

Rotating tools

MILLING
DRILLING
TAPPING
BORING
REAMING
ROTATING TOOL ADAPTERS



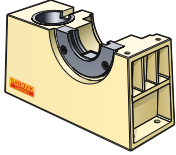
2015



Assembly fixture

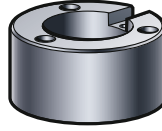
Fixture body
Ordering code:

391.500



Fixture body for sleeves
Ordering code:

391.501



Ordering code



Sleeve	For holder type, size
391.540-C3	Coromant Capto Size C3
391.540-C4	Coromant Capto Size C4
391.540-C5	Coromant Capto Size C5
391.540-C6	Coromant Capto Size C6
391.540-C8	Coromant Capto Size C8
391.540-C10	Coromant Capto Size C10
391.540-HA04	HSK 40 Form A/C
391.540-HA05	HSK 50 Form A/C
391.540-HA06	HSK 63 Form A/C
391.540-HA08	HSK 80 Form A/C
391.540-HA10	HSK 100 Form A/C
391.540-30	MAS-BT/CAT/ISO 30
391.540-40	MAS-BT/CAT/ISO 40
391.540-50	MAS-BT/CAT/ISO 50

Ordering code

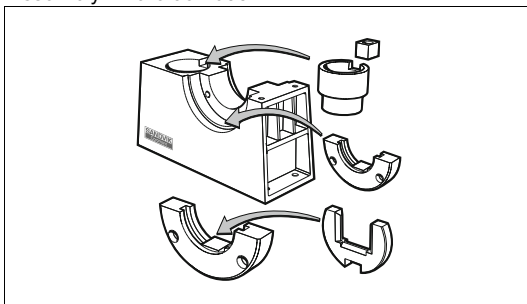


Flange	Collar	For holder type, size
391.510-140 50	391.530-C3	Coromant Capto Size C3
391.510-140 50	391.530-C4	Coromant Capto Size C4
391.510-140 50	391.530-C5	Coromant Capto Size C5
391.510-140 50	391.530-C6	Coromant Capto Size C6
391.510-140 50	391.530-C8	Coromant Capto Size C8
	391.530-C10*	Coromant Capto Size C10
391.510-HA04		HSK 40 Form A
391.510-HA05		HSK 50 Form A
391.510-HA06		HSK 63 Form A
391.510-HA08		HSK 80 Form A
391.510-HA10		HSK 100 Form A
391.510-HA12		HSK 125 Form A
391.510-55 30		MAS-BT 30
391.510-55 40		MAS-BT 40
391.510-55 50		MAS-BT 50
391.510-562-40		BIG-PLUS, MAS-BT 40
391.510-562-50		BIG-PLUS, MAS-BT 50
391.510-140 40		DIN 69871/40, ANSIB 5.50-40, ISO7388/1-40, CAT 40
391.510-140 50		DIN 69871/50, ANSIB 5.50-40, ISO7388/1-50, CAT 50
391.510-540 40		BIG-PLUS DIN69871/1-40, BIG-PLUS 7388/1-40, CAT 40
391.510-540 50		BIG-PLUS DIN69871/1-50, BIG-PLUS 7388/1-50, CAT 50
391.510-00 40		DIN 2080-40/NMTB 40
391.510-00 50		DIN 2080-50/NMTB 50
A391.510-45 40		ANSIB 5.50-2009, CAT-V 40-2009
A391.510-45 50		ANSIB 5.50-2009, CAT-V 50-2009
A391.510-545 40		BIG-PLUS ANSIB 5.50-2009, CAT-V 40-2009
A391.510-545 50		BIG-PLUS ANSIB 5.50-2009, CAT-V 50-2009

Note: Key is delivered with the sleeve.

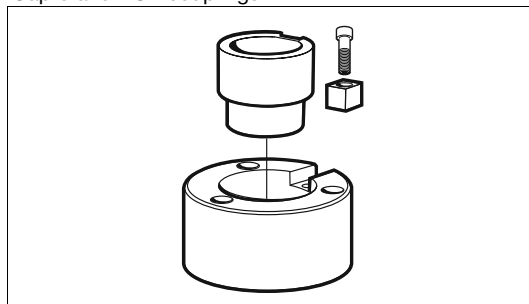
* Combined collar and flange

Assembly fixture 391.500



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

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



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

K

L

Tool cart for Coromant Capto

Quick change tooling



- 1. Cradle carrier
- 2. Tool cradles
- 3. Molded tool holders (to be ordered separately)

Ordering code	Kit consists of:		
CCW-KIT	TC-0	4 pieces	Tool cradles
	TCC-2	4 pair	Frame carriers for tool cradle

To order a complete cart 1 pcs CCW-KIT + toolholders

M

Bench stand



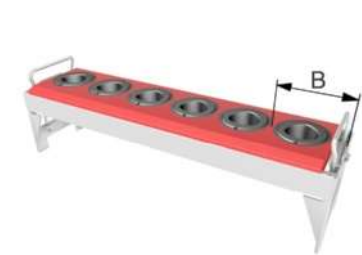
Ordering code	Kit consists of:		
BS-KIT	3 pieces	Tool cradles	
	3 pair	Frame carriers for tool cradle	

To order a complete bench stand 1 pcs BS-KIT + molded tool holders

N

O

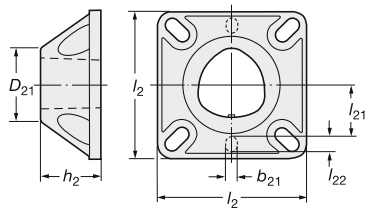
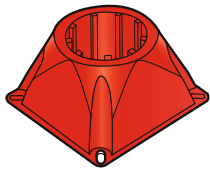
Molded tool holders - to be ordered separately



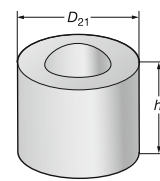
Ordering code	Width (B)	Max. number of coupling sizes
C3-IC-1	58	C3 = 9
C4-IC-1	58	C4 = 9
C5-IC-1	65.5	C5 = 8
C6-IC-1	81.5	C6 = 6
C8-IC-1	105	C8 = 5
C10-IC-1	120	C10 = 4

Cassettes (polygon seating)

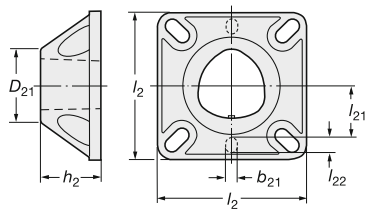
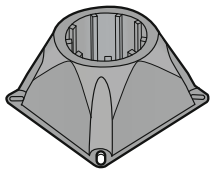
Coromant Capto®

**-4000**

Plastic storage cassettes (red)

-6000-B

Aluminum cassette blanks

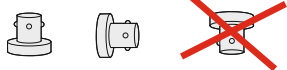
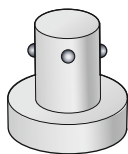
**-5000**

High grade plastic in-machine tool storage (black)

Coupling size	Ordering code	Dimensions, mm, inch							
			b_{21}	D_{21}	h_2	l_2	l_{21}	l_{22}	
C3	C3-C-4000	-	32	26	65	-	-	-	All plastic cassettes conforming to hole pattern 17 mm, 20 mm, 25 mm and 1". High grade plastic. Red color. To be used: – alone for upright storage – with mechanism type PL-01 for horizontal or upright position.
		-	1.260	1.024	2.559	-	-	-	
C4	C4-C-4000	6	50	39	74	26	8		
		.236	1.969	1.535	2.913	1.024	.315		
C5	C5-C-4000	6	50	39	74	26	8		
		.236	1.969	1.535	2.913	1.024	.315		
C6	C6-C-4000	8	80	63	116	41	10		High grade reinforced black plastic. For in-machine tool storage with mechanism AL-01.
		.315	3.150	2.480	4.567	1.614	.394		
C8	C8-C-4000	8	80	63	116	41	10		
		.315	3.150	2.480	4.567	1.614	.394		
C4	C4-C-5000	6	50	39	74	26	8		
		.236	1.969	1.535	2.913	1.024	.315		
C5	C5-C-5000	6	50	39	74	26	8		
		.236	1.969	1.535	2.913	1.024	.315		
C6	C6-C-5000	8	80	63	116	41	10		
		.315	3.150	2.480	4.567	1.614	.394		
C8	C8-C-5000	8	80	63	116	41	10		Aluminum cassette blanks for individual adaptation. To be used with AL-01.
		.315	3.150	2.480	4.567	1.614	.394		
C10	C10-C-5000	8	100	80	150	60	68		
		.315	3.940	3.150	5.910	2.360	2.630		
C6	C6-C-6000-B	-	120	63	-	-	-		
			4.724	2.480					
C8	C8-C-6000-B		120	63	-	-	-		
			4.724	2.480					
C10	C10-C-6000-B		138	80	-	-	-		
			5.433	3.150					

Locking mechanism for cassettes

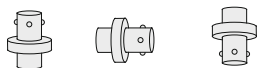
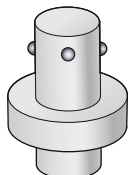
-PL



Passive locking mechanism

For vertical upwards and horizontal storage. NEVER upside down storage.

-AL



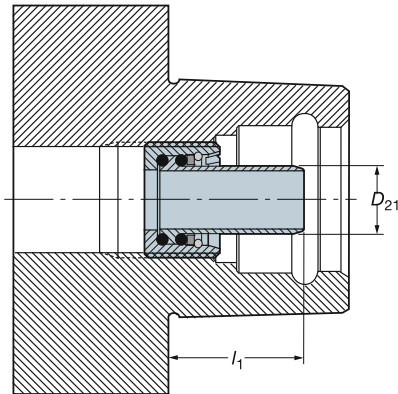
Active locking mechanism

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

CZC	Ordering code	Pull action force, N	Pull action force, lbf	
C4	C4-PL-01	55	12.36	Central passive locking mechanism. Spring loaded clamping. Fits directly into all cassettes type 4000.
C5	C5-PL-01	120	26.98	
C6	C6-PL-01	150	33.72	
C8	C8-PL-01	240	53.95	
CZC	Ordering code	Rec. max. tool weight, Kg	Rec. max. tool weight lbs	
C4	C4-AL-01	40	88	Active locking mechanism – mechanical push action. Fits directly into all cassettes type 5000/6000.
C5	C5-AL-01	60	132	
C6	C6-AL-01	75	165	
C8	C8-AL-01	110	243	
C10	C10-AL-01	150	330.7	
CZC	Ordering code	Rec. max. tool weight, Kg	Rec. max. tool weight lbs	
C6	C6-AL-02	75	165	Active locking mechanism – mechanical push action. Fits directly into all cassettes type 5000/6000.
C8	C8-AL-02	110	243	

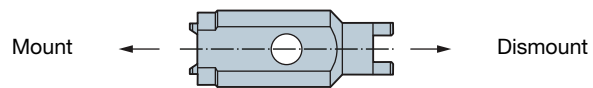
Assembly item

Coolant tubes for Coromant Capto®



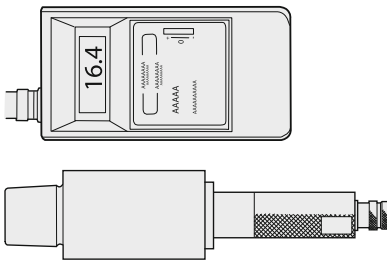
The requirement for use of coolant tubes is machine related. See machine information before installing.

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



Please refer to M/C manual

Safe control



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

Contact your local Sandvik Coromant representative for more information.

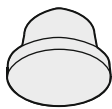
J

Assembly item

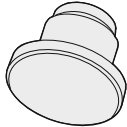
K

Cover plug

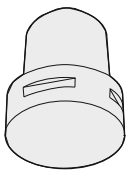
CP-11



CP-01



CPA-01

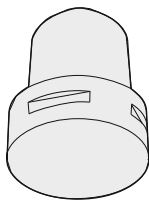


Coupling size	Ordering code		
	Manual unit	Automatic unit	Type 3000
C3	C3-CP-01	-	C3-CP-11
C4	C4-CP-01	C4-CPA-01	C4-CP-11
C5	C5-CP-01	C5-CPA-01	C5-CP-11
C6	C6-CP-01	C6-CPA-01	-
C8	C8-CP-01	C8-CPA-01	-
C10	-	C10-CPA-01	-

L

Balancing tool

Cx-BAT-01



Coupling size	Ordering code
C3	C3 - BAT - 01
C4	C4 - BAT - 01
C5	C5 - BAT - 01
C6	C6 - BAT - 01
C8	C8 - BAT - 01
C10	C10 - BAT - 01

M

N

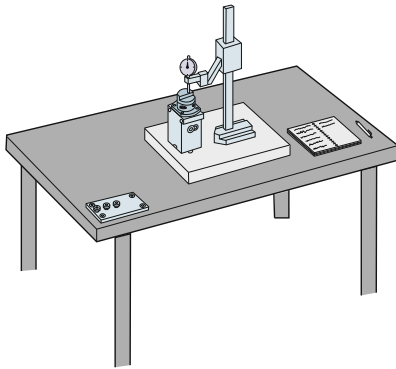
O

P

Q

Assembly item

Pre-measuring fixture for Coromant Capto® cutting units



The precision of the Coromant Capto coupling ensures excellent repeatability when changing the same tool unit. This accuracy can be utilized in many ways. For example, in manual changing, the cutting edge indexing takes place outside the machine, where the edge positions can be checked in two coordinates on Sandvik Coromant's pre-measuring fixture.

When the pre-measured unit is returned to the clamping unit in the turret, the edge deviation is compensated for through the machine control offset.

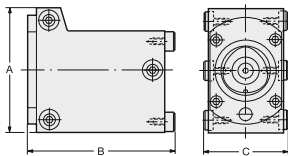
The fixture can be used with any dial indicator and preferably, a surface plate, but Sandvik Coromant recommends an indicator with a zero-set switch and a contact stylus.

Basic package

You may already have the required measuring equipment in your shop – all you need is the measuring kit:

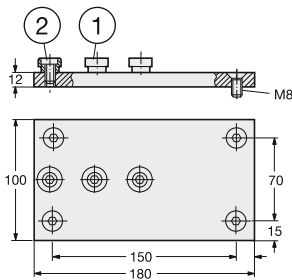
- Pre-measuring unit
- Holding plate (anchor for tightening)
- Master

Pre-measuring unit



Coupling size	Ordering code	Dimensions, mm (inch)		
		A	B	C
C3	C3-PMU-01M	65 (2.56)	85 (3.35)	44 (1.79)
C4	C4-PMU-01M	77 (3.03)	94 (3.70)	54 (2.13)
C5	C5-PMU-01M	94 (3.70)	130 (5.12)	70 (2.76)
C6	C6-PMU-01	114 (4.40)	135 (5.31)	90 (3.54)
C8	C8-PMU-01	133 (5.24)	150 (5.91)	106 (4.17)

Holding plate for pre-measuring unit

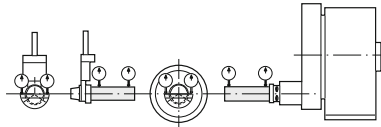


Coupling size	Ordering code	Spare parts	
		1	2
		Stud	Screw
C3 – C8	C-HP-01	5638 060-01	3212 020-409

Assembly item

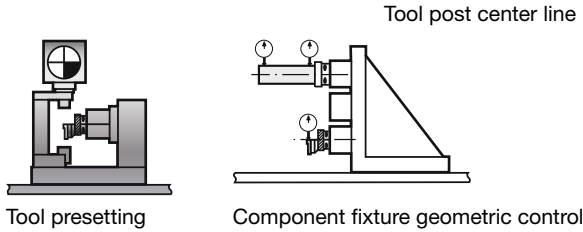
Master setting gauges

Checking position for grippers Spindle orientation



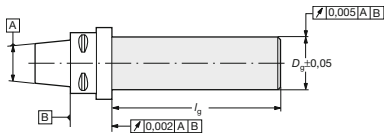
The Coromant Capto system guarantees exceptional, repeatable accuracy but this is of little use unless the various other components in the total machining process are correctly and accurately positioned. Coromant offers a range of axial and center height master setting gauges for the various coupling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

- The centerline of the tool post



Axial gauge

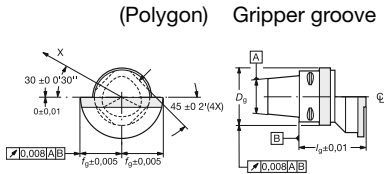
Master setting gauges MAS-11



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

Center height gauge

Master setting gauges MAS-01



		Dimensions, mm (inch)		
Coupling size	Ordering code	f _g	l _g	D _g
C3	C3-MAS-01	22 (.87)	40 (1.57)	34 (1.34)
C4	C4-MAS-01	27 (1.06)	50 (1.97)	42 (1.65)
C5	C5-MAS-01	35 (1.38)	60 (2.36)	52 (2.05)
C6	C6-MAS-01	45 (1.77)	65 (2.56)	65 (2.56)
C8	C8-MAS-01	55 (2.17)	80 (3.15)	82 (3.23)
C10	C10-MAS-01	65 (2.559)	100 (3.937)	102 (4.016)

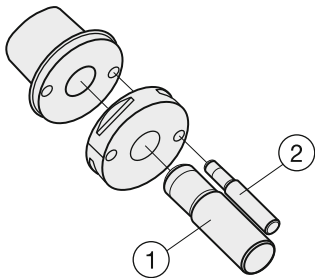
Center height gauge

		Dimensions, mm (inch)	
Coupling size	Ordering code	l _g	D _g
C4	C4-MAS-25 140	140 (5.512)	25 (.984)
C5	C5-MAS-32 145	145 (5.709)	32 (1.260)
C6	C6-MAS-40 180	180 (7.087)	40 (1.575)
C8	C8-MAS-40 240	240 (9.449)	40 (1.575)

Assembly item

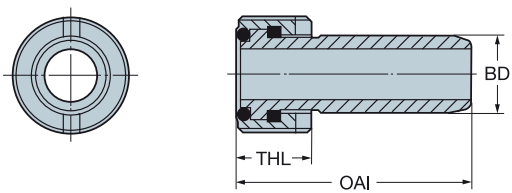
Alignment tool

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



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

Coolant tube

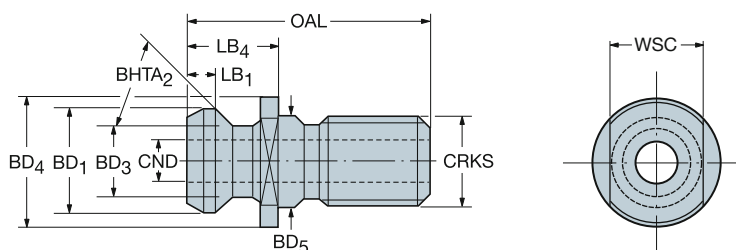


HSK size	Ordering code	Dimensions, mm, inch				Key	
		BD	THL	OAL		Ordering code	Torque Nm
40	5692 022-02	8	7.5	29.5	0.01	5680 094-02	10
		.315	.295	1.161			
50	5692 022-03	10	9.5	32.8	0.02	5680 094-03	15
		.394	.374	1.291			
63	5692 022-04	12	11.5	46.5	0.03	5680 094-04	20
		.472	.453	1.437			
100	5692 022-06	16	15.5	44.5	0.05	5680 094-06	30
		.630	.610	1.752			
125	5692 022-07	18	17.5	48	0.08	5680 094-07	30
		.709	.689	1.890			



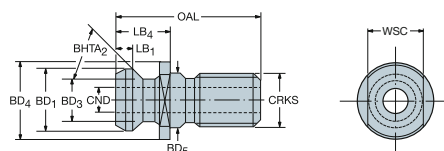
Q1

Draw bolt



ISO/DIN

Ordering code	Dimensions												
	CRKS	CND	WSC	OAL	BD ₁	BD ₃	BD ₄	BD ₅	LB ₁	LB ₄	BHTA	CNSC	BSG
393.140C-40 M16-45	M16	7.35	18.0	44	18	12	22	17	5	16	45°	1	ISO 7388 B
393.140C-40 M16-75-1	M16	7.00	19.0	54	19	14	23	17	6	26	75°	1	ISO 7388
393.140C-40 M16-75-2	M16	7.00	19.0	54	19	14	23	17	6	26	75°	1	DIN 69872
393.140C-50 M24-45	M24	11.50	30.0	65	29	19	37	25	7	25	45°	1	ISO 7388 B
393.140C-50 M24-75-1	M24	11.50	30.0	74	28	21	36	25	9	34	75°	1	ISO 7388
393.140C-50 M24-75-2	M24	11.50	30.0	74	28	21	36	25	9	34	75°	1	DIN 69872



MAS-BT

Ordering code	Dimensions												
	CRKS	CND	WSC	OAL	BD ₁	BD ₃	BD ₄	BD ₅	LB ₁	LB ₄	BHTA	CNSC	BSG
393.55-30 M12-45	M12		13.0	43	11	7	16	12	5	23	45°	0	
393.55-30 M12-60	M12		13.0	43	11	7	16	12	5	23	60°	0	
393.55-40 M16-45	M16		19.0	60	15	10	23	17	7	35	45°	0	
393.55-40 M16-60	M16		19.0	60	15	10	23	17	7	35	60°	0	
393.55-40 M16-90	M16		19.0	60	15	10	23	17	7	35	90°	0	
393.55-50 M24-45	M24		30.0	85	23	17	38	25	10	45	45°	0	
393.55-50 M24-60	M24		30.0	85	23	17	38	25	10	45	60°	0	
393.55-50 M24-90	M24		30.0	85	23	17	38	25	20	45	90°	0	
393.55C-30 M12-45	M12	2.38	13.0	43	11	7	16	12	5	23	45°	1	
393.55C-30 M12-45FA	M12	4.00	13.0	43	11	8	16	12	5	23	45°	1	
393.55C-30 M12-45MS	M12	2.50	13.0	43	11	7	16	12	5	23	45°	1	
393.55C-30 M12-60	M12	2.38	13.0	43	11	7	16	12	5	23	60°	1	
393.55C-30 M12-60BR	M12	2.50	13.0	43	11	7	16	12	5	23	60°	1	
393.55C-40 M16-45	M16	4.00	19.0	60	15	10	23	17	7	35	45°	1	
393.55C-40 M16-75	M16	7.00	19.0	54	19	14	23	17	6	29	75°	1	JIS 40
393.55C-50 M24-75	M24	11.50	30.0	74	28	21	36	25	9	34	75°	1	JIS 50

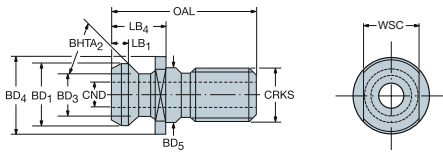


Q1



Q35

Draw bolt



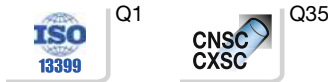
CAT-V

Ordering code	Dimensions, inch											
	CRKS	CND	WSC	OAL	BD ₁	BD ₃	BD ₄	BD ₅	LB ₁	LB ₄	BHTA	CNSC
393.45-40 5/8-45-1M	5/8-11 UNC		.750	2.320	.590	.390	.940	.614			45°	0
393.45-40 5/8-45-2	5/8-11 UNC		.750	2.250	.591	.394	.940	.641	.276	1.266	45°	0
393.45-40 5/8-90M	5/8-11 UNC		.690	2.320	.590	.390	.860	.614			90°	0
393.45-50 1-90M	1-8 UNC		1.190	3.310	.902	.670	1.370	1.031			90°	0
393.45C-40 5/8-45-1	5/8-11 UNC	.281	.750	1.500	.740	.490	.940		.201	.640	45°	1
393.45C-40 5/8-45-2M	5/8-11 UNC	.197	.750	2.320	.590	.390	.940	.614	.272	1.260	45°	1
393.45C-40 5/8-45-3	5/8-11 UNC	.236	.750	1.624	.740	.490	.858		.201	.640	45°	1
393.45C-40 5/8-75M	5/8-11 UNC	.276	.750	2.060	.744	.550	.900	.614	.228	1.020	75°	1
393.45C-40 M16-45-1	M16	.276	.750	1.624	.739	.490	.860	.669	.201	.640	45°	1
393.45C-40 M16-45-2	M16	.252	.748	1.736	.740	.490	.866	.669	.201	.752	45°	1
393.45C-50 1-45-1	1-8 UNC	.469	1.250	2.300	1.140	.820	1.440		.299	1.000	45°	1
393.45C-50 1-45-2M	1-8 UNC	.250	1.190	3.330	.900	.660	1.370	1.031	.409	1.790	45°	1
393.45C-50 1-45-3	1-8 UNC	.394	1.250	2.575	1.140	.820	1.437		.299	1.000	45°	1
393.45C-50 1-45-4M	1-8 UNC	.468	1.250	2.300	1.140	.820	1.430	1.031	.299	1.000	45°	1
393.45C-50 1-60M	1-8 UNC	.240	1.180	3.250	.904	.670	1.500	1.020	.390	1.770	60°	1
393.45C-50 M24-45	M24	.394	1.187	2.575	1.140	.820	1.437	.984	.299	1.000	45°	1

393.45C-50 1-60M With O-ring 3x20mm

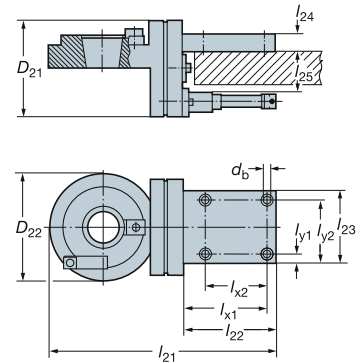
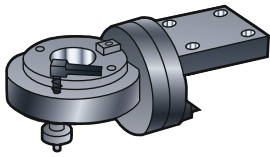
Warning!

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



Assembly fixture

Pneumatically operated



Note!

Assembly fixture 391.200-xx includes foot pedal.

Instructions are enclosed with fixture.

Air supply of 85 PSI (6 bar) is required for connection to the pedal.

Size	Ordering code	Dimensions, mm, inch													
Taper		d_b	D_{21}	D_{22}	l_{21}	l_{22}	l_{23}	l_{24}	l_{25}	l_{26}	l_{27}	l_{28}	l_{29}	l_{30}	l_{31}
40	391.200-40	11	160	180	370	150	120	30	67	135	100	15	105	20	
		.433	6.299	7.087	14.567	5.906	4.724	1.181	2.637	5.315	3.737	.590	4.134		
45	391.200-45	11	160	180	370	150	120	30	67	135	100	15	105	20	
		.433	6.299	7.087	14.567	5.906	4.724	1.181	2.637	5.315	3.737	.590	4.134		
50	391.200-50	11	160	180	370	150	120	30	67	135	100	15	105	20	
		.433	6.299	7.087	14.567	5.906	4.724	1.181	2.637	5.315	3.737	.590	4.134		

Arbor mounting screws with coolant hole

Metric

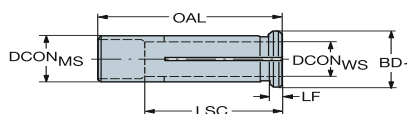
Arbor size	Screw	Key
16	5512 073-03 (M8)	3021 010-060 (6.0)
22	5512 073-01 (M10)	3021 010-080 (8.0)
22	5512 073-04 (M10)	3021 010-080 (8.0)
27	5512 073-02 (M12)	3021 010-100 (10.0)
32	5512 073-05 (M16)	3021 010-140 (12.0)

Inch

Arbor size	Screw	Key
.750	5512 074-01 (3/8"-24 UNF)	3021 011-516 (5/16)
.750	5512 074-03 (3/8"-24 UNF)	3021 011-516 (5/16)
1.000	5512 074-02 (1/2"-20 UNF)	3021 011-380 (3/8)
1.250	5512 074-04 (5/8"-18 UNF)	- (1/2)
1.500	5512 074-05 (3/4"-16 UNF)	- (5/8)

Cylindrical sleeves

Metallic sealed for coolant through tool



Metric bore

			Dimensions			
CZC _{MS}	CZC _{WS}	Ordering code	DCON _{MS}	DCON _{WS}	LF	LSC
6	3.0	393.CGS-06 03 27	6	3.0	3	22
12	3.0	393.CGS-12 03 40	12	3.0	4	25
	4.0	393.CGS-12 04 40	12	4.0	4	25
	5.0	393.CGS-12 05 40	12	5.0	4	25
	6.0	393.CGS-12 06 40	12	6.0	4	32
	7.0	393.CGS-12 07 40	12	7.0	4	33
	8.0	393.CGS-12 08 40	12	8.0	4	33
	9.0	393.CGS-12 09 40	12	9.0	4	33
	10.0	393.CGS-12 10 40	12	10.0	4	36
20	3.0	393.CGS-20 03 52	20	3.0	4	24
	4.0	393.CGS-20 04 52	20	4.0	4	24
	5.0	393.CGS-20 05 52	20	5.0	4	24
	6.0	393.CGS-20 06 52	20	6.0	4	32
	7.0	393.CGS-20 07 52	20	7.0	4	33
	8.0	393.CGS-20 08 52	20	8.0	4	33
	9.0	393.CGS-20 09 52	20	9.0	4	34
	10.0	393.CGS-20 10 52	20	10.0	4	36
	12.0	393.CGS-20 12 52	20	12.0	4	41
	14.0	393.CGS-20 14 52	20	14.0	4	41
	16.0	393.CGS-20 16 52	20	16.0	4	45
	18.0	393.CGS-20 18 52	20	18.0	4	42
25	3.0	393.CGS-25 03 56	25	3.0	4	25
	4.0	393.CGS-25 04 56	25	4.0	4	25
	5.0	393.CGS-25 05 56	25	5.0	4	25
	6.0	393.CGS-25 06 56	25	6.0	4	33
	7.0	393.CGS-25 07 56	25	7.0	4	33
	8.0	393.CGS-25 08 56	25	8.0	4	33
	9.0	393.CGS-25 09 56	25	9.0	4	34
	10.0	393.CGS-25 10 56	25	10.0	4	36
	12.0	393.CGS-25 12 56	25	12.0	4	42
	14.0	393.CGS-25 14 56	25	14.0	4	43
	16.0	393.CGS-25 16 56	25	16.0	4	44
	18.0	393.CGS-25 18 56	25	18.0	4	44
	20.0	393.CGS-25 20 56	25	20.0	4	45
32	8.0	393.CGS-32 08 60	32	8.0	4	33
	10.0	393.CGS-32 10 60	32	10.0	4	36
	12.0	393.CGS-32 12 60	32	12.0	4	41
	14.0	393.CGS-32 14 60	32	14.0	4	42
	16.0	393.CGS-32 16 60	32	16.0	4	44
	18.0	393.CGS-32 18 60	32	18.0	4	45
	20.0	393.CGS-32 20 60	32	20.0	4	46
	25.0	393.CGS-32 25 60	32	25.0	4	53

LSC Clamping length required to achieve sealing effect.

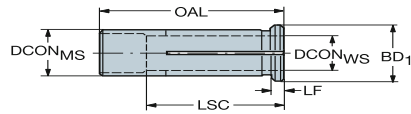
For extractors for cylindrical collets, see page



Q1

Cylindrical sleeves

Metallic sealed for coolant through tool



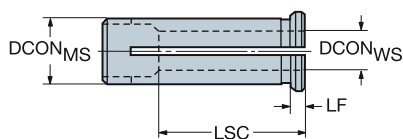
Inch bore

			Dimensions, inch				
CZC _{MS}	CZC _{WS}	Ordering code	DCON _{MS}	DCON _{WS}	BD ₁	LF	OAL
12	1/8	A393.CGS-12 02 40	.472	.125	.630	.157	1.732
	3/16	A393.CGS-12 03 40	.472	.187	.630	.157	1.732
	1/4	A393.CGS-12 04 40	.472	.250	.630	.157	1.732
	5/16	A393.CGS-12 05 40	.472	.313	.630	.157	1.732
	3/8	A393.CGS-12 06 40	.472	.375	.630	.157	1.732
20	1/8	A393.CGS-20 02 52	.787	.125	.984	.157	2.125
	3/16	A393.CGS-20 03 52	.787	.187	.984	.157	2.125
	1/4	A393.CGS-20 04 52	.787	.250	.984	.157	2.125
	5/16	A393.CGS-20 05 52	.787	.313	.984	.157	2.125
	3/8	A393.CGS-20 06 52	.787	.375	.984	.157	2.125
	7/16	A393.CGS-20 07 52	.787	.438	.984	.157	2.125
	1/2	A393.CGS-20 08 52	.787	.500	.984	.157	2.125
	9/16	A393.CGS-20 09 52	.787	.563	.984	.157	2.125
	5/8	A393.CGS-20 10 52	.787	.625	.984	.157	2.125
25	1/8	A393.CGS-25 02 56	.984	.125	1.181	.157	2.362
	3/16	A393.CGS-25 03 56	.984	.187	1.181	.157	2.362
	1/4	A393.CGS-25 04 56	.984	.250	1.181	.157	2.362
	5/16	A393.CGS-25 05 56	.984	.313	1.181	.157	2.362
	3/8	A393.CGS-25 06 56	.984	.375	1.181	.157	2.362
	7/16	A393.CGS-25 07 56	.984	.438	1.181	.157	2.362
	1/2	A393.CGS-25 08 56	.984	.500	1.181	.157	2.362
	9/16	A393.CGS-25 09 56	.984	.563	1.181	.157	2.362
	9	A393.CGS-25 09.2 56	.984	.362	1.181	.157	2.362
	5/8	A393.CGS-25 10 56	.984	.625	1.181	.157	2.362
	11/16	A393.CGS-25 11 56	.984	.687	1.181	.157	2.362
	3/4	A393.CGS-25 12 56	.984	.750	1.181	.157	2.362
	13/16	A393.CGS-25 13 56	.984	.813	1.181	.157	2.362
	18	A393.CGS-25 18.7 56	.984	.736	1.181	.157	2.362
32	3/16	A393.CGS-32 03 60	1.260	.187	1.417	.157	2.519
	1/4	A393.CGS-32 04 60	1.260	.250	1.417	.157	2.519
	5/16	A393.CGS-32 05 60	1.260	.313	1.417	.157	2.519
	3/8	A393.CGS-32 06 60	1.260	.375	1.417	.157	2.519
	7/16	A393.CGS-32 07 60	1.260	.438	1.417	.157	2.519
	1/2	A393.CGS-32 08 60	1.260	.500	1.417	.157	2.519
	9/16	A393.CGS-32 09 60	1.260	.563	1.417	.157	2.519
	5/8	A393.CGS-32 10 60	1.260	.625	1.417	.157	2.519
	11/16	A393.CGS-32 11 60	1.260	.687	1.417	.157	2.519
	3/4	A393.CGS-32 12 60	1.260	.750	1.417	.157	2.519
	13/16	A393.CGS-32 13 60	1.260	.813	1.417	.157	2.519
	7/8	A393.CGS-32 14 60	1.260	.875	1.417	.157	2.519
	15/16	A393.CGS-32 15 60	1.260	.938	1.417	.157	2.519
	1	A393.CGS-32 16 60	1.260	1.000	1.417	.157	2.519
	18	A393.CGS-32 18.7 60	1.260	.736	1.417	.157	2.519

For extractors for cylindrical collets, see page

Cylindrical sleeves

Coolant through sleeve



Metric bore

			Dimensions			
CZC _{MS}	CZC _{WS}	Ordering code	DCON _{MS}	DCON _{WS}	LF	LSC
12	2.9	393.CG-12 02.9 40	12	2.9	4	25
	3.0	393.CG-12 03 40	12	3.0	4	25
	3.8	393.CG-12 03.8 40	12	3.8	4	25
	4.0	393.CG-12 04 40	12	4.0	4	25
	4.8	393.CG-12 04.8 40	12	4.8	4	25
	5.0	393.CG-12 05 40	12	5.0	4	25
	5.8	393.CG-12 05.8 40	12	5.8	4	32
	6.0	393.CG-12 06 40	12	6.0	4	32
	7.0	393.CG-12 07 40	12	7.0	4	33
	7.8	393.CG-12 07.8 40	12	7.8	4	33
16	8.0	393.CG-12 08 40	12	8.0	4	33
	9.0	393.CG-12 09 40	12	9.0	4	33
	10.0	393.CG-12 10 40	12	10.0	4	36
	6.0	393.CG-16 06 50	16	6.0	4	32
	8.0	393.CG-16 08 50	16	8.0	4	32
	10.0	393.CG-16 10 50	16	10.0	4	36
	12.0	393.CG-16 12 50	16	12.0	4	36
	3.0	393.CG-20 03 52	20	3.0	4	24
	4.0	393.CG-20 04 52	20	4.0	4	24
	5.0	393.CG-20 05 52	20	5.0	4	24
20	6.0	393.CG-20 06 52	20	6.0	4	32
	7.0	393.CG-20 07 52	20	7.0	4	33
	8.0	393.CG-20 08 52	20	8.0	4	33
	9.0	393.CG-20 09 52	20	9.0	4	34
	9.7	393.CG-20 09.7 50	20	9.7	4	41
	10.0	393.CG-20 10 52	20	10.0	4	36
	11.7	393.CG-20 11.7 50	20	11.7	4	45
	12.0	393.CG-20 12 52	20	12.0	4	41
	14.0	393.CG-20 14 52	20	14.0	4	41
	15.7	393.CG-20 15.7 50	20	15.7	4	48
25	16.0	393.CG-20 16 52	20	16.0	4	44
	3.0	393.CG-25 03 56	25	3.0	4	25
	4.0	393.CG-25 04 56	25	4.0	4	25
	5.0	393.CG-25 05 56	25	5.0	4	25
	6.0	393.CG-25 06 56	25	6.0	4	33
	7.0	393.CG-25 07 56	25	7.0	4	33
	8.0	393.CG-25 08 56	25	8.0	4	33
	9.0	393.CG-25 09 56	25	9.0	4	34
	9.7	393.CG-25 09.7 56	25	9.7	4	38
	10.0	393.CG-25 10 56	25	10.0	4	36
32	11.7	393.CG-25 11.7 56	25	11.7	4	41
	12.0	393.CG-25 12 56	25	12.0	4	42
	14.0	393.CG-25 14 56	25	14.0	4	43
	15.7	393.CG-25 15.7 56	25	15.7	4	48
	16.0	393.CG-25 16 56	25	16.0	4	44
	18.0	393.CG-25 18 56	25	18.0	4	44
	19.7	393.CG-25 19.7 56	25	19.7	4	50
	20.0	393.CG-25 20 56	25	20.0	4	46

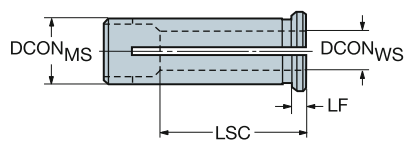
For extractors for cylindrical collets, see page



Q1

Cylindrical sleeves

Coolant through sleeve



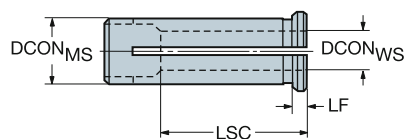
Metric bore

			Dimensions			
CZC _{MS}	CZC _{WS}	Ordering code	DCON _{MS}	DCON _{WS}	LF	LSC
32	6.0	393.CG-32 06 60	32	6.0	4	33
	8.0	393.CG-32 08 60	32	8.0	4	33
	10.0	393.CG-32 10 60	32	10.0	4	36
	12.0	393.CG-32 12 60	32	12.0	4	41
	14.0	393.CG-32 14 60	32	14.0	4	42
	15.7	393.CG-32 15.7 60	32	15.7	4	47
	16.0	393.CG-32 16 60	32	16.0	4	44
	18.0	393.CG-32 18 60	32	18.0	4	45
	19.7	393.CG-32 19.7 60	32	19.7	4	50
	20.0	393.CG-32 20 60	32	20.0	4	46
	24.7	393.CG-32 24.7 60	32	24.7	4	56
	25.0	393.CG-32 25 60	32	25.0	4	53

For extractors for cylindrical collets, see page

Cylindrical sleeves

Coolant through sleeve



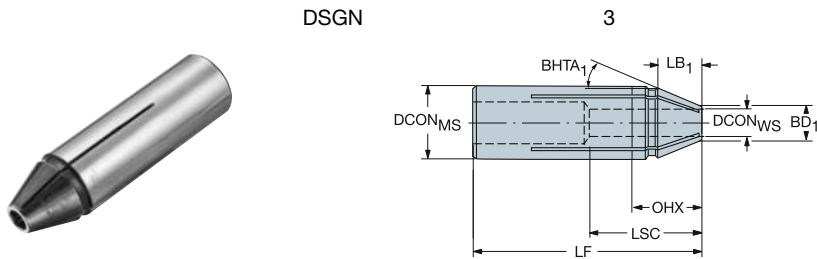
Inch bore

			Dimensions, inch				
CZC _{MS}	CZC _{WS}	Ordering code	DCON _{MS}	DCON _{WS}	BD ₁	LF	OAL
12	1/4	A393.CG-12 04 40	.472	.250	.630	.157	1.732
	3/8	A393.CG-12 06 40	.472	.375	.630	.157	1.732
20	1/4	A393.CG-20 04 52	.787	.250	.984	.157	2.125
	3/8	A393.CG-20 06 52	.787	.375	.984	.157	2.125
	1/2	A393.CG-20 08 52	.787	.500	.984	.157	2.125
	9	A393.CG-20 09.2 50	.787	.362	.984	.157	2.125
25	5/8	A393.CG-20 10 52	.787	.625	.984	.157	2.125
	1/4	A393.CG-25 04 56	.984	.250	1.181	.157	2.362
	3/8	A393.CG-25 06 56	.984	.375	1.181	.157	2.362
	1/2	A393.CG-25 08 56	.984	.500	1.181	.157	2.362
	9	A393.CG-25 09.2 56	.984	.362	1.181	.157	2.362
	5/8	A393.CG-25 10 56	.984	.625	1.181	.157	2.362
	3/4	A393.CG-25 12 56	.984	.750	1.181	.157	2.362
	18	A393.CG-25 18.7 56	.984	.736	1.181	.157	2.362
32	1/4	A393.CG-32 04 60	1.260	.250	1.417	.157	2.519
	3/8	A393.CG-32 06 60	1.260	.375	1.417	.157	2.519
	1/2	A393.CG-32 08 60	1.260	.500	1.417	.157	2.519
	5/8	A393.CG-32 10 60	1.260	.625	1.417	.157	2.519
	3/4	A393.CG-32 12 60	1.260	.750	1.417	.157	2.519
	1	A393.CG-32 16 60	1.260	1.000	1.417	.157	2.519
18		A393.CG-32 18.7 60	1.260	.736	1.417	.157	2.519

For extractors for cylindrical collets, see page

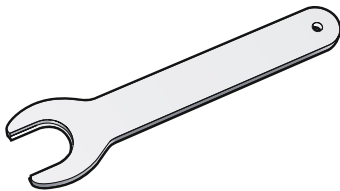
Cylindrical sleeves

Pencil type



				Dimensions							
CZC _{MS}	CZC _{WS}	DSGN	Ordering code	DCON _{MS}	DCON _{WS}	LF	LB ₁	BD ₁	CNSC	CP Bar	Kg
20	6	3	393.CGP-20 06 72	20	6	72.0	14.1	9	1	80	0.1
	8	3	393.CGP-20 08 72	20	8	72.0	13.9	11	1	80	0.1
	10	3	393.CGP-20 10 72	20	10	72.0	13.6	13	1	80	0.1
	12	3	393.CGP-20 12 72	20	12	72.0	13.2	15	1	80	0.1

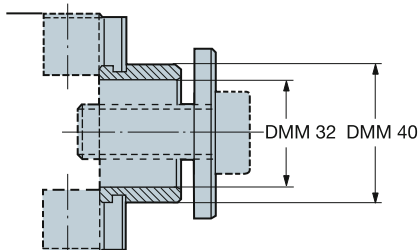
Extractor for cylindrical sleeves



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

Sleeve set

Silent Tools



Ordering code

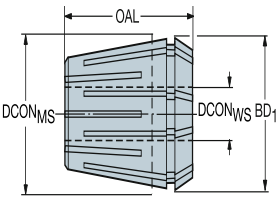
5638 035-011



Q1

ER collet

Metallic sealed for coolant through tool
Compatible with DIN 6499-B



Metric bore

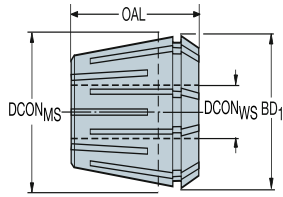
			Dimensions, mm, inch	
CZCMS	CZCWS	Ordering code	OAL	BD1
ER16	3 (h9)	393.15-16 03	27	17
			1.083	.669
	4 (h9)	393.15-16 04	27	17
			1.083	.669
	5.0 - 4.5	393.15-16 05	27	17
			1.083	.669
	6.0 - 5.5	393.15-16 06	27	17
			1.083	.669
	8.0 - 7.5	393.15-16 08	27	17
			1.083	.669
	10.0 - 9.5	393.15-16 10	27	17
			1.083	.669
ER20	3 (h9)	393.15-20 03	31	21
			1.240	.827
	4 (h9)	393.15-20 04	31	21
			1.240	.827
	5 (h9)	393.15-20 05	31	21
			1.240	.827
	6 (h9)	393.15-20 06	31	21
			1.240	.827
	8.0 - 7.5	393.15-20 08	31	21
			1.240	.827
ER25	10.0 - 9.5	393.15-20 10	31	21
			1.240	.827
	12.0 - 11.5	393.15-20 12	31	21
			1.240	.827
	6 (h9)	393.15-25 06	34	26
			1.339	1.024
	8.0 - 7.5	393.15-25 08	34	26
			1.339	1.024
	10.0 - 9.5	393.15-25 10	34	26
			1.339	1.024
	12.0 - 11.5	393.15-25 12	34	26
			1.339	1.024
	14.0 - 13.5	393.15-25 14	34	26
			1.339	1.024
	16.0 - 15.5	393.15-25 16	34	26
			1.339	1.024



ER collet

Metallic sealed for coolant through tool

Compatible with DIN 6499-B



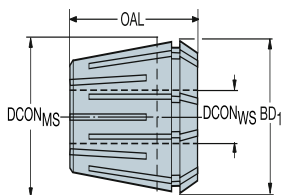
Metric bore

			Dimensions, mm, inch	
CZC _{MS}	CZC _{WS}	Ordering code	OAL	BD ₁
ER32	6 (h9)	393.15-32 06	40	33
			1.575	1.299
	8.0 - 7.5	393.15-32 08	40	33
			1.575	1.299
	10.0 - 9.5	393.15-32 10	40	33
			1.575	1.299
	12.0 - 11.5	393.15-32 12	40	33
			1.575	1.299
	14.0 - 13.5	393.15-32 14	40	33
			1.575	1.299
ER40	6 (h9)	393.15-40 06	46	41
			1.811	1.614
	8 (h9)	393.15-40 08	46	41
			1.811	1.614
	10.0 - 9.5	393.15-40 10	46	41
			1.811	1.614
	12.0 - 11.5	393.15-40 12	46	41
			1.811	1.614
	14.0 - 13.5	393.15-40 14	46	41
			1.811	1.614
ER50	16.0 - 15.5	393.15-40 16	46	41
			1.811	1.614
	18.0 - 17.5	393.15-40 18	46	41
			1.811	1.614
	20.0 - 19.5	393.15-40 20	46	41
			1.811	1.614
	22.0 - 21.5	393.15-40 22	46	41
			1.811	1.614
	24.0 - 23.5	393.15-40 24	46	41
			1.811	1.614
ER63	25.0 - 24.5	393.15-40 25	46	41
			1.811	1.614

ER collet

Metallic sealed for coolant through tool

Compatible with DIN 6499-B



Inch bore

			Dimensions, inch	
CZC _{MS}	CZC _{WS}	Ordering code	OAL	BD ₁
ER16	.2500 - .2303	A393.15-16 1/4	1.082	.669
	.3125 - .2929	A393.15-16 5/16	1.082	.669
	.3750 - .3556	A393.15-16 3/8	1.082	.669
	1/8 (h9)	A393.15-16 1/8	1.082	.669
	3/16 (h9)	A393.15-16 3/16	1.082	.669
ER20	5/32 (h9)	A393.15-16 5/32	1.082	.669
	.3125 - .2929	A393.15-20 5/16	1.240	.827
	.3750 - .3556	A393.15-20 3/8	1.240	.827
	.5000 - .4803	A393.15-20 1/2	1.240	.827
	1/4 (h9)	A393.15-20 1/4	1.240	.827
ER25	1/8 (h9)	A393.15-20 1/8	1.240	.827
	3/16 (h9)	A393.15-20 3/16	1.240	.827
	5/32 (h9)	A393.15-20 5/32	1.240	.827
	.3125 - .2929	A393.15-25 5/16	1.338	1.024
	.3750 - .3556	A393.15-25 3/8	1.338	1.024
ER32	.5000 - .4803	A393.15-25 1/2	1.338	1.024
	.6250 - .6055	A393.15-25 5/8	1.338	1.024
	1/4 (h9)	A393.15-25 1/4	1.338	1.024
	.3125 - .2929	A393.15-32 5/16	1.574	1.299
	.3750 - .3556	A393.15-32 3/8	1.574	1.299
ER40	.5000 - .4803	A393.15-32 1/2	1.574	1.299
	.6250 - .6055	A393.15-32 5/8	1.574	1.299
	.7500 - .7303	A393.15-32 3/4	1.574	1.299
	1/4 (h9)	A393.15-32 1/4	1.574	1.299
	.3750 - .3556	A393.15-40 3/8	1.811	1.614
ER40	.5000 - .4803	A393.15-40 1/2	1.811	1.614
	.6250 - .6055	A393.15-40 5/8	1.811	1.614
	.7500 - .7303	A393.15-40 3/4	1.811	1.614
	1.0000 - .9646	A393.15-40 1	1.811	1.614
	1/4 (h9)	A393.15-40 1/4	1.811	1.614
	5/16 (h9)	A393.15-40 5/16	1.811	1.614

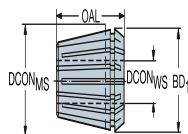


Q1

ER collet

Coolant through collet

Compatible with DIN 6499-B

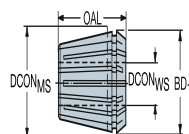


			Dimensions, mm, inch	
CZC _{MS}	CZC _{WS}	Ordering code	OAL	BD ₁
ER8	3.00 - 2.50	393.14-08 0300	13	8
			.535	.335
	3.50 - 3.00	393.14-08 0350	13	8
			.535	.335
	4.00 - 3.50	393.14-08 0400	13	11
			.535	.449
ER11	1.00 - 0.75	393.14-11 0100	18	11
			.709	.449
	1.25 - 1.00	393.14-11 0125	18	11
			.709	.449
	1.50 - 1.25	393.14-11 0150	18	11
			.709	.449
	1.75 - 1.50	393.14-11 0175	18	11
			.709	.449
	2.00 - 1.75	393.14-11 0200	18	11
			.709	.449
	2.25 - 2.00	393.14-11 0225	18	11
			.709	.449
	2.50 - 2.25	393.14-11 0250	18	11
			.709	.449
	3.00 - 2.50	393.14-11 0300	18	11
			.709	.449
	3.50 - 3.00	393.14-11 0350	18	11
			.709	.449
	4.00 - 3.50	393.14-11 0400	18	11
			.709	.449
	4.50 - 4.00	393.14-11 0450	18	11
			.709	.449
	5.00 - 4.50	393.14-11 0500	18	11
			.709	.449
	5.50 - 5.00	393.14-11 0550	18	11
			.709	.449
	6.00 - 5.50	393.14-11 0600	18	11
			.709	.449
	6.50 - 6.00	393.14-11 0650	18	11
			.709	.449
	7.00 - 6.50	393.14-11 0700	18	11
			.709	.449

ER collet

Coolant through collet

Compatible with DIN 6499-B



			Dimensions, mm, inch	
CZC _{MS}	CZC _{WS}	Ordering code	OAL	BD ₁
ER16	1.0 - 0.5	393.14-16 0100	27	17
			1.083	.669
	1.5 - 1.0	393.14-16 0150	27	17
			1.083	.669
	2.0 - 1.0	393.14-16 0200	27	17
			1.083	.669
	2.5 - 1.5	393.14-16 0250	27	17
			1.083	.669
	3.0 - 2.0	393.14-16 0300	27	17
			1.083	.669
	4.0 - 3.0	393.14-16 0400	27	17
			1.083	.669
	5.0 - 4.0	393.14-16 0500	27	17
			1.083	.669
	6.0 - 5.0	393.14-16 0600	27	17
			1.083	.669
ER20	7.0 - 6.0	393.14-16 0700	27	17
			1.083	.669
	8.0 - 7.0	393.14-16 0800	27	17
			1.083	.669
	9.0 - 8.0	393.14-16 0900	27	17
			1.083	.669
	10.0 - 9.0	393.14-16 1000	27	17
			1.083	.669
	1.5 - 1.0	393.14-20 015	31	21
			1.240	.827
	2.0 - 1.5	393.14-20 020	31	21
			1.240	.827
	2.5 - 2.0	393.14-20 025	31	21
			1.240	.827
	3.0 - 2.5	393.14-20 030	31	21
			1.240	.827
	4.0 - 3.0	393.14-20 040	31	21
			1.240	.827
	5.0 - 4.0	393.14-20 050	31	21
			1.240	.827
	6.0 - 5.0	393.14-20 060	31	21
			1.240	.827
	7.0 - 6.0	393.14-20 070	31	21
			1.240	.827
	8.0 - 7.0	393.14-20 080	31	21
			1.240	.827
	9.0 - 8.0	393.14-20 090	31	21
			1.240	.827
	10.0 - 9.0	393.14-20 100	31	21
			1.240	.827
	11.0 - 10.0	393.14-20 110	31	21
			1.240	.827
	12.0 - 11.0	393.14-20 120	31	21
			1.240	.827
	13.0 - 12.0	393.14-20 130	31	21
			1.240	.827

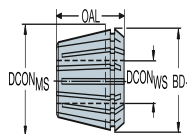


Q1

ER collet

Coolant through collet

Compatible with DIN 6499-B

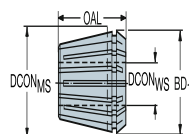


			Dimensions, mm, inch	
CZC _{MS}	CZC _{WS}	Ordering code	OAL	BD ₁
ER25	2.0 - 1.5	393.14-25 020	34	26
			1.339	1.024
	2.5 - 2.0	393.14-25 025	34	26
			1.339	1.024
	3.0 - 2.5	393.14-25 030	34	26
			1.339	1.024
	4.0 - 3.0	393.14-25 040	34	26
			1.339	1.024
	5.0 - 4.0	393.14-25 050	34	26
			1.339	1.024
	6.0 - 5.0	393.14-25 060	34	26
			1.339	1.024
	7.0 - 6.0	393.14-25 070	34	26
			1.339	1.024
	8.0 - 7.0	393.14-25 080	34	26
			1.339	1.024
	9.0 - 8.0	393.14-25 090	34	26
			1.339	1.024
	10.0 - 9.0	393.14-25 100	34	26
			1.339	1.024
	11.0 - 10.0	393.14-25 110	34	26
			1.339	1.024
	12.0 - 11.0	393.14-25 120	34	26
			1.339	1.024
	13.0 - 12.0	393.14-25 130	34	26
			1.339	1.024
	14.0 - 13.0	393.14-25 140	34	26
			1.339	1.024
	15.0 - 14.0	393.14-25 150	34	26
			1.339	1.024
	16.0 - 15.0	393.14-25 160	34	26
			1.339	1.024
ER32	2.5 - 2.0	393.14-32 025	40	33
			1.575	1.299
	3.0 - 2.5	393.14-32 030	40	33
			1.575	1.299
	4.0 - 3.0	393.14-32 040	40	33
			1.575	1.299
	5.0 - 4.0	393.14-32 050	40	33
			1.575	1.299
	6.0 - 5.0	393.14-32 060	40	33
			1.575	1.299
	7.0 - 6.0	393.14-32 070	40	33
			1.575	1.299
	8.0 - 7.0	393.14-32 080	40	33
			1.575	1.299
	9.0 - 8.0	393.14-32 090	40	33
			1.575	1.299
	10.0 - 9.0	393.14-32 100	40	33
			1.575	1.299
	11.0 - 10.0	393.14-32 110	40	33
			1.575	1.299

ER collet

Coolant through collet

Compatible with DIN 6499-B



			Dimensions, mm, inch	
CZC _{MS}	CZC _{WS}	Ordering code	OAL	BD ₁
ER32	12.0 - 11.0	393.14-32 120	40	33
			1.575	1.299
	13.0 - 12.0	393.14-32 130	40	33
			1.575	1.299
	14.0 - 13.0	393.14-32 140	40	33
			1.575	1.299
	15.0 - 14.0	393.14-32 150	40	33
			1.575	1.299
	16.0 - 15.0	393.14-32 160	40	33
			1.575	1.299
	17.0 - 16.0	393.14-32 170	40	33
			1.575	1.299
ER40	18.0 - 17.0	393.14-32 180	40	33
			1.575	1.299
	19.0 - 18.0	393.14-32 190	40	33
			1.575	1.299
	20.0 - 19.0	393.14-32 200	40	33
			1.575	1.299
	4.0 - 3.0	393.14-40 040	46	41
			1.811	1.614
	5.0 - 4.0	393.14-40 050	46	41
			1.811	1.614
	6.0 - 5.0	393.14-40 060	46	41
			1.811	1.614
	7.0 - 6.0	393.14-40 070	46	41
			1.811	1.614
	8.0 - 7.0	393.14-40 080	46	41
			1.811	1.614
	9.0 - 8.0	393.14-40 090	46	41
			1.811	1.614
	10.0 - 9.0	393.14-40 100	46	41
			1.811	1.614
	11.0 - 10.0	393.14-40 110	46	41
			1.811	1.614
	12.0 - 11.0	393.14-40 120	46	41
			1.811	1.614
	13.0 - 12.0	393.14-40 130	46	41
			1.811	1.614
	14.0 - 13.0	393.14-40 140	46	41
			1.811	1.614
	15.0 - 14.0	393.14-40 150	46	41
			1.811	1.614
	16.0 - 15.0	393.14-40 160	46	41
			1.811	1.614
	17.0 - 16.0	393.14-40 170	46	41
			1.811	1.614
	18.0 - 17.0	393.14-40 180	46	41
			1.811	1.614
	19.0 - 18.0	393.14-40 190	46	41
			1.811	1.614
	20.0 - 19.0	393.14-40 200	46	41
			1.811	1.614

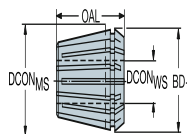


Q1

ER collet

Coolant through collet

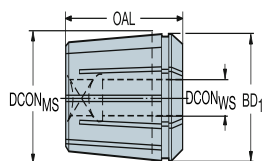
Compatible with DIN 6499-B



			Dimensions, mm, inch	
CZC _{MS}	CZC _{WS}	Ordering code	OAL	BD ₁
ER40	21.0 - 20.0	393.14-40 210	46	41
			1.811	1.614
	22.0 - 21.0	393.14-40 220	46	41
			1.811	1.614
	23.0 - 22.0	393.14-40 230	46	41
			1.811	1.614
	24.0 - 23.0	393.14-40 240	46	41
			1.811	1.614
ER50	25.0 - 24.0	393.14-40 250	46	41
			1.811	1.614
	26.0 - 25.0	393.14-40 260	46	41
			1.811	1.614
	8.0 - 6.0	393.14-50 080	60	52
			2.362	2.047
	10.0 - 8.0	393.14-50 100	60	52
			2.362	2.047
	12.0 - 10.0	393.14-50 120	60	52
			2.362	2.047
	14.0 - 12.0	393.14-50 140	60	52
			2.362	2.047
	16.0 - 14.0	393.14-50 160	60	52
			2.362	2.047
	18.0 - 16.0	393.14-50 180	60	52
			2.362	2.047
	20.0 - 18.0	393.14-50 200	60	52
			2.362	2.047
	22.0 - 20.0	393.14-50 220	60	52
			2.362	2.047
	24.0 - 22.0	393.14-50 240	60	52
			2.362	2.047
	26.0 - 24.0	393.14-50 260	60	52
			2.362	2.047
	28.0 - 26.0	393.14-50 280	60	52
			2.362	2.047
	30.0 - 28.0	393.14-50 300	60	52
			2.362	2.047
	32.0 - 30.0	393.14-50 320	60	52
			2.362	2.047
	34.0 - 32.0	393.14-50 340	60	52
			2.362	2.047

ER Collet for tap shank

Compatible with DIN 6499-B



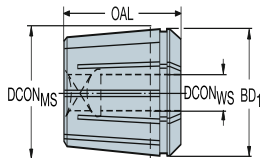
			Dimensions, mm, inch	
CZC _{MS}	CZC _{WS}	Ordering code	OAL	BD ₁
ER11	2.50 x 2.00	393.14-11 D025X021	18	11
			.709	.449
	2.80 x 2.10	393.14-11 D028X021	18	11
			.709	.449
	3.50 x 2.70	393.14-11 D035X027	18	11
			.709	.449
	4.00 x 3.00	393.14-11 D040X030	18	11
			.709	.449
	4.00 x 3.15	393.14-11 D040X0315	18	11
			.709	.449
4.50 x 3.40	393.14-11 D045X034	18	11	
		.709	.449	
5.00 x 4.00	393.14-11 D050X040	18	11	
		.709	.449	
6.00 x 4.90	393.14-11 D060X049	18	11	
		.709	.449	
ER20	4.00 x 3.15	393.14-20 D040X0315	31	21
			1.240	.827
	4.50 x 3.40	393.14-20 D045X034	31	21
			1.240	.827
	5.00 x 4.00	393.14-20 D050X040	31	21
			1.240	.827
	6.00 x 4.90	393.14-20 D060X049	31	21
			1.240	.827
	6.30 x 5.00	393.14-20 D063X050	31	21
			1.240	.827
7.00 x 5.50	393.14-20 D070X055	31	21	
		1.240	.827	
8.00 x 6.30	393.14-20 D080X063	31	21	
		1.240	.827	
9.00 x 7.10	393.14-20 D090X071	31	21	
		1.240	.827	
10.00 x 8.00	393.14-20 D100X080	31	21	
		1.240	.827	
ER25	8.00 x 6.30	393.14-25 D080X063	34	26
			1.339	1.024
	9.00 x 7.10	393.14-25 D090X071	34	26
			1.339	1.024
	10.00 x 8.00	393.14-25 D100X080	34	26
			1.339	1.024
	11.00 x 9.00	393.14-25 D110X090	34	26
			1.339	1.024
	11.20 x 9.00	393.14-25 D112X090	34	26
			1.339	1.024
12.00 x 9.00	393.14-25 D120X090	34	26	
		1.339	1.024	
12.50 x 10.00	393.14-25 D125X100	34	26	
		1.339	1.024	
14.00 x 11.20	393.14-25 D140X112	34	26	
		1.339	1.024	
16.00 x 12.00	393.14-25 D160X120	34	26	
		1.339	1.024	



Q1

ER Collet for tap shank

Compatible with DIN 6499-B



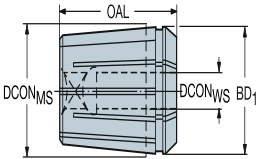
			Dimensions, mm, inch	
CZC _{MS}	CZC _{WS}	Ordering code	OAL	BD ₁
ER40	12.00 x 9.00	393.14-40 D120X090	46	41
			1.811	1.614
	12.50 x 10.00	393.14-40 D125X100	46	41
			1.811	1.614
	14.00 x 11.20	393.14-40 D140X112	46	41
			1.811	1.614
	16.00 x 12.50	393.14-40 D160X125	46	41
			1.811	1.614
	18.00 x 14.50	393.14-40 D180X145	46	41
			1.811	1.614
	20.00 x 16.00	393.14-40 D200X160	46	41
			1.811	1.614
	22.00 x 18.00	393.14-40 D220X180	46	41
			1.811	1.614



Q1

ER Collet for tap shank

For inch standard taps
Compatible with DIN 6499-B

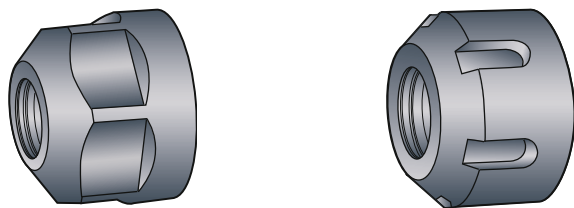


			Dimensions, inch	
CZCMS	CZCWS	Ordering code	OAL	BD1
ER11	.141 x .110	A393.14-11-0-6 NO	.708	.449
	.168 x .131	A393.14-11-8 NO	.708	.449
	.194 x .152	A393.14-11-10 NO	.708	.449
ER20	.168 x .131	A393.14-20-8 NO	1.240	.827
	.194 x .152	A393.14-20-10 NO	1.240	.827
	.220 x .165	A393.14-20-12 NO	1.240	.827
	.255 x .191	A393.14-20-1/4	1.240	.827
	.318 x .238	A393.14-20-5/16	1.240	.827
	.381 x .286	A393.14-20-3/8	1.240	.827
ER25	.255 x .191	A393.14-25-1/4	1.338	1.024
	.318 x .238	A393.14-25-5/16	1.338	1.024
	.323 x .242	A393.14-25-7/16	1.338	1.024
	.367 x .275	A393.14-25-1/2	1.338	1.024
	.381 x .286	A393.14-25-3/8	1.338	1.024
	.429 x .322	A393.14-25-9/16	1.338	1.024
	.480 x .360	A393.14-25-5/8	1.338	1.024
ER40	.590 x .442	A393.14-25-3/4	1.338	1.024
	.480 x .360	A393.14-40-5/8	1.811	1.614
	.590 x .442	A393.14-40-3/4	1.811	1.614
	.697 x .523	A393.14-40-7/8	1.811	1.614
	.800 x .600	A393.14-40-1	1.811	1.614



Q1

ER collet nut



ER collet nut

CZC	Ordering code	TDZ	Wrench	
ER11	5533 050-07	M14 x 0.75	5680 091-03	
ER16	5533 050-06	M22 x 1.5	5680 091-01	
ER20	5533 050-08	M25 x 1.5	5680 091-02	
ER25	5533 050-02	M32 x 1.5	5680 096-02	
ER32	5533 050-03	M40 x 1.5	5680 096-03	
ER40	5533 050-04	M50 x 1.5	5680 096-04	
ER50	5533 050-05	M64 x 2	5680 096-05	

ER collet nut Mini

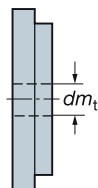
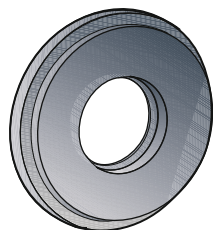
CZC	Ordering code	TDZ	Wrench	
ER8	5533 065-04	M10 x 0.75	5680 098-04	
ER11	5533 065-02	M13 x 0.75	5680 098-02	
ER16	5533 065-03	M19 x 1	5680 098-03	
ER20	5533 065-01	M24 x 1	5680 098-01	

ER collet nuts for through coolant

CZC	Ordering code	TDZ	Wrench	
ER16	5533 051-01	M22 x 1.5	5680 091-01	
ER20	5533 051-02	M25 x 1.5	5680 091-02	
ER25	5533 051-03	M32 x 1.5	5680 096-02	
ER32	5533 051-04	M40 x 1.5	5680 096-03	
ER40	5533 051-05	M50 x 1.5	5680 096-04	

ER Collet sealing discs
See page P32

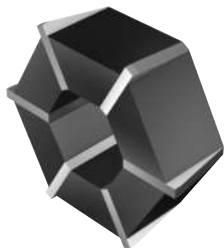
ER Collet sealing discs



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

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

Rubber collet for tap shanks

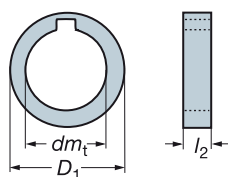


		Ordering code	Dimensions			
CZC _{MS}	CZC _{WS}		DCON _{MS}	DCON _{WS}	LF	BD ₁
J42x	3.5-6.5 (J42x)	391.60A-OZ J421	23	6	0	23
	6.5-10 (J42x)	391.60A-OZ J422	23	10	0	23
J44x	7-13 (J44x)	391.60A-OZ J440	28	13	0	30
	2.8-7.0 (J44x)	391.60A-OZ J443	28	7	0	32
J46x	10-16 (J46x)	391.60A-OZ J461	44	16	0	44
	16-23 (J46x)	391.60A-OZ J462	44	23	0	44

Spacing collars

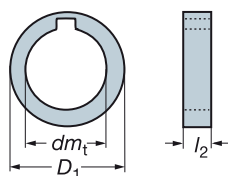
For milling adapter 391.10

ISO 839/2 1977



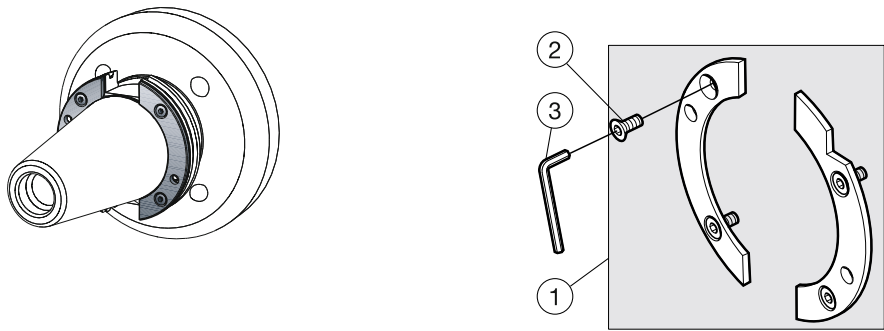
Ordering code	For adapter	Dimensions, mm, inch												
		l_2	0.5	1.0	1.5	2.0	3.0	4.0	5.0	6.0	10.0	20.0	30.0	
		.020	.039	.059	.079	.118	.157	.197	.236	.394	.787	1.181		
		dm_1	D_1	D_1	D_1	D_1	D_1	D_1	D_1	D_1	D_1	D_1	D_1	
5549 091-011	391.10-16...	16	25	25	25	27	27	27	27	27	27	27	—	
		.630	.984	.984	.984	1.024	1.024	1.024	1.024	1.024	1.024	1.024	—	
5549 091-021	391.10-22...	22	33	33	33	34	34	34	34	34	34	34	34	
		.866	1.299	1.299	1.299	1.339	1.339	1.339	1.339	1.339	1.339	1.339	1.339	
5549 091-031	391.10-27...	27	39	39	39	40	40	40	40	40	40	40	40	
		1.063	1.535	1.535	1.535	1.575	1.575	1.575	1.575	1.575	1.575	1.575	1.575	
5549 091-041	391.10-32...	32	45	45	45	46	46	46	46	46	46	46	46	
		1.260	1.772	1.772	1.772	1.811	1.811	1.811	1.811	1.811	1.811	1.811	1.811	
5549 091-051	391.10-40...	40	54	54	54	55	55	55	55	55	55	55	55	
		1.575	2.126	2.126	2.126	2.165	2.165	2.165	2.165	2.165	2.165	2.165	2.165	
5549 091-061	391.10-50...	50	67	67	—	68	68	68	68	68	68	68	68	
		1.969	2.638	2.638	—	2.677	2.677	2.677	2.677	2.677	2.677	2.677	2.677	
5549 091-071	391.10-60...	60	84	84	—	84	84	84	84	84	84	84	84	
		2.362	3.307	3.307	—	3.307	3.307	3.307	3.307	3.307	3.307	3.307	3.307	

For milling adapter A391.10



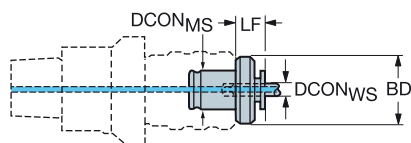
For adapter	Dimensions, inch											
	dm_t	D_1	BKW	l_2 1/4	3/8	7/16	1/2	5/8	3/4	1	1 1/2	
Cx-A391.10-25 xxx	1.000	1.500	1/4	-	-	SC40	SC40	SC41	-	-	-	
Cx-A391.10-31 xxx	1.250	1.750	5/16	-	SC50	-	SC50	-	-	SC51	-	
Cx-A391.10-38 xxx	1.500	2.125	3/8	SC60	SC60	-	SC60	-	-	SC61	-	
Cx-A391.10-50 xxx	2.000	2.750	1/2	-	SC80	-	-	-	SC81	SC81	-	
Cx-A391.10-63 xxx	2.500	3.250	5/8	SC90	SC90	-	-	-	SC91	SC91	SC92	

Shim set



1	2	3
Shim set	Screw	Key
5549 128-50	3213 011-256	3021 010-025 (2.5)

quick change adapter



Metric version

			Dimensions, mm, inch							
CZC _{MS}	CZC _{WS}	Ordering code	DCON _{MS}	DCON _{WS}	LF	CNSC	CXSC	CP BarPSI	 Kg	
1	3.15 x 2.24	393.03-SE1 D0315X022	19.0	3.2	7.0	1	1	80	0.10	
			.748	.124	.276			1160		
	4.00 x 3.15	393.03-SE1 D040X031	19.0	4.0	7.0	1	1	80	0.10	
			.748	.157	.276			1160		
	5.00 x 4.00	393.03-SE1 D050X040	19.0	5.0	7.0	1	1	80	0.10	
			.748	.197	.276			1160		
	6.30 x 5.00	393.03-SE1 D063X050	19.0	6.3	7.0	1	1	80	0.10	
			.748	.248	.276			1160		
	4.50 x 3.40	393.03-SE1 D045X034	19.0	4.5	7.0	1	1	80	0.10	
			.748	.177	.276			1160		
M	8.00 x 6.30	393.03-SE1 D080X063	19.0	8.0	7.0	1	1	80	0.10	
			.748	.315	.276			1160		
	9.00 x 7.10	393.03-SE1 D090X071	19.0	9.0	7.0	1	1	80	0.10	
			.748	.354	.276			1160		
	6.00 x 4.90	393.03-SE1 D060X049	19.0	6.0	7.0	1	1	80	0.10	
			.748	.236	.276			1160		
	10.00 x 8.00	393.03-SE1 D100X080	19.0	10.0	7.0	1	1	80	0.10	
			.748	.394	.276			1160		
	7.00 x 5.50	393.03-SE1 D070X055	19.0	7.0	7.0	1	1	80	0.10	
			.748	.276	.276			1160		
N	8.00 x 6.20	393.03-SE1 D080X062	19.0	8.0	7.0	1	1	80	0.10	
			.748	.315	.276			1160		
	9.00 x 7.00	393.03-SE1 D090X070	19.0	9.0	7.0	1	1	80	0.10	
			.748	.354	.276			1160		
	2	6.30 x 5.00	393.03-SE2 D063X050	31.0	6.3	11.0	1	1	80	0.10
				1.220	.248	.433			1160	
	8.00 x 6.30	393.03-SE2 D080X063	31.0	8.0	11.0	1	1	80	0.30	
			1.220	.315	.433			1160		
	9.00 x 7.10	393.03-SE2 D090X071	31.0	9.0	11.0	1	1	80	0.30	
			1.220	.354	.433			1160		
O	6.00 x 4.90	393.03-SE2 D060X049	31.0	6.0	11.0	1	1	80	0.10	
			1.220	.236	.433			1160		
	10.00 x 8.00	393.03-SE2 D100X080	31.0	10.0	11.0	1	1	80	0.30	
			1.220	.394	.433			1160		
	7.00 x 5.50	393.03-SE2 D070X055	31.0	7.0	11.0	1	1	80	0.30	
			1.220	.276	.433			1160		
	11.20 x 9.00	393.03-SE2 D112X090	31.0	11.2	11.0	1	1	80	0.30	
			1.220	.441	.433			1160		
	8.00 x 6.20	393.03-SE2 D080X062	31.0	8.0	11.0	1	1	80	0.30	
			1.220	.315	.433			1160		
P	12.50 x 10.00	393.03-SE2 D125X100	31.0	12.5	11.0	1	1	80	0.30	
			1.220	.492	.433			1160		
	9.00 x 7.00	393.03-SE2 D090X070	31.0	9.0	11.0	1	1	80	0.30	
			1.220	.354	.433			1160		
	14.00 x 11.20	393.03-SE2 D140X112	31.0	14.0	11.0	1	1	80	0.30	
			1.220	.551	.433			1160		
	11.00 x 9.00	393.03-SE2 D110X090	31.0	11.0	11.0	1	1	80	0.30	
			1.220	.433	.433			1160		
	12.00 x 9.00	393.03-SE2 D120X090	31.0	12.0	11.0	1	1	80	0.30	
			1.220	.472	.433			1160		
Q	14.00 x 11.00	393.03-SE2 D140X110	31.0	14.0	11.0	1	1	80	0.30	
			1.220	.551	.433			1160		
	16.00 x 12.00	393.03-SE2 D160X120	31.0	16.0	11.0	1	1	80	0.30	
			1.220	.630	.433			1160		

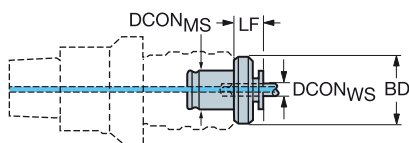


Q1



Q35

quick change adapter



Inch version

			Dimensions, mm, inch								
CZC _{MS}	CZC _{WS}	Ordering code	DCON _{MS}	DCON _{WS}	LF	BD ₁	CNSC	CXSC	CP Bar/PSI		
1	.141 x .110	393.03-SE1 D036X027	19.0	3.6	7.0	30.0	1	1	80	0.10	
			.748	.141	.276	1.181			1160		
	.168 x .131	393.03-SE1 D042X033	19.0	4.3	7.0	30.0	1	1	80	0.10	
			.748	.168	.276	1.181			1160		
	.194 x .152	393.03-SE1 D049X038	19.0	4.9	7.0	30.0	1	1	80	0.10	
			.748	.194	.276	1.181			1160		
	.220 x .165	393.03-SE1 D055X041	19.0	5.6	7.0	30.0	1	1	80	0.10	
			.748	.220	.276	1.181			1160		
	.255 x .191	393.03-SE1 D064X048	19.0	6.5	7.0	30.0	1	1	80	0.10	
			.748	.255	.276	1.181			1160		
	.313 x .234	393.03-SE1 D079X059	19.0	8.0	7.0	30.0	1	1	80	0.10	
			.748	.313	.276	1.181			1160		
	.318 x .238	393.03-SE1 D080X060	19.0	8.1	7.0	30.0	1	1	80	0.10	
			.748	.318	.276	1.181			1160		
	.323 x .242	393.03-SE1 D082X061	19.0	8.2	7.0	30.0	1	1	80	0.10	
			.748	.323	.276	1.181			1160		
	.367 x .275	393.03-SE1 D093X069	19.0	9.3	7.0	30.0	1	1	80	0.10	
			.748	.367	.276	1.181			1160		
	.381 x .286	393.03-SE1 D096X072	19.0	9.7	7.0	30.0	1	1	80	0.10	
			.748	.381	.276	1.181			1160		
2	.255 x .191	393.03-SE2 D064X048	31.0	6.5	11.0	48.0	1	1	80	0.20	
			1.220	.255	.433	1.890			1160		
	.318 x .238	393.03-SE2 D080X060	31.0	8.1	11.0	48.0	1	1	80	0.20	
			1.220	.318	.433	1.890			1160		
	.323 x .242	393.03-SE2 D082X061	31.0	8.2	11.0	48.0	1	1	80	0.20	
			1.220	.323	.433	1.890			1160		
	.367 x .275	393.03-SE2 D093X069	31.0	9.3	11.0	48.0	1	1	80	0.20	
			1.220	.367	.433	1.890			1160		
	.381 x .286	393.03-SE2 D096X072	31.0	9.7	11.0	48.0	1	1	80	0.20	
			1.220	.381	.433	1.890			1160		
	.429 x .322	393.03-SE2 D109X082	31.0	10.9	11.0	48.0	1	1	80	0.20	
			1.220	.429	.433	1.890			1160		
	.437 x .328	393.03-SE2 D111X083	31.0	11.1	11.0	48.0	1	1	80	0.20	
			1.220	.437	.433	1.890			1160		
	.480 x .360	393.03-SE2 D121X091	31.0	12.2	11.0	48.0	1	1	80	0.20	
			1.220	.480	.433	1.890			1160		
	.562 x .421	393.03-SE2 D143X107	31.0	14.3	11.0	48.0	1	1	80	0.20	
			1.220	.562	.433	1.890			1160		
	.590 x .442	393.03-SE2 D149X112	31.0	15.0	11.0	48.0	1	1	80	0.20	
			1.220	.590	.433	1.890			1160		
.687 x .515	393.03-SE2 D175X131	31.0	17.4	11.0	48.0	1	1	80	0.20		
		1.220	.687	.433	1.890			1160			
.697 x .523	393.03-SE2 D177X132	31.0	17.7	11.0	48.0	1	1	80	0.20		
		1.220	.697	.433	1.890			1160			
.700 x .531	393.03-SE2 D178X135	31.0	17.8	11.0	48.0	1	1	80	0.20		
		1.220	.700	.433	1.890			1160			

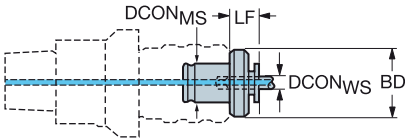


Q1



Q35

quick change adapter



Inch version

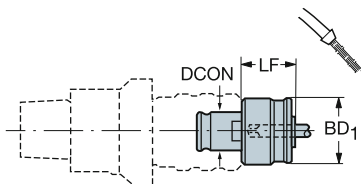
		Dimensions, mm, inch									
CZC _{MS}	CZC _{WS}	Ordering code	DCON _{MS}	DCON _{WS}	LF	BD ₁	CNSC	CXSC	CP BarPSI	 Kg	
3	.590 x .442	393.03-SE3 D149X112	48.0	15.0	14.0	70.0	1	1	80	0.80	
			1.890	.590	.551	2.756			1160		
	.687 x .515	393.03-SE3 D175X131	48.0	17.4	14.0	70.0	1	1	80	0.80	
			1.890	.687	.551	2.756			1160		
	.697 x .523	393.03-SE3 D177X132	48.0	17.7	14.0	70.0	1	1	80	0.80	
			1.890	.697	.551	2.756			1160		
	.700 x .531	393.03-SE3 D178X135	48.0	17.8	14.0	70.0	1	1	80	0.80	
			1.890	.700	.551	2.756			1160		
	.800 x .600	393.03-SE3 D203X152	48.0	20.3	14.0	70.0	1	1	80	0.80	
			1.890	.800	.551	2.756			1160		
	.906 x .679	393.03-SE3 D230X172	48.0	23.0	14.0	70.0	1	1	80	0.80	
			1.890	.906	.551	2.756			1160		
	1.125 x .843	393.03-SE3 D286X214	48.0	28.6	14.0	70.0	1	1	80	0.80	
			1.890	1.125	.551	2.756			1160		

 Q1

 Q35

quick change adapter

with friction clutch and for external / internal coolant supply



			Dimensions, mm, inch							
CZC _{MS}	CZC _{WS}	Ordering code	DCON _{MS}	DCON _{WS}	LF	CNSC	CXSC	CP Bar	CP PSI	Kg
1	3.15 x 2.50	393.03-SES1 D031X025	19.00	3.15	25.0	1	1	80		0.2
			.748	.124	.984			1160		
	4.00 x 3.15	393.03-SES1 D040X031	19.00	4.00	25.0	1	1	80		0.2
			.748	.157	.984			1160		
	4.50 x 3.55	393.03-SES1 D045X035	19.00	4.50	25.0	1	1	80		0.2
			.748	.177	.984			1160		
	5.00 x 4.00	393.03-SES1 D050X040	19.00	5.00	25.0	1	1	80		0.2
			.748	.197	.984			1160		
	3.50 x 2.70	393.03-SES1 D035X027	19.00	3.50	25.0	1	1	80		0.2
			.748	.138	.984			1160		
	6.30 x 5.00	393.03-SES1 D063X050	19.00	6.30	25.0	1	1	80		0.2
			.748	.248	.984			1160		
	4.00 x 3.00	393.03-SES1 D040X030	19.00	4.00	25.0	1	1	80		0.2
			.748	.157	.984			1160		
	4.50 x 3.40	393.03-SES1 D045X034	19.00	4.50	25.0	1	1	80		0.2
			.748	.177	.984			1160		
	8.00 x 6.30	393.03-SES1 D080X063	19.00	8.00	25.0	1	1	80		0.2
			.748	.315	.984			1160		
	9.00 x 7.10	393.03-SES1 D090X071	19.00	9.00	25.0	1	1	80		0.2
			.748	.354	.984			1160		
2	6.00 x 4.90	393.03-SES1 D060X049	19.00	6.00	25.0	1	1	80		0.2
			.748	.236	.984			1160		
	10.00 x 8.00	393.03-SES1 D100X080	19.00	10.00	25.0	1	1	80		0.2
			.748	.394	.984			1160		
	7.00 x 5.50	393.03-SES1 D070X055	19.00	7.00	25.0	1	1	80		0.2
			.748	.276	.984			1160		
	8.00 x 6.20	393.03-SES1 D080X062	19.00	8.00	25.0	1	1	80		0.2
			.748	.315	.984			1160		
	9.00 x 7.00	393.03-SES1 D090X070	19.00	9.00	25.0	1	1	80		0.2
			.748	.354	.984			1160		
	8.00 x 6.30	393.03-SES2 D080X063	31.00	8.00	34.0	1	1	80		0.6
			1.220	.315	1.339			1160		
	9.00 x 7.10	393.03-SES2 D090X071	31.00	9.00	34.0	1	1	80		0.6
			1.220	.354	1.339			1160		
	6.00 x 4.90	393.03-SES2 D060X049	31.00	6.00	34.0	1	1	80		0.6
			1.220	.236	1.339			1160		
	10.00 x 8.00	393.03-SES2 D100X080	31.00	10.00	34.0	1	1	80		0.6
			1.220	.394	1.339			1160		
	7.00 x 5.50	393.03-SES2 D070X055	31.00	7.00	34.0	1	1	80		0.6
			1.220	.276	1.339			1160		
P	11.20 x 9.00	393.03-SES2 D112X090	31.00	11.20	34.0	1	1	80		0.6
			1.220	.441	1.339			1160		
	8.00 x 6.20	393.03-SES2 D080X062	31.00	8.00	34.0	1	1	80		0.6
			1.220	.315	1.339			1160		
	12.50 x 10.00	393.03-SES2 D125X100	31.00	12.50	34.0	1	1	80		0.6
			1.220	.492	1.339			1160		
	9.00 x 7.00	393.03-SES2 D090X070	31.00	9.00	34.0	1	1	80		0.6
			1.220	.354	1.339			1160		
	14.00 x 11.20	393.03-SES2 D140X112	31.00	14.00	34.0	1	1	80		0.6
			1.220	.551	1.339			1160		
Q	11.00 x 9.00	393.03-SES2 D110X090	31.00	11.00	34.0	1	1	80		0.6
			1.220	.433	1.339			1160		

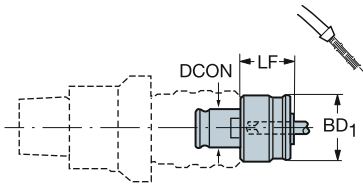


Q1

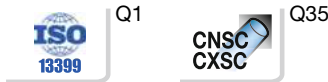


Q35

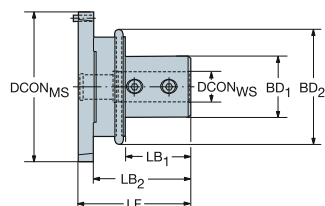
quick change adapter
with friction clutch and for external / internal coolant supply



			Dimensions, mm, inch							CP 	CP 	
CZC _{MS}	CZC _{WS}	Ordering code	DCON _{MS}	DCON _{WS}	LF	CNSC	CXSC			Bar	PSI	
2	12.00 x 9.00	393.03-SES2 D120X090	31.00	12.00	34.0	1	1	80				0.6
			1.220	.472	1.339			1160				
	14.00 x 11.00	393.03-SES2 D140X110	31.00	14.00	34.0	1	1	80				0.6
			1.220	.551	1.339			1160				
	16.00 x 12.00	393.03-SES2 D160X120	31.00	16.00	34.0	1	1	80				0.6
			1.220	.630	1.339			1160				
3	11.20 x 9.00	393.03-SES3 D112X090	48.00	11.20	45.0	1	1	80				1.7
			1.890	.441	1.772			1160				
	14.00 x 11.20	393.03-SES3 D140X112	48.00	14.00	45.0	1	1	80				1.7
			1.890	.551	1.772			1160				
	16.00 x 12.50	393.03-SES3 D160X125	48.00	16.00	45.0	1	1	80				1.7
			1.890	.630	1.772			1160				
	11.00 x 9.00	393.03-SES3 D110X090	48.00	11.00	45.0	1	1	80				1.7
			1.890	.433	1.772			1160				
	18.00 x 14.00	393.03-SES3 D180X140	48.00	18.00	45.0	1	1	80				1.7
N			1.890	.709	1.772			1160				
	12.00 x 9.00	393.03-SES3 D120X090	48.00	12.00	45.0	1	1	80				1.7
			1.890	.472	1.772			1160				
	20.00 x 16.00	393.03-SES3 D200X160	48.00	20.00	45.0	1	1	80				1.7
			1.890	.787	1.772			1160				
	14.00 x 11.00	393.03-SES3 D140X110	48.00	14.00	45.0	1	1	80				1.7
			1.890	.551	1.772			1160				
	16.00 x 12.00	393.03-SES3 D160X120	48.00	16.00	45.0	1	1	80				1.7
			1.890	.630	1.772			1160				
	25.00 x 20.00	393.03-SES3 D250X200	48.00	25.00	45.0	1	1	80				1.7
			1.890	.984	1.772			1160				
	18.00 x 14.50	393.03-SES3 D180X145	48.00	18.00	45.0	1	1	80				1.7
			1.890	.709	1.772			1160				
	22.00 x 18.00	393.03-SES3 D220X180	48.00	22.00	45.0	1	1	80				1.7
O			1.890	.866	1.772			1160				



Slide to adjustable drill adapter



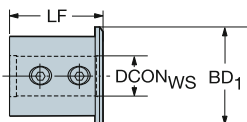
Metric bore

				Dimensions, mm, inch												
CZC _{MS}	CZC _{WS}	CNSC	Ordering code	DCON _{MS}	DCON _{WS}	LF	LB ₁	LB ₂	LB ₃	BD ₁	BD ₂	BD ₃	BHTA ₁	BHTA ₂		BBD
01	20	1	393.277-20 01 075A	78	20.0	75.0	44.0	65.0	75.0	40.0	55.2	78	0°	0°	0.80	0
				3.071	.787	2.953	1.732	2.559	2.953	1.575	2.173	3.071				
	25	1	393.277-25 01 080A	78	25.0	80.0	50.0	70.0	80.0	45.0	55.2	78	0°	0°	0.80	0
				3.071	.984	3.150	1.969	2.756	3.150	1.772	2.173	3.071				
02	20	1	393.277-20 02 075A	98	20.0	75.0	44.0	65.0	75.0	40.0	75.2	98	0°	0°	1.02	0
				3.858	.787	2.953	1.732	2.559	2.953	1.575	2.961	3.858				
	25	1	393.277-25 02 085A	98	25.0	85.0	54.0	75.0	85.0	45.0	75.2	98	0°	0°	1.25	0
				3.858	.984	3.346	2.126	2.953	3.346	1.772	2.961	3.858				
	32	1	393.277-32 02 085A	98	32.0	85.0	54.0	75.0	85.0	52.0	75.2	98	0°	0°	1.52	0
				3.858	1.260	3.346	2.126	2.953	3.346	2.047	2.961	3.858				
03	40	1	393.277-40 03 090A	136	40.0	90.0	65.0	90.0		65.0	136.0		0°	0°	4.50	0
				5.354	1.575	3.543	2.559	3.543		2.559	5.354					
	50	1	393.277-50 03 100A	136	50.0	100.0	75.0	110.0		75.0	163.0		0°	0°	4.50	0
				5.354	1.969	3.937	2.953	4.331		2.953	6.417					

Inch bore

				Dimensions, mm, inch									
CZC _{MS}	CZC _{WS}	CNSC	CXSC	Ordering code	DCON _{MS}	DCON _{WS}	LF	LB ₁	BD ₁	 CP Bar	 CP PSI		BBD
01	3/4	1		A393.277-75 01 075A	78	19.1	75.0	75.0	78.0			1.30	0
					3.071	.750	2.953	2.953	3.071				
	1	1	1	A393.277-100 01 080A	78	25.4	80.0	49.0	45.0	20		1.60	0
					3.071	1.000	3.150	1.929	1.772		290		
02	3/4	1	1	A393.277-75 02 075A	98	19.1	75.0	44.0	40.0	20		2.20	0
					3.858	.750	2.953	1.732	1.575		290		
	1	1		A393.277-100 02 085A	98	25.4	84.9	85.0	98.0			2.20	0
					3.858	1.000	3.346	3.346	3.858				
	1 1/4	1		A393.277-125 02 085A	98	31.8	84.9	85.0	98.0			2.20	0
					3.858	1.250	3.346	3.346	3.858				

Sleeve



				Dimensions, mm, inch								
CZC _{MS}	CZC _{WS}	CNSC	CXSC	Ordering code	DCON _{MS}	DCON _{WS}	LSC	LF	LB ₁	BD ₁	CP BarPSI	
40	32	1	1	393.277-40 32 074A	40.0	32.0	70	4.0	4.0	48.0	80	0.80
					1.575	1.260	2.756	.157	.157	1.890	1160	



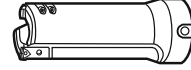
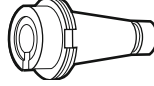
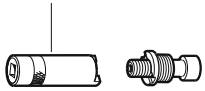
Q1



Q35

Accessories

1.



1.	2.	3.
Ordering code	Ordering code	Ordering code
Key	Screw	Centering sleeve
5680 065-02	5516 030-01	5638 030-01

Assembly tools

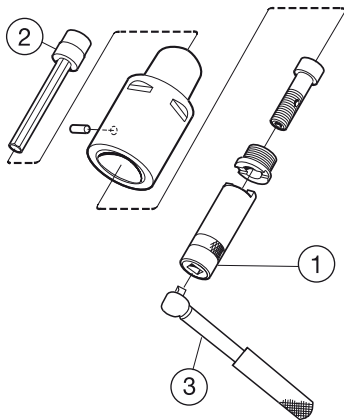
Coromant Capto®

Torque wrench for manual clamping units, quick change



Coupling size	Torque wrench		Dimensions, mm, inch		Key adapter	
	Ordering code	Torque range, Nm, ft-lbs	WSC	OAL	Ordering code	KIC
C3	C-TK-01	20-100	1/2"	345	5680 035-14	8
		15-74		13.583		.315
C4	C-TK-01	20-100	1/2"	345	5680 035-06	10
		15-74		13.583		.394
C5	C-TK-01	20-100	1/2"	345	5680 035-07	12
		15-74		13.583		.472
C6	C-TK-01	20-100	1/2"	345	5680 035-07	12
		15-74		13.583		.472
C8	C-TK-02	40-200	1/2"	440	5680 035-07	12
		30-148		17.323		.472
C10	C-TK-03	60-300	1/2"	548	5680 035-10	17
		44-220		21.575		.669

Torque wrench for modular assemblies, center bolt clamping



Center bolt clamping

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

Coupling size	3. Torque wrench		Dimensions, mm, inch		2. Extension key		1. Retaining nut spanner	
	Ordering code	Torque range, Nm, ft-lbs	WSC	OAL	Ordering code	KIC	Ordering code	
C3	C-TK-02	40-200	1/2"	345	5680 015-05	8	5680 065-13	
		30-148		13.583		.315		
C4	C-TK-02	40-200	1/2"	345	5680 015-05	8	5680 065-10	
		30-148		13.583		.315		
C5	C-TK-02	40-200	1/2"	345	5680 015-01	10	5680 065-11	
		30-148		13.583		.394		
C6	C-TK-02	40-200	1/2"	345	5680 015-02	14	5680 065-12	
		30-148		13.583		.551		
C8	C-TK-02	40-200	1/2"	440	5680 015-02	14	5680 065-12	
		30-148		17.323		.551		
C10	C-TK-04	80-400	3/4"	683	5680 015-06	17	5680 065-14	
		60-295		26.890		.669		

To be calibrated according to ISO 6789, accuracy within 4%

ER torque wrench set



ER-TW-SET

		Kit consists of:	
CZC	Ordering code	Torque wrench	Collar
ER11	ER-TW-SET	ER-TW	ER11-COLLAR
ER16			ER16-COLLAR
ER20			ER20-COLLAR
ER25			ER25-COLLAR
ER32			ER32-COLLAR

Bolt clip ER-TW-CLIP available as spare part.

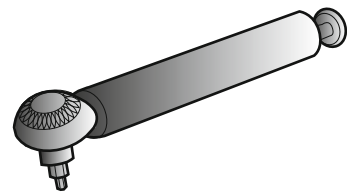
ER torque wrench set consisting of an ER torque wrench and exchangeable ER collar sizes ER11 to ER32. Complete set with torque wrench and all 5 collars comes in a practical storage case.

Key for integrated collet

CZC	Ordering code	
ER11	5680 091-03	
ER16	5680 096-06	
ER20	5680 096-01	
ER25	5680 096-02	
ER32	5680 096-03	

CoroChuck™ 930

Torque wrench



Ordering code
5680 099-01

Torx Plus® torque wrench

Correct torque when mounting the inserts in milling cutters is a prerequisite for a well functioning tool. Together with the Torx Plus screws, the new wrench guarantees improved and secure insert clamping.

The wrenches, available in 6 sizes and tested to withstand 10,000 insert tightenings, are each calibrated for the torque needed for correct insert clamping of Sandvik Coromant milling cutters.

A torque wrench is always recommended for cutters with Torx Plus screws. The new wrench must be ordered separately, except for CoroMill® Century, CoroMill® 790 and CoroMill® 390 long edge milling cutters. See spare parts information.



Note! Torx Plus is a registered trademark of Camcar Textron (USA).

Note!

Please note that the new Torx Plus keys and screwdrivers do NOT fit into the standard Torx screws.

However, the standard Torx keys and screwdrivers will fit the new Torx Plus screws.



5680 100-07 (20IP) and 5680 100-08 (25IP)

Torx Plus® torque wrench

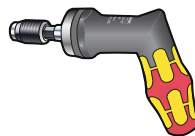
New torque wrench	Size	Torque in.lbs	Torque Nm	Old torque wrench
5680 100-01	6IP	4	0.6	5680 086-01
5680 100-02	7IP	8	0.9	5680 086-02
5680 100-03	8IP	10	1.2	5680 086-03
5680 100-04	9IP	12	1.4	5680 086-04
5680 100-05	10IP	18	2.0	5680 086-05
5680 100-06	15IP	26	3.0	5680 086-06
5680 100-07	20IP	44	5.0	-
5680 100-08	25IP	66	7.5	-

Torx Plus® torque wrench with bits

5680 105-01
5680 105-02
5680 105-03
5680 105-04



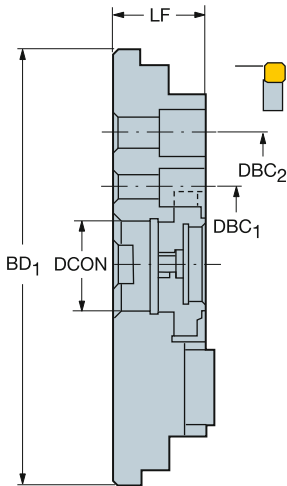
5680 105-05
5680 105-06
5680 105-07
5680 105-08



Torque wrench	Torque range		Handle
	Nm	In-lbs	
5680 105-01	0.3 - 1.2		Straight
5680 105-02	1.2 - 3.0		Straight
5680 105-05	3.0 - 6.0		Angled
5680 105-06	4.0 - 8.8		Angled
5680 105-03		2.5 - 11.5	Straight
5680 105-04		11.0 - 26.0	Straight
5680 105-07		26.0 - 55.0	Angled
5680 105-08		35.4 - 78.0	Angled

Bit	OAL		NT
	mm	Inch	
5680 084-01	50	1.969	8IP
5680 084-02	50	1.969	15IP
5680 084-03	89	3.504	15IP
5680 084-04	50	1.969	7IP
5680 084-05	50	1.969	9IP
5680 084-06	50	1.969	10IP
5680 084-07	50	1.969	20IP
5680 084-08	89	3.504	20IP
5680 084-09	89	3.504	25IP
5680 084-10	89	3.504	30IP
5680 084-11	50	1.969	6IP
5680 084-12	80	3.150	27IP
5680 084-13	35	1.378	50IP

Support body



Metric version

				Dimensions					
CZC _{MS}	CZC _{WS}	DSGN	Ordering code	DCON _{MS}	LF	BD ₁	DBC1	DBC2	
60	250	5	260-425M-1	60	80	163.0			12.6
	315	5	260-431M-1	60	80	228.0	101	177	4.0
	355	5	260-435M-1	60	80	268.0	101	177	4.0
	400	5	260-440M-1	60	80	313.0	101	177	40.0
	500	5	260-450M-1	60	80	410.0	101	177	4.0

Inch version

				Dimensions, inch					
CZC _{MS}	CZC _{WS}	DSGN	Ordering code	DCON _{MS}	LF	BD ₁	DBC1	DBC2	
2 1/2	250	1	A260-425M-1	2.500	2.375	8.740			4.7
	315	1	A260-431M-1	2.500	2.375	11.299	4	7	21.5
	355	1	A260-435M-1	2.500	2.375	12.874	4	7	21.5
	400	1	A260-440M-1	2.500	2.375	14.646	4	7	21.6
	500	1	A260-450M-1	2.500	2.375	18.583	4	7	21.8

