

Cutting tools from Sandvik Coromant



Turning tools

GENERAL TURNING | PARTING & GROOVING | THREADING | TOOLING SYSTEMS

2012



MULTI-TASK MACHINING

Tooling possibilities

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Multi-Task Machining - tooling possibilities

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

B

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

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

C



G

CoroPlex™ – Innovative multi-functional tools

To take full advantage of the more versatile multi-task machine tools and to optimize their efficiency, there is now a demand for running them with dedicated tooling. CoroPlex™ t³)

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

H

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

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

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



CoroPlex™ TT twin tools – two turning tools in one

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

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

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

Multi-Task Machining - tooling possibilities

Turning tools

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



Milling tools

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



Holemaking tools

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

Tool holders and tool adapters

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

Accessories

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



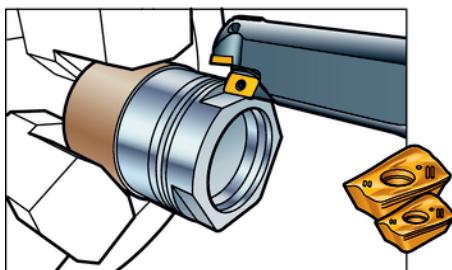
A

CoroPlex™ MT

Multi-functional milling and turning tool

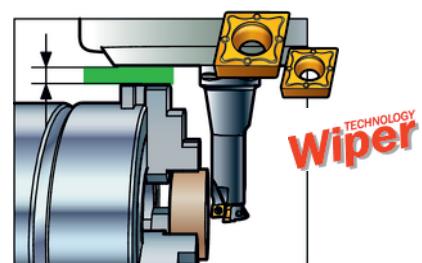
Many optimized tools in one solution dedicated for multi-task machining.

... as a CoroMill® 390 cutter



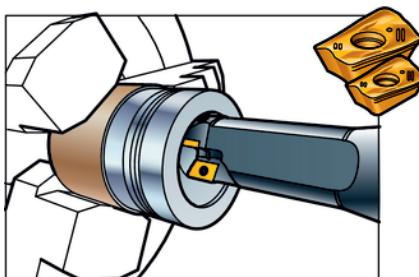
Shoulder milling

...as a CoroTurn® 107 tool

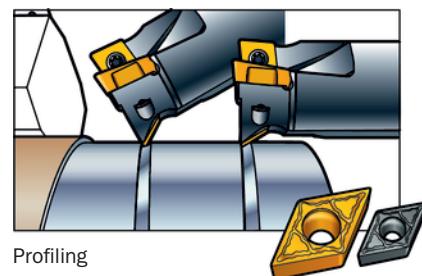
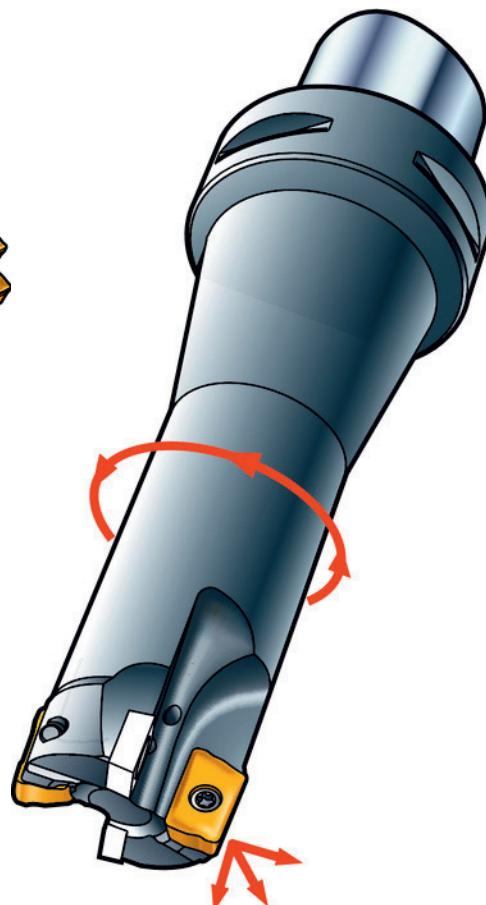


Face and longitudinal turning

C

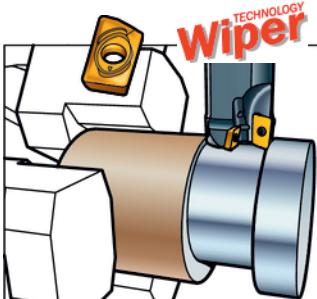


Circular interpolation in helix

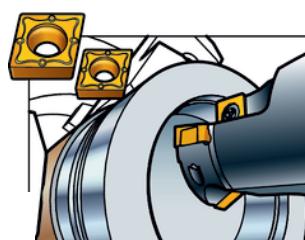


Profiling

G

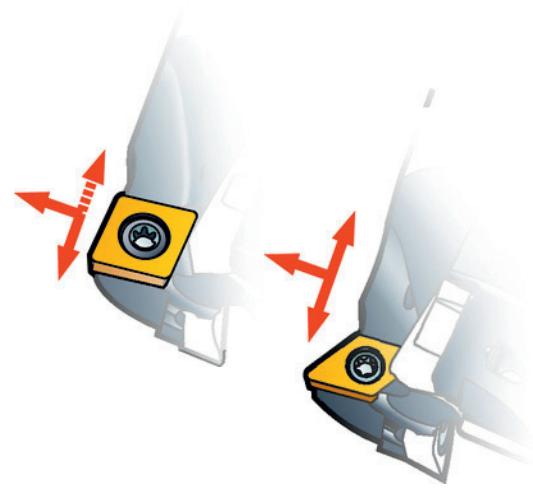


Turn-milling



Internal turning

H

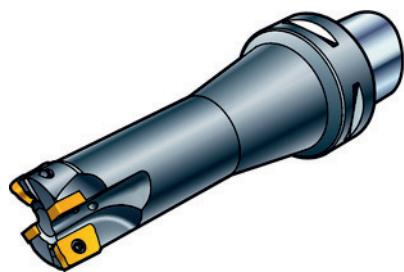


ISO application areas:

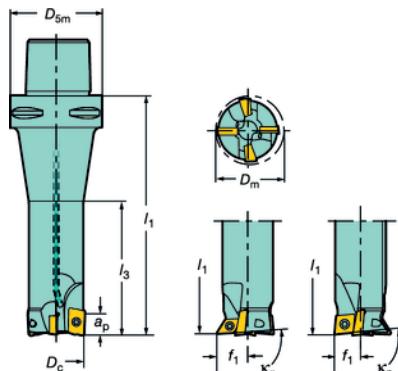


Multi-functional tools CoroPlex™ MT

for milling and turning in Multi-Task machines



Coolant inlet: Axial through the center



Entering angle:
Lead angle:

$K_r = 93^\circ$
 -3°

$K_r = 95^\circ$
 -5°

Insert size 	Coupling size 	D_c mm inch	Ordering code	Z_n	Dimensions, mm, inch	Gauge insert	
						ISO ANSI	$n_{max}^{(3)}$ kg
11 - -	C5	32 1.260	M-32C5-39011C09D07	2	- 50 130 78.5 - 10 - -	R390-11	12000 1.0
					1.969 5.118 3.091 .394	CCMT 09 T3 08	
					35 50 129.3 77.8 15.4 - 0° -5°	CCMT 3 (2.5) 2	
- 09 3/8				1	1.378 1.969 3.063 .606	DCMT 07 02 04	
					35 50 128.9 77.4 15.4 - 0° -5°	DCMT 2 (1.5) 1	
					1.378 1.969 3.047 .606		
- 07 1/4				1	- 63 165 78.5 - 10 - -	R390-11	12000 1.7
					2.480 6.496 3.091 .394	CCMT 09 T3 08	
					35 63 164.3 77.8 15.4 - 0° -5°	CCMT 3 (2.5)	
11 - -	C6	32 1.260	M-32C6-39011C09D07	2	1.378 2.480 3.063 .606	DCMT 07 02 04	
					35 63 163.9 77.4 15.4 - 0° -5°	DCMT 2 (1.5) 1	
					1.378 2.480 3.047 .606		
18 - -	C6	40 1.575	M-40C6-39018C12D11	2	- 63 165 90.1 - 10 - -	R390-18	10000 1.7
					2.480 6.496 3.547 .394	CCMT 12 04 08	
					43 63 164.4 89.5 19.0 - 0° -5°	CCMT 432	
- 12 1/2				1	1.693 2.480 3.524 .748	DCMT 11 T3 04	
					43 63 163.9 89.0 19.2 - 0° -5°	DCMT 3 (2.5) 1	
					1.693 2.480 3.504 .756		
- 11 3/8				1	- 80 200 90.1 - 10 - -	R390-18	10000 3.3
					3.150 7.874 3.547 .394	CCMT 12 04 08	
					43 80 199.4 89.5 19.0 - 0° -5°	CCMT 432	
18 - -	C8	40 1.575	M-40C8-39018C12D11	2	1.693 3.150 3.524 .748	DCMT 11 T3 04	
					43 80 198.9 89.0 19.2 - 0° -5°	DCMT 3 (2.5) 1	
					1.693 3.150 3.504 .756		

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

2) λ_s = Angle of inclination.

3) n_{max} (max. rev/min) for holders must also be considered.

Limitation on workpiece diameter

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

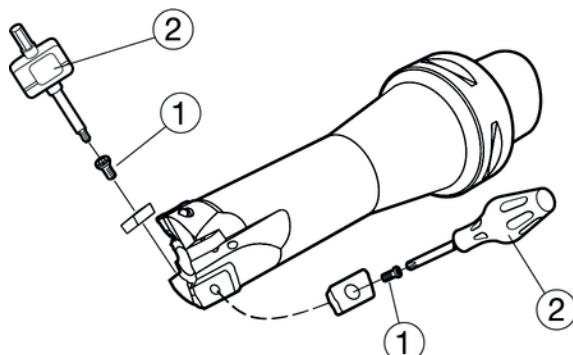
For ordering CoroMill 390 inserts, see chapter D, Milling.

	Tool diameter, D_c mm (inch)	Max workpiece diameter, D_m mm (inch)		Wiper R390-11	
		Insert type			
		R390-11	R390-18		
	32 (1.260)	150 (5.906)	-	100 (3.937)	
	40 (1.575)	-	380 (14.960)	-	

.CMT



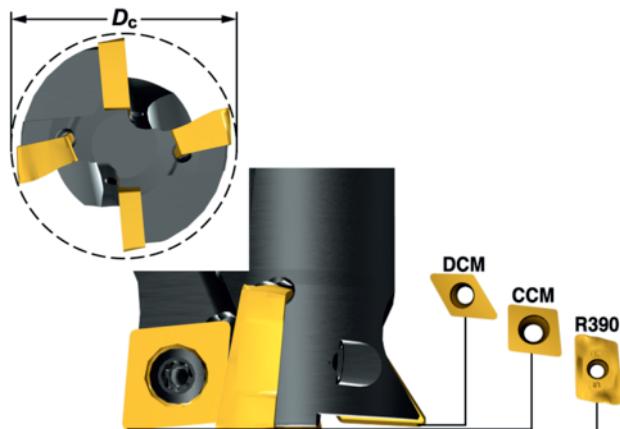
Multi-functional tools CoroPlex™ MT



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

One tool for both rotating and stationary use

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



Tool length optimized for accessibility in multi-tasking

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

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



Coromant Capto® cutting units for Multi-Task machining

CoroPlex™ TT Twin tool, rigid clamp design Insert size, mm (iC, inch) Coromant Capto® size Page	Entering angle (Lead angle) 95° (-5°) T-DCMxxDDMxx	93° (-3°) T-DCMxxDDMxx	95° (-5°) T-DCL.xxDCLxx
	12-19 (1/2-3/4)	15 (1/2)	12-16 (1/2-5/8)
	C5-C10	C5-C10	C5-C8
	H11	H11	H12
CoroTurn® RC rigid clamp design Insert size, mm (iC, inch) Coromant Capto® size Page	Entering angle (Lead angle) 95° (-5°) DCMNN	93° (-3°) DDNML	95° (-5°) DVMNL
	12-16 (1/2-5/8)	15 (1/2)	16 (3/8)
	C5-C8	C5-C8	C8
	H15	H16	H16
CoroTurn® HP lever design (T-Max P) Insert size, mm (iC, inch) Coromant Capto® size Page	Entering angle (Lead angle) 95° (-5°) PCLNR/L	50° (40°) PCMNN	93° (-3°) PDJNR/L
	12 (1/2)	12-19 (1/2-3/4)	15 (1/2)
	C6	C4-C10	C6
	H22	H22	H23
CoroTurn® HP lever design (T-Max P) Insert size, mm (iC, inch) Coromant Capto® size Page	Entering angle (Lead angle) 93° (-3°) PDMNR/L	45° (45°) PSSNR/L	 PSSNR/L
	15 (1/2)	12 (1/2)	
	C6	C6	
	H23	H24	

B

C

G

H

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J

Coromant Capto® cutting units for Multi-Task machining

<p>CoroTurn® 107 screw clamp design</p> <p>Entering angle (Lead angle) 95° (-5°)</p> <p>SCMCN</p>	<p>-</p> <p>SRDCN</p>	<p>95° (-5°)</p> <p>SVMBL</p>
Insert size, mm (inC, inch)	12 (1/2)	10-16 (.394-.630)
Coromant Capto® size	C6	C6
Page	H17	H17
<p>CoroTurn® HP screw design (CoroTurn® 107)</p> <p>Entering angle (Lead angle) 50° (40°)</p> <p>HP</p> <p>SVMBR/L</p>	<p>35°</p> <p>SVMBR/L</p>	
Insert size, mm (inC, inch)	16 (3/8)	
Coromant Capto® size	C6	
Page	H25	
<p>CoroTurn® TR screw clamp design</p> <p>Entering angle (Lead angle) 93° (-3°)</p> <p>D13MCL</p>	<p>95° (-5°)</p> <p>V13MBL</p>	
Insert size, mm (inch)	13	13
Coromant Capto® size	C5-C6	C5-C6
Page	H19	H20

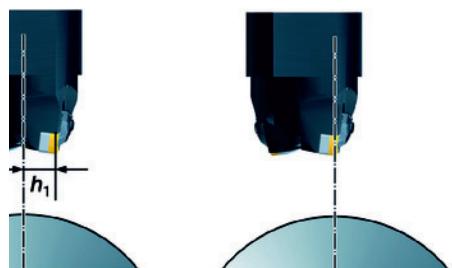
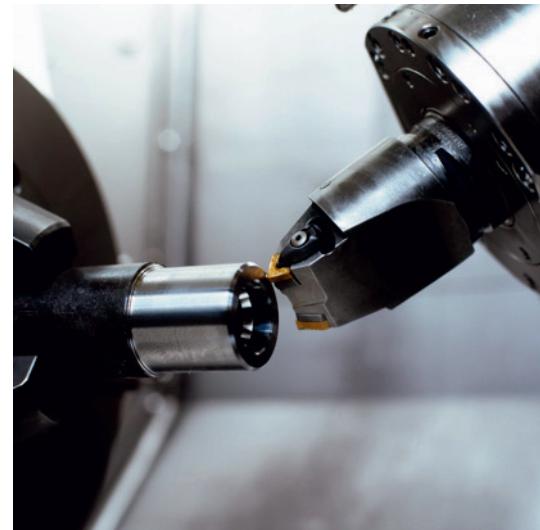
CoroPlex™ TT

Multi-functional turning tool

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

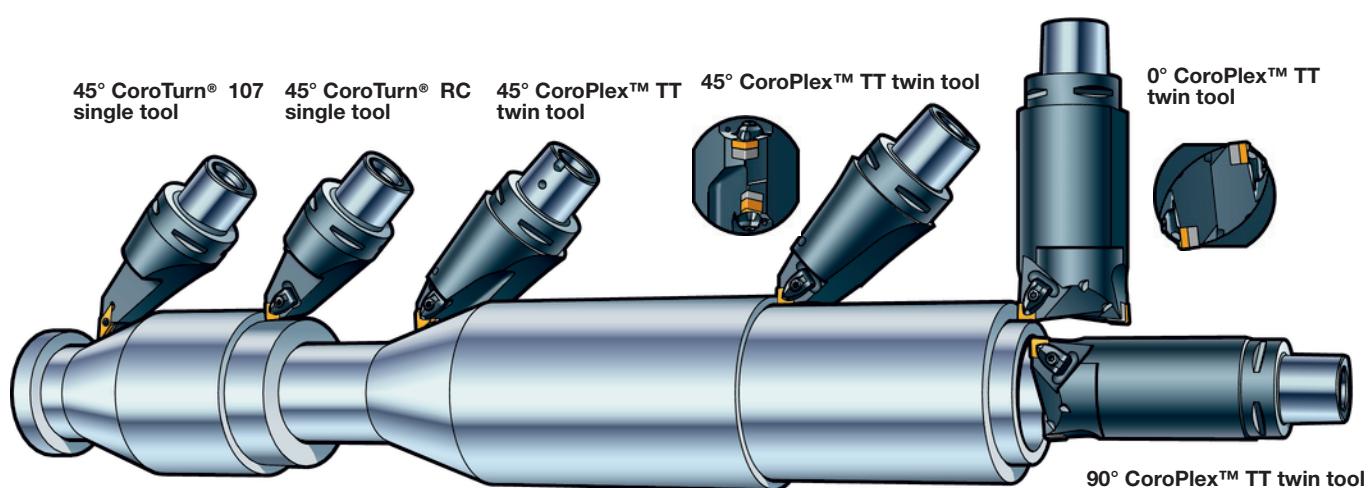
CoroPlex™ TT twin tool combines two tool holders in one:

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



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

Flexibility with Multi-Task machining



Code key for CoroPlexTM TT twin tools

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

1 Coupling size mm, inchC = Coromant Capto®
 D_{5m} = Coupling size

C3 $D_{5m} = 32$ (1.260)
C4 $D_{5m} = 40$ (1.575)
C5 $D_{5m} = 50$ (1.969)

C6 $D_{5m} = 63$ (2.480)
C8 $D_{5m} = 80$ (3.150)

Coromant Capto®

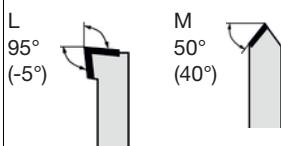
2 Type of tool
T = Twin tool**3 and 7** Clamping system

Top and hole clamping (RC)

CoroTurn® RC

4 and 8 Insert shape**5 and 9**

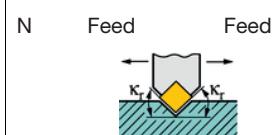
Holder style



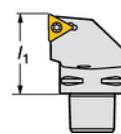
Entering angle (Lead angle)

6 and 10 Insert size
C,D**11** Hand of tool

L Feed

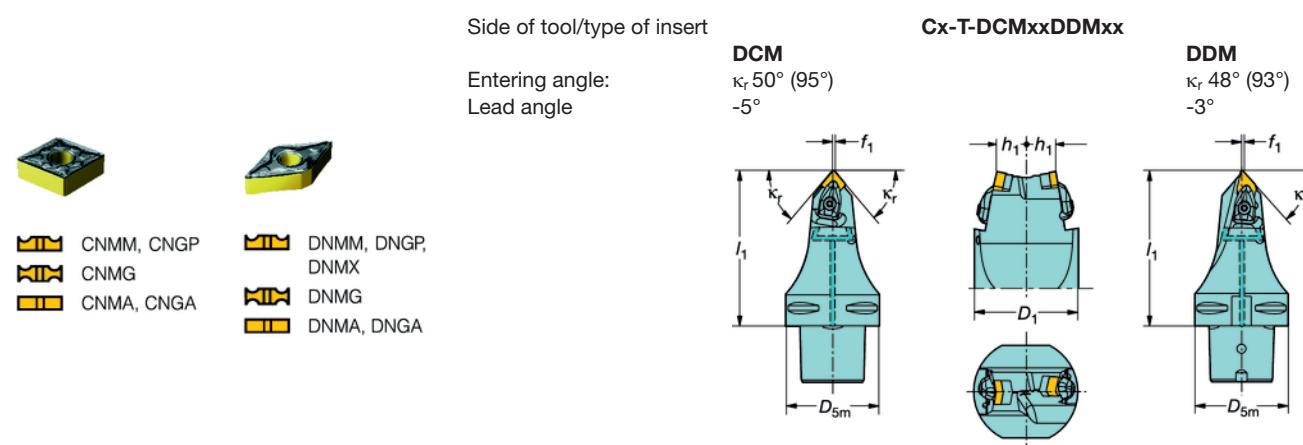


N Feed Feed

12 Tool length, l_1 

Multi-functional tools - CoroPlex™ TT twin tool

CoroTurn® RC rigid clamp design



Coolant inlet: Axial through the center

Left hand style shown

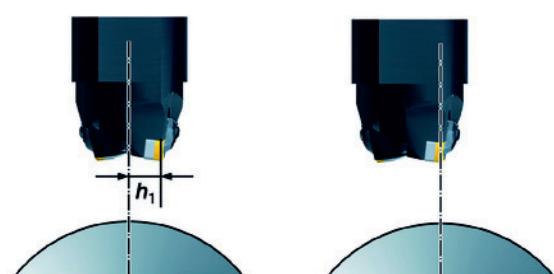
Main application	<input type="checkbox"/>	iC	<input checked="" type="checkbox"/>	iC	Ordering code	Dimensions, mm, inch	Gauge inserts	ISO	ANSI	Nm ³⁾
	12	1/2	15	1/2	C5-T-DCM12DDM15L115	<i>D_{5m}</i> 50 <i>D₁</i> 70 <i>f₁</i> 0.5 <i>h₁</i> 20 <i>l₁</i> 115 -6° -6° 1.8 1.968 2.756 .020 .787 4.528	CNMG 12 04 08	CNMG 432	3.9	
					C6-T-DCM12DDM15L105	<i>D_{5m}</i> 63 <i>D₁</i> 70 <i>f₁</i> 0.5 <i>h₁</i> 20 <i>l₁</i> 105 -6° -6° 1.8 2.480 2.756 .020 .787 4.134	CNMG 12 04 08	CNMG 432	3.9	
					C6-T-DCM12DDM15L130	<i>D_{5m}</i> 63 <i>D₁</i> 70 <i>f₁</i> 0.5 <i>h₁</i> 20 <i>l₁</i> 130 -6° -6° 2.5 2.480 2.756 .020 .787 5.118	CNMG 12 04 08	CNMG 432	3.9	
	16	5/8	15	1/2	C8-T-DCM16DDM15L160	<i>D_{5m}</i> 80 <i>D₁</i> 80 <i>f₁</i> 0.5 <i>h₁</i> 24 <i>l₁</i> 160 -6° -6° 4.7 3.150 3.150 .020 .945 6.299	CNMG 16 06 12	CNMG 543	6.4	
							CNMG 15 06 08	CNMG 442	3.9	
	19	3/4	15	1/2	C10-T-DCM19DDM15L180	<i>D_{5m}</i> 100 <i>D₁</i> 80 <i>f₁</i> 0.5 <i>h₁</i> 24 <i>l₁</i> 180 -6° -6° 6.2 3.937 3.150 .020 .945 7.087	CNMG 19 06 12	CNMG 643	6.4	
							CNMG 15 06 08	CNMG 442	3.9	

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

L = Left hand

2) λ_s = Angle of inclination.

3) Insert tightening torque, Nm.



To apply the twin tool, move the Y-axis the distance h_1 , so that the insert will cut on the center line of the workpiece.

For information about alternative use, see page H9

Main spare parts

Insert size				Shim	Shim screw	Key (Torx Plus)	Complete clamp set ⁴⁾	Key (Torx Plus)
12		1/2		5322 234-01	5513 020-02	5680 049-01 (15IP)	5412 028-021	5680 049-01 (15IP)
	15		1/2	5322 266-02	5513 020-02	5680 049-01 (15IP)	5412 028-021	5680 049-01 (15IP)
16		5/8		5322 234-03	5513 020-07	5680 043-14 (20IP)	5412 028-031	5680 043-14 (20IP)
19		3/4		5322 236-01	5322 020-07	5680 043-14 (20IP)	5412 028-041	5680 043-14 (20IP)

4) To modify CoroTurn® RC holders for other inserts, see clamp sets on page A445.



Multi-functional tools - CoroPlex™ TT twin tool

CoroTurn® RC rigid clamp design

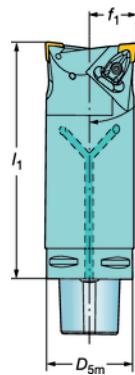
Side of tool/type of insert

Cx-T-DCL.xxDCLxx

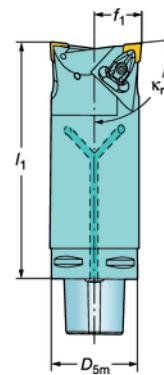
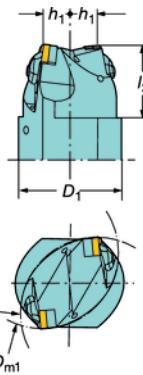


Entering angle:
Lead angle:

DCL...
 κ_r 95°
-5°



DCL...
 κ_r 95°
-5°



- CNMM, CNGP
- CNMG
- CNMA, CNGA

Coolant inlet: Axial through the center

Left hand style shown

Main application	<input type="checkbox"/> iC	Ordering code	Dimensions, mm, inch										Gauge inserts		
			D_{5m}	min	D_1	f_1	h_1	l_1	l_3	$\gamma^1)$	$\lambda_s^2)$		ISO	ANSI	Nm ³⁾
	12 1/2	C5-T-DCL12DCL12L130	50	110	69	26.0	20	130	50	-6°	-6°	2.7	CNMG 12 04 08	CNMG 432	3.9
			1.968	4.331	2.716	1.024	.787	5.118	1.968						
		C6-T-DCL12DCL12L165	63	110	75	33.0	20	165	50	-6°	-6°	4.7	CNMG 12 04 08	CNMG 432	3.9
	16 5/8	C8-T-DCL16DCL16L200	80	115	80	33.0	20	200	50	-6°	-6°	7.0	CNMG 16 06 12	CNMG 543	6.4
			3.150	4.528	3.150	1.299	.787	7.874	1.968						

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

L = Left hand

2) λ_s = Angle of inclination.

3) Insert tightening torque, Nm.

Main spare parts

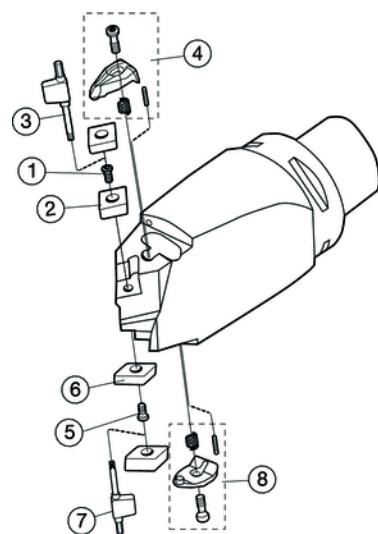
Insert size		Shim	Shim screw	Key (Torx Plus)	Complete clamp set	Key (Torx Plus)
12	1/2	5322 234-01	5513 020-02	5680 049-01 (15IP)	5412 028-021 ⁴⁾	5680 049-01 (15IP)
16	5/8	5322 234-03	5513 020-07	5680 043-14 (20IP)	5412 028-031 ⁴⁾	5680 043-14 (20IP)

4) To modify CoroTurn® RC holders for other inserts, see clamp sets on page A445.



Spare parts

CoroPlex™ TT with CoroTurn® RC rigid clamp design



	1	2	3	4	412)	412)
Twin tool	Shim screw	Shim	For insert thickness mm (inch).	Key (Torx Plus)	Complete clamp set	Clamp sets for ceramic inserts without hole.
C5-T-DCL12DCL12L130	5513 020-02	5322 234-01	4.76 (.187)	5680 049-01 (15IP)	5412 028-021	5412 034-021
C6-T-DCL12DCL12L165		5322 234-02 ²⁾	7.94 (.313)			
C8-T-DCL16DCL16L200	5513 020-07	5322 234-03	6.35 (.250)	5680 043-14 (20IP)	5412 028-031	5412 034-031
		5322 234-04 ²⁾	7.94 (.313)			
C5-T-DCM12DDM15L115	5513 020-02	5322 234-01	4.76 (.187)	5680 049-01 (15IP)	5412 028-021	5412 034-021
C6-T-DCM12DDM15L105		5322 234-02 ²⁾	7.94 (.313)			
C6-T-DCM12DDM15L130						
C8-T-DCM16DDM15L150	5513 020-07	5322 234-03	6.35 (.250)	5680 043-14 (20IP)	5412 028-031	5412 034-031
		5322 234-04 ²⁾	7.94 (.313)			
C10-T-DCM19DDM15L180	5513 020-07	5322 236-01	6.35 (.250)	5680 043-14 (20IP)	5412 028-041	5412 034-041
	5	6		7	8	812)
Twin tool	Shim screw	Shim	For insert thickness mm (inch).	Key (Torx Plus)	Complete clamp set	Clamp sets for ceramic inserts without hole.
C5-T-DCL12DCL12L130	5513 020-02	5322 234-01	4.76 (.187)	5680 049-01 (15IP)	5412 028-021	5412 034-021
C6-T-DCL12DCL12L165		5322 234-02 ²⁾	7.94 (.313)			
C8-T-DCL16DCL16L200	5513 020-07	5322 234-03	4.76 (.187)	5680 043-14 (20IP)	5412 028-031	5412 034-031
		5322 234-04 ²⁾	7.94 (.313)			
C5-T-DCM12DDM15L115	5513 020-02	5322 266-02	6.35 (.250)	5680 049-01 (15IP)	5412 028-021	5412 034-021
C6-T-DCM12DDM15L105		5322 266-01 ²⁾	4.76 (.187)			
C6-T-DCM12DDM15L130						
C8-T-DCM16DDM15L150	5513 020-02	5322 266-02	6.35 (.250)	5680 049-01 (15IP)	5412 028-021	5412 034-021
		5322 266-01 ²⁾	4.76 (.187)			
C10-T-DCM19DDM15L180	5513 020-02	5322 266-02	6.35 (.250)	5680 049-01 (15IP)	5412 028-021	5412 034-021
		5322 266-01 ²⁾	4.76 (.187)			

1) For clamp set parts, see page A445.

2) Optional part delivered to separate order.

B

C

G

H

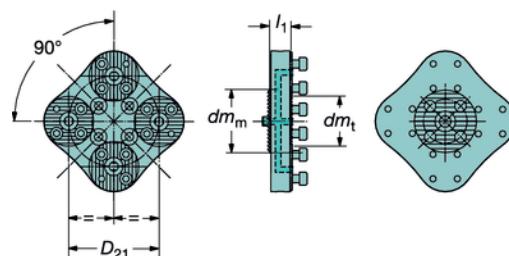
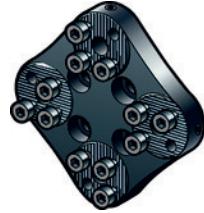
I

J

A

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

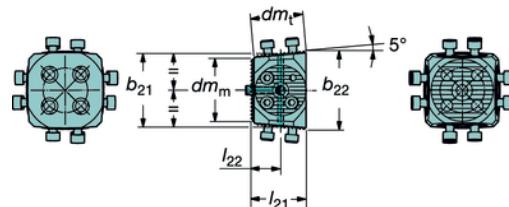
Axial mounting of heads and blades



C

Coupling size dm_t mm	Ordering code	Dimensions, millimeter, inch (mm, in.)						
		D_{21} mm	D_{21} in.	dm_m mm	dm_m in.	l_1 mm	l_1 in.	kg
25	570-4-25-40-000-AX	50	1.968	40	1.575	12	0.472	0.3
32	570-4-32-40-000-AX	58	2.284	40	1.575	15	0.591	0.6

5° radial mounting of heads and blades



H

Coupling size dm_t mm	Ordering code	Dimensions, millimeter, inch (mm, in.)										
		b_{21} mm	b_{21} in.	b_{22} mm	b_{22} in.	dm_m mm	dm_m in.	l_{21} mm	l_{21} in.	l_{22} mm	l_{22} in.	kg
25	570-4-25-40-050-RA	46	1.811	48.5	1.909	40	1.575	28	1.102	15	0.591	0.4
32	570-4-32-40-050-RA	46	1.811	49.2	1.939	40	1.575	34.5	1.358	18	0.709	0.5

Spare parts

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



Coromant Capto® cutting units

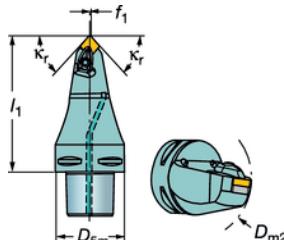
CoroTurn® RC rigid clamp design

DCMNN
Entering angle: κ_r 50° (95°)

Lead angle: -5°



- CNMM, CNGP
- CNMG
- CNMA, CNGA



Coolant inlet: Axial through the center

Neutral style

Main application	iC	Ordering code	Dimensions, millimeter, inch (mm, in.)									Gauge inserts					
			D_{5m} mm	D_{5m} in.	D_{m2} min mm. ⁴⁾	D_{m2} min in. ⁴⁾	f_1 mm	f_1 in.	l_1 mm	l_1 in.	$\gamma^1)$	$\lambda_s^2)$ Nm ³⁾	ISO	ANSI	Nm ³⁾		
	12	1/2	C5-DCMNN-00105-12	50	1.969	110	4.331	0	0	105	4.134	-6°	-6°	1.1	CNMG 12 04 08	CNMG 432	3.9
			C6-DCMNN-00090-12	63	2.480	110	4.331	0	0	90	3.543	-6°	-6°	1.4	CNMG 12 04 08	CNMG 432	3.9
			C6-DCMNN-00115-12	63	2.480	110	4.331	0	0	115	4.528	-6°	-6°	1.8	CNMG 12 04 08	CNMG 432	3.9
	16	5/8	C6-DCMNN-00090-16	63	2.480	110	4.331	0	0	90	3.543	-6°	-6°	1.3	CNMG 16 06 12	CNMG 543	6.4
			C8-DCMNN-00150-16	80	3.150	115	4.528	0	0	150	5.906	-6°	-6°	4.0	CNMG 16 06 12	CNMG 543	6.4

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

N = Neutral

2) λ_s = Angle of inclination.

3) Insert tightening torque, Nm.

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

Main spare parts

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

5) To modify CoroTurn® RC holders for other inserts, see clamp sets on page A445.

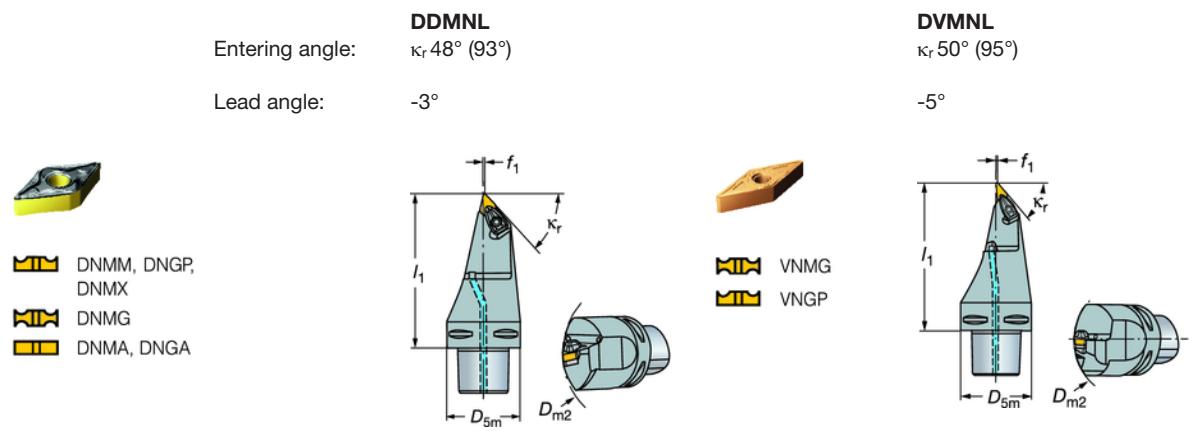
Coromant Capto® coupling size	Coolant nozzle
C5	5691 029-09
C6	5691 029-10
C8	5691 029-10



A

Coromant Capto® cutting units

CoroTurn® RC rigid clamp design



Coolant inlet: Axial through the center

Left hand style

Main application	iC	Ordering code	Dimensions, millimeter, inch (mm, in.)										Gauge inserts			
			D_{5m} mm	D_{5m} in.	D_{m2} min. mm. ⁴)	D_{m2} min. in. ⁴)	f_1 mm	f_1 in.	l_1 mm	l_1 in.	$\gamma^1)$	$\lambda_s^2)$		ISO	ANSI	Nm ³
45°	15 1/2	C5-DDMNL-00115-15	50	1.968	110	4.331	0	0	115	4.528	-5°	-6°	1.2	DNMG 15 06 08	DNMG 442	3.9
		C6-DDMNL-00130-15	63	2.480	110	4.331	0	0	130	5.118	-5°	-6°	2.0	DNMG 15 06 08	DNMG 442	3.9
		C6-DDMNL-00130-1504	63	2.480	110	4.331	0	0	130	5.118	-5°	-6°	2.0	DNMG 15 04 08	DNMG 432	3.9
		C6-DDMNL-33120-15	63	2.480	130	5.118	33	1.299	120	4.724	-5°	-6°	2.1	DNMG 15 06 08	DNMG 442	3.9
		C6-DDMNL-33120-1504	63	2.480	130	5.118	33	1.299	120	4.724	-5°	-6°	2.1	DNMG 15 04 08	DNMG 432	3.9
		C8-DDMNL-00160-15	80	3.150	120	4.724	0	0	160	6.299	-5°	-6°	4.1	DNMG 15 06 08	DNMG 442	3.9
45°	15 1/2	C8-DDMNL-00160-1504	80	3.150	120	4.724	0	0	160	6.299	-5°	-6°	4.1	DNMG 15 04 08	DNMG 432	3.9

Main application	iC	Ordering code	Dimensions, millimeter, inch (mm, in.)										Gauge inserts			
			D_{5m} mm	D_{5m} in.	D_{m2} min. mm. ⁴)	D_{m2} min. in. ⁴)	f_1 mm	f_1 in.	l_1 mm	l_1 in.	$\gamma^1)$	$\lambda_s^2)$		ISO	ANSI	Nm ³
47°	16 3/8	C8-DVMNL-00160-16	80	3.150	110	4.331	0	0	160	6.299	-4°	-14°	4.0	VNMG 16 04 08	VNMG 332	3.0

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

L = Left hand

2) λ_s = Angle of inclination.

3) Insert tightening torque, Nm.

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

Main spare parts

Insert size	Coromant Capto® size	Shim screw	Shim	Key (Torx Plus)	Complete clamp set	Key (Torx Plus)
1/2	iC	5513 020-02	5322 266-02	5680 049-01 (15IP)	5412 028-021 ⁵	5680 049-01 (15IP)
1/2	C5-C8	5513 020-02	5322 266-01	5680 049-01 (15IP)	5412 028-021 ⁵	5680 049-01 (15IP)
16 3/8	C6, C8	5513 020-09	5322 269-01	5680 049-01 (15IP)	5412 028-061	5680 049-01 (15IP)

5) To modify CoroTurn® RC holders for other inserts, see clamp sets on page A445.

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



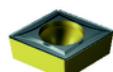
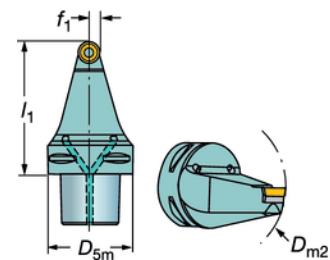
Coromant Capto® cutting units

CoroTurn® 107 screw clamp design

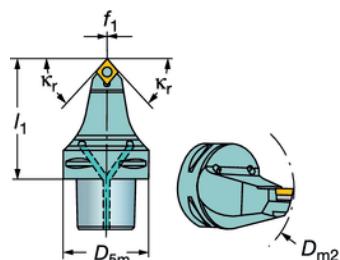
Entering angle:
 κ_r 50° (95°)

Lead angle: 40°

SRDCN



CCMT, CCGT
 CCGX, CCET
 CCMW



SCMCN

Coolant inlet: Radial through the taper

Neutral style

Main application	<input type="checkbox"/> iC	Ordering code	Dimensions, millimeter, inch (mm, in.)										Gauge inserts			
			D _{5m} mm	D _{5m} in.	D _{m2} min. mm. ⁴⁾	D _{m2} min. in. ⁴⁾	f ₁ mm	f ₁ in.	l ₁ mm	l ₁ in.	$\gamma^1)$	$\lambda_s^{2)}$	$\frac{Q}{kg}$	ISO	ANSI	Nm ³⁾
	<input type="checkbox"/> 12 1/2	C6-SCMCN-00090-12	63	2.480	100	3.937	0	0	90	3.543	0°	0°	1.4	CCMT 12 04 08	CCMT 432	3.0

Main application	iC	Ordering code	Dimensions, millimeter, inch (mm, in.)										Gauge inserts			
			D _{5m} mm	D _{5m} in.	D _{m2} min. mm. ⁴⁾	D _{m2} min. in. ⁴⁾	f ₁ mm	f ₁ in.	l ₁ mm	l ₁ in.	$\gamma^1)$	$\lambda_s^{2)}$	$\frac{Q}{kg}$	ISO	ANSI	Nm ³⁾
	10 .39	C6-SRDCN-00100-10	63	2.480	110	4.331	5	.197	100	3.937	0°	0°	1.4	RCMT 10 T3 M0	RCMT 10 T3 M0	3.0
	16 .63	C6-SRDCN-00100-16	63	2.480	110	4.331	8	.315	100	3.937	0°	0°	1.4	RCMT 16 06 M0	RCMT 16 06 M0	6.4

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

N = Neutral

2) λ_s = Angle of inclination.

3) Insert tightening torque, Nm.

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

Main spare parts

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



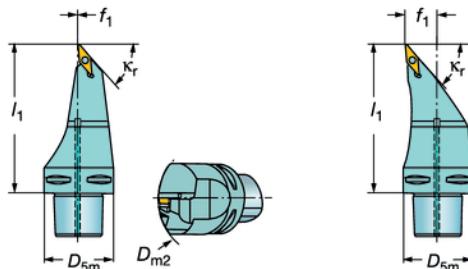
Coromant Capto® cutting units

CoroTurn® 107 screw clamp design

Entering angle:
Lead angle:

SVMBL

κ_r 50° (95°)
40°



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

Coolant inlet: Radial through the taper

C6-SVMBL-33120-16

Left hand style

Main application		iC	Ordering code	Dimensions, millimeter, inch (mm, in.)										Gauge inserts			ISO	ANSI	Nm ³⁾
				D _{5m} mm	D _{5m} in.	D _{m2} min mm. ⁴⁾	D _{m2} min in. ⁴⁾	f ₁ mm	f ₁ in.	l ₁ mm	l ₁ in.	$\gamma^1)$	$\lambda_s^2)$						
	16	3/8	C5-SVMBL-00115-16	50	1.968	110	4.331	0	0	115	4.528	0°	0°	1.0	VBMT 16 04 08	VBMT 332	3.0		
			C6-SVMBL-00130-16	63	2.480	110	4.331	0	0	130	5.118	0°	0°	1.8	VBMT 16 04 08	VBMT 332	3.0		
			C6-SVMBL-33120-16	63	2.480	110	4.331	33	1.299	120	4.724	0°	0°	1.9	VBMT 16 04 08	VBMT 332	3.0		

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

L = Left hand

2) λ_s = Angle of inclination.

3) Insert tightening torque, Nm.

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

Main spare parts

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



A9



A464



G6



A2



J2

Coromant Capto® cutting units

CoroTurn® TR screw clamp design

Entering angle:
Lead angle:

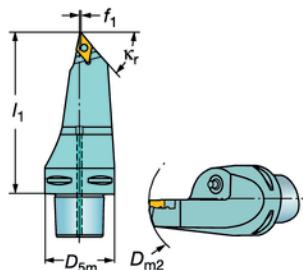


TR-DC



TR-Cx-D13MCL

κ_r 48° (93°)
40°



Coolant inlet: Axial through the center

Left hand style shown

Main application		Ordering code	Dimensions, millimeter, inch (mm, in.)								Gauge inserts			Nm ³)		
			D _{5m} mm	D _{5m} in.	D _{m2} min mm. ⁴)	D _{m2} min in. ⁴)	f ₁ mm	f ₁ in.	l ₁ mm	l ₁ in.	$\gamma^1)$	$\lambda_s^2)$		ISO	ANSI	
	13	TR-C5-D13MCL-00115	50	1.968	150	5.906	0	0	115	4.528	0°	0°	0.8	TR-DC1308	TR-DC1308	3.0
		TR-C6-D13MCL-00130	63	2.480	150	5.906	0	0	130	5.118	0°	0°	1.6	TR-DC1308	TR-DC1308	3.0

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

L = Left hand

2) λ_s = Angle of inclination.

3) Insert tightening torque, Nm.

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

For more information about CoroTurn TR system, see chapter A page A189

Main spare parts

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



Coromant Capto® cutting units

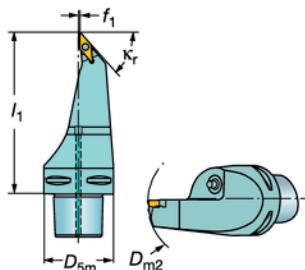
CoroTurn® TR screw clamp design

Entering angle:
Lead angle:



TR-Cx-V13MBL

κ_r 50°
40°



Coolant inlet: Axial through the center

Left hand style shown

Main application		Ordering code	Dimensions, millimeter, inch (mm, in.)								Gauge inserts			Nm ³⁾		
			D_{5m} mm	D_{5m} in.	D_{m2} min mm. ⁴⁾	D_{m2} min in. ⁴⁾	f_1 mm	f_1 in.	l_1 mm	l_1 in.	$\gamma^1)$	$\lambda_s^{2)}$		ISO	ANSI	
	13	TR-C5-V13MBL-00115	50	1.968	150	5.906	0	0	115	4.528	0°	0°	0.8	TR-VB1308	TR-VB1308	2.0
		TR-C6-V13MBL-00130	63	2.480	150	5.906	0	0	130	5.118	0°	0°	1.6	TR-VB1308	TR-VB1308	2.0

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

L = Left hand

2) λ_s = Angle of inclination.

3) Insert tightening torque, Nm.

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

For more information about CoroTurn TR system, see chapter A page A189

Main spare parts

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



CoroTurn® HP

Coromant Capto tools for High Pressure coolant

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

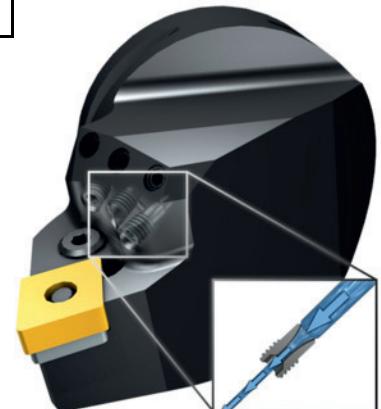
When to use

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

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



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



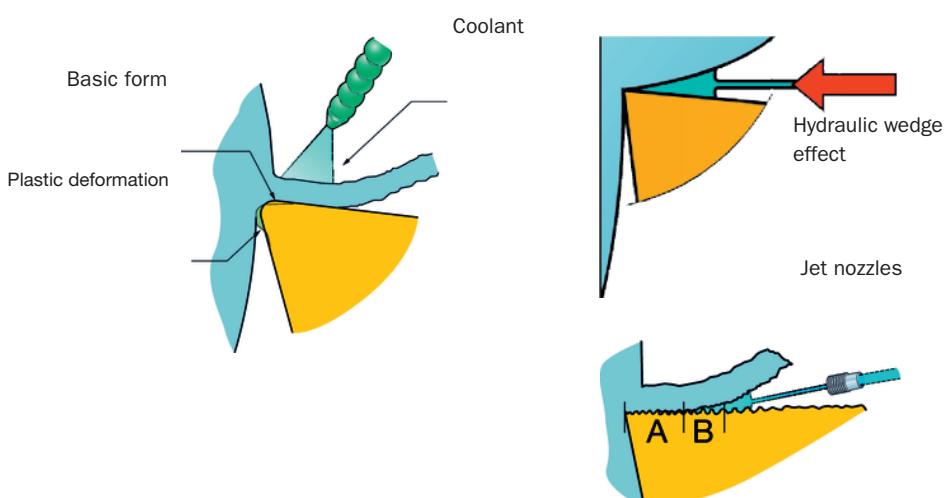
Fixed coolant nozzle technology

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

A directional jet for maximum effect

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

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



CoroTurn HP tools for general turning, see page A123.

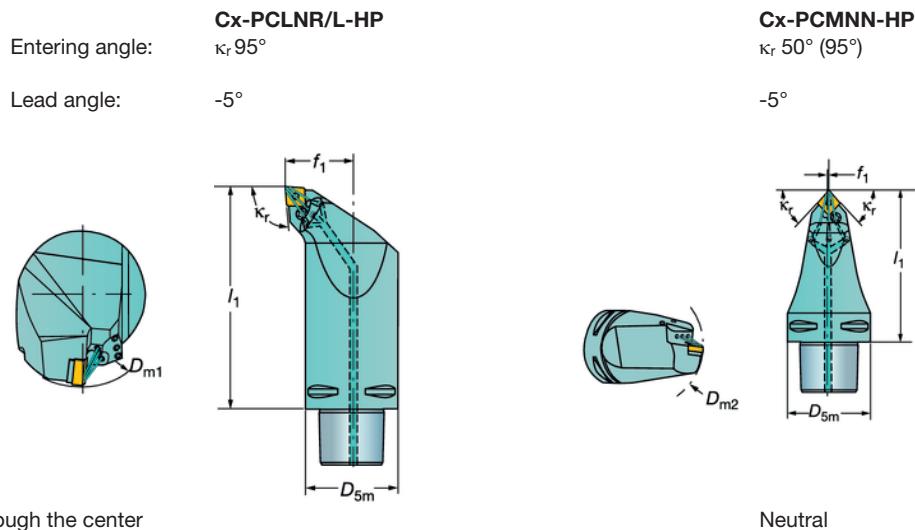
CoroTurn HP with SL coupling, see page I12.

CoroTurn® HP cutting units

Lever design

With high pressure coolant

B



Right hand style shown

Main application	<input type="checkbox"/> iC	Ordering code	Dimensions, mm, inch							Gauge inserts			Nm ³⁾
			D_{sm} min ⁴⁾	D_{m1} min ⁴⁾	f_1	l_1	$\gamma^1)$	$\lambda_s^2)$	kg	ISO	ANSI		
	12 1/2	C6-PCLNR/L-45165-12HP	63 2.480	110 4.331	45.0 1.772	165.0 6.496	-6°	-6°	3.5	CNMG 12 04 08	CNMG 432	5.0	

Main application	<input type="checkbox"/> iC	Ordering code	Dimensions, mm, inch							Gauge inserts			Nm ³⁾
			D_{sm} min ⁴⁾	D_{m2} min ⁴⁾	f_1	l_1	$\gamma^1)$	$\lambda_s^2)$	kg	ISO	ANSI		
	12 1/2	C4-PCMNN-00095-12HP	40 1.575	185 7.284	0.0 .000	95.0 3.740	-6°	-6°	0.7	CNMG 12 04 08	CNMG 432	5.0	
		C5-PCMNN-00115-12HP	50 1.968	220 8.661	0.0 .000	115.0 4.528	-6°	-6°	1.3	CNMG 12 04 08	CNMG 432	5.0	
		C6-PCMNN-00115-12HP	63 2.480	240 9.449	0.0 .000	115.0 4.528	-6°	-6°	1.8	CNMG 12 04 08	CNMG 432	5.0	
		C8-PCMNN-00150-12HP	80 3.150	315 12.402	0.0 .000	150.0 5.906	-6°	-6°	3.8	CNMG 12 04 08	CNMG 432	5.0	
	19 3/4	C10-PCMNN-00110-19HP	100 3.937	315 12.402	0.0 .000	110.0 4.331	-6°	-6°	4.9	CNMG 19 06 12	CNMG 643	5.0	

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

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

2) λ_s = Angle of inclination.

3) Insert tightening torque, Nm.

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

Main spare parts

Insert size										Nozzle (hole dia mm.)	Plug	
<input type="checkbox"/> iC	Lever	Screw	Key (mm)		Shim							
12 1/2	174.3-841M	174.3-821	174.1-864 (3.0)		171.31-850M					5691 026-03 (1.0)	3214 010-253	
19 3/4	174.3-842M	174.3-822M	3021 010-040 (4.0)		171.35-851M					5691 034-03 (3.5) ¹⁾		

1) When changing nozzle use key 5680 019-01 and bits 5680 021-04

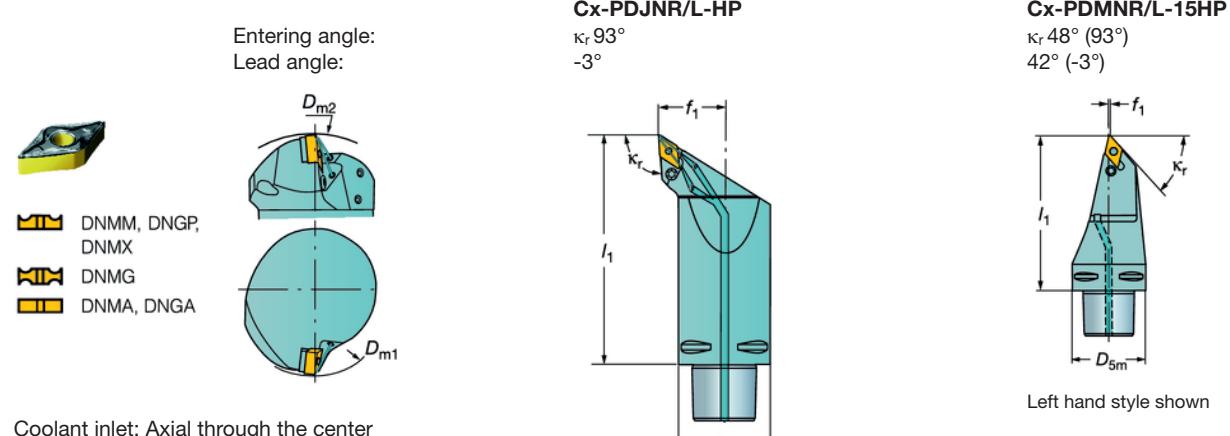
For optional nozzles, see page A465



CoroTurn® HP cutting units

Lever design

With high pressure coolant



Coolant inlet: Axial through the center

Right hand style shown

Main application			iC	Ordering code	Dimensions, mm, inch							Gauge inserts				
					D_{5m}	D_{m1} min	D_{m2} min	f_1	I_1	$\gamma^1)$	$\lambda_s^2)$		ISO	ANSI	Nm ³⁾	
			15	1/2	C6-PDJNR/L-45165-15HP	63	95	290.0	45.0	165.0	-6°	-7°	3.5	DNMG 15 06 08	DNMG 442	5.0
						2.480	3.740	11.417	1.772	6.496						

Main application			iC	Ordering code	Dimensions, mm, inch							Gauge inserts				
					D_{5m}	f_1	I_1	$\gamma^1)$	$\lambda_s^2)$		ISO	ANSI	Nm ³⁾			
			15	1/2	C6-PDMNR/L-00130-15HP	63	0.6	130.0	-5°	-15°	2.0	DNMG 15 06 08	DNMG 442	5.0		
						2.480	.022	5.118								

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

R = Right hand, L = Left hand

2) λ_s = Angle of inclination.

3) Insert tightening torque, Nm.

Main spare parts

Insert size												
	iC	Lever	Screw	Key (mm)	Shim	Nozzle (hole dia mm.)						

For optional nozzles, see page A465

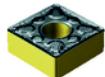


CoroTurn® HP cutting units

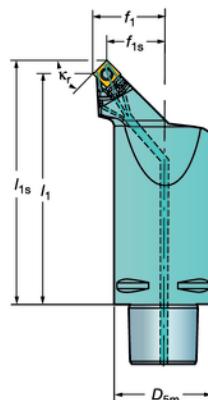
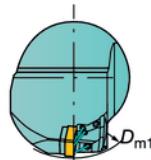
Lever design

With high pressure coolant

Entering angle: κ_r 45°
Lead angle: 45°



- SNMM
- SNMG
- SNMA, SNGA



Coolant inlet: Axial through the center

Right hand style shown

Main application	<input type="checkbox"/>	iC	Ordering code	Dimensions, mm, inch								Gauge inserts			Nm ³
				D_{5m} min ⁴⁾	D_{m1}	f_1	f_{1s}	l_1	l_{1s}	$\gamma^1)$	$\lambda_s^{2)}$	R^{a}	ISO	ANSI	
	<input checked="" type="checkbox"/>	12	1/2	C6-PSSNR/L-45156-12HP	63 2.480	110 4.331	45.0 1.772	36.7 1.445	156 6.142	164.3 6.468	-8° 0°	3.38	SNMG 12 04 08	SNMG 432	5.0
	<input type="checkbox"/>														

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

R = Right hand, L = Left hand

2) λ_s = Angle of inclination.

3) Insert tightening torque, Nm.

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

Main spare parts

Insert size		Lever				Screw		Key (mm)		Shim		Nozzle (hole dia mm.)	
<input type="checkbox"/>	iC	12	1/2	174.3-841M		174.3-821		174.1-864 (3.0)		174.3-851M		5691 026-03 (1.0)	

For optional nozzles, see page A465



CoroTurn® HP cutting units

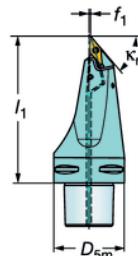
Screw clamp design

With high pressure coolant

Cx-SVMBR/L-HP
 Entering angle: κ_r 50°
 Lead angle: 40°



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



Coolant inlet: Axial through the center

Right hand style shown

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

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

R = Right hand, L = Left hand

2) λ_s = Angle of inclination.

3) Insert tightening torque, Nm.

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

Main spare parts

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

For optional nozzles, see page A467

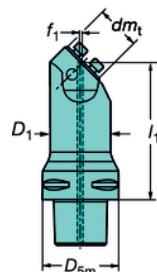


CoroTurn® SL

Coromant Capto® adapter



Coromant Capto® 45°



Coolant inlet: Axial through the center

Cx-570-..RX-045-L1

Right hand style shown

Coupling size <i>dm_t</i> mm	Ordering code	Shank style	Dimensions, millimeter, inch (mm, in.)							
			<i>D₁</i> mm	<i>D₁</i> in.	<i>D_{5m}</i> mm	<i>D_{5m}</i> in.	<i>f₁</i> mm	<i>f₁</i> in.	<i>l₁</i> mm	<i>l₁</i> in.
32	C5-570-32-RX-045-L1	45°	40	1.575	50	1.968	2	0.079	90	3.543 1.1
32	C6-570-32-RX-045-L1		45	1.772	63	2.480	2	0.079	100	3.937 1.7
40	C6-570-40-RX-045-L1		45	1.772	63	2.480	2	0.079	100	3.937 1.8
40	C8-570-40-RX-045-L1		50	1.969	80	3.150	5	0.197	135	5.315 3.7

R = Right hand, L = Left hand

Main spare parts

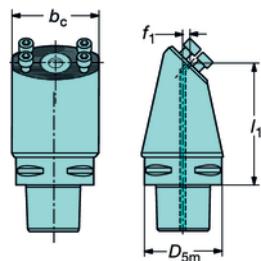
Coromant Capto®	Screw	Key (mm)	Plug
Cx-570-32-RX-045-L1	3212 010-308	3021 010-040 (4.0)	5643 045-01
Cx-570-40-RX-045-L1	3212 010-358	3021 010-050 (5.0)	5643 045-01

For complete assortment see page I70.



CoroTurn® SL70

Coromant Capto® adapter

Coromant Capto® 45°

Coolant inlet: Axial through the center

With internal coolant supply

Right hand style shown

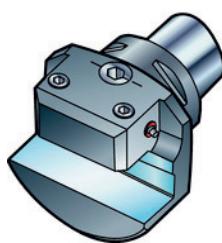
Type	Ordering code	Shank style	Coupling size, mm	Dimensions, mm, inch				KG
	C6-SL70-RX-045-100	45°	70	63 2.480	5 .197	100 3.937	2.7 2.7	

For complete assortment see page I106.

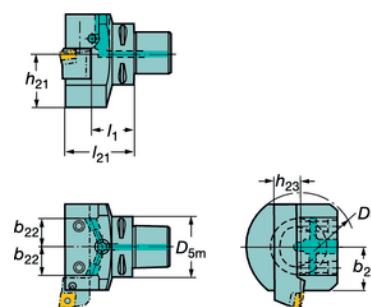


Adapters for shank tools

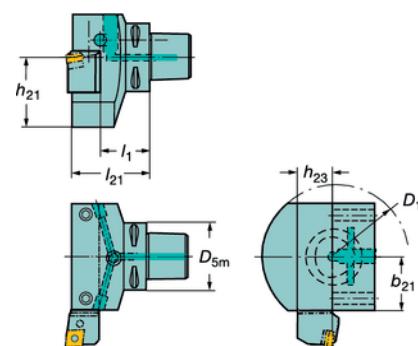
Radial mounting



ASHA



C6-ASHA-50071-32M



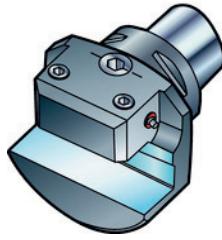
Coolant inlet: Axial through the center

Metric version

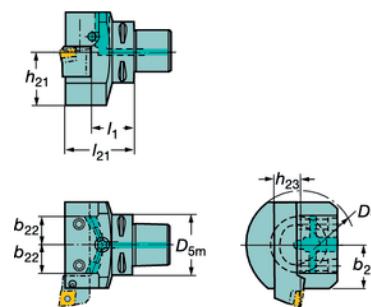
Neutral style shown

Coupling size	Ordering code	Dimensions							
		D_1	D_{5m}	b_{21}	b_{22}	h_{21}	h_{23}	l_1	l_{21}
C3	C3-ASHA-25040-12	60	32	25	20	25	12	28	40
C4	C4-ASHA-25046-16	70	40	25	20	32	16	30	46
C5	C5-ASHA-38058-20M	90	50	38	23	45	20	38	58
C6	C6-ASHA-38060-20M	90	63	38	23	45	20	40	60
	C6-ASHA-45071-25M	110	63	45	30	55	25	45	71
	C6-ASHA-50071-32M	130	63	50		65	32	45	71
C8	C8-ASHA-45085-25	110	80	45	30	55	25	60	85
	C8-ASHA-55085-32M	142	80	55	40	65	32	53	85
C10	C10-ASHA-55090-32	145	100	55	40	65	32	58	90
									5.7

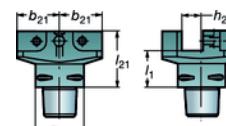
Radial mounting



ASHA-AM



ASHA-U



Coolant inlet: Axial through the center

Inch version

Neutral style shown

Coupling size	Ordering code	Dimensions, inch							
		D_1	D_{5m}	b_{21}	b_{22}	h_{21}	h_{23}	l_1	l_{21}
C4	C4-ASHA-25046-10U					.625	1.180	1.810	2.20
C5	C5-ASHA-30055-12U					.750	1.380	2.150	2.93
	C5-ASHA-38057-12-AM	3.543	1.968	1.496	.906	1.772	.750	1.457	2.244
C6	C6-ASHA-38059-12-AM	3.543	2.480	1.496	.906	1.772	.750	1.575	2.323
	C6-ASHA-38066-12U	5.118	2.480	1.496	.591		.750	1.580	2.340
	C6-ASHA-45071-16-A	4.331	2.480	1.772	1.181	2.165	1.000	1.795	2.795
C8	C8-ASHA-55085-20-AM	5.591	3.150	2.165	1.575	2.559	1.250	2.087	3.337
									10.14

Warning!

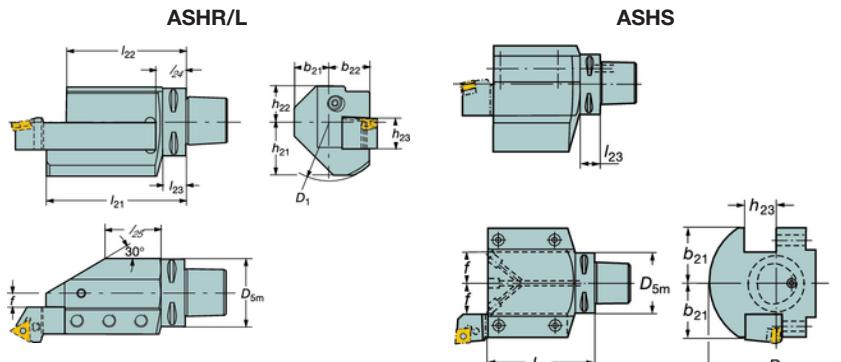
The adapters are designed for automatic tool change.

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



Adapters for shank tools

Axial mounting



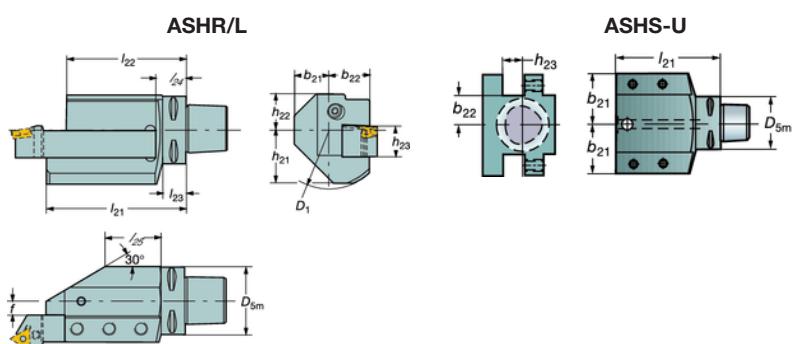
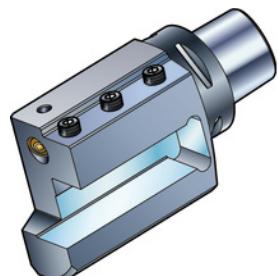
Coolant inlet: Axial through the center

Metric version

Coupling size	Ordering code	Dimensions											
		D ₁	D _{5m}	b ₂₁	b ₂₂	f	h ₂₁	h ₂₂	h ₂₃	l ₂₁	l ₂₂	l ₂₃	l ₂₄
C3	C3-ASHR/L-18085-12	48	32	16.5	18	6			12	85	80	15	18
C4	C4-ASHR/L-23104-16	65	40	20.5	23	7			16	104	99	20	24
C5	C5-ASHR/L-30098-20	90	50	29	30	10	41	33	20	98	88	20	23
C6	C6-ASHR/L-30100-20 C6-ASHR/L-38130-25	90	63	29	30	10	41	33	20	100	90	22	25
C8	C8-ASHR/L-40140-32	110	80	40	40	8	55	30	32	140	130	30	35
C10	C10-ASHR/L-50150-32	145	100	50	50	18	65	30	32	150	136	37	41
C6	C6-ASHS-58115-32	140	63	58		33			32	115	22		7.3
C8	C8-ASHS-73160-32	165	80		73	41			32	160	30	30	13.1

R = Right hand, L = Left hand

Axial mounting



Coolant inlet: Axial through the center

Inch version

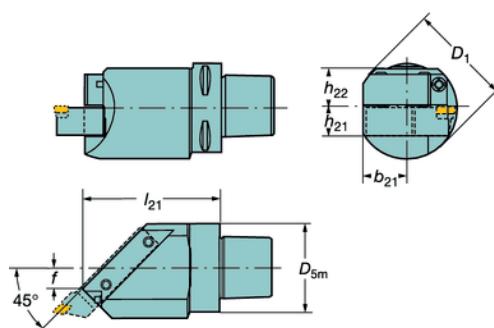
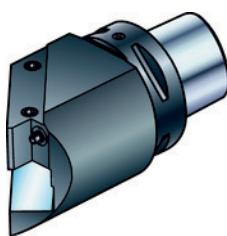
Coupling size	Ordering code	Dimensions, inch											
		D ₁	D _{5m}	b ₂₁	b ₂₂	f	h ₂₁	h ₂₂	h ₂₃	l ₂₁	l ₂₂	l ₂₃	l ₂₄
C5	C5-ASHR/L-30098-12-A	3.543	1.968	1.142	1.181	.431	1.614	1.299	.750	3.858	3.465	.787	.906
C6	C6-ASHR/L-30100-12-A	3.543	2.480	1.142	1.181	.431	1.614	1.299	.750	3.937	3.543	.866	.984
	C6-ASHR/L-38130-16-A	4.331	2.480	1.260	1.496	.496	1.968	1.299	1.000	5.118	4.409	.866	1.102
C8	C8-ASHR/L-40140-20-A	4.331	3.150	1.575	1.575	.325	2.165	1.181	1.250	5.512	5.118	1.181	1.378
C5	C5-ASHS-47088-12U		1.968	1.831	1.060				.750	3.465			6.83
C6	C6-ASHS-54090-12U		2.480	2.106	1.340				.750	3.543			2.20

R = Right hand, L = Left hand



Adapters for shank tools

Angular mounting



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

Coolant inlet: Axial through the center

Metric version

Right hand style shown

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

Inch version

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

R = Right hand, L = Left hand

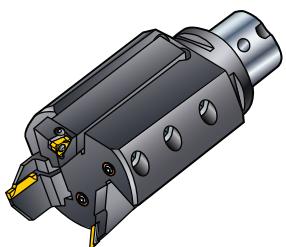


Adapter for CoroCut® and T-Max Q-Cut® parting blades See page H32

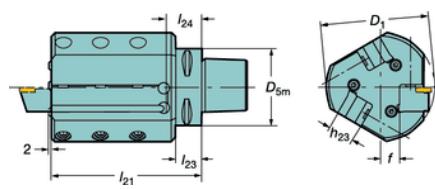


Mini-turret for shank tools

Axial mounting



ASHR/L3



Coolant inlet: Axial through the center

Metric version

Right hand style shown

Coupling size	Ordering code	Dimensions							$\frac{\text{kg}}{\text{lbs}}$
		D_1	D_{5m}	f	h_{23}	l_{21}	l_{23}	l_{24}	
C5	C5-ASHR/L3-36123-20	90	50	16	20	123	20	26	3.4
C6	C6-ASHR/L3-36125-20	90	63	16	20	125	22	28	3.8
C8	C8-ASHR/L3-46150-32	120	80	20	32	150	30	36	7.5

Inch version

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

R = Right hand, L = Left hand

Warning!

The adapters are designed for automatic tool change.

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



Adapter for CoroCut® and T-Max Q-Cut® parting blades See page H32



H34



G6

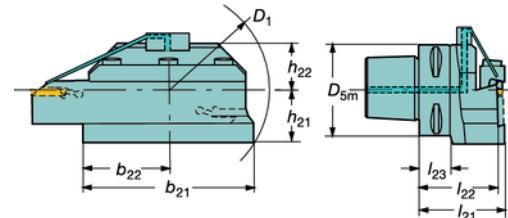
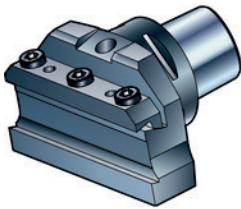


J2

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

Coromant Capto®

Radial mounting



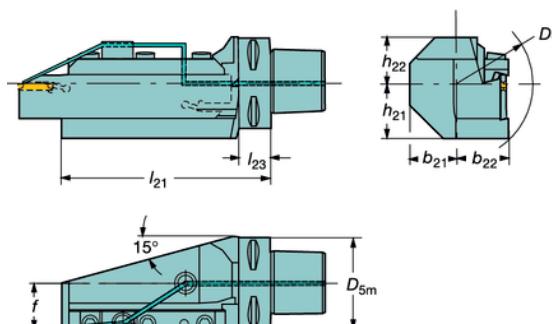
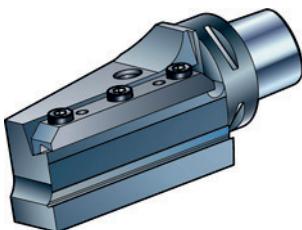
Neutral style shown

For blade size	Coupling size	Ordering code	Dimensions, mm, inch									kg
			D _{5m}	b ₂₁	b ₂₂	D ₁	h ₂₁	h ₂₂	I ₂₁	I ₂₂	I ₂₃	kg
21	C5	C5-APBA-40058-21	50 1.968	80 3.150	40 1.575	100 3.937	30 1.181	25.2 .992	58 2.284	53 2.087	20 .787	1.30
25	C6	C6-APBA-60060-25	63 2.480	120 4.724	60 2.362	141 5.551	37 1.457	32 1.260	60 2.362	55 2.165	.22 .866	2.30
25	C8	C8-APBA-60068-25	80 3.150	120 4.724	60 2.362	145 5.709	40.5 1.594	40 1.575	68 2.677	63 2.480	.30 1.181	3.30
45	C6	C6-APBA-80068-45	63 2.480	160 6.299	80 3.150	198 7.795	72 2.835	42 1.654	68 2.677	60.5 2.382	.23.2 .913	5.42
45	C8	C8-APBA-80068-45	80 3.150	160 6.299	80 3.150	198 7.795	72 2.835	42 1.654	68 2.677	60.5 2.382	.31.2 1.228	5.42
45	C10	C10-APBA-80075-45	100 3.937	160 6.299	80 3.150	190 7.480	61.7 2.429	50.5 1.988	75 2.953	68 2.677	.36 1.417	6.60

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

Coromant Capto®

Axial mounting



Right hand style shown

For blade size	Coupling size	Ordering code	Dimensions, mm, inch									kg
			D _{5m}	b ₂₁	b ₂₂	D ₁	f	h ₂₁	h ₂₂	I ₂₁	I ₂₃	kg
21	C4	C4-APBR/L-26110-21	40 1.575	20.5 .807	26 1.024	76 2.992	21 .827	30 1.181	20.5 .807	110 4.331	20 .787	0.90
	C5	C5-APBR/L-31095-21	50 1.968	25.5 1.004	31 1.220	87 3.425	32 1.024	26 1.181	30 1.024	95 3.740	20 .787	1.30
	C5	C5-APBR/L-31110-21	50 1.968	25.5 1.004	31 1.220	80 3.150	26 1.024	30 1.181	25.5 1.004	110 4.331	20 .787	1.12
25	C6	C6-APBR/L-37147-25	63 2.480	32 1.260	37 1.457	106 4.173	32 1.260	38 1.496	32 1.260	147 5.787	22 .866	3.22
	C6	C6-APBR/L-37147-25X	63 2.480	32 1.260	37 1.457	100 3.937	32 1.260	38 1.496	32 1.260	147 5.787	22 .866	2.00
	C8	C8-APBR/L-46155-25	80 3.150	40 1.575	45.5 1.791	122 4.803	40.5 1.594	40.5 1.594	40.5 1.594	155 6.102	30 1.181	6.10
	C8	C8-APBR/L-46155-25X	80 3.150	40.5 1.594	45.5 1.791	115 4.528	40.5 1.594	40.5 1.594	40.5 1.594	155 6.102	30 1.181	3.16
	C10	C10-APBR/L-60205-45	100 3.937	50.5 1.988	60 2.362	160 6.299	53 2.087	61.7 2.429	50.5 1.988	205 8.071	36 1.417	10.50

R = Right hand, L = Left hand

Warning!

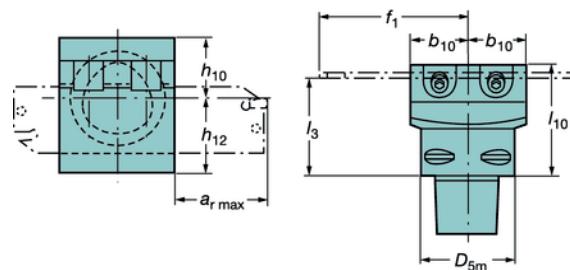
The adapters are designed for automatic tool change.

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

Coolant adapter ordered separately. See page B32



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

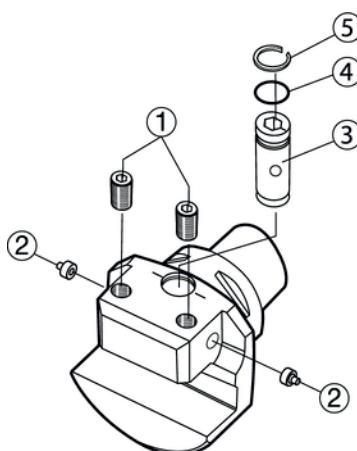


For blade size	Coupling size	Ordering code	Dimensions, mm, inch								
			a _r max	b ₁₀	D _{5m}	f ₁	h ₁₀	h ₁₂	l ₃	l ₁₀	kg
21	C4	C4-151.2-25040-21	44.45 1.750	24.89 .980	40 1.575	69.34 2.730	24.89 .980	29.97 1.180	40.13 1.580	45.21 1.780	0.68
21	C5	C5-151.2-33040-21	44.45 1.750	33.02 1.300	50 1.968	77.47 3.050	32 1.260	35.05 1.380	40.13 1.580	45.21 1.780	1.10
25	C5	C5-151.2-33040-25	76.2 3.000	33.02 1.300	50 1.968	109.22 4.300	32 1.260	35.05 1.380	40.13 1.580	45.21 1.780	1.13



Spare parts

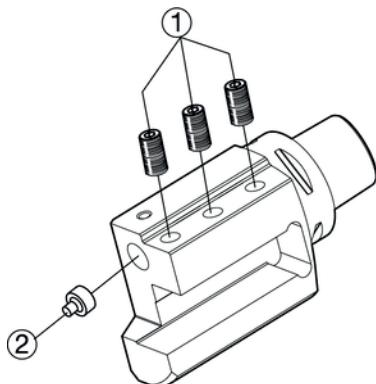
Radial mounting



	1	2	3	4	5	
	Screw	NPT	Coolant nozzle	Valve bolt	O-ring	Circlip
C3-ASHA-25040-12	3214 020-359		5691 029-08	5692 035-05	5641 005-08	-
C4-ASHA-25046-10U	3214 010-408	1/8	-			
C4-ASHA-25046-16	3214 020-359		5691 029-08	5692 035-05	5641 005-08	-
C5-ASHA-30055-12U	3214 010-408	1/8	-			
C5-ASHA-38057-12-AM	3214 020-461		5691 029-09	5692 035-04	5641 005-79	3421 105-015
C6-ASHA-38066-12U	3214 010-459	1/8	-			
C6-ASHA-38059-12-AM	3214 020-411		5691 029-09	5692 035-04	5641 005-79	3421 105-015
C8-ASHA-45085-25	3214 020-512		5691 029-09	5692 035-04	5641 005-79	3421 105-015
C8-ASHA-55085-20-AM	3214 020-512		5691 029-09	5692 035-04	5641 005-79	3421 105-015
C5-ASHA-38058-20M	3214 020-461		5691 029-09	5692 035-04	5641 005-79	3421 105-015
C6-ASHA-38060-20M	3214 020-411		5691 029-09	5692 035-04	5641 005-79	3421 105-015
C6-ASHA-45071-16-A	3214 020-512		5691 029-09	5692 035-04	5641 005-79	3421 105-015
C6-ASHA-45071-25M	3214 040-462		5691 029-09	5692 035-04	5641 005-79	3421 105-015
C6-ASHA-50071-32M	3214 040-462		5691 029-09	5692 035-04	5641 005-79	3421 105-015
C8-ASHA-55085-32M	3214 020-512		5691 029-09	5692 035-04	5641 005-79	3421 105-015
C8X-ASHA-55090-32M	3214 020-512		5691 029-09	5692 035-04	5641 005-79	3421 105-015

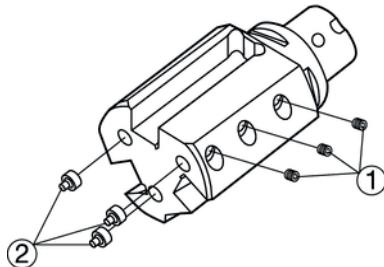
Axial mounting

Cx-ASHA/ASHS



	1	2	3	4	5	
	Screw	NPT	Coolant nozzle	Valve bolt	O-ring	Circlip
C3-ASHR/L-18085-12	3214 020-358		5691 029-08	-	-	-
C4-ASHR/L-23104-16	3214 020-409		5691 029-09	-	-	-
C5-ASHS-47088-12U	3214 010-408	1/8	-			
C5-ASHR/L-30098-12-A	3214 020-461		5691 029-10			
C5-ASHR/L-30098-20	3214 020-461		5691 029-10			
C6-ASHS-54090-12U	3214 010-408	1/8	-			
C6-ASHR/L-30100-12-A	3214 020-411		5691 029-10			
C6-ASHR/L-38130-16-A	3214 020-512		5691 029-10			
C6-ASHR/L-30100-20	3214 020-461		5691 029-10			
C6-ASHR/L-38130-25	3214 020-512		5691 029-10			
C6-ASHR/L-40140-32	3214 020-512		5691 029-10			
C6-ASHS-58115-32	3214 040-462		5691 029-09			
C8-ASHS-73160-32	3214 020-512		5691 029-10	5692 035-04	5641 005-79	3421 105-015
C8-ASHR/L-40140-20-A	3214 020-512		5691 029-10			
C8X-ASHR/L-50143-32	3214 020-512		5691 029-10			
C10-ASHR/L-50150-32	3214 020-512		5691 029-10	5692 035-04	5641 005-79	3421 105-015

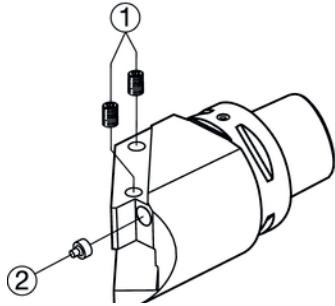
Cx-ASHR/L3



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

Angular mounting

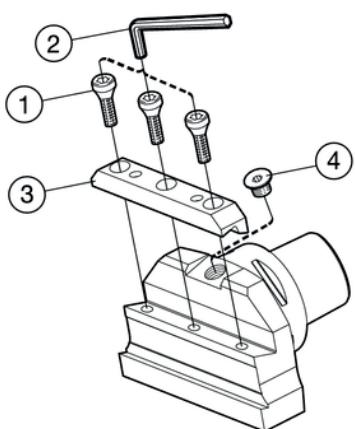
Cx-ASHR45



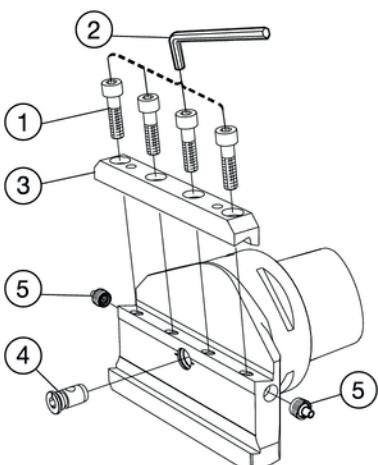
	1	2
	Screw	Coolant nozzle
C5-ASHR/L45-36097-12-A	3214 020-461	5691 029-09
C5-ASHR/L45-36097-20	3214 020-461	5691 029-09
C6-ASHR/L45-36099-12-A	3214 020-411	5691 029-09
C6-ASHR/L45-36099-20	3214 020-461	5691 029-09
C8-ASHR/L45-50135-20-A	3214 020-512	5691 029-09
C8-ASHR/L45-50135-32	3214 020-512	5691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

Spare parts

Radial mounting



Adapter	1 Screw	2 Key (mm)	3 Clamp	4 Plug	Optional coolant adapter ²⁾
C5-APBA-40058-21	3212 010-410	3021 010-060 (6.0)	5412 120-01	5519 055-01	5691 050-011
C6-APBA-60060-25	3212 010-411	3021 010-060 (6.0)	5412 120-02	5519 055-01	5691 050-011
C8-APBA-60068-25	3212 010-411	3021 010-060 (6.0)	5412 120-02	5519 055-01	5691 050-011
C6-APBA-80068-45	3212 010-412	3021 010-060 (6.0)	5412 120-03	5519 055-01	5691 050-011
C8-APBA-80068-45	3212 010-412	3021 010-060 (6.0)	5412 120-03	5519 055-01	5691 050-011



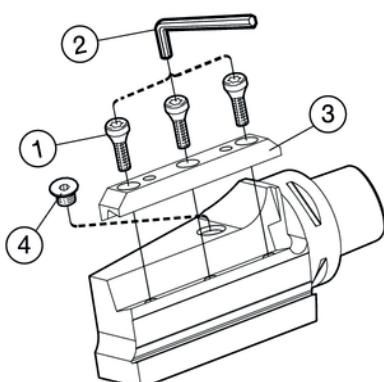
Adapter	1 Screw	2 Key (mm)	3 Clamp	4 Valve bolt	5 Nozzle (thread)
C10-APBA-80075-45	3212 010-412	3021 010-060 (6.0)	5412 120-03	5692 035-04	5691 034-03 (M10) ¹⁾

¹⁾ When changing nozzle use key 5680 019-01 and bits 5680 021-03

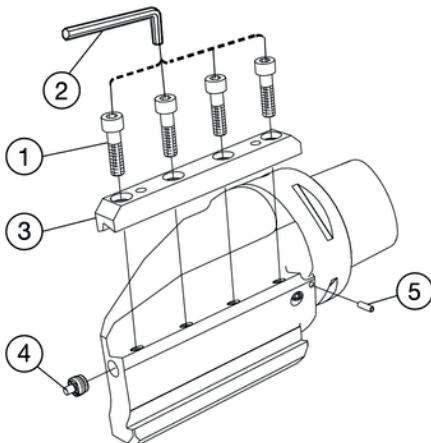
²⁾ To be ordered separately

Spare parts

Axial mounting



Adapter	1 Screw	2 Key (mm)	3 Clamp	4 Plug	Optional coolant adapter ²⁾
C5-APBR/L-31095-21	3212 010-410	3021 010-060 (6.0)	5412 120-01	5519 055-01	5691 050-011
C6-APBR/L-37147-25	3212 010-411	3021 010-060 (6.0)	5412 120-02	5519 055-01	5691 050-011
C8-APBR/L-46155-25	3212 010-411	3021 010-060 (6.0)	5412 120-02	5519 055-01	5691 050-011

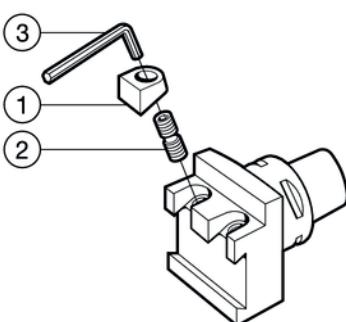


Adapter	1 Screw	2 Key (mm)	3 Clamp	4 Nozzle (thread)	5 Spring pin
C4-APBR/L-26110-21	3212 010-411	3021 010-060 (6.0)	5412 120-01	5691 034-01 (M8) ¹⁾	3113 030-457
C5-APBR/L-31110-21	3212 010-411	3021 010-060 (6.0)	5412 120-01	5691 034-01 (M10) ¹⁾	3113 030-457
C6-APBR/L-37147-25X	3212 010-411	3021 010-060 (6.0)	5412 120-02	5691 034-01 (M10) ¹⁾	3113 030-457
C8-APBR/L-46155-25X	3212 010-411	3021 010-060 (6.0)	5412 120-02	5691 034-01 (M10) ¹⁾	3113 030-457
C10-APBR/L-60205-45	3212 010-412	3021 010-060 (6.0)	5412 120-03	5691 034-03 (M10) ¹⁾	3113 030-457

1) When changing nozzle use key 5680 019-01 and bits 5680 021-03

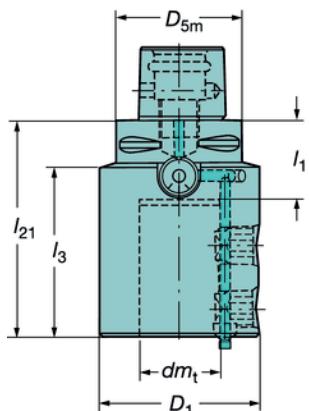
2) To be ordered separately

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



Adapter	1 Clamp	2 Clamp screw	3 Key (Size, mm)
C4-151.2-25040-21	150.2-820	269-833	3021 010-040 (4.0)
C5-151.2-33040-21	150.2-820	269-833	3021 010-040 (4.0)
C6-151.2-43045-21			
C5-151.2-33040-25			
C6-151.2-43045-25			

Boring bar adapters for Multi-Task machining



Technical information:

C = Coolant goes straight through the center

L = Left coolant nozzle will get coolant

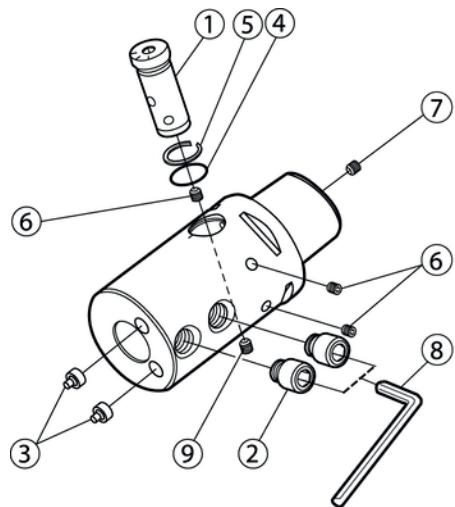
R = Right coolant nozzle will get coolant

l_1 = programming length

Coolant inlet: Axial through the center

Coupling size	Ordering code	Dimensions, millimeter, inch (mm, in.)												
		dm_t mm	dm_t in.	D_1 mm	D_1 in.	D_{5m} mm	D_{5m} in.	l_1 mm	l_1 in.	l_3 mm	l_3 in.	l_{21} mm	l_{21} in.	l_{RG}
C5	C5-131-00100-25	25	0.984	63	2.480	50	1.968	43	1.693	80	3.150	100	3.937	2.0
C6	C6-131-00098-25	25	0.984	63	2.480	63	2.480	41	1.614			98	3.858	2.4
	C6-131-00112-40	40	1.575	80	3.150	63	2.480	41	1.614	90	3.543	112	4.409	3.5
C8	C8-131-00098-25	25	0.984	63	2.480	80	3.150	41	1.614	50	1.968	98	3.858	3.4
	C8-131-00112-40	40	1.575	80	3.150	80	3.150	41	1.614			112	4.409	4.3

Spare parts



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

For cylindrical sleeves, see page A320.



G6

A

MULTI-TASK MACHINING

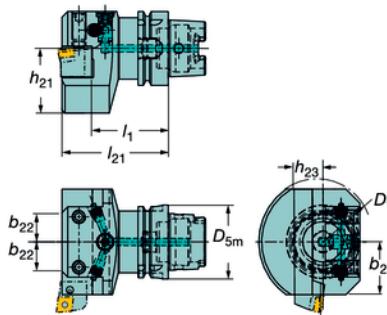
HSK solid holding tools

TURN - USA

Boring bar adapters for Multi-Task machining

HSK form A/C/T

Radial mounting



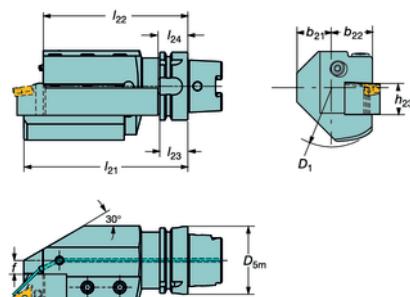
Metric version

Coolant inlet: Axial through the center

Neutral style shown

HSK size	Ordering code	Dimensions								
		D_1	D_{5m}	b_{21}	b_{22}	h_{21}	h_{23}	l_1	l_{21}	$\frac{\text{kg}}{\text{kg}}$
63	392.419-63-ASHA-25	110	63	45	30	55	25	65	91	2.7
100	392.419-100-ASHA-32	142	100	55	40	65	32	68	100	5.7

Axial mounting



Coolant inlet: Axial through the center

Metric version

Right hand style

HSK size	Ordering code	Dimensions									
		D_1	D_{5m}	b_{21}	b_{22}	f	h_{23}	l_{21}	l_{22}	l_{23}	$\frac{\text{kg}}{\text{kg}}$
63	392.419-63-ASHR/L-25	103.5	63	32	38	13	25	152	134	42	50 3.7
100	392.419-100-ASHR/L-32	110	100	42.5	40	8	32	155	145	45	50 6.3

R = Right hand, L = Left hand

Warning!

The adapters are designed for automatic tool change.

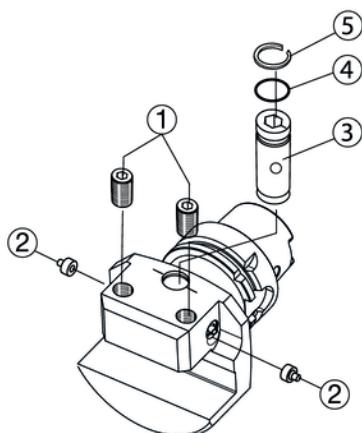
Make sure that there is no risk of interference in the magazine and tool changing cycle.



Boring bar adapters for Multi-Task machining

Radial mounting

ASHA

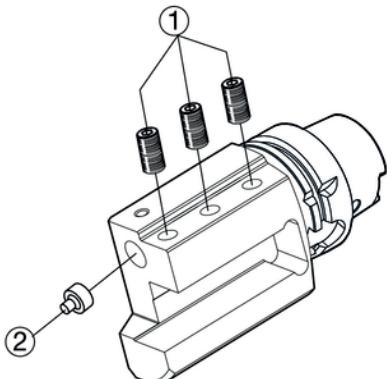


	1	2	3	4	5
	Screw	Coolant nozzle (thread)	Valve bolt	O-ring	Circlip
392.419-63-ASHA-25 392.419-100-ASHA-32	3214 020-512 3214 020-512	5691 034-02 (M10) ¹⁾ 5691 034-02 (M10) ¹⁾	5692 035-04 5692 035-04	5641 005-79 5641 005-79	3421 105-015 (SB15) 3421 105-015 (SB15)

1) When changing nozzle use key 5680 019-01 and bits 5680 021-03

Axial mounting

ASHR/L



	1	2
	Screw	Coolant nozzle (thread)
392.419-63-ASHR/L-25 392.419-100-ASHR/L-32	3214 020-512 3214 020-512	5691 034-02 (M10) ¹⁾ 5691 034-02 (M10) ¹⁾

1) When changing nozzle use key 5680 019-01 and bits 5680 021-03

B

C

G

H

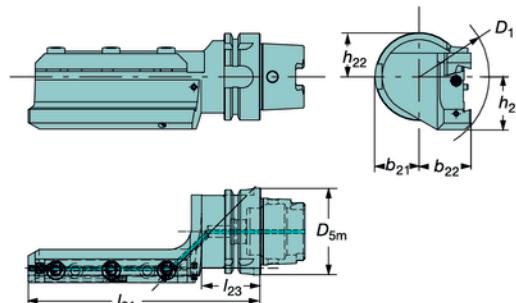
I

J

Boring bar adapters for Multi-Task machining

HSK form A/C/T

Axial mounting



Right hand style shown

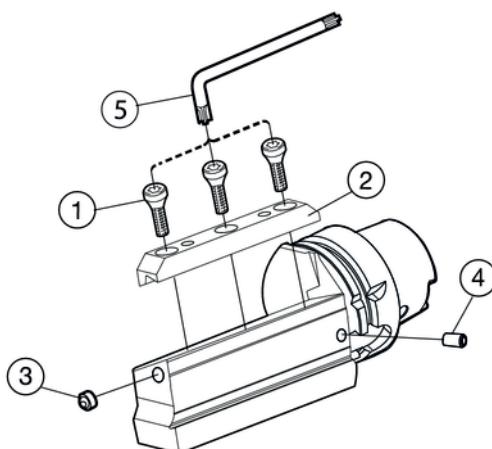
For blade size	HSK size	Ordering code	Dimensions, mm, inch								
			D _{5m}	b ₂₁	b ₂₂	D ₁	h ₂₁	h ₂₂	l ₂₁	l ₂₃	KG
25	63	392.419-63-APBR/L-25	63	31.5	37	100	38	31.5	168	42	2.07
			2.480	1.240	1.457	3.937	1.496	1.240	6.614	1.654	

R = Right hand, L = Left hand

Warning!

The adapters are designed for automatic tool change.
Make sure that there is no risk of interference in the magazine and tool changing cycle.

Main spare parts



	1	2	3	4	5
Holder 392.419-63-APBR/L-25	Screw 3212 010-411	Clamp 5412 120-02	Nozzle 5631 034-01	Spring pin 3113 030-457	Key (mm) 3021 010-060 (6.0)