----------------------|
|               | Drawbolt         | Drawbolt                       | O-ring <sup>2)</sup> |
| C5            | C5-390.00-M16-01 | C5-390.00-M16-02 <sup>1)</sup> | 3671 010-125         |
| C6            | C6-390.00-M20-01 | C6-390.00-M20-02 <sup>1)</sup> | 3671 010-128         |
| C8            | C8-390.00-M20-01 | C8-390.00-M20-02 <sup>1)</sup> | 3671 010-130         |

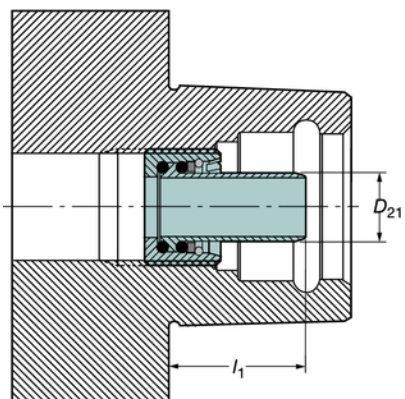
1) To be used together with turning cutting units.  
2) Delivered together with the drawbolt.

G 128



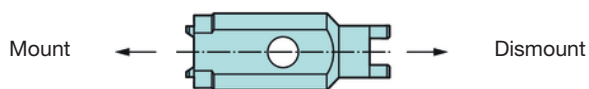
## Coolant tubes for Coromant Capto®

### Cx-CT for Coromant Capto®



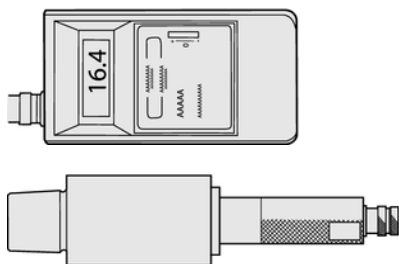
The requirement for use of coolant tubes is machine related, see machine information before installing.

Ensure the clamping device and/or machine are able to accept/handle the coolant tube before using.



Please refer to M/C manual

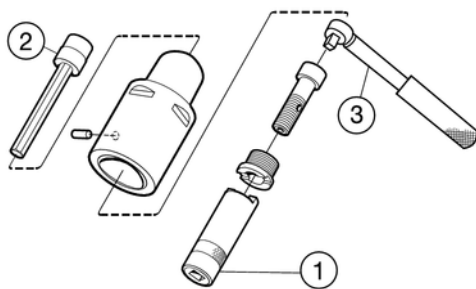
## Safe control



The safe control is used for measuring the clamping force of a machine's clamping system. If the clamping force is too low, the dynamic reaction between spindle and tool deteriorates.




Contact your local Sandvik representative for more information.

## Assembly tools for extension / reduction adaptors



E

All these accessories are supplied to separate order, and we recommend that they are ordered with the first Coromant Capto parts.

|               | 1.  | 2.  | 3.  |             |
|---------------|---|---|---|-------------|
|               |  |  |  |             |
| Coupling size | Retaining nut spanner   | Extension key   | Torque wrench   | Length (mm) |
| C3            | 5680 065-13   | 5680 015-05   | C-TK-02   | 440         |
| C4            | 5680 065-10   | 5680 015-05   | C-TK-02   | 440         |
| C5            | 5680 065-11   | 5680 015-01   | C-TK-02   | 440         |
| C6-C8         | 5680 065-12   | 5680 015-02   | C-TK-02   | 440         |
| C10           | 5680 065-14   | 5680 015-06   | C-TK-04   | 683         |

F

**C-TK-02**  
40-200Nm  
30-148 ft-lbs



**C-TK-04**

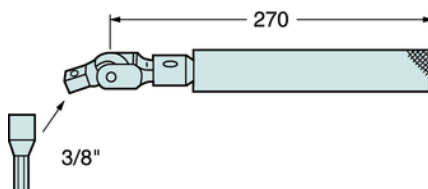
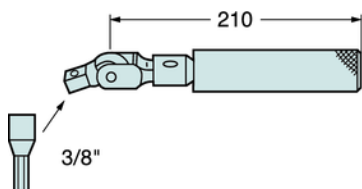


G

## Torque wrench for Coromant Capto® front clamping

**TW-30-01**  
Pre-set 30 Nm (22 ft-lbs)

**TW-60-01**  
Pre-set 60 Nm (44 ft-lbs)



J

| Coupling size |        |    | Ordering code | Size mm | Spare parts |
|---------------|--------|----|---------------|---------|-------------|
|               | ft-lbs | Nm | Torque wrench |         | Key adaptor |
| C5            | 22     | 30 | TW-30-01      | 5       | 5680 035-08 |
| C6            | 22     | 30 | TW-30-01      | 5       | 5680 035-08 |
| C8            | 44     | 60 | TW-60-01      | 7       | 5680 035-09 |

## Tightening torque recommendations

Coromant Capto® tightening torque:

Manual clamping units type NC2000 and NC3000

| Coupling size | Torque |        |
|---------------|--------|--------|
|               | Nm     | ft-lbs |
| C3            | 35     | 26     |
| C4            | 50     | 37     |
| C5            | 70     | 52     |

Coromant Capto® tightening torque:

Manual clamping units and driven tool holders with camshaft mechanism

| Coupling size | Torque |        |
|---------------|--------|--------|
|               | Nm     | ft-lbs |
| C3            | 35     | 26     |
| C4            | 50     | 37     |
| C5            | 70     | 52     |
| C6            | 90     | 66     |
| C8            | 130    | 96     |

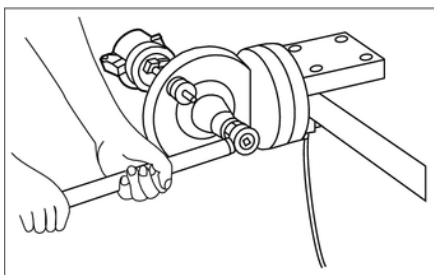
Coromant Capto® required pressure:

Hydro-mechanical clamping units type 5000

| Coupling size | Clamping           | Ejecting           |
|---------------|--------------------|--------------------|
|               | Pressure bar (PSI) | Pressure bar (PSI) |
| C4            | 100 (1450)         | 100 (1450)         |
| C5            | 80 (1160)          | 80 (1160)          |
| C6            | 80 (1160)          | 80 (1160)          |
| C8            | 80 (1160)          | 80 (1160)          |
| C8X           | 80 (1160)          | 80 (1160)          |
| C10           | 80 (1160)          | 80 (1160)          |

Required oil flow in all cases: 6 l/min

Coromant Capto® basic holders



Centre bolt clamping

| Coupling size | Torque |        |
|---------------|--------|--------|
|               | Nm     | ft-lbs |
| C3            | 45     | 33     |
| C4            | 55     | 40     |
| C5            | 95     | 70     |
| C6            | 170    | 125    |
| C8            | 170    | 125    |
| C10           | 380    | 277    |

Front clamp

| Coupling size | Torque |        |
|---------------|--------|--------|
|               | Nm     | ft-lbs |
| C5            | 30     | 22     |
| C6            | 30     | 22     |
| C8            | 60     | 44     |

D  
E  
F  
G  
J

ROT - ENG

TOOLING SYSTEMS Accessories

### Cassettes with tapered polygon seating

**-4000**  
Plastic storage cassettes (red)

**-6000-B**

Aluminium cassette blanks

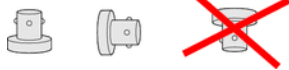
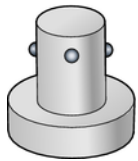
**-5000**  
High grade plastic in-machine tool storage (black)

| Coupling size | Ordering code | Dimensions, mm, inch |          |       |       |          |          |   |
|---------------|---------------|----------------------|----------|-------|-------|----------|----------|---|
|               |               | $b_{21}$             | $D_{21}$ | $h_2$ | $l_2$ | $l_{21}$ | $l_{22}$ |   |
| C3            | C3-C-4000     | -                    | 32       | 26    | 65    | -        | -        | All plastic cassettes conforming to hole pattern 17 mm, 20 mm, 25 mm and 1".<br>High grade plastic. Red colour. To be used:<br>- alone for upright storage<br>- with mechanism type PL-01 for horizontal or upright position. |
| C4            | C4-C-4000     | 6                    | 50       | 39    | 74    | 26       | 8        |   |
| C5            | C5-C-4000     | 6                    | 50       | 39    | 74    | 26       | 8        |   |
| C6            | C6-C-4000     | 8                    | 80       | 63    | 116   | 41       | 10       |   |
| C8            | C8-C-4000     | 8                    | 80       | 63    | 116   | 41       | 10       |   |
| C4            | C4-C-5000     | 6                    | 50       | 39    | 74    | 26       | 8        |   |
| C5            | C5-C-5000     | 6                    | 50       | 39    | 74    | 26       | 8        |   |
| C6            | C6-C-5000     | 8                    | 80       | 63    | 116   | 41       | 10       |   |
| C8            | C8-C-5000     | 8                    | 80       | 63    | 116   | 41       | 10       | High grade re-inforced black plastic. For in-machine tool storage with mechanism AL-01.   |
| C10           | C10-C-5000    | 8                    | 100      | 80    | 150   | 60       | 68       |   |
| C6            | C6-C-6000-B   | -                    | 120      | 63    | -     | -        | -        |   |
| C8            | C8-C-6000-B   | -                    | 120      | 63    | -     | -        | -        |   |
| C10           | C10-C-6000-B  | -                    | 138      | 80    | -     | -        | -        | Aluminium cassette blanks for individual adaptation. To be used with AL-01.   |
|               |               |                      | 5.433    | 3.150 |       |          |          |   |

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## Locking mechanism for cassettes

-PL-01

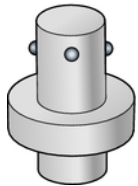


**Passive locking mechanism**

For vertical upwards and horizontal storage.

NEVER upside down storage.

-AL-01

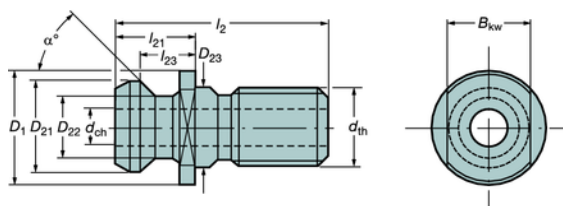
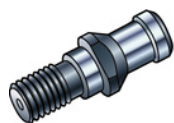


**Active locking mechanism**

For storage at all angles: vertical upwards and downwards or horizontal.

| Coupling size | Ordering code | Pull action force         |                            |  |
|---------------|---------------|---------------------------|----------------------------|--|
|               |               | Pull action force, N      | Pull action force, lbs     |  |
| C4            | C4-PL-01      | 55                        | 12.36                      | Central passive locking mechanism. Spring loaded clamping. Fits directly into all cassettes type 4000. |
| C5            | C5-PL-01      | 120                       | 26.98                      |  |
| C6            | C6-PL-01      | 150                       | 33.72                      |  |
| C8            | C8-PL-01      | 240                       | 53.95                      |  |
|               |               | Rec. max. tool weight     |                            | Active locking mechanism – mechanical push action. Fits directly into all cassettes type 5000/6000.    |
|               |               | Rec. max. tool weight, kg | Rec. max. tool weight, lbs |  |
| C4            | C4-AL-01      | 40                        | 88                         |  |
| C5            | C5-AL-01      | 60                        | 132                        |  |
| C6            | C6-AL-01      | 75                        | 165                        |  |
| C8            | C8-AL-01      | 110                       | 243                        |  |
| C10           | C10-AL-01     | 150                       | 330.7                      |  |

## Pull studs



## Metric

| Machine design | Taper             | Ordering code                   | Coolant <sup>1)</sup> | Dimensions, mm |       |          |          |          |      |          |          |          |          |          | Info       |
|----------------|-------------------|---------------------------------|-----------------------|----------------|-------|----------|----------|----------|------|----------|----------|----------|----------|----------|------------|
|                |                   |                                 |                       | $a_{ch}$       | $D_1$ | $D_{21}$ | $D_{22}$ | $D_{23}$ | $l$  | $l_{21}$ | $l_{23}$ | $a_{th}$ | $\alpha$ | $B_{kw}$ |            |
| ISO            | 40                | 393.140-40 M16-75               | 0                     |                | 23    | 19       | 14       | 17       | 54   | 26       | 20       | M16      | 75       | 19       | DIN 69872  |
|                | 40                | 393.140C-40 M16-45              | 1                     | 7.35           | 22.5  | 18.95    | 12.95    | 17       | 44.5 | 16.4     | 11.15    | M16      | 45       | 18       | ISO 7388 B |
|                | 40                | 393.140C-40 M16-75-1            | 1                     | 7              | 23    | 19       | 14       | 17       | 54   | 26       | 20       | M16      | 75       | 19       | ISO 7388   |
|                | 40                | 393.140C-40 M16-75-2            | 1                     | 7              | 23    | 19       | 14       | 17       | 54   | 26       | 20       | M16      | 75       | 19       | DIN 69872  |
|                | 50                | 393.140-50 M24-75 <sup>2)</sup> | 0                     |                | 36    | 28       | 21       | 25       | 74   | 34       | 25       | M24      | 75       | 30       | DIN 69872  |
|                | 50                | 393.140C-50 M24-45              | 1                     | 11.5           | 37    | 29.1     | 19.6     | 25       | 65.5 | 25.55    | 17.95    | M24      | 45       | 30       | ISO 7388 B |
|                | 50                | 393.140C-50 M24-75-1            | 1                     | 11.5           | 36    | 28       | 21       | 25       | 74   | 34       | 25       | M24      | 75       | 30       | ISO 7388   |
| MAS-BT 403     | 50                | 393.140C-50 M24-75-2            | 1                     | 11.5           | 36    | 28       | 21       | 25       | 74   | 34       | 25       | M24      | 75       | 30       | DIN 69872  |
|                | 30                | 393.55-30 M12-45                | 0                     |                | 16.5  | 11       | 7        | 12.5     | 43   | 23       | 18       | M12      | 45       | 13       |            |
|                | 30                | 393.55-30 M12-60                | 0                     |                | 16.5  | 11       | 7        | 12.5     | 43   | 23       | 18       | M12      | 60       | 13       |            |
|                | 30                | 393.55C-30 M12-45               | 1                     | 2.4            | 16.5  | 11       | 7        | 12.5     | 43   | 23       | 18       | M12      | 45       | 13       |            |
|                | 30                | 393.55C-30 M12-60               | 1                     | 2.4            | 16.5  | 11       | 7        | 12.5     | 43   | 23       | 18       | M12      | 60       | 13       |            |
|                | 40                | 393.55-40 M16-45                | 0                     |                | 23    | 15       | 10       | 17       | 60   | 35       | 28       | M16      | 45       | 19       |            |
|                | 40                | 393.55-40 M16-60                | 0                     |                | 23    | 15       | 10       | 17       | 60   | 35       | 28       | M16      | 60       | 19       |            |
|                | 40                | 393.55-40 M16-90                | 0                     |                | 23    | 15       | 10       | 17       | 60   | 35       | 28       | M16      | 90       | 19       |            |
|                | 40                | 393.55C-40 M16-45               | 1                     | 4              | 23    | 15       | 10       | 17       | 60   | 35       | 28       | M16      | 45       | 19       |            |
|                | 40                | 393.55C-40 M16-75               | 1                     | 10             | 23    | 19       | 14       | 17       | 54   | 29       | 23       | M16      | 75       | 19       | JIS 40     |
|                | 50                | 393.55-50 M24-45                | 0                     |                | 38    | 23       | 17       | 25       | 85   | 45       | 35       | M24      | 45       | 30       |            |
|                | 50                | 393.55-50 M24-60                | 0                     |                | 38    | 23       | 17       | 25       | 85   | 45       | 35       | M24      | 60       | 30       |            |
|                | 50                | 393.55-50 M24-90                | 0                     |                | 38    | 23       | 17       | 25       | 85   | 45       | 35       | M24      | 90       | 30       |            |
| 50             | 393.55C-50 M24-75 | 1                               | 11.5                  | 36             | 28    | 21       | 25       | 74       | 34   | 25       | M24      | 75       | 30       | JIS 50   |            |

## Inch

| Machine design | Taper | Ordering code                 | Coolant <sup>1)</sup> | Dimensions, inch |       |          |          |          |       |          |          |          |          |          | Info |
|----------------|-------|-------------------------------|-----------------------|------------------|-------|----------|----------|----------|-------|----------|----------|----------|----------|----------|------|
|                |       |                               |                       | $a_{ch}$         | $D_1$ | $D_{21}$ | $D_{22}$ | $D_{23}$ | $l$   | $l_{21}$ | $l_{23}$ | $a_{th}$ | $\alpha$ | $B_{kw}$ |      |
| CAT-V          | 40    | 393.45-40 5/8-45-1            | 0                     |                  | .940  | .590     | .390     |          | 2.120 | 1.260    | .990     | 5/8"-11  | 45       | .750     |      |
|                | 40    | 393.45-40 5/8-45-2            | 0                     |                  | .940  | .591     | .394     | .641     | 2.250 | 1.266    | .990     | 5/8"-11  | 45       | .750     |      |
|                | 40    | 393.45-40 5/8-90              | 0                     |                  | .860  | .590     | .390     |          | 2.140 | 1.280    | .990     | 5/8"-11  | 90       | .690     |      |
|                | 40    | 393.45C-40 5/8-45-1           | 1                     | .281             | .940  | .740     | .490     |          | 1.500 | .640     | .440     | 5/8"-11  | 45       | .750     |      |
|                | 40    | 393.45C-40 5/8-45-2           | 1                     | .197             | .940  | .590     | .390     |          | 2.120 | 1.260    | .990     | 5/8"-11  | 45       | .751     |      |
|                | 40    | 393.45C-40 5/8-45-3           | 1                     | .236             | .858  | .740     | .490     |          | 1.624 | .640     | .440     | 5/8"-11  | 45       | .750     |      |
|                | 40    | 393.45C-40 5/8-75             | 1                     | .276             | .900  | .744     | .550     |          | 1.880 | 1.020    | .790     | 5/8"-11  | 75       | .740     |      |
|                | 40    | 393.45C-40 M16-45-1           | 1                     | .276             | .860  | .739     | .490     | .669     | 1.624 | .640     | .440     | M16      | 45       | .750     |      |
|                | 40    | 393.45C-40 M16-45-2           | 1                     | .252             | .866  | .740     | .490     | .669     | 1.736 | .752     | .552     | M16      | 45       | .750     |      |
|                | 50    | 393.45-50 1-90                | 0                     |                  | 1.370 | .900     | .670     |          | 3.070 | 1.770    | 1.380    | 1"-8     | 90       | 1.190    |      |
|                | 50    | 393.45C-50 1-45-1             | 1                     | .468             | 1.440 | 1.140    | .820     |          | 2.300 | 1.000    | .700     | 1"-8     | 45       | 1.250    |      |
|                | 50    | 393.45C-50 1-45-2             | 1                     | .250             | 1.370 | .900     | .660     |          | 3.090 | 1.790    | 1.380    | 1"-8     | 45       | 1.190    |      |
|                | 50    | 393.45C-50 1-45-3             | 1                     | .394             | 1.437 | 1.140    | .820     |          | 2.575 | 1.000    | .700     | 1"-8     | 45       | 1.250    |      |
|                | 50    | 393.45C-50 1-45-4             | 1                     | .468             | 1.430 | 1.140    | .820     | 1.030    | 2.300 | 1.000    | .700     | 1"-8     | 45       | 1.250    |      |
|                | 50    | 393.45C-50 1-60 <sup>3)</sup> | 1                     | .240             | 1.500 | .910     | .670     | 1.020    | 3.250 | 1.770    | 1.380    | 1"-8     | 60       | 1.180    |      |
|                | 50    | 393.45C-50 M24-45             | 1                     | .394             | 1.437 | 1.140    | .820     | .984     | 2.575 | 1.000    | .700     | M24      | 45       | 1.180    |      |

1) 0 = no coolant, 1 = coolant through centre

2) With O-ring 2.5x20mm

3) With O-ring 3x20mm

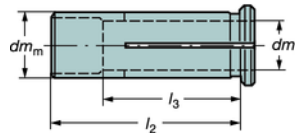
## J

## Warning!

Machine tool manufacturers have used many various styles and sizes of retention knobs. They often look very similar and appear to be interchangeable. The use of the incorrect knob, or the incorrect use of a knob, may result in injury or property damage. We try to ensure that we specify the correct knob, but due to the variety, it is the responsibility of the end user to check that the supplied knobs are correct for the machine toll and taper type.

Be sure to fully tighten the retention knob. Failure to do so may result in the tool holder coming loose during operation.

## Cylindrical collets for Hydro-Grip®

Sealed  
393.CGS

$l_3$  = clamping length required to achieve sealing effect.

Metric bore

Inch bore

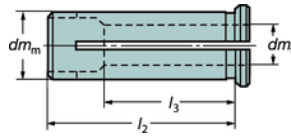
| Collet size      | Ordering code    | Dimensions, mm |        |       |                   | Collet size    | Ordering code     | Dimensions, mm (inch) |        |       |       |
|------------------|------------------|----------------|--------|-------|-------------------|----------------|-------------------|-----------------------|--------|-------|-------|
|                  |                  | $dm_t$         | $dm_m$ | $l_2$ | $l_3$             |                |                   | $dm_t$                | $dm_m$ | $l_2$ | $l_3$ |
| 12               | 393.CGS-12 03 40 | 3              | 12     | 40    | 25                | 12             | A393.CGS-12 02 40 | 3.175 (1/8)           | .472   | 1.575 | 1.024 |
|                  | 393.CGS-12 04 40 | 4              | 12     | 40    | 25                |                | A393.CGS-12 03 40 | 4.763 (3/16)          | .472   | 1.575 | 1.063 |
|                  | 393.CGS-12 05 40 | 5              | 12     | 40    | 25                |                | A393.CGS-12 04 40 | 6.35 (1/4)            | .472   | 1.575 | 1.102 |
|                  | 393.CGS-12 06 40 | 6              | 12     | 40    | 32                |                | A393.CGS-12 05 40 | 7.938 (5/16)          | .472   | 1.575 | 1.575 |
|                  | 393.CGS-12 07 40 | 7              | 12     | 40    | 33                |                | A393.CGS-12 06 40 | 9.525 (3/8)           | .472   | 1.575 | 1.575 |
|                  | 393.CGS-12 08 40 | 8              | 12     | 40    | 33                |                |                   |                       |        |       |       |
|                  | 393.CGS-12 09 40 | 9              | 12     | 40    | 33                |                |                   |                       |        |       |       |
|                  | 393.CGS-12 10 40 | 10             | 12     | 40    | 36                |                |                   |                       |        |       |       |
| 20               | 393.CGS-20 03 52 | 3              | 20     | 50    | 24                | 20             | A393.CGS-20 02 52 | 3.175 (1/8)           | .787   | 1.969 | 1.024 |
|                  | 393.CGS-20 04 52 | 4              | 20     | 50    | 24                |                | A393.CGS-20 03 52 | 4.763 (3/16)          | .787   | 1.969 | 1.024 |
|                  | 393.CGS-20 05 52 | 5              | 20     | 50    | 24                |                | A393.CGS-20 04 52 | 6.35 (1/4)            | .787   | 1.969 | 1.024 |
|                  | 393.CGS-20 06 52 | 6              | 20     | 50    | 32                |                | A393.CGS-20 05 52 | 7.938 (5/16)          | .787   | 1.969 | 1.575 |
|                  | 393.CGS-20 07 52 | 7              | 20     | 50    | 33                |                | A393.CGS-20 06 52 | 9.525 (3/8)           | .787   | 1.969 | 1.575 |
|                  | 393.CGS-20 08 52 | 8              | 20     | 50    | 33                |                | A393.CGS-20 07 52 | 11.113 (7/16)         | .787   | 1.969 | 1.575 |
|                  | 393.CGS-20 09 52 | 9              | 20     | 50    | 34                |                | A393.CGS-20 08 52 | 12.7 (1/2)            | .787   | 1.969 | 1.575 |
|                  | 393.CGS-20 10 52 | 10             | 20     | 50    | 36                |                | A393.CGS-20 09 52 | 14.288 (9/16)         | .787   | 1.969 | 1.575 |
|                  | 393.CGS-20 12 52 | 12             | 20     | 50    | 36                |                | A393.CGS-20 10 52 | 15.875 (5/8)          | .787   | 1.969 | 1.772 |
|                  | 393.CGS-20 14 52 | 14             | 20     | 50    | 41                |                |                   |                       |        |       |       |
|                  | 393.CGS-20 16 52 | 16             | 20     | 50    | 41                |                |                   |                       |        |       |       |
|                  | 393.CGS-20 18 52 | 18             | 20     | 50    | 44                |                |                   |                       |        |       |       |
| 25               | 393.CGS-25 03 56 | 3              | 25     | 56    | 25                | 25             | A393.CGS-25 02 56 | 3.175 (1/8)           | .984   | 2.205 | .984  |
|                  | 393.CGS-25 04 56 | 4              | 25     | 56    | 25                |                | A393.CGS-25 03 56 | 4.763 (3/16)          | .984   | 2.205 | .984  |
|                  | 393.CGS-25 05 56 | 5              | 25     | 56    | 25                |                | A393.CGS-25 04 56 | 6.35 (1/4)            | .984   | 2.205 | 1.299 |
|                  | 393.CGS-25 06 56 | 6              | 25     | 56    | 33                |                | A393.CGS-25 05 56 | 7.938 (5/16)          | .984   | 2.205 | 1.299 |
|                  | 393.CGS-25 07 56 | 7              | 25     | 56    | 33                |                | A393.CGS-25 06 56 | 9.525 (3/8)           | .984   | 2.205 | 1.339 |
|                  | 393.CGS-25 08 56 | 8              | 25     | 56    | 33                |                | A393.CGS-25 07 56 | 11.113 (7/16)         | .984   | 2.205 | 1.417 |
|                  | 393.CGS-25 09 56 | 9              | 25     | 56    | 34                |                | A393.CGS-25 08 56 | 12.7 (1/2)            | .984   | 2.205 | 1.654 |
|                  | 393.CGS-25 10 56 | 10             | 25     | 56    | 36                |                | A393.CGS-25 09 56 | 14.288 (9/16)         | .984   | 2.205 | 1.693 |
|                  | 393.CGS-25 12 56 | 12             | 25     | 56    | 42                |                | A393.CGS-25 10 56 | 15.875 (5/8)          | .984   | 2.205 | 1.732 |
|                  | 393.CGS-25 14 56 | 14             | 25     | 56    | 43                |                | A393.CGS-25 11 56 | 17.463 (11/16)        | .984   | 2.205 | 1.772 |
|                  | 393.CGS-25 16 56 | 16             | 25     | 56    | 44                |                | A393.CGS-25 12 56 | 19.05 (3/4)           | .984   | 2.205 | 1.772 |
|                  | 393.CGS-25 18 56 | 18             | 25     | 56    | 44                |                | A393.CGS-25 13 56 | 20.638 (13/16)        | .984   | 2.205 | 1.811 |
| 393.CGS-25 20 56 | 20               | 25             | 56     | 45    |                   |                |                   |                       |        |       |       |
| 32               | 393.CGS-32 07 60 | 7              | 32     | 60    | 33                | 32             | A393.CGS-32 03 60 | 4.763 (3/16)          | 1.260  | 2.362 | 1.024 |
|                  | 393.CGS-32 08 60 | 8              | 32     | 60    | 33                |                | A393.CGS-32 04 60 | 6.35 (1/4)            | 1.260  | 2.362 | 1.024 |
|                  | 393.CGS-32 09 60 | 9              | 32     | 60    | 33                |                | A393.CGS-32 05 60 | 7.938 (5/16)          | 1.260  | 2.362 | 1.575 |
|                  | 393.CGS-32 10 60 | 10             | 32     | 60    | 36                |                | A393.CGS-32 06 60 | 9.525 (3/8)           | 1.260  | 2.362 | 1.575 |
|                  | 393.CGS-32 12 60 | 12             | 32     | 60    | 41                |                | A393.CGS-32 07 60 | 11.113 (7/16)         | 1.260  | 2.362 | 1.575 |
|                  | 393.CGS-32 14 60 | 14             | 32     | 60    | 42                |                | A393.CGS-32 08 60 | 12.7 (1/2)            | 1.260  | 2.362 | 1.575 |
|                  | 393.CGS-32 16 60 | 16             | 32     | 60    | 44                |                | A393.CGS-32 09 60 | 14.288 (9/16)         | 1.260  | 2.362 | 1.575 |
|                  | 393.CGS-32 18 60 | 18             | 32     | 60    | 45                |                | A393.CGS-32 10 60 | 15.875 (5/8)          | 1.260  | 2.362 | 1.575 |
|                  | 393.CGS-32 20 60 | 20             | 32     | 60    | 46                |                | A393.CGS-32 11 60 | 17.463 (11/16)        | 1.260  | 2.362 | 1.575 |
|                  | 393.CGS-32 25 60 | 25             | 32     | 60    | 47                |                | A393.CGS-32 12 60 | 19.05 (3/4)           | 1.260  | 2.362 | 1.575 |
|                  |                  |                |        |       |                   |                | A393.CGS-32 13 60 | 20.638 (13/16)        | 1.260  | 2.362 | 1.575 |
|                  |                  |                |        |       |                   |                | A393.CGS-32 14 60 | 22.225 (7/8)          | 1.260  | 2.362 | 1.575 |
|                  |                  |                |        |       | A393.CGS-32 15 60 | 23.813 (15/16) | 1.260             | 2.362                 | 1.575  |       |       |
|                  |                  |                |        |       | A393.CGS-32 16 60 | 25.4 (1)       | 1.260             | 2.362                 | 1.772  |       |       |

For extractors for cylindrical collets, see page G137

# Cylindrical collets for Hydro-Grip®

Slitted

393.CG



Metric bore

Inch bore

| Collet size     | Ordering code   | Dimensions, mm |        |       |       | Collet size | Bore size (inch) | Ordering code    | Dimensions, inch |                  |                  |                  |                  |        |        |        |        |
|-----------------|-----------------|----------------|--------|-------|-------|-------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------|--------|--------|--------|
|                 |                 | $dm_t$         | $dm_m$ | $l_2$ | $l_1$ |             |                  |                  | $dm_t$           | $dm_m$           | $l_2$            | $l_1$            |                  |        |        |        |        |
| 12              | 393.CG-12 03 40 | 3              | 12     | 40    | 25    | 12          | 1/4              | A393.CG-12 04 40 | .250             | .4724            | 1.5748           | .9843            |                  |        |        |        |        |
|                 | 393.CG-12 04 40 | 4              | 12     | 40    | 25    |             |                  |                  | A393.CG-12 06 40 | .375             | .4724            | 1.5748           | .9843            |        |        |        |        |
|                 | 393.CG-12 05 40 | 5              | 12     | 40    | 25    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 | 393.CG-12 06 40 | 6              | 12     | 40    | 32    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 | 393.CG-12 07 40 | 7              | 12     | 40    | 33    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 | 393.CG-12 08 40 | 8              | 12     | 40    | 33    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 | 393.CG-12 09 40 | 9              | 12     | 40    | 33    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
| 393.CG-12 10 40 | 10              | 12             | 40     | 36    |       |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
| 16              | 393.CG-16 06 50 | 6              | 16     | 50    | 32    | 16          |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 | 393.CG-16 08 50 | 8              | 16     | 50    | 32    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 | 393.CG-16 10 50 | 10             | 16     | 50    | 36    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 | 393.CG-16 12 50 | 12             | 16     | 50    | 36    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 |                 |                |        |       |       |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
| 20              | 393.CG-20 03 52 | 3              | 20     | 50    | 24    | 20          | 1/4              | A393.CG-20 04 52 | .250             | .7874            | 2.0472           | .9843            |                  |        |        |        |        |
|                 | 393.CG-20 04 52 | 4              | 20     | 50    | 24    |             |                  |                  | A393.CG-20 06 52 | .375             | .7874            | 2.0472           | 1.2598           |        |        |        |        |
|                 | 393.CG-20 05 52 | 5              | 20     | 50    | 24    |             |                  |                  |                  | A393.CG-20 08 52 | .500             | .7874            | 2.0472           | 1.2992 |        |        |        |
|                 | 393.CG-20 06 52 | 6              | 20     | 50    | 32    |             |                  |                  |                  |                  | A393.CG-20 10 52 | .625             | .7874            | 2.0472 | 1.4173 |        |        |
|                 | 393.CG-20 07 52 | 7              | 20     | 50    | 33    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 | 393.CG-20 08 52 | 8              | 20     | 50    | 33    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 | 393.CG-20 09 52 | 9              | 20     | 50    | 34    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 | 393.CG-20 10 52 | 10             | 20     | 50    | 36    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 | 393.CG-20 12 52 | 12             | 20     | 50    | 41    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 | 393.CG-20 14 52 | 14             | 20     | 50    | 41    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 | 393.CG-20 16 52 | 16             | 20     | 50    | 44    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 |                 |                |        |       |       |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 |                 |                |        |       |       |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
| 25              | 393.CG-25 03 56 | 3              | 25     | 56    | 25    | 25          | 1/4              | A393.CG-25 04 56 | .250             | .9843            | 2.2047           | .9843            |                  |        |        |        |        |
|                 | 393.CG-25 04 56 | 4              | 25     | 56    | 25    |             |                  |                  | A393.CG-25 06 56 | .375             | .9843            | 2.2047           | 1.2992           |        |        |        |        |
|                 | 393.CG-25 05 56 | 5              | 25     | 56    | 25    |             |                  |                  |                  | A393.CG-25 08 56 | .500             | .9843            | 2.2047           | 1.2992 |        |        |        |
|                 | 393.CG-25 06 56 | 6              | 25     | 56    | 33    |             |                  |                  |                  |                  | A393.CG-25 10 56 | .625             | .9843            | 2.2047 | 1.4173 |        |        |
|                 | 393.CG-25 07 56 | 7              | 25     | 56    | 33    |             |                  |                  |                  |                  |                  | A393.CG-25 12 56 | .625             | .9843  | 2.2047 | 1.6535 |        |
|                 | 393.CG-25 08 56 | 8              | 25     | 56    | 33    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 | 393.CG-25 09 56 | 9              | 25     | 56    | 34    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 | 393.CG-25 10 56 | 10             | 25     | 56    | 36    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 | 393.CG-25 12 56 | 12             | 25     | 56    | 42    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 | 393.CG-25 14 56 | 14             | 25     | 56    | 43    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 | 393.CG-25 16 56 | 16             | 25     | 56    | 44    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 | 393.CG-25 18 56 | 18             | 25     | 56    | 44    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 | 393.CG-25 20 56 | 20             | 25     | 56    | 46    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 |                 |                |        |       |       |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 |                 |                |        |       |       |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
| 32              | 393.CG-32 06 60 | 6              | 32     | 60    | 26    | 32          | 1/4              | A393.CG-32 04 60 | .2500            | 1.2598           | 2.7559           | 1.2598           |                  |        |        |        |        |
|                 | 393.CG-32 07 60 | 7              | 32     | 60    | 40    |             |                  |                  | A393.CG-32 06 60 | .3750            | 1.2598           | 2.7559           | 1.2992           |        |        |        |        |
|                 | 393.CG-32 08 60 | 8              | 32     | 60    | 40    |             |                  |                  |                  | A393.CG-32 08 60 | .5000            | 1.2598           | 2.7559           | 1.6142 |        |        |        |
|                 | 393.CG-32 09 60 | 9              | 32     | 60    | 40    |             |                  |                  |                  |                  | A393.CG-32 10 60 | .6250            | 1.2598           | 2.7559 | 1.6535 |        |        |
|                 | 393.CG-32 10 60 | 10             | 32     | 60    | 40    |             |                  |                  |                  |                  |                  | A393.CG-32 12 60 | .7500            | 1.2598 | 2.7559 | 1.8110 |        |
|                 | 393.CG-32 12 60 | 12             | 32     | 60    | 40    |             |                  |                  |                  |                  |                  |                  | A393.CG-32 16 60 | 1.4000 | 1.2598 | 2.7559 | 2.0472 |
|                 | 393.CG-32 14 60 | 14             | 32     | 60    | 40    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 | 393.CG-32 16 60 | 16             | 32     | 60    | 40    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 | 393.CG-32 18 60 | 18             | 32     | 60    | 40    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
|                 | 393.CG-32 20 60 | 20             | 32     | 60    | 40    |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |
| 393.CG-32 25 60 | 25              | 32             | 60     | 45    |       |             |                  |                  |                  |                  |                  |                  |                  |        |        |        |        |

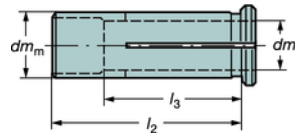
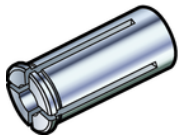
For extractors for cylindrical collets, see page G137



# Cylindrical collets for CoroGrip®

Inch bore

Sealed  
A393.CGS



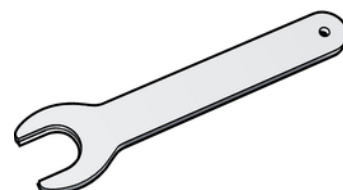
$l_3$  = clamping length required to achieve sealing effect.

Inch bore

| Collet size       | Ordering code     | Dimensions, inch  |            |       |       |
|-------------------|-------------------|-------------------|------------|-------|-------|
|                   |                   | $dm_t$            | $dm_m$     | $l_2$ | $l_3$ |
| 13                | A393.CGS-13 02 40 | .125 (1/8)        | .500       | 1.575 | .984  |
|                   | A393.CGS-13 03 40 | .187 (3/16)       | .500       | 1.575 | .984  |
|                   | A393.CGS-13 04 40 | .250 (1/4)        | .500       | 1.575 | 1.260 |
|                   | A393.CGS-13 05 40 | .312 (5/16)       | .500       | 1.575 | 1.299 |
|                   | A393.CGS-13 06 40 | .375 (3/8)        | .500       | 1.575 | 1.417 |
| 15                | A393.CGS-15 04 50 | .250 (1/4)        | .625       | 1.969 | 1.260 |
|                   | A393.CGS-15 05 50 | .312 (5/16)       | .625       | 1.969 | 1.260 |
|                   | A393.CGS-15 06 50 | .375 (3/8)        | .625       | 1.969 | 1.417 |
|                   | A393.CGS-15 08 50 | .500 (1/2)        | .625       | 1.969 | 1.417 |
| 19                | A393.CGS-19 02 52 | .125 (1/8)        | .750       | 2.047 | 1.023 |
|                   | A393.CGS-19 03 52 | .187 (3/16)       | .750       | 2.047 | 1.023 |
|                   | A393.CGS-19 04 52 | .250 (1/4)        | .750       | 2.047 | 1.023 |
|                   | A393.CGS-19 05 52 | .312 (5/16)       | .750       | 2.047 | 1.575 |
|                   | A393.CGS-19 06 52 | .375 (3/8)        | .750       | 2.047 | 1.575 |
|                   | A393.CGS-19 07 52 | .437 (7/16)       | .750       | 2.047 | 1.575 |
|                   | A393.CGS-19 08 52 | .500 (1/2)        | .750       | 2.047 | 1.575 |
|                   | A393.CGS-19 09 52 | .562 (9/16)       | .750       | 2.047 | 1.575 |
|                   | A393.CGS-19 10 52 | .625 (5/8)        | .750       | 2.047 | 1.772 |
|                   | 26                | A393.CGS-26 02 56 | .125 (1/8) | 1.000 | 2.205 |
| A393.CGS-26 03 56 |                   | .187 (3/16)       | 1.000      | 2.205 | .984  |
| A393.CGS-26 04 56 |                   | .250 (1/4)        | 1.000      | 2.205 | 1.299 |
| A393.CGS-26 05 56 |                   | .312 (5/16)       | 1.000      | 2.205 | 1.299 |
| A393.CGS-26 06 56 |                   | .375 (3/8)        | 1.000      | 2.205 | 1.339 |
| A393.CGS-26 07 56 |                   | .437 (7/16)       | 1.000      | 2.205 | 1.417 |
| A393.CGS-26 08 56 |                   | .500 (1/2)        | 1.000      | 2.205 | 1.654 |
| A393.CGS-26 09 56 |                   | .562 (9/16)       | 1.000      | 2.205 | 1.693 |
| A393.CGS-26 10 56 |                   | .625 (5/8)        | 1.000      | 2.205 | 1.732 |
| A393.CGS-26 11 56 |                   | .687 (11/16)      | 1.000      | 2.205 | 1.732 |
| A393.CGS-26 12 56 |                   | .750 (3/4)        | 1.000      | 2.205 | 1.732 |
| 31                | A393.CGS-31 03 60 | .187 (3/16)       | 1.250      | 2.362 | 1.023 |
|                   | A393.CGS-31 04 60 | .250 (1/4)        | 1.250      | 2.362 | 1.575 |
|                   | A393.CGS-31 05 60 | .312 (5/16)       | 1.250      | 2.362 | 1.575 |
|                   | A393.CGS-31 06 60 | .375 (3/8)        | 1.250      | 2.362 | 1.575 |
|                   | A393.CGS-31 07 60 | .437 (7/16)       | 1.250      | 2.362 | 1.575 |
|                   | A393.CGS-31 08 60 | .500 (1/2)        | 1.250      | 2.362 | 1.575 |
|                   | A393.CGS-31 09 60 | .562 (9/16)       | 1.250      | 2.362 | 1.575 |
|                   | A393.CGS-31 10 60 | .625 (5/8)        | 1.250      | 2.362 | 1.575 |
|                   | A393.CGS-31 11 60 | .687 (11/16)      | 1.250      | 2.362 | 1.575 |
|                   | A393.CGS-31 12 60 | .750 (3/4)        | 1.250      | 2.362 | 1.575 |
|                   | A393.CGS-31 16 60 | 1.000 (1)         | 1.250      | 2.362 | 1.772 |

## Extractor for cylindrical collets

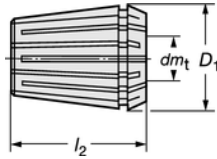
| Extractor   | For collet size |             |
|-------------|-----------------|-------------|
|             | Metric          | Inch        |
| 5680 061-01 | 12              | 13 (1/2")   |
| 5680 061-02 | 16              | 15 (5/8")   |
| 5680 061-03 | 20              | 19 (3/4")   |
| 5680 061-04 | 25              | 26 (1")     |
| 5680 061-05 | 32              | 31 (1 1/4") |



## ER collets

DIN 6499-B

393.14



| Size | D <sub>1</sub> |       | l <sub>2</sub> |       |
|------|----------------|-------|----------------|-------|
|      | mm             | Inch  | mm             | Inch  |
| ER11 | 11.4           | .449  | 18             | .709  |
| ER16 | 17             | .669  | 27.5           | 1.062 |
| ER20 | 21             | .827  | 31.5           | 1.240 |
| ER25 | 26             | 1.024 | 34             | 1.330 |
| ER32 | 33             | 1.291 | 40             | 1.575 |
| ER40 | 41             | 1.614 | 46             | 1.811 |
| ER50 | 52             | 2.047 | 60             | 2.362 |

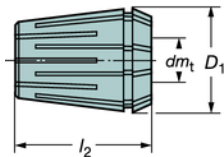
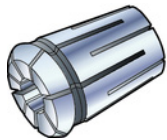
| Size 11   |                      |                | Size 16  |                      |                | Size 20   |                      |               | Size 25   |                      |               |
|-----------|----------------------|----------------|----------|----------------------|----------------|-----------|----------------------|---------------|-----------|----------------------|---------------|
| Range     |                      |                | Range    |                      |                | Range     |                      |               | Range     |                      |               |
| mm        | dm <sub>1</sub> inch | Ordering code  | mm       | dm <sub>1</sub> inch | Ordering code  | mm        | dm <sub>1</sub> inch | Ordering code | mm        | dm <sub>1</sub> inch | Ordering code |
| 1.00-0.75 | .039-.030            | 393.14-11 0100 | 1.0-0.5  | .039-.020            | 393.14-16 0100 | 1.5-1.0   | .059-.039            | 393.14-20 015 | 2.0-1.5   | .079-.059            | 393.14-25 020 |
| 1.25-1.00 | .049-.039            | 393.14-11 0125 | 1.5-1.0  | .059-.039            | 393.14-16 0150 | 2.0-1.5   | .079-.059            | 393.14-20 020 | 2.5-2.0   | .098-.079            | 393.14-25 025 |
| 1.50-1.25 | .059-.049            | 393.14-11 0150 | 2.0-1.0  | .079-.039            | 393.14-16 0200 | 2.5-2.0   | .098-.079            | 393.14-20 025 | 3.0-2.5   | .118-.098            | 393.14-25 030 |
| 1.75-1.50 | .069-.059            | 393.14-11 0175 | 2.5-1.5  | .098-.059            | 393.14-16 0250 | 3.0-2.5   | .118-.098            | 393.14-20 030 | 4.0-3.0   | .157-.118            | 393.14-25 040 |
| 2.00-1.75 | .079-.069            | 393.14-11 0200 | 3.0-2.0  | .118-.079            | 393.14-16 0300 | 4.0-3.0   | .157-.118            | 393.14-20 040 | 5.0-4.0   | .197-.157            | 393.14-25 050 |
| 2.25-2.00 | .089-.079            | 393.14-11 0225 | 4.0-3.0  | .157-.118            | 393.14-16 0400 | 5.0-4.0   | .197-.157            | 393.14-20 050 | 6.0-5.0   | .236-.197            | 393.14-25 060 |
| 2.50-2.25 | .098-.089            | 393.14-11 0250 | 5.0-4.0  | .197-.157            | 393.14-16 0500 | 6.0-5.0   | .236-.197            | 393.14-20 060 | 7.0-6.0   | .275-.236            | 393.14-25 070 |
| 3.00-2.50 | .118-.098            | 393.14-11 0300 | 6.0-5.0  | .236-.197            | 393.14-16 0600 | 7.0-6.0   | .275-.236            | 393.14-20 070 | 8.0-7.0   | .315-.275            | 393.14-25 080 |
| 3.50-3.00 | .138-.118            | 393.14-11 0350 | 7.0-6.0  | .276-.236            | 393.14-16 0700 | 8.0-7.0   | .315-.275            | 393.14-20 080 | 9.0-8.0   | .354-.315            | 393.14-25 090 |
| 4.00-3.50 | .157-.138            | 393.14-11 0400 | 8.0-7.0  | .315-.276            | 393.14-16 0800 | 9.0-8.0   | .354-.315            | 393.14-20 090 | 10.0-9.0  | .394-.354            | 393.14-25 100 |
| 4.50-4.00 | .177-.157            | 393.14-11 0450 | 9.0-8.0  | .354-.315            | 393.14-16 0900 | 10.0-9.0  | .394-.354            | 393.14-20 100 | 11.0-10.0 | .433-.394            | 393.14-25 110 |
| 5.00-4.50 | .197-.177            | 393.14-11 0500 | 10.0-9.0 | .394-.354            | 393.14-16 1000 | 11.0-10.0 | .433-.394            | 393.14-20 110 | 12.0-11.0 | .472-.433            | 393.14-25 120 |
| 5.50-5.00 | .217-.197            | 393.14-11 0550 |          |                      |                | 12.0-11.0 | .472-.433            | 393.14-20 120 | 13.0-12.0 | .512-.472            | 393.14-25 130 |
| 6.00-5.50 | .236-.217            | 393.14-11 0600 |          |                      |                | 13.0-12.0 | .512-.472            | 393.14-20 130 | 14.0-13.0 | .551-.512            | 393.14-25 140 |
| 6.50-6.00 | .256-.236            | 393.14-11 0650 |          |                      |                |           |                      |               | 15.0-14.0 | .591-.551            | 393.14-25 150 |
| 7.00-6.50 | .276-.256            | 393.14-11 0700 |          |                      |                |           |                      |               | 16.0-15.0 | .630-.591            | 393.14-25 160 |

| Size 32   |                      |               | Size 40   |                      |               | Size 50   |                      |               |
|-----------|----------------------|---------------|-----------|----------------------|---------------|-----------|----------------------|---------------|
| Range     |                      |               | Range     |                      |               | Range     |                      |               |
| mm        | dm <sub>1</sub> inch | Ordering code | mm        | dm <sub>1</sub> inch | Ordering code | mm        | dm <sub>1</sub> inch | Ordering code |
| 2.5- 2.0  | .098-.079            | 393.14-32 025 | 4.0- 3.0  | .157-.118            | 393.14-40 040 | 8.0- 6.0  | .315-.236            | 393.14-50 080 |
| 3.0- 2.5  | .118-.098            | 393.14-32 030 | 5.0- 4.0  | .197-.157            | 393.14-40 050 | 10.0- 8.0 | .394-.315            | 393.14-50 100 |
| 4.0- 3.0  | .157-.118            | 393.14-32 040 | 6.0- 5.0  | .236-.197            | 393.14-40 060 | 12.0-10.0 | .472-.394            | 393.14-50 120 |
| 5.0- 4.0  | .197-.157            | 393.14-32 050 | 7.0- 6.0  | .275-.236            | 393.14-40 070 | 14.0-12.0 | .551-.472            | 393.14-50 140 |
| 6.0- 5.0  | .236-.197            | 393.14-32 060 | 8.0- 7.0  | .315-.275            | 393.14-40 080 | 16.0-14.0 | .630-.551            | 393.14-50 160 |
| 7.0- 6.0  | .275-.236            | 393.14-32 070 | 9.0- 8.0  | .354-.315            | 393.14-40 090 | 18.0-16.0 | .709-.630            | 393.14-50 180 |
| 8.0- 7.0  | .315-.275            | 393.14-32 080 | 10.0- 9.0 | .394-.354            | 393.14-40 100 | 20.0-18.0 | .787-.709            | 393.14-50 200 |
| 9.0- 8.0  | .354-.315            | 393.14-32 090 | 11.0-10.0 | .433-.394            | 393.14-40 110 | 22.0-20.0 | .866-.787            | 393.14-50 220 |
| 10.0- 9.0 | .394-.354            | 393.14-32 100 | 12.0-11.0 | .472-.433            | 393.14-40 120 | 24.0-22.0 | .945-.866            | 393.14-50 240 |
| 11.0-10.0 | .433-.394            | 393.14-32 110 | 13.0-12.0 | .512-.472            | 393.14-40 130 | 26.0-24.0 | 1.024-.945           | 393.14-50 260 |
| 12.0-11.0 | .472-.433            | 393.14-32 120 | 14.0-13.0 | .551-.512            | 393.14-40 140 | 28.0-26.0 | 1.102-1.024          | 393.14-50 280 |
| 13.0-12.0 | .512-.472            | 393.14-32 130 | 15.0-14.0 | .591-.551            | 393.14-40 150 | 30.0-28.0 | 1.181-1.102          | 393.14-50 300 |
| 14.0-13.0 | .551-.512            | 393.14-32 140 | 16.0-15.0 | .630-.591            | 393.14-40 160 | 32.0-30.0 | 1.260-1.181          | 393.14-50 320 |
| 15.0-14.0 | .591-.551            | 393.14-32 150 | 17.0-16.0 | .669-.630            | 393.14-40 170 | 34.0-32.0 | 1.339-1.260          | 393.14-50 340 |
| 16.0-15.0 | .630-.591            | 393.14-32 160 | 18.0-17.0 | .709-.669            | 393.14-40 180 |           |                      |               |
| 17.0-16.0 | .699-.630            | 393.14-32 170 | 19.0-18.0 | .748-.709            | 393.14-40 190 |           |                      |               |
| 18.0-17.0 | .709-.669            | 393.14-32 180 | 20.0-19.0 | .787-.748            | 393.14-40 200 |           |                      |               |
| 19.0-18.0 | .748-.709            | 393.14-32 190 | 21.0-20.0 | .827-.787            | 393.14-40 210 |           |                      |               |
| 20.0-19.0 | .787-.748            | 393.14-32 200 | 22.0-21.0 | .866-.827            | 393.14-40 220 |           |                      |               |
|           |                      |               | 23.0-22.0 | .906-.866            | 393.14-40 230 |           |                      |               |
|           |                      |               | 24.0-23.0 | .945-.906            | 393.14-40 240 |           |                      |               |
|           |                      |               | 25.0-24.0 | .984-.945            | 393.14-40 250 |           |                      |               |
|           |                      |               | 26.0-25.0 | 1.024-.984           | 393.14-40 260 |           |                      |               |

# ER collets, metallic sealed

393.15  
A393.15

- High precision run out to  $\leq 6 \mu\text{m}$
- HPC applicable



| Metric      |             |      |               | Dimensions, mm |       |                       | Inch        |               |       |               | Dimensions, inch |       |                           |     |
|-------------|-------------|------|---------------|----------------|-------|-----------------------|-------------|---------------|-------|---------------|------------------|-------|---------------------------|-----|
| Collet size | $d_{m1}$ mm |      | Ordering code | $D_1$          | $l_2$ | Tightening torque Nm. | Collet size | $d_{m1}$ inch |       | Ordering code | $D_1$            | $l_2$ | Tightening torque, ft-lbs |     |
|             | max         | min  |               |                |       |                       | max         | min           |       |               |                  |       |                           | max |
| 16          | 3           | 2.97 | 393.15-16 03  | 17             | 27.5  | 20                    | 16          | 1/8           | .125  | .1170         | A393.15-16 1/8   | .669  | 1.082                     | 14  |
|             | 4           | 3.97 | 393.15-16 04  | 17             | 27.5  | 40                    |             | 5/32          | .157  | .1560         | A393.15-16 5/32  | .669  | 1.082                     | 29  |
|             | 5           | 4.5  | 393.15-16 05  | 17             | 27.5  | 40                    |             | 3/16          | .188  | .1770         | A393.15-16 3/16  | .669  | 1.082                     | 41  |
|             | 6           | 5.5  | 393.15-16 06  | 17             | 27.5  | 56                    |             | 1/4           | .250  | .2303         | A393.15-16 1/4   | .669  | 1.082                     | 41  |
|             | 8           | 7.5  | 393.15-16 08  | 17             | 27.5  | 56                    |             | 5/16          | .3125 | .2929         | A393.15-16 5/16  | .669  | 1.082                     | 41  |
|             | 10          | 9.5  | 393.15-16 10  | 17             | 27.5  | 56                    |             | 3/8           | .375  | .3556         | A393.15-16 3/8   | .669  | 1.082                     | 41  |
| 20          | 3           | 2.97 | 393.15-20 03  | 21             | 31.5  | 32                    | 20          | 1/8           | .125  | .1170         | A393.15-20 1/8   | .827  | 1.240                     | 23  |
|             | 4           | 3.97 | 393.15-20 04  | 21             | 31.5  | 32                    |             | 5/32          | .157  | .1560         | A393.15-20 5/32  | .827  | 1.240                     | 23  |
|             | 5           | 4.97 | 393.15-20 05  | 21             | 31.5  | 32                    |             | 3/16          | .188  | .1960         | A393.15-20 3/16  | .827  | 1.240                     | 23  |
|             | 6           | 5.97 | 393.15-20 06  | 21             | 31.5  | 32                    |             | 1/4           | .250  | .2488         | A393.15-20 1/4   | .827  | 1.240                     | 23  |
|             | 8           | 7.5  | 393.15-20 08  | 21             | 31.5  | 80                    |             | 5/16          | .3125 | .2929         | A393.15-20 5/16  | .827  | 1.240                     | 54  |
|             | 10          | 9.5  | 393.15-20 10  | 21             | 31.5  | 80                    |             | 3/8           | .375  | .3556         | A393.15-20 3/8   | .827  | 1.240                     | 54  |
| 25          | 12          | 11.5 | 393.15-20 12  | 21             | 31.5  | 80                    |             | 1/2           | .500  | .4803         | A393.15-20 1/2   | .827  | 1.240                     | 54  |
|             | 6           | 5.97 | 393.15-25 06  | 26             | 34    | 80                    | 25          | 1/4           | .250  | .2488         | A393.15-25 1/4   | 1.024 | 1.339                     | 59  |
|             | 8           | 7.5  | 393.15-25 08  | 26             | 34    | 80                    |             | 5/16          | .3125 | .2929         | A393.15-25 5/16  | 1.024 | 1.339                     | 59  |
|             | 10          | 9.5  | 393.15-25 10  | 26             | 34    | 104                   |             | 3/8           | .375  | .3556         | A393.15-25 3/8   | 1.024 | 1.339                     | 76  |
|             | 12          | 11.5 | 393.15-25 12  | 26             | 34    | 104                   |             | 1/2           | .500  | .4803         | A393.15-25 1/2   | 1.024 | 1.339                     | 76  |
|             | 14          | 13.5 | 393.15-25 14  | 26             | 34    | 104                   |             | 5/8           | .625  | .6055         | A393.15-25 5/8   | 1.024 | 1.339                     | 76  |
| 32          | 16          | 15.5 | 393.15-25 16  | 26             | 34    | 104                   |             |               |       |               |                  |       |                           |     |
|             | 6           | 5.97 | 393.15-32 06  | 33             | 40    | 136                   | 32          | 1/4           | .250  | .2488         | A393.15-32 1/4   | 1.291 | 1.575                     | 100 |
|             | 8           | 7.5  | 393.15-32 08  | 33             | 40    | 136                   |             | 5/16          | .3125 | .2929         | A393.15-32 5/16  | 1.291 | 1.575                     | 100 |
|             | 10          | 9.5  | 393.15-32 10  | 33             | 40    | 136                   |             | 3/8           | .375  | .3556         | A393.15-32 3/8   | 1.291 | 1.575                     | 100 |
|             | 12          | 11.5 | 393.15-32 12  | 33             | 40    | 136                   |             | 1/2           | .500  | .4803         | A393.15-32 1/2   | 1.291 | 1.575                     | 100 |
|             | 14          | 13.5 | 393.15-32 14  | 33             | 40    | 136                   |             | 5/8           | .625  | .6055         | A393.15-32 5/8   | 1.291 | 1.575                     | 100 |
|             | 16          | 15.5 | 393.15-32 16  | 33             | 40    | 136                   |             | 3/4           | .750  | .7303         | A393.15-32 3/4   | 1.291 | 1.575                     | 100 |
|             | 18          | 17.5 | 393.15-32 18  | 33             | 40    | 136                   |             |               |       |               |                  |       |                           |     |
| 40          | 20          | 19.5 | 393.15-32 20  | 33             | 40    | 136                   |             |               |       |               |                  |       |                           |     |
|             | 6           | 5.97 | 393.15-40 06  | 41             | 46    | 176                   | 40          | 1/4           | .250  | .2488         | A393.15-40 1/4   | 1.614 | 1.811                     | 120 |
|             | 8           | 7.97 | 393.15-40 08  | 41             | 46    | 176                   |             | 5/16          | .3125 | .3111         | A393.15-40 5/16  | 1.614 | 1.811                     | 120 |
|             | 10          | 9.5  | 393.15-40 10  | 41             | 46    | 176                   |             | 3/8           | .375  | .3556         | A393.15-40 3/8   | 1.614 | 1.811                     | 120 |
|             | 12          | 11.5 | 393.15-40 12  | 41             | 46    | 176                   |             | 1/2           | .500  | .4803         | A393.15-40 1/2   | 1.614 | 1.811                     | 120 |
|             | 14          | 13.5 | 393.15-40 14  | 41             | 46    | 176                   |             | 5/8           | .625  | .6055         | A393.15-40 5/8   | 1.614 | 1.811                     | 120 |
|             | 16          | 15.5 | 393.15-40 16  | 41             | 46    | 176                   |             | 3/4           | .750  | .7303         | A393.15-40 3/4   | 1.614 | 1.811                     | 120 |
|             | 18          | 17.5 | 393.15-40 18  | 41             | 46    | 176                   |             | 1             | .1000 | .9646         | A393.15-40 1     | 1.614 | 1.811                     | 120 |
|             | 20          | 19.5 | 393.15-40 20  | 41             | 46    | 176                   |             |               |       |               |                  |       |                           |     |
|             | 25          | 24.5 | 393.15-40 25  | 41             | 46    | 176                   |             |               |       |               |                  |       |                           |     |

D

TOOLING SYSTEMS

Accessories

ROT - ENG

ER Collet sealing discs

0.5 mm (.020 inch) capacity per disc. Max 150 bar (2000 psi) coolant pressure.

| Size 16              |               | Size 25               |               | Size 32               |               | Size 40                 |               |
|----------------------|---------------|-----------------------|---------------|-----------------------|---------------|-------------------------|---------------|
| Range, mm (inch)     | Ordering code | Range, mm (inch)      | Ordering code | Range, mm (inch)      | Ordering code | Range, mm (inch)        | Ordering code |
| $dm_t$               |               | $dm_t$                |               | $dm_t$                |               | $dm_t$                  |               |
| 3.0-2.5 (.118-.098)  | 3916.00300    | 3.0-2.5 (.118-.098)   | 3925.00300    | 3.0-2.5 (.118-.098)   | 3932.00300    | 3.0-2.5 (.118-.098)     | 3940.00300    |
| 3.5-3.0 (.138-.118)  | 3916.00350    | 3.5-3.0 (.138-.118)   | 3925.00350    | 3.5-3.0 (.138-.118)   | 3932.00350    | 3.5-3.0 (.138-.118)     | 3940.00350    |
| 4.0-3.5 (.157-.138)  | 3916.00400    | 4.0-3.5 (.157-.138)   | 3925.00400    | 4.0-3.5 (.157-.138)   | 3932.00400    | 4.0-3.5 (.157-.138)     | 3940.00400    |
| 4.5-4.0 (.177-.157)  | 3916.00450    | 4.5-4.0 (.177-.157)   | 3925.00450    | 4.5-4.0 (.177-.157)   | 3932.00450    | 4.5-4.0 (.177-.157)     | 3940.00450    |
| 5.0-4.5 (.197-.177)  | 3916.00500    | 5.0-4.5 (.197-.177)   | 3925.00500    | 5.0-4.5 (.197-.177)   | 3932.00500    | 5.0-4.5 (.197-.177)     | 3940.00500    |
| 5.5-5.0 (.217-.197)  | 3916.00550    | 5.5-5.0 (.217-.197)   | 3925.00550    | 5.5-5.0 (.217-.197)   | 3932.00550    | 5.5-5.0 (.217-.197)     | 3940.00550    |
| 6.0-5.5 (.236-.217)  | 3916.00600    | 6.0-5.5 (.236-.217)   | 3925.00600    | 6.0-5.5 (.236-.217)   | 3932.00600    | 6.0-5.5 (.236-.217)     | 3940.00600    |
| 6.5-6.0 (.256-.236)  | 3916.00650    | 6.5-6.0 (.256-.236)   | 3925.00650    | 6.5-6.0 (.256-.236)   | 3932.00650    | 6.5-6.0 (.256-.236)     | 3940.00650    |
| 7.0-6.5 (.276-.256)  | 3916.00700    | 7.0-6.5 (.276-.256)   | 3925.00700    | 7.0-6.5 (.276-.256)   | 3932.00700    | 7.0-6.5 (.276-.256)     | 3940.00700    |
| 7.5-7.0 (.295-.276)  | 3916.00750    | 7.5-7.0 (.295-.276)   | 3925.00750    | 7.5-7.0 (.295-.276)   | 3932.00750    | 7.5-7.0 (.295-.276)     | 3940.00750    |
| 8.0-7.5 (.315-.295)  | 3916.00800    | 8.0-7.5 (.315-.295)   | 3925.00800    | 8.0-7.5 (.315-.295)   | 3932.00800    | 8.0-7.5 (.315-.295)     | 3940.00800    |
| 8.5-8.0 (.335-.315)  | 3916.00850    | 8.5-8.0 (.335-.315)   | 3925.00850    | 8.5-8.0 (.335-.315)   | 3932.00850    | 8.5-8.0 (.335-.315)     | 3940.00850    |
| 9.0-8.5 (.354-.335)  | 3916.00900    | 9.0-8.5 (.354-.335)   | 3925.00900    | 9.0-8.5 (.354-.335)   | 3932.00900    | 9.0-8.5 (.354-.335)     | 3940.00900    |
| 9.5-9.0 (.374-.354)  | 3916.00950    | 9.5-9.0 (.374-.354)   | 3925.00950    | 9.5-9.0 (.374-.354)   | 3932.00950    | 9.5-9.0 (.374-.354)     | 3940.00950    |
| 10.0-9.5 (.394-.374) | 3916.01000    | 10.0-9.5 (.394-.374)  | 3925.01000    | 10.0-9.5 (.394-.374)  | 3932.01000    | 10.0-9.5 (.394-.374)    | 3940.01000    |
|                      |               | 10.5-10.0 (.413-.394) | 3925.01050    | 10.5-10.0 (.413-.394) | 3932.01050    | 10.5-10.0 (.413-.394)   | 3940.01050    |
|                      |               | 11.0-10.5 (.433-.413) | 3925.01100    | 11.0-10.5 (.433-.413) | 3932.01100    | 11.0-10.5 (.433-.413)   | 3940.01100    |
|                      |               | 11.5-11.0 (.453-.433) | 3925.01150    | 11.5-11.0 (.453-.433) | 3932.01150    | 11.5-11.0 (.453-.433)   | 3940.01150    |
|                      |               | 12.0-11.5 (.472-.453) | 3925.01200    | 12.0-11.5 (.472-.453) | 3932.01200    | 12.0-11.5 (.472-.453)   | 3940.01200    |
|                      |               | 12.5-12.0 (.492-.472) | 3925.01250    | 12.5-12.0 (.492-.472) | 3932.01250    | 12.5-12.0 (.492-.472)   | 3940.01250    |
|                      |               | 13.0-12.5 (.512-.492) | 3925.01300    | 13.0-12.5 (.512-.492) | 3932.01300    | 13.0-12.5 (.512-.492)   | 3940.01300    |
|                      |               | 13.5-13.0 (.531-.512) | 3925.01350    | 13.5-13.0 (.531-.512) | 3932.01350    | 13.5-13.0 (.531-.512)   | 3940.01350    |
|                      |               | 14.0-13.5 (.551-.531) | 3925.01400    | 14.0-13.5 (.551-.531) | 3932.01400    | 14.0-13.5 (.551-.531)   | 3940.01400    |
|                      |               | 14.5-14.0 (.571-.551) | 3925.01450    | 14.5-14.0 (.571-.551) | 3932.01450    | 14.5-14.0 (.571-.551)   | 3940.01450    |
|                      |               | 15.0-14.5 (.591-.571) | 3925.01500    | 15.0-14.5 (.591-.571) | 3932.01500    | 15.0-14.5 (.591-.571)   | 3940.01500    |
|                      |               | 15.5-15.0 (.610-.591) | 3925.01550    | 15.5-15.0 (.610-.591) | 3932.01550    | 15.5-15.0 (.610-.591)   | 3940.01550    |
|                      |               | 16.0-15.5 (.630-.610) | 3925.01600    | 16.0-15.5 (.630-.610) | 3932.01600    | 16.0-15.5 (.630-.610)   | 3940.01600    |
|                      |               |                       |               | 16.5-16.0 (.650-.630) | 3932.01650    | 16.5-16.0 (.650-.630)   | 3940.01650    |
|                      |               |                       |               | 17.0-16.5 (.669-.650) | 3932.01700    | 17.0-16.5 (.669-.650)   | 3940.01700    |
|                      |               |                       |               | 17.5-17.0 (.689-.669) | 3932.01750    | 17.5-17.0 (.689-.669)   | 3940.01750    |
|                      |               |                       |               | 18.0-17.5 (.709-.689) | 3932.01800    | 18.0-17.5 (.709-.689)   | 3940.01800    |
|                      |               |                       |               | 18.5-18.0 (.728-.709) | 3932.01850    | 18.5-18.0 (.728-.709)   | 3940.01850    |
|                      |               |                       |               | 19.0-18.5 (.748-.728) | 3932.01900    | 19.0-18.5 (.748-.728)   | 3940.01900    |
|                      |               |                       |               | 19.5-19.0 (.768-.748) | 3932.01950    | 19.5-19.0 (.768-.748)   | 3940.01950    |
|                      |               |                       |               | 20.0-19.5 (.787-.768) | 3932.02000    | 20.0-19.5 (.787-.768)   | 3940.02000    |
|                      |               |                       |               |                       |               | 20.5-20.0 (.807-.787)   | 3940.02050    |
|                      |               |                       |               |                       |               | 21.0-20.5 (.827-.807)   | 3940.02100    |
|                      |               |                       |               |                       |               | 21.5-21.0 (.846-.827)   | 3940.02150    |
|                      |               |                       |               |                       |               | 22.0-21.5 (.866-.846)   | 3940.02200    |
|                      |               |                       |               |                       |               | 22.5-22.0 (.886-.866)   | 3940.02250    |
|                      |               |                       |               |                       |               | 23.0-22.5 (.906-.886)   | 3940.02300    |
|                      |               |                       |               |                       |               | 23.5-23.0 (.925-.906)   | 3940.02350    |
|                      |               |                       |               |                       |               | 24.0-23.5 (.945-.925)   | 3940.02400    |
|                      |               |                       |               |                       |               | 24.5-24.0 (.965-.945)   | 3940.02450    |
|                      |               |                       |               |                       |               | 25.0-24.5 (.984-.965)   | 3940.02500    |
|                      |               |                       |               |                       |               | 25.5-25.0 (1.004-.984)  | 3940.02550    |
|                      |               |                       |               |                       |               | 26.0-25.5 (1.024-1.004) | 3940.02600    |

E

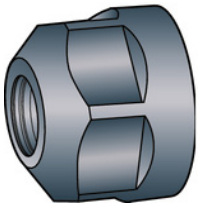
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G

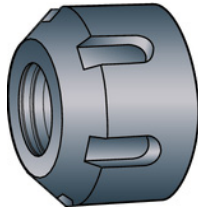
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G 140

## ER collet nuts for through-coolant



Size 16 and 20



Size 25, 32 and 40

| Collet size | Ordering code | Spare parts |             | Thread size |
|-------------|---------------|-------------|-------------|-------------|
|             |               | Wrench      | O-ring      |             |
| ER16        | 5533 051-01   | 5680 091-01 | 5641005-085 | M22 x 1.5   |
| ER20        | 5533 051-02   | 5680 091-02 | 5641005-086 | M25 x 1.5   |
| ER25        | 5533 051-03   | 5680 096-02 | 5641005-087 | M32 x 1.5   |
| ER32        | 5533 051-04   | 5680 096-03 | 5641005-088 | M40 x 1.5   |
| ER40        | 5533 051-05   | 5680 096-04 | 5641005-089 | M50 x 1.5   |

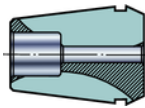
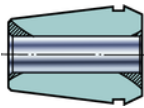
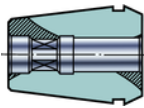
### Assembly instructions for sealing discs for through-coolant nuts

#### Assembly

1. Locate the smallest outside diameter on the disc.
2. Insert the small diameter into the centre of the coolant nut and apply even pressure until the disc is properly seated into the nut.

#### Removal

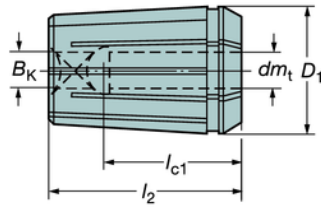
1. To remove the disc, simply press on the outside of the disc evenly until it snaps out.

| Max.tightening torques ER collet nuts   |                            |                    |                               |                        |                                     |                |           |            |               |            |               |     |
|---|----------------------------|--------------------|-------------------------------|------------------------|-------------------------------------|----------------|-----------|------------|---------------|------------|---------------|-----|
| Collet nut  | Collet size                | ER Counterbore     |                               |                        |                                     | ER Throughbore |           |            |               | ER Tapping |               |     |
|   |                            | $d_m$ mm           | Torque Nm                     | $d_m$ inch             | Torque ft-lbs                       | $d_m$ mm       | Torque Nm | $d_m$ inch | Torque ft-lbs | Torque Nm  | Torque ft-lbs |     |
|    | 5533 050-07                | ER11               | 1.0-2.5                       | 8                      | .039-.098                           | 5              | 3.0-5.0   | 24         | .118-.197     | 17         | 16            | 12  |
|   | 5533 050-06<br>5533 051-01 | ER16               | 1.0<br>1.5-3.5<br>4.0-4.5     | 8<br>24<br>24          | .039<br>.059-.138<br>.157-.177      | 5<br>17<br>17  | 5.0-10.0  | 56         | .197-.394     | 42         | 40            | 29  |
|   | 5533 050-08<br>5533 051-02 | ER20               | 1.0<br>1.5-6.5                | 16<br>32               | .039<br>.059-.256                   | 12<br>24       | 7.0-13.0  | 80         | .276-.512     | 59         | 32            | 24  |
|   | 5533 050-02<br>5533 051-03 | ER25               | 1.0-3.5<br>4.0-4.5<br>5.0-7.5 | 24<br>56<br>80         | .039-.138<br>.157-.177<br>.197-.295 | 17<br>41<br>59 | 8.0-16.0  | 104        | .315-.630     | 77         | 104           | 77  |
|  | 5533 050-03<br>5533 051-04 | ER32               | 2.0-2.5<br>3.0-7.5            | 24<br>136              | .079-.098<br>.118-.295              | 17<br>100      | 8.0-20.0  | 136        | .315-.787     | 100        | 136           | 100 |
|   | 5533 050-04<br>5533 051-05 | ER40               | 3.0-8.5                       | 176                    | .118-.335                           | 129            | 9.0-26.0  | 176        | .354-1.024    | 129        | 176           | 129 |
| 5533 050-05   | ER50                       | 6.0-10.0           | 240                           | .236-.394              | 177                                 | 12.0-          | 240       | .472-1.339 | 177           | 300        | 220           |     |
| 5533 065-02   | ER11                       | 1.0-2.5            | 8                             | .039-.098              | 5                                   | 3.0-5.0        | 16        | .118-.197  | 12            | 12         | 9             |     |
| 5533 065-03   | ER16                       | 1.0                | 16                            | .039                   | 12                                  | 5.0-10.0       | 24        | .197-.394  | 18            | 24         | 18            |     |
|   |                            | 1.5-3.5<br>4.0-4.5 | 24<br>24                      | .059-.138<br>.157-.177 | 17<br>17                            |                |           |            |               |            |               |     |
| 5533 065-01   | ER20                       | 1.0                | 16                            | .039                   | 17                                  | 7.0-13.0       | 28        | .276-.512  | 21            | 28         | 21            |     |
|   |                            | 1.5-6.5            | 32                            | .059-.256              | 24                                  |                |           |            |               |            |               |     |
|   | ER25                       | 1.0-3.5            | 24                            | .039-.138              | 17                                  | 8.0-16.0       | 33        | .315-.630  | 24            | 28         | 24            |     |
|   |                            | 4.0-7.5            | 56                            | .157-.295              | 41                                  |                |           |            |               |            |               |     |

# ER tapping collets

Compatible with DIN 6499-B

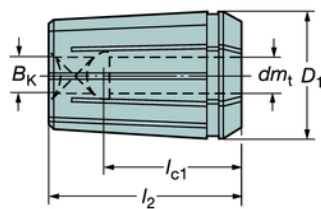
For metric standard taps



| Collet size | Dimensions, mm |       |
|-------------|----------------|-------|
|             | $D_1$          | $l_2$ |
| 11          | 11.3           | 18    |
| 20          | 20.8           | 31.5  |
| 25          | 25.8           | 34    |
| 40          | 40.8           | 46    |

| Collet tap size |            | Ordering code             |             |                     |             |                    |             |                    |             |           |          |
|-----------------|------------|---------------------------|-------------|---------------------|-------------|--------------------|-------------|--------------------|-------------|-----------|----------|
| DIN             | ISO        | Collet size 11            | $l_{c1}$ mm | Collet size 20      | $l_{c1}$ mm | Collet size 25     | $l_{c1}$ mm | Collet size 40     | $l_{c1}$ mm | $dm_t$ mm | $B_k$ mm |
| M1-M1.8         | M1-M2      | 393.14-11 D025X021        | 14          |                     |             |                    |             |                    |             | 2.5       | 2.0      |
| M2/M2.5         |            | <b>393.14-11 D028X021</b> | 12          |                     |             |                    |             |                    |             | 2.8       | 2.1      |
| M3/M5           |            | 393.14-11 D035X027        | 14          |                     |             |                    |             |                    |             | 3.5       | 2.7      |
| M3.5            |            | 393.14-11 D040X030        | 14          |                     |             |                    |             |                    |             | 4.0       | 3.0      |
|                 | M5/M4*     | 393.14-11 D040X0315       | 14          | 393.14-20 D040X0315 | 18          |                    |             | -                  |             | 4.0       | 3.15     |
| M4/M6           |            | 393.14-11 D045X034        | 14          | 393.14-20 D045X034  | 18          |                    |             | -                  |             | 4.5       | 3.4      |
| M5/M6           | M5*        | 393.14-11 D050X040        | 14          | 393.14-20 D050X040  | 18          |                    |             | -                  |             | 5.0       | 4.0      |
| M5/M6/M8        |            | 393.14-11 D060X049        | 14          | 393.14-20 D060X049  | 18          |                    |             | -                  |             | 6.0       | 4.9      |
|                 | M8/M6*     |                           |             | 393.14-20 D063X050  | 18          |                    |             | -                  |             | 6.3       | 5.0      |
|                 |            |                           |             | 393.14-20 D070X055  | 18          |                    |             | -                  |             | 7.0       | 5.5      |
| M7/M9/M10       |            |                           |             | 393.14-20 D080X063  | 22          | 393.14-25 D080X063 | 18          | -                  |             | 8.0       | 6.3      |
| M8/M10          | M10/M8*    |                           |             | 393.14-20 D090X071  | 22          | 393.14-25 D090X071 | 18          | -                  |             | 9.0       | 7.1      |
| M12             | M12        |                           |             | 393.14-20 D100X080  | 25          | 393.14-25 D100X080 | 18          | -                  |             | 10.0      | 8.0      |
|                 | M10*       |                           |             |                     |             |                    |             | -                  |             | 11.0      | 9.0      |
| M14             |            |                           |             |                     |             | 393.14-25 D110X090 | 18          | -                  |             | 11.2      | 9.0      |
|                 | M14        |                           |             |                     |             | 393.14-25 D112X090 | 18          | -                  |             | 11.2      | 9.0      |
| M16             |            |                           |             |                     |             | 393.14-25 D120X090 | 18          | 393.14-40 D120X090 | 25          | 12.0      | 9.0      |
|                 | M16        |                           |             |                     |             | 393.14-25 D125X100 | 22          | 393.14-40 D125X100 | 25          | 12.5      | 10.0     |
| M18             | M18/M20    |                           |             |                     |             | 393.14-25 D140X112 | 22          | 393.14-40 D140X112 | 25          | 14.0      | 11.2     |
| M20             |            |                           |             |                     |             | 393.14-25 D160X120 | 25          | -                  |             | 16.0      | 12.0     |
| M20             | M22        |                           |             |                     |             |                    |             | 393.14-40 D160X125 | 25          | 16.0      | 12.5     |
| M22/24          | M24        |                           |             |                     |             |                    |             | 393.14-40 D180X145 | 25          | 18.0      | 14.5     |
| M27             | M27/M28/30 |                           |             |                     |             |                    |             | 393.14-40 D200X160 | 28          | 20.0      | 16.0     |
| M30/M32         | M30        |                           |             |                     |             |                    |             | 393.14-40 D220X180 | 28          | 22.0      | 18.0     |

For US standard taps



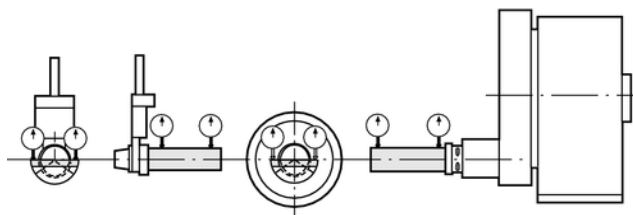
| Collet size | Dimensions, inch |       |
|-------------|------------------|-------|
|             | $D_1$            | $l_2$ |
| 11          | .445             | .709  |
| 20          | .819             | 1.240 |
| 25          | 1.016            | 1.339 |
| 40          | 1.606            | 1.811 |

| Tap size |        | Ordering code            |               |                         |               |                        |               |                       |               |             |            |
|----------|--------|--------------------------|---------------|-------------------------|---------------|------------------------|---------------|-----------------------|---------------|-------------|------------|
| Inch     | Number | Collet size 11           | $l_{c1}$ inch | Collet size 20          | $l_{c1}$ inch | Collet size 25         | $l_{c1}$ inch | Collet size 40        | $l_{c1}$ inch | $dm_t$ inch | $B_k$ inch |
|          | 0-6    | <b>A393.14-11-0-6 NO</b> | .551          |                         |               |                        |               |                       |               | .141        | .110       |
|          | 8      | <b>A393.14-11-8 NO</b>   | .551          | <b>A393.14-20-8 NO</b>  | .709          |                        |               |                       |               | .168        | .131       |
|          | 10     | <b>A393.14-11-10 NO</b>  | .551          | <b>A393.14-20-10 NO</b> | .709          |                        |               |                       |               | .194        | .152       |
|          | 12     |                          |               | <b>A393.14-20-12 NO</b> | .709          |                        |               |                       |               | .220        | .165       |
| 1/4      |        |                          |               | <b>A393.14-20-1/4</b>   | .709          | <b>A393.14-25-1/4</b>  | .709          |                       |               | .255        | .191       |
| 5/16     |        |                          |               | <b>A393.14-20-5/16</b>  | .866          | <b>A393.14-25-5/16</b> | .866          |                       |               | .318        | .238       |
| 3/8      |        |                          |               | <b>A393.14-20-3/8</b>   | .866          | <b>A393.14-25-3/8</b>  | .866          |                       |               | .381        | .286       |
| 7/16     |        |                          |               |                         |               | <b>A393.14-25-7/16</b> | .866          |                       |               | .323        | .242       |
| 1/2      |        |                          |               |                         |               | <b>A393.14-25-1/2</b>  | .866          |                       |               | .367        | .275       |
| 9/16     |        |                          |               |                         |               | <b>A393.14-25-9/16</b> | .984          |                       |               | .429        | .322       |
| 5/8      |        |                          |               |                         |               | <b>A393.14-25-5/8</b>  | .984          |                       |               | .480        | .360       |
| 3/4      |        |                          |               |                         |               | <b>A393.14-25-3/4</b>  | .984          |                       |               | .590        | .442       |
| 5/8      |        |                          |               |                         |               |                        |               | <b>A393.14-40-5/8</b> | .984          | .480        | .360       |
| 3/4      |        |                          |               |                         |               |                        |               | <b>A393.14-40-3/4</b> | .984          | .590        | .442       |
| 7/8      |        |                          |               |                         |               |                        |               | <b>A393.14-40-7/8</b> | .984          | .697        | .523       |
| 1        |        |                          |               |                         |               |                        |               | <b>A393.14-40-1</b>   | 1.102         | .800        | .600       |

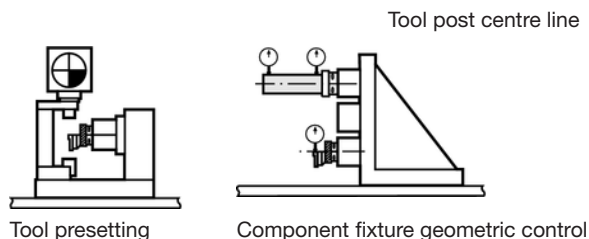
\* Shank diameter enlarged, both tap sizes have the same shaft diameter.

# Master setting gauges

Checking position for grippers      Spindle orientation



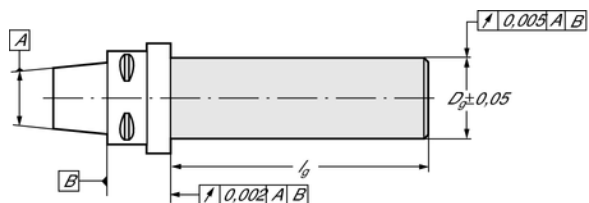
The Coromant Capto system guarantees exceptional, repeatable accuracy but this is of little use unless the various other components in the total machining process are correctly and accurately positioned. Coromant offers a range of axial and centre height master setting gauges for the various coupling sizes which are strongly recommended for setting important parameters such as:



- The centre line of the tool post
- Spindle orientation
- The position of the tool for grippers
- Tool centre height and cutting edge position ( $f_1$  and  $l_1$  dimensions). Gauges can be used in a pre-measuring fixture
- Component fixtures

## Axial gauge

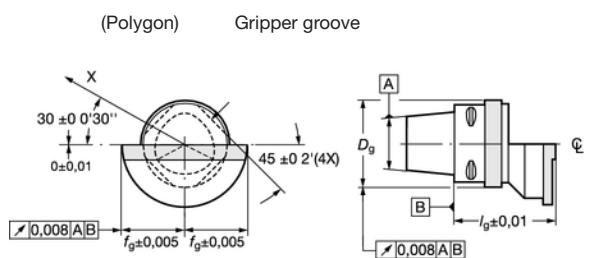
Master setting gauges MAS-11



| Coupling size | Ordering code | Dimensions, mm (inch) |              |
|---------------|---------------|-----------------------|--------------|
|               |               | $D_g$                 | $l_g$        |
| C3            | C3-MAS-11     | 25 (.98)              | 160 (6.30)   |
| C4            | C4-MAS-11     | 25 (.98)              | 160 (6.30)   |
| C5            | C5-MAS-11     | 32 (1.26)             | 210 (8.27)   |
| C6            | C6-MAS-11     | 40 (1.57)             | 315 (12.40)  |
| C8            | C8-MAS-11     | 40 (1.57)             | 315 (12.40)  |
| C10           | C10-MAS-11    | 60 (2.362)            | 420 (16.535) |

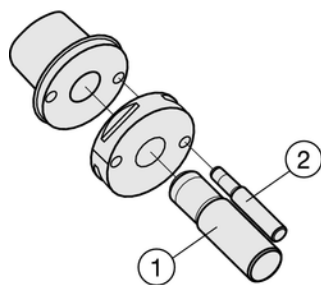
## Centre height gauge

Master setting gauges MAS-01



| Coupling size | Ordering code | Dimensions, mm (inch) |            |             |
|---------------|---------------|-----------------------|------------|-------------|
|               |               | $f_g$                 | $l_g$      | $D_g$       |
| C3            | C3-MAS-01     | 22 (.87)              | 40 (1.57)  | 34 (1.34)   |
| C4            | C4-MAS-01     | 27 (1.06)             | 50 (1.97)  | 42 (1.65)   |
| C5            | C5-MAS-01     | 35 (1.38)             | 60 (2.36)  | 52 (2.05)   |
| C6            | C6-MAS-01     | 45 (1.77)             | 65 (2.56)  | 65 (2.56)   |
| C8/C8X        | C8-MAS-01     | 55 (2.17)             | 80 (3.15)  | 82 (3.23)   |
| C10           | C10-MAS-01    | 65 (2.559)            | 10 (3.937) | 102 (4.016) |

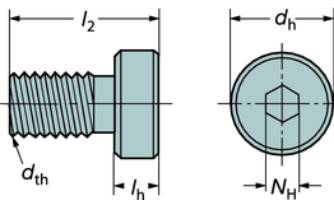
## Alignment tool



This tool is used to check the Automatic Tool Change positioning tolerance between the gripper arm and magazine and the clamping unit/spindle. If the tolerance is not achieved the result can be abnormal wear on cutting tool or Coromant Capto interface, wrong clamping, dropped tools, personal injuries etc. Instructions and tolerances are available in the box together with the tool.

| Coupling size | Ordering code | Spare parts |             |
|---------------|---------------|-------------|-------------|
|               |               | 1           | 2           |
|               |               | Gauge pin   | Gauge pin   |
| C4            | C4-AMT-01     | 5552 069-03 | 5552 069-01 |
| C5            | C5-AMT-01     | 5552 069-04 | 5552 069-01 |
| C6            | C6-AMT-01     | 5552 069-05 | 5552 069-02 |
| C8            | C8-AMT-01     | 5552 069-05 | 5552 069-02 |
| C8X           | C8X-AMT-01    | 5552 089-09 | 5552 069-08 |
| C10           | C10-AMT-01    | 5552 069-09 | 5552 069-08 |

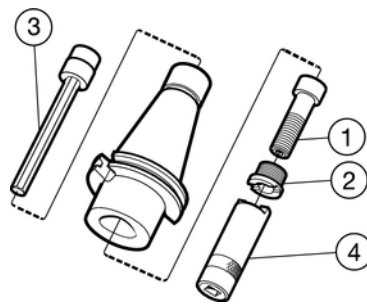
## Lockscrews for arbors

|  | Ordering code | Dimensions, inch |       |        |       |       |
|--|---------------|------------------|-------|--------|-------|-------|
|  |               | $d_{th}$         | $d_h$ | $l_2$  | $l_h$ | $N_H$ |
|  | 5512 065-07   | 3/8"-24          | 7/8   | 1-1/16 | 3/8   | 1/4   |
|  | 5512 065-02   | 3/8"-24          | 5/8   | 1-1/4  | 13/64 | 3/16  |
|  | 5512 065-08   | 1/2"-20          | 13/16 | 1-1/16 | 3/8   | 5/16  |
|  | 5512 065-05   | 1/2"-20          | 1-1/4 | 1-5/8  | 3/8   | 5/16  |
|  | 5512 065-03   | 1/2"-20          | 13/16 | 1-3/4  | 11/32 | 5/16  |
|  | 5512 065-09   | 5/8"-18          | 1-1/2 | 1-3/8  | 1/2   | 5/16  |
|  | 5512 065-06   | 5/8"-18          | 1-1/2 | 1-3/4  | 1/2   | 5/16  |
|  | 5512 065-10   | 3/4"-16          | 1-7/8 | 1-7/16 | 1/2   | 3/8   |
|  | 5512 065-04   | 3/4"-16          | 1-1/4 | 1-3/4  | 1/2   | 3/8   |



## Basic holders

- Cx-A390.00    Cx-390.00
- Cx-A390.45    Cx-390.55
- Cx-A390.455    Cx-390.58
- Cx-A390.545    Cx-390.140
- Cx-390.140HD
- Cx-390.272
- Cx-390.369
- Cx-390.540
- Cx-390.555
- Cx-390.558



|                                  | 1            | 2             | 3 <sup>1)</sup>    | 4 <sup>1)</sup>       |
|----------------------------------|--------------|---------------|--------------------|-----------------------|
|                                  | Centre screw | Retaining nut | Extension key (mm) | Retaining nut spanner |
| C3-A390.xx/C3-390.xx-            | 5512 063-10  | 5512 091-04   | 5680 015-05 (8.0)  | 5680 065-13           |
| C4-A390.xx-/C4-390.xx-           | 5512 063-07  | 5512 091-03   | 5680 015-05 (8.0)  | 5680 065-10           |
| C5-A390.xx-/C5-390.xx-           | 5512 063-08  | 5512 091-01   | 5680 015-01 (10.0) | 5680 065-11           |
| C6-A390.xx-/C6-390.xx-           | 5512 063-09  | 5512 091-02   | 5680 015-02 (14.0) | 5680 065-12           |
| C6-390.xx-40 075                 | 5512 063-13  | 5512 091-02   | 5680 015-01 (10.0) | 5680 065-12           |
| C6-390.xx-40 085                 | 5512 063-13  | 5512 091-02   | 5680 015-01 (10.0) | 5680 065-12           |
| C8-A390.xx/C8-390.xx-/C8X-390.xx | 5512 063-09  | 5512 091-02   | 5680 015-02 (14.0) | 5680 065-12           |
| C10-390.xx/C10-A390.xx5          | 5512 063-14  | 5512 091-02   | 5680 015-06 (17)   | 5680 065-14           |

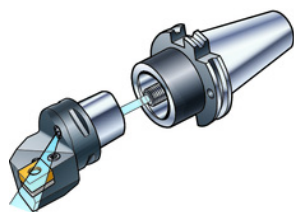
  

|                    | 1            | 2             | 3 <sup>1)</sup>    | 4 <sup>1)</sup>       |
|--------------------|--------------|---------------|--------------------|-----------------------|
|                    | Centre screw | Retaining nut | Extension key (mm) | Retaining nut spanner |
| C3-390.540-50 060  | 5512 063-10  | 5512 091-04   | 5680 015-05 (8.0)  | 5680 065-13           |
| C4-390.540-50 060  | 5512 063-07  | 5512 091-03   | 5680 015-05 (8.0)  | 5680 065-10           |
| C5-390.540-50 070  | 5512 063-08  | 5512 091-01   | 5680 015-01 (10.0) | 5680 065-11           |
| C6-390.540-50 100  | 5512 063-09  | 5512 091-02   | 5680 015-05 (14.0) | 5680 065-12           |
| C8-390.540-50 120  | 5512 063-09  | 5512 091-02   | 5680 015-02 (14.0) | 5680 065-12           |
| C3-A390.545-50 070 | 5512 063-10  | 5512 091-04   | 5680 015-05 (8.0)  | 5680 065-13           |
| C4-A390.545-50 070 | 5512 063-07  | 5512 091-03   | 5680 015-05 (8.0)  | 5680 065-10           |
| C5-A390.545-50 080 | 5512 063-08  | 5512 091-01   | 5680 015-01 (10.0) | 5680 065-11           |
| C6-A390.545-50 090 | 5512 063-09  | 5512 091-02   | 5680 015-05 (14.0) | 5680 065-12           |
| C8-A390.545-50 150 | 5512 063-09  | 5512 091-02   | 5680 015-02 (14.0) | 5680 065-12           |
| C4-A390.546-40 040 | 5512 067-02  | 5512 091-03   | 5680 015-05 (8.0)  | 5680 065-10           |
| C5-A390.546-40 050 | 5512 067-03  | 5512 091-01   | 5680 015-01 (10.0) | 5680 065-10           |
| C6-A390.546-50 050 | 5512 067-04  | 5512 091-02   | 5680 015-02 (14.0) | 5680 065-12           |
| C8-A390.546-50 070 | 5512 067-04  | 5512 091-02   | 5680 015-02 (14.0) | 5680 065-12           |
| C8-A390.547-50 070 | 5512 067-04  | 5512 091-02   | 5680 015-02 (14.0) | 5680 065-12           |
| C3-390.558-50 070  | 5512 063-10  | 5512 091-04   | 5680 015-05 (8.0)  | 5680 065-13           |
| C4-390.558-50 070  | 5512 063-07  | 5512 091-03   | 5680 015-05 (8.0)  | 5680 065-10           |
| C5-390.558-50 080  | 5512 063-08  | 5512 091-01   | 5680 015-05 (10.0) | 5680 065-11           |
| C6-390.558-50 100  | 5512 063-09  | 5512 091-02   | 5680 015-02 (14.0) | 5680 065-12           |
| C8-390.558-50 120  | 5512 063-09  | 5512 091-02   | 5680 015-05 (14.0) | 5680 065-12           |
| C5-390.562-40 050  | 5512 067-03  | 5512 091-01   | 5680 015-01 (10.0) | 5680 065-11           |
| C6-390.562-50 050  | 5512 067-04  | 5512 091-02   | 5680 015-02 (14.0) | 5680 065-12           |
| C8-390.562-50 070  | 5512 067-04  | 5512 091-02   | 5680 015-02 (14.0) | 5680 065-12           |
| C5-390.605-40 030  | 5512 067-03  | 5512 091-01   | 5680 015-01 (10.0) | 5680 065-11           |
| C6-390.605-50 040  | 5512 067-04  | 5512 091-02   | 5680 015-02 (14.0) | 5680 065-12           |
| C8-390.605-50 070  | 5512 067-04  | 5512 091-02   | 5680 015-02 (14.0) | 5680 065-12           |

<sup>1)</sup> Accessories, must be ordered separately

## Screw with radial hole for internal coolant for turning tools

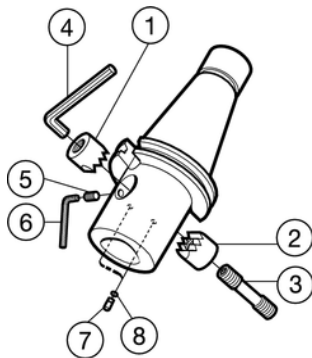
When using a turning tool prepared for internal coolant directly into a basic holder, the centre screw has to be replaced with one with a radial hole, to be able to transfer coolant through the cutting tool.



| Coupling size | Existing screw in basic holders | Exchangeable screw with radial hole |
|---------------|---------------------------------|-------------------------------------|
| C3            | 5512 063-10                     | 5512 067-01                         |
| C4            | 5512 063-07                     | 5512 067-02                         |
| C5            | 5512 063-08                     | 5512 067-03                         |
| C6            | 5512 063-09                     | 5512 067-04                         |
| C6/40 taper   | 5512 063-13                     | 5512 067-05                         |

## Basic holders Front clamp

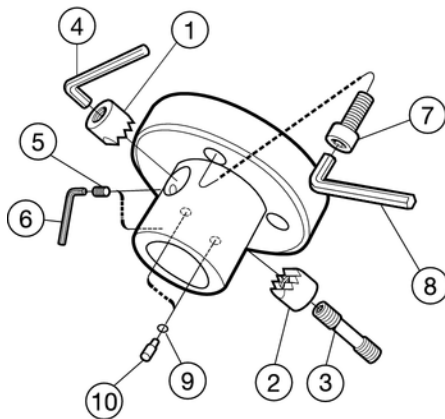
Cx-A390.0004  
 Cx-A390.4504  
 Cx-390.0004  
 Cx-390.5504  
 Cx-390.5804  
 Cx-390.14004



|                       | 1             | 2           | 3           | 4 <sup>1)</sup>    | 5           | 6               | 7           | 8           |
|-----------------------|---------------|-------------|-------------|--------------------|-------------|-----------------|-------------|-------------|
|                       | Gripping jaws |             |             |                    |             |                 |             |             |
|                       | left          | right       | Screw       | Key (mm)           | Screw       | Key (mm)        | Pin         | O-ring      |
| C5-A390.xx/C5-390.xx- | 5412 094-02   | 5412 094-01 | 5516 010-03 | 3021 013-050 (5.0) | 5514 060-01 | 174.1-870 (2.0) | 5552 065-01 | 5641 001-28 |
| C6-A390.xx/C6-390.xx- | 5412 094-04   | 5412 094-03 | 5516 010-04 | 3021 013-050 (5.0) | 5514 060-01 | 174.1-870 (2.0) | 5552 065-01 | 5641 001-28 |
| C8-A390.xx/C8-390.xx- | 5412 094-06   | 5412 094-05 | 5516 013-01 | 3021 013-070 (7.0) | 5514 060-02 | 174.1-864 (3.0) | 5552 065-02 | 5641 001-11 |

<sup>1)</sup> Accessories, must be ordered separately

### Cx-390.34704



|                     | 1             | 2           | 3           | 4 <sup>1)</sup>    | 5           | 6 <sup>1)</sup> |
|---------------------|---------------|-------------|-------------|--------------------|-------------|-----------------|
|                     | Gripping jaws |             |             |                    |             |                 |
|                     | left          | right       | Screw       | Key (mm)           | Screw       | Key (mm)        |
| C5-390.34704-xx xxx | 5412 094-02   | 5412 094-01 | 5516 010-03 | 3021 013-050 (5.0) | 5514 060-01 | 174.1-870 (2.0) |
| C6-390.34704-xx xxx | 5412 094-04   | 5412 094-03 | 5516 010-04 | 3021 013-050 (5.0) | 5514 060-01 | 174.1-870 (2.0) |
| C8-390.34704-xx xxx | 5412 094-06   | 5412 094-05 | 5516 013-01 | 3021 013-070 (7.0) | 5514 060-02 | 174.1-864 (3.0) |

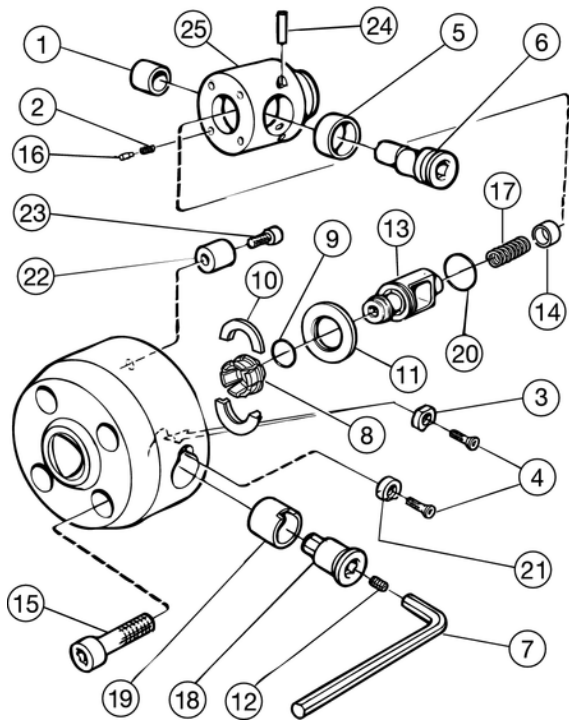
  

|                     | 7             | 8 <sup>1)</sup>     | 9           | 10          |
|---------------------|---------------|---------------------|-------------|-------------|
|                     | Screw         | Key (mm)            | O-ring      | Pin         |
| C5-390.34704-xx xxx | 10-1353-21178 | 3021 010-080 (8.0)  | 5641 001-28 | 5552 065-01 |
| C6-390.34704-xx xxx | 3212 020-562  | 3021 010-120 (12.0) | 5641 001-28 | 5552 065-01 |
| C8-390.34704-xx xxx | 3212 020-562  | 3021 010-120 (12.0) | 5641 001-11 | 5552 065-02 |

<sup>1)</sup> Accessories, must be ordered separately

# Basic holders Camshaft clamping

Cx-390.34705

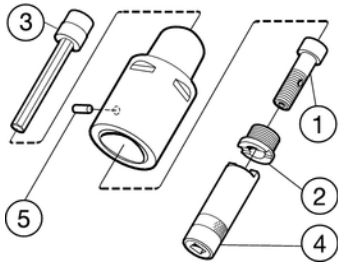


|                     |                |                          |                    |               |               |              |                     |
|---------------------|----------------|--------------------------|--------------------|---------------|---------------|--------------|---------------------|
|                     | 1              | 2                        | 3                  | 4             | 5             | 6            | 7 <sup>1)</sup>     |
|                     | Plain bearing  | Compression spring (4 x) | Locking washer     | Screw         | Plain bearing | Cam shaft    | Key (mm)            |
| C3-390.34705-40 060 | 3823 010-101   | 5561 001-37              | 5541 030-06        | 416.1-834     | 5638 022-01   | 5333 025-01  | 3021 013-080 (8.0)  |
| C4-390.34705-40 070 | 3823 010-123   | 5561 001-36              | -                  | 416.1-834     | 5638 022-01   | 5333 025-02  | 3021 013-100 (10.0) |
|                     | 8              | 9                        | 10                 | 11            | 12            | 13           | 14                  |
|                     | Segment (6 x)  | O-ring                   | Holder ring (2 x)  | Outer ring    | Screw         | Drawbar      | Plain bearing       |
| C3-390.34705-40 060 | 5549 120-08    | 5641 005-01              | 5546 001-08        | 5541 025-01   | 3214 010-355  | 5461 100-08  | 5638 023-02         |
| C4-390.34705-40 070 | 5549 120-06    | 5641 005-05              | 5546 001-06        | 5541 025-06   | 3214 010-355  | 5461 100-06  | 5638 023-02         |
|                     | 15             | 16                       | 17                 | 18            | 19            | 20           |                     |
|                     | Screw          | Pin (4 x)                | Compression spring | Key extension | Plain bearing | O-ring       |                     |
| C3-390.34705-40 060 | 3212 010-518   | 5552 005-01              | 5546 001-41        | 5680 038-02   | 3823 011-182  | 3671 010-126 |                     |
| C4-390.34705-40 070 | 3212 010-520   | -                        | 5561 001-42        | 5680 038-01   | 3823 011-205  | 3671 010-127 |                     |
|                     | 21             | 22                       | 23                 | 24            | 25            |              |                     |
|                     | Locking washer | Driving key              | Screw              | Pin           | Housing       |              |                     |
| C3-390.34705-40 060 | 5541 030-01    | 5635 012-01              | 3212 010-309       | -             | 5251 030-02   |              |                     |
| C4-390.34705-40 070 | 5541 030-02    | 5635 012-01              | 3212 010-309       | 3111 020-511  | 5251 030-01   |              |                     |

1) Accessories, must be ordered separately

## Extension/reduction adaptors

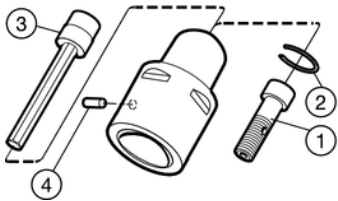
Cx-391.01A/ Cx-391.01HD  
Cx-391.02/ Cx-391.02HD



|                    | 1            | 2              | 3 <sup>1)</sup>    | 4 <sup>1)</sup> | 5            |
|--------------------|--------------|----------------|--------------------|-----------------|--------------|
|                    | Centre screw | Retaining ring | Extension key (mm) | Key             | Pin          |
| C3-391.01-32 xxxA  | 5512 067-01  | 5512 091-04    | 5680 015-05 (8.0)  | 5680 065-13     | 3113 020-304 |
| C4-391.01-40 xxxA  | 5512 067-02  | 5512 091-03    | 5680 015-05 (8.0)  | 5680 065-10     | 3113 020-355 |
| C5-391.01-50 xxxA  | 5512 067-03  | 5512 091-01    | 5680 015-01 (10.0) | 5680 065-11     | 3113 020-406 |
| C6-391.01-63 xxxA  | 5512 067-04  | 5512 091-02    | 5680 015-02 (14.0) | 5680 065-12     | 3113 020-457 |
| C8-391.01-80 xxxA  | 5512 067-04  | 5512 091-02    | 5680 015-02 (14.0) | 5680 065-12     | 3113 020-509 |
| C8x-391.01-100 xxx | 5512 067-04  | 5512 091-02    | 5680 015-02 (14.0) | 5680 065-12     | 3113 020-509 |
| C4-391.02-32 055A  | 5512 067-01  | 5512 091-04    | 5680 015-05 (8.0)  | 5680 065-13     | 3113 020-304 |
| C4-391.02-32 070A  | 5512 067-01  | 5512 091-04    | 5680 015-05 (8.0)  | 5680 065-13     | 3113 020-304 |
| C5-391.02-32 060A  | 5512 067-01  | 5512 091-04    | 5680 015-05 (8.0)  | 5680 065-13     | 3113 020-304 |
| C5-391.02-40 065A  | 5512 067-02  | 5512 091-03    | 5680 015-05 (8.0)  | 5680 065-10     | 3113 020-355 |
| C5-391.02-40 085A  | 5512 067-02  | 5512 091-03    | 5680 015-05 (8.0)  | 5680 065-10     | 3113 020-355 |
| C6-391.02-32 070A  | 5512 067-01  | 5512 091-04    | 5680 015-05 (8.0)  | 5680 065-13     | 3113 020-304 |
| C6-391.02-40 080A  | 5512 067-02  | 5512 091-03    | 5680 015-05 (8.0)  | 5680 065-10     | 3113 020-355 |
| C6-391.02-50 080A  | 5512 067-03  | 5512 091-01    | 5680 015-01 (10.0) | 5680 065-11     | 3113 020-406 |
| C6-391.02-50 110A  | 5512 067-03  | 5512 091-01    | 5680 015-01 (10.0) | 5680 065-11     | 3113 020-406 |
| C8-391.02-32 060A  | 5512 067-01  | 5512 091-04    | 5680 015-05 (8.0)  | 5680 065-13     | 3113 020-304 |
| C8-391.02-40 070A  | 5512 067-02  | 5512 091-03    | 5680 015-05 (8.0)  | 5680 065-10     | 3113 020-355 |
| C8-391.02-50 080A  | 5512 067-03  | 5512 091-01    | 5680 015-01 (10.0) | 5680 065-11     | 3113 020-406 |
| C8-391.02-63 080A  | 5512 067-04  | 5512 091-02    | 5680 015-02 (14.0) | 5680 065-12     | 3113 020-457 |
| C8-391.02-63 120A  | 5512 067-04  | 5512 091-02    | 5680 015-02 (14.0) | 5680 065-12     | 3113 020-457 |
| C8X-391.02-63 080  | 5512 067-04  | 5512 091-02    | 5680 015-02 (14.0) | 5680 065-12     | 3113 020-457 |
| C8X-391.02-80 100  | 5512 067-04  | 5512 091-02    | 5680 015-02 (14.0) | 5680 065-12     | 3113 020-509 |
| C8X-391.02-80 150  | 5512 067-04  | 5512 091-02    | 5680 015-02 (14.0) | 5680 065-12     | 3113 020-509 |

<sup>1)</sup> Accessories, must be ordered separately

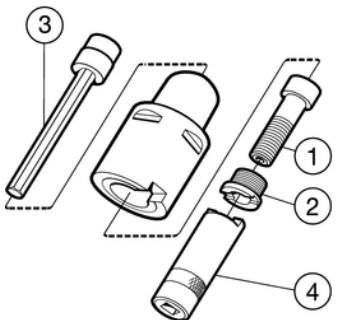
Short version  
Cx-391.01/ Cx-391.02



|                   | 1            | 2              | 3 <sup>1)</sup>    | 4            |
|-------------------|--------------|----------------|--------------------|--------------|
|                   | Centre screw | Retaining ring | Extension key (mm) | Pin          |
| C3-391.01-32 035  | 5512 068-01  | 5545 040-02    | 5680 015-05 ( 8.0) | 3113 020-304 |
| C4-391.01-40 040  | 5512 068-02  | 5545 040-03    | 5680 015-05 ( 8.0) | 3113 020-355 |
| C5-391.01-50 050  | 5512 068-03  | 5545 040-07    | 5680 015-05 ( 8.0) | 3113 020-406 |
| C6-391.01-63 060  | 5512 068-04  | 5545 040-08    | 5680 015-02 (14.0) | 3113 020-457 |
| C8-391.01-80 065  | 5512 068-05  | 5545 040-08    | 5680 015-02 (14.0) | 3113 020-509 |
| C5-391.02-32 033  | 5512 068-01  | 5545 040-02    | 5680 015-05 ( 8.0) | -            |
| C5-391.02-40 040  | 5512 068-06  | 5545 040-07    | 5680 015-05 ( 8.0) | -            |
| C6-391.02-32 032  | 5512 068-01  | 5545 040-02    | 5680 015-05 ( 8.0) | -            |
| C6-391.02-40 040  | 5512 068-02  | 5545 040-03    | 5680 015-05 ( 8.0) | -            |
| C6-391.02-50 050  | 5512 068-07  | 5545 040-08    | 5680 015-01 (10.0) | -            |
| C8-391.02-50 045  | 5512 068-08  | 5545 040-08    | 5680 015-01 (10.0) | -            |
| C8-391.02-63 055  | 5512 068-05  | 5545 040-08    | 5680 015-02 (14.0) | -            |
| C8X-391.02-63 055 | 5512 068-05  | 5545 040-08    | 5680 015-02 (14.0) | -            |
| C8X-391.02-80 065 | 5512 068-05  | 5545 040-08    | 5680 015-02 (14.0) | -            |

<sup>1)</sup> Accessories, must be ordered separately

Coromant Capto adaptor for  
Varilock  
Cx-391.01-Vxx



|                   | 1            | 2             | 3 <sup>1)</sup>     | 4 <sup>1)</sup>       |
|-------------------|--------------|---------------|---------------------|-----------------------|
|                   | Centre screw | Retaining nut | Extension key (mm)  | Retaining nut spanner |
| C5-391.01-V50 060 | 5512 063-01  | 5512 091-01   | 5680 015-01 ( 10.0) | 5680 065-01           |
| C6-391.01-V63 080 | 5512 063-02  | 5512 091-02   | 5680 015-02 ( 14.0) | 5680 065-02           |
| C8-391.01-V80 065 | 5512 063-03  | 5512 091-02   | 5680 015-02 ( 14.0) | 5680 065-02           |

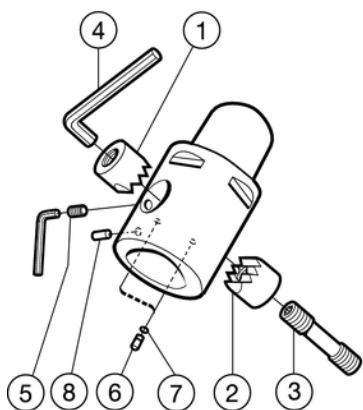
<sup>1)</sup> Accessories, must be ordered separately

## Extension/reduction adaptors

### Front clamp

Cx-391.0204

Cx-391.04

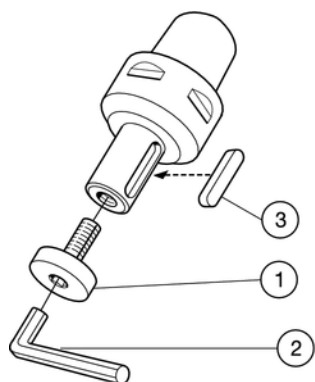


|                    | 1                    | 2           | 3           | 4 <sup>1)</sup>    | 5           | 6           | 7           | 8            |
|--------------------|----------------------|-------------|-------------|--------------------|-------------|-------------|-------------|--------------|
|                    | Gripping jaw<br>left | right       | Screw       | Key (mm)           | Stop screw  | Pin         | O-ring      | Pin          |
| Cx-391.0204-50 xxx | 5412 094-02          | 5412 094-01 | 5516 010-03 | 3021 013-050 (5.0) | 5514 060-01 | 5552 065-01 | 5641 001-28 | 3113 020-406 |
| Cx-391.0204-63 xxx | 5412 094-04          | 5412 094-03 | 5516 010-04 | 3021 013-050 (5.0) | 5514 060-01 | 5552 065-01 | 5641 001-28 | 3113 020-457 |
| Cx-391.04-50 xxx   | 5412 094-02          | 5412 094-01 | 5516 010-03 | 3021 013-050 (5.0) | 5514 060-01 | 5552 065-01 | 5641 001-28 | 3113 020-406 |
| Cx-391.04-63 xxx   | 5412 094-04          | 5412 094-03 | 5516 010-04 | 3021 013-050 (5.0) | 5514 060-01 | 5552 065-01 | 5641 001-28 | 3113 020-457 |
| Cx-391.04-80 xxx   | 5412 094-06          | 5412 094-05 | 5516 013-01 | 3021 013-070 (7.0) | 5514 060-02 | 5552 065-02 | 5641 001-11 | 3113 020-509 |

1) Accessories, must be ordered separately

### Adaptors for side and face mills

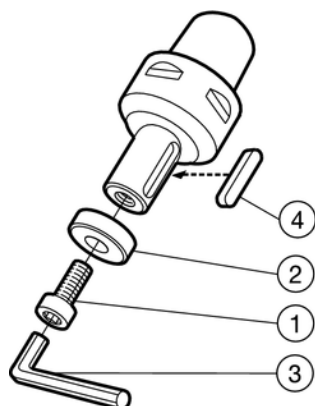
Cx-A391.10/Cx-A391.10HD



| Inch pilot        | 1            | 2 <sup>1)</sup>        | 3            |
|-------------------|--------------|------------------------|--------------|
|                   | Screw        | Key                    | Parallel key |
| Cx-A391.10-25 xxx | 5512 065-05  | 3021 011-516 (5/16)    | SK 414       |
| Cx-A391.10-31 xxx | 5512 065-06  | 3021 011-516 (5/16)    | SK 517       |
| Cx-A391.10-38 xxx | 5512 065-10  | 3021 011-380 (3/8)     | SK 617       |
| Cx-A391.10-50 xxx | 5512 065-11  | 3021 011-916 (9/16)    | SK 817       |
| Cx-A391.10-63 xxx | 3212 020-666 | 3021 010-170 (17.0 mm) | 5631 065-01  |

1) Accessories, must be ordered separately

Cx-391.10/ Cx-391.10HD



| Metric pilot     | 1            | 2           | 3 <sup>1)</sup>     | 4            |
|------------------|--------------|-------------|---------------------|--------------|
|                  | Screw        | Washer      | Key (mm)            | Parallel key |
| Cx-391.10-16 xxx | 3212 020-411 | 5541 015-01 | 3021 010-060 (6.0)  | 3191 010-461 |
| Cx-391.10-22 xxx | 3212 020-461 | 5541 015-02 | 3021 010-080 (8.0)  | 3191 010-564 |
| Cx-391.10-27 xxx | 3212 020-512 | 5541 015-03 | 3021 010-100 (10.0) | 5632 010-01  |
| Cx-391.10-32 xxx | 3212 020-563 | 5541 015-04 | 3021 010-120 (12.0) | 3191 010-621 |
| Cx-391.10-40 xxx | 3212 020-614 | 5541 015-05 | 3021 010-140 (14.0) | 3191 010-671 |
| Cx-391.10-50 xxx | 3212 020-666 | 5541 015-06 | 3021 010-170 (17.0) | 3191 010-721 |
| Cx-391.10-60 xxx | 3212 020-666 | 5541 015-08 | 3021 010-170 (17.0) | 3191 010-771 |

1) Accessories, must be ordered separately

D  
E  
F  
G  
J

ROT - ENG

TOOLING SYSTEMS Spare parts - Coromant Capto® - Rotating

# Adaptor for face mills and square shoulder face mills

With coolant through arbor

Cx-391.05C  
Cx-A391.05C

Round driving keys:  
Cx-391.05C

Cx-A391.05C

Cx-391.05C-16 xxx  
Driving ring

Metric pilot

|                    | 1              | 2           | 3 <sup>1)</sup>     | 4            | 5           | 6            | 7 <sup>1)</sup>    |
|--------------------|----------------|-------------|---------------------|--------------|-------------|--------------|--------------------|
|                    | Mounting screw | Washer      | Key (mm)            | Driving ring | Driving key | Screw        | Key (mm)           |
| C3-391.05C-16 030  | 3212 020-414   | 5541 015-01 | 3021 010-060 (6.0)  | 3193 010-160 | -           | -            | -                  |
| C4-391.05C-16 032  | 3212 020-414   | 5541 015-01 | 3021 010-060 (6.0)  | 3193 010-160 | -           | -            | -                  |
| C4-391.05C-22 025  | 3212 020-464   | 5541 015-02 | 3021 010-080 (8.0)  | -            | 5631 011-01 | 3213 010-258 | 3021 010-030 (3.0) |
| C5-391.05C-16 035  | 3212 020-414   | 5541 015-01 | 3021 010-060 (6.0)  | 3193 010-160 | -           | -            | -                  |
| C5-391.05C-22 025  | 3212 020-464   | 5541 015-02 | 3021 010-080 (8.0)  | -            | 5635 025-01 | 3212 010-258 | 3021 010-030 (3.0) |
| C5-391.05C-27 025  | 3212 020-514   | 5541 015-03 | 3021 010-100 (10.0) | -            | 5635 025-02 | 3212 010-308 | 3021 010-040 (4.0) |
| C5-391.05C-32 040  | 3212 020-564   | 5541 015-04 | 3021 010-120 (12.0) | -            | 5631 010-04 | 3212 010-308 | 3021 010-040 (4.0) |
| C6-391.05C-16 040  | 3212 020-414   | 5541 015-01 | 3021 010-060 (6.0)  | 3193 010-160 | -           | -            | -                  |
| C6-391.05C-22 025  | 3212 020-464   | 5541 015-02 | 3021 010-080 (8.0)  | -            | 5635 025-01 | 3212 010-258 | 3021 010-030 (3.0) |
| C6-391.05C-27 025  | 3212 020-514   | 5541 015-03 | 3021 010-100 (10.0) | -            | 5635 025-02 | 3212 010-308 | 3021 010-040 (4.0) |
| C6-391.05C-32 025  | 3212 020-564   | 5541 015-04 | 3021 010-120 (12.0) | -            | 5635 025-03 | 3212 010-358 | 3021 010-050 (5.0) |
| C6-391.05C-40 040  | 3212 020-614   | 5541 015-05 | 3021 010-140 (14.0) | -            | 5631 010-02 | 3212 010-358 | 3021 010-050 (5.0) |
| C8-391.05C-16 050  | 3212 020-414   | 5541 015-01 | 3021 010-060 (6.0)  | 3193 010-160 | -           | -            | -                  |
| C8-391.05C-22 030  | 3212 020-464   | 5541 015-02 | 3021 010-080 (8.0)  | -            | 5635 025-01 | 3212 010-258 | 3021 010-030 (3.0) |
| C8-391.05C-27 030  | 3212 020-514   | 5541 015-03 | 3021 010-100 (10.0) | -            | 5635 025-02 | 3212 010-308 | 3021 010-040 (4.0) |
| C8-391.05C-32 030  | 3212 020-564   | 5541 015-04 | 3021 010-120 (12.0) | -            | 5635 025-03 | 3212 010-358 | 3021 010-050 (5.0) |
| C8-391.05C-40 030  | 3212 020-614   | 5541 015-05 | 3021 010-140 (14.0) | -            | 5635 025-04 | 3212 020-409 | 3021 010-060 (6.0) |
| C10-391.05C-22 075 | 3212 020-454   | 5541 015-02 | 3021 010-080 (8.0)  | -            | 5631 012-01 | 3212 010-258 | 3021 010-030(3.0)  |
| C10-391.05C-27 075 | 3212 020-514   | 5541 015-03 | 3021 010-100 (10.0) | -            | 5631 010-01 | 3212 010-258 | 3021 010-030(3.0)  |
| C10-391.05C-32 075 | 3212 020-564   | 5541 015-04 | 3021 010-120 (12.0) | -            | 5631 010-01 | 3212 010-308 | 3021 010-040(4.0)  |
| C10-391.05C-40 040 | 3212 020-614   | 5541 015-05 | 3021 010-140 (14.0) | -            | 5635 025-04 | 3212 020-409 | 3021 010-060 (6.0) |

<sup>1)</sup> Accessories, must be ordered separately

Inch pilot

|                     | 1              | 3 <sup>1)</sup>            | 1              | 3 <sup>1)</sup> | 5           | 6                | 7 <sup>1)</sup>    |
|---------------------|----------------|----------------------------|----------------|-----------------|-------------|------------------|--------------------|
|                     | Mounting screw | Key                        | Mounting screw | Key             | Drive key   | Screw            | Key                |
| C3-A391.05C-19 030  | 5512 065-07    | 3021 011-140               | 5512 065-02    | 3021 011-316    | 5631 013-01 | 8-32 x 3/8M      | (9/64)             |
| C4-A391.05C-19 025  | 5512 065-07    | 3021 011-140               | 5512 065-02    | 3021 011-316    | 5635 025-07 | 3212 010-207     | 3021 010-025 (2.5) |
| C4-A391.05C-25 035  | 5512 065-05    | 3021 011-516 <sup>2)</sup> | 5512 065-03    | 3021 011-516    | 5631 013-02 | 10-32 x 3/8      | 3021 011-532       |
| C5-A391.05C-19 025  | 5512 065-07    | 3021 011-140               | 5512 065-02    | 3021 011-316    | 5635 025-07 | 3212 010-207     | 3021 010-025 (2.5) |
| C5-A391.05C-25 025  | 5512 065-05    | 3021 011-516 <sup>2)</sup> | 5512 065-03    | 3021 011-516    | 5635 025-06 | 3212 010-257     | 3021 010-030 (3.0) |
| C5-A391.05C-31 040  | 5512 065-06    | 3021 011-516 <sup>2)</sup> | -              | -               | 5631 010-06 | 10-32 x 3/8      | 3021 011-532       |
| C5-A391.05C-38 045  | 5512 065-10    | 3021 011-380               | 5512 065-04    | 3021 011-380    | 5631 013-04 | 1/4-20 x 3/4     | 3021 011-316       |
| C6-A391.05C-19 030  | 5512 065-07    | 3021 011-140               | 5512 065-02    | 3021 011-316    | 5635 025-07 | 3212 010-207     | 3021 010-025 (2.5) |
| C6-A391.05C-25 030  | 5512 065-05    | 3021 011-516 <sup>2)</sup> | 5512 065-03    | 3021 011-516    | 5635 025-06 | 3212 010-257     | 3021 010-030 (3.0) |
| C6-A391.05C-31 030  | 5512 065-06    | 3021 011-516 <sup>2)</sup> | -              | -               | 5635 025-08 | 3212 010-308     | 3021 010-040 (4.0) |
| C6-A391.05C-38 045  | 5512 065-10    | 3021 011-380               | 5512 065-04    | 3021 011-380    | 5631 013-04 | 1/4-20 x 3/4     | 3021 011-316       |
| C8-A391.05C-19 030  | 5512 065-07    | 3021 011-140               | 5512 065-02    | 3021 011-316    | 5635 025-07 | 3212 010-207     | 3021 010-025 (2.5) |
| C8-A391.05C-25 030  | 5512 065-05    | 3021 011-516 <sup>2)</sup> | 5512 065-03    | 3021 011-516    | 5635 025-06 | 3212 010-257     | 3021 010-030 (3.0) |
| C8-A391.05C-31 030  | 5512 065-06    | 3021 011-516 <sup>2)</sup> | -              | -               | 5635 025-08 | 3212 010-308     | 3021 010-040 (4.0) |
| C8-A391.05C-38 030  | 5512 065-10    | 3021 011-380               | 5512 065-04    | 3021 011-380    | 5635 025-05 | 3212 010-409     | 3021 010-060 (6.0) |
| C10-A391.05C-19 075 | 5512 065-07    | 3021 011-140               | 5512 065-02    | 3021 011-316    | 5631 013-03 | 8-32x3/8M (9/64) | -                  |
| C10-A391.05C-25 075 | 5512 065-05    | 3021 011-516               | 5512 065-03    | 3021 011-516    | 5631 013-02 | 10-32x3/8        | 3021 011-532       |
| C10-A391.05C-38 040 | 5512 065-10    | 3021 011-380               | 5512 065-04    | 3021 011-380    | 5635 025-05 | 3212 010-409     | 3021 010-060 (6.0) |

<sup>1)</sup> Accessories, must be ordered separately

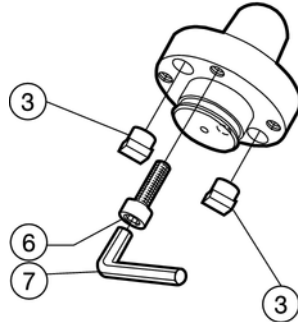
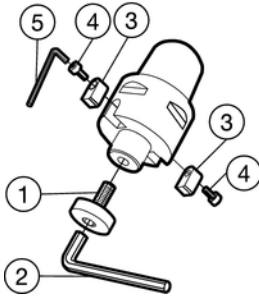
<sup>2)</sup> ANSI - Code = DIN 911-5/16 ZDLL

G 150

## Adaptors for face mills, inch pilot

Cx-A391.05  
Cx-A391.05HD

C8-A391.05- 50 xxx  
C8-A391.05- 63 xxx



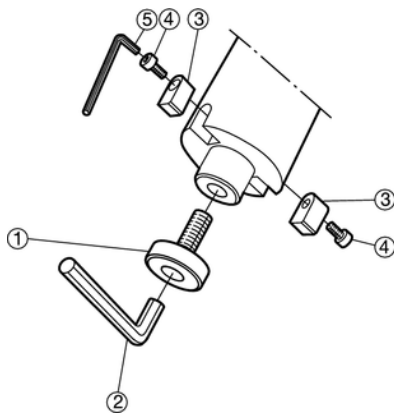
|                      | 1              | 2 <sup>1)</sup>            | 3           | 4            | 5 <sup>1)</sup> | 6            | 7 <sup>1)</sup> |
|----------------------|----------------|----------------------------|-------------|--------------|-----------------|--------------|-----------------|
|                      | Mounting screw | Key                        | Drive key   | Screw        | Key             | Screw        | Key             |
| C3-A391.05- 19 xxx   | 5512 065-07    | 3021 011-140               | 5631 013-01 | 8-32 x 3/8M  | (9/64)          | -            | -               |
| C4-A391.05- 19 xxx   | 5512 065-07    | 3021 011-140               | 5631 013-01 | 8-32 x 3/8M  | (9/64)          | -            | -               |
| C4-A391.05- 25 xxx   | 5512 065-05    | 3021 011-516 <sup>2)</sup> | 5631 013-02 | 10-32 x 3/8  | (5/32)          | -            | -               |
| C5-A391.05- 19 xxx   | 5512 065-07    | 3021 011-140               | 5631 013-01 | 8-32 x 3/8M  | (9/64)          | -            | -               |
| C5-A391.05- 25 xxx   | 5512 065-05    | 3021 011-516 <sup>2)</sup> | 5631 013-02 | 10-32 x 3/8  | (5/32)          | -            | -               |
| C5-A391.05- 31 xxx   | 5512 065-06    | 3021 011-516 <sup>2)</sup> | 5631 010-06 | 10-32 x 3/8  | (5/32)          | -            | -               |
| C5-A391.05- 38 xxx   | 5512 065-10    | 3021 011-380               | 5631 013-04 | 1/4-20 x 3/4 | (3/16)          | -            | -               |
| C6-A391.05- 19 xxx   | 5512 065-07    | 3021 011-140               | 5631 013-01 | 8-32 x 3/8M  | (9/64)          | -            | -               |
| C6-A391.05- 25 xxx   | 5512 065-05    | 3021 011-516 <sup>2)</sup> | 5631 013-02 | 10-32 x 3/8  | (5/32)          | -            | -               |
| C6-A391.05- 31 xxx   | 5512 065-06    | 3021 011-516 <sup>2)</sup> | 5631 010-06 | 10-32 x 3/8  | (5/32)          | -            | -               |
| C6-A391.05- 38 xxx   | 5512 065-10    | 3021 011-380               | 5631 013-04 | 1/4-20 x 3/4 | (3/16)          | -            | -               |
| C8-A391.05- 19 xxx   | 5512 065-07    | 3021 011-140               | 5631 013-01 | 8-32 x 3/8M  | (9/64)          | -            | -               |
| C8-A391.05- 25 xxx   | 5512 065-05    | 3021 011-516 <sup>2)</sup> | 5631 013-02 | 10-32 x 3/8  | (5/32)          | -            | -               |
| C8-A391.05- 31 xxx   | 5512 065-06    | 3021 011-516 <sup>2)</sup> | 5631 010-06 | 10-32 x 3/8  | (5/32)          | -            | -               |
| C8-A391.05- 38 xxx   | 5512 065-10    | 3021 011-380               | 5631 013-04 | 1/4-20 x 3/4 | (3/16)          | -            | -               |
| C8-A391.05- 50 xxx   | -              | -                          | 5631 060-01 | -            | -               | 3212 031-761 | (1/2")          |
| C8-A391.05- 63 xxx   | -              | -                          | 5631 060-01 | -            | -               | 3212 031-761 | (1/2")          |
| C8X-A391.05- 63 070  | -              | -                          | 5631 060-01 | -            | -               | 3212 031-761 | (1/2")          |
| C8-A391.05HD- 63 xxx | -              | -                          | 5631 060-01 | -            | -               | 3212 031-761 | (1/2")          |

1) Accessories, must be ordered separately  
2) ANSI - Code = DIN 911-5/16 ZDLL

## Dampened adaptor for face mills and square shoulder face mills, inch pilot

With coolant through arbor

Cx-A391.06



|                    | 1 <sup>1)</sup> | 2 <sup>1)</sup> | 3           | 4            | 5 <sup>1)</sup> |
|--------------------|-----------------|-----------------|-------------|--------------|-----------------|
|                    | Screw           | Key             | Drive key   | Screw        | Key             |
| Cx-A391.06- 19 xxx | 5512 065-02     | 3021 011-316    | 5631 013-01 | 8-32 x 3/8M  | (9/64)          |
| Cx-A391.06- 25 xxx | 5512 065-08     | 3021 011-352    | 5631 013-02 | 10-32 x 3/8  | (5/32)          |
| Cx-A391.06- 38 xxx | 5512 065-04     | 3021 011-380    | 5631 013-04 | 1/4-20 x 3/4 | (3/16)          |

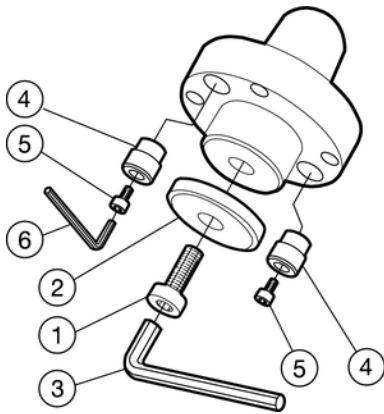
### Arbor mounting screws with coolant hole

| Arbor size         | Screw       | Key                         |
|--------------------|-------------|-----------------------------|
| <b>Inch</b>        |             |                             |
| .750               | 5512 074-01 | (3/8"-24 UNF)               |
| .750 <sup>1)</sup> | 5512 074-03 | (3/8"-24 UNF) <sup>1)</sup> |
| 1.000              | 5512 074-02 | (1/2"-20 UNF)               |
| 1.250              | 5512 074-04 | (5/8"-18 UNF)               |
| 1.500              | 5512 074-05 | (3/4"-16 UNF)               |

1) Optimized: Low head/small head-diameter

## Adaptor for face mills and square shoulder face mill

Coolant for boring

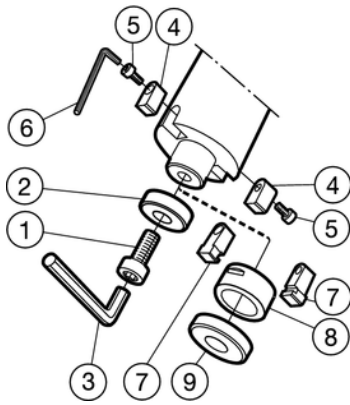


|                       | 1            | 2           | 3                   | 4           | 5            | 6                  |
|-----------------------|--------------|-------------|---------------------|-------------|--------------|--------------------|
|                       | Screw        | Washer      | Key (mm)            | Driving key | Screw        | Key (mm)           |
| C8/C8X-391.05-40 xxxB | 3212 020-614 | 5541 015-05 | 3021 010-140 (14.0) | 5635 025-04 | 3212 020-409 | 3021 010-060 (6.0) |

## Dampened adaptor for face mills and square shoulder face mills, metric pilot

With coolant through arbor

Cx-391.06



|                          | 1            | 2           | 3 <sup>1)</sup>     | 4           | 5            | 6 <sup>1)</sup>    |
|--------------------------|--------------|-------------|---------------------|-------------|--------------|--------------------|
|                          | Screw        | Washer      | Key (mm)            | Driving key | Screw        | Key (mm)           |
| Cx-391.06-22 xxx         | 3212 020-464 | 5541 015-02 | 3021 010-080 (8.0)  | 5631 011-01 | 3213 010-258 | 174.1-864 (3.0)    |
| Cx-391.06-27 xxx         | 3212 020-514 | 5541 015-03 | 3021 010-100 (10.0) | 5631 010-01 | 3212 010-258 | 174.1-864 (3.0)    |
| Cx-391.06-32 xxx         | 3212 020-564 | 5541 015-04 | 3021 010-120 (12.0) | 5631 010-04 | 3212 010-308 | 3021 010-040 (4.0) |
| Sleeve set for Cx-391.06 | 7            | 8           | 9                   |             |              |                    |
|                          | Driving key  | Sleeve      | Washer              |             |              |                    |
| 5638 035-011             | 5631 016-01  | 5638 035-01 | 5541 015-09         |             |              |                    |

1) Accessories, must be ordered separately

### Arbor mounting screws with coolant hole

| Arbor size       | Screw                           | Key <sup>2)</sup>   |
|------------------|---------------------------------|---------------------|
| <b>Metric</b>    |                                 |                     |
| 16               | 5512 073-03 (M8)                | 3021 010-060 (6.0)  |
| 22               | 5512 073-01 (M10)               | 3021 010-080 (8.0)  |
| 22 <sup>1)</sup> | 5512 073-04 <sup>1)</sup> (M10) | 3021 010-080 (8.0)  |
| 27               | 5512 073-02 (M12)               | 3021 010-100 (10.0) |
| 32               | 5512 073-05 (M16)               | 3021 010-140 (12.0) |

1) Optimized: Low head/small head-diameter

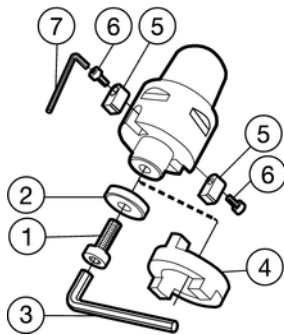
2) Accessories, must be ordered separately

For CoroMill® 365, CoroMill® Century and CoroMill® 210 a unique screw, with coolant hole, is used. This has to be ordered separately. See ordering pages for these cutters.

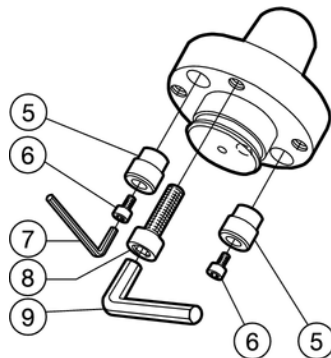


## Adaptors for face mills and square shoulder face mills

Cx-391.05/ Cx-391.05HD



C8-391.05-60 060



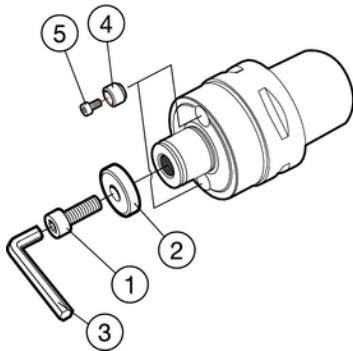
|                                     | 1                  | 2            | 3 <sup>1)</sup>     | 4            | 5           | 6            |
|-------------------------------------|--------------------|--------------|---------------------|--------------|-------------|--------------|
|                                     | Screw              | Washer       | Key (mm)            | Driving ring | Driving key | Screw        |
| C3-391.05-16 030                    | 3212 020-414       | 5541 015-01  | 3021 010-060 (6.0)  | 3193 010-160 | -           | -            |
| C4-391.05-16 032                    | 3212 020-414       | 5541 015-01  | 3021 010-060 (6.0)  | 3193 010-160 | -           | -            |
| C4-391.05-16 055                    | 3212 020-414       | 5541 015-01  | 3021 010-060 (6.0)  | 3193 010-160 | -           | -            |
| C4-391.05-22 025                    | 3212 020-464       | 5541 015-02  | 3021 010-080 (8.0)  | -            | 5631 011-01 | 3213 010-258 |
| C4-391.05-22 055                    | 3212 020-464       | 5541 015-02  | 3021 010-080 (8.0)  | -            | 5631 011-01 | 3213 010-258 |
| C5-391.05-16 035                    | 3212 020-414       | 5541 015-01  | 3021 010-060 (6.0)  | 3193 010-160 | -           | -            |
| C5-391.05-16 070                    | 3212 020-414       | 5541 015-01  | 3021 010-060 (6.0)  | 3193 010-160 | -           | -            |
| C5-391.05-22 025                    | 3212 020-464       | 5541 015-02  | 3021 010-080 (8.0)  | -            | 5631 012-01 | 3212 010-258 |
| C5-391.05-22 070                    | 3212 020-464       | 5541 015-02  | 3021 010-080 (8.0)  | -            | 5631 011-01 | 3213 010-258 |
| C5-391.05-27 025                    | 3212 020-514       | 5541 015-03  | 3021 010-100 (10.0) | -            | 5631 010-01 | 3212 010-258 |
| C5-391.05-32 040                    | 3212 020-564       | 5541 015-04  | 3021 010-120 (12.0) | -            | 5631 010-04 | 3212 010-308 |
| C6-391.05-16 040                    | 3212 020-414       | 5541 015-01  | 3021 010-060 (6.0)  | 3193 010-160 | -           | -            |
| C6-391.05-22 025                    | 3212 020-464       | 5541 015-02  | 3021 010-080 (8.0)  | -            | 5631 012-01 | 3212 010-258 |
| C6-391.05-27 025                    | 3212 020-514       | 5541 015-03  | 3021 010-100 (10.0) | -            | 5631 010-01 | 3212 010-258 |
| C6-391.05-32 025                    | 3212 020-564       | 5541 015-04  | 3021 010-120 (12.0) | -            | 5631 010-04 | 3212 010-308 |
| C6-391.05-40 030B                   | 3212 020-614       | 5541 015-05  | 3021 010-140 (14.0) | -            | 5635 025-04 | 3212 020-409 |
| C8-391.05-16 050                    | 3212 020-414       | 5541 015-01  | 3021 010-060 (6.0)  | 3193 010-160 | -           | -            |
| C8-391.05-22 030                    | 3212 020-464       | 5541 015-02  | 3021 010-080 (8.0)  | -            | 5631 012-01 | 3212 010-258 |
| C8-391.05-27 030                    | 3212 020-514       | 5541 015-03  | 3021 010-100 (10.0) | -            | 5631 010-01 | 3212 010-258 |
| C8/C8X-391.05-32 030                | 3212 020-564       | 5541 015-04  | 3021 010-120 (12.0) | -            | 5631 010-04 | 3212 010-308 |
| C8-391.05-40 xxxB <sup>2)</sup>     | 3212 020-614       | 5541 015-05  | 3021 010-140 (14.0) | -            | 5635 025-04 | 3212 020-409 |
| C8/C8X-391.05-60 xxx                | -                  | -            | -                   | -            | 5635 010-01 | 3212 010-363 |
|                                     | 7 <sup>1)</sup>    | 8            | 9 <sup>1)</sup>     |              |             |              |
|                                     | Key (mm)           | Screw        | Key (mm)            |              |             |              |
| C3-391.05-16 030                    | -                  | -            | -                   |              |             |              |
| C4-391.05-16 032                    | -                  | -            | -                   |              |             |              |
| C4-391.05-16 055                    | -                  | -            | -                   |              |             |              |
| C4-391.05-22 025                    | -                  | -            | -                   |              |             |              |
| C4-391.05-22 055                    | -                  | -            | -                   |              |             |              |
| C5-391.05-16 035                    | -                  | -            | -                   |              |             |              |
| C5-391.05-16 070                    | -                  | -            | -                   |              |             |              |
| C5-391.05-22 025                    | 174.1-864 (3.0)    | -            | -                   |              |             |              |
| C5-391.05-22 070                    | -                  | -            | -                   |              |             |              |
| C5-391.05-27 025                    | 174.1-864 (3.0)    | -            | -                   |              |             |              |
| C5-391.05-32 040                    | 3021 010-040 (4.0) | -            | -                   |              |             |              |
| C6-391.05-16 040                    | -                  | -            | -                   |              |             |              |
| C6-391.05-22 025                    | 174.1-864 (3.0)    | -            | -                   |              |             |              |
| C6-391.05-27 025                    | 174.1-864 (3.0)    | -            | -                   |              |             |              |
| C6-391.05-32 025                    | 3021 010-040 (4.0) | -            | -                   |              |             |              |
| C6-391.05-40 030B                   | 3021 010-060 (6.0) | -            | -                   |              |             |              |
| C8-391.05-16 050                    | -                  | -            | -                   |              |             |              |
| C8-391.05-22 030                    | 174.1-864 (3.0)    | -            | -                   |              |             |              |
| C8-391.05-27 030                    | 174.1-864 (3.0)    | -            | -                   |              |             |              |
| C8-391.05-32 030                    | 3021 010-040 (4.0) | -            | -                   |              |             |              |
| C8/C8X-391.05-40 xxxA <sup>2)</sup> | 3021 010-050 (5.0) | -            | -                   |              |             |              |
| C8/C8X-391.05-60 xxx                | 3021 010-050 (5.0) | 3212 010-568 | 3021 010-140 (14.0) |              |             |              |

1) Accessories, must be ordered separately

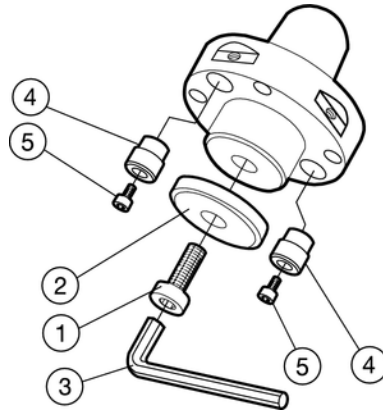
2) For HD adaptors use locking screw 3214 010-406 for mounting cutters with single bolt circle (style C).

## Adaptors for face mills and square shoulder face mills

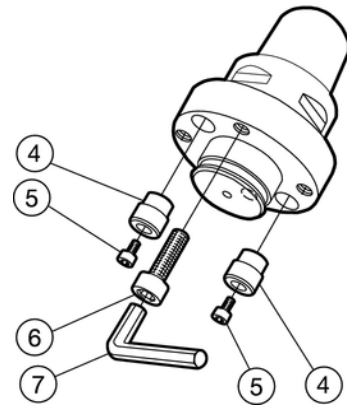
Cx-A391.05/ Cx-391.05



C10-A391.05-38 040/ C10-391.05-40 040



C10-A391.05-63 075/ C10-391.05-60 075



### Metric pilot

|                   | 1            | 2           | 3 <sup>1)</sup>     | 4 <sup>1)</sup> | 5            | 6 <sup>1)</sup> | 7 <sup>1)</sup>     |
|-------------------|--------------|-------------|---------------------|-----------------|--------------|-----------------|---------------------|
| Ordering code     | Screw        | Washer      | Key (mm)            | Driving key     | Screw        | Screw           | Key (mm)            |
| C5-391.05-22 025A | 3212 020-464 | 5541 015-02 | 3021 010-080 (8.0)  | 5635 025-01     | 3212 010-258 | -               | -                   |
| C5-391.05-27 025A | 3212 020-514 | 5541 015-03 | 3021 010-100 (10.0) | 5635 025-02     | 3212 010-308 | -               | -                   |
| C6-391.05-22 025A | 3212 020-464 | 5541 015-02 | 3021 010-080 (8.0)  | 5635 025-01     | 3212 010-258 | -               | -                   |
| C6-391.05-27 025A | 3212 020-514 | 5541 015-03 | 3021 010-100 (10.0) | 5635 025-02     | 3212 010-308 | -               | -                   |
| C6-391.05-32 025A | 3212 020-564 | 5541 015-04 | 3021 010-120 (12.0) | 5635 025-03     | 3212 010-358 | -               | -                   |
| C8-391.05-22 030A | 3212 020-464 | 5541 015-02 | 3021 010-080 (8.0)  | 5635 025-01     | 3212 010-258 | -               | -                   |
| C8-391.05-27 030A | 3212 020-514 | 5541 015-03 | 3021 010-100 (10.0) | 5635 025-02     | 3212 010-308 | -               | -                   |
| C8-391.05-32 030A | 3212 020-564 | 5541 015-04 | 3021 010-120 (12.0) | 5635 025-03     | 3212 010-358 | -               | -                   |
| C10-391.05-40 040 | 3212 020-614 | 5541 015-05 | 3021 010-140 (14.0) | 5635 025-04     | 3212 020-409 | -               | -                   |
| C10-391.05-60 075 | -            | -           | -                   | 5635 010-01     | 3212 010-363 | 3212 010-568    | 3021 010-140 (14.0) |

1) Accessories, must be ordered separately

### Inch pilot

|                     | 1           | 3 <sup>1)</sup>            | 4           | 5            | 6            | 7 <sup>1)</sup> |
|---------------------|-------------|----------------------------|-------------|--------------|--------------|-----------------|
| Ordering code       | Screw       | Key                        | Drive key   | Screw        | Screw        | Key             |
| C4-A391.05- 19 025A | 5512 065-07 | 3021 011-140               | 5635 025-07 | 3212 010-207 | -            | -               |
| C5-A391.05- 19 025A | 5512 065-07 | 3021 011-140               | 5635 025-07 | 3212 010-207 | -            | -               |
| C5-A391.05- 25 025A | 5512 065-05 | 3021 011-516 <sup>2)</sup> | 5635 025-06 | 3212 010-257 | -            | -               |
| C6-A391.05- 19 030A | 5512 065-07 | 3021 011-140               | 5635 025-07 | 3212 010-207 | -            | -               |
| C6-A391.05- 25 030A | 5512 065-05 | 3021 011-516 <sup>2)</sup> | 5635 025-06 | 3212 010-257 | -            | -               |
| C6-A391.05- 31 030A | 5512 065-06 | 3021 011-516 <sup>2)</sup> | 5635 025-08 | 3212 010-308 | -            | -               |
| C8-A391.05- 19 030A | 5512 065-07 | 3021 011-140               | 5635 025-07 | 3212 010-207 | -            | -               |
| C8-A391.05- 25 030A | 5512 065-05 | 3021 011-516 <sup>2)</sup> | 5635 025-06 | 3212 010-257 | -            | -               |
| C8-A391.05- 31 030A | 5512 065-06 | 3021 011-516 <sup>2)</sup> | 5635 025-08 | 3212 010-308 | -            | -               |
| C8-A391.05- 38 030A | 5512 065-10 | 3021 011-380               | 5635 025-05 | 3212 020-409 | -            | -               |
| C10-A391.05- 38 040 | 5512 065-04 | 3021 011-380               | 5635 025-05 | 3212 020-409 | -            | -               |
| C10-A391.05- 63 075 | -           | -                          | 5631 060-01 | 3212 010-363 | 3212 031-761 | (1/2")          |

1) Accessories, must be ordered separately

2) ANSI - Code = DIN 911-5/16 ZDLL

### Arbor mounting screws with coolant hole

| Arbor size<br>Inch | Screw       | Key           | Arbor size<br>Metric | Screw                     | Key <sup>2)</sup> |
|--------------------|-------------|---------------|----------------------|---------------------------|-------------------|
| .750               | 5512 074-01 | (3/8"-24 UNF) | 16                   | 5512 073-03               | (M8)              |
| .750 <sup>1)</sup> | 5512 074-03 | (3/8"-24 UNF) | 22                   | 5512 073-01               | (M10)             |
| .1000              | 5512 074-02 | (1/2"-20 UNF) | 22 <sup>1)</sup>     | 5512 073-04 <sup>1)</sup> | (M10)             |
| 1.250              | 5512 074-04 | (5/8"-18 UNF) | 27                   | 5512 073-02               | (M12)             |
| 1.500              | 5512 074-05 | (3/4"-16 UNF) | 32                   | 5512 073-05               | (M16)             |

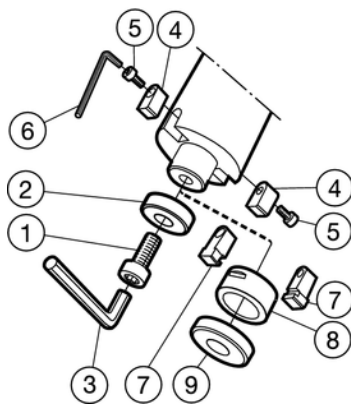
1) Optimized: Low head/small head-diameter

2) Accessories, must be ordered separately

## Dampened adaptor for face mills and square shoulder face mills

With coolant through arbor

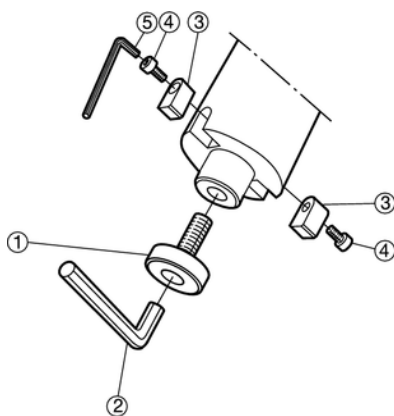
**Metric pilot**  
Cx.391.05CD



|                            | 1            | 2           | 3 <sup>1)</sup>     | 4           | 5            | 6 <sup>1)</sup>    |
|----------------------------|--------------|-------------|---------------------|-------------|--------------|--------------------|
|                            | Screw        | Washer      | Key (mm)            | Driving key | Screw        | Key (mm)           |
| Cx-391.05CD-22 xxx         | 3212 020-464 | 5541 015-02 | 3021 010-080 (8.0)  | 5631 012-01 | 3212 010-258 | 3021 010-030 (3.0) |
| Cx-391.05CD-27 xxx         | 3212 020-514 | 5541 015-03 | 3021 010-100 (10.0) | 5631 010-01 | 3212 010-258 | 3021 010-030 (3.0) |
| Cx-391.05CD-32 xxx         | 3212 020-564 | 5541 015-04 | 3021 010-120 (12.0) | 5631 010-04 | 3212 010-308 | 3021 010-040 (4.0) |
| Sleeve set for Cx-391.05CD | 7            | 8           | 9                   |             |              |                    |
|                            | Driving key  | Sleeve      | Washer              |             |              |                    |
| 5638 035-011               | 5631 016-01  | 5638 035-01 | 5541 015-09         |             |              |                    |

<sup>1)</sup> Accessories, must be ordered separately

**Inch pilot**  
Cx-A391.05CD

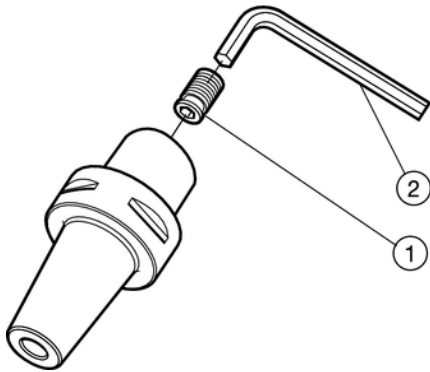


|                     | 1 <sup>1)</sup> | 2 <sup>1)</sup> | 3           | 4            | 5 <sup>1)</sup> |
|---------------------|-----------------|-----------------|-------------|--------------|-----------------|
|                     | Screw           | Key             | Drive key   | Screw        | Key             |
| Cx-A391.05CD-19 xxx | 5512 065-02     | 3021 011-316    | 5631 013-01 | 8-32 x 3/8M  | (9/64)          |
| Cx-A391.05CD-25 xxx | 5512 065-08     | 3021 011 532    | 5631 013-02 | 10-32 x 3/8  | 3021 011 532    |
| Cx-A391.05CD-38 xxx | 5512 065-04     | 3021 011-380    | 5631 013-04 | 1/4-20 x 3/4 | 3021 011 316    |

## Coromant Capto® shrink fit adaptor

Cx-391.19

Cx-391.19



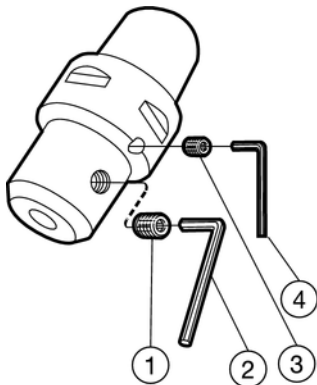
|                   | 1                | 2 <sup>1)</sup>    |
|-------------------|------------------|--------------------|
|                   | Adjustment screw | Key (mm)           |
| Cx-391.19-06 xxx  | 5512 066-09      | 3021 010-025 (2.5) |
| Cx-391.19-08 xxx  | 5512 066-10      | 3021 010-030 (3.0) |
| Cx-391.19-10 xxx  | 5512 066-11      | 3021 010-040 (4.0) |
| Cx-391.19-12 xxx  | 5512 066-12      | 3021 010-050 (5.0) |
| Cx-391.19-14 xxx  | 5512 066-12      | 3021 010-050 (5.0) |
| Cx-391.19-16 xxx  | 5512 066-13      | 3021 010-060 (6.0) |
| Cx-391.19-18 xxx  | 5512 066-13      | 3021 010-060 (6.0) |
| Cx-391.19-20 xxx  | 5512 066-14      | 3021 010-080 (8.0) |
| Cx-391.19-25 xxx  | 5512 066-14      | 3021 010-080 (8.0) |
| Cx-391.19-32 xxx  | 5512 066-14      | 3021 010-080 (8.0) |
| Cx-A391.19-06 xxx | 5512 066-09      | 3021 010-025 (2.5) |
| Cx-A391.19-09 xxx | 5512 066-11      | 3021 010-040 (4.0) |
| Cx-A391.19-12 xxx | 5512 066-12      | 3021 010-050 (5.0) |
| Cx-A391.19-15 xxx | 5512 066-13      | 3021 010-060 (6.0) |
| Cx-A391.19-19 xxx | 5512 066-14      | 3021 010-080 (8.0) |
| Cx-A391.19-25 xxx | 5512 066-14      | 3021 010-080 (8.0) |

1) Accessories, must be ordered separately

## Adaptors for Weldon shanks

Cx-A391.20

Cx-391.20



| Inch version      | 1           | 2 <sup>1)</sup>      | 3           | 4 <sup>1)</sup>     |
|-------------------|-------------|----------------------|-------------|---------------------|
|                   | Screw       | Key                  | Screw       | Key                 |
| Cx-A391.20-09 xxx | 5514 021-01 | 3021 011-316 (3/16)  | -           | -                   |
| Cx-A391.20-12 xxx | 5514 021-02 | 3021 011-732 (7/32)  | -           | -                   |
| Cx-A391.20-15 xxx | 5514 021-03 | 3021 011-140 (1/4)   | -           | -                   |
| Cx-A391.20-19 xxx | 5514 021-04 | 3021 011- 516 (5/16) | -           | -                   |
| Cx-A391.20-22 xxx | 5514 021-04 | 3021 011-516 (5/16)  | 5514 021-04 | 3021 011-516 (5/16) |
| Cx-A391.20-25 xxx | 5514 021-05 | 3021 011-380 (3/8)   | 5514 021-05 | 3021 011-380 (3/8)  |
| Cx-A391.20-31 xxx | 5514 021-05 | 3021 011-380 (3/8)   | 5514 021-05 | 3021 011-380 (3/8)  |
| Cx-A391.20-38 xxx | 5514 021-05 | 3021 011-380 (3/8)   | 5514 021-05 | 3021 011-380 (3/8)  |
| Cx-A391.20-50 xxx | 5514 021-07 | 3021 011-916 (9/16)  | 5514 021-07 | 3021 011-916 (9/16) |

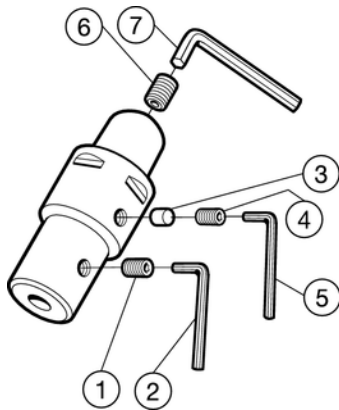
  

| Metric version   | 1            | 2 <sup>1)</sup>     | 3            | 4 <sup>1)</sup>     |
|------------------|--------------|---------------------|--------------|---------------------|
|                  | Screw        | Key (mm)            | Screw        | Key (mm)            |
| Cx-391.20-06 xxx | 3214 050-357 | 174.1-864 (3.0)     | -            | -                   |
| Cx-391.20-08 xxx | 3214 050-407 | 3021 010-040 (4.0)  | -            | -                   |
| Cx-391.20-10 xxx | 3214 050-458 | 3021 010-050 (5.0)  | -            | -                   |
| Cx-391.20-12 xxx | 3214 050-509 | 3021 010-060 (6.0)  | -            | -                   |
| Cx-391.20-14 xxx | 3214 050-509 | 3021 010-060 (6.0)  | -            | -                   |
| Cx-391.20-16 xxx | 3214 050-539 | 3021 010-060 (6.0)  | -            | -                   |
| Cx-391.20-18 xxx | 3214 050-539 | 3021 010-060 (6.0)  | -            | -                   |
| Cx-391.20-20 xxx | 3214 050-559 | 3021 010-080 (8.0)  | -            | -                   |
| Cx-391.20-25 xxx | 3214 050-590 | 3021 010-100 (10.0) | 3214 050-590 | 3021 010-100 (10.0) |
| Cx-391.20-32 xxx | 3214 050-610 | 3021 010-100 (10.0) | 3214 050-610 | 3021 010-100 (10.0) |
| Cx-391.20-40 xxx | 3214 050-611 | 3021 010-100 (10.0) | 3214 050-611 | 3021 010-100 (10.0) |
| Cx-391.20-50 xxx | 3214 050-661 | 3021 010-120 (12.0) | 3214 050-611 | 3021 010-100 (10.0) |

1) Accessories, must be ordered separately

## Adaptors for Whistle Notch shanks

Cx-391.21

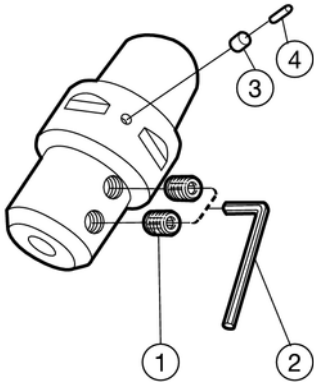


|                   | 1            | 2 <sup>1)</sup>     | 3       | 4            | 5 <sup>1)</sup> | 6           | 7 <sup>1)</sup>    |
|-------------------|--------------|---------------------|---------|--------------|-----------------|-------------|--------------------|
|                   | Screw        | Key (mm)            | Plug    | Screw        | Key (mm)        | Screw       | Key (mm)           |
| C3-391.21-06 070A | 3214 050-357 | 174.1-864 (3.0)     | 470-841 | 3214 010-355 | 174.1-864 (3.0) | 5512 066-09 | 174.1-864 (3.0)    |
| C3-391.21-08 070A | 3214 050-407 | 3021 010-040 (4.0)  | 470-841 | 3214 010-355 | 174.1-864 (3.0) | 5512 066-08 | 3021 010-040 (4.0) |
| C3-391.21-10 070  | 3214 050-458 | 3021 010-050 (5.0)  | 470-841 | 3214 010-355 | 174.1-864 (3.0) | 5512 066-03 | 3021 010-040 (4.0) |
| C3-391.21-12 075  | 3214 050-509 | 3021 010-060 (6.0)  | 470-841 | 3214 010-357 | 174.1-864 (3.0) | 5512 066-05 | 3021 010-050 (5.0) |
| C4-391.21-06 070A | 3214 050-357 | 174.1-864 (3.0)     | 470-841 | 3214 010-355 | 174.1-864 (3.0) | 5512 066-09 | 174.1-864 (3.0)    |
| C4-391.21-08 070A | 3214 050-407 | 3021 010-040 (4.0)  | 470-841 | 3214 010-355 | 174.1-864 (3.0) | 5512 066-08 | 3021 010-040 (4.0) |
| C4-391.21-10 070  | 3214 050-458 | 3021 010-050 (5.0)  | 470-841 | 3214 010-355 | 174.1-864 (3.0) | 5512 066-03 | 3021 010-040 (4.0) |
| C4-391.21-12 075  | 3214 050-509 | 3021 010-060 (6.0)  | 470-841 | 3214 010-357 | 174.1-864 (3.0) | 5512 066-05 | 3021 010-050 (5.0) |
| C4-391.21-14 075  | 3214 050-509 | 3021 010-060 (6.0)  | 470-841 | 3214 010-357 | 174.1-864 (3.0) | 5512 066-05 | 3021 010-050 (5.0) |
| C5-391.21-06 070A | 3214 050-357 | 174.1-864 (3.0)     | 470-841 | 3214 010-355 | 174.1-864 (3.0) | 5512 066-09 | 174.1-864 (3.0)    |
| C5-391.21-08 070A | 3214 050-407 | 3021 010-040 (4.0)  | 470-841 | 3214 010-355 | 174.1-864 (3.0) | 5512 066-08 | 3021 010-040 (4.0) |
| C5-391.21-10 070  | 3214 050-458 | 3021 010-050 (5.0)  | 470-841 | 3214 010-355 | 174.1-864 (3.0) | 5512 066-03 | 3021 010-040 (4.0) |
| C5-391.21-12 075  | 3214 050-509 | 3021 010-060 (6.0)  | 470-841 | 3214 010-357 | 174.1-864 (3.0) | 5512 066-05 | 3021 010-050 (5.0) |
| C5-391.21-14 075  | 3214 050-509 | 3021 010-060 (6.0)  | 470-841 | 3214 010-357 | 174.1-864 (3.0) | 5512 066-05 | 3021 010-050 (5.0) |
| C5-391.21-16 080  | 3214 050-539 | 3021 010-060 (6.0)  | 470-841 | 3214 010-357 | 174.1-864 (3.0) | 5512 066-05 | 3021 010-060 (6.0) |
| C5-391.21-18 080  | 3214 050-539 | 3021 010-060 (6.0)  | 470-841 | 3214 010-357 | 174.1-864 (3.0) | 5512 066-06 | 3021 010-060 (6.0) |
| C5-391.21-20 085  | 3214 050-559 | 3021 010-080 (8.0)  | 470-841 | 3214 010-357 | 174.1-864 (3.0) | 5512 066-07 | 3021 010-060 (6.0) |
| C6-391.21-06 075A | 3214 050-357 | 174.1-864 (3.0)     | 470-841 | 3214 010-355 | 174.1-864 (3.0) | 5512 066-09 | 174.1-864 (3.0)    |
| C6-391.21-08 075A | 3214 050-407 | 3021 010-040 (4.0)  | 470-841 | 3214 010-355 | 174.1-864 (3.0) | 5512 066-08 | 3021 010-040 (4.0) |
| C6-391.21-10 075  | 3214 050-458 | 3021 010-050 (5.0)  | 470-841 | 3214 010-355 | 174.1-864 (3.0) | 5512 066-03 | 3021 010-040 (4.0) |
| C6-391.21-12 080  | 3214 050-509 | 3021 010-060 (6.0)  | 470-841 | 3214 010-357 | 174.1-864(3.0)  | 5512 066-05 | 3021 010-050 (5.0) |
| C6-391.21-14 080  | 3214 050-509 | 3021 010-060 (6.0)  | 470-841 | 3214 010-357 | 174.1-864 (3.0) | 5512 066-05 | 3021 010-050 (5.0) |
| C6-391.21-16 080  | 3214 050-539 | 3021 010-060 (6.0)  | 470-841 | 3214 010-357 | 174.1-864 (3.0) | 5512 066-06 | 3021 010-060 (6.0) |
| C6-391.21-18 080  | 3214 050-539 | 3021 010-060 (6.0)  | 470-841 | 3214 010-357 | 174.1-864 (3.0) | 5512 066-06 | 3021 010-060 (6.0) |
| C6-391.21-20 085  | 3214 050-559 | 3021 010-080 (8.0)  | 470-841 | 3214 010-357 | 174.1-864 (3.0) | 5512 066-07 | 3021 010-060 (6.0) |
| C6-391.21-25 090  | 3214 050-590 | 3021 010-100 (10.0) | 470-841 | 3214 010-357 | 174.1-864(3.0)  | 5512 066-07 | 3021 010-060 (6.0) |
| C6-391.21-32 095  | 3214 050-610 | 3021 010-100 (10.0) | 470-841 | 3214 010-357 | 174.1-864 (3.0) | 5512 066-07 | 3021 010-060 (6.0) |
| C8-391.21-06 065A | 3214 050-357 | 174.1-864 (3.0)     | 470-841 | 3214 010-355 | 174.1-864(3.0)  | 5512 066-09 | 174.1-864 (3.0)    |
| C8-391.21-08 065A | 3214 050-407 | 3021 010-040 (4.0)  | 470-841 | 3214 010-355 | 174.1-864(3.0)  | 5512 066-08 | 3021 010-040 (4.0) |
| C8-391.21-10 065  | 3214 050-458 | 3021 010-050 (5.0)  | 470-841 | 3214 010-355 | 174.1-864(3.0)  | 5512 066-03 | 3021 010-040 (4.0) |
| C8-391.21-12 070  | 3214 050-509 | 3021 010-060 (6.0)  | 470-841 | 3214 010-357 | 174.1-864(3.0)  | 5512 066-05 | 3021 010-050 (5.0) |
| C8-391.21-14 070  | 3214 050-509 | 3021 010-060 (6.0)  | 470-841 | 3214 010-357 | 174.1-864(3.0)  | 5512 066-05 | 3021 010-050 (5.0) |
| C8-391.21-16 075  | 3214 050-539 | 3021 010-060 (6.0)  | 470-841 | 3214 010-357 | 174.1-864(3.0)  | 5512 066-06 | 3021 010-060 (6.0) |
| C8-391.21-18 075  | 3214 050-539 | 3021 010-060 (6.0)  | 470-841 | 3214 010-357 | 174.1-864(3.0)  | 5512 066-06 | 3021 010-060 (6.0) |
| C8-391.21-20 080  | 3214 050-559 | 3021 010-080 (8.0)  | 470-841 | 3214 010-357 | 174.1-864(3.0)  | 5512 066-07 | 3021 010-060 (6.0) |
| C8-391.21-25 090  | 3214 050-590 | 3021 010-100 (10.0) | 470-841 | 3214 010-357 | 174.1-864(3.0)  | 5512 066-07 | 3021 010-060 (6.0) |
| C8-391.21-32 095  | 3214 050-610 | 3021 010-100 (10.0) | 470-841 | 3214 010-357 | 174.1-864(3.0)  | 5512 066-07 | 3021 010-060 (6.0) |

1) Accessories, must be ordered separately

## Adaptors for Weldon / ISO9766

## Combi



| Metric version    | 1            | 2 <sup>1)</sup>     |
|-------------------|--------------|---------------------|
|                   | Screw        | Key (mm)            |
| C10-391.23-20 090 | 3214 050-559 | 3021 010-080 (8.0)  |
| C10-391.23-25 105 | 3214 050-590 | 3021 010-100 (10.0) |
| C10-391.23-32 110 | 3214 050-610 | 3021 010-100 (10.0) |
| C10-391.23-40 115 | 3214 050-611 | 3021 010-100 (10.0) |
| C10-391.23-50 120 | 3214 050-661 | 3021 010-120 (12.0) |

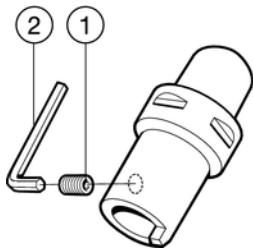
| Inch version       | 1           | 2 <sup>1)</sup>     | 3           | 4           |
|--------------------|-------------|---------------------|-------------|-------------|
|                    | Screw       | Key (inch)          | Pin         | Plug        |
| C6-A391.23-19 066  | 5514 021-04 | 3021 011-516 (5/16) | 5552 020-12 | 5643 012-02 |
| C6-A391.23-25 085  | 5514 021-05 | 3021 011-380 (3/8)  |             |             |
| C6-A391.23-31 085  | 5514 021-05 | 3021 011-380 (3/8)  |             |             |
| C6-A391.23-38 090  | 5514 021-05 | 3021 011-380 (3/8)  |             |             |
| C8-A391.23-19 075  | 5514 021-04 | 3021 011-516 (5/16) | 5552 020-13 | 5643 012-03 |
| C8-A391.23-25 080  | 5514 021-05 | 3021 011-380 (3/8)  |             |             |
| C8-A391.23-31 080  | 5514 021-05 | 3021 011-380 (3/8)  |             |             |
| C8-A391.23-38 085  | 5514 021-05 | 3021 011-380 (3/8)  |             |             |
| C8-A391.23-50 115  | 5514 021-07 | 3021 011-916 (9/16) |             |             |
| C10-A391.23-19 090 | 5514 021-04 | 3021 011-516 (5/16) |             |             |
| C10-A391.23-25 105 | 5514 021-05 | 3021 011-380 (3/8)  |             |             |
| C10-A391.23-31 110 | 5514 021-05 | 3021 011-380 (3/8)  |             |             |
| C10-A391.23-38 115 | 5514 021-05 | 3021 011-380 (3/8)  |             |             |
| C10-A391.23-50 120 | 5514 021-07 | 3021 011-916 (9/16) |             |             |

<sup>1)</sup> Accessories, must be ordered separately

## Adaptors for drills

### Cx-391.25

For Coromant Whistle Notch shank

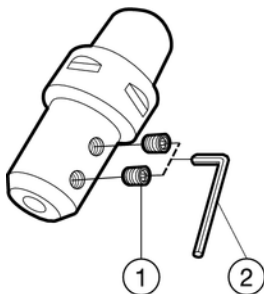


|                   | 1         | 2 <sup>1)</sup>    |
|-------------------|-----------|--------------------|
|                   | Screw     | Key (mm)           |
| Cx-391.25-16 xxx  | 416.1-836 | 3021 010-040 (4.0) |
| Cx-391.25- 20 xxx | 416.1-836 | 3021 010-040 (4.0) |
| Cx-391.25- 25 xxx | 416.1-837 | 3021 010-050 (5.0) |
| Cx-391.25- 32 xxx | 416.1-838 | 3021 010-060 (6.0) |
| Cx-391.25- 40 xxx | 416.1-839 | 3021 010-080 (8.0) |

<sup>1)</sup> Accessories, must be ordered separately

### Cx-391.27

ISO 9766 Shank



|                   | 1           | 2 <sup>1)</sup>    |
|-------------------|-------------|--------------------|
|                   | Screw       | Key (mm)           |
| Cx-391.27- 16 xxx | 5514 042-04 | 3021 010-040 (4.0) |
| Cx-391.27- 20 xxx | 5514 042-04 | 3021 010-040 (4.0) |
| Cx-391.27- 25 xxx | 416.1-838   | 3021 010-060 (6.0) |
| Cx-391.27- 32 xxx | 416.1-838   | 3021 010-060 (6.0) |
| Cx-391.27- 40 xxx | 5514 042-06 | 3021 010-080 (8.0) |
| Cx-391.27- 50 xxx | 5514 042-06 | 3021 010-080 (8.0) |

<sup>1)</sup> Accessories, must be ordered separately

### Drill chuck

#### Cx-391.31

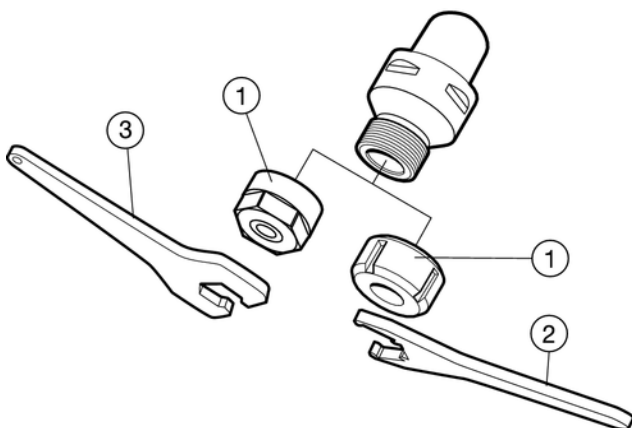


|                   | 1              | 2 <sup>1)</sup> | 3             |
|-------------------|----------------|-----------------|---------------|
|                   | Worm screw set | Key             | Chuck jaw set |
| Cx-391.31-10 xxxM | 5519 070-021   | 5680 017-03     | 5471 010-03   |
| Cx-391.31-13 xxx  | 5519 070-011   | 5680 017-03     | 5471 010-01   |

<sup>1)</sup> Accessories, must be ordered separately

## ER collet chuck adaptors

### Cx-391.14



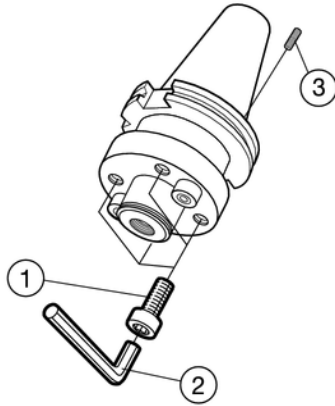
|                  | 1           | 2 <sup>1)</sup> | 3 <sup>1)</sup> |
|------------------|-------------|-----------------|-----------------|
|                  | Locking nut | Wrench          | Wrench          |
| Cx-391.14-16 xxx | 5533 050-06 | -               | 5680 091-01     |
| Cx-391.14-20 xxx | 5533 050-08 | -               | 5680 091-02     |
| Cx-391.14-25 xxx | 5533 050-02 | 5680 096-02     | -               |
| Cx-391.14-32 xxx | 5533 050-03 | 5680 096-03     | -               |
| Cx-391.14-40 xxx | 5533 050-04 | 5680 096-04     | -               |
| Cx-391.14-50 xxx | 5533 050-05 | 5680 096-05     | -               |

<sup>1)</sup> Accessories, must be ordered separately

## Face milling holder for flange mounting

### Face milling holder for flange mounting

A1F05 / A2F05  
Metric pilot

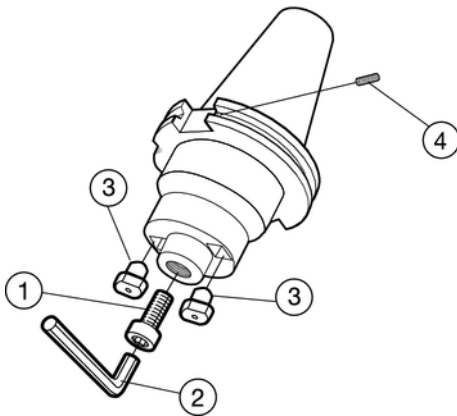


|                | 1            | 2                   | 3                                |
|----------------|--------------|---------------------|----------------------------------|
| A1F05<br>A2F05 |              |                     | Plastic dowel set<br>(50 pieces) |
|                | Screw (4 x)  | Key <sup>1)</sup>   |                                  |
| -xx 60 xxx     | 3212 010-566 | 3021 010-140 (14.0) | 5643 017-02                      |

<sup>1)</sup> Accessories, not delivered with the tool, must be ordered separately.

### Face mill holder

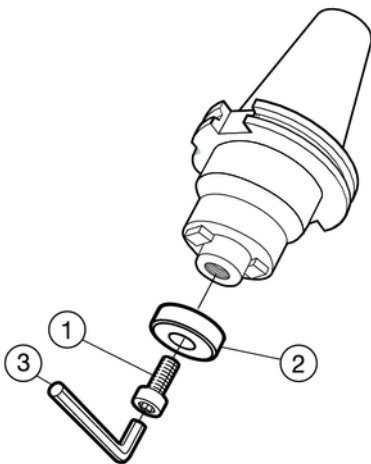
AA205 / AA305  
Inch pilot



|                        | 1            | 2                        | 3           | 4 <sup>2)</sup> |
|------------------------|--------------|--------------------------|-------------|-----------------|
| AA3B05<br>AA2B05/AA205 | Centre screw | Key (inch) <sup>1)</sup> | Drive key   | Coolant screw   |
| AA3B05-40 19 xxx       | 3212 030-606 | 3021 011-516 (5/16")     | 5631 062-01 | 3214 010-253    |
| AA3B05-40 25 xxx       | 3212 030-707 | 3021 011-380 (3/8")      | 5631 062-02 | 3214 010-253    |
| AA3B05-40 32 xxx       | 3212 030-757 | -                        | 5631 062-03 | 3214 010-253    |
| AA3B05-40 38 xxx       | 5512 065-10  | 3021 011-380 (3/8")      | 5631 062-04 | 3214 010-253    |
| AA3B05-50 19 xxx       | 3212 030-606 | 3021 011-516 (5/16")     | 5631 062-01 | 3214 010-355    |
| AA3B05-50 25 xxx       | 3212 030-707 | 3021 011-380 (3/8")      | 5631 062-02 | 3214 010-355    |
| AA3B05-50 32 xxx       | 3212 030-757 | -                        | 5631 062-03 | 3214 010-355    |
| AA3B05-50 38 xxx       | 5512 065-10  | 3021 011-380 (3/8")      | 5631 062-04 | 3214 010-355    |
| AA3B05-50 51 xxx       | 5512 065-11  | 3021 011-916 (9/16")     | 5631 062-05 | 3214 010-355    |
| AA3B05-50 63 xxx       | 5512 065-11  | 3021 011-916 (9/16")     | 5631 062-06 | 3214 010-355    |
| AA205-30 19 xxx        | 3212 030-606 | 3021 011-516 (5/16")     | 5631 062-01 | -               |
| AA205-30 25 xxx        | 3212 030-707 | 3021 011-380 (3/8")      | 5631 062-02 | -               |
| AA2B05-40 19 xxx       | 3212 030-606 | 3021 011-516 (5/16")     | 5631 062-01 | 3214 010-253    |
| AA2B05-40 25 xxx       | 3212 030-707 | 3021 011-380 (3/8")      | 5631 062-02 | 3214 010-253    |
| AA2B05-40 32 xxx       | 3212 030-757 | -                        | 5631 062-03 | 3214 010-253    |
| AA2B05-40 38 xxx       | 5512 065-10  | 3021 011-380 (3/8")      | 5631 062-04 | 3214 010-253    |

<sup>1)</sup> Accessories, not delivered with the tool, must be ordered separately.

AA3B05  
Metric pilot



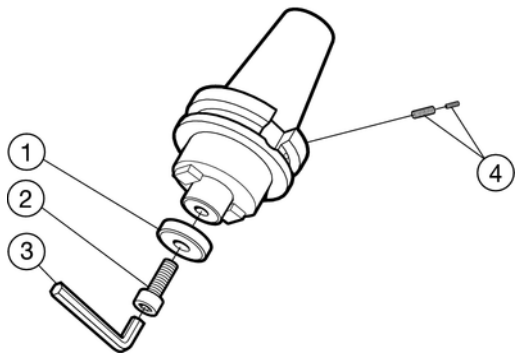
|                  | 1            | 2           | 3                      | 4                        |
|------------------|--------------|-------------|------------------------|--------------------------|
| AA3B05           | Centre screw | Washer      | Key (mm) <sup>1)</sup> | Flange mounting<br>Screw |
| AA3B05-40 16 035 | 3212 020-410 | 5541 015-01 | 3021 010-060 (6.0)     | -                        |
| AA3B05-40 22 035 | 3212 020-461 | 5541 015-02 | 3021 010-080 (8.0)     | -                        |
| AA3B05-40 27 050 | 3212 020-512 | 5541 015-03 | 3021 010-100 (10.0)    | -                        |
| AA3B05-40 27 050 | 3212 020-563 | 5541 015-04 | 3021 010-120 (12.0)    | -                        |
| AA3B05-50 22 035 | 3212 020-461 | 5541 015-02 | 3021 010-080 (8.0)     | -                        |
| AA3B05-50 22 050 | 3212 020-563 | 5541 015-04 | 3021 010-120 (12.0)    | -                        |
| AA3B05-50 27 035 | 3212 020-512 | 5541 015-03 | 3021 010-100 (10.0)    | -                        |
| AA3B05-50 40 050 | 3212 020-614 | 5541 015-04 | 3021 010-140 (14.0)    | 3212 020-514             |

<sup>1)</sup> Accessories, not delivered with the tool, must be ordered separately.



# Face mill holder

A1B05 / A2B05



## Arbor mounting screws with coolant hole

| Arbor size       | Screw                           | Key (mm) <sup>2)</sup> |
|------------------|---------------------------------|------------------------|
| 16               | 5512 073-03 (M8)                | 3021 010-060 (6.0)     |
| 22               | 5512 073-01 (M10)               | 3021 010-080 (8.0)     |
| 22 <sup>1)</sup> | 5512 073-04 <sup>1)</sup> (M10) | 3021 010-080 (8.0)     |
| 27               | 5512 073-02 (M12)               | 3021 010-100 (10.0)    |
| 32               | 5512 073-05 (M16)               | 3021 010-140 (14.0)    |

<sup>1)</sup> Optimized: Low head/small head-diameter

<sup>2)</sup> Accessories, must be ordered separately.

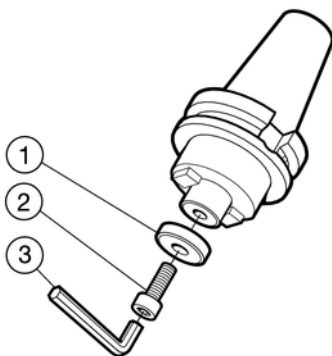
For CoroMill® 365, CoroMill® Century and CoroMill® 210 a unique screw, with coolant hole, is used. This has to be ordered separately. See ordering pages for these cutters.

## Metric pilot

| A1B05<br>A2B05 | 1           | 2            | 3 <sup>1)</sup>     | 4           |             |
|----------------|-------------|--------------|---------------------|-------------|-------------|
|                | Washer      | Centre screw | Key (mm)            | ISO 40      | ISO 50      |
| -xx 16 xxx     | 5541 015-01 | 3212 020-410 | 3021 010-060 (6.0)  | 5643 017-01 | 5643 017-02 |
| -xx 22 xxx     | 5541 015-02 | 3212 020-461 | 3021 010-080 (8.0)  | 5643 017-01 | 5643 017-02 |
| -xx 27 xxx     | 5541 015-03 | 3212 020-512 | 3021 010-100 (10.0) | 5643 017-01 | 5643 017-02 |
| -xx 32 xxx     | 5541 015-04 | 3212 020-563 | 3021 010-120 (12.0) | 5643 017-01 | 5643 017-02 |
| -xx 40 xxx     | 5541 015-05 | 3212 020-614 | 3021 010-140 (14.0) | 5643 017-01 | 5643 017-02 |

<sup>1)</sup> Accessories, must be ordered separately

## A205 Metric pilot

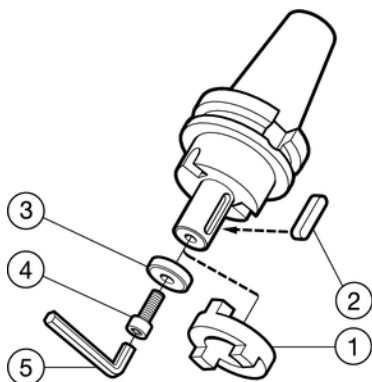


|                | 1           | 2            | 3                      |
|----------------|-------------|--------------|------------------------|
|                | Washer      | Centre screw | Key (mm) <sup>1)</sup> |
| A205-30 16 035 | 5541 015-01 | 3212 020-410 | 3021 010-060 (6.0)     |
| A205-30 22 035 | 5541 015-02 | 3212 020-461 | 3021 010-080 (8.0)     |
| A205-30 27 035 | 5541 015-03 | 3212 020-512 | 3021 010-100 (10.0)    |
| A205-30 32 050 | 5541 015-03 | 3212 020-563 | 3021 010-110 (12.0)    |

<sup>1)</sup> Accessories, not delivered with the tool, must be ordered separately.

## Combi Face mill holder

A2B05



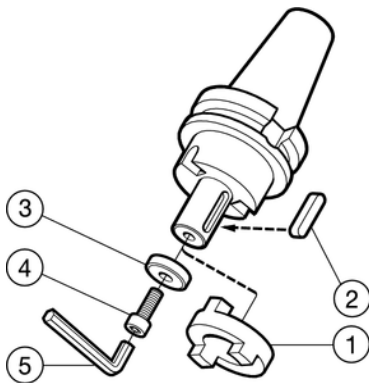
| A2B05      | 1            | 2             | 3           | 4            | 5 <sup>1)</sup>     |
|------------|--------------|---------------|-------------|--------------|---------------------|
|            | Driving ring | Parallell key | Washer      | Centre screw | Key (mm)            |
| -xx 16 xxx | 3193 010-160 | 3191 010-460  | 5541 015-01 | 3212 020-410 | 3021 010-060 (6.0)  |
| -xx 22 xxx | 3193 010-220 | 3191 010-562  | 5541 015-02 | 3212 020-461 | 3021 010-080 (8.0)  |
| -xx 27 xxx | 3193 010-270 | 5632 010-06   | 5541 015-03 | 3212 020-512 | 3021 010-100 (10.0) |

<sup>1)</sup> Accessories, must be ordered separately

## Side and face mill holder

### Side and face mill holder

A1B08, A208, A2B08, AA3B10



| Metric pilot    | 1            | 2            | 3           | 4            | 5                      |
|-----------------|--------------|--------------|-------------|--------------|------------------------|
|                 | Driving ring | Parallel key | Washer      | Screw        | Key (mm) <sup>1)</sup> |
| A1B08-40 22 055 | 3193 010 220 | 3191 010 562 | 5541 015-02 | 3212 020-464 | 3021 010-080 (8.0)     |
| A1B08-40 27 055 | 3193 010 270 | 5632 010-06  | 5541 015-03 | 3212 020-512 | 3021 010-100 (10.0)    |
| A1B08-40 32 060 | 3193 010 320 | 3191 010 07  | 5541 015-04 | 3212 020-563 | 3021 010-120 (12.0)    |
| A1B08-40 40 060 | 3193 010 400 | 3191 010 664 | 5541 015-05 | 3212 020-614 | 3021 010-140 (14.0)    |
| A208-30 16 045  | 3193 010 160 | 3191 010 460 | 5541 015-01 | 3212 020-410 | 3021 010-050 (6.0)     |
| A208-30 22 047  | 3193 010 220 | 3191 010 562 | 5541 015-02 | 3212 020-461 | 3021 010-080 (8.0)     |
| A208-30 27 050  | 3193 010 270 | 5632 010-06  | 5541 015-03 | 3212 020-512 | 3021 010-100 (10.0)    |
| A2B08-40 22 055 | 3193 010 220 | 3191 010 562 | 5541 015-02 | 3212 020-461 | 3021 010-080 (8.0)     |
| A2B08-40 27 055 | 3193 010 270 | 5632 010-06  | 5541 015-03 | 3212 020-512 | 3021 010-100 (10.0)    |
| A2B08-40 32 060 | 3193 010 320 | 3191 010 07  | 5541 015-04 | 3212 020-563 | 3021 010-120 (12.0)    |
| A2B08-40 40 070 | 3193 010 400 | 3191 010 664 | 5541 015-05 | 3212 020-614 | 3021 010-140 (14.0)    |

| Inch pilot       | 2            | 4           | 5                        |
|------------------|--------------|-------------|--------------------------|
|                  | Parallel key | Screw       | Key (inch) <sup>1)</sup> |
| AA3B10-40 25 055 | SK 512       | 5512 065-06 |                          |
| AA3B10-40 31 060 | SK 627       | 5512 065-10 | 3193 010 270             |
| AA3B10-40 38 060 | SK 414       | 5512 065-05 | 3193 010 320             |

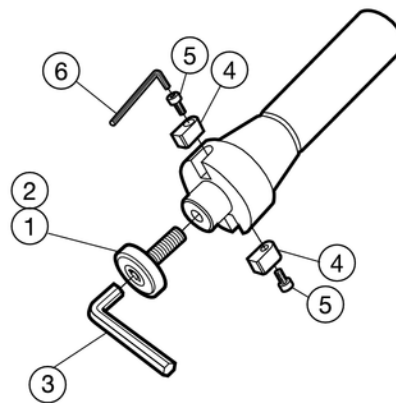
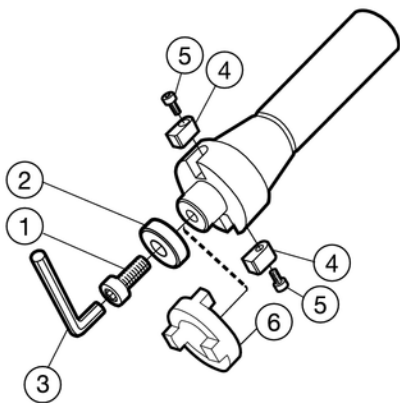
<sup>1)</sup> Accessories, must be ordered separately

## Face mill holder

### Bridgeport

392.R8.05

A392.R8.05



| Metric pilot     | 1            | 2           | 3                      | 4           | 5            | 6            |
|------------------|--------------|-------------|------------------------|-------------|--------------|--------------|
|                  | Centre screw | Washer      | Key (mm) <sup>1)</sup> | Driving key | Screw        | Driving ring |
| 392.R8.05-16 020 | 3212 020-414 | 5541 015-01 | 3021 010-060 (6.0)     | -           | -            | 3193 020-160 |
| 392.R8.05-22 020 | 3212 020-464 | 5541 015-02 | 3021 010-080 (8.0)     | 5631 011-01 | 3213 010-258 | -            |

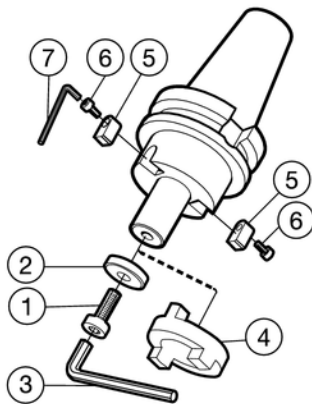
  

| Inch pilot        | 1            | 2            | 3                        | 4           | 5         | 6                        |
|-------------------|--------------|--------------|--------------------------|-------------|-----------|--------------------------|
|                   | Centre screw | Centre screw | Key (inch) <sup>1)</sup> | Driving key | Screw     | Key (inch) <sup>1)</sup> |
| A392.R8.05-19 020 | 5512 065-02  | 5512 065-07  | 3021 011-316 (3/16)      | 5631 013-01 | 8-32x3/8M | 3021 011-140 (1/4)       |
| A392.R8.05-25 020 | 5512 065-03  | 5512 065-05  | 3021 011-516 (5/16)      | 5631 013-02 | 10-32x3/8 |                          |

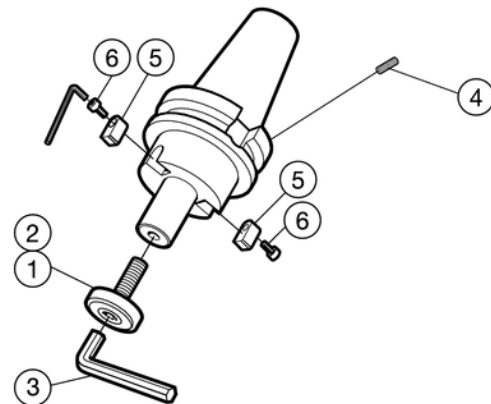
<sup>1)</sup> Accessories, must be ordered separately

# Face mill holder

**BIG-PLUS**  
392.54005C  
Metric pilot



**BIG-PLUS CAT V**  
A392.54005C  
Inch pilot



| Metric pilot      | 1            | 2           | 3                      | 4            | 5           | 6            | 7                  |
|-------------------|--------------|-------------|------------------------|--------------|-------------|--------------|--------------------|
|                   | Screw        | Washer      | Key (mm) <sup>1)</sup> | Driving ring | Driving key | Screw        | Key (mm)           |
| 392.54005C4016045 | 3212 020-414 | 5541 015-01 | 3021 010-060 (6.0)     | 3193 010-160 | -           | -            | -                  |
| 392.54005C4022040 | 3212 020-464 | 5541 015-02 | 3021 010-080 (8.0)     | -            | 5631 012-01 | 3212 010-258 | 3021 010-030 (3.0) |
| 392.54005C4027050 | 3212 020-514 | 5541 015-03 | 3021 010-100 (10.0)    | -            | 5631 010-01 | 3212 010-258 | 3021 010-030 (3.0) |
| 392.54005C4032055 | 3212 020-564 | 5541 015-04 | 3021 010-120 (12.0)    | -            | 5631 010-11 | 3212 010-308 | 3021 010-040 (4.0) |
| 392.54005C4040055 | 3212 020-614 | 5541 015-05 | 3021 010-140 (12.0)    | -            | 5631 051-02 | 3212 010-359 | 3021 010-050 (5.0) |
| 392.55505C4016050 | 3212 020-414 | 5541 015-01 | 3021 010-060 (6.0)     | 3193 010-160 | -           | -            | -                  |
| 392.55505C4022045 | 3212 020-464 | 5541 015-02 | 3021 010-080 (8.0)     | -            | 5631 012-01 | 3212 010-258 | 3021 010-030 (3.0) |
| 392.55505C4027045 | 3212 020-514 | 5541 015-03 | 3021 010-100 (10.0)    | -            | 5631 010-01 | 3212 010-258 | 3021 010-030 (3.0) |
| 392.55505C4032050 | 3212 020-564 | 5541 015-04 | 3021 010-120 (12.0)    | -            | 5631 010-11 | 3212 010-308 | 3021 010-040 (4.0) |
| 392.55505C4040050 | 3212 020-614 | 5541 015-05 | 3021 010-140 (12.0)    | -            | 5631 051-02 | 3212 010-359 | 3021 010-050 (5.0) |

| Inch pilot         | 1           | 2           | 3                        | 4           | 5           | 6          |
|--------------------|-------------|-------------|--------------------------|-------------|-------------|------------|
|                    | Screw       | Screw       | Key (inch) <sup>1)</sup> | Screw       | Driving key | Screw      |
| A392.54505C4019040 | 5512 065-02 | 5512 065-07 | 3021 011-316 (3/16")     | 5514 011-02 | 5631 013-01 | 8-32x3/8M  |
| A392.54505C4025055 | 5512 065-03 | 5512 065-05 | 3021 011-516 (5/16")     | 5514 011-02 | 5631 013-02 | 10-32x3/8  |
| A392.54505C4038060 | 5512 065-04 | 5512 065-10 | 3021 011-380 (3/8")      | 5514 011-02 | 5631 013-04 | 1/4-20x3/4 |

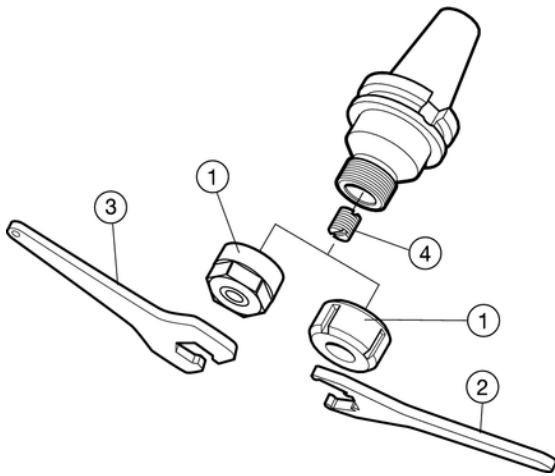
<sup>1)</sup> Accessories, must be ordered separately

## ER collet chuck

For DIN 6499 collets

CAT V

AA3B14



| AA3B14     | 1           | 2 <sup>1)</sup> | 3 <sup>1)</sup> | 4 <sup>1)</sup> |
|------------|-------------|-----------------|-----------------|-----------------|
|            | Locking nut | Wrench          | Wrench          | Stop screw      |
| -xx 16 xxx | 5533 050-06 | -               | 5680 091-01     | 5514 044-01     |
| -xx 20 xxx | 5533 050-08 | -               | 5680 091-02     | 5514 018-01     |
| -xx 25 xxx | 5533 050-02 | 5680 096-02     | -               | 5514 018-03     |
| -xx 32 xxx | 5533 050-03 | 5680 096-03     | -               | 5514 018-04     |
| -xx 40 xxx | 5533 050-04 | 5680 096-04     | -               | 5514 018-02     |

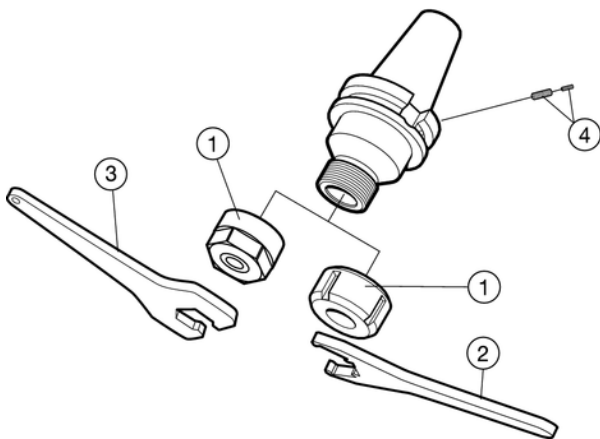
<sup>1)</sup> Accessories, not delivered with the tool, must be ordered separately.

## Collet chuck

For DIN 6499 collets

ISO 7388, MAS-BT 403

A1B14 / A2B14



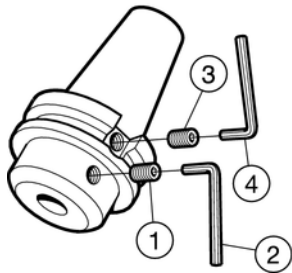
| A1B14<br>A2B14 | 1           | 2 <sup>1)</sup> | 3 <sup>1)</sup> | 4 <sup>1)</sup> | 5 <sup>1)</sup>         |
|----------------|-------------|-----------------|-----------------|-----------------|-------------------------|
|                | Locking nut | Wrench          | Wrench          | ISO 30          | ISO 40<br>ISO 50        |
| -xx 11 xxx     | 5533 050-07 | -               | -               | -               | -                       |
| -xx 16 xxx     | 5533 050-06 | -               | 5680 091-01     | -               | 5643 017-01 5643 017-02 |
| -xx 20 xxx     | 5533 050-08 | -               | 5680 091-02     | -               | 5643 017-01 5643 017-02 |
| -xx 25 xxx     | 5533 050-02 | 5680 096-02     | -               | -               | 5643 017-01 5643 017-02 |
| -xx 32 xxx     | 5533 050-03 | 5680 096-03     | -               | -               | 5643 017-01 5643 017-02 |
| -xx 40 xxx     | 5533 050-04 | 5680 096-04     | -               | -               | 5643 017-01 5643 017-02 |

<sup>1)</sup> Accessories, not delivered with the tool, must be ordered separately.

## End mill holder, Weldon type, short version

Shank according to DIN 6535-HB

A1X20 / A2X20

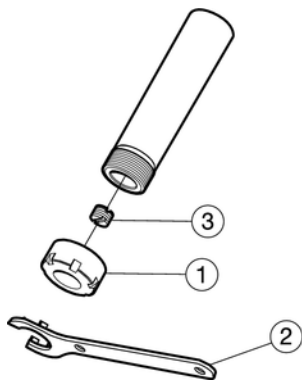


|                 | 1            | 2                      | 3            | 4                      |
|-----------------|--------------|------------------------|--------------|------------------------|
| A1X20<br>A2X20  | Screw        | Key (mm) <sup>1)</sup> | Screw        | Key (mm) <sup>1)</sup> |
| A1X20-xx 16 xxx | 3214 050-539 | 3021 010-060 (6.0)     |              |                        |
| A1X20-xx 18 xxx | 5514 023-03  | 3021 010-060 (6.0)     |              |                        |
| A1X20-xx 20 xxx | 5514 023-04  | 3021 010-080 (8.0)     |              |                        |
| A1X20-xx 25 xxx | 5514 023-05  | 3021 010-100 (10.0)    |              |                        |
| A1X20-xx 32 xxx | 3214 050-610 | 3021 010-100 (10.0)    | 5514 023-02  | 3021 010-040 (4.0)     |
| A2X20-xx 16 xxx | 5514 023-03  | 3021 010-060 (6.0)     |              |                        |
| A2X20-xx 18 xxx | 5514 023-03  | 3021 010-060 (6.0)     |              |                        |
| A2X20-xx 20 xxx | 5514 023-04  | 3021 010-060 (6.0)     |              |                        |
| A2X20-xx 25 xxx | 5514 023-06  | 3021 010-100 (10.0)    | 3214 050-407 | 3021 010-040 (4.0)     |
| A2X20-xx 32 xxx | 5514 023-08  | 3021 010-100 (10.0)    | 3214 010-406 | 3021 010-040 (4.0)     |

<sup>1)</sup> Accessories, not delivered with the tool, must be ordered separately.

## Collet chuck extension

A393.14  
393.14



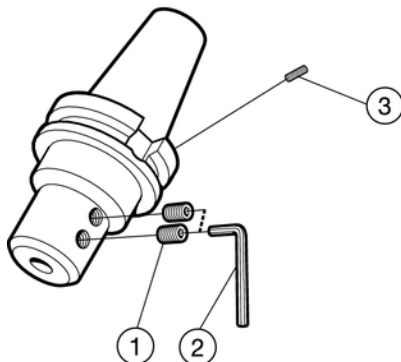
|                   | 1           | 2 <sup>1)</sup> | 3 <sup>1)</sup> |
|-------------------|-------------|-----------------|-----------------|
|                   | Locking nut | Wrench          | Stop screw      |
| A393.14-13 16 182 | 5533 065-03 | 5680 098-03     | 3214 010-360    |
| A393.14-19 16 182 | 5533 065-03 | 5680 098-03     | 5514 014-02     |
| A393.14-19 20 187 | 5533 065-01 | 5680 098-01     | 5514 014-02     |
| A393.14-26 20 203 | 5533 065-01 | 5680 098-01     | 5514 014-03     |
| A393.14-19 25 203 | 5533 050-02 | 5680 096-02     | 5514 014-02     |
| A393.14-26 25 203 | 5533 050-02 | 5680 096-02     | 5514 014-04     |
| A393.14-26 32 203 | 5533 050-03 | 5680 096-03     | 5514 014-04     |
| 393.14-08 11 056  | 5533 065-02 | 5680 098-02     | -               |
| 393.14-12 16 080  | 5533 065-03 | 5680 098-03     | -               |
| 393.14-16 11 150  | 5533 065-02 | 5680 098-02     | 5514 014-01     |
| 393.14-20 16 155  | 5533 065-03 | 5680 098-03     | 5514 014-02     |
| 393.14-25 20 170A | 5533 065-01 | 5680 098-01     | 5514 014-03     |

<sup>1)</sup> Accessories, must be ordered separately

## End mill holder, Weldon type

Metric bore with CAT V-flange

392.45520



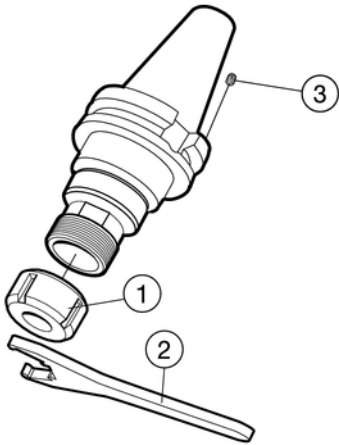
|                     | 1           | 2 <sup>1)</sup> | 3             |
|---------------------|-------------|-----------------|---------------|
|                     | Screw       | Key             | Coolant screw |
| 392.45520-40 20 089 | 5514 022-08 | 3021 011-516    | 3214 010-253  |
| 392.45520-40 25 100 | 5514 022-09 | 3021 011-380    | 3214 010-253  |
| 392.45520-50 20 095 | 5514 022-08 | 3021 011-516    | 3214 010-255  |
| 392.45520-50 25 100 | 5514 022-09 | 3021 011-380    | 3214 010-255  |
| 392.45520-50 32 100 | 5514 022-07 | 3021 011-380    | 3214 010-255  |
| 392.45520-50 40 100 | 5514 022-07 | 3021 011-380    | 3214 010-255  |

<sup>1)</sup> Accessories, not delivered with the tool, must be ordered separately.

**ER collet chuck**

BIG-PLUS

392.54014 / 392.55514 / A392.54514

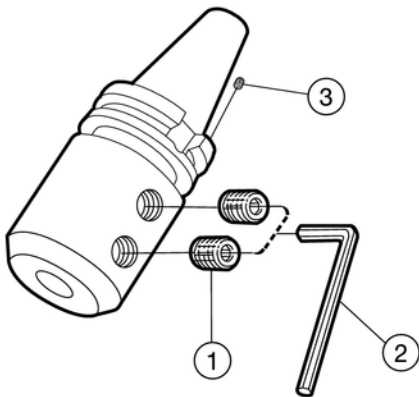


|                    | 1           | 2           | 3           |
|--------------------|-------------|-------------|-------------|
|                    | Collet nut  | Key         | Screw       |
| 392.54014-4025070  | 5533 050-02 | 5680 096-02 | 5514 011-02 |
| 392.54014-4040075  | 5533 050-04 | 5680 096-04 | 5514 011-02 |
| 392.55514-4025070  | 5533 050-02 | 5680 096-02 | 5514 011-02 |
| 392.55514-4040070  | 5533 050-04 | 5680 096-04 | 5514 011-02 |
| A392.54514-4025070 | 5533 050-02 | 5680 096-02 | 5514 011-02 |
| A392.54514-4040075 | 5533 050-04 | 5680 096-04 | 5514 011-02 |

**Combination Weldon / ISO9766**

BIG-PLUS

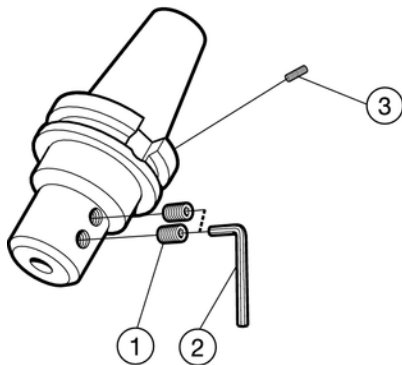
392.54023 / 392.55523 / A392.5453



|                    | 1            | 2                    | 3           |
|--------------------|--------------|----------------------|-------------|
|                    | Screw        | Key (mm/inch)        | Screw       |
| 392.54023-4020070  | 3214 050-559 | 3021 010-080 (8.0)   | 5514 011-02 |
| 392.54023-4025100  | 3214 050-590 | 3021 010-100 (10.0)  | 5514 011-02 |
| 392.54023-4032105  | 3214 050-610 | 3021 010-100 (10.0)  | 5514 011-02 |
| 392.54023-4040115  | 3214 050-611 | 3021 010-100 (10.0)  | 5514 011-02 |
| 392.55523-4020065  | 3214 050-559 | 3021 010-080 (8.0)   | 5514 011-02 |
| 392.55523-4025090  | 3214 050-590 | 3021 010-100 (10.0)  | 5514 011-02 |
| 392.55523-4032100  | 3214 050-610 | 3021 010-100 (10.0)  | 5514 011-02 |
| 392.55523-4040110  | 3214 050-611 | 3021 010-100 (10.0)  | 5514 011-02 |
| A392.54523-4019065 | 5514 021-04  | 3021 011-516 (5/16") | 5514 011-02 |
| A392.54523-4025100 | 5514 021-05  | 3021 011-380 (3/8")  | 5514 011-02 |
| A392.54523-4031100 | 5514 021-05  | 3021 011-380 (3/8")  | 5514 011-02 |

## End mill holder, Weldon type

AA3B20/ AA2B20/AA220



### End mill holder, Weldon type

|                        | 1           | 2                        | 3 <sup>2)</sup> |
|------------------------|-------------|--------------------------|-----------------|
| AA3B20<br>AA2B20/AA220 | Screw       | Key (inch) <sup>1)</sup> | Coolant screw   |
| AA3B20-40 03 xxx       | 5514 022-01 | 3021 011-532 (5/32")     | 3214 010-253    |
| AA3B20-40 06 xxx       | 5514 022-03 | 3021 011-316 (3/16")     | 3214 010-253    |
| AA3B20-40 09 xxx       | 5514 022-04 | 3021 011-140 (1/4")      | 3214 010-253    |
| AA3B20-40 13 xxx       | 5514 022-05 | 3021 011-732 (7/32")     | 3214 010-253    |
| AA3B20-40 16 xxx       | 5514 022-06 | 3021 011-140 (1/4")      | 3214 010-253    |
| AA3B20-40 19 xxx       | 5514 022-08 | 3021 011-516 (5/16")     | 3214 010-253    |
| AA3B20-40 22 xxx       | 5514 022-08 | 3021 011-516 (5/16")     | 3214 010-253    |
| AA3B20-40 25 044       | 5514 022-10 | 3021 010-080 (8 mm)      | 3214 010-253    |
| AA3B20-40 25 101       | 5514 022-09 | 3021 011-380 (3/8")      | 3214 010-253    |
| AA3B20-40 32 xxx       | 5514 022-07 | 3021 011-380 (3/8")      | 3214 010-253    |
| AA3B20-40 38 xxx       | 5514 022-07 | 3021 011-380 (3/8")      | 3214 010-253    |
| AA3B20-50 09 xxx       | 5514 022-04 | 3021 011-140 (1/4")      | 3214 010-355    |
| AA3B20-50 13 xxx       | 5514 022-05 | 3021 011-732 (7/32")     | 3214 010-355    |
| AA3B20-50 16 xxx       | 5514 022-06 | 3021 011-140 (1/4")      | 3214 010-355    |
| AA3B20-50 19 xxx       | 5514 022-08 | 3021 011-516 (5/16")     | 3214 010-355    |
| AA3B20-50 22 xxx       | 5514 022-08 | 3021 011-516 (5/16")     | 3214 010-355    |
| AA3B20-50 25 xxx       | 5514 022-09 | 3021 011-380 (3/8")      | 3214 010-355    |
| AA3B20-50 32 xxx       | 5514 022-07 | 3021 011-516 (5/16")     | 3214 010-355    |
| AA3B20-50 38 xxx       | 5514 022-07 | 3021 011-380 (3/8")      | 3214 010-355    |
| AA3B20-50 51 xxx       | 5514 022-02 | - (1/2")                 | 3214 010-355    |
| AA220-30 03 xxx        | 5514 022-01 | 3021 011-532 (5/32")     | -               |
| AA220-30 06 xxx        | 5514 022-03 | 3021 011-316 (3/16")     | -               |
| AA220-30 09 xxx        | 5514 022-04 | 3021 011-140 (1/4")      | -               |
| AA2B20-40 09 xxx       | 5514 022-04 | 3021 011-140 (1/4")      | 3214 010-253    |
| AA2B20-40 13 xxx       | 5514 022-05 | 3021 011-732 (7/32")     | 3214 010-253    |
| AA2B20-40 16 xxx       | 5514 022-06 | 3021 011-140 (1/4")      | 3214 010-253    |
| AA2B20-40 19 xxx       | 5514 022-08 | 3021 011-516 (5/16")     | 3214 010-253    |
| AA2B20-40 25 xxx       | 5514 022-09 | 3021 011-380 (3/8")      | 3214 010-253    |
| AA2B20-40 32 xxx       | 5514 022-07 | 3021 011-516 (5/16")     | 3214 010-253    |

<sup>1)</sup> Accessories, not delivered with the tool, must be ordered separately.

<sup>2)</sup> Only new products with B in the code have coolant through centre and flange.

## End mill holder, Weldon type

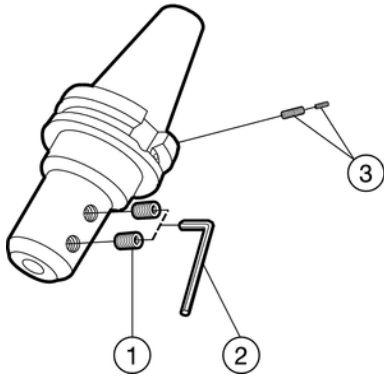
Inch bore

Shank according to DIN 6535-HB

Metric bore

ISO 7388/I

A1B20



|            | 1            | 2                      | 3   |             |
|------------|--------------|------------------------|---|-------------|
|            |              |                        | Plastic dowel and screw (set of 50 pieces each) <sup>1)</sup> |             |
| A1B20      | Screw        | Key (mm) <sup>1)</sup> | ISO 40  | ISO 50      |
| -xx 06 xxx | 3214 050-357 | 174.1-864 (3.0)        | 5643 017-01   | 5643 017-02 |
| -xx 08 xxx | 3214 050-407 | 3021 010-040 (4.0)     | 5643 017-01   | 5643 017-02 |
| -xx 10 xxx | 3214 050-458 | 3021 010-050 (5.0)     | 5643 017-01   | 5643 017-02 |
| -xx 12 xxx | 3214 050-509 | 3021 010-060 (6.0)     | 5643 017-01   | 5643 017-02 |
| -xx 16 xxx | 3214 050-539 | 3021 010-060 (6.0)     | 5643 017-01   | 5643 017-02 |
| -xx 18 xxx | 3214 050-539 | 3021 010-060 (6.0)     | 5643 017-01   | 5643 017-02 |
| -xx 20 xxx | 3214 050-559 | 3021 010-080 (8.0)     | 5643 017-01   | 5643 017-02 |
| -xx 25 xxx | 3214 050-590 | 3021 010-100 (10.0)    | 5643 017-01   | 5643 017-02 |
| -xx 32 xxx | 3214 050-610 | 3021 010-100 (10.0)    | 5643 017-01   | 5643 017-02 |
| -xx 40 xxx | 3214 050-610 | 3021 010-100 (10.0)    | 5643 017-01   | 5643 017-02 |

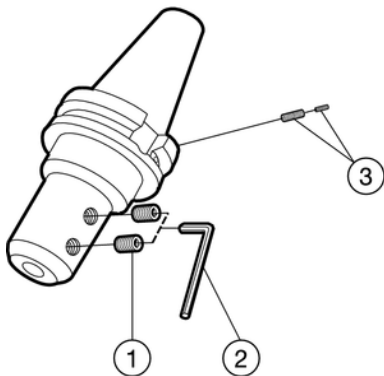
<sup>1)</sup> Accessories, not delivered with the tool, must be ordered separately.

Shank according to DIN 6535-HB

Metric bore

MAS 403 BT

A2B20



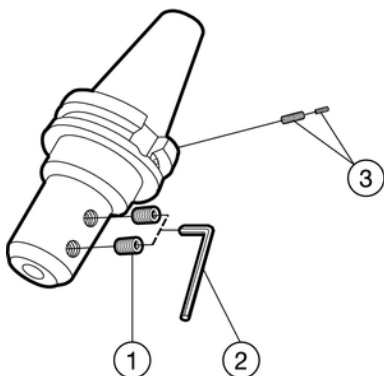
|                          | 1            | 2                      | 3   |             |             |
|--------------------------|--------------|------------------------|---|-------------|-------------|
|                          |              |                        | Plastic dowel and screw (set of 50 pieces each) <sup>1)</sup> |             |             |
| A2B20                    | Screw        | Key (mm) <sup>1)</sup> | ISO 30  | ISO 40      | ISO 50      |
| -xx 06 xxx               | 3214 050-357 | 174.1-864 (3.0)        | -   | 5643 017-01 | 5643 017-02 |
| -xx 08 xxx               | 3214 050-407 | 3021 010-040 (4.0)     | -   | 5643 017-01 | 5643 017-02 |
| -xx 10 xxx               | 3214 050-458 | 3021 010-050 (5.0)     | -   | 5643 017-01 | 5643 017-02 |
| -xx 12 xxx               | 3214 050-509 | 3021 010-060 (6.0)     | -   | 5643 017-01 | 5643 017-02 |
| -xx 16 xxx               | 3214 050-539 | 3021 010-060 (6.0)     | -   | 5643 017-01 | 5643 017-02 |
| -xx 20 xxx               | 3214 050-559 | 3021 010-080 (8.0)     | -   | 5643 017-01 | 5643 017-02 |
| -40 25 xxx               | 5514 023-06  | 3021 010-100 (10.0)    | -   | 5643 017-01 | 5643 017-02 |
| -50 25 xxx               | 3214 050-590 | 3021 010-100 (10.0)    | -   | 5643 017-01 | 5643 017-02 |
| -50 32 xxx               | 3214 050-610 | 3021 010-100 (10.0)    | -   | 5643 017-01 | 5643 017-02 |
| -40 32 xxx               | 5514 023-07  | 3021 010-100 (10.0)    | -   | 5643 017-01 | 5643 017-02 |
| -40 32 100 <sup>2)</sup> | 3214 050-610 | 3021 010-100 (10.0)    | -   | -           | -           |
| -xx 40 xxx               | 3214 050-610 | 3021 010-100 (10.0)    | -   | 5643 017-01 | 5643 017-02 |

<sup>1)</sup> Accessories, not delivered with the tool, must be ordered separately.

<sup>2)</sup> Two screws are used, 3214 050-610 and 5514 023-07. Key for both is 3021 010-100.

Holder for Coromant Delta drills, CoroDrill® 880 and Coromant U drills

A1B27 / A2B27

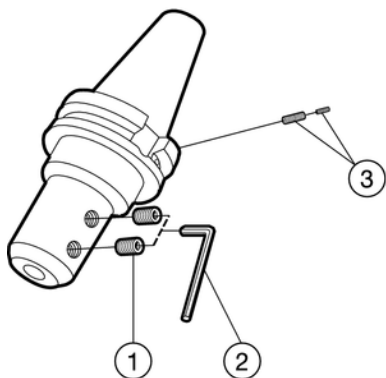


|                | 1           | 2 <sup>1)</sup>    | 3 <sup>1)</sup>                                 |             |
|----------------|-------------|--------------------|---|-------------|
|                |             |                    | Plastic dowel and screw (set of 50 pieces each) |             |
| A1B27<br>A2B27 | Screw       | Key (mm)           | ISO 40  | ISO 50      |
| -xx 16 xxx     | 5514 042-04 | 3021 010-040 (4.0) | 5643 017-01                                     | 5643 017-02 |
| -xx 20 xxx     | 5514 042-04 | 3021 010-040 (4.0) | 5643 017-01                                     | 5643 017-02 |
| -xx 25 xxx     | 416-1-838   | 3021 010-060 (6.0) | 5643 017-01                                     | 5643 017-02 |
| -xx 32 xxx     | 416.1-838   | 3021 010-060 (6.0) | 5643 017-01                                     | 5643 017-02 |
| -xx 40 xxx     | 5514 042-03 | 3021 010-080 (8.0) | 5643 017-01                                     | 5643 017-02 |
| -xx 50 xxx     | 416.1-839   | 3021 010-080 (8.0) | 5643 017-01                                     | 5643 017-02 |

<sup>1)</sup> Accessories, must be ordered separately



## Drill holder, ISO 9766 shank

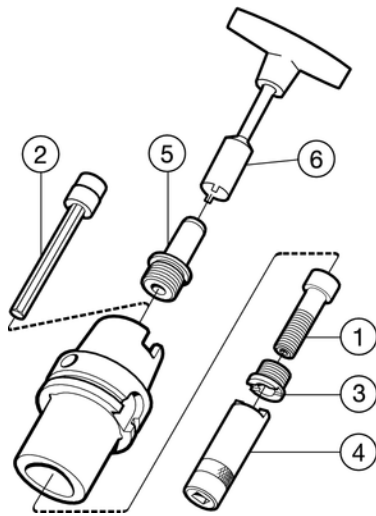


|                  | 1           | 2                        | 3 <sup>1)</sup> |
|------------------|-------------|--------------------------|-----------------|
| AA3B27           | Screw       | Key (inch) <sup>1)</sup> | Coolant screw   |
| AA3B27-40 19 080 | 5514 022-05 | 3021 011-732 (7/32")     | 3214 010-253    |
| AA3B27-40 25 085 | 5514 022-05 | 3021 011-732 (7/32")     | 3214 010-253    |
| AA3B27-40 32 090 | 5514 022-06 | 3021 011-140 (1/4")      | 3214 010-253    |
| AA3B27-50 19 080 | 5514 022-05 | 3021 011-732 (7/32")     | 3214 010-355    |
| AA3B27-50 25 085 | 5514 022-06 | 3021 011-140 (1/4")      | 3214 010-355    |
| AA3B27-50 32 090 | 5514 022-06 | 3021 011-140 (1/4")      | 3214 010-355    |
| AA3B27-50 38 090 | 5514 022-09 | 3021 011-916 (9/16")     | 3214 010-355    |
| AA3B27-50 51 110 | 5514 022-09 | 3021 011-916 (9/16")     | 3214 010-355    |

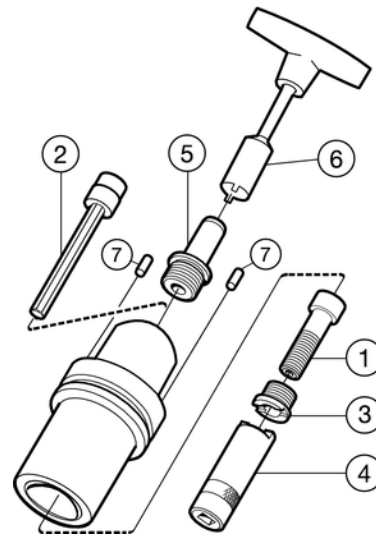
<sup>1)</sup> Accessories, must be ordered separately

# Basic holders

Cx390.410  
Cx-390.419



HSK F  
Cx.390.612



| Coromant Capto®     | 1            | 2 <sup>1)</sup>       | 3             | 4 <sup>1)</sup>          | 5            | 6 <sup>1)</sup> |
|---------------------|--------------|-----------------------|---------------|--------------------------|--------------|-----------------|
|                     | Centre screw | Extension key<br>(mm) | Retaining nut | Retaining nut<br>spanner | Coolant tube | Key             |
| C3-390.410-40 065   | 5512 067-01  | 5680 015-05 (8.0)     | 5512 091-04   | 5680 065-13              | 5692 020-02  | 5680 094-02     |
| C3-390.410-50 075A  | 5512 067-01  | 5680 015-05 (8.0)     | 5512 091-04   | 5680 065-13              | 5692 020-03  | 5680 094-03     |
| C3-390.410-63 075C  | 5512 067-01  | 5680 015-05 (8.0)     | 5512 091-04   | 5680 065-13              | 5692 020-04  | 5680 094-04     |
| C3-390.410-80 080   | 5512 067-01  | 5680 015-05 (8.0)     | 5512 091-04   | 5680 065-13              | 5692 020-05  | 5680 094-05     |
| C3-390.410-100 080A | 5512 067-01  | 5680 015-05 (8.0)     | 5512 091-04   | 5680 065-13              | 5692 020-06  | 5680 094-06     |
| C4-390.410-50 080A  | 5512 067-02  | 5680 015-05 (8.0)     | 5512 091-03   | 5680 065-10              | 5692 020-03  | 5680 094-03     |
| C4-390.410-63 080C  | 5512 067-02  | 5680 015-05 (8.0)     | 5512 091-03   | 5680 065-10              | 5692 020-04  | 5680 094-04     |
| C4-390.410-80 090   | 5512 067-02  | 5680 015-05 (8.0)     | 5512 091-03   | 5680 065-10              | 5692 020-05  | 5680 094-05     |
| C4-390.410-100 090A | 5512 067-02  | 5680 015-05 (8.0)     | 5512 091-03   | 5680 065-10              | 5692 020-06  | 5680 094-06     |
| C4-390.410-125 095  | 5512 067-02  | 5680 015-05 (8.0)     | 5512 091-03   | 5680 065-10              | 5692 020-06  | 5680 094-06     |
| C5-390.410-63 090C  | 5512 067-03  | 5680 015-01 (10.0)    | 5512 091-01   | 5680 065-11              | 5692 020-04  | 5680 094-04     |
| C5-390.410-80 095   | 5512 067-03  | 5680 015-01 (10.0)    | 5512 091-01   | 5680 065-11              | 5692 020-05  | 5680 094-05     |
| C5-390.410-100 100A | 5512 067-03  | 5680 015-01 (10.0)    | 5512 091-01   | 5680 065-11              | 5692 020-06  | 5680 094-06     |
| C5-390.410-100100HD | 5512 067-03  | 5680 015-01 (10.0)    | 5512 091-01   | 5680 065-11              | 5692 020-06  | 5680 094-06     |
| C5-390.410-125 105  | 5512 067-03  | 5680 015-01 (10.0)    | 5512 091-01   | 5680 065-11              | 5692 020-06  | 5680 094-06     |
| C6-390.410-80 110   | 5512 067-04  | 5680 015-02 (14.0)    | 5512 091-02   | 5680 065-12              | 5692 020-05  | 5680 094-05     |
| C6-390.410-100 110A | 5512 067-04  | 5680 015-02 (14.0)    | 5512 091-02   | 5680 065-12              | 5692 020-06  | 5680 094-06     |
| C6-390.410-100 120A | 5512 067-04  | 5680 015-02 (14.0)    | 5512 091-02   | 5680 065-12              | 5692 020-06  | 5680 094-06     |
| C6-390.410-125 120  | 5512 067-04  | 5680 015-02 (14.0)    | 5512 091-02   | 5680 065-12              | 5692 020-07  | 5680 094-07     |
| C6-390.410-100110HD | 5512 067-04  | 5680 015-02 (14.0)    | 5512 091-02   | 5680 065-12              | 5692 020-07  | 5680 094-07     |
| C6-390.410-125120HD | 5512 067-04  | 5680 015-02 (14.0)    | 5512 091-02   | 5680 065-12              | 5692 020-07  | 5680 094-07     |
| C8-390.410-125 130  | 5512 067-04  | 5680 015-02 (14.0)    | 5512 091-02   | 5680 065-12              | 5692 020-07  | 5680 094-07     |
| C8-390.410-125130HD | 5512 067-04  | 5680 015-02 (14.0)    | 5512 091-02   | 5680 065-12              | 5692 020-07  | 5680 094-07     |
| C8-390.410-160 135  | 5512 067-04  | 5680 015-02 (14.0)    | 5512 091-02   | 5680 065-12              | 5692 020-07  | 5680 094-07     |
| C10-390.410-125 160 | 5512 067-06  | 5680 015-06 (17.0)    | 5512 091-05   | 5680 065-14              | 5692 020-07  | 5680 094-07     |
| C10-390.410-160 160 | 5512 067-06  | 5680 015-06 (17.0)    | 5512 091-05   | 5680 065-14              | 5692 020-07  | 5680 094-07     |

<sup>1)</sup> Accessories, must be ordered separately

| Coromant Capto®    | 1            | 2 <sup>1)</sup>       | 3             | 4 <sup>1)</sup>          | 5            | 6 <sup>1)</sup> |
|--------------------|--------------|-----------------------|---------------|--------------------------|--------------|-----------------|
|                    | Centre screw | Extension key<br>(mm) | Retaining nut | Retaining nut<br>spanner | Coolant tube | Key             |
| C4-390.419-40 075  | 5512 067-02  | 5680 015-05           | 5512 091-03   | 5680 065-10              | 5692 020-03  | 5680 094-03     |
| C5-390.419-63 090  | 5512 067-03  | 5680 015-01           | 5512 091-01   | 5680 065-11              | 5692 020-04  | 5680 094-04     |
| C6-390.419-100 110 | 5512 067-04  | 5680 015-02           | 5512 091-02   | 5680 065-12              | 5692 020-06  | 5680 094-06     |
| C6-390.419-63 110  | 5512 067-04  | 5680 015-02           | 5512 091-02   | 5680 065-12              | 5692 020-04  | 5680 094-04     |
| C8-390.419-100 120 | 5512 067-04  | 5680 015-02           | 5512 091-02   | 5680 065-12              | 5692 020-06  | 5680 094-06     |

<sup>1)</sup> Accessories, must be ordered separately

## HSK F Pin style

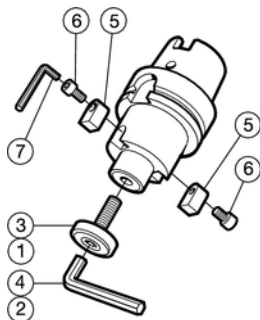
| Coromant Capto®   | 1            | 2 <sup>1)</sup>       | 3             | 4 <sup>1)</sup>          | 5            | 6 <sup>1)</sup> | 7            |
|-------------------|--------------|-----------------------|---------------|--------------------------|--------------|-----------------|--------------|
|                   | Centre screw | Extension key<br>(mm) | Retaining nut | Retaining nut<br>spanner | Coolant tube | Key             | Spring pin   |
| C5-390.612 80 090 | 5512 063-08  | 5680 015-01 (10.0)    | 5512 091-01   | 5680 065-11              | 5692 020-04  | 5680 094-04     | 3113 030-508 |
| C6-390.612-80 105 | 5512 063-09  | 5680 015-01 (10.0)    | 5512 091-02   | 5680 065-11              | 5692 020-04  | 5680 094-04     | 3113 030-508 |

<sup>1)</sup> Accessories, must be ordered separately

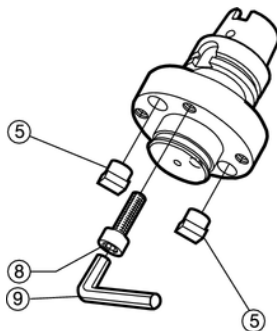
## Face mill holders

### Inch pilot

#### A392.41005



#### A392.41005-100 50 075 A

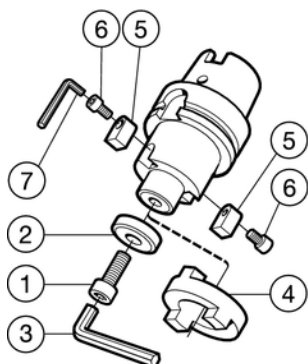


|                         | 1            | 2 <sup>1)</sup> | 3           | 4 <sup>1)</sup> | 5           | 6            | 7 <sup>1)</sup> | 8            | 9 <sup>1)</sup> |
|-------------------------|--------------|-----------------|-------------|-----------------|-------------|--------------|-----------------|--------------|-----------------|
|                         | Centre screw | Key             | Screw       | Key             | Driving key | Screw        | Key             | Screw        | Key             |
| A392.41005-50 19 050 A  | 5512 065-07  | 3021 011-140    | 5512 065-02 | 3021 011-316    | 5631 013-01 | 8-32 X 3/8M  | (9/64")         | -            | -               |
| A392.41005-50 25 060 A  | 5512 065-03  | 3021 011-516    | 5512 065-05 | 3021 011-516    | 5631 013-02 | 10-32 x 3/8  | (5/32")         | -            | -               |
| A392.41005-50 31 065 A  | 5512 065-06  | 3021 011-516    | -           | -               | 5631 010-06 | 10-32 x 5/8  | (5/32")         | -            | -               |
| A392.41005-63 19 050 B  | 5512 065-07  | 3021 011-140    | 5512 065-02 | 3021 011-316    | 5631 013-01 | 8-32 X 3/8M  | (9/64")         | -            | -               |
| A392.41005-63 25 060 B  | 5512 065-03  | 3021 011-516    | 5512 065-05 | 3021 011-516    | 5631 013-02 | 10-32 x 3/8  | (5/32")         | -            | -               |
| A392.41005-63 31 065 B  | 5512 065-06  | 3021 011-516    | -           | -               | 5631 013-03 | 10-32 x 3/4  | (5/32")         | -            | -               |
| A392.41005-63 38 065 B  | 5512 065-10  | 3021 011-380    | 5512 065-04 | 3021 011-380    | 5631 013-04 | 8-32 X 3/8M  | (3/16")         | -            | -               |
| A392.41005-100 19 050 A | 5512 065-07  | 3021 011-140    | 5512 065-02 | 3021 011-316    | 5631 013-01 | 8-32 x 3/8M  | (9/64")         | -            | -               |
| A392.41005-100 25 050 A | 5512 065-03  | 3021 011-516    | 5512 065-05 | 3021 011-516    | 5631 013-02 | 10-32 x 3/8  | (5/32")         | -            | -               |
| A392.41005-100 31 060 A | 5512 065-06  | 3021 011-516    | -           | -               | 5631 013-03 | 10-32 x 3/4  | (5/32")         | -            | -               |
| A392.41005-100 38 060 A | 5512 065-10  | 3021 011-380    | 5512 065-04 | 3021 011-380    | 5631 013-04 | 1/4-20 x 3/4 | (3/16")         | -            | -               |
| A392.41005-100 50 075 A | -            | -               | -           | -               | 5631 060-01 | -            | -               | 3212 031-761 | (1/2")          |

1) Accessories, must be ordered separately

### Metric pilot

#### 392.41005



|                      | 1                          | 2           | 3 <sup>1)</sup>     | 4            | 5           | 6            | 7 <sup>1)</sup>     |
|----------------------|----------------------------|-------------|---------------------|--------------|-------------|--------------|---------------------|
|                      | Centre screw               | Washer      | Key (mm)            | Driving ring | Driving key | Screw        | Key (mm)            |
| 392.41005-xx 16 xxx  | 3212 020-414               | 5541 015-01 | 3021 010-060 (6.0)  | 3193 010-160 | -           | -            | -                   |
| 392.41005-xx 22 xxx  | 3212 020-464               | 5541 015-02 | 3021 010-080 (8.0)  | -            | 5631 012-01 | 3212 010-258 | 174.1-864 (3.0)     |
| 392.41005-xx 27 xxx  | 3212 020-514               | 5541 015-03 | 3021 010-100 (10.0) | -            | 5631 010-01 | 3212 010-258 | 174.1-864 (3.0)     |
| 392.41005-xx 32 xxx  | 3212 020-564               | 5541 015-04 | 3021 010-120 (12.0) | -            | 5631 010-11 | 3212 010-308 | 3021 010-040 (4.0)  |
| 392.41005-63 40 xxx  | 3212 020-614               | 5541 015-05 | 3021 010-140 (14.0) | -            | 5631 051-02 | 3212 010-359 | 3021 010-050 (5.0)  |
| 392.41005-100 40 xxx | 3212 020-614               | 5541 015-05 | 3021 010-140 (14.0) | -            | 5631 010-03 | 3212 010-360 | 3021 010-050 (5.0)  |
| 392.41005-xxx 60 xxx | 3212 010-568 <sup>2)</sup> | -           | 3021 010-140 (14.0) | -            | 5635 010-01 | 3212 010-363 | 3021 010-140 (14.0) |

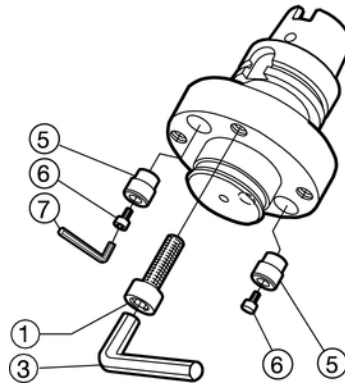
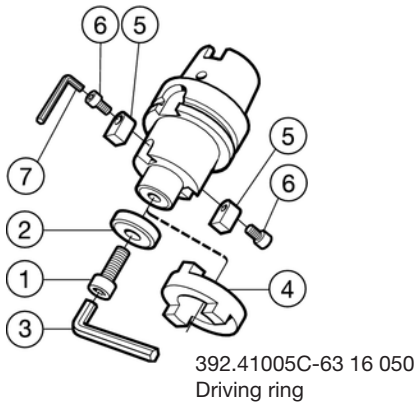
1) Accessories, must be ordered separately

2) Holder with flange clamping. For flange clamping, four screws, 3212 010 568, are used.

# Face mill holders

392.41005 / 392.41005C

392.41005-125 60 085



## Metric pilot

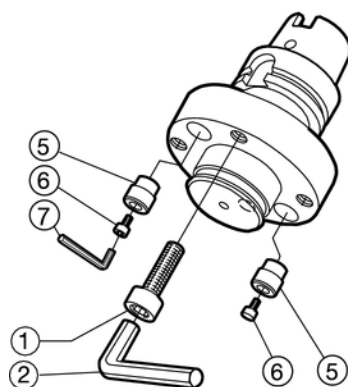
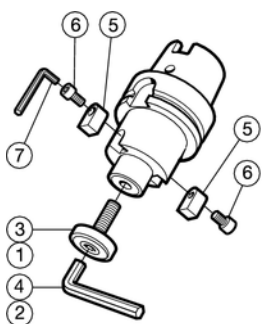
|                     | 1                          | 2           | 3 <sup>1)</sup>     | 4            | 5           | 6            | 7 <sup>1)</sup>     |
|---------------------|----------------------------|-------------|---------------------|--------------|-------------|--------------|---------------------|
|                     | Mounting screw             | Washer      | Key (mm)            | Driving ring | Driving key | Screw        | Key (mm)            |
| 392.41005C-4022050  | 3212 020-464               | 5541 015-02 | 3021 010-080 (8.0)  | -            | 5631 012-01 | 3212 010-258 | 3021 010-030 (3.0)  |
| 392.41005C-5022060  | 3212 020-464               | 5541 015-02 | 3021 010-080 (8.0)  | -            | 5631 012-01 | 3212 010-258 | 3021 010-030 (3.0)  |
| 392.41005C6316050   | 3212 020-414               | 5541 015-01 | 3021 010-060 (6.0)  | 3193 010-160 | -           | -            | -                   |
| 392.41005C6322050   | 3212 020-464               | 5541 015-02 | 3021 010-080 (8.0)  | -            | 5631 012-01 | 3212 010-258 | 3021 010-030 (3.0)  |
| 392.41005C6327060   | 3212 020-514               | 5541 015-03 | 3021 010-100 (10.0) | -            | 5631 010-01 | 3212 010-258 | 3021 010-030 (3.0)  |
| 392.41005C6332060   | 3212 020-564               | 5541 015-04 | 3021 010-120 (12.0) | -            | 5631 010-11 | 3212 010-308 | 3021 010-040 (4.0)  |
| 392.41005C6340060   | 3212 020-614               | 5541 015-05 | 3021 010-140 (14.0) | -            | 5631 051-02 | 3212 010-359 | 3021 010-050 (5.0)  |
| 392.41005C10022100  | 3212 020-564               | 5541 015-02 | 3021 010-080 (8.0)  | -            | 5631 012-01 | 3212 010-258 | 3021 010-030 (3.0)  |
| 392.41005C-10027100 | 3212 020-614               | 5541 015-03 | 3021 010-100 (10.0) | -            | 5631 010-01 | 3212 010-258 | 3021 010-030 (3.0)  |
| 392.41005C-10032100 | 3212 020-564               | 5541 015-04 | 3021 010-120 (12.0) | -            | 5631 010-11 | 3212 010-308 | 3021 010-040 (4.0)  |
| 392.41005C-10040100 | 3212 020-614               | 5541 015-05 | 3021 010-140 (14.0) | -            | 5631 010-03 | 3212 010-360 | 3021 010-050 (5.0)  |
| 392.41005C-12532100 | 3212 020-564               | 5541 015-04 | 3021 010-120 (12.0) | -            | 5631 010-11 | 3212 010-308 | 3021 010-040 (4.0)  |
| 392.41005C-12540100 | 3212 020-614               | 5541 015-05 | 3021 010-140 (14.0) | -            | 5631 010-03 | 3212 010-360 | 3021 010-050 (5.0)  |
| 392.41005-12560085  | 3212 010-568 <sup>2)</sup> | -           | 3021 010-140 (14.0) | -            | 5635 010-01 | 3212 010-363 | 3021 010-140 (14.0) |

1) Accessories, must be ordered separately

2) Holder with flange clamping. For flange clamping, four screws, 3212 010 568, are used.

A392.41005 / A392.41005C

A392.41005-100 63 075  
A392.41005-125 63 085



## Inch pilot

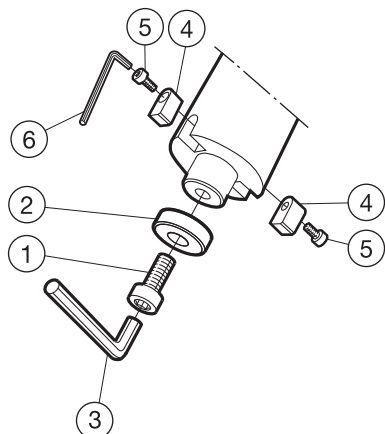
|                     | 1                          | 2 <sup>1)</sup> | 3              | 4 <sup>1)</sup> | 5           | 6            | 7 <sup>1)</sup> |
|---------------------|----------------------------|-----------------|----------------|-----------------|-------------|--------------|-----------------|
|                     | Mounting screw             | Key             | Mounting screw | Key             | Driving key | Screw        | Key             |
| A392.41005C6319050  | 5512 065-07                | 3021 011-140    | 5512 065-02    | 3021 011-316    | 5631 013-01 | 8-32 X 3/8M  | (9/64")         |
| A392.41005C6325060  | 5512 065-03                | 3021 011-516    | 5512 065-05    | 3021 011-516    | 5631 013-02 | 10-32 x 3/8  | 3021 011-532    |
| A392.41005C6338065  | 5512 065-10                | 3021 011-380    | 5512 065-04    | 3021 011-380    | 5631 013-04 | 8-32 X 3/8M  | 3021 011-316    |
| A392.41005C10019100 | 5512 065-07                | 3021 011-140    | 5512 065-02    | 3021 011-316    | 5631 013-01 | 8-32 X 3/8M  | (9/64")         |
| A392.41005C10025100 | 5512 065-03                | 3021 011-516    | 5512 065-05    | 3021 011-516    | 5631 013-02 | 10-32 x 3/8  | 3021 011-532    |
| A392.41005C10038100 | 5512 065-10                | 3021 011-380    | 5512 065-04    | 3021 011-380    | 5631 013-04 | 8-32 X 3/8M  | 3021 011-316    |
| A392.41005-10063075 | 3212 031-761 <sup>2)</sup> | (1/2")          | -              | -               | 5631 060-01 | 3212 010-363 | 3021 010-050    |
| A392.41005C12525100 | 5512 065-03                | 3021 011-516    | 5512 065-05    | 3021 011-516    | 5631 013-02 | 10-32 x 3/8  | 3021 011-532    |
| A392.41005C12538100 | 5512 065-10                | 3021 011-380    | 5512 065-04    | 3021 011-380    | 5631 013-04 | 8-32 X 3/8M  | 3021 011-316    |
| A392.41005-12563085 | 3212 031-761 <sup>2)</sup> | (1/2")          | -              | -               | 5631 060-01 | 3212 010-363 | 3021 010-050    |

1) Accessories, must be ordered separately

2) Holder with flange clamping. For flange clamping, four screws, 3212 031-761, are used.

## Dampened face mill holders

### 392.41006



|                       | 1            | 2           | 3 <sup>1)</sup>     | 4           | 5            | 6 <sup>1)</sup>    |
|-----------------------|--------------|-------------|---------------------|-------------|--------------|--------------------|
|                       | Centre screw | Washer      | Key (mm)            | Driving key | Screw        | Key (mm)           |
| 392.41005CD6316160    | 3212 020-411 | 5541 015-01 | 3021 011-060 (6.0)  | 5631 012-02 | 3212 020-257 | 3021 010-030 (3.0) |
| 392.41005CD6322210    | 3212 020-464 | 5541 015-02 | 3021 011-080 (8.0)  | 5631 012-01 | 3212 020-258 | 3021 010-030 (3.0) |
| 392.41005CD10022230   | 3212 020-464 | 5541 015-02 | 3021 011-080 (8.0)  | 5631 012-01 | 3212 020-258 | 3021 010-030 (3.0) |
| 392.41005CD10027230   | 3212 020-514 | 5541 015-03 | 3021 011-100 (10.0) | 5631 012-01 | 3212 020-258 | 3021 010-030 (3.0) |
| 392.41006-xx 22 xxx   | 3212 020-464 | 5541 015-02 | 3021 010-080 (8.0)  | 5631 011-01 | 3213 010-258 | 174.1-864 (3.0)    |
| 392.41006-xx 27 xxx   | 3212 020-514 | 5541 015-03 | 3021 010-100 (10.0) | 5631 010-01 | 3212 010-258 | 174.1-864 (3.0)    |
| 392.41006-xx 32 xxx   | 3212 020-564 | 5541 015-04 | 3021 010-120 (12.0) | 5631 010-04 | 3212 010-308 | 3021 010-040 (4.0) |
| A392.41005CD6319210   | 5512 065-02  | -           | 3021 011-316 (3/16) | 5631 013-01 | 8-32x3/8M    | (9/64)             |
| A392.41005CD10025230  | 5512 065-03  | -           | 3021 011-532 (5/32) | 5631 013-02 | 10-32x3/8M   | 3021 011-532       |
| A392.41006- xx 19 xxx | 5512 065-02  | -           | 3/16                | 5631 013-01 | 8-32 x 3/8M  | 9/64               |
| A392.41006- xx 25 xxx | 5512 065-08  | -           | 5/16                | 5631 031-02 | 10-32 x 3/8  | 5/32               |
| A392.41006- xx 38 xxx | 5512 065-04  | -           | 3/8                 | 5631 031-04 | 1/4-20 x 3/4 | 3/16               |

<sup>1)</sup> Accessories, must be ordered separately

### Arbor mounting screws with coolant hole

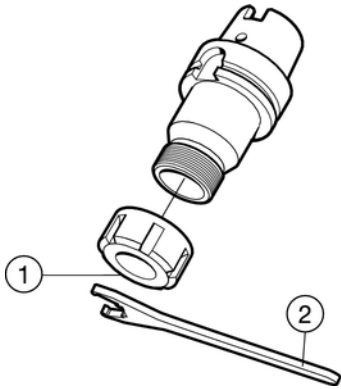
| Arbor size         | Screw                                   | Key                 |
|--------------------|---|---------------------|
| <b>Metric</b>      |   |                     |
| 16                 | 5512 073-03 (M8)                        | 3021 010-060 (6.0)  |
| 22                 | 5512 073-01 (M10)                       | 3021 010-080 (8.0)  |
| 22 <sup>1)</sup>   | 5512 073-04 <sup>1)</sup> (M10)         | 3021 010-080 (8.0)  |
| 27                 | 5512 073-02 (M12)                       | 3021 010-100 (10.0) |
| 32                 | 5512 073-05 (M16)                       | 3021 010-140 (12.0) |
| <b>Inch</b>        |   |                     |
| .750               | 5512 074-01 (3/8"-24 UNF)               | 3021 011-516        |
| .750 <sup>1)</sup> | 5512 074-03 (3/8"-24 UNF) <sup>1)</sup> | 3021 011-516        |
| 1.000              | 5512 074-02 (1/2"-20 UNF)               | 3021 011-380        |
| 1.250              | 5512 074-04 (5/8"-18 UNF)               | -                   |
| 1.500              | 5512 074-05 (3/4"-16 UNF)               | 3021 011-580 (5/8") |

<sup>1)</sup> Optimized: Low head/small head-diameter

For CoroMill® 365, CoroMill® Century and CoroMill® 210 a unique screw, with coolant hole, is used. This has to be ordered separately. See ordering pages for these cutters.

## Collet holder

392.41014

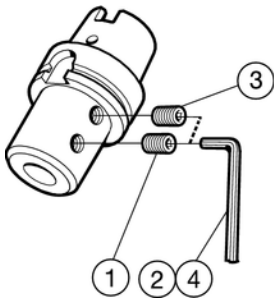


|                    | 1           | 2 <sup>1)</sup> |
|--------------------|-------------|-----------------|
|                    | Locking nut | Wrench          |
| 392.41014-xx 25xxx | 5533 050-02 | 5680 096-02     |
| 392.41014-xx 32xxx | 5533 050-03 | 5680 096-03     |
| 392.41014-xx 40xxx | 5533 050-04 | 5680 096-04     |
| 392.41014-xx 50xxx | 5533 050-05 | 5680 096-05     |

1) Accessories, must be ordered separately

## Weldon shank holder

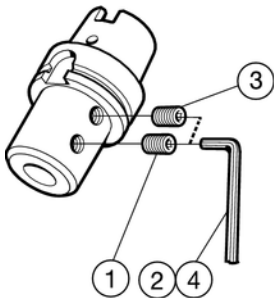
A392.41020



|                  | 1           | 2 <sup>1)</sup>     | 3           | 4 <sup>1)</sup>     |
|------------------|-------------|---------------------|-------------|---------------------|
|                  | Screw       | Key (Size)          | Screw       | Key (Size)          |
| A392.41020-xx 09 | 5514 021-01 | 3021 011-316 (3/16) | -           | -                   |
| A392.41020-xx 12 | 5514 021-02 | 3021 011-732 (7/32) | -           | -                   |
| A392.41020-xx 15 | 5514 021-03 | 3021 011-140 (1/4)  | -           | -                   |
| A392.41020-xx 19 | 5514 021-04 | 3021 011-516 (5/16) | -           | -                   |
| A392.41020-xx 22 | 5514 021-05 | 3021 011-516 (5/16) | -           | -                   |
| A392.41020-xx 25 | 5514 021-06 | 3021 011-380 (3/8)  | 5514 021-05 | 3021 011-380 (3/8)  |
| A392.41020-xx 31 | 5514 021-07 | 3021 011-380 (3/8)  | 5514 021-05 | 3021 011-380 (3/8)  |
| A392.41020-xx 38 | 5514 021-08 | 3021 011-380 (3/8)  | 5514 021-05 | 3021 011-380 (3/8)  |
| A392.41020-xx 50 | 5514 021-09 | 3021 011-916 (9/16) | 5514 021-07 | 3021 011-916 (9/16) |

1) Accessories, must be ordered separately

392.41020

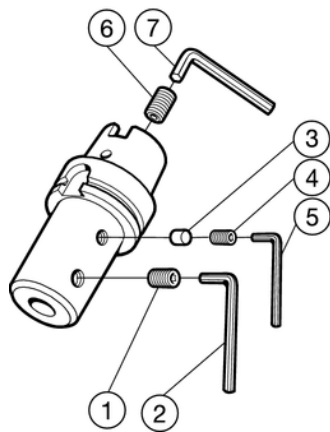


|                 | 1            | 2 <sup>1)</sup>     | 3            | 4 <sup>1)</sup>     |
|-----------------|--------------|---------------------|--------------|---------------------|
|                 | Screw        | Key (mm)            | Screw        | Key (mm)            |
| 392.41020-xx 06 | 3214 050-357 | 174.1-864 (3.0)     | -            | -                   |
| 392.41020-xx 08 | 3214 050-407 | 3021 010-040 (4.0)  | -            | -                   |
| 392.41020-xx 10 | 3214 050-458 | 3021 010-050 (5.0)  | -            | -                   |
| 392.41020-xx 12 | 3214 050-509 | 3021 010-060 (6.0)  | -            | -                   |
| 392.41020-xx 14 | 3214 050-509 | 3021 010-060 (6.0)  | -            | -                   |
| 392.41020-xx 16 | 3214 050-539 | 3021 010-060 (6.0)  | -            | -                   |
| 392.41020-xx 18 | 3214 050-539 | 3021 010-060 (6.0)  | -            | -                   |
| 392.41020-xx 20 | 3214 050-559 | 3021 010-080 (8.0)  | -            | -                   |
| 392.41020-xx 25 | 3214 050-590 | 3021 010-100 (10.0) | 3214 050-590 | 3021 010-100 (10.0) |
| 392.41020-xx 32 | 3214 050-610 | 3021 010-100 (10.0) | 3214 050-610 | 3021 010-100 (10.0) |
| 392.41020-xx 40 | 3214 050-611 | 3021 010-100 (10.0) | 3214 050-611 | 3021 010-100 (10.0) |

1) Accessories, must be ordered separately

# Whistle Notch holder

392.41021

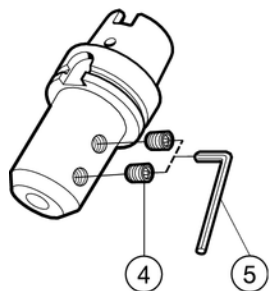


|                    | 1            | 2 <sup>1)</sup>     | 3       | 4            | 5 <sup>1)</sup> | 6           | 7 <sup>1)</sup>    |
|--------------------|--------------|---------------------|---------|--------------|-----------------|-------------|--------------------|
|                    | Screw        | Key (mm)            | Plug    | Screw        | Key (mm)        | Screw       | Key (mm)           |
| 392.41021-xx 06xxx | 3214 050-357 | 174.1-864 (3.0)     | -       | -            | -               | 5512 066-08 | 174.1-864 (3.0)    |
| 392.41021-xx 08xxx | 3214 050-407 | 3021 010-040 (4.0)  | 470-841 | 3214 010-355 | 174.1-864 (3.0) | 5512 066-08 | 174.1-864 (3.0)    |
| 392.41021-xx 10xxx | 3214 050-458 | 3021 010-050 (5.0)  | 470-841 | 3214 010-355 | 174.1-864 (3.0) | 5512 066-03 | 3021 010-040 (4.0) |
| 392.41021-xx 12xxx | 3214 050-509 | 3021 010-060 (6.0)  | 470-841 | 3214 010-357 | 174.1-864 (3.0) | 5512 066-04 | 3021 010-040 (4.0) |
| 392.41021-xx 14xxx | 3214 050-509 | 3021 010-060 (6.0)  | 470-841 | 3214 010-357 | 174.1-864 (3.0) | 5512 066-04 | 3021 010-040 (4.0) |
| 392.41021-xx 16xxx | 3214 050-539 | 3021 010-060 (6.0)  | 470-841 | 3214 010-357 | 174.1-864 (3.0) | 5512 066-04 | 3021 010-040 (4.0) |
| 392.41021-xx 18xxx | 3214 050-539 | 3021 010-060 (6.0)  | 470-841 | 3214 010-357 | 174.1-864 (3.0) | 5512 066-04 | 3021 010-040 (4.0) |
| 392.41021-xx 20xxx | 3214 050-559 | 3021 010-080 (8.0)  | 470-841 | 3214 010-357 | 174.1-864 (3.0) | 5512 066-05 | 3021 010-050 (5.0) |
| 392.41021-xx 25xxx | 3214 050-590 | 3021 010-100 (10.0) | 470-841 | 3214 010-357 | 174.1-864 (3.0) | 5512 066-06 | 3021 010-060 (6.0) |
| 392.41021-xx 32xxx | 3214 050-610 | 3021 010-100 (10.0) | 470-841 | 3214 010-357 | 174.1-864 (3.0) | 5512 066-06 | 3021 010-060 (6.0) |

1) Accessories, must be ordered separately

## Drill holder, ISO 9766

392.41027

4 5<sup>1)</sup>

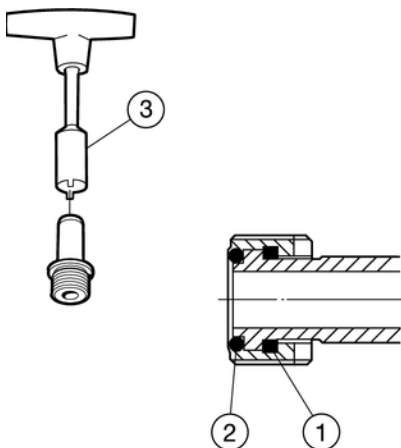
Screw Key (mm)

|                  |             |                    |
|------------------|-------------|--------------------|
| 392.41027-16 xxx | 5514 042-04 | 3021 010-040 (4.0) |
| 392.41027-20 xxx | 5514 042-04 | 3021 010-040 (4.0) |
| 392.41027-25 xxx | 416.1-838   | 3021 010-060 (6.0) |
| 392.41027-32 xxx | 416.1-838   | 3021 010-060 (6.0) |
| 392.41027-40 xxx | 5514 042-06 | 3021 010-080 (8.0) |
| 392.41027-50 xxx | 5514 042-06 | 3021 010-080 (8.0) |

1) Accessories, must be ordered separately

## Coolant tube

5692 022-



1 2 3

| Coupling size | O-ring       | O-ring       | Key <sup>1)</sup> | Torque (Nm) |
|---------------|--------------|--------------|-------------------|-------------|
| 40-A/C        | 5641 001-108 | 5641 001-108 | 5680 094-02       | 10          |
| 50-A/C        | 5641 001-33  | 5641 001-33  | 5680 094-03       | 15          |
| 63-A/C        | 5641 001-37  | 5641 001-72  | 5680 094-04       | 20          |
| 100-A/C       | 5641 001-38  | 5641 001-38  | 5680 094-06       | 30          |
| 125-A/C       | 5641 001-92  | 5641 001-92  | 5680 094-07       | 30          |

1) Accessories, must be ordered separately

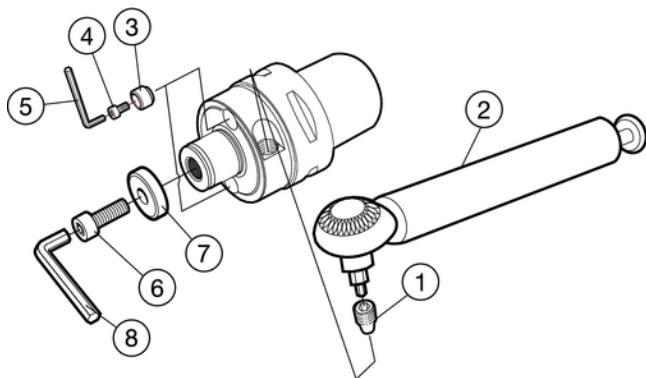


# Hydro-Grip®

## Coromant Capto®

High precision adaptor for face mills and square shoulder face mills

Cx-391.05CG



Note: Tightening torque Nm = 6.0

| Cx-391.05CG | 1              | 2                           | 3                | 4           | 5            | 6                      | 7                          | 8           |                        |
|-------------|----------------|-----------------------------|------------------|-------------|--------------|------------------------|----------------------------|-------------|------------------------|
|             | Pressure screw | Torque wrench <sup>1)</sup> | Nm <sup>3)</sup> | Driving key | Screw        | Key (mm) <sup>1)</sup> | Centre screw <sup>2)</sup> | Washer      | Key (mm) <sup>1)</sup> |
| -22 xxx     | 3214 020-457   | 5680 099-01                 | 6                | 5635 025-01 | 3212 010-257 | 3021 010-030 (3.0)     | 3212 020-464               | 5541 015-02 | 3021 010-080 (8.0)     |
| -27 xxx     | 3214 020-457   | 5680 099-01                 | 6                | 5635 025-02 | 3212 010-307 | 3021 010-040 (4.0)     | 3212 020-514               | 5541 015-03 | 3021 010-100 (10.0)    |
| -32 xxx     | 3214 020-457   | 5680 099-01                 | 6                | 5635 025-03 | 3212 010-357 | 3021 010-050 (5.0)     | 3212 020-564               | 5541 015-04 | 3021 010-120 (12.0)    |
| -40 xxx     | 3214 020-458   | 5680 099-01                 | 6                | 5635 025-04 | 3212 020-409 | 3021 010-060 (6.0)     | 3212 020-614               | 5541 015-05 | 3021 010-140 (14.0)    |

<sup>1)</sup> Accessories, not delivered with the tool, must be ordered separately.

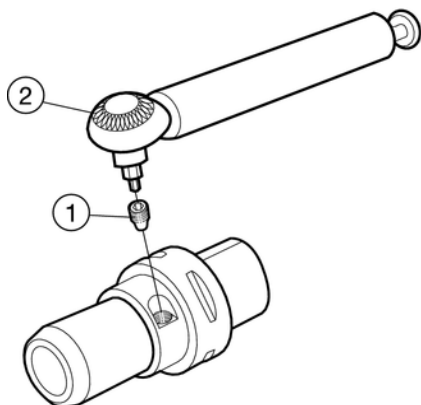
<sup>2)</sup> Screw for through coolant, must be ordered separately.

<sup>3)</sup> Tightening torque Nm.

### High precision chuck

Cx-391.CGA  
Cx-391.CGB  
Cx-391.CGC

Pencil type  
Slender



|                    | 1              | 2  |
|--------------------|----------------|--|
|                    | Pressure screw | Nm <sup>2)</sup> Torque wrench <sup>1)</sup> |
| C4-391.CGA-12 062A | 3214 020-457   | 6 5680 099-01                                |
| C4-391.CGA-12 100  | 3214 020-457   | 6 5680 099-01                                |
| C4-391.CGA-20 075  | 3214 020-457   | 6 5680 099-01                                |
| C5-391.CGA-12 062  | 3214 020-457   | 6 5680 099-01                                |
| C5-391.CGA-20 074A | 3214 020-457   | 6 5680 099-01                                |
| C5-391.CGA-20 125  | 3214 020-457   | 6 5680 099-01                                |
| C5-391.CGA-25 079  | 3214 020-458   | 6 5680 099-01                                |
| C6-391.CGA-12 064  | 3214 020-457   | 6 5680 099-01                                |
| C6-391.CGA-20 076  | 3214 020-457   | 6 5680 099-01                                |
| C6-391.CGA-20 150  | 3214 020-457   | 6 5680 099-01                                |
| C6-391.CGA-25 080  | 3214 020-458   | 6 5680 099-01                                |
| C6-391.CGA-32 084A | 3214 020-497   | 6 5680 099-01                                |
| C8-391.CGA-20 079  | 3214 020-457   | 6 5680 099-01                                |
| C8-391.CGA-25 083  | 3214 020-458   | 6 5680 099-01                                |
| C8-391.CGA-32 087  | 3214 020-497   | 6 5680 099-01                                |
| Pencil type        |                |  |
| Cx-391.CGB-06 xxx  | 3214 020-457   | 6 5680 099-01                                |
| Cx-391.CGB-12 xxx  | 3214 020-457   | 6 5680 099-01                                |
| Cx-391.CGB-20 xxx  | 3214 020-458   | 6 5680 099-01                                |
| Slender type       |                |  |
| Cx-391.CGC-12 xxx  | 3214 020-457   | 6 5680 099-01                                |
| Cx-391.CGC-20 xxx  | 3214 020-497   | 6 5680 099-01                                |
| Cx-391.CGC-25 xxx  | 3214 020-497   | 6 5680 099-01                                |

<sup>1)</sup> Accessories, not delivered with the tool, must be ordered separately.

<sup>2)</sup> Tightening torque Nm.

D  
E  
F  
G  
J

ROT - ENG

TOOLING SYSTEMS

Spare parts - Hydro-Grip

# Hydro-Grip®

Hydro-Grip holder for face mills and square shoulder face mills

AA3B05  
Inch pilot

Note: Tightening torque Nm = 6.0

| AA3B05     | 1              | 2                           | 3                | 4           | 5            | 6                      | 7            |                          |
|------------|----------------|-----------------------------|------------------|-------------|--------------|------------------------|--------------|--------------------------|
|            | Pressure screw | Torque wrench <sup>1)</sup> | Nm <sup>3)</sup> | Driving key | Screw        | Key (mm) <sup>1)</sup> | Centre screw | Key (inch) <sup>1)</sup> |
| -xx 19 xxx | 3214 020-457   | 5680 099-01                 | 6                | 5635 025-07 | 3212 010-207 | 3021 010-025 (2.5)     | 5512 065-07  | 3021 011-140 (1/4")      |
| -xx 25 xxx | 3214 020-457   | 5680 099-01                 | 6                | 5635 025-06 | 3212 010-257 | 3021 010-030 (3.0)     | 5512 065-08  | 3021 011-516 (5/16")     |
| -xx 38 xxx | 3214 020-458   | 5680 099-01                 | 6                | 5635 025-05 | 3212 020-409 | 3021 010-060 (6.0)     | 5512 065-10  | 3021 011-380 (3/8")      |

<sup>1)</sup> Accessories, not delivered with the tool, must be ordered separately.

<sup>2)</sup> Tightening torque Nm.

Coromant solid holder  
A1B05CG / A2B05CG  
Metric pilot

| A1B05CG<br>A2B05CG | 1              | 2                           | 3                | 4           | 5            | 6                      | 7                          | 8           |                        |
|--------------------|----------------|-----------------------------|------------------|-------------|--------------|------------------------|----------------------------|-------------|------------------------|
|                    | Pressure screw | Torque wrench <sup>1)</sup> | Nm <sup>3)</sup> | Driving key | Screw        | Key (mm) <sup>1)</sup> | Centre screw <sup>2)</sup> | Washer      | Key (mm) <sup>1)</sup> |
| -22 xxx            | 3214 020-457   | 5680 099-01                 | 6                | 5635 025-01 | 3212 010-257 | 3021 010-030 (3.0)     | 3212 020-464               | 5541 015-02 | 3021 010-080 (8.0)     |
| -27 xxx            | 3214 020-457   | 5680 099-01                 | 6                | 5635 025-02 | 3212 010-307 | 3021 010-040 (4.0)     | 3212 020-514               | 5541 015-03 | 3021 010-100 (10.0)    |
| -32 xxx            | 3214 020-457   | 5680 099-01                 | 6                | 5635 025-03 | 3212 010-357 | 3021 010-050 (5.0)     | 3212 020-564               | 5541 015-04 | 3021 010-120 (12.0)    |
| -40 xxx            | 3214 020-458   | 5680 099-01                 | 6                | 5635 025-04 | 3212 020-409 | 3021 010-060 (6.0)     | 3212 020-614               | 5541 015-05 | 3021 010-140 (14.0)    |

<sup>1)</sup> Accessories, not delivered with the tool, must be ordered separately.

<sup>2)</sup> Screw for through coolant, must be ordered separately.

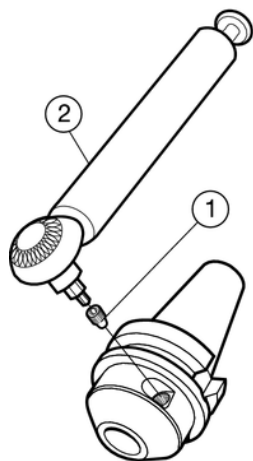
G 178

## Hydro-Grip®

High precision adaptor for face mills and square shoulder face mills

Solid holder

392.272CG/55CG/45CG  
393.CGA/392.CGB



|                      | 1              | 2                           |                  |
|----------------------|----------------|-----------------------------|------------------|
|                      | Pressure screw | Torque wrench <sup>1)</sup> | Nm <sup>2)</sup> |
| 392.272CG-40 12 056  | 3214 020-457   | 5680 099-01                 | 6                |
| 392.272CG-40 20 060A | 3214 020-457   | 5680 099-01                 | 6                |
| 392.272CG-40 20 125  | 3214 020-457   | 5680 099-01                 | 6                |
| 392.272CG-40 25 064  | 3214 020-458   | 5680 099-01                 | 6                |
| 392.272CG-50 20 060  | 3214 020-457   | 5680 099-01                 | 6                |
| 392.272CG-50 25 064  | 3214 020-458   | 5680 099-01                 | 6                |
| 392.272CG-50 32 068A | 3214 020-497   | 5680 099-01                 | 6                |
| 392.272CG-50 25 150  | 3214 020-458   | 5680 099-01                 | 6                |
| 392.55CG-40 12 052   | 3214 020-457   | 5680 099-01                 | 6                |
| 392.55CG-40 20 056A  | 3214 020-457   | 5680 099-01                 | 6                |
| 392.55CG-40 20 125   | 3214 020-457   | 5680 099-01                 | 6                |
| 392.55CG-40 25 060   | 3214 020-458   | 5680 099-01                 | 6                |
| 392.55CG-50 20 067   | 3214 020-457   | 5680 099-01                 | 6                |
| 392.55CG-50 25 071   | 3214 020-458   | 5680 099-01                 | 6                |
| 392.55CG-50 32 075A  | 3214 020-497   | 5680 099-01                 | 6                |
| 392.55CG-50 25 150   | 3214 020-458   | 5680 099-01                 | 6                |
| 392.45CG-40 12 056   | 3214 020-457   | 5680 099-01                 | 6                |
| 392.45CG-40 20 060   | 3214 020-457   | 5680 099-01                 | 6                |
| 392.45CG-40 25 064   | 3214 020-458   | 5680 099-01                 | 6                |
| 392.45CG-40 20 125   | 3214 020-457   | 5680 099-01                 | 6                |
| 392.45CG-50 20 060   | 3214 020-457   | 5680 100-09 (5.0)           | 6                |
| 392.45CG-50 25 064   | 3214 020-458   | 5680 099-01                 | 6                |
| 392.45CG-50 32 068   | 3214 020-497   | 5680 099-01                 | 6                |

Pencil type, cylindrical shank

|                   |              |             |   |
|-------------------|--------------|-------------|---|
| 393.CGA-20 12 150 | 3214 020-457 | 5680 099-01 | 6 |
|-------------------|--------------|-------------|---|

Pencil type, taper shank

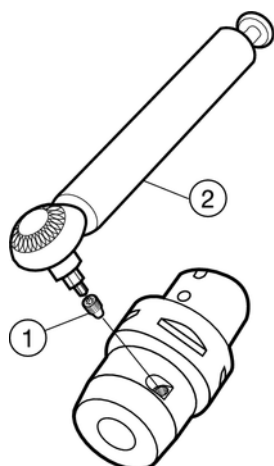
|                  |              |             |   |
|------------------|--------------|-------------|---|
| 392.xxxCGB-xx-06 | 3214 020-457 | 5680 099-01 | 6 |
| 392.xxxCGB-xx-12 | 3214 020-457 | 5680 099-01 | 6 |
| 392.xxxCGB-xx-20 | 3214 020-458 | 5680 099-01 | 6 |

<sup>1)</sup> Accessories, not delivered with the tool, must be ordered separately.

<sup>2)</sup> Tightening torque Nm.

## Hydro-Grip® Heavy Duty

Cx-391.CGD  
392.45CGD  
392.272CGD  
392.55CGD  
392.410CGD



|                       | 1              | 2                |                      |                             |
|-----------------------|----------------|------------------|----------------------|-----------------------------|
| Ordering code         | Pressure screw | Nm <sup>2)</sup> | ft-lbs <sup>2)</sup> | Torque wrench <sup>1)</sup> |
| C5-391.CGD-20079      | 3214 020-460   | 10               | 7.38                 | 5680 099-01                 |
| C6-391.CGD-20073      | 3214 020-460   | 10               | 7.38                 | 5680 099-01                 |
| C6-391.CGD-25080      | 3214 020-461   | 10               | 7.38                 | 5680 099-01                 |
| C6-391.CGD-32086      | 3214 020-461   | 10               | 7.38                 | 5680 099-01                 |
| C6-391.CGD-20079      | 3214 020-460   | 10               | 7.38                 | 5680 099-01                 |
| C6-391.CGD-25083      | 3214 020-461   | 10               | 7.38                 | 5680 099-01                 |
| C6-391.CGD-32087      | 3214 020-461   | 10               | 7.38                 | 5680 099-01                 |
| C6-391.CGD-20085      | 3214 020-460   | 10               | 7.38                 | 5680 099-01                 |
| C6-391.CGD-25089      | 3214 020-461   | 10               | 7.38                 | 5680 099-01                 |
| C6-391.CGD-32093      | 3214 020-461   | 10               | 7.38                 | 5680 099-01                 |
| 392.272CGD-40 20 090  | 3214 020-460   | 10               | 7.38                 | 5680 099-01                 |
| 392.272CGD-50 20 068  | 3214 020-460   | 10               | 7.38                 | 5680 099-01                 |
| 392.272CGD-50 25 079  | 3214 020-461   | 10               | 7.38                 | 5680 099-01                 |
| 392.272CGD-50 32 083  | 3214 020-461   | 10               | 7.38                 | 5680 099-01                 |
| 392.45CGD-40 20 090   | 3214 020-460   | 10               | 7.38                 | 5680 099-01                 |
| 392.45CGD-50 20 068   | 3214 020-460   | 10               | 7.38                 | 5680 099-01                 |
| 392.45CGD-50 25 092   | 3214 020-461   | 10               | 7.38                 | 5680 099-01                 |
| 392.45CGD-50 32 097   | 3214 020-461   | 10               | 7.38                 | 5680 099-01                 |
| 392.55CGD-40 20 087   | 3214 020-460   | 10               | 7.38                 | 5680 099-01                 |
| 392.55CGD-50 20 087   | 3214 020-460   | 10               | 7.38                 | 5680 099-01                 |
| 392.55CGD-50 25 091   | 3214 020-461   | 10               | 7.38                 | 5680 099-01                 |
| 392.55CGD-50 32 095   | 3214 020-461   | 10               | 7.38                 | 5680 099-01                 |
| 392.410CGD-63 20 096  | 3214 020-460   | 10               | 7.38                 | 5680 099-01                 |
| 392.410CGD-100 20 091 | 3214 020-460   | 10               | 7.38                 | 5680 099-01                 |
| 392.410CGD-100 25 095 | 3214 020-461   | 10               | 7.38                 | 5680 099-01                 |
| 392.410CGD-100 32 099 | 3214 020-461   | 10               | 7.38                 | 5680 099-01                 |

<sup>1)</sup> Accessories, not delivered with the tool, must be ordered separately.

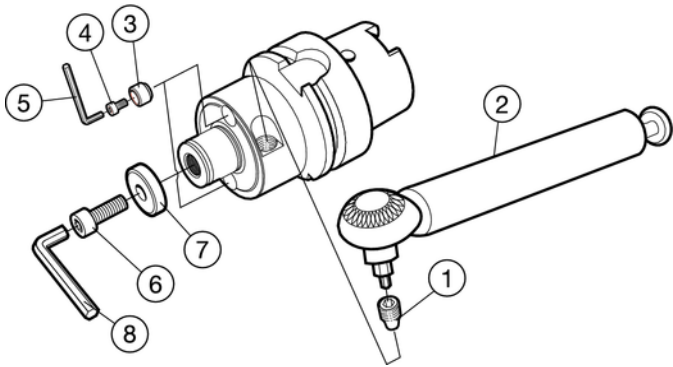
<sup>2)</sup> Tightening torque Nm, ft-lbs.

## Hydro-Grip®

High precision holder for face mills and square shoulder face mills

HSK

41005CG



| 41005CG | 1              | 2                           | 3                | 4           | 5            | 6                      | 7                          | 8           |                        |
|---------|----------------|-----------------------------|------------------|-------------|--------------|------------------------|----------------------------|-------------|------------------------|
|         | Pressure screw | Torque wrench <sup>1)</sup> | Nm <sup>3)</sup> | Driving key | Screw        | Key (mm) <sup>1)</sup> | Centre screw <sup>2)</sup> | Washer      | Key (mm) <sup>1)</sup> |
| -22 xxx | 3214 020-457   | 5680 099-01                 | 6                | 5635 025-01 | 3212 010-257 | 3021 010-030 (3.0)     | 3212 020-464               | 5541 015-02 | 3021 010-080 (8.0)     |
| -27 xxx | 3214 020-457   | 5680 099-01                 | 6                | 5635 025-02 | 3212 010-307 | 3021 010-040 (4.0)     | 3212 020-514               | 5541 015-03 | 3021 010-100 (10.0)    |
| -32 xxx | 3214 020-457   | 5680 099-01                 | 6                | 5635 025-03 | 3212 010-357 | 3021 010-050 (5.0)     | 3212 020-564               | 5541 015-04 | 3021 010-120 (12.0)    |
| -40 xxx | 3214 020-458   | 5680 099-01                 | 6                | 5635 025-04 | 3212 020-409 | 3021 010-060 (6.0)     | 3212 020-614               | 5541 015-05 | 3021 010-140 (14.0)    |

<sup>1)</sup> Accessories, not delivered with the tool, must be ordered separately.

<sup>2)</sup> Screw for through coolant, must be ordered separately.

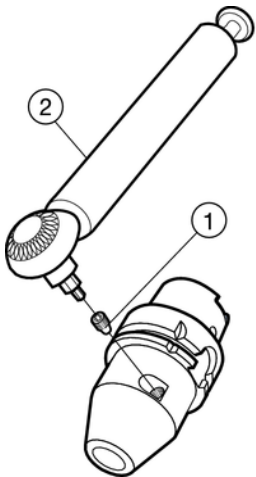
<sup>3)</sup> Tightening torque Nm.

## High precision chuck

HSK

392.410CGA

392.410CGB



|                        | 1              | 2                           |                  |
|------------------------|----------------|-----------------------------|------------------|
|                        | Pressure screw | Torque wrench <sup>1)</sup> | Nm <sup>2)</sup> |
| 392.410CGA-63 12 076B  | 3214 020-457   | 5680 099-01                 | 6                |
| 392.410CGA-63 20 088B  | 3214 020-457   | 5680 099-01                 | 6                |
| 392.410CGA-63 20 150   | 3214 020-457   | 5680 099-01                 | 6                |
| 392.410CGA-63 25 092   | 3214 020-458   | 5680 099-01                 | 6                |
| 392.410CGA-63 32 096A  | 3214 020-497   | 5680 099-01                 | 6                |
| 392.410CGA-100 12 079B | 3214 020-457   | 5680 099-01                 | 6                |
| 392.410CGA-100 20 091B | 3214 020-457   | 5680 099-01                 | 6                |
| 392.410CGA-100 25 095  | 3214 020-458   | 5680 099-01                 | 6                |
| 392.410CGA-100 32 099B | 3214 020-497   | 5680 099-01                 | 6                |
| Pencil type            |                |                             |                  |
| 392.410CGB-63 12 xxx   | 3214 020-457   | 5680 099-01                 | 6                |
| 392.410CGB-100 12 xxx  | 3214 020-457   | 5680 099-01                 | 6                |

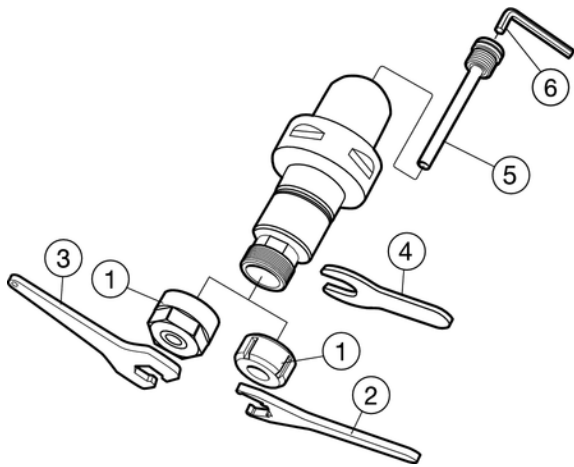
<sup>1)</sup> Accessories, not delivered with the tool, must be ordered separately.

<sup>2)</sup> Tightening torque Nm.

# SynchroFlex® ER tapping chuck

Coromant Capto®

391.62/391.63



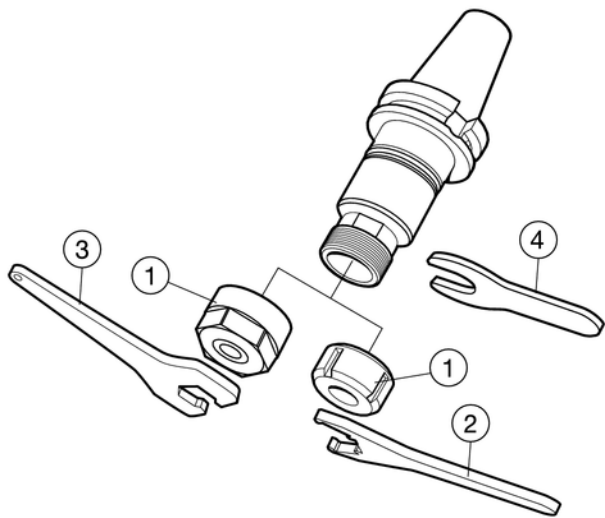
|                  | 1           | 2 <sup>1)</sup> | 3 <sup>1)</sup> | 4 <sup>1)</sup> | 5            | 6 <sup>1)</sup>    |
|------------------|-------------|-----------------|-----------------|-----------------|--------------|--------------------|
| Ordering code    | Nut         | Wrench          | Wrench          | Wrench          | Coolant tube | Key (mm)           |
| Cx-391.62-20 xxx | 5533 050-08 | -               | 5680 091-02     | 5680 092-04     | -            | -                  |
| Cx-391.62-25 xxx | 5533 050-02 | 5680 096-02     | -               | 5680 092-05     | -            | -                  |
| Cx-391.62-40 xxx | 5533 050-04 | 5680 096-04     | -               | 5680 092-06     | -            | -                  |
| Cx-391.63-11 xxx | 5533 050-07 | -               | 5680 051-03     | 5680 052-03     | -            | -                  |
| Cx-391.63-20 xxx | 5533 051-02 | -               | 5680 091-02     | 5680 092-04     | 5692 031-01  | 3021 010-030 (3.0) |
| C3-391.63-20 105 | 5533 051-02 | -               | 5680 091-02     | 5680 092-04     | 5692 01-04   | 3021 010-030 (3.0) |
| Cx-391.63-25 xxx | 5533 051-03 | 5680 096-02     | -               | 5680 092-05     | 5692 031-02  | 3021 010-030 (3.0) |
| Cx-391.63-40 xxx | 5533 051-05 | 5680 096-04     | -               | 5680 092-06     | 5692 031-03  | 3021 010-030 (3.0) |

1) Accessories, must be ordered separately

# SynchroFlex® ER tapping chuck

MAS-BT 403

392.5563

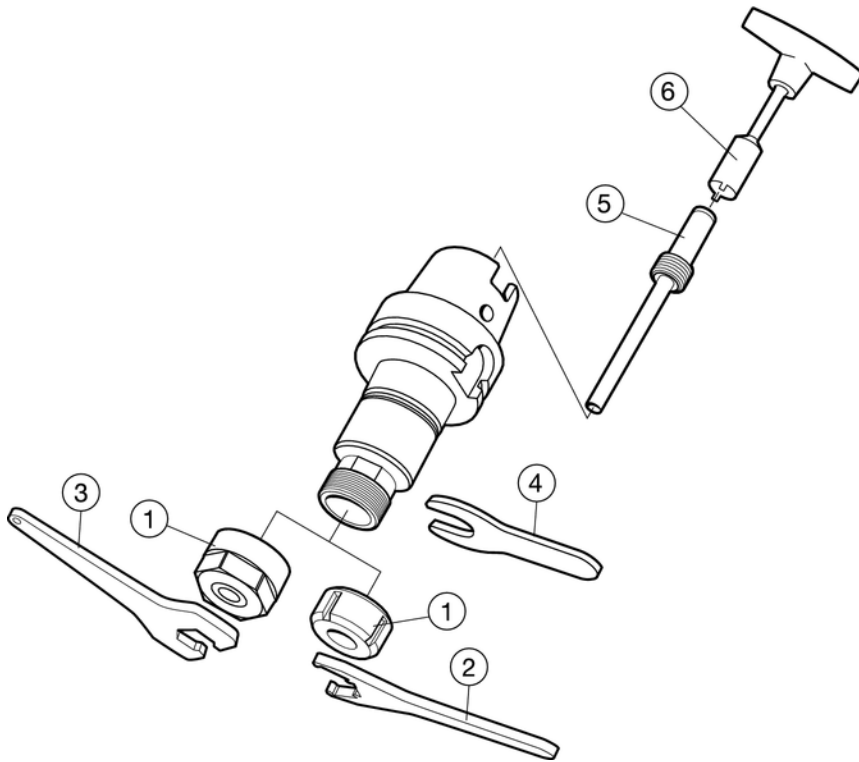


|                    | 1           | 2 <sup>1)</sup> | 3 <sup>1)</sup> | 4 <sup>1)</sup> | 5            | 6                  |
|--------------------|-------------|-----------------|-----------------|-----------------|--------------|--------------------|
| Ordering code      | Nut         | Wrench          | Wrench          | Wrench          | Coolant tube | Key                |
| 392.5563-30 11 082 | 5533 051-07 | -               | 5680 091-02     | -               | -            | -                  |
| 392.5563-30 20 105 | 5533 051-02 | -               | 5680 091-03     | 5680 092-05     | 5692 031-01  | 3021 010-030 (3.0) |
| 392.5563-30 25 125 | 5533 051-03 | 5680 096-02     | -               | 5680 092-06     | 5692 031-02  | 3021 010-030 (3.0) |

1) Accessories, must be ordered separately

# SynchroFlex® ER tapping chuck

HSK



|                      | 1           | 2 <sup>1)</sup> | 3 <sup>1)</sup> | 4 <sup>1)</sup> | 5            | 6           |
|----------------------|-------------|-----------------|-----------------|-----------------|--------------|-------------|
| Ordering code        | Nut         | Wrench          | Wrench          | Wrench          | Coolant tube | Key         |
| 392.41062-63 20 xxx  | 5533 050-08 | -               | 5680 091-02     | 5680 092-04     | -            | -           |
| 392.41062-63 25 xxx  | 5533 050-02 | 5680 096-02     | -               | 5680 092-05     | -            | -           |
| 392.41062-63 40 xxx  | 5533 050-04 | 5680 096-04     | -               | 5680 092-06     | -            | -           |
| 392.41062-100 20 xxx | 5533 050-08 | -               | 5680 091-02     | 5680 092-04     | -            | -           |
| 392.41062-100 25 xxx | 5533 050-02 | 5680 096-02     | -               | 5680 092-05     | -            | -           |
| 392.41062-100 40 xxx | 5533 050-04 | 5680 096-04     | -               | 5680 092-06     | -            | -           |
| 392.41063-63 20 xxx  | 5533 051-02 | -               | 5680 091-02     | 5680 092-04     | 5692 032-01  | 5680 094-04 |
| 392.41063-63 25 xxx  | 5533 051-03 | 5680 096-02     | -               | 5680 092-05     | 5692 032-02  | 5680 094-04 |
| 392.41063-63 40 xxx  | 5533 051-05 | 5680 096-04     | -               | 5680 092-06     | 5692 032-05  | 5680 094-04 |
| 392.41063-100 20 xxx | 5533 051-02 | -               | 5680 091-02     | 5680 092-04     | 5692 032-03  | 5680 094-06 |
| 392.41063-100 25 xxx | 5533 051-03 | 5680 096-02     | -               | 5680 092-05     | 5692 032-04  | 5680 094-06 |
| 392.41063-100 40 xxx | 5533 051-05 | 5680 096-04     | -               | 5680 092-06     | 5692 032-06  | 5680 094-06 |

1) Accessories, must be ordered separately

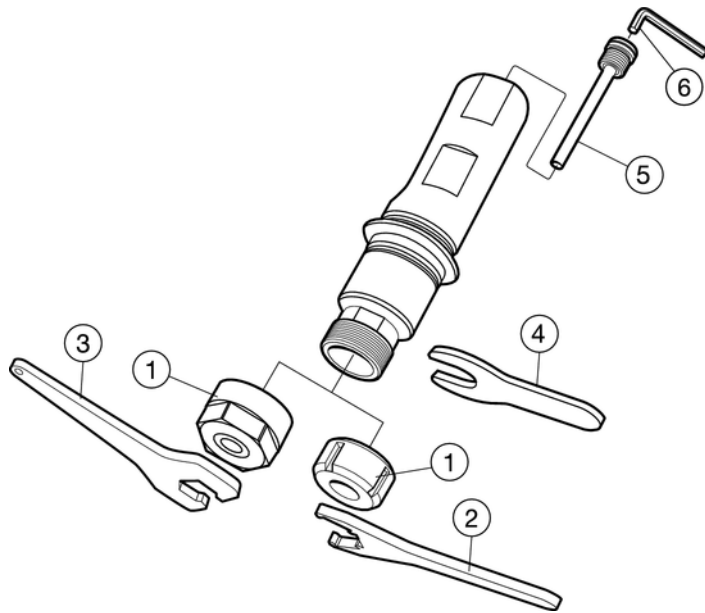
## SynchroFlex® ER tapping chuck

Weldon/Whistle Notch combi shank

Collet type

393.2062

393.2063



### Weldon shank

| 393.2062/393.2063 | 1           | 2 <sup>1)</sup> | 3 <sup>1)</sup> | 4 <sup>1)</sup> | 5            | 6             |
|-------------------|-------------|-----------------|-----------------|-----------------|--------------|---------------|
|                   | Nut         | Wrench          | Wrench          | Wrench          | Coolant tube | Key           |
| 393.2062 -xx 11   | 5533 050-07 | -               | 5680 091-03     | 5680 092-03     | -            | -             |
| 393.2062 -xx 20   | 5533 050-08 | -               | 5680 091-02     | 5680 092-04     | -            | -             |
| 393.2062 -xx 25   | 5533 050-02 | 5680 096-02     | -               | 5680 092-05     | -            | -             |
| 393.2063 -xx 20   | 5533 051-02 | -               | 5680 091-02     | 5680 092-04     | 5692 031-01  | 3021 010- 030 |
| 393.2063 -xx 25   | 5533 051-03 | 5680 096-02     | -               | 5680 092-05     | 5692 031-02  | 3021 010- 030 |
| 393.2063 -xx 40   | 5533 051-05 | 5680 096-04     | -               | 5680 092-06     | 5692 031-03  | 3021 010- 030 |

<sup>1)</sup> Accessories, must be ordered separately



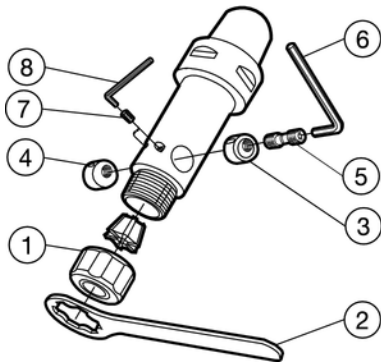


## Floating rubber collet chuck

Coromant Capto®

Cx-391.60A

Cx-391.60B



|                            | 1               | 2 <sup>1)</sup> | 3           | 4           |
|----------------------------|-----------------|-----------------|-------------|-------------|
| Cx-391.60A-<br>Cx-391.60B- | Locking nut     | Wrench          | Jaw right   | Jaw left    |
| 01 xxx                     | 391.60A-OZ 3158 | 5680 090-01     | 5412 093-01 | 5412 093-02 |
| 02 xxx                     | 391.60A-OZ 3159 | 5680 090-02     | 5412 093-01 | 5412 093-02 |
| 03 xxx                     | 391.60A-OZ N460 | 5680 092-01     | 5412 093-03 | 5412 093-04 |

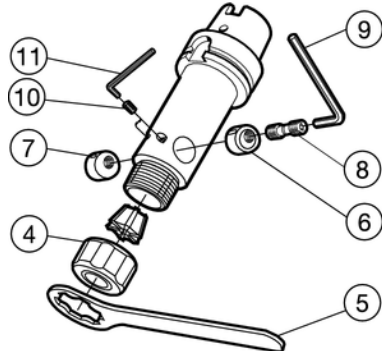
|                            | 5               | 6 <sup>1)</sup>    | 7            | 8 <sup>1)</sup> |
|----------------------------|-----------------|--------------------|--------------|-----------------|
| Cx-391.60A-<br>Cx-391.60B- | Adjusting screw | Key for jaws (mm)  | Socket screw | Key (mm)        |
| 01 xxx                     | 5516 050-01     | 3021 010-040 (4.0) | 3214 020-255 | 174.1-870 (2.0) |
| 02 xxx                     | 5516 050-01     | 3021 010-040 (4.0) | 3214 020-255 | 174.1-870 (2.0) |
| 03 xxx                     | 5516 050-02     | 3021 010-050 (5.0) | 3214 020-305 | 174.1-863 (2.5) |

1) Accessories, must be ordered separately

## HSK form A/C

392.41060A

392.41060B



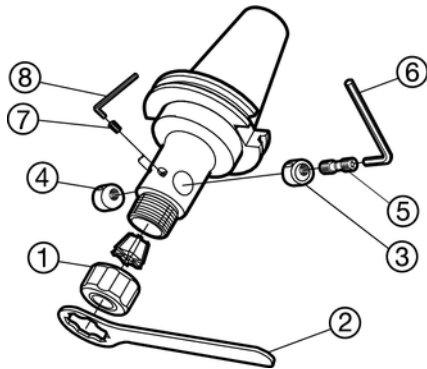
|                            | 4               | 5 <sup>1)</sup> | 6           | 7           | 8               | 9 <sup>1)</sup>    | 10           | 11 <sup>1)</sup> |
|----------------------------|-----------------|-----------------|-------------|-------------|-----------------|--------------------|--------------|------------------|
| 392.41060A-<br>392.41060B- | Locking nut     | Wrench          | Jaw right   | Jaw left    | Adjusting screw | Key for jaws (mm)  | Socket screw | Key (mm)         |
| xx 01 xxx                  | 391.60A-OZ 3158 | 5680 090-01     | 5412 093-01 | 5412 093-02 | 5516 050-01     | 3021 010-040 (4.0) | 3214 020-255 | 174.1-870 (2.0)  |
| xx 02 xxx                  | 391.60A-OZ 3159 | 5680 090-02     | 5412 093-01 | 5412 093-02 | 5516 050-01     | 3021 010-040 (4.0) | 3214 020-255 | 174.1-870 (2.0)  |
| xx 03 xxx                  | 391.60A-OZ N460 | 5680 092-01     | 5412 093-03 | 5412 093-04 | 5516 050-02     | 3021 010-050 (5.0) | 3214 020-305 | 174.1-863 (2.5)  |

1) Accessories, must be ordered separately

# Floating rubber collet chuck

Cat V-Flange

A392.4560B



| A392.4560B           | 1               | 2 <sup>1)</sup> | 3                  | 4                 | 5               | 6 <sup>1)</sup>    | 7            | 8 <sup>1)</sup> |
|----------------------|-----------------|-----------------|--------------------|-------------------|-----------------|--------------------|--------------|-----------------|
|                      | Collet nut      | Wrench          | Gripping jaw right | Gripping jaw left | Adjusting screw | Key for jaws (mm)  | Socket screw | Key (mm)        |
| A392.4560B-xx 01 xxx | 391.60A-OZ 3158 | 5680 090-01     | 5412 093-01        | 5412 093-02       | 5516 050-01     | 3021 010-040 (4.0) | 3214 020-255 | 174.1-870 (2.0) |
| A392.4560B-xx 02 xxx | 391.60A-OZ 3159 | 5680 090-02     | 5412 093-01        | 5412 093-02       | 5516 050-01     | 3021 010-040 (4.0) | 3214 020-255 | 174.1-870 (2.0) |
| A392.4560B-xx 03 xxx | 391.60A-OZ N460 | 5680 092-01     | 5412 093-03        | 5412 093-04       | 5516 050-02     | 3021 010-040 (4.0) | 3214 020-305 | 174.1-863 (2.5) |

<sup>1)</sup> Accessories, must be ordered separately