

MULTI-TASK MACHINING

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Multi-Task Machining - tooling possibilities

Coromant Capto® – the connecting link to Multi-Task machining

A tool system for multi-task machines has to transmit satisfactory torque levels, be capable of high spindle speeds, have high bending strength and have high precision couplings for repeatability and accuracy with pre-measurement or when setting outside the machine.

Coromant Capto® has a proven record of fulfilling all the requirements and operational demands in multi-task machines involving stationary and rotating tools. With its broad program of turning, milling and drilling tools, which use the same self-centering tool coupling for a very broad application area, the system has been successfully installed on all types of multi-task machines.



Clamping units for turning

Standard turret heads for lathes can easily be converted to the Coromant Capto® modular quick change system by using standard clamping units. See page G6.

CoroPlex™ – Innovative multi-functional tools

To take full advantage of the more versatile multi-task machine tools and to optimize their efficiency, there is now a demand for running them with dedicated tooling. CoroPlex™ tools are designed for multi-task machining, providing:

- accessibility, stability and higher productivity
- reduced tool changing time
- saved tool pocket in tool magazine
- cost reduction - one tool replaces several.

CoroPlex™ MT – one milling and four turning tools in one

CoroPlex™ MT is a combination of two winning concepts in one – CoroMill® 390 and CoroTurn® 107. It is either applied rotating as an effective tool for milling applications – or indexed in a number of optional positions for stationary turning, external and internal, using two different CoroTurn® 107 inserts. See page A9.

For ordering CoroMill 390 inserts, see chapter D, Milling.

CoroPlex™ TT twin tools – two turning tools in one

The CoroPlex™ TT twin tool is a solution with two turning inserts in one holder, giving the possibility to change operations with just a quick indexing of the tool.



CoroPlex™ SL mini-turret – four turning tools in one

Build your own multi-functional tool by using a Coromant Capto® tool adapter and applying a CoroPlex™ SL mini-turret adapter plate to be combined with four SL cutting heads and blades for turning, threading or grooving operations. See page G6.

Multi-Task Machining - tooling possibilities

Turning tools

For general turning, the T-Max P system with negative inserts and CoroTurn® 107 with positive inserts form the basis for high productivity turning. In parting and grooving, the first choice is the CoroCut® system, while in threading the first choice is the CoroThread® 266 or T-Max U-Lock® system. See pages A3, B14, C9.



Milling tools

In the CoroMill® family there is always a milling cutter to fit your needs perfectly. The CoroMill® family is a multi-purpose milling system for use in applications such as face, shoulder, slot and profile milling. See chapter D, Milling.

Holemaking tools

The drilling and boring program, CoroDrill® and CoroBore®, offers a wide range of high performance holemaking products. Regardless of the hole style – we can offer you the right tool for the best productivity in a wide diameter range. See chapter E, Drilling and Boring.



Tool holders and tool adapters

Modern machines and tools put greater demands on toolholders. Low runout is required to achieve long tool life. Hydro-Grip® meets all the demands on a toolholder. Different types of tool adapters are available to help in building a correct tool length. See chapter G, Tooling systems in this catalog and Tooling systems in the main catalog for milling and drilling tools.

Accessories

Sandvik Coromant offers a range of accessory tools for the various coupling sizes, which are strongly recommended for setting important parameters such as spindle orientation, clamping forces, etc. See chapter G, Tooling systems in this catalog and Tooling systems in the main catalog for milling and drilling tools.

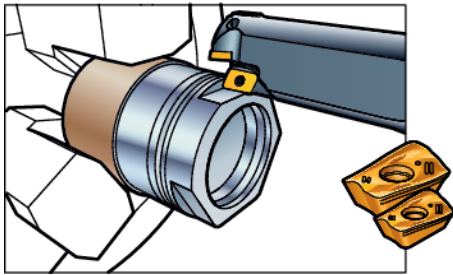


CoroPlex™ MT

Multi-functional milling and turning tool

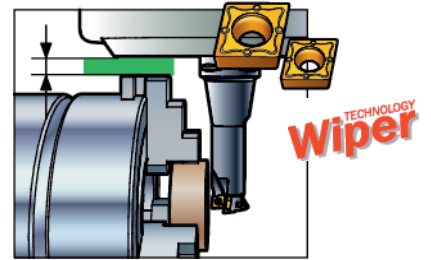
Many optimized tools in one solution dedicated for multi-task machining.

... as a CoroMill® 390 cutter

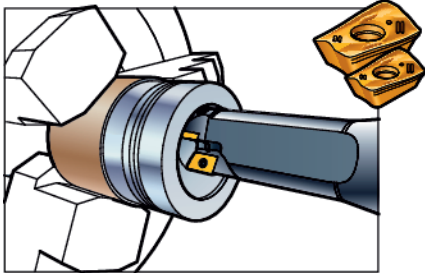


Shoulder milling

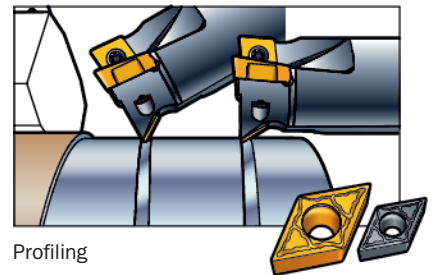
...as a CoroTurn® 107 tool



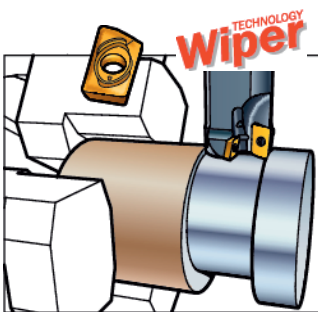
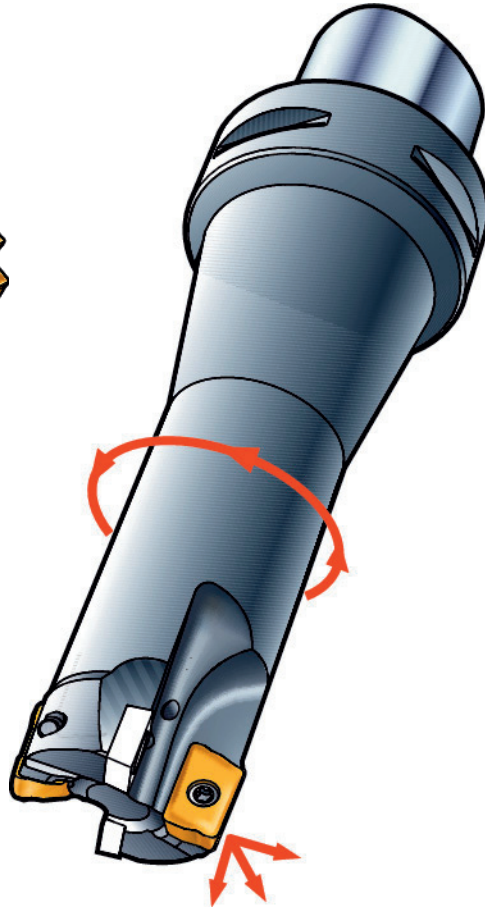
Face and longitudinal turning



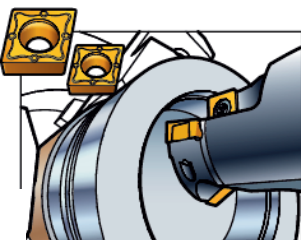
Circular interpolation in helix



Profiling



Turn-milling



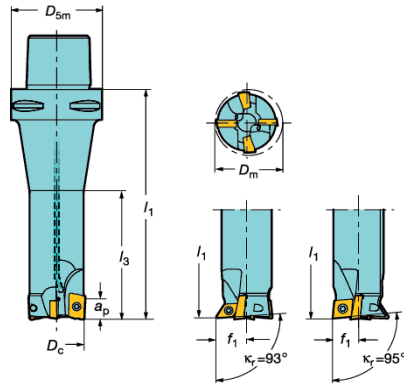
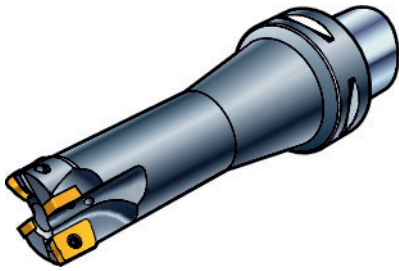
Internal turning

ISO application areas:



Multi-functional tools CoroPlex™ MT

for milling and turning in Multi-Task machines



Coolant inlet: Axial through the center

Entering angle:
Lead angle:

$\kappa_r = 93^\circ$
 -3°

$\kappa_r = 95^\circ$
 -5°

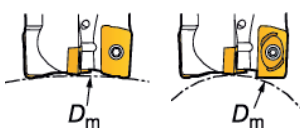
Insert size 	Coupling size	D_c mm inch	Ordering code	z_n	Dimensions, mm, inch								Gauge insert ISO ANSI	$n_{max}^{(3)}$	$\frac{D}{\mu m}$	
					D_m min	D_{5m}	l_1	l_3	f_1	a_p	$\gamma^{(1)}$	$\lambda_s^{(2)}$				
11	-	32 1.260	M-32C5-39011C09D07	2	-	50	130	78.5	-	10	-	-	-	R390-11	12000	1.0
-	09	3/8		1	35	50	129.3	77.8	15.4	-	0°	-5°		CCMT 09 T3 08 CCMT 3 (2.5) 2	-	
-	07	1/4		1	35	50	128.9	77.4	15.4	-	0°	-5°		DCMT 07 02 04 DCMT 2 (1.5) 1	-	
11	-	32 1.260	M-32C6-39011C09D07	2	-	63	165	78.5	-	10	-	-	-	R390-11	12000	1.7
-	09	3/8		1	35	63	164.3	77.8	15.4	-	0°	-5°		CCMT 09 T3 08 CCMT 3 (2.5)	-	
-	07	1/4		1	35	63	163.9	77.4	15.4	-	0°	-5°		DCMT 07 02 04 DCMT 2 (1.5) 1	-	
18	-	40 1.575	M-40C6-39018C12D11	2	-	63	165	90.1	-	10	-	-	-	R390-18	10000	1.7
-	12	1/2		1	43	63	164.4	89.5	19.0	-	0°	-5°		CCMT 12 04 08 CCMT 432	-	
-	11	3/8		1	43	63	163.9	89.0	19.2	-	0°	-5°		DCMT 11 T3 04 DCMT 3 (2.5) 1	-	
18	-	40 1.575	M-40C8-39018C12D11	2	-	80	200	90.1	-	10	-	-	-	R390-18	10000	3.3
-	12	1/2		1	43	80	199.4	89.5	19.0	-	0°	-5°		CCMT 12 04 08 CCMT 432	-	
-	11	3/8		1	43	80	198.9	89.0	19.2	-	0°	-5°		DCMT 11 T3 04 DCMT 3 (2.5) 1	-	

- 1) γ = Rake angle (valid with flat insert).
- 2) λ_s = Angle of inclination.
- 3) n_{max} (max. rev/min) for holders must also be considered.

Limitation on workpiece diameter

When turning axially and using the CCMT insert, it may happen that the R390 inserts, because of their position in the tool, limit the workpiece diameter. See illustration below.

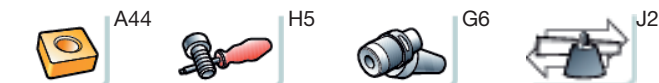
For ordering CoroMill 390 inserts, see chapter D, Milling.



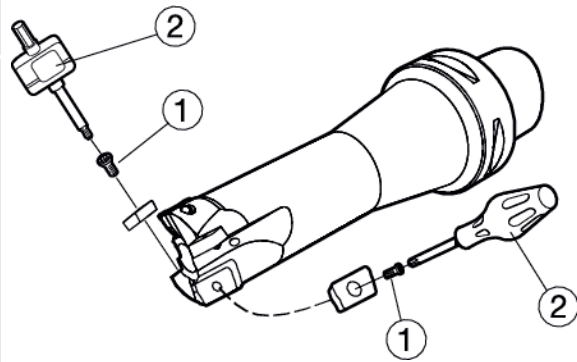
Tool diameter, D_c mm (inch)	Max workpiece diameter, D_m mm (inch)		
	Insert type		
	R390-11	R390-18	Wiper R390-11
32 (1.260)	150 (5.906)	-	100 (3.935)
-	380 (14.960)	-	

CoroMill® 390 inserts are in the main catalog part two, chapter D, Milling.40 (1.575)

.CMT



Multi-functional tools CoroPlex™ MT

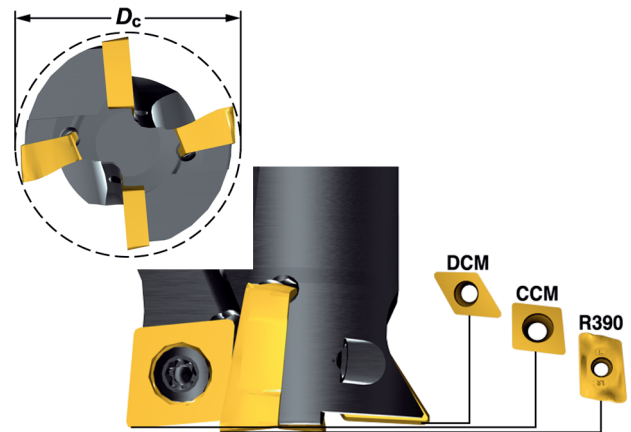


Spare parts

Insert		Torque value			
Type/size		1	2		
ISO-code	ANSI-code	Insert screw	Key (Torx Plus)	Nm	ft-lbs
CCMT 09 ...	CCMT 3 (2.5)	5513 020-09	5680 046-02 (15IP)	3.0	2.2
CCMT 12 ...	CCMT 43 ...	5513 020-07	5680 046-06 (20IP)	6.4	4.7
DCMT 07 ...	DCMT 2 (1.5)	5513 020-03	5680 046-03 (7IP)	0.9	0.7
DCMT 11 ...	DCMT 3 (2.5)	5513 020-09	5680 046-02 (15IP)	3.0	2.2
R390-11 ...	R390-11 ...	5513 020-35	5680 046-01 (8IP)	1.2	0.9
R390-18 ...	R390-18 ...	5513 020-29	5680 046-02 (15IP)	3.0	2.2

One tool for both rotating and stationary use

The CoroMill® 390 inserts are positioned a little ahead of the CoroTurn® inserts – axially as well as radially – to guarantee that turning inserts are not in cut when the tool is applied for rotating. This means that turning of an available blind hole – using the CoroTurn® function of the tool – must be stopped before the CoroMill® 390 inserts get in contact with the bottom face.



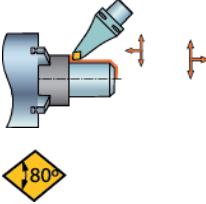
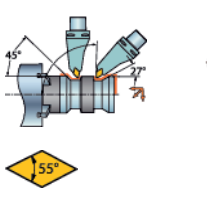
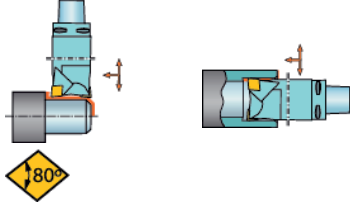
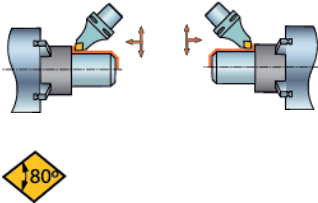
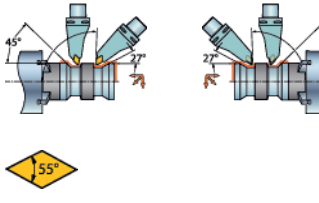
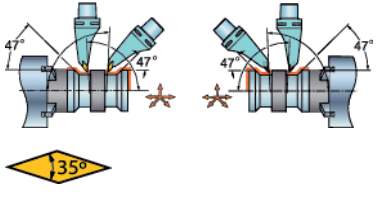
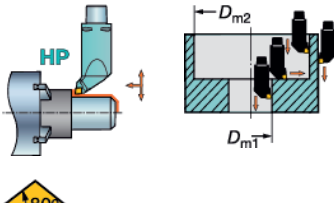
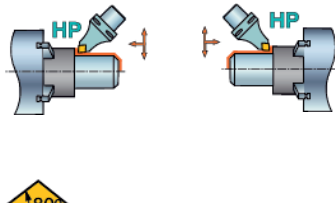
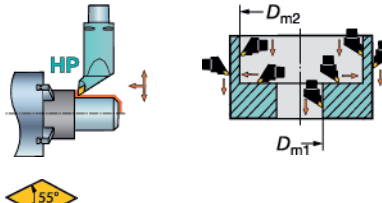
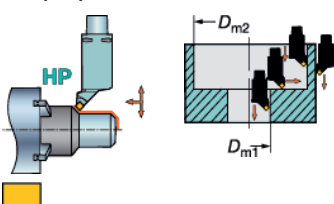

Tool length optimized for accessibility in multi-tasking

The tool bodies are extended by 65 mm (2.560 inch) compared with corresponding conventional tools to allow freer use of the working positions possible in multi-task machining with no need for extensions.

The length and design of the tool bodies are optimized by each Coromant Capto® size to provide best accessibility relative to the most common chuck sizes. Tools are designed with all inserts positioned on the center line of the tool, making them easy to use with the standard program cycles in the machine tools.

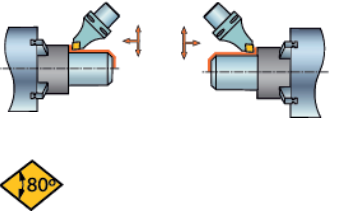
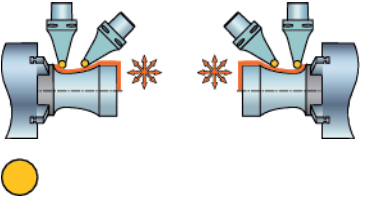
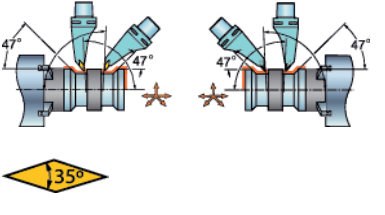
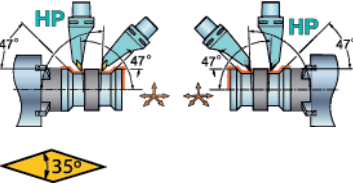
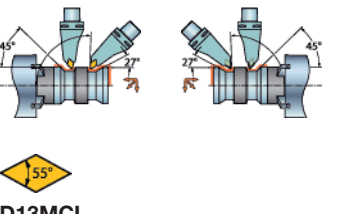
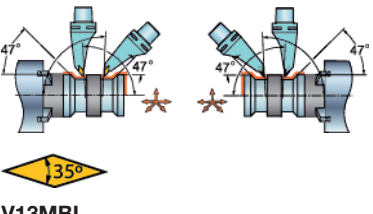


Coromant Capto® cutting units for Multi-Task machining

CoroPlex™ TT Twin tool, rigid clamp design Insert size, mm (<i>iC</i> , inch) Coromant Capto® size Page	Entering angle (Lead angle) 95° (-5°)  T-DCMxxDDMxx 12-16 (1/2-5/8) C5-C8 H11	93° (-3°)  T-DCMxxDDMxx 15 (1/2) C5-C8 H11	95° (-5°)  T-DCL.xxDCLxx 12-16 (1/2-5/8) C5-C8 H12		
	CoroTurn® RC rigid clamp design Insert size, mm (<i>iC</i> , inch) Coromant Capto® size Page	Entering angle (Lead angle) 95° (-5°)  DCMNN 12-16 (1/2-5/8) C5-C8 H15	93° (-3°)  DDMNL 15 (1/2) C5-C8 H16	95° (-5°)  DVMNL 16 (3/8) C8 H16	
		CoroTurn® HP lever design (T-Max P) Insert size, mm (<i>iC</i> , inch) Coromant Capto® size Page	Entering angle (Lead angle) 95° (-5°)  PCLNR/L 12 (1/2) C6 H22	50° (40°)  PCMNN 12 (1/2) C6-C8 H22	93° (-3°)  PDJNR/L 15 (1/2) C6 H23
			Entering angle (Lead angle) 45° (45°)   PSSNR/L 12 (1/2) C6 H24		

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Coromant Capto® cutting units for Multi-Task machining

<p>CoroTurn® 107 screw clamp design</p>	<p>Entering angle (Lead angle) 95° (-5°)</p>  <p>SCMCN</p>	<p>-</p>  <p>SRDCN</p>	<p>95° (-5°)</p>  <p>SVMBL</p>
<p>Insert size, mm (I/C, inch)</p>	<p>12 (1/2)</p>	<p>10-16 (.394-.630)</p>	<p>16 (3/8)</p>
<p>Coromant Capto® size</p>	<p>C6</p>	<p>C6</p>	<p>C5-C6</p>
<p>Page</p>	<p>H17</p>	<p>H17</p>	<p>H18</p>
<p>CoroTurn® HP screw design (CoroTurn® 107)</p>	<p>Entering angle (Lead angle) 50° (40°)</p>  <p>SVMBR/L</p>		
<p>Insert size, mm (I/C, inch)</p>	<p>16 (3/8)</p>		
<p>Coromant Capto® size</p>	<p>C6</p>		
<p>Page</p>	<p>H25</p>		
<p>CoroTurn® TR screw clamp design</p>	<p>Entering angle (Lead angle) 93° (-3°)</p>  <p>D13MCL</p>	<p>95° (-5°)</p>  <p>V13MBL</p>	
<p>Insert size, mm (inch)</p>	<p>13</p>	<p>13</p>	
<p>Coromant Capto® size</p>	<p>C5-C6</p>	<p>C5-C6</p>	
<p>Page</p>	<p>H19</p>	<p>H20</p>	

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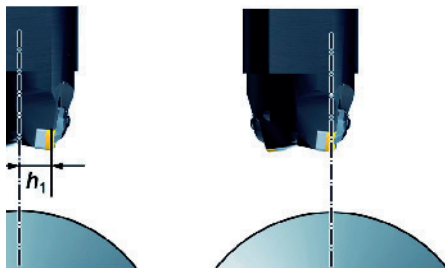
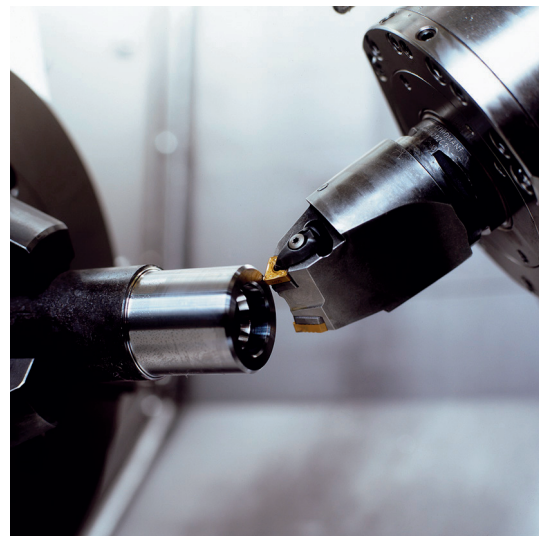
CoroPlex™ TT

Multi-functional turning tool

Two turning tools in one dedicated for multi-task machining.

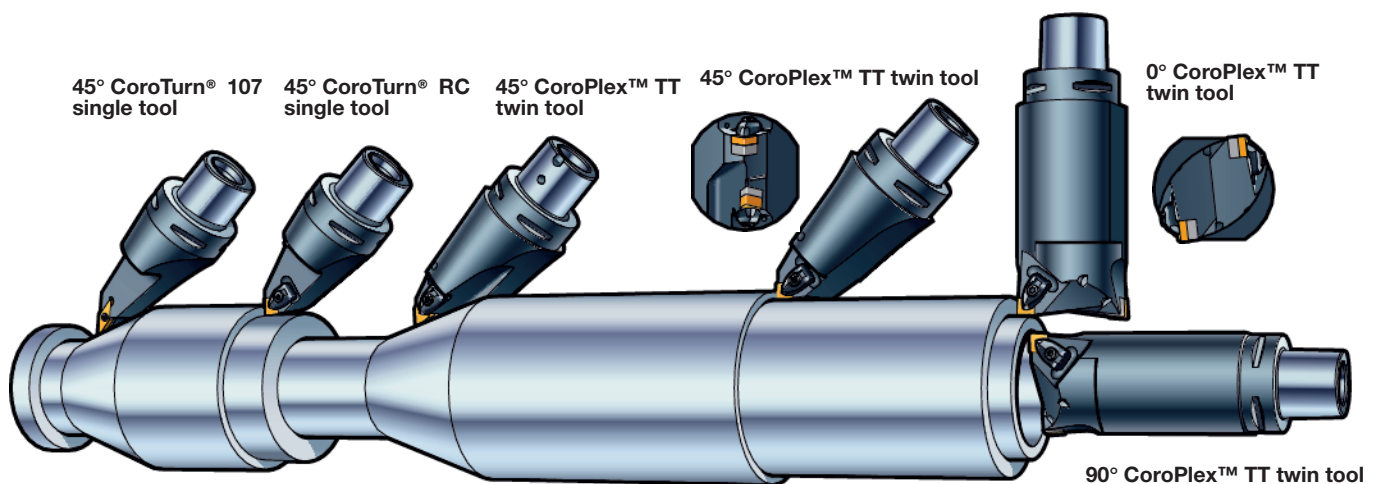
CoroPlex™ TT twin tool combines two tool holders in one:

- Reduce tool changing time
- Save tool pockets in the tool magazine
- Flexible tool holders with optimized length, stability and coolant solution for multi-task machines
- CoroTurn® RC insert clamping system with wide flexibility
- One holder replaces two - cost reduction.



To apply the twin tool, move the Y-axis the distance h_1 , so that the insert will cut on the center line of the workpiece. When working against a sub-spindle, the Y-axis must be offset in the opposite direction in relation to the main spindle.

Flexibility with Multi-Task machining

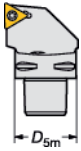


Code key for CoroPlex™ TT twin tools

C6	-	T	-	D	C	M	12	D	D	M	15	L	130
1		2		3	4	5	6	7	8	9	10	11	12

1 Coupling size mm, inch

C = Coromant Capto®
 D_{5m} = Coupling size



C3	$D_{5m} = 32$ (1.260)
C4	$D_{5m} = 40$ (1.575)
C5	$D_{5m} = 50$ (1.969)
C6	$D_{5m} = 63$ (2.480)
C8	$D_{5m} = 80$ (3.150)

Coromant Capto®

2

Type of tool
 T = Twin tool

3 and 7

Clamping system

D



Top and hole clamping (RC)
 CoroTurn® RC

4 and 8

Insert shape

C



D

**5 and 9**

Holder style



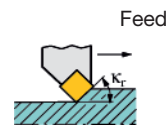
Entering angle (Lead angle)

6 and 10

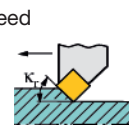
Insert size

**11** Hand of tool

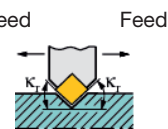
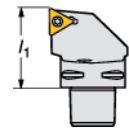
R



L

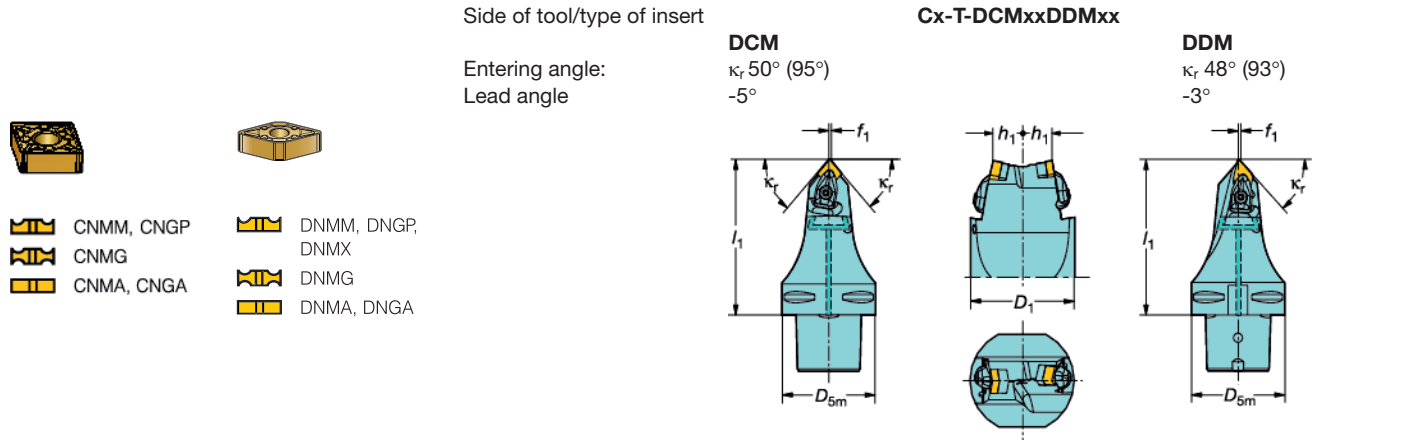


N

**12** Tool length, l 

Multi-functional tools - CoroPlex™ TT twin tool

CoroTurn® RC rigid clamp design



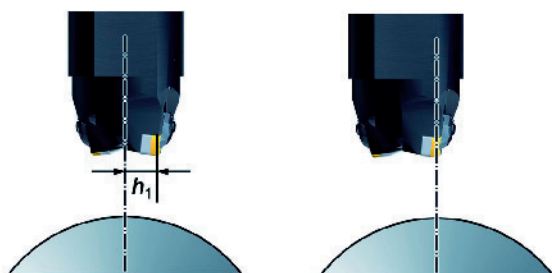
Coolant inlet: Axial through the center

Left hand style shown

Main application	□	iC	□	iC	Ordering code	Dimensions, mm, inch								Gauge inserts					
						D _{5m}	D ₁	f ₁	h ₁	h ₁	γ ¹⁾	λ _s ²⁾	⊖ _{ISO}	ISO	ANSI	Nm ³⁾			
	12	1/2	15	1/2	C5-T-DCM12DDM15L115	50	70	0.5	20	115	-6°	-6°	1.8	CNMG 12 04 08	CNMG 432	3.9			
					C6-T-DCM12DDM15L105	63	70	0.5	20	105	-6°	-6°	1.8	CNMG 12 04 08	CNMG 432	3.9			
	16	5/8	15	1/2	C8-T-DCM16DDM15L160	80	80	0.5	24	160	-6°	-6°	4.7	CNMG 16 06 12	CNMG 543	6.4			

- 1) γ = Rake angle (valid with flat insert).
- 2) λ_s = Angle of inclination.
- 3) Insert tightening torque, Nm.

L = Left hand



To apply the twin tool, move the Y-axis the distance h₁, so that the insert will cut on the center line of the workpiece.

For information about alternative use, see page H9

Main spare parts

Insert size				Shim	Shim screw	Key (Torx Plus)	Complete clamp set ⁴⁾	Key (Torx Plus)
□	□	iC	iC					
12		1/2		5322 234-01	5513 020-02	5680 049-01 (15IP)	5412 028-021	5680 049-01 (15IP)
	15		1/2	5322 266-02	5513 020-02	5680 049-01 (15IP)	5412 028-021	5680 049-01 (15IP)
16		5/8		5322 234-03	5513 020-07	5680 043-14 (20IP)	5412 028-031	5680 043-14 (20IP)

4) To modify CoroTurn® RC holders for other inserts, see clamp sets on page A359.



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MULTI-TASK MACHINING Coromant Capto® cutting units

Multi-functional tools - CoroPlex™ TT twin tool

CoroTurn® RC rigid clamp design

Side of tool/type of insert
Entering angle:
Lead angle:

DCL...
 $\kappa_r 95^\circ$
 -5°

DCL...
 $\kappa_r 95^\circ$
 -5°

CNMM, CNGP
CNMG
CNMA, CNGA

Coolant inlet: Axial through the center

Left hand style shown

Main application	□	iC	Ordering code	Dimensions, mm, inch								Gauge inserts				
				D_{5m}	D_{m1} min	D_1	f_1	h_1	l_1	l_3	γ^1	λ_s^2	ρ_{KO}	ISO	ANSI	Nm ³⁾
	12	1/2	C5-T-DCL12DCL12L130	50	110	69	26.0	20	130	50	-6°	-6°	2.7	CNMG 12 04 08	CNMG 432	3.9
				1.968	4.330	2.716	1.023	0.787	5.118	1.96						
				63	110	75	33.0	20	165	50	-6°	-6°	4.7			
			C6-T-DCL12DCL12L165	63	110	75	33.0	20	165	50	-6°	-6°	4.7	CNMG 12 04 08	CNMG 432	3.9
				2.480	4.330	2.952	1.299	0.787	6.496	1.96						
				80	115	80	33.0	20	200	50	-6°	-6°	7.0			
	16	5/8	C8-T-DCL16DCL16L200	80	115	80	33.0	20	200	50	-6°	-6°	7.0	CNMG 16 06 12	CNMG 543	6.4
				3.149	4.527	3.149	1.299	0.787	7.874	1.96						

1) γ = Rake angle (valid with flat insert).
2) λ_s = Angle of inclination.
3) Insert tightening torque, Nm.

L = Left hand

Main spare parts

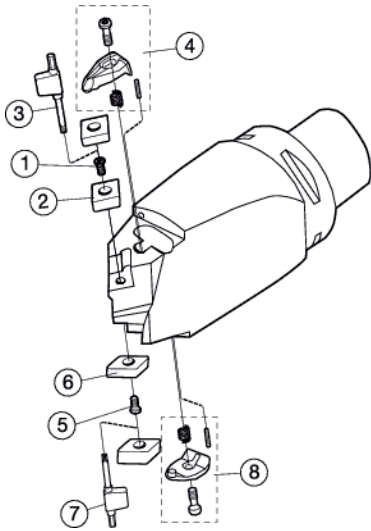
Insert size	□	iC	Shim	Shim screw	Key (Torx Plus)	Complete clamp set	Key (Torx Plus)
12	12	1/2	5322 234-01	5513 020-02	5680 049-01 (15IP)	5412 028-021 ⁴⁾	5680 049-01 (15IP)
16	16	5/8	5322 234-03	5513 020-07	5680 043-14 (20IP)	5412 028-031 ⁴⁾	5680 043-14 (20IP)

4) To modify CoroTurn® RC holders for other inserts, see clamp sets on page A359.

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Spare parts

CoroPlex™ TT with CoroTurn® RC rigid clamp design



	1	2		3	4	4 ¹⁾²⁾	4 ¹⁾²⁾
Twin tool	Shim screw	Shim	For insert thickness mm (inch).	Key (Torx Plus)	Complete clamp set	Clamp sets for ceramic inserts without hole.	Clamp sets for ceramic inserts with hole.
C5-T-DCL12DCL12L130	5513 020-02	5322 234-01	4.76 (.187)	5680 049-01 (15IP)	5412 028-021	5412 034-021	5412 032-021
C6-T-DCL12DCL12L165		5322 234-02 ²⁾	7.94 (.313)				
C8-T-DCL16DCL16L200	5513 020-07	5322 234-03	6.35 (.250)	5680 043-14 (20IP)	5412 028-031	5412 034-031	5412 032-031
		5322 234-04 ²⁾	7.94 (.313)				
C5-T-DCM12DDM15L115	5513 020-02	5322 234-01	4.76 (.187)	5680 049-01 (15IP)	5412 028-021	5412 034-021	5412 032-021
C6-T-DCM12DDM15L105		5322 234-02 ²⁾	7.94 (.313)				
C6-T-DCM12DDM15L130							
C8-T-DCM16DDM15L150	5513 020-07	5322 234-03	6.35 (.250)	5680 043-14 (20IP)	5412 028-031	5412 034-031	5412 032-031
		5322 234-04 ²⁾	7.94 (.313)				
	5	6		7	8	8 ¹⁾²⁾	8 ¹⁾²⁾
Twin tool	Shim screw	Shim	For insert thickness mm (inch).	Key (Torx Plus)	Complete clamp set	Clamp sets for ceramic inserts without hole.	Clamp sets for ceramic inserts with hole.
C5-T-DCL12DCL12L130	5513 020-02	5322 234-01	4.76 (.187)	5680 049-01 (15IP)	5412 028-021	5412 034-021	5412 032-021
C6-T-DCL12DCL12L165		5322 234-02 ²⁾	7.94 (.313)				
C8-T-DCL16DCL16L200	5513 020-07	5322 234-03	4.76 (.187)	5680 043-14 (20IP)	5412 028-031	5412 034-031	5412 032-031
		5322 234-04 ²⁾	7.94 (.313)				
C5-T-DCM12DDM15L115	5513 020-02	5322 266-02	6.35 (.250)	5680 049-01 (15IP)	5412 028-021	5412 034-021	5412 032-021
C6-T-DCM12DDM15L105		5322 266-01 ²⁾	4.76 (.187)				
C6-T-DCM12DDM15L130							
C8-T-DCM16DDM15L150	5513 020-02	5322 266-02	6.35 (.250)	5680 049-01 (15IP)	5412 028-021	5412 034-021	5412 032-021
		5322 266-01 ²⁾	4.76 (.187)				

1) For clamp set parts, see page A359.

2) Optional part delivered to separate order.

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MULTI-TASK MACHINING Coromant Capto® cutting units

CoroPlex™ SL mini-turret for cutting heads and blades with serrated coupling

Axial mounting of heads and blades

Coupling size		Dimensions, millimeter, inch (mm, in.)							
dm_h	Ordering code	D_{21} mm	D_{21} in.	dm_m mm	dm_m in.	l_1 mm	l_1 in.	ρ_{KS}	
25	570-4-25-40-000-AX	50	1.968	40	1.574	12	0.472	0.3	
32	570-4-32-40-000-AX	58	2.283	40	1.574	15	0.590	0.6	

5° radial mounting of heads and blades

Coupling size		Dimensions, millimeter, inch (mm, in.)											
dm_h	Ordering code	b_{21} mm	b_{21} in.	b_{22} mm	b_{22} in.	dm_m mm	dm_m in.	l_{21} mm	l_{21} in.	l_{22} mm	l_{22} in.	ρ_{KS}	
25	570-4-25-40-050-RA	46	1.811	48.5	1.909	40	1.574	28	1.102	15	0.590	0.4	
32	570-4-32-40-050-RA	46	1.811	49.25	1.939	40	1.574	34.5	1.358	18	0.708	0.5	

Spare parts

	1	2	3	4	5
	Screw	Key (mm)	O-ring	Coolant tube	Screw
570-4-25-40-000-AX	3212 010-257	174.1-864 (3.0)	-	5638 031-01	3212 010-358
570-4-32-40-000-AX	3212 010-307	3021 010-040 (4.0)	3671 010-113	5638 031-01	3212 010-358
570-4-25-40-050-RA	3212 010-257	174.1-864 (3.0)	-	5638 031-01	3212 010-358
570-4-32-40-050-RA	3212 010-307	3021 010-040 (4.0)	3671 010-113	5638 031-01	3212 010-358

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General information

Coromant Capto® cutting units

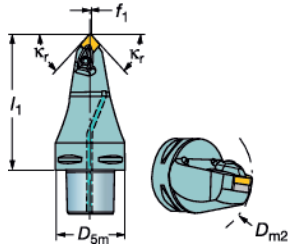
CoroTurn® RC rigid clamp design



- CNMM, CNGP
- CNMG
- CNMA, CNGA

Entering angle:
Lead angle:

DCMNN
 $\kappa_r 50^\circ (95^\circ)$
 -5°



Coolant inlet: Axial through the center

Neutral style

Main application	□	iC	Ordering code	Dimensions, millimeter, inch (mm, in.)										Gauge inserts			
				D _{5m} mm	D _{5m} in.	D _{m2} min mm. ⁴⁾	D _{m2} min in. ⁴⁾	f ₁ mm	f ₁ in.	h mm	h in.	γ ¹⁾	λ _s ²⁾	kg	ISO	ANSI	Nm ³⁾
	12	1/2	C5-DCMNN-00105-12	50	1.968	110	4.330	0	0	105	4.133	-6°	-6°	1.1	CNMG 12 04 08	CNMG 432	3.9
			C6-DCMNN-00090-12	63	2.480	110	4.330	0	0	90	3.543	-6°	-6°	1.4	CNMG 12 04 08	CNMG 432	3.9
			C6-DCMNN-00115-12	63	2.480	110	4.330	0	0	115	4.527	-6°	-6°	1.8	CNMG 12 04 08	CNMG 432	3.9
	16	5/8	C6-DCMNN-00090-16	63	2.480	110	4.330	0	0	90	3.543	-6°	-6°	1.3	CNMG 16 06 12	CNMG 543	6.4
			C8-DCMNN-00150-16	80	3.149	115	4.527	0	0	150	5.905	-6°	-6°	4.0	CNMG 16 06 12	CNMG 543	6.4

1) γ = Rake angle (valid with flat insert).

2) λ_s = Angle of inclination.

3) Insert tightening torque, Nm.

4) Valid in combination with clamping unit R/LC2090.

N = Neutral

Main spare parts

Insert size						
□	iC	Shim	Shim screw	Key (Torx Plus)	Complete clamp set	Key (Torx Plus)
12	1/2	5322 234-01	5513 020-02	5680 049-01 (15IP)	5412 028-021 ⁵⁾	5680 049-01 (15IP)
16	5/8	5322 234-03	5513 020-07	5680 043-14 (20IP)	5412 028-031 ⁵⁾	5680 043-14 (20IP)

5) To modify CoroTurn® RC holders for other inserts, see clamp sets on page A359.

Coromant Capto® coupling size	Coolant nozzle
C5	5691 029-09
C6	5691 029-10
C8	5691 029-10



Coromant Capto® cutting units

CoroTurn® RC rigid clamp design

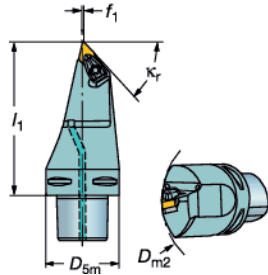
Entering angle:
Lead angle:

DDMNL
 $\kappa_r 48^\circ (93^\circ)$
 -3°

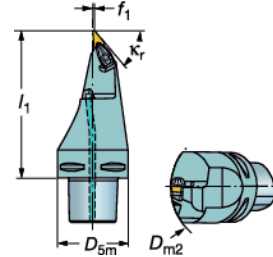
DVMNL
 $\kappa_r 50^\circ (95^\circ)$
 -5°



- DNMM, DNGP, DNMX
- DNMG
- DNMA, DNGA



- VNMG
- VNGP



Coolant inlet: Axial through the center

Left hand style

Main application		iC	Ordering code	Dimensions, millimeter, inch (mm, in.)										Gauge inserts			
				D_{5m} mm	D_{5m} in.	D_{m2} min mm. ⁴⁾	D_{m2} min in. ⁴⁾	f_1 mm	f_1 in.	h mm	h in.	γ^1	λ_s^2	$R_{0.05}$	ISO	ANSI	Nm ³⁾
	15	1/2	C5-DDMNL-00115-15	50	1.968	110	4.330	0	0	115	4.527	-5°	-6°	1.2	DNMG 15 06 08	DNMG 442	3.9
			C6-DDMNL-00130-15	63	2.480	110	4.330	0	0	130	5.118	-5°	-6°	2.0	DNMG 15 06 08	DNMG 442	3.9
			C6-DDMNL-00130-1504	63	2.480	110	4.330	0	0	130	5.118	-5°	-6°	2.0	DNMG 15 04 08	DNMG 432	3.9
			C6-DDMNL-33120-15	63	2.480	130	5.118	33	1.299	120	4.724	-5°	-6°	2.1	DNMG 15 06 08	DNMG 442	3.9
			C6-DDMNL-33120-1504	63	2.480	130	5.118	33	1.299	120	4.724	-5°	-6°	2.1	DNMG 15 04 08	DNMG 432	3.9
			C8-DDMNL-00160-15	80	3.149	120	4.724	0	0	160	6.299	-5°	-6°	4.1	DNMG 15 06 08	DNMG 442	3.9
			C8-DDMNL-00160-1504	80	3.149	120	4.724	0	0	160	6.299	-5°	-6°	4.1	DNMG 15 04 08	DNMG 432	3.9

Main application		iC	Ordering code	Dimensions, millimeter, inch (mm, in.)										Gauge inserts		
				D_{5m} mm	D_{5m} in.	D_{m2} min mm. ⁴⁾	D_{m2} min in. ⁴⁾	h mm	h in.	γ^1	λ_s^2	$R_{0.05}$	ISO	ANSI	Nm ³⁾	
	16	3/8	C8-DVMNL-00160-16	80	3.1496	110	4.3307	160	6.2992	-4°	-14°	4.0	VNMG 16 04 08	VNMG 332	3.0	

- 1) γ = Rake angle (valid with flat insert).
 - 2) λ_s = Angle of inclination.
 - 3) Insert tightening torque, Nm.
 - 4) Valid in combination with clamping unit R/LC2090.
- L = Left hand

Main spare parts

Insert size				Shim			Shim screw			Key (Torx Plus)			Complete clamp set		Key (Torx Plus)	
		iC	iC													
15		1/2		5322 266-02	5513 020-02	5680 049-01 (15IP)	5412 028-021 ⁵⁾			5680 049-01 (15IP)						
	16		3/8	5322 267-01	5513 020-09	5680 049-01 (15IP)	5412 028-061			5680 049-01 (15IP)						

5) To modify CoroTurn® RC holders for other inserts, see clamp sets on page A359.

Coromant Capto® coupling size	Coolant nozzle
C5	5691 029-09
C6	5691 029-10
C8	5691 029-10



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Coromant Capto® cutting units

CoroTurn® 107 screw clamp design

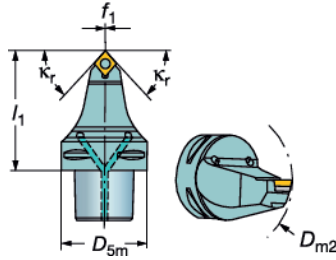
Entering angle:
Lead angle:

SCMCN
 κ_r 50° (95°)
40°

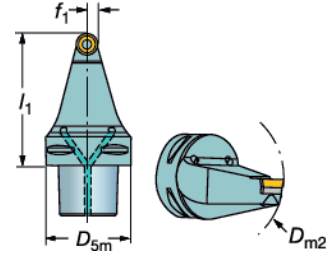
SRDCN



CCMT, CCGT
CCGX, CCET
CCMW



RCMT
RCGX-AL



Coolant inlet: Radial through the taper

Neutral style

Main application	□	iC	Ordering code	Dimensions, millimeter, inch (mm, in.)								Gauge inserts			
				D _{5m} mm	D _{5m} in.	D _{m2} min mm. ⁴⁾	D _{m2} min in. ⁴⁾	f ₁ mm	f ₁ in.	h mm	h in.	γ ¹⁾	λ _s ²⁾	Ⓜ _{kg}	ISO
	12	1/2	C6-SCMCN-00090-12	63	2.480	100	3.937	90	3.543	0°	0°	1.4	CCMT 12 04 08	CCMT 432	3.0

Main application	○	iC	Ordering code	Dimensions, millimeter, inch (mm, in.)								Gauge inserts					
				D _{5m} mm	D _{5m} in.	D _{m2} min mm.	D _{m2} min in.	f ₁ mm	f ₁ in.	h mm	h in.	γ ¹⁾	λ _s ²⁾	Ⓜ _{kg}	ISO	ANSI	Nm ³⁾
	10	.394	C6-SRDCN-00100-10	63	2.480	110	4.330	5	0.196	100	3.937	0°	0°	1.4	RCMT 10 T3 M0	RCMT 10	3.0
	16	.630	C6-SRDCN-00100-16	63	2.480	110	4.330	8	0.315	100	3.937	0°	0°	1.4	RCMT 16 06 M0	RCMT 16	6.4

1) γ = Rake angle (valid with flat insert).

2) λ_s = Angle of inclination.

3) Insert tightening torque, Nm.

4) Valid in combination with clamping unit R/LC2090.

N = Neutral

Main spare parts

Insert size				Insert screw	Key (Torx Plus)	Shim	Shim screw	Key (Torx Plus)	Coolant tube
□	○	iC	iC						
12		1/2		5513 020-18	5680 049-01 (15IP)	5322 232-02	5512 090-03	5680 049-01 (15IP)	5691 045-01
	10		.394	5513 020-10	5680 049-01 (15IP)	5322 110-01	5512 090-01	5680 049-01 (15IP)	5691 045-01
	16		.630	5513 020-26	5680 043-14 (20IP)	5322 110-03	5512 090-06	5680 043-14 (20IP)	5691 045-01



Coromant Capto® cutting units

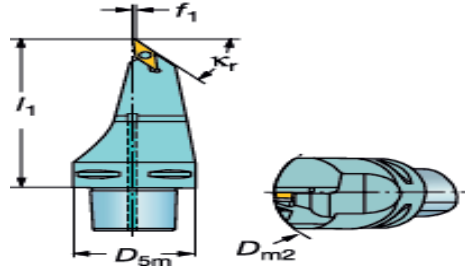
CoroTurn® 107 screw clamp design

Entering angle:
Lead angle:

SVMBL
κ_r 50° (95°)
40°



- VBMT, VBGT, VCGX, VCEX, VCGT, VCET
- VBMW, VCMW



Coolant inlet: Radial through the taper

C6-SVMBL-33120-16

Left hand style

Main application	iC	Ordering code	Dimensions, millimeter, inch (mm, in.)											Gauge inserts			
			D _{5m} mm	D _{5m} in.	D _{m2} min mm. ⁴⁾	D _{m2} min in. ⁴⁾	f ₁ mm	f ₁ in.	h ₁ mm	h ₁ in.	γ ¹⁾	λ _s ²⁾	ISO	ANSI	Nm ³⁾		
	16	3/8	C5-SVMBL-00115-16	50	1.9685	110	4.3307	0	0	115	4.5276	0°	0°	1.0	VBMT 16 04 08	VBMT 332	3.0
			C6-SVMBL-00130-16	63	2.4803	110	4.3307	0	0	130	5.1181	0°	0°	1.8	VBMT 16 04 08	VBMT 332	3.0
			C6-SVMBL-33120-16	63	2.4803	110	4.3307	33	1.299	120	4.7244	0°	0°	1.9	VBMT 16 04 08	VBMT 332	3.0

- 1) γ = Rake angle (valid with flat insert).
- 2) λ_s = Angle of inclination.
- 3) Insert tightening torque, Nm.
- 4) Valid in combination with clamping unit R/LC2090.

L = Left hand

Main spare parts

Insert size		Insert screw		Key (Torx Plus)		Shim		Shim screw		Key (Torx Plus)	
iC	Ordering code	Ordering code	Ordering code	Ordering code	Ordering code	Ordering code	Ordering code	Ordering code	Ordering code	Ordering code	Ordering code
16	3/8	5513 020-01	5680 049-01 (15IP)	5322 270-01	5512 090-01	5680 049-01 (15IP)					



Coromant Capto® cutting units

CoroTurn® TR screw clamp design

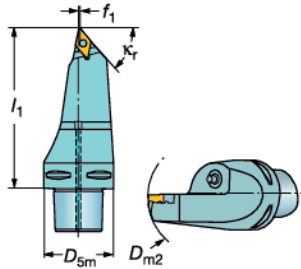
Entering angle:
Lead angle:

TR-Cx-D13MCL

κ_r 48° (93°)
40°



TR-DC



Coolant inlet: Axial through the center

Left hand style shown

Main application	Ordering code	Dimensions, millimeter, inch (mm, in.)										Gauge inserts			
		D_{sm} mm	D_{sm} in.	D_{m2} min mm. ⁴⁾	D_{m2} min in. ⁴⁾	f_1 mm	f_1 in.	h_1 mm	h_1 in.	$\gamma^1)$	$\lambda_s^2)$	$\frac{K_{TC}}{K_{TC}}$	ISO	ANSI	Nm ³⁾
	13 TR-C5-D13MCL-00115	50	1.968	150	5.905	0	0	115	4.527	0°	0°	0.8	TR-DC1308	TR-DC1308	3.0
	TR-C6-D13MCL-00130	63	2.480	150	5.905	0	0	130	5.118	0°	0°	1.6	TR-DC1308	TR-DC1308	3.0

- 1) γ = Rake angle (valid with flat insert).
- 2) λ_s = Angle of inclination.
- 3) Insert tightening torque, Nm.
- 4) Valid in combination with clamping unit R/LC2090.

L = Left hand

For more information about CoroTurn TR system, see chapter A page A175

Main spare parts

Insert size	Insert screw	Key (Torx Plus)	Torque wrench	Coolant nozzle
13	5513 020-01	5680 049-01 (15IP)	5680 100-06	5691 029-02



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CoroTurn® TR screw clamp design

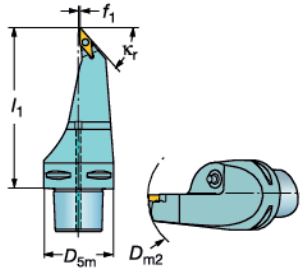
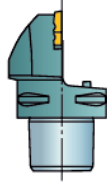
Entering angle:
Lead angle:

TR-Cx-V13MBL

κ_r 50°
40°



TR-VB



Coolant inlet: Axial through the center

Left hand style shown

Main application	Ordering code	Dimensions, millimeter, inch (mm, in.)										Gauge inserts			
		D_{sm} mm	D_{sm} in.	D_{m2} min mm. ⁴⁾	D_{m2} min in. ⁴⁾	f_1 mm	f_1 in.	h_1 mm	h_1 in.	$\gamma^1)$	$\lambda_s^2)$	$\frac{M}{Nm}$	ISO	ANSI	Nm ³⁾
	13 TR-C5-V13MBL-00115	50	1.968	150	5.905	0	0	115	4.527	0°	0°	0.8	TR-VB1308	TR-VB1308	2.0
	TR-C6-V13MBL-00130	63	2.480	150	5.905	0	0	130	5.118	0°	0°	1.6	TR-VB1308	TR-VB1308	2.0

- 1) γ = Rake angle (valid with flat insert).
- 2) λ_s = Angle of inclination.
- 3) Insert tightening torque, Nm.
- 4) Valid in combination with clamping unit R/LC2090.

L = Left hand

For more information about CoroTurn TR system, see chapter A page A175

Main spare parts

Insert size	Insert screw	Key (Torx Plus)	Torque wrench
13	5513 020-64	5680 049-04 (10IP)	5680 100-05



CoroTurn® HP

Coromant Capto tools for High Pressure coolant

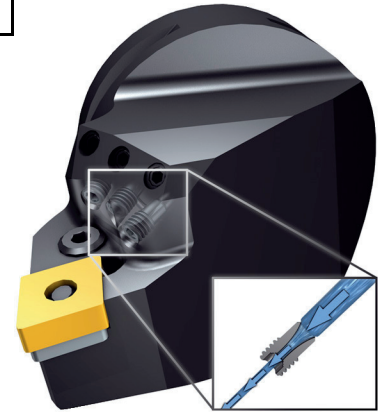
Increased cutting speed for rough to medium machining
Chip control in finishing - secure unmanned production

When to use

Any turning machine where both high pressure coolant and Coromant Capto® coupling are available:

- Multi-task machines
- Vertical turning lathes (VTL)
- Turning centers

The characteristic reduced depth of cut and reduced feed rate in finishing operations always leads to challenges for chip control. In automated production, be it high volume mass production or machines with automatic tool changing (multi-task and vertical turning lathes), any chips gathering around the tool will result in costly machine stoppages. This new technology will provide you with total chip control, giving security in unmanned production.



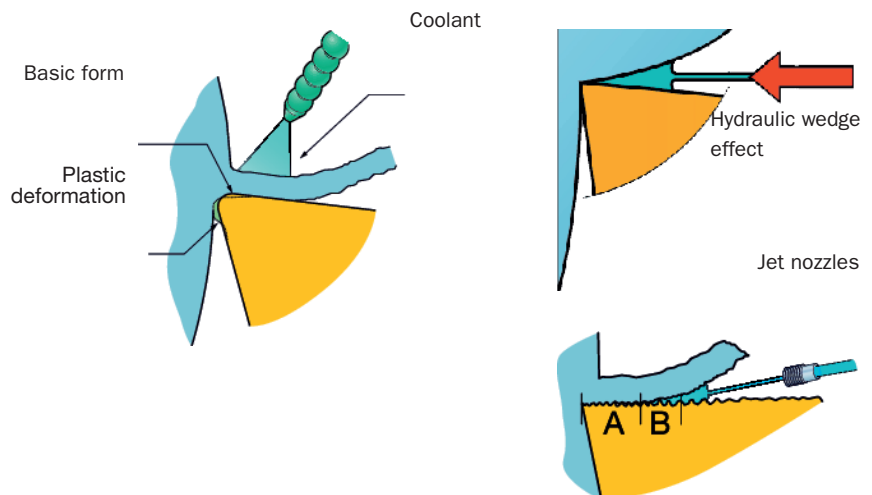
Fixed coolant nozzle technology

The high pressure coolant application with CoroTurn HP utilizes carefully developed nozzle technology based on decades of experience. Optimized nozzles give parallel laminar jets of coolant with high velocity accurately directed at the right place on the insert. The precision and character of these jets makes the difference. CoroTurn HP has fixed, pre-directed, high precision nozzles mounted on the tool targeting the right place, at the right angle on the cutting edge. No setting with trials is needed; performance and security is built-in with only normal tool maintenance required.

A directional jet for maximum effect

The principle of turning with high pressure coolant is to accurately position the jet of coolant through small, sighted nozzles (dia .039 inch) to give a parallel laminar flow. This high velocity jet of coolant creates a hydraulic wedge between the top surface of the insert and the underside of the chip being removed from the component. The coolant jet has three main effects:

1. To provide localized cooling of the insert in the contact zone (A)
2. To force the chip away from the insert face quickly, reducing wear on the insert (B)
3. To help break the chip into smaller pieces and evacuate it from the cutting area



CoroTurn HP tools for general turning, see page A110.

CoroTurn HP with SL coupling, see page I12.

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MULTI-TASK MACHINING Coromant Capto® cutting units

CoroTurn® HP cutting units

Lever design
With high pressure coolant

Cx-PCLNR/L-HP
 κ_r 95°
 Lead angle: -5°

Cx-PCMNN-HP
 κ_r 50° (95°)
 -5°

Coolant inlet: Axial through the center Neutral

Right hand style shown

Main application	□	iC	Ordering code	Dimensions, mm, inch						Gauge inserts			
				D_{sm}	D_{m2} min ⁴⁾	f_1	l_1	$\gamma^1)$	$\lambda_s^2)$	$\frac{kg}{mm^3}$	ISO	ANSI	Nm ³⁾
	12	1/2	C6-PCLNR/L-45165-12HP	63	110	45.0	165.0	-6°	-6°	3.5	CNMG 12 04 08	CNMG 432	5.0
				2.480	4.331	1.772	6.496						

Main application	□	iC	Ordering code	Dimensions, mm, inch						Gauge inserts			
				D_{sm}	D_{m2} min ⁴⁾	f_1	l_1	$\gamma^1)$	$\lambda_s^2)$	$\frac{kg}{mm^3}$	ISO	ANSI	Nm ³⁾
	12	1/2	C6-PCMNN-00115-12HP	63	110	0.0	115.0	-6°	-6°	1.8	CNMG 12 04 08	CNMG 432	5.0
				2.480	4.331	.000	4.528						
	12	1/2	C8-PCMNN-00150-12HP	80	315	0.0	150.0	-6°	-6°	3.8	CNMG 12 04 08	CNMG 432	5.0
				3.150	12.402	.000	5.906						

1) γ = Rake angle (valid with flat insert).
 2) λ_s = Angle of inclination.
 3) Insert tightening torque, Nm.
 4) Valid in combination with clamping unit R/LC2090.
 N = Neutral, R = Right hand, L = Left hand

Main spare parts

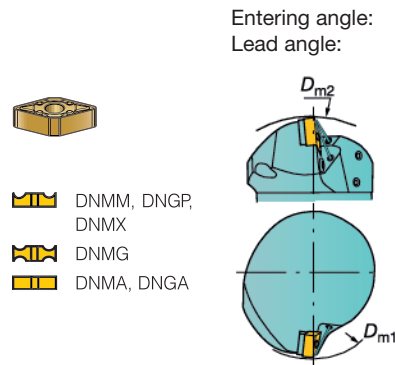
Insert size		Lever	Screw	Key (mm)	Shim	Nozzle (hole dia mm.)	Plug
□	iC	174.3-841M	174.3-821	174.1-864 (3.0)	171.31-850M	5691 026-03 (1.0)	3214 010-253

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CoroTurn® HP cutting units

Lever design

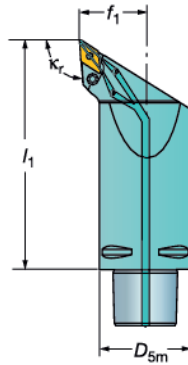
With high pressure coolant



- DNMM, DNGP, DNMX
- DNMG
- DNMA, DNGA

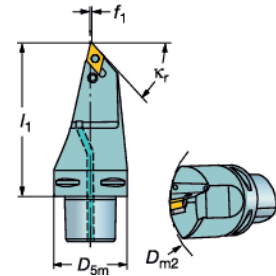
Cx-PDJNR/L-HP

κ_r 93°
-3°



Cx-PDMNR/L-15HP

κ_r 48° (93°)
42° (-3°)



Coolant inlet: Axial through the center

Right hand style shown

Main application		iC	Ordering code	Dimensions, mm, inch						Gauge inserts			
				D_{5m}	D_{m1} min	f_1	l_1	$\gamma^{1)}$	$\lambda_s^{2)}$	$\frac{m}{kg}$	ISO	ANSI	Nm ³⁾
	15	1/2	C6-PDJNR/L-45165-15HP	63	95	45.0	165.0	-6°	-7°	3.5	DNMG 15 06 08	DNMG 442	5.0
				2.480	3.740	1.772	6.496						

Main application		iC	Ordering code	Dimensions, mm, inch						Gauge inserts		
				D_{5m}	f_1	l_1	$\gamma^{1)}$	$\lambda_s^{2)}$	$\frac{m}{kg}$	ISO	ANSI	Nm ³⁾
	15	1/2	C6-PDMNR/L-00130-15HP	63	0.6	130.0	-5°	-15°	2.0	DNMG 15 06 08	DNMG 442	5.0
				2.480	.022	5.118						

1) γ = Rake angle (valid with flat insert).

2) λ_s = Angle of inclination.

3) Insert tightening torque, Nm.

4) Valid in combination with clamping unit R/LC2090.

N = Neutral, R = Right hand, L = Left hand

Main spare parts

Insert size						
	iC	Lever	Screw	Key (mm)	Shim	Nozzle (hole dia mm.)
15	1/2	174.3-847M	174.3-830	174.1-864 (3.0)	171.35-851M	5691 026-03 (1.0)



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MULTI-TASK MACHINING Coromant Capto® cutting units

CoroTurn® HP cutting units

Lever design

With high pressure coolant

Cx-PSSNR/L-HP

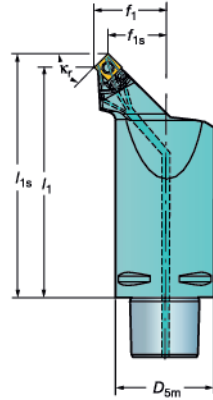
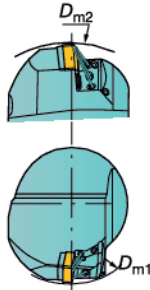
κ_r 45°

Lead angle: 45°

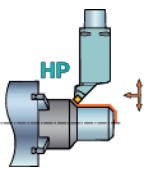
Entering angle:
Lead angle:



-  SNMM
-  SNMG
-  SNMA, SNGA



Coolant inlet: Axial through the center
Right hand style shown

Main application	□	iC	Ordering code	Dimensions, mm, inch							Gauge inserts				
				D_{5m}	D_{m1} min ⁴⁾	f_1	f_{1s}	h_1	h_{1s}	$\gamma^1)$	$\lambda_s^2)$	τ_{kg}	ISO	ANSI	Nm ³⁾
	12	1/2	C6-PSSNR/L-45156-12HP	63	110	45.0	36.7	156	164.3	-8°	0°	3.38	SNMG 12 04 08	SNMG 432	5.0
				2.480	4.331	1.772	1.445	6.142	6.468						

- 1) γ = Rake angle (valid with flat insert).
- 2) λ_s = Angle of inclination.
- 3) Insert tightening torque, Nm.
- 4) Valid in combination with clamping unit R/LC2090.

N = Neutral, R = Right hand, L = Left hand

Main spare parts

Insert size		Lever	Screw	Key (mm)	Shim	Nozzle (hole dia mm.)
□	iC					
12	1/2	174.3-841M	174.3-821	174.1-864 (3.0)	174.3-851M	5691 026-03 (1.0)



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CoroTurn® HP cutting units

Screw clamp design

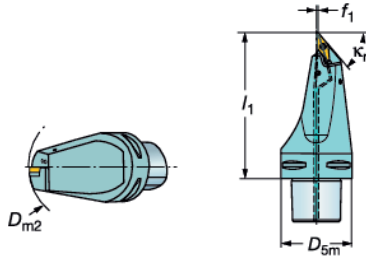
With high pressure coolant



- VBMT, VBGT
- VCGX, VCEX, VCGT, VCET
- VBMW, VCMW

Entering angle:
Lead angle:

Cx-SVMBR/L-HP
 κ_r 50°
40°



Coolant inlet: Axial through the center

Right hand style shown

Main application	IC	Ordering code	Dimensions, mm, inch							Gauge inserts			
			D_{5m}	D_{m2} min ⁴⁾	f_1	l_1	$\gamma^1)$	$\lambda_s^2)$	ρ_{ISO}	ISO	ANSI	Nm ³⁾	
	16	3/8	C6-SVMBR/L-00130-16HP	63	145	0	130	0°	0°	1.84	VBMT 16 04 08	VBMT 332	3
				2.480	5.709	.000	5.118				VBMT 16 04 08	VBMT 332	3

1) γ = Rake angle (valid with flat insert).

2) λ_s = Angle of inclination.

3) Insert tightening torque, Nm.

4) Valid in combination with clamping unit R/LC2090.

N = Neutral, R = Right hand, L = Left hand

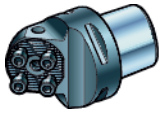
Main spare parts

Insert size		Insert screw (thread)	Key (Torx Plus)	Shim	Shim screw	Key (mm)	Nozzle (hole dia mm.)
16	3/8	5513 020-01 (M3.5)	5680 049-01 (15IP)	5322 270-01	5512 090-01	5680 049-01 (3.5)	5691 026-03 (1.0)

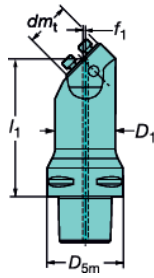


CoroTurn® SL

Coromant Capto® adapter



Coromant Capto® 45°



Cx-570-..RX-045-L1

Coolant inlet: Axial through the center

Right hand style shown

Coupling size		Dimensions, millimeter, inch (mm, in.)								
dm_λ mm	Ordering code	D_1 mm	D_1 in.	D_{5m} mm	D_{5m} in.	f_1 mm	f_1 in.	l_1 mm	l_1 in.	$\frac{\sigma}{R_{p0.2}}$
32	C5-570-32-RX-045-L1	40	1.574	50	1.968	2	0.078	90	3.543	1.1
32	C6-570-32-RX-045-L1	45	1.771	63	2.480	2	0.078	100	3.937	1.7
40	C6-570-40-RX-045-L1	45	1.771	63	2.480	2	0.078	100	3.937	1.8
40	C8-570-40-RX-045-L1	50	1.969	80	3.149	5	0.196	135	5.315	3.7

R = Right hand, L = Left hand

Main spare parts

Coromant Capto®	Screw	Key (mm)	Plug
Cx-570-32-RX-045-L1	3212 010-308	3021 010-040 (4.0)	5643 045-01
Cx-570-40-RX-045-L1	3212 010-358	3021 010-050 (5.0)	5643 045-01

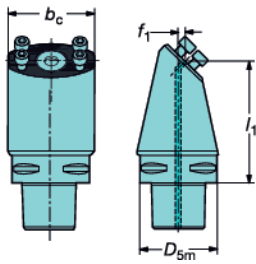
For complete assortment see page I68.



CoroTurn® SL70

Coromant Capto® adapter


Coromant Capto® 45°



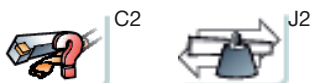
Coolant inlet: Axial through the center

With internal coolant supply

Right hand style shown

Type	Ordering code	Shank style	Coupling size, mm	Dimensions, mm, inch			
				b_c	D_{5m}	f_1	l_1
	C6-SL70-RX-045-100	45°	70	63	5	100	2.7
				2.480	.197	3.937	2.7

For complete assortment see page I103.

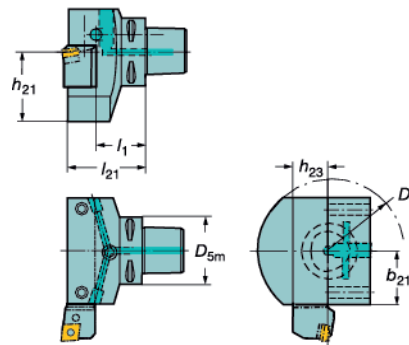
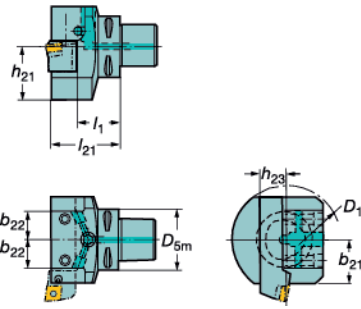
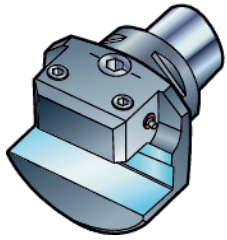


Adapters for shank tools

Radial mounting

ASHA

C6-ASHA-50071-32



Metric version

Coolant inlet: Axial through the center

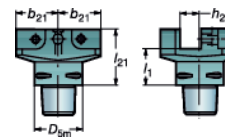
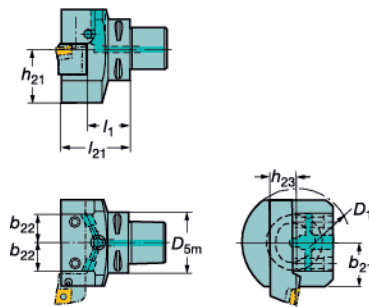
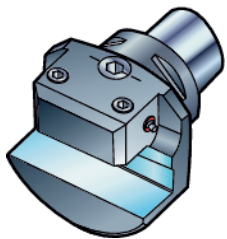
Neutral style shown

Coupling size	Ordering code	Dimensions								
		D_1	D_{5m}	b_{21}	b_{22}	h_{21}	h_{23}	l_1	l_{21}	$\frac{kg}{lb}$
C5	C5-ASHA-38058-20M	90	50	38	23	45	20	38	58	1.4
C6	C6-ASHA-38060-20M	90	63	38	23	45	20	40	60	1.7
	C6-ASHA-45071-25M	110	63	45	30	55	25	45	71	2.6
	C6-ASHA-50071-32M	130	63	50		65	32	45	71	3.2
C8	C8-ASHA-55085-32M	142	80	55	40	65	32	53	85	4.6
C10	C10-ASHA-55090-32	145	100	55	40	65	32	58	90	5.7

Radial mounting

ASHA-A

ASHA-U



Inch version

Coolant inlet: Axial through the center

Neutral style shown

Coupling size	Ordering code	Dimensions, inch								
		D_1	D_{5m}	b_{21}	b_{22}	h_{21}	h_{23}	l_1	l_{21}	$\frac{lbs}{kg}$
C4	C4-ASHA-25046-10U		1.575	.984			.625	1.180	1.810	2.20
C5	C5-ASHA-30055-12U		1.968	1.181	.581		.750	1.380	2.150	2.93
	C5-ASHA-38057-12-AM	3.543	1.968	1.496	.906	1.772	.750	1.457	2.244	3.02
C6	C6-ASHA-38059-12-AM	3.543	2.480	1.496	.906	1.772	.750	1.575	2.323	3.75
	C6-ASHA-38066-12U	5.118	2.480	1.496	.591		.750	1.580	2.340	5.11
C8	C8-ASHA-55085-20-AM	5.591	3.150	2.165	1.575	2.559	1.250	2.087	3.337	10.14

Warning!

The adapters are designed for automatic tool change.

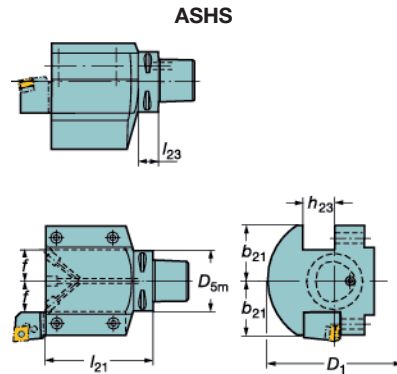
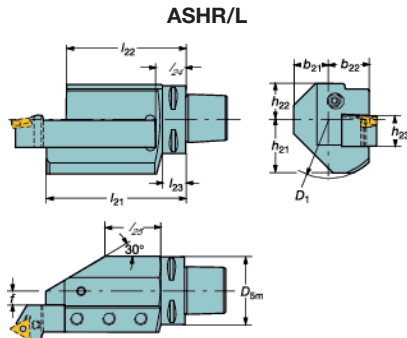
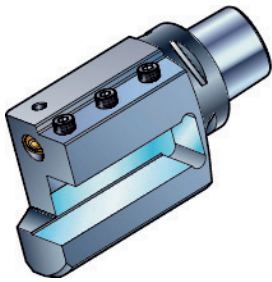
Make sure that there is no risk of interference in the magazine and tool changing cycle.



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Axial mounting



Coolant inlet: Axial through the center

Metric version

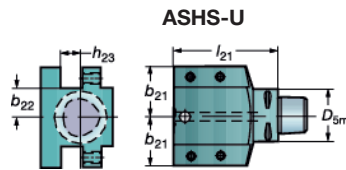
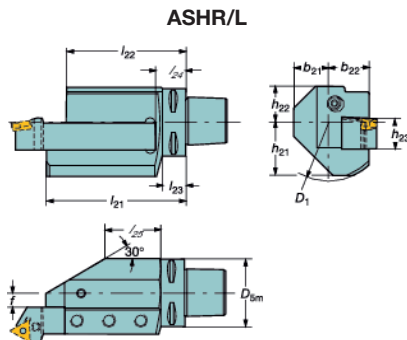
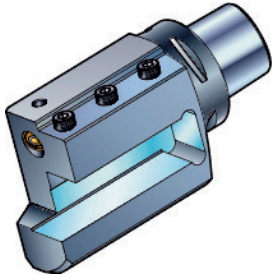
Right hand style

Neutral style

Coupling size	Ordering code	Dimensions												
		D_1	D_{5m}	b_{21}	b_{22}	f	h_{21}	h_{22}	h_{23}	l_{21}	l_{22}	l_{23}	l_{24}	$R_{0.2}$
C5	C5-ASHR/L-30098-20	90	50	29	30	10	41	33	20	98	88	20	23	2.5
C6	C6-ASHR/L-30100-20	90	63	29	30	10	41	33	20	100	90	22	25	2.5
	C6-ASHR/L-38130-25	110	63	32	38	13	50	33	25	130	112	22	28	3.4
C8	C8-ASHR/L-40140-32	110	80	40	40	8	55	30	32	140	130	30	35	5.1
C6	C6-ASHS-58115-32	140	63	58		33			32	115		22		7.3

R = Right hand, L = Left hand

Axial mounting



Coolant inlet: Axial through the center

Inch version

Right hand style

Neutral style

Coupling size	Ordering code	Dimensions, inch												
		D_1	D_{5m}	b_{21}	b_{22}	f	h_{21}	h_{22}	h_{23}	l_{21}	l_{22}	l_{23}	l_{24}	$R_{0.2}$
C5	C5-ASHR/L-30098-12-A	3.543	1.968	1.142	1.181	.431	1.614	1.299	.750	3.858	3.465	.787	.906	4.67
C6	C6-ASHR/L-30100-12-A	3.543	2.480	1.142	1.181	.431	1.614	1.299	.750	3.937	3.543	.866	.984	5.29
	C6-ASHR/L-38130-16-A	4.331	2.480	1.260	1.496	.496	1.968	1.299	1.000	5.118	4.409	.866	1.102	7.50
C8	C8-ASHR/L-40140-20-A	4.331	3.150	1.575	1.575	.325	2.165	1.181	1.250	5.512	5.118	1.181	1.378	11.84
C5	C5-ASHS-47088-12U		1.968	1.831	1.060				.750	3.465				6.83
C6	C6-ASHS-54090-12U		2.480	2.106	1.340				.750	3.543				2.20

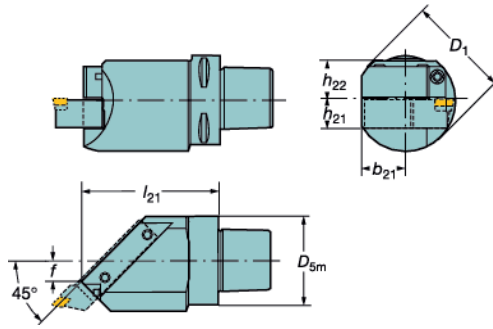
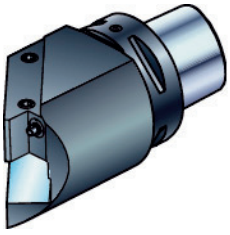
R = Right hand, L = Left hand



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Adapters for shank tools

Angular mounting



Normal use is a left hand cutting tool in a right hand adapter

Metric version

Right hand style shown

Coupling size	Ordering code	Dimensions							
		D_1	D_{5m}	b_{21}	f	h_{21}	h_{22}	l_{21}	$\frac{\sigma}{\sigma_{0.2}}$
C5	C5-ASHR/L45-36097-20	72	50	30.6	15	20	26	97	1.7
C6	C6-ASHR/L45-36099-20	72	63	31.5	15	20	28	99	2.2
C8	C8-ASHR/L45-50135-32	140	80	45	17	32	40	135	6.5

Inch version

Coupling size	Ordering code	Dimensions, inch							
		D_1	D_{5m}	b_{21}	f	h_{21}	h_{22}	l_{21}	$\frac{\sigma}{\sigma_{0.2}}$
C5	C5-ASHR/L45-36097-12-A	2.835	1.968	1.205	.618	.750	1.024	3.791	3.75
C6	C6-ASHR/L45-36099-12-A	2.835	2.480	1.224	.618	.750	1.102	3.870	4.83
C8	C8-ASHR/L45-50135-20-A	5.512	3.150	1.772	.677	1.250	1.575	5.307	14.99

R = Right hand, L = Left hand



Adapter for CoroCut® and T-Max Q-Cut® parting blades See page B33



H32



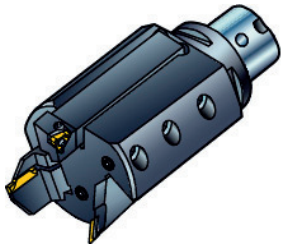
G6



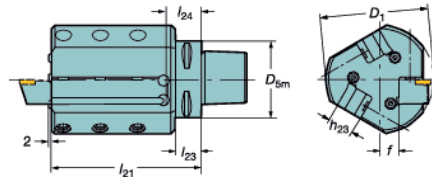
J2

Mini-turret for shank tools

Axial mounting



ASHR/L3



Coolant inlet: Axial through the center

Metric version

Right hand style shown

Coupling size	Ordering code	Dimensions							
		D_1	D_{5m}	f	h_{23}	l_{21}	l_{23}	l_{24}	$\frac{kg}{mm^3}$
C5	C5-ASHR/L3-36123-20	90	50	16	20	123	20	26	3.4
C6	C6-ASHR/L3-36125-20	90	63	16	20	125	22	28	3.8
C8	C8-ASHR/L3-45150-32	120	80	20	32	150	30	36	7.5

Inch version


Coupling size	Ordering code	Dimensions, inch							
		D_1	D_{5m}	f	h_{23}	l_{21}	l_{23}	l_{24}	$\frac{lbs}{in^3}$
C5	C5-ASHR/L3-36123-12-A	3.543	1.968	.614	.750	4.842	.787	1.024	7.85
C6	C6-ASHR/L3-36125-12-A	3.543	2.480	.614	.750	4.921	.866	1.102	8.16
C8	C8-ASHR/L3-46150-20-A	4.724	3.150	.811	1.250	5.906	1.181	1.417	17.01

R = Right hand, L = Left hand

Warning!

The adapters are designed for automatic tool change.

Make sure that there is no risk of interference in the magazine and tool changing cycle.

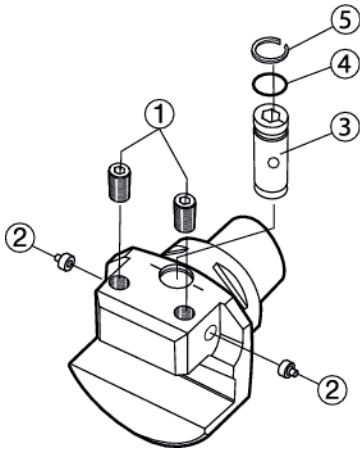
 Adapter for CoroCut® and T-Max Q-Cut® parting blades See page B33



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Spare parts

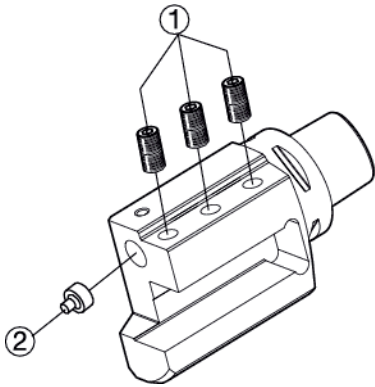
Radial mounting



	1	2	3	4	5	
	Screw	NPT	Coolant nozzle	Valve bolt	O-ring	Circlip
C4-ASHA-25046-10U	3214 010-408	1/8	–			
C5-ASHA-30055-12U	3214 010-408	1/8	–			
C5-ASHA-38057-12-AM	3214 020-461		5691 029-09	5692 035-04	5641 005-79	3421 105-015
C6-ASHA-38066-12U	3214 010-459	1/8	–			
C6-ASHA-38059-12-AM	3214 020-411		5691 029-09	5692 035-04	5641 005-79	3421 105-015
C8-ASHA-55085-20-AM	3214 020-512		5691 029-09	5692 035-04	5641 005-79	3421 105-015
C5-ASHA-38058-20M	3214 020-461		5691 029-09	5692 035-04	5641 005-79	3421 105-015
C6-ASHA-38060-20M	3214 020-411		5691 029-09	5692 035-04	5641 005-79	3421 105-015
C6-ASHA-45071-25M	3214 040-462		5691 029-09	5692 035-04	5641 005-79	3421 105-015
C6-ASHA-50071-32M	3214 040-462		5691 029-09	5692 035-04	5641 005-79	3421 105-015
C8-ASHA-55085-32M	3214 020-512		5691 029-09	5692 035-04	5641 005-79	3421 105-015
C8X-ASHA-55090-32M	3214 020-512		5691 029-09	5692 035-04	5641 005-79	3421 105-015

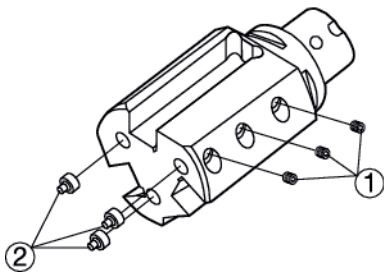
Axial mounting

Cx-ASHA/ASHS



	1	2	
	Screw	NPT	Coolant nozzle
C5-ASHS-47088-12U	3214 010-408	1/8	–
C5-ASHR/L-30098-12-A	3214 020-461		5691 029-10
C5-ASHR/L-30098-20	3214 020-461		5691 029-10
C6-ASHS-54090-12U	3214 010-408	1/8	–
C6-ASHR/L-30100-12-A	3214 020-411		5691 029-10
C6-ASHR/L-38130-16-A	3214 020-512		5691 029-10
C6-ASHR/L-30100-20	3214 020-461		5691 029-10
C6-ASHR/L-38130-25	3214 020-512		5691 029-10
C6-ASHR/L-40140-32	3214 020-512		5691 029-10
C6-ASHS-58115-32	3214 040-462		5691 029-09
C8-ASHR/L-40140-20-A	3214 020-512		5691 029-10
C8X-ASHR/L-50143-32	3214 020-512		5691 029-10

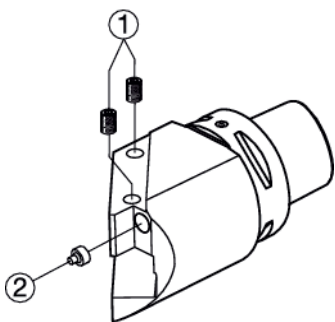
Cx-ASHR/L3



	1	2
	Screw	Coolant nozzle
C5-ASHR/L3-36123-12-A	3214 020-512	5691 029-09
C5-ASHR/L3-36123-20	3214 020-512	5691 029-09
C6-ASHR/L3-36125-12-A	3214 020-512	5691 029-09
C6-ASHR/L3-36125-20	3214 020-512	5691 029-09
C8-ASHR/L3-48150-12-A	3214 020-512	5691 029-10
C8-ASHR/L3-45150-32	3214 020-512	5691 029-10

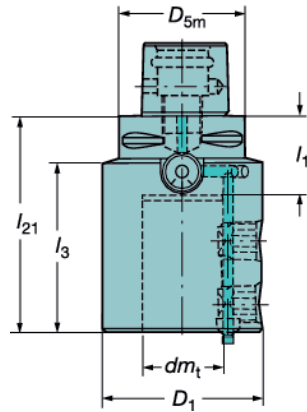
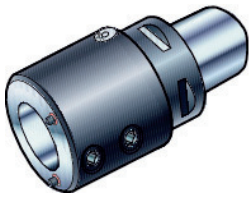
Angular mounting

Cx-ASHR45



	1	2
	Screw	Coolant nozzle
C5-ASHR/L45-36097-12-A	3214 020-461	5691 029-09
C5-ASHR/L45-36097-20	3214 020-461	5691 029-09
C6-ASHR/L45-36099-12-A	3214 020-411	5691 029-09
C6-ASHR/L45-36099-20	3214 020-461	5691 029-09
C8-ASHR/L45-50135-20-A	3214 020-512	5691 029-09
C8-ASHR/L45-50135-32	3214 020-512	5691 029-09

Boring bar adapters for Multi-Task machining



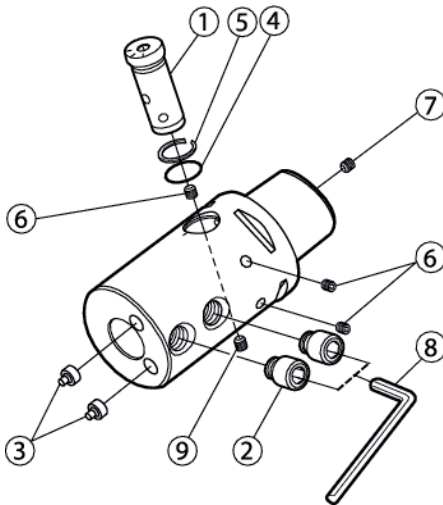
Technical information:
 C = Coolant goes straight through the center
 L = Left coolant nozzle will get coolant
 R = Right coolant nozzle will get coolant

l_1 = programming length

Coolant inlet: Axial through the center

Coupling size	Ordering code	Dimensions, millimeter, inch (mm, in.)														
		dm_1 mm	dm_1 in.	D_1 mm	D_1 in.	D_{5m} mm	D_{5m} in.	h mm	h in.	h_1 mm	h_1 in.	h_2 mm	h_2 in.	h_3 mm	h_3 in.	$\frac{m}{kg}$
C5	C5-131-00100-25	25	0.984	63	2.480	50	1.968	43	1.692	80	3.149	100	3.937	2.0		
C6	C6-131-00098-25	25	0.984	63	2.480	63	2.480	41	1.614	90	3.543	112	4.409	2.4		
	C6-131-00112-40	40	1.574	80	3.149	63	2.480	41	1.614	90	3.543	112	4.409	3.5		
C8	C8-131-00098-25	25	0.984	63	2.480	80	3.149	41	1.614	50	1.968	98	3.858	3.4		
	C8-131-00112-40	40	1.574	80	3.149	80	3.149	41	1.614	50	1.968	98	3.858	4.3		

Spare parts



	1	2	3	4	5
	Valve bolt	Screw	Coolant nozzle	O-ring	Circlip
C5-131-00100-25	5692 035-03	5514 012-02	5691 029-09	5641 005-06	3421 105-020
C6-131-00098-25	5692 035-01	5514 012-02	5691 029-09	5641 005-06	3421 105-020
C6-131-00112-40	5692 035-01	5514 012-01	5691 029-10	5641 005-06	3421 105-020
C8-131-00098-25	5692 035-02	5514 012-02	5691 029-09	5641 005-06	3421 105-020
C8-131-00112-40	5692 035-02	5514 012-01	5691 029-10	5641 005-06	3421 105-020
	6	7	8	9	
	Screw	Spring plunger	Key	Screw	
C5-131-00100-25	3214 010-355 (DIN913-M6x6-45H)	5514 064-01	3021 010-080 (DIN911-8)	3214 010-406	
C6-131-00098-25	3214 010-355 (DIN913-M6x6-45H)	5514 064-01	3021 010-080 (DIN911-8)	3214 010-406	
C6-131-00112-40	3214 010-355 (DIN913-M6x6-45H)	5514 064-01	3021 010-100 (DIN911-10)	3214 010-406	
C8-131-00098-25	3214 010-355 (DIN913-M6x6-45H)	5514 064-01	3021 010-080 (DIN911-8)	3214 010-406	
C8-131-00112-40	3214 010-355 (DIN913-M6x6-45H)	5514 064-01	3021 010-100 (DIN911-10)	3214 010-406	



For cylindrical sleeves, see page A304.



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