



Product competence

Grooving, parting off and recessing

January 2016
UPDATE

_COMPETENCE IN MACHINING

Walter Cut – Easy grooving.





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Walter Cut:

Parting off, grooving and recessing.

1. G1551 GX monoblock tool for low cutting depths at 45°

- Shank sizes 0.750 to 1.000 inch (20 x 20 to 25 x 25 mm)
- Insert widths from 0.079 to 0.250 inch (3 to 6.35 mm)
- Cutting depths up to 0.236 inch (6 mm) with one tool
- Excellent chip evacuation thanks to low tool head height
- Access to the insert screw from above and below
- Page 72

2. NCAI GX modular tool for internal grooving

- Shank diameters 0.750 to 2.000 inch (20 to 40 mm)
- Insert widths from 0.024 to 0.250 inch (0.6 to 6.35 mm)
- Max. cutting depth 0.748 inch (19 mm)
- Page 126

3. G1111 GX monoblock tool for axial grooving

- Shank sizes 1.000 inch (25 mm)
- Insert widths from 0.118 to 0.250 inch (3 to 6.35 mm)
- Max. cutting depth 1.000 inch (25 mm)
- Excellent chip evacuation thanks to low tool head height
- Access to the insert screw from above and below
- Page 73

4. G1511 GX monoblock tool for low cutting depths

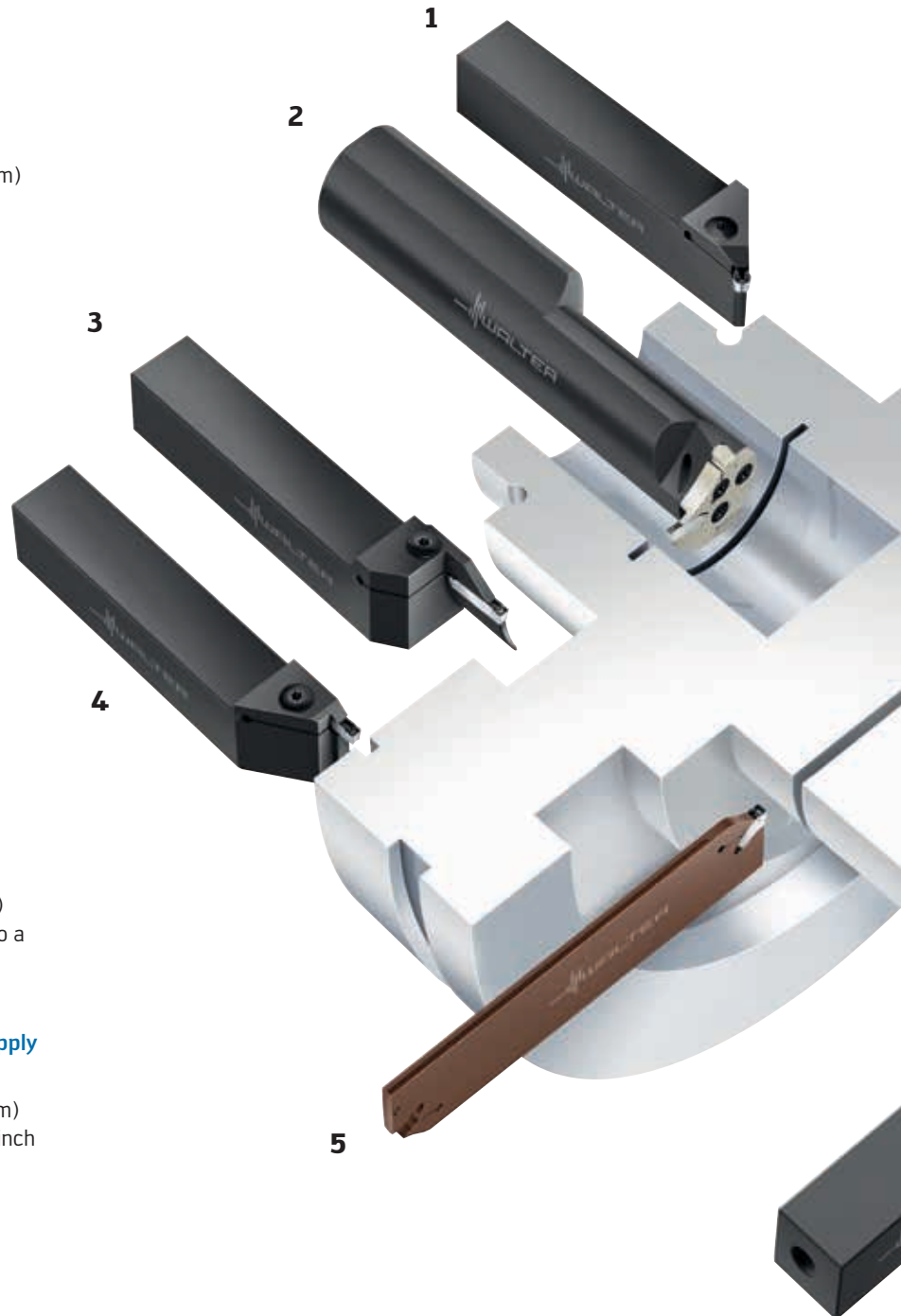
- Shank sizes 0.750 to 1.000 inch (20 to 25 mm)
- Insert widths from 0.031 to 0.250 inch (2 to 6.35 mm)
- Cutting depths up to 0.236 inch (6 mm)
- Excellent chip evacuation thanks to low tool head height
- Access to the insert screw from above and below
- Page 70

5. G2042N SX deep parting blade

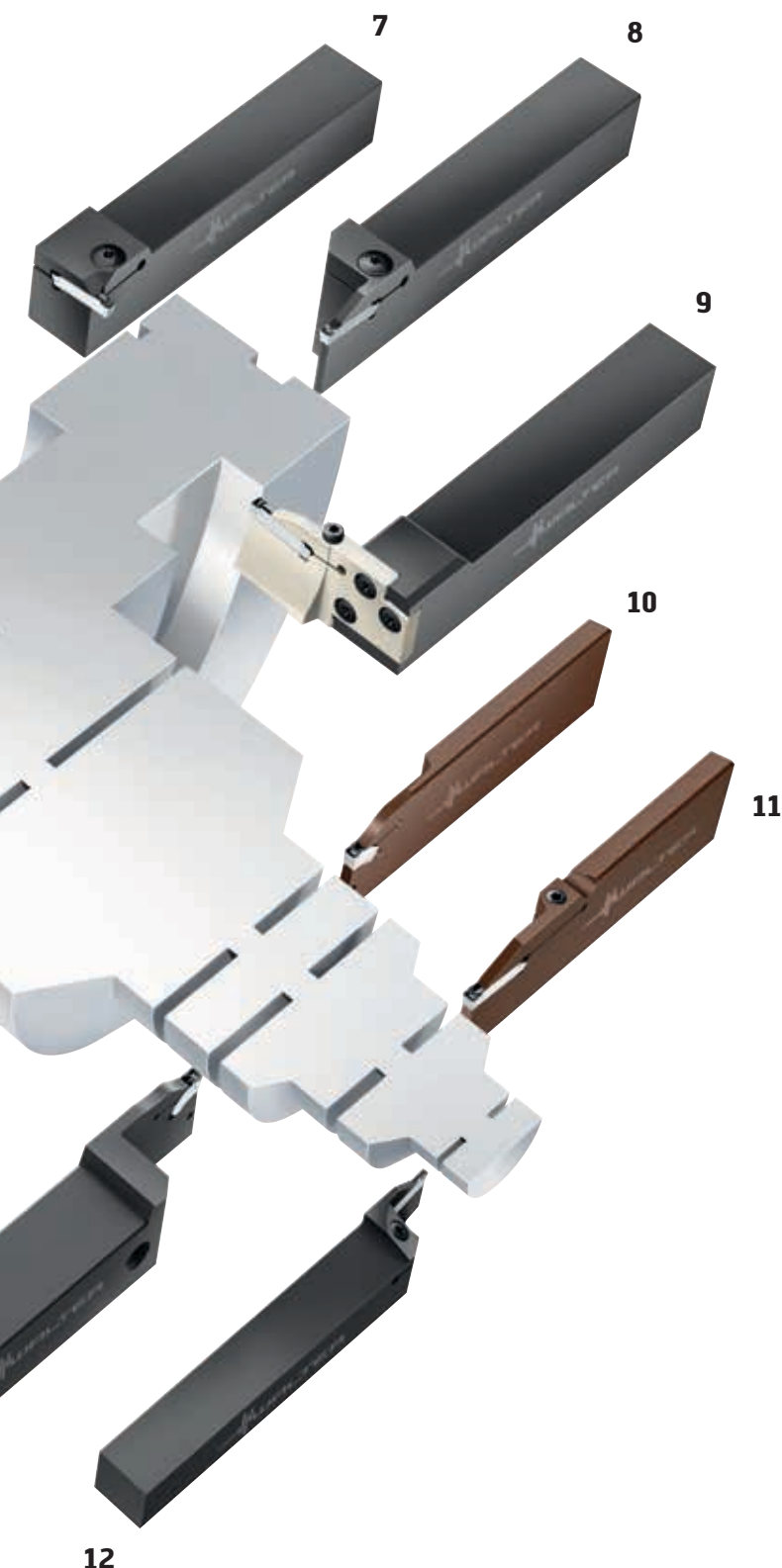
- Blade height 1.020 to 1.811 inch (26 to 46 mm)
- Insert widths from 0.079 to 0.250 inch (2 to 6.35 mm)
- Cost-effective, single-edged parting off solution up to a diameter of 6.3 inch (160 mm)
- Page 58

6. G2012 SX monoblock tool with internal coolant supply

- Shank sizes 0.500 to 1.000 inch (12 to 25 mm)
- Insert widths from 0.059 to 0.250 inch (1.5 to 6.35 mm)
- For grooving and parting off up to a diameter of 3.15 inch (80 mm)
- With internal coolant supply via G1/8 connections
- Page 54



6



7. G1521 90° GX monoblock tool for low cutting depths

- 0.625 to 1.000 inch (16 to 25 mm)
- Insert widths from 0.031 to 0.250 inch (2 to 6.35 mm) and cutting depths of up to 0.236 inch (6 mm) with one tool
- Excellent chip evacuation thanks to low tool head height
- Access to the insert screw from above and below
- Page 71

8. G1011 GX monoblock tool

- Shank sizes 0.500 to 1.50 inch (12 to 38.1 mm)
- Insert widths from 0.031 to 0.315 inch (2 to 8 mm)
- Max. cutting depth 1.50 inch (38.1 mm)
- Access to the insert screw from above and below
- Excellent chip evacuation thanks to low head height
- Page 50

9. NCOE GX modular tool for axial grooving

- Shank sizes 1 inch (25 mm)
- Insert widths from 0.118 to 0.250 inch (3 to 6.35 mm)
- Max. cutting depth 0.827 inch (21 mm)
- Page 116 onwards

10. G2042R/L SX reinforced-design parting blade

- Blade heights of 1.02 and 1.26 inch (26 and 32 mm)
- Insert widths from 0.059 to 0.236 inch (1.5 to 6 mm)
- For grooving and parting off diameters up to 2.56 inch (65 mm)
- Contra version available
- Page 60

11. G1041 GX reinforced-design parting blade

- Blade heights of 1.02 and 1.26 inch (26 and 32 mm)
- Insert widths from 0.059 to 0.157 inch (1.5 to 4 mm)
- For grooving and parting off diameters up to 2.56 inch (65 mm)
- Contra version available
- Page 62

12. XLDE GX monoblock tool for small part production

- Shank sizes from 0.394 to 0.787 inch (10 to 20 mm)
- Insert widths from 0.059" to 0.118" (1.5 to 3 mm)
- Maximum parting diameter of 1.26 inch (32 mm)
- For use on all lathes including center and multi-spindle machines
- Simple insert changing thanks to angular access to clamping screw
- Page 68

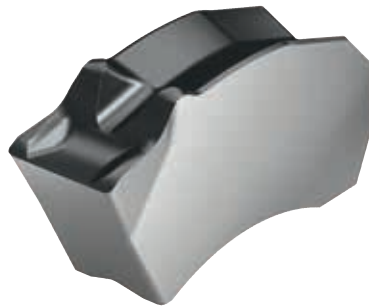
Walter Cut – SX: Parting off and slotting with the new single-edged grooving system.

THE SYSTEM

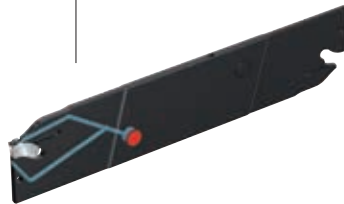
The Walter Cut grooving tools family is being extended with the new SX grooving system. This enables the user to part off and groove, or slit and slot mill, using the same insert.

THE CUTTING MATERIAL GRADES

- Three **Tiger-tec® Silver** PVD grades: WSM23S, WSM33S and WSM43S for steel, stainless steels and materials that are difficult to machine
- One **Tiger-tec® Silver** CVD grade: WKP23S for steel and cast iron machining
- One uncoated grade: WK1 for machining Non-Ferrous metals



NEW: G2012 R/L toolholder with precise internal coolant supply for parting off up to a diameter of 90 mm



Neutral and reinforced G2042 / G2042-P parting blades, with optional precise coolant supply for parting off up to a diameter of 8 inches (200 mm)



G2632 grooving modules for parting off up to 3.5 inch (90 mm) diameter



F5055 slot mill:
Diameter from 2.48 - 9.84 inch (63-250 mm)

BENEFITS FOR YOU

- Maximum tool life due to new self-clamping with positive locking
- User-friendly clamping system for fast insert change
- Lower inventory costs through the use of one type of cutting insert in multiple tool variants

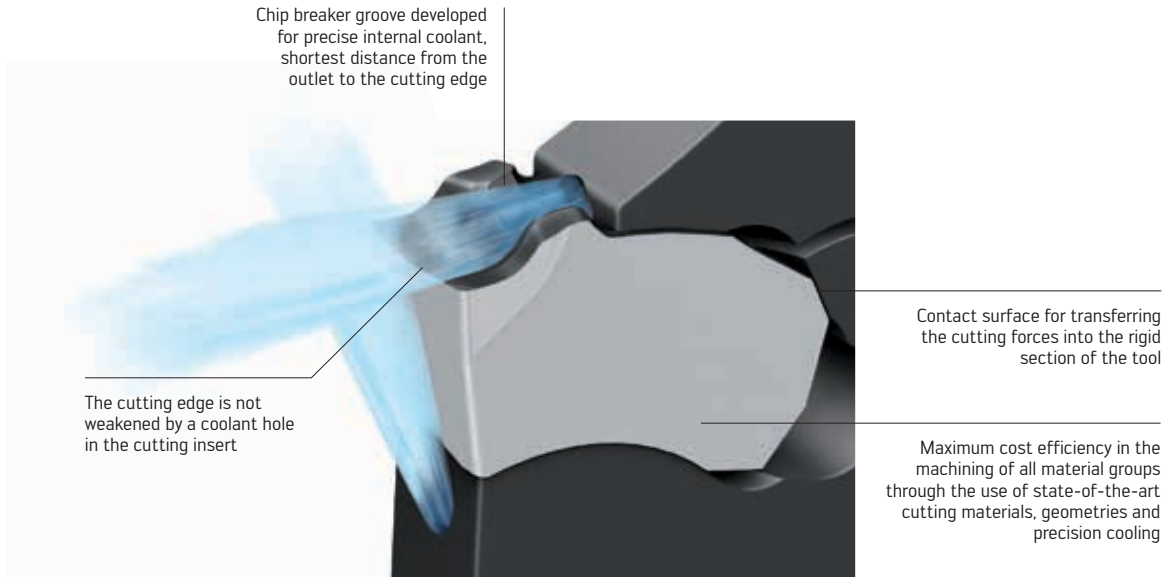


Watch the product animation:
Scan this QR code or go directly to <http://goo.gl/mjxsMT>



Watch the product video:
Scan this QR code or go directly to <http://goo.gl/viJ9A>

THE STABILITY



THE INSERT WIDTHS

1.5 / 2.0 / 3.0 / 4.0 / 5.0 / 6.0 / **8.0** / **10.0** mm
 0.059 – 0.394 inch width

THE CHIP BREAKER TYPES



CE4 – The universal one

- Strong cutting edge for maximum feed rates
- Excellent chip formation
- 6° angled parting off inserts available in right- and left-hand version



CF5 – The positive one

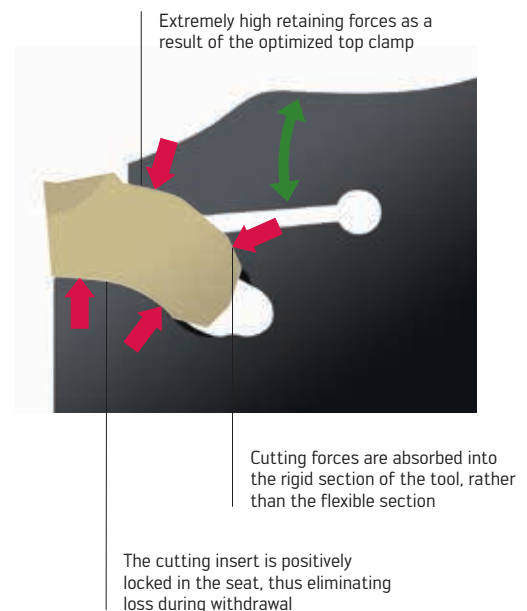
- Low burr and pip formation
- For long-chipping materials
- 15° / 7° / 6° angled parting off inserts for parting off with low burr and pip formation



CF6 – The sharp one

- Minimum burr and pip formation
- For small diameters and thin-walled tubes

THE ACTION/ POSITIVE-LOCKING CLAMPING



Tiger-tec® Silver

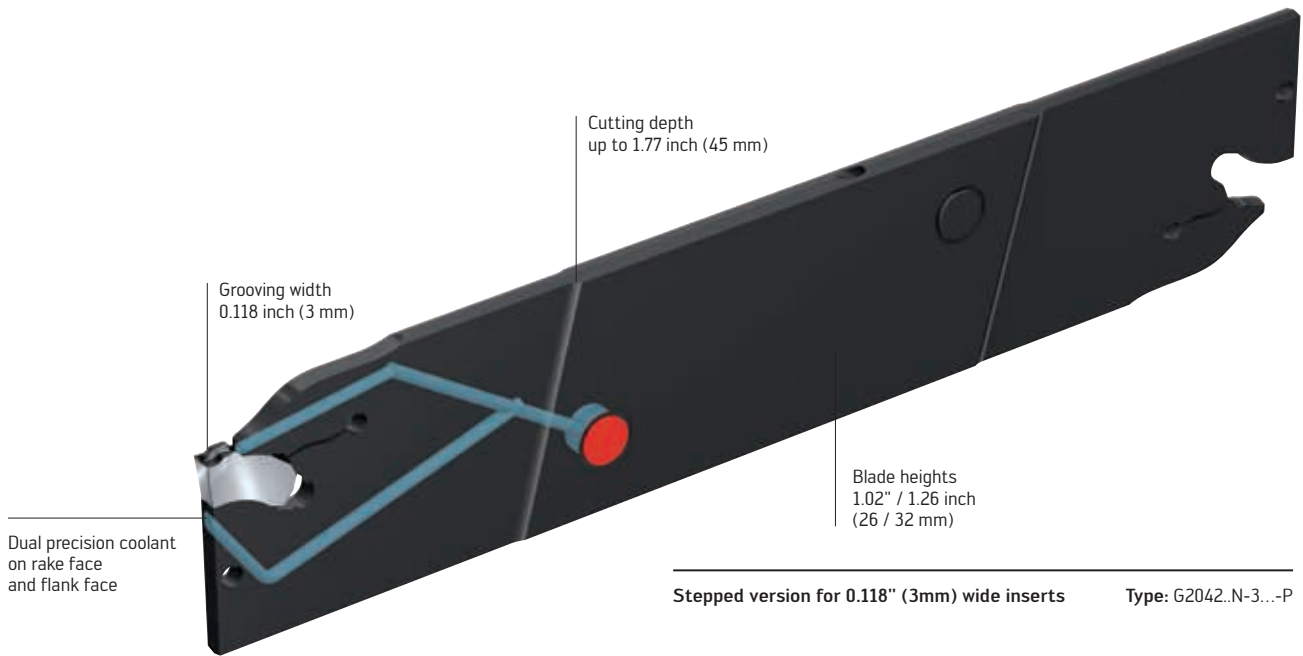
Walter Cut G2042..N-P – provides more flexible working: Deep parting blades with precision cooling.

THE TOOLS

- G2042..N-P parting blades with precise internal coolant
- Blade heights of 1.02 / 1.26 / 2.05 inch (26 / 32 / 52 mm)
- Grooving widths from 0.118 – 0.394" (3 – 10 mm) inserts
- Grooving to a cutting depth of 4 inches (100 mm) and parting off up to a diameter of 8 inches (200 mm)
- Reinforced 3 mm blade for more stability
- Two insert seats on one tool

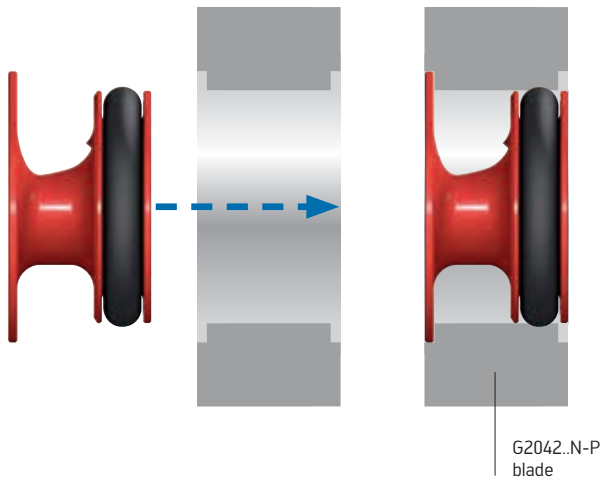
THE APPLICATION

- Grooving and parting off on all types of lathes
- Can be universally used due to its neutral design
- Grooving and parting off along the primary or counter spindle without interference from the reinforced shank on the tool
- Can be used starting from 150 psi up to a maximum coolant pressure of 1160 psi



Stepped version for 0.118" (3mm) wide inserts Type: G2042..N-3...-P

FITTING

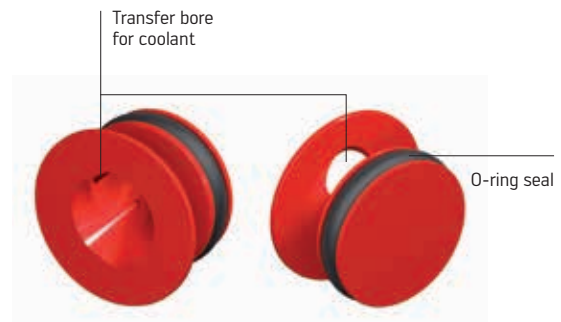


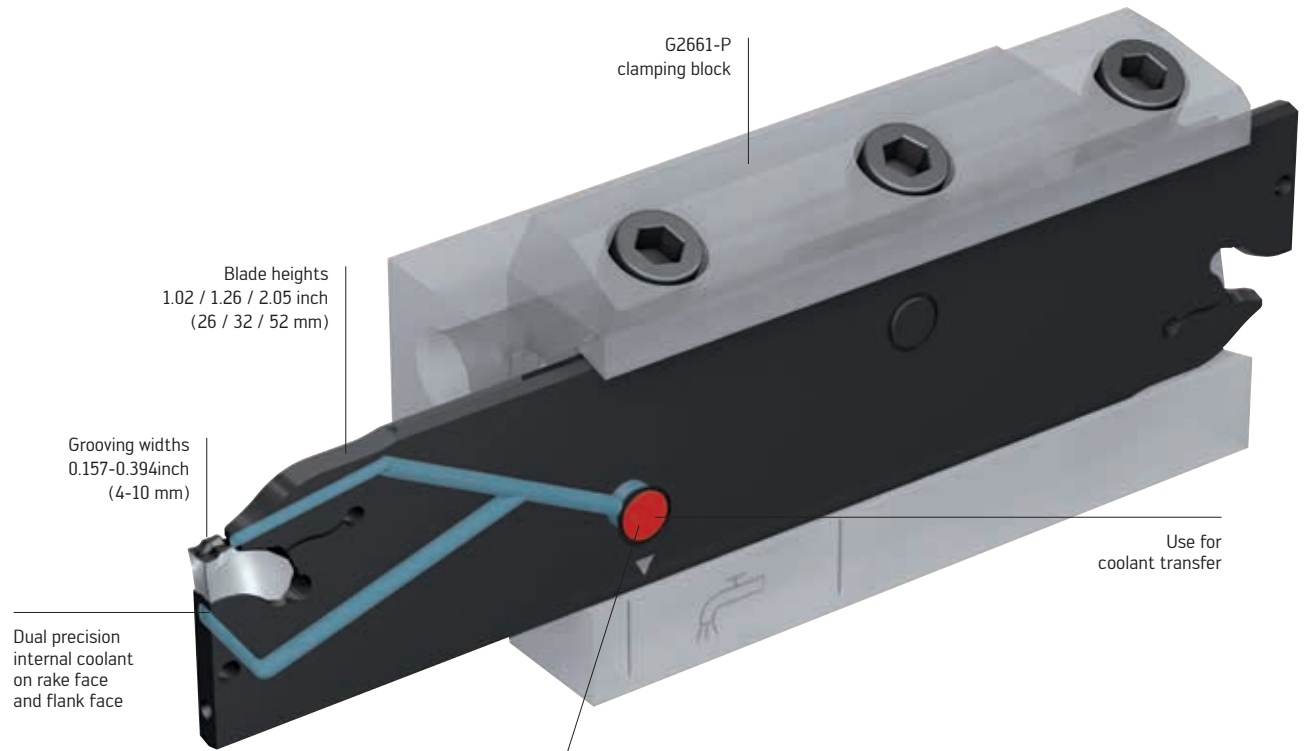
THE TRICK

Coolant supply fitting*:

- Can be fitted from both sides with no mounting aid required
- No interference from the reinforced shank on the tool to the outside
- Reliably supplies coolant into the blade

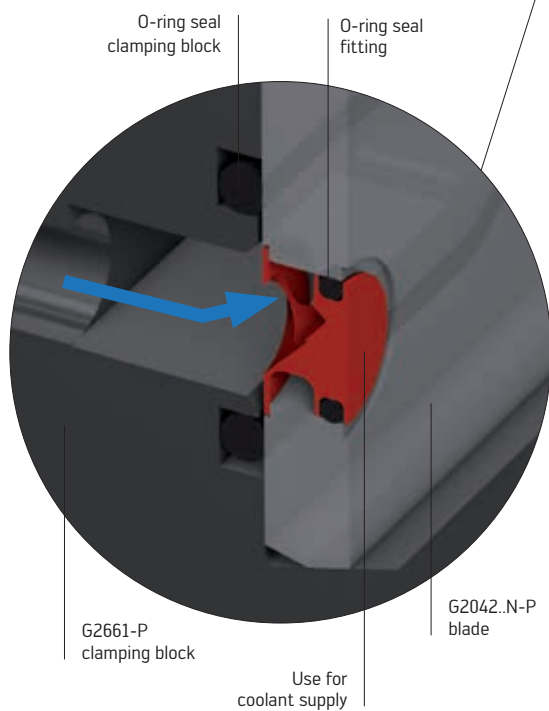
* patent pending





Neutral/universal version for 0.157- 0.394" (4-10 mm) inserts

Type: G2042..N4-10...-P



BENEFITS FOR YOU

- Increased tool life up to 200% on stainless materials, high-temperature alloys and steel
- Plug-and-play: Use of existing machines, as the coolant system can be used starting from a pressure of 150 psi and without interference from the reinforced shank on the tool
- Increase in cutting speed by up to 50%, while maintaining same tool life

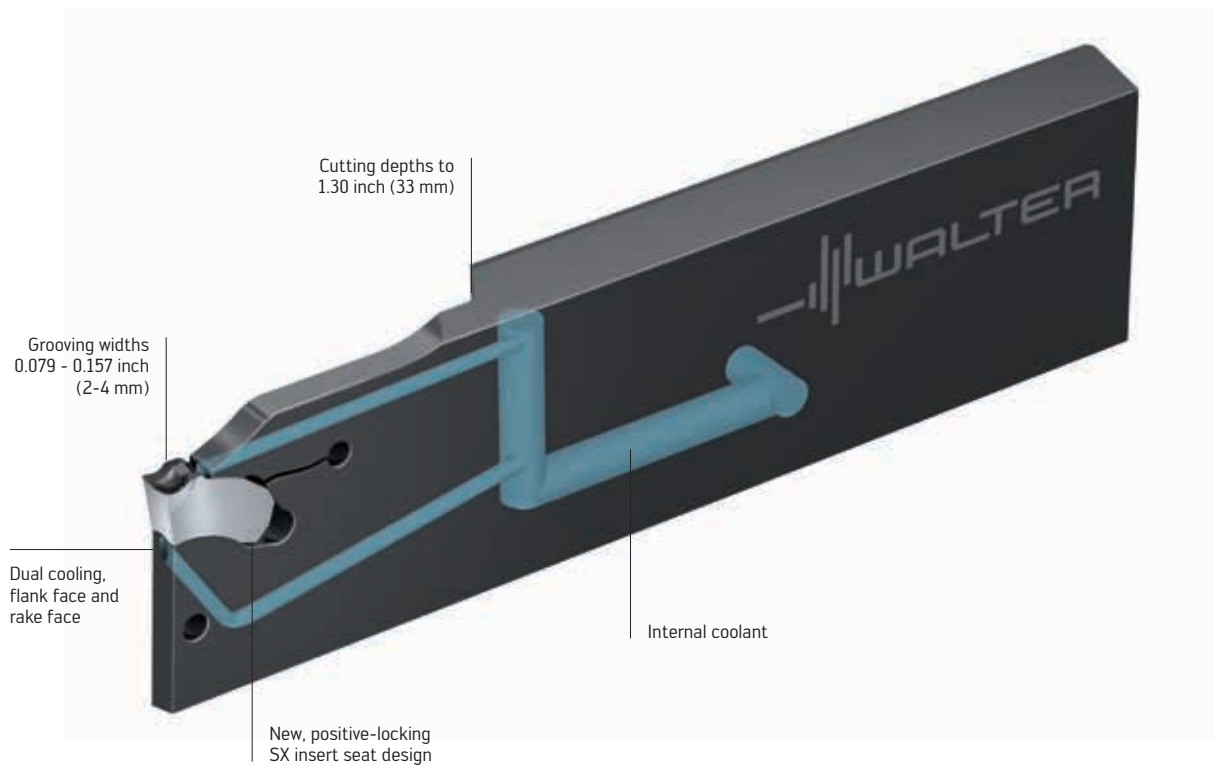
Walter Cut – G2042..R/L-C-P: More productive due to reinforced contra parting blades with precision cooling.

THE TOOLS

- G2042..R/L-C-P parting blades with reinforced shank and internal coolant supply
- Blade heights of 1.02 / 1.26 inch (26 / 32 mm)
- Grooving widths 0.079 – 0.157 inch (2-4 mm)
- Available in right- and left-hand contra version
- Grooving to a cutting depth of 1.30 inch (33 mm) and parting off up to a diameter of 2.56 inch (65 mm)

THE APPLICATIONS

- Grooving and parting off on all types of lathes
- Parting off operations where space is limited
- Parting off when using long tool projections with low loss of stability
- First choice when using parting blades
- Can be used starting from 150 psi up to a maximum coolant pressure of 1160 psi



Reinforced blade with precision cooling

Type: G2042..R/L-C-P

Left-hand tool



Contra

Right-hand tool



Contra

BENEFITS FOR YOU

- No loss of the cutting edge during machining due to the optimized, positive-locking design of the insert seat
- Longer tool life and productivity thanks to optimum cooling directly at the cutting edge starting from a coolant pressure as low as 150 psi
- Optimum chip control through precision cooling
- Can also be used on all conventional clamping blocks
- Low vibration tendency due to reinforced shank

Ordering information can be found from page 60 onwards.

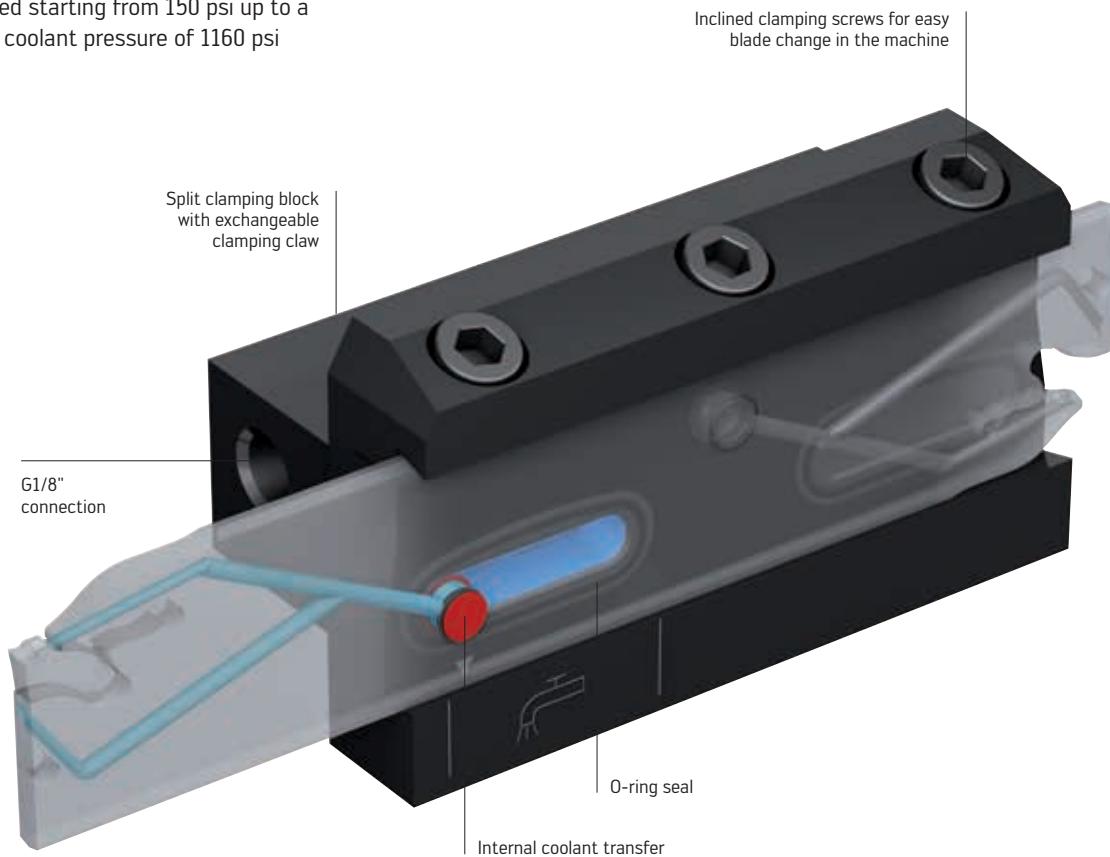
Walter Cut – G2661-P: Clamping blocks with direct coolant transfer for precision-cooled parting blades.

THE TOOLS

- Clamping blocks with direct coolant transfer
- Blade heights of 1.02 / 1.26 / 2.05 inch (26 / 32 / 52 mm)
- Shank dimensions 0.75, 1.0, 1.25 and 1.5 inch (20, 25, 32 and 40 mm)

THE APPLICATION

- Grooving and parting off on all types of lathes
- Left-/right-hand variant in one block
- Can be used starting from 150 psi up to a maximum coolant pressure of 1160 psi



Clamping block for precision cooling

Type: G2661-P



Watch the product video:
Scan this QR code or go directly to
<http://goo.gl/KBIHp1>

BENEFITS FOR YOU

- No loss of pressure through the O-ring seal for reliable transfer of the coolant
- No vibration thanks to sturdy holder design with claw clamping
- Easy handling of the blade without removing the clamping block thanks to the inclined clamping screws

Walter Valenite A2110-V..-P: VDI parting blade adaptors with direct coolant transfer for star turrets.

THE TOOLS: A2110-V..-P

- VDI 25 / 30 / 40 adaptors for star turrets
- Transfer of the coolant directly through the VDI interface

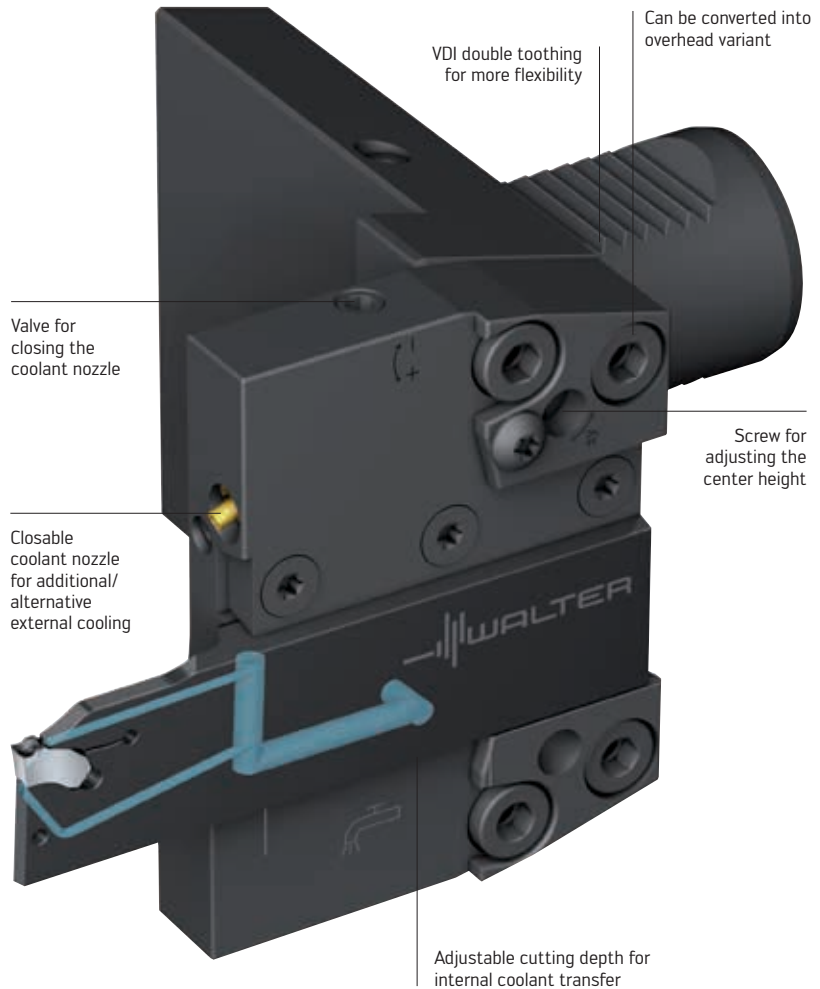
THE APPLICATIONS

- For use on all VDI star turret machines
- Grooving and parting off with precision cooling
- Can be used starting from 150 psi up to a maximum coolant pressure of 1160 psi



VDI 25 / 30 adaptors for Star turret

Type: A2110-V30-32R-087-P



VDI 40 adaptor for star turret

Type: A2110-P

THE APPLICATION OPTIONS



A2110-V40-32R-080-P



A2110-V40-32R-080-P
Overhead installation position



A2110-V40-32L-080-P



A2110-V40-32L-080-P
Overhead installation position

BENEFITS FOR YOU

- Flexibility: One holder for standard and overhead installation position
- Longer tool life and higher productivity thanks to optimum cooling directly on the cutting edge starting from a coolant pressure as low as 150 psi
- Short chips, therefore no downtime for removing chip accumulation

Ordering information can be found from page 177 onwards.

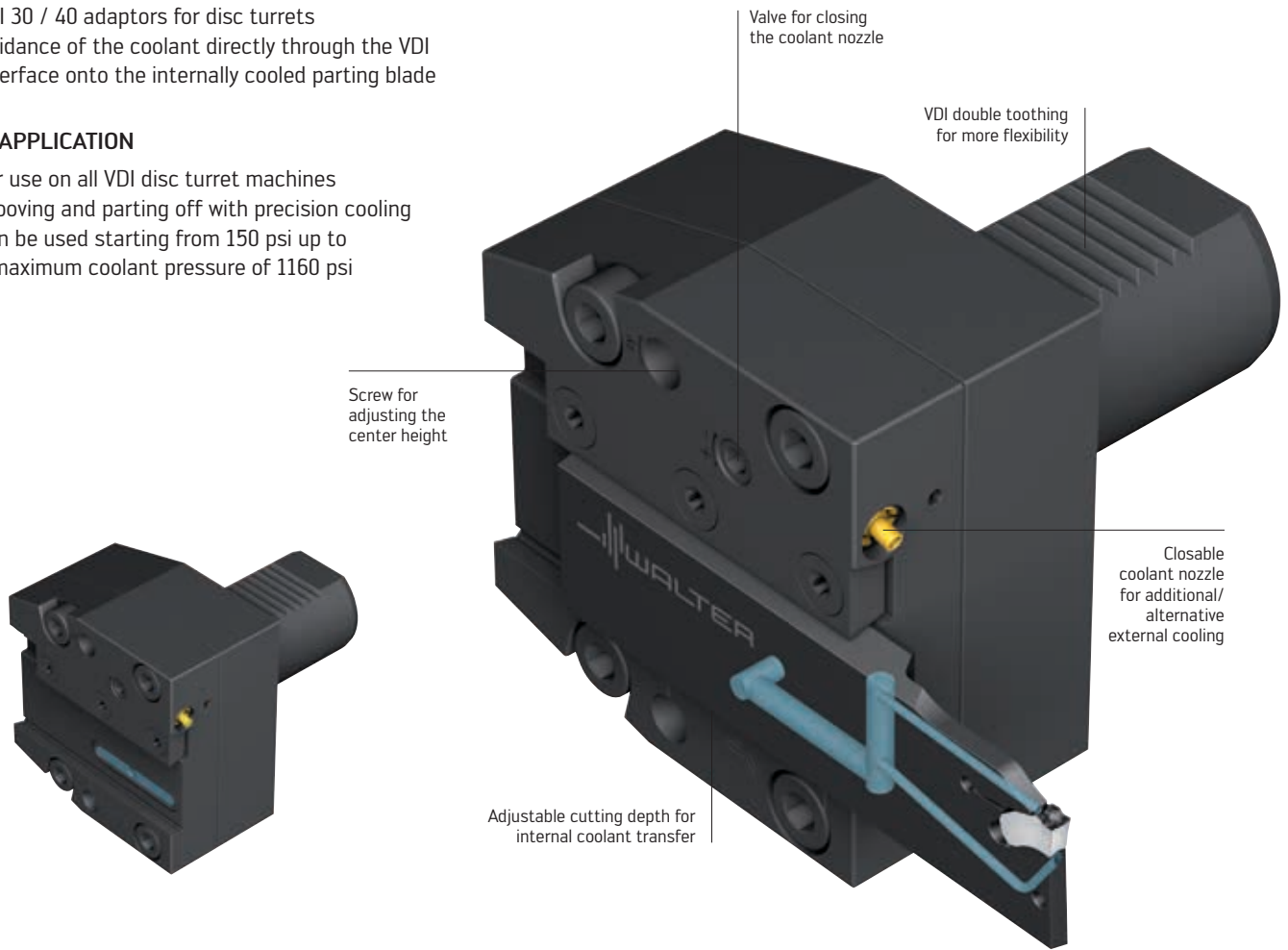
Walter Valenite A2111-V..-P: VDI parting blade adaptors with direct coolant transfer for disc turrets.

THE TOOLS: A2111-V..-P

- VDI 30 / 40 adaptors for disc turrets
- Guidance of the coolant directly through the VDI interface onto the internally cooled parting blade

THE APPLICATION

- For use on all VDI disc turret machines
- Grooving and parting off with precision cooling
- Can be used starting from 150 psi up to a maximum coolant pressure of 1160 psi



VDI adaptor for disc turret

Type: A2111-P

THE APPLICATION OPTIONS

- No loss of pressure through the O-ring seal for reliable transfer of the coolant
- No vibration thanks to sturdy holder design, adjustable to every machining position
- Precise center position thanks to easily adjustable center height in a range from ± 0.020 inch (0.5 mm)



A2111-V30-32R-045-P



A2111-V30-32L-045-P
Overhead installation position

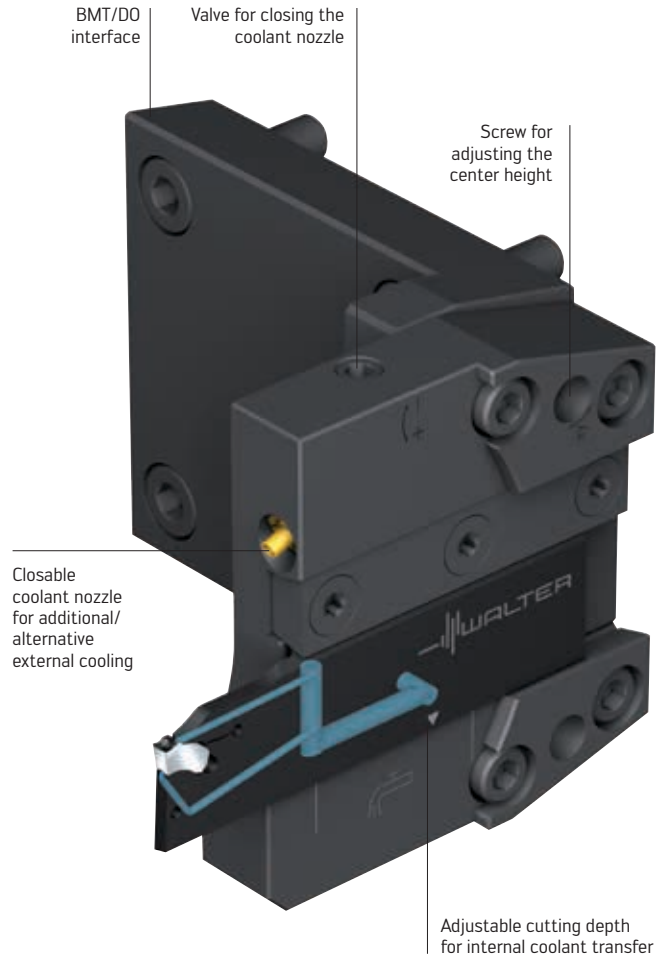
Walter Valenite A2110-BT..-P: BMT/DO parting blade adaptors with direct coolant transfer for precision cooling.

THE TOOLS

- A2110-BT..-P BMT 45 / 55 / 60 adaptors for star turrets
- A2110-DO..-P DO adaptors for star turrets
- Transfer of the coolant directly through the interface

THE APPLICATIONS

- For use on machines with BMT interface such as on Doosan Puma TT / TL / MX / Lynx, Hyundai Wia, Hwacheon Cutex, etc.
- For use on Doosan machines, such as Doosan Puma 2100, 2600 and 3100
- Grooving and parting off with precision cooling
- Can be used starting from 150 psi up to a maximum coolant pressure of 1160 psi



VDI adaptor for star turret

Type: A2110-BT45-26R-080-P

THE APPLICATION OPTIONS



A2110-BT55-32R-080-P



A2110-BT55-32R-080-P
Overhead installation position



A2110-BT55-32L-080-P



A2110-BT55-32L-080-P
Overhead installation position

BENEFITS FOR YOU

- Flexibility: One holder for standard and overhead installation position
- Longer tool life and higher productivity thanks to optimum cooling directly on the cutting edge starting from a coolant pressure as low as 150 psi
- Short chips, therefore no downtimes for removing accumulation of chips
- No loss of pressure through the O-ring seal for reliable transfer of the coolant
- No vibration thanks to sturdy holder design, adjustable to every machining position
- Precise center position thanks to easily adjustable center height in a range from ± 0.020 inch (0.5 mm)

Ordering information can be found from page 181 onwards.

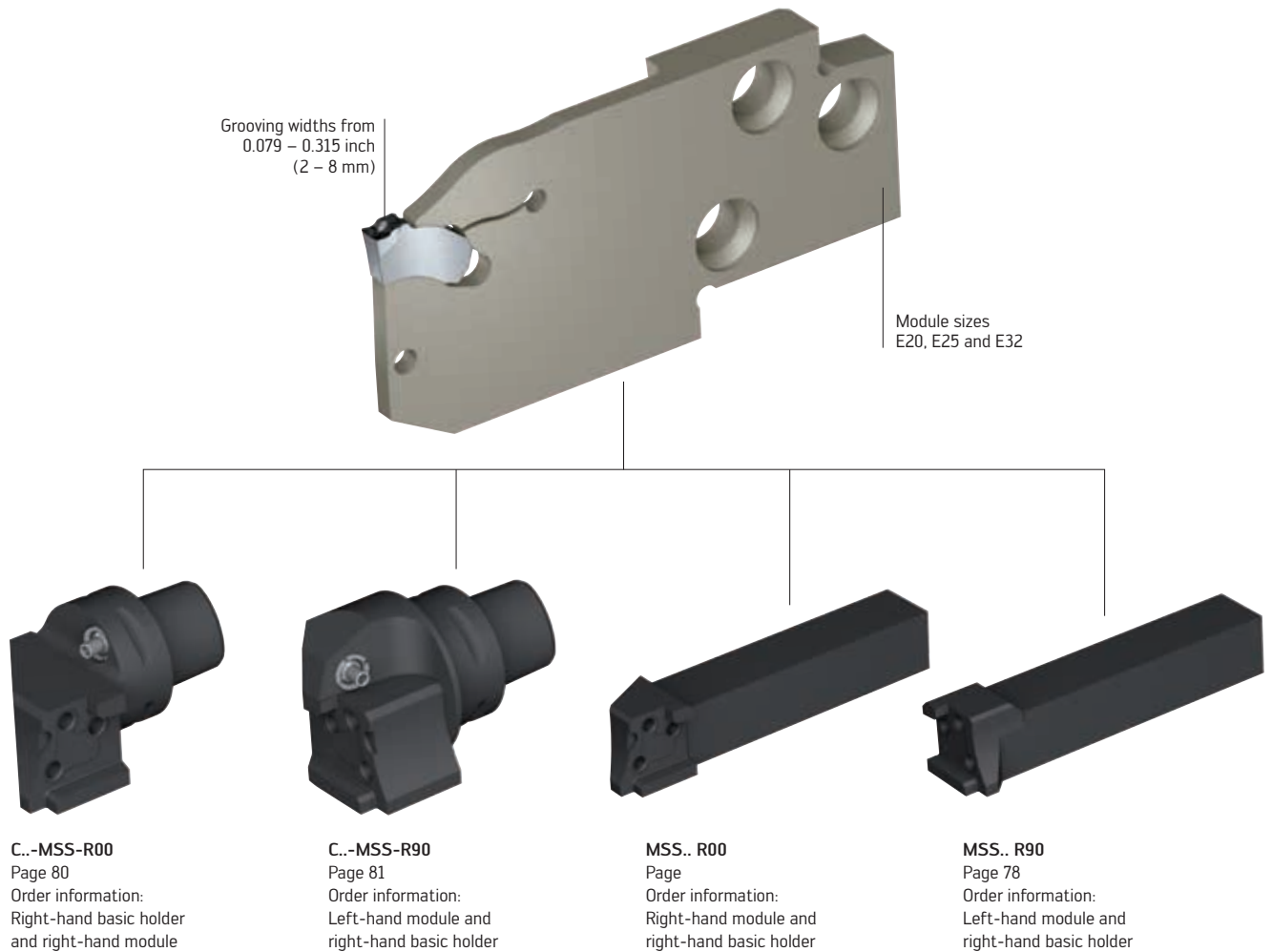
Walter Cut – G2632: Grooving modules for modular toolholders.

THE TOOLS

- G2632 grooving modules for modular Walter Cut toolholders MSS...
- Module sizes E20, E25 and E32
- Grooving widths from 0.079 – 0.315 inch (2 – 8 mm)
- Grooving to a cutting depth of 1.70 inch (45 mm) and parting off up to a diameter of 3.54 inch (90 mm)

THE APPLICATIONS

- Grooving and parting off
- For use on modular toolholders with square shank or Walter Capto™ interface



C..-MSS-R00
Page 80
Order information:
Right-hand basic holder
and right-hand module

C..-MSS-R90
Page 81
Order information:
Left-hand module and
right-hand basic holder

MSS.. R00
Page
Order information:
Right-hand module and
right-hand basic holder

MSS.. R90
Page 78
Order information:
Left-hand module and
right-hand basic holder

All illustrations show right-hand version

BENEFITS FOR YOU

- Flexible use of more than one grooving width/grooving module on the same basic holder
- Low inventory levels
- Short set-up times

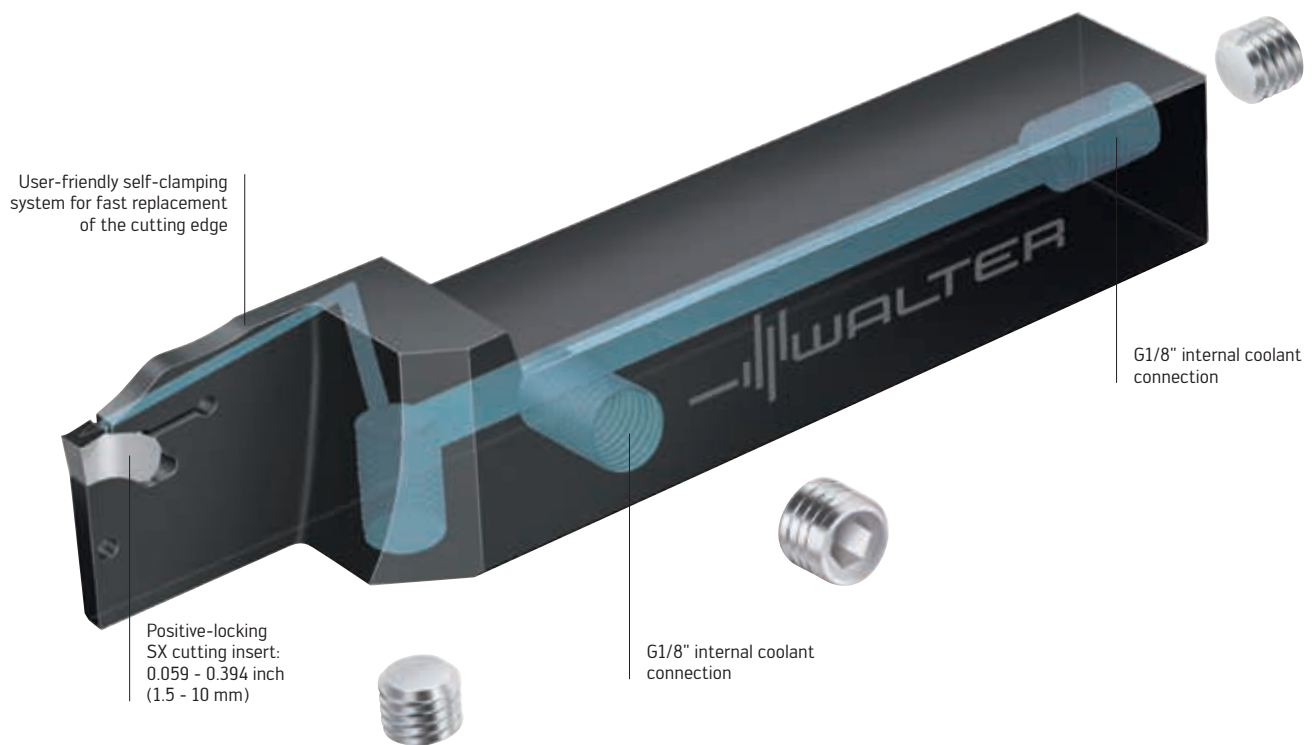
Walter Cut G2012-P toolholder with precision cooling for single-sided SX cutting inserts.

THE TOOLS

- G2012-P in sizes 0.5 – 1.25 inch (12 – 32m m) with internal coolant supply
- Grooving widths of 0.059 – 0.394 inch (1.5 – 10 mm)
- Grooving to a cutting depth of 1.77 inch (45 mm) and parting off to a bar diameter of 3.54 inch (90 mm)

THE APPLICATION

- Can be used on all types of lathes
- Grooving and parting off with internal coolant
- Can be used from 150 psi up to a maximum coolant pressure of 2200 psi



SX monoblock tools with precision cooling

Type: G2012-P

BENEFITS FOR YOU

- Longer tool life and higher productivity thanks to optimum cooling directly in the cutting zone starting from a coolant pressure as low as 150 psi
- Short chips, therefore no downtime for removing chip accumulation

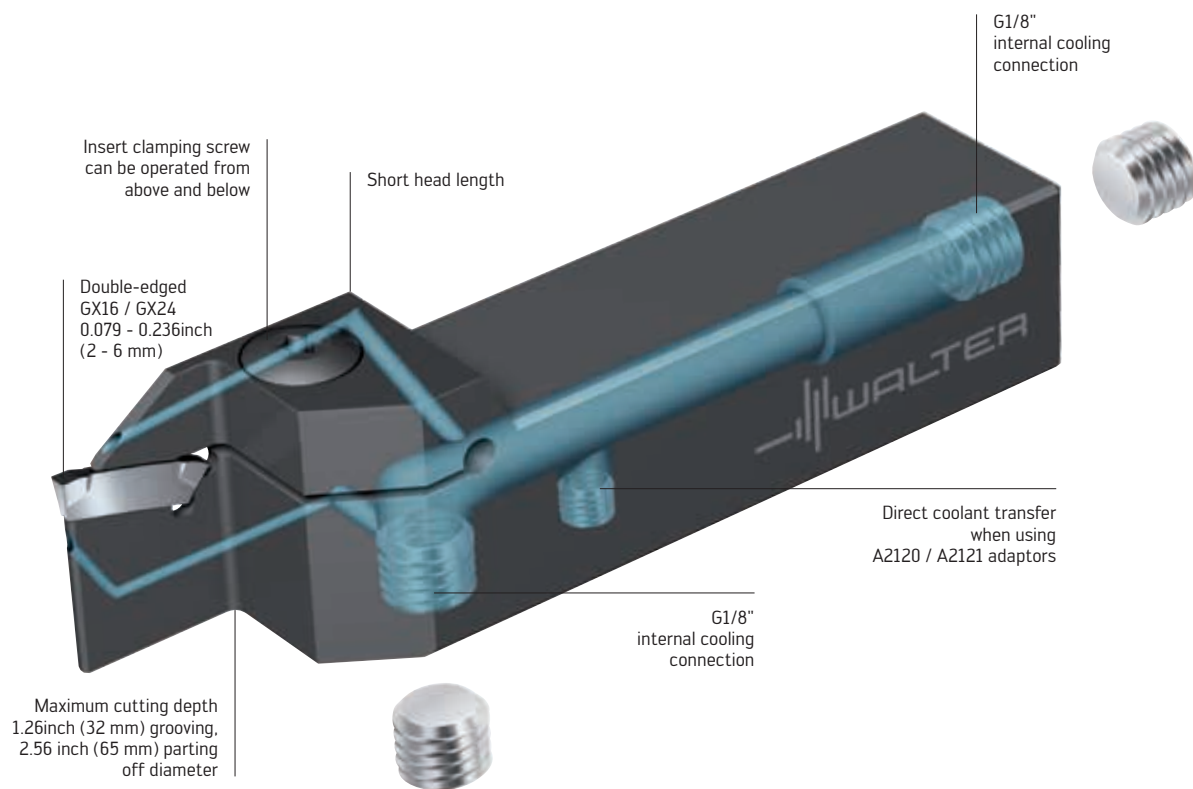
Walter Cut G1011-P toolholder with precision cooling for double-edged GX cutting inserts.

THE TOOLS

- G1011-P in 0.75 and 1.0 inch (16, 20, 25 mm) with precision cooling
- Grooving widths:
 - Range expansion 0.157 – 0.236 inch (4 – 6 mm)
 - Full range is now 0.079 – 0.236 inch (2 – 6 mm)
- Grooving to a maximum cutting depth of 1.26 inch (32 mm) and parting off to a bar diameter of 2.56 inch (65 mm)

THE APPLICATION

- Can be used on lathes of all types, especially:
 - Short automatic lathes
 - Multi-spindle machines
 - Bar feed lathes
- Can be used from 150 psi up to a maximum coolant pressure of 2200 psi



GX monoblock tools with precision cooling

Type: G1011-P

- Low head height for optimum chip removal
- High quality surface finish and flatness thanks to precision cooling



Watch the product video:
Scan this QR code or go directly to
<http://goo.gl/tLt1ai>

Walter Cut G1041R/L and G2042R/L: Reinforced parting blades for even greater stability.

THE TOOLS

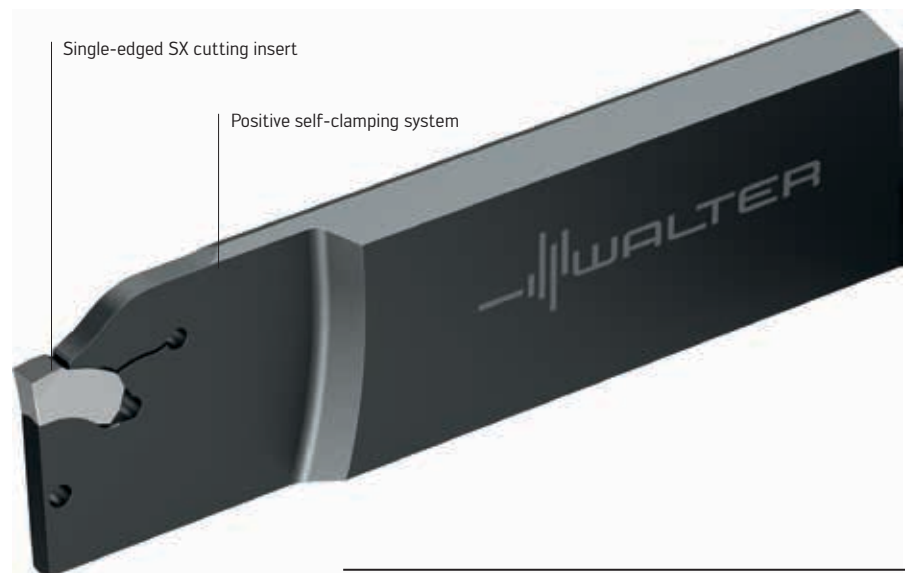
- G2042R/L and G1041R/L parting blades with reinforced shank
- Blade heights of 1.02 and 1.26 inch (26 and 32 mm)
- Insert widths from 0.059 to 0.157 inch (1.5 to 4mm)
- Available as right- and left-hand version
- Grooving to a cutting depth of 1.30 inch (33 mm) and parting off up to a diameter of 2.60 inch (65 mm)
- Contra version available

THE APPLICATION

- For grooving and parting off on all types of lathes
- For parting off operations where space is limited
- For parting off operations with low stability loss when using long tool projections
- First choice when using parting blades

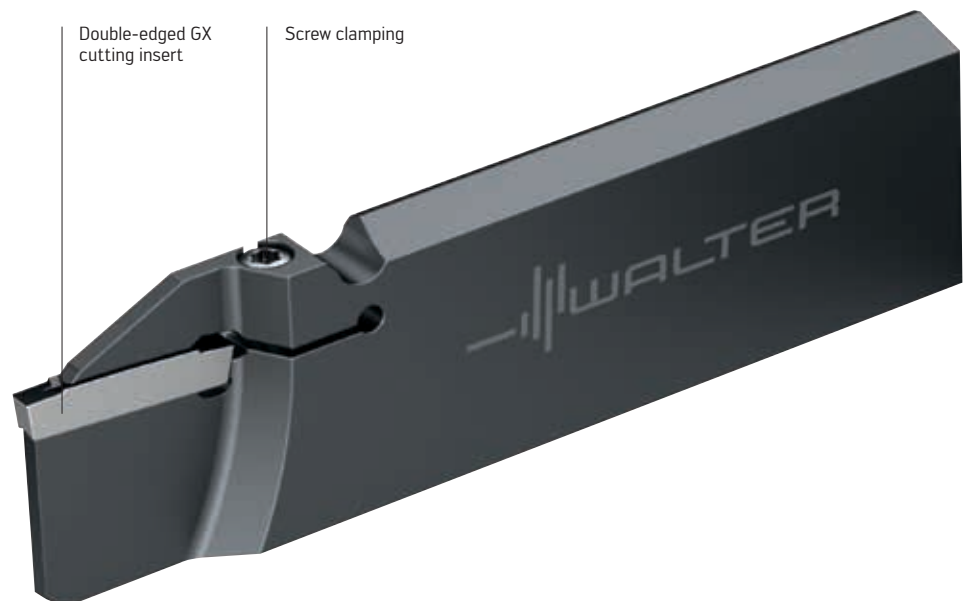
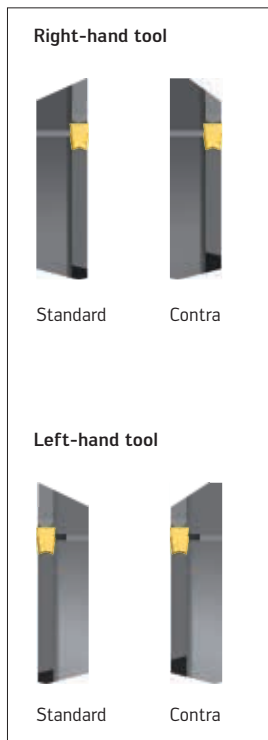
YOUR ADVANTAGES

- Long tool life
- Low vibration tendency thanks to reinforced shank
- Can be used on all conventional clamping blocks
- High level of process reliability thanks to stable tool design



Walter Cut parting blade

Type: G2042R/L



Walter Cut parting blade

Type: G1041R/L

Ordering information can be found from page 60 onwards.

Walter Cut G1042N and G2042N: Parting blades with neutral design.

THE TOOLS

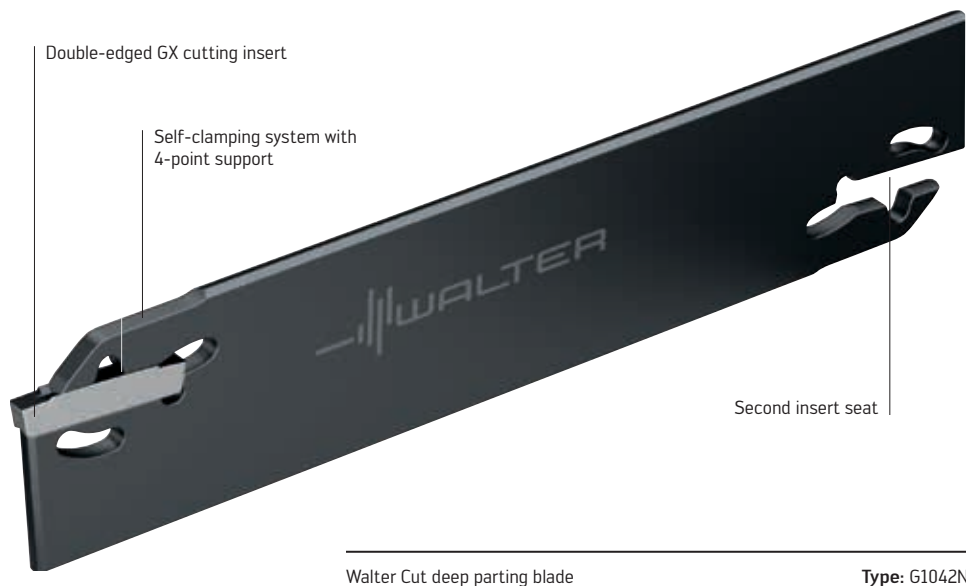
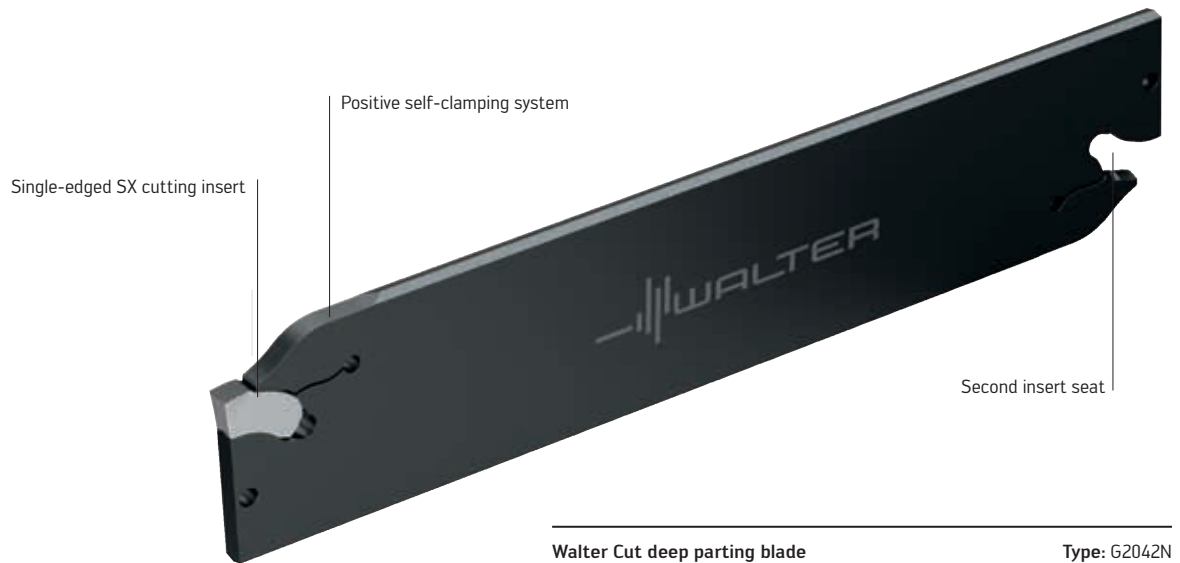
- G2042N and G1042N deep parting blades with self-clamping system
- Blade heights of 1.02, 1.26 and 1.81 inch (26, 32 and 46 mm)
- Insert widths from 0.079 to 0.236 inch (2.0 to 6.0 mm)
- Grooving to a cutting depth of 3.15 inch (80 mm) and parting off up to a diameter of 6.30 inch (160 mm)
- User-friendly self-clamping system

THE APPLICATION

- For grooving and parting off on all types of lathes
- Suitable for all industries: The automotive industry, aerospace industry and general mechanical engineering, etc.

YOUR ADVANTAGES

- Universal application
- Maximum stability between the cutting insert and tool thanks to the latest self-clamping system
- Two insert seats in the tool body
- Adjustable tool projection



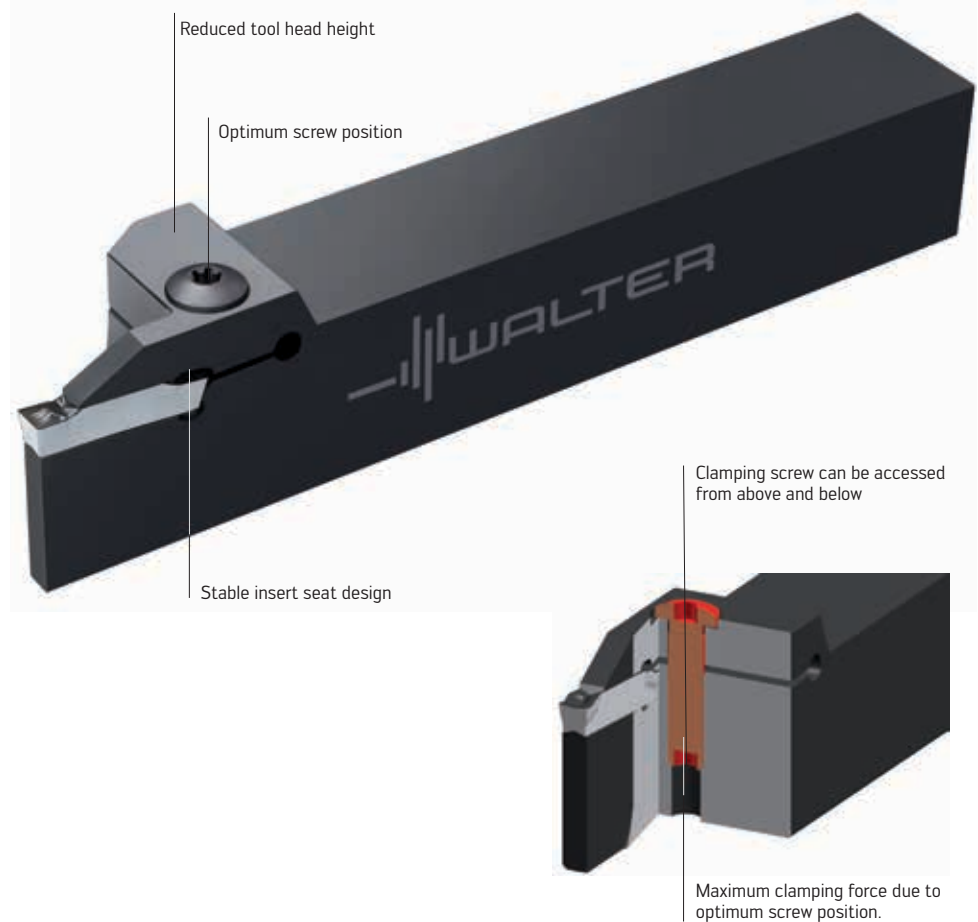
Walter Cut G1011/G1011-P monoblock tool: One for all.

THE TOOL

- Walter Cut monoblock tools for grooving, parting off and recessing
- G1011-P with internal coolant supply directly to the cutting edge
- Clamping screw can be accessed from above and below
- For double-edged GX16, GX24 and GX30 grooving inserts
- Insert widths 0.079 - 0.315 inch (2 to 8 mm)
- Cutting depths of 0.472 - 1.500 inch (12 - 38.1 mm)
- Shank sizes 0.500 to 1.500 inch (12 to 38.1 mm)

THE APPLICATION

- Parting off up to 1.654 inch (42 mm) diameter with two cutting edges
- Grooving and recessing operations up to a depth of 1.500 inch (38.1 mm)
- For use on lathes of all types
- First choice for all grooving/recessing operations



Walter Cut monoblock toolholder

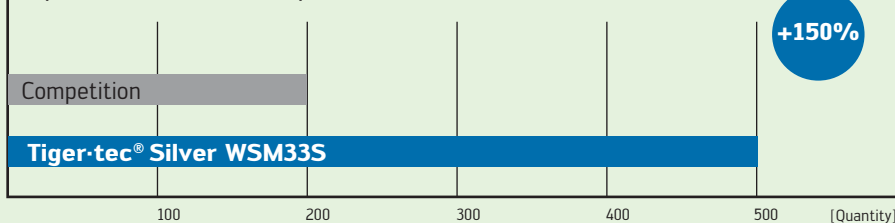
Type: G1011

Parting off operation on a guide pin

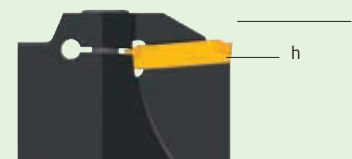
Workpiece material: S1 Tool steel
 Cutting insert: GX24-2E300N030-UF4
 Cutting tool material: WSM33S Tiger-tec® Silver
 Tool: G1011.2020R-3T21GX24

Cutting data	
Cutting speed v_c	350 SFM
Feed f	0.004 inch
Insert width	0.118 inch
Depth of cut a_p	0.531 inch

Comparison of the number of components



OVERVIEW OF THE ADVANTAGES OF THE G1011 AND G1111



Simple chip evacuation thanks to reduced tool head height [h]

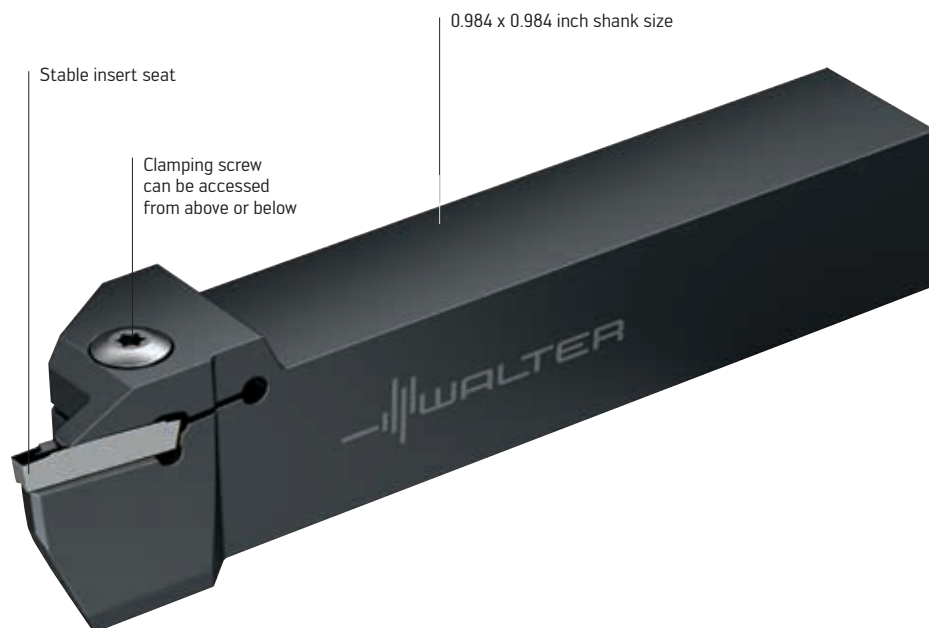
Walter Cut G1011 monoblock tool: Axial / Face grooving.

THE TOOL

- Monoblock tool
- Clamping screw can be accessed from above or below
- Optimum stability thanks to a selection of holders with different cutting depths

THE APPLICATION

- Axial (face) grooves from a diameter of 1.339 inch (34 mm)
- Cutting depth up to 0.984 inch (25 mm)
- Insert width from 0.118 inch (3 mm)



Monoblock toolholder for axial grooving

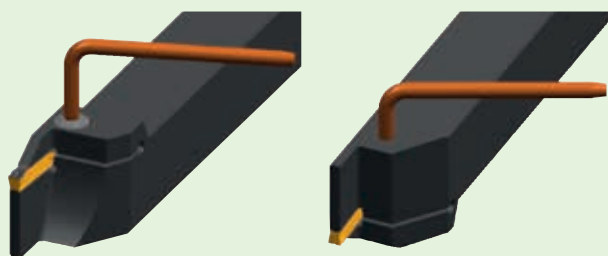
Type: G1111



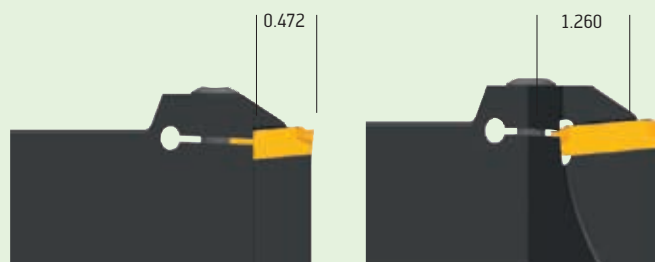
Right-hand design



Left-hand design



Simple insert changing in normal or inverted attitude



Optimum stability thanks to a selection of holders with different cutting depths

Walter Cut G15XX monoblock tools: Flexible use for low groove depths.

THE TOOLS

G1511 monoblock toolholder

- For cutting depths up to 0.236 inch (6 mm)
- For GX16 and GX24 inserts
- For radial and axial grooving and recessing
- The same tool can be used for all insert widths from 0.079 to 0.236 inch (2 to 6 mm)



G1511 monoblock toolholder – straight version

G1521 90° monoblock toolholder

- 90° angle tool design
- For cutting depths up to 0.236 inch (6 mm)
- For GX16 and GX24 inserts
- For radial and axial grooving and recessing
- The same tool can be used for all insert widths from 0.079 to 0.236 inch (2 to 6 mm)



G1521 monoblock toolholder – 90° offset

G1551 monoblock toolholder at 45°

- Insert set at 45°
- For cutting depths up to 0.236 inch (6 mm)
- For GX24 cutting inserts
- For undercuts, relief grooves and copy turning applications
- The same tool can be used for all insert widths from 0.118 to 0.236 inch (3 to 6 mm)



G1551 monoblock toolholder – set to 45°

THE APPLICATION

- For low groove depths, e.g.:
 - Circlip grooves
 - Sealing ring grooves
 - Thread relief grooves
- For axial and radial grooving
- Compatible with all types of lathe

YOUR ADVANTAGES

- Low inventory costs thanks to tool bodies accepting different cutting-edge widths
- Easy insert changing thanks to clamping screw accessible from above and below
- Maximum productivity when combined with Tiger-tec® Silver cutting tool materials

Walter Cut XLDE monoblock tool: Especially for small part production.

THE TOOL

- Walter Cut monoblock tools have been specially designed for parting off
- Clamping screw with double inclination of 20° in axial and radial directions
- For double-edged GX16 grooving inserts
- Insert widths: 0.059, 0.079, 0.098, 0.118 inch (1.5, 2.0, 2.5, 3.0 mm)
- Shank sizes: 0.394, 0.472, 0.630, 0.787 inch (10, 12, 16 and 20 mm)

THE APPLICATION

- Parting off of diameters up to 1.260 inch (32 mm)
- For use on lathes of all types, in particular
 - Long bed automatic lathes
 - Swiss type machines
 - Multi-spindle machines
 - Bar feed lathes
- Ideally suited for small parts production and the bar turning industry, as well as for general mechanical engineering

TOOL DESIGNS



XLDE L ... C



XLDE L



XLDE R



XLDE R ... C

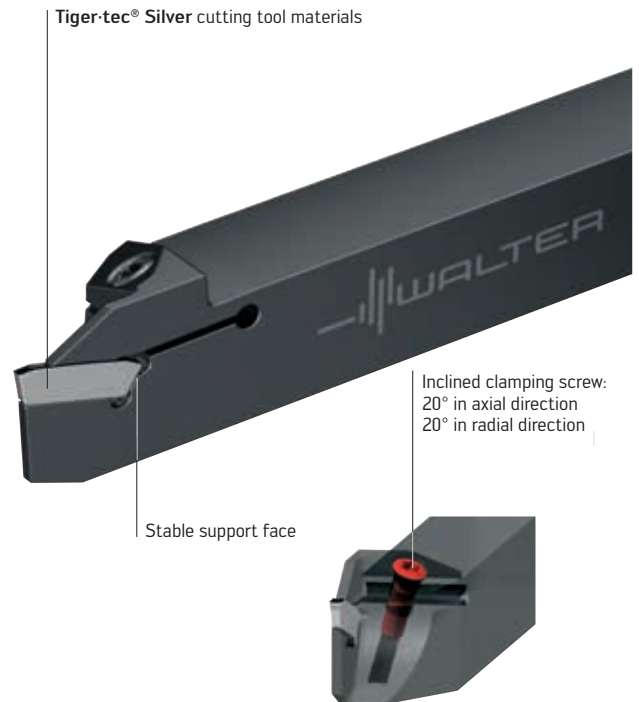
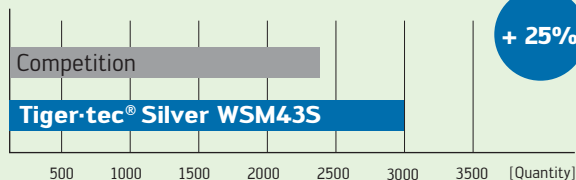
Parting off of pistons

Workpiece material:	M35 high alloy steel
Cutting insert:	GX16-1E200 N020-CF6
Cutting tool material:	WSM43S Tiger-tec® Silver
Tool:	XLDE R 1212K-GX16-1

Cutting data

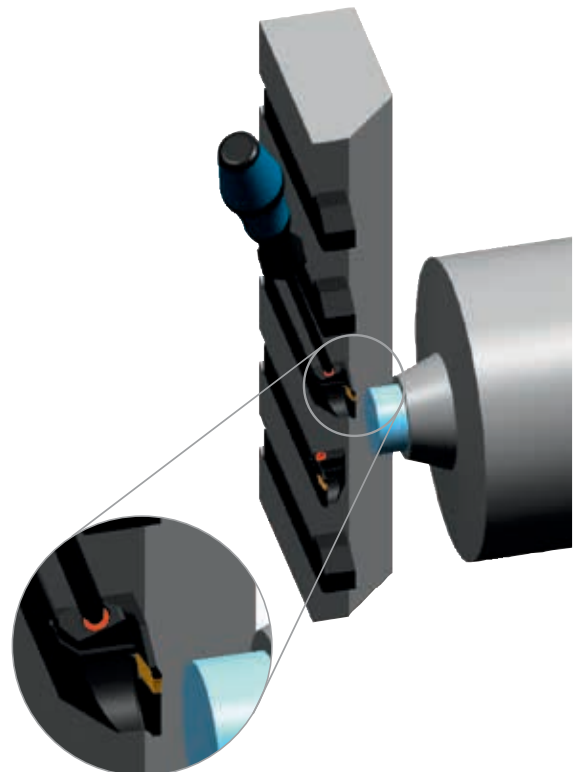
v_c	280 SFM
f	0.002 inch
s	0.079 inch
D	0.394 inch

Comparison of the number of components



Walter Cut monoblock toolholder

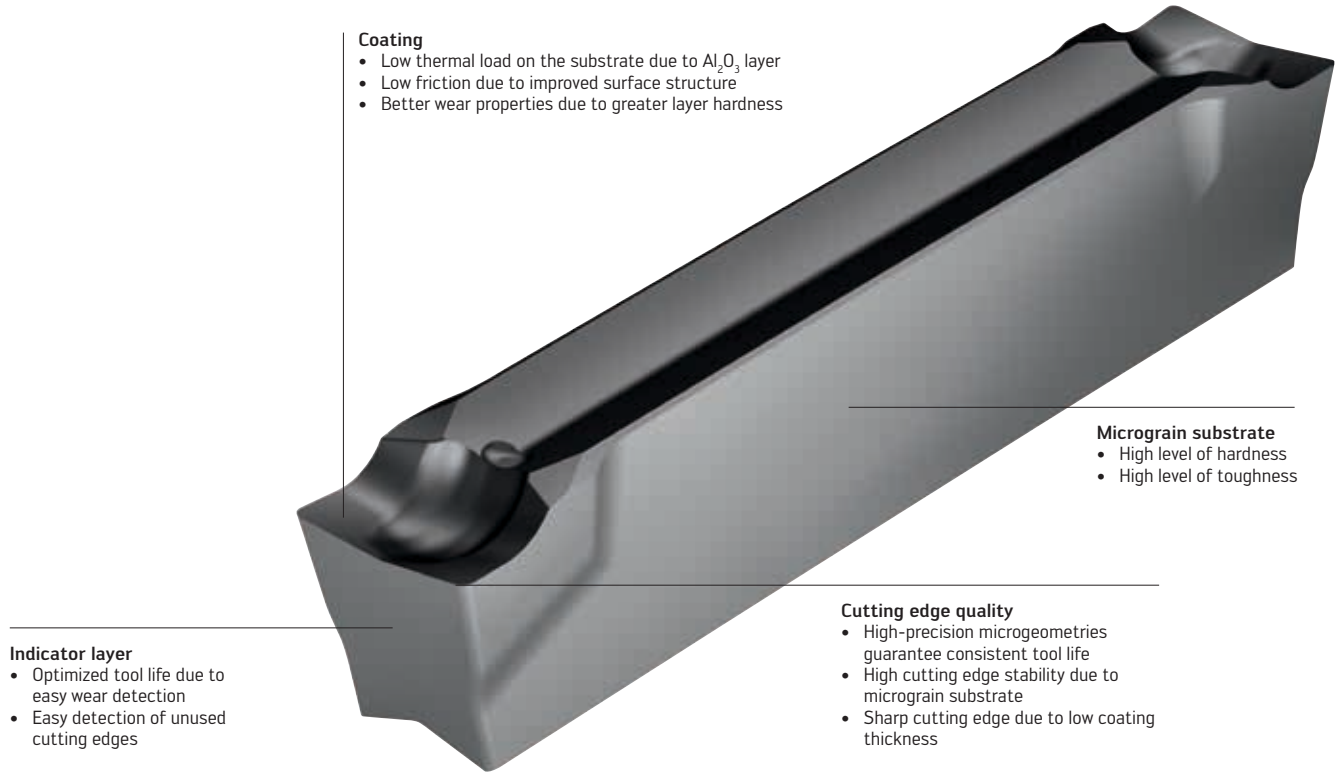
Type: XLDE



Inserts can be changed in machines with linear units without removing the tool

Walter Tiger-tec® Silver – PVD:

Wear resistance and toughness are not a contradiction.

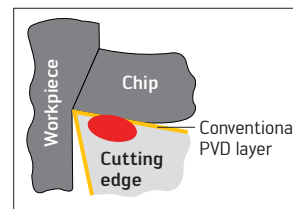


COMPARISON

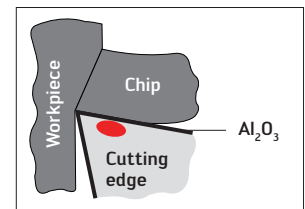
Competition

Tiger-tec® Silver PVD

Thermal loading of carbide

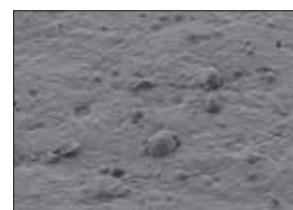


High level of heat entry into the carbide

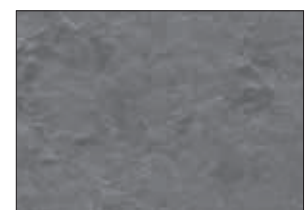


Thermal protection by Al_2O_3

Surface structure of coating



High level of friction due to surface structure



Reduced friction due to improved surface



Tiger-tec® Silver

THE NEW PVD GRADES

WSM13S – (ISO P10, ISO M10, ISO S10)

- Optimum resistance to temperature and wear when machining steels, stainless steels and heat-resistant super alloys
- For finishing and medium machining with uninterrupted cuts.

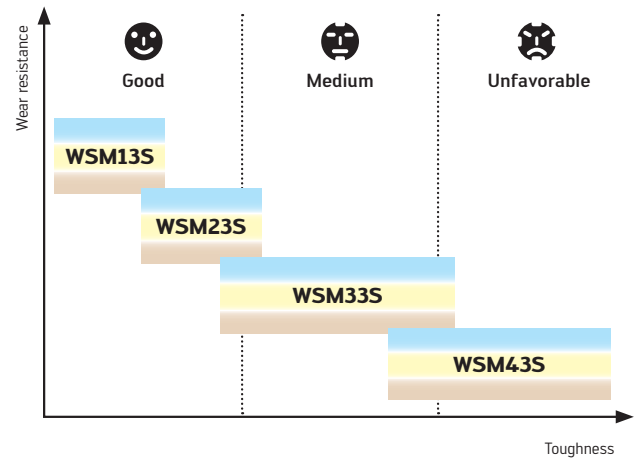
WSM23S – (ISO P20, ISO M20, ISO S20)

- Resistance to temperature and wear when machining steels, stainless steels and heat-resistant super alloys
- For use in stable conditions, with high cutting speeds and also when oil is used as the lubricant

WSM33S – (ISO P30, ISO M30, ISO S30)

- First choice for machining steels, stainless steels and heat-resistant super alloys
- For use under normal conditions
- Covers the majority of applications
- Combination of outstanding wear resistance and a high degree of toughness

Overview of Tiger-tec® Silver cutting materials

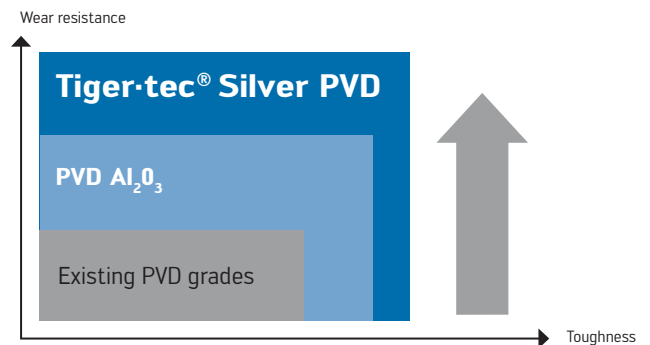


WSM43S – (ISO P40, ISO M40, ISO S40)

- Maximum toughness and process reliability when machining steels, stainless steels and heat resistant super alloys
- Ideal grade for machining interrupted cuts, low cutting speeds and unstable clamping or poor machine conditions

YOUR ADVANTAGES

- Unique combination of thermal stability and toughness ensures unbeatable cost efficiency
- Maximum process reliability thanks to improved cutting edge stability
- Low tendency for build-up on the cutting edge due to improved surface structure and sharp cutting edge with thin **Tiger-tec® Silver** PVD Al_2O_3 coating
- Longer tool life thanks to improved layer hardness
- Universal cutting tool material for different ISO material groups
- Excellent machining results thanks to the use of **Tiger-tec® Silver** PVD technology in conjunction with Walter Cut geometries



Watch product video:
Scan this QR code
or go directly to
<http://goo.gl/u3dxw>

Walter Tiger-tec® Silver – CVD: High-performance cutting tool materials specially developed for grooving and longitudinal turning.

THE APPLICATION

Primary application - ISO P:

- Typical steels, such as Alloy steel 4140, Bearing steel 52100 and carbon steel 1045

Primary application - ISO K:

- All cast iron materials, such as gray cast iron, ductile cast iron and compacted graphite cast iron (CGI)

THE NEW CVD GRADES

WKP13S (ISO P10, ISO K20)

- Excellent wear resistance and cutting speed
- Continuous cuts

WKP23S (ISO P20, ISO K25)

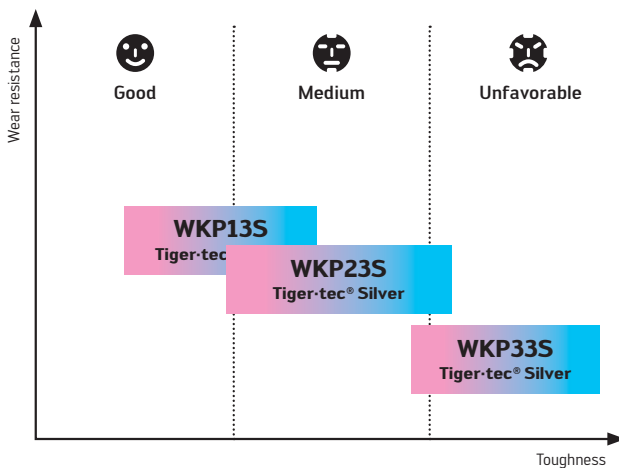
- Excellent wear resistance and cutting speed
- Continuous cuts and medium interrupted cuts
- Universal grade for approx. 80% of all applications

WKP33S (ISO P30, ISO K30)

- Excellent wear resistance and toughness
- Unfavorable conditions or interrupted cuts

Tiger-tec® Silver CVD coating

- Aluminum oxide with optimized micro-structure for maximum crater wear resistance/cutting speed
- Mechanical post-treatment creates compressive stresses to prevent fracture on the cutting edge



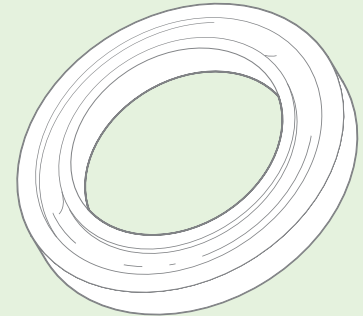
Tiger-tec® Silver



Indicator layer

- Silver flank face for easy wear detection
- Easy detection of unused cutting edges

Axial grooving
2 x 4 mm
Forged blank

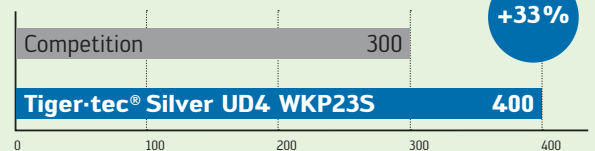


Workpiece material: 1045
Cutting insert: GX24-3E400N04-UD4
Cutting tool material: WKP23S **Tiger-tec® Silver**
Tool: G1111.2525R-5T12-040GX24

Cutting data	Competition	Tiger-tec® Silver
	CVD	WKP23S
Cutting speed v_c	820 SFM	820 SFM
Feed f	0.006 inch	0.008 inch
Depth of cut ap	0.157 inch	0.157 inch
Tool life	300 components	400 components
Machining time	36 secs	30 secs -20%

Note:
 Excellent chip breaking thanks to UD4 geometry.
 High level of process reliability

Comparison of the number of components



THE GEOMETRIES

The new WKP13S, WKP23S and WKP33S grades are introduced in combination with the proven groove-turning geometries UD4, UA4, UF4 and RD4, and the grooving and parting off geometries GD3 and CE4. This means the new **Tiger-tec® Silver** technology is combined with the long-standing experience of our existing geometries.

YOUR ADVANTAGES

- Maximum productivity due to an increase in cutting data with longer tool life thanks to Tiger-tec® Silver technology
- Wear-resistant cutting tool material as an alternative to our WSM grades



Watch product video:
 Scan this QR code or go directly to <http://goo.gl/dcyLLa>

Walter Cut

GX and SX geometries for parting off.

THE GEOMETRIES

CF6 – The sharp one

- Extremely low burr and pip formation
- Right- and left-hand inserts available for parting off
- For small diameters and thin-walled tubes
- 15°, 7° and 6° angled parting off inserts for parting off with low burr and pip formation

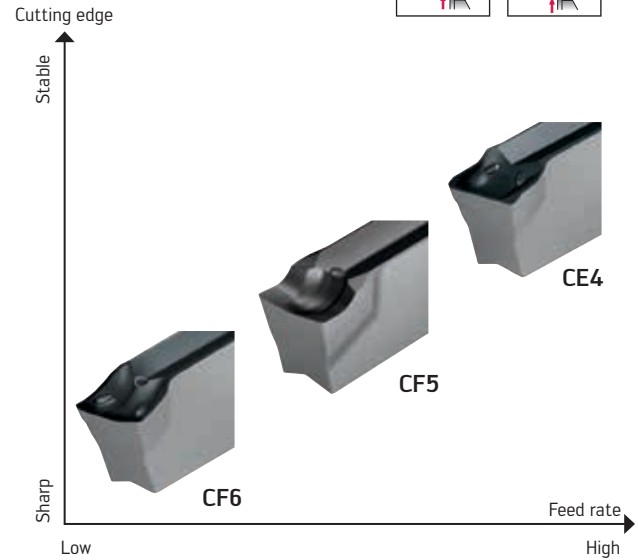
CF5 – The positive one

- Low burr and pip formation
- Right- and left-hand inserts available for parting off
- For long-chipping workpiece materials
- 15°, 7° and 6° angled parting off inserts for parting off with low burr and pip formation

CE4 – The universal one

- Stable cutting edge for maximum feed rates
- Right- and left-hand inserts available
- Excellent chip formation

Fields of application/ geometries



Parting off ball bearing race

Workpiece material: 52100
 Cutting insert: GX16-1E200N020-CE4
 Cutting tool material: WSM33S – Tiger-tec® Silver
 Tool: G1011.2020L-2T8GX16

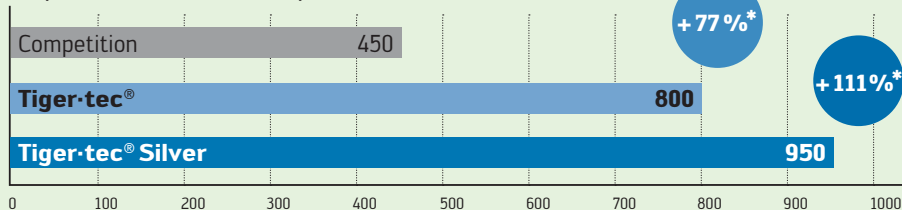
Cutting data

	Competition	Tiger-tec®	Tiger-tec® Silver
Cutting speed v_c	192 SFM	192 SFM	558 SFM
Feed f	0.003 inch	0.004 inch	0.004 inch
Depth of cut	0.315 inch	0.315 inch	0.315 inch
Tool life	450 components	800 components	950 components

Note:

- More consistent tool life
- Improved flatness of parted surfaces
- Outstanding chip control

Comparison of the number of components



* in comparison to the competition

YOUR ADVANTAGES

- Three geometries to cover all machining operations
- Max. tool life thanks to the new PVD Tiger-tec® Silver cutting tool materials



Watch product video:
 Scan this QR code or go directly to
<http://goo.gl/e8wZy>

Walter Cut GX geometries for grooving.

THE GEOMETRIES

GD3

- Very low cutting forces
- Light to moderate feed rates
- General parting off and grooving operations

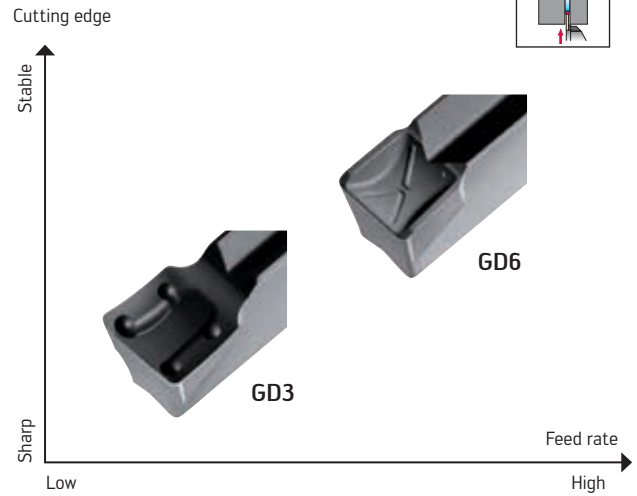
GD6

- Moderate feed rates
- Long-chipping materials
- Medium machining conditions

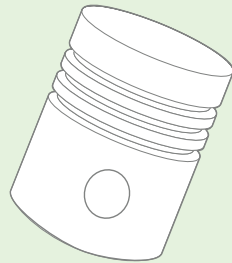
YOUR ADVANTAGES

- Soft cutting action and perfect chip control, even for materials with difficult cutting properties
- Can be used for grooving and parting off

Fields of application/geometries



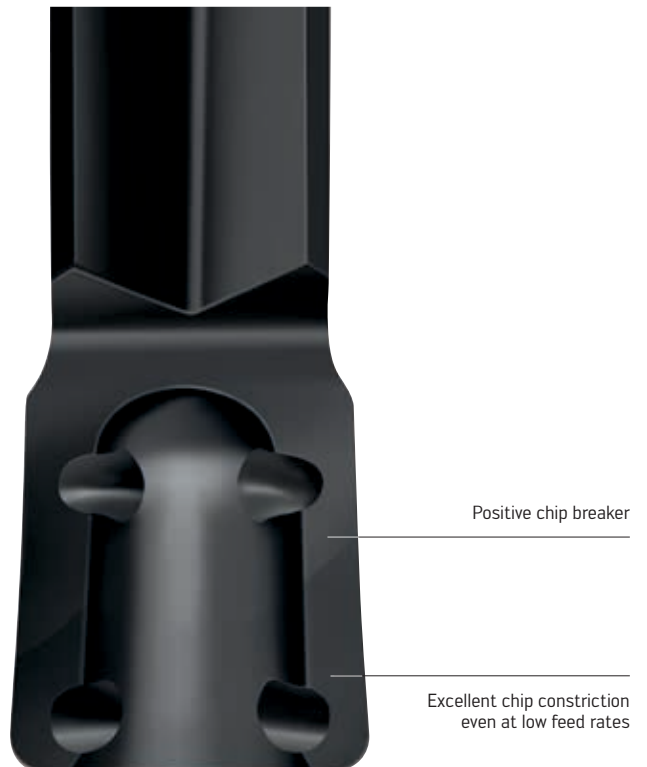
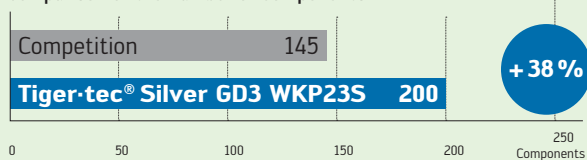
Piston grooving – automotive industry



Workpiece material: 4140
 Tensile strength: 130,500 PSI
 Cutting insert: GX16-3E400N040-GD3
 Cutting tool material: WKP23S – Tiger-tec® Silver
 Tool: NCA132-3215R-GX16-3

Cutting data	Competition ISO P	Tiger-tec® Silver WSM33S
Cutting speed v_c	460 SFM	460 SFM
Feed f	0.006 inch	0.006 inch
Depth of cut	0.157 inch	0.157 inch
Tool life	145 components	200 components

Comparison of the number of components



Grooving chip breaker

Type: GD3

Walter Cut

GX universal geometries for grooving and longitudinal turning.

THE GEOMETRIES

UD6

- Grooving in stainless steel
- Average feed range
- Low cutting forces

UF4

- All grooving operations
- Good chip control
- Average feed range
- Positive cut

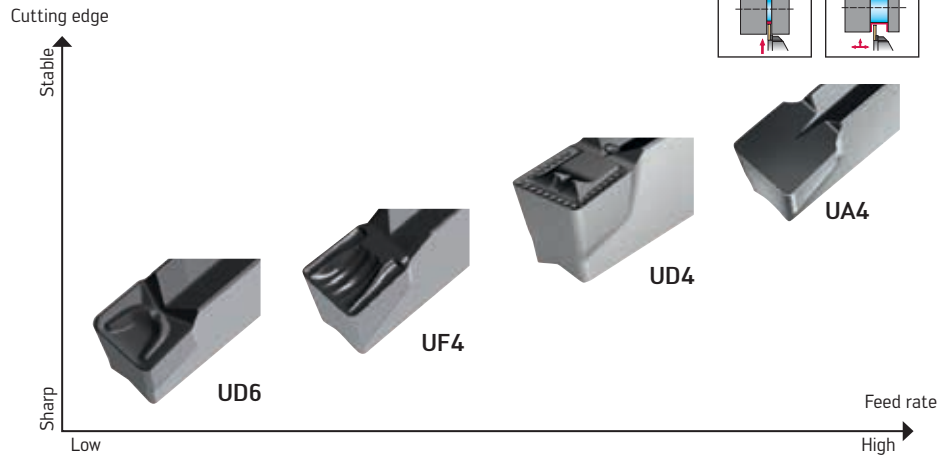
UD4

- Large chip breaking area
- Optimized chip breaking when machining forged parts
- Strong cutting edge
- For moderate to high feed rates

UA4

- For cast iron machining
- For moderate to high feed rates
- Maximum stability

Fields of application/geometries



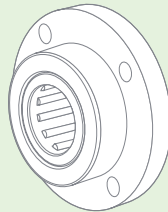
Watch product video:
Scan this QR code
or go directly to
<http://goo.gl/0c0xB>

YOUR ADVANTAGES

- Increased tool life thanks to PVD and CVD Tiger-tec® Silver cutting tool materials
- Universal chip breaker, suitable for all machining

Axial grooving of hub – automotive industry

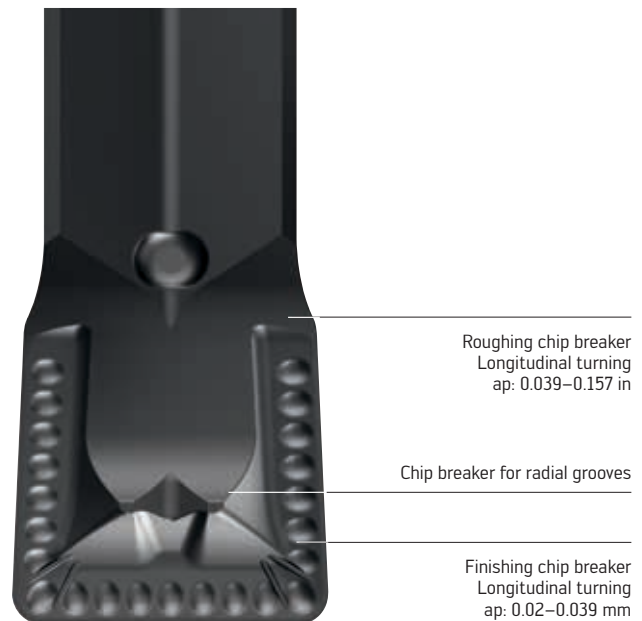
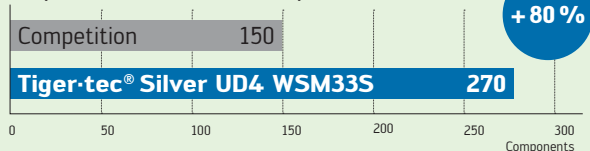
Workpiece material: 5115
Tensile strength: 87,000 PSI
Cutting insert: GX24-4E600N05-UD4
Cutting tool material: WSM33S – Tiger-tec® Silver
Tool: G1521.2525L-T6GX24



Cutting data	Competition ISO P	Tiger-tec® Silver WSM33S
Cutting speed v_c	787–1148 SFM	787–1148 SFM
Feed f	0.004–0.012 in	0.004–0.012 in
Depth of cut	0.039–0.059 in	0.039–0.059 in
Tool life	150 components	270 components

Note:
Excellent chip breaking with the UD4 geometry. High process reliability.

Comparison of the number of components



Universal geometry

Type: UD4

Walter CUT

GX geometries for copy turning.

THE GEOMETRIES

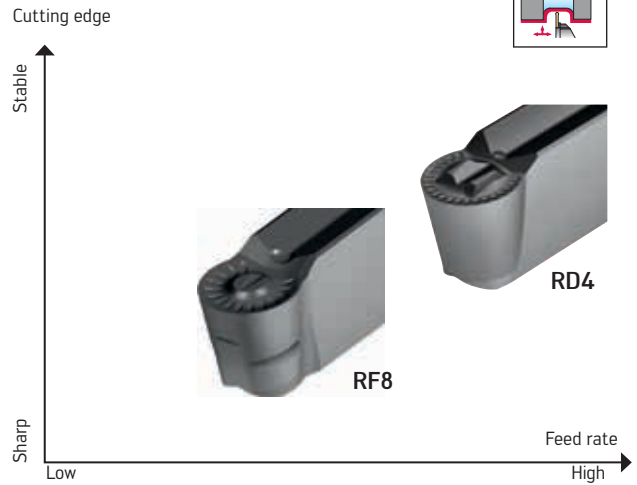
RF8

- For profiling and relief turning
- High surface quality
- Machining of ISO M, ISO N and ISO S materials, such as turbine discs
- 230° machining angle enables undercuts to be created
- Finishing of ISO P materials
- Reduced cutting forces due to positive cutting edges with a fully ground circumference

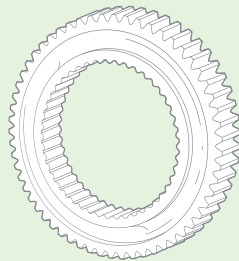
RD4

- For profiling, e.g. of forged parts
- Outstanding chip control even at low cutting depths
- For moderate to high feed rates
- Strong cutting edge, fully sintered
- Machining of ISO P / ISO K

Fields of application/geometries



Gearwheel axial grooving



Workpiece material: 5115
 Cutting insert: GX24-3E400N200-RD4
 Cutting tool material: WKP23S – Tiger-tec® Silver
 Tool: G1111.2525L-4T20GX24

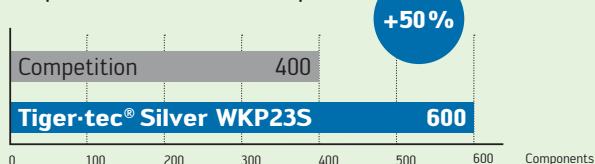
Cutting data

	Competition	Tiger-tec® Silver
Cutting speed v_c	590 SFM	655 SFM
Feed f	0.005 in	0.008 in
Depth of cut	0.276 in	0.276 in
Tool life	400 components	600 components

Note:

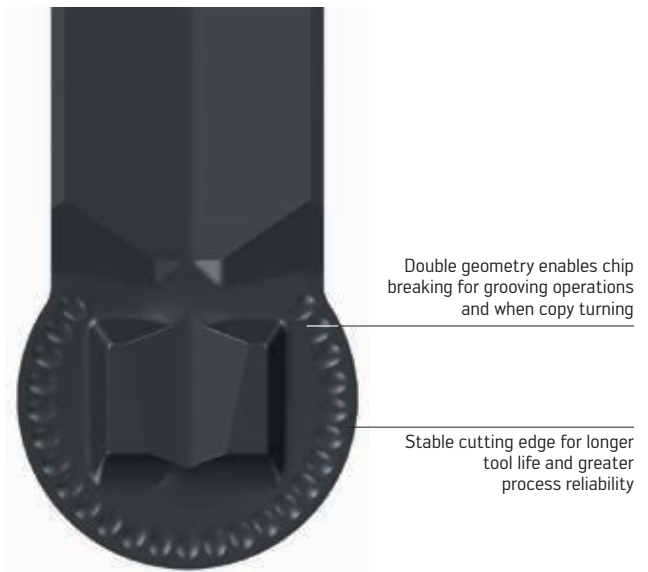
- Outstanding chip control
- Shorter process time due to higher feed rate and faster cutting speed
- Greater process reliability

Comparison of the number of components



YOUR ADVANTAGES

- Increased tool life thanks to PVD and CVD Tiger-tec® Silver cutting tool materials
- Outstanding chip control for any machining operation





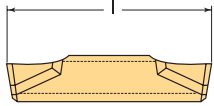
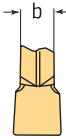
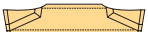
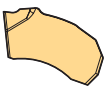


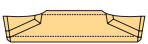
Full-radius geometry

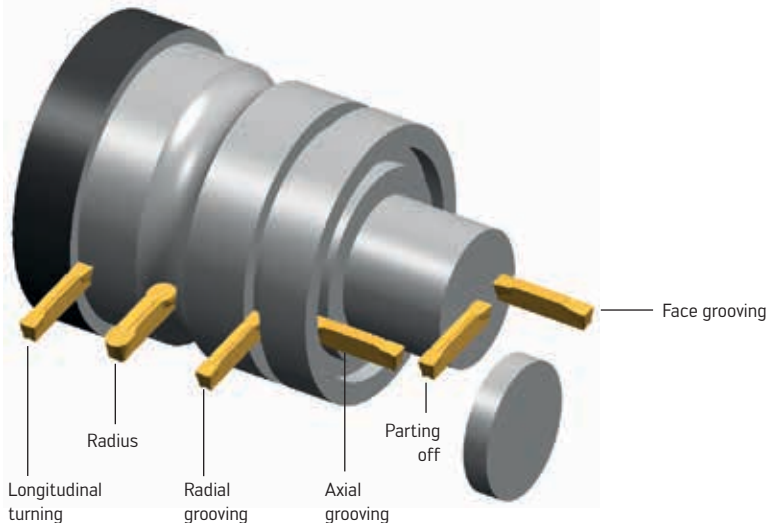
Type: RD4

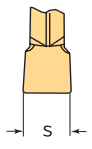
Designation key for cutting inserts






Example

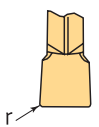
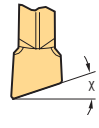
GX 24	2	E	300	N	03	U	F	4	
1	2	3	4	5	6	7	8	9	10





1	2	3	4
Insert type	Insert length l [mm]	Width category	Basic shape
<p>GX</p>  <p>SX</p> 	 <p>09 l = 9 (0.354 in)</p> <p>16 l = 16 (0.630 in)</p> <p>24 l = 24 (0.945 in)</p> <p>30 l = 30 (1.181 in)</p>	 <p>0</p> <p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p>	<p>E</p>   <p>F</p>  <p>R</p>  <p>S</p> 






8	
Application	
<p>C "Cut off"</p> <ul style="list-style-type: none"> - Parting off - Radial grooving 	
<p>G "Grooving"</p> <ul style="list-style-type: none"> - Radial grooving - Axial grooving - Parting off 	
<p>R Full radius</p> <ul style="list-style-type: none"> - Radial grooving - Axial grooving - Longitudinal turning - Facing 	
<p>U Universal</p> <ul style="list-style-type: none"> - Longitudinal turning - Radial grooving - Axial grooving - Facing - Parting off 	

5	
Groove width s [mm]	
	
for example:	
200	s = 2.0 (0.079 in)
220	s = 2.2 (0.087 in)
250	s = 2.5 (0.098 in)
300	s = 3.0 (0.118 in)
310	s = 3.1 (0.122 in)
318	s = 3.18 (0.125 in)
etc.	

6	
Version	
Grooving:	R  right-hand
	L  left-hand
	N  neutral
Parting off:	R  right-hand
	L  left-hand

7	
Corner radius r [mm]/ clearance angle χ [°]	
	
02	r = 0.2 (0.008 in)
03	r = 0.3 (0.015 in)
04	r = 0.4 (0.016 in)
05	r = 0.5 (0.020 in)
etc.	
	
6	$\chi = 6^\circ$
7	$\chi = 7^\circ$
10	$\chi = 10^\circ$
15	$\chi = 15^\circ$

9	
Rake angle	
smaller	
	A
	D
	F
	K
larger	

10	
Cutting edge	
stable	
	1
	3
	4
	6
	8
sharp	



Walter Select for parting off inserts

Step by step to the right cutting insert

STEP 1

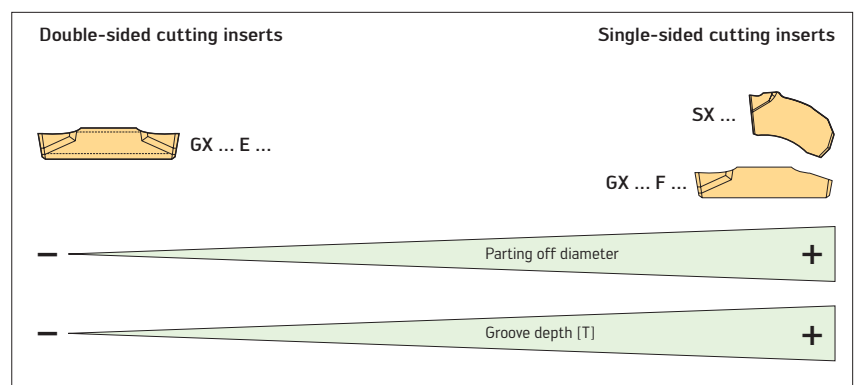
Determine the **material** to be machined from page H 8 in the Walter General catalogue 2012.

Make a note of the machining group corresponding to your material e.g.: P10.

Identification letters	Machining group	Groups of the materials to be machined	
P	P1–P15	Steel	All types of steel and cast steel, with the exception of steel with an austenitic structure
M	M1–M3	Stainless steel	Austenitic stainless steel, austenitic-ferritic steel and cast steel
K	K1–K7	Cast iron	Grey cast iron, cast iron with spheroidal graphite, malleable cast iron, cast iron with vermicular graphite
N	N1–N10	NF metals	Aluminum and other non-ferrous metals, non-ferrous materials
S	S1–S10	High temperature alloys and titanium alloys	Heat-resistant special alloys based on iron, nickel and cobalt, titanium and titanium alloys
H	H1–H4	Hard materials	Hardened steel, hardened cast iron materials, chilled cast iron
O	O1–O6	Other	Plastics, glass and carbon-fiber reinforced plastics, graphite

STEP 2

Determine the **basic shape** of the cutting insert:



STEP 3

Select the **machining conditions**:

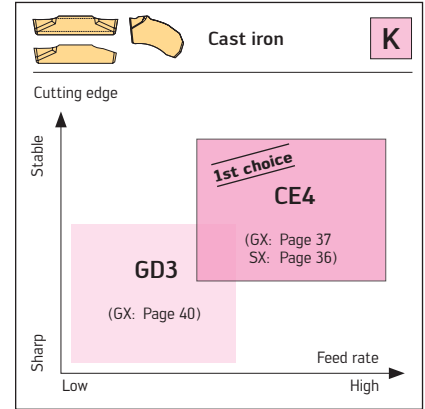
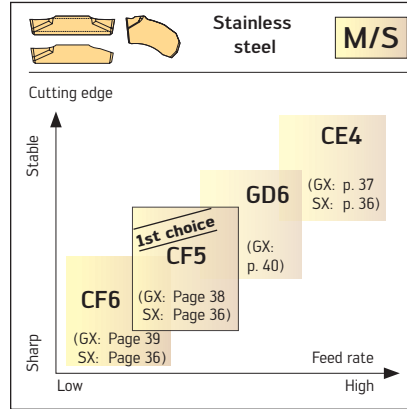
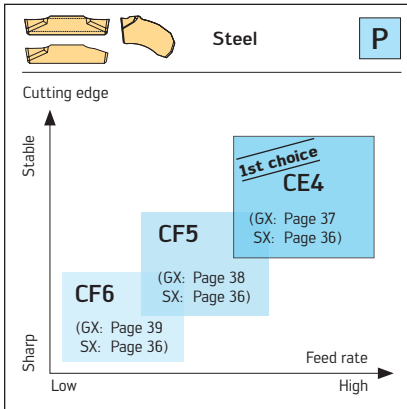
Type of cutting action	Machine stability, clamping system and workpiece		
	Very good	Good	Moderate
Smooth cut Parting off tubing.	☺	☹	☹
Smooth cut Parting solid bar to center	☹	☹	
Interrupted cuts	☹	☹	☹

STEP 4

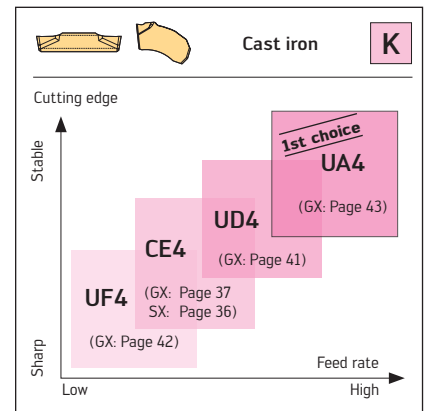
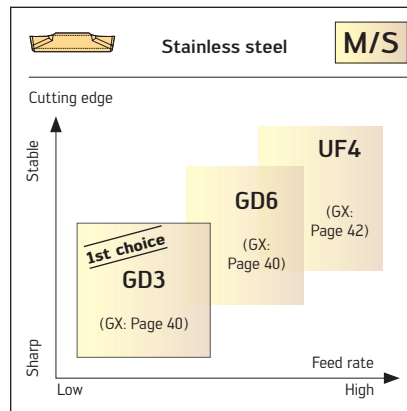
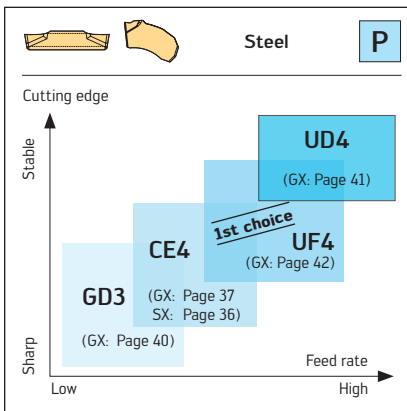
Determine the **indexable insert geometry** using cutting edge stability and feed.



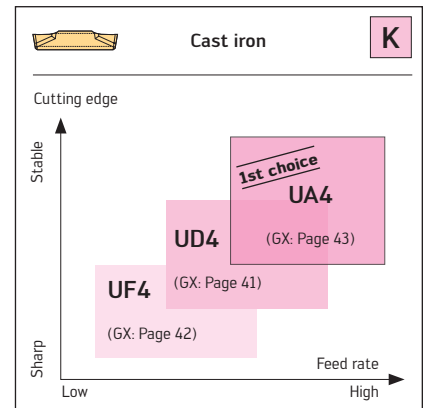
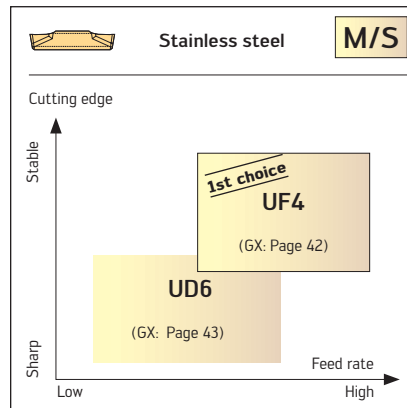
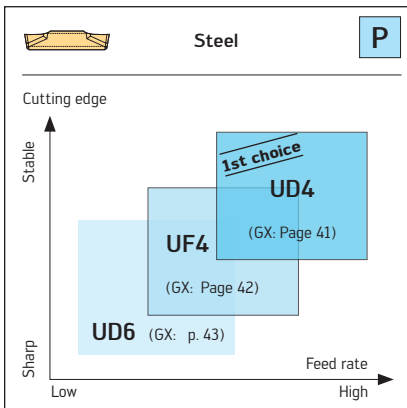
GX and SX cutting inserts for parting off



GX inserts for grooving



Geometry selection for groove turning

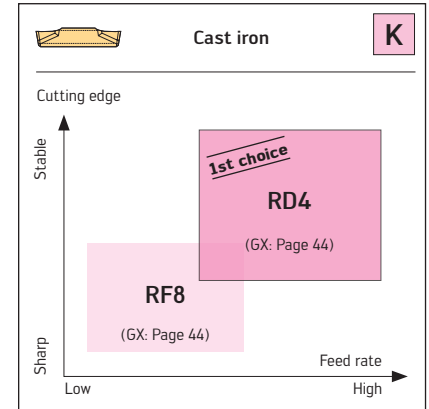
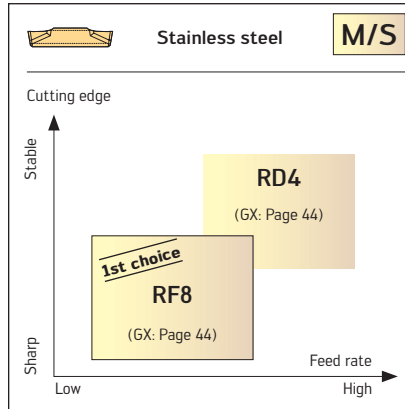
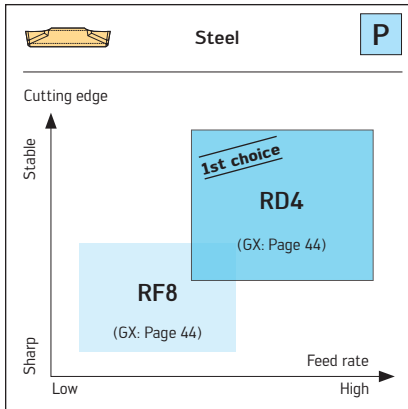


STEP 4 – Continued

Determine the indexable insert geometry using cutting edge stability and feed.



Selecting a geometry for copy turning



STEP 5

You will find the cutting tool material recommendation and the feed value (f) on the specified catalog page.

Walter Cut GX grooving inserts
Grooving and parting off
Tiger-tec® Silver

Indexable inserts

Designation	P				M		K	S	
	WPP23	WSM235	WSM335	WSM435	WSM235	WSM335	WSM435	WPP23	WSM235
GX16-1E200N02-CF5			☉	☉					
GX16-1E200R/L6-CF5			☉	☉					
GX16-1E200R/L7-CF5			☉	☉					
GX16-1E200R/L15-CF5			☉	☉					
GX16-1E250N02-CF5			☉	☉					
GX16-1E250R/L6-CF5			☉	☉					
GX16-2E300N02-CF5			☉	☉					

WALTER SELECT Best insert for: good, moderate, unfavorable machining conditions

STEP 6

Choose the cutting data for your selected cutting insert from the technical information from page 156 onwards.

Cutting data for Walter Cut – Grooving and recessing
Carbide grades

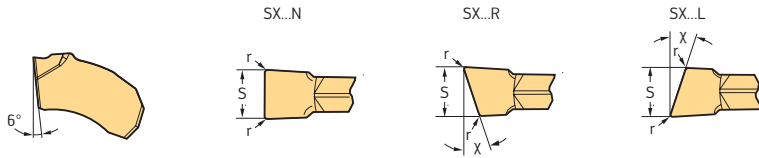
Material group	Structure of main material groups and identification letters	Brinell hardness HB	Tensile strength R _m N/mm ²	Machining group ¹	Cutting material group	
					WPP23	WSM435
P	Unalloyed steel	C ≤ 0.25 %	annealed	P1	•••	•••
		C > 0.25, ≤ 0.55 %	annealed	P2	•••	•••
		C > 0.25, ≤ 0.55 %	tempered	P3	•••	•••
		C > 0.55 %	annealed	P4	•••	•••
		C > 0.55 %	tempered	P5	•••	•••
		Free cutting steel (short-chipping)	annealed	P6	•••	•••
		annealed		P7	•••	•••

Legend: ☉ = Cutting data for wet machining, ☉ = Dry machining is possible




Walter Cut SX grooving inserts

Grooving and parting off

Tiger-tec® Silver



Indexable inserts

Designation	s inch	r inch	κ	f inch	S _{Tol} inch	l _{Tol} inch	P				M			S			N	
							HC				HC			HC	HC		HC	HW
							WKP23S	WSM23S	WSM33S	WSM43S	WSM23S	WSM33S	WSM43S	WKP23S	WSM23S	WSM33S	WSM43S	WK1
 SX-1E150N01-CE4	0.059	0.004		0.001-0.005	±0.002	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-1E150R/L6-CE4	0.059	0.004	6°	0.001-0.003	±0.002	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-2E200N02-CE4	0.079	0.008		0.002-0.006	±0.002	±0.004	☉	☉	☉	☉	☉	☉			☉	☉	☉	
SX-2E200R/L6-CE4	0.079	0.008	6°	0.002-0.004	±0.002	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-2E260N03-CE4	0.079	0.012		0.003-0.007	±0.002	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-3E300N02-CE4	0.118	0.008		0.004-0.012	±0.002	±0.004	☉	☉	☉	☉	☉	☉			☉	☉	☉	
SX-3E300R/L6-CE4	0.118	0.008	6°	0.002-0.008	±0.002	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-3E310N03-CE4	0.122	0.012		0.004-0.012	±0.002	±0.004	☉		☉	☉	☉	☉			☉	☉	☉	
SX-4E400N02-CE4	0.157	0.008		0.004-0.013	±0.002	±0.004	☉	☉	☉	☉	☉	☉			☉	☉	☉	
SX-4E400R/L6-CE4	0.157	0.008	6°	0.003-0.009	±0.002	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-4E410N03-CE4	0.161	0.012		0.004-0.014	±0.002	±0.004	☉		☉	☉	☉	☉			☉	☉	☉	
SX-4E480N03-CE4	0.189	0.012		0.002-0.005	±0.002	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-5E500N04-CE4	0.197	0.016		0.005-0.014	±0.002	±0.004	☉	☉	☉	☉	☉	☉			☉	☉	☉	
SX-5E500R/L6-CE4	0.197	0.016	6°	0.004-0.010	±0.002	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-6E600N04-CE4	0.236	0.016		0.005-0.016	±0.002	±0.004	☉		☉	☉	☉	☉			☉	☉	☉	
SX-6E600R/L6-CE4	0.236	0.016	6°	0.005-0.012	±0.002	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-8E800N08-CE4	0.315	0.031	-	0.008-0.020	±0.002	±0.004	☉		☉	☉	☉	☉			☉	☉	☉	
SX-10E1000N08-CE4	0.394	0.031	-	0.010-0.022	±0.002	±0.004	☉		☉	☉	☉	☉			☉	☉	☉	
 SX-1E150N01-CF5	0.059	0.004		0.001-0.004	±0.002	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-1E150R/L6-CF5	0.059	0.004	6°	0.001-0.003	±0.002	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-1E150R/L7-CF5	0.059		7°	0.001-0.003	±0.001	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-1E150R/L15-CF5	0.059		15°	0.001-0.003	±0.001	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-2E200N02-CF5	0.079	0.008		0.002-0.005	±0.002	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-2E200R/L6-CF5	0.079	0.008	6°	0.001-0.004	±0.002	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-2E200R/L7-CF5	0.079		7°	0.001-0.004	±0.001	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-2E200R/L15-CF5	0.079		15°	0.001-0.004	±0.001	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-3E300N02-CF5	0.118	0.008		0.003-0.008	±0.002	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-3E300R/L6-CF5	0.118	0.008	6°	0.002-0.006	±0.002	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-3E300R/L7-CF5	0.118		7°	0.002-0.005	±0.001	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-3E300R/L15-CF5	0.118		15°	0.002-0.005	±0.001	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-3E310N03-CF5	0.118	0.012		0.002-0.005	±0.001	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-4E400N02-CF5	0.157	0.008		0.004-0.009	±0.002	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-4E400R/L6-CF5	0.157	0.008	6°	0.003-0.007	±0.002	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-5E500N04-CF5	0.197	0.016		0.004-0.010	±0.002	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-5E500R/L6-CF5	0.197	0.016	6°	0.004-0.008	±0.002	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-6E600N04-CF5	0.236	0.016		0.004-0.012	±0.002	±0.004			☉	☉	☉	☉			☉	☉	☉	
 SX-1E150N01-CF6	0.059	0.004		0.001-0.004	±0.002	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-2E200N02-CF6	0.079	0.008		0.001-0.005	±0.002	±0.004			☉	☉	☉	☉			☉	☉	☉	
SX-3E300N02-CF6	0.118	0.008		0.002-0.008	±0.002	±0.004			☉	☉	☉	☉			☉	☉	☉	

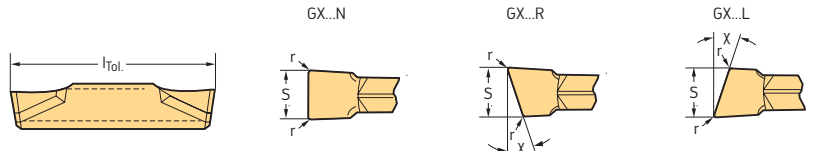
l_{Tol} = Repeat accuracy when changing indexable insert
 Radius tolerance r_{Tol} = ±0.002 inch (0.05 mm)

HC = Coated carbide



Walter Cut GX grooving inserts

Grooving and parting off

Tiger-tec® Silver



Indexable inserts

Designation	s inch	r inch	κ	l inch	f inch	S _{Tot} inch	l _{Tot} inch	P				M			K	S		
								HC	WKP23S	WSM23S	WSM33S	WSM43S	HC	WSM23S	WSM33S	WSM43S	HC	WSM23S
 GX16-1E200N02-CE4	0.079	0.008		0.654	0.002-0.006	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX16-1E200R/L6-CE4	0.079	0.008	6°	0.654	0.002-0.004	±0.002	±0.006		☺	☺	☺	☺	☺			☺	☺	☺
GX16-1E250N02-CE4	0.098	0.008		0.654	0.003-0.007	±0.002	±0.006		☺	☺	☺	☺	☺			☺	☺	☺
GX16-1E250R/L6-CE4	0.098	0.008	6°	0.654	0.002-0.005	±0.002	±0.006		☺	☺	☺	☺	☺			☺	☺	☺
GX16-2E300N02-CE4	0.118	0.008		0.654	0.004-0.012	±0.002	±0.006	☺	☺	☺	☺	☺	☺			☺	☺	☺
GX16-2E300R/L6-CE4	0.118	0.008	6°	0.654	0.004-0.009	±0.002	±0.006		☺	☺	☺	☺	☺			☺	☺	☺
GX24-1E200N02-CE4	0.079	0.008		0.945	0.002-0.006	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX24-1E250N02-CE4	0.098	0.008		0.945	0.003-0.007	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX24-2E300N02-CE4	0.118	0.008		0.945	0.004-0.012	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX24-2E300R/L6-CE4	0.118	0.008	6°	0.969	0.004-0.009	±0.002	±0.006	☺	☺	☺	☺	☺	☺			☺	☺	☺
GX24-3E400N03-CE4	0.157	0.012		0.945	0.004-0.013	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX24-3E400R/L6-CE4	0.157	0.008	6°	0.969	0.004-0.010	±0.002	±0.006		☺	☺	☺	☺	☺			☺	☺	☺
GX24-3E500N03-CE4	0.197	0.012		0.945	0.005-0.014	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX24-4E600N03-CE4	0.236	0.012		0.945	0.005-0.016	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
 GX16-1F200N02-CE4	0.079	0.008		0.630	0.002-0.005	±0.002	±0.006		☺	☺	☺	☺	☺			☺	☺	☺
GX16-1F250N02-CE4	0.098	0.008		0.630	0.002-0.006	±0.002	±0.006		☺	☺	☺	☺	☺			☺	☺	☺
GX24-2F300N02-CE4	0.118	0.008		0.945	0.004-0.012	±0.002	±0.006		☺	☺	☺	☺	☺			☺	☺	☺
GX24-3F400N03-CE4	0.157	0.012		0.945	0.004-0.013	±0.002	±0.006		☺	☺	☺	☺	☺			☺	☺	☺

l_{Tot} = Repeat accuracy when changing indexable insert
 Radius tolerance r_{tol} = ± 0.002 inch (0.05 mm)
 Parting off with GX16 possible up to dia. 1.260 inch (32 mm)

HC = Coated carbide

WALTER SELECT

Best insert for:

☺
good

☹
moderate

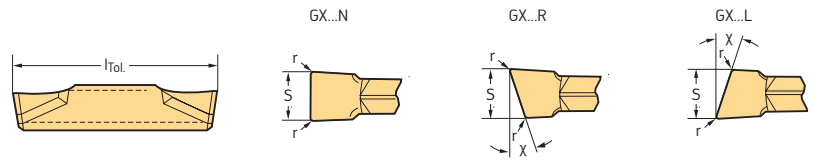
☹
unfavorable

machining conditions

Walter Cut GX grooving inserts

Grooving and parting off

Tiger-tec® Silver



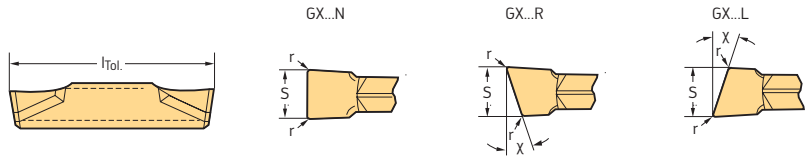
Indexable inserts

Designation	s inch	r inch	κ	l inch	f inch	S _{Tot} inch	l _{Tot} inch	P				M		K	S			
								HC				HC		HC	HC			
								WKP23S	WSM23S	WSM33S	WSM43S	WSM23S	WSM33S	WSM43S	WKP23S	WSM23S	WSM33S	WSM43S
GX16-1E200N00-CF5	0.079	0.000		0.654	0.001-0.004	±0.001	±0.002											
GX16-1E200N02-CF5	0.079	0.008		0.654	0.002-0.005	±0.002	±0.006											
GX16-1E200R/L6-CF5	0.079	0.008	6°	0.654	0.001-0.004	±0.002	±0.006											
GX16-1E200R/L7-CF5	0.079	0.000	7°	0.646	0.001-0.004	±0.001	±0.006											
GX16-1E200R/L15-CF5	0.079	0.000	15°	0.646	0.001-0.004	±0.001	±0.006											
GX16-1E250N02-CF5	0.098	0.008		0.654	0.002-0.006	±0.002	±0.006											
GX16-1E250R/L6-CF5	0.098	0.008	6°	0.654	0.001-0.005	±0.002	±0.006											
GX16-2E300N02-CF5	0.118	0.008		0.654	0.003-0.008	±0.002	±0.006											
GX16-2E300R/L6-CF5	0.118	0.008	6°	0.654	0.002-0.006	±0.002	±0.006											
GX16-2E300R/L7-CF5	0.118	0.000	7°	0.654	0.002-0.005	±0.001	±0.006											
GX16-2E300R/L15-CF5	0.118	0.000	15°	0.654	0.002-0.005	±0.001	±0.006											
GX24-1E200N02-CF5	0.079	0.008		0.945	0.002-0.005	±0.002	±0.006											
GX24-1E250N02-CF5	0.098	0.008		0.945	0.002-0.006	±0.002	±0.006											
GX24-2E300N00-CF5	0.118	0.000		0.969	0.002-0.006	±0.001	±0.002											
GX24-2E300N02-CF5	0.118	0.008		0.945	0.003-0.008	±0.002	±0.006											
GX24-2E300R/L6-CF5	0.118	0.008	6°	0.969	0.002-0.006	±0.002	±0.006											
GX24-3E400N02-CF5	0.157	0.008		0.945	0.004-0.009	±0.002	±0.006											
GX24-3E400R/L6-CF5	0.157	0.008	6°	0.969	0.004-0.007	±0.002	±0.006											
GX24-3E500N03-CF5	0.197	0.012		0.945	0.004-0.010	±0.002	±0.006											



l_{Tot} = Repeat accuracy when changing indexable insert
 Radius tolerance r_{tol} = ± 0.002 inch (0.05 mm)
 Parting off with GX16 possible up to dia. 1.260 inch (32 mm)

HC = Coated carbide

Walter Cut GX grooving inserts
Grooving and parting off
Tiger-tec® Silver



Indexable inserts

Designation	s in	r inch	κ	l inch	f inch	s _{Tot} inch	l _{Tot} inch	P				M			K		S		
								WKP23S	WSM23S	WSM33S	WSM43S	WSM23S	WSM33S	WSM43S	WKP23S	WSM23S	WSM33S	WSM43S	
 GX16-0E150N01-CF6	0.059	0.006		0.654	0.001-0.004	±0.001	±0.002			☹	☹		☹	☹			☹	☹	
GX16-0E150R/L10-CF6	0.059	0.006	10°	0.654	0.001-0.004	±0.001	±0.002			☹			☹				☹		
GX16-1E200N02-CF6	0.079	0.008		0.654	0.001-0.005	±0.002	±0.006			☹	☹		☹	☹			☹	☹	
GX16-1E200R/L6-CF6	0.079	0.008	6°	0.654	0.001-0.004	±0.002	±0.006			☹	☹		☹	☹			☹	☹	
GX16-1E200R/L7-CF6	0.079		7°	0.638	0.001-0.004	±0.001	±0.006			☹			☹				☹		
GX16-1E200R/L15-CF6	0.079		15°	0.638	0.001-0.004	±0.001	±0.006			☹			☹				☹		
GX16-1E250N02-CF6	0.098	0.008		0.654	0.001-0.006	±0.002	±0.006			☹	☹		☹	☹			☹	☹	
GX16-1E250R/L6-CF6	0.098	0.008	6°	0.654	0.001-0.005	±0.002	±0.006			☹	☹		☹	☹			☹	☹	
GX16-2E300N02-CF6	0.118	0.008		0.654	0.002-0.008	±0.002	±0.006			☹	☹		☹	☹			☹	☹	
GX16-2E300R/L6-CF6	0.118	0.008	6°	0.654	0.002-0.006	±0.002	±0.006			☹	☹		☹	☹			☹	☹	
GX16-2E300R/L7-CF6	0.118		7°	0.638	0.002-0.005	±0.002	±0.006			☹			☹				☹		
GX16-2E300R/L15-CF6	0.118		15°	0.638	0.002-0.005	±0.002	±0.006			☹			☹				☹		
GX24-1E200N02-CF6	0.079	0.008		0.945	0.001-0.005	±0.002	±0.006			☹	☹		☹	☹			☹	☹	
GX24-2E300N02-CF6	0.118	0.008		0.969	0.002-0.008	±0.002	±0.006			☹	☹		☹	☹			☹	☹	
GX24-2E300R/L6-CF6	0.118	0.008	6°	0.969	0.002-0.006	±0.002	±0.006			☹	☹		☹	☹			☹	☹	
 GX16-1F200N02-CF6	0.079	0.008		0.630	0.001-0.005	±0.002	±0.006			☹	☹		☹	☹			☹	☹	
GX16-1F250N02-CF6	0.098	0.008		0.630	0.001-0.006	±0.002	±0.006			☹	☹		☹	☹			☹	☹	
GX24-2F300N02-CF6	0.118	0.008		0.945	0.002-0.008	±0.002	±0.006			☹	☹		☹	☹			☹	☹	

l_{Tot} = Repeat accuracy when changing indexable insert
 Radius tolerance r_{Tot} = ±0.002

HC = Coated carbide

Parting off diameters up to 1.260 inch (32 mm) possible with these inserts (l = 0.654 inch (16.6 mm)).

WALTER SELECT

Best insert for:

☺
good

☹
moderate

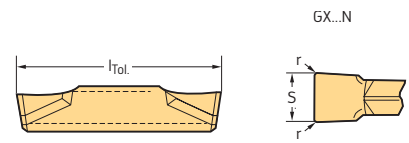
☹
unfavorable

machining conditions

Walter Cut GX grooving inserts

Grooving and parting off

Tiger-tec® Silver



Indexable inserts

Designation	s inch	r inch	κ	l inch	f inch	s _{Tol} inch	l _{Tol} inch	P				M		K	S	
								HC				HC		HC	HC	
								WKP23S	WSM23S	WSM33S	WSM43S	WSM23S	WSM33S	WSM43S	WKP23S	WSM23S
GX09-1E200N02-GD3	0.079	0.008		0.354	0.002-0.005	±0.001	±0.002	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX09-1E250N02-GD3	0.098	0.008		0.354	0.002-0.006	±0.001	±0.002	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX09-2E300N03-GD3	0.118	0.012		0.354	0.002-0.007	±0.001	±0.002	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX09-2E350N03-GD3	0.138	0.012		0.354	0.002-0.007	±0.001	±0.002	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX16-1E200N02-GD3	0.079	0.008		0.630	0.002-0.005	±0.001	±0.002	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX16-1E250N02-GD3	0.098	0.008		0.630	0.002-0.006	±0.001	±0.002	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX16-2E300N03-GD3	0.118	0.012		0.630	0.002-0.007	±0.001	±0.002	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX16-3E400N04-GD3	0.157	0.016		0.630	0.004-0.008	±0.001	±0.002	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX16-3E500N04-GD3	0.197	0.016		0.630	0.005-0.010	±0.001	±0.002	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX16-4E600N05-GD3	0.236	0.020		0.630	0.006-0.011	±0.001	±0.002	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX24-2E300N03-GD3	0.118	0.012		0.945	0.002-0.007	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX24-3E400N04-GD3	0.157	0.016		0.945	0.004-0.008	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX24-3E500N04-GD3	0.197	0.016		0.945	0.005-0.010	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX24-4E600N05-GD3	0.236	0.020		0.945	0.006-0.011	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX16-1E200N02-GD6	0.079	0.008		0.630	0.002-0.005	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX16-1E250N02-GD6	0.098	0.008		0.630	0.002-0.007	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX16-2E300N03-GD6	0.118	0.012		0.630	0.003-0.007	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX16-3E400N04-GD6	0.157	0.016		0.630	0.004-0.009	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX16-3E500N04-GD6	0.197	0.016		0.630	0.005-0.009	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX16-4E600N05-GD6	0.236	0.020		0.630	0.006-0.012	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX24-2E300N03-GD6	0.118	0.012		0.945	0.003-0.007	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX24-3E400N04-GD6	0.157	0.016		0.945	0.004-0.009	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX24-3E500N04-GD6	0.197	0.016		0.945	0.005-0.009	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
GX24-4E600N05-GD6	0.236	0.020		0.945	0.006-0.012	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺

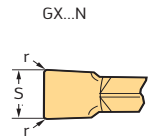
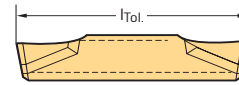
l_{Tol} = Repeat accuracy when changing indexable insert
 Radius tolerance r_{Tol} = ±0.002

HC = Coated carbide

Walter Cut GX grooving inserts

Grooving and longitudinal turning

Tiger-tec® Silver



Indexable inserts

Designation	s inch	r inch	l inch	f inch	a _p inch	S _{Tot} inch	l _{Tot} inch	P				M		K	S		
								HC				HC		HC	HC		
								WKP23S	WSM23S	WSM33S	WSM43S	WSM23S	WSM33S	WSM43S	WKP23S	WSM23S	WSM33S
GX09-1E200N02-UF4	0.079	0.008	0.354	0.002-0.004	0.012-0.039	±0.002	±0.006			☒	☒		☒			☒	☒
GX09-2E300N03-UF4	0.118	0.012	0.354	0.002-0.004	0.016-0.059	±0.002	±0.006			☒	☒		☒			☒	☒
GX16-1E200N02-UF4	0.079	0.008	0.630	0.004-0.006	0.012-0.047	±0.002	±0.006	☒	☒	☒	☒	☒	☒	☒		☒	☒
GX16-1E239N02-UF4	0.094	0.008	0.630	0.004-0.006	0.012-0.051	±0.002	±0.006			☒	☒		☒			☒	☒
GX16-1E250N02-UF4	0.098	0.008	0.630	0.004-0.007	0.012-0.051	±0.002	±0.006	☒	☒	☒	☒	☒	☒	☒		☒	☒
GX16-2E300N03-UF4	0.118	0.012	0.630	0.004-0.008	0.016-0.079	±0.002	±0.006	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
GX16-3E400N04-UF4	0.157	0.016	0.630	0.004-0.012	0.020-0.110	±0.002	±0.006	☒		☒	☒		☒			☒	☒
GX16-3E500N04-UF4	0.197	0.016	0.630	0.005-0.014	0.020-0.118	±0.002	±0.006	☒		☒	☒		☒			☒	☒
GX16-4E600N05-UF4	0.236	0.020	0.630	0.006-0.016	0.024-0.138	±0.002	±0.006	☒		☒	☒		☒			☒	☒
GX24-2E300N03-UF4	0.118	0.012	0.945	0.004-0.008	0.016-0.079	±0.002	±0.006	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
GX24-2E318N03-UF4	0.125	0.012	0.945	0.004-0.008	0.016-0.079	±0.002	±0.006			☒	☒		☒			☒	☒
GX24-3E400N04-UF4	0.157	0.016	0.945	0.004-0.012	0.020-0.110	±0.002	±0.006	☒	☒	☒	☒	☒	☒	☒		☒	☒
GX24-3E400N08-UF4	0.157	0.031	0.945	0.004-0.012	0.035-0.110	±0.002	±0.006	☒		☒	☒		☒			☒	☒
GX24-3E475N04-UF4	0.187	0.016	0.945	0.005-0.014	0.020-0.118	±0.002	±0.006	☒		☒	☒		☒			☒	☒
GX24-3E500N04-UF4	0.197	0.016	0.945	0.005-0.014	0.020-0.118	±0.002	±0.006	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
GX24-3E500N08-UF4	0.197	0.031	0.945	0.005-0.014	0.035-0.118	±0.002	±0.006	☒		☒	☒		☒			☒	☒
GX24-4E600N05-UF4	0.236	0.020	0.945	0.006-0.016	0.024-0.138	±0.002	±0.006	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
GX24-4E600N08-UF4	0.236	0.031	0.945	0.006-0.016	0.035-0.138	±0.002	±0.006	☒		☒	☒		☒			☒	☒
GX24-4E635N05-UF4	0.250	0.020	0.945	0.006-0.016	0.024-0.138	±0.002	±0.006	☒		☒	☒		☒			☒	☒
GX30-5E800N08-UF4	0.315	0.031	1.181	0.007-0.022	0.035-0.157	±0.002	±0.006	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
GX30-5E800N12-UF4	0.315	0.047	1.181	0.007-0.022	0.051-0.157	±0.002	±0.006	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

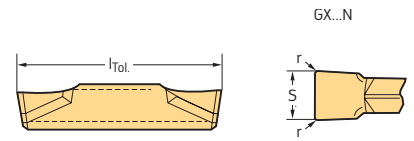
l_{Tot} = Repeat accuracy when changing indexable insert
 Radius tolerance r_{tol} = ± 0.002 inch (0.05 mm)

HC = Coated carbide

Walter Cut GX grooving inserts



Grooving and longitudinal turning

Tiger-tec® Silver



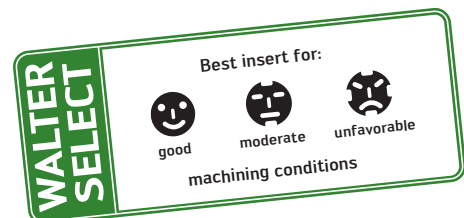
GX...N

Indexable inserts

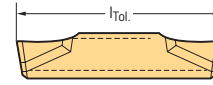
Designation	s inch	r inch	l inch	f inch	ap inch	s _{Tol} inch	l _{Tol} inch	P				M			K		S	
								HC				HC			HC		HC	
								WKP13S	WSM23S	WKP33S	WSM33S	WSM43S	WSM23S	WSM33S	WSM43S	WKP13S	WKP33S	WSM23S
 GX16-1E200N02-UD6	0.079	0.008	0.630	0.002-0.006	0.012-0.047	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
GX16-1E250N02-UD6	0.098	0.008	0.630	0.003-0.006	0.012-0.051	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
GX16-2E300N03-UD6	0.118	0.012	0.630	0.004-0.008	0.016-0.079	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
GX16-3E400N04-UD6	0.157	0.016	0.630	0.005-0.010	0.020-0.110	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
GX16-3E500N04-UD6	0.197	0.016	0.630	0.005-0.012	0.020-0.118	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
GX16-4E600N05-UD6	0.236	0.020	0.630	0.006-0.014	0.024-0.138	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
GX24-2E300N03-UD6	0.118	0.012	0.945	0.004-0.008	0.016-0.079	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
GX24-3E400N04-UD6	0.157	0.016	0.945	0.005-0.010	0.020-0.110	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
GX24-3E500N04-UD6	0.197	0.016	0.945	0.005-0.012	0.020-0.118	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
GX24-4E600N05-UD6	0.236	0.020	0.945	0.006-0.014	0.024-0.138	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
 GX16-1E200N02-UA4	0.079	0.008	0.630	0.003-0.006	0.012-0.047	±0.002	±0.006	☺						☺				
GX16-2E300N03-UA4	0.118	0.012	0.630	0.004-0.009	0.016-0.079	±0.002	±0.006	☺	☺					☺	☺			
GX16-3E400N04-UA4	0.157	0.016	0.630	0.004-0.014	0.020-0.110	±0.002	±0.006	☺	☺					☺	☺			
GX16-3E500N04-UA4	0.197	0.016	0.630	0.005-0.014	0.020-0.118	±0.002	±0.006	☺	☺					☺	☺			
GX16-4E600N05-UA4	0.236	0.020	0.630	0.006-0.016	0.024-0.138	±0.002	±0.006	☺	☺					☺	☺			
GX24-2E300N03-UA4	0.118	0.012	0.945	0.004-0.009	0.016-0.079	±0.002	±0.006	☺	☺					☺	☺			
GX24-3E400N04-UA4	0.157	0.016	0.945	0.004-0.014	0.020-0.110	±0.002	±0.006	☺	☺					☺	☺			
GX24-3E500N04-UA4	0.197	0.016	0.945	0.005-0.014	0.020-0.118	±0.002	±0.006	☺	☺					☺	☺			
GX24-4E600N05-UA4	0.236	0.020	0.945	0.006-0.016	0.024-0.138	±0.002	±0.006	☺	☺					☺	☺			

l_{Tol} = Repeat accuracy when changing indexable insert
 Radius tolerance r_{Tol} = ±0.002

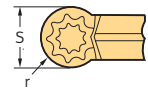
HC = Coated carbide






Walter Cut GX grooving inserts
Grooving and longitudinal turning
Tiger-tec® Silver



GX...N



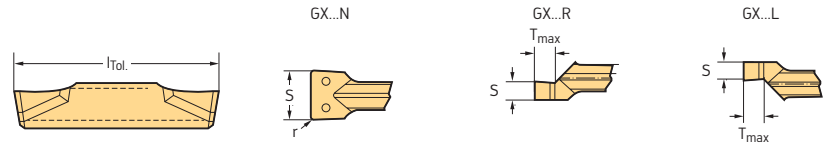
Indexable inserts

Designation	s inch	r inch	l inch	f inch	ap inch	s _{Tot} inch	l _{Tot} inch	P				M				K		N	S		
								HC				HC				HC		HW	HC		
								WKP23S	WSM13S	WSM23S	WSM33S	WSM13S	WSM23S	WSM33S	WSM33	WKP23S	WKP33S	WK1	WSM13S	WSM23S	WSM33S
 GX16-1E200N10-RD4	0.079	0.039	0.630	0.003-0.010	0.008-0.039	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺	
GX16-1E239N12-RD4	0.094	0.047	0.630	0.003-0.010	0.008-0.039	±0.002	±0.006	☺		☺			☺	☺	☺					☺	
GX24-2E300N15-RD4	0.118	0.059	0.945	0.004-0.014	0.020-0.059	±0.002	±0.006	☺		☺	☺		☺	☺	☺					☺	☺
GX24-2E318N16-RD4	0.125	0.063	0.945	0.003-0.014	0.063	±0.002	±0.006	☺		☺			☺	☺	☺						☺
GX24-3E400N20-RD4	0.157	0.079	0.945	0.006-0.020	0.020-0.079	±0.002	±0.006	☺		☺			☺	☺	☺						☺
GX24-3E475N24-RD4	0.187	0.094	0.945	0.004-0.016	0.094	±0.002	±0.006	☺		☺			☺	☺	☺						☺
GX24-3E500N25-RD4	0.197	0.098	0.945	0.007-0.028	0.020-0.098	±0.002	±0.006	☺		☺			☺	☺	☺						☺
GX24-4E600N30-RD4	0.236	0.118	0.945	0.007-0.028	0.020-0.118	±0.002	±0.006	☺		☺			☺	☺	☺						☺
GX24-4E635N32-RD4	0.250	0.125	0.945	0.006-0.024	0.118	±0.002	±0.006	☺		☺			☺	☺	☺						☺
 GX16-1E200N10-RF8	0.079	0.039	0.630	0.003-0.010	0.004-0.039	±0.001	±0.001		☺	☺		☺	☺						☺	☺	
GX16-2E300N15-RF8	0.118	0.059	0.630	0.004-0.012	0.004-0.059	±0.001	±0.001		☺	☺		☺	☺						☺	☺	
GX24-2E300N15-RF8	0.118	0.059	0.945	0.004-0.012	0.004-0.059	±0.001	±0.001		☺	☺		☺	☺						☺	☺	
GX24-2E318N16-RF8	0.125	0.063	0.945	0.004-0.012	0.004-0.059	±0.001	±0.001			☺			☺	☺							☺
GX24-3E400N20-RF8	0.157	0.079	0.945	0.005-0.018	0.004-0.079	±0.001	±0.001		☺	☺		☺	☺						☺	☺	
GX24-3E475N24-RF8	0.189	0.094	0.945	0.005-0.018	0.004-0.098	±0.001	±0.001			☺			☺	☺							☺
GX24-3E500N25-RF8	0.197	0.098	0.945	0.006-0.020	0.004-0.098	±0.001	±0.001		☺	☺		☺	☺						☺	☺	
GX24-4E600N30-RF8	0.236	0.118	0.945	0.006-0.022	0.004-0.118	±0.001	±0.001		☺	☺		☺	☺						☺	☺	
GX24-4E635N32-RF8	0.250	0.125	0.945	0.006-0.022	0.004-0.118	±0.001	±0.001			☺			☺	☺							☺
GX30-5E800N40-RF8	0.315	0.157	1.181	0.007-0.024	0.008-0.157	±0.001	±0.001		☺	☺		☺	☺						☺	☺	
 GX24-4R300N-RK8	0.236	0.118	1.000	0.004-0.012	0.157	±0.001	±0.002												☺		
GX24-5R400N-RK8	0.315	0.157	1.000	0.004-0.014	0.197	±0.001	±0.002												☺		

l_{Tot} = Repeat accuracy when changing indexable insert
Radius tolerance r_{Tot} = ±0.002

HC = Coated carbide
HW = Uncoated carbide

Walter Cut GX grooving inserts Circlip grooves

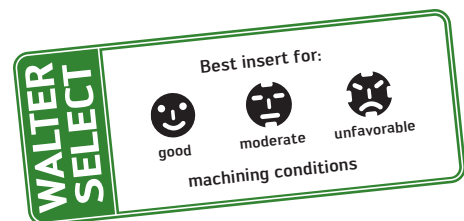


Indexable inserts

Designation	s in	r in	T _{max} in	l in	f in	s _{Tol} in	l _{Tol} in	P		M		K		S	
								HC		HC		HC		HC	
								WSM23S	WSM33S	WTA33	WSM23S	WSM33S	WTA33	WSM23S	WSM33S
GX09-1S1.00R/L	0.039		0.045	0.354	0.002-0.004	±0.001	±0.002		☺			☹			
GX09-1S1.20R/L	0.047		0.053	0.354	0.002-0.004	±0.001	±0.002		☺			☹			
GX09-1S1.40R/L	0.055		0.060	0.354	0.002-0.004	±0.001	±0.002		☺			☹			
GX09-1S1.70R/L	0.067		0.072	0.354	0.002-0.004	±0.001	±0.002		☺			☹			
GX09-1S1.95N	0.079	0.004		0.354	0.002-0.004	±0.001	±0.002		☺			☹			
GX09-1S2.25N	0.091	0.004		0.354	0.002-0.005	±0.001	±0.002		☺			☹			
GX09-2S2.75N	0.110	0.004		0.354	0.002-0.005	±0.001	±0.002		☺			☹			
GX09-2S3.25N	0.130	0.004		0.354	0.002-0.005	±0.001	±0.002		☺			☹			
GX16-2S0.60R/L	0.024		0.030	0.630	0.002-0.004	±0.001	±0.002		☺			☹			
GX16-2S0.80R/L	0.031		0.037	0.630	0.002-0.004	±0.001	±0.002		☺			☹			
GX16-2S0.90R/L	0.035		0.041	0.630	0.002-0.004	±0.001	±0.002		☺			☹			
GX16-2S1.00R/L	0.039		0.045	0.630	0.002-0.004	±0.001	±0.002		☺			☹			
GX16-2S1.20R/L	0.047		0.053	0.630	0.002-0.004	±0.001	±0.002		☺			☹			
GX16-2S1.40R/L	0.055		0.060	0.630	0.002-0.004	±0.001	±0.002		☺			☹			
GX16-2S1.70R/L	0.067		0.072	0.630	0.002-0.004	±0.001	±0.002		☺			☹			
GX16-2S1.95R/L	0.079		0.081	0.630	0.002-0.004	±0.001	±0.002		☺			☹			
GX16-2S2.25R/L	0.091		0.093	0.630	0.002-0.005	±0.001	±0.002		☺			☹			
GX16-2S2.75N	0.110	0.004		0.630	0.002-0.005	±0.001	±0.002		☺			☹			
GX16-2S3.25N	0.130	0.004		0.630	0.003-0.006	±0.001	±0.002		☺			☹			
GX16-3S4.25N	0.169	0.008		0.630	0.003-0.008	±0.001	±0.002		☺			☹			
GX16-4S5.25N	0.209	0.008		0.630	0.003-0.008	±0.001	±0.002		☺			☹			

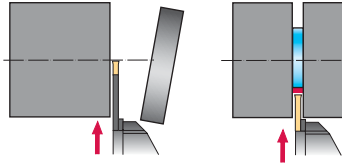
l_{Tol} = Repeat accuracy when changing indexable insert
Radius tolerance r_{Tol} = ±0.002

HC = Coated carbide



Walter Cut product range overview

Parting off/grooving



SX system		GX system		
<p>G2012 / G2012-P</p> <p>s = .079-.236 inch (2-6 mm) T_{max} = 1.574 inch (40 mm)</p>  <p>Page 54</p>	<p>G1011-P</p> <p>s = .079-.250 inch (2-6.35 mm) T_{max} = 1.260 inch (26 mm)</p>  <p>Page 52</p>	<p>G1011</p> <p>s = .079-.315 inch (2-8 mm) T_{max} = 1.500 inch (38.1 mm)</p>  <p>Page 50</p>	<p>NCAE / NCBE</p> <p>s = .079-.315 inch (2-8 mm) T_{max} = .827 inch (21 mm)</p>  <p>Shank tool: Page 84 Walter Capto Page 134</p>	
<p>G2042N / / G2042N-P</p> <p>s = .118-.315 inch (3-10 mm) T_{max} = 3.94 inch (100 mm)</p>  <p>Page 58-59</p>	<p>G1042N</p> <p>s = .118-.236 inch (3-6 mm) T_{max} = 2.362 inch (60 mm)</p>  <p>Page 64</p>	<p>XLDE</p> <p>s = .059-.125 inch (1.5-3.18 mm) T_{max} = .630 inch (16 mm)</p>  <p>Page 68</p>	<p>NCLE</p> <p>s = .079-.315 inch (2-8 mm) T_{max} = .827 inch (21 mm)</p>  <p>Shank tool: Page 88 Walter Capto Page 138</p>	
<p>G2042R/L / G2042R/L-C / G2042R/L-C-P</p> <p>s = .059-.236 inch (1.5-6 mm) T_{max} = 1.260 inch (32 mm)</p>  <p>Page 60</p>	<p>G1041R/L</p> <p>s = .059-.157 inch (1.5-4 mm) T_{max} = 1.260 inch (32 mm)</p>  <p>Page 62</p>	<p>XLDE-C</p> <p>s = .059-.125 inch (1.5-3.18 mm) T_{max} = .630 inch (16 mm)</p>  <p>Page 69</p>	<p>NCCE</p> <p>s = .024-.089 inch (.6-2.25mm) T_{max} = .118 inch (3 mm)</p>  <p>Shank tool: Page 92 Walter Capto Page 140</p>	
<p>G2632</p> <p>s = .079-.250 inch (2-8 mm) T_{max} = 1.772 inch (45 mm)</p>  <p>Page 75</p>	<p>G1041R/L-C</p> <p>s = .059-.157 inch (1.5-4 mm) T_{max} = 1.260 inch (32 mm)</p>  <p>Page 63</p>	<p>MSS-E...R/L 00 / MSS-E...R/L90</p>  <p>Shank tool: Page 76 Walter Capto Page 80</p>	<p>NCNE</p> <p>s = .024-.089 inch (.6-2.25 mm) T_{max} = .118 inch (3 mm)</p>  <p>Shank tool: Page 96 Walter Capto Page 142</p>	

Grooving/recessing		Axial grooving		Internal grooving					
GX system		GX system		GX system					
<p>G1011</p> <p>s = .031–.250 inch (2–8 mm) T_{max} = 1.50 inch (38.1 mm)</p> <p>Page 50</p>		<p>G1511</p> <p>s = .031–.250 inch (2–6.35 mm) T_{max} = .236 inch (6 mm)</p> <p>Page 70</p>		<p>G1111</p> <p>s = .118–.236 inch (3–6 mm) T_{max} = .980 inch (25 mm)</p> <p>Page 73</p>		<p>NCHE</p> <p>s = .118–.250 inch (3–6.35 mm) T_{max} = .590 inch (15 mm)</p> <p>Shank tool: Page 104 Walter Capto Page 146</p>		<p>I 12</p> <p>s = .077–.098 inch (1.95–2.5 mm) T_{max} = .118 inch (3 mm)</p> <p>Page 125</p>	
<p>G1521</p> <p>s = .031–.250 inch (2–6.35 mm) T_{max} = .236 inch (6 mm)</p> <p>Page 71</p>		<p>G1551</p> <p>s = .118–.250 inch (3–6.35 mm) T_{max} = .236 inch (6 mm)</p> <p>Page 72</p>		<p>NCEE</p> <p>s = .118–.250 inch (3–6.35 mm) T_{max} = .590 inch (15 mm)</p> <p>Shank tool: Page 100 Walter Capto Page 144</p>		<p>NCOE</p> <p>s = .118–.250 inch (3–6.35 mm) T_{max} = .827 inch (21 mm)</p> <p>Shank tool: Page 116 Walter Capto Page 150</p>		<p>NCAI</p> <p>s = .077–.236 inch (1.95–6 mm) T_{max} = .748 inch (19 mm)</p> <p>Page 126</p>	
<p>NCAE / NCBE</p> <p>s = .079–.315 inch (2–8 mm) T_{max} = .827 inch (21 mm)</p> <p>Shank tool: Page 84 Page 134</p>		<p>NCCE</p> <p>s = .024–.089 inch (.6–2.25 mm) T_{max} = .118 inch (3 mm)</p> <p>Shank tool: Page 92 Walter Capto Page 140</p>		<p>NCFE</p> <p>s = .118–.250 inch (3–6.35 mm) T_{max} = .827 inch (21 mm)</p> <p>Shank tool: Page 108 Walter Capto Page 148</p>		<p>NCOE-C</p> <p>s = .118–.250 inch (3–6.35 mm) T_{max} = .827 inch (21 mm)</p> <p>Shank tool: Page 120 Walter Capto Page 154</p>		<p>NCCI</p> <p>s = .024–.128 inch (.6–3.25 mm) T_{max} = .118 inch (3 mm)</p> <p>Page 130</p>	
<p>NCLE</p> <p>s = .079–.315 inch (2–8 mm) T_{max} = .827 inch (21 mm)</p> <p>Shank tool: Page 88 Page 138</p>		<p>NCNE</p> <p>s = .031–.118 inch (.8–3.0 mm) T_{max} = .118 inch (3 mm)</p> <p>Shank tool: Page 96 Walter Capto Page 142</p>		<p>NCFE-C</p> <p>s = .118–.250 inch (3–6.35 mm) T_{max} = .827 inch (21 mm)</p> <p>Shank tool: Page 112 Walter Capto Page 152</p>					

Designation key for Walter Cut grooving tools

Example for monoblock grooving tool holder

G1	0	1	1	.	16	L	-	5	T21	-	GX24
1	2	3	4		6 / 7	8		9	10		12

1
Tool range
G1 Walter Cut

2
Machining method
0 0° radial grooving and turning 1 0° axial (face) grooving and turning 3 modular external GX 5 shallow and circlip grooving

3
Approach angle
1 0° (straight) 2 90° 3 Module 4 Parting blade 5 45° angle

4
Insert clamping
1 Screw clamped 2 Self (spring) clamped

8
Holder design
R Right-hand L Left-hand N Neutral

9
Insert width
SX Grooving single-edged GX Grooving double-edged

10
Maximum depth of cut, T _{max} inch [mm]
8 = 0.315 inch [8 mm] 12 = 0.472 inch [12 mm] 20 = 0.787 inch [20 mm] . . . 60 = 2.362 inch [60 mm]

11
Axial (face) grooving minimum 1st cut diameter inch [mm]
1 1.969–2.756 inch [50–70 mm] 2 2.756–3.937 inch [70–100 mm] 3 3.937–5.905 inch [100–150 mm] 4 5.905–11.811 inch [150–300 mm] 5 11.811–35.433 inch [300–900 mm]

Example for parting blade

G1	0	4	2	.	26	N	-	2	T25	-	GX16	-	C
1	2	3	4		5	8		9	10		12		14

Example for axial (face) grooving

G1	1	1	1	.	16	R	-	4	T25	-	092	-	GX24
1	2	3	4		6	8		9	10		11		12

5
Parting blade height [mm]
26
32
20
25
32
52

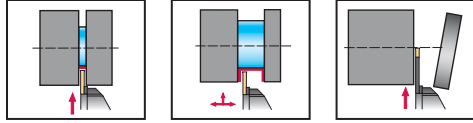
6														
Shank dimensions														
<table border="1"> <thead> <tr> <th>$h_1 = b$ (inch)</th> <th>$h_1 = b$ (mm)</th> </tr> </thead> <tbody> <tr> <td>06 = 0.375"</td> <td>1010 = 10 mm</td> </tr> <tr> <td>08 = 0.5"</td> <td>1212 = 12 mm</td> </tr> <tr> <td>10 = 0.625"</td> <td>1616 = 16 mm</td> </tr> <tr> <td>12 = 0.75"</td> <td>2020 = 20 mm</td> </tr> <tr> <td>16 = 1.0"</td> <td>2525 = 25 mm</td> </tr> <tr> <td>20 = 1.25"</td> <td>3232 = 32 mm</td> </tr> </tbody> </table>	$h_1 = b$ (inch)	$h_1 = b$ (mm)	06 = 0.375"	1010 = 10 mm	08 = 0.5"	1212 = 12 mm	10 = 0.625"	1616 = 16 mm	12 = 0.75"	2020 = 20 mm	16 = 1.0"	2525 = 25 mm	20 = 1.25"	3232 = 32 mm
$h_1 = b$ (inch)	$h_1 = b$ (mm)													
06 = 0.375"	1010 = 10 mm													
08 = 0.5"	1212 = 12 mm													
10 = 0.625"	1616 = 16 mm													
12 = 0.75"	2020 = 20 mm													
16 = 1.0"	2525 = 25 mm													
20 = 1.25"	3232 = 32 mm													

7																														
Shank dimensions [mm] / Walter Capto™																														
<table border="1"> <thead> <tr> <th colspan="2">External holder</th> <th>Walter Capto™</th> </tr> <tr> <th>Height</th> <th>Width</th> <th>External</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>10</td> <td>C3 00 = C3</td> </tr> <tr> <td>12</td> <td>12</td> <td>C4 00 = C4</td> </tr> <tr> <td>16</td> <td>16</td> <td>C5 00 = C5</td> </tr> <tr> <td>20</td> <td>12</td> <td>C6 00 = C6</td> </tr> <tr> <td>20</td> <td>20</td> <td></td> </tr> <tr> <td>25</td> <td>25</td> <td></td> </tr> <tr> <td>32</td> <td>25</td> <td></td> </tr> <tr> <td>32</td> <td>32</td> <td></td> </tr> </tbody> </table>	External holder		Walter Capto™	Height	Width	External	10	10	C3 00 = C3	12	12	C4 00 = C4	16	16	C5 00 = C5	20	12	C6 00 = C6	20	20		25	25		32	25		32	32	
External holder		Walter Capto™																												
Height	Width	External																												
10	10	C3 00 = C3																												
12	12	C4 00 = C4																												
16	16	C5 00 = C5																												
20	12	C6 00 = C6																												
20	20																													
25	25																													
32	25																													
32	32																													

12
GX insert length
GX09 = 9mm [0.354"] GX16 = 16mm [0.630"] GX24 = 24mm [0.945"]

14
Version
C Contra P Precision Coolant

Walter Cut G1011 - Inch



- External machining
- Radial grooving 0°
- One-piece shank tool
- For grooving, recessing and parting off
- For GX cutting inserts

Tool	Designation	s in	s mm	T _{max} in	D _{max} in	h=h ₁ in	b in	f ₁ in	l ₁ in	l ₄ in	s ₁ in	Type			
	G1011.08R/L-2T8GX16	0.079 - 0.094	2 - 2.39	0.315		0.500	0.500	0.469	4.803	1.240	0.063	GX 16-1E2/F2...			
	G1011.08R/L-2T12GX16			0.472		0.500	0.500	0.469	4.803	1.240	0.063				
	G1011.10R/L-2T8GX16			0.315		0.625	0.625	0.594	5.197	1.398	0.063				
	G1011.10R/L-2T15GX16			0.590		0.625	0.625	0.594	5.315	1.398	0.063				
	G1011.12R/L-2T8GX16			0.315		0.750	0.750	0.719	5.591	1.240	0.063				
	G1011.12R/L-2T15GX16			0.590		0.750	0.750	0.719	5.748	1.398	0.063				
	G1011.12R/L-2T21GX24			0.827		0.750	0.750	0.719	5.905	1.575	0.063				
	G1011.16R/L-2T8GX16			0.315		1.000	1.000	0.969	5.591	1.240	0.063				
	G1011.16R/L-2T15GX16			0.590		1.000	1.000	0.969	5.748	1.398	0.063				
	G1011.16R/L-2T21GX24			0.827		1	1	0.969	5.905	1.575	0.063				
	G1011.10R/L-3T12GX24			0.472	0.118 - 0.125	3.0 - 3.18	0.472	0.625	0.625	0.578	5.315		1.378	0.094	GX 24-2E3/F3...
	G1011.10R/L-3T21GX24			0.827			0.625	0.625	0.578	5.905	1.575		0.094		
	G1011.12R/L-3T12GX24			0.472			0.750	0.750	0.701	5.709	1.378		0.094		
	G1011.12R/L-3T21GX24			0.827			0.750	0.750	0.701	5.905	1.575		0.094		
	G1011.16R/L-3T12GX24			0.472	0.156 - 0.187	4 - 4.75	0.472	1.000	1.000	0.953	5.709		1.378	0.094	GX 24-3E4/F4...
	G1011.16R/L-3T21GX24			0.827			1.000	1.000	0.953	5.905	1.575		0.094		
	G1011.10R/L-4T12GX24			0.472			0.625	0.625	0.558	5.315	1.378		0.134		
	G1011.10R/L-4T21GX24			0.827			0.625	0.625	0.558	5.905	1.575		0.134		
	G1011.12R/L-4T12GX24			0.472	0.197	5	0.472	0.750	0.750	0.685	5.709		1.378	0.134	GX 24-3E5/F5...
	G1011.12R/L-4T21GX24			0.827			0.750	0.750	0.669	5.905	1.575		0.165		
	G1011.16R/L-5T12GX24			0.472			1.000	1.000	0.917	5.709	1.378		0.165		
	G1011.16R/L-5T21GX24			0.827			1.000	1.000	0.917	5.905	1.575		0.165		
	G1011.16R/L-5T32GX24			1.260	0.236 - 0.250	6 - 6.35	1.260	1.000	1.000	0.917	5.496		2.165	0.165	GX 24-4E6/F6...
	G1011.12R/L-6T12GX24			0.472			0.750	0.750	0.646	5.709	1.378		0.205		
G1011.12R/L-6T21GX24	0.827	0.750	0.750	0.646			5.905	1.575	0.205						
G1011.16R/L-6T12GX24	0.472	1.000	1.000	0.898			5.709	1.378	0.205						
G1011.16R/L-6T21GX24	0.827	0.118-0.125	3.0 - 3.18	0.827	1.000	1.000	0.898	5.905	1.575	0.205	GX 24-2E3/F3...				
G1011.16R/L-6T32GX24	1.260			4.72	1.000	1.000	0.898	6.496	2.165	0.205					
G1011.20R/L-3T21GX24	0.827			1.250	1.250	1.205	4.330	1.575	0.094						
G1011.20R/L-4T15GX24	0.590			1.250	1.250	1.181	5.787	1.457	0.134						
G1011.20R/L-4T26GX24	1.024	0.156 - 0.187	4.0 - 4.75	1.024	1.250	1.250	1.181	6.142	1.811	0.134	GX 24-3E4/F4...				
G1011.20R/L-5T26GX24	1.024			1.250	1.250	1.165	6.142	1.811	0.165						
G1011.20R/L-5T62GX24	1.260	0.197	5	1.024	1.250	1.250	1.165	6.142	1.811	0.165	GX 24-3E5...				
G1011.20R/L-6T21GX24	0.827	0.236 - 0.250	6.0 - 6.35	0.827	1.250	1.250	1.15	5.905	1.575	0.205	GX 24-4E6...				
G1011.20R/L-6T32GX24	1.260			1.250	1.250	1.148	6.500	2.165	0.205						
G1011.16R/L-8T28GX30	1.102	0.315	8.0	1.102	1.000	1.000	0.822	6.470	2.165	0.240	GX 30-5E8...				
G1011.20R/L-8T28GX30	1.102			1.250	1.250	1.130	6.470	2.165	0.240						
G1011.20R/L-8T38GX30	1.500			1.250	1.250	1.130	6.870	2.600	0.240						
G1011.24R/L-8T38GX30	1.500			1.500	1.500	1.378	6.870	2.600	0.240						

For T_{max} with greater diameters than D_{max}, see "Technical information" from page A 471 in the Walter General Catalog 2012.

Max. cutting depth for double-edged GX16 insert = 0.615 inch (15.6mm). GX24 insert = 0.906 inch (23 mm)

f = f1+s/2

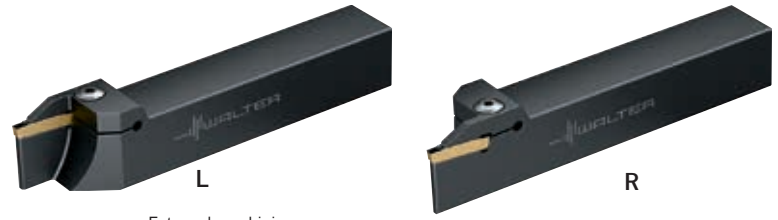
Ordering example: right-handed shank tool: G1011.12 R-3T21GX24 / left-handed shank tool: G1011.12 L-3T21GX24

Bodies and assembly parts are included in the scope of delivery.

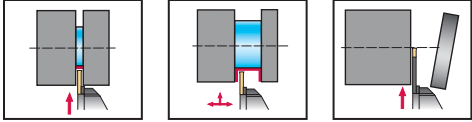
Assembly parts	Type	GX 16-1E2/F2...-GX 24-4E6/F6...
	Clamping screw for grooving insert Tightening torque	FS2118 (Torx 20IP) 44 in lb (5.0 Nm)
	Torx key	FS1464 (Torx 20IP)



Walter Cut G1011 - Metric



- External machining
- Radial grooving 0°
- One-piece shank tool
- For grooving, recessing and parting off
- For GX cutting inserts



Tool	Designation	s mm	T _{max} mm	D _{max} mm	h=h ₁ mm	b mm	f ₁ mm	l ₁ mm	l ₄ mm	s ₁ mm	Type	
	G1011.1212R/L-2T8GX16	2	8		12	12	11	122	32	1.6	GX 16-1E2/F2 ..	
	G1011.1212R/L-2T12GX16		12		12	12	11	122	32	1.6		
	G1011.1616R/L-2T8GX16		8		16	16	15	132	36	1.6		
	G1011.1616R/L-2T15GX16		16		16	16	15	136	36	1.6		
	G1011.2020R/L-2T8GX16		8		20	20	19	142	32	1.6		
	G1011.2020R/L-2T15GX16		16		20	20	19	146	36	1.6		
	G1011.2525R/L-2T8GX16		8		25	25	24	142	32	1.6		
	G1011.2525R/L-2T15GX16		16		25	25	24	146	36	1.6		
	G1011.1616R/L-2T21GX24		21	2	16	16	15	150	40	1.6		GX 24-1E2 ..
	G1011.2020R/L-2T21GX24		21		20	20	19	150	40	1.6		
	G1011.1616R/L-3T12GX24		12		16	16	15	135	35	2.4		
	G1011.1616R/L-3T21GX24		21	3	16	16	15	150	40	2.4		GX 24-2E3/F3 ..
	G1011.2020R/L-3T12GX24	12	20		20	19	145	35	2.4			
	G1011.2012R/L-3T21GX24	21	20		12	11	150	40	2.4			
	G1011.2020R/L-3T21GX24	21	20		20	19	150	40	2.4			
	G1011.2525R/L-3T12GX24	12	25		25	24	145	35	2.4			
	G1011.2525R/L-3T21GX24	21	25		25	24	150	40	2.4			
	G1011.1616R/L-4T12GX24	12	4	16	16	14	135	35	3.4	GX 24-3E4/F4 ..		
	G1011.1616R/L-4T21GX24	21		16	16	14	150	40	3.4			
	G1011.2020R/L-4T12GX24	12		20	20	18	145	35	3.4			
	G1011.2012R/L-4T21GX24	21		20	12	10	150	40	3.4			
	G1011.2020R/L-4T21GX24	21		20	20	18	150	40	3.4			
	G1011.2525R/L-4T12GX24	12		25	25	23	145	35	3.4			
	G1011.2525R/L-4T21GX24	21		25	25	23	150	40	3.4			
	G1011.2525R/L-4T32GX24	32		25	25	23	165	55	3.4			
	G1011.2020R/L-5T12GX24	12	5	20	20	18	145	35	4.2	GX 24-3E5/F5 ..		
	G1011.2020R/L-5T21GX24	21		20	20	18	150	40	4.2			
	G1011.2525R/L-5T12GX24	12		25	25	23	145	35	4.2			
G1011.2525R/L-5T21GX24	21	25		25	23	150	40	4.2				
G1011.2525R/L-5T32GX24	32		25	25	23	165	55	4.2				
G1011.2020R/L-6T12GX24	12	6	20	20	17	145	35	5.2	GX 24-4E6/F6 ..			
G1011.2020R/L-6T21GX24	21		20	20	17	150	40	5.2				
G1011.2525R/L-6T12GX24	12		25	25	22	145	35	5.2				
G1011.2525R/L-6T21GX24	21		25	25	22	150	40	5.2				
G1011.2525R/L-6T32GX24	32		25	25	22	165	55	5.2				
G1011.2525R/L-8T28GX30	28	8	25	25	22	165	55	6.1	GX 30-5E8..			
G1011.3232R/L-8T28GX30	28		32	32	29	165	55	6.1				

f = f₁+s/2

Ordering example: Right-handed shank tool: G1011.2020R-3T12GX24 / left-handed shank tool: G1011.2020L-3T12GX24

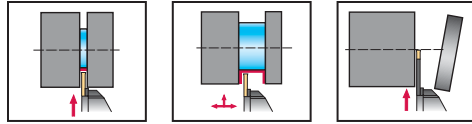
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	Type	GX 16-1E2/F2 ..-GX 30-5E8..
	Clamping screw for grooving insert Tightening torque	FS2118 (Torx 20IP) 44 in lb (5.0 Nm)
	Torx key	FS1464 (Torx 20IP)



Walter Cut G1011-P - Inch



- External machining
- Radial grooving 0°
- One-piece shank tool with internal coolant supply
- For grooving, recessing and parting off
- For GX cutting inserts

Tool	Designation	s inch	s mm	T _{max} inch	D _{max} inch	h = h ₁ inch	b inch	f ₁ inch	l ₁ inch	l ₄ inch	s ₁ inch	Type
	G1011.12R/L-2T15GX16-P	0.079	2	0.59	-	0.75	0.75	0.719	5.9	1.398	0.063	GX16-1E2/F2..
	G1011.16R/L-2T15GX16-P			0.59	-	1	1	0.969	5.9	1.398	0.063	
	G1011.12R/L-3T21GX24-P	0.118-0.125	3-3.18	0.827	3.15	0.75	0.75	0.701	5.9	1.575	0.094	GX24-2E3/F3..
	G1011.16R/L-3T21GX24-P			0.827	3.15	1	1	0.701	5.9	1.575	0.094	
	G1011.12R/L-4T21GX24-P	0.157	4	0.472	-	0.75	0.75	0.685	5.9	1.378	0.134	GX24-3E4/F4..
	G1011.12R/L-4T21GX24-P			0.827	-	0.75	0.75	0.685	5.9	1.575	0.134	
	G1011.16R/L-4T21GX24-P			0.827	-	1	1	0.933	5.9	1.575	0.134	
	G1011.12R/L-5T21GX24-P	0.198	5	0.827	-	0.75	0.75	0.669	5.9	1.575	0.165	GX24-3E5/F5..
	G1011.16R/L-5T21GX24-P			0.827	-	1	1	0.917	5.9	1.575	0.165	
	G1011.16R/L-6T21GX24-P	0.236-0.250	6-6.35	0.827	-	1	1	0.898	5.9	1.575	0.205	GX24-4E6/F6..
	G1011.16R/L-6T32GX24-P			1.26	-	1	1	0.898	5.9	1.165	0.205	

For T_{max} with greater dimensions than D_{max}, see "Technical information" from page A 471 in the Walter General Catalog 2012.

$$f = f_1 + s/2$$

Ordering example: Right-hand shank tool: G1011.2020R-3T12GX24-P / left-hand shank tool: G1011.2020L-3T12GX24-P

For the connection set for internal coolant supply with G1/8" thread, see page 163.

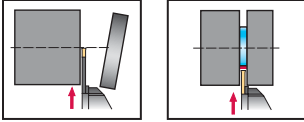
The maximum recommended coolant pressure is 150 bar (2175 psi).

Bodies and assembly parts are included in the scope of delivery.

Assembly parts		Type	GX 16-1E2/F2 . . . - GX24-4E6/F6 . . .
	Clamping screw for grooving insert		FS2118 (Torx 20IP)
	Tightening torque		44 in lb
	Threaded plug		FS2258 (G1/8 / SW 5)
			FS2288 (M6 / SW 3)
	Torx key		FS1464 (Torx 20IP)



Walter Cut G2042 N



- External machining
- Radial grooving 0°
- Deep parting blade
- For parting off and grooving
- For SX cutting inserts

Tool	Designation	s in	T _{max} in	h ₄ in	l ₁ in	h ₁ in	Type	
	G2042.26N-2T30SX	0.079	1.181	1.024	5.906	0.831	SX-2 ..	
	G2042.32N-2T30SX		1.181	1.260		0.976		
	G2042.26N-3T38SX	0.118	1.496	1.024	5.906	0.827	SX-3 ..	
	G2042.32N-3T50SX		1.969	1.260		0.972		
	G2042.26N-4T40SX	0.157	1.575	1.024	5.906	0.823	SX-4 ..	
	G2042.32N-4T50SX		1.969	1.260		0.966		
	G2042.32N-5T60SX	0.197	2.362	1.260	5.906	0.961	SX-5 ..	
	G2042.46N-5T80SX		3.150	1.811		1.472		
	G2042.32N-6T60SX	0.236	2.362	1.260	5.906	0.957	SX-6 ..	
	G2042.46N-6T80SX		3.150	1.811		1.453		

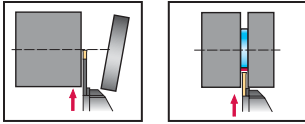
For clamping blocks, see page 65-67.

For instructions on replacing the cutting edge, see page 162.

Accessories

	Type	SX-2 ..-SX-6 ..
	Mounting wrench for grooving insert	FS1494

Walter Cut G2042...N...-P - Inch



- External machining
- Radial grooving 0°
- Deep parting blade
- For parting off and grooving
- For SX cutting inserts

Tool

Designation	s Inch	s mm	T _{max} inch	h ₄ inch	b inch	l ₁ inch	h ₁ inch	T _{max} mm	h ₄ mm	b mm	l ₁ mm	h ₁ mm	Type
G2042.26N-3T38SX-P	0.118	3	1.496	1.024	0.138	5.118	0.827	38	26	3.5	130	21	SX-3E ..
G2042.32N-3T45SX-P			1.772	1.260		5.906	0.969	45	32		150	24.6	
G2042.26N-4T40SX-P	0.157	4	1.575	1.024	-	5.118	0.827	40	26	-	130	21	SX-4E ..
G2042.32N-4T50SX-P			1.969	1.260	-	5.906	0.969	50	32	-	150	24.6	
G2042.32N-5T60SX-P	0.197	5	2.362	1.260	-	5.906	0.969	60	32	-	150	24.6	SX-5E ..
G2042.32N-6T60SX-P	0.236	6	2.362	1.260	-	5.906	0.969	60	32	-	150	24.6	SX-6E ..
G2042.52N-8T100SX-P	0.315	8	3.937	2.047	-	10.236	1.772	100	52	-	260	45	SX-8E ..
G2042.52N-10T100SX-P	0.394	10	3.937	2.047	-	10.236	1.772	100	52	-	260	45	SX-10E ..

For clamping blocks, see page 65-66.

The maximum recommended coolant pressure is 80 bar (1160 psi).

Bodies and assembly parts are included in the scope of delivery.

Assembly parts



Type	SX-3E .. - SX-4E ..	SX-5E ..	SX-6E ..	SX-8E ..	SX-10E ..
Coolant transfer insert	FS2282	FS2283	FS2284	FS2285	FS2286

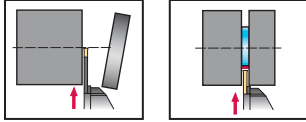
Accessories



Type	SX-3E .. - SX-6E ..	SX-8E .. - SX-10E ..
Mounting wrench for grooving insert	FS1494	FS2274



Walter Cut G2042 R/L



- External machining
- Radial grooving 0°
- Deep parting blade
- For parting off and grooving
- For SX cutting inserts

Tool	Designation	s in	T _{max} in	h ₄ in	l ₁ in	h ₁ in	Type
	G2042.26L/R-1.5T20SX	0.059	0.787	1.024	4.331	0.827	SX-1E15 ..
	G2042.32L/R-1.5T20SX		0.787	1.260	4.331	0.969	
	G2042.26L/R-2T26SX	0.079	1.024	1.024	4.331	0.827	SX-2E2 ..
	G2042.32L/R-2T26SX		1.024	1.260	4.331	0.970	
	G2042.26L/R-3T33SX	0.118	1.299	1.024	4.331	0.827	SX-3E3 ..
	G2042.32L/R-3T33SX		1.299	1.260	4.331	0.970	
	G2042.32L/R-4T33SX	0.157	1.299	1.260	4.331	0.970	SX-4E4 ..

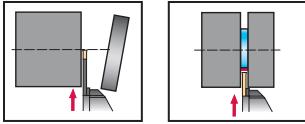
For clamping blocks. see page 66.

For instructions on replacing the cutting edge. see page 162.

Accessories

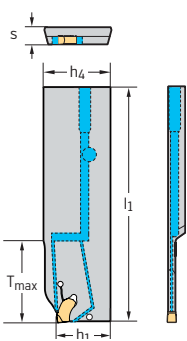
	Type	SX-1 ..	SX-2 .. – SX-4 ..
	Mounting wrench for grooving insert	FS2249	FS1494

Walter Cut G2042 R/L-C Contra version



- External machining
- Radial grooving 0°
- Deep parting blade
- For parting off and grooving
- For SX cutting inserts

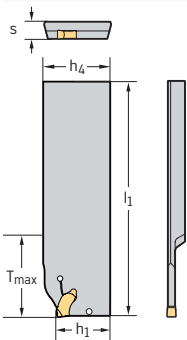
Tool



Designation	s in	s mm	T _{max} in	h ₄ in	l ₁ in	h ₁ in	T _{max} mm	h ₄ mm	l ₁ mm	h ₁ mm	Type
G2042.26L/R-2T26SX-C-P	0.079	2	1.024	1.024	4.331	0.827	26	26	110	21	SX-2E2 ..
G2042.32L/R-2T26SX-C-P			1.024	1.26	4.331	0.969	26	32	110	24.6	
G2042.26L/R-3T33SX-C-P	0.118	3	1.26	1.024	4.331	0.827	33	26	110	21	SX-3E3 ..
G2042.32L/R-3T33SX-C-P			1.26	1.26	4.331	0.969	33	32	110	24.6	
G2042.32L/R-4T33SX-C-P	0.157	4	1.26	1.26	4.331	0.969	33	32	110	24.6	SX-4E4 ..

For clamping blocks, see page 66.
For instructions on replacing the cutting edge, see page 162

Tool



Designation	s in	T _{max} in	h ₄ in	l ₁ in	h ₁ in	Type
G2042.26L/R-2T26SX-C	0.079	1.024	1.024	4.331	0.827	SX-2E2 ..
G2042.32L/R-2T26SX-C		1.024	1.260	4.331	0.969	
G2042.26L/R-3T33SX-C	0.118	1.299	1.024	4.331	0.827	SX-3E3 ..
G2042.32L/R-3T33SX-C		1.299	1.260	4.331	0.969	
G2042.32L/R-4T33SX-C	0.157	1.299	1.260	4.331	0.969	SX-4E4 ..

For clamping blocks, see page 66.
For instructions on replacing the cutting edge, see page 162.

Accessories



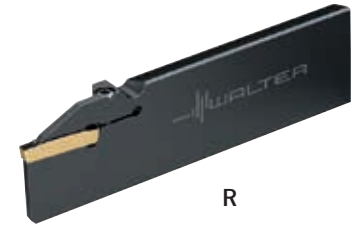
Type
Mounting wrench for
grooving insert

SX-1 ..
FS2249

SX-2 .. - SX-4 ..
FS1494



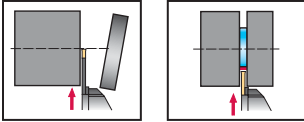
Walter Cut G1041 R/L



L

R

- External machining
- Radial grooving 0°
- Deep parting blade
- For parting off and grooving
- For GX cutting inserts



Tool	Designation	s in	s mm	T _{max} in	h ₄ in	l ₁ in	h ₁ in	T _{max} mm	h ₄ mm	l ₁ mm	h ₁ mm	Type
	G1041.26R/L-1.5T16GX16	0.059	1.5	0.630	1.024	4.331	0.827	16	26	110	21	GX16-0E..
	G1041.26R/L-2T16GX16	0.079	2	0.630	1.024	4.331	0.827	16	26	110	21	GX16-1E2/F2..
	G1041.32R/L-2T23GX16			0.906	1.260	4.331	0.969	23	32	110	24.6	
	G1041.26R/L-2T23GX24	0.079	2	0.906	1.024	4.331	0.827	23	26	110	21	GX24-1E2..
	G1041.32R/L-2T23GX24			0.906	1.260	4.331	0.969	23	32	110	24.6	
	G1041.32R/L-2T32GX24			1.260	1.260	4.331	0.969	32	32	110	24.6	
	G1041.26R/L-3T16GX16	0.118	3	0.630	1.024	4.331	0.827	16	26	110	21	GX16-2E3/F3..
	G1041.26R/L-3T23GX24			0.906	1.024	4.331	0.827	23	26	110	21	GX24-2E3/F3..
	G1041.32R/L-3T23GX24			0.906	1.260	4.331	0.969	23	32	110	24.6	
	G1041.32R/L-3T32GX24			1.260	1.260	4.331	0.969	32	32	110	24.6	
	G1041.32R/L-4T32GX24	0.157	4	1.260	1.260	4.331	0.969	32	32	110	24.6	GX24-3E4/F4..

For clamping blocks, see page 67.

For description of contra version/standard version, see page 162.

Bodies and assembly parts are included in the scope of delivery.

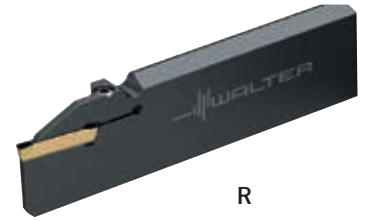
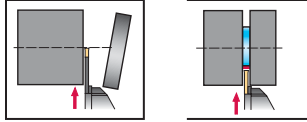
Assembly parts

	Type	GX16-0E . . . –GX24-3E . .
	Clamping screw for grooving insert Tightening torque	FS2164 (Torx 15IP) 31 in lb (3.5 Nm)

Accessories

	Type	GX16-0E . . . –GX24-3E . .
	Screwdriver	FS1485 (Torx 15IP)

Walter Cut G1041 R/L-C Contra version



- External machining
- Radial grooving 0°
- Deep parting blade
- For parting off and grooving
- For GX cutting inserts

Tool	Designation	s in	s mm	T _{max} in	h ₄ in	l ₁ in	h ₁ in	T _{max} mm	h ₄ mm	l ₁ mm	h ₁ mm	Type
	G1041.26R/L-1.5T16GX16C	0.059	1.5	0.630	1.024	4.331	0.827	16	26	110	21	GX16-0E ..
	G1041.26R/L-2T16GX16C	0.079	2	0.630	1.024	4.331	0.827	16	26	110	21	GX16-1E2/F2 ..
	G1041.32R/L-2T23GX16C			0.906	1.260	4.331	0.969	23	32	110	24.6	
	G1041.26R/L-2T23GX24C	0.079	2	0.906	1.024	4.331	0.827	23	26	110	21	GX24-1E2..
	G1041.32R/L-2T23GX24C			0.906	1.260	4.331	0.969	23	32	110	24.6	
	G1041.32R/L-2T32GX24C			1.260	1.260	4.331	0.969	32	32	110	24.6	
	G1041.26R/L-3T16GX16C	0.118	3	0.630	1.024	4.331	0.827	16	26	110	21	GX16-2E3/F3 ..
	G1041.26R/L-3T23GX24C			0.906	1.024	4.331	0.827	23	26	110	21	GX24-2E3/F3 ..
	G1041.32R/L-3T23GX24C			0.906	1.260	4.331	0.969	23	32	110	24.6	
	G1041.32R/L-3T32GX24C			1.260	1.260	4.331	0.969	32	32	110	24.6	
	G1041.32R/L-4T32GX24C	0.157	4	1.260	1.260	4.331	0.969	32	32	110	24.6	GX24-3E4/F4 ..

For clamping blocks, see page 67.

For description of contra version/standard version, see page 162.

Bodies and assembly parts are included in the scope of delivery.

Assembly parts

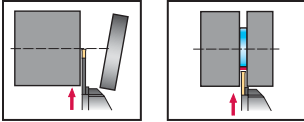
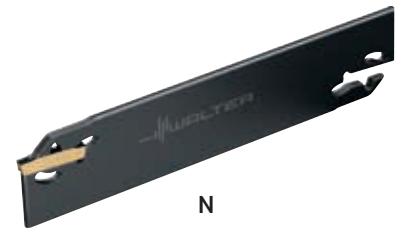
	Type	GX16-0E .. -GX24-3E ..
	Clamping screw for grooving insert Tightening torque	FS2164 (Torx 15IP) 31 in lb (3.5 Nm)

Accessories

	Type	GX16-0E .. -GX24-3E ..
	Screwdriver	FS1485 (Torx 15IP)



Walter Cut G1042



- External machining
- Radial grooving 0°
- Deep parting blade
- For parting off and grooving
- For GX cutting inserts

Tool	Designation	s in	s mm	T _{max} in	h ₄ in	l ₁ in	h ₁ in	T _{max} mm	h ₄ mm	l ₁ mm	h ₁ mm	Type
	G1042.26N-2T25GX16	0.079	2	0.980	1.020	4.264	0.831	25	26	108.3	21.1	GX16-1E2/F2...
	G1042.32N-2T25GX16			0.980	1.260	5.878	0.976	25	32	149.3	24.8	
	G1042.26N-3T40GX24	0.118	3	1.570	1.020	4.264	0.827	40	26	108.3	21	GX24-2E3/F3...
	G1042.32N-3T50GX24			1.970	1.260	5.878	0.972	50	32	149.3	24.7	
	G1042.26N-4T40GX24	0.157	4	1.570	1.020	4.264	0.823	40	26	108.3	20.9	GX24-3E4/F4...
	G1042.32N-4T50GX24			1.970	1.260	5.878	0.969	50	32	149.3	24.6	
	G1042.32N-5T60GX24	0.198	5	2.360	1.260	5.878	0.965	60	32	149.3	24.5	GX24-3E5/F5...
	G1042.32N-6T60GX24	0.236	6	2.360	1.260	5.878	0.961	60	32	149.3	24.4	GX24-4E6/F6...

For clamping blocks, see page 67.

For instructions on replacing the cutting edge, see page 162.

Accessories

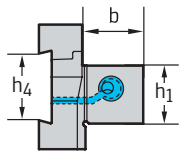
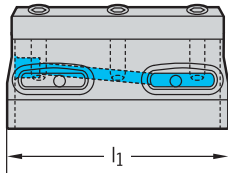
Type	GX16-1E2/F2 . . .GX24-4E6/F6...
 Mounting wrench for grooving insert	FS1494

Walter Cut G2661-P - Inch



- Clamping blocks for parting blades
- For parting blades with precision cooling

Tool



Designation	h ₄ inch	h ₄ mm	h ₁ inch	b inch	l ₁ inch
G2661.12N-26-P	1.024	26	0.750	0.750	3.740
G2661.12N-32-P	1.260	32	0.750	0.750	3.740
G2661.16N-32-P	1.260	32	1.000	1.000	3.740
G2661.20N-32-P	1.260	32	1.250	1.250	3.740
G2661.20N-52-P	2.070	52	1.250	1.250	5.512
G2661.24N-52-P	2.070	52	1.500	1.500	5.512





All G2661 tool blocks have a removable clamp. For blades with internal cooling, see page 59-61.

For the connection set for internal coolant supply with G1/8" thread, see page 163.

The maximum recommended coolant pressure is 1160 psi (80 bar).

Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	h ₄ [inch]	1.024 - 1.260	2.070
	Screw	M06X020 ISO4762 12.9	M06X025 ISO4762 12.9
	Wedge	PK260	PK263
	O-ring	O-ring 20 × 2	O-ring 27 × 2 70/80
	Wrenches	ISO 2936-5	ISO 2936-5

Walter Cut G2661-P - Metric



- Clamping blocks for parting blades
- For parting blades with precision cooling

Tool	Designation	h_4 mm	h_1 mm	b mm	l_1 mm
	G2661-1616N-26-P	26	16	16	95
	G2661-2020N-26-P	26	20	20	95
	G2661-2020N-32-P	32	20	20	95
	G2661-2525N-32-P	32	25	25	95
	G2661-3232N-32-P	32	32	32	95
	G2661-3225N-52-P	52	32	25	140
	G2661-4032N-52-P	52	40	32	140

All G2661 tool blocks have a removable clamp. For blades with internal cooling, see page 59-61.

For the connection set for internal coolant supply with G1/8" thread, see page 163.

The maximum recommended coolant pressure is 1160 psi (80 bar).

Bodies and assembly parts are included in the scope of delivery.

Assembly parts	h_4 [mm]	26 - 32	52
	Screw	M06X020 ISO4762 12.9	M06X025 ISO4762 12.9
	Wedge	PK260	PK263
	O-ring	O-ring 20 x 2	O-ring 27 x 2 70/80
	Wrenches	ISO 2936-5	ISO 2936-5

Walter Cut SBN



- Clamping blocks for parting blades

Tool	Designation	h_4 in (mm)	h_1 in	b in	l_1 in
	SBN12-26K-E	1.024 (26)	0.750	1.200	3.54
	SBN16-32-K-E	1.260 (32)	1.000	0.950	4.33
	SBN20-32K-E	1.260 (32)	1.250	1.200	4.72
	SBN20-46K-E	1.811 (46)	1.250	1.200	5.91
	SBN12-26KS-E*	1.024 (26)	0.750	0.700	3.54
	SBN16-32KS-E*	1.260 (32)	1.000	0.950	4.33
	SBN20-32KS-E*	1.260 (32)	1.250	1.200	4.72
	* Block with removable clamp				

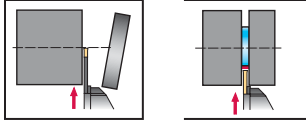
Tool	Designation	h_4 mm	h_1 mm	b mm	l_1 mm
	SBN2020-26-K	26	20	20	90
	SBN2520-32-K	32	25	20	110
	SBN3229-32-K	32	32	29	120
	SBN3229-46-K	46	32	29	150
	SBN4037-46-K	46	40	47	150

Assembly parts	h_4 in (mm)	1.024-1.260 (26-32)	1.811 (46)
	Clamping screw	M06X025 ISO4762 12.9	M08X035 ISO4762 12.9

Walter Cut XLDE



- External machining
- Radial grooving 0°
- One-piece shank tool
- For grooving and parting off
- For GX inserts



Tool	Designation	s in	s mm	D _{max} in	h=h ₁ in	b in	f ₁ in	l ₁ in	l ₄ in	s ₁ in	Type	
	XLDER/L1010K-GX16-0	0.059	1.5	0.394	0.394	0.394	0.370	4.921	0.748	0.047	GX16-0E150..	
	XLDER/L1212K-GX16-0			0.472	0.472	0.472	0.449	4.921	0.748	0.047		
	XLDER/L1616K-GX16-0			0.630	0.630	0.630	0.606	4.921	0.945	0.047		
	XLDER/L1010K-GX16-1	0.079 - 0.098	2.0 - 2.5	0.787	0.394	0.394	0.362	4.921	0.748	0.063	GX16-1E2..	
	XLDER/L1212K-GX16-1			0.945	0.472	0.472	0.441	4.921	0.748	0.063		
	XLDER/L1616K-GX16-1			1.260	0.630	0.630	0.598	4.921	0.945	0.063		
	XLDER/L2020K-GX16-1	0.118 - 0.125	3.0 - 3.18	1.260	0.787	0.787	0.756	4.921	0.945	0.063	GX16-2E3..	
	XLDER/L1212K-GX16-2			0.945	0.472	0.472	0.425	4.921	0.748	0.094		
	XLDER/L1616K-GX16-2			1.260	0.630	0.630	0.583	4.921	0.945	0.094		
	XLDER/L2020K-GX16-2				1.260	0.787	0.787	0.740	4.921	0.945	0.094	

Tool	Designation	s in	s mm	D _{max} mm	h=h ₁ mm	b mm	f ₁ mm	l ₁ mm	l ₄ mm	s ₁ mm	Type	
	XLDER/L1010K-GX16-0	0.059	1.5	10	10	10	9.4	125	19	1.2	GX16-0E150..	
	XLDER/L1212K-GX16-0			12	12	12	11.4	125	19	1.2		
	XLDER/L1616K-GX16-0			16	16	16	15.4	125	24	1.2		
	XLDER/L1010K-GX16-1	0.079 - 0.098	2.0 - 2.5	20	10	10	9.2	125	19	1.6	GX16-1E2..	
	XLDER/L1212K-GX16-1			24	12	12	11.2	125	19	1.6		
	XLDER/L1616K-GX16-1			32	16	16	15.2	125	24	1.6		
	XLDER/L2020K-GX16-1	0.118 - 0.125	3.0 - 3.18	32	20	20	19.2	125	24	1.6	GX16-2E3..	
	XLDER/L1212K-GX16-2			24	12	12	10.8	125	19	2.4		
	XLDER/L1616K-GX16-2			32	16	16	14.8	125	24	2.4		
	XLDER/L2020K-GX16-2				32	20	20	18.8	125	24	2.4	

F=f₁+S/2

For description of contra version/standard version, see page 162.

Ordering example:

Right shank tool: XLDER1010K-GX16-1

Left shank tool: XLDEL1010K-GX16-1

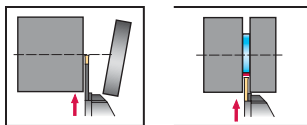
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	Type	GX16-0E150..-GX16-2E3..
	Clamping screw for grooving insert Tightening torque	FS2164 (Torx 15IP) 31 in-lb (3.5 Nm)
	Screwdriver	FS1485 (Torx 15IP)



Walter Cut XLDE-C Contra version



- External machining
- Radial grooving 0°
- One-piece shank tool
- For grooving and parting off
- For GX inserts

Tool	Designation	s in	s mm	D _{max} in	h=h ₁ in	b in	f ₁ in	l ₁ in	l ₄ in	s ₁ in	Type	
	XLDER/L1010K-GX16-0C	0.059	1.5	0.394	0.394	0.394	0.362	4.921	0.748	0.047	GX16-0E150..	
	XLDER/L1212K-GX16-0C			0.472	0.472	0.472	0.441	4.921	0.748	0.047		
	XLDER/L1616K-GX16-0C			0.472	0.630	0.630	0.598	4.921	0.945	0.047		
	XLDER/L1010K-GX16-1C	0.079 - 0.098	2.0 - 2.5	0.787	0.394	0.394	0.362	4.921	0.748	0.063	GX16-1E2..	
	XLDER/L1212K-GX16-1C			0.945	0.472	0.472	0.441	4.921	0.748	0.063		
	XLDER/L1616K-GX16-1C			1.260	0.630	0.630	0.598	4.921	0.945	0.063		
	XLDER/L1212K-GX16-2C	0.118 - 0.125	3.0 - 3.18	0.945	0.472	0.472	0.425	4.921	0.748	0.094	GX16-2E3..	
	XLDER/L1616K-GX16-2C			1.260	0.630	0.630	0.583	4.921	0.945	0.094		

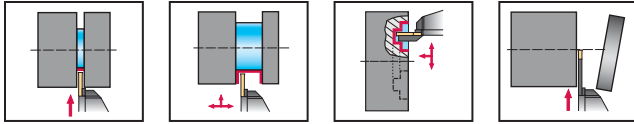
Tool	Designation	s in	s mm	D _{max} mm	h=h ₁ mm	b mm	f ₁ mm	l ₁ mm	l ₄ mm	s ₁ mm	Type	
	XLDER/L1010K-GX16-0C	0.059	1.5	10	10	10	9.2	125	19	1.2	GX16-0E150..	
	XLDER/L1212K-GX16-0C			12	12	12	11.2	125	19	1.2		
	XLDER/L1616K-GX16-0C			12	16	16	15.2	125	24	1.2		
	XLDER/L1010K-GX16-1C	0.079 - 0.098	2.0 - 2.5	20	10	10	9.2	125	19	1.6	GX16-1E2..	
	XLDER/L1212K-GX16-1C			24	12	12	11.2	125	19	1.6		
	XLDER/L1616K-GX16-1C			32	16	16	15.2	125	24	1.6		
	XLDER/L1212K-GX16-2C	0.118 - 0.125	3.0 - 3.18	24	12	12	10.8	125	19	2.4	GX16-2E3..	
	XLDER/L1616K-GX16-2C			32	16	16	14.8	125	24	2.4		

F=f₁+S/2
 For description of contra version/standard version, see page 162
 Ordering example:
 Right shank tool: XLDER1010K-GX16-1C
 Left shank tool: XLDEL1010K-GX16-1C
 Bodies and assembly parts are included in the scope of delivery.

Assembly parts	Type	GX16-0E150..-GX16-2E3..
	Clamping screw for grooving insert	FS2164 (Torx 15IP)
	Tightening torque	31 in-lb (3.5 Nm)
	Screwdriver	FS1485 (Torx 15IP)



Walter Cut G1511



- External machining
- Radial grooving 0°/90°
- Axial grooving 0°/90°
- One-piece shank tool
- For grooving, recessing and parting off
- For GX inserts

Tool	Designation	s in	s mm	T _{max} in	h=h ₁ in	b in	f ₁ in	l ₁ in	l ₄ in	s ₁ in	Type
	G1511.08 R/L-T4GX16	0.024 - 0.236	0.6 - 6.0	0.157	0.500	0.500	0.415	5.000	1.240	0.177	GX16...
	G1511.10 R/L-T4GX16				0.625	0.625	0.540	5.400	1.240	0.177	
	G1511.12 R/L-T4GX16				0.750	0.750	0.665	5.400	1.240	0.177	
	G1511.16 R/L-T4GX16				1.000	1.000	0.915	5.400	1.240	0.177	
	G1511.10 R/L-T6GX24	0.079 - 0.250	2.0 - 6.0	0.236	0.625	0.625	0.540	5.400	1.319	0.177	GX24...
	G1511.12 R/L-T6GX24				0.750	0.750	0.665	5.400	1.319	0.177	
G1511.16 R/L-T6GX24	1.000				1.000	0.915	5.400	1.319	0.177		

Tool	Designation	s in	s mm	T _{max} mm	h=h ₁ mm	b mm	f ₁ mm	l ₁ mm	l ₄ mm	s ₁ mm	Type
	G1511.1212R/L-T4GX16	0.024 - 0.250	0.6 - 6.0	4	12	12	9.9	131.5	31.5	4.5	GX16...
	G1511.1616R/L-T4GX16				16	16	13.9	141.5	31.5	4.5	
	G1511.2020R/L-T4GX16				20	20	17.9	141.5	31.5	4.5	
	G1511.2525R/L-T4GX16				25	25	22.9	141.5	31.5	4.5	
	G1511.1616R/L-T6GX24	0.079 - 0.250	2.0 - 6.35	6	16	16	13.9	143.5	33.5	4.5	GX24...
	G1511.2020R/L-T6GX24				20	20	17.9	143.5	33.5	4.5	
G1511.2525R/L-T6GX24	25				25	22.9	143.5	33.5	4.5		

G1511: $f = f_1 + s/2$

Ordering example:

Right shank tool: G1511.1212R-T4GX16

Left shank tool: G1511.1212L-T4GX16

Bodies and assembly parts are included in the scope of delivery.

Grooving insert width s in [mm]	Minimum axially cut groove D _{min} in [mm]	
	GX16	GX24
0.118 [3]	3.189 [81]	2.559 [65]
0.157 [4]	2.953 [75]	2.441 [62]
0.197 [5]	2.480 [63]	2.008 [51]
0.236 [6]	2.087 [53]	1.693 [43]

Assembly parts

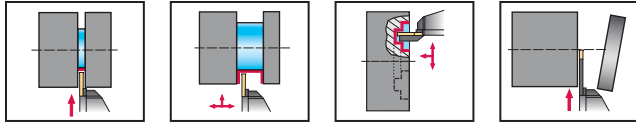
	Type	GX 16-1E2/F2 ...GX 24-4E6/F6 . .
	Clamping screw for grooving insert Tightening torque	FS2118 (Torx 20IP) 44 in-lb (5.0 Nm)
	Torx key	FS1464 (Torx 20IP)



Walter Cut G1521



R



- External machining
- Radial grooving 0°/90°
- Axial grooving 0°/90°
- One-piece shank tool
- For grooving, recessing and parting off
- For GX inserts

Tool	Designation	s mm	s in	T _{max} in	h=h ₁ in	b in	f in	l ₂₁ in	l ₄ in	Type
	G1521.10 R/L-T4GX16	0.6 - 6.0	0.024 - 0.236	0.157	0.625	0.625	0.803	5.4	1.063	GX16 . .
	G1521.12 R/L-T4GX16		0.024 - 0.236	0.157	0.750	0.750	0.929	5.4	1.063	
	G1521.16 R/L-T4GX16		0.024 - 0.236	0.157	1.000	1.000	1.177	5.4	1.063	
	G1521.12 R/L-T6GX24	2.0 - 6.0	0.079 - 0.236	0.236	0.750	0.750	1.008	5.4	1.063	GX24 . .
	G1521.16 R/L-T6GX24		0.079 - 0.236	0.236	1.000	1.000	1.256	5.4	1.063	

Tool	Designation	s mm	s in	T _{max} mm	h=h ₁ mm	b mm	f mm	l ₂₁ mm	l ₄ mm	Type
	G1521.1616R/L-T4GX16	0.6 - 6.35	0.024 - 0.250	4	16	16	20.5	134.9	27	GX16- . .
	G1521.2020R/L-T4GX16			4	20	20	24.5	134.9	27	
	G1521.2525R/L-T4GX16			4	25	25	29.5	134.9	27	
	G1521.2020R/L-T6GX24	2.0 - 6.35	0.079 - 0.250	6	20	20	26.5	134.9	27	GX24- . .
	G1521.2525R/L-T6GX24			6	25	25	31.5	134.9	27	

G1521: l1=l21+S/2

Ordering example:

Right shank tool: G1521.16R-T6GX24

Left shank tool: G1521.16L-T6GX24

Bodies and assembly parts are included in the scope of delivery.

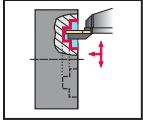
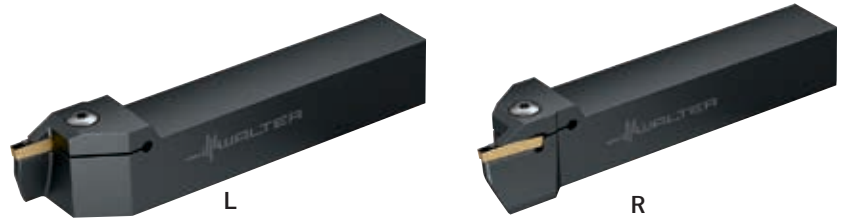
Grooving insert width s in [mm]	Minimum axially cut groove D _{min} in [mm]	
	GX16	GX24
0.118 [3]	3.189 [81]	2.559 [65]
0.157 [4]	2.953 [75]	2.441 [62]
0.197 [5]	2.480 [63]	2.008 [51]
0.236 [6]	2.087 [53]	1.693 [43]

Assembly parts

Type	GX 16-1E2/F2 . .-GX 24-4E6/F6 . .
 Clamping screw for grooving insert Tightening torque	FS2118 (Torx 20IP) 44 in-lb (5.0 Nm)
 Torx key	FS1464 (Torx 20IP)

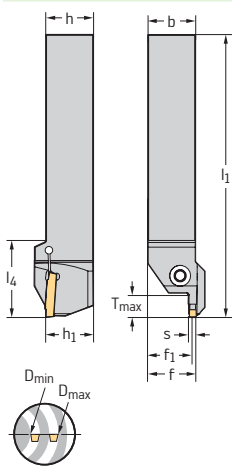


Walter Cut G1111 - Inch



- External machining
- One-piece shank tool
- For axial grooving
- For GX inserts

Tool



Designation	s in	s mm	T _{max} in	D _{min} in	D _{max} in	h=h ₁ in	b in	f in	l ₁ in	l ₄ in	s ₁ in	Type
G1111.16 R/L-3T12-034 GX24	0.118 - 0.125	3.0 - 3.18	0.472	1.339	1.732	1.000	1.000	0.989	5.709	1.575	0.094	GX24-2E3..
G1111.16 R/L-3T12-042 GX24			0.472	1.654	2.362	1.000	1.000	0.987	5.709	1.575	0.094	
G1111.16 R/L-3T19-054 GX24			0.748	2.126	2.953	1.000	1.000	0.987	5.984	1.654	0.094	
G1111.16 R/L-3T22-067 GX24			0.866	2.638	3.937	1.000	1.000	0.987	6.063	1.732	0.094	
G1111.16 R/L-3T22-090 GX24			0.866	3.543	6.299	1.000	1.000	0.984	6.063	1.732	0.094	
G1111.16 R/L-3T22-130 GX24			0.866	5.118	11.811	1.000	1.000	0.984	6.063	1.732	0.094	
G1111.16 R/L-4T20-040 GX24	0.156 - 0.187	4 - 4.75	0.787	1.575	2.362	1.000	1.000	0.971	5.984	1.654	0.130	GX24-3E4..
G1111.16 R/L-4T20-052 GX24			0.787	2.047	2.835	1.000	1.000	0.968	5.984	1.654	0.130	
G1111.16 R/L-4T25-064 GX24			0.984	2.520	3.937	1.000	1.000	0.965	6.142	1.811	0.130	
G1111.16 R/L-4T25-092 GX24			0.984	3.622	5.512	1.000	1.000	0.963	6.142	1.811	0.130	
G1111.16 R/L-4T25-132 GX24			0.984	5.197	9.055	1.000	1.000	0.963	6.142	1.811	0.130	
G1111.16 R/L-4T25-220 GX24			0.984	8.661	19.685	1.000	1.000	0.963	6.142	1.811	0.130	
G1111.16 R/L-5T20-040 GX24	0.197	5	0.787	1.575	2.756	1.000	1.000	0.952	5.984	1.654	0.161	GX24-3E5..
G1111.16 R/L-5T20-060 GX24			0.787	2.362	3.740	1.000	1.000	0.950	5.984	1.654	0.161	
G1111.16 R/L-5T25-085 GX24			0.984	3.346	5.118	1.000	1.000	0.947	6.142	1.811	0.161	
G1111.16 R/L-5T25-120 GX24			0.984	4.724	7.087	1.000	1.000	0.947	6.142	1.811	0.161	
G1111.16 R/L-5T25-175 GX24			0.984	6.890	19.685	1.000	1.000	0.947	6.142	1.811	0.161	
G1111.16 R/L-6T20-040 GX24	0.236 - 0.250	6 - 6.35	0.787	1.575	2.756	1.000	1.000	0.933	5.984	1.654	0.197	GX24-4E6..
G1111.16 R/L-6T25-058 GX24			0.984	2.283	3.937	1.000	1.000	0.930	6.142	1.811	0.197	
G1111.16 R/L-6T25-088 GX24			0.984	3.465	7.087	1.000	1.000	0.927	6.142	1.811	0.197	
G1111.16 R/L-6T25-168 GX24			0.984	6.614	15.748	1.000	1.000	0.927	6.142	1.811	0.197	

Max. double-edged insert cutting depth 23 mm

Ordering example:

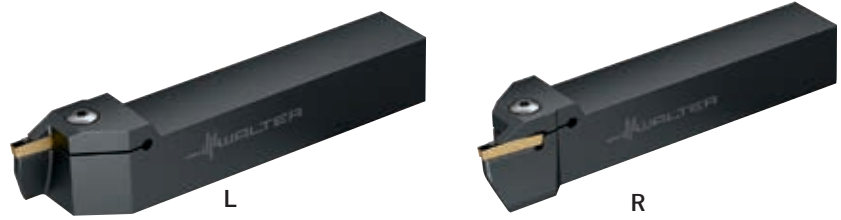
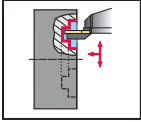
Right shank tool: G1111.16R-4T25-064 GX24

Left shank tool: G1111.16L-4T25-064 GX24

Assembly parts

	Type	GX 16-1E2/F2 . . -GX 24-4E6/F6 . .
	Clamping screw for grooving insert Tightening torque	FS2118 (Torx 20IP) 44 in-lb (5.0 Nm)
	Torx key	FS1464 (Torx 20IP)

Walter Cut G1111 - Metric



- External machining
- One-piece shank tool
- For axial grooving
- For GX inserts

Tool	Designation	s mm	T _{max} mm	D _{min} mm	D _{max} mm	h=h ₁ mm	b mm	f mm	l ₁ mm	l ₄ mm	Type
	G1111.2525R/L-3T12-034GX24	3	12	34	44	25	25	26.2	150	40	GX24-2E3 ..
	G1111.2525R/L-3T12-042GX24		12	42	60	25	25	26.2	150	40	
	G1111.2525R/L-3T12-054GX24		12	54	75	25	25	26.1	150	40	
	G1111.2525R/L-3T19-054GX24		19	54	75	25	25	26.2	152	42	
	G1111.2525R/L-3T22-067GX24		22	67	100	25	25	26.2	154	44	
	G1111.2525R/L-3T12-067GX24		12	67	100	25	25	26.1	150	40	
	G1111.2525R/L-3T12-090GX24		12	90	160	25	25	26.1	150	40	
	G1111.2525R/L-3T22-090GX24		22	90	160	25	25	26.1	154	44	
	G1111.2525R/L-3T12-130GX24		12	130	300	25	25	26.1	150	40	
	G1111.2525R/L-3T22-130GX24		22	130	300	25	25	26.1	154	44	
	G1111.2525R/L-4T12-040GX24	4	12	40	60	25	25	26.1	150	40	GX24-3E4/F4 ..
	G1111.2525R/L-4T20-040GX24		20	40	60	25	25	26.3	152	42	
	G1111.2525R/L-4T12-052GX24		12	52	72	25	25	26.1	150	40	
	G1111.2525R/L-4T20-052GX24		20	52	72	25	25	26.2	152	42	
	G1111.2525R/L-4T12-064GX24		12	64	100	25	25	26.1	150	40	
	G1111.2525R/L-4T25-064GX24		25	64	100	25	25	26.1	156	46	
	G1111.2525R/L-4T12-092GX24		12	92	140	25	25	26.1	150	40	
	G1111.2525R/L-4T25-092GX24		25	92	140	25	25	26.1	156	46	
	G1111.2525R/L-4T25-132GX24		25	132	230	25	25	26.1	156	46	
	G1111.2525R/L-4T12-132GX24		12	132	230	25	25	26.1	150	40	
	G1111.2525R/L-4T12-220GX24	5	12	220	500	25	25	26.1	150	40	GX24-3E5/F5 ..
	G1111.2525R/L-4T25-220GX24		25	220	500	25	25	26.1	156	46	
	G1111.2525R/L-5T20-040GX24		20	40	70	25	25	26.3	152	42	
	G1111.2525R/L-5T12-040GX24		12	40	70	25	25	26.2	150	40	
	G1111.2525R/L-5T20-060GX24		20	60	95	25	25	26.3	152	42	
	G1111.2525R/L-5T12-060GX24		12	60	95	25	25	26.2	150	40	
	G1111.2525R/L-5T12-085GX24		12	85	130	25	25	26.2	150	40	
	G1111.2525R/L-5T25-085GX24		25	85	130	25	25	26.2	156	46	
	G1111.2525R/L-5T25-120GX24		25	120	180	25	25	26.2	156	46	
	G1111.2525R/L-5T12-120GX24		12	120	180	25	25	26.2	150	40	
	G1111.2525R/L-5T12-175GX24	6	12	175	500	25	25	26.1	150	40	GX24-4E6/F6 ..
	G1111.2525R/L-5T25-175GX24		25	175	500	25	25	26.2	156	46	
	G1111.2525R/L-6T12-040GX24		12	40	70	25	25	26.2	150	40	
	G1111.2525R/L-6T20-040GX24		20	40	70	25	25	26.3	152	42	
	G1111.2525R/L-6T12-058GX24		12	58	100	25	25	26.2	150	40	
	G1111.2525R/L-6T25-058GX24		25	58	100	25	25	26.2	156	46	
	G1111.2525R/L-6T12-088GX24		12	88	180	25	25	26.2	150	40	
	G1111.2525R/L-6T25-088GX24		25	88	180	25	25	26.2	156	46	
	G1111.2525R/L-6T12-168GX24	6	12	168	400	25	25	26.2	150	40	GX24-4E6/F6 ..
	G1111.2525R/L-6T25-168GX24		25	168	400	25	25	26.2	156	46	

Max. double-edged insert cutting depth 23 mm

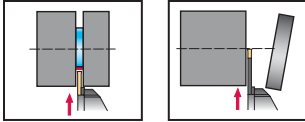
Ordering example: Right shank tool: G1111.2525R-5T12-085GX24 . Left shank tool: G1111.2525L-5T12-085GX24

Assembly parts

	Type	GX 16-1E2/F2 ..GX 24-4E6/F6 ..
	Clamping screw for grooving insert	FS2118 (Torx 20IP)
	Tightening torque	44 in.-lb (5.0 Nm)
	Torx key	FS1464 (Torx 20IP)



Walter Cut G2632-E..R/L...-SX - Inch



- Self-clamping system

Tool	Designation	s mm	T _{max} inch	D ₂ inch	l ₄ inch	l ₁ inch	h ₁ inch	s ₁ inch	Module size	Type
	G2632-E20R/L-2T20SX	2	0.787	3.465	0.866	1.614	0.787	0.065	E20	SX-2E..
	G2632-E25R/L-2T20SX		0.787	4.646	0.866	1.811	0.984	0.065	E25	
	G2632-E20R/L-3T20SX	3	0.787	3.465	0.866	1.614	0.787	0.094	E20	SX-3E..
	G2632-E25R/L-3T25SX		0.984	3.465	1.075	2.059	0.984	0.094	E25	
	G2632-E25R/L-3T35SX		1.378	4.646	1.468	2.453	0.984	0.094	E25	
	G2632-E32R/L-3T45SX	1.772	5.039	1.835	3.063	1.260	0.094	E32	SX-4E..	
	G2632-E20R/L-4T20SX	4	0.787	3.465	0.866	1.614	0.787	0.134		E20
	G2632-E25R/L-4T35SX		1.378	4.646	1.468	2.453	0.984	0.134	E25	
	G2632-E32R/L-4T45SX	1.772	5.039	1.835	3.063	1.260	0.134	E32	SX-5E..	
	G2632-E25R/L-5T35SX	5	1.378	4.646	1.468	2.453	0.984	0.169		E25
	G2632-E32R/L-5T45SX		1.772	5.039	1.835	3.063	1.260	0.169	E32	SX-6E..
	G2632-E25R/L-6T35SX	6	1.378	4.646	1.468	2.453	0.984	0.208	E25	
	G2632-E32R/L-6T45SX		1.772	5.039	1.835	3.063	1.260	0.208	E32	SX-8E..
	G2632-E32N-8T45SX	8	1.772	-	1.835	3.063	1.260	0.283	E32	

Suitable tools can be found on page 76.

G2632-E20...T20SX Maximum cutting depth for diameter of 19.685 inch = 0.650 inch [500 mm = 16.5 mm]

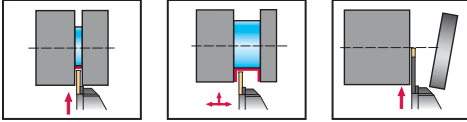
G2632-E25...T20SX Maximum cutting depth for diameter of 19.685 inch = 0.650 inch [500 mm = 16.5 mm]

G2632-E25...T35SX Maximum cutting depth for diameter of 19.685 inch = 1.240 inch [500 mm = 31.5 mm]

G2632-E32...T45SX Maximum cutting depth for diameter of 19.685 inch = 1.594 inch [500 mm = 40.5 mm]

Accessories	Type h [inch]	SX-2... - SX-6...	SX-8... - SX-10...
	Mounting wrench for grooving insert	FS1494	FS2274

Walter Cut MSS-E...R/L00-... - Inch



Tool	Designation	h = h ₁ inch	b inch	f inch	l ₁ inch	Module size
	MSS-E20R/L00-12-E	0.750	0.750	0.967	4.677	E20
	MSS-E25R/L00-16-E	1.000	1.000	1.236	5.710	E25
	MSS-E32R/L00-85-E	1.250	1.000	1.236	6.710	E32

Ordering example: Right-hand complete tool: MSS-E25**R**00-16-E + G2632-E25**R**-3T35SX (= right-hand holder and right-hand module)

Ordering example: Left-hand complete tool: MSS-E25**L**00-16-E + G2632-E25**L**-3T35SX (= left-hand holder and left-hand module)

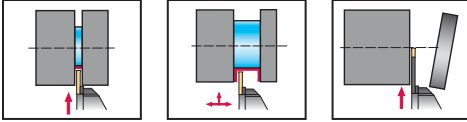
For modules, see page 75.

Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	Module size	E20	E25	E32
	Screw for grooving module Tightening torque	FS1053 (Torx 15) 18 in lb	FS1054 (Torx 20) 27 in lb	FS1055 (Torx 25) 27 in lb
	Handle key, small	FS1047 (Torx T15)	FS1048 (Torx 20)	FS1049 (Torx 25)

Walter Cut MSS-E...R/L90-... - Inch



Tool	Designation	h = h ₁ inch	b inch	f inch	l ₁ inch	Module size
	MSS-E20R/L90-12-E	0.750	0.750	0.965	4.5	E20
	MSS-E25R/L90-16-E	1.000	1.000	1.200	5.5	E25
	MSS-E32R/L90-85-E	1.250	1.000	1.470	6.5	E32

Ordering example: Right-hand complete tool: MSS-E25**R**90-16-E + G2632-E25**L**-3T35SX (= right-hand holder and left-hand module)

Ordering example: Left-hand complete tool: MSS-E25**L**90-16-E + G2632-E25**R**-3T35SX (= left-hand holder and right-hand module)

For modules, see page 75.

Bodies and assembly parts are included in the scope of delivery.

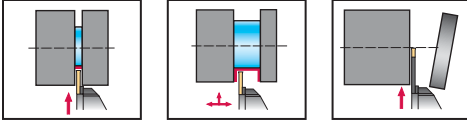
Assembly parts

	Module size	E20	E25	E32
	Screw for grooving module Tightening torque	FS1053 (Torx T15) 18 in lb	FS1054 (Torx T20) 27 in lb	FS1055 (Torx T25) 27 in lb
	Handle key, small	FS1047 (Torx T15)	FS1048 (Torx T20)	FS1049 (Torx T25)





Walter Cut shank tool NCAE / NCBE



- external machining
- radial grooving 0°
- for grooving, recessing and parting off
- for GX/LX inserts

Tool	Designation	s in	T _{max} in	D _{max} in	h=h ₁ in	h ₁ in
	NCAE 16-1010 R/L-GX 09-1	0.077 - 0.098	0.275	2.047	0.625	0.625
	NCAE 16-1010 R/L-GX 09-2	0.118 - 0.178				
	NCAE 20-1212 R/L-GX 16-1	0.079 - 0.098	0.472	2.480	0.750	0.750
	NCAE 25-1616 R/L-GX 16-1					
	NCAE 20-1212 R/L-GX 16-2	0.118 - 0.178	0.472	2.480	0.750	0.750
	NCAE 25-1616 R/L-GX 16-2					
	NCAE 32-8585 R/L-GX 16-2	0.157 - 0.197	0.472	3.937	1.250	1.250
	NCAE 20-1212 R/L-GX 16-3					
	NCAE 25-1616 R/L-GX 16-3	0.157 - 0.197	0.472	3.110	1.000	1.000
	NCAE 32-8585 R/L-GX 16-3					
	NCAE 25-1616 R/L-GX 16-4	0.236	0.472	3.110	1.000	1.000
	NCBE 20-1212 R/L-GX 24-2-21	0.118	0.827	2.480	0.750	0.750
	NCBE 25-1616 R/L-GX 24-2-21					
	NCBE 25-1616 R/L-GX 24-3-21	0.157 - 0.197	0.827	3.110	1.000	1.000
	NCBE 32-8585 R-GX 24-3-21					
	NCBE 25-1616 R/L-GX 24-4-21	0.236	0.827	3.110	1.000	1.000
	NCBE 32-8585 R/L-GX 24-4-21					
	NCBE 25-1616 R/L-GX 24-5-21	0.315	0.827	3.110	1.000	1.000

$f = f_1 + s/2$

For Tmax with greater diameters than Dmax, see technical information on page A 473-477 in 2012 General Catalog.

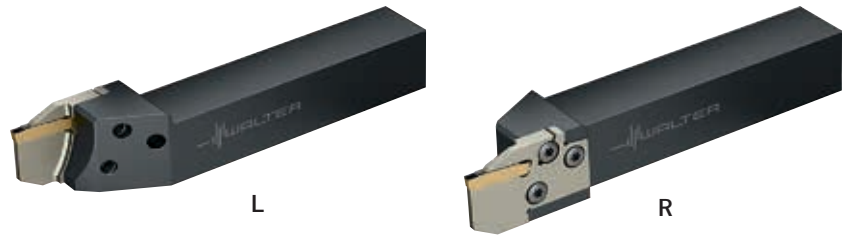
Bodies and assembly parts are included in the scope of delivery.


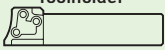
Ordering example:

Right-handed shank tool NCAE16-1010R-GX09-1 (right-handed module and right-handed toolholder)

Left-handed shank tool NCAE16-1010L-GX09-1 (left-handed module and left-handed toolholder)

Assembly parts	Module size	E16	E20	E25	E32
	Clamping screw for LX grooving insert Tightening torque				FS1217 (Torx 20) 18 in-lb (2.0 Nm)
	Screw for grooving module Tightening torque	FS1052 (Torx 15) 18 in-lb (2.0 Nm)	FS1053 (Torx 15) 18 in-lb (2.0 Nm)	FS1054 (Torx 20) 27 in-lb (3.0 Nm)	FS1055 (Torx 25) 27 in-lb (3.0 Nm)
	Handle key, small	FS1047 (Torx T15)	FS1047 (Torx T15)	FS1048 (Torx 20)	FS1049 (Torx 25)



	b in	f ₁ in	f in	l ₁ in	Module size	Type	Grooving module	Toolholder
								
	0.625	0.770		3.815	E 16	GX 09-1 ...	MSS-E16 R/L 07-GX 09-1	MSS-E16 R/L 00-10 E
	0.625	0.770		3.815	E 16		MSS-E16 R/L 07-GX 09-2	MSS-E16 R/L 00-10 E
	0.750	0.967		5.012	E 20	GX 16-1 ...	MSS-E20 R/L 12-GX 16-1	MSS-E20 R/L 00-12 E
	1.000	1.236		6.012	E 25		MSS-E25 R/L 12-GX 16-1	MSS-E25 R/L 00-16 E
	0.750	0.967		5.012	E 20	GX 16-2 ...	MSS-E20 R/L 12-GX 16-2	MSS-E20 R/L 00-12 E
	1.000	1.236		6.012	E 25		MSS-E25 R/L 12-GX 16-2	MSS-E25 R/L 00-16 E
	1.250	1.236		7.012	E 32		MSS-E32 R/L 12-GX 16-2	MSS-E32 R/L 00-85 E
	0.750	0.967		5.012	E 20	GX 16-3 ...	MSS-E20 R/L 12-GX 16-3	MSS-E20 R/L 00-12 E
	1.000	1.236		6.012	E 25		MSS-E25 R/L 12-GX 16-3	MSS-E25 R/L 00-16 E
	1.250	1.236		7.012	E 32		MSS-E32 R/L 12-GX 16-3	MSS-E32 R/L 00-85 E
	1.000	1.236		6.012	E 25	GX 16-4 ...	MSS-E25 R/L 12-GX 16-4	MSS-E25 R/L 00-16 E
	0.750	0.967		5.366	E 20	GX 24-2 ...	MSS-E20 R/L 21-GX 24-2	MSS-E20 R/L 00-12 E
	1.000	1.236		6.366	E 25		MSS-E25 R/L 21-GX 24-2	MSS-E25 R/L 00-16 E
	1.000	1.236		6.366	E 25	GX 24-3 ...	MSS-E25 R/L 21-GX 24-3	MSS-E25 R/L 00-16 E
	1.000	1.236		7.366	E 32		MSS-E32 R/L 21-GX 24-3	MSS-E32 R/L 00-85 E
	1.000	1.236		6.366	E 25	GX 24-4 ...	MSS-E25 R/L 21-GX 24-4	MSS-E25 R/L 00-16 E
	1.000	1.236		7.366	E 32		MSS-E32 R/L 21-GX 24-4	MSS-E32 R/L 00-85 E
	1.000	1.236		6.366	E 25		MSS-E25 R/L 21-GX 24-5	MSS-E25 R/L 00-16 E

Accessories



Module size

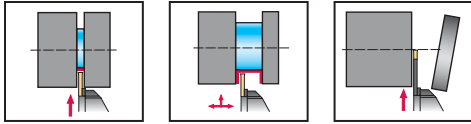
Handle key, small

E32

FS1048 (Torx 20)

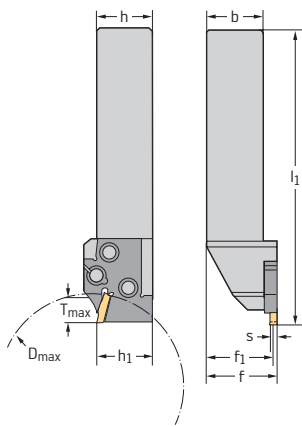


Walter Cut shank tool NCAE / NCBE



- external machining
- radial grooving 0°
- for grooving, recessing and parting off
- for GX/LX inserts

Tool



Designation	s mm	T _{max} mm	D _{max} mm	h=h ₁ mm	h ₁ mm
NCAE16-1616R/L-GX09-1	2.0 - 2.5	7	52	16	16
NCAE16-1616R/L-GX09-2	3.0 - 3.5	7	52	16	16
NCAE20-2020R/L-GX16-1	2.0 - 2.5	12	63	20	20
NCAE25-2525R/L-GX16-1		12	79	25	25
NCAE20-2020R/L-GX16-2	3.0 - 3.5	12	63	20	20
NCAE25-2525R/L-GX16-2		12	79	25	25
NCAE32-3225R/L-GX16-2		12	100	32	32
NCAE20-2020R/L-GX16-3	4.0 - 5.0	12	63	20	20
NCAE25-2525R/L-GX16-3		12	79	25	25
NCAE32-3225R/L-GX16-3		12	100	32	32
NCAE25-2525R/L-GX16-4	6	12	79	25	25
NCAE32-3225R/L-GX16-4		12	100	32	32
NCBE20-2020R/L-GX24-2-21	3	21	63	20	20
NCBE25-2525R/L-GX24-2-21		21	79	25	25
NCBE25-2525R/L-GX24-3-21	4.0 - 5.0	21	79	25	25
NCBE32-3225R/L-GX24-3-21		21	100	32	32
NCBE25-2525R/L-GX24-4-21	6	21	79	25	25
NCBE32-3225R/L-GX24-4-21		21	100	32	32
NCBE25-2525R/L-GX24-5-21		21	79	25	25
NCBE32-3225R/L-LX80-32	8	32	100	32	32
NCBE32-3225R/L-LX80-45		45	100	32	32

$f = f_1 + s/2$

For Tmax with greater diameters than Dmax, see technical information on page A 473-477 in 2012 General Catalog.

Bodies and assembly parts are included in the scope of delivery.

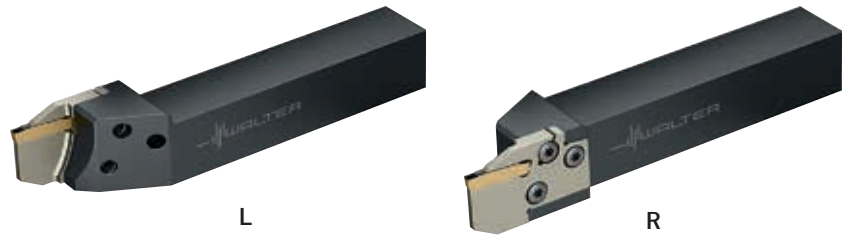
Ordering example:

Right-handed shank tool NCAE12-1212R-GX09-1 (right-handed module and right-handed toolholder)

Left-handed shank tool NCAE12-1212L-GX09-1 (left-handed module and left-handed toolholder)

Assembly parts

	Module size	E16	E20	E25	E32
	Clamping screw for LX grooving insert Tightening torque				FS1217 (Torx 20) 18 in-lb (2.0 Nm)
	Screw for grooving module Tightening torque	FS1052 (Torx 15) 18 in-lb (2.0 Nm)	FS1053 (Torx 15) 18 in-lb (2.0 Nm)	FS1054 (Torx 20) 27 in-lb (3.0 Nm)	FS1055 (Torx 25) 27 in-lb (3.0 Nm)
	Handle key, small	FS1047 (Torx T15)	FS1047 (Torx T15)	FS1048 (Torx 20)	FS1049 (Torx 25)



b mm	f mm	f ₁ mm	l ₁ mm	Module size	Type	Grooving module	Toolholder
16		18.9	98	E16	GX 09-1 ...	MSS-E16R/L07-GX09-1	MSS-E16R/L00-1616G
16		18.6	98	E16	GX 09-2 ...	MSS-E16R/L07-GX09-2	MSS-E16R/L00-1616G
20		23.9	123	E20	GX 16-1 ...	MSS-E20R/L12-GX16-1	MSS-E20R/L00-2020J
25		30.8	153	E25		MSS-E25R/L12-GX16-1	MSS-E25R/L00-2525L
20		23.6	123	E20	GX 16-2 ...	MSS-E20R/L12-GX16-2	MSS-E20R/L00-2020J
25		30.4	153	E25		MSS-E25R/L12-GX16-2	MSS-E25R/L00-2525L
25		30.4	173	E32		MSS-E32R/L12-GX16-2	MSS-E32R/L00-3225N
20		23.1	123	E20	GX 16-3 ...	MSS-E20R/L12-GX16-3	MSS-E20R/L00-2020J
25		29.9	153	E25		MSS-E25R/L12-GX16-3	MSS-E25R/L00-2525L
25		29.9	173	E32		MSS-E32R/L12-GX16-3	MSS-E32R/L00-3225N
25		29.3	153	E25	GX 16-4 ...	MSS-E25R/L12-GX16-4	MSS-E25R/L00-2525L
25		29.3	173	E32		MSS-E32R/L12-GX16-4	MSS-E32R/L00-3225N
20		23.6	132	E20	GX 24-2 ...	MSS-E20R/L21-GX24-2	MSS-E20R/L00-2020J
25		30.4	162	E25		MSS-E25R/L21-GX24-2	MSS-E25R/L00-2525L
25		29.9	162	E25	GX 24-3 ...	MSS-E25R/L21-GX24-3	MSS-E25R/L00-2525L
25		29.9	182	E32		MSS-E32R/L21-GX24-3	MSS-E32R/L00-3225N
25		29.3	162	E25	GX 24-4 ...	MSS-E25R/L21-GX24-4	MSS-E25R/L00-2525L
25		29.3	182	E32		MSS-E32R/L21-GX24-4	MSS-E32R/L00-3225N
25		28.5	162	E25	GX 24-5 ...	MSS-E25R/L21-GX24-5	MSS-E25R/L00-2525L
25		28.9	194	E32	LX - ...	MSS-E32N32-LX	MSS-E32R/L00-3225N
25		28.9	207	E32		MSS-E32N45-LX	MSS-E32R/L00-3225N

Accessories



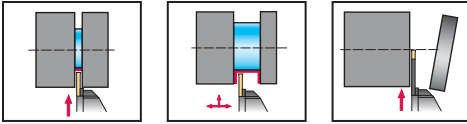
Module size

Handle key, small

E32

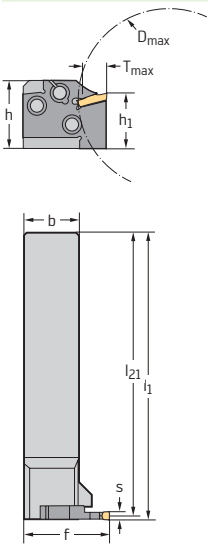
FS1048 (Torx 20)

Walter Cut shank tool NCLE



- external machining
- radial grooving 90°
- for grooving, recessing and parting off
- for GX/LX inserts

Tool



Designation	s in	T _{max} in	D _{max} in	h=h ₁ in	b in
NCLE 20-1212 R/L-GX 16-1	0.079 - 0.098	0.472	2.480	0.750	0.750
NCLE 25-1616 R/L-GX 16-1		0.472	3.110	1.000	1.000
NCLE 20-1212 R/L-GX 16-2	0.118 - 0.138	0.472	2.480	0.750	0.750
NCLE 25-1616 R/L-GX 16-2		0.472	3.110	1.000	1.000
NCLE 32-8585 R/L-GX 16-2		0.472	3.937	1.250	1.250
NCLE 20-1212 R/L-GX 16-3	0.158 - 0.197	0.472	2.480	0.750	0.750
NCLE 25-1616 R/L-GX 16-3		0.472	3.110	1.000	1.000
NCLE 32-8585 R/L-GX 16-3		0.472	3.937	1.250	1.000
NCLE 25-1616 R/L-GX 16-4	0.236	0.472	3.110	1.000	1.000
NCLE 32-8585 R/L-GX 16-4		0.472	3.937	1.250	1.000
NCLE 20-1212 R/L-GX 24-2-21	0.118	0.827	2.480	0.750	0.750
NCLE 25-1616 R/L-GX 24-2-21		0.827	3.110	1.000	1.000
NCLE 25-1616 R/L-GX 24-3-21	0.158 - 0.197	0.827	2.480	1.000	1.000
NCLE 32-8585 R/L-GX 24-3-21		0.827	3.110	1.250	1.000
NCLE 25-1616 R/L-GX 24-4-21	0.236	0.827	3.937	1.000	1.000
NCLE 32-8585 R/L-GX 24-4-21		0.827	2.480	1.250	1.000
NCLE 25-1616 R/L-GX 24-5-21	0.315	0.827	3.110	1.000	1.000
NCLE32-8585R/L-LX80-32	0.315	1.26	3.930	1.250	1.000
NCLE32-8585R/L-LX80-45	0.315	1.77	3.930	1.250	1.000

For T_{max} with greater diameters than D_{max}, see technical information on page A 473-477 in 2012 General Catalog.



Bodies and assembly parts are included in the scope of delivery.

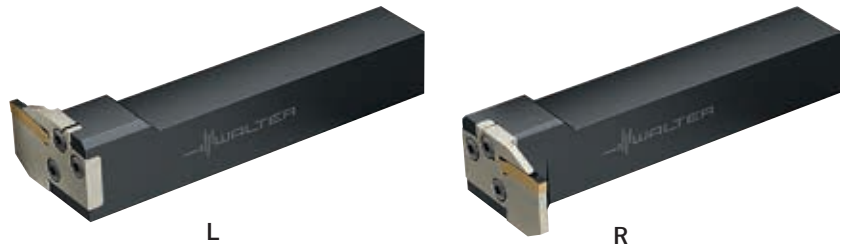
Ordering example:


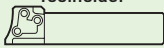
Right-handed shank tool: NCLE25-1616R-GX16-1 (left-handed module and right-handed toolholder)

Left-handed shank tool: NCLE25-1616L-GX16-1 (right-handed module and left-handed toolholder)

Assembly parts

	Module size	E20	E25	E32
	Clamping screw for LX grooving insert Tightening torque			FS1217 (Torx 20) 18 in-lb (2.0 Nm)
	Screw for grooving module Tightening torque	FS1053 (Torx 15) 18 in-lb (2.0 Nm)	FS1054 (Torx 20) 27 in-lb (3.0 Nm)	FS1055 (Torx 25) 27 in-lb (3.0 Nm)
	Handle key, small	FS1047 (Torx T15)	FS1048 (Torx 20)	FS1049 (Torx 25)



f in	l ₁ in	l ₂₁ in	Module size	Type	Grooving module		Toolholder	
								
1.297	4.500		E 20	GX 16-1 ...	MSS-E20 R/L12-GX 16-1	MSS-E20 R/L 90-12 E		
1.510	5.500		E 25		MSS-E25 R/L 12-GX 16-1	MSS-E25 R/L 90-16 E		
1.297	4.500		E 20	GX 16-2 ...	MSS-E20 R/L 12-GX 16-2	MSS-E20 R/L 90-12 E		
1.510	5.500		E 25		MSS-E25 R/L 12-GX 16-2	MSS-E25 R/L 90-16 E		
1.770	1.770		E 32		MSS-E32 R/L 12-GX 16-2	MSS-E32 R/L 90-85 E		
1.297	4.500		E 20	GX16-3...	MSS-E20 R/L 12-GX 16-3	MSS-E20 R/L 90-12 E		
1.510	5.500		E 25		MSS-E25 R/L 12-GX 16-3	MSS-E25 R/L 90-16 E		
1.770	6.500		E 32		MSS-E32 R/L 12-GX 16-3	MSS-E32 R/L 90-85 E		
1.150	5.500		E 25	GX16-4...	MSS-E25 R/L 12-GX 16-4	MSS-E25 R/L 90-16 E		
1.770	6.500		E 32		MSS-E32 R/L 12-GX 16-4	MSS-E32 R/L 90-85 E		
1.657	4.500		E 20	GX24-2...	MSS-E20 R/L 21-GX 24-2	MSS-E20 R/L 90-12 E		
1.870	5.500		E 25		MSS-E25 R/L 21-GX 24-2	MSS-E25 R/L 90-16 E		
1.870	5.500		E 25	GX24-3...	MSS-E25 R/L 21-GX 24-3	MSS-E25 R/L 90-16 E		
2.130	6.500		E 32		MSS-E32 R/L 21-GX 24-3	MSS-E32 R/L 90-85 E		
1.870	5.500		E 25	GX24-4...	MSS-E25 R/L 21-GX 24-4	MSS-E25 R/L 90-16 E		
2.130	6.500		E 32		MSS-E32 R/L 21-GX 24-4	MSS-E32 R/L 90-85 E		
1.870	5.500		E 25	GX24-5...	MSS-E25 R/L 21-GX 24-5	MSS-E25 R/L 90-16 E		
2.140	6.500		E32	LX - ...	MSS-E32N32-LX	MSS-E32 R/L 90-85 E		
2.140	6.500		E32		MSS-E32N45-LX	MSS-E32 R/L 90-85 E		

Accessories



Module size

Handle key, small

E32

FS1048 (Torx 20)

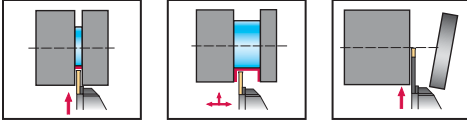


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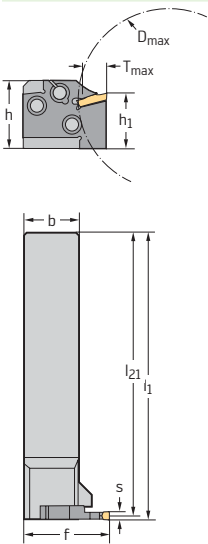
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Walter Cut shank tool NCLE



- external machining
- radial grooving 90°
- for grooving, recessing and parting off
- for GX/LX inserts

Tool



Designation	s mm	T _{max} mm	D _{max} mm	h=h ₁ mm	b mm
NCLE20-2020R/L-GX16-1	2.0 - 2.5	12	63	20	20
NCLE25-2525R/L-GX16-1		12	79	25	25
NCLE20-2020R/L-GX16-2	3	12	63	20	20
NCLE25-2525R/L-GX16-2		12	79	25	25
NCLE32-3225R/L-GX16-2		12	100	32	25
NCLE20-2020R/L-GX16-3	4.0 - 5.0	12	63	20	20
NCLE25-2525R/L-GX16-3		12	79	25	25
NCLE32-3225R/L-GX16-3		12	100	32	25
NCLE25-2525R/L-GX16-4	6	12	79	25	25
NCLE32-3225R/L-GX16-4		12	100	32	25
NCLE20-2020R/L-GX24-2-21	3	21	63	20	20
NCLE25-2525R/L-GX24-2-21		21	79	25	25
NCLE25-2525R/L-GX24-3-21	4.0 - 5.0	21	79	25	25
NCLE32-3225R/L-GX24-3-21		21	100	32	25
NCLE25-2525R/L-GX24-4-21	6	21	79	25	25
NCLE32-3225R/L-GX24-4-21		21	100	32	25
NCLE25-2525R/L-GX24-5-21		21	79	25	25
NCLE32-3225R/L-LX80-32	8	32	100	32	25
NCLE32-3225R/L-LX80-45		45	100	32	25

For T_{max} with greater diameters than D_{max}, see technical information on page A 473-477 in 2012 General Catalog.

Bodies and assembly parts are included in the scope of delivery.

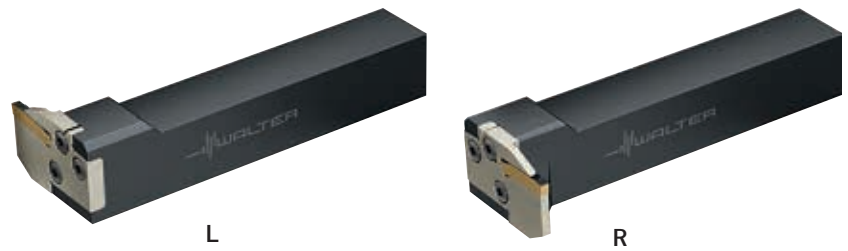
Ordering example:


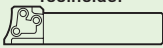
Right-handed shank tool: NCLE25-2525R-GX16-1 (left-handed module and right-handed toolholder)

Left-handed shank tool: NCLE25-2525L-GX16-1 (right-handed module and left-handed toolholder)


Assembly parts

	Module size	E20	E25	E32
	Clamping screw for LX grooving insert Tightening torque			FS1217 (Torx 20) 18 in-lb (2.0 Nm)
	Screw for grooving module Tightening torque	FS1053 (Torx 15) 18 in-lb (2.0 Nm)	FS1054 (Torx 20) 27 in-lb (3.0 Nm)	FS1055 (Torx 25) 27 in-lb (3.0 Nm)
	Handle key, small	FS1047 (Torx T15)	FS1048 (Torx 20)	FS1049 (Torx 25)

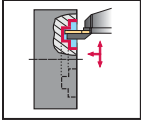


f mm	l ₁ mm	l ₂₁ mm	Module size	Type	Grooving module		Toolholder
							
33		109.8	E20	GX16-1E...	MSS-E20R/L12-GX16-1	MSS-E20R/L90-2020J	
38		139.8	E25		MSS-E25R/L12-GX16-1	MSS-E25R/L90-2525L	
33		109.4	E20	GX16-2E...	MSS-E20R/L12-GX16-2	MSS-E20R/L90-2020J	
38		139.4	E25		MSS-E25R/L12-GX16-2	MSS-E25R/L90-2525L	
45		159.4	E32		MSS-E32R/L12-GX16-2	MSS-E32R/L90-3225N	
33		108.9	E20	GX16-3E...	MSS-E20R/L12-GX16-3	MSS-E20R/L90-2020J	
38		138.9	E25		MSS-E25R/L12-GX16-3	MSS-E25R/L90-2525L	
45		158.9	E32		MSS-E32R/L12-GX16-3	MSS-E32R/L90-3225N	
38		138.3	E25	GX16-4E...	MSS-E25R/L12-GX16-4	MSS-E25R/L90-2525L	
45		158.3	E32		MSS-E32R/L12-GX16-4	MSS-E32R/L90-3225N	
42		109.4	E20	GX24-2E...	MSS-E20R/L21-GX24-2	MSS-E20R/L90-2020J	
47		139.4	E25		MSS-E25R/L21-GX24-2	MSS-E25R/L90-2525L	
47		138.9	E25	GX24-3E...	MSS-E25R/L21-GX24-3	MSS-E25R/L90-2525L	
54		158.9	E32		MSS-E32R/L21-GX24-3	MSS-E32R/L90-3225N	
47		138.3	E25	GX24-4E...	MSS-E25R/L21-GX24-4	MSS-E25R/L90-2525L	
54		158.3	E32		MSS-E32R/L21-GX24-4	MSS-E32R/L90-3225N	
47		137.5	E25	GX24-5E...	MSS-E25R/L21-GX24-5	MSS-E25R/L90-2525L	
66		157.9	E32	LX - ...	MSS-E32N32-LX	MSS-E32R/L90-3225N	
79		157.9	E32		MSS-E32N45-LX	MSS-E32R/L90-3225N	

Accessories

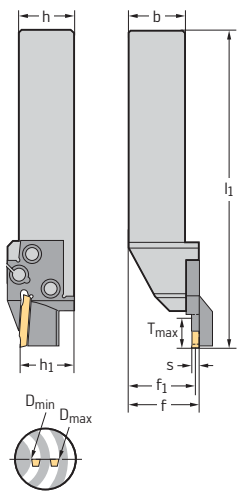
	Module size	E32
	Handle key, small	FS1048 (Torx 20)

Walter Cut shank tool NCEE



- external machining
- axial grooving 0°
- for axial grooving and face turning
- for GX inserts

Tool



Designation	s in	T _{max} in	D _{min} in	D _{max} in	h in
NCEE 20-1212 R/L-GX 24-2-1	0.118 - 0.138	0.551	1.969	2.756	0.750
NCEE 20-1212 R/L-GX 24-2-2		0.551	2.756	3.937	0.750
NCEE 20-1212 R/L-GX 24-2-3		0.551	3.937	5.906	0.750
NCEE 25-1616 R/L-GX 24-2-1	0.118 - 0.138	0.591	1.969	2.756	1.000
NCEE 25-1616 R/L-GX 24-2-2		0.591	2.756	3.937	1.000
NCEE 25-1616 R/L-GX 24-2-3		0.591	3.937	5.906	1.000
NCEE 25-1616 R/L-GX 24-3-1	0.157 - 0.197	0.591	1.969	2.756	1.000
NCEE 25-1616 R/L-GX 24-3-2		0.591	2.756	3.937	1.000
NCEE 32-8585 R/L-GX 24-3-2		0.591	2.756	3.937	1.250
NCEE 25-1616 R/L-GX 24-3-3		0.591	3.937	5.906	1.000
NCEE 32-8585 R/L-GX 24-3-3		0.591	3.937	5.906	1.250
NCEE 25-1616 R/L-GX 24-3-4		0.591	5.906	11.811	1.000
NCEE 32-8585 R/L-GX 24-3-4		0.591	5.906	11.811	1.250
NCEE 25-1616 R/L-GX 24-4-1	0.236	0.591	1.969	2.756	1.000
NCEE 25-1616 R/L-GX 24-4-2		0.591	2.756	3.937	1.000
NCEE 32-8585 R/L-GX 24-4-2		0.591	2.756	3.937	1.250
NCEE 25-1616 R/L-GX 24-4-3		0.591	3.937	5.906	1.000
NCEE 32-8585 R/L-GX 24-4-3		0.591	3.937	5.906	1.250
NCEE 25-1616 R/L-GX 24-4-4		0.591	5.906	11.811	1.000
NCEE 32-8585 R/L-GX 24-4-4		0.591	5.906	11.811	1.250
NCEE 32-8585 R/L-GX 24-4-5		0.591	11.811	35.433	1.250



Bodies and assembly parts are included in the scope of delivery.

Ordering example:


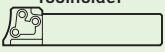
Right-handed tool NCEE20-1212R-GX24-2-1 (right-handed module and right-handed toolholder)

Left-handed tool NCEE20-1212L-GX24-2-1 (left-handed module and left-handed toolholder)

Assembly parts

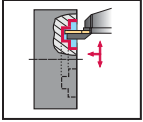
	Module size	E20	E25	E32
	Screw for grooving module Tightening torque	FS1053 (Torx T15) 18 in-lb (2.0 Nm)	FS1053 (Torx T15) 18 in-lb (2.0 Nm)	FS1055 (Torx T25) 27 in-lb (3.0 Nm)
	Handle key, small	FS1047 (Torx T15)	FS1048 (Torx T20)	FS1049 (Torx T25)



				Grooving module		Toolholder
b in	f ₁ in	l ₁ in	Module size	Type		
0.750	0.967	5.366	E 20	GX 24-2 ...	MSS-E20 R/L 14-GX 24-2 A 5070	MSS-E20 R/L 00-12 E
0.750	0.967	5.366	E 20		MSS-E20 R/L 14-GX 24-2 A 70100	MSS-E20 R/L 00-12 E
0.750	0.967	5.366	E 20		MSS-E20 R/L 14-GX 24-2 A 100150	MSS-E20 R/L 00-12 E
1.000	1.236	6.366	E 25	GX 24-2 ...	MSS-E25 R/L 15-GX 24-2 A 5070	MSS-E25 R/L 00-16 E
1.000	1.236	6.366	E 25		MSS-E25 R/L 15-GX 24-2 A 70100	MSS-E25 R/L 00-16 E
1.000	1.236	6.366	E 25		MSS-E25 R/L 15-GX 24-2 A 100150	MSS-E25 R/L 00-16 E
1.000	1.236	6.366	E 25	GX 24-3 ...	MSS-E25 R/L 15-GX 24-3 A 5070	MSS-E25 R/L 00-16 E
1.000	1.236	6.366	E 25		MSS-E25 R/L 15-GX 24-3 A 70100	MSS-E25 R/L 00-16 E
1.000	1.236	7.366	E 32		MSS-E32 R/L 15-GX 24-3 A 70100	MSS-E32 R/L 00-85 E
1.000	1.236	6.366	E 25		MSS-E25 R/L 15-GX 24-3 A 100150	MSS-E25 R/L 00-16 E
1.000	1.236	7.366	E 32		MSS-E32 R/L 15-GX 24-3 A 100150	MSS-E32 R/L 00-85 E
1.000	1.236	6.366	E 25		MSS-E25 R/L 15-GX 24-3 A 150300	MSS-E25 R/L 00-16 E
1.000	1.236	7.366	E 32		MSS-E32 R/L 15-GX 24-3 A 150300	MSS-E32 R/L 00-85 E
1.000	1.236	6.366	E 25		GX 24-4 ...	MSS-E25 R/L 15-GX 24-4 A 5070
1.000	1.236	6.366	E 25	MSS-E25 R/L 15-GX 24-4 A 70100		MSS-E25 R/L 00-16 E
1.000	1.236	7.366	E 32	MSS-E32 R/L 15-GX 24-4 A 70100		MSS-E32 R/L 00-85 E
1.000	1.236	6.366	E 25	MSS-E25 R/L 15-GX 24-4 A 100150		MSS-E25 R/L 00-16 E
1.000	1.236	7.366	E 32	MSS-E32 R/L 15-GX 24-4 A 100150		MSS-E32 R/L 00-85 E
1.000	1.236	6.366	E 25	MSS-E25 R/L 15-GX 24-4 A 150300		MSS-E25 R/L 00-16 E
1.000	1.236	7.366	E 32	MSS-E32 R/L 15-GX 24-4 A 150300		MSS-E32 R/L 00-85 E
1.000	1.236	7.366	E 32	MSS-E32 R/L 15-GX 24-4 A 300900		MSS-E32 R/L 00-85 E



Walter Cut shank tool NCEE



- external machining
- axial grooving 0°
- for axial grooving and face turning
- for GX inserts

Tool	Designation	s mm	T _{max} mm	D _{min} mm	D _{max} mm	h mm
	NCEE20-2020R/L-GX24-2-1	3.0 - 3.5	14	50	70	20
	NCEE20-2020R/L-GX24-2-2		14	70	100	20
	NCEE20-2020R/L-GX24-2-3		14	100	150	20
	NCEE25-2525R/L-GX24-2-3		15	100	150	25
	NCEE25-2525R/L-GX24-2-2		15	70	100	25
	NCEE25-2525R/L-GX24-2-1		15	50	70	25
	NCEE25-2525R/L-GX24-3-1	4.0 - 5.0	15	50	70	25
	NCEE25-2525R/L-GX24-3-2		15	70	100	25
	NCEE25-2525R/L-GX24-3-3		15	100	150	25
	NCEE25-2525R/L-GX24-3-4		15	150	300	25
	NCEE32-3225R/L-GX24-3-4		15	150	300	32
	NCEE32-3225R/L-GX24-3-3		15	100	150	32
	NCEE32-3225R/L-GX24-3-2	6	15	70	100	32
	NCEE25-2525R/L-GX24-4-4		15	150	300	25
	NCEE25-2525R/L-GX24-4-3		15	100	150	25
	NCEE25-2525R/L-GX24-4-2		15	70	100	25
	NCEE25-2525R/L-GX24-4-1		15	50	70	25
	NCEE32-3225R/L-GX24-4-2		15	70	100	32
	NCEE32-3225R/L-GX24-4-3		15	100	150	32
	NCEE32-3225R/L-GX24-4-4		15	150	300	32
NCEE32-3225R/L-GX24-4-5	15	300	900	32		

$f = f_1 + s/2$

Bodies and assembly parts are included in the scope of delivery.

Ordering example:

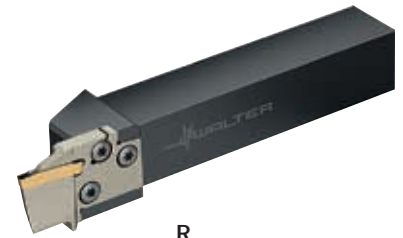
Right-handed tool NCEE20-2020R-GX24-2-1 (right-handed module and right-handed toolholder)

Left-handed tool NCEE20-2020L-GX24-2-1 (left-handed module and left-handed toolholder)


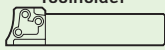
Assembly parts	Module size	E20	E25	E32
	Screw for grooving module Tightening torque	FS1053 (Torx T15) 2.0 Nm	FS1053 (Torx T15) 2.0 Nm	FS1055 (Torx T25) 3.0 Nm
	Handle key, small	FS1047 (Torx T15)	FS1048 (Torx T20)	FS1049 (Torx T25)



L

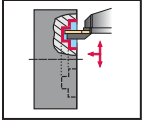


R

	b mm	f ₁ mm	l ₁ mm	Module size	Type	Grooving module	Toolholder
							
	20	23.6	132	E20	GX 24-2 ...	MSS-E20R/L14-GX24-2A5070	MSS-E20R/L00-2020J
	20	23.6	132	E20		MSS-E20R/L14-GX24-2A70100	MSS-E20R/L00-2020J
	20	23.6	132	E20		MSS-E20R/L14-GX24-2A100150	MSS-E20R/L00-2020J
	25	30.4	162	E25		MSS-E25R/L15-GX24-2A100150	MSS-E25R/L00-2525L
	25	30.4	162	E25		MSS-E25R/L15-GX24-2A70100	MSS-E25R/L00-2525L
	25	30.4	162	E25		MSS-E25R/L15-GX24-2A5070	MSS-E25R/L00-2525L
	25	29.9	162	E25	GX 24-3 ...	MSS-E25R/L15-GX24-3A5070	MSS-E25R/L00-2525L
	25	29.9	162	E25		MSS-E25R/L15-GX24-3A70100	MSS-E25R/L00-2525L
	25	29.9	162	E25		MSS-E25R/L15-GX24-3A100150	MSS-E25R/L00-2525L
	25	29.9	162	E25		MSS-E25R/L15-GX24-3A150300	MSS-E25R/L00-2525L
	25	29.9	182	E32		MSS-E32R/L15-GX24-3A150300	MSS-E32R/L00-3225N
	25	29.9	182	E32		MSS-E32R/L15-GX24-3A100150	MSS-E32R/L00-3225N
	25	29.9	182	E32	GX 24-4 ...	MSS-E32R/L15-GX24-3A70100	MSS-E32R/L00-3225N
	25	29.3	162	E25		MSS-E25R/L15-GX24-4A150300	MSS-E25R/L00-2525L
	25	29.3	162	E25		MSS-E25R/L15-GX24-4A100150	MSS-E25R/L00-2525L
	25	29.3	162	E25		MSS-E25R/L15-GX24-4A70100	MSS-E25R/L00-2525L
	25	29.3	162	E25		MSS-E25R/L15-GX24-4A5070	MSS-E25R/L00-2525L
	25	29.3	182	E32		MSS-E32R/L15-GX24-4A70100	MSS-E32R/L00-3225N
	25	29.3	182	E32	GX 24-4 ...	MSS-E32R/L15-GX24-4A100150	MSS-E32R/L00-3225N
	25	29.3	182	E32		MSS-E32R/L15-GX24-4A150300	MSS-E32R/L00-3225N
	25	29.3	182	E32		MSS-E32R/L15-GX24-4A300900	MSS-E32R/L00-3225N



Walter Cut shank tool NCHE



- external machining
- axial grooving 90°
- for axial grooving and face turning

Tool	Designation	s in	T _{max} in	D _{min} in	D _{max} in	h in
	NCHE 20-1212 R/L-GX 24-2-1	0.118 - 0.138	0.551	1.969	2.756	0.750
	NCHE 20-1212 R/L-GX 24-2-2		0.551	2.756	3.937	0.750
	NCHE 20-1212 R/L-GX 24-2-3		0.551	3.937	5.906	0.750
	NCHE 25-1616 R/L-GX 24-2-1	0.118 - 0.138	0.591	1.969	2.756	1.000
	NCHE 25-1616 R/L-GX 24-2-2		0.591	2.756	3.937	1.000
	NCHE 25-1616 R/L-GX 24-2-3		0.591	3.937	5.906	1.000
	NCHE 25-1616 R/L-GX 24-3-1	0.157 - 0.197	0.591	1.969	2.756	1.000
	NCHE 25-1616 R/L-GX 24-3-2		0.591	2.756	3.937	1.000
	NCHE 32-8585 R/L-GX 24-3-2		0.591	2.756	3.937	1.250
	NCHE 25-1616 R/L-GX 24-3-3		0.591	3.937	5.906	1.000
	NCHE 32-8585 R/L-GX 24-3-3		0.591	3.937	5.906	1.250
	NCHE 25-1616 R/L-GX 24-3-4	0.236	0.591	5.906	11.811	1.000
	NCHE 32-8585 R/L-GX 24-3-4		0.591	5.906	11.811	1.250
	NCHE 25-1616 R/L-GX 24-4-1		0.591	1.969	2.756	1.000
	NCHE 25-1616 R/L-GX 24-4-2		0.591	2.756	3.937	1.000
	NCHE 32-8585 R/L-GX 24-4-2		0.591	2.756	3.937	1.250
	NCHE 25-1616 R/L-GX 24-4-3	0.236	0.591	3.937	5.906	1.000
	NCHE 32-8585 R/L-GX 24-4-3		0.591	3.937	5.906	1.250
	NCHE 25-1616 R/L-GX 24-4-4		0.591	5.906	1.811	1.000
	NCHE 32-8585 R/L-GX 24-4-4		0.591	5.906	1.811	1.250
NCHE 32-8585 R/L-GX 24-4-5	0.591		11.811	35.433	1.250	

Bodies and assembly parts are included in the scope of delivery.

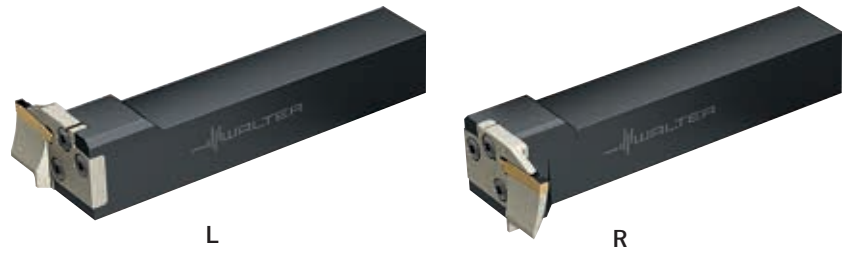
$l1 = l21 + s/2$


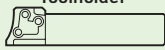
Ordering example:

Right-handed tool NCHE20-2020R-GX24-2-1 (left-handed module and right-handed toolholder)

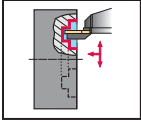
Left-handed tool NCHE20-2020L-GX24-2-1 (right-handed module and left-handed toolholder)

Assembly parts	Module size	E20	E25	E32
	Screw for grooving module Tightening torque	FS1053 (Torx 15) 18 in-lb (2.0 Nm)	FS1054 (Torx 20) 27 in-lb (3.0 Nm)	FS1055 (Torx 25) 27 in-lb (3.0 Nm)
	Handle key, small	FS1047 (Torx T15)	FS1048 (Torx 20)	FS1049 (Torx 25)



				Grooving module		Toolholder	
b in	f in	l ₁ in	Module size	Type			
0.750	1.657	4.5	E 20	GX 24-2 ...	MSS-E20 R/L 14-GX 24-2 A 5070	MSS-E20 R/L 90-12 E	
0.750	1.657	4.5	E 20		MSS-E20 R/L 14-GX 24-2 A 70100	MSS-E20 R/L 90-12 E	
0.750	1.657	4.5	E 20		MSS-E20 R/L 14-GX 24-2 A 100150	MSS-E20 R/L 90-12 E	
1.000	1.866	5.5	E 25	GX 24-2 ...	MSS-E25 R/L 15-GX 24-2 A 5070	MSS-E25 R/L 90-16 E	
1.000	1.866	5.5	E 25		MSS-E25 R/L 15-GX 24-2 A 70100	MSS-E25 R/L 90-16 E	
1.000	1.866	5.5	E 25		MSS-E25 R/L 15-GX 24-2 A 100150	MSS-E25 R/L 90-16 E	
1.000	1.866	5.5	E 25	GX 24-3 ...	MSS-E25 R/L 15-GX 24-3 A 5070	MSS-E25 R/L 90-16 E	
1.000	1.866	5.5	E 25		MSS-E25 R/L 15-GX 24-3 A 70100	MSS-E25 R/L 90-16 E	
1.000	2.130	6.5	E 32		MSS-E32 R/L 15-GX 24-3 A 70100	MSS-E32 R/L 90-85 E	
1.000	1.866	5.5	E 25		MSS-E25 R/L 15-GX 24-3 A 100150	MSS-E25 R/L 90-16 E	
1.000	2.130	6.5	E 32		MSS-E32 R/L 15-GX 24-3 A 100150	MSS-E32 R/L 90-85 E	
1.000	1.866	5.5	E 25		MSS-E25 R/L 15-GX 24-3 A 150300	MSS-E25 R/L 90-16 E	
1.000	2.130	6.5	E 32		MSS-E32 R/L 15-GX 24-3 A 150300	MSS-E32 R/L 90-85 E	
1.000	1.866	5.5	E 25		GX 24-4 ...	MSS-E25 R/L 15-GX 24-4 A 5070	MSS-E25 R/L 90-16 E
1.000	1.866	5.5	E 25			MSS-E25 R/L 15-GX 24-4 A 70100	MSS-E25 R/L 90-16 E
1.000	2.130	6.5	E 32	MSS-E32 R/L 15-GX 24-4 A 70100		MSS-E32 R/L 90-85 E	
1.000	1.866	5.5	E 25	MSS-E25 R/L 15-GX 24-4 A 100150		MSS-E25 R/L 90-16 E	
1.000	2.130	6.5	E 32	MSS-E32 R/L 15-GX 24-4 A 100150		MSS-E32 R/L 90-85 E	
1.000	1.866	5.5	E 25	MSS-E25 R/L 15-GX 24-4 A 150300		MSS-E25 R/L 90-16 E	
1.000	2.130	6.5	E 32	MSS-E32 R/L 15-GX 24-4 A 150300		MSS-E32 R/L 90-85 E	
1.000	2.130	6.5	E 25	MSS-E32 R/L 15-GX 24-4 A 300900		MSS-E32 R/L 90-85 E	

Walter Cut shank tool NCHE



- external machining
- axial grooving 90°
- for axial grooving and face turning

Tool	Designation	s mm	T _{max} mm	D _{min} mm	D _{max} mm	h mm
	NCHE20-2020R/L-GX24-2-1	3.0 - 3.5	14	50	70	20
	NCHE20-2020R/L-GX24-2-2		14	70	100	20
	NCHE20-2020R/L-GX24-2-3		14	100	150	20
	NCHE25-2525R/L-GX24-2-3	4.0 - 5.0	15	100	150	25
	NCHE25-2525R/L-GX24-2-2		15	70	100	25
	NCHE25-2525R/L-GX24-2-1		15	50	70	25
	NCHE25-2525R/L-GX24-3-1	6	15	50	70	25
	NCHE25-2525R/L-GX24-3-2		15	70	100	25
	NCHE25-2525R/L-GX24-3-3		15	100	150	25
	NCHE25-2525R/L-GX24-3-4		15	150	300	25
	NCHE32-3225R/L-GX24-3-4	6	15	150	300	32
	NCHE32-3225R/L-GX24-3-3		15	100	150	32
	NCHE32-3225R/L-GX24-3-2		15	70	100	32
	NCHE25-2525R/L-GX24-4-4		15	150	300	25
	NCHE25-2525R/L-GX24-4-3	6	15	100	150	25
	NCHE25-2525R/L-GX24-4-2		15	70	100	25
	NCHE25-2525R/L-GX24-4-1		15	50	70	25
	NCHE32-3225R/L-GX24-4-2		15	70	100	32
	NCHE32-3225R/L-GX24-4-3		15	100	150	32
	NCHE32-3225R/L-GX24-4-4	6	15	150	300	32
NCHE32-3225R/L-GX24-4-5	15		300	900	32	

$l1 = l21 + s/2$

Bodies and assembly parts are included in the scope of delivery.

Ordering example:

Right-handed tool NCHE20-2020R-GX24-2-1 (left-handed module and right-handed toolholder)

Left-handed tool NCHE20-2020L-GX24-2-1 (right-handed module and left-handed toolholder)


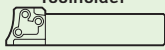
Assembly parts	Module size	E20	E25	E32
	Screw for grooving module Tightening torque	FS1053 (Torx 15) 18 in-lb (2.0 Nm)	FS1054 (Torx 20) 27 in-lb (3.0 Nm)	FS1055 (Torx 25) 27 in-lb (3.0 Nm)
	Handle key, small	FS1047 (Torx T15)	FS1048 (Torx 20)	FS1049 (Torx 25)

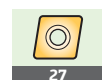


L



R

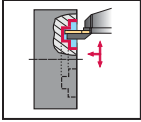
					Grooving module		Toolholder
b mm	f mm	l ₂₁ mm	Module size	Type			
20	42	109.4	E20	GX 24-2 ...	MSS-E20R/L14-GX24-2A5070	MSS-E20R/L90-2020J	
20	42	109.4	E20		MSS-E20R/L14-GX24-2A70100	MSS-E20R/L90-2020J	
20	42	109.4	E20		MSS-E20R/L14-GX24-2A100150	MSS-E20R/L90-2020J	
25	47	139.4	E25		MSS-E25R/L15-GX24-2A100150	MSS-E25R/L90-2525L	
25	47	139.4	E25		MSS-E25R/L15-GX24-2A70100	MSS-E25R/L90-2525L	
25	47	139.4	E25		MSS-E25R/L15-GX24-2A5070	MSS-E25R/L90-2525L	
25	47	138.9	E25	GX 24-3 ...	MSS-E25R/L15-GX24-3A5070	MSS-E25R/L90-2525L	
25	47	138.9	E25		MSS-E25R/L15-GX24-3A70100	MSS-E25R/L90-2525L	
25	47	138.9	E25		MSS-E25R/L15-GX24-3A100150	MSS-E25R/L90-2525L	
25	47	138.9	E25		MSS-E25R/L15-GX24-3A150300	MSS-E25R/L90-2525L	
25	54	158.9	E32		MSS-E32R/L15-GX24-3A150300	MSS-E32R/L90-3225N	
25	54	158.9	E32		MSS-E32R/L15-GX24-3A100150	MSS-E32R/L90-3225N	
25	54	158.9	E32	GX 24-4 ...	MSS-E32R/L15-GX24-3A70100	MSS-E32R/L90-3225N	
25	47	138.3	E25		MSS-E25R/L15-GX24-4A150300	MSS-E25R/L90-2525L	
25	47	138.3	E25		MSS-E25R/L15-GX24-4A100150	MSS-E25R/L90-2525L	
25	47	138.3	E25		MSS-E25R/L15-GX24-4A70100	MSS-E25R/L90-2525L	
25	47	138.3	E25		MSS-E25R/L15-GX24-4A5070	MSS-E25R/L90-2525L	
25	54	158.3	E32		MSS-E32R/L15-GX24-4A70100	MSS-E32R/L90-3225N	
25	54	158.3	E32	GX 24-4 ...	MSS-E32R/L15-GX24-4A100150	MSS-E32R/L90-3225N	
25	54	158.3	E32		MSS-E32R/L15-GX24-4A150300	MSS-E32R/L90-3225N	
25	54	158.3	E32		MSS-E32R/L15-GX24-4A300900	MSS-E32R/L90-3225N	



Walter Cut shank tool

NCFE-C

Contra version



- external machining
- axial grooving 0°
- for deep axial grooving and face turning
- Contra version
- for GX inserts

Tool	Designation	s in	T _{max} in	D _{min} in	D _{max} in	h in
	NCFE 25-1616 R/L-GX 24-3-1 C	0.157 - 0.197	0.827	1.969	2.756	1.000
	NCFE 25-1616 R/L-GX 24-3-2 C		0.827	2.756	3.937	1.000
	NCFE 25-1616 R/L-GX 24-3-3 C		0.827	3.937	5.906	1.000
	NCFE 25-1616 R/L-GX 24-3-4 C		0.827	5.906	11.811	1.000
	NCFE 25-1616 R/L-GX 24-4-1 C	0.236	0.984	1.969	2.756	1.000
	NCFE 25-1616 R/L-GX 24-4-2 C		0.984	2.756	3.937	1.000
	NCFE 25-1616 R/L-GX 24-4-3 C		0.984	3.937	5.906	1.000
	NCFE 25-1616 R/L-GX 24-4-4 C		0.984	5.906	11.811	1.000

Bodies and assembly parts are included in the scope of delivery.

Ordering example:

Right-handed tool NCFE25-1616R-GX24-3-1C (right-handed module and right-handed toolholder)

Left-handed tool NCFE25-1616L-GX24-3-1C (left-handed module and left-handed toolholder)

For description of contra version/standard version, see page 162.


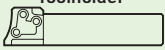
Assembly parts	Module size	E25
	Clamping screw for grooving insert	FS1342 (Torx 15)
	Tightening torque	9 in-lb (1.0 Nm)
	Screw for grooving module	FS1054 (Torx 20)
	Tightening torque	27 in-lb (3.0 Nm)
	Key for grooving module	FS1048 (Torx 20)
	Handle key, small	FS1047 (Torx T15)



L



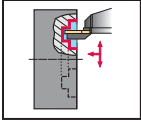
R

					Grooving module 		Toolholder 
b in	f ₁ in	l ₁ in	Module size	Type			
1.000	1.236	6.878	E 25	GX 24-3 ...	MSS-E25 R/L 21-GX 24-3 C 5070	MSS-E25 R/L 00-16 E	
1.000	1.236	6.878	E 25		MSS-E25 R/L 21-GX 24-3 C 70100	MSS-E25 R/L 00-16 E	
1.000	1.236	6.878	E 25		MSS-E25 R/L 21-GX 24-3 C 100150	MSS-E25 R/L 00-16 E	
1.000	1.236	6.878	E 25		MSS-E25 R/L 21-GX 24-3 C 150300	MSS-E25 R/L 00-16 E	
1.000	1.236	6.878	E 25	GX 24-4 ...	MSS-E25 R/L 25-GX 24-4 C 5070	MSS-E25 R/L 00-16 E	
1.000	1.236	6.878	E 25		MSS-E25 R/L 25-GX 24-4 C 70100	MSS-E25 R/L 00-16 E	
1.000	1.236	6.878	E 25		MSS-E25 R/L 25-GX 24-4 C 100150	MSS-E25 R/L 00-16 E	
1.000	1.236	6.878	E 25		MSS-E25 R/L 25-GX 24-4 C 150300	MSS-E25 R/L 00-16 E	

Walter Cut shank tool

NCFE-C

Contra version



- external machining
- axial grooving 0°
- for deep axial grooving and face turning
- Contra version
- for GX inserts

Tool	Designation	s mm	T _{max} mm	D _{min} mm	D _{max} mm	h mm
	NCFE25-2525R/L-GX24-3-1C	4.0 - 5.0	21	50	70	25
	NCFE25-2525R/L-GX24-3-2C		21	70	100	25
	NCFE25-2525R/L-GX24-3-3C		21	100	150	25
	NCFE25-2525R/L-GX24-3-4C		21	150	300	25
	NCFE25-2525R/L-GX24-4-1C	6	25	50	70	25
	NCFE25-2525R/L-GX24-4-2C		25	70	100	25
	NCFE25-2525R/L-GX24-4-3C		25	100	150	25
	NCFE25-2525R/L-GX24-4-4C		25	150	300	25

$f = f_1 + s/2$

Bodies and assembly parts are included in the scope of delivery.

Ordering example:

Right-handed tool NCFE25-2525R-GX24-3-1C (left-handed module and right-handed toolholder)

Left-handed tool NCFE25-2525L-GX24-3-1C (right-handed module and left-handed toolholder)

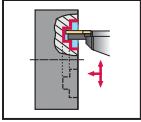
For description of contra version/standard version, see page 162.

Assembly parts	Module size	E25
	Clamping screw for grooving insert	FS1342 (Torx T15)
	Tightening torque	1.0 Nm
	Screw for grooving module	FS1054 (Torx T20)
	Tightening torque	3.0 Nm
	Key for grooving module	FS1048 (Torx T20)
	Handle key, small	FS1047 (Torx T15)

Walter Cut shank tool

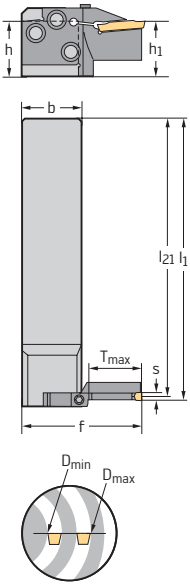
NCOE-C

Contra version



- external machining
- axial grooving 90°
- for deep axial grooving and face turning
- Contra version
- for GX inserts

Tool



Designation	s in	T _{max} in	D _{min} in	D _{max} in	h in
NCOE 25-1616 R/L-GX 24-3-1 C	0.158 - 0.197	0.827	1.969	2.756	1.000
NCOE 25-1616 R/L-GX 24-3-2 C		0.827	2.756	3.937	1.000
NCOE 25-1616 R/L-GX 24-3-3 C		0.827	3.937	5.906	1.000
NCOE 25-1616 R/L-GX 24-3-4 C		0.827	5.906	11.811	1.000
NCOE 25-1616 R/L-GX 24-4-1 C	0.236	0.827	1.969	2.756	1.000
NCOE 25-1616 R/L-GX 24-4-2 C		0.827	2.756	3.937	1.000
NCOE 25-1616 R/L-GX 24-4-3 C		0.827	3.937	5.906	1.000
NCOE 25-1616 R/L-GX 24-4-4 C		0.827	5.906	11.811	1.000

Bodies and assembly parts are included in the scope of delivery.

Ordering example:

Right-handed tool NCOE25-1616R-GX24-3-1C (right-handed module and right-handed toolholder)

Left-handed tool NCOE25-1616L-GX24-3-1C (left-handed module and left-handed toolholder)

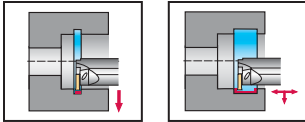
For description of contra version/standard version, see page 162.

Assembly parts

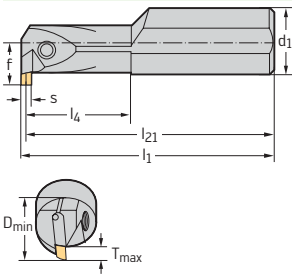
	Module size	E25
	Clamping screw for grooving insert	FS1342 (Torx 15)
	Tightening torque	9 in-lb (1.0 Nm)
	Screw for grooving module	FS1054 (Torx 20)
	Tightening torque	27 in-lb (3.0 Nm)
	Key for clamping screw	FS1047 (Torx 15)
	Handle key, small	FS1048 (Torx 20)

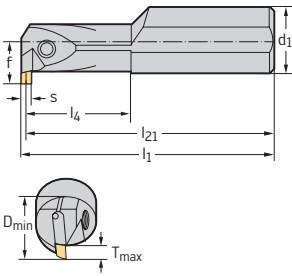


Walter Cut I 12 R/L



- internal machining
- radial grooving 90°
- one-piece shank tool
- for grooving and longitudinal turning
- for GX inserts

Tool	Modular tool** Designation	s in	T _{max} in	D _{min} in	d ₁ in	f in	l ₄ in	l ₂₁ in	Type
	I 12 R/L 90-2.5D-GX 09-E	0.077-0.098	0.118	0.630	0.625	0.433	1.181	5.880	GX 09-1 ...

Tool	Designation	s mm	T _{max} mm	D _{min} mm	d ₁ mm	f mm	l ₄ mm	l ₂₁ mm	Type
	I12R/L90-2.5D-GX09	2.0 - 2.5	3	16	16	11	29.4	149.4	GX 09-1 ...




$l_1 = l_{21} + s/2$

Bodies and assembly parts are included in the scope of delivery.

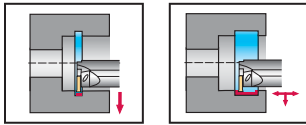
Ordering example:

Right-handed shank tool: I 12 R 90-2.5D-GX09-E

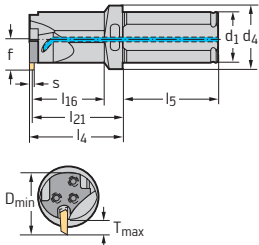
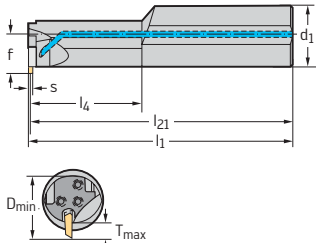
Left-handed shank tool: I 12 R 90-2.5D-GX09-E

Assembly parts	Type	GX 09-1 ...
	Clamping screw for grooving insert Tightening torque	FS1052 (Torx T15) 18 in-lb (2.0 Nm)
	Pin	02,0M6X005 ISO 8734
	Handle key, small	FS1047 (Torx T15)

Walter Cut shank tool NCAI



- internal machining
- radial grooving 90°
- for grooving and longitudinal turning
- for GX inserts

Tool	Designation	s in	T _{max} in	D _{min} in	d ₁ in	d ₄ in	l ₄ in	
1.5 x D 	NCAI 16-1215 R/L-GX 09-1	0.077 - 0.098	0.157	0.787	0.750	0.984	1.260	
	NCAI 16-1215 R/L-GX 09-2	0.118 - 0.138						
	NCAI 20-1215 R/L-GX 09-1	0.077 - 0.098	0.197	0.984	0.750	0.984	1.457	
	NCAI 20-1215 R/L-GX 09-2	0.118 - 0.138						
	NCAI 32-2015 R/L-GX 16-1	0.079 - 0.098	0.354	1.575	1.250	1.575	2.323	
	NCAI 32-2015 R/L-GX 16-2	0.118 - 0.138						
	NCAI 32-2015 R/L-GX 16-3	0.157 - 0.197						
	NCAI 32-2015 R/L-GX 16-4	0.236						
	NCAI 40-2415 R/L-GX 16-1	0.079 - 0.098	0.394	1.969	1.500	1.969	2.835	
	NCAI 40-2415 R/L-GX 16-2	0.118 - 0.138						
	NCAI 40-2415 R/L-GX 16-3	0.157 - 0.197						
	NCAI 40-2415 R/L-GX 16-4	0.236						
	NCAI 40-2415 R/L-GX 24-3	0.157 - 0.197	0.748	2.362	1.500	1.969	2.835	
	NCAI 40-2415 R/L-GX 24-4	0.236						
	2.5 x D 	NCAI 16-1225 R/L-GX 09-1	0.077 - 0.098	0.157	0.787	0.750		1.575
		NCAI 16-1225 R/L-GX 09-2	0.118 - 0.138					
NCAI 20-1625 R/L-GX 09-1		0.077 - 0.098	0.197	0.984	1.000		1.969	
NCAI 20-1625 R/L-GX 09-2		0.118 - 0.138						
NCAI 25-2025 R/L-GX 09-1		0.077 - 0.098	0.236	1.260	1.250		2.480	
NCAI 25-2025 R/L-GX 09-2		0.118 - 0.138						
NCAI 32-2425 R/L-GX 16-1		0.079 - 0.098	0.354	1.575	1.500		3.150	
NCAI 32-2425 R/L-GX 16-2		0.118 - 0.138						
NCAI 32-2425 R/L-GX 16-3		0.157 - 0.197						
NCAI 32-2425 R/L-GX 16-4		0.236						
NCAI 40-3225 R/L-GX 16-1		0.079 - 0.098	0.394	1.969	2.000		3.937	
NCAI 40-3225 R/L-GX 16-2		0.118 - 0.138						
NCAI 40-3225 R/L-GX 16-3		0.157 - 0.197						
NCAI 40-3225 R/L-GX 16-4		0.236						
NCAI 40-3225 R/L-GX 24-3		0.125 - 0.197	0.748	2.362	2.000		3.937	
NCAI 40-3225 R/L-GX 24-4		0.236						



$l1 = l21 + s/2$

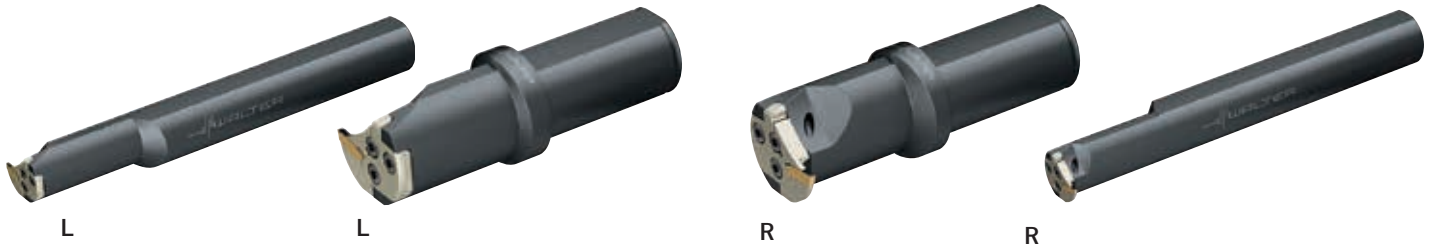
Bodies and assembly parts are included in the scope of delivery.


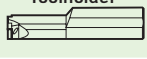
Ordering example:

Right-handed tool NCAI16-1215R-GX09-1 (right-handed module and right-handed toolholder)

Left-handed tool NCAI16-1215L-GX09-1 (left-handed module and left-handed toolholder)

Assembly parts		Module size	I16	I20	I25	I32	I40
	Handle key, small		FS257 (Torx 8)	FS1050 (Torx 10)	FS1047 (Torx T15)	FS1048 (Torx 20)	FS1048 (Torx 20)
	Screw for grooving module Tightening torque		FS1051 (Torx 8) 18 in-lb (2.0 Nm)	FS1056 (Torx 10) 18 in-lb (2.0 Nm)	FS1052 (Torx 15) 18 in-lb (2.0 Nm)	FS1057 (Torx 20) 27 in-lb (3.0 Nm)	FS1054 (Torx 20) 27 in-lb (3.0 Nm)



	f in	l ₅ in	l ₁ in	l ₁₆ in	Module size	Type	Grooving module 	Toolholder 
	0.433	2.000	3.260	0.945	116	GX 09-1..	MSS-I16 R/L 04-GX 09-1	MSS-I16 R/L 90-1.5D -E
	0.433	2.000	3.260	0.945	116	GX 09-2..	MSS-I16 R/L 04-GX 09-2	MSS-I16 R/L 90-1.5D -E
	0.512	2.000	3.457	1.181	120	GX 09-1..	MSS-I20 R/L 05-GX 09-1	MSS-I20 R/L 90-1.5D -E
	0.512	2.000	3.457	1.181	120	GX 09-2..	MSS-I20 R/L 05-GX 09-2	MSS-I20 R/L 90-1.5D -E
	0.866	2.500	4.823	1.890	132	GX 16-1..	MSS-I32 R/L 09-GX 16-1	MSS-I32 R/L 90-1.5D -E
	0.866	2.500	4.823	1.890	132	GX 16-2..	MSS-I32 R/L 09-GX 16-2	MSS-I32 R/L 90-1.5D -E
	0.866	2.500	4.823	1.890	132	GX 16-3..	MSS-I32 R/L 09-GX 16-3	MSS-I32 R/L 90-1.5D -E
	0.866	2.500	4.823	1.890	132	GX 16-4..	MSS-I32 R/L 09-GX 16-4	MSS-I32 R/L 90-1.5D -E
	1.063	3.000	5.835	2.362	140	GX 16-1..	MSS-I40 R/L 10-GX 16-1	MSS-I40 R/L 90-1.5D -E
	1.063	3.000	5.835	2.362	140	GX 16-2..	MSS-I40 R/L 10-GX 16-2	MSS-I40 R/L 90-1.5D -E
	1.063	3.000	5.835	2.362	140	GX 16-3..	MSS-I40 R/L 10-GX 16-3	MSS-I40 R/L 90-1.5D -E
	1.063	3.000	5.835	2.362	140	GX 16-4..	MSS-I40 R/L 10-GX 16-4	MSS-I40 R/L 90-1.5D -E
	1.417	3.000	5.835	2.362	140	GX 24-3..	MSS-I40 N 19-GX 24-3	MSS-I40 R/L 90-1.5D -E
	1.417	3.000	5.835	2.362	140	GX 24-4..	MSS-I40 N 19-GX 24-4	MSS-I40 R/L 90-1.5D -E
	0.522		7.000		116	GX 09-1..	MSS-I16 R/L 04-GX 09-1	MSS-I16 R/L 90-2.5D -E
	0.522		7.000		116	GX 09-2..	MSS-I16 R/L 04-GX 09-2	MSS-I16 R/L 90-2.5D -E
	0.659		8.000		120	GX 09-1..	MSS-I20 R/L 05-GX 09-1	MSS-I20 R/L 90-2.5D -E
	0.659		8.000		120	GX 09-2..	MSS-I20 R/L 05-GX 09-2	MSS-I20 R/L 90-2.5D -E
	0.837		10.000		125	GX 09-1..	MSS-I25 R/L 06-GX 09-1	MSS-I25 R/L 90-2.5D -E
	0.837		10.000		125	GX 09-2..	MSS-I25 R/L 06-GX 09-2	MSS-I25 R/L 90-2.5D -E
	1.073		12.000		132	GX 16-1..	MSS-I32 R/L 09-GX 16-1	MSS-I32 R/L 90-2.5D -E
	1.073		12.000		132	GX 16-2..	MSS-I32 R/L 09-GX 16-2	MSS-I32 R/L 90-2.5D -E
	1.073		12.000		132	GX 16-3..	MSS-I32 R/L 09-GX 16-3	MSS-I32 R/L 90-2.5D -E
	1.073		12.000		132	GX 16-4..	MSS-I32 R/L 09-GX 16-4	MSS-I32 R/L 90-2.5D -E
	1.309		14.000		140	GX 16-1..	MSS-I40 R/L 10-GX 16-1	MSS-I40 R/L 90-2.5D -E
	1.309		14.000		140	GX 16-2..	MSS-I40 R/L 10-GX 16-2	MSS-I40 R/L 90-2.5D -E
	1.309		14.000		140	GX 16-3..	MSS-I40 R/L 10-GX 16-3	MSS-I40 R/L 90-2.5D -E
	1.309		14.000		140	GX 16-4..	MSS-I40 R/L 10-GX 16-4	MSS-I40 R/L 90-2.5D -E
	1.417		14.000		140	GX 24-3..	MSS-I40 N 19-GX 24-3	MSS-I40 R/L 90-2.5D -E
	1.417		14.000		140	GX 24-4..	MSS-I40 N 19-GX 24-4	MSS-I40 R/L 90-2.5D -E

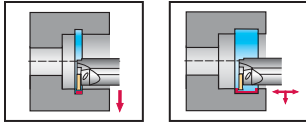


27



162

Walter Cut shank tool NCAI



- internal machining
- radial grooving 90°
- for grooving and longitudinal turning
- for GX inserts

Tool	Designation	s mm	T _{max} mm	D _{min} mm	d ₁ mm	d ₄ mm	l ₄ mm
1.5 x D 	NCAI16-2015R/L-GX09-1	2.0 - 2.5	4	20	20	25	24
	NCAI20-2015R/L-GX09-1		5	25	20	25	30
	NCAI16-2015R/L-GX09-2	3	4	20	20	25	24
	NCAI20-2015R/L-GX09-2		5	25	20	25	30
	NCAI40-4015R/L-GX16-1	2.0 - 2.5	10	50	40	50	60
	NCAI32-3215R/L-GX16-1		9	40	32	40	48
	NCAI32-3215R/L-GX16-2	3	9	40	32	40	48
	NCAI40-4015R/L-GX16-2		10	50	40	50	60
	NCAI32-3215R/L-GX16-3	4.0 - 5.0	9	40	32	40	48
	NCAI40-4015R/L-GX16-3		10	50	40	50	60
	NCAI32-3215R/L-GX16-4	6	9	40	32	40	48
	NCAI40-4015R/L-GX16-4		10	50	40	50	60
	NCAI40-4015R/L-GX24-3	4.0 - 5.0	19	60	40	50	60
	NCAI40-4015R/L-GX24-4	6	19	60	40	50	60
2.5 x D 	NCAI16-2025R/L-GX09-1	2.0 - 2.5	4	20	20	25	40
	NCAI20-2525R/L-GX09-1		5	25	25	25	50
	NCAI25-2515R/L-GX09-1		6	32	25	32	38
	NCAI25-3225R/L-GX09-1	3	6	32	32	32	63
	NCAI25-3225R/L-GX09-2		6	32	32	32	63
	NCAI25-2515R/L-GX09-2		6	32	25	32	38
	NCAI20-2525R/L-GX09-2	2.0 - 2.5	5	25	25	25	50
	NCAI16-2025R/L-GX09-2		4	20	20	25	40
	NCAI32-4025R/L-GX16-1		9	40	40	40	80
	NCAI40-5025R/L-GX16-1	3	10	50	50	50	100
	NCAI32-4025R/L-GX16-2		9	40	40	40	80
	NCAI40-5025R/L-GX16-2	4.0 - 5.0	10	50	50	50	100
	NCAI32-4025R/L-GX16-3		9	40	40	40	80
	NCAI40-5025R/L-GX16-3	6	10	50	50	50	100
	NCAI32-4025R/L-GX16-4		9	40	40	40	80
	NCAI40-5025R/L-GX16-4	4.0 - 5.0	10	50	50	50	100
	NCAI40-5025R/L-GX24-3		19	60	50	50	100
	NCAI40-5025R/L-GX24-4	6	19	60	50	50	100

$l1 = l21 + s/2$

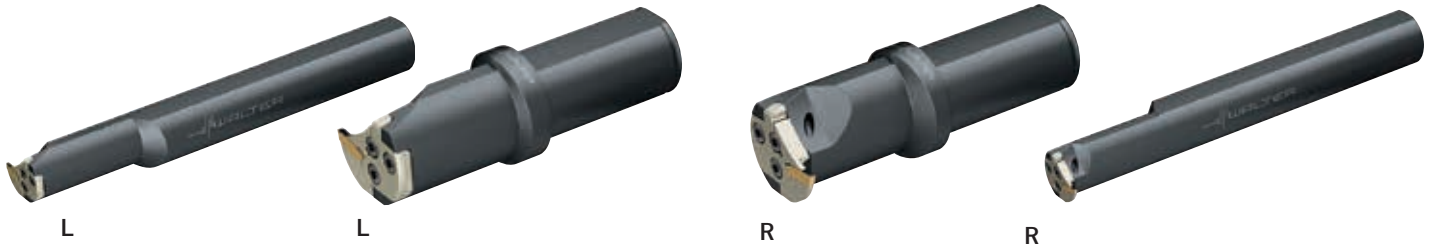
Bodies and assembly parts are included in the scope of delivery.


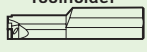
Ordering example:

Right-handed tool NCAI16-2015R-GX09-1 (right-handed module and right-handed toolholder)

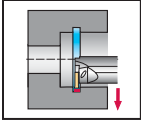
Left-handed tool NCAI16-2015L-GX09-1 (left-handed module and left-handed toolholder)

Assembly parts		Module size	I16	I20	I25	I32	I40
	Handle key, small		FS257 (Torx 8)	FS1050 (Torx 10)	FS1047 (Torx T15)	FS1048 (Torx 20)	FS1048 (Torx 20)
	Screw for grooving module Tightening torque		FS1051 (Torx 8) 18 in-lb (2.0 Nm)	FS1056 (Torx 10) 18 in-lb (2.0 Nm)	FS1052 (Torx 15) 18 in-lb (2.0 Nm)	FS1057 (Torx 20) 27 in-lb (3.0 Nm)	FS1054 (Torx 20) 27 in-lb (3.0 Nm)



f mm	l ₅ mm	l ₂₁ mm	l ₁₆ mm	Module size	Type	Grooving module		Toolholder
								
11	50	31.4	23.4	I16	GX09-1E...	MSS-I16R/L04-GX09-1	MSS-I16R/L90-1.5D-N	
13	50	37	29.4	I20		MSS-I20R/L05-GX09-1	MSS-I20R/L90-1.5D-N	
11	50	31.4	23.4	I16	GX09-2E...	MSS-I16R/L04-GX09-2	MSS-I16R/L90-1.5D-N	
13	50	37	29.4	I20		MSS-I20R/L05-GX09-2	MSS-I20R/L90-1.5D-N	
27	70	71.4	59.4	I40	GX16-1E...	MSS-I40R/L10-GX16-1	MSS-I40R/L90-1.5D-N	
22	60	58.4	47.4	I32		MSS-I32R/L09-GX16-1	MSS-I32R/L90-1.5D-N	
22	60	58	47	I32	GX16-2E...	MSS-I32R/L09-GX16-2	MSS-I32R/L90-1.5D-N	
27	70	71	59	I40		MSS-I40R/L10-GX16-2	MSS-I40R/L90-1.5D-N	
22	60	60.5	49.5	I32	GX16-3E...	MSS-I32R/L09-GX16-3	MSS-I32R/L90-1.5D-N	
27	70	80.5	68.5	I40		MSS-I40R/L10-GX16-3	MSS-I40R/L90-1.5D-N	
22	60	56.9	45.9	I32	GX16-4E...	MSS-I32R/L09-GX16-4	MSS-I32R/L90-1.5D-N	
27	70	69.9	57.9	I40		MSS-I40R/L10-GX16-4	MSS-I40R/L90-1.5D-N	
36	70	70.8	58.8	I40	GX24-3E...	MSS-I40N19-GX24-3	MSS-I40R/L90-1.5D-N	
36	70	70.2	58.2	I40	GX24-4E...	MSS-I40N19-GX24-4	MSS-I40R/L90-1.5D-N	
14.5		179.4	39.4	I16	GX09-1E...	MSS-I16R/L04-GX09-1	MSS-I16R/L90-2.5D-N	
18		199.4	49.4	I20		MSS-I20R/L05-GX09-1	MSS-I20R/L90-2.5D-N	
17		45.4	37.4	I25		MSS-I25R/L06-GX09-1	MSS-I25R/L90-1.5D-N	
22.5		249.4	62.4	I25		MSS-I25R/L06-GX09-1	MSS-I25R/L90-2.5D-N	
22.5		249	62	I25	GX09-2E...	MSS-I25R/L06-GX09-2	MSS-I25R/L90-2.5D-N	
17		45	37	I25		MSS-I25R/L06-GX09-2	MSS-I25R/L90-1.5D-N	
18		199	49	I20		MSS-I20R/L05-GX09-2	MSS-I20R/L90-2.5D-N	
14.5		179	39	I16		MSS-I16R/L04-GX09-2	MSS-I16R/L90-2.5D-N	
29.5		299.4	79.4	I32	GX16-1E...	MSS-I32R/L09-GX16-1	MSS-I32R/L90-2.5D-N	
35.5		349.4	99.4	I40		MSS-I40R/L10-GX16-1	MSS-I40R/L90-2.5D-N	
29.5		299	79	I32	GX16-2E...	MSS-I32R/L09-GX16-2	MSS-I32R/L90-2.5D-N	
35.5		349	99	I40		MSS-I40R/L10-GX16-2	MSS-I40R/L90-2.5D-N	
29.5		301.5	81.5	I32	GX16-3E...	MSS-I32R/L09-GX16-3	MSS-I32R/L90-2.5D-N	
35.5		348.5	98.5	I40		MSS-I40R/L10-GX16-3	MSS-I40R/L90-2.5D-N	
29.5		303.4	83.4	I32	GX16-4E...	MSS-I32R/L09-GX16-4	MSS-I32R/L90-2.5D-N	
35.5		347.9	97.9	I40		MSS-I40R/L10-GX16-4	MSS-I40R/L90-2.5D-N	
44.5		348.8	98.8	I40	GX24-3E...	MSS-I40N19-GX24-3	MSS-I40R/L90-2.5D-N	
44.5		348.2	98.2	I40	GX24-4E...	MSS-I40N19-GX24-4	MSS-I40R/L90-2.5D-N	

Walter Cut shank tool NCCI



- internal machining
- for circlip grooves
- for GX inserts

Tool	Designation	s in	T _{max} in	D _{min} in	d ₁ in	d ₄ in	l ₄ in
1.5 x D 	NCCI 16-1215 R/L-GX 09-1	0.024 - 0.067	0.079	0.787	0.750	0.984	0.945
	NCCI 20-1215 R/L-GX 09-1			0.984	0.750	0.984	1.181
	NCCI 25-1615 R/L-GX 09-1			1.260	1.000	1.260	1.496
	NCCI 32-2015 R/L-GX 16-2	0.024 - 0.089	0.118	1.575	1.250	1.575	1.890
	NCCI 40-2415 R/L-GX 16-2			1.969	1.500	1.986	2.362
2.5 x D 	NCCI 16-1225 R/L-GX 09-1	0.024 - 0.067	0.079	0.787	0.750		1.575
	NCCI 20-1625 R/L-GX 09-1			0.984	1.000		1.969
	NCCI 25-2025 R/L-GX 09-1			1.260	1.250		2.480
	NCCI 32-2425 R/L-GX 16-2	0.024 - 0.089	0.118	1.575	1.500		3.150
	NCCI 40-3225 R/L-GX 16-2			1.969	2.000		3.937

$l_1 = l_{21} + s/2$

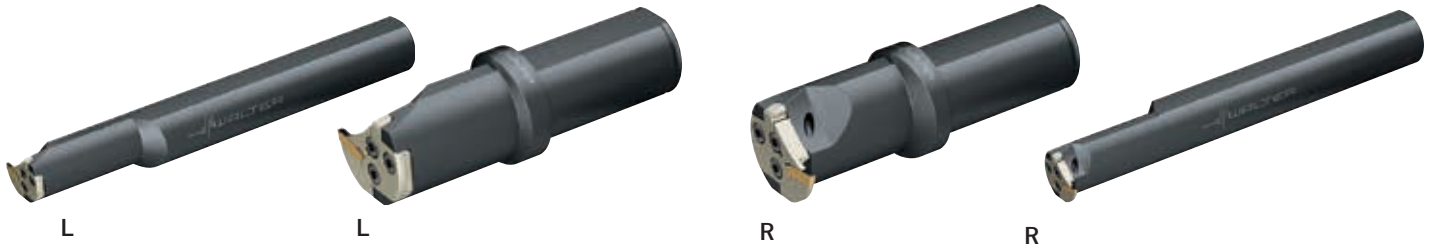
Bodies and assembly parts are included in the scope of delivery.



Ordering example:

Right-handed tool NCCI16-1215R-GX09-1 (right-handed module and right-handed toolholder)

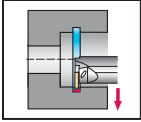
Left-handed tool NCCI16-1215L-GX09-1 (left-handed module and left-handed toolholder)

Assembly parts	Module size	I16	I20	I25	I32	I40
	Screw for grooving module Tightening torque	FS1051 (Torx 8) 18 in-lb (2.0 Nm)	FS1056 (Torx 10) 18 in-lb (2.0 Nm)	FS1052 (Torx 15) 18 in-lb (2.0 Nm)	FS1057 (Torx 20) 27 in-lb (3.0 Nm)	FS1054 (Torx 20) 27 in-lb (3.0 Nm)
	Handle key, small	FS257 (Torx 8)	FS1050 (Torx 10)	FS1047 (Torx T15)	FS1048 (Torx 20)	FS1048 (Torx 20)



	f in	l ₅ in	l ₁ in	Module size	Type	Grooving module 	Toolholder 
	0.433	2.000	3.260	116	GX 09-1..	MSS-I16 R/L 02-GX 09-1	MSS-I16 R/L 90-1.5D -E
	0.512	2.000	3.457	120		MSS-I20 R/L 02-GX 09-1	MSS-I20 R/L 90-1.5D -E
	0.669	2.225	4.036	125		MSS-I25 R/L 02-GX 09-1	MSS-I25 R/L 90-1.5D -E
	0.866	2.500	4.823	132	GX 16-2..	MSS-I32 R/L 03-GX 16-2	MSS-I32 R/L 90-1.5D -E
	1.063	3.000	5.835	140		MSS-I40 R/L 03-GX 16-2	MSS-I40 R/L 90-1.5D -E
	0.571		7.000	116	GX 09-1..	MSS-I16 R/L 02-GX 09-1	MSS-I16 R/L 90-2.5D -E
	0.709		8.000	120		MSS-I20 R/L 02-GX 09-1	MSS-I20 R/L 90-2.5D -E
	0.866		10.000	125		MSS-I25 R/L 02-GX 09-1	MSS-I25 R/L 90-2.5D -E
	1.161		12.000	132	GX 16-2..	MSS-I32 R/L 03-GX 16-2	MSS-I32 R/L 90-2.5D -E
	1.398		14.000	140		MSS-I40 R/L 03-GX 16-2	MSS-I40 R/L 90-2.5D -E

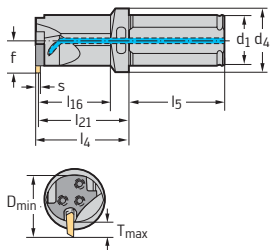
Walter Cut shank tool NCCI



- internal machining
- for circlip grooves
- for GX inserts

Tool

1.5 x D



Designation

s
mm

T_{max}
mm

D_{min}
mm

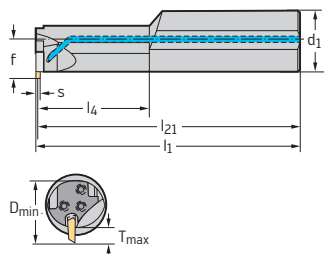
d₁
mm

d₄
mm

l₄
mm

NCCI16-2015R/L-GX09-1	0.6 - 1.7	2	20	20	25	24
NCCI20-2015R/L-GX09-1		2	25	20	25	30
NCCI25-2515R/L-GX09-1		2	32	25	32	38
NCCI32-3215R/L-GX16-2	0.6 - 2.3	3	40	32	40	48
NCCI40-4015R/L-GX16-2		3	50	40	50	60

2.5 x D



NCCI16-2025R/L-GX09-1	0.6 - 1.7	2	20	20		40
NCCI20-2525R/L-GX09-1		2	25	25		50
NCCI25-3225R/L-GX09-1		2	32	32		63
NCCI32-4025R/L-GX16-2	0.6 - 2.3	3	40	40		80
NCCI40-5025R/L-GX16-2		3	50	50		100

$l_1 = l_{21} + s/2$

Bodies and assembly parts are included in the scope of delivery.

Ordering example:

Right-handed tool NCCI16-2015R-GX09-1 (right-handed module and right-handed toolholder)

Left-handed tool NCCI16-2015L-GX09-1 (left-handed module and left-handed toolholder)

Assembly parts



Module size
Screw for grooving module
Tightening torque

I16
FS1051 (Torx 8)
18 in-lb (2.0 Nm)

I20
FS1056 (Torx 10)
18 in-lb (2.0 Nm)

I25
FS1052 (Torx 15)
18 in-lb (2.0 Nm)

I32
FS1057 (Torx 20)
27 in-lb (3.0 Nm)

I40
FS1054 (Torx 20)
27 in-lb (3.0 Nm)



Handle key, small

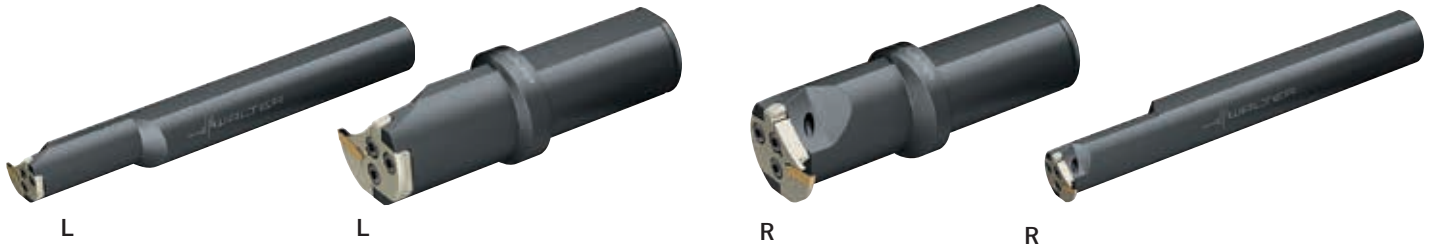
FS257 (Torx 8)


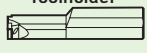
FS1050 (Torx 10)

FS1047 (Torx T15)

FS1048 (Torx 20)

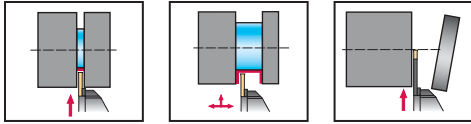
FS1048 (Torx 20)



f mm	l ₅ mm	l ₂₁ mm	l ₁₆ mm	Module size	Type	Grooving module		Toolholder
								
11	50	31.4	23.4	I16	GX09-1...	MSS-I16R/L02-GX09-1	MSS-I16R/L90-1.5D-N	
13	50	36.4	29.4	I20		MSS-I20R/L02-GX09-1	MSS-I20R/L90-1.5D-N	
17	56	45.4	37.4	I25		MSS-I25R/L02-GX09-1	MSS-I25R/L90-1.5D-N	
22	60	58	47	I32	GX16-2...	MSS-I32R/L03-GX16-2	MSS-I32R/L90-1.5D-N	
27	70	71	59	I40		MSS-I40R/L03-GX16-2	MSS-I40R/L90-1.5D-N	
14.5		179.4	39.4	I16	GX09-1...	MSS-I16R/L02-GX09-1	MSS-I16R/L90-2.5D-N	
18		199.4	49.4	I20		MSS-I20R/L02-GX09-1	MSS-I20R/L90-2.5D-N	
22.5		249.4	62.4	I25		MSS-I25R/L02-GX09-1	MSS-I25R/L90-2.5D-N	
29.5		299	79	I32	GX16-2...	MSS-I32R/L03-GX16-2	MSS-I32R/L90-2.5D-N	
35.5		349	99	I40		MSS-I40R/L03-GX16-2	MSS-I40R/L90-2.5D-N	

Walter Cut Capto™ tool

C ... – NCAE



- external machining
- radial grooving
- for grooving, recessing and parting off
- for GX inserts

Tool	Designation	s in	s mm	d ₁
Walter Capto™ ISO 26623 	NCAE16-C300R/L-GX09-1	0.079 -0.098	2.0 - 2.5	C3
	NCAE16-C300R/L-GX09-2	0.118	3	C3
	NCAE20-C300R/L-GX16-1	0.079 -0.098	2.0 - 2.5	C3
	NCAE25-C400R/L-GX16-1			C4
	NCAE25-C500R/L-GX16-1			C5
	NCAE20-C300R/L-GX16-2	0.118	3	C3
	NCAE25-C400R/L-GX16-2			C4
	NCAE25-C500R/L-GX16-2			C5
	NCAE32-C600R/L-GX16-2	0.157 - 0.197	4.0 - 5.0	C6
	NCAE20-C300R/L-GX16-3			C3
	NCAE25-C400R/L-GX16-3			C4
	NCAE25-C500R/L-GX16-3	0.236	6	C5
	NCAE32-C600R/L-GX16-3			C6
	NCAE25-C400R/L-GX16-4			C4
	NCAE25-C500R/L-GX16-4	C5		

$$f = f_1 + s/2$$

For T_{max} with greater diameters than D_{max}, see technical information on page A 473-477 in 2012 General Catalog.

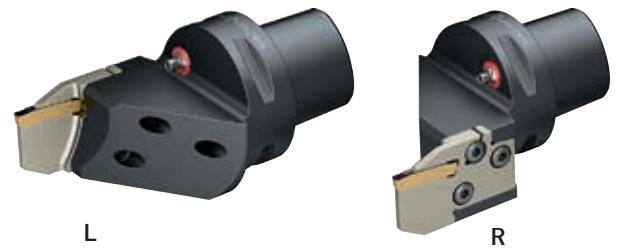
Bodies and assembly parts are included in the scope of delivery.



Ordering example:

Right-handed complete tool NCAE20-C300R-GX16-2 (right-handed module and right-handed toolholder)

Left-handed complete tool NCAE20-C300L-GX16-2 (left-handed module and left-handed toolholder)

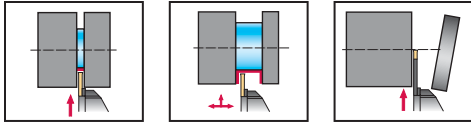
Assembly parts	Module size	E16	E20	E25	E32
	Screw for grooving module Tightening torque	FS1052 (Torx 15) 18 in-lb (2.0 Nm)	FS1053 (Torx 15) 18 in-lb (2.0 Nm)	FS1054 (Torx 20) 27 in-lb (3.0 Nm)	FS1055 (Torx 25) 27 in-lb (3.0 Nm)
	Handle key, small	FS1047 (Torx T15)	FS1047 (Torx T15)	FS1048 (Torx 20)	FS1049 (Torx 25)
	Cooling lubricant nozzle C3	FS1230	FS1230		
	Cooling lubricant nozzle C4			FS1018	
	Cooling lubricant nozzle C5			FS1019	
	Cooling lubricant nozzle C6				FS1019



										Grooving module		Toolholder
T_{\max} in	D_{\max} in	f_1 in	l_4 in	T_{\max} mm	D_{\max} mm	f_1 mm	l_4 mm	module size	Type			
0.276	2.047	0.780	1.594	7	52	19.8	40.5	E16	GX 09-1 ...	MSS-E16R/L07-GX09-1	C3-MSS-E16R/L00	
0.276	2.047	0.764	1.594	7	52	19.4	40.5	E16	GX 09-2 ...	MSS-E16R/L07-GX09-2	C3-MSS-E16R/L00	
0.472	2.480	0.780	1.594	12	63	19.8	40.5	E20	GX 16-1 ...	MSS-E20R/L12-GX16-1	C3-MSS-E20R/L00	
0.472	3.110	1.016	2.382	12	79	25.8	60.5	E25		MSS-E25R/L12-GX16-1	C4-MSS-E25R/L00	
0.472	3.110	1.213	2.382	12	79	30.8	60.5	E25		MSS-E25R/L12-GX16-1	C5-MSS-E25R/L00	
0.472	2.480	0.764	1.594	12	63	19.4	40.5	E20	GX 16-2 ...	MSS-E20R/L12-GX16-2	C3-MSS-E20R/L00	
0.472	3.110	1.000	2.382	12	79	25.4	60.5	E25		MSS-E25R/L12-GX16-2	C4-MSS-E25R/L00	
0.472	3.110	1.197	2.382	12	79	30.4	60.5	E25		MSS-E25R/L12-GX16-2	C5-MSS-E25R/L00	
0.472	3.937	1.433	2.618	12	100	36.4	66.5	E32		MSS-E32R/L12-GX16-2	C6-MSS-E32R/L00	
0.472	2.480	0.744	1.594	12	63	18.9	40.5	E20	GX 16-3 ...	MSS-E20R/L12-GX16-3	C3-MSS-E20R/L00	
0.472	3.110	0.980	2.382	12	79	24.9	60.5	E25		MSS-E25R/L12-GX16-3	C4-MSS-E25R/L00	
0.472	3.110	1.177	2.382	12	79	29.9	60.5	E25		MSS-E25R/L12-GX16-3	C5-MSS-E25R/L00	
0.472	3.937	1.413	2.618	12	100	35.9	66.5	E32		MSS-E32R/L12-GX16-3	C6-MSS-E32R/L00	
0.472	3.110	0.957	2.382	12	79	24.3	60.5	E25	GX 16-4 ...	MSS-E25R/L12-GX16-4	C4-MSS-E25R/L00	
0.472	3.110	1.154	2.382	12	79	29.3	60.5	E25			MSS-E25R/L12-GX16-4	C5-MSS-E25R/L00

Walter Cut Capto™ tool

C ... – NCBE



- external machining
- radial grooving 0°
- for grooving, recessing and parting off
- for GX/LX inserts

Tool	Designation	s in	s mm	d ₁
	Walter Capto™ ISO 26623			
	NCBE20-C300R/L-GX24-2-21	0.118	3	C3
	NCBE25-C400R/L-GX24-2-21			C4
	NCBE25-C500R/L-GX24-2-21			C5
	NCBE25-C400R/L-GX24-3-21	0.157 - 0.197	4.0 - 5.0	C4
	NCBE25-C500R/L-GX24-3-21			C5
	NCBE32-C600R/L-GX24-3-21			C6
	NCBE25-C400R/L-GX24-4-21	0.236	6	C4
	NCBE25-C500R/L-GX24-4-21			C5
	NCBE32-C600R/L-GX24-4-21			C6
	NCBE25-C400R/L-GX24-5-21	0.315	8	C4
	NCBE25-C500R/L-GX24-5-21			C5

$f = f_1 + s/2$

For T_{max} with greater diameters than D_{max} , see technical information on page A 473-477 in 2012 General Catalog.

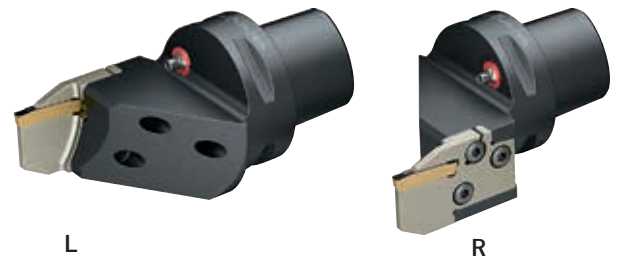
Bodies and assembly parts are included in the scope of delivery.



Ordering example:

Right-handed complete tool NCBE25-C400R-GX24-4-21 (right-handed module and right-handed toolholder)

Left-handed complete tool NCBE25-C400L-GX24-4-21 (left-handed module and left-handed toolholder)

Assembly parts	Module size	E20	E25	E32
	Clamping screw for LX grooving insert Tightening torque			FS1217 (Torx 20) 2.0 Nm
	Screw for grooving module Tightening torque	FS1053 (Torx 15) 18 in-lb (2.0 Nm)	FS1054 (Torx 20) 27 in-lb (3.0 Nm)	FS1055 (Torx 25) 27 in-lb (3.0 Nm)
	Handle key, small	FS1047 (Torx T15)	FS1048 (Torx 20)	FS1049 (Torx 25)
	Cooling lubricant nozzle C3	FS1230		
	Cooling lubricant nozzle C4		FS1018	
	Cooling lubricant nozzle C5		FS1019	
	Cooling lubricant nozzle C6			FS1019



										Grooving module		Toolholder
T_{max} in	D_{max} in	f_1 in	l_4 in	T_{max} mm	D_{max} mm	f_1 mm	l_4 mm	module size	Type			
0.827	2.480	0.764	2.303	21	63	19.4	58.5	E20	GX 24-2 ...	MSS-E20R/L21-GX24-2	C3-MSS-E20R/L00	
0.827	3.110	1.000	2.736	21	79	25.4	69.5	E25		MSS-E25R/L21-GX24-2	C4-MSS-E25R/L00	
0.827	3.110	1.197	2.736	21	79	30.4	69.5	E25		MSS-E25R/L21-GX24-2	C5-MSS-E25R/L00	
0.827	3.110	0.980	2.736	21	79	24.9	69.5	E25	GX 24-3 ...	MSS-E25R/L21-GX24-3	C4-MSS-E25R/L00	
0.827	3.110	1.177	2.736	21	79	29.9	69.5	E25		MSS-E25R/L21-GX24-3	C5-MSS-E25R/L00	
0.827	3.937	1.413	2.972	21	100	35.9	75.5	E32		MSS-E32R/L21-GX24-3	C6-MSS-E32R/L00	
0.827	3.110	0.957	2.736	21	79	24.3	69.5	E25	GX 24-4 ...	MSS-E25R/L21-GX24-4	C4-MSS-E25R/L00	
0.827	3.110	1.154	2.736	21	79	29.3	69.5	E25		MSS-E25R/L21-GX24-4	C5-MSS-E25R/L00	
0.827	3.937	1.390	2.972	21	100	35.3	75.5	E32		MSS-E32R/L21-GX24-4	C6-MSS-E32R/L00	
0.827	3.110	0.925	2.736	21	79	23.5	69.5	E25	GX 24-5 ...	MSS-E25R/L21-GX24-5	C4-MSS-E25R/L00	
0.827	3.110	1.122	2.736	21	79	28.5	69.5	E25		MSS-E25R/L21-GX24-5	C5-MSS-E25R/L00	

Accessories



Module size

Handle key, small

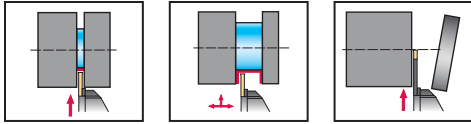
E32

FS1048 (Torx 20)



Walter Cut Capto™ tool

C ... – NCLE



- external machining
- radial grooving 90°
- for grooving, recessing and parting off
- for GX/LX inserts

Tool	Designation	s in	s mm	d ₁
	Walter Capto™ ISO 26623			
	NCLE20-C300R/L-GX16-1	0.079 - 0.098	2.0 - 2.5	C3
	NCLE25-C400R/L-GX16-1			C4
	NCLE25-C500R/L-GX16-1			C5
	NCLE25-C400R/L-GX16-2	0.118	3	C4
	NCLE25-C500R/L-GX16-2			C5
	NCLE32-C600R/L-GX16-2			C6
	NCLE20-C300R/L-GX16-2	0.118 - 0.138	3.0 - 3.5	C3
	NCLE20-C300R/L-GX16-3			C3
	NCLE25-C400R/L-GX16-3			C4
	NCLE25-C500R/L-GX16-3	0.157 - 0.197	4.0 - 5.0	C5
	NCLE32-C600R/L-GX16-3			C6
	NCLE25-C400R/L-GX16-4			C4
	NCLE25-C500R/L-GX16-4	0.236	6	C5
	NCLE20-C300R/L-GX24-2-21			C3
	NCLE25-C400R/L-GX24-2-21			C4
	NCLE25-C500R/L-GX24-2-21	0.157 - 0.197	4.0 - 5.0	C5
	NCLE25-C400R/L-GX24-3-21			C4
	NCLE25-C500R/L-GX24-3-21			C5
	NCLE32-C600R/L-GX24-3-21	0.236	6	C6
	NCLE25-C400R/L-GX24-4-21			C4
	NCLE25-C500R/L-GX24-4-21			C5
	NCLE32-C600R/L-GX24-4-21	0.315	8	C6
	NCLE25-C400R/L-GX24-5-21			C4
	NCLE25-C500R/L-GX24-5-21			C5

$l_4 = l_{21} + s/2$

For T_{max} with greater diameters than D_{max}, see technical information on page A 473-477 in 2012 General Catalog.

Bodies and assembly parts are included in the scope of delivery.

Ordering example:

Right-handed complete tool NCLE32-C600R-GX16-3 (left-handed module and right-handed toolholder)



Left-handed complete tool NCLE32-C600L-GX16-3 (right-handed module and left-handed toolholder)

Assembly parts	Module size	E20	E25	E32
	Clamping screw for LX grooving insert Tightening torque			FS1217 (Torx 20) 2.0 Nm
	Screw for grooving module Tightening torque	FS1053 (Torx 15) 18 in-lb (2.0 Nm)	FS1054 (Torx 20) 27 in-lb (3.0 Nm)	FS1055 (Torx 25) 27 in-lb (3.0 Nm)
	Handle key, small	FS1047 (Torx T15)	FS1048 (Torx 20)	FS1049 (Torx 25)
	Cooling lubricant nozzle C3	FS1230		
	Cooling lubricant nozzle C4		FS1018	
	Cooling lubricant nozzle C5		FS1018	
	Cooling lubricant nozzle C6			FS1019



L

R

										Grooving module 		Toolholder 
	T _{max} in	D _{max} in	f in	l ₂₁ in	T _{max} mm	D _{max} mm	f mm	l ₂₁ mm	module size	Type		
	0.472	2.480	1.299	1.409	12	63	33	35.8	E20	GX 16-1 ...	MSS-E20R/L12-GX16-1	C3-MSS-E20R/L90
	0.472	3.110	1.299	2.118	12	79	33	53.8	E25		MSS-E25R/L12-GX16-1	C4-MSS-E25R/L90
	0.472	3.110	1.496	2.118	12	79	38	53.8	E25		MSS-E25R/L12-GX16-1	C5-MSS-E25R/L90
	0.472	3.110	1.299	2.102	12	79	33	53.4	E25	GX 16-2 ...	MSS-E25R/L12-GX16-2	C4-MSS-E25R/L90
	0.472	3.110	1.496	2.102	12	79	38	53.4	E25		MSS-E25R/L12-GX16-2	C5-MSS-E25R/L90
	0.472	3.937	1.575	2.437	12	100	40	61.9	E32		MSS-E32R/L12-GX16-2	C6-MSS-E32R/L90
	0.472	2.480	1.299	1.394	12	63	33	35.4	E20	GX 16-3 ...	MSS-E20R/L12-GX16-2	C3-MSS-E20R/L90
	0.472	2.480	1.299	1.374	12	63	33	34.9	E20		MSS-E20R/L12-GX16-3	C3-MSS-E20R/L90
	0.472	3.110	1.299	2.083	12	79	33	52.9	E25		MSS-E25R/L12-GX16-3	C4-MSS-E25R/L90
	0.472	3.110	1.496	2.083	12	79	38	52.9	E25		MSS-E25R/L12-GX16-3	C5-MSS-E25R/L90
	0.472	3.937	1.575	2.417	12	100	40	61.4	E32	GX 16-4 ...	MSS-E32R/L12-GX16-3	C6-MSS-E32R/L90
	0.472	3.110	1.299	2.059	12	79	33	52.3	E25		MSS-E25R/L12-GX16-4	C4-MSS-E25R/L90
	0.472	3.110	1.496	2.059	12	79	38	52.3	E25	MSS-E25R/L12-GX16-4	C5-MSS-E25R/L90	
	0.827	2.480	1.654	1.394	21	63	42	35.4	E20	GX 24-2 ...	MSS-E20R/L21-GX24-2	C3-MSS-E20R/L90
	0.827	3.110	1.654	2.102	21	79	42	53.4	E25		MSS-E25R/L21-GX24-2	C4-MSS-E25R/L90
	0.827	3.110	1.850	2.102	21	79	47	53.4	E25		MSS-E25R/L21-GX24-2	C5-MSS-E25R/L90
	0.827	3.110	1.654	2.083	21	79	42	52.9	E25	GX 24-3 ...	MSS-E25R/L21-GX24-3	C4-MSS-E25R/L90
	0.827	3.110	1.850	2.083	21	79	47	52.9	E25		MSS-E25R/L21-GX24-3	C5-MSS-E25R/L90
	0.827	3.937	1.929	2.417	21	100	49	61.4	E32	GX 24-4 ...	MSS-E32R/L21-GX24-3	C6-MSS-E32R/L90
	0.827	3.110	1.654	2.059	21	79	42	52.3	E25		MSS-E25R/L21-GX24-4	C4-MSS-E25R/L90
	0.827	3.110	1.850	2.059	21	79	47	52.3	E25		MSS-E25R/L21-GX24-4	C5-MSS-E25R/L90
	0.827	3.937	1.929	2.394	21	100	49	60.8	E32	GX 24-5 ...	MSS-E32R/L21-GX24-4	C6-MSS-E32R/L90
	0.827	3.110	1.654	2.028	21	79	42	51.5	E25		MSS-E25R/L21-GX24-5	C4-MSS-E25R/L90
	0.827	3.110	1.850	2.028	21	79	47	51.5	E25	MSS-E25R/L21-GX24-5	C5-MSS-E25R/L90	

Accessories

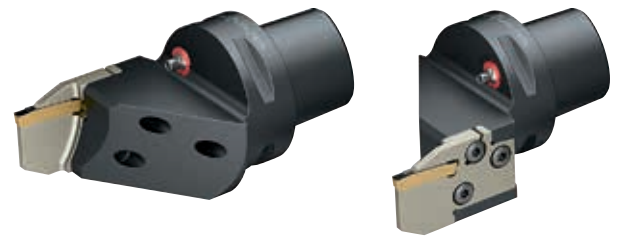
Module size

E32





Handle key, small

FS1048 (Torx 20)



L



R

										Grooving module		Toolholder
T_{max} in	D_{max} in	f_1 in	l_4 in	T_{max} mm	D_{max} mm	f_1 mm	l_4 mm	module size	Type			
0.079	2.047	0.780	1.594	2	52	19.8	40.5	E16	GX 09-1 ...	MSS-E16R/L02-GX09-1	C3-MSS-E16R/L00	
0.118	2.047	0.764	1.949	3	52	19.4	49.5	E16	GX 16-2 ...	MSS-E20R/L03-GX16-2	C3-MSS-E20R/L00	
0.118	2.480	1.000	2.382	3	63	25.4	60.5	E20		MSS-E25R/L03-GX16-2	C4-MSS-E25R/L00	
0.118	3.110	1.197	2.382	3	79	30.4	60.5	E25		MSS-E25R/L03-GX16-2	C5-MSS-E25R/L00	
0.118	3.937	1.433	2.618	3	100	36.4	66.5	E32		MSS-E32R/L03-GX16-2	C6-MSS-E32R/L00	



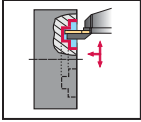
L

R

										Grooving module 		Toolholder 
T_{max} in	D_{max} in	f in	l_{21} in	T_{max} mm	D_{max} mm	f mm	l_{21} mm	module size	Type			
0.118	2.48	1.299	1.394	3	63	33	35.4	E20	GX 16-2...	MSS-E20R/L03-GX16-2	C3-MSS-E20R/L90	
0.118	3.11	1.299	2.102	3	79	33	53.4	E25		MSS-E25R/L03-GX16-2	C4-MSS-E25R/L90	
0.118	3.11	1.496	2.102	3	79	38	53.4	E25		MSS-E25R/L03-GX16-2	C5-MSS-E25R/L90	
0.118	3.937	1.575	2.437	3	100	40	61.9	E32		MSS-E32R/L03-GX16-2	C6-MSS-E32R/L90	

Walter Cut Capto™ tool

C ... – NCEE



- external machining
- axial grooving 0°
- for axial grooving and face turning
- for GX inserts

Tool	Designation	s in	s mm	d ₁
	Walter Capto™ ISO 26623			
	NCEE20-C300R/L-GX24-2-1	0.118	3	C3
	NCEE20-C300R/L-GX24-2-2			C3
	NCEE20-C300R/L-GX24-2-3			C3
	NCEE25-C400R/L-GX24-2-1	0.118 - 0.138	3.0 - 3.5	C4
	NCEE25-C400R/L-GX24-2-2			C4
	NCEE25-C400R/L-GX24-2-3			C4
	NCEE25-C500R/L-GX24-2-1			C5
	NCEE25-C500R/L-GX24-2-2			C5
	NCEE25-C500R/L-GX24-2-3			C5
	NCEE25-C400R/L-GX24-3-1	0.157 - 0.197	4.0 - 5.0	C4
	NCEE25-C400R/L-GX24-3-2			C4
	NCEE25-C400R/L-GX24-3-3			C4
	NCEE25-C400R/L-GX24-3-4			C4
	NCEE25-C500R/L-GX24-3-1			C5
	NCEE25-C500R/L-GX24-3-2			C5
	NCEE25-C500R/L-GX24-3-3			C5
	NCEE25-C500R/L-GX24-3-4			C5
	NCEE32-C600R/L-GX24-3-2			C6
	NCEE32-C600R/L-GX24-3-3			C6
	NCEE32-C600R/L-GX24-3-4			C6
	NCEE25-C400R/L-GX24-4-1			0.236
	NCEE25-C400R/L-GX24-4-2	C4		
	NCEE25-C400R/L-GX24-4-3	C4		
	NCEE25-C400R/L-GX24-4-4	C4		
	NCEE25-C500R/L-GX24-4-1	C5		
	NCEE25-C500R/L-GX24-4-2	C5		
	NCEE25-C500R/L-GX24-4-3	C5		
	NCEE25-C500R/L-GX24-4-4	C5		
	NCEE32-C600R/L-GX24-4-2	C6		
NCEE32-C600R/L-GX24-4-3	C6			
NCEE32-C600R/L-GX24-4-4	C6			
NCEE32-C600R/L-GX24-4-5	C6			

$f = f_1 + s/2$

Bodies and assembly parts are included in the scope of delivery.

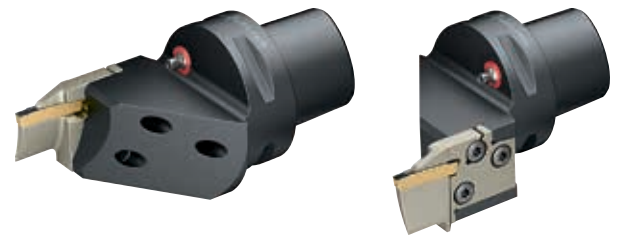
Ordering example:

Right-handed complete tool NCEE20-C300R-GX24-2-1 (right-handed module and right-handed toolholder)

Left-handed complete tool NCEE20-C300L-GX24-2-1 (left-handed module and left-handed toolholder)



Assembly parts

	Module size	E20	E25	E32
	Screw for grooving module Tightening torque	FS1053 (Torx T15) 18 in-lb (2.0 Nm)	FS1054 (Torx T20) 27 in-lb (3.0 Nm)	FS1055 (Torx T25) 27 in-lb (3.0 Nm)
	Handle key, small	FS1047 (Torx T15)	FS1048 (Torx T20)	FS1049 (Torx T25)
	Cooling lubricant nozzle C3	FS1230		
	Cooling lubricant nozzle C4		FS1018	
	Cooling lubricant nozzle C5		FS1019	
	Cooling lubricant nozzle C6			FS1019



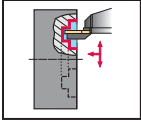
L

R

												Grooving module		Toolholder	
T_{\max} in	D_{\min} in	D_{\max} in	f_1 in	l_4 in	T_{\max} mm	D_{\min} mm	D_{\max} mm	f_1 mm	l_4 mm	module size	Type				
0.551	1.969	2.756	0.764	2.303	14	50	70	19.4	58.5	E20	GX 24-2 ...	C3-MSS-E20R/L00	C3-MSS-E20R/L00		
0.551	2.756	3.937	0.764	2.303	14	70	100	19.4	58.5	E20		C3-MSS-E20R/L00	C3-MSS-E20R/L00		
0.551	3.937	5.906	0.764	2.303	14	100	150	19.4	58.5	E20		C3-MSS-E20R/L00	C3-MSS-E20R/L00		
0.591	1.969	2.756	1.039	2.736	15	50	70	26.4	69.5	E25		C4-MSS-E25R/L00	C4-MSS-E25R/L00		
0.591	2.756	3.937	1.039	2.736	15	70	100	26.4	69.5	E25		C4-MSS-E25R/L00	C4-MSS-E25R/L00		
0.591	3.937	5.906	1.039	2.736	15	100	150	26.4	69.5	E25		C4-MSS-E25R/L00	C4-MSS-E25R/L00		
0.591	1.969	2.756	1.236	2.736	15	50	70	31.4	69.5	E25		C5-MSS-E25R/L00	C5-MSS-E25R/L00		
0.591	2.756	3.937	1.236	2.736	15	70	100	31.4	69.5	E25		C5-MSS-E25R/L00	C5-MSS-E25R/L00		
0.591	3.937	5.906	1.236	2.736	15	100	150	31.4	69.5	E25		C5-MSS-E25R/L00	C5-MSS-E25R/L00		
0.591	1.969	2.756	1.039	2.736	15	50	70	26.4	69.5	E25		C4-MSS-E25R/L00	C4-MSS-E25R/L00		
0.591	2.756	3.937	1.039	2.736	15	70	100	26.4	69.5	E25	C4-MSS-E25R/L00	C4-MSS-E25R/L00			
0.591	3.937	5.906	1.039	2.736	15	100	150	26.4	69.5	E25	C4-MSS-E25R/L00	C4-MSS-E25R/L00			
0.591	5.906	11.811	1.039	2.736	15	150	300	26.4	69.5	E25	C4-MSS-E25R/L00	C4-MSS-E25R/L00			
0.591	1.969	2.756	1.236	2.736	15	50	70	31.4	69.5	E25	C5-MSS-E25R/L00	C5-MSS-E25R/L00			
0.591	2.756	3.937	1.236	2.736	15	70	100	31.4	69.5	E25	C5-MSS-E25R/L00	C5-MSS-E25R/L00			
0.591	3.937	5.906	1.236	2.736	15	100	150	31.4	69.5	E25	C5-MSS-E25R/L00	C5-MSS-E25R/L00			
0.591	5.906	11.811	1.236	2.736	15	150	300	31.4	69.5	E25	C5-MSS-E25R/L00	C5-MSS-E25R/L00			
0.591	2.756	3.937	1.472	2.972	15	70	100	37.4	75.5	E32	C6-MSS-E32R/L00	C6-MSS-E32R/L00			
0.591	3.937	5.906	1.472	2.972	15	100	150	37.4	75.5	E32	C6-MSS-E32R/L00	C6-MSS-E32R/L00			
0.591	5.906	11.811	1.472	2.972	15	150	300	37.4	75.5	E32	C6-MSS-E32R/L00	C6-MSS-E32R/L00			
0.591	1.969	2.756	1.039	2.736	15	50	70	26.4	69.5	E25	C4-MSS-E25R/L00	C4-MSS-E25R/L00			
0.591	2.756	3.937	1.039	2.736	15	70	100	26.4	69.5	E25	C4-MSS-E25R/L00	C4-MSS-E25R/L00			
0.591	3.937	5.906	1.039	2.736	15	100	150	26.4	69.5	E25	C4-MSS-E25R/L00	C4-MSS-E25R/L00			
0.591	5.906	11.811	1.039	2.736	15	150	300	26.4	69.5	E25	C4-MSS-E25R/L00	C4-MSS-E25R/L00			
0.591	1.969	2.756	1.236	2.736	15	50	70	31.4	69.5	E25	C5-MSS-E25R/L00	C5-MSS-E25R/L00			
0.591	2.756	3.937	1.236	2.736	15	70	100	31.4	69.5	E25	C5-MSS-E25R/L00	C5-MSS-E25R/L00			
0.591	3.937	5.906	1.236	2.736	15	100	150	31.4	69.5	E25	C5-MSS-E25R/L00	C5-MSS-E25R/L00			
0.591	5.906	11.811	1.236	2.736	15	150	300	31.4	69.5	E25	C5-MSS-E25R/L00	C5-MSS-E25R/L00			
0.591	2.756	3.937	1.472	2.972	15	70	100	37.4	75.5	E32	C6-MSS-E32R/L00	C6-MSS-E32R/L00			
0.591	3.937	5.906	1.472	2.972	15	100	150	37.4	75.5	E32	C6-MSS-E32R/L00	C6-MSS-E32R/L00			
0.591	5.906	11.811	1.472	2.972	15	150	300	37.4	75.5	E32	C6-MSS-E32R/L00	C6-MSS-E32R/L00			
0.591	11.811	35.433	1.472	2.972	15	300	900	37.4	75.5	E32	C6-MSS-E32R/L00	C6-MSS-E32R/L00			

Walter Cut Capto™ tool

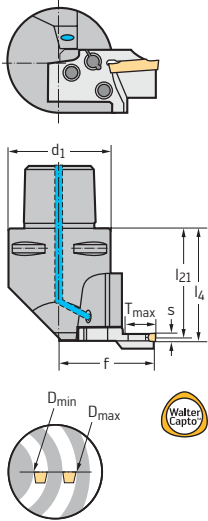
C ... – NCHE



- external machining
- axial grooving 90°
- for axial grooving and face turning
- for GX inserts

Tool

Walter Capto™ ISO 26623



Designation

s
in

s
mm

d₁

Designation	s in	s mm	d ₁		
NCHE20-C300R/L-GX24-2-1	0.118	3	C3		
NCHE20-C300R/L-GX24-2-2			C3		
NCHE20-C300R/L-GX24-2-3			C3		
NCHE25-C400R/L-GX24-2-3			C4		
NCHE25-C400R/L-GX24-2-2			C4		
NCHE25-C400R/L-GX24-2-1			C4		
NCHE25-C500R/L-GX24-2-3			C5		
NCHE25-C500R/L-GX24-2-2			C5		
NCHE25-C500R/L-GX24-2-1			C5		
NCHE25-C400R/L-GX24-3-4			0.157 - 0.197	4.0 - 5.0	C4
NCHE25-C400R/L-GX24-3-3					C4
NCHE25-C400R/L-GX24-3-2					C4
NCHE25-C400R/L-GX24-3-1					C4
NCHE25-C500R/L-GX24-3-4					C5
NCHE25-C500R/L-GX24-3-3					C5
NCHE25-C500R/L-GX24-3-2	C5				
NCHE25-C500R/L-GX24-3-1	C5				
NCHE32-C600R/L-GX24-3-2	C6				
NCHE32-C600R/L-GX24-3-3	C6				
NCHE32-C600R/L-GX24-3-4	C6				
NCHE25-C400R/L-GX24-4-4	0.236	6			C4
NCHE25-C400R/L-GX24-4-3					C4
NCHE25-C400R/L-GX24-4-2					C4
NCHE25-C400R/L-GX24-4-1					C4
NCHE25-C500R/L-GX24-4-1			C5		
NCHE25-C500R/L-GX24-4-2			C5		
NCHE25-C500R/L-GX24-4-3			C5		
NCHE25-C500R/L-GX24-4-4			C5		
NCHE32-C600R/L-GX24-4-2			C6		
NCHE32-C600R/L-GX24-4-3			C6		
NCHE32-C600R/L-GX24-4-4			C6		
NCHE32-C600R/L-GX24-4-5			C6		

$l_4 = l_{21} + s/2$

Bodies and assembly parts are included in the scope of delivery.

Ordering example:

Right-handed complete tool NCHE25-C400R-GX24-4-2 (left-handed module and right-handed toolholder)

Left-handed complete tool NCHE25-C400L-GX24-4-2 (right-handed module and left-handed toolholder)

Assembly parts

Module size

E20

E25

E32

	Handle key, small	FS1047 (Torx T15)	FS1048 (Torx 20)	FS1049 (Torx 25)
	Screw for grooving module Tightening torque	FS1053 (Torx 15) 18 in-lb (2.0 Nm)	FS1054 (Torx 20) 27 in-lb (3.0 Nm)	FS1055 (Torx 25) 27 in-lb (3.0 Nm)
	Cooling lubricant nozzle C3	FS1230		
	Cooling lubricant nozzle C4		FS1018	
	Cooling lubricant nozzle C5		FS1018	
	Cooling lubricant nozzle C6			FS1019



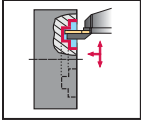
L

R

												Grooving module		Toolholder
T_{\max} in	D_{\min} in	D_{\max} in	f in	I_{21} in	T_{\max} mm	D_{\min} mm	D_{\max} mm	f mm	I_{21} mm	module size	Type			
0.551	1.969	2.756	1.654	1.394	14	50	70	42	35.4	E20	GX 24-2 ...	MSS-E20R/L14-GX24-2A5070	C3-MSS-E20R/L90	
0.551	2.756	3.937	1.654	1.394	14	70	100	42	35.4	E20		MSS-E20R/L14-GX24-2A70100	C3-MSS-E20R/L90	
0.551	3.937	5.906	1.654	1.394	14	100	150	42	35.4	E20		MSS-E20R/L14-GX24-2A100150	C3-MSS-E20R/L90	
0.591	3.937	5.906	1.654	2.102	15	100	150	42	53.4	E25		MSS-E25R/L15-GX24-2A100150	C4-MSS-E25R/L90	
0.591	2.756	3.937	1.654	2.102	15	70	100	42	53.4	E25		MSS-E25R/L15-GX24-2A70100	C4-MSS-E25R/L90	
0.591	1.969	2.756	1.654	2.102	15	50	70	42	53.4	E25		MSS-E25R/L15-GX24-2A5070	C4-MSS-E25R/L90	
0.591	3.937	5.906	1.850	2.102	15	100	150	47	53.4	E25		MSS-E25R/L15-GX24-2A100150	C5-MSS-E25R/L90	
0.591	2.756	3.937	1.850	2.102	15	70	100	47	53.4	E25		MSS-E25R/L15-GX24-2A70100	C5-MSS-E25R/L90	
0.591	1.969	2.756	1.850	2.102	15	50	70	47	53.4	E25		MSS-E25R/L15-GX24-2A5070	C5-MSS-E25R/L90	
0.591	5.906	11.811	1.654	2.083	15	150	300	42	52.9	E25		MSS-E25R/L15-GX24-3A150300	C4-MSS-E25R/L90	
0.591	3.937	5.906	1.654	2.083	15	100	150	42	52.9	E25	MSS-E25R/L15-GX24-3A100150	C4-MSS-E25R/L90		
0.591	2.756	3.937	1.654	2.083	15	70	100	42	52.9	E25	MSS-E25R/L15-GX24-3A70100	C4-MSS-E25R/L90		
0.591	1.969	2.756	1.654	2.083	15	50	70	42	52.9	E25	MSS-E25R/L15-GX24-3A5070	C4-MSS-E25R/L90		
0.591	5.906	11.811	1.850	2.083	15	150	300	47	52.9	E25	MSS-E25R/L15-GX24-3A150300	C5-MSS-E25R/L90		
0.591	3.937	5.906	1.850	2.083	15	100	150	47	52.9	E25	MSS-E25R/L15-GX24-3A100150	C5-MSS-E25R/L90		
0.591	2.756	3.937	1.850	2.083	15	70	100	47	52.9	E25	MSS-E25R/L15-GX24-3A70100	C5-MSS-E25R/L90		
0.591	1.969	2.756	1.850	2.083	15	50	70	47	52.9	E25	MSS-E25R/L15-GX24-3A5070	C5-MSS-E25R/L90		
0.591	2.756	3.937	1.929	2.417	15	70	100	49	61.4	E32	MSS-E32R/L15-GX24-3A70100	C6-MSS-E32R/L90		
0.591	3.937	5.906	1.929	2.417	15	100	150	49	61.4	E32	MSS-E32R/L15-GX24-3A100150	C6-MSS-E32R/L90		
0.591	5.906	11.811	1.929	2.417	15	150	300	49	61.4	E32	MSS-E32R/L15-GX24-3A150300	C6-MSS-E32R/L90		
0.591	5.906	11.811	1.654	2.059	15	150	300	42	52.3	E25	MSS-E25R/L15-GX24-4A150300	C4-MSS-E25R/L90		
0.591	3.937	5.906	1.654	2.059	15	100	150	42	52.3	E25	MSS-E25R/L15-GX24-4A100150	C4-MSS-E25R/L90		
0.591	2.756	3.937	1.654	2.059	15	70	100	42	52.3	E25	MSS-E25R/L15-GX24-4A70100	C4-MSS-E25R/L90		
0.591	1.969	2.756	1.654	2.059	15	50	70	42	52.3	E25	MSS-E25R/L15-GX24-4A5070	C4-MSS-E25R/L90		
0.591	1.969	2.756	1.850	2.059	15	50	70	47	52.3	E25	MSS-E25R/L15-GX24-4A5070	C5-MSS-E25R/L90		
0.591	2.756	3.937	1.850	2.059	15	70	100	47	52.3	E25	MSS-E25R/L15-GX24-4A70100	C5-MSS-E25R/L90		
0.591	3.937	5.906	1.850	2.059	15	100	150	47	52.3	E25	MSS-E25R/L15-GX24-4A100150	C5-MSS-E25R/L90		
0.591	5.906	11.811	1.850	2.059	15	150	300	47	52.3	E25	MSS-E25R/L15-GX24-4A150300	C5-MSS-E25R/L90		
0.591	2.756	3.937	1.929	2.394	15	70	100	49	60.8	E32	MSS-E32R/L15-GX24-4A70100	C6-MSS-E32R/L90		
0.591	3.937	5.906	1.929	2.394	15	100	150	49	60.8	E32	MSS-E32R/L15-GX24-4A100150	C6-MSS-E32R/L90		
0.591	5.906	11.811	1.929	2.394	15	150	300	49	60.8	E32	MSS-E32R/L15-GX24-4A150300	C6-MSS-E32R/L90		
0.591	11.811	35.433	1.929	2.394	15	300	900	49	60.8	E32	MSS-E32R/L15-GX24-4A300900	C6-MSS-E32R/L90		

Walter Cut Capto™ tool

C ... – NCFE



- external machining
- axial grooving 0°
- for deep axial grooving and face turning
- for GX inserts

Tool	Designation	s in	s mm	d ₁
Walter Capto™ ISO 26623 	NCFE25-C400R/L-GX24-3-1	0.157 - 0.197	4.0 - 5.0	C4
	NCFE25-C400R/L-GX24-3-2			C4
	NCFE25-C400R/L-GX24-3-3			C4
	NCFE25-C400R/L-GX24-3-4			C4
	NCFE25-C500R/L-GX24-3-1			C5
	NCFE25-C500R/L-GX24-3-2			C5
	NCFE25-C500R/L-GX24-3-3			C5
	NCFE25-C500R/L-GX24-3-4			C5
	NCFE25-C400R/L-GX24-4-1	0.236	6	C4
	NCFE25-C400R/L-GX24-4-2			C4
	NCFE25-C400R/L-GX24-4-3			C4
	NCFE25-C400R/L-GX24-4-4			C4
	NCFE25-C500R/L-GX24-4-1			C5
	NCFE25-C500R/L-GX24-4-2			C5
	NCFE25-C500R/L-GX24-4-3			C5
	NCFE25-C500R/L-GX24-4-4			C5

$f = f_1 + s/2$

For description of contra version/standard version, see page 162.

Bodies and assembly parts are included in the scope of delivery.



Ordering example:

Right-handed complete tool NCFE25-C400R-GX24-4-3 (right-handed module and right-handed toolholder)

Left-handed complete tool NCFE25-C400L-GX24-4-3 (left-handed module and left-handed toolholder)

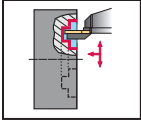
Assembly parts	Module size	E25
	Clamping screw for grooving insert	FS1342 (Torx 15)
	Tightening torque	9 in-lb (1.0 Nm)
	Screw for grooving module	FS1054 (Torx 20)
	Tightening torque	27 in-lb (3.0 Nm)
	Key for clamping screw	FS1047 (Torx 15)
	Handle key, small	FS1048 (Torx 20)
	Cooling lubricant nozzle C4	FS1018
	Cooling lubricant nozzle C5	FS1019



												Grooving module		Toolholder
T_{\max} in	D_{\min} in	D_{\max} in	f_1 in	l_4 in	T_{\max} mm	D_{\min} mm	D_{\max} mm	f_1 mm	l_4 mm	module size	Type			
0.827	1.969	2.756	0.980	3.248	21	50	70	24.9	82.5	E25	GX 24-3 ...	MSS-E25R/L21-GX24-3C5070	C4-MSS-E25R/L00	
0.827	2.756	3.937	0.980	3.248	21	70	100	24.9	82.5	E25		MSS-E25R/L21-GX24-3C70100	C4-MSS-E25R/L00	
0.827	3.937	5.906	0.980	3.248	21	100	150	24.9	82.5	E25		MSS-E25R/L21-GX24-3C100150	C4-MSS-E25R/L00	
0.827	5.906	11.811	0.980	3.248	21	150	300	24.9	82.5	E25		MSS-E25R/L21-GX24-3C150300	C4-MSS-E25R/L00	
0.827	1.969	2.756	1.177	3.248	21	50	70	29.9	82.5	E25		MSS-E25R/L21-GX24-3C5070	C5-MSS-E25R/L00	
0.827	2.756	3.937	1.177	3.248	21	70	100	29.9	82.5	E25		MSS-E25R/L21-GX24-3C70100	C5-MSS-E25R/L00	
0.827	3.937	5.906	1.177	3.248	21	100	150	29.9	82.5	E25		MSS-E25R/L21-GX24-3C100150	C5-MSS-E25R/L00	
0.827	5.906	11.811	1.177	3.248	21	150	300	29.9	82.5	E25		MSS-E25R/L21-GX24-3C150300	C5-MSS-E25R/L00	
0.827	1.969	2.756	0.957	3.248	21	50	70	24.3	82.5	E25		GX 24-4 ...	MSS-E25R/L25-GX24-4C5070	C4-MSS-E25R/L00
0.827	2.756	3.937	0.957	3.248	21	70	100	24.3	82.5	E25	MSS-E25R/L25-GX24-4C70100		C4-MSS-E25R/L00	
0.827	3.937	5.906	0.957	3.248	21	100	150	24.3	82.5	E25	MSS-E25R/L25-GX24-4C100150		C4-MSS-E25R/L00	
0.827	5.906	11.811	0.957	3.248	21	150	300	24.3	82.5	E25	MSS-E25R/L25-GX24-4C150300		C4-MSS-E25R/L00	
0.827	1.969	2.756	1.154	3.248	21	50	70	29.3	82.5	E25	MSS-E25R/L25-GX24-4C5070		C5-MSS-E25R/L00	
0.827	2.756	3.937	1.154	3.248	21	70	100	29.3	82.5	E25	MSS-E25R/L25-GX24-4C70100		C5-MSS-E25R/L00	
0.827	3.937	5.906	1.154	3.248	21	100	150	29.3	82.5	E25	MSS-E25R/L25-GX24-4C100150		C5-MSS-E25R/L00	
0.827	5.906	11.811	1.154	3.248	21	150	300	29.3	82.5	E25	MSS-E25R/L25-GX24-4C150300		C5-MSS-E25R/L00	

Walter Cut Capto™ tool

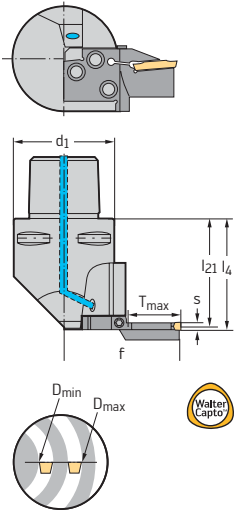
C ... – NCOE



- external machining
- axial grooving 90°
- for deep axial grooving and face turning
- for GX inserts

Tool

Walter Capto™ ISO 26623



Designation	s in	s mm	d ₁
NCOE25-C400R/L-GX24-3-1	0.157 - 0.197	4.0 - 5.0	C4
NCOE25-C400R/L-GX24-3-2			C4
NCOE25-C400R/L-GX24-3-3			C4
NCOE25-C400R/L-GX24-3-4			C4
NCOE25-C500R/L-GX24-3-1			C5
NCOE25-C500R/L-GX24-3-2			C5
NCOE25-C500R/L-GX24-3-3			C5
NCOE25-C500R/L-GX24-3-4			C5
NCOE25-C400R/L-GX24-4-1	0.236	6	C4
NCOE25-C400R/L-GX24-4-2			C4
NCOE25-C400R/L-GX24-4-3			C4
NCOE25-C400R/L-GX24-4-4			C4
NCOE25-C500R/L-GX24-4-1			C5
NCOE25-C500R/L-GX24-4-2			C5
NCOE25-C500R/L-GX24-4-3			C5
NCOE25-C500R/L-GX24-4-4			C5

$$l_4 = l_{21} + s/2$$

For description of contra version/standard version, see page 162.

Bodies and assembly parts are included in the scope of delivery.

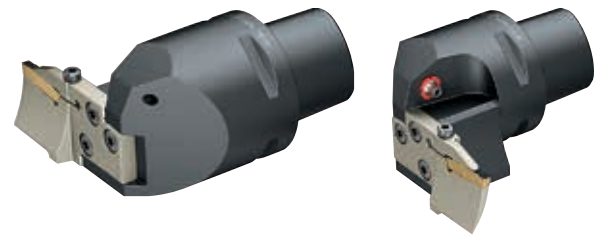
Ordering example:

Right-handed complete tool NCOE25-C500R-GX24-4-1 (left-handed module and right-handed toolholder)

Left-handed complete tool NCOE25-C500L-GX24-4-1 (right-handed module and left-handed toolholder)



Assembly parts

	Module size	E25
	Clamping screw for grooving insert	FS1342 (Torx 15)
	Tightening torque	9 in-lb (1.0 Nm)
	Screw for grooving module	FS1054 (Torx 20)
	Tightening torque	27 in-lb (3.0 Nm)
	Key for clamping screw	FS1047 (Torx 15)
	Handle key, small	FS1048 (Torx 20)
	Cooling lubricant nozzle C4	FS1018
	Cooling lubricant nozzle C5	FS1018



L

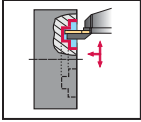
R

												Grooving module		Toolholder
T_{\max} in	D_{\min} in	D_{\max} in	f in	I_{21} in	T_{\max} mm	D_{\min} mm	D_{\max} mm	f mm	I_{21} mm	module size	Type			
0.827	1.969	2.756	1.654	2.083	21	50	70	42	52.9	E25	GX 24-3 ...	MSS-E25R/L21-GX24-3C5070	C4-MSS-E25R/L90	
0.827	2.756	3.937	1.654	2.083	21	70	100	42	52.9	E25		MSS-E25R/L21-GX24-3C70100	C4-MSS-E25R/L90	
0.827	3.937	5.906	1.654	2.083	21	100	150	42	52.9	E25		MSS-E25R/L21-GX24-3C100150	C4-MSS-E25R/L90	
0.827	5.906	11.811	1.654	2.083	21	150	300	42	52.9	E25		MSS-E25R/L21-GX24-3C150300	C4-MSS-E25R/L90	
0.827	1.969	2.756	1.850	2.083	21	50	70	47	52.9	E25		MSS-E25R/L21-GX24-3C5070	C5-MSS-E25R/L90	
0.827	2.756	3.937	1.850	2.083	21	70	100	47	52.9	E25		MSS-E25R/L21-GX24-3C70100	C4-MSS-E25R/L90	
0.827	3.937	5.906	1.850	2.083	21	100	150	47	52.9	E25		MSS-E25R/L21-GX24-3C100150	C5-MSS-E25R/L90	
0.827	5.906	11.811	1.850	2.083	21	150	300	47	52.9	E25		MSS-E25R/L21-GX24-3C150300	C5-MSS-E25R/L90	
0.827	1.969	2.756	1.654	2.059	21	50	70	42	52.3	E25		GX 24-4 ...	MSS-E25R/L25-GX24-4C5070	C4-MSS-E25R/L90
0.827	2.756	3.937	1.654	2.059	21	70	100	42	52.3	E25	MSS-E25R/L25-GX24-4C70100		C4-MSS-E25R/L90	
0.827	3.937	5.906	1.654	2.059	21	100	150	42	52.3	E25	MSS-E25R/L25-GX24-4C100150		C4-MSS-E25R/L90	
0.827	5.906	11.811	1.654	2.059	21	150	300	42	52.3	E25	MSS-E25R/L25-GX24-4C150300		C4-MSS-E25R/L90	
0.827	1.969	2.756	1.850	2.059	21	50	70	47	52.3	E25	MSS-E25R/L25-GX24-4C5070		C5-MSS-E25R/L90	
0.827	2.756	3.937	1.850	2.059	21	70	100	47	52.3	E25	MSS-E25R/L25-GX24-4C70100		C5-MSS-E25R/L90	
0.827	3.937	5.906	1.850	2.059	21	100	150	47	52.3	E25	MSS-E25R/L25-GX24-4C100150		C5-MSS-E25R/L90	
0.827	5.906	11.811	1.850	2.059	21	150	300	47	52.3	E25	MSS-E25R/L25-GX24-4C150300		C5-MSS-E25R/L90	

Walter Cut Capto™ tool

C ... – NCFE-C

Contra version



- external machining
- axial grooving 0°
- for deep axial grooving and face turning
- Contra version
- for GX inserts

Tool		Designation	s in	s mm	d ₁
	Walter Capto™ ISO 26623	NCFE25-C400R/L-GX24-3-1C	0.157 - 0.197	4.0 - 5.0	C4
		NCFE25-C400R/L-GX24-3-2C			C4
		NCFE25-C400R/L-GX24-3-3C			C4
		NCFE25-C400R/L-GX24-3-4C			C4
		NCFE25-C500R/L-GX24-3-1C			C5
		NCFE25-C500R/L-GX24-3-2C			C5
		NCFE25-C500R/L-GX24-3-3C			C5
		NCFE25-C500R/L-GX24-3-4C			C5
		NCFE25-C400R/L-GX24-4-1C	0.236	6	C4
		NCFE25-C400R/L-GX24-4-2C			C4
		NCFE25-C400R/L-GX24-4-3C			C4
		NCFE25-C400R/L-GX24-4-4C			C4
		NCFE25-C500R/L-GX24-4-1C			C5
		NCFE25-C500R/L-GX24-4-2C			C5
		NCFE25-C500R/L-GX24-4-3C			C5
		NCFE25-C500R/L-GX24-4-4C			C5

$f = f_1 + s/2$

For description of contra version/standard version, see page 162.

Bodies and assembly parts are included in the scope of delivery.

Ordering example:

Right-handed complete tool NCFE25-C500R-GX24-4-2C (left-handed module and right-handed toolholder)



Left-handed complete tool NCFE25-C500L-GX24-4-2C (right-handed module and left-handed toolholder)

Assembly parts		Module size	E25
	Handle key, small		FS1048 (Torx 20)
	Key for clamping screw		FS1047 (Torx 15)
	Screw for grooving module		FS1054 (Torx 20)
	Tightening torque		27 in-lb (3.0 Nm)
	Clamping screw for grooving insert		FS1342 (Torx 15)
	Tightening torque		9 in-lb (1.0 Nm)
	Cooling lubricant nozzle C4		FS1018
	Cooling lubricant nozzle C5		FS1019



L

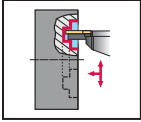
R

												Grooving module		Toolholder
T_{\max} in	D_{\min} in	D_{\max} in	f_1 in	l_4 in	T_{\max} mm	D_{\min} mm	D_{\max} mm	f_1 mm	l_4 mm	module size	Type			
0.827	1.969	2.756	0.980	3.248	21	50	70	24.9	82.5	E25	GX 24-3 ...	MSS-E25R/L21-GX24-3C5070	C4-MSS-E25R/L00	
0.827	2.756	3.937	0.980	3.248	21	70	100	24.9	82.5	E25		MSS-E25R/L21-GX24-3C70100	C4-MSS-E25R/L00	
0.827	3.937	5.906	0.980	3.248	21	100	150	24.9	82.5	E25		MSS-E25R/L21-GX24-3C100150	C4-MSS-E25R/L00	
0.827	5.906	11.811	0.980	3.248	21	150	300	24.9	82.5	E25		MSS-E25R/L21-GX24-3C150300	C4-MSS-E25R/L00	
0.827	1.969	2.756	1.177	3.248	21	50	70	29.9	82.5	E25		MSS-E25R/L21-GX24-3C5070	C5-MSS-E25R/L00	
0.827	2.756	3.937	1.177	3.248	21	70	100	29.9	82.5	E25		MSS-E25R/L21-GX24-3C70100	C5-MSS-E25R/L00	
0.827	3.937	5.906	1.177	3.248	21	100	150	29.9	82.5	E25		MSS-E25R/L21-GX24-3C100150	C5-MSS-E25R/L00	
0.827	5.906	11.811	1.177	3.248	21	150	300	29.9	82.5	E25		MSS-E25R/L21-GX24-3C150300	C5-MSS-E25R/L00	
0.827	1.969	2.756	0.957	3.248	21	50	70	24.3	82.5	E25		GX 24-4 ...	MSS-E25R/L25-GX24-4C5070	C4-MSS-E25R/L00
0.827	2.756	3.937	0.957	3.248	21	70	100	24.3	82.5	E25	MSS-E25R/L25-GX24-4C70100		C4-MSS-E25R/L00	
0.827	3.937	5.906	0.957	3.248	21	100	150	24.3	82.5	E25	MSS-E25R/L25-GX24-4C100150		C4-MSS-E25R/L00	
0.827	5.906	11.811	0.957	3.248	21	150	300	24.3	82.5	E25	MSS-E25R/L25-GX24-4C150300		C4-MSS-E25R/L00	
0.827	1.969	2.756	1.154	3.248	21	50	70	29.3	82.5	E25	MSS-E25R/L25-GX24-4C5070		C5-MSS-E25R/L00	
0.827	2.756	3.937	1.154	3.248	21	70	100	29.3	82.5	E25	MSS-E25R/L25-GX24-4C70100		C5-MSS-E25R/L00	
0.827	3.937	5.906	1.154	3.248	21	100	150	29.3	82.5	E25	MSS-E25R/L25-GX24-4C100150		C5-MSS-E25R/L00	
0.827	5.906	11.811	1.154	3.248	21	150	300	29.3	82.5	E25	MSS-E25R/L25-GX24-4C150300		C5-MSS-E25R/L00	

Walter Cut Capto™ tool

C ... – NCOE-C

Contra version



- external machining
- axial grooving 90°
- for deep axial grooving and face turning
- Contra version
- for GX inserts

Tool	Designation	s in	s mm	d ₁
Walter Capto™ ISO 26623 	NCOE25-C400R/L-GX24-3-1C	0.157 - 0.197	4.0 - 5.0	C4
	NCOE25-C400R/L-GX24-3-2C			C4
	NCOE25-C400R/L-GX24-3-3C			C4
	NCOE25-C400R/L-GX24-3-4C			C4
	NCOE25-C500R/L-GX24-3-1C			C5
	NCOE25-C500R/L-GX24-3-2C			C5
	NCOE25-C500R/L-GX24-3-3C			C5
	NCOE25-C500R/L-GX24-3-4C			C5
	NCOE25-C400R/L-GX24-4-1C	0.236	6	C4
	NCOE25-C400R/L-GX24-4-2C			C4
	NCOE25-C400R/L-GX24-4-3C			C4
	NCOE25-C400R/L-GX24-4-4C			C4
	NCOE25-C500R/L-GX24-4-1C			C5
	NCOE25-C500R/L-GX24-4-2C			C5
	NCOE25-C500R/L-GX24-4-3C			C5
	NCOE25-C500R/L-GX24-4-4C			C5

$l_4 = l_{21} + s/2$

For description of contra version/standard version, see page 162.

Bodies and assembly parts are included in the scope of delivery.

Ordering example:

Right-handed complete tool NCOE25-C500R-GX24-4-3C (left-handed module and right-handed toolholder)



Left-handed complete tool NCOE25-C500L-GX24-4-3C (left-handed module and left-handed toolholder)

Assembly parts	Module size	E25
	Clamping screw for grooving insert	FS1342 (Torx 15)
	Tightening torque	9 in-lb (1.0 Nm)
	Screw for grooving module	FS1054 (Torx 20)
	Tightening torque	27 in-lb (3.0 Nm)
	Key for clamping screw	FS1047 (Torx 15)
	Handle key, small	FS1048 (Torx 20)
	Cooling lubricant nozzle C4	FS1018
	Cooling lubricant nozzle C5	FS1018



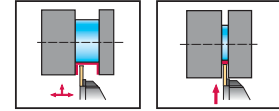
L

R

	T _{max} in	D _{min} in	D _{max} in	f in	l ₂₁ in	T _{max} mm	D _{min} mm	D _{max} mm	f mm	l ₂₁ mm	module size	Type	Grooving module		Toolholder	
																
	0.827	1.969	2.756	1.654	2.083	21	50	70	42	52.9	E25	GX 24-3 ...	MSS-E25R/L21-GX24-3C5070	C4-MSS-E25R/L90		
	0.827	2.756	3.937	1.654	2.083	21	70	100	42	52.9	E25		MSS-E25R/L21-GX24-3C70100	C4-MSS-E25R/L90		
	0.827	3.937	5.906	1.654	2.083	21	100	150	42	52.9	E25		MSS-E25R/L21-GX24-3C100150	C4-MSS-E25R/L90		
	0.827	5.906	11.811	1.654	2.083	21	150	300	42	52.9	E25		MSS-E25R/L21-GX24-3C150300	C4-MSS-E25R/L90		
	0.827	1.969	2.756	1.850	2.083	21	50	70	47	52.9	E25		MSS-E25R/L21-GX24-3C5070	C5-MSS-E25R/L90		
	0.827	2.756	3.937	1.850	2.083	21	70	100	47	52.9	E25		MSS-E25R/L21-GX24-3C70100	C5-MSS-E25R/L90		
	0.827	3.937	5.906	1.850	2.083	21	100	150	47	52.9	E25		MSS-E25R/L21-GX24-3C100150	C5-MSS-E25R/L90		
	0.827	5.906	11.811	1.850	2.083	21	150	300	47	52.9	E25		MSS-E25R/L21-GX24-3C150300	C5-MSS-E25R/L90		
	0.827	1.969	2.756	1.654	2.059	21	50	70	42	52.3	E25		GX 24-4 ...	MSS-E25R/L25-GX24-4C5070	C4-MSS-E25R/L90	
	0.827	2.756	3.937	1.654	2.059	21	70	100	42	52.3	E25	MSS-E25R/L25-GX24-4C70100		C4-MSS-E25R/L90		
	0.827	3.937	5.906	1.654	2.059	21	100	150	42	52.3	E25	MSS-E25R/L25-GX24-4C100150		C4-MSS-E25R/L90		
	0.827	5.906	11.811	1.654	2.059	21	150	300	42	52.3	E25	MSS-E25R/L25-GX24-4C150300		C4-MSS-E25R/L90		
	0.827	1.969	2.756	1.850	2.059	21	50	70	47	52.3	E25	MSS-E25R/L25-GX24-4C5070		C5-MSS-E25R/L90		
	0.827	2.756	3.937	1.850	2.059	21	70	100	47	52.3	E25	MSS-E25R/L25-GX24-4C70100		C5-MSS-E25R/L90		
	0.827	3.937	5.906	1.850	2.059	21	100	150	47	52.3	E25	MSS-E25R/L25-GX24-4C100150		C5-MSS-E25R/L90		
	0.827	5.906	11.811	1.850	2.059	21	150	300	47	52.3	E25	MSS-E25R/L25-GX24-4C150300		C5-MSS-E25R/L90		



Cutting data for Walter Cut



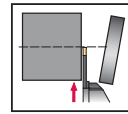
Material group	Structure of main material groups and code letters		Brinell hardness HB	Tensile strength R _m N/mm ²	Machining group ¹		Cutting material grades			
							Starting values for cutting speed v _c [SFM]			
							WSM13S	WSM23S		
P	Unalloyed steel	C ≤ 0.25%	Annealed	125	428	P1	●●	●	660	620
		C > 0.25... ≤ 0.55%	Annealed	190	639	P2	●●	●	590	560
		C > 0.25... ≤ 0.55%	Tempered	210	708	P3	●●	●	560	520
		C > 0.55%	Annealed	190	639	P4	●●	●	620	590
		C > 0.55%	Tempered	300	1013	P5	●●	●	520	490
		Free cutting steel (short-chipping)	Annealed	220	745	P6	●●	●	620	590
	Low-alloyed steel	Annealed	175	591	P7	●●	●	620	590	
		Tempered	300	1013	P8	●●	●	520	490	
		Tempered	380	1282	P9	●●	●	520	490	
		Tempered	430	1477	P10	●●	●			
	High-alloyed steel and high-alloyed tool steel	Annealed	200	675	P11	●●	●	460	430	
		Hardened and tempered	300	1013	P12	●●	●	390	360	
		Hardened and tempered	400	1361	P13	●●	●			
	Stainless steel	Ferritic/martensitic, annealed	200	675	P14	●●	●	620	590	
		Martensitic, tempered	330	1114	P15	●●	●	390	330	
M	Stainless steel	Austenitic, quench hardened		200	675	M1	●●	●	620	560
		Austenitic, precipitation hardened (PH)		300	1013	M2	●●	●	390	330
		Austenitic/ferritic, duplex		230	778	M3	●●	●	560	490
K	Malleable cast iron	Ferritic		200	675	K1	●●	●	620	590
		Pearlitic		260	867	K2	●●	●	560	520
	Grey cast iron	Low tensile strength		180	602	K3	●●	●	720	690
		High tensile strength/austenitic		245	825	K4	●●	●	590	560
	Cast iron with spheroidal graphite	Ferritic		155	518	K5	●●	●	720	690
		Pearlitic		265	885	K6	●●	●	590	560
	GGV (CGI)		200	675	K7	●●	●			
N	Aluminum wrought alloys	Cannot be hardened		30	-	N1	●●	●		
		Hardenable, hardened		100	343	N2	●●	●		
	Cast aluminum alloys	≤ 12% Si, cannot be hardened		75	260	N3	●●	●		
		≤ 12% Si, hardenable, hardened		90	314	N4	●●	●		
		> 12% Si, cannot be hardened		130	447	N5				
	Magnesium alloys		70	250	N6					
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	343	N7	●●	●		
Brass, bronze, red brass			90	314	N8	●●	●			
Cu-alloys, short-chipping			110	382	N9	●●	●			
High-strength, Ampco			300	1013	N10					
S	Heat-resistant alloys	Fe-based	Annealed	200	675	S1	●●	●	360	330
			Hardened	280	943	S2	●●	●	200	160
		Ni or Co base	Annealed	250	839	S3	●●	●	300	260
			Hardened	350	1177	S4	●●	●	260	230
			Cast	320	1076	S5	●●	●	260	230
	Titanium alloys	Pure titanium	200	675	S6	●●	●	520	490	
		α and β alloys, hardened	375	1262	S7	●●	●	150	130	
		β alloys	410	1396	S8	●●	●	110	100	
	Tungsten alloys		300	1013	S9					
	Molybdenum alloys		300	1013	S10					
H	Hardened steel	Hardened and tempered	50 HRC	-	H1					
		Hardened and tempered	55 HRC	-	H2					
		Hardened and tempered	60 HRC	-	H3					
	Hardened cast iron	Hardened and tempered	55 HRC	-	H4					
O	Thermoplastics	Without abrasive fillers			O1					
	Thermosetting plastics	Without abrasive fillers			O2					
	Plastic, glass-fiber reinforced	GFRP			O3					
	Plastic, carbon-fiber reinforced	CFRP			O4					
	Plastic, aramid-fiber reinforced	AFRP			O5					
	Graphite (technical)		80 Shore		O6					

●● Recommended application (the specified cutting data are regarded as starting values for the recommended application)

● Possible application

¹The classification of the machining groups can be found in the Walter General Catalog 2012 from page H 8 onwards.

1. Grooving and recessing



2. Parting off

Cutting material grades							Cutting material grades						
Starting values for cutting speed v_c [SFM]							Starting values for cutting speed v_c [SFM]						
WSM33S	WSM43S	WTA33	WKP13S	WKP23S	WKP33S		HC					HW	
WSM13S	WSM23S	WSM33S	WSM43S	WKP23S	WKP33S		WSM13S	WSM23S	WSM33S	WSM43S	WKP23S	WKP33S	WK1
590	560	620	720	660	590		620	590	560	520	620		
560	520	590	660	590	560		590	560	520	490	560		
490	460	520	620	560	520		520	490	460	430	520		
560	520	590	660	590	560		590	560	520	490	560		
460	430	390	560	490	490		490	460	430	390	460		
560	520	590	660	590	560		590	560	520	490	560		
520	490	590	660	590	520		590	560	490	460	560		
360	330	490	560	490	490		490	460	330	300	460		
330	330	430	560	490	430		490	460	300	300	460		
			330	260	200								
390	360	590	590	560	520		430	390	360	330	390		
300	260	460	520	490	460		360	330	260	230	330		
			330	260	200								
520	460	590	660	590	520		590	520	490	430			
260	200	330	430	390	360		330	300	230	160			
490	430	490					560	520	460	390			
260	200	330	430	390	360		330	300	230	160			
430	360	430					490	460	390	330			
560		330	620	520	460		590	560	520		590		
490		200	560	430	330		520	490	460		520		
660		850	1150	1080	820		750	720	690		750		
520		690	1020	980	950		620	590	560		620		
660		790	980	950	920		690	660	620		690		
520		620	850	820	790		560	520	490		560		
			720		590						620		
													2950
													1970
													1150
													820
													1310
													980
													660
300	260						330	300	260	230			
130	100						160	130	100	80			
230	200						260	230	200	160			
200	160						230	200	160	130			
200	160						230	200	160	130			
430	390						490	460	430	360			
110	100						160	130	100	80			
80							130	100	80				

HC = Coated carbide
HW = Uncoated carbide

The specified cutting data are average recommended values.
For special applications, adjustment is recommended.

Cutting tool material application tables


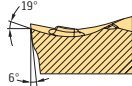


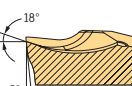


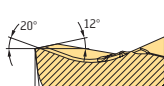

Walter grade designation	Standard designation	Workpiece material group							Range of applications							Coating process	Coating composition	Indexable insert example											
		P	M	K	N	S	H	O	01	05	10	15	20	25	30				35	40	45								
		Steel	Stainless steel	Cast iron	NF metals	Materials with difficult machining properties	Hard materials	Other																					
WSM13S	HC – M 10		●●																		PVD	TiAlN + Al ₂ O ₃ (Al)							
	HC – S 10					●●																							
	HC – P 10	●																											
WSM23S	HC – M 20		●●																		PVD	TiAlN + Al ₂ O ₃ (Al)							
	HC – S 20					●●																							
	HC – P 20	●●																											
WSM33S	HC – S 30					●●															PVD	TiAlN + Al ₂ O ₃ (Al)							
	HC – M 30		●●																										
	HC – P 35	●●																											
WSM43S	HC – S 45					●●															PVD	TiAlN + Al ₂ O ₃ (Al)							
	HC – M 45		●●																										
	HC – P 45	●●																											
WTA 33	HC – P 10	●●																			CVD	TiCN + Al ₂ O ₃							
	HC – K 10			●																									
WKP13S	HC – P 10	●●																			CVD	TiCN + Al ₂ O ₃ (+TiCN)							
	HC – K 20			●●																									
	HC – H 10						●																						
WKP23S	HC – P 20	●●																			CVD	TiCN + Al ₂ O ₃ (+TiCN)							
	HC – K 30			●●																									
WKP33S	HC – P 30	●●																			CVD	TiCN + Al ₂ O ₃ (+TiCN)							
	HC – K 30			●●																									

HC = Coated carbide
 HW = Uncoated carbide


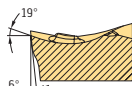


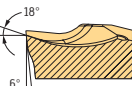


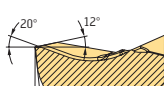

●● Primary application
 ● Other application

Geometry overview of cutting inserts

SX system for grooving and parting off

Geometry	Remarks/ field of applications	Workpiece material group							Section of main cutting edge	View Main cutting edge	s inch	f inch
		P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other				
 <p>CF6 – Low feed rate – Low burr/center pip formation – Low cutting force</p>		●	●		●	●				0.059	0.001 - 0.004	
										0.079	0.001 - 0.005	
										0.118	0.002 - 0.008	
 <p>CF5 – Grooving and parting off operations – Light to moderate feed rates – Good chip control – Low burr/center pip formation</p>		●	●	●	●	●				0.059	0.001 - 0.005	
										0.079	0.002 - 0.006	
										0.118	0.003 - 0.008	
										0.157	0.004 - 0.008	
										0.236	0.005 - 0.011	
 <p>CE4 – Grooving and parting off operations – Moderate to high feed rates – Excellent chip constriction – Stable cutting edge</p>		●		●	●	●				0.059	0.002 - 0.005	
										0.079	0.002 - 0.006	
										0.118	0.004 - 0.012	
										0.157	0.004 - 0.013	
										0.236	0.005 - 0.016	


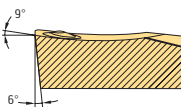


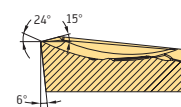

GX system for grooving and parting off


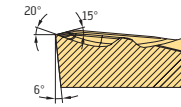


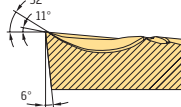


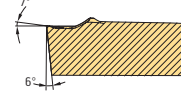


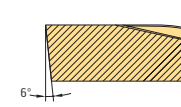

Geometry	Remarks/ field of applications	Workpiece material group							Section of main cutting edge	View Main cutting edge	s inch	f inch
		P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other				
 <p>CF6 – Low feed rate – Low burr/center pip formation – Low cutting force</p>		●	●		●	●				0.059	0.001 - 0.004	
										0.079	0.001 - 0.005	
										0.098	0.001 - 0.006	
										0.118	0.002 - 0.008	
 <p>CF5 – Grooving and parting off operations – Light to moderate feed rates – Good chip control – Low burr/center pip formation</p>		●	●	●	●	●				0.079	0.002 - 0.006	
										0.098	0.002 - 0.006	
										0.118	0.003 - 0.008	
										0.157	0.004 - 0.009	
 <p>CE4 – Grooving and parting off operations – Moderate to high feed rates – Excellent chip constriction – Stable cutting edge</p>		●		●	●	●				0.079	0.002 - 0.006	
										0.098	0.003 - 0.007	
										0.118	0.004 - 0.012	
										0.157	0.004 - 0.013	
										0.236	0.005 - 0.016	

- ● Primary application
- Other application

Geometry overview of cutting inserts

(continued)

		Workpiece material group							Section of main cutting edge	View Main cutting edge	s inch	f inch
Geometry	Remarks/ field of applications	P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other				
 <p>GD3 - Very low cutting forces - Light to moderate feed rates - General parting off and grooving operations</p>	<p>•• •• • • • • •</p>			0.079	0.002 - 0.005							
				0.098	0.002 - 0.006							
				0.118	0.002 - 0.007							
				0.157	0.004 - 0.008							
				0.197	0.005 - 0.010							
				0.236	0.006 - 0.011							
 <p>GD6 - Moderate feed rates - Long-chipping materials - Medium machining conditions</p>	<p>•• •• • • •• •</p>			0.079	0.002 - 0.005							
				0.098	0.002 - 0.007							
				0.118	0.003 - 0.007							
				0.157	0.004 - 0.009							
				0.197	0.005 - 0.009							
				0.236	0.006 - 0.012							




		Workpiece material group							Section of main cutting edge	View Main cutting edge	s inch	a _p inch	f inch
Geometry	Remarks/ field of applications	P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other					
 <p>UD6 - Grooving in stainless steel - Average feed range - Soft cutting action</p>	<p>• ••</p>			0.079	0.012 - 0.098	0.002 - 0.006							
				0.098	0.012 - 0.098	0.003 - 0.006							
				0.118	0.016 - 0.118	0.004 - 0.008							
				0.157	0.020 - 0.138	0.005 - 0.010							
				0.197	0.020 - 0.118	0.005 - 0.012							
				0.236	0.024 - 0.138	0.006 - 0.014							
 <p>UF4 - All grooving operations - Good chip control - Average feed range - Positive cut</p>	<p>•• •• •• •</p>			0.079	0.012 - 0.098	0.004 - 0.006							
				0.098	0.012 - 0.098	0.004 - 0.007							
				0.118	0.016 - 0.118	0.004 - 0.008							
				0.157	0.020 - 0.138	0.004 - 0.012							
				0.197	0.020 - 0.138	0.005 - 0.014							
				0.236	0.024 - 0.157	0.006 - 0.016							
 <p>UD4 - Large chip breaking area - Optimum chip breaking when machining forged parts - Strong cutting edge - For moderate to high feed rates</p>	<p>•• • ••</p>			0.118	0.016 - 0.079	0.003 - 0.008							
				0.157	0.020 - 0.110	0.004 - 0.012							
				0.197	0.020 - 0.118	0.005 - 0.014							
				0.236	0.024 - 0.138	0.006 - 0.016							
				0.315	0.035 - 0.157	0.006 - 0.016							
				 <p>UA4 - For cast iron machining - For medium to high machining parameters - For an extremely high level of process reliability in cast iron machining</p>	<p>•• •• •</p>			0.079	0.012 - 0.098	0.003 - 0.006			
0.098	0.012 - 0.098	0.004 - 0.008											
0.118	0.016 - 0.118	0.004 - 0.009											
0.157	0.020 - 0.138	0.004 - 0.014											
0.197	0.020 - 0.118	0.005 - 0.014											
0.236	0.024 - 0.138	0.006 - 0.016											

•• Primary application
• Other application


Geometry overview of cutting inserts

(continued)

GX system, full radius cutting inserts

Geometry	Remarks/ field of applications	Workpiece material group							Section of main cutting edge	View Main cut- ting edge	s inch	a _p inch max	f inch
		P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other					
 <p>RD4 – For copy turning – Outstanding chip control during grooving – For moderate to high feed rates – Circumference-sintered</p>		●●	●	●●		●				0.118	0.059	0.003 - 0.014	
										0.157	0.079	0.004 - 0.016	
										0.197	0.098	0.005 - 0.020	
										0.236	0.118	0.006 - 0.024	
 <p>RF8 – For copy and relief turning – Circumference fully ground – High surface quality – Stable cutting edge</p>		●●	●●	●		●●				0.118	0.004–0.059	0.004 - 0.012	
										0.157	0.004–0.079	0.005 - 0.018	
										0.197	0.004–0.098	0.006 - 0.020	
										0.236	0.004–0.118	0.006 - 0.022	
 <p>RK8 – Polished rake face – Sharp cutting edge – Circumference fully ground – Extremely positive</p>					●●		●			0.236	0.157	0.004 - 0.012	
										0.315	0.197	0.004 - 0.014	

GX system for grooving of circlip grooves

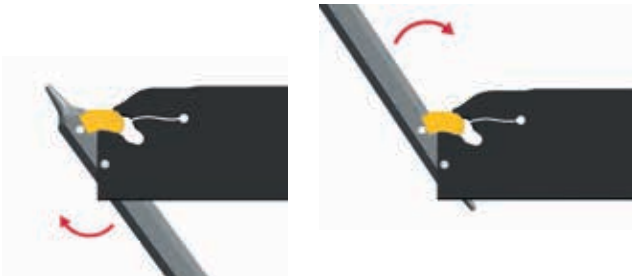
Geometry	Remarks/ field of applications	Workpiece material group							Section of main cutting edge	View Main cutting edge	s inch	f inch
		P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other				
 <p>Cutting inserts for circlip grooves – Excellent surface quality – All common circlip types – Low burr formation</p>		●●	●	●●						0.024 - 0.078	0.002 - 0.004	
										0.079 - 0.118	0.002 - 0.005	
										0.118 - 0.157	0.003 - 0.006	
										0.157 - 0.196	0.003 - 0.008	
										0.197 - 0.236	0.003 - 0.008	

- Primary application
- Other application

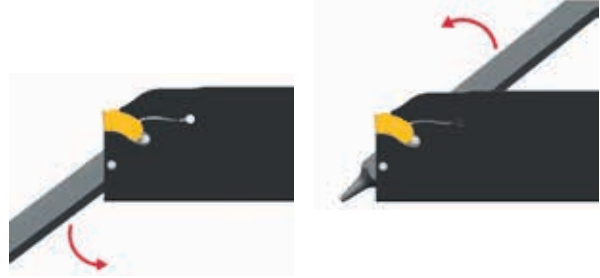
Usage information: Replacing the cutting edge on Walter Cut tools

Mounting SX cutting inserts

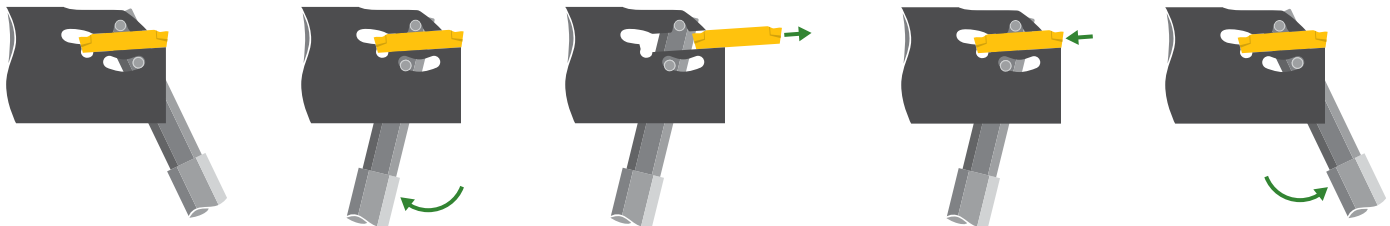
Fitting the cutting insert



Removing the cutting insert



Changing the GX cutting insert



1. Fit the key

2. Open the clamp

3. Remove the old insert

4. Push in the new insert

5. Close the clamp

Walter Cut tool standard/contra version

G2042 / G1041 . . . -C

Right-hand version



Standard

Example: G1041.32R-3T32GX24



Contra

Example: G1041.32R-3T32GX24C

Left-hand version



Standard

Example: G1041.32L-3T32GX24



Contra

Example: G1041.32L-3T32GX24C

XLDE / XLDE . . . -C

Right-hand version



Standard

Example: XLDER1616K-GX16-2



Contra

Example: XLDER1616K-GX16-2C

Left-hand version



Standard

Example: XLDEL1616K-GX16-2

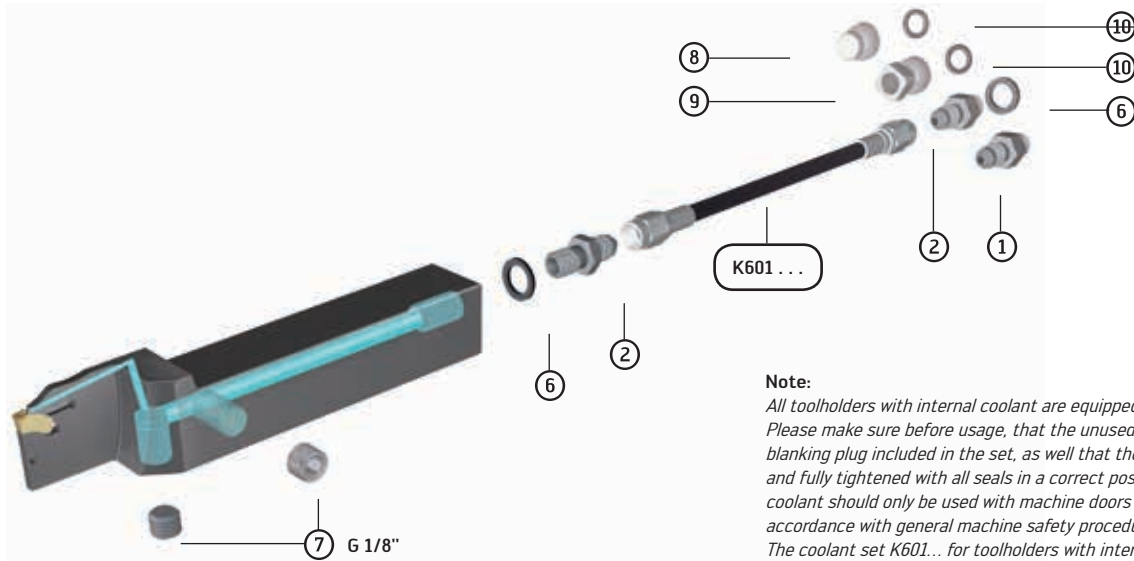


Contra

Example: XLDEL1616K-GX16-2C

Usage information: Coolant hose set for grooving holders with internal coolant supply














Grooving holder G2012-P


Note:

All toolholders with internal coolant are equipped with 3 coolant connections. Please make sure before usage, that the unused connections are sealed with a blanking plug included in the set, as well that the coolant hose is located correctly and fully tightened with all seals in a correct position. All toolholders using internal coolant should only be used with machine doors in a fully closed position in accordance with general machine safety procedures.

The coolant set K601... for toolholders with internal coolant are pressure rated from 150 psi (10 bar) to a maximum of 4000 psi (275 bar)

Walter P coolant hose set

Components	Designation	Length			
			K601.01.150-SET	K601.02.150-SET	K601.03.150-SET
		150 mm	K601.01.250-SET	K601.02.250-SET	K601.03.250-SET
		250 mm	K601.01.300-SET	K601.02.300-SET	K601.03.300-SET
		300 mm	Included each Set		
①	 M10 Connection element FS2252		1 x	—	—
②	 1/8" Double connection element FS2253		2 x	1 x	—
③	 1/8" Elbow connection FS2254		—	1 x	1 x
④	 M10 Elbow connection FS2255		—	1 x	2 x
⑤	 1/4" – 1/8" Reduction FS2256		—	1 x	1 x
⑥	 Copper seal FS2257		2 x	3 x	4 x
⑦	 1/8" Blanking plug FS2258		1 x	1 x	1 x
⑧	 Brass blanking plug FS2259		1 x	1 x	1 x
⑨	 1/8" Brass nozzle FS2260		1 x	1 x	1 x
⑩	 Sealing ring FS2261		2 x	2 x	2 x



User Guide – Parting off

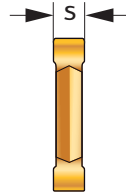
1. Basic principles

General

It is essential to note that the strongest tool possible should be selected. This can reduce vibration and increase tool life.

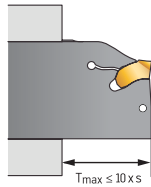
Insert width

The insert width should be as narrow as possible but as wide as necessary. By reducing the insert width, the cutting force is reduced and workpiece material also saved.

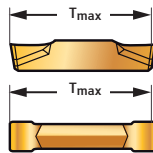


Cutting depth

1. The max. cutting depth [Tmax] of the tool and the max. clamping length of the insert holder should not exceed 10 x insert width [s]. As small a grooving depth as possible should always be selected.

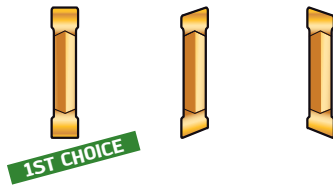


2. Double-edged Walter Cut GX indexable inserts are the most efficient option when the maximum cutting depth does not exceed the second cutting edge. At a deeper cutting depth, single-edged Walter Cut SX cutting inserts are first choice.



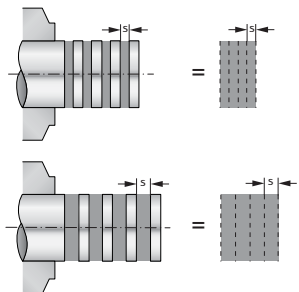
1. Use a neutral cutting edge where possible

- Improved chip formation
- Lower axial forces
- Longer tool life



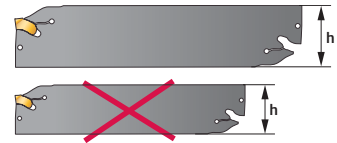
2. Use the smallest insert width possible

- Lower cutting force
- Reduced workpiece material consumption



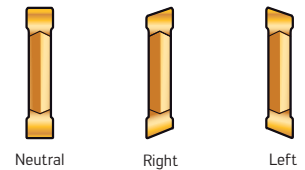
3. Use the largest tool possible – in relation to the height of the body [h]

- Greater tool rigidity
- Reduced risk of vibration
- Longer tool life



Effect of the lead angle on machining

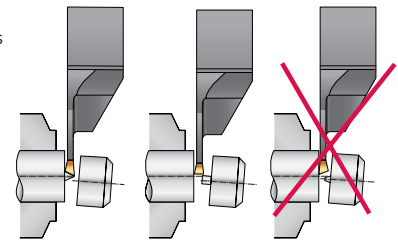
To determine the hand of the cutting inserts (right/left), the insert is viewed from above.



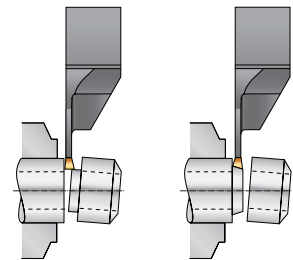
The following rule applies:

Direction of rotation of the machine spindle:
 Clockwise → right cutting insert
 Counter-clockwise → left cutting insert

When parting off solid material, the use of inserts with lead angles reduces the formation of a 'pip' remaining on the component that has been parted off.



When parting off tubular material, the use of inserts with lead angles prevents the creation of rings which may remain on the parted off component and interfere with the rest of the manufacturing process. It also leads to lower burr formation.



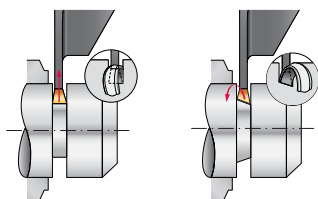
The use of inserts with lead angles always has a negative effect on the cutting insert tool life. If possible, neutral inserts should be used.

1. Basic principles *(continued)*

(Continued: 2. Effect of the lead angle on machining)

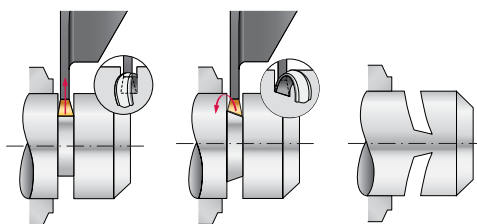
When inserts with lead angles are used for parting off, the angle is likely to be detrimental to chip formation.

The chip rolls at 90° to the main cutting edge, thereby not taking on a clockspring shape (as with a neutral insert), but instead, that of a spiral coil.

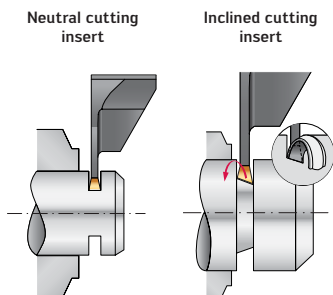


One possibility for guiding the chips is to interrupt cutting briefly once a cutting depth of 1-2 x insert width [s] is reached. Once cutting resumes, the chip will flow in the existing groove.

The feed values must be reduced by approximately 30%, because the tool tends to flex as a result of the axial force created (F_n). This can lead to vibration and convex machined surfaces.



Effects on machining

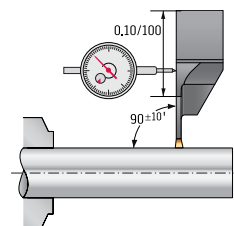


	Good	Poor
Stability and tool life	Good	Poor
Radial cutting forces (positive)	High	Low
Axial cutting forces (negative)	Low	High
Remaining pip / burr	Large	Small
Risk of vibration	Low	High
Surface finish quality and flatness	Good	Poor
Chip flow	Good	Poor

2. User tips

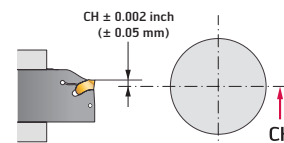
Tool must be aligned 90° to the axis of rotation

- Better machined face flatness
- Reduced vibration tendency



Check the center height

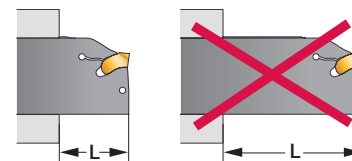
- Longer/more consistent tool life
- Reduced pip/burr formation



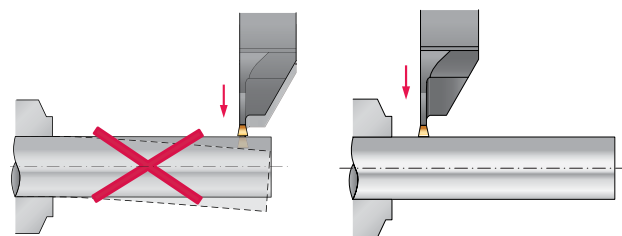
If the tool is positioned over or under center, the effective rake and front clearance angles change during machining.

Set the tool in the machine with the shortest possible overhang

- Better machined face flatness
- Reduced vibration tendency
- Improved tool life



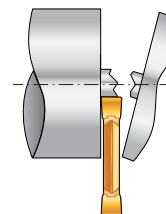
Clamp the workpiece as short as possible



Reducing the feed rate

Under a diameter of 1.5 x width mm, reduce the feed rate [f] by approx. 50 – 75%. Do not machine past the center, as there is a risk of fracture.

It is possible to machine past the center to a maximum of corner radius +0.004 inch (+0.1 mm).
For example, corner radius 0.012 inch (0.3 mm)
 $x = -0.016$ inch (-0.4 mm)
Constant cutting speed with speed limitation (e.g. max. bar loader RPM)



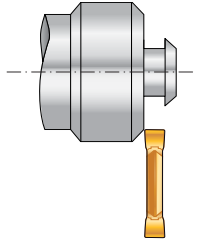


User Guide – Parting off

2. User tips (continued)

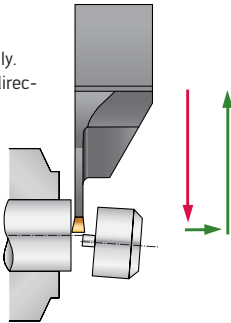
Grooving on inclined surfaces

When grooving on inclined surfaces, the feed rate for the chamfer must be reduced by approx. 20% - 50% and a sharper geometry must be used (e.g. CF5).

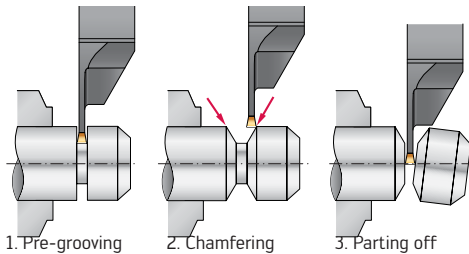


Retracting the tool

After parting off, do not retract the tool immediately. First, move away from the parted face in the axial direction and then radially retract.

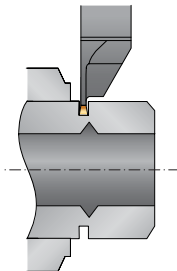


Chamfering and parting off



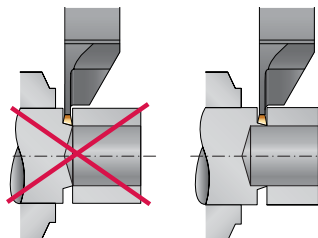
Chamfering internally before parting off

The corner cutting edge of the chamfering tool and the corresponding parting off tool must be precisely aligned to achieve as burr-free a result as possible.



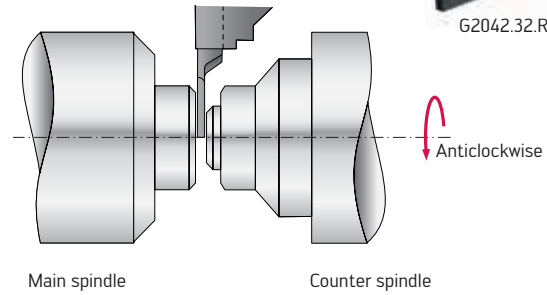
Parting off into a bore

The hole must be pre-bored deep enough so that the entire insert width of the parting off tool exits in the cylindrical section of the hole.

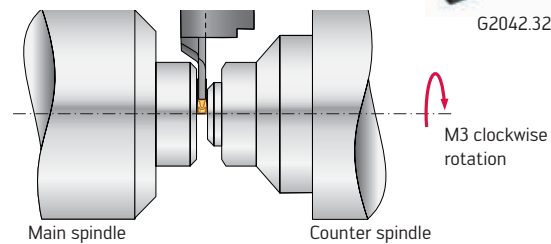


Reinforced blades for application conditions

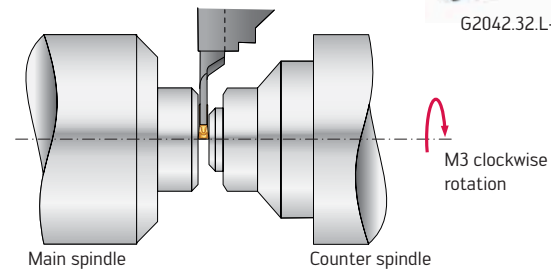
“Overhead” mounting position Contra blade



“Normal” mounting position



“Normal” mounting position Contra blade



3. Fault analysis



Large residual pip / burr

- Reduce the feed value by 50 - 75% from below diameter $1.5 \times s$ (s = insert width)
- Use an insert with lead angle
- Use a narrower insert (reduction of the cutting forces)
- Use a smaller corner radius
- Use a more positive geometry
- Check the center height



Poor surface / vibration

- Use a more stable tool
- Clamp the tool with a shorter overhang.
- Check whether the insert seat is damaged
- Use a more positive geometry
- Increase the feed rate



Damage caused by chips

- Use a chip breaker with greater chip constriction
- Lower the cutting speed
- Use a straight cutting insert
- Optimize cooling
- Increase the feed rate



Poor chip formation

- Lower the cutting speed
- Improve cooling
- Check the chip breaker
- Increase the feed rate

Poor face flatness

- Use an insert with as small a lead angle as possible or no lead angle at all.
- Use a tool with the shortest possible cutting depth for the application
- Reduce the feed rate for inserts with a lead angle.
- Use a smaller corner radius
- Use a more positive geometry
- Align the tool correctly

Chip formation when parting off

- Chip constriction inhibits friction on the side walls of the tool and reduces chip accumulation
- Enables higher feed rates
- No damage to parted off surfaces
- Chips are rolled up helically and broken short, so that they can exit the groove easily



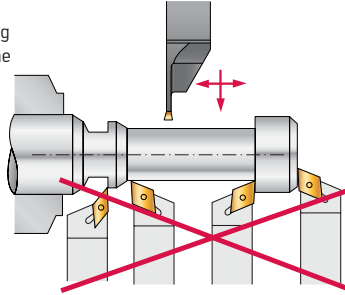
User Guide – Grooving

1. Basic principles

General

The use of recessing tools allows machining steps to be grouped together, saving on the number of tools used.

These tools are used for machining between shoulders or when tool positions are limited.

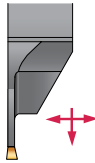


A precise form-fit connection between the insert and the insert seat enables both radial and axial forces to be absorbed.



This precise form fit allows grooving and longitudinal turning operations when special chip forming geometries are used.

The universal geometries are perfectly suited for this, e.g. UD4, UF4.



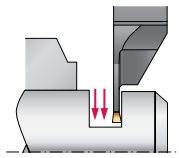
Machining process strategy

We always distinguish between two production strategies: Grooving and recessing.

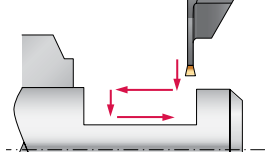
For **grooving**, the feed moves in only one direction. Longitudinal turning with low material removal (approx. 0.004 - 0.012 inch / 0.1 - 0.3 mm) takes place only as a finishing pass.

Recessing is a combination of grooving and longitudinal turning movements.

Grooving



Recessing



Grooving or recessing?

The choice of machining strategy depends on the shape and size of the groove to be produced.

As a general rule, the following criteria can be used to make a decision:

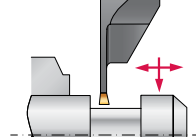
Recessing:

The groove width is 1.5 times greater than the groove depth

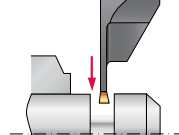
Grooving:

The groove depth is 1.5 times greater than the groove width

Recessing



Grooving

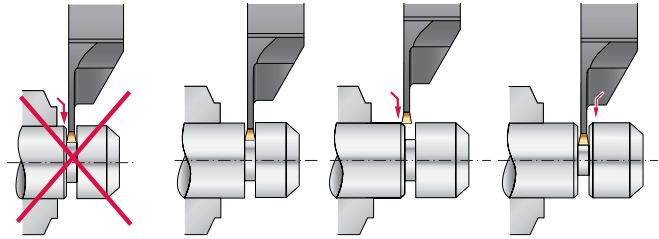


2. User tips

For grooving, only one cutting edge is used.

Here, it is also necessary to adhere to certain machining sequences to achieve an optimum result.

Producing a small groove with chamfer

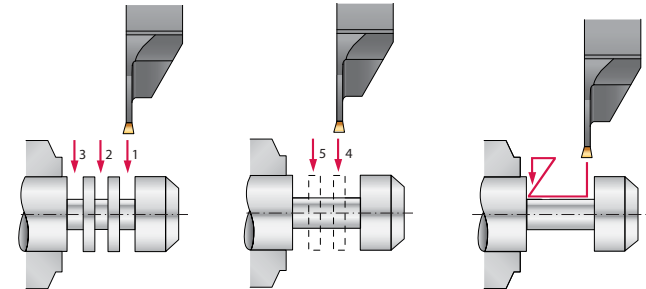


Grooving with 0.004 inch (0.1 mm) machining allowance on the diameter

Turn the chamfer and finish first groove wall

Turn the chamfer and finish second groove wall

Producing a wide groove by grooving



Pre-grooving
Web width = $s - 2 \times r$

Pre-grooving

Finishing
 $a_{p \max} = r$

s = insert width / r = corner radius / $a_{p \max}$ = max. cutting depth

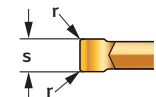
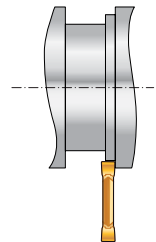
Side offset [s]–[r]

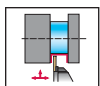
For side offset grooving, a universal "U" geometry should be used if possible. It is important to ensure that the grooving width is at least between $s/2$ and insert width $s-1 \times r$.

$a_p \min:$ 0.5 x s
 $a_p \max:$ s-r

Example:

$s =$ 0.118 in (3.0 mm)
 $r =$ 0.008 in (0.2 mm)
 $a_p \min:$ 0.059 in (1.5 mm)
 $a_p \max:$ 0.11 in (2.8 mm)



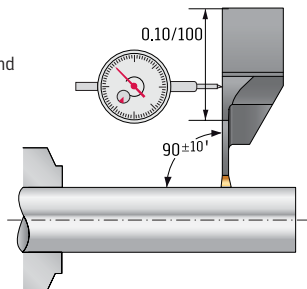


User Guide – Recessing

1. Basic principles

Tool must be aligned 90° to the axis of rotation.

This is the only way to guarantee that a clearance angle can be generated when the groove is turned in both directions. Poor tool alignment leads to vibration and can cause tool breakage.

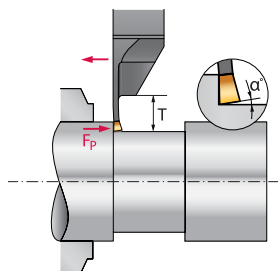


Deflection

Deflection means the deformation of the insert blade support caused by a force [F_p]. This deflection is required in order to generate an adjacent clearance angle [α] during the longitudinal turning operation.

The degree of deflection is influenced by multiple factors:

- Cutting depth [a_p]
- Feed [f]
- Cutting speed [v_c]
- Corner radius [r]
- Workpiece material to be machined
- Cutting depth of the tool [T]
- Width of the insert support blade



Diameter compensation

The deflection causes different longitudinal ratios on the tool. In order to generate the correct diameter during finishing, a diameter compensation must take place at the transition from grooving to the longitudinal turning movement.

1. Pre-machine the component up to the finishing operation
2. Groove to the final diameter
3. Retract by 0.004 inch (0.1 mm)
4. Turn longitudinally
5. Measure the groove diameter and turned diameter and correct the retraction dimension (0.004 inch / 0.1 mm) by the difference in diameter.

Recessing surface finish quality in comparison to ISO turning

A "wiper effect" is generated by deflecting the cutting insert when recessing. This is shown in image A.

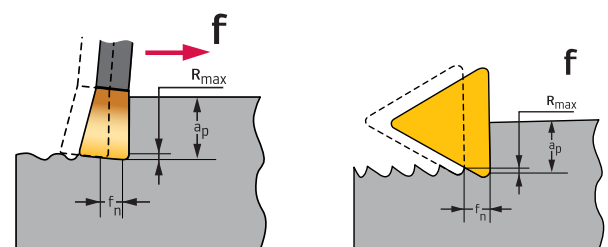
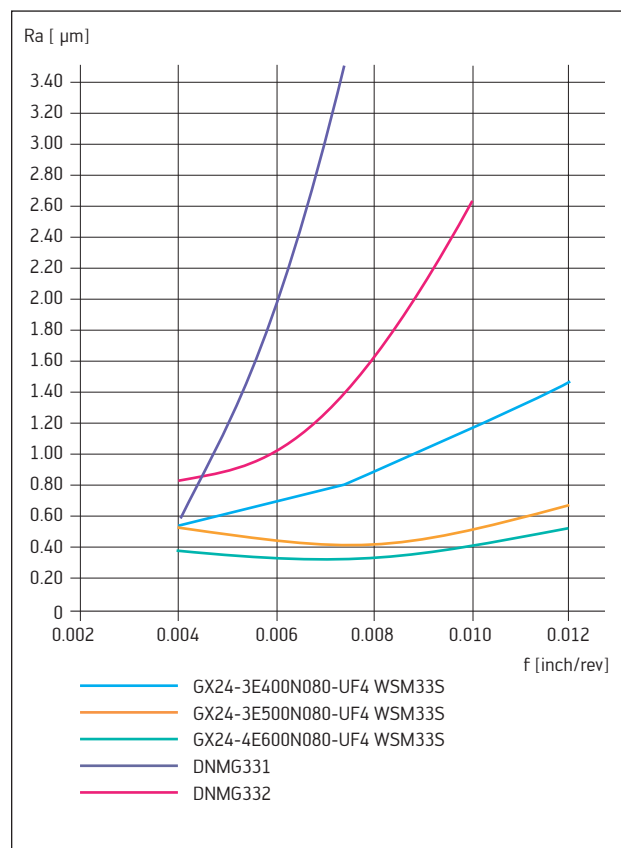


Image A

Comparison of the surface finish quality for recessing and ISO turning



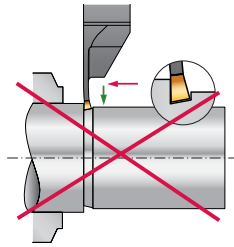


User Guide – Recessing

2. User tips

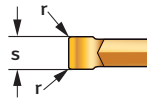
Recessing

In order to ensure a reliable machining process, certain tool paths must be adhered to.
For instance, a tool must not be stressed by cutting in two directions at the same time. At all times, ensure that stress on the cutting edge is relieved after grooving before you start the longitudinal turning operation. Transition from longitudinal turning to grooving applications requires the cutting edge stress to be relieved in the same way.



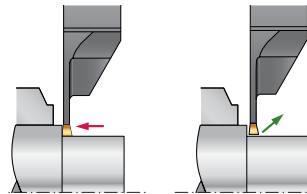
General rule for recessing:

f_{start}	$0.05 \times s$
f_{max}	$0.07 \times s$
ap_{min}	$R + 0.004 \text{ inch (0.1 mm)}$
ap_{max}	$0.7 \times s$

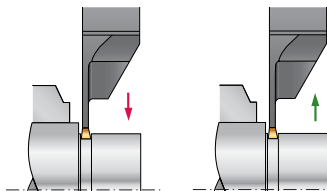


Machining sequence

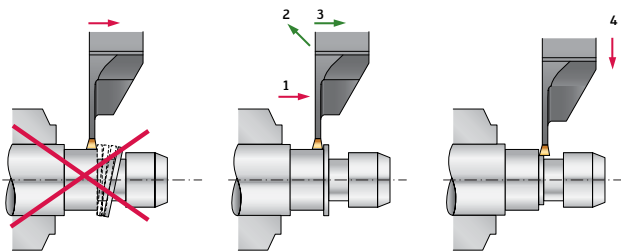
At the end of the longitudinal turning operation, retract opposite the direction of feed and away from the machined diameter by at least 0.004 inch (0.1 mm). This clearance allows the cutting edge to return to its original position.



The next grooving operation can now follow.
Before you transition to the longitudinal turning operation at this point, retract 0.004 inch (0.1 mm) again.



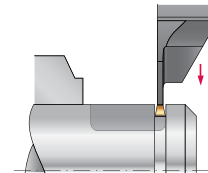
Avoidance of ring formation



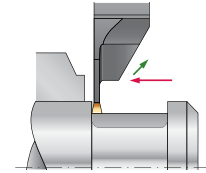
1. Longitudinally turn to approx. 0.02 - 0.060 inch (0.5 - 1.5 mm) before the end of planned cut path
2. Retract at an angle away from the corner
3. Position the tool above the remaining ring
4. Remove the ring in a plunge grooving application

Cutting a recess

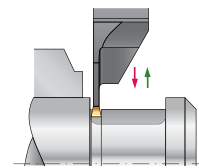
1. Roughing



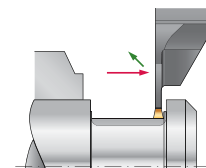
1. Grooving (to the depth of your first longitudinal pass)
2. Retract by 0.004 inch (0.1 mm)



3. Turn longitudinally
4. Retract by 0.004 inch (0.1 mm) in two directions

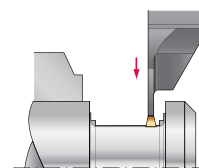


5. Groove again
6. Retract by 0.004 inch (0.1 mm)

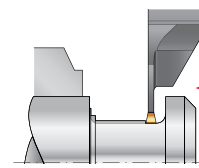
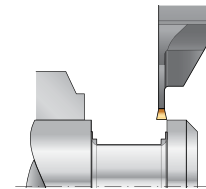


7. Turn longitudinally to approximately 0.02 inch (0.5 mm) before the shoulder
8. Retract by 0.004 inch (0.1 mm) in two directions

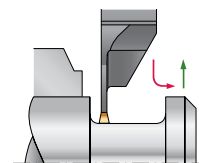
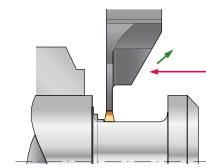
2. Finishing



1. Groove at the radius tangent point (end of the component radius) down to the required finished diameter



2. Finishing turn the first shoulder and the required radius
3. Retract by the diameter compensation dimension (ref: page 169)



4. Turn longitudinally to the remaining radius tangent position (radius start point)
5. Retract 0.004 inch (0.1 mm) in two directions
6. Finishing turn the second shoulder and the required radius

2. User tips *(continued)*

Preventing vibration when copy turning

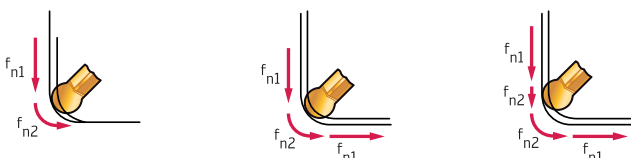
- The radius of the indexable insert should always be smaller than the required workpiece radius
- When machining the workpiece radius, reduce the feed rate by 50% in comparison to the feed rate on the straight longitudinal cut

Insert radius = workpiece radius
Not recommended!

Insert radius < workpiece radius
Recommended!

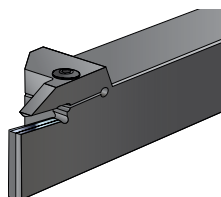


f_{n1} = longitudinal cut – max. chip thickness 0.15 - 0.40 mm
 f_{n2} = radius machining – 50% max. chip thickness

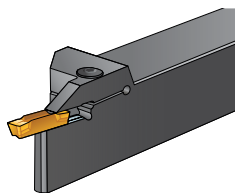


Tool set up

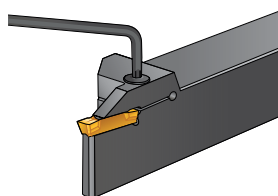
- Before inserting the insert, you should check that the insert seat is free from dirt and damage



- Push the cutting insert along the location faces into the insert seat and check for resistance

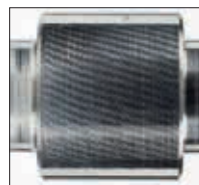


- To tighten the clamping screw, use the screwdriver provided. We recommend using a torque wrench. The following clamping screw torque values are recommended :



Tool	Tightening torque [in lb]	Tightening torque [Nm]
G15 . .	44.3 in lb	5.0 Nm
G1011	44.3 in lb	5.0 Nm
G1111	35.4 in lb	4.0 Nm
G1041	31.0 in lb	3.5 Nm
XLDE	31.0 in lb	3.5 Nm

3. Recessing – Fault Analysis



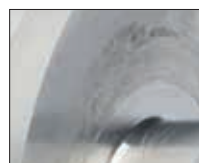
Vibration during longitudinal turning

- Check tool alignment (see page 165)
- Deflection of cutting insert too low (see page 169)
- Use narrower insert (easier to deflect)
- Use a smaller corner radius
- Shorten workpiece overhang



Step in machined diameter

- Verify and correct retraction dimension before finishing cut
- Ensure even material removal
- Check whether the insert seat is damaged
- Increase the cutting speed
- Use a more positive geometry



Damage caused by chips

- Use a chip breaker with greater chip constriction
- Lower the cutting speed
- Increase the feed rate
- Optimize cooling



Ring formation

- Check the program sequence (see page 170)



Poor chip formation

- Lower the cutting speed
- Increase the feed rate
- Improve cooling
- Check the chip breaker for damage
- Check geometry selection

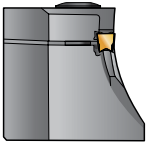


User Guide – Axial grooving

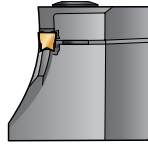
General grooving

Basic principles

Selecting a tool design



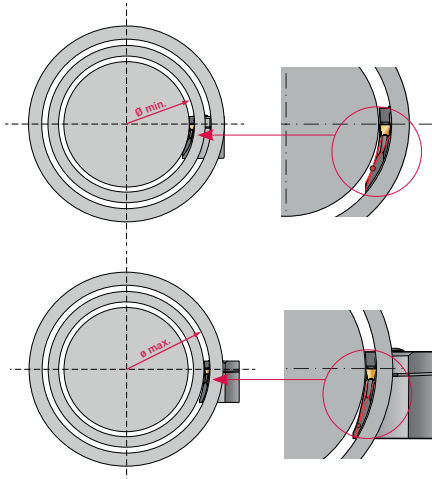
Right-hand tool



Left-hand tool

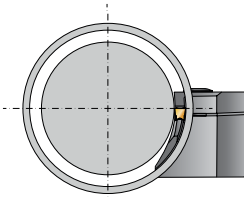
Select the largest possible diameter range for the first groove

The larger the diameter range of the first groove, the better the chip evacuation

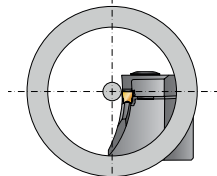


Expanding an axial groove

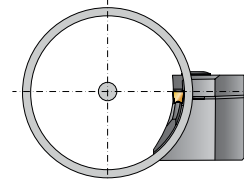
1. First groove on the largest possible diameter



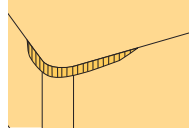
2. Expanding inwards



3. Expanding outwards

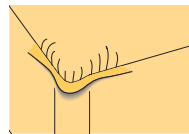


Wear analysis



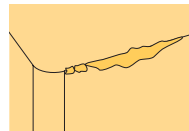
Flank face wear

- Use a more wear-resistant cutting material
- Reduce the cutting speed
- Improve cooling



Plastic deformation

- Use a more wear-resistant cutting material
- Reduce feed
- Optimize cooling
- Reduce the cutting speed



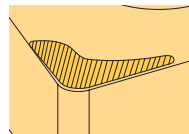
Fractures

- Use tougher carbide grades
- Use a more stable tool
- Use a more stable geometry
- Use wider inserts if necessary



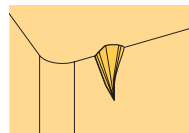
Built up edge

- Increase the cutting speed
- Use a more positive geometry
- Optimize cooling
- Decrease feed rate



Crater wear

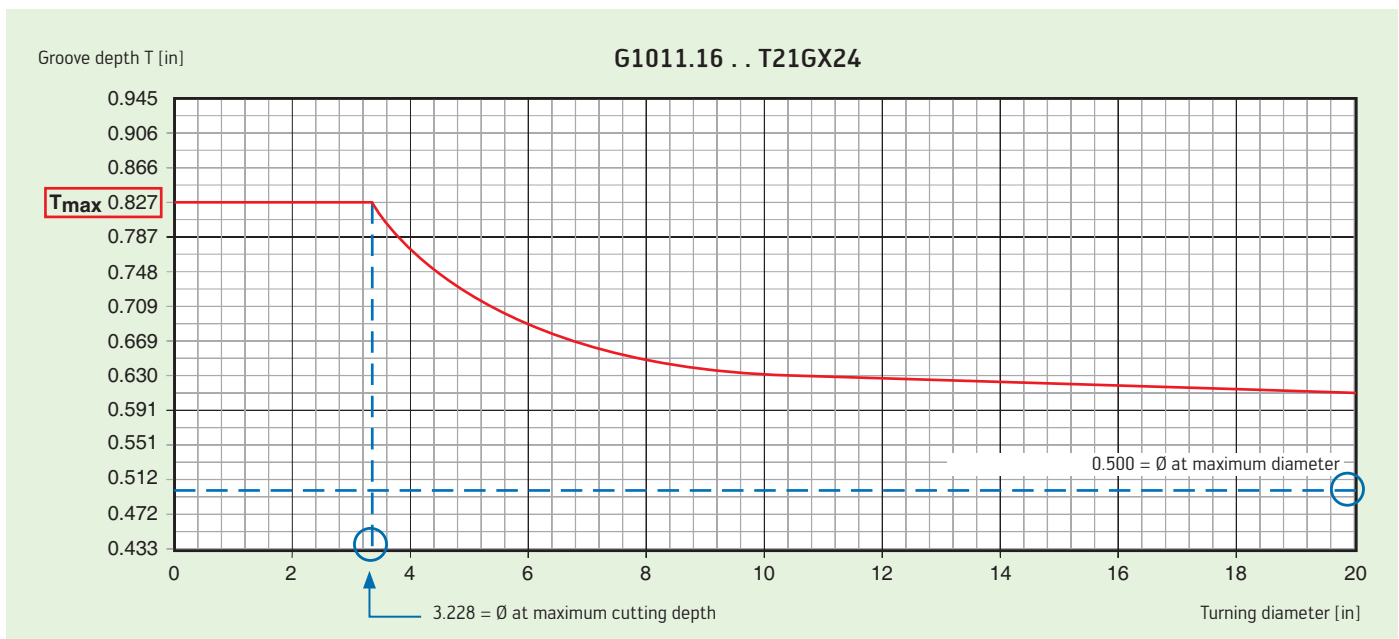
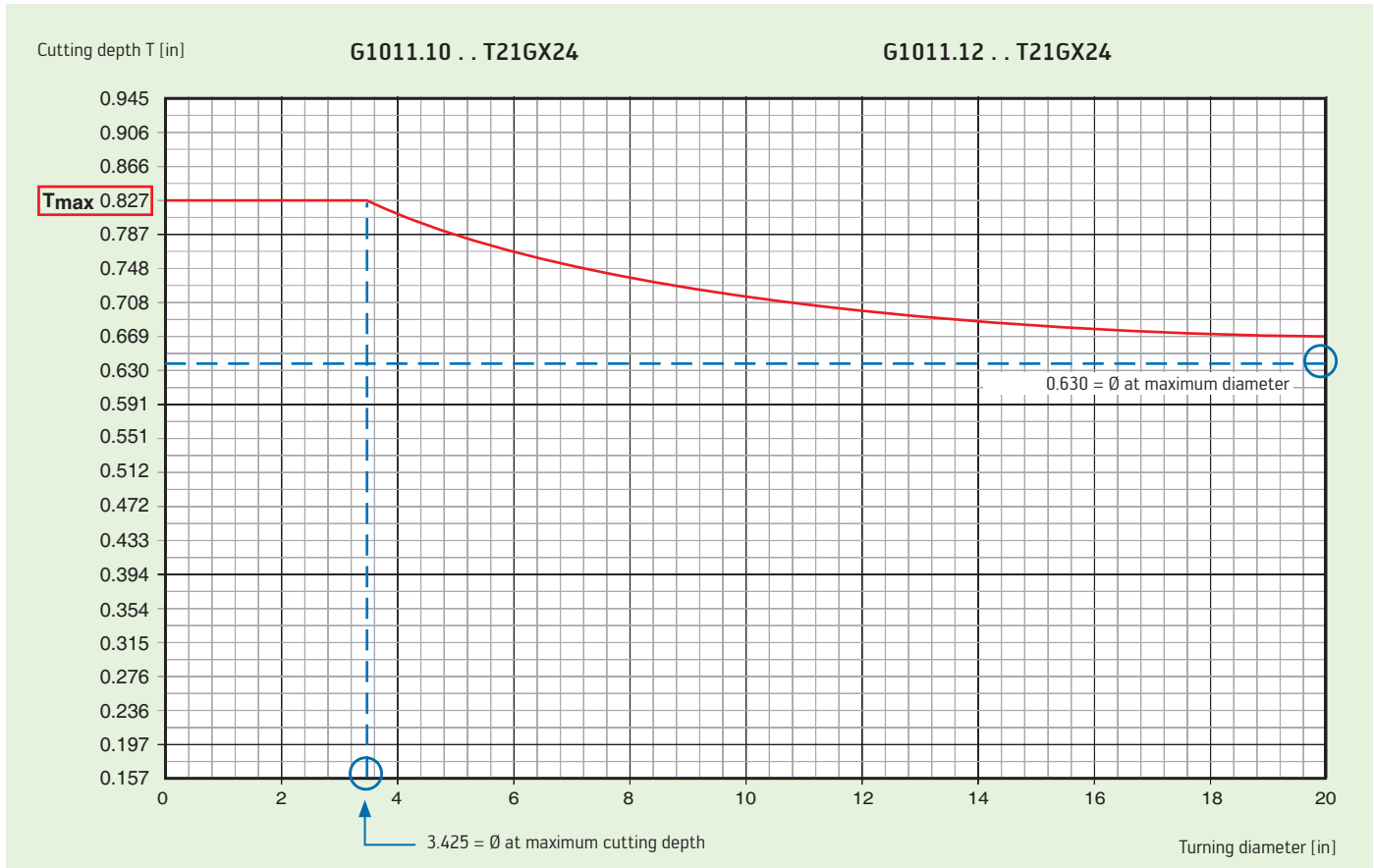
- Reduce the cutting speed
- Use a more positive geometry
- Use a more wear-resistant cutting material
- Optimize cooling



Notching or oxidation wear

- Reduce the cutting speed
- Reduce feed rate

Cutting depths relative to turned outer diameter



Hardness comparison table

Tensile strength, Brinell, Vickers and Rockwell hardness (extract from DIN 50150)

Tensile strength Rm N/mm ²	Vickers hardness HV	Brinell hardness HB	Rockwell hardness HRC
255	80	76.0	
270	85	80.7	
285	90	85.5	
305	95	90.2	
320	100	95.0	
335	105	99.8	
350	110	105	
370	115	109	
385	120	114	
400	125	119	
415	130	124	
430	135	128	
450	140	133	
465	145	138	
480	150	143	
495	155	147	
510	160	152	
530	165	156	
545	170	162	
560	175	166	
575	180	171	
595	185	176	
610	190	181	
625	195	185	
640	200	190	
660	205	195	
675	210	199	
690	215	204	
705	220	209	
720	225	214	
740	230	219	
755	235	223	
770	240	228	20.3
785	245	233	21.3
800	250	238	22.2
820	255	242	23.1
835	260	247	24.0
850	265	252	24.8
865	270	257	25.6
880	275	261	26.4
900	280	266	27.1
915	285	271	27.8
930	290	276	28.5
950	295	280	29.2
965	300	285	29.8
995	310	295	31.0
1030	320	304	32.2
1060	330	314	33.3
1095	340	323	34.4
1125	350	333	35.5
1155	360	342	36.6
1190	370	352	37.7
1220	380	361	38.8
1255	390	371	39.8
1290	400	380	40.8
1320	410	390	41.8
1350	420	399	42.7
1385	430	409	43.6

Tensile strength Rm N/mm ²	Vickers hardness HV	Brinell hardness HB	Rockwell hardness HRC
1420	440	418	44.5
1455	450	428	45.3
1485	460	437	46.1
1520	470	447	46.9
1555	480	(456)	47.7
1595	490	(466)	48.4
1630	500	(475)	49.1
1665	510	(485)	49.8
1700	520	(494)	50.5
1740	530	(504)	51.1
1775	540	(513)	51.7
1810	550	(523)	52.3
1845	560	(532)	53.0
1880	570	(542)	53.6
1920	580	(551)	54.1
1955	590	(561)	54.7
1995	600	(570)	55.2
2030	610	(580)	55.7
2070	620	(589)	56.3
2105	630	(599)	56.8
2145	640	(608)	57.3
2180	650	(618)	57.8
	660		58.3
	670		58.8
	680		59.2
	690		59.7
	700		60.1
	720		61.0
	740		61.8
	760		62.5
	780		63.3
	800		64.0
	820		64.7
	840		65.3
	860		65.9
	880		66.4
	900		67.0
	920		67.5
	940		68.0

The hardness values converted in accordance with these tables are approximate only. See DIN 50150.

Material property	Unit / test method	Formula symbol
Tensile strength	N/mm ²	R _m
Vickers hardness	Diamond pyramid 136° Testing force F ≥ 98 N	HV
Brinell hardness Calculated from: HB = 0.95 x HV	0.102 × F/D ² = 30 N/mm ² F = Testing force in N D = Sphere diameter in mm	HB
Rockwell hardness C	Diamond cone 120° Overall testing force 1471 ± 9 N	HRC

Grooving calculation formulas

Number of revolutions

$$n = \frac{v_c \times 12}{D_c \times \pi} \text{ [rpm]}$$

Cutting speed

$$v_c = \frac{D_c \times \pi \times n}{12} \text{ [ft/min]}$$

Feed rate

$$v_f = n \times f \text{ [in/min]}$$

Metal removal rate

$$Q = v_c \times a_p \times f \times 12 \text{ [in}^3\text{/min]}$$

Cutting time

$$t_h = \frac{l_m}{f \times n} \text{ [min]}$$

Power requirements depending on $m_c/k_{c1.1}$

$$P_{mot} = \frac{v_c \times f \times a_p \times k_c}{60000 \times \eta} \text{ [kW]}$$

$$k_c = \frac{1 - 0.01 \times \gamma_0}{h^{m_c}} \times k_{c1.1} \text{ [N/mm}^2\text{]}$$

$$h = f \times \sin \kappa$$

General rule

for a "quick" calculation of power required

Steel:
$$P_{mot} = \frac{v_c \times f \times a_p}{20} \text{ [kW]}$$

Cast iron:
$$P_{mot} = \frac{v_c \times f \times a_p}{25} \text{ [kW]}$$

Aluminum:
$$P_{mot} = \frac{v_c \times f \times a_p}{100} \text{ [kW]}$$

n	Number of revolutions	rpm
D_c	Turning diameter	in
v_c	Cutting speed	ft/min
v_f	Feed rate	in/min
f	Feed per revolution	in
Q	Metal removal rate	in ³ /min
a_p	Depth of cut	in
h	Chip thickness	in
κ	Lead angle	°
$k_{c1.1}$ *	Specific cutting force For 1 in ² chip cross section	lbs/in ²
m_c *	Increase in the k_c curve	
P_{mot}	Drive power	HP
t_h	Cutting time	min
l_m	Length of cut	in
η	Machine efficiency	(0.75 - 0.9)

* m_c and $k_{c1.1}$ see table on page 176.

Cutting forces of Walter machining groups

Steel		$k_{cw} 1.1^*$ (lbs/in ²)	m_{cw}^*
P	Low-carbon soft steel; low tensile ferritic steel	260,950	0.1062
	Low-carbon free cutting steel	178,400	0.1063
	Normal structural steel, low to medium content of carbon (< 0.5% C)	247,200	0.1062
	Normal, low-alloy steel and steel casting; tempering steel; carbon steel (> 0.5% C); ferritic and martensitic stainless steel	274,700	0.1062
	Normal tool steel; harder tempering steel; martensitic, stainless steel	247,200	0.1062
	Tool steel featuring difficult cutting properties; hard, high-alloyed steel and steel casting; martensitic, stainless steel	274,700	0.1062
	High tensile steel with difficult cutting properties; hardened steels of the groups 3 – 6; martensitic, stainless steel	302,150	0.1063
Stainless Steel			
M	Stainless steel featuring less difficult cutting properties, calcium treated stainless steel	185,400	0.1063
	Molybdenum stainless steel; austenite and duplex, difficult cutting properties	206,000	0.1062
	Austenite and duplex featuring difficult cutting properties	247,200	0.1062
	Austenite and duplex featuring extremely difficult cutting properties	271,900	0.1063
Cast Iron			
K	Cast iron of medium hardness, grey cast iron	192,300	0.1061
	Low-alloyed cast iron, malleable cast iron, nodular cast iron	211,500	0.1061
	Cast iron alloy of medium hardness, malleable cast iron, GGG, medium cutting properties	221,100	0.1061
	High-alloyed cast iron with difficult cutting properties; malleable cast iron, GGG, difficult cutting properties	230,700	0.1061
NF Metal			
N	Nonferrous alloys which are easy to machine, Aluminum with <16% Si, brass, zinc, magnesium	82,400	0.1062
	Nonferrous alloys which are difficult to machine; Aluminum with >16% Si, bronze, copper, Aluminum alloys (nickel, copper, magnesium)	82,400	0.1062
High Temperature Alloys and Titanium Alloys			
S	High temperature alloys containing nickel, cobalt, iron, hardness <30 HRc, Incoly 800 and Inconel 601, 617 and 625, Monel 400	302,150	0.1062
	High temperature alloys containing nickel, cobalt, iron, hardness >30 HRc, Inconel 718 and 750-X and Incoly 925, Monel K-5008	332,350	0.1062
	Titanium alloys, Ti-6Al-4V	178,550	0.1061

*The $k_{cw} 1.1$ and m_{cw} values should be used only with the listed formulas on pages 175.

$k_{cw} 1.1$ value = specific cutting force with a rake angle of 0°. With other rake angles, $k_{cw} 1.1$ should be increased/decreased accordingly, i.e. 1% each degree of rake angle.

Designation key for stationary adaptors

Example:

A	2	1	10	-	V30	-	25	L	-	080	-	P
1	2	3	4	5	6	7	8	9	10			

1
Tool group
A Adaptors

2
Generation
1
2

3
Tool type
0 Monoblock
1 Shank adaptor

4
Tool type
10 Parting blade adaptor, axial
11 Parting blade adaptor, radial
20 Square shank adaptor, axial
21 Square shank adaptor, radial

5
1. Delimiters
- Metric
· Inch

6
Machine-side adaptor type
V25 VDI25 d = 25 mm
V30 VDI30 d = 30 mm
V40 VDI40 d = 40 mm
V50 VDI50 d = 50 mm
BT45 BMT45A
BT55 BMT55A
BT65 BMT65A
DO Doosan Puma 2100, 2600, 3100

7
Tool-side adaptor type
Blade adaptor
26 26 mm blade height
32 32 mm blade height
Shank adaptor
20 20 mm shank height
25 25 mm shank height

8
Tool-side version adaptor type
R Right-hand
L Left-hand
N Neutral

9
Length of the adaptor
Blade adaptor
045 = 45 mm
080 = 80 mm
087 = 87 mm
Shank adaptor
070 = 70 mm
085 = 85 mm
100 = 100 mm

10
Variant
P Precision cooling

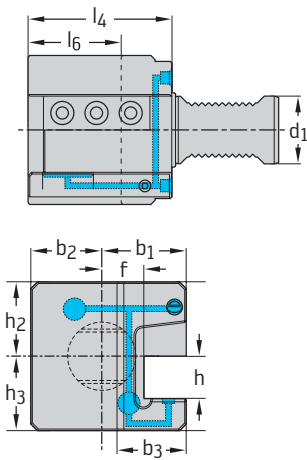
VDI adaptor – shank tools A2120-VDI-P



Illustration shows right-hand version

- For star turret
- For precision cooling

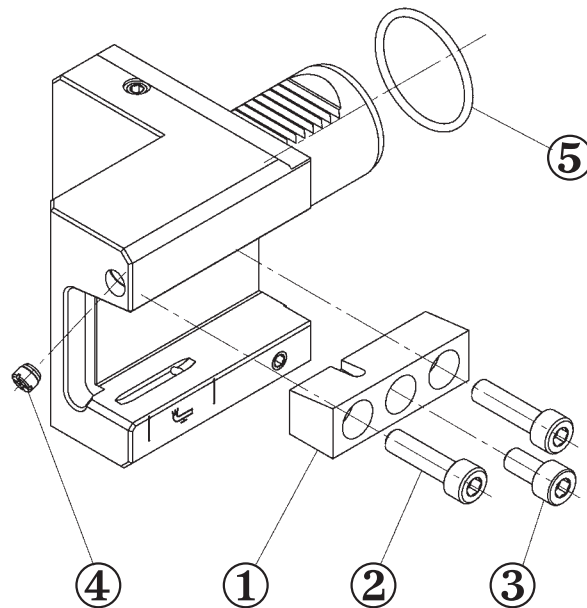
Tool



Designation	d ₁ mm	h mm	b ₁ mm	b ₂ mm	b ₃ mm	f mm	l ₄ mm	l ₆ mm	h ₂ mm	h ₃ mm	kg
A2120-V30-20R/L-070-P	30	20	54	30	34	34	70	22	35	35	1.7
A2120-V40-25R/L-085-P	40	25	50	42	41	25	85	30	44	44	3.2

For shank holder with precision cooling, see page 48.
The maximum recommended coolant pressure is 80 bar (1160 psi).

Assembly parts	Type d ₁ / h [mm]	30 / 20	40 / 25
1	Wedge	FK392	FK393
2	Screw	M06X025 ISO4762 12.9	FS972
3	Screw	M06X014 ISO4762 12.9	M08X016 ISO4762 12.9
4	Screw	FS2278	FS2278
5	O-ring	O-RING 28.3X1.78 70/75	O-RING 37.77X2.62 70/75
6	Wrenches	ISO2936-5 (SW5)	ISO2936-6 (SW6)



VDI adaptor – shank tools A2121-VDI-P



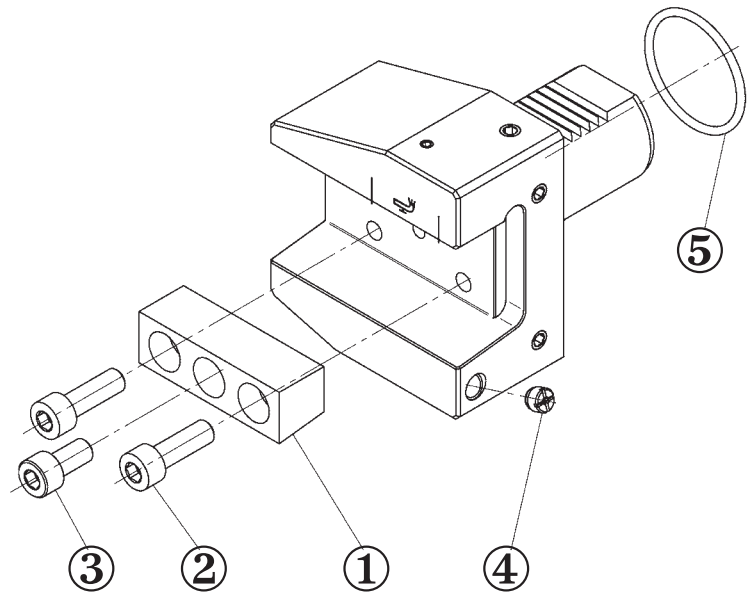
Illustration shows right-hand version

- For disc turret
- For precision cooling

Tool	Designation	d ₁ mm	h mm	b ₁ mm	b ₂ mm	l ₄ mm	l ₅ mm	h ₂ mm	h ₃ mm	kg
	A2121-V30-20R/L-070-P	30	20	35	35	35.5	15.5	35	38	1.2
	A2121-V40-25R/L-085-P	40	25	42.5	42.5	48	23	41	48	2.5
	A2121-V50-25R/L-100-P	50	25	50	50	48	23	50	55	4.0

For shank holder with precision cooling, see page 52-54.
The maximum recommended coolant pressure is 80 bar (1160 psi).

Assembly parts	Type d ₁ / h [mm]	30 / 20	40 / 25	50 / 25
1	Wedge	FK392	FK393	FK393
2	Screw	M06X014 ISO4762 12.9	M08X025 ISO4762 12.9	M08X025 ISO4762 12.9
3	Screw	M06X025 ISO4762 12.9	M08X016 ISO4762 12.9	M08X016 ISO4762 12.9
4	Screw	FS2278	FS2278	FS2278
5	O-ring	O-RING 28.3X1.78 70/75	O-RING 37.77X2.62 70/75	O-RING 47.29X2.62 70/75
6	Wrenches	ISO2936-5 (SW5)	ISO2936-6 (SW6)	ISO2936-6 (SW6)



VDI radial adaptor – parting blades A2110-P



A2110-V25 / V30..R

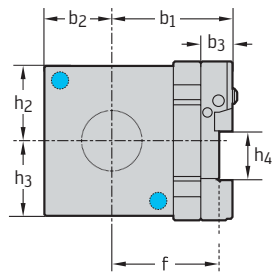
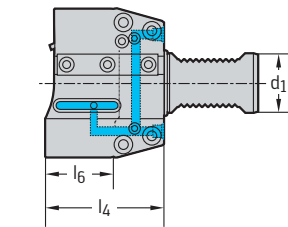


A2110-V40..R

Illustrations show right-hand version

- For star turret
- For precision cooling

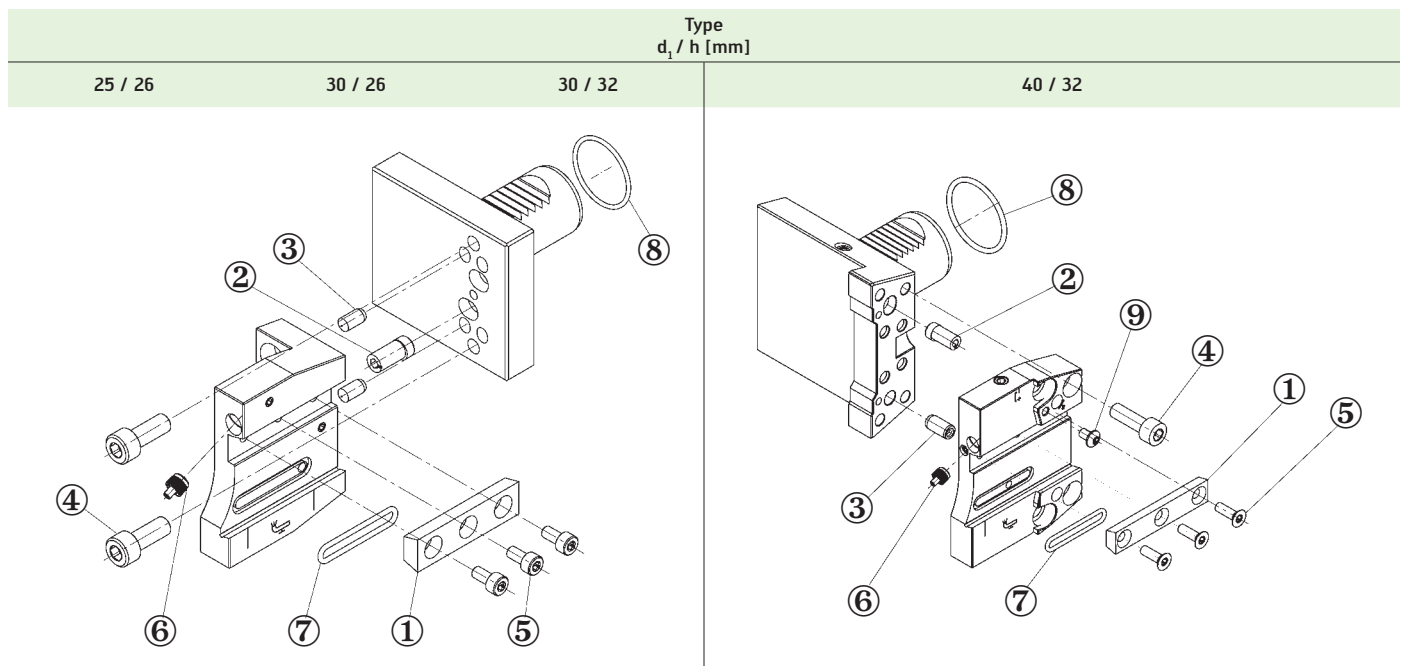
Tool



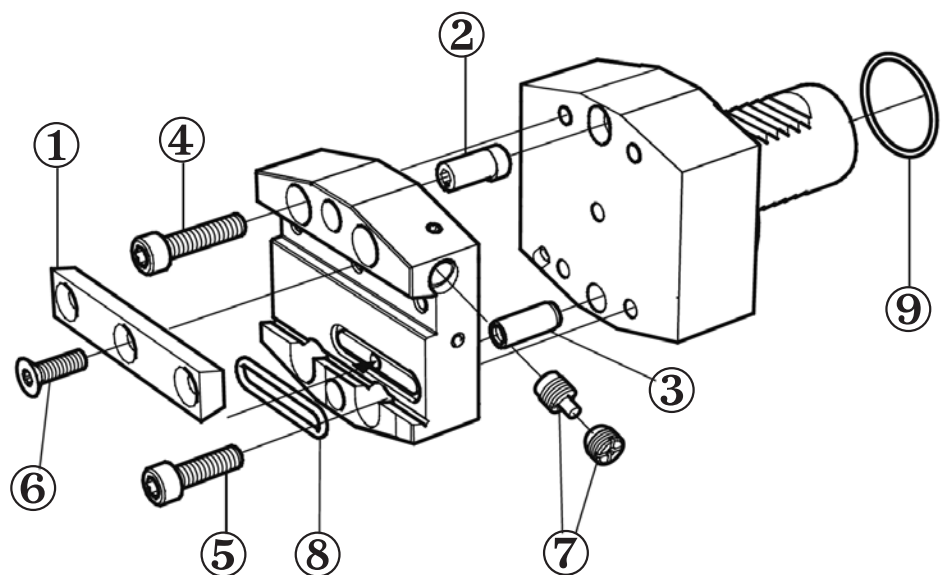
Designation	d ₁ mm	h ₄ mm	b ₁ mm	b ₂ mm	b ₃ mm	f mm	l ₄ mm	l ₆ mm	h ₂ mm	h ₃ mm	kg
A2110-V25-26R/L-080-P	25	26	43	30	17	38	83	52	37	37	1.2
A2110-V30-26R/L-080-P	30	26	50	35	17	45	90	52	37	37	1.5
A2110-V30-32R/L-087-P	30	32	51	35	17	46	84	52	39	39	1.6
A2110-V40-32R/L-080-P	40	32	76	42.5	20	67.5	80	46	50	50	2.9

For parting blades with precision cooling, see page 59, 61.
The maximum recommended coolant pressure is 80 bar (1160 psi).

Assembly parts	Type d ₁ / h [mm]	Type d ₁ / h [mm]			
		25 / 26	30 / 26	30 / 32	40 / 32
1	Wedge	FK383	FK383	FK383	FK384
2	Eccentric pin	FS2275	FS2275	FS2275	FS2275
3	Parallel pin	06,0M6X012 DIN7	06,0M6X012 DIN7	06,0M6X012 DIN7	08,0M6X016 ISO8735
4	Screw	M08X016 ISO4762 12.9	M06X020 DIN7984 8.8	M06X020 DIN7984 8.8	M08X025 ISO4762 12.9
5	Screw	M05X010 ISO14579 8.8	M05X010 ISO14579 8.8	M05X010 ISO14579 8.8	M05X016 ISO14581 8.8
6	Nozzle	FS1477	FS1477	FS1477	FS1477
7	O-ring	O-RING 24X2 70/80	O-RING 24X2 70/80	O-RING 24X2 70/80	O-RING 27X2 70/80
8	O-ring	O-RING 23.52X1.78 70/75	O-RING 28.3X1.78 70/75	O-RING 28.3X1.78 70/75	O-RING 37.77X2.62 70/75
9	Screw				M5X8-10.9-Torx
10	Wrenches	FS1592	FS1592	FS1592	FS1592
11	Wrenches	ISO 2936-4 (SW4)	ISO 2936-4 (SW4)	ISO 2936-4 (SW4)	ISO 2936-4 (SW4)
12	Wrenches	ISO 2936-5 (SW5)	ISO 2936-5 (SW5)	ISO 2936-6 (SW6)	ISO 2936-6 (SW6)



Assembly parts	Type d ₁ / h [mm]	30 / 26	30 / 32	40 / 32
1	Wedge	FK384	FK384	FK384
2	Eccentric pin	FS2275	FS2275	FS2275
3	Parallel pin	08,0M6X020 ISO8735	08,0M6X020 ISO8735	08,0M6X020 ISO8735
4	Screw	M06X025 ISO4762 12.9	M08X025 ISO4762 12.9	M08X025 ISO4762 12.9
5	Screw	M06X020 DIN984 8.8		
6	Screw	M05X016 ISO14581 8.8	M05X016 ISO14581 8.8	M05X016 ISO14581 8.8
7	Nozzle	FS1477	FS1477	FS1477
8	O-ring	O-RING 24X2 70/80	O-RING 27X2 70/80	O-RING 27X2 70/80
9	O-ring	O-RING 28.3X1.78 70/75	O-RING 28.3X1.78 70/75	O-RING 37.77X2.62 70/75
10	Wrenches	FS1592 (Torx IP25)	FS1592 (Torx IP25)	FS1592 (Torx IP25)
11	Wrenches	ISO 2936-4 (SW4)	ISO 2936-4 (SW4)	ISO 2936-4 (SW4)
12	Wrenches	ISO 2936-5 (SW5)	ISO 2936-6 (SW6)	ISO 2936-6 (SW6)



BMT adaptor – parting blades A2110-BT..-P



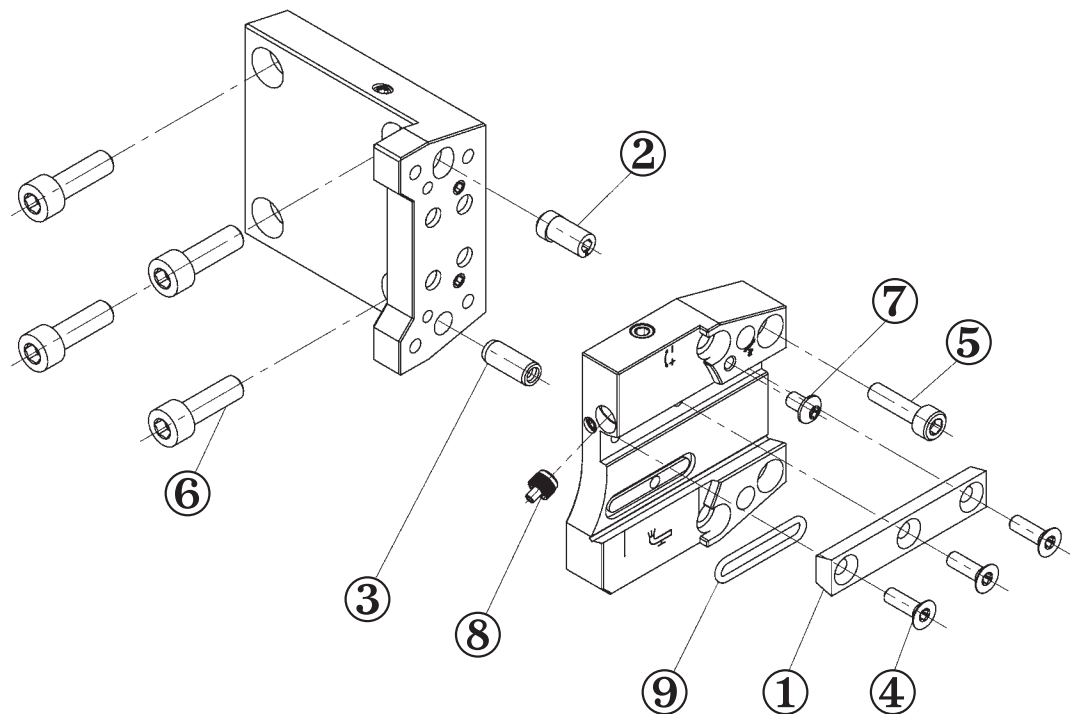
Illustration shows right-hand version

- For BMT star turret
- For precision cooling

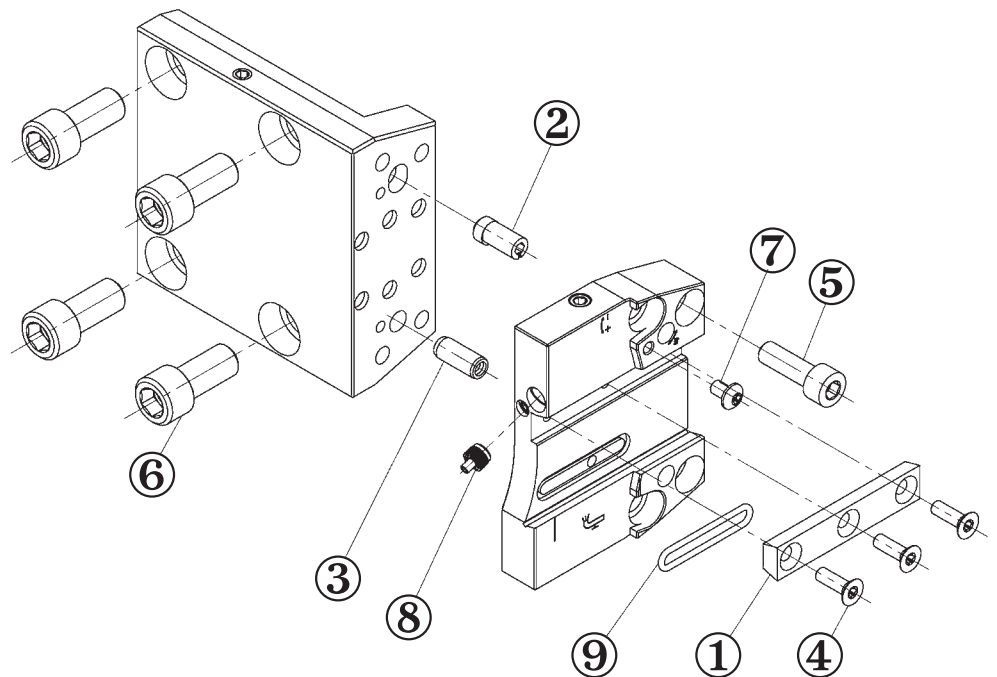
Tool	Designation	h_4 mm	b_1 mm	b_2 mm	b_3 mm	f mm	l_4 mm	l_6 mm	h_2 mm	h_3 mm	kg
	A2110-BT45-26R/L-080-P	26	69	40	20	60.5	80	41	42	42	1.8
	A2110-BT55-32R/L-080-P	32	77.5	44	20	69.0	80	46	50	50	2.2
	A2110-BT65-32R/L-083-P	32	79	47	20	70.5	83	45	50	50	2.7

For parting blades with precision cooling, see page 59, 61.
The maximum recommended coolant pressure is 80 bar (1160 psi).

Assembly parts	Type	BT45	BT55	BT65
1	Wedge	FK384	FK384	FK384
2	Eccentric pin	FS2275	FS2275	FS2275
3	Parallel pin	08,0M6X020 ISO8735	08,0M6X016 ISO8735	08,0M6X016 ISO8735
4	Screw	M05X016 ISO14581 8.8	M05X016 ISO14581 8.8	M05X016 ISO14581 8.8
5	Screw	M06X022 ISO4762 12.9	-	M06X022 ISO4762 12.9
6a	Screw	M08X025 ISO4762 12.9	M10X020 ISO4762 12.10	M08X025 ISO4762 12.9
6b	Screw	-	M010X025 ISO4762 12.9	-
7	Screw	FS2287	FS2287	FS2287
8	Nozzle	FS1477	FS1477	FS1477
9	O-ring	O-RING 24X2 70/80	O-RING 27X2 70/80	O-RING 27X2 70/80
10	Wrenches	FS1592	FS1592	FS1592
11	Wrenches	ISO2936-5	ISO2936-6	ISO2936-5
12	Wrenches	ISO2936-6	ISO2936-8	ISO2936-6

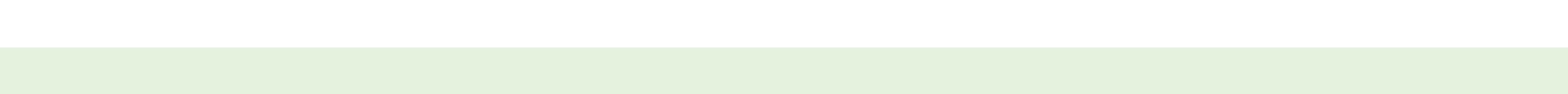


Assembly parts	Type	DO
1	Wedge	FK384
2	Eccentric pin	FS2275
3	Parallel pin	08,0M6X020 ISO8735
4	Screw	M05X016 ISO14581 8.8
5	Screw	M08X022 ISO4762 12.9
6	Screw	M12X025 ISO4762 12.9
7	Screw	FS2287
8	Nozzle	FS1477
9	O-ring	O-RING 27X2 70/80
10	Wrenches	FS1592
11	Wrenches	ISO2936-6
12	Wrenches	ISO2936-10



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NCCI	130
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NCFE	108
NCHE	104
NCLE	88
NCNE	96
NCOE	116
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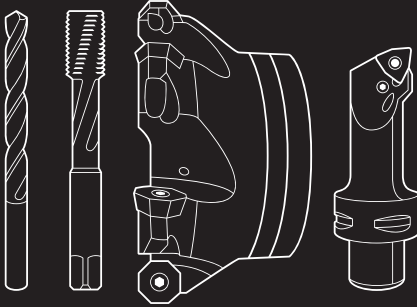


Walter USA, LLC

N22W23855 RidgeView Parkway West
Waukesha, WI 53188, USA

Phone: 800-945-5554 Fax: 262-347-2500
service.us@walter-tools.com

www.walter-tools.com/us
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Walter Canada
service.ca@walter-tools.com

Walter Tools S.A. de C.V.
Carr. Estatal KM 2.22 #431, Módulo 3, Interior 19 y 20
El Colorado Galindo, Municipio El Marqués,
Querétaro, C.P. 76246, México
Phone: +52 (442) 478-3500
service.mx@walter-tools.com
