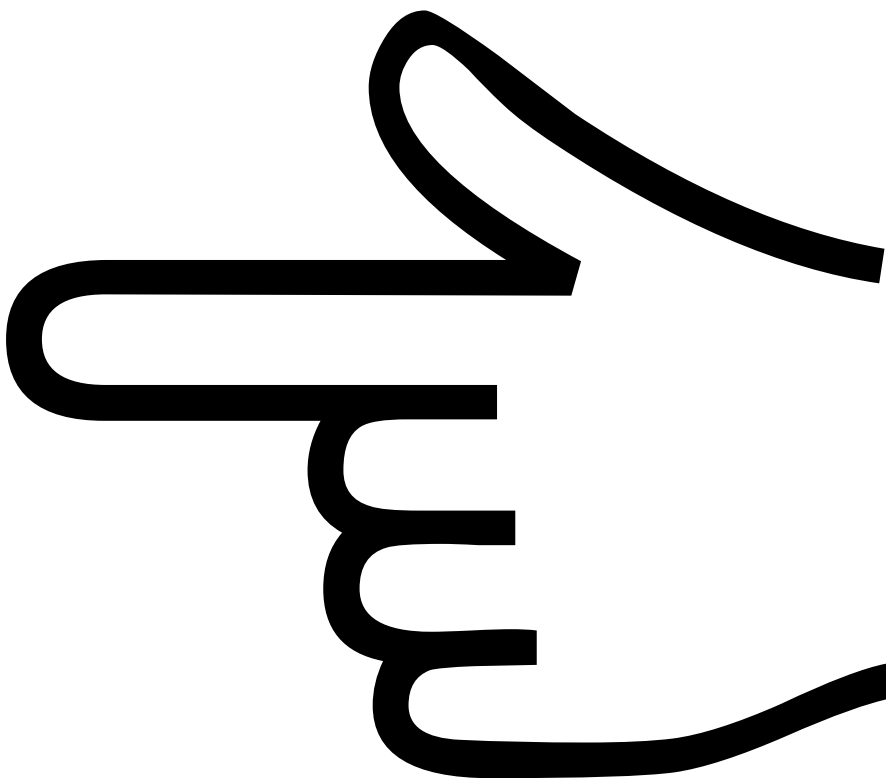


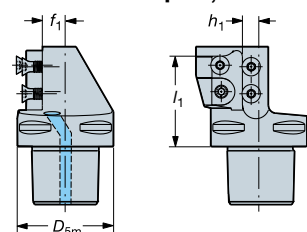
This PDF document is divided into several files

Please click here to continue



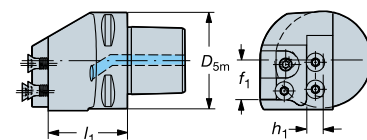
Coromant Capto® adaptor

Coromant Capto®, 0°



Right hand (R) shown.
Left hand (L) reflected

Coromant Capto®, 90°



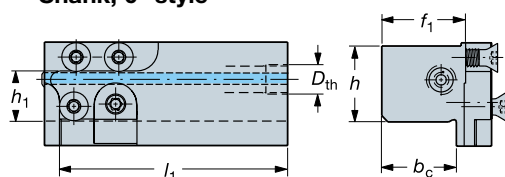
Right hand (R) shown.
Left hand (L) reflected

Blades for Coromant Capto® adaptors	Coromant Capto®, 0°				Coromant Capto®, 90°					
	Ordering code	Dimensions, mm				Ordering code	Dimensions, mm			
		D_{5m}	f_1	h_1	l_1		D_{5m}	f_1	h_1	l_1
MBS3 MBS3A MBS3B	C3-RF-MBS3	32	11,4	5,5	34	C3-LG-MBS3	32	13	5,5	30
	C4-RF-MBS3	40	16,4	5,5	38	C4-LG-MBS3	40	17	5,5	36
MBS4 MBS4A MBS4B	C3-LF-MBS4	32	11,4	5,5	34	C3-RG-MBS4	32	13	5,5	30
	C4-LF-MBS4	40	16,4	5,5	38	C4-RG-MBS4	40	17	5,5	36
MBS5 MBS5A MBS5B	C5-RF-MBS5	50	12,0	8,5	47	C5-LG-MBS5	50	21	8,5	41
MBS6 MBS6A MBS6B	C5-LF-MBS6	50	12,0	8,5	47	C5-RG-MBS6	50	21	8,5	41

Ordering example: 2 pieces C3-RF-MBS3

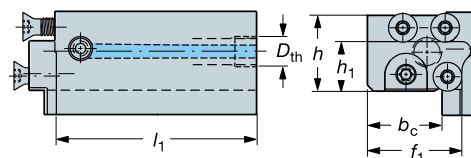
Shank adaptor

Shank, 0° style



Right hand (R) shown.
Left hand (L) reflected

Shank, 90° style



Right hand (R) shown.
Left hand (L) reflected

Blades for shank adaptors	Shank 0°							Shank 90°							
	Ordering code	Dimensions, mm							Ordering code	Dimensions, mm					
		b_c	f_1	h	h_1	l_1	D_{th}		b_c	f_1	h	h_1	l_1	D_{th}	
MBS3 MBS3A MBS3B	RF-MBS3-1616	16	18,6	16	10,5	76	G1/8"	LG-MBS3-1616	16	18,6	16	10,5	74	G1/8"	
	-2020	20	22,6	20	14,5	96	G1/8"	-2020	20	22,6	20	14,5	94	G1/8"	
	-2525	25	27,6	25	19,5	116	G1/8"	-2525	25	29,1	25	19,5	114	G1/8"	
MBS4 MBS4A MBS4B	LF-MBS4-1616	16	18,6	16	10,5	76	G1/8"	RG-MBS4-1616	16	18,6	16	10,5	74	G1/8"	
	-2020	20	22,6	20	14,5	96	G1/8"	-2020	20	22,6	20	14,5	94	G1/8"	
	-2525	25	27,6	25	19,5	116	G1/8"	-2525	25	29,1	25	19,5	114	G1/8"	
MBS5 MBS5A MBS5B	RF-MBS5-2525	25	27,6	25	16,5	115	G1/8"	LG-MBS5-2525	25	31,1	25	16,5	111	G1/8"	
	-3225	25	27,6	32	23,5	115	G1/8"	-3225	25	31,1	32	23,5	111	G1/8"	
MBS6 MBS6A MBS6B	LF-MBS6-2525	25	27,6	25	16,5	115	G1/8"	RG-MBS6-2525	25	31,1	25	16,5	111	G1/8"	
	-3225	25	27,6	32	23,5	115	G1/8"	-3225	25	31,1	32	23,5	111	G1/8"	

Ordering example: 2 pieces RF-MBS3-1616

Spare parts



B 74

Technical information



B 92

Tailor Made

- Quick quotation
- Easy to order
- Competitive delivery

Even more possibilities thanks to tailored design!

If you do not find what you need in our comprehensive standard programme, choose the tool shape you require and we will tailor it for you to *your* dimensions.

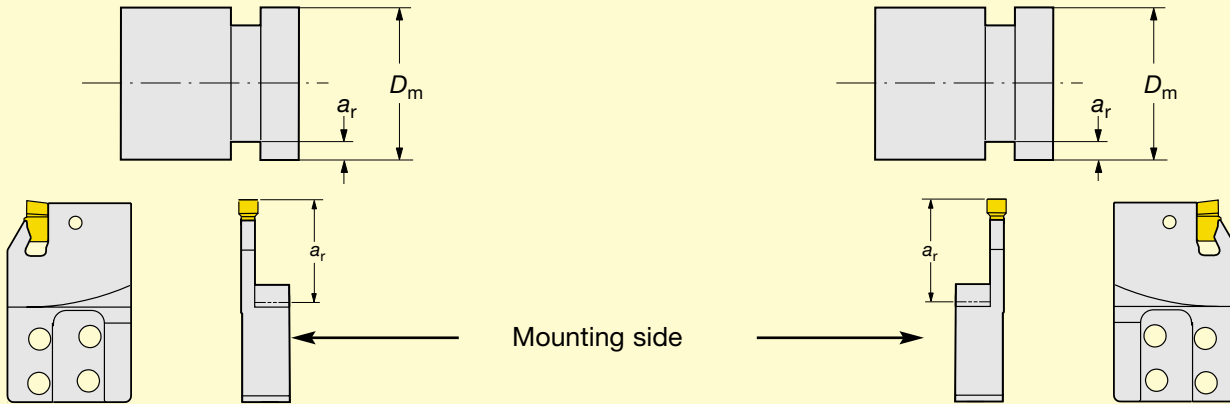
MBS (Multi blade system)

T-MAX Q-Cut spring clamp

Parting/grooving

Inserts:

- N151.2-200 -4E/5E
- N151.2-250 -4E/5E
- N151.2-300 -4E/5E
- N151.2-400 -4E/5E
- N151.2-500 -4E/5E
- N151.2-600 -4E/5E

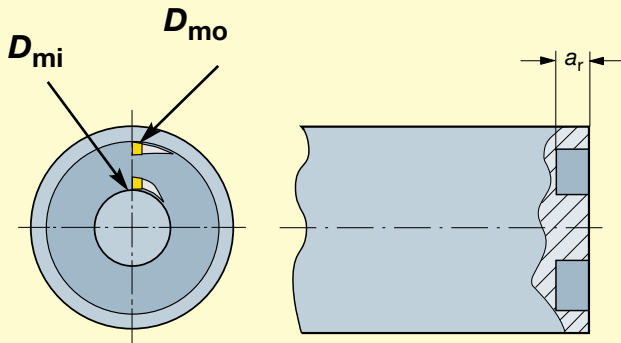


MBS3/MBS5

MBS4/MBS6

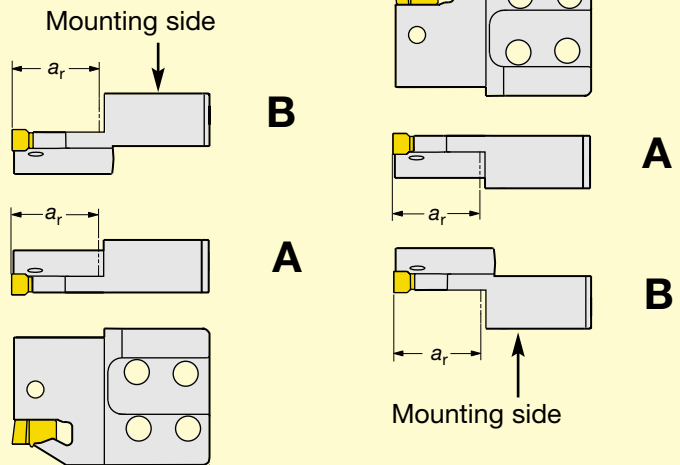
Face grooving

First cut diameters



MBS3/MBS5

MBS4/MBS6



Options

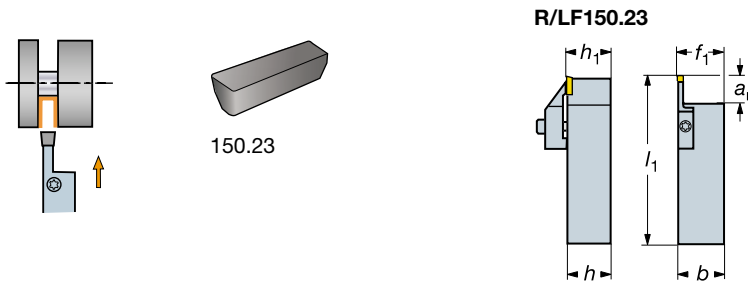
Note! For specific details regarding the options, contact your Coromant sales representative.

Adaptor size	MBS3, MBS4 —smaller size, MBS5, MBS6 —bigger size
Operation type	Parting/grooving— Extrad. Face grooving— Extrface
Insert seat size	20, 25, 30, 40, 50, 60
D_m	Diameter on workpiece— Max = $(2 \times a_r - 500 \text{ mm})$

Blade type	A or B
D_{mi}	Inside diameter on groove— 24-3000 mm
D_{mo}	Depends on inside diameter
a_r	Cutting depth—Parting/grooving— 8,5-32 mm Face grooving— 8,5-32 mm

Shank tools for ceramic grooving inserts

Screw clamp



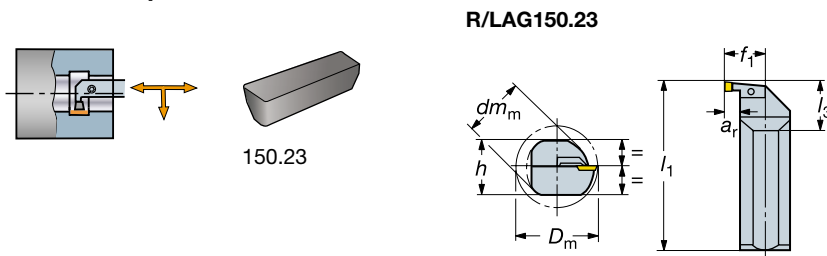
Right hand style

Ordering code		Dimensions, mm					Gauge inserts	Torque Nm	
a_r	Seat size		b	f_1	h	h_1	l_1		
19	1	R/LF150.23 -3244M-0317C	44	44,2	32	32	150	150.23-0317	3,5
19	2	R/LF150.23 -3244M-0476C	44	44,4	32	32	150	150.23-0476	4,5
29	3	R/LF150.23 -3244M-0635C	44	44,6	32	32	150	150.23-0635	5,0
38	4	R/LF150.23 -3244M-0952C	44	45,0	32	32	150	150.23-0952	5,0

Ordering example: 2 pieces RF150.23-3244M-0317C

Steel boring bars for ceramic grooving inserts

Screw clamp



Right hand style

Ordering code		Dimensions, mm					Gauge inserts	Torque Nm		
$D_{m \text{ min.}}$	a_r	Seat size ¹⁾	dm_m	f_1	h	l_1	l_3			
63,5	10	1	R/LAG150.23-50V-0317C	50	35,0	47	400	55	150.23-0317	3,5
63,5	10	2	R/LAG150.23-50V-0476C	50	35,0	47	400	55	150.23-0476	4,5
70	13	3	R/LAG150.23-50V-0635C	50	38,0	47	400	56	150.23-0635	5,0
76,5	16	4	R/LAG150.23-50V-0952C	50	41,0	47	400	56	150.23-0952	5,0

1) To correspond with seat size on insert.

Ordering example: 2 pieces RAG150.23-50V-0317C

Main spare parts

For additional spare parts and accessories, see complete spare part list.

Holder type	Screw	Key Torx Plus
External	3212 036-506	5680 043-17 (30IP)
Internal	3212 106-504	5680 043-16 (27IP)

Inserts



Spare parts

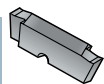


Technical information



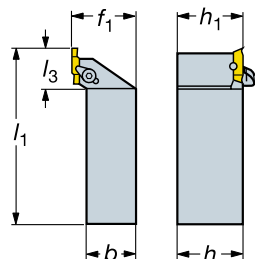
Shank tools for grooving

Screw and top clamp



154.91

R/L154.91



Right hand style

Insert size	Ordering code		Dimensions, mm							Main spare parts	
	$l_a^{1)}$	$a_r^{1)}$	b	f_1	h	h_1	l_1	l_3	Clamp set	Key (mm)	
3	1,10-3,0	2,1-4,0	R/L154.91-1616-3	16	20	16	16	100	20,2	174.9-831-2	174.1-863 (2,5)
			R/L154.91-2020-3	20	25	20	20	125	20,2		
5	3.15-5,0	4,2-6,0	R/L154.91-1616-5	16	20	16	16	100	25,2	174.9-837-2	174.1-864 (3,0)
			R/L154.91-2020-5	20	25	20	20	125	25,2		
3	1,10-3,0	2,1-4,0	R/L154.91-2525-3 Q	25	32 ²⁾	25	25	150 ²⁾	20,2	174.9-831-2	174.1-863 (2,5)
5	3.15-5,0	4,2-6,0	R/L154.91-2525-5 Q	25	32 ²⁾	25	25	150 ²⁾	25,2	174.9-837-2	174.1-864 (3,0)
8	5,15-8,0	6,2-9,0	R/L154.91-2525-8 Q	25	32 ²⁾	25	25	150 ²⁾	29,2	174.9-838-1	3021 010-040 (4,0)

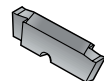
1) See insert page B 30.

2) l_1 and f_1 tolerance is $\pm 0,08$ mm

Ordering example: 2 pieces R154.91-1616-3

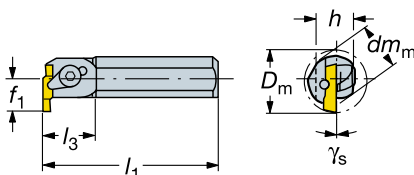
Steel boring bars for grooving

Screw and top clamp



154.91

R/L154.91



Tools in right hand(R) style must be used with left hand (L) inserts, and left hand (L) tools with right hand (R) inserts.

Right hand style

Insert size	Ordering code		Dimensions, mm							Main spare parts				
	$l_a^{1)}$	$a_r^{1)}$	D_m	dm_m	f_1	h	l_1	l_3	γ_s°	Clamp set	Key (mm)			
3	1,10-3,0	2,1-4,0	R/L154.91 -16-3	20	16	11	15	150	16,9	-8	174.9-831-1	174.1-863 (2,5)		
			-25-3	32	25	17	23	200	21,9	-5			174.9-831-2	174.1-863 (2,5)
			-40-3	50	40	27	37	300	31,8	0			174.9-831-2	174.1-863 (2,5)
5	3.15-5,0	4,2-6,0	R/L154.91 -25-5	32	25	17	23	200	24,1	-5	174.9-837-2	174.1-864 (3,0)		
			-40-5	50	40	27	37	300	33,9	0				
8	5,15-8,0	6,2-9,0	R/L154.91 -40-8	50	40	27	37	300	36,9	0	174.9-838-1	3021 010-040 (4,0)		

1) See insert page B 30.

Ordering example: 2 pieces R154.91-16-3

Inserts



B 30

Spare parts

B 76
B 77

Technical information



B 92

B 64

Shank tools for turning of reliefs

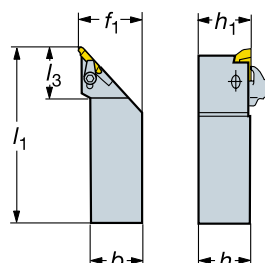
Screw and top clamp



154.93

Tools in right hand (R) style must be used with left hand (L) inserts, and left hand (L) tools with right hand (R) inserts.

R/L154.93



Right hand style

Insert size	Ordering code		Dimensions, mm						Main spare parts		
	$l_a^{(1)}$	$r_{\epsilon}^{(1)}$	b	f_1	h	h_1	l_1	l_3	Clamp set	Key (mm)	
3	2,0–3,0	1,0–1,5	R/L154.93-1616-3	16	20	16	16	100	25,5	174.9-831-2	174.1-863 (2,5)
			-2020-3	20	25	20	20	125	25,5		
5	4,0–5,0	2,0–2,5	R/L154.93-1616-5	16	20	16	16	100	32,0	174.9-837-2	174.1-864 (3,0)
			-2020-5	20	25	20	20	125	32,0		
8	6,0–8,0	3,0–4,0	R/L154.93-2020-8	20	25	20	20	125	37,8	174.9-838-1	3021 010-040 (4,0)
3	2,0–3,0	1,0–1,5	R/L154.93-2525-3 Q	25	32	25	25	150	25,5	174.9-831-2	174.1-863 (2,5)
			-2020-3	25	32	25	25	150	25,5		
5	4,0–5,0	2,0–2,5	R/L154.93-2525-5 Q	25	32	25	25	150	32,0	174.9-837-2	174.1-864 (3,0)
			-2020-5	25	32	25	25	150	32,0		

¹⁾ See insert page B 30.

Ordering example: 2 pieces R154.93-1616-3

Steel boring bars for turning of reliefs

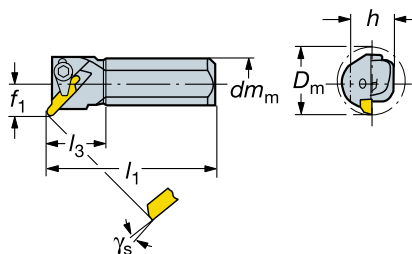
Screw and top clamp

Recommended inserts:



154.93

R/L154.93



Right hand style

Insert size	Ordering code		Dimensions, mm							Main spare parts		
	$l_a^{(1)}$	$a_r^{(1)}$	D_m	dm_m	f_1	h	l_1	l_3	γ_s°	Clamp set	Key (mm)	
3	1,10–3,0	2,1–4,0	R/L154.93 -16-3	21	16	11	15	150	19,3	-8	174.9-831-1	174.1-863 (2,5)
			-25-3	32	25	17	23	200	23,7	-8		
			-40-3	50	40	27	37	300	35,4	0		
5	3,15–5,0	4,2–6,0	R/L154.93 -25-5	32	25	17	23	200	27,5	-8	174.9-837-2	174.1-864 (3,0)
			-40-5	50	40	27	37	300	39,5	0		
8	5,15–8,0	6,2–9,0	R/L154.93 -40-8	50	40	27	37	300	41,8	0	174.9-838-1	3021 010-040 (4,0)

¹⁾ See insert page B 30.

Ordering example: 2 pieces R154.93-16-3

Inserts



B 30

Spare parts

B 76
B 77

Technical information



B 92

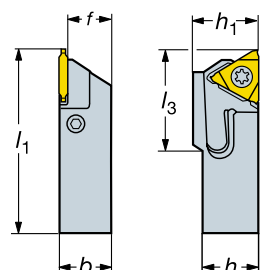
Shank tools for circlip grooving

Screw clamp

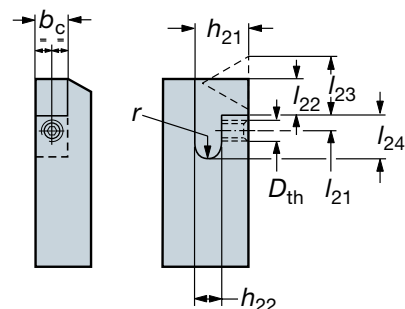


154.3

R/L154.3



Mounting dimensions



Right hand style

Ordering code		Dimensions, mm						
$l_a^{1)}$	$a_r^{1)}$		b	f	h	h_1	l_1	l_3
1,10-4,15	1,2-3,0	R/L154.3-2016-16	16	13	20	20	150	33,6
		-2516-16	16	13	25	25	150	-
		-3225-16	25	22	32	32	180	-

Ordering example: 2 pieces R154.3-2016-16

Steel boring bars for circlip grooving

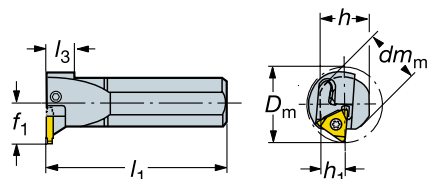
Screw clamp

Recommended inserts:



154.3

R/L154.3



Right hand style

Ordering code		Dimensions, mm							
$l_a^{1)}$	$a_r^{1)}$		D_m	dm_m	f_1	h	h_1	l_1	l_3
1,10-4,15	1,2-3,0	R/L154.3-25-16	34	25	17,6	23	16	300	15
		R/L154.3-32-16	50	32	21,2	30	19,5	355	13,5

¹⁾ See insert page B 30.

Ordering example: 2 pieces R154.3-25-16

Inserts



B 31

Spare parts



B 76
B 77

Technical information



B 92

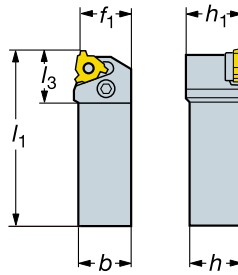
Shank tools for O-ring circlip grooving

Screw clamp



156.3

R/L156.3



Right hand style

Ordering code		Dimensions, mm							Main spare parts		
$l_a^{1)}$	$a_r^{1)}$		b	f_1	h	h_1	l_1	l_3	Lever	Screw	Key (mm)
2,3-4,0	1,8-3,1	R156.3-2020-22	20	20	20	22	150	25	174.3-841M	174.3-821	174.1-864 (3,0)
		R156.3-2525-22	25	22	25	25	150	-			
		R156.3-3225-22	25	22	32	32	180	-			

¹⁾ See insert page B 30.

Ordering example: 2 pieces R156.3-2020-22

Inserts



B 31

Spare parts



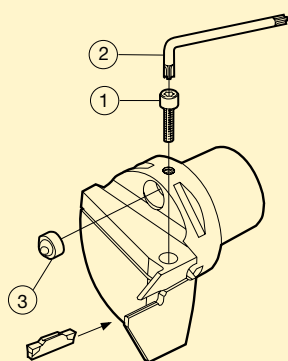
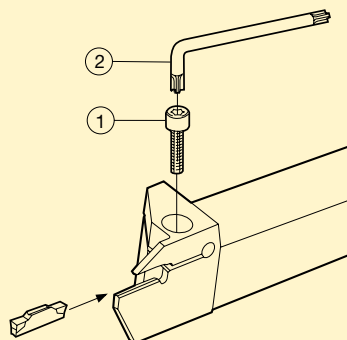
B 76

Technical information



B 92

CoroCut® external screw clamp tools



Nozzle for Coromant Capto cutting units

Cutting unit size 3
Nozzle

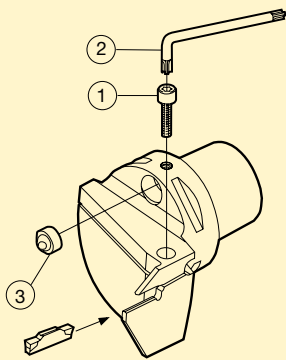
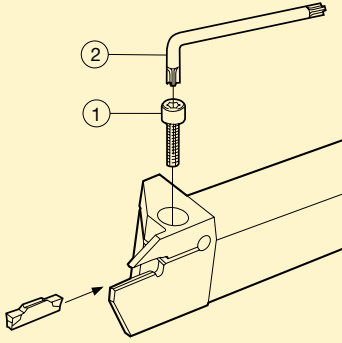
C3-C4	5691 029-01
C5-C6	5691 029-02

Tool type and size		1	2
Shank holders	Coromant Capto®	Clamping screw	Key Torx Plus
	C3-NF123 G20-00060B C4-NF123 G20-00070B C5-NF123 G20-00070B C6-NF123 G20-00075B	3212 012-310	5680 043-15 (25IP)
NF123J25 -2525BM -3225BM		5512 044-01 ¹⁾	5680 043-17 (30IP)
	C4-NF123 J25-00077B C5-NF123 J25-00077B C6-NF123 J25-00082B	3212 012-360	5680 043-17 (30IP)
R/LF123D08 -1212B		3212 012-257	5680 043-14 (20IP)
R/LF123D08 -1616B -2020B -2525B		3212 012-259	5680 043-14 (20IP)
R/LF123D10 -1010B-S R/LF123D11 -1212B-S		5513 021-07 5513 021-04	5680 043-13 (15IP) 5680 043-13 (15IP)
R/LF123D15 -1616B -2020B -2525B	C3-R/LF123 D15-22050B C4-R/LF123 D15-27055B C5-R/LF123 D15-35055B	3212 012-259	5680 043-14 (20IP)
R/LF123E08 -1212B		3212 012-257	5680 043-14 (20IP)
R/LF123E08 -1616B -2020B -2525B		3212 012-259	5680 043-14 (20IP)
R/LF123E10 -1010B-S R/LF123E11 -1212B-S		5513 021-07 5513 021-04	5680 043-13 (15IP) 5680 043-13 (15IP)
R/LF123E12 -1212B		3212 012-257	5680 043-14 (20IP)
R/LF123E15 -1616B -2020B -2525B	C3-R/LF123 E15-22055B C4-R/LF123 E15-27055B C5-R/LF123 E15-35060B	3212 012-259	5680 043-14 (20IP)
R/LF123E17 -1616B-S		5513 021-04	5680 043-13 (15IP)
R/LF123F10 -1212B		3212 012-257	5680 043-14 (20IP)
R/LF123F10 -1616B -2020B -2525B		3212 012-259	5680 043-14 (20IP)
R/LF123F17 -1616B-S		5513 021-04	5680 043-13 (15IP)
R/LF123F20 -1616B -2020B -2525B -3225B	C3-R/LF123 F20-22055B C4-R/LF123 F20-27060B C5-R/LF123 F20-35060B	3212 012-259	5680 043-14 (20IP)
R/LF123G07 -2525C		3212 012-310	5680 043-15 (25IP)
R/LF123G10 -1616B		3212 012-309	5680 043-15 (25IP)
R/LF123G10 -2020B -2525B -3225B		3212 012-310	5680 043-15 (25IP)
R/LF123G12-1212B		3212 012-257	5680 043-14 (20IP)
R/LF123G12 -2525B-034B -2525B-038B		3212 012-310	5680 043-15 (25IP)
R/LF123G19 -2525B-042B -2525B-054B		3212 012-310	5680 043-15 (25IP)
R/LF123G20 -1616B -2020B -2525B -3225B -3232B	C3-R/LF123 G20-22055B C4-R/LF123 G20-27060B C5-R/LF123 G20-35060B C6-R/LF123 G20-45065B	3212 012-309 3212 012-310 3212 012-310 3212 012-310 3212 012-310	5680 043-15 (25IP) 5680 043-15 (25IP) 5680 043-15 (25IP) 5680 043-15 (25IP) 5680 043-15 (25IP)
R/LF123G22 -2525B-067B -2525B-090B -2525B-130B		3212 012-310	5680 043-15 (25IP)
R/LF123H13 -1616B -2020B		3212 012-360	5680 043-17 (30IP)
R/LF123H13 -2525BM -3225BM -3232BM		5512 044-01 ¹⁾	5680 043-17 (30IP)
R/LF123H20 -2525B-040BM -2525B-052BM		5512 044-01 ¹⁾	5680 043-17 (30IP)
	C3-R/LF123 H20-22060B	3212 012-360	5680 043-17 (30IP)
R/LF123H25 -1616B -2020B	C4-R/LF123 H25-27067B C5-R/LF123 H25-35067B C6-R/LF123 H25-45070B	3212 012-360	5680 043-17 (30IP)

¹⁾ Note:
For holder without M in the ordering code, use screw 3212 012-360

Ordering example: 10 pieces 3212 012-310

CoroCut® external screw clamp tools



Nozzle for Coromant Capto cutting units

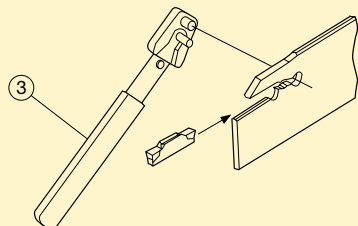
Cutting unit size	3 Nozzle
C3-C4	5691 029-01
C5-C6	5691 029-02

Tool type and size		1	2
Shank holders	Coromant Capto®	Clamping screw	Key Torx Plus
R/LF123H25 -2525BM -3225BM -3232BM		5512 044-01 ¹⁾	5680 043-17 (30IP)
R/LF123H25 -2525B-064BM -2525B-092BM -2525B-132BM -2525B-220BM -2525B-300BM		5512 044-01 ¹⁾	5680 043-17 (30IP)
R/LF123J13 -2020B		3212 012-360	5680 043-17 (30IP)
R/LF123J13 -2525BM -3225BM -3232BM		5512 044-01 ¹⁾	5680 043-17 (30IP)
R/LF123J20 -2525B-040BM -2525B-180BM		5512 044-01 ¹⁾	5680 043-17 (30IP)
R/LF123J25 -2525B-060BM -2525B-085BM -2525B-120BM -2525B-175BM		5512 044-01 ¹⁾	5680 043-17 (30IP)
	C4-R/LF123 J25-27067B C5-R/LF123 J25-35067B C6-R/LF123 J25-45070B	3212 012-360	5680 043-17 (30IP)
R/LF123J32 -2525BM -3225BM -3232BM		5512 044-01 ¹⁾	5680 043-17 (30IP)
R/LF123K08 -2525CM		5512 044-01 ¹⁾	5680 043-17 (30IP)
R/LF123K16 -2525BM -3225BM -3232BM		5512 044-01 ¹⁾	5680 043-17 (30IP)
R/LF123K20 -2525B-040BM R/LF123K25 -2525B-058BM -2525B-088BM -2525B-168BM -2525B-220BM		5512 044-01 ¹⁾	5680 043-17 (30IP)
	C4-R/LF123 K25-27070B C5-R/LF123 K25-35070B C5-R/LF123 K25-45075B	3212 012-360	5680 043-17 (30IP)
R/LF123K32 -2525BM -3225BM -3232BM		5512 044-01 ¹⁾	5680 043-17 (30IP)
R/LF123L16 -2525BM		5512 044-01 ¹⁾	5680 043-17 (30IP)
R/LF123L25 -2525BM -3225BM		5512 044-01 ¹⁾	5680 043-17 (30IP)
R/LF123L25 -2525B-050BM R/LF123L28 -2525B-075BM -2525B-140BM		5512 044-01 ¹⁾	5680 043-17 (30IP)
	C5-R/LF123 L25-35070B C6-R/LF123 L25-45075B	3212 012-360	5680 043-17 (30IP)
R/LF123L32 -3225BM -3232BM		5512 044-01 ¹⁾	5680 043-17 (30IP)
R/LG123G07 -2525C		3212 012-310	5680 043-15 (25IP)
R/LG123H20 -2525B-064BM -2525B-092BM -2525B-132BM		5512 044-01 ¹⁾	5680 043-17 (30IP)
R/LG123K08 -2525CM		5512 044-01 ¹⁾	5680 043-17 (30IP)
R/LG123K20 -2525B-058BM -2525B-088BM -2525B-168BM		5512 044-01 ¹⁾	5680 043-17 (30IP)
R/LG123L20 -2525B-050BM -2525B-075BM -2525B-140BM		5512 044-01 ¹⁾	5680 043-17 (30IP)
R/LX123J16 -2525B-070 -3232B-070		3212 012-360	5680 043-17 (30IP)
R/LX123L25 -2525B-007 -3232B-007		3212 012-360	5680 043-17 (30IP)
R/LX123G05 -2020B-045 -2525B-045		3212 012-309	5680 043-14 (25IP)
R/LX123J05 -2020B-045 -2525B-045 -3225B-045		3212 012-360	5680 043-17 (30IP)

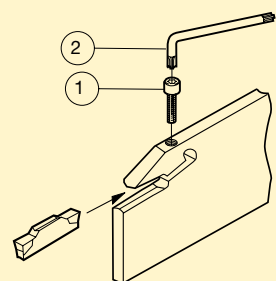
¹⁾ **Note:**
For holder without M in the ordering code, use screw 3212 012-360

Ordering example: 10 pieces 3212 012-360

CoroCut® parting blade



Spring clamp

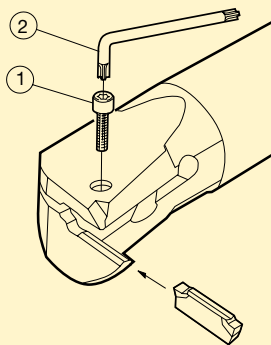


Screw clamp

Tool type and size			Optional parts
	1	2	Delivery to separate order
Parting blade	Clamping screw	Key Torx Plus	3 Insert key
N123D15-21A2	–	–	5680 058-01
N123D15-25A2	–	–	5680 058-01
N123E15-21A2	–	–	5680 058-01
N123E20-25A2	–	–	5680 058-01
N123F30-21A2	–	–	5680 058-01
N123F55-25A2	–	–	5680 058-01
N123G30-21A2	–	–	5680 058-01
N123G55-25A2	–	–	5680 058-01
N123H55-25A2	–	–	5680 058-01
N123J55-25A2	–	–	5680 058-01
N123K55-25A2	–	–	5680 058-01
R/LF123E25-25B1	3212 012-259	5680 043-14 (20IP)	–
R/LF123F25-25B1	3212 012-259	5680 043-14 (20IP)	–
R/LF123G25-25B1	3212 012-259	5680 043-14 (20IP)	–
R/LF123H32-25B1	3212 012-259	5680 043-14 (20IP)	–

Ordering example: 10 pieces 3212 012 259

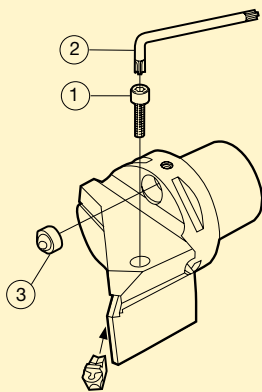
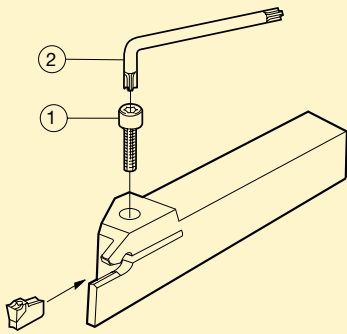
CoroCut® internal screw clamp tools



Tool type and size		
	1	2
Shank holders	Clamping screw	Key Torx Plus
R/LAG123D 04-16B	5512 031-03	5680 043-13 (15IP)
05-20B	5512 031-03	5680 043-13 (15IP)
R/LAG123E 05-20B	5512 031-03	5680 043-13 (15IP)
07-25B	3212 012-259	5680 043-14 (20IP)
09-32B	3212 012-259	5680 043-14 (20IP)
R/LAG123G 06-20B	5512 031-03	5680 043-13 (15IP)
07-25B	3212 012-309	5680 043-14 (20IP)
09-32B	3212 012-309	5680 043-14 (20IP)
11-40B	3212 012-309	5680 043-14 (20IP)
R/LAG123H 07-25B	3212 012-309	5680 043-14 (20IP)
10-32B	3212 012-359	5680 043-17 (30IP)
11-40B	3212 012-360	5680 043-17 (30IP)
13-50B	3212 012-360	5680 043-17 (30IP)
R/LAG123J 08-25B	3212 012-309	5680 043-14 (20IP)
11-32B	3212 012-359	5680 043-17 (30IP)
11-40B	3212 012-360	5680 043-17 (30IP)
13-50B	3212 012-360	5680 043-17 (30IP)
R/LAG123K 11-40B	3212 012-360	5680 043-17 (30IP)
13-50B	3212 012-360	5680 043-17 (30IP)
R/LAX123J 25-40B-020	3212 012-360	5680 043-17 (30IP)
R/LAX123L 25-40B-020	3212 012-360	5680 043-17 (30IP)

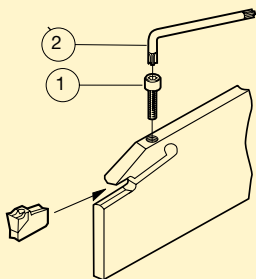
Ordering example: 10 pieces 5512 031-03

T-MAX Q-Cut® external screw clamp tools



Nozzle for Coromant Capto® cutting units

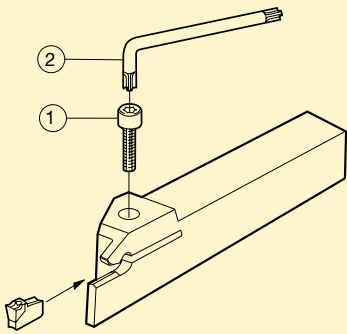
Cutting unit size	3 Nozzle
C3-C4	5691 029-01
C5-C6	5691 029-02



Tool type and size		1	2
Shank holders	Coromant Capto®	Clamping screw	Key Torx Plus
R/LF151.22-1616-20 -2020-20 -2525-20	C3-R/LF151.22 -22045-20 C4-R/LF151.22 -27050-20 C5-R/LF151.22 -35060-20	3212 012-259	5680 043-14 (20IP)
R/LF151.22-1616-25 -2020-25 -2525-25	C3-R/LF151.22 -22050-25 C4-R/LF151.22 -27050-25 C5-R/LF151.22 -35060-25	3212 012-259	5680 043-14 (20IP)
R/LF151.22-1616-30 -2020-30 -2525-30 -3225-30	C3-R/LF151.22 -22050-30 C4-R/LF151.22 -27055-30 C5-R/LF151.22 -35060-30 C6-R/LF151.22 -45065-30	3212 012-259	5680 043-14 (20IP)
R/LF151.22-2020-40 -2525-40 -3225-40	C4-R/LF151.22 -27055-40 C5-R/LF151.22 -35060-40 C6-R/LF151.22 -45065-40	3212 012-360	5680 043-17 (30IP)
R/LF151.22-2525-50 -3225-50	C4-R/LF151.22 -27055-50 C5-R/LF151.22 -35060-50 C6-R/LF151.22 -45065-50 C8-R/LF151.22 -42080-50	3212 012-360	5680 043-17 (30IP)
R/LF151.22-2525-60 -3225-60	C5-R/LF151.22 -35060-60 C6-R/LF151.22 -45065-60 C8-R/LF151.22 -42080-60 C8-R/LF151.22 -42080-80	3212 012-360	5680 043-17 (30IP)
R/LS151.22-2525-20	C3-R/LS151.22 -22045-20 C4-R/LS151.22 -27050-20	3212 012-259	5680 043-14 (20IP)
R/LS151.22-2525-25	C3-R/LS151.22 -22050-25 C4-R/LS151.22 -27050-25 C4-R/LS151.22 -35060-25	3212 012-259	5680 043-14 (20IP)
R/LS151.22-2020-30 -2525-30	C3-R/LS151.22 -22050-30 C4-R/LS151.22 -27055-30 C5-R/LS151.22 -35060-30	3212 012-259	5680 043-14 (20IP)
R/LS151.22-2020-40 -2525-40	C4-R/LS151.22 -27055-40 C5-R/LS151.22 -35060-40	3212 012-360	5680 043-17 (30IP)
R/LS151.22-2525-50 -3225-50	C4-R/LS151.22 -27055-50 C5-R/LS151.22 -35060-50	3212 012-360	5680 043-17 (T30)
R/LS151.22-2525-60 -3225-60	C5-R/LS151.22 -35060-60 C6-R/LS151.22 -45065-60	3212 012-360	5680 043-17 (30IP)
R/LF151.23-1616-20M1 -2020-20M1 -2525-20M1	C3-R/LF151.23 -22050-20 C4-R/LF151.23 -27055-20 C5-R/LF151.23 -35060-20	3212 012-259	5680 043-14 (20IP)
R/LF151.23-1616-25M1 -2020-25M1 -2525-25M1	C3-R/LF151.23 -22055-25 C4-R/LF151.23 -27060-25 C5-R/LF151.23 -35060-25	3212 012-259	5680 043-14 (20IP)
R/LF151.23-1616-30M1 -2020-30M1 -2525-30M1 -3225-30M1	C3-R/LF151.23 -22055-30 C4-R/LF151.23 -27060-30 C5-R/LF151.23 -35060-30 C6-R/LF151.23 -45065-30	3212 012-310	5680 043-15 (20IP)
R/LF151.23-2020-40M1 -2525-40M1 -3225-40M1	C4-R/LF151.23 -27067-40 C5-R/LF151.23 -35067-40 C6-R/LF151.23 -45067-40	3212 012-360	5680 043-17 (30IP)
R/LF151.23-2525-50M1 -3225-50M1	C5-R/LF151.23 -35075-50 C6-R/LF151.23 -45075-50	3212 012-360	5680 043-17 (30IP)
R/LF151.23-2525-60M1 -3225-60M1	C5-R/LF151.23 -35075-60 C6-R/LF151.23 -45080-60	3212 012-360	5680 043-17 (30IP)
		1	2
Parting blade		Clamping screw	Key Torx Plus
151.2-45-80		3212 012-259	5680 043-14 (20IP)

Ordering example: 10 pieces 3212 012-259

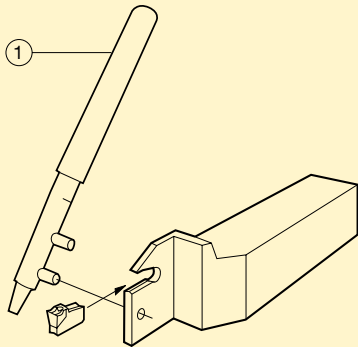
T-MAX Q-Cut® external screw clamp tools




Tool type and size	1	2
	Clamping screw	Key Torx Plus
R/LF151.37 -2525 -024B25 -029B25 -034B25 -044B25 -064B25	3212 012-360	5680 043-17 (30IP)
R/LF151.37 -2525 -027B30 -032B30 -042B30 -062B30 -112B30	3212 012-360	5680 043-17 (30IP)
R/LF151.37 -2525 -025B40 -030B40 -045B40 -070B40 -090B40	3212 012-360	5680 043-17 (30IP)
R/LF151.37 -2525 -023B50 -038B50 -058B50 -088B50	3212 012-360	5680 043-17 (30IP)
R/LG151.37 -2525 -027B30 -032B30 -042B30		
R/LG151.37 -2525 -023B50 -038B50		
NF151.42 -2525 -40 -3225-40	3212 012-360	5680 043-17 (30IP)
NF151.42 -2525-60 -3225-60	3212 012-360	5680 043-17 (30IP)
R/LF151.42 -2525 -40 -3225 -40	3212 012-360	5680 043-17 (30IP)
R/LF151.42 -2525 -60 -3225 -60	3212 012-360	5680 043-17 (30IP)

Ordering example: 10 pieces 3212 012-360

Insert changing and clamping for T-MAX Q-Cut® external spring clamp tools



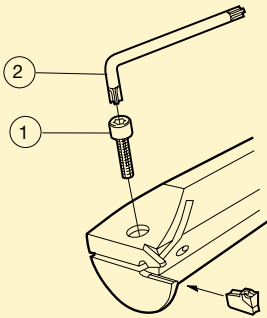
 5680 057-021
= Yellow handled key

 5680 057-011
= Red handled key

Optional parts Delivery to separate order			
Shank holders	Insert key	Shank holders	Insert key
R/L151.20 -0808-20 -1010-20 -1212-20 -1612-20 -1616-20 -1212-25 -1612-25 -1616-25 -2012-25 -2016-25 -2020-25 -2525-25 -1612-30 -1616-30 -2012-30 -2016-30 -2020-30 -2020-30A -2525-30A	5680 057-021	R/L151.21 -1616-20 -1616-25 -2020-25 -2020-30 -2525-30 -3225-30	5680 057-021
		R/L151.21 -2020-40 -2525-40 -3225-40 -2525-40A -3225-40A -3232-40 -2525-50 -3232-50 -2525-60 -3232-60	5680 057-011
R/L151.20 -2020-40 -2525-40	5680 057-011	Parting blade 151.2 -21-20 -21-25 -25-25 -21-30 -25-30	5680 057-021
		151.2 -21-40 -25-40 -25-50 -25-60	5680 057-011

Ordering example: 10 pieces 5680 057-021

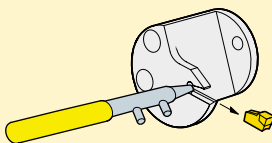
T-MAX Q-Cut® internal screw clamp tools



Tool type and size	1	2
	Clamping screw	Key Torx Plus
Boring bar		
R/LAF151.37 -25-024A25	3212 012-257	5680 043-14 (20IP)
R/LAF151.37 -25-024A30 -25-025A30	3212 012-257	5680 043-14 (20IP)
R/LAF151.37 -40-035A50 -40-036A50	3212 012-359	5680 043-17 (30IP)
R/LAG151.22 -25R-20 -32S-20	3212 012-257	5680 043-14 (20IP)
R/LAG151.22 -25R-25 -32S-25 -40T-25	3212 012-257	5680 043-14 (20IP)
R/LAG151.22 -25R-30 -32S-30 -40T-30	3212 012-257	5680 043-14 (20IP)
R/LAG151.22 -32S-40 -40T-40 -50U-40	3212 012-359	5680 043-17 (30IP)
R/LAG151.22 -32S-50 -40T-50 -50U-50	3212 012-359	5680 043-17 (30IP)
R/LAG151.22 -40T-60 -50U-60	3212 012-359	5680 043-17 (30IP)
R/LAG151.32 -16M-20 -20Q-20	5512 031-03	5680 043-13 (15IP)
R/LAG151.32 -16M-25 -20Q-25 -25R-25 -32S-25	5512 031-03	5680 043-13 (15IP)
R/LAG151.32 -20Q-30 -25R-30 -32S-30	5512 031-03	5680 043-13 (15IP)
R/LAG151.32 -25R-40 -32S-40 -40T-40	5512 031-03 3212 012-359 3212 012-359	5680 043-13 (15IP) 5680 043-17 (30IP) 5680 043-17 (30IP)
R/LAG151.32 -32S-50 -40T-50	3212 012-359	5680 043-17 (30IP)
R/LAG151.32 -40T-60	3212 012-359	5680 043-17 (30IP)

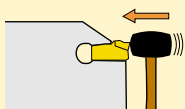
Ordering example: 10 pieces 3212 012-257

Insert changing and clamping for T-MAX Q-Cut® grooving heads type 551.31 with spring clamp



Optional parts Delivery to separate order			
Cutting head	Insert key	Cutting head	Insert key
R/LAG551.31 -160808-20 -161603-20 -161605-25 -201011-25 -202004-25 -202004-30 -251214-30 -252506-30	1)	R/LAG551.31 -252506-40 -321617-40 -323207-40 -323207-50 -402019-50 -404009-50 -404009-60	1)

Ordering example: 10 pieces 5680 057-021

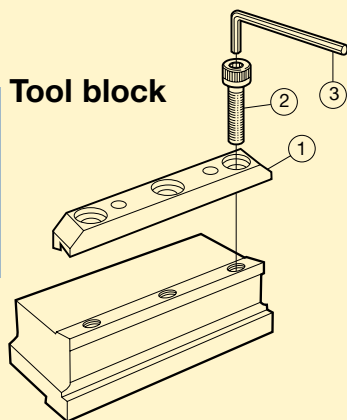


1) No pivot holes are provided in the 551.31 type exchangeable cutting heads. For these items a small rubber hammer should be used to tap the insert into its final position. The tip of the yellow key should be used to extract the insert.

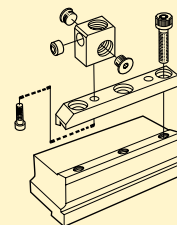
 5680 057-021
= Yellow handled key

Tool block for CoroCut 1- and 2-edge and T-MAX Q-Cut parting blade

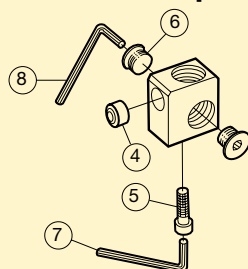
Tool block



Tool block	Standard parts		
	Delivered with the tool		
	1	2	3
	Clamp	Clamp screw	Key (mm)
151.2-2020-21M	5412 120-01	3212 010-410	3021 010-060 (6,0)
151.2-2520-25	5412 120-02	3212 010-411	3021 010-060 (6,0)
151.2-3232-25	5412 120-02	3212 010-411	3021 010-060 (6,0)
151.2-3232-45	5412 120-03	3212 010-412	3021 010-060 (6,0)
151.2-4040-45	5412 120-03	3212 010-412	3021 010-060 (6,0)



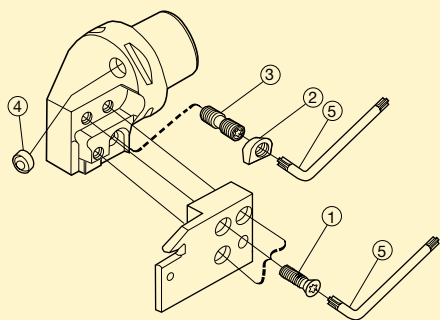
Coolant adaptor



Standard parts				
Delivered with the adaptor				
4	5	6	7	8
Nozzle	Mounting screw	Plug	Key (mm)	Key (mm)
5691 029-02	3212 010-358	5519 055-01	3021 010-050 (5,0)	3021 010-060 (6,0)

Ordering example: 10 pieces 5412 120-01

T-MAX Q-Cut® – MBS tools

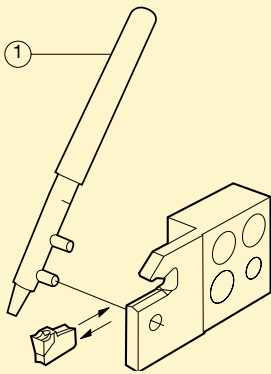


Shank adaptors and CoroMant Capto®, 0° and 90° style

Tool type and size		1	2	3	4	5
Shank adaptor	CoroMant Capto®	Blade screw	Wedge	Wedge screw	Nozzle	Key Torx Plus
LF-MBS4 -1616 -2020 -2525	C3-LF-MBS4 C4-LF-MBS4	5513 021-04	5431 120-02	5516 014-02	5691 029-06	5680 043-13 (15IP)
LF-MBS6 -2525 -3225	C5-LF-MBS6	5513 021-02	5431 120-01	5516 014-01	5691 029-01	5680 043-15 (25IP)
RF-MBS3 -1616 -2020 -2525"	C3-RF-MBS3 C4-RF-MBS3	5513 021-04	5431 120-02	5516 014-02	5691 029-06	5680 043-13 (15IP)
RF-MBS5 -2525 -3225	C5-RF-MBS5	5513 021-02	5431 120-01	5516 014-01	5691 029-01	5680 043-15 (25IP)
LG-MBS3 -1616 -2020 -2525"	C3-LG-MBS3 C4-LG-MBS3	5513 021-04	5431 120-02	5516 014-02	5691 029-06	5680 043-13 (15IP)
LG-MBS5 -2525 -3225	C5-LG-MBS5	5513 021-02	5431 120-01	5516 014-01	5691 029-01	5680 043-15 (25IP)
RG-MBS4 -1616 -2020 -2525"	C3-RG-MBS4 C4-RG-MBS4	5513 021-04	5431 120-02	5516 014-02	5691 029-06	5680 043-13 (15IP)
RG-MBS6 -2525 -3225	C5-RG-MBS6	5513 021-02	5431 120-01	5516 014-01	5691 029-01	5680 043-15 (25IP)

Ordering example: 10 pieces 5513 021-04

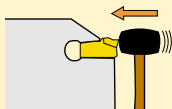
Insert changing and clamping for T-MAX Q-Cut® blades for MBS system



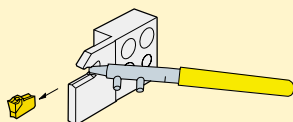
- 5680 057-021
= Yellow handled key
- 5680 057-011
= Red handled key

Optional parts			
Delivery to separate order			
1		1	
Blade	Insert key	Blade	Insert key
Face grooving blades MBS3-151.21 -030A-20 -035A-20 -030B-20 -035B-20	1)	Face grooving blades MBS5-151.21 -090A-60 -090B-60	5680 057-011
MBS3-151.21 -040A-25 -045A-25 -055A-25 -040B-25 -045B-25 -055B-25	1)	MBS6-151.21 -080A-30 -100A-30 -150A-30 -080B-30 -100B-30 -150B-30	5680 057-021
MBS3-151.21 -054A-30 -068A-30 -054B-30 -068B-30	1)	MBS6-151.21 -050A-40 -062A-40 -090A-40 -150A-40 -050B-40 -062B-40 -090B-40 -150B-40	5680 057-011
MBS4-151.21 -030A-20 -035A-20 -030B-20 -035B-20	1)	MBS6-151.21 -080A-50 -120A-50 -190A-50 -080B-50 -120B-50 -190B-50	5680 057-011
MBS4-151.21 -040A-25 -045A-25 -055A-25 -040B-25 -045B-25 -055B-25	1)	MBS5-151.21 -090A-60 -090B-60	5680 057-011
MBS4-151.21 -054A-30 -068A-30 -054B-30 -068B-30	1)	Parting – grooving blades	
MBS5-151.21 -080A-30 -100A-30 -150A-30 -080B-30 -100B-30 -150B-30	5680 057-021	MBS3-151.21 -20 -25 -30	5680 057-021
MBS5-151.21 -050A-40 -062A-40 -090A-40 -150A-40 -050B-40 -062B-40 -090B-40 -150B-40	5680 057-011	MBS4-151.21 -20 -25 -30	5680 057-021
MBS5-151.21 -080A-50 -120A-50 -190A-50 -080B-50 -120B-50 -190B-50	5680 057-011	MBS5-151.21 -30 -40 -50 -60	5680 057-021 5680 057-011 5680 057-011 5680 057-011
		MBS6-151.21 -30 -40 -50 -60	5680 057-021 5680 057-011 5680 057-011 5680 057-011

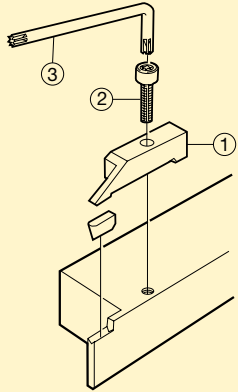
Ordering example: 10 pieces 5680 057-021



1) No pivot holes are provided in the smaller MBS blades (MBS3-MBS4) for parting or face grooving. For these items a small rubber hammer should be used to tap the insert into its final position. The tip of the yellow key should be used to extract the insert.

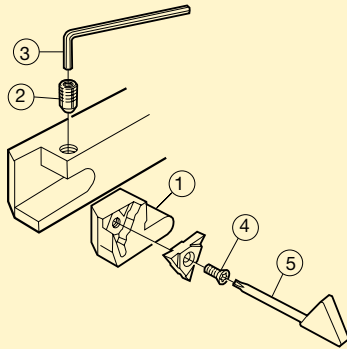


T-MAX external holders



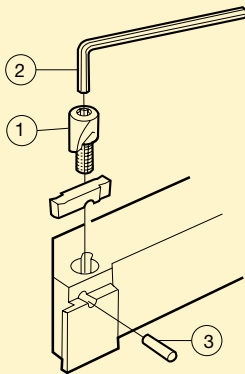
Tool type and size		1	2	3
Ceramic shank holders		Clamp Right hand	Clamp Left hand	Clamp screw Key Torx Plus
R/LF150.23	-3244M-0317C	5412 117-01	5412 117-02	3212 036-506
	-3244M-0476C	5412 117-05	5412 117-06	3212 036-506
	-3244M-0635C	5412 117-09	5412 117-10	3212 036-506
	-3244M-0952C	5412 117-17	5412 117-18	3212 036-506
				5680 043-17 (30IP)

Ordering example: 10 pieces 5412 117-01



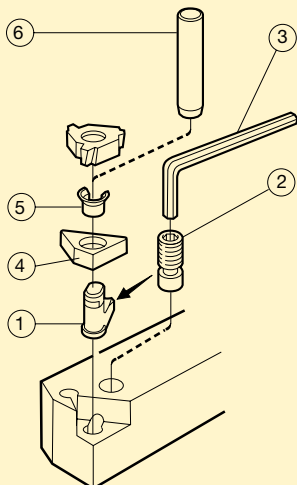
Tool type and size	1	2	3	4	5
Shank holders	Unit Right hand	Unit Left hand	Screw	Key (mm)	Screw (thread) Key Torx Plus
R/L154.3	-2016-16	154.3-830	154.3-831	437.5-822	174.1-864 (3,0)
	-2516-16				154.3-835 (M3,0)
	-3225-16				5680 051-03 (9IP)

Ordering example: 10 pieces 154.3-830



Tool type and size	1	2	3
Shank holders	Clamp set	Key (mm)	Pin
R/L154.91	-1616-3	174.9-831-2	174.1-863 (2,5)
	-2020-3		
	-2525-3 Q		
R/L154.91	-1616-5	174.9-837-2	174.1-864 (3,0)
	-2020-5		
	-2525-5 Q		
R/L154.91	-2525-8 Q	174.9-838-1	3021 010-040 (4,0)
R/L154.93	-1616-3	174.9-831-2	174.1-863 (2,5)
	-2020-3		
	-2525-3 Q		
R/L154.93	-1616-5	174.9-837-2	174.1-864 (3,0)
	-2020-5		
	-2525-5Q		
R/L154.93	-2020-8	174.9-838-1	3021 010-040 (4,0)

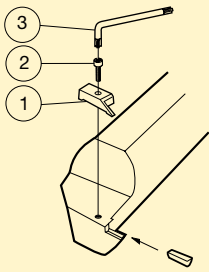
Ordering example: 10 pieces 174.9-831-2



Tool type and size	1	2	3	4	5	6
Shank holders	Lever	Screw	Key (mm)	Shim	Shim pin	Shim pin punch
R156.3	-2020-22	174.3-841M	174.3-821	174.1-864 (3,0)	156.3-850	174.3-861
	-2525-22					174.3-871
	-3225-22					

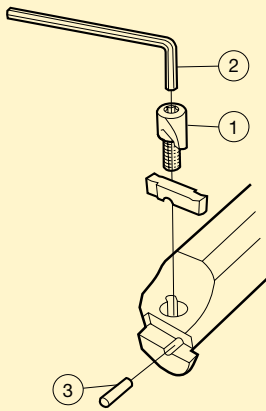
Ordering example: 10 pieces 174.3-841M

T-MAX internal holders



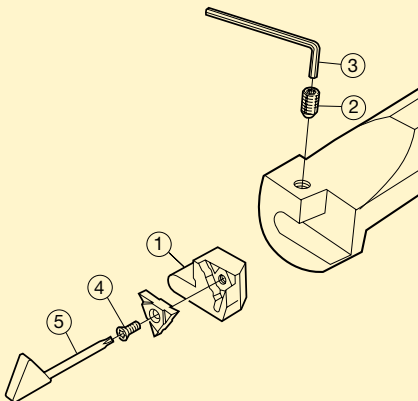
Tool type and size	1		2	3
	Clamp Right hand	Clamp Left hand	Clamp screw	Key Torx Plus
Ceramic boring bars				
R/LAG150.23-50V-0317C	5412 115-01	5412 115-02	3212 106-504	5680 043-16 (27IP)
-50V-0476C	5412 115-05	5412 115-06	3212 106-504	5680 043-16 (27IP)
-50V-0635C	5412 115-03	5412 115-04	3212 106-504	5680 043-16 (27IP)
-50V-0952C	5412 115-11	5412 115-12	3212 106-504	5680 043-16 (27IP)

Ordering example: 10 pieces 5412 115-01



Tool type and size	1	2	3
	Clamp set	Key (mm)	Pin
Boring bars			
R/L154.91 -16-3	174.9-831-1	174.1-863 (2,5)	3111 020-405
R/L154.91 -25-3 -40-3	174.9-831-2	174.1-863 (2,5)	3111 020-405
R/L154.91 -25-5 -40-5	174.9-837-2	174.1-864 (3,0)	3111 020-406
R/L154.91 -40-8	174.9-838-1	3021 010-040 (4,0)	3111 020-409
R/L154.93 -16-3	174.9-831-1	174.1-863 (2,5)	3111 020-408
R/L154.93 -25-3 -40-3	174.9-831-2	174.1-863 (2,5)	3111 020-408
R/L154.93 -25-5	174.9-837-2	174.1-864 (3,0)	3111 020-411
R/L154.93 -40-5	174.9-837-2	174.1-864 (3,0)	3111 020-409
R/L154.93-40-8	174.9-838-1	3021 010-040 (4,0)	3111 020-411

Ordering example: 10 pieces 174.9-831-1



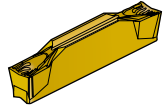
Tool type and size	1		2	3	4	5
	Unit Right hand	Unit Left hand	Screw	Key (mm)	Screw (thread)	Key Torx Plus
Boring bars						
R/L154.3-25-16	154.3-833M	154.3-832M	437.5-822	174.1-864 (3,0)	5513 015-01 (M3,5)	5680 051-03 (9IP)
R/L154.3-32-16	154.3-831	154.3-830	437.5-822	174.1-864 (3,0)	154.3-835 (M3,0)	5680 051-03 (9IP)

Ordering example: 10 pieces 154.3-832M

CoroCut® 1- and 2-edge inserts

Parting

-CF

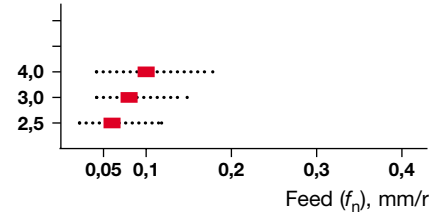


Low feed choice



Radial feed

Insert width (l_a), mm



Stainless steels and sticky materials

Very good chip control at low feeds.

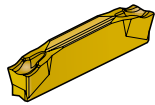
The positive geometry eliminates the risk of built up edges.

Gives soft cutting action.

Generates good surface finish, due to wiper design on the side.

Available as CoroCut 2-edged inserts.

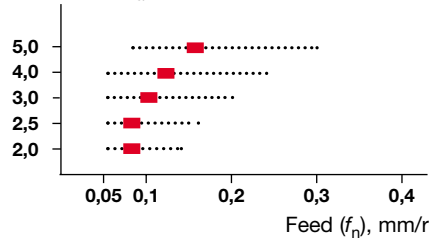
-CM



Medium feed choice

Radial feed

Insert width (l_a), mm



Parting off stainless steels

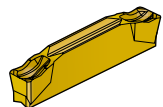
Also recommended for thin walled tubes and small diameter components in all materials.

The positive geometry eliminates the risk of built up edges.

Low cutting forces resulting in reduced vibrations.

Available as CoroCut 1- and 2-edged inserts.

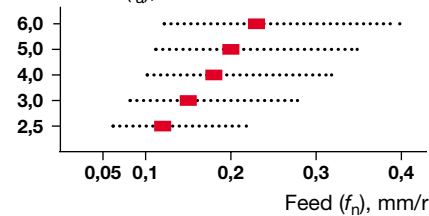
-CR



High feed choice

Radial feed

Insert width (l_a), mm



Rough machining

Strong cutting edges, reduce risk of edge fractures.

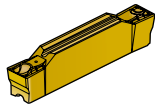
Suitable for parting off bars and interrupted cuts.

For steel and cast iron, but also suitable for stainless steels when there is a need for strong edges.

Available as CoroCut 1- and 2-edged inserts.

Grooving

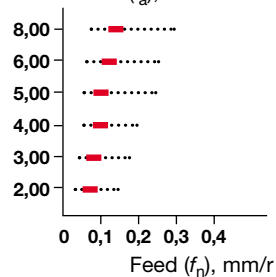
-GF



Low feed choice

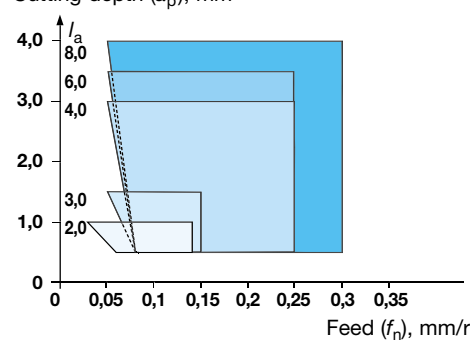
Radial feed

Insert width (l_a), mm



Axial feed

Cutting depth (a_p), mm



For precision grooves

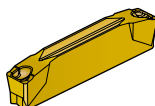
Good accuracy and repeatability due to tight tolerances on inserts.

Low cutting forces and good surface finishing due to sharp cutting edge.

Large number of different widths, Designed for side turning.

Available as CoroCut 1- and 2-edged inserts.

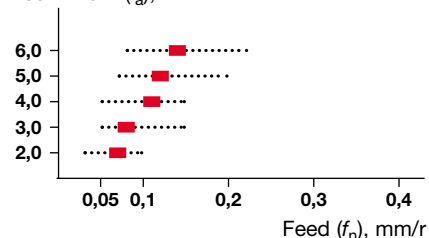
-GM



Medium feed choice

Radial feed

Insert width (l_a), mm



Grooving in all materials

Outstanding chip control.

Reduces chip width giving good surfaces.

Available as CoroCut 2-edged inserts.

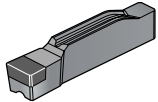
■ = Recommended starting value

For cutting speed recommendations, see page B 86

CoroCut® 1- and 2-edge inserts

Grooving

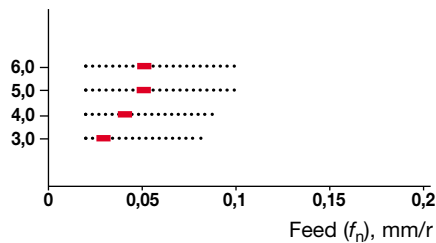
-GE



Cubic Boron Nitride tipped

Radial feed

Insert width (l_a), mm



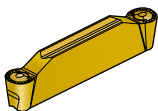
Alternative for finish grooving of hardened materials

Maintains close tolerances and gives excellent finish on components.

Available as CoroCut 1-edged inserts.

Profiling

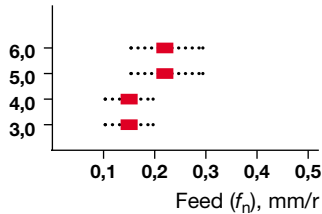
-RM



Medium feed choice

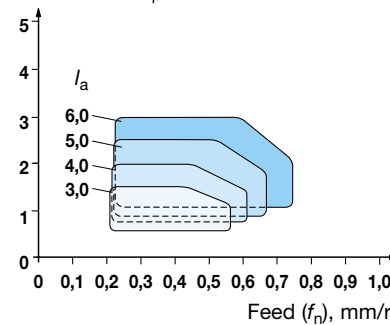
Radial feed

Insert width (l_a), mm



Axial feed

Cutting depth (a_p), mm



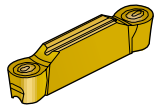
Excellent for profiling in all materials

Outstanding chip control even at low feeds and small depths of cut.

Good surface finish.

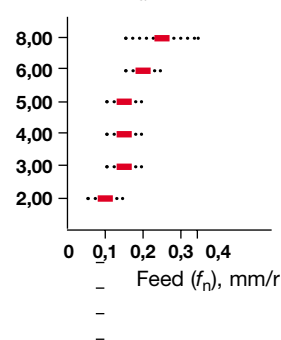
Available as CoroCut 1 and 2-edged inserts.

-RO



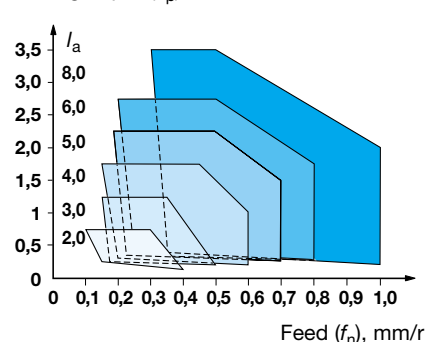
Radial feed

Insert width (l_a), mm



Axial feed

Cutting depth (a_p), mm



Excellent for profiling in stainless steel

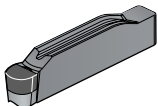
HRSA and other sticky materials.

Outstanding chip control at low feeds and small depths of cut.

Good surface finish. Sharp cutting edge.

Available as CoroCut 2-edged inserts.

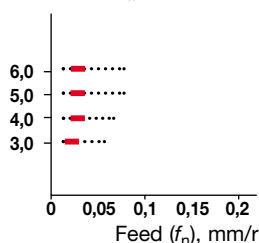
-RE



Cubic Boron Nitride tipped

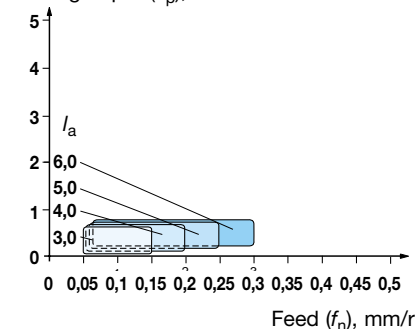
Radial feed

Insert width (l_a), mm



Axial feed

Cutting depth (a_p), mm



Alternative for finish profiling of hardened materials

Gives outstanding productivity and exceptional surface finish.

Available as CoroCut 1-edged inserts.

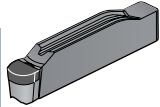
■ = Recommended starting value

For cutting speed recommendations, see page B 86

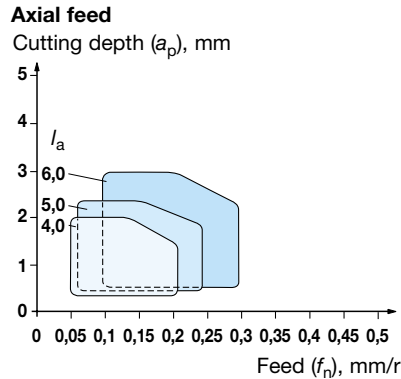
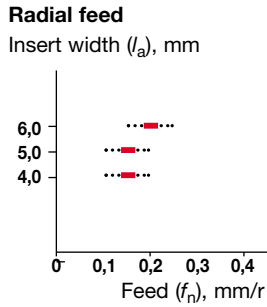
CoroCut® 1- and 2-edge inserts

Profiling

-RS



Diamond tipped



Alternative for finish profiling of non-ferrous materials.

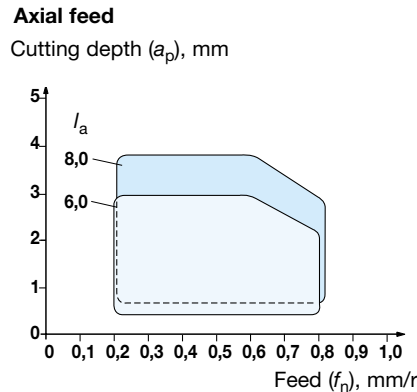
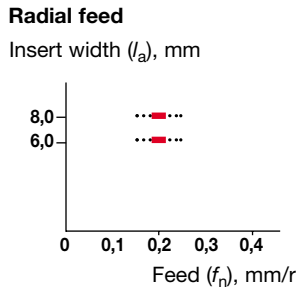
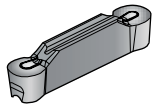
Gives outstanding productivity and exceptional surface finish.

For use under stable conditions.

Available as CoroCut 1-edged inserts.

Aluminium profiling

-AM



First choice for profiling in non-ferrous materials

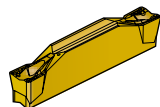
Good chip flow giving good surface finish.

Sharp cutting edge.

Available as CoroCut 2-edged inserts.

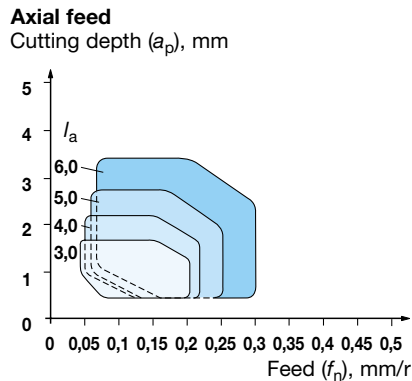
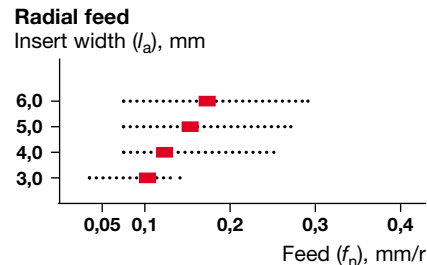
Turning and plunge turning

-TF



Low feed choice

TECHNOLOGY
Wiper



The excellent choice for plunge turning

Suitable for all turning operations in stainless steels.

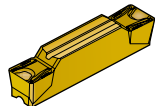
The positive geometry eliminates the risk of built up edges.

Good chip control and surface finish.

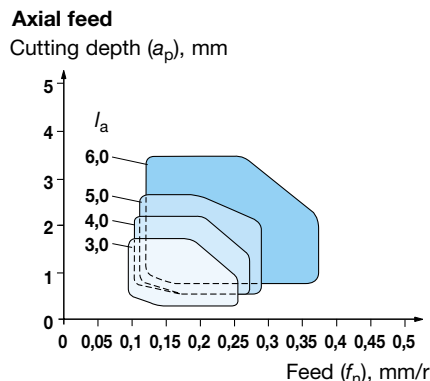
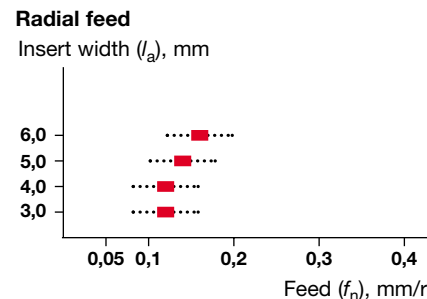
Wiper design on the side.

Available as CoroCut 1- and 2-edged inserts.

-TM



Medium feed choice



General turning operations

The positive geometry eliminates the risk of built up edges.

Available as CoroCut 2-edged inserts.

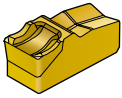
■ = Recommended starting value

For cutting speed recommendations, see page B 86

T-MAX Q-Cut® inserts

Parting

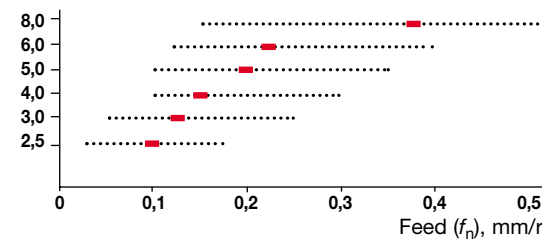
-4E



High feed choice

Radial feed

Insert width (l_a), mm



First choice for parting off bars

Strong geometry ideal for interrupted cuts.
For parting off steel and cast iron.

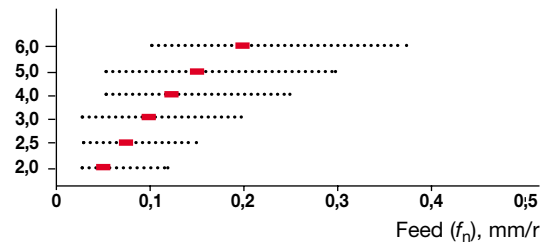
-5E



Medium feed choice

Radial feed

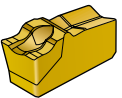
Insert width (l_a), mm



First choice for parting off tubes

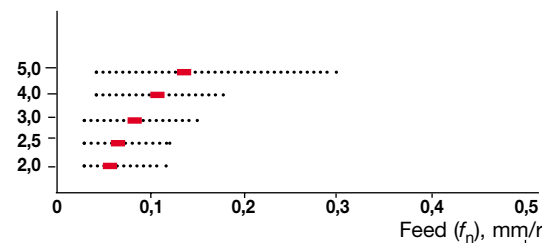
Particularly recommended for thin walled tubes and small diameter components in all materials.
Generates low cutting forces and hence little vibration.
For parting off stainless steel.

-5F



Radial feed

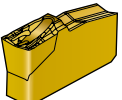
Insert width (l_a), mm



Optimizer to minimize pips and burrs on components due to sharp cutting edge, with a wide choice of front angles

Recommended for stainless steels, ductile and work hardening materials.

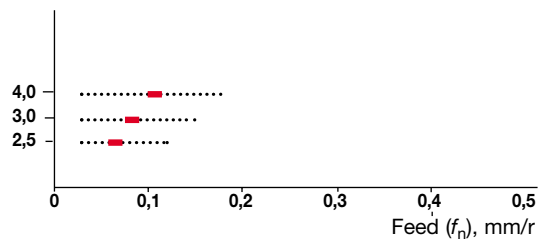
-7E



Low feed choice

Radial feed

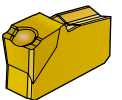
Insert width (l_a), mm



Alternative for good chip control at low feeds

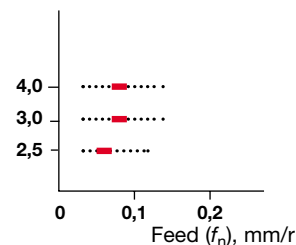
Soft cutting action.
Low cutting forces.
Generates good surface finish, due to Wiper design.
Very good chip control.

-9E



Radial feed

Insert width (l_a), mm



Optimizer for ball bearing operations and long chip-ping materials

Good chip control giving a high productive and problem-free production.

■ = Recommended starting value

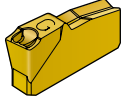
For cutting speed recommendations, see page B 86



T-MAX Q-Cut® inserts

Grooving

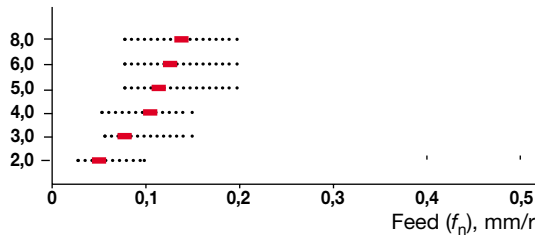
-5G



Medium feed choice

Radial feed

Insert width (l_a), mm



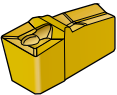
First choice for general purpose grooving.

Outstanding chip control.

Reduces chip width giving good surfaces.

For grooving in all materials

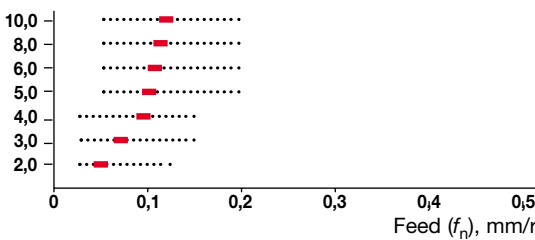
-4G (N151.2)



Low feed choice

Radial feed

Insert width (l_a), mm



Alternative choice for precision grooving.

Good accuracy and repeatability due to tight tolerances on insert.

Low cutting forces and good chip control in a wide range of materials.

Sharp cutting edge.

-6G



High feed choice

Radial feed

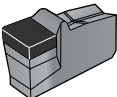
Insert width (l_a), mm



Alternative choice when chip control is of prime importance at high production rates.

Particularly recommended for mass production operations, e.g. cam shaft production.

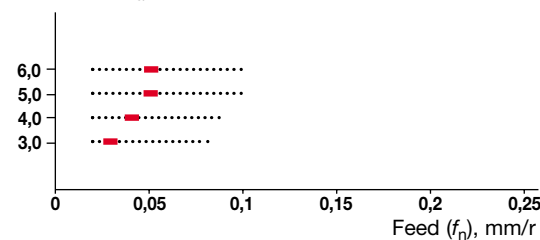
E-G



Cubic Boron Nitride tipped

Radial feed

Insert width (l_a), mm



Alternative for finish grooving of hardened materials.

Maintains close tolerances and gives excellent finish on components.

Internal grooving

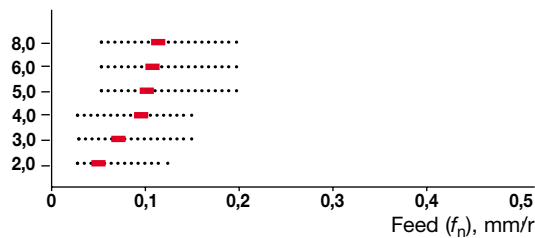
-4G (N151.3)



Low feed choice

Radial feed

Insert width (l_a), mm



Alternative choice for internal grooving of smallest bores.

Good accuracy and repeatability due to tight tolerances on insert.

Low cutting forces and good chip control in a wide range of materials.

Sharp cutting edge.

These inserts can only be used with holders type F151.37 or bars type AG151.32

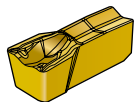
■ = Recommended starting value

For cutting speed recommendations, see page B 86

T-MAX Q-Cut® inserts

Face grooving

-7G (N151.3)

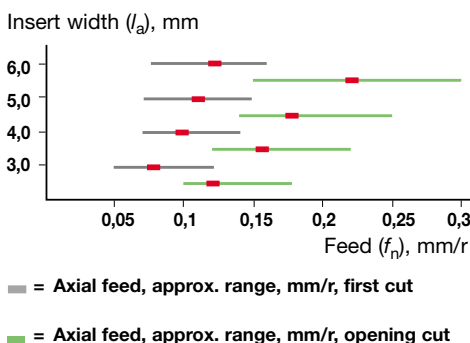


Medium feed choice

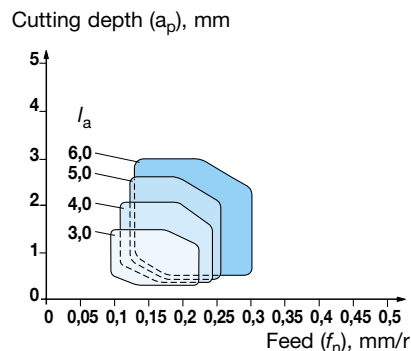


These inserts can only be used with holders type F151.37 or bars type AG151.32

Axial feed



Radial feed



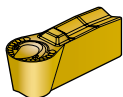
First choice for face grooving.

Good chip control both when cutting first groove and opening up. Smaller diameter grooves can be cut. Excellent stability. For face grooving in all materials.

First choice for internal turning/grooving

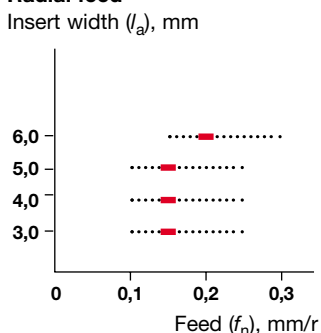
Good chip control. Generates good surface finish, due to Wiper design.

-7P (N151.3)

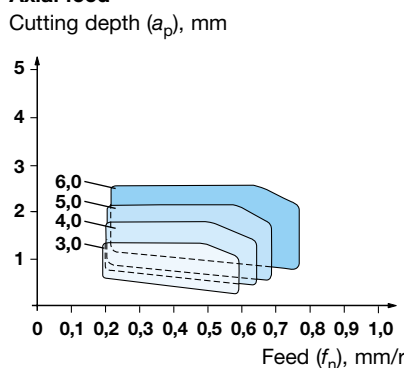


These inserts can only be used with holders type F151.37 or bars type AG151.32

Radial feed



Axial feed



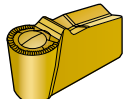
For profiling in face grooving operations.

Good chip control both axial and radial direction.

Well suited also for internal profiling operations.

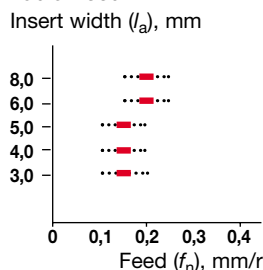
Profiling

-5P

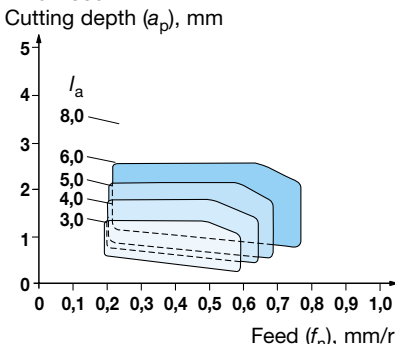


Medium feed choice

Radial feed



Axial feed



First choice for profiling in all materials.

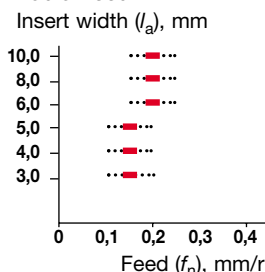
Outstanding chip control even at low feeds and small depths of cut. Generates good surface finish.

For profiling in all materials.

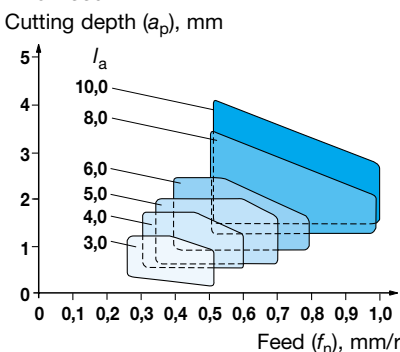
-4P



Radial feed



Axial feed



Optimizer for profiling and turning in stainless steels and heat resistant materials where there is a risk of built-up edges forming.

Generates excellent surface finish.

Diamond coated (grade CD1810) is a good alternative for finish profiling of non-ferrous materials. Recommended for stainless steels and heat resistant materials.

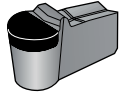
■ = Recommended starting value

For cutting speed recommendations, see page B 86

T-MAX Q-Cut® inserts

Profiling

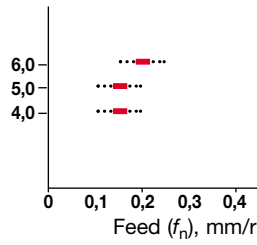
F-P



Diamond tipped

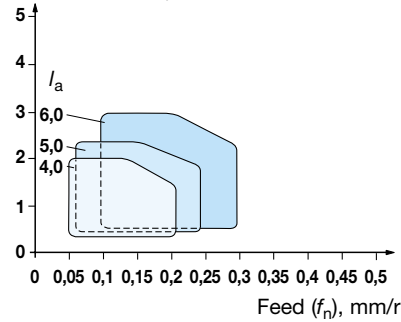
Radial feed

Insert width (l_a), mm



Axial feed

Cutting depth (a_p), mm

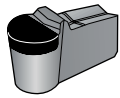


Alternative for finish profiling of non-ferrous materials.

Gives outstanding productivity and exceptional surface finish.

For use under stable conditions

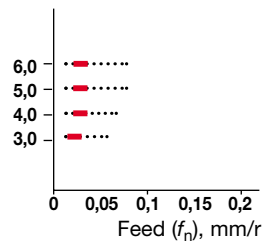
E-P



Cubic Boron Nitride tipped

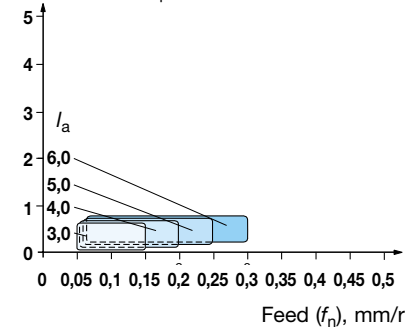
Radial feed

Insert width (l_a), mm



Axial feed

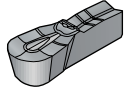
Cutting depth (a_p), mm



Alternative for finish profiling of hardened materials.

Gives outstanding productivity and exceptional surface finish.

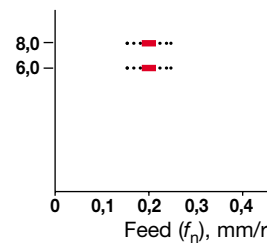
-AL (N151.4)



These inserts can only be used with holders type F151.42

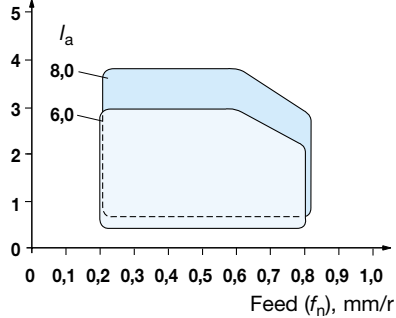
Radial feed

Insert width (l_a), mm



Axial feed

Cutting depth (a_p), mm



First choice for profiling in non-ferrous materials.

Good chip flow giving good surface finish.

Extra long cutting head gives excellent accessibility.

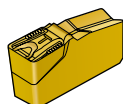
Gives unrivalled tool life and cutting economy when using diamond coated grade CD1810.

■ = Recommended starting value

For cutting speed recommendations, see page B 86

Turning

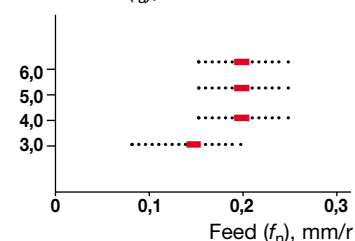
-5T



Medium feed choice

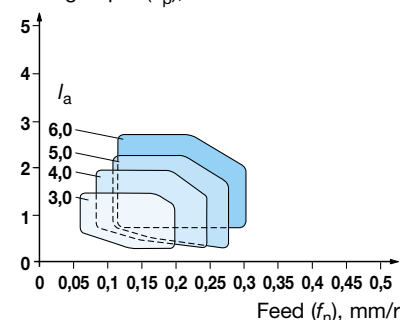
Radial feed

Insert width (l_a), mm



Axial feed

Cutting depth (a_p), mm

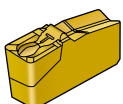


First choice for high productive turning with Q-Cut.

Good chip control.

Versatile - one insert can replace two conventional (one left and one right hand).

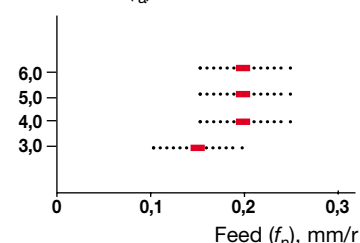
-4T



High feed choice

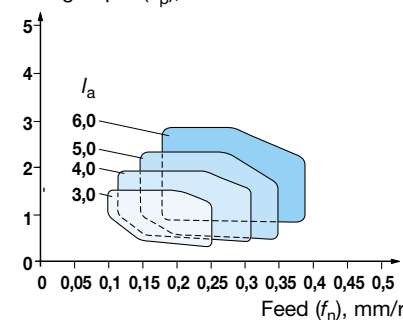
Radial feed

Insert width (l_a), mm



Axial feed

Cutting depth (a_p), mm



Alternative, especially for turning with high feeds.

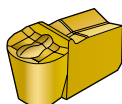
Good chip control.

Versatile - one insert can replace two conventional.

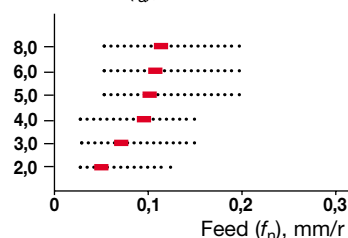
(one left and one right hand)

Undercutting

-4U



Insert width (l_a), mm



For the turning of reliefs and undercuts.

Large clearance angle permits undercutting of smaller diameters down 23 mm.

■ = Recommended starting value

For cutting speed recommendations, see page B 86

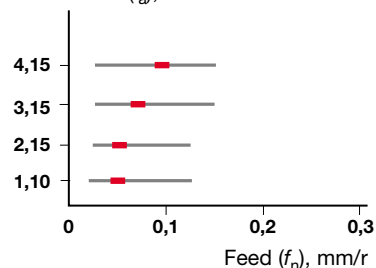
T-MAX U-Lock – Circlip grooving

R-/L154.0G



Radial feed

Insert width (l_a), mm



Alternative for good economy when grooving circlips.

High productivity and reliability through low cutting forces and little vibration.

Three cutting edges give good economy.

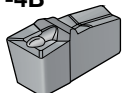
Recommended for use in all materials.

■ = Recommended starting value

For cutting speed recommendations, see page C 54.

T-MAX Q-Cut® – Blanks for grooving inserts

-4B

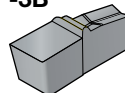


Blanks for do-it-yourself grinding of inserts for grooving.

Good chip control and low cutting forces.

Recommended for most materials.

-3B



Alternative blanks for do-it-yourself grinding of inserts for grooving.

Larger than -4B. Recommended when -4B is too small.

Recommended for most materials.

CoroCut® family (CoroCut and T-Max Q-Cut)

The recommendations are valid for use with cutting fluid.

Note! For internal grooving, facegrooving and undercutting the speed should be reduced by 30-40 %.

ISO	CMC No	Material		Specific cutting force k_c 0,4	Hardness Brinell						
						CT525	GC3115	GC3020			
						Feed f_n , mm/r					
						0,05- 0,5		0,05- 0,5		0,05- 0,5	
				Cutting speed v_c , m/min							
				N/mm ²	HB						
P STEEL	01.1	Unalloyed	C = 0,1 – 0,25 % C = 0,25 – 0,55 % C = 0,55 – 0,80 %	2000	125	235 – 170	355 – 185	355 – 185			
	01.2			2100	150	220 – 155	330 – 140	330 – 140			
	01.3			2180	170	210 – 145	300 – 125	300 – 125			
	02.1	Low-alloy ≤ 5 %	Non-hardened Hardened and tempered Hardened and tempered	2100	180	205 – 145	290 – 135	290 – 135			
	02.2			2775	275	185 – 120	270 – 105	270 – 105			
	02.2			2775	350	150 – 100	220 – 85	220 – 85			
	03.11	High-alloy > 5 %	Annealed Hardened tool steel	2500	200	130 – 100	260 – 115	260 – 115			
	03.21			3750	325	80 – 55	205 – 75	205 – 75			
	06.1	Castings	Unalloyed Low-alloy (alloying elements ≤ 5 %) High-alloy, alloying elements > 5 % Manganese steel, 12–14% Mn	1800	180	150 – 100	175 – 75	175 – 75			
	06.2			2100	200	135 – 85	200 – 90	200 – 90			
06.3	2500			225	115 – 70	160 – 75	160 – 75				
06.33	3600			250	75 – 50	90 – 48	90 – 48				
ISO	CMC No	Material		Specific cutting force k_c 0,4	Hardness Brinell						
						GC1005	CT525	GC1015			
						Feed f_n , mm/r					
						0,05- 0,5		0,05- 0,5		0,05- 0,5	
				Cutting speed v_c , m/min							
				N/mm ²	HB						
M STAINLESS STEEL	05.10 05.11 05.12 05.13	Ferritic/ martensitic	Free machining steel Non-hardened PH-hardened Hardened	2100	200		250 – 180	190 – 140			
				2300	200	400 – 175	195 – 135	140 – 105			
				3500	330	215 – 95	135 – 95	100 – 75			
				2800	330	255 – 110	150 – 100	110 – 80			
	05.20 05.21 05.22 05.23	Austenitic	Free machining steel Austenitic PH-hardened Super austenitic	2300	200		230 – 160	130 – 90			
	2600			180	435 – 190	190 – 130	105 – 70				
	3500			330	235 – 100	115 – 80	85 – 60				
	3000			200	260 – 115	130 – 90	70 – 49				
	05.51 05.52	Austenitic-ferritic (Duplex)	Non-weldable Weldable	≥ 0,05%C	2600	230	335 – 145	115 – 90	100 – 65		
	< 0,05%C			3000	260	300 – 130	90 – 70	50 – 29			
15.11 15.12 15.13	Ferritic/ martensitic	Non-hardened PH-hardened Hardened	2100	200		165 – 115	120 – 90				
3200			330		110 – 75	80 – 60					
2600			330								
15.21 15.22	Austenitic	Austenitic PH-hardened	2300	180		160 – 110	115 – 90				
3200			330		95 – 65	70 – 55					
15.51 15.52	Austenitic-ferritic (Duplex)	Non-weldable Weldable	≥ 0,05%C	2300	230		100 – 80	85 – 60			
< 0,05%C			2700	260		80 – 60	44 – 26				
ISO	CMC No	Material		Specific cutting force k_c 0,4	Hardness Brinell						
						GC1015	GC3115	GC3020			
						Feed f_n , mm/r					
						0,05- 0,5		0,05- 0,5		0,05- 0,5	
				Cutting speed v_c , m/min							
				N/mm ²	HB						
K CAST IRON	07.1	Malleable	Ferritic (short chipping) Pearlitic (long chipping)	950	130	110 – 95	340 – 170	230 – 120			
	07.2			1100	230	75 – 60	250 – 115	180 – 85			
	08.1	Grey	Low tensile strength High tensile strength	1100	180	90 – 70	290 – 140	250 – 105			
	08.2			1290	220	85 – 65	250 – 120	205 – 100			
	09.1	Nodular SG iron	Ferritic Pearlitic	1050	160	75 – 60	260 – 115	180 – 85			
	09.2			1750	250	65 – 48	205 – 100	150 – 85			

GC4025	GC4125	GC2135	GC235	GC2145					
Feed f_n, mm/r									
0,05- 0,5	0,05- 0,5	0,05- 0,5	0,05- 0,5	0,05- 0,5					
Cutting speed v_c, m/min									
325 - 175 300 - 135 280 - 120	255 - 125 230 - 100 205 - 90	205 - 100 180 - 75 175 - 70	165 - 130 150 - 120 140 - 105	175 - 90 160 - 65 150 - 60					
270 - 125 260 - 95 210 - 75	205 - 95 175 - 80 140 - 65	175 - 80 155 - 70 125 - 55	140 - 110 120 - 85 95 - 70	155 - 75 140 - 60 115 - 49					
250 - 105 185 - 70	180 - 80 130 - 55	155 - 70 105 - 43	70 - 60 45 - 33	140 - 65 95 - 37					
160 - 65 180 - 80 100 - 75 80 - 42	120 - 60 140 - 75 105 - 45 60 - 35	105 - 50 120 - 60 90 - 40 50 - 29	100 - 70 90 - 55 80 - 47 100 - 80	95 - 45 110 - 55 80 - 35					
H13A	GC4125	GC2135	GC235	GC2145					
Feed f_n, mm/r									
0,05- 0,5	0,05- 0,5	0,05- 0,5	0,05- 0,5	0,05- 0,5					
Cutting speed v_c, m/min									
120 - 90 90 - 70 60 - 40 70 - 50	175 - 75 165 - 75 130 - 60 140 - 65	155 - 65 145 - 65 110 - 46 120 - 50	170 - 130 130 - 100 90 - 70 100 - 75	140 - 55 130 - 50 100 - 40 110 - 45					
120 - 80 100 - 65 49 - 33 65 - 44	205 - 85 185 - 90 130 - 60 140 - 65	170 - 75 165 - 70 105 - 49 115 - 55	150 - 110 125 - 95 75 - 55 85 - 65	160 - 70 140 - 55 95 - 44 105 - 49					
	155 - 75 130 - 60	135 - 60 110 - 50	125 - 95 95 - 70	125 - 50 100 - 45					
75 - 60 50 - 38	150 - 70 125 - 55	130 - 60 110 - 46	110 - 85 70 - 55	120 - 47 100 - 40					
70 - 47 43 - 29	160 - 80 105 - 55	135 - 60 90 - 44	105 - 80 65 - 49	125 - 50 80 - 38					
	135 - 65 110 - 55	115 - 55 95 - 45	110 - 85 85 - 60	105 - 47 80 - 39					
H13A	GC4025	GC4125							
Feed f_n, mm/r									
0,05- 0,5	0,05- 0,5	0,05- 0,5							
Cutting speed v_c, m/min									
100 - 85 70 - 55	300 - 160 220 - 100	220 - 110 150 - 85							
80 - 65 80 - 60	260 - 125 225 - 110	180 - 95 150 - 80							
70 - 55 60 - 44	240 - 105 190 - 90	160 - 85 130 - 65							

CoroCut® family (CoroCut and T-Max Q-Cut)

The recommendations are valid for use with cutting fluid.

Note! For internal grooving, facegrooving and undercutting the speed should be reduced by 30-40 %.

ISO	CMC No	Material		Specific cutting force k_c 0,4	Hardness Brinell				
						CD10		CD1810	H10
						Feed f_n , mm/r			
						Cutting speed v_c , m/min			
				N/mm ²	HB				
N Non-ferrous material	30.11	Aluminium alloys	Wrought or wrought and coldworked, non ageing	500	60	2000 - 465	2500 - 150	2400 - 715	
	30.12		Wrought or wrought and aged	800	100	2000 - 465	2500 - 150	805 - 275	
	30.21 30.22	Aluminium alloys	Cast, non ageing Cast or cast and aged	750 900	75 90	2000 - 465 2000 - 465	2500 - 150 2500 - 150	825 - 275 510 - 200	
	33.1 33.2 33.3	Copper and copper alloys	Free cutting alloys, $\geq 1\%$ Pb Brass, leaded bronzes, $\leq 1\%$ Pb Bronze and non-lead copper incl. electrolytic copper	700 700 1750	110 90 100	800 - 325 795 - 325 400 - 185	800 - 150 800 - 150 400 - 150		
ISO	CMC No	Material		Specific cutting force k_c 0,4	Hardness Brinell				
						H10		GC1005	GC1015
						Feed f_n , mm/r			
						Cutting speed v_c , m/min			
				N/mm ²	HB				
S Heat resistant super alloys	20.11	Iron base	Annealed or solution treated	3000	200		180 - 120	55 - 40	
	20.12		Aged or solution treated and aged	3100	280		150 - 100	44 - 29	
	20.21	Nickel base	Annealed or solution treated	3320	250		90 - 55	33 - 26	
	20.22		Aged or solution treated and aged	3600	350		80 - 50	22 - 15	
	20.24		Cast or cast and aged	3700	320		70 - 46	22 - 15	
	20.31	Cobalt base	Annealed or solution treated	3300	200		90 - 60	38 - 30	
	20.32		Solution treated and aged	3750	300		80 - 50	26 - 17	
	20.33		Cast or cast and aged	3800	320		70 - 46	22 - 15	
	Titanium	23.1	Titanium Commercial pure ¹⁾	(99,5% Ti)	1530	Rm ²⁾ 400	190 - 160		
		23.21 23.22	Titanium alloys ¹⁾	α , near α and $\alpha+\beta$ alloys, annealed $\alpha+\beta$ alloys in aged cond, β alloys, annealed or aged	1675 1690	950 1050	80 - 65 70 - 55		
ISO	CMC No	Material		Specific cutting force k_c 0,4	Hardness Brinell				
						CB20		CC670	
						Feed f_n , mm/r			
						Cutting speed v_c , m/min			
				N/mm ²	HB				
H Hardened material	04.1	Extra hard steel	Hardened and tempered	5400	60 HRC	130 - 125	110 - 100		
	10.1	Chilled	Cast or cast and aged	2750	400	200-195	110 - 100		

1) Positive cutting geometry and coolant should be used.

2) Rm = ultimate tensile strength measured in MPa.

H13A									
Feed f_n, mm/r									
0,05- 0,5									
Cutting speed v_c, m/min									
995 - 585									
420 - 235									
995 - 585 650 - 360									
300 - 175 200 - 115 150 - 90									
H13A GC4125 GC2135 GC235 GC2145 CC670									
Feed f_n, mm/r									
0,05- 0,3 0,05- 0,3 0,05- 0,3 0,05- 0,3 0,05- 0,3 0,05- 0,1									
Cutting speed v_c, m/min									
50 - 37 70 - 38 50 - 29 50 - 37 40 - 30									
40 - 26 50 - 29 40 - 26 40 - 26 30 - 20									
30 - 23 45 - 28 40 - 26 30 - 23 25 - 20 600 - 500									
20 - 13 40 - 22 35 - 21 20 - 13 15 - 10 500 - 400									
20 - 13 30 - 16 25 - 10 20 - 13 15 - 10 250 - 200									
35 - 27 50 - 33 45 - 28 35 - 27 30 - 20 410 - 340									
23 - 15 40 - 22 35 - 17 23 - 15 20 - 10 350 - 300									
20 - 13 30 - 16 25 - 14 20 - 13 15 - 10 320 - 250									
175 - 145 200 - 95									
70 - 60 70 - 38									
65 - 55 65 - 33									
Feed f_n, mm/r									
Cutting speed v_c, m/min									

B

T-MAX grooving tools

The recommendations are valid for use with cutting fluid.

ISO	CMC No	Material	Specific cutting force k_c 0,4	Hardness Brinell	Parting						
					External grooving						
					Turning						
					Profiling						
					Undercutting						
					S1P	S4	H13A	H20			
					Feed f_n , mm/r						
					0,05–0,5	0,05–0,5	0,05–0,5				
					Cutting speed v_c , m/min						
					N/mm ²	HB					
P Steel	01.1	Unalloyed	C = 0,1–0,25 %	2000	125	180–100	150–100				
	01.2		C = 0,25–0,55 %	2100	150	170–100	140–90				
	01.3		C = 0,55–0,80 %	2280	200	160–80	120–70				
	02.1	Low-alloy ≤ 5%	Non-hardened	2100	180	160–80	120–70				
	02.2		Hardened and tempered	2600	275	120–80	100–60				
	02.2		Hardened and tempered	2850	350	100–60	80–40				
	03.11	High-alloy > 5%	Annealed	2600	200	140–80	110–70				
03.21	Hardened tool steel		3900	325	70–40	40–20					
06.1	Castings	Unalloyed	2000	160	140–70	110–60					
06.2		Low-alloy (alloying elements ≤ 5%)	2100	200	110–60	80–40					
06.3		High-alloy, alloying elements > 5%	2700	225	95–50	75–30					
06.33		Manganese steel, 12–14% Mn	3600	250							
M Stainless steel	05.10	Ferritic/martensitic	Free machining steel	2100	200			120–90			
	05.11		Non-hardened	2300	200			90–70			
	05.12		PH-hardened	3500	330			60–40			
	05.13		Hardened	2800	330			70–50			
	05.20	Austenitic	Free machining steel	2300	200			120–80			
	05.21		Austenitic	2450	180			90–60			
	05.22		PH-hardened	3500	330			50–30			
	05.23		Super austenitic	3000	200			70–40			
	05.51	Austenitic-ferritic (Duplex)	Non-weldable	≥ 0,05%C	2600	230					
	05.52		Weldable	< 0,05%C	3000	260					
15.11	Ferritic/martensitic	Non-hardened	2100	200			80–60				
15.12		PH-hardened	3200	330							
15.13		Hardened	2600	330			50–40				
15.21	Austenitic	Austenitic	2300	200			60–40				
15.22		PH-hardened	3200	330			40–30				
15.51	Austenitic-ferritic (Duplex)	Non-weldable	≥ 0,05%C	2300	230						
15.52		Weldable	< 0,05%C	2700	260						
K Cast iron	07.1	Malleable	Ferritic (short chipping)	950	130		80–40	100–80			
	07.2		Pearlitic (long chipping)	1100	230		50–20	70–50			
	08.1	Grey	Low tensile strength	1100	180	80–60	70–30	90–60			
	08.2		High tensile strength	1400	260	70–50		80–50			
	09.1	Nodular SG iron	Ferritic	1050	160		50–30	70–50			
	09.2		Pearlitic	1750	250		40–20	60–40			
N Non-ferrous material	30.11	Aluminium alloys	Wrought or wrought and coldworked, non ageing	500	60			1000–590			
	30.12		Wrought or wrought and aged	800	100			420–240			
	30.21	Aluminium alloys	Cast, non ageing	750	75			1000–590			
	30.22		Cast or cast and aged	900	90			650–360			
	33.1	Copper and copper alloys	Free cutting alloys, ≥1% Pb	700	110			300–130			
33.2	Brass, leaded bronzes, ≤1% Pb		700	90			200–120				
33.3	Bronze and non-leadad copper incl. electrolytic copper		1750	100			150–90				

ISO	CMC No	Material		Specific cutting force k_c 0,4	Hardness Brinell	Parting							
						External grooving							
						Turning							
						Profiling							
						Undercutting							
						H13A	H20						
						Feed f_n , mm/r							
						0,05–0,5 0,05–0,5							
						Cutting speed v_c , m/min							
						N/mm ²	HB						
S Heat resistant super alloys	20.11	Iron base	Annealed or solution treated		3000	200	50– 30						
	20.12		Aged or solution treated and aged		3050	280	40– 20						
	20.21	Nickel base	Annealed or solution treated		3320	250	30– 20						
	20.22		Aged or solution treated and aged		3600	350	20– 10						
	20.24		Cast or cast and aged		3700	320	20– 10						
	20.31	Cobalt base	Annealed or solution treated		3500	200	30– 20						
	20.32		Solution treated and aged		4000	350	20– 10						
	20.33		Cast or cast and aged		3800	320	20– 10						
	23.1		Titanium Commercial pure ¹⁾	(99,5% Ti)	1530	Rm ²⁾ 400	170–130						
	23.21	Titanium alloys ¹⁾	α , near α and $\alpha + \beta$ alloys, annealed $\alpha + \beta$ alloys in aged cond, β alloys, annealed or aged		1675	950	70– 50						
23.22	1690				1050		60– 40						
H Hardened material	04.1 10.1	Extra hard steel Chilled	Hardened and tempered Cast or cast and aged		4700 2750	55 HRC 400	30– 20 20– 10	20– 10					

¹⁾ Positive cutting geometry and coolant should be used.

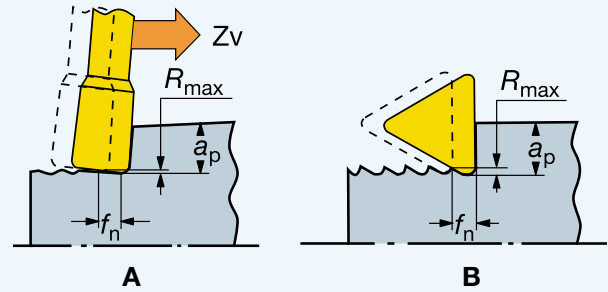
²⁾ Rm = ultimate tensile strength measured in MPa.

The Wiper effect with CoroCut

Surface finish in axial turning

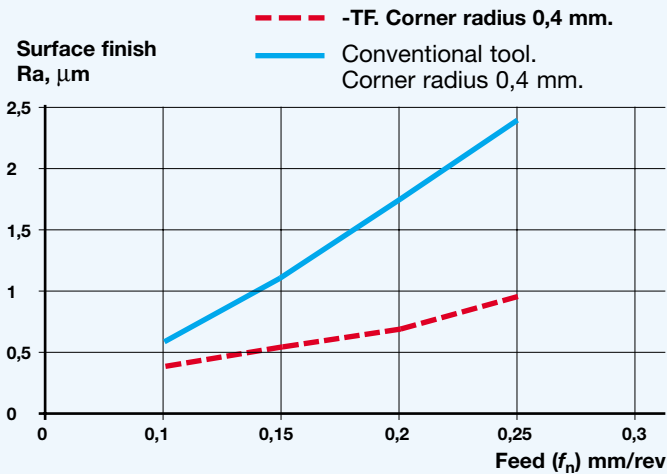
When using geometries -TF or -TM in axial turning operations, the wiper effect will generate much better surface finish (A) compared to conventional tools (B). This wiper effect, generated by tilting the insert, makes it possible to increase the feed, which results in a productivity increase.

Results from surface finish measurements from axial turning in steel with geometries -TF and -TM are shown in the graphs below.



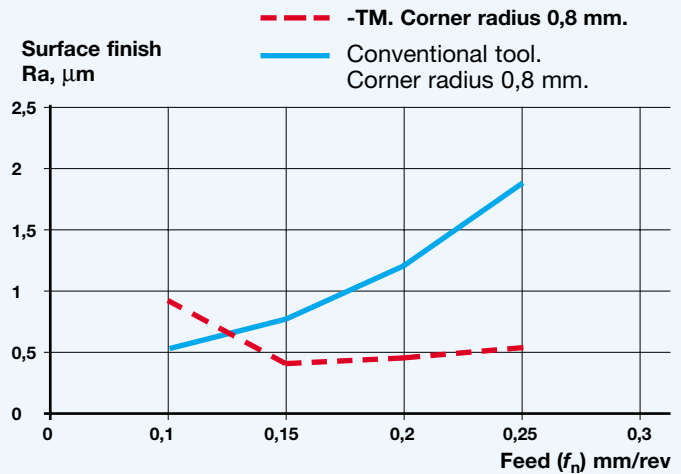
CoroCut® -TF

Cutting depth, a_p : 1,5 mm
Material: Steel, CMC 01.2



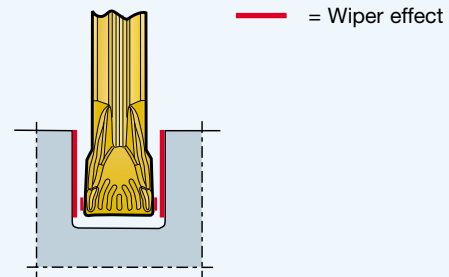
CoroCut® -TM

Cutting depth, a_p : 1,5 mm
Material: Steel, CMC 01.2

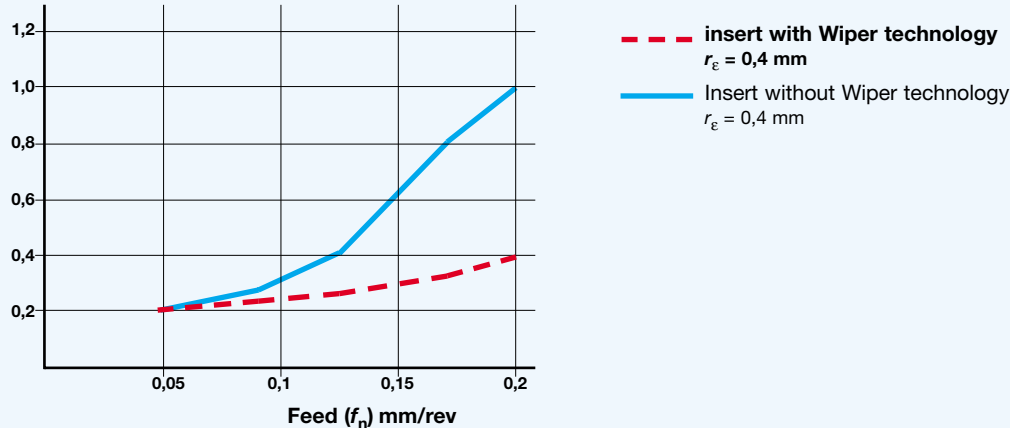


Surface finish in parting and grooving

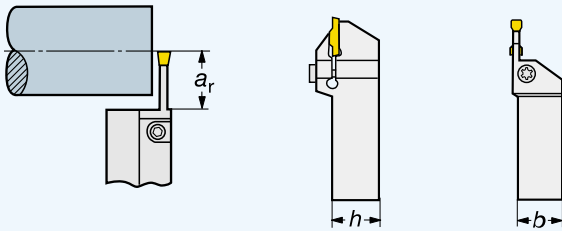
The Wiper is designed to work with radial feed (axial feed when facegrooving). The main benefit is much better surface finish on the component (see graph below). The CoroCut 1 -2 edge system is a system for high productivity parting and grooving operations. The CoroCut insert geometries -CF and -TF, as well as the T-MAX Q-Cut geometries -7E and -7G, are using the Wiper technology giving much better surface finish in parting and single groove operations.



Surface finish R_a , mm



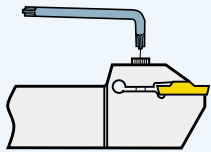
General



Choosing the toolholder

To minimize risk of vibration and deflection always choose:

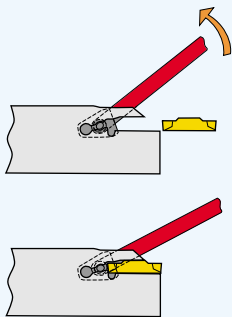
- blade or toolholder with smallest possible overhang.
- toolholder with maximum shank dimension.
- blade height (h) which is \geq insertion length (a_r).
- blade or holder with maximum blade width (largest possible insert seat size).



Insert clamping

Integrated screw clamp

The recommended torque values for the clamping screws are shown in the tool tables. Be careful to use the appropriate torque, do not overtighten. Max. torque is about 50% higher than the table values.



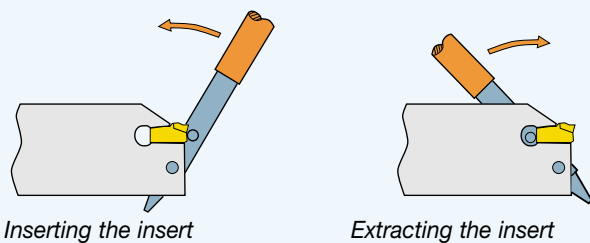
CoroCut spring clamp blade key

Mounting of insert:

1. Mount the excentric key in the corresponding recess of the blade slot.
2. Open the tip seat (lift the key) as you push the insert into the pocket.

Dismounting of insert:

1. Mount the excentric key in the corresponding recess of the blade slot.
2. Open the tip seat (lift the key) as you pull the insert from the pocket.



Inserting the insert

Extracting the insert

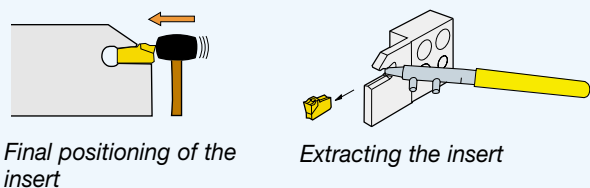
Q-Cut spring clamp

Always apply a little cutting fluid or oil on the insert seat before mounting to further increase the holder life.

Use the special Q-Cut key for inserting and extracting the insert in order to avoid edge fractures.

No pivot holes are provided in either the 570 type exchangeable cutting heads ((R/LAG 551.31) or the smaller MBS blades for parting or face grooving. For these items a small rubber hammer should be used to tap the insert into its final position. The tip of the yellow key should be used to extract the insert.

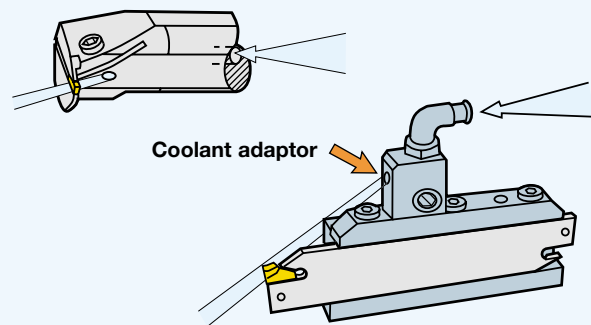
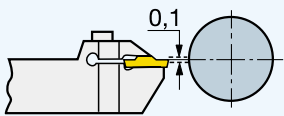
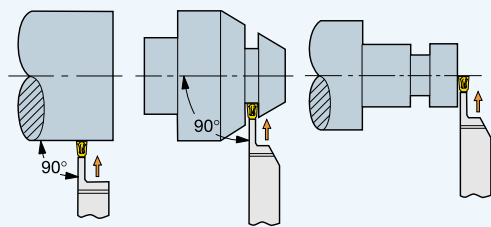
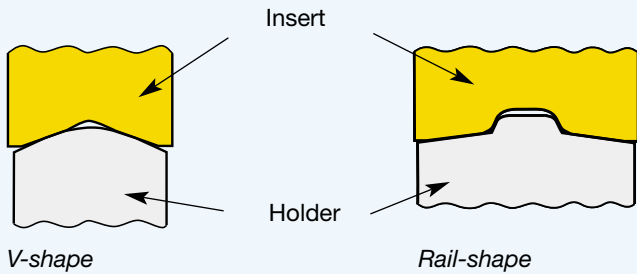
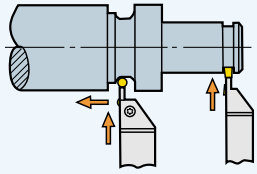
Types R/LAG 551.31 and small MBS blades.



Final positioning of the insert

Extracting the insert

General



Insert support

A screw clamp holder is recommended when axial machining is used (e.g. with holder type CoroCut with short a_r).

A spring clamp tool is recommended when only radial machining is used.

CoroCut family insert clamping

The CoroCut family has two different insert clamping systems.

- CoroCut in insert seat size D-G and all Q-Cut insert seat sizes have a V-shaped design giving a very secure clamping for parting and grooving applications.
- CoroCut in insert seat size H-L have the unique rail-design giving superior stability to the insert clamping. This is primarily needed in operations generating side forces such as turning and profiling.

90° mounting

It is very important that the insert is mounted at 90° to the centre line of the workpiece in order to obtain perpendicular surfaces and reduce the risk of vibration.

Correct centre height setting

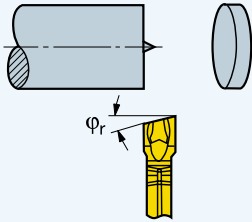
It is essential, when parting off bars or grooving relatively small diameters, that the centre height setting is maintained to a tolerance of $\pm 0,1$ mm. This has a major influence on tool life, cutting forces and chip size.

Cutting fluid

A copious supply of cutting fluid, directed exactly at the cutting edge, should be used while the insert is engaged and throughout the operation.

For tool blocks a coolant adaptor can be mounted and the coolant supply connected from above or from either side. The adaptor can be ordered as an optional extra and is supplied with an assembly screw. See page B 37.

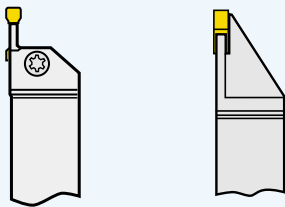
Parting



Burr free parting

To avoid or minimize pips or burrs use ground handed inserts (e.g. -5F geometry) with the smallest possible front angle that gives an acceptable component.

Note that large front angle reduces pip/burrs, but will produce an uneven cut, with poorer surface finish and shorter tool life.



Straight parting and good stability

Use a CoroCut toolholder with short a_r (for Q-Cut holder type -22) if possible, to ensure good stability and straight cutting off. A re-inforced holder will increase the stability even more.



Large depths of penetration

Use double ended blades for best insert seat economy and accessibility at large depths of penetration.

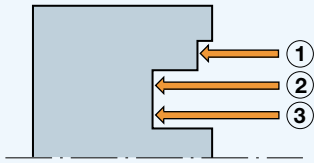
Note that when machining a large diameter workpiece or using a holder/blade with large overhang reduce feed and cutting speed when parting to the centre, in order to minimize pip and load on the cutting edge.

Practical hints when parting to centre:

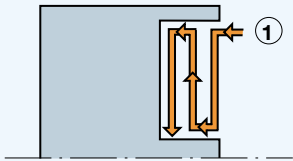
Reduce the feed rate by up to 75% 2–3 mm prior to the part dropping off will increase the tool life.

Face grooving

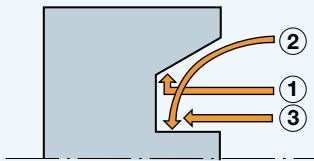
Operation A



Operation B



Operation C



Recommendations

A) Roughing

Sequence of operation: always work from largest diameter inwards.

Cut 1 gives chip control but no chip breaking.

Cuts 2—3. Widths 0,5—0,8 of cutting edge, l_a .

Insert will now give chip breaking.

When retracting offset insert slightly from inner edge of groove.

B) Plunge turning

Axial turning depth should not be deeper than $0,75 \times$ width of insert.

A good indicator is that if the groove is wider than it is deep, plunge turning would be recommended. If the groove is deeper than it is wide, multiple grooving is best and involves less tool manipulation.

C) Finishing

Cut 1 within given diameter range and face turn towards the radius.

Cut 2 finish outer diameter and radius and face turn inwards.

Cut 3 finish the inner diameter to correct dimension.

Practical hints

- To avoid chatter and bending, minimize overhang.
- For stability use blade with largest diameter range, whenever possible.
- To avoid chip jamming, keep the infeed rate low during the first cut.
- For good chip breaking always start with largest possible diameter and work inwards.

Trouble shooting

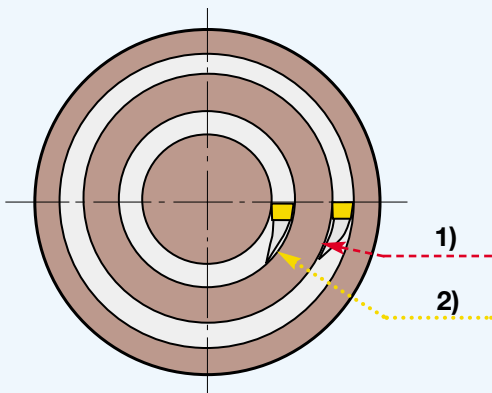
If the support web rubs against the workpiece diameter on:

1) inner side of supported web:

- lower the tool below the centre line.
- tool is not parallel to axis of rotation; correct.
- tool is not correct for the diameter range; change tool.

2) outer side of supported web:

- lift the tool above the centre line.
- tool is not parallel to axis of rotation; correct.
- tool is not correct for the diameter range; change tool.

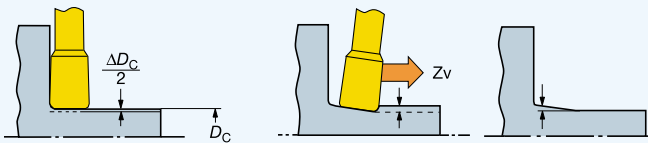
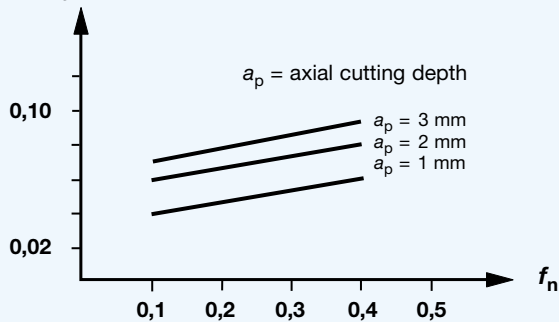


Profiling / turning

Compensation for tool deflection

Compensation on workpiece diameter, mm

$\Delta D_c / 2$ mm



One CoroCut® replaces two conventional

A neutral CoroCut tool is excellent for opening or completing a recess. Conventional tools normally need both right and left hand tools to achieve the same operation.

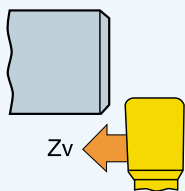
Choosing the toolholder

A screw clamp holder should be used for profiling/turning operations. For maximum stability and optimum productivity choose a CoroCut/Q-Cut holder with shortest possible a_r (for Q-Cut holder type -22). If, for reasons of accessibility, this is not possible, use a holder with long a_r (for Q-Cut holder type -23) but cutting data should be reduced accordingly.

Compensation when axial turning

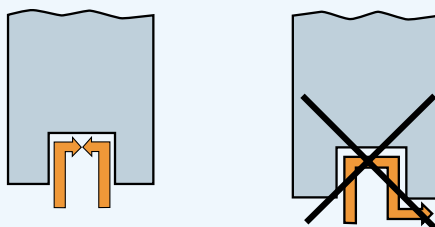
During axial turning or copying the tool is subjected to a small deflection, caused by axial cutting forces. This results in a difference ($\Delta D_c / 2$) in diameter during the transition between radial and axial feed. In order to compensate for this, the difference in diameter should be measured and the tool drawn back so that the correct diameter is obtained.

The diagram above shows the necessary compensation ($+\Delta D_c / 2$) for the workpiece diameter.



Chamfering for increased edge life

To increase tool life an entering chamfer is recommended.



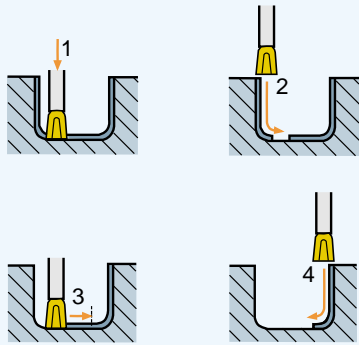
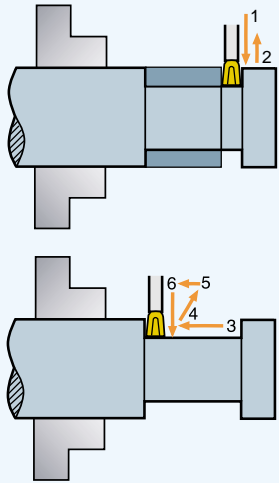
In-copying or out-copying?

To minimize wear on the tool and the risk of the insert loosening, in-copying should be used. Chip breaking is also better and more consistent with in-copying.

Perpendicularity

To achieve good perpendicularity between the side walls use radial operations as shown in the diagram.

Profiling / turning



Recommended machining sequence – roughing

Because of the need for limited deflection it is recommended that forces on the insert in one direction should be relieved prior to changing cutting direction.

1. Radially infeed to required DOC (a_p max. $0,75 \times$ insert width)
2. Retract radially 0,1 mm
3. Turn axially to opposite shoulder position
4. Retract diagonally 0,5 mm into "fresh air"
5. Feed axially to finish position (still 0,5 mm off machined diameter)
6. Radially infeed to required DOC

Retract radially 0,1 mm. Continue sequence for subsequent roughing passes.

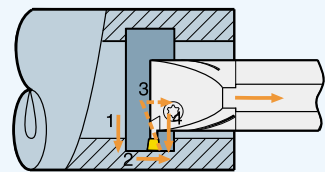
Axial turn in both directions to use both corners of the insert and to maximize tool life.

Machining into a radius or chamfer – finishing

The machining of a wide groove can be produced using just one tool compared to conventionally with at least two. However, care must be taken when machining around the bottom radius or chamfer.

As the insert contours around the radius, most of the movement is in the Z direction. This produces an extremely thin chip thickness along the front cutting edge, which can result in rubbing and hence vibrations. This can be prevented following machining sequences 1 to 4.

Internal grooving/turning

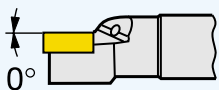


When the internal groove is shallow and relatively wide, the quickest method to program and run would be to plunge turn.

However when plunge turning internally it is necessary to ensure that the swarf is evacuated out of the bore and not trap between the bottom of the bore and the end of the tool/insert.

The swarf will always flow in the same direction as the feed direction. It is therefore recommended to feed out towards the opening of the hole.

Shallow grooving



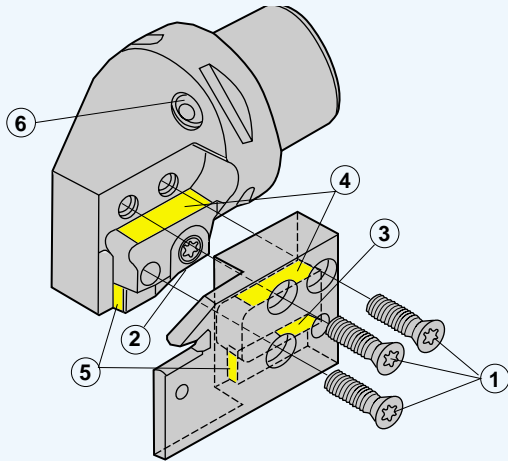
Very important!

Shim giving an angle of inclination of 0° must be used, see page C 66. For small bores when using holders without shims grooving bars type 154.0 must be used.

Note!

The right hand insert can be used for right hand external and left hand internal holders, and the left hand insert for left hand external and right hand internal holders.

Multi Blade System



Assembly and function

The coupling has been designed for exceptional rigidity and repeatable positional accuracy.

Assemble as follows:

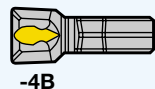
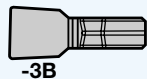
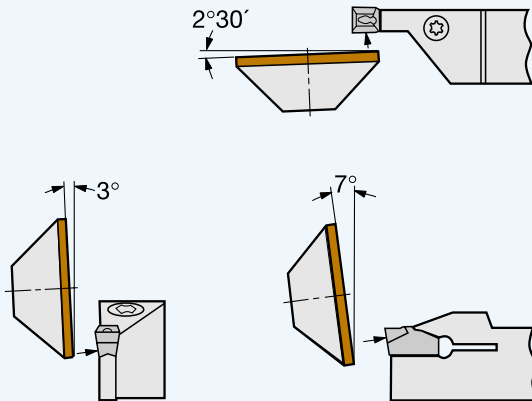
1. Hold the blade against the adaptor with the coupling halves interlocked. Tighten the wedge (2) which acts vertically on the surface (3) pulling the blade against the contact surface (4).
2. Screw the three Torx screws (1) into position but do not tighten completely.
3. Loosen the wedge.
4. Tighten the Torx screws. The blade is pulled axially towards the vertical face of the adaptor and radially against the surface (5).
5. Tighten the wedge.

The surfaces (3), (4) and (5) have been machined to precise dimensions to absorb the cutting forces and ensure accurate cutting edge positioning.

Coolant is supplied directly through the tool, except on Block Tool adaptors. A frog eye (6) permits fine directional control of the coolant.

For optimal dimensions after assembling, see page B 60.

Grinding



General instructions for do-it-yourself grinding

Grinding wheel:

The grinding wheel should have the following properties:

Grain size:	US Mesh 170-240 (75-55 μm)
Binder:	Metal
Concentration:	75-100

Fixture:

Standard holder R/LF151.22 is suitable as grinding fixture.

Setting angles:

Recommended setting angles for grinding wheel with insert mounted in the holder are shown in the diagram opposite.

Blank -3B with flat top:

If a front clearance angle greater than 7° is used the cutting data should be reduced.

Blank -4B with chip forming bump:

For best results do not grind the chip forming bump – the coloured area of the insert picture.

SAFETY INFORMATION

Precautions when grinding and brazing of cemented carbide, see section K.



B

A series of horizontal dotted lines for writing, spanning the width of the page.