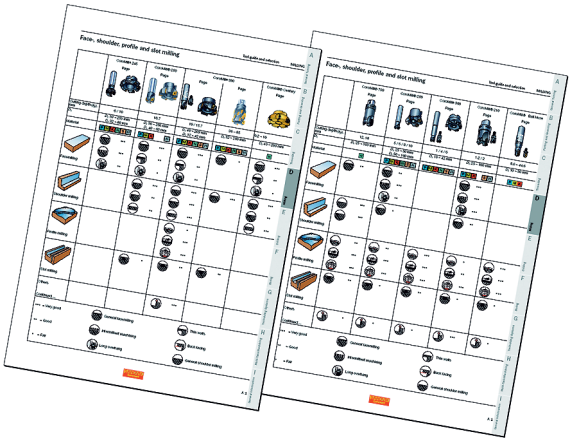
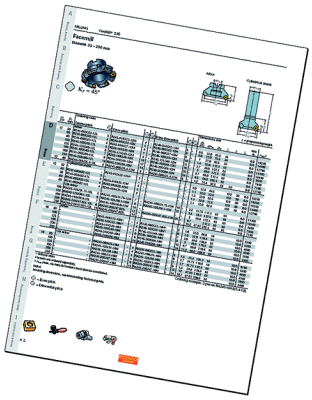
How to choose your milling tool

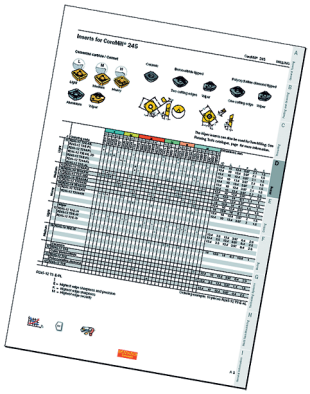


1 **Define your type of operation**
Identify your type of operation:
- Facemilling
- Shoulder milling
- Profile milling
- Slot milling

Select your tool.
See page D6.

2 **Define your material**
Define your material according to ISO:



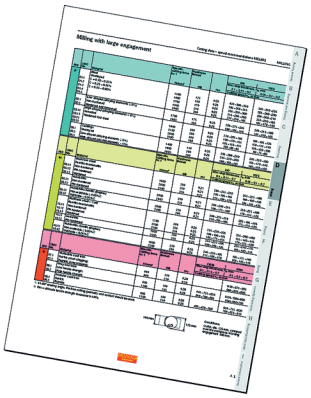


- **P** Steel (P)
- **M** Stainless steel (M)
- **K** Cast iron (K)
- **N** Aluminum (N)
- **S** Heat resistant and titanium alloys (S)
- **H** Hardened material (H)

See Material Cross Reference list in chapter I.

3 **Select your milling cutter**
Choose cutter pitch and mounting.
Use a close pitch cutter as first choice.
Use a coarse pitch cutter for long overhang and unstable conditions.
Use an extra close pitch cutter for short chipping materials and super alloys.

Choose a mounting type.



4 **Select your insert**
Choose the insert geometry for your operation:

Geometry L = Light
For light cuts when low forces / power are required

Geometry M = Medium
First choice for mixed production

Geometry H = Heavy
For rough operations, forging, cast skin and vibrations

Select insert grade for optimum productivity.

5 **Define your start values**
Cutting speeds and feeds for different materials are given on the insert dispensers and in the tables on page D312.

Optimize the values according to the machine and conditions.

For more technical information, see our Metalcutting Technical Guide.

Cutters
Inserts
Grade descriptions
Tailor Made options
Solid endmills
Spare parts/ accessories
Cutting data
Tooling systems
How to choose tool, overview
Cutting data, feed recommendations

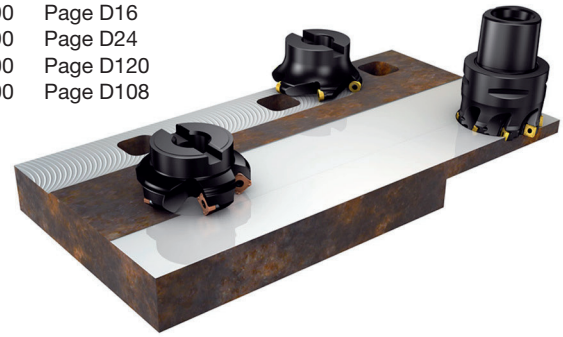
MILLING

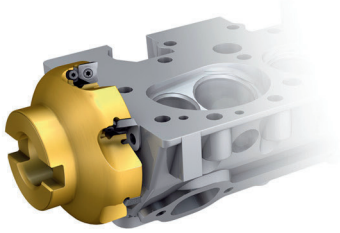
Applications

Products

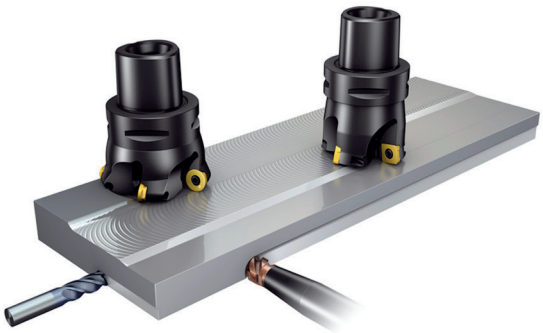
Facemilling

General facemilling
CoroMill 345 Page D81
CoroMill 245 Page D88
CoroMill 490 Page D16
CoroMill 390 Page D24
CoroMill 200 Page D120
CoroMill 300 Page D108





Aluminum milling
CoroMill Century Page D50



High feed milling
CoroMill 210 Page D72
CoroMill Plura Page D214
CoroMill 200 Page D120
CoroMill 300 Page D108

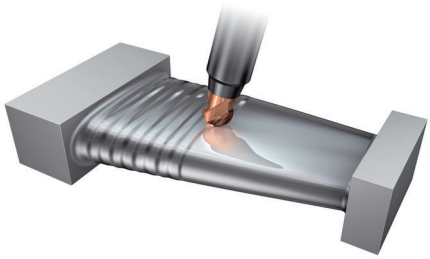
Shoulder milling

Deep shoulder milling
CoroMill 390 Page D24
CoroMill 210 Page D72

Face and shoulder milling
CoroMill 490 Page D16
CoroMill 390 Page D24
CoroMill 331 Page D138
CoroMill Century Page D50

Shoulder milling
CoroMill 690 Page D65
CoroMill 316 Page D202
CoroMill 390 Page D26

Profile milling

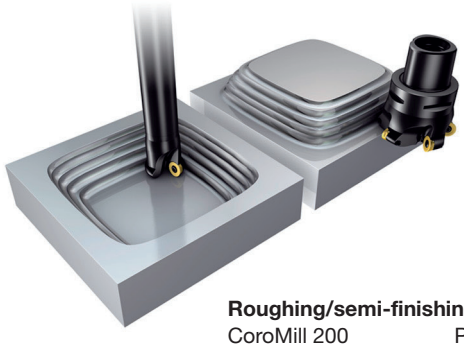


Roughing/semi-finishing

CoroMill 200	Page D120
CoroMill 300	Page D108
CoroMill 316	Page D202
CoroMill Plura	Page D214

Finishing

CoroMill Ball Nose	Page D133
CoroMill 316	Page D202
CoroMill Plura	Page D214



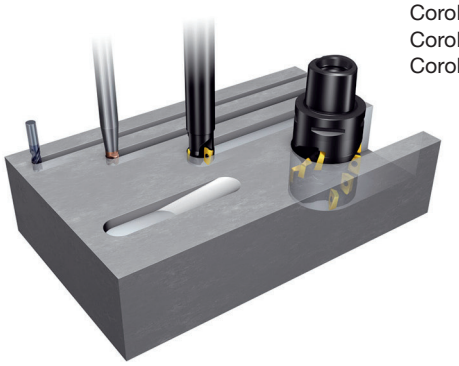
Roughing/semi-finishing

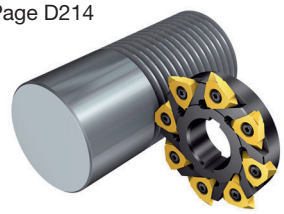
CoroMill 200	Page D120
CoroMill 300	Page D108
CoroMill 316	Page D202
CoroMill Plura	Page D214
CoroMill Ball nose	Page D126

Slot and thread milling

Slot milling

CoroMill 390	Page D26
CoroMill 690	Page D65
CoroMill 316	Page D202
CoroMill Plura	Page D214



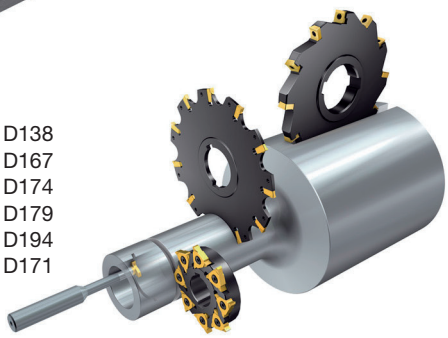


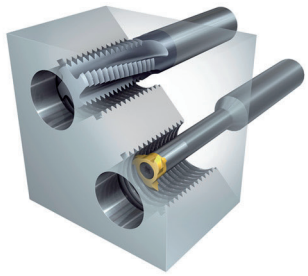
Thread milling

CoroMill 328	Page D174
CoroMill 327	Page D179
CoroMill 326	Page D194
CoroMill 316	Page D202
CoroMill Plura	Page D273

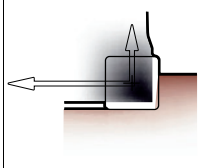
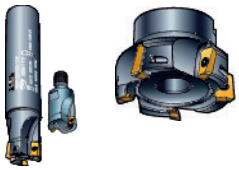
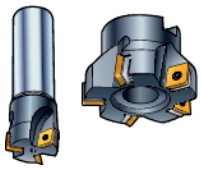
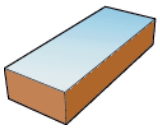
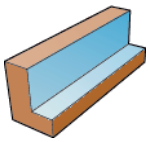
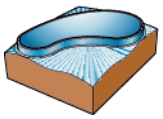
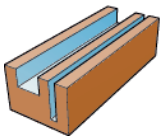
Side and face milling

CoroMill 331	Page D138
CoroMill 329	Page D167
CoroMill 328	Page D174
CoroMill 327	Page D179
CoroMill 326	Page D194
T-MAX Q-Cutter	Page D171





90° shoulder milling cutters

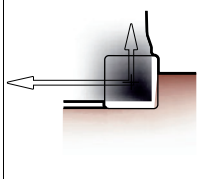
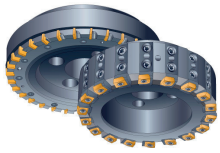
	CoroMill® 490	CoroMill® 390		CoroMill® 290	CoroMill® Century
	Page D16	Page D24	Page D26	Page D46	Page D50
					
Cutting depth (a_p), mm inch	5.5 - 10.0 .216 - .394	10 - 15.7 .394 - .618	36 - 85 1.420 - 3.900	10.7 .421	2 - 10 .079 - .394
D_c mm D_c inch	20 - 250 .750 - 10.000	12 - 200 .500 - 8.000	32 - 200 1.250 - 4.000	40 - 250 2.000 - 10.000	40 - 200 2.000 - 8.000
Material	P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H
 Facemilling	••• / •• / ••	••• / •• / ••	•	••• / •• / •	••• / •• / •
 Shoulder milling	••• / ••• / •••	••• / ••• / •••	••• / •••	••• / •• / ••	••• / •• / •••
 Profile milling		• / ••• / •••			
 Slot milling	••	••	••	•	
Others		•••			

••• = Very good
•• = Good
• = Fair

General facemilling
Thin walls
Ramping
Helical interpolation
Profiling
Edging / contouring
Axial / plunge milling
Slotting
Long overhang
General shoulder milling
Repeated shoulder milling

SANDVIK Coromant

90° shoulder milling cutters

	CoroMill® 790 Page D59	CoroMill® 690 Page D65	Coromant Finishing Long Edge Cutter Page D70	AUTO-FS Page D293
				
Cutting depth (a_p), mm inch	12, 18 .472 - .709	53 - 112 2.087 - 4.409	100 - 150 4.000 - 6.000	1 - 8 .008 - .315
D_c mm D_c inch	25 - 100 1.000 - 5.000	40 - 100 1.500 - 4.000	50 - 80 2.000 - 3.000	125 - 500 4.921 - 19.685
Material	P M K N S	S	P M N S H	P K N S H
Facemilling	••	•	•	••• •••
Shoulder milling	••• •••	•••	•••	•••
Profile milling	•• ••• •••			
Slot milling	••	••	••	
Others	•			

Repeated shoulder milling
Deep slotting
Ramping
General shoulder milling
Slotting
Axial / plunge milling
Helical interpolation
General facemilling
Profiling
Intermittent machining

10°-75° face and plunge milling cutters

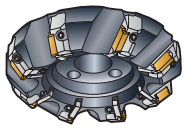
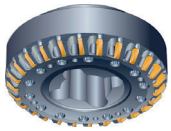
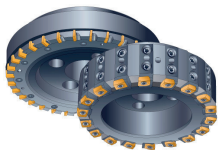
	CoroMill® 210 Page D72	CoroMill® 345 Page D81	CoroMill® 245 Page D88	CoroMill® 360 Page D103
Cutting depth (a_p), mm inch	1.2 - 2 .047 - .079	6 .236	6 - 10 .240 - .394	13 / 18 .512 / .709
D_c mm D_c inch	25 - 160 1.000 - 6.000	40 - 250 1.500-10.000	32 - 250 1.250 - 10.000	160 - 500 6.000 - 20.000
Material	P M K S H	P M K N S H	P M K N S H	
Facemilling	••• / ••• / •••	••• / ••• / •••	••• / ••• / ••	••• / ••• / •••
Shoulder milling	••	••		••
Profile milling	• / •• / •••	• / •• / •••		• / •• / •••
Slot milling	•	•		•
Others	••	••		••

Continued ...

••• = Very good
•• = Good
• = Fair

General facemilling
Ramping
Intermittent machining
Helical interpolation
Profiling
Axial / plunge milling
Slotting
Long overhang
Repeated shoulder milling

10°-75° face and plunge milling cutters

	CoroMill® 365 Page D96	T-MAX 45 Page D278	AUTO-R Page D286	AUTO-AF Page D289
				
Cutting depth (a_p), mm inch	6 .236	12 .472	6 .236	1 - 8 .008 - .315
D_c mm D_c inch	40 - 250 1.500 - 10.000	100 - 400 3.937 - 15.748	125 - 500 3.150 - 19.685	80 - 500 3.150 - 9.843
Material	P K H	P M K N S H	P K N S H	P K N S H
Facemilling	••• / ••	•• / •••	•• / ••	••• / •••
Shoulder milling				•••
Profile milling				
Slot milling				
Others				

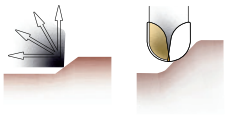
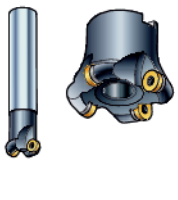
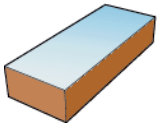
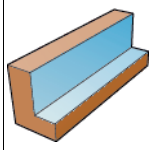
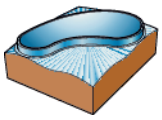
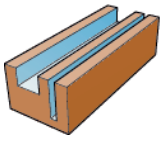
••• = Very good
•• = Good
• = Fair

General facemilling

Intermittent machining

General shoulder milling

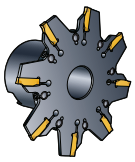
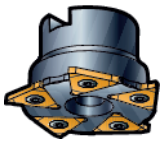
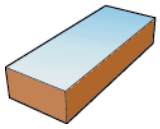
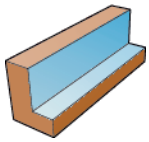
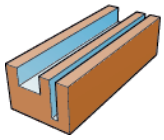
Round insert and Ball Nose cutters

	CoroMill® 200 Page D120	CoroMill® 300 Page D108	CoroMill® Ball Nose Page D126	CoroMill® Ball Nose Finishing Page D133
				
Cutting depth (a_p), mm inch	5 - 10 .187 - .375	0.7 - 10 .027 - .500	8.6 - 44.6 .310 - 1.791	1.2 - 4.8 .047 - .188
D_c mm D_c inch	25 - 160 1.000 - 10.000	10 - 200 .375 - 8.000	10 - 50 .375 - 2.000	8 - 32 .312 - 1.250
Material	P M K N S H	P M K N S H	P M K N S H	P M K H
 Facemilling	•• / ••• / ••	•• / ••• / ••		
 Shoulder milling	•	•		
 Profile milling	•• / ••• / •••	••• / ••• / •••	••• / ••• / •••	••• / • / •
 Slot milling	•	••	•	•
Others	•	•	•	•

••• = Very good
•• = Good
• = Fair

General facemilling
Ramping
Intermittent machining
Helical interpolation
Profiling
Axial / plunge milling
Slotting
Long overhang
Repeated shoulder milling

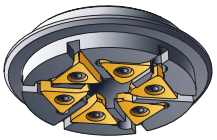
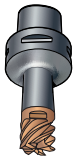
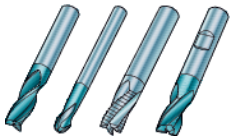
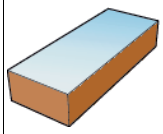
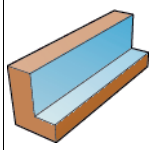
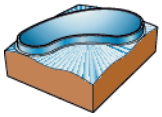
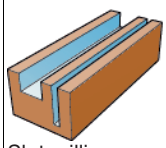
Slot, groove, side/face and thread milling cutters

	CoroMill® 331		CoroMill® 329	CoroMill® 327	CoroMill® 328	T-MAX® Q-cutter
	Page D138 Adjustable	Page D158 Fixed pockets	Page D167	Page D179	Page D174	Page D171
						
Cutting depth (a_p), mm inch	6 - 33.8 .236 - 1.643	6 - 10 .250 - .500	15 / 18 .591 / .709	1.5 - 6.5 .059 - .256	1.3 - 5.15 .051 - .203	2 - 6 .084 - .243
D_c mm D_c inch	80 - 315 3.150 - 12.000	40 - 125 1.500 - 3.000	100 - 160 4.000 - 5.000	9.7 - 21.7 .382 - 1.091	39 - 80 1.535 - 2.480	80 - 315 3.000 - 12.000
Material	P M K N S H		P M K N S	P M K N S	P M K N S	P M K N S
 Facemilling	•• / •• / •••	•• / •• / •••				
 Shoulder milling	•• / •••	•• / •••				
 Slot milling	••• / •••	••• / •••	••• / •••	••• / •••	••• / •••	•••
Others Continued ...	••	••		••• / ••• / •••	••• / ••• / •••	

••• = Very good
•• = Good
• = Fair

General facemilling
Ramping
Deep shoulder milling
Helical interpolation
Back shoulder milling
Axial / plunge milling
External threading
Slotting
Deep slotting
Thin walls
Internal threading
Chamfering

Cutters for different applications

	Solid end mill CoroMill® 326 Page D194	Thread milling CoroMill® 325 Page D189	Gear milling cutter CoroMill® 170 Page D196	Exchangeable head CoroMill® 316 Page D202	Solid end mill CoroMill® Plura Page D214
					
Cutting depth (a_p), inch inch					0.1 - 90 .004 - 3.543
D_c mm D_c inch	6 - 8 .236 - .315	12 .472	210 - 500 8.268 - 19.685	10 - 25 .375 - 1.000	0.4 - 25 .062 - .750
Material	P M K N S	M N S	P	P M K N S	P M K N S H
 Facemilling				••• ••• •••	••• •••
 Shoulder milling				••• ••• ••• •••	••• ••• ••• •••
 Profile milling				••• ••• •••	••• ••• •••
 Slot milling				••• •••	••• •••
Others	••• •••	•••	•••	••• •••	••• ••• •••

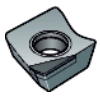
••• = Very good
•• = Good
• = Fair

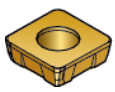
 Peck drilling
 Ramping
 Gear milling
 Helical interpolation
 Back shoulder milling
 Profiling
 Threading
 Slotting
 Deep slotting
 Deep shoulder milling
 Chamfering
 Long overhang
 Facemilling
 Thin walls
 General shoulder milling
 Repeated shoulder milling

Inserts for milling

CoroMill®



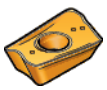



	APMT	R/L331.1A	N331.1A	R/L590	RCHT	RCKT	R210	R216	R216F
Page	D130	D161	D160	D56	D123	D123	D75	D130	D136

CoroMill® **T-MAX Q-Cutter**



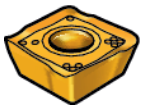




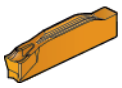

	R245	R/L 365	R290	R300	R390	R790	N151.2	330.20
Page	D93	D100	D49	D115	D41	D63	D173	D173

CoroMill®



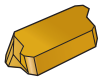


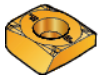





	327	328	490	690	345	360	329	170
Page	D182	D177	D22	D69	D86	D107	D170	D199

U-Max® T-MAX® 45 **AUTO**




	R216.2	LNCX	SPMT	N260.8	SBEN	SBEX	SDKX
Page	D282	D279	D283	D291	D294	D294	D296

Plunge cutter **Long edge cutter** **AUTO**








	LPMH	LDTH	SDMX	TNCN	TNEF	TNEN	TNHF	TNJN
Page	D79	D71	D296	D287	D287	D287	D287	D287

Inserts for other cutters







	BPKX	HNGX	SEER	SMKR / SPKR	SEKR	SEKN	SNKN
Page	D302	D300	D300	D301	D300	D300	D301

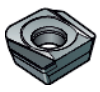
Inserts for other cutters

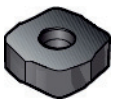



	SPEX	SPKN	TPKN	TPKR
Page	D301	D301	D302	D302

Inserts for advanced materials

CoroMill® **Inserts for other cutters**





	245	R/L590	290	N365	RCHT	RPGN	RNGN	TNCN
Page	D94	D56	D49	D101	D125	D302	D302	D287

General code key for CoroMill inserts

R	390	–	11	T3	12	M	–	P	L	W
1	2		3	4	5	6		7	8	9

1 Hand of insert

R = Right hand
L = Left hand

2 Main code

E.g.: 390= CoroMill® 390

3 Insert width

E.g.: 11=11 mm (.669 inch)

4 Insert thickness, *s*

E.g.: T3 s = 3.97

04 s = 4.76

06 s = 6.33

5 Corner radius

E.g.: 12 = 1.2 mm

6 Edge performance

M = Highest edge security
E = Highest sharpness and precision
H = High edge sharpness and high precision
K = High cutting sharpness

7 Main ISO application area

P M K N S H

8 Operation

L = Light cutting
M = Medium
H = Heavy
T = Turn milling

9 Wiper

W = Wiper

General code key for CoroMill cutters

R	A	390	–	063	Q	22	L	–	11	M	050
1	2	3		4	5	6	7		8	9	10

1 Style

R = Right hand rotating

2 Performance

A = Inch

3 Main code

E.g.: 390 = CoroMill® 390

4 Cutting diameter

E.g.: 063 = 63 mm

6 Coupling size

22 = 22 mm

5 Type of coupling

A = Cylindrical, mm	R = Arbor mounting inch
B = Weldon mm	T = Threaded coupling
C = Coromant Capto	W = Whistle Notch mm
D = Cylindrical inch	HA= HSK form A
J = CIS Tenon drive	
M = Weldon, inch	
N = Whistle Notch inch	
Q = Arbor mounting mm	
O = Cylindrical inch	

7 Extra long

L = Extra long

8 Insert size

11 = 11 mm (11/64)

9 Pitch

L = Coarse pitch

M = Close pitch

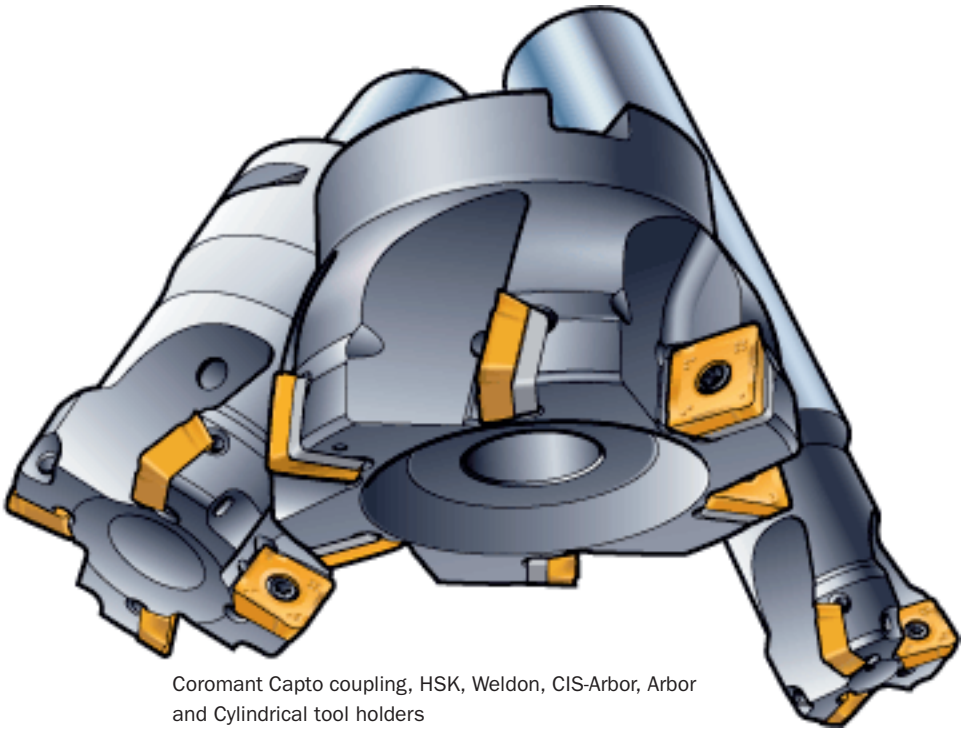
H = Extra close pitch

10 Length, l_1

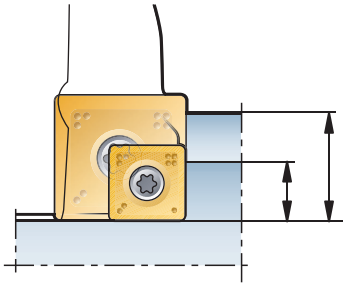
E.g.: 050 = 50 mm

CoroMill® 490

New generation face and shoulder mill
Diameter 20 - 250 mm (.750 - 10.000 inch)



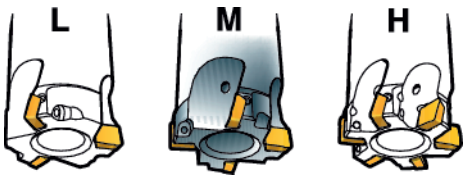
Coromant Capto coupling, HSK, Weldon, CIS-Arbor, Arbor and Cylindrical tool holders



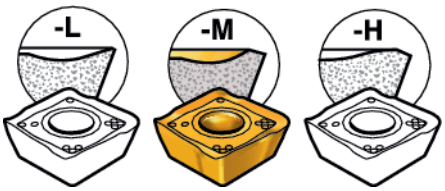
Insert size 08
Max depth 5.5 mm (.216 inch)
Recommended 4 mm (.157 inch)

Insert size 14
Max depth 10 mm (.394 inch)
Recommended 7 mm (.276 inch)

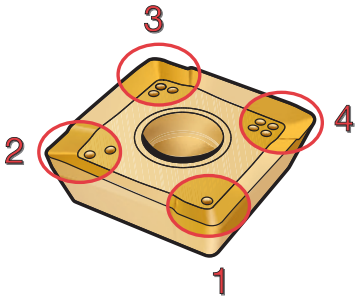
Through coolant:
Insert size 14, 40-125 mm (1.575-5.000 inch)
Insert size 08, 20-50 mm (.750-2.000 inch)



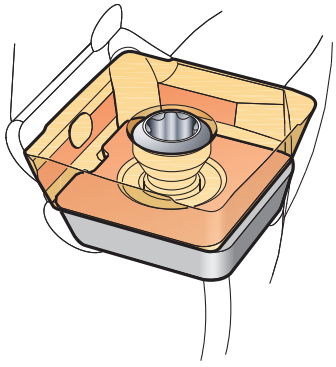
Three different cutter pitches with differential pitch



Insert geometries



Four true edges



Secure insert location

Tailor Made

Download the Tailor Made Tool Selection Guide in PDF-format at **www.sandvik.coromant.com/us.**

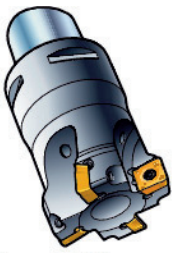
ISO application areas:

P M K N S H

SANDVIK Coromant

Endmill and square shoulder facemill

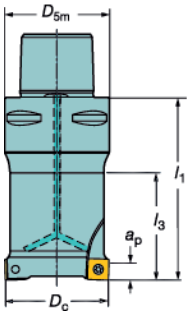
Diameter 20 - 84 mm



$\kappa_r = 90°$

Insert size, mm
8, 14

Coromant Capto®



l_1 = programming length

Metric version

		Ordering code										Dimensions					
	D_c mm	Coarse pitch			Close pitch			Extra close pitch			Coolant[1]	kg	D_{5m}	l_1	l_3	Max a_p	n_{max}
		Coromant Capto															
08	20	490-020C3-08L	2	-	-	-	-	-	-	-	1	0.2	32	80	40	5.5	48500
		490-020C4-08L	2	-	-	-	-	-	-	-	1	0.4	40	70	40	5.5	39000
		490-020C5-08L	2	-	-	-	-	-	-	-	1	0.6	50	75	40	5.5	28000
		490-020C6-08L	2	-	-	-	-	-	-	-	1	1.0	63	80	40	5.5	20000
	25	-	-	-	490-025C3-08M	3	-	-	-	-	1	0.3	32	80	60	5.5	40400
		-	-	-	490-025C4-08M	3	-	-	-	-	1	0.4	40	70	45	5.5	39000
		-	-	-	490-025C5-08M	3	-	-	-	-	1	0.6	50	75	50	5.5	28000
		-	-	-	490-025C6-08M	3	-	-	-	-	1	1.0	63	80	53	5.5	20000
	32	-	-	-	490-032C3-08M	4	-	-	-	-	1	0.4	32	80	60	5.5	33900
		-	-	-	490-032C4-08M	4	-	-	-	-	1	0.5	40	70	45	5.5	33900
		-	-	-	490-032C5-08M	4	-	-	-	-	1	0.7	50	75	50	5.5	28000
		-	-	-	490-032C6-08M	4	-	-	-	-	1	1.0	63	80	53	5.5	20000
		-	-	-	490-032C8-08M	4	-	-	-	-	1	2.0	80	80	45	5.5	14000
	36	-	-	-	490-036C3-08M	-	4	-	-	-	1	0.3	32	50	30	5.5	31300
	40	-	-	-	490-040C4-08M	-	4	490-040C4-08H	6	-	1	0.6	40	70	45	5.5	29300
		-	-	-	490-040C5-08M	-	4	490-040C5-08H	6	-	1	0.8	50	75	50	5.5	28000
		-	-	-	-	-	-	490-040C6-08H	6	-	1	1.2	63	80	53	5.5	20000
		-	-	-	-	-	-	490-040C8-08H	6	-	1	2.2	80	80	45	5.5	14000
	44	-	-	-	490-044C4-08M	-	5	490-044C4-08H	6	-	1	0.6	40	60	40	5.5	27600
	50	-	-	-	490-050C5-08M	-	5	490-050C5-08H	7	-	1	1.0	50	75	50	5.5	25500
		-	-	-	490-050C6-08M	-	5	490-050C6-08H	7	-	1	1.4	63	80	53	5.5	20000
		-	-	-	-	-	-	490-050C8-08H	7	-	1	2.4	80	80	45	5.5	14000
	54	-	-	-	490-054C5-08M	-	5	490-054C5-08H	7	-	1	0.9	50	60	40	5.5	24300
	63	-	-	-	490-063C6-08M	-	6	490-063C6-08H	8	-	1	1.2	63	50	23	5.5	20000
		-	-	-	-	-	-	490-063C8-08H	8	-	0	2.8	80	80	45	5.5	14000
	66	-	-	-	490-066C6-08M	-	6	490-066C6-08H	-	8	1	1.3	63	50	28	5.5	20000
	80	-	-	-	490-080C8-08M	-	8	490-080C8-08H	-	10	0	3.4	80	80	45	5.5	14000
	84	-	-	-	490-084C8-08M	-	8	490-084C8-08H	-	10	0	2.7	80	60	30	5.5	14000
14	40	-	-	-	490-040C4-14M [2]	-	3	490-040C4-14H [2]	4	-	1	0.5	40	70	45	10.0	26400
		-	-	-	490-040C5-14M [2]	-	3	490-040C5-14H [2]	4	-	1	0.8	50	75	50	10.0	26400
		-	-	-	490-040C6-14M [2]	-	3	490-040C6-14H [2]	4	-	1	1.2	63	80	53	10.0	20000
		-	-	-	-	-	-	490-040C8-14H [2]	4	-	1	2.1	80	80	45	10.0	14000
	44	-	-	-	490-044C4-14M [2]	-	3	490-044C4-14H [2]	4	-	1	0.6	40	70	70	10.0	24600
	50	-	-	-	-	-	-	490-050C5-14H [2]	5	-	1	1.0	50	75	50	10.0	22400
		-	-	-	490-050C5-14M	-	4	-	-	-	1	1.0	50	75	50	10.0	13700
		-	-	-	-	-	-	490-050C6-14H [2]	5	-	1	1.4	63	80	53	10.0	20000
		-	-	-	490-050C6-14M	-	4	-	-	-	1	1.4	63	80	53	10.0	13700
		-	-	-	-	-	-	490-050C8-14H [2]	5	-	1	2.3	80	80	45	10.0	14000
	54	-	-	-	-	-	-	490-054C5-14H	5	-	1	0.9	50	60	60	10.0	21300
		-	-	-	490-054C5-14M	-	4	-	-	-	1	0.9	50	60	60	10.0	13000
	63	-	-	-	490-063C6-14M	-	5	490-063C6-14H	6	-	1	1.8	63	80	53	10.0	11700
		-	-	-	-	-	-	490-063C8-14H	6	-	1	2.6	80	80	45	10.0	11700
	66	-	-	-	490-066C6-14M	-	5	490-066C6-14H	6	-	1	1.5	63	65	65	10.0	11400
	80	-	-	-	490-080C6-14M	-	6	490-080C6-14H	8	-	1	1.9	63	65	65	10.0	10100
		-	-	-	490-080C8-14M	-	6	490-080C8-14H	8	-	1	3.2	80	80	45	10.0	10100
	84	-	-	-	490-084C8-14M	-	6	490-084C8-14H	8	-	1	3.0	80	70	70	10.0	9800

[1] 0 = no coolant, 1 = coolant through center

[2] No shims used

= Even pitch


J2


G6

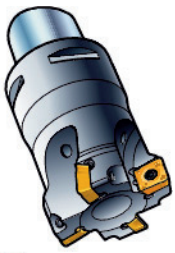

J3


D22


D23

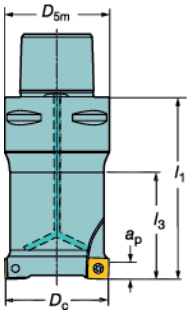
Endmill and square shoulder facemill

Diameter .750 - 3.000 inch



0°

Coromant Capto®



Insert size, mm
8, 14

l_1 = programming length

Inch version

	D_c	Ordering code									Coolant[1]	Dimensions, inch					
	inch	Coarse pitch			Close pitch			Extra close pitch				Ltss	D_{5m}	l_1	l_3	Max a_p	n_{max}
		Coromant Capto															
08	.750	A490-019C5-08L	2	-	-	-	-	-	-	-	1	1.3	1.968	3.000	1.500	.216	28000
		A490-019C6-08L	2	-	-	-	-	-	-	-	1	2.1	2.480	3.000	1.500	.216	20000
	1.000	-	-	-	A490-025C5-08M	3	-	-	-	-	1	1.3	1.968	3.000	2.015	.216	28000
		-	-	-	A490-025C6-08M	3	-	-	-	-	1	2.1	2.480	3.000	1.937	.216	20000
	1.250	-	-	-	A490-032C5-08M	4	-	-	-	-	1	1.5	1.968	3.000	2.015	.216	28000
		-	-	-	A490-032C6-08M	4	-	-	-	-	1	2.3	2.480	3.000	1.937	.216	20000
		-	-	-	A490-032C8-08M	4	-	-	-	-	1	4.4	3.150	3.000	1.622	.216	14000
	1.500	-	-	-	-	-	-	A490-038C5-08H	5	-	1	1.7	1.968	3.000	2.015	.216	28000
		-	-	-	-	-	-	A490-038C6-08H	5	-	1	2.3	2.480	3.000	1.937	.216	20000
		-	-	-	-	-	-	A490-038C8-08H	5	-	1	4.6	3.150	3.000	1.622	.216	14000
	2.000	-	-	-	A490-051C5-08M	-	5	A490-051C5-08H	7	-	1	2.4	1.968	3.000	3.000	.216	25200
		-	-	-	-	-	-	A490-051C6-08H	7	-	1	3.1	2.480	3.000	1.937	.216	20000
		-	-	-	-	-	-	A490-051C8-08H	7	-	1	5.2	3.150	3.000	1.622	.216	14000
	2.500	-	-	-	A490-063C6-08M	-	6	A490-063C6-08H	8	-	1	2.8	2.480	2.000	.937	.216	20000
		-	-	-	-	-	-	A490-063C8-08H	8	-	0	5.9	3.150	3.000	1.622	.216	14000
	3.000	-	-	-	-	-	-	A490-076C8-08H	10	-	0	5.9	3.150	2.500	1.122	.216	14000
14	1.500	-	-	-	A490-038C5-14M[2]	3	-	-	-	-	1	1.6	1.968	3.000	2.015	.394	27400
		-	-	-	A490-038C6-14M[2]	3	-	-	-	-	1	2.4	2.480	3.000	1.937	.394	20000
		-	-	-	A490-038C8-14M[2]	3	-	-	-	-	1	4.5	3.150	3.000	1.622	.394	14000
	2.000	-	-	-	A490-051C5-14M	-	4	A490-051C5-14H[2]	5	-	1	2.2	1.968	3.000	3.000	.394	22200
		-	-	-	A490-051C6-14M	-	4	A490-051C6-14H[2]	5	-	1	3.0	2.480	3.000	1.937	.394	20000
		-	-	-	-	-	-	A490-051C8-14H	5	-	1	5.0	3.150	3.000	1.622	.394	14000
	2.500	-	-	-	A490-063C6-14M	-	5	A490-063C6-14H	6	-	1	3.2	2.480	2.500	2.500	.394	11700
		-	-	-	-	-	-	A490-063C8-14H	6	-	1	5.6	3.150	3.000	1.622	.394	11700
	3.000	-	-	-	A490-076C8-14M	-	6	A490-076C8-14H	7	-	1	6.5	3.150	3.000	1.622	.394	10400

[1] 0 = no coolant, 1 = coolant through center

[2] No shims used

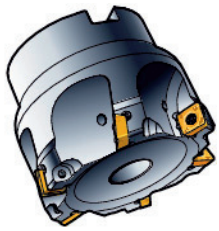
= Even pitch

= Differential pitch

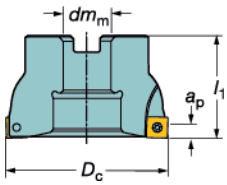
J2 G6 J3 D22 D23

SANDVIK Coromant

Square shoulder facemill



Arbor



$\kappa_r = 90°$

Insert size, mm (inch)
08, 14

l_1 = programming length

Metric version

		Ordering code										Dimensions				
□	D_c mm	Coarse pitch	⊚	⊚	Close pitch	⊚	⊚	Extra close pitch	⊚	⊚	Coolant[1]	kg	dm_m	l_1	Max a_p	n_{max}
		CIS Arbor														
08	80	-	-	-	A490-080J25.4-08M	-	8	A490-080J25.4-08H	-	10	0	1.1	25.4	50	5.5	19400
	100	A490-100J31.75-08L	-	6	A490-100J31.75-08M	-	8	A490-100J31.75-08H	-	10	0	2.1	31.75	63	5.5	17100
	125	A490-125J38.1-08L	-	8	A490-125J38.1-08M	-	10	A490-125J38.1-08H	-	12	0	3.0	38.1	63	5.5	15200
14	80	A490-080J25.4-14L	-	4	A490-080J25.4-14M	-	6	A490-080J25.4-14H	8	-	1	0.9	25.4	50	10.0	10100
	100	A490-100J31.75-14L	-	5	A490-100J31.75-14M	-	7	A490-100J31.75-14H	10	-	1	1.9	31.75	63	10.0	8900
	125	A490-125J38.1-14L	-	6	A490-125J38.1-14M	-	8	-	-	-	1	2.7	38.1	63	10.0	7800
	160	-	-	-	A490-160J50.8-14M	-	12	-	-	-	0	5.0	50.8	63	10.0	6800
	200	-	-	-	A490-200J47.625-14M	-	16	-	-	-	0	8.2	47.625	63	10.0	6000
	250	-	-	-	A490-250J47.625-14M	-	18	-	-	-	0	12.2	47.625	63	10.0	5300
		Arbor														
08	40	-	-	-	490-040Q16-08M	-	4	490-040Q16-08H	6	-	1	0.2	16	40	5.5	29300
	44	-	-	-	490-044Q16-08M	-	5	-	-	-	1	0.2	16	40	5.5	27600
	50	490-050Q22-08L	-	4	490-050Q22-08M	-	5	490-050Q22-08H	7	-	1	0.4	22	40	5.5	25500
	54	-	-	-	490-054Q22-08M	-	5	-	-	-	1	0.4	22	40	5.5	24300
	63	490-063Q22-08L	-	5	490-063Q22-08M	-	6	490-063Q22-08H	8	-	0	0.5	22	40	5.5	22200
	80	490-080Q27-08L	-	6	490-080Q27-08M	-	8	490-080Q27-08H	-	10	0	1.2	27	50	5.5	19400
	100	490-100Q32-08L	-	6	490-100Q32-08M	-	8	490-100Q32-08H	-	10	0	1.6	32	50	5.5	17100
	125	490-125Q40-08L	-	8	490-125Q40-08M	-	10	490-125Q40-08H	-	12	0	2.9	40	63	5.5	15200
14	50	-	-	-	-	-	-	490-050Q22-14H[2]	5	-	1	0.3	22	40	10.0	22400
		-	-	-	490-050Q22-14M	-	4	-	-	-	1	0.3	22	40	10.0	13700
	63	-	-	-	490-063Q22-14M	-	5	490-063Q22-14H	6	-	1	0.4	22	40	10.0	11700
	80	-	-	-	490-080Q27-14M	-	6	490-080Q27-14H	8	-	1	1.0	27	50	10.0	10100
	100	490-100Q32-14L	-	5	490-100Q32-14M	-	7	490-100Q32-14H	10	-	1	1.4	32	50	10.0	8900
	125	490-125Q40-14L	-	6	490-125Q40-14M	-	8	490-125Q40-14H	12	-	1	2.6	40	63	10.0	7800
	160	490-160Q40-14L	-	8	490-160Q40-14M	-	12	490-160Q40-14H	15	-	0	4.4	40	63	10.0	6800
	200	490-200Q60-14L	-	10	490-200Q60-14M	-	16	-	-	-	0	7.4	60	63	10.0	6000
	250	490-250Q60-14L	-	12	490-250Q60-14M	-	18	-	-	-	0	11.3	60	63	10.0	5300

1) 0 = no coolant, 1 = coolant through center

2) No shims used

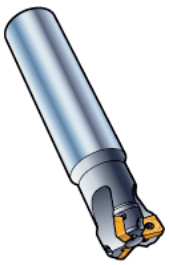
⊚ = Even pitch

⊚ = Differential pitch

J2 G6 J3 D22 D23

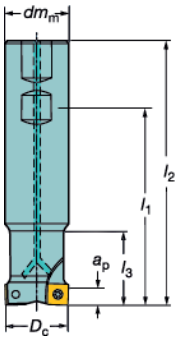
Square shoulder facemill

Diameter 20 - 80 mm

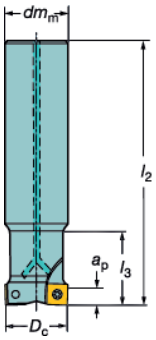


$\kappa_r = 90°$

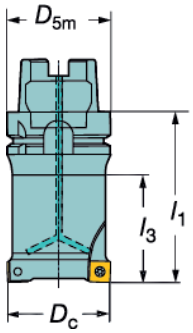
Weldon



Cylindrical



HSK



Insert size, mm (inch)
8, 14

l_1 = programming length

Metric version

□	D_c mm	Ordering code Coarse pitch			Close pitch			Extra close pitch			Coolant[1]	Dimensions kg	dm_m	D_{5m}	l_1	l_2	l_3	Max a_p	n_{max}
		Weldon																	
08	20	490-020B16-08L	2	-	-	-	-	-	-	-	1	0.1	16		50.5	74	25	5.5	48500
		490-020B20-08L	2	-	-	-	-	-	-	-	1	0.1	20		51.5	76	25	5.5	48500
	25	490-025B20-08L	2	-	-	-	-	-	-	-	1	0.2	20		58.5	83	32	5.5	40400
		-	-	-	490-025B25-08M	3	-	-	-	-	1	0.3	25		56.5	88	32	5.5	40400
	32	490-032B25-08L	-	3	490-032B25-08M	4	-	-	-	-	1	0.4	25		66.5	98	40	5.5	33900
		490-032B32-08L	-	3	490-032B32-08M	4	-	-	-	-	1	0.5	32		64.5	100	40	5.5	33900
	40	-	-	-	490-040B32-08M	-	4	490-040B32-08H	6	-	1	0.7	32		76.5	112	50	5.5	29300
14	40	-	-	-	490-040B32-14M[2]	-	3	490-040B32-14H[2]	4	-	1	0.6	32		76.5	112	50	10.0	26400
		Cylindrical shank																	
08	20	490-020A16-08L	2	-	-	-	-	-	-	-	1	0.1	16			100	25	5.5	48500
		490-020A20-08L	2	-	-	-	-	-	-	-	1	0.2	20			110	25	5.5	48500
	22	490-022A20L-08L	2	-	-	-	-	-	-	-	1	0.4	20			170	30	5.5	20300
	25	490-025A20-08L	2	-	490-025A20-08M	3	-	-	-	-	1	0.2	20			110	32	5.5	40400
		490-025A25-08L	2	-	490-025A25-08M	3	-	-	-	-	1	0.4	25			120	32	5.5	40400
	28	490-028A25L-08L	2	-	-	-	-	-	-	-	1	0.7	25			210	35	5.5	11000
	32	490-032A25-08L	-	3	490-032A25-08M	4	-	-	-	-	1	0.4	25			120	40	5.5	33900
		490-032A32-08L	-	3	490-032A32-08M	4	-	-	-	-	1	0.7	32			130	40	5.5	33900
	40	490-040A32-08L	-	3	490-040A32-08M	-	4	490-040A32-08H	6	-	1	1.1	32			170	50	5.5	20300
14	40	-	-	-	490-040A32-14M [2]	-	3	490-040A32-14H [2]	4	-	1	1.0	32			170	50	10.0	26400
		-	-	-	490-040A32L-14M [2]	-	3	-	-	-	1	1.5	32			250	65	10.0	7600
	50	490-050A32-14L	-	3	490-050A32-14M	-	4	-	-	-	1	0.8	32			120	40	10.0	13700
	63	490-063A32-14L	-	4	490-063A32-14M	-	5	-	-	-	1	1.0	32			120	40	10.0	11700
		HSK																	
08	20	490-020HA06-08L	2	-	-	-	-	-	-	-	1	0.9		63	95		40	5.5	30000
	25	-	-	-	490-025HA06-08M	3	-	-	-	-	1	0.9		63	95		50	5.5	30000
	32	-	-	-	490-032HA06-08M	4	-	-	-	-	1	1.0		63	95		58	5.5	30000
	40	-	-	-	-	-	-	490-040HA06-08H	6	-	1	1.2		63	95		58	5.5	29300
	50	-	-	-	490-050HA06-08M	-	5	490-050HA06-08H	7	-	1	1.4		63	95		58	5.5	25500
	63	-	-	-	490-063HA06-08M	-	6	490-063HA06-08H	8	-	0	1.4		63	70		44	5.5	22200
	66	-	-	-	490-066HA06-08M	-	6	490-066HA06-08H	-	8	0	1.4		63	70		44	5.5	21600
	80	-	-	-	490-080HA06-08M	-	8	-	-	-	0	1.6		63	70		44	5.5	19400

[1] 0 = no coolant, 1 = coolant through center

[2] No shims used

= Even pitch

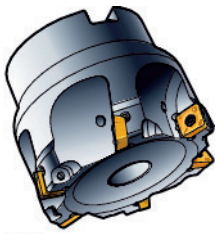
= Differential pitch

J2 G6 J3 D22 D23

SANDVIK Coromant

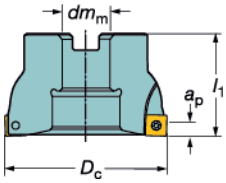
Square shoulder facemill

Diameter .750 - 10.000 inch

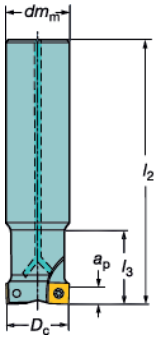


0°

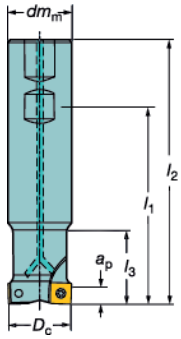
Arbor



Cylindrical



Weldon



Insert size, mm
8, 14

l_1 = programming length

Inch version

		Ordering code										Dimensions, inch						
	D_c inch	Coarse pitch			Close pitch			Extra close pitch			Coolant[1]	Lbs	dm_m	l_1	l_2	l_3	Max a_p	n_{max}
		Arbor																
08	1.500	-	-	-	A490-038R19-08M	-	4	A490-038R19-08H	5	-	1	0.4	.750	1.575			.216	30200
	2.000	A490-051R19-08L	-	4	A490-051R19-08M	-	5	A490-051R19-08H	7	-	1	0.8	.750	1.575			.216	25200
	2.500	A490-063R25-08L	-	5	A490-063R25-08M	-	6	A490-063R25-08H	8	-	0	1.8	1.000	1.969			.216	22100
	3.000	A490-076R25-08L	-	6	A490-076R25-08M	-	8	A490-076R25-08H	10	-	0	2.4	1.000	1.969			.216	19900
	4.000	A490-102R38-08L	-	6	A490-102R38-08M	-	8	A490-102R38-08H	-	10	0	3.2	1.500	1.969			.216	17000
	5.000	A490-127R38-08L	-	8	A490-127R38-08M	-	10	A490-127R38-08H	-	12	0	6.4	1.500	2.480			.216	15100
14	2.000	-	-	-	-	-	-	A490-051R19-14H	5	-	1	0.7	.750	1.575			.394	22200
		-	-	-	A490-051R19-14M	-	4	-	-	-	1	0.7	.750	1.575			.394	13600
	2.500	-	-	-	A490-063R25-14M	-	5	A490-063R25-14H	6	-	1	1.3	1.000	1.969			.394	11700
	3.000	-	-	-	A490-076R25-14M	-	6	A490-076R25-14H	7	-	1	1.9	1.000	1.969			.394	10400
	4.000	A490-102R38-14L	-	5	A490-102R38-14M	-	7	A490-102R38-14H	10	-	1	2.8	1.500	1.969			.394	8800
	5.000	A490-127R38-14L	-	6	A490-127R38-14M	-	8	A490-127R38-14H	12	-	1	6.0	1.500	2.480			.394	7700
	6.000	A490-152R38-14L	-	8	A490-152R38-14M	-	12	A490-152R38-14H	14	-	0	9.0	1.500	2.480			.394	7000
	8.000	A490-203R63-14L	-	10	A490-203R63-14M	-	16	-	-	-	0	16.6	2.500	2.480			.394	6000
	10.000	A490-254R63-14L	-	12	A490-254R63-14M	-	18	-	-	-	0	25.5	2.500	2.480			.394	5300
		Weldon																
08	.750	A490-019M19-08L	2	-	-	-	-	-	-	-	1	0.3	.750	2.335	3.350	1.020	.216	50600
	1.000	A490-025M19-08L	2	-	A490-025M19-08M	3	-	-	-	-	1	0.4	.750	2.485	3.500	1.468	.216	40000
		A490-025M25-08L	2	-	A490-025M25-08M	3	-	-	-	-	1	0.7	1.000	2.610	3.750	1.250	.216	40000
	1.250	A490-032M32-08L	-	3	A490-032M32-08M	4	-	-	-	-	1	1.1	1.250	2.610	3.750	1.350	.216	34100
	1.500	-	-	-	A490-038M32-08M	-	4	A490-038M32-08H	5	-	1	1.3	1.250	2.860	4.000	1.719	.216	30200
14	1.500	-	-	-	A490-038M32-14M[2]	3	-	-	-	-	1	1.1	1.250	2.860	4.000	1.719	.394	27400
		Cylindrical shank																
08	.750	A490-019O19L-08L	2	-	-	-	-	-	-	-	1	0.7	.750		6.500	1.625	.216	22100
	1.000	A490-025O25L-08L	2	-	-	-	-	-	-	-	1	1.5	1.000		8.000	2.125	.216	12100
		-	-	-	A490-025O25L-08M	3	-	-	-	-	1	1.5	1.000		8.000	2.125	.216	12100
14	1.500	-	-	-	A490-038O32L-14M[2]	3	-	-	-	-	1	3.2	1.250		10.000	2.625	.394	7400

[1] 0 = no coolant, 1 = coolant through center

[2] No shims used

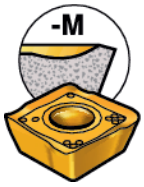
= Even pitch

= Differential pitch

J2 G6 J3 D22 D23

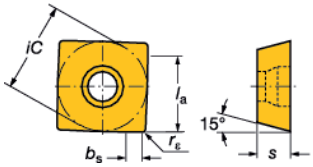
Inserts for CoroMill® 490

Light



Medium

Heavy



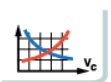
Dimensions, mm (inch)

iC	l_a	*s*
08	5.6 (.220)	3.3 (.130)
14	10.3 (.406)	3.9 (.154)

l_a = max recommended cutting depth

	iC	Ordering code	P GC 1010	P GC 1030	P GC 3040	P GC 3220	P GC 4220	P GC 4230	P GC 4240	P CT 530	M GC 1030	M GC 1040	M GC 2030	M GC 2040	M GC 4240	M CT 530	M GC S30T	K GC 1010	K GC 1020	K GC 3040	K GC 3220	K GC 4220	K GC 4230	K GC 4240	K - H13A	N - H13A	S GC 1010	S GC 1030	S GC 2040	S GC S30T	S GC S40T	H GC 1010	H GC 1030	H CT 530	b_s mm	b_s in.	r_ε mm	r_ε in.
Light	08	490R-08T304E-ML										☆	☆	☆			☆							☆	☆			☆						1.5	.059	0.4	.016
		490R-08T304M-KL																	☆	☆															1.5	.059	0.4	.016
		490R-08T304M-PL		☆				☆	☆		☆			☆								☆					☆								1.5	.059	0.4	.016
		490R-08T308E-ML		☆							☆	★	☆	☆			☆							☆	★		☆	☆	★	☆		☆			1.2	.047	0.8	.032
		490R-08T308M-KL																	★	☆															1.2	.047	0.8	.032
		490R-08T308M-PL	☆	★			☆	☆	☆	☆	☆				☆	☆		☆				☆	☆				☆	☆				★		☆	1.2	.047	0.8	.032
	14	490R-140408E-ML										★		☆			☆							☆	★			☆	★	☆					2.0	.079	0.8	.032
		490R-140408M-PL		★	☆			☆	☆		☆								★	☆			☆	☆			☆						☆		2.0	.079	0.8	.032
Medium	08	490R-08T308E-MM		☆							☆	☆	☆	☆			☆												★	☆				1.2	.047	0.8	.032
		490R-08T308M-KM																	★	☆	☆														1.2	.047	0.8	.032
		490R-08T308M-MM										★	☆	☆			☆												☆	★	☆				1.2	.047	0.8	.032
		490R-08T308M-PM	☆	★			☆	☆	☆		☆				☆			☆				☆	☆				☆	☆				★			1.2	.047	0.8	.032
		490R-08T312E-MM										★	☆	☆																					0.85	.034	1.2	.047
		490R-08T312M-KM																	☆	☆	☆														0.85	.034	1.2	.047
		490R-08T312M-PM	☆	☆			☆	☆	☆		☆				☆			☆				☆	☆				☆	☆				☆			0.85	.034	1.2	.047
		490R-08T316E-MM										☆	☆	☆																					0.6	.024	1.6	.063
		490R-08T316M-KM																	☆	☆	☆														0.6	.024	1.6	.063
		490R-08T316M-PM	☆	☆			☆	☆	☆		☆				☆			☆				☆					☆	☆				☆			0.6	.024	1.6	.063
	14	490L-140408M-PM			☆	★		★	★						☆					★			☆							☆					2.0	.079	0.8	.032
		490R-140408E-MM										☆		☆																☆					2.0	.079	0.8	.032
		490R-140408M-MM										★		☆			☆													☆	★	☆				2.0	.079	0.8	.032
		490R-140408M-PM		☆	☆		☆	☆	★											☆	★	☆	☆	☆	☆				☆					☆		2.0	.079	0.8	.032
		490R-140412E-MM										★		☆			☆													☆	★	☆				1.6	.063	1.2	.047
		490R-140412M-PM		★	☆			★	★		☆				☆					★	★	★		☆					☆							2.0	.079	1.2	.047
		490R-140416E-MM										☆		☆																☆						1.6	.063	1.6	.063
		490R-140416M-PM		★	☆			★	★		☆				☆					★	★	★		☆					☆							2.0	.079	1.6	.063
		490R-140420E-MM										☆		☆																☆						0.8	.032	2.0	.079
		490R-140420M-MM										☆		☆																☆						0.8	.032	2.0	.079
		490R-140420M-PM		☆	☆		☆	☆	☆											☆	☆	☆	☆	☆	☆											0.8	.032	2.0	.079
Heavy	08	490R-08T308M-KH																		☆	☆	☆														1.2	.047	0.8	.032
		490R-08T308M-PH		☆			☆	☆	★						☆								☆	☆												1.2	.047	0.8	.032
		490R-08T316M-KH																		☆	★	☆														0.6	.024	1.6	.063
		490R-08T316M-PH		☆			☆	☆	☆		☆				☆								☆	☆				☆								0.6	.024	1.6	.063
	14	490R-140408M-PH		☆	☆		☆	☆	☆											☆	★	☆	☆	☆	☆											2.0	.079	0.8	.032
		490R-140420M-PH		☆	☆		☆	☆	☆											☆	☆	☆	☆	☆	☆											0.8	.032	2.0	.079
			P10	P30	P20		P20	P20	P40	P15	M15	M35	M25	M40	M40	M10	M25	K05	K20	K30	K15	K25	K30	K40	K20	N15	S10	S15	S30	S25	S35	H10	H10	H25				

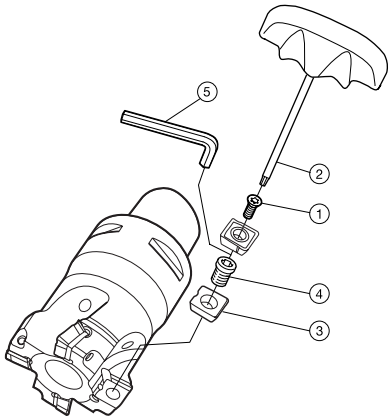
Note! 490L = Left hand insert.
Left hand cutters to be ordered separately.
For further information contact your Sandvik Coromant sales representative.



D312

D305

Spare parts for CoroMill® 490



		1	2					3	4	5
				Torque value						
Insert size	D_c mm (inch)	Screw	Key (Torx Plus)	Nm	In-lbs	Molykote	Torque wrench[1]	Shim	Shim screw	Key
08	25-125 (1.000 - 5.000)	5513 020-35	5680 046-01 (8IP)	1.2	10.6	5683 010-01	5680 100-03 (8IP)			
	19.05-20.00(.750 -.787)	5513 020-36	5680 046-01 (8IP)	1.2	10.6	5683 010-01	5680 100-03 (8IP)			
14	40-50[2] (1.500-2.000)	5513 020-72	5680 048-01 (15IP)	3.0	26.5	5683 010-01	5680 100-06 (15IP)	-	-	-
	63-250 (2.500-10.000)	5513 020-72	5680 048-01 (15IP)	3.0	26.5	5683 010-01	5680 100-06 (15IP)	5322 471-01 5322 478-01[3]	5512 090-01	5680 010-01

[1] Accessories, must be ordered separately.

[2] No shims used for D_c 50 mm (2.000 inch) extra close pitch

[3] Shim for left hand insert, to be ordered separately.

Mounting screws for Arbor

Size	Article code	Coolant screw[1]	Non-coolant screw[2]	(mm/inch/TorxPlus)[1]	Size
08	490-040Q16-08M/H, 490-044Q16-08M	5512 073-03	–	3021 010-060	(6)
	490-050Q22-08L/M/H, 490-054Q22-08M	5512 073-01	–	3021 010-080	(8)
	A490-038R19-08M/H	5512 074-03	5512 065-01	3021 011-516	(5/16)
	A490-051R19-08L/M/H	5512 074-01	–	3021 011-516	(5/16)

No through coolant on D_c larger than 54 mm or 2.000 inch, and no optimized arbor screws

Size	Article code	Coolant screw[1]	Non-coolant screw[2]	Key	Size
14	490-050Q22-14M/H	5512 073-04	5512 060-15	3021 010-080	(8)
	490-063Q22-14M/H	5512 073-01	–	3021 010-080	(8)
	490-080Q27-14M/H, A490-080J25.4-14L/M/H,	5512 073-02	–	3021 010-100	(10)
	490-100Q32-14L/M/H	5512 087-061	–	5680 043-18	(50IP)
	490-125Q40-14L/M/H, A490-125J38.1-14L/M	5512 098-01	–	5680 043-18	(50IP)
	A490-051R19-14M/H	5512 074-03	5512 065-01	3021 011-516	(5/16)
	A490-063R25-14M/H, A490-076R25-14M/H	5512 074-02	–	3021 011-380	(3/8)
	A490-102R38-14L/M/H, A490-127R38-14L/M/H	5512 099-01	–	5680 043-18	(50IP)
	A490-100J31.75-14L/M/H	5512 087-04	–	5680 043-18	(50IP)

No through coolant on D_c larger than 127 mm or 5.000 inch, and no optimized arbor screws

[1] To be ordered separately.

[2] Standard screw delivered with the cutter body, optimized for CoroMill 490 concept

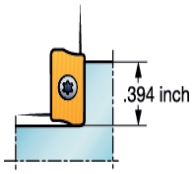
CoroMill® 390

Shoulder milling cutters

Comprehensive concept for deep or shallow shoulder milling

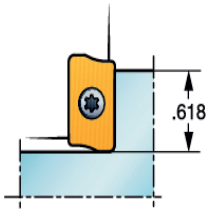
Diameter 12 - 200 mm / .500 - 8.000 inch

Insert size 11

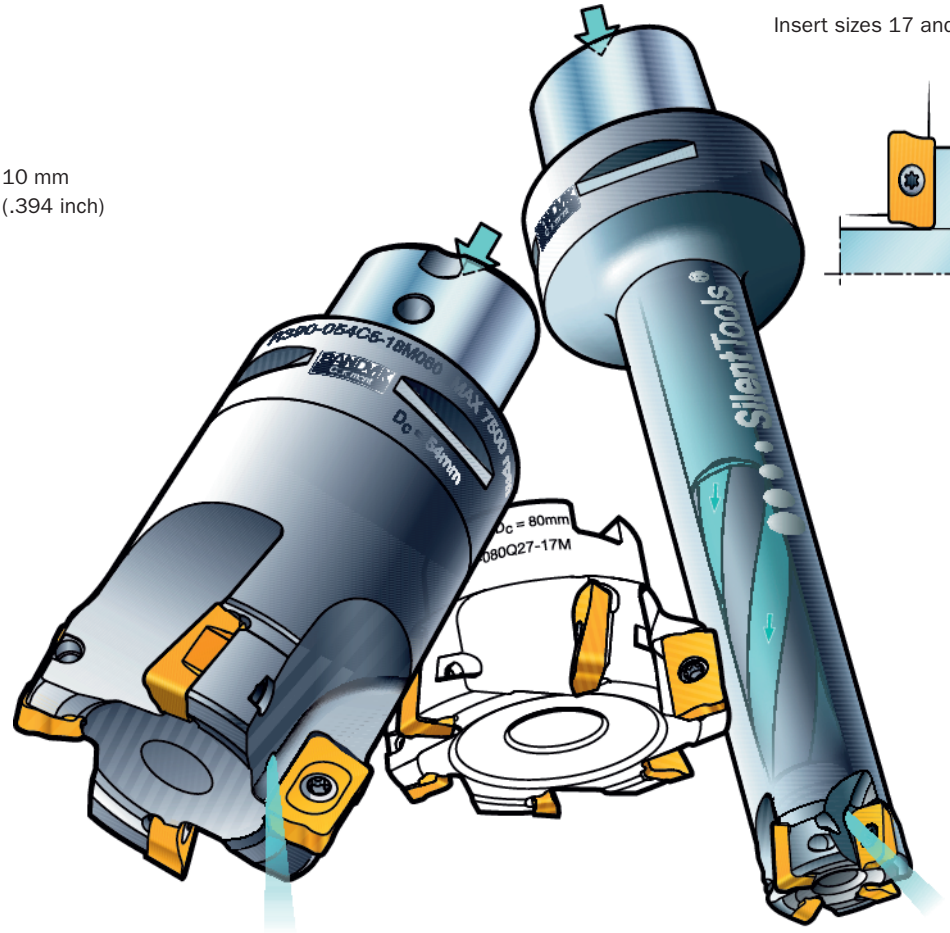


10 mm
(.394 inch)

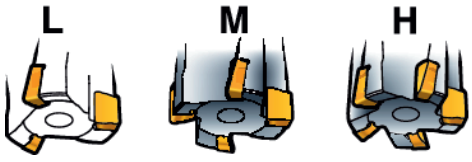
Insert sizes 17 and 18

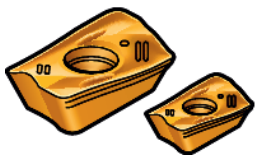


15.7 mm
(.618 inch)

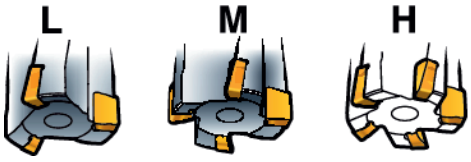


Pitch choice recommendations:
Insert sizes 11 and 17



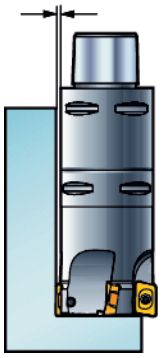


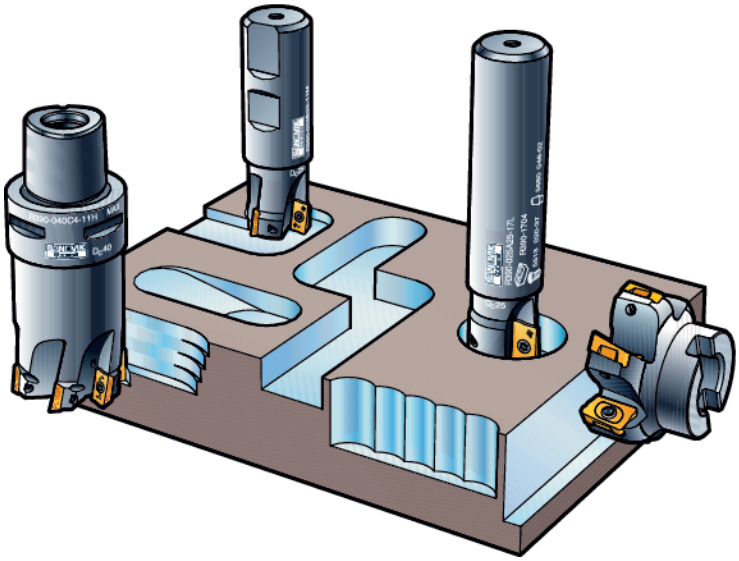
Pitch choice recommendations:
Insert size 18



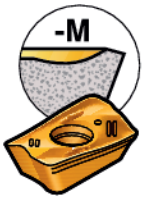
Versatile shoulder milling

Oversized diameter option for clearance





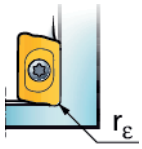
Geometries:

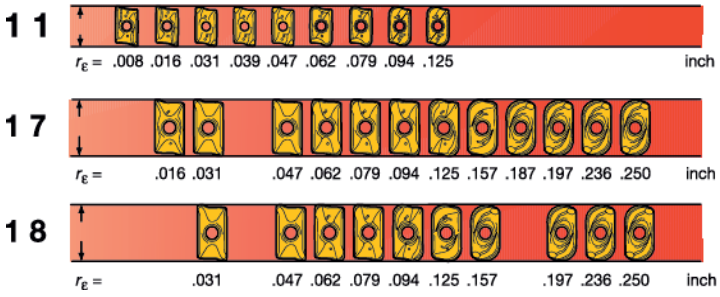


Condition: Light cutting | General | High security

ISO application areas:

Radius insert options





Tailor Made

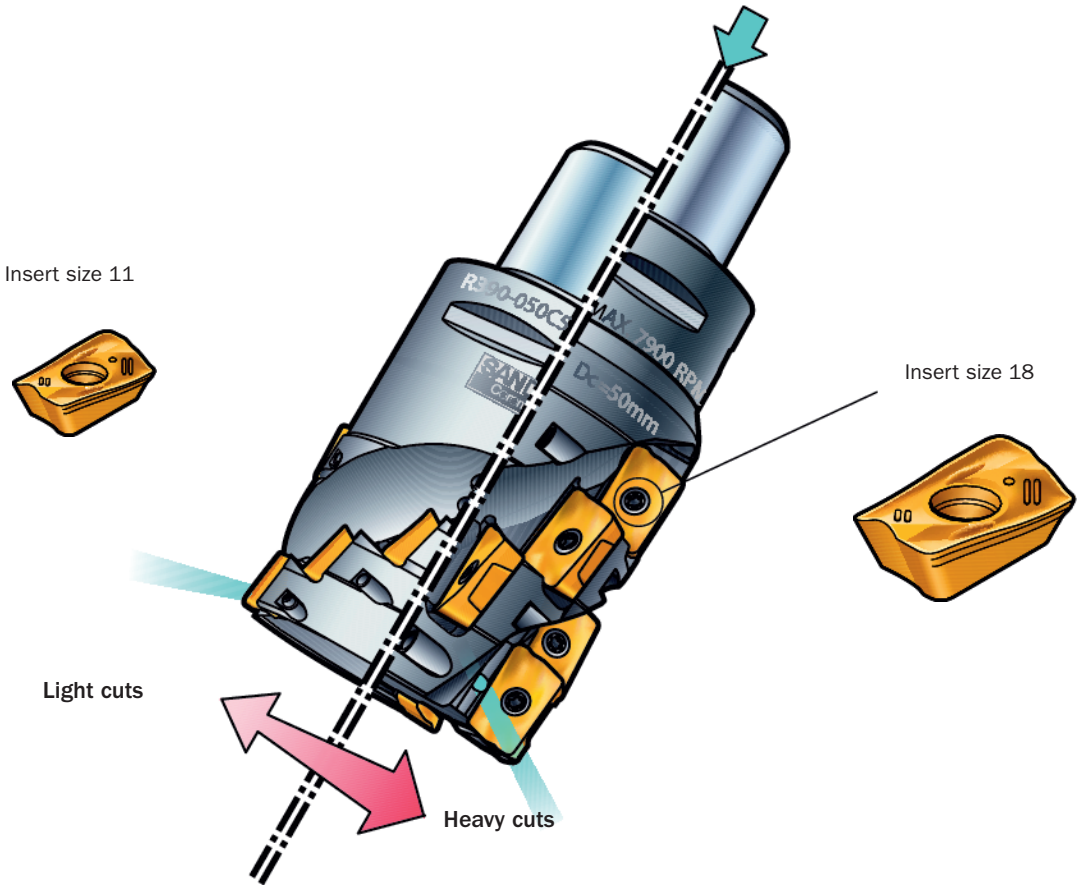
Tool options designed to individual customer requirements are available. For information on our Tailor Made program see page J3.

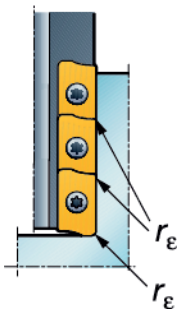
CoroMill® 390

Long edge milling cutters

Options for light and heavy operations

Diameter 32 - 200mm / 1.250 - 8.000 inch



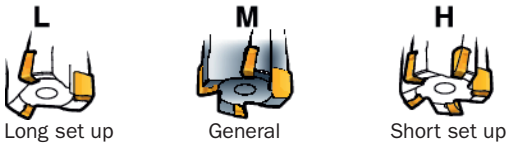


Several radii for peripheral

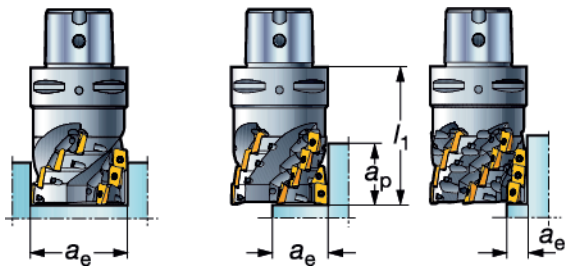
Insert -11, max. 1.0 mm (.039 inch)
Inserts -18, max. 1.2 mm (.047 inch)

Radius insert options for cutter end seats.

Pitch:



Long set up | General | Short set up



Tailor Made

Tool options designed to individual customer requirements are available. For information on our Tailor Made program see page J3.

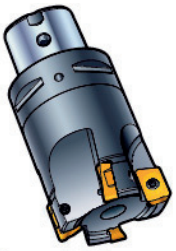
ISO application areas:

P M K N S

SANDVIK Coromant

Endmill and square shoulder facemill

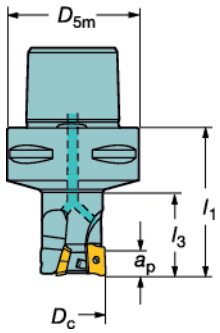
Diameter 16 – 80 mm



$\kappa_r = 90°$

Insert size
11

Coromant Capto®



l_1 = programming length

Metric version

		Ordering code										Dimensions, mm					
	D_c mm	Coarse pitch			Close pitch			Extra close pitch			Coolant[1]	kg	D_{5m}	l_1	l_3	Max a_p	n_{max}[2]
		Coromant Capto															
11	16	R390-016C3-11L050	2	-	-	-	-	-	-	-	1	0.2	C3	50	25	10.0	39000
		R390-016C4-11L	2	-	-	-	-	-	-	-	1	0.5	C4	50	25	10.0	39000
	20	R390-020C3-11L050	2	-	R390-020C3-11M050	3	-	-	-	-	1	0.2	C3	50	25	10.0	34600
		R390-020C4-11L	2	-	-	-	-	-	-	-	1	0.5	C4	50	25	10.0	34600
		-	-	-	R390-020C5-11M095	3	-	-	-	-	1	1.0	C5	95	40	10.0	34600
		-	-	-	R390-020C6-11M110	3	-	-	-	-	1	1.6	C6	110	40	10.0	34600
	25	R390-025C3-11L050	2	-	R390-025C3-11M050	3	-	-	-	-	1	0.2	C3	50	32	10.0	36500
		R390-025C4-11L	2	-	R390-025C4-11M	3	-	-	-	-	1	0.5	C4	55	32	10.0	36500
		-	-	-	R390-025C5-11M095	3	-	-	-	-	1	1.1	C5	95	45	10.0	36500
		-	-	-	R390-025C6-11M110	3	-	-	-	-	1	1.6	C6	110	45	10.0	36500
	32	R390-032C3-11L050	-	2	R390-032C3-11M050	-	3	-	-	-	1	0.3	C3	50	35	10.0	31000
		R390-032C4-11L	2	-	R390-032C4-11M	-	3	-	-	-	1	0.6	C4	65	40	10.0	31000
		R390-032C5-11L	2	-	R390-032C5-11M	-	3	-	-	-	1	0.8	C5	65	40	10.0	31000
		-	-	-	R390-032C5-11M095	-	3	-	-	-	1	1.1	C5	95	50	10.0	31000
		-	-	-	R390-032C6-11M080	3	-	-	-	-	1	1.5	C6	80	40	10.0	31000
		-	-	-	R390-032C6-11M110	-	3	-	-	-	1	1.7	C6	110	50	10.0	31000
	36	-	-	-	R390-036C3-11M050	3	-	-	-	-	1	0.4	C3	50	50	10.0	29000
		-	-	-	R390-036C3-11M075	3	-	-	-	-	1	0.5	C3	75	75	10.0	29000
	40	-	-	-	R390-040C4-11M	-	4	R390-040C4-11H	-	6	1	0.8	C4	70	50	10.0	27000
		-	-	-	R390-040C5-11M	-	4	R390-040C5-11H	-	6	1	1.1	C5	75	50	10.0	27000
		-	-	-	R390-040C6-11M080	4	-	-	-	-	1	1.6	C6	80	40	10.0	27000
	44	-	-	-	R390-044C4-11M060	4	-	-	-	-	1	0.8	C4	60	60	10.0	25600
		-	-	-	R390-044C4-11M075	4	-	-	-	-	1	0.9	C4	75	75	10.0	25600
	50	-	-	-	R390-050C5-11M060	5	-	-	-	-	1	1.0	C5	60	60	10.0	23700
		-	-	-	R390-050C6-11M080	5	-	-	-	-	1	1.8	C6	80	40	10.0	23700
	54	-	-	-	R390-054C5-11M060	5	-	-	-	-	1	1.2	C5	60	60	10.0	22700
		-	-	-	R390-054C5-11M080	5	-	-	-	-	1	1.4	C5	80	80	10.0	22700
	63	-	-	-	R390-063C5-11M060	5	-	-	-	-	1	1.4	C5	60	60	10.0	20700
		-	-	-	R390-063C6-11M080	6	-	-	-	-	1	2.2	C6	80	40	10.0	20700
	66	-	-	-	R390-066C6-11M060	6	-	-	-	-	1	1.9	C6	60	60	10.0	20200
		-	-	-	R390-066C6-11M080	6	-	-	-	-	1	2.3	C6	80	80	10.0	20200
	80	-	-	-	R390-080C6-11M060	7	-	-	-	-	1	2.2	C6	60	60	10.0	18200
		-	-	-	R390-080C6-11M080	7	-	-	-	-	1	2.7	C6	80	80	10.0	18200

1) 0 = no coolant, 1 = coolant through center

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

= Even pitch

= Differential pitch

Note:
When using inserts with radius >1.6 mm, standard cutter bodies have to be modified accordingly: r = rε - 0.5 mm.

 D41

 D45

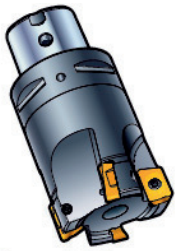
 G6

 D2

 J3

Endmill and square shoulder facemill

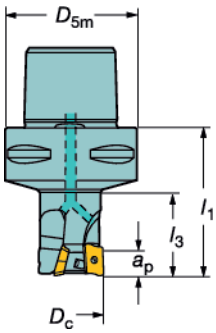
Diameter 40 – 84 mm



$\kappa_r = 90°$

Insert size
18

Coromant Capto®



l_1 = programming length

Metric version

		Ordering code										Dimensions, mm					
D_c mm	Coarse pitch			Close pitch			Extra close pitch			Coolant[1]		D_{5m}	l_1	l_3	Max a_p	n_{max}[2]
	Coromant Capto															
18	40	-	-	-	R390-040C4-18M060	3	-	-	-	-	1	0.6	C4	60	40	15.4	9200
		-	-	-	R390-040C5-18M080	3	-	-	-	-	1	1.1	C5	80	40	15.4	9200
		-	-	-	R390-040C6-18M100	3	-	-	-	-	1	1.9	C6	100	50	15.4	9200
	44	R390-044C4-18L080	2	-	R390-044C4-18M080	3	-	-	-	-	1	0.7	C4	80	80	15.4	8600
		-	-	-	R390-044C4-18M060	3	-	-	-	-	1	0.5	C4	60	60	15.4	8600
	50	-	-	-	R390-050C5-18M060	4	-	-	-	-	1	1.1	C5	60	40	15.4	7900
		-	-	-	R390-050C6-18M080	4	-	-	-	-	1	1.4	C6	80	40	15.4	7900
	54	-	-	-	R390-054C5-18M060	4	-	-	-	-	1	1.1	C5	60	60	15.4	7500
		-	-	-	R390-054C5-18M080	4	-	-	-	-	1	1.4	C5	80	80	15.4	7500
	63	-	-	-	R390-063C5-18M060	5	-	-	-	-	1	1.0	C5	60	60	15.4	6800
		-	-	-	R390-063C6-18M060	5	-	-	-	-	1	1.3	C6	60	38	15.4	6800
	66	-	-	-	R390-066C6-18M060	5	-	-	-	-	1	1.8	C6	60	60	15.4	6700
		-	-	-	R390-066C6-18M080	5	-	-	-	-	1	1.8	C6	80	80	15.4	6700
	80	-	-	-	R390-080C6-18M060	6	-	-	-	-	1	2.1	C6	60	60	15.4	5900
	84	-	-	-	R390-084C8-18M070	6	-	-	-	-	1	3.0	C8	70	70	15.4	5800
		-	-	-	R390-084C8-18M100	6	-	-	-	-	1	4.5	C8	100	100	15.4	5800

1) 0 = no coolant, 1 = coolant through center

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

= Even pitch

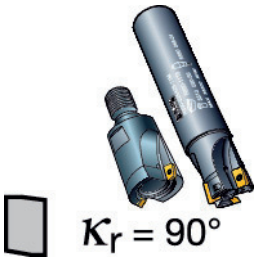
= Differential pitch

Note:
When using inserts with radius >1.6 mm, standard cutter bodies have to be modified accordingly: r = rε - 0.5 mm.

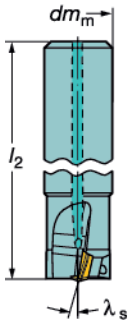
 D41  D45  G6  D2  J3

End mill

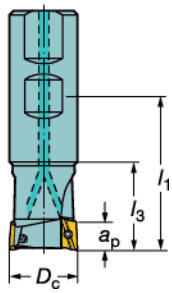
Diameter 12 – 42 mm



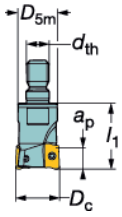
Cylindrical



Weldon



Threaded coupling



Insert size
11, 17

l_1 = programming length

Metric version

		Ordering code											Dimensions								
□	D_c mm	Coarse pitch	⊙	⊙	Close pitch	⊙	⊙	Extra close pitch	⊙	⊙	Coolant[1]	kg	dm_m	l_1	l_2	l_3	λ_s	Max a_p	d_{th}	n_{max}[2]
		Cylindrical shank																		
11	12	R390-012A16-11L[3]	1	-	-	-	-	-	-	-	1	0.2	16		95	20	11.48	10.0		68600
	16	R390-016A16-11L	2	-	-	-	-	-	-	-	1	0.3	16		100	25	13.43	10.0		41500
		R390-016A16L-11L	2	-	-	-	-	-	-	-	1	0.3	16		145	25	13.43	10.0		10900
	18	R390-018A16L-11L	2	-	-	-	-	-	-	-	1	0.3	16		145	25	10.31	10.0		12200
	20	R390-020A20-11L	2	-	R390-020A20-11M	3	-	-	-	-	1	0.4	20		110	25	10.27	10.0		34600
		R390-020A20L-11L	2	-	-	-	-	-	-	-	1	0.5	20		170	40	10.27	10.0		9900
	22	R390-022A20L-11L	2	-	-	-	-	-	-	-	1	0.5	20		170	30	14	10.0		10900
	25	R390-025A25-11L	2	-	R390-025A25-11M	3	-	R390-025A25-11H	4	-	1	0.5	25		120	32	17.06	10.0		36500
		R390-025A25L-11L	2	-	-	-	-	-	-	-	1	0.5	25		210	50	17.06	10.0		8100
	30	R390-030A25L-11L	2	-	-	-	-	-	-	-	1	1.1	25		210	35	18.8	10.0		9700
	32	R390-032A32-11L	2	-	R390-032A32-11M	-	3	R390-032A32-11H	-	5	1	0.8	32		130	40	19.46	10.0		31000
	40	R390-040A32-11L	2	-	R390-040A32-11M	-	4	R390-040A32-11H	-	6	1	0.8	32		170	50	21.93	10.0		27000
		R390-040A32L-11L	2	-	-	-	-	-	-	-	1	1.7	32		250	65	21.93	10.0		9100
17	25	R390-025A25-17L	2	-	-	-	-	-	-	-	1	0.5	25		120	32	11.55	15.7		30800
		R390-025A25L-17L	2	-	-	-	-	-	-	-	1	0.5	25		210	50	11.55	15.7		30800
	32	R390-032A32-17L	2	-	R390-032A32-17M	-	3	-	-	-	1	0.8	32		130	40	13.15	15.7		25600
		R390-032A32L-17L	2	-	-	-	-	-	-	-	1	1.5	32		250	65	19.46	15.7		7300
	40	R390-040A32-17L	2	-	R390-040A32-17M	-	3	R390-040A32-17H	4	-	1	1.1	32		170	50	14.78	15.7		21900
		R390-040A32L-17L	2	-	-	-	-	-	-	-	1	1.7	32		250	65	21.93	15.7		9100
		Weldon																		
11	12	R390-012B16-11L	1	-	-	-	-	-	-	-	1	0.2	16	44.5	68	20	11.48	10.0		68600
	16	R390-016B16-11L	2	-	-	-	-	-	-	-	1	0.2	16	49.5	73	25	13.43	10.0		41500
	20	R390-020B20-11L	2	-	R390-020B20-11M	3	-	-	-	-	1	0.3	20	56.5	81	25	10.27	10.0		34600
	25	R390-025B25-11L	2	-	R390-025B25-11M	3	-	R390-025B25-11H	4	-	1	0.4	25	56.5	88	32	17.06	10.0		36500
	32	R390-032B32-11L	2	-	R390-032B32-11M	-	3	R390-032B32-11H	-	5	1	0.6	32	64.5	100	40	19.46	10.0		31000
	40	R390-040B32-11L	2	-	R390-040B32-11M	-	4	R390-040B32-11H	-	6	1	0.8	32	74.5	110	50	21.93	10.0		27000
17	25	R390-025B25-17L	2	-	-	-	-	-	-	-	1	0.4	25	56.5	88	32	11.55	15.7		30800
	32	R390-032B32-17L	2	-	R390-032B32-17M	-	3	-	-	-	1	0.8	32	64.5	100	40	13.15	15.7		25600
	40	R390-040B32-17L	2	-	R390-040B32-17M	-	3	R390-040B32-17H	4	-	1	0.8	32	74.5	110	50	14.78	15.7		21900
		Threaded coupling																		
11	16	R390-16T08-11L[4]	2	-	-	-	-	-	-	-	1	0.2		25			13.43	10.0	8	
	20	R390-20T10-11L[4]	2	-	R390-20T10-11M	3	-	-	-	-	1	0.2		30			10.27	10.0	10	
	25	R390-25T12-11L[4]	2	-	R390-25T12-11M	3	-	-	-	-	1	0.2		35			17.06	10.0	12	
	32	R390-32T16-11L[4]	2	-	R390-32T16-11M	3	-	-	-	-	1	0.3		45			19.46	10.0	16	
	35	R390-35T16-11L[4]	2	-	R390-35T16-11M	3	-	-	-	-	1	0.4		45			20.46	10.0	16	
	40	R390-40T16-11L[4]	2	-	R390-40T16-11M	4	-	-	-	-	1	0.4		45			21.93	10.0	16	
	42	R390-42T16-11L[4]	2	-	R390-42T16-11M	4	-	-	-	-	1	0.4		45			22.49	10.0	16	

1) 0 = no coolant, 1 = coolant through center
2) n_{max} (max. rev/min) for holders must also be considered.
3) Light geometries are recommended.
4) Max. rpm values, $n$max, are not given for threaded coupling design as they are always used with long extensions.

⊙ = Even pitch

⊙ = Differential pitch

Note:
When using inserts with radius >1.6 mm, standard cutter bodies have to be modified accordingly: r = rε - 0.5 mm.


D41


D45


G6


D2

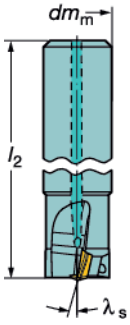
J3

End mill

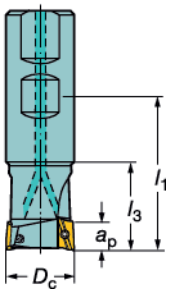
Diameter .500 - 1.500 inch

0°

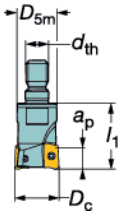
Cylindrical



Weldon



Threaded coupling



Insert size
11, 17

l_1 = programming length

Inch version

		Ordering code									Dimensions, inch							
□	D_c inch	Coarse pitch	⊕	Close pitch	⊕	⊕	Extra close pitch	⊕	⊕	Coolant[1]	lbs	dm_m	l_1	l_2	l_3	λ_s	Max a_p	n_{max}[2]
		Cylindrical shank																
11	.625	RA390-016O16L-11L	2	-	-	-	-	-	-	1	0.5	.625		5.700	1.375	13.43	.394	5700
	.750	RA390-019O19L-11L	2	-	-	-	-	-	-	1	0.8	.750		6.500	1.625	14.73	.394	10900
	1.000	RA390-025O25L-11L	2	RA390-025O25L-11M	3	-	-	-	-	1	1.5	1.000		8.000	2.125	17.06	.394	8100
17	1.250	RA390-032O32L-17L	2	RA390-032O32L-17M	-	3	-	-	-	1	2.8	1.250		9.000	2.625	13.15	.618	9100
	1.500	RA390-038O32L-17L	2	RA390-038O32L-17M	-	3	-	-	-	1	2.8	1.250		9.000		14.76	.618	9100
		Weldon																
11	.500	RA390-013M16-11L[3]	1	-	-	-	-	-	-	1	0.5	.625	1.929	2.882	.751	11.99	.394	64400
	.625	RA390-016M19-11L	2	-	-	-	-	-	-	1	0.6	.750	2.235	3.250	1.020	13.43	.394	41800
	.750	RA390-019M19-11L	2	RA390-019M19-11M	3	-	-	-	-	1	0.6	.750	2.335	3.350	1.020	14.73	.394	35900
	1.000	RA390-025M19-11L	2	RA390-025M19-11M	3	-	RA390-025M19-11H	4	-	1	0.7	.750	2.485	3.500	1.468	17.06	.394	36100
		RA390-025M25-11L	2	RA390-025M25-11M	3	-	RA390-025M25-11H	4	-	1	1.0	1.000	2.610	3.750	1.250	17.06	.394	36100
	1.250	RA390-032M32-11L	2	RA390-032M32-11M	-	3	RA390-032M32-11H	-	5	1	1.1	1.250	2.610	3.750	1.350	19.46	.394	31200
	1.500	RA390-038M32-11L	2	RA390-038M32-11M	-	4	RA390-038M32-11H	-	6	1	1.6	1.250	2.860	4.000	1.719	21.35	.394	27800
17	1.000	RA390-025M25-17L	2	-	-	-	-	-	-	1	1.0	1.000	2.860	4.000	1.500	11.7	.618	30500
	1.250	RA390-032M32-17L	2	RA390-032M32-17M	-	3	-	-	-	1	1.4	1.250	2.860	4.000	1.580	13.15	.618	25700
	1.500	RA390-038M32-17L	2	RA390-038M32-17M	-	3	RA390-038M32-17H	-	4	1	1.7	1.250	3.360	4.500	1.750	14.76	.618	22700

		Ordering code									Dimensions, inch					
□	D_c inch	Coarse pitch	⊕	Close pitch	⊕	⊕	Extra close pitch	⊕	⊕	Coolant[1]	lbs	dm_m	l_1	λ_s	Max a_p	D_{th}
		Threaded coupling														
11	.625	RA390-16T08-11L	2	-	-	-	-	-	-	1	0.4	.504	.906	13.43	.394	M8
	.750	RA390-19T10-11L	2	-	-	-	-	-	-	1	0.3	.701	1.134	14.73	.394	M10
	1.000	RA390-25T12-11L	2	RA390-25T12-11M	3	-	-	-	-	1	0.5	.819	1.378	17.06	.394	M12
	1.250	RA390-32T16-11L	2	RA390-32T16-11M	3	-	-	-	-	1	0.7	1.134	1.693	19.46	.394	M16
	1.500	RA390-38T16-11L	2	RA390-38T16-11M	4	-	-	-	-	1	0.9	1.134	1.693	21.35	.394	M16

1) 0 = no coolant, 1 = coolant through center

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

3) Recommended to use light-medium cuts (a_e/a_p) and L (light) geometries.

⊕ = Even pitch

⊕ = Differential pitch

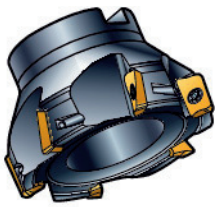
Note:
When using inserts with radius >1.6 mm, standard cutter bodies have to be modified accordingly: r = rε - 0.5 mm.

 D41
 D45
 G6
 D2
 J3

SANDVIK Coromant

Square shoulder facemill

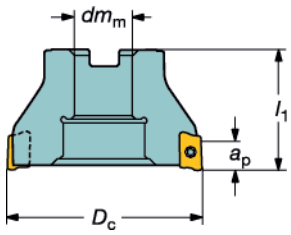
Diameter 40 – 200 mm



$\kappa_r = 90°$

Insert size
11, 17, 18

Arbor



l_1 = programming length

Metric version

		Ordering code									Dimensions				
D_c															
	mm	Coarse pitch			Close pitch			Extra close pitch			kg	dm_m	l_1	Max a_p	n_{max} [1]
		Arbor													
11	40	-	-	-	R390-040Q16-11M	-	4	R390-040Q16-11H	-	6	0.4	16	40	10.0	27000
	50	-	-	-	R390-050Q22-11M	-	5	R390-050Q22-11H	-	7	0.5	22	40	10.0	23700
	63	-	-	-	R390-063Q22-11M	-	6	R390-063Q22-11H	-	8	0.6	22	40	10.0	20700
	80	-	-	-	R390-080Q27-11M	-	7	R390-080Q27-11H	-	10	0.9	27	50	10.0	18200
17	40	R390-040Q16-17L	2	-	R390-040Q16-17M	-	3	R390-040Q16-17H	4	-	0.3	16	40	15.7	21900
	50	R390-050Q22-17L	-	3	R390-050Q22-17M	-	4	R390-050Q22-17H	-	5	0.4	22	40	15.7	19000
	63	R390-063Q22-17L	-	4	R390-063Q22-17M	-	5	R390-063Q22-17H	-	6	0.6	22	40	15.7	16500
	80	R390-080Q27-17L	-	4	R390-080Q27-17M	-	6	R390-080Q27-17H	-	8	0.8	27	50	15.7	14400
	100	R390-100Q32-17L	-	5	R390-100Q32-17M	-	7	R390-100Q32-17H	-	9	1.0	32	50	15.7	12700
	125	R390-125Q40-17L	-	6	R390-125Q40-17M	-	8	R390-125Q40-17H	-	11	2.7	40	63	15.7	11200
18	50	R390-050Q22-18L	-	3	R390-050Q22-18M	-	4	R390-050Q22-18H	5	-	0.6	22	40	15.7	7900
	63	R390-063Q22-18L	-	4	R390-063Q22-18M	-	5	R390-063Q22-18H	6	-	0.8	22	40	15.7	6800
	80	R390-080Q27-18L	-	4	R390-080Q27-18M	-	6	-	-	-	1.1	27	50	15.7	5900
	100	R390-100Q32-18L	-	5	R390-100Q32-18M	-	7	-	-	-	1.8	32	50	15.7	5200
	125	R390-125Q40-18L	-	6	R390-125Q40-18M	-	8	-	-	-	2.7	40	63	15.7	4600
	160	R390-160Q40-18L	-	8	R390-160Q40-18M	-	12	-	-	-	3.9	40	63	15.7	4000
	200	R390-200Q60-18L	-	10	-	-	-	-	-	-	10.0	60	63	15.7	3600
		CIS Arbor													
17	80	RA390-080J25.4-17L	-	4	RA390-080J25.4-17M	-	6	RA390-080J25.4-17H	-	8	1.0	25.4	50	15.7	14400
18	80	-	-	-	RA390-080J25.4-18M	-	6	-	-	-	1.2	25.4	50	15.7	5900
	125	-	-	-	RA390-125J38.1-18M	-	8	-	-	-	3.0	38.1	63	15.7	4600
	160	-	-	-	RA390-160J50.8-18M	-	12	-	-	-	9.8	50.8	63	15.7	4000

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

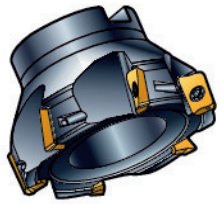
Note:
Bolt circle for cutters 200 and 250mm = 4"
When using inserts with radius >1.6 mm, standard cutter bodies have to be modified accordingly: r = rε - 0.5 mm.

= Even pitch
= Differential pitch

D41 D45 G6 D2 J3

Square shoulder facemill

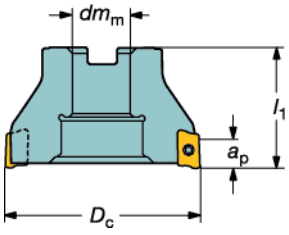
Diameter 1.500 - 8.000 inch



0°

Insert size
11, 17, 18

Arbor



l_1 = programming length

Inch version

		Ordering code									Dimensions, inch				
D_c															
	inch	Coarse pitch			Close pitch			Extra close pitch			Lbs	dm_m	l_1	Max a_p	n_{max} [1]
		Arbor													
11	1.500	-	-	-	RA390-038R19-11M	4	-	RA390-038R19-11H	6	-	0.8	.750	1.575	.394	22700
	2.000	-	-	-	RA390-051R19-11M	5	-	RA390-051R19-11H	7	-	1.1	.750	1.575	.394	23500
	2.500	-	-	-	RA390-063R19-11M	6	-	RA390-063R19-11H	8	-	1.2	.750	1.575	.394	20700
	3.000	-	-	-	RA390-076R25-11M	7	-	RA390-076R25-11H	9	-	2.2	1.000	1.969	.394	18700
17	2.000	RA390-051R19-17L	3	-	RA390-051R19-17M	4	-	RA390-051R19-17H	5	-	1.1	.750	1.575	.618	18800
	2.500	RA390-063R19-17L	4	-	RA390-063R19-17M	5	-	RA390-063R19-17H	6	-	1.3	.750	1.575	.618	16500
	3.000	RA390-076R25-17L	4	-	RA390-076R25-17M	6	-	RA390-076R25-17H	7	-	2.0	1.000	1.969	.618	14800
	4.000	RA390-102R38-17L	5	-	RA390-102R38-17M	7	-	RA390-102R38-17H	9	-	4.4	1.500	1.969	.618	12600
	5.000	RA390-127R38-17L	6	-	RA390-127R38-17M	8	-	RA390-127R38-17H	11	-	6.6	1.500	2.480	.618	11200
18	2.000	RA390-051R19-18L	-	3	RA390-051R19-18M	-	4	RA390-051R19-18H	5	-	1.9	.750	1.575	.618	7800
	2.500	RA390-063R19-18L	-	4	RA390-063R19-18M	-	5	RA390-063R19-18H	6	-	2.4	.750	1.575	.618	6800
	3.000	RA390-076R25-18L	-	4	RA390-076R25-18M	-	6	-	-	-	4.9	1.000	1.968	.618	6100
	4.000	RA390-102R38-18L	-	5	RA390-102R38-18M	-	7	-	-	-	9.2	1.500	1.968	.618	5200
	5.000	RA390-127R38-18L	-	6	RA390-127R38-18M	-	8	-	-	-	17.1	1.500	2.480	.618	4600
	6.000	RA390-152R38-18L	-	8	RA390-152R38-18M	-	12	-	-	-	20.4	1.500	2.480	.618	4100
	8.000	RA390-203R63-18L	-	10	-	-	-	-	-	-	20.4	2.500	2.480	.618	3500

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

Note:
Bolt circle for cutters 8" and 10" = 4"
When using inserts with radius >1.6 mm, standard cutter bodies have to be modified accordingly: r = rε - 0.5 mm.

= Even pitch
= Differential pitch

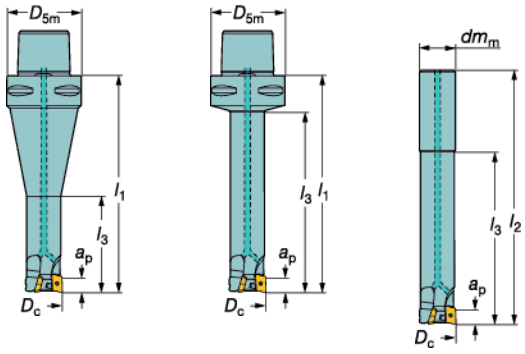
 D41
 D45
 G6
 D2
 J3

SANDVIK Coromant

Endmill and square shoulder facemill

Dampened

Coromant Capto **Cylindrical shank**



l_1 = programming length

	D_c	Ordering code									Coolant[1]	Dimensions						n_{max}
	mm	Coarse pitch			Close pitch			Extra close pitch				kg	Size	D_{5m}	l_1	l_3	Max a_p	
		Coromant Capto																
11	20	R390D-020C5-11L125	2	-	-	-	-	-	-	-	1	0.6	C5	50	125	100	10	21000
		R390D-020C6-11L165	2	-	-	-	-	-	-	-	1	1.5	C6	63	165	60	10	20000
	25	-	-	-	-	-	-	R390D-025C5-11H150	-	4	1	0.8	C5	50	150	125	10	20000
		-	-	-	-	-	-	R390D-025C6-11H165	-	4	1	1.6	C6	63	165	75	10	20000
	32	-	-	-	R390D-032C5-11M165	-	4	-	-	-	1	1.2	C5	50	165	140	10	26000
		-	-	-	R390D-032C6-11M165	-	4	-	-	-	1	1.8	C6	63	165	96	10	20000
	40	-	-	-	-	-	-	R390D-040C6-11H165	-	6	1	2.0	C6	63	165	120	10	20000

[1] 0 = no coolant, 1 = coolant through center

	D_c	Ordering code									Coolant[1]	Dimensions					n_{max}
	mm	Coarse pitch			Close pitch			Extra close pitch				kg	dm_m	l_2	l_3	Max a_p	
		Cylindrical shank															
11	20	R390D-020A20-11L	2	-	-	-	-	-	-	-	1	0.3	20	170	100	10	30000
	25	-	-	-	-	-	-	R390D-025A25-11H	-	4	1	0.6	25	195	125	10	23000
	32	-	-	-	R390D-032A32-11M	-	4	-	-	-	1	1.1	32	235	160	10	17000

[1] 0 = no coolant, 1 = coolant through center

= Even pitch

= Differential pitch

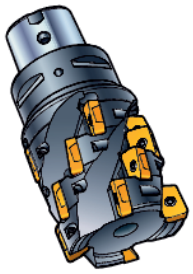
Note:

When using inserts with radius >1.6 mm, standard cutter bodies have to be modified accordingly: r = rε - 0.5 mm.

D41 D45 G6 D2 J3

Long edge milling cutter

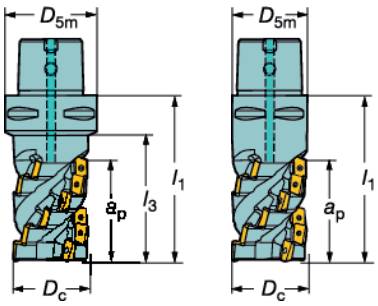
Diameter 32 – 100 mm



$\kappa_r = 90°$

Insert size
11, 18

Coromant Capto®



l_1 = programming length

Metric version

		Ordering code	z_n/z_c			z_n/z_c			z_n/z_c			Dimensions					
	D_c mm	Coarse pitch	⊙	⊙	Close pitch	⊙	⊙	Extra close pitch	⊙	⊙	Coolant[1]	kg	D_{5m}	l_1	l_3	Max a_p	n_{max}[2]
		Coromant Capto															
11	32	R390-032C5-36L	8/2	-	R390-032C5-36M	-	12/3	-	-	-	1	1.0	50	72	46	36	21700
		R390-032C5-54L	12/2	-	R390-032C5-54M	-	18/3	-	-	-	1	1.1	50	89	63	54	21700
		-	-	-	R390-032C6-45M	-	15/3	-	-	-	1	1.4	63	82	54	45	21700
		R390-032C6-63L	14/2	-	-	-	-	-	-	-	1	1.5	63	100	72	63	21700
	36	R390-036C3-36L	8/2	-	R390-036C3-36M	-	12/3	-	-	-	1	0.7	32	66	66	36	20200
	40	-	-	-	R390-040C5-54M	-	18/3	R390-040C5-54H	-	24/4	1	1.2	50	89	63	54	18900
		-	-	-	R390-040C6-63M	-	21/3	R390-040C6-63H	-	28/4	1	1.7	63	100	72	63	18900
	44	-	-	-	R390-044C4-45M	-	15/3	-	-	-	1	1.0	40	80	80	45	17800
	50	R390-050C5-36L	-	12/3	R390-050C5-36M	-	16/4	R390-050C5-36H	20/5	-	1	1.3	50	72	50	36	16600
		R390-050C5-54L	-	18/3	R390-050C5-54M	-	24/4	-	-	-	1	1.5	50	89	67	54	16600
		-	-	-	R390-050C6-63M	-	28/4	R390-050C6-63H	35/5	-	1	2.1	63	100	72	63	16600
	54	-	-	-	R390-054C5-54M	-	24/4	-	-	-	1	1.7	50	89	80	54	16000
	66	-	-	-	R390-066C6-45M	-	20/4	-	-	-	1	2.5	63	82	82	45	13900
18	44	R390-044C4-43L	6/2	-	-	-	-	-	-	-	1	0.9	40	78	78	43	8600
		R390-044C5-43L	6/2	-	-	-	-	-	-	-	1	1.3	50	80	53	43	9200
		R390-044C5-57L	-	8/2	-	-	-	-	-	-	1	1.4	50	92	67	57	9200
		R390-044C6-43L	6/2	-	-	-	-	-	-	-	1	1.6	63	80	53	43	9200
		R390-044C6-57L	8/2	-	-	-	-	-	-	-	1	1.7	63	94	67	57	9200
	50	R390-050C5-43L	6/2	-	-	-	-	-	-	-	1	1.3	50	78	53	43	7900
		-	-	-	R390-050C6-43M	-	9/3	-	-	-	1	1.7	63	80	53	43	7900
		R390-050C6-71L	10/2	-	R390-050C6-71M	15/3	-	-	-	-	1	2.0	63	108	81	71	7900
		-	-	-	R390-050C8-57M	-	12/3	-	-	-	1	2.7	80	102	67	57	7900
	54	-	-	-	R390-054C5-43M	-	9/3	-	-	-	1	1.3	50	78	78	43	7500
	63	-	-	-	R390-063C6-43M	-	12/4	-	-	-	1	2.1	63	80	53	43	6800
		R390-063C6-57L	-	12/3	-	-	-	-	-	-	1	2.3	63	94	67	57	6800
		R390-063C8-57L	-	12/3	R390-063C8-57M	-	16/4	-	-	-	1	3.3	80	102	67	57	6800
		R390-063C8-85L	-	18/3	-	-	-	-	-	-	1	3.7	80	130	95	85	6800
	66	R390-066C6-57L	-	12/3	-	-	-	-	-	-	1	2.5	63	94	67	57	6700
	80	-	-	-	-	-	-	R390-080C8-57H	20/5	-	1	4.0	80	102.6	67	57	5900
		R390-080C8-71L	-	15/3	-	-	-	-	-	-	1	4.6	80	116	81	71	5900
	84	-	-	-	R390-084C8-57M	-	16/4	-	-	-	1	4.3	80	102.6	67	57	5800
	100	-	-	-	R390-100C8-57M	-	16/4	R390-100C8-57H	24/6	-	1	5.2	80	102	67	57	5200
		-	-	-	R390-100C8-71M	-	20/4	-	-	-	1	6.1	80	116.7	81	71	5200

1) 0 = no coolant, 1 = coolant through center

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

⊙ = Even pitch

⊙ = Differential pitch

z_n= Number of insert in the cutter $z_n = 8$

z_c= Effective number of rows $z_c = 2$

Note:

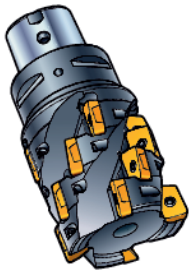
When using inserts with radius >1.6 mm, standard cutter bodies have to be modified accordingly: r = rε - 0.5 mm.

 D41
 D45
 G6
 D2
 J3

SANDVIK Coromant

Long edge milling cutter

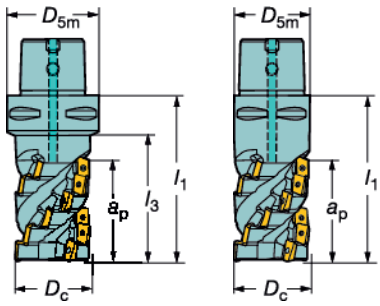
Diameter 1.250 - 3.000 inch



0°

Insert size
11, 18

Coromant Capto®



l_1 = programming length

Inch version

		Ordering code	z_n/z_c			z_n/z_c			z_n/z_c			Dimensions, inch					
	D_c inch	Coarse pitch			Close pitch			Extra close pitch			Coolant[1]	Lug	D_{5m}	l_1	l_3	Max a_p	n_{max}[2]
		Coromant Capto															
11	1.250	RA390-032C5-36L	8/2	-	RA390-032C5-36M	-	12/3	-	-	-	1	2.2	C5	2.830	1.810	1.420	21700
	1.250	RA390-032C5-54L	12/2	-	RA390-032C5-54M	-	18/3	-	-	-	1	2.5	C5	3.500	2.480	2.130	21700
	1.250	-	-	-	RA390-032C6-45M	15/3	-	-	-	-	1	3.3	C6	3.230	2.130	1.770	21700
	1.250	RA390-032C6-63L	14/2	-	-	-	-	-	-	-	1	3.3	C6	3.940	2.480	2.480	21700
	1.500	-	-	-	RA390-038C5-63M	-	21/3	RA390-038C5-63H	-	28/4	1	2.6	C5	3.860	2.840	2.480	19500
	1.500	-	-	-	RA390-038C6-45M	-	15/3	-	-	-	1	3.5	C6	3.247	2.130	1.770	19500
	1.500	-	-	-	RA390-038C6-63M	-	21/3	RA390-038C6-63H	-	28/4	1	3.5	C6	3.940	2.840	2.480	19500
	1.500	RA390-038C6-80L	-	18/2	RA390-038C6-80M	-	27/3	-	-	-	1	3.8	C6	4.650	3.550	3.150	19500
	2.000	-	-	-	RA390-051C5-45M	-	20/4	RA390-051C5-45H	-	25/5	1	3.1	C5	3.150	3.150	1.770	16600
	2.000	RA390-051C5-63L	-	21/3	RA390-051C5-63M	-	28/4	-	-	-	1	3.5	C5	3.580	3.579	2.480	16600
	2.000	RA390-051C6-98L	-	33/3	-	-	-	-	-	-	1	5.2	C6	5.350	4.250	3.500	16600
18	2.000	RA390-051C5-43L	6/2	-	RA390-051C5-43M	-	9/3	-	-	-	1	3.2	C5	3.093	2.110	1.720	7800
	2.000	-	-	-	RA390-051C6-43M	-	9/3	-	-	-	1	3.7	C6	3.725	2.110	1.720	7800
	2.000	RA390-051C6-71L	-	10/2	-	-	-	-	-	-	1	4.5	C6	4.278	3.210	2.820	7800
	2.000	RA390-051C6-99L	-	14/2	-	-	-	-	-	-	1	4.9	C6	5.384	4.320	3.930	7800
	2.000	-	-	-	RA390-051C8-57M	-	12/3	-	-	-	1	5.3	C8	4.040	2.660	2.270	7800
	2.500	-	-	-	RA390-063C6-43M	-	12/4	-	-	-	1	4.6	C6	3.172	3.172	1.720	6800
	2.500	RA390-063C6-57L	-	12/3	RA390-063C6-57M	-	16/4	-	-	-	1	5.2	C6	3.725	3.724	2.270	6800
	2.500	RA390-063C6-71L	-	15/3	RA390-063C6-71M	-	20/4	-	-	-	1	5.6	C6	4.278	4.276	2.820	6800
	2.500	RA390-063C6-99L	-	21/3	-	-	-	-	-	-	1	6.5	C6	5.384	5.382	3.930	6800
	3.000	RA390-076C8-71L	-	15/3	-	-	-	-	-	-	1	9.5	C8	4.593	3.210	2.820	6100

1) 0 = no coolant, 1 = coolant through center

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

= Even pitch

= Differential pitch

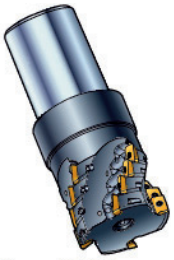
z_n= Number of insert in the cutter $z_n = 8$
z_c= Effective number of rows $z_c = 2$

Note:
When using inserts with radius >1.6 mm, standard cutter bodies have to be modified accordingly: r = rε - 0.5 mm.

D41 D45 G6 D2 J3

Long edge milling cutter

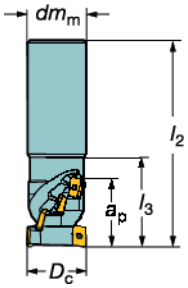
Diameter 32 – 200 mm



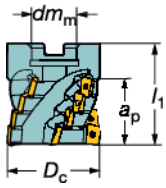
$\kappa_r = 90°$

Insert size
11, 18

Cylindrical



Arbor



l_1 = programming length

Metric version

		Ordering code									Dimensions						
□	D_c mm	Coarse pitch	⊕	⊕	Close pitch	⊕	⊕	Extra close pitch	⊕	⊕	kg	dm_m	l_1	l_2	l_3	Max a_p	n_{max} [1]
		Cylindrical shank															
11	32	R390-032A25-36L	8/2	-	-	-	-	-	-	-	0.6	25		109	48	36	21700
		R390-032A32-36L	8/2	-	-	-	-	-	-	-	0.9	32		113	48	36	21700
	40	-	-	-	R390-040A40-45M	-	15/3	-	-	-	1.4	40		131	58	45	18900
		Arbor															
11	40	-	-	-	R390-040Q16-36M	-	12/3	R390-040Q16-36H	16/4	-	0.8	16	57			36	18900
	44	-	-	-	R390-044Q16-45M	-	15/3	-	-	-	0.9	16	65			45	17800
	50	-	-	-	R390-050Q22-36M	-	16/4	R390-050Q22-36H	20/5	-	1.0	22	57			36	16600
		R390-050Q22-54L	-	18/3	-	-	-	-	-	-	1.1	22	74			54	16600
	54	-	-	-	R390-054Q22-36M	-	16/4	-	-	-	1.0	22	57			36	16000
18	44	R390-044Q16-43L	6/2	-	-	-	-	-	-	-	0.8	16	68			43	8600
	50	R390-050Q22-57L	-	8/2	-	-	-	-	-	-	1.1	22	82			57	7900
	54	R390-054Q22-57L	8/2	-	-	-	-	-	-	-	1.3	22	82			57	7500
	63	R390-063Q27-57L	-	12/3	-	-	-	-	-	-	1.1	27	82			57	6800
	80	R390-080Q32-71L	-	15/3	-	-	-	-	-	-	2.9	32	97			71	5900
	100	-	-	-	R390-100Q40-57M	-	16/4	-	-	-	3.2	40	82.6			57	5200
	125	R390-125Q40-43L	18/6	-	-	-	-	-	-	-	4.7	40	68			43	4600
	160	R390-160Q40-43L	24/8	-	-	-	-	-	-	-	8.5	40	68			43	4000
	200	R390-200Q60-43L	27/9	-	-	-	-	-	-	-	14.5	60	68			43	3600

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

Note:
Bolt circle for cutters 200 and 250mm = 4"

⊕ = Even pitch
⊕ = Differential pitch

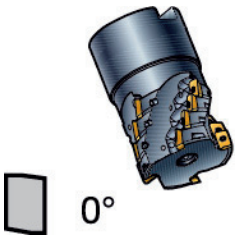
z_n= Number of insert in the cutter $z_n = 18$
z_c= Effective number of rows $z_c = 3$

Note:
When using inserts with radius >1.6 mm, standard cutter bodies have to be modified accordingly: r = rε - 0.5 mm.

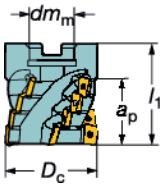
 D41
 D45
 G6
 D2
 J3

Long edge milling cutter

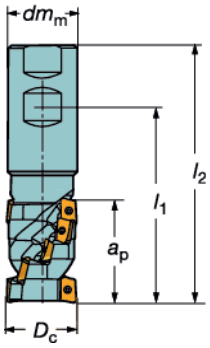
Diameter 1.250 - 4.000 inch



Arbor



Weldon



Insert size
11, 18

l_1 = programming length

Inch version

		Ordering code									Dimensions, inch					
	D_c inch	Coarse pitch			Close pitch			Extra close pitch			Lbs	dm_m	l_1	l_2	Max a_p	n_{max} [1]
		Weldon														
11	1.250	RA390-032M32-45L	10/2	-	-	-	-	-	-	-	2.0	1.250	3.220	3.500	1.770	21700
	1.500	RA390-038M38-54L	12/2	-	-	-	-	-	-	-	2.9	1.500	4.210	5.418	2.130	19500
	1.500	-	-	-	RA390-038M38-54M	-	18/3	-	-	-	2.9	1.500	4.210	4.210	2.130	19500
		Arbor														
11	2.000	-	-	-	RA390-051R19-36M	-	16/4	RA390-051R19-36H	20/5	-	2.1	.750	2.240		1.420	16600
	2.000	-	-	-	RA390-051R19-54M	-	18/3	-	-	-	2.5	.750	2.910		2.130	16600
18	2.000	-	-	-	RA390-051R19-43M	-	9/3	-	-	-	2.1	.750	2.699		1.720	7800
	2.000	-	-	-	RA390-051R19-57M	-	12/3	-	-	-	2.3	.750	3.252		2.270	7800
	2.500	-	-	-	RA390-063R19-43M	-	12/4	-	-	-	3.1	.750	2.699		1.720	6800
	2.500	-	-	-	RA390-063R25-43M	-	16/4	-	-	-	3.1	1.000	2.699		1.720	6800
	2.500	RA390-063R25-57L	-	12/3	-	-	-	-	-	-	3.1	1.000	3.252		2.270	6800
	3.000	-	-	-	-	-	-	RA390-076R32-43H	-	16/4	4.3	1.250	2.699		1.720	6100
	4.000	-	-	-	RA390-102R38-57M	-	16/4	RA390-102R38-57H	-	24/6	7.2	1.500	3.252		2.270	5200

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

= Even pitch

= Differential pitch

z_n= Number of insert in the cutter $z_n = 12$
z_c= Effective number of rows $z_c = 3$

Note:
When using inserts with radius >1.6 mm, standard cutter bodies have to be modified accordingly: r = rε - 0.5 mm.

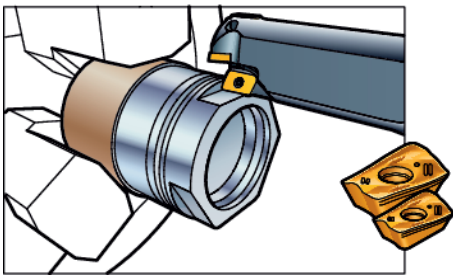
D41 D45 G6 D2 J3

CoroPlex™ MT

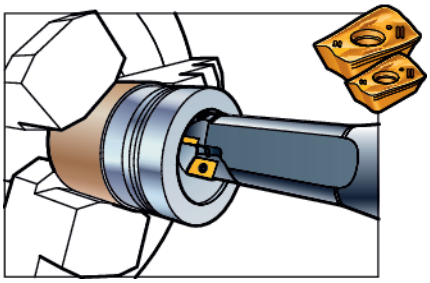
Multi-functional milling and turning tool

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

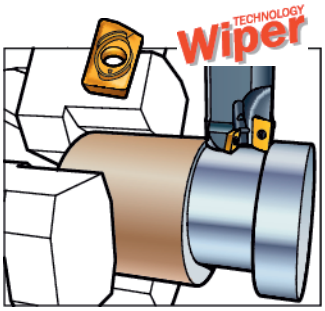
... as a CoroMill® 390 cutter



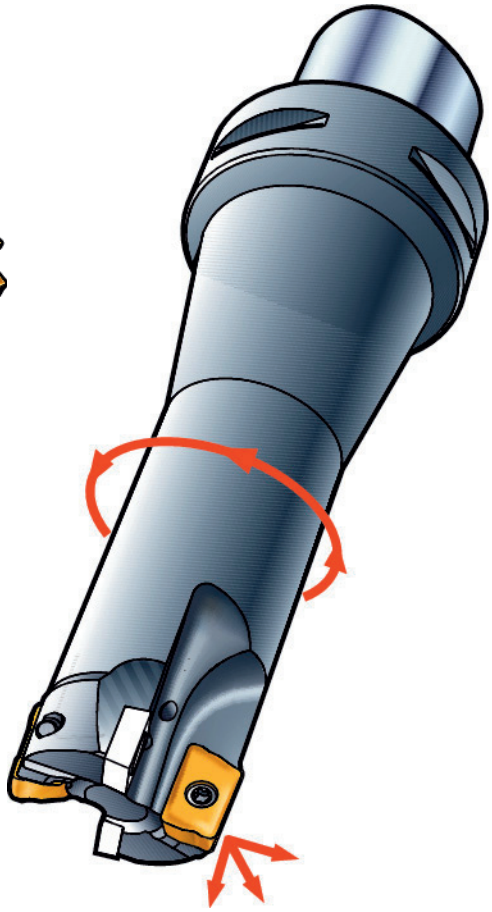
Shoulder milling

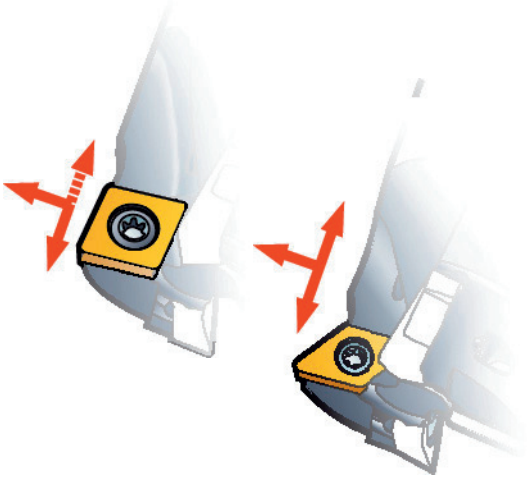


Circular interpolation in helix

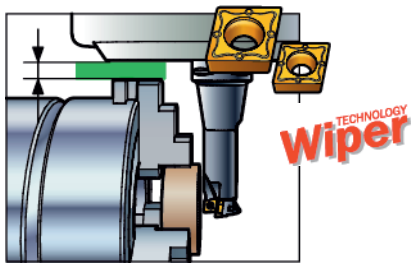


Turn-milling

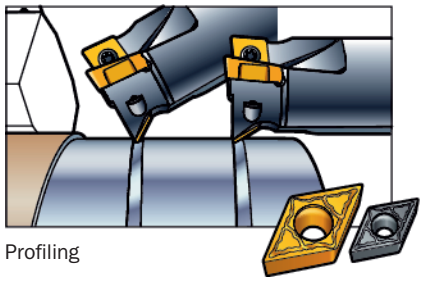




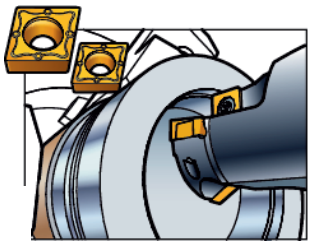
...as a CoroTurn® 107 tool



Face and longitudinal turning



Profiling



Internal turning

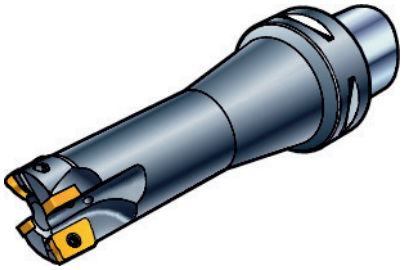
ISO application areas:

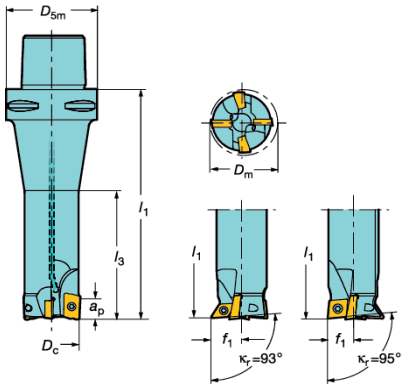
P M K N S H

SANDVIK Coromant

Multi-functional tools CoroPlex™ MT

for milling and turning in Multi-Task machines





Coolant inlet: Axial through the center

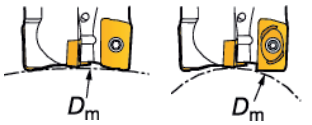
Entering angle: K_r = 93° / K_r = 95°
Lead angle: -3° / -5°

Insert size			Coupling size	D_c mm inch	Ordering code	z_n	Dimensions, mm, inch D_m min	D_{5m}	l_1	l_3	f_1	a_p	γ°1)	λ_s2)	Gauge insert ISO ANSI	n_{max}3)	kg
11	–	–	C5	32	**M-32C5-39011C09D07**	2	–	50	130	78.5	–	10	–	–	R390-11	12000	1.0
				1.260				*1.969*	*5.118*	*3.091*		*.394*					
–	09	3/8				1	35	50	129.3	77.8	15.4	–	0°	-5°	CCMT 09 T3 08	–	
							1.378	*1.969*	*5.091*	*3.063*	*.606*				*CCMT 3 (2.5) 2*		
–	07	1/4				1	35	50	128.9	77.4	15.4	–	0°	-5°	DCMT 07 02 04	–	
							1.378	*1.969*	*5.075*	*3.047*	*.606*				*DCMT 2 (1.5) 1*		
11	–	–	C6	32	**M-32C6-39011C09D07**	2	–	63	165	78.5	–	10	–	–	R390-11	12000	1.7
				1.260				*2.480*	*6.496*	*3.091*		*.394*					
–	09	3/8				1	35	63	164.3	77.8	15.4	–	0°	-5°	CCMT 09 T3 08	–	
							1.378	*2.480*	*6.469*	*3.063*	*.606*				*CCMT 3 (2.5)*		
–	07	1/4				1	35	63	163.9	77.4	15.4	–	0°	-5°	DCMT 07 02 04	–	
							1.378	*2.480*	*6.453*	*3.047*	*.606*				*DCMT 2 (1.5) 1*		
18	–	–	C6	40	**M-40C6-39018C12D11**	2	–	63	165	90.1	–	10	–	–	R390-18	10000	1.7
				1.575				*2.480*	*6.496*	*3.547*		*.394*					
–	12	1/2				1	43	63	164.4	89.5	19.0	–	0°	-5°	CCMT 12 04 08	–	
							1.693	*2.480*	*6.472*	*3.524*	*.748*				*CCMT 432*		
–	11	3/8				1	43	63	163.9	89.0	19.2	–	0°	-5°	DCMT 11 T3 04	–	
							1.693	*2.480*	*6.453*	*3.504*	*.756*				*DCMT 3 (2.5) 1*		
18	–	–	C8	40	**M-40C8-39018C12D11**	2	–	80	200	90.1	–	10	–	–	R390-18	10000	3.3
				1.575				*3.150*	*7.874*	*3.547*		*.394*					
–	12	1/2				1	43	80	199.4	89.5	19.0	–	0°	-5°	CCMT 12 04 08	–	
							1.693	*3.150*	*7.850*	*3.524*	*.748*				*CCMT 432*		
–	11	3/8				1	43	80	198.9	89.0	19.2	–	0°	-5°	DCMT 11 T3 04	–	
							1.693	*3.150*	*7.831*	*3.504*	*.756*				*DCMT 3 (2.5) 1*		

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

Limitation on workpiece diameter

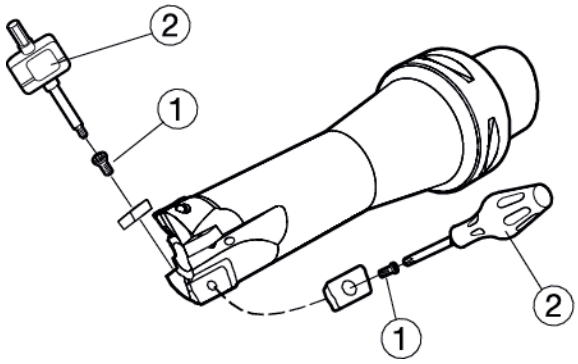
When turning axially and using the CCMT insert, it may happen that the R390 inserts, because of their position in the tool, limit the workpiece diameter. See illustration below.



Tool diameter, D_c mm (inch)	Max workpiece diameter, D_m mm (inch) Insert type		
	R390-11	**R390-18**	**Wiper R390-11**
32 (1.260)	150 (5.906)	–	100 (3.935)
40 (1.575)	–	380 (14.960)	–

R390 .CMT

Multi-functional tools CoroPlex™ MT

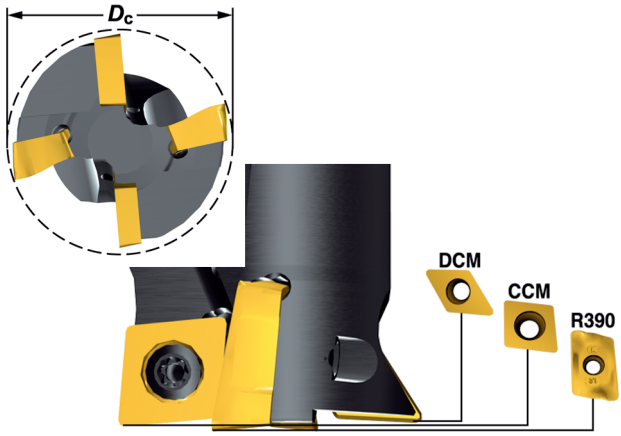


Spare parts

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

One tool for both rotating and stationary use

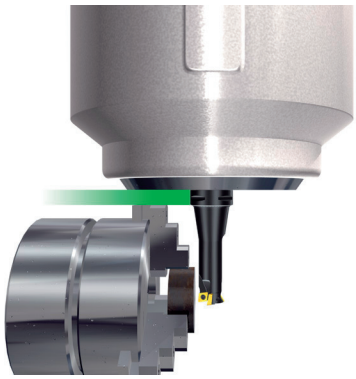
The CoroMill® 390 inserts are positioned a little ahead of the CoroTurn® inserts – axially as well as radially – to guarantee that turning inserts are not in cut when the tool is applied for rotating. This means that turning of an available blind hole – using the CoroTurn® function of the tool – must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



Tool length optimized for accessibility in multi-tasking

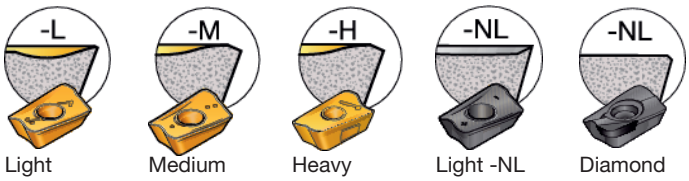
The tool bodies are extended by 65 mm (2.560 inch) compared with corresponding conventional tools to allow freer use of the working positions possible in multi-task machining with no need for extensions.

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



Inserts for CoroMill® 390

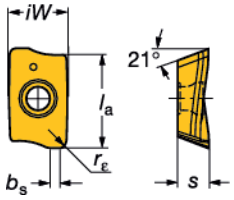
11



Light | Medium | Heavy | Light -NL | Diamond

Radius inserts

Note!
Intermediate radii and other grades and geometry combinations are delivered on request as engineered inserts.



Dimensions, mm (inch)

Size	l_a	iW	s
11	11 (.433)	6.8 (.268)	3.5 (.141)

			Ordering code	P						M				K				N				S										H				Dimensions, millimeter, inch (mm, in.)			
				GC	GC	GC	GC	GC	CT	GC	GC	GC	CT	GC	GC	GC	-	GC	GC	CT	-	GC	GC	GC	-	GC	GC					GC	GC	GC	CT				
				1025	1030	4220	4230	4240	530	1040	2030	2040	530	1020	3040	4220	H13A	1025	1030	530	H13A	1010	1025	1030	2040	H13A	S30T	S40T					1010	3040	4220	530	b_s mm	b_s in.	r_ε mm	r_ε in.
Light	11		R390-11 T3 04E-NL														☆				☆															0.9	.035	0.4	.016
			R390-11 T3 04E-PL	☆	☆													☆	☆				☆	☆			★	★									0.9	.035	0.4	.016
			R390-11 T3 08E-KL														☆				☆				☆												1.5	.059	0.8	.032
			R390-11 T3 08E-ML							★	☆	☆													☆		★	★									1.5	.059	0.8	.032
			R390-11 T3 08E-NL																		★																1.5	.059	0.8	.032
			R390-11 T3 08E-PL	☆	★				☆				☆					☆	☆			☆	☆	☆				★							☆	1.5	.059	0.8	.032
			R390-11 T3 08M-KL											★	☆		☆				☆					☆							★				1.2	.047	0.8	.032
			R390-11 T3 08M-PL	☆	★	☆	☆	☆	☆				☆			☆		☆	☆			☆	☆	☆			★	★					★		☆	☆	1.2	.047	0.8	.032
			R390-11 T3 16E-ML							☆	☆	☆													☆		★	★									0.8	.032	1.6	.063
			R390-11 T3 20E-NL																		☆																		2.0	.079
			R390-11 T3 24E-ML							☆	☆	☆													☆		★	★											2.4	.094
			R390-11 T3 31E-ML							☆	☆	☆													☆		★	★											3.1	.122
			R390-11 T3 31E-NL																		☆																		3.1	.122
Medium	11		R390-11 T3 02E-KM														☆				☆					☆											0.7	.028	0.2	.008
			R390-11 T3 02E-MM							☆	☆																										0.7	.028	0.2	.008
			R390-11 T3 02E-PM	☆	☆			☆										☆	☆				☆	☆													0.7	.028	0.2	.008
			R390-11 T3 04M-KM											☆	☆		☆				☆					☆								☆			0.9	.035	0.4	.016
			R390-11 T3 04M-PM	☆	☆	☆		☆	☆				☆			☆				☆			☆	☆										☆	☆	0.9	.035	0.4	.016
			R390-11 T3 08M-KM											★	☆		☆				☆					☆								☆			1.2	.047	0.8	.032
			R390-11 T3 08M-MM							★	☆	☆													☆		★	★									1.2	.047	0.8	.032
			R390-11 T3 08M-PM	☆	★	☆	☆	☆	☆				☆			☆		☆	☆			☆	☆	☆			★	★					★		☆	☆	1.2	.047	0.8	.032
			R390-11 T3 12E-KM														☆				☆					☆											0.8	.032	1.2	.047
			R390-11 T3 12E-MM							☆	☆																										0.8	.032	1.2	.047
			R390-11 T3 12E-PM	☆	☆			☆										☆	☆			☆	☆	☆			★	★					★				0.8	.032	1.2	.047
			R390-11 T3 16E-KM														☆				☆					☆											0.8	.032	1.6	.063
			R390-11 T3 16E-MM							☆	☆																										0.4	.016	1.6	.063
			R390-11 T3 16E-PM	☆	☆			☆										☆	☆			☆	☆	☆									★				0.4	.016	1.6	.063
			R390-11 T3 16M-KM											☆			☆				☆					☆											0.4	.016	1.6	.063
			R390-11 T3 16M-PM	☆	☆	☆		☆								☆		☆	☆			☆	☆	☆			★	★					★				0.4	.016	1.6	.063
			R390-11 T3 20E-KM														☆				☆					☆											0.4	.016	2.0	.079
			R390-11 T3 20E-MM							☆	☆																												2.0	.079
			R390-11 T3 20E-PM	☆	☆			☆										☆	☆			☆	☆	☆			★	★					★						2.0	.079
			R390-11 T3 24E-KM														☆				☆					☆													2.4	.094
			R390-11 T3 24E-MM							☆	☆																												2.4	.094
			R390-11 T3 24E-PM	☆	☆			☆										☆	☆				☆	☆															2.4	.094
			R390-11 T3 31E-KM														☆				☆					☆													3.1	.122
			R390-11 T3 31E-MM							☆	☆																												3.1	.122
			R390-11 T3 31E-PM	☆	☆			☆										☆	☆			☆	☆	☆									★						3.1	.122
			R390-11 T3 31M-KM											☆			☆				☆					☆													3.1	.122
			R390-11 T3 31M-PM	☆	☆	☆		☆								☆		☆	☆			☆	☆	☆			★	★					★						3.1	.122
Heavy	11		R390-11 T3 10M-KH											★	☆																			☆			1.02	.040	1.0	.039
			R390-11 T3 10M-MH							★	☆	☆													☆												1.02	.040	1.0	.039
			R390-11 T3 10M-PH	☆	☆	☆	☆	★								☆											★	★							☆		1.02	.040	1.0	.039
				P10	P30	P15	P25	P40	P20	M35	M25	M30	M20	K20	K30	K25	K25	N15	N15	N15	N15	S10	S15	S15	S30	S20	S25	S35					H10	H25	H25	H15				

R390-11 T3 04 E-PL
|
E = Highest edge sharpness and precision
M = Highest edge security

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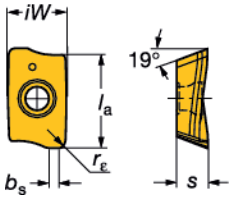
Inserts for CoroMill® 390

17

Light Medium Light -NL

Radius inserts

Note!
Intermediate radii and other grades and geometry combinations are delivered on request as engineered inserts.



Dimensions, mm (inch)

Size	l_a	iW	s
17	17 (.669)	9.6 (.378)	4.7 (.188)

			Ordering code	P						M					K				N			S							H					Dimensions, millimeter, inch (mm, in.)			
				GC	GC	GC	GC	GC	CT	GC	GC	GC	GC	CT	GC	GC	GC	-	GC	GC	-	GC	GC	GC	-	GC	GC	GC	GC	GC	GC	CT				
				1025	1030	4220	4230	4240	530	1040	2030	2040	4240	530	1020	3040	4220	H13A	1025	1030	H13A	1010	1025	1030	2040	H13A	S30T	S40T	1010	1030	3040	4220	530	b_s mm	b_s in.	r_ε mm	r_ε in.
Light	17		R390-17 04 08E-KL															☆			☆				☆								1.5	.059	0.8	.032
			R390-17 04 08E-ML							☆	☆	☆									☆				☆		★	★						1.5	.059	0.8	.032
			R390-17 04 08E-NL																		★													1.5	.059	0.8	.032
			R390-17 04 08E-PL	☆	★			☆	☆				☆	☆					☆	☆		☆	☆	☆					★	☆			☆	1.5	.059	0.8	.032
			R390-17 04 08M-KL												★	☆		☆			☆					☆					☆			1.5	.059	0.8	.032
			R390-17 04 08M-PL	☆	★	☆	☆	☆	☆					☆			☆		☆	☆		☆	☆	☆			★	★	★	☆		☆	☆	1.5	.059	0.8	.032
			R390-17 04 20E-NL																		★													0.3	.012	2.0	.079
			R390-17 04 31E-NL																		★															3.1	.122
			R390-17 04 40E-NL																		★															4.0	.158
			R390-17 04 50E-NL																		★															5.0	.197
	17		R390-17 04 04E-KM															☆			☆				☆									1.0	.039	0.4	.016
			R390-17 04 04E-MM							☆	☆										☆													1.0	.039	0.4	.016
			R390-17 04 04E-PM	☆	☆			☆											☆	☆			☆	☆			★	★		☆				1.0	.039	0.4	.016
			R390-17 04 04M-KM												☆	☆		☆			☆					☆					☆			1.0	.039	0.4	.016
			R390-17 04 04M-PM	☆	☆	☆		☆	☆					☆			☆		☆	☆			☆	☆						☆		☆	☆	1.0	.039	0.4	.016
			R390-17 04 08M-KM												★	☆		☆			☆					☆					☆			1.5	.059	0.8	.032
			R390-17 04 08M-MM							★	☆	☆									☆				☆		★	★						1.5	.059	0.8	.032
			R390-17 04 08M-PM	☆	★	☆	☆	☆	☆					☆			☆		☆	☆		☆	☆	☆			★	★	★	☆		☆	☆	1.5	.059	0.8	.032
			R390-17 04 12E-KM															☆			☆				☆									1.1	.043	1.2	.047
			R390-17 04 12E-MM							☆	☆										☆													1.1	.043	1.2	.047
			R390-17 04 12E-PM	☆	☆			☆											☆	☆		☆	☆	☆			★	★	★	☆				1.1	.043	1.2	.047
			R390-17 04 16E-KM															☆			☆				☆									0.7	.028	1.6	.063
			R390-17 04 16E-MM							☆	☆										☆													0.7	.028	1.6	.063
			R390-17 04 16E-PM	☆	☆			☆											☆	☆		☆	☆	☆			★	★	★	☆				0.7	.028	1.6	.063
			R390-17 04 16M-KM												☆			☆			☆					☆										1.6	.063
			R390-17 04 16M-PM	☆	☆	☆		☆									☆		☆	☆			☆	☆			★	★		☆				0.7	.028	1.6	.063
			R390-17 04 20E-KM															☆			☆				☆									0.3	.012	2.0	.079
			R390-17 04 20E-MM							☆	☆										☆													0.3	.012	2.0	.079
			R390-17 04 20E-PM	☆	☆			☆											☆	☆		☆	☆	☆			★	★	★	☆				0.3	.012	2.0	.079
			R390-17 04 24E-KM															☆			☆				☆											2.4	.094
			R390-17 04 24E-MM							☆	☆										☆															2.4	.094
			R390-17 04 24E-PM	☆	☆			☆											☆	☆		☆	☆	☆			★	★	★	☆						2.4	.094
			R390-17 04 31E-KM															☆			☆				☆											3.1	.122
			R390-17 04 31E-MM							☆	☆										☆															3.1	.122
			R390-17 04 31E-PM	☆	☆			☆											☆	☆		☆	☆	☆			★	★	★	☆						3.1	.122
			R390-17 04 31M-KM												☆			☆			☆					☆										3.1	.122
			R390-17 04 31M-PM	☆	☆	☆		☆									☆		☆	☆			☆	☆			★	★		☆						3.1	.122
			R390-17 04 40E-KM															☆			☆				☆											4.0	.157
			R390-17 04 40E-MM							☆	☆										☆															4.0	.157
			R390-17 04 40E-PM	☆	☆			☆											☆	☆		☆	☆	☆			★	★	★	☆						4.0	.157
			R390-17 04 48E-KM															☆			☆				☆											4.8	.189
			R390-17 04 48E-MM							☆	☆										☆															4.8	.189
			R390-17 04 48E-PM	☆	☆			☆											☆	☆		☆	☆	☆			★	★	★	☆						4.8	.189
			R390-17 04 50E-KM															☆			☆				☆											5.0	.197
			R390-17 04 50E-MM							☆	☆										☆															5.0	.197
			R390-17 04 50E-PM	☆	☆			☆											☆	☆		☆	☆	☆			★	★	★	☆						5.0	.197
			R390-17 04 60E-KM															☆			☆				☆											6.0	.236
			R390-17 04 60E-MM							☆	☆										☆															6.0	.236
			R390-17 04 60E-PM	☆	☆			☆											☆	☆		☆	☆	☆			★	★	★	☆						6.0	.236
			R390-17 04 64E-KM															☆			☆				☆											6.35	.250
			R390-17 04 64E-MM							☆	☆										☆															6.35	.250
			R390-17 04 64E-PM	☆	☆			☆											☆	☆		☆	☆	☆			★	★	★	☆						6.35	.250
				P10	P30	P15	P25	P40	P20	M35	M25	M30	M40	M20	K20	K30	K25	K25	N15	N15	N15	S10	S15	S15	S30	S20	S25	S35	H10	H10	H25	H25	H15				

R390-17 04 08 E-PL
|
E = Highest edge sharpness and precision
M = Highest edge security

★= First choice

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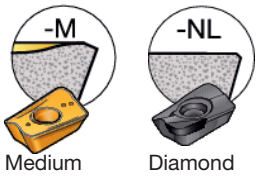
Inserts for CoroMill® 390

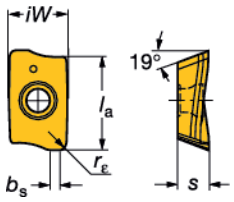
17



Medium Diamond

Radius inserts

Note!
Intermediate radii and other grades and geometry combinations are delivered on request as engineered inserts.



			P			K			H	Dimensions, millimeter, inch (mm, in.)									
			GC	GC	GC	GC	GC	GC	GC										
			4220	4230	4240	1020	3040	4220	4220	l_a mm	l_a in.	iW mm	iW in.	s mm	s in.	b_s mm	b_s in.	r_ε mm	r_ε in.
	◻	Ordering code																	
Heavy	17	R390-17 04 08M-KH				☆	☆			17	.669	9.6	.378	4.76	.188	1.5	.059	0.8	.032
		R390-17 04 08M-PH	☆		★			☆	☆	17	.669	9.6	.378	4.76	.188	1.5	.059	0.8	.032
		R390-17 04 16M-PH		☆	☆					17	.669	9.6	.378	4.76	.188	1.5	.059	1.6	.063
			P15	P25	P40	K20	K30	K25	H25										

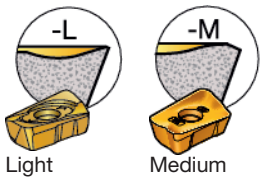
Advanced cutting materials

			N	Dimensions, millimeter, inch (mm, in.)									
			CD										
			CD10	l_a mm	l_a in.	iW mm	iW in.	s mm	s in.	b_s mm	b_s in.	r_ε mm	r_ε in.
	◻	Ordering code											
Light	11	R390-11T304E-P4-NL	☆	11	.433	6.8	.268	3.59	.141	2.2	.087	0.4	.016
	17	R390-170408E-P6-NL	★	17	.669	9.6	.378	4.76	.188	1.8	.071	0.8	.032
			N05										

D312 D305 D334 D2

Inserts for CoroMill® 390

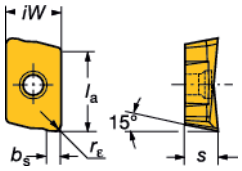
18



Light Medium

Radius inserts

Note!
Intermediate radii and other grades and geometry combinations are delivered on request as engineered inserts.



Dimensions, mm (inch)

Size	*iW*	*s*
18	11 (.433)	6.3 (.249)

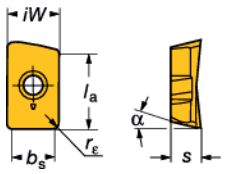
			P							M			K				N		S						H			Dimensions, millimeter, inch (mm, in.)					
			GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC						
	□	Ordering code	1025	1030	2040	3040	4220	4230	4240	530	1040	2030	2040	1020	3040	4020	4220	1025	1030	1010	1025	1030	2040	S30T	S40T	1010	3040	4220	l_a mm	l_a in.	b_s mm	b_s in.	r_ε mm	r_ε in.
Light	18	R390-18 06 08H-KL												★	☆												☆		15.8	.622	1.0	.039	0.8	.032
		R390-18 06 08H-ML									☆	☆	☆										☆						15.8	.622	1.0	.039	0.8	.032
		R390-18 06 08H-PL	☆	☆				☆	☆							☆				☆	☆	☆		★	★	★			15.8	.622	1.0	.039	0.8	.032
		R390-18 06 12H-KL												☆	★												☆		15.8	.622	1.0	.039	1.2	.047
		R390-18 06 12H-ML									★	☆	☆										☆						15.8	.622	1.0	.039	1.2	.047
		R390-18 06 12H-PL	☆	★			☆	☆	☆								☆	☆	☆	☆	☆	☆		★	★	★		☆	15.8	.622	1.0	.039	1.2	.047
		R390-18 06 16H-ML									☆	☆	☆																15.8	.622	1.0	.039	1.6	.063
		R390-18 06 16H-PL	★						☆									☆											15.8	.622	1.0	.039	1.6	.063
		R390-18 06 20H-ML									☆	☆	☆										☆						15.8	.622	1.0	.039	2.0	.079
		R390-18 06 20H-PL	☆															☆			☆								15.8	.622	1.0	.039	2.0	.079
		R390-18 06 24H-ML									☆	☆	☆										☆						15.8	.622	1.0	.039	2.4	.094
		R390-18 06 24H-PL	☆															☆			☆								15.8	.622	1.0	.039	2.4	.094
		R390-18 06 31H-KL												☆	☆												☆		15.8	.622	1.0	.039	3.1	.122
		R390-18 06 31H-ML									☆	☆	☆										☆						15.8	.622	1.0	.039	3.1	.122
		R390-18 06 31H-PL	☆															☆			☆								15.8	.622	1.0	.039	3.1	.122
		R390-18 06 40H-ML									☆	☆	☆										☆						15.8	.622	1.0	.039	4.0	.157
		R390-18 06 40H-PL	☆	☆														☆			☆								15.8	.622	1.0	.039	4.0	.157
		R390-18 06 50H-ML									☆	☆	☆										☆						15.8	.622	1.0	.039	5.0	.197
		R390-18 06 50H-PL	☆	☆														☆		☆	☆					★			15.8	.622	1.0	.039	5.0	.197
		R390-18 06 60H-ML									☆	☆	☆										☆						15.8	.622	1.0	.039	6.0	.236
		R390-18 06 60H-PL	☆	☆														☆		☆	☆					★			15.8	.622	1.0	.039	6.0	.236
		R390-18 06 64H-ML									☆	☆	☆										☆						15.8	.622	1.0	.039	6.4	.252
		R390-18 06 64H-PL	☆	☆														☆		☆	☆					★			15.8	.622	1.0	.039	6.4	.252
Medium	18	R390-18 06 08M-KM				☆								☆	☆														15.8	.622	1.1	.043	0.8	.032
		R390-18 06 08M-MM			☆						☆		☆										☆						15.8	.622	1.1	.043	0.8	.032
		R390-18 06 08M-PM					☆	☆	☆							☆					☆							☆	15.8	.622	1.1	.043	0.8	.032
		R390-18 06 12M-KM												★	☆												☆		15.8	.622	1.5	.059	1.2	.047
		R390-18 06 12M-KMR												☆	☆														17	.669	0.25	.010	1.2	.047
		R390-18 06 12M-MM									★	☆	☆										☆						15.8	.622	1.5	.059	1.2	.047
		R390-18 06 12M-MMR			☆						☆		☆										☆						17	.669	0.25	.010	1.2	.047
		R390-18 06 12M-PM	☆	☆			☆	★	☆								☆	☆	☆	☆	☆	☆		★	★	★		☆	15.8	.622	1.1	.043	1.2	.047
		R390-18 06 12M-PMR		☆				☆	☆												☆			★	★				17	.669	0.25	.010	1.2	.047
		R390-18 06 16M-KM				☆								★	★														15.8	.622	1.1	.043	1.6	.063
		R390-18 06 16M-MM			☆						☆		☆											☆					15.8	.622	1.1	.043	1.6	.063
		R390-18 06 16M-PM		☆			☆	☆	☆								☆					☆		★	★			☆	15.8	.622	1.1	.043	1.6	.063
		R390-18 06 20M-KM												☆	☆														15.8	.622	0.5	.020	2.0	.079
		R390-18 06 20M-MM			☆						☆		☆											☆					15.8	.622	0.5	.020	2.0	.079
		R390-18 06 20M-PM		☆			☆	★	☆								☆					☆							15.8	.622	0.5	.020	2.0	.079
		R390-18 06 31M-KM												☆	☆														15.8	.622	0.5	.020	3.1	.122
		R390-18 06 31M-MM			☆						☆		☆											☆					15.8	.622	0.5	.020	3.1	.122
		R390-18 06 31M-PM		☆			☆	☆	☆								☆					☆		★	★			☆	15.8	.622	0.5	.020	3.1	.122
			P10	P30	P40	P20	P15	P25	P40	P20	M35	M25	M30	K20	K30	K25	K25	N15	N15	S10	S15	S15	S30	S25	S35	H10	H25	H25						

D312 D305 D334 D2

SANDVIK Coromant

Wiper inserts for CoroMill® 390

11
18



Light

Dimensions, mm (inch)

Size	l_a	iW	s
11	11 (.433)	6.8 (.268)	3.5 (.138)
18	16 (.630)	11 (.433)	6.3 (.249)

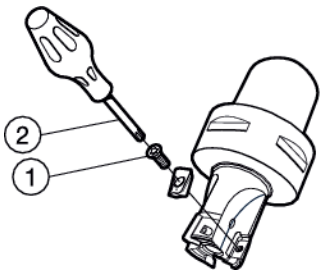
[1] D_c

mm	inch	b_s	inch
12	.500	2.0	.079
16	.625	2.5	.098
20	.750	3.2	.126
25	1.000	4.0	.157
32	1.250	4.9	.193
≥40	1.500	5.0	.197

		Ordering code	P GC1025	P GC1030	M GC1030	K GC1020	N GC1025	N GC1030	S GC1025	S GC1030	H GC1025	H GC1030	b_s mm	b_s in.	r_ε mm	r_ε in.
Wiper	11	R390-11 T3 08E-PLW	☆	☆			☆	☆	☆	☆	☆	☆	[1]	[1]	0.8	.032
	18	R390-18 06 16H-PTW		☆	☆			☆		☆			8.6	.339	1.6	.063
		R390-18 06 16H-KTW				☆							8.6	.339	1.6	.063
			P10	P30	M15	K20	N15	N15	S15	S15	H15	H10				

Spare parts for CoroMill® 390

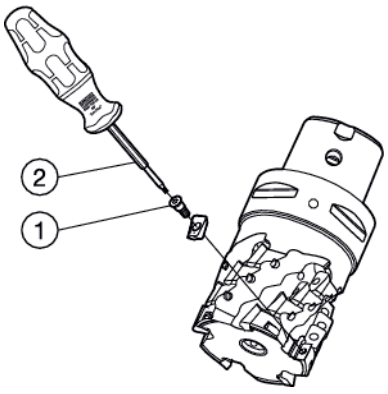
Square shoulder facemill



Cutter			1	2			
Insert size	D_c mm	D_c inch	Screw	Key (Torx Plus)	Torque value Nm/in.lbs	Molykote	Torque wrench[1]
11	12-22	.500-.750	5513 020-36	5680 046-01 (8IP)	1.2 /10.6	5683 010-01	5680 100-03
	25-80	1.000-3.000	5513 020-35	5680 046-01 (8IP)	1.2 /10.6	5683 010-01	5680 100-03
17	25	1.000	5513 020-37	5680 046-02 (15IP)	3.0/26	5683 010-01	5680 100-06
	32-125	1.250-5.000	5513 020-39	5680 048-01 (15IP)	3.0/26	5683 010-01	5680 100-06
18	40-200	2.000-8.000	5513 020-29	5680 046-02 (15IP)	3.0/26	5683 010-01	5680 100-06

[1] Accessories, must be ordered separately.

Long edge milling cutter



Cutter			1	2		
Insert size	D_c mm	D_c inch	Insert screw[2]	Torque wrench Torx Plus	Torque value Nm/in.lbs	Molykote
11	32-66	1.250-2.598	5513 024-01	5680 100-03 (8IP)	1.2/10.6	5683 010-01
18	40-200	2.000-4.000	5513 036-01	5680 100-06(15IP)	3.0/26	5683 010-01

[1] Accessories, must be ordered separately.

[2] Note! The insert screw is unique for the CoroMill 390 long edge milling cutter. Do NOT use the screw for the CoroMill 390 square shoulder face mill.

D312 D305 D334 D2

CoroMill® 290

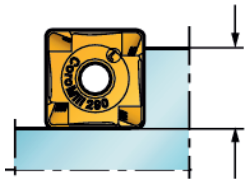
General purpose square shoulder milling cutter

Optional facemill generating low axial pressure

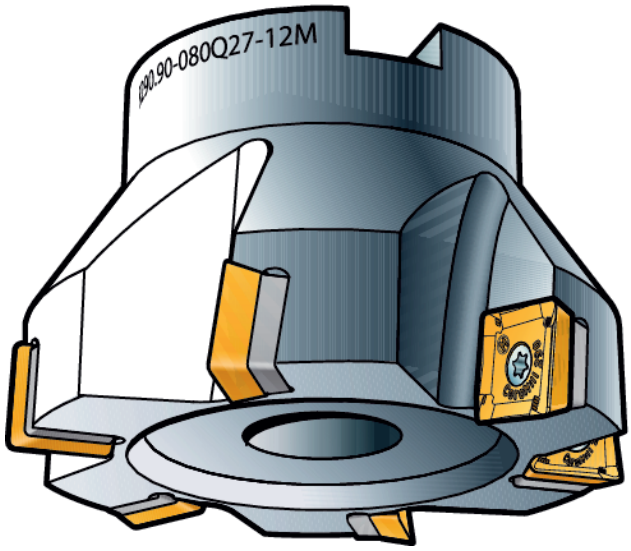
Diameter 40 - 250 mm / 2.000 - 10.000 inch

High accuracy

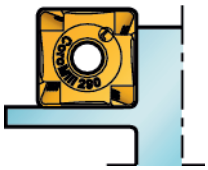
Milling of true 90° corners, with ability to achieve excellent surface finish



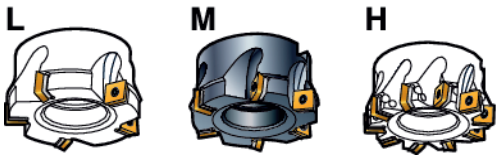
Max. a_p 10.7 mm (.421 inch)



Low axial forces



Pitch:

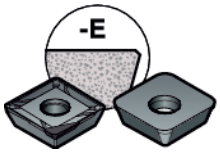


Condition: Unstable General Stable

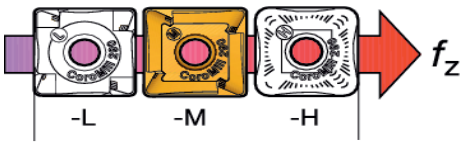
Geometries:

General

Ceramic and cubic boron nitride



Feed range



.002 0.05 (.002)

.012 inch 0.30 (.012)

Tailor Made

Tool options designed to individual customer requirements are available. For information on our Tailor Made program see page J3.

ISO application areas:

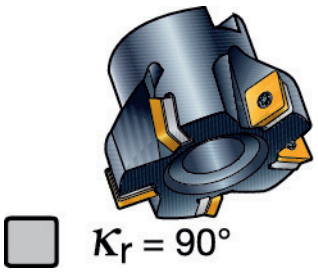
P K H

SANDVIK Coromant

Square shoulder facemill

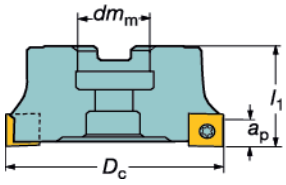
Square shoulder facemill

Diameter 40 – 250 mm

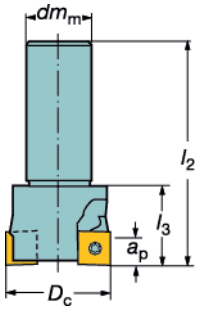


$\kappa_r = 90°$

Arbor



Cylindrical shank



l_1 = programming length

Metric version

□	D_c mm	Ordering code Coarse pitch			Close pitch			Extra close pitch			Dimensions kg	dm_m	l_1	l_2	l_3	Max a_p	n_{max} [1]
		Cylindrical shank															
12	40	R290-040A32-12L [2]	-	3	-	-	-	-	-	-	0.4	32		120	39	10.7	21600
	50	R290-050A32-12L	-	3	R290-050A32-12M	4	-	-	-	-	0.4	32		120	39	10.7	18400
	63	R290-063A32-12L	-	4	R290-063A32-12M	5	-	-	-	-	1.1	32		120	39	10.7	15900
	80	R290-080A32-12L	-	4	R290-080A32-12M	6	-	-	-	-	1.9	32		120	39	10.7	13700
		Arbor															
12	50	R290-050Q22-12L	-	3	R290-050Q22-12M	4	-	R290-050Q22-12H [2]	5	-	0.5	22	40			10.7	18400
	63	R290-063Q22-12L	-	4	R290-063Q22-12M	5	-	R290-063Q22-12H	6	-	0.6	22	40			10.7	15900
	80	R290-080Q27-12L	-	4	R290-080Q27-12M	6	-	R290-080Q27-12H	8	-	0.9	27	50			10.7	13700
	100	R290-100Q32-12L	-	5	R290-100Q32-12M	7	-	R290-100Q32-12H	10	-	1.3	32	50			10.7	12000
	125	R290-125Q40-12L	-	6	R290-125Q40-12M	8	-	R290-125Q40-12H	12	-	2.7	40	63			10.7	10600
	160	R290-160Q40-12L	-	8	R290-160Q40-12M	12	-	R290-160Q40-12H	15	-	4.1	40	63			10.7	9250
	200	R290-200Q60-12L	-	10	R290-200Q60-12M	16	-	-	-	-	6.2	60	63			10.7	8200
	250	R290-250Q60-12L	-	12	R290-250Q60-12M	18	-	-	-	-	10.7	60	63			10.7	7300

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

[2] Without shim

Note!
Mounting dimensions, see Metalcutting Technical guide.
Bolt circle for cutters 200 and 250mm = 4"

= Even pitch

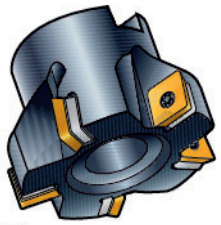
= Differential pitch

D49 D48 G6 D2 J3

Square shoulder facemill

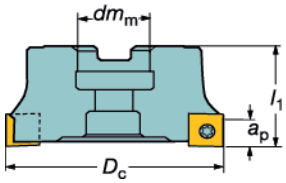
Square shoulder facemill

Diameter 2.000 - 10.000 inch



0°

Arbor



l_1 = programming length

Inch version

	D_c inch	Ordering code Coarse pitch			Close pitch			Extra close pitch			Dimensions, inch				
		Arbor										dm_m	l_1	Max a_p	n_{max}[1]
12	2.000	RA290-051R19-12L	-	3	RA290-051R19-12M	4	-	RA290-051R19-12H	5	-	0.8	.750	1.575	.421	18400
	2.500	RA290-063R19-12L	-	4	RA290-063R19-12M	5	-	RA290-063R19-12H	6	-	1.1	.750	1.575	.421	15900
	3.000	RA290-076R25-12L	-	4	RA290-076R25-12M	6	-	RA290-076R25-12H	7	-	2.1	1.000	1.969	.421	13700
	4.000	-	-	-	-	-	-	RA290-102R38-12H	10	-	3.1	1.500	1.969	.421	12000
		RA290-102R38-12L	-	5	RA290-102R38-12M	7	-	-	-	-	3.0	1.500	1.969	.421	12000
	5.000	RA290-127R38-12L	-	6	RA290-127R38-12M	8	-	RA290-127R38-12H	12	-	6.0	1.500	2.480	.421	10600
	6.000	RA290-152R38-12L	-	8	RA290-152R38-12M	12	-	RA290-152R38-12H	14	-	8.7	1.500	2.480	.421	9250
	8.000	RA290-203R63-12L	-	10	RA290-203R63-12M	16	-	-	-	-	30.2	2.500	2.480	.421	8200
	10.000	RA290-254R63-12L	-	12	RA290-254R63-12M	18	-	-	-	-	52.0	2.500	2.480	.421	7300

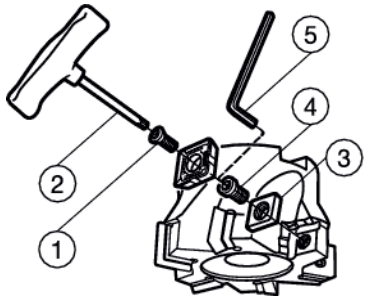
1) n_{max} (max. rev/min) for holders must also be considered.

Note!
Mounting dimensions, see Metalcutting Technical guide.
Bolt circle for cutters 8" and 10" = 4"

= Even pitch

= Differential pitch

Spare parts



Cutter		1	2			3	4	5	
D_c mm	D_c inch	Screw	Key (Torx Plus)	Torque value Nm/in.lbs	Torque wrench[2]	Shim	Shim screw	Key (mm)	Arbor screw[1]
40-250	2.000-10.000	5513 020-32	5680 048-01 (15IP)	3.0/26	5680 100-06	5322 470-01	5512 090-09	5680 010-01 (3.5)	5512 060-15

1) Only for cutter Ø 50 mm.

2) Accessories, must be ordered separately.

 D49
 D48
 G6
 D2
 J3

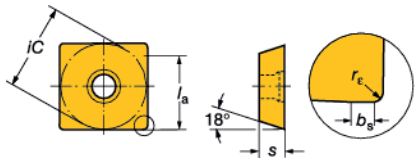
Inserts for CoroMill® 290

Cemented carbide / Cermet

Light

Medium

Heavy



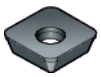
Dimensions, mm (inch)

Size	*iC*	*s*
12	13.29 (.523)	3.97 (.156)
15	15.88 (.625)	4.76 (.188)

l_a = max recommended cutting depth

	□	Max a_p mm	Max a_p in.	Ordering code	P GC 4220	P CT 530	K GC 3220	K GC 4220	K GC K20W	H GC 4220	H CT 530	l_a mm	l_a in.	b_s mm	b_s in.	r_ε mm	r_ε in.
Light	12	6.0	.236	R290-12T308E-PL		☆					☆	6.4	.252	1.46	.058	0.8	.032
		10.7	.421	R290-12T308M-PL	☆			☆		☆		10.7	.421	1.53	.060	0.8	.032
		6.0	.236	R290-12T308E-KL			☆					6.4	.252	1.46	.058	0.8	.032
		10.7	.421	R290-12T308M-KL			☆					10.7	.421	1.53	.060	0.8	.032
Medium	12	10.7	.421	R290.90-12T320M-PM	☆			☆		☆		10.7	.421			2.0	.079
		10.7	.421	R290-12T308M-PM	☆	☆		☆		☆	☆	10.7	.421	1.53	.060	0.8	.032
		10.7	.421	R290.90-12T320M-KM			☆					10.7	.421			2.0	.079
		10.7	.421	R290-12T308M-KM			★		☆			10.7	.421	1.53	.060	0.8	.032
Heavy	12	10.7	.421	R290.90-12T320M-PH	☆			☆		☆		10.7	.421			2.0	.079
		10.7	.421	R290.90-12T320M-KH			☆		☆			10.7	.421			2.0	.079
					P15	P20	K20	K25	K25	H25	H15						

Ceramic



Cubic boron nitride

	□	Max a_p mm	Max a_p in.	Ordering code	K CC 6090	K CB CB50	H CB CB50	l_a mm	l_a in.	b_s mm	b_s in.	r_ε mm	r_ε in.
Medium	12	4.5	.177	R290-12 T3 08E		☆	☆	4.5	.177	1.55	.061	0.8	.032
		6.5	.256	R290-12 T3 20E	☆			6.5	.256	0.29	.011	2.0	.079
					K10	K05	H05						

R290-12T308 E-PL
|
E = Highest edge sharpness and precision
M = Highest edge security

D312 D305 D334 D2

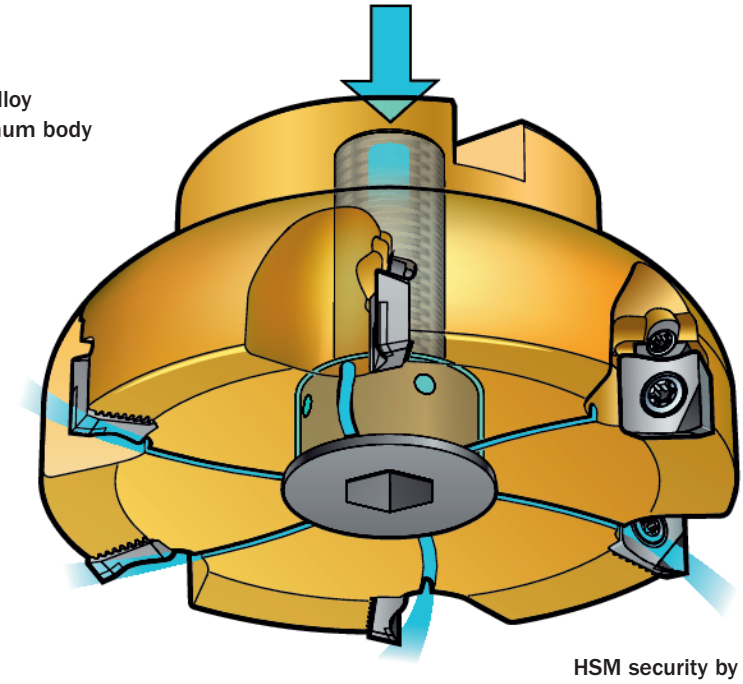
CoroMill® Century

Facemill for non-ferrous materials, cast iron and hardened steel

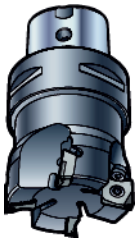
Designed for high speed machining.

Diameter 40 - 200 mm (2.000 - 8.000 inch)

High alloy aluminum body



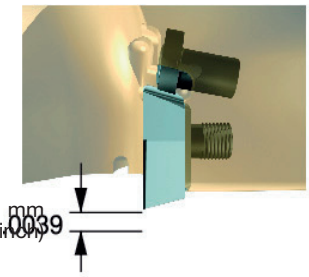
Steel body



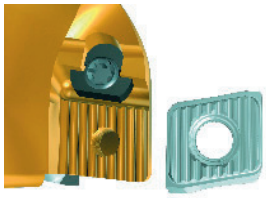
Coromant Capto® , HSK or arbor mountings

Intensified chip evacuation through accelerated cutting fluid supply

HSM security by design

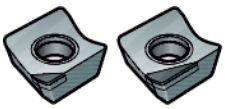


Easy setting to micron precision within 0.1 mm (.0039 inch) setting range

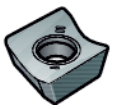


Serrated location offers security and prevents insert movement at high speeds

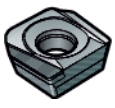
PCD and carbide inserts



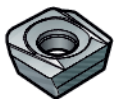
CD10/CB50



H10
1020
1030

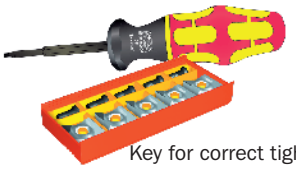


CD10/CB50



H10

Wiper insert option for high feed finishing



Key for correct tightening torques delivered with the tool

ISO application area:

N K H

Tailor Made

Tool options designed to individual customer requirements are available. For information on our Tailor Made program see page J3.

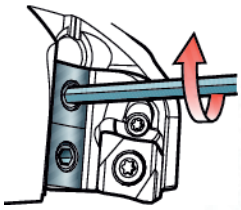
SANDVIK Coromant

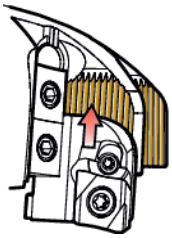
CoroMill® Century

Facemill with exchangeable cassettes

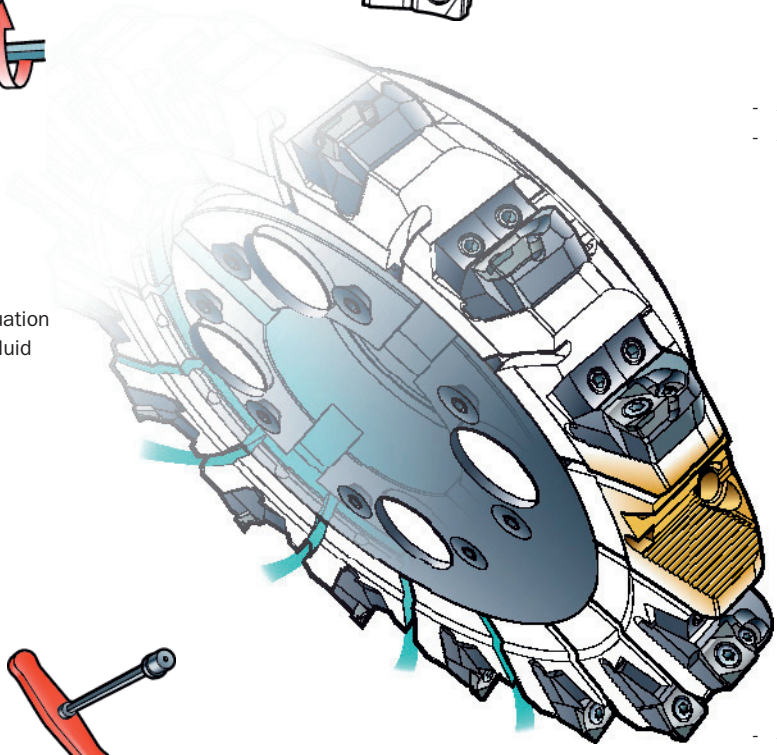
A concept for optimal finishing of non-ferrous materials, cast iron and hardened steel

- Safe wedge clamping
- Easy maintenance



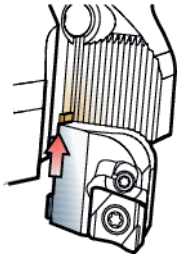


Good basic accuracy by design



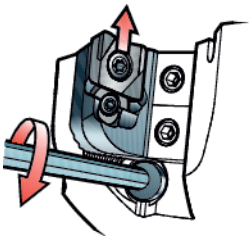
- Serrated cassette interface
- Safe performance

Intensified chip evacuation through accelerated fluid flush

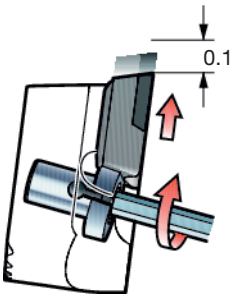


- Setting key
- Cam shaped
- Easy handling

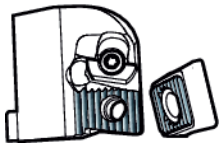
- Serrated inserts
- Reduced effect of tolerances
- Reduced runout



Macro setting within 1.0 mm (.039 inch)



Micro setting within 0.1 mm (.0039 inch)

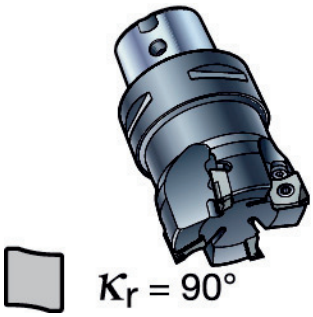


ISO application areas:

N K H

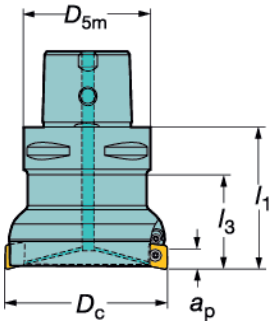
Facemill for non-ferrous materials, cast iron and hardened steel

Diameter 40 – 200 mm

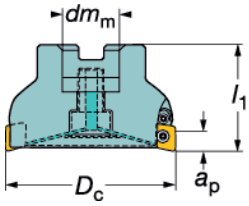


$\kappa_r = 90°$

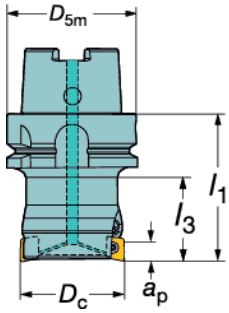
Coromant Capto®



Arbor



HSK



Coolant through

l_1 = programming length

Metric version

	D_c mm	Ordering code Close pitch			Coolant[1]	Dimensions kg	dm_m	D_{5m}	l_1	l_3	Torque value Nm[3]	n_{max}[2]
		Coromant Capto										
11	40	R590-040C3-11M	3	-	1	0.6		32	55	40		48000
		R590-040C4-11M	3	-	1	0.4		40	63	40		39000
	50	R590-050C5-11M	4	-	1	0.7		50	63	40		28000
	63	R590-063C5-11M	5	-	1	1.1		50	63	40		28000
	80	R590-080C6-11M	6	-	1	1.8		63	71			20000
		HSK										
11	40	R590-040HA06-11M	3	-	1	0.8		63	71	40		20000
	50	R590-050HA06-11M	4	-	1	1.0		63	71	40		20000
	63	R590-063HA06-11M	5	-	1	1.3		63	71	40		25000
		R590-063HA08-11M	5	-	1	2.0		80	80	50		16000
	80	R590-080HA06-11M	6	-	1	1.5		63	71			20000
		R590-080HA08-11M	6	-	1	2.5		80	80	50		16000
	100	R590-100HA06-11M	6	-	1	1.9		63	80			20000
		R590-100HA08-11M	6	-	1	3.0		80	80			16000
	125	R590-125HA08-11M	8	-	1	3.9		80	80			16000
		Arbor										
11	50	R590-050Q22S-11M	4	-	1	0.6	22		40		50.0	41600
	63	R590-063Q22S-11M	5	-	1	0.7	22		40		50.0	35100
	80	R590-080Q27A-11M	6	-	1	1.5	27		50		50.0	27500
		R590-080Q27S-11M	6	-	1	1.5	27		50		90.0	27500
	100	R590-100Q32A-11M	6	-	1	1.2	32		50		200.0	23800
		R590-100Q32S-11M	6	-	1	2.2	32		50		200.0	23800
	125	R590-125Q40A-11M	8	-	1	1.8	40		63		230.0	20700
		R590-125Q40S-11M	8	-	1	3.3	40		63		230.0	20700
	160	R590-160Q40A-11M	10	-	1	2.4	40		63		230.0	17900
		R590-160Q40S-11M	10	-	1	5.6	40		63		230.0	17900
	200	R590-200Q60A-11M	16	-	0	7.6	60		63		230.0	15700
		R590-200Q60S-11M	16	-	0	11.7	60		63		230.0	15700
		CIS Arbor										
11	80	RA590-080J25A-11M	6	-	1	0.9	25.4		50		50.0	27500
		RA590-080J25S-11M	6	-	1	1.5	25.4		50		90.0	27500
	100	RA590-100J31A-11M	6	-	1	1.2	31.75		63		200.0	23800
		RA590-100J31S-11M	6	-	1	2.2	31.75		63		200.0	23800
	125	RA590-125J38A-11M	8	-	1	1.8	38.1		63		230.0	20700
		RA590-125J38S-11M	8	-	1	3.8	38.1		63		230.0	20700
	160	RA590-160J38A-11M	10	-	1	2.4	38.1		63		230.0	17900
		RA590-160J38S-11M	10	-	1	6.0	38.1		63		230.0	17900
	200	RA590-200J47A-11M	16	-	1	7.3	47.625		63		230.0	15700
		RA590-200J47S-11M	16	-	1	12.1	47.625		63		230.0	15700

1) 0 = no coolant, 1 = coolant through center

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

3) Torque value shower screw

R590-050Q22S-11M

S = Steel
A = Aluminum

= Even pitch

= Differential pitch

Note: Cutting depth (a_p) depends on insert type - see insert page

Bolt circle for cutters 200 and 250mm = 4"

 D56

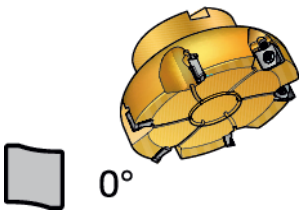
 D57

 G6

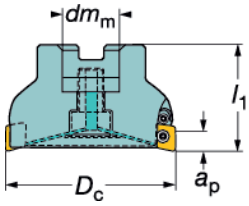
 D2

Facemill for non-ferrous materials, cast iron and hardened steel

Diameter 2.000 - 8.000 inch



Arbor



l_1 = programming length

Inch version

		Ordering code				Dimensions, inch				
	D_c inch	Close pitch			Coolant[1]	lbs	dm_m	l_1	Torque value ft.lbs[3]	n_{max}[2]
		Arbor								
11	2.000	RA590-051R19S-11M	4	-	1	1.4	.750	1.575	36.9	41100
	2.500	RA590-063R19S-11M	5	-	1	1.7	.750	1.575	36.9	34900
	3.000	RA590-076R25A-11M	6	-	1	1.8	1.000	1.968	66.4	28400
		RA590-076R25S-11M	6	-	1	3.1	1.000	1.968	66.4	28400
	4.000	RA590-102R38A-11M	6	-	1	3.3	1.500	2.480	147.5	23500
		RA590-102R38S-11M	6	-	1	5.9	1.500	2.480	147.5	23500
	5.000	RA590-127R38A-11M	8	-	1	4.0	1.500	2.480	169.6	20500
		RA590-127R38S-11M	8	-	1	7.4	1.500	2.480	169.6	20500
	6.000	RA590-152R38A-11M	10	-	1	5.0	1.500	2.480	169.6	18400
		RA590-152R38S-11M	10	-	1	10.8	1.500	2.480	169.6	18400
	8.000	RA590-203R63A-11M	16	-	0	16.2	2.500	2.480		15600
		RA590-203R63S-11M	16	-	0	26.1	2.500	2.480		15600

1) 0 = no coolant, 1 = coolant through center

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

3) Torque value shower screw

Note: Cutting depth (a_p) depends on insert type - see insert page

Bolt circle for cutters 8" and 10" = 4"

R590-050Q22S-11M
|
S = Steel
A = Aluminum

= Even pitch

= Differential pitch

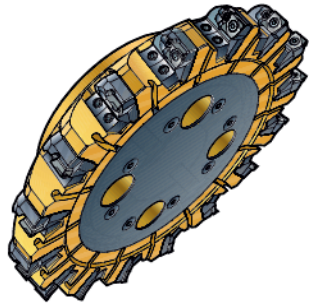
 D56  D57  G6  D2

CoroMill® Century facemill

with exchangeable cassettes for arbor mounting

Diameter 160 - 500 mm

Metric version



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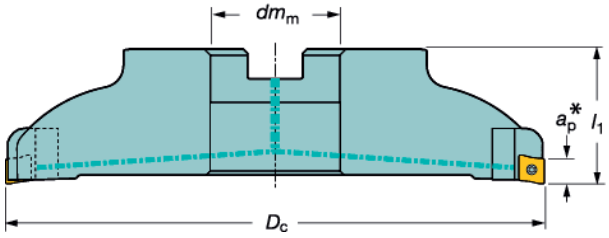


$\kappa_r = 90°$

l_1 = programming length

□ 1)	D_c mm	Ordering code Close pitch Even Coolant through	⊙	Close pitch Even No coolant through	⊙	Dimensions kg	dm_m	l_1	n_{max} 2)
		Metric versions - Steel body							
11	160	S-R/L590-160Q40CS1-11M	10	S-R/L590-160Q40CS0-11M	10	6.5	40	63	3166
	200	S-R/L590-200Q60CS1-11M	12	S-R/L590-200Q60CS0-11M	12	9.5	60	63	2837
	250	S-R/L590-250Q60CS1-11M	16	S-R/L590-250Q60CS0-11M	16	15.0	60	63	2533
	315	S-R/L590-315Q60CS1-11M	20	S-R/L590-315Q60CS0-11M	20	25.0	60	80	2251
	400	S-R/L590-400Q60CS1-11M	26	S-R/L590-400Q60CS0-11M	26	42.0	60	80	1992
	500	S-R/L590-500Q60CS1-11M	32	S-R/L590-500Q60CS0-11M	32	60.0	60	80	1795
		Metric versions – Aluminum body							
11	160	S-R/L590-160Q40CA1-11M	10	S-R/L590-160Q40CA0-11M	10	3.0	40	63	3166
	200	S-R/L590-200Q40CA1-11M	12	S-R/L590-200Q40CA0-11M	12	8.0	60	63	2837
	250	S-R/L590-250Q60CA1-11M	16	S-R/L590-250Q60CA0-11M	16	10.0	60	63	2533
	315	S-R/L590-315Q60CA1-11M	20	S-R/L590-315Q60CA0-11M	20	12.0	60	80	2251
	400	S-R/L590-400Q60CA1-11M	26	S-R/L590-400Q60CA0-11M	26	16.0	60	80	1992
	500	S-R/L590-500Q60CA1-11M	32	S-R/L590-500Q60CA0-11M	32	20.0	60	80	1795
		CIS Versions - Steel body							
11	160	S-R/LA590-160J38CS1-11M	10	S-R/LA590-160J38CS0-11M	10	6.5	38.1	63	3166
	200	S-R/LA590-200J47CS1-11M	12	S-R/LA590-200J47CS0-11M	12	9.5	47.625	63	2837
	250	S-R/LA590-250J47CS1-11M	16	S-R/LA590-250J47CS0-11M	16	10.0	47.625	63	2533
	315	S-R/LA590-315J47CS1-11M	20	S-R/LA590-315J47CS0-11M	20	12.0	47.625	80	2251
		CIS Versions - Aluminum body							
11	160	S-R/LA590-160J38CA1-11M	10	S-R/LA590-160J38CA0-11M	10	3.0	38.1	63	3166
	200	S-R/LA590-200J47CA1-11M	12	S-R/LA590-200J47CA0-11M	12	8.0	47.625	63	2837
	250	S-R/LA590-250J47CA1-11M	16	S-R/LA590-250J47CA0-11M	16	10.0	47.625	63	2533
	315	S-R/LA590-315J47CA1-11M	20	S-R/LA590-315J47CA0-11M	20	12.0	47.625	80	2251

1) Inserts are ordered separately.

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

Note: Cutting depth a_p depends on insert type.

Ordering example: 2 pieces S-R590-160Q40CS1-11M

These cutters are subject to quotation. Please contact your Sandvik Coromant representative.

 D56
 D57
 G6
 D2

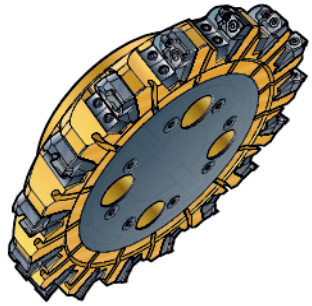
SANDVIK Coromant

CoroMill® Century facemill

with exchangeable cassettes for arbor mounting

Diameter 6.000 - 20.000 inch

Inch version



0°

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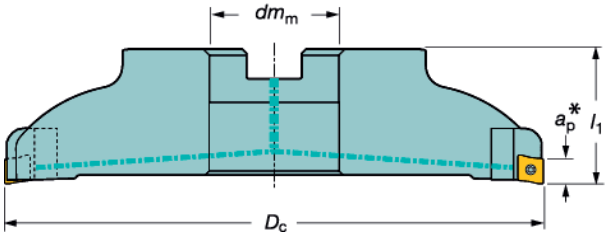


l_1 = programming length

		Ordering code				Dimensions			
		Close pitch		**Close pitch**					
		Even		**Even**					
[1]	D_c inch	Coolant through		No coolant through		Lbs	dm_m	l_1	n_{max} [2]
		Inch version - Steel body							
11	6.000	S-R/LA590-152R38CS1-11M	10	S-R/LA590-152R38CS0-11M	10	14	1.500	2.480	3333
	8.000	S-R/LA590-203R63CS1-11M	12	S-R/LA590-203R63CS0-11M	12	20	2.500	2.480	2795
	10.000	S-R/LA590-254R63CS1-11M	16	S-R/LA590-254R63CS0-11M	16	32	2.500	2.480	2493
	12.000	S-R/LA590-305R63CS1-11M	20	S-R/LA590-305R63CS0-11M	20	54	2.500	3.150	2325
	14.000	S-R/LA590-355R63CS1-11M	20	S-R/LA590-355R63CS0-11M	20	60	2.500	3.150	2125
	16.000	S-R/LA590-406R63CS1-11M	26	S-R/LA590-406R63CS0-11M	26	90	2.500	3.150	1963
	20.000	S-R/LA590-508R63CS1-11M	32	S-R/LA590-508R63CS0-11M	32	130	2.500	3.150	1767
		Inch version – Aluminum body							
11	6.000	S-R/LA590-15R38CA1-11M	10	S-R/LA590-152R38CA0-11M	10	7	1.500	2.480	3333
	8.000	S-R/LA590-203R63CA1-11M	12	S-R/LA590-203R63CA0-11M	12	18	2.500	2.480	2795
	10.000	S-R/LA590-254R63CA1-11M	16	S-R/LA590-254R63CA0-11M	16	23	2.500	2.480	2493
	12.000	S-R/LA590-305R63CA1-11M	20	S-R/LA590-305R63CA0-11M	20	26	2.500	3.150	2325
	14.000	S-R/LA590-355R63CA1-11M	20	S-R/LA590-355R63CA0-11M	20	28	2.500	3.150	2125
	16.000	S-R/LA590-406R63CA1-11M	26	S-R/LA590-406R63CA0-11M	26	35	2.500	3.150	1963
	20.000	S-R/LA590-508R63CA1-11M	32	S-R/LA590-508R63CA0-11M	32	45	2.500	3.150	1767

[1] Inserts are ordered separately.

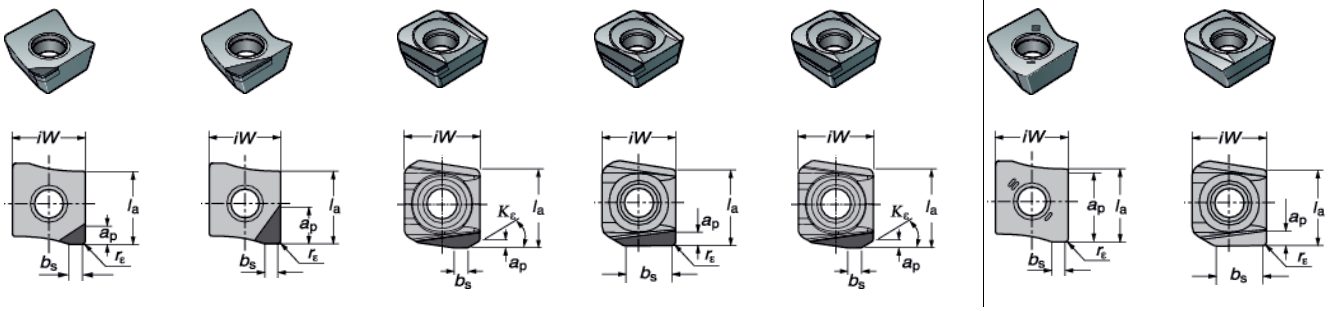
[2] n_{max} (max. rev/min) for holders must also be considered.

Note: Cutting depth a_p depends on insert type.

 D56
 D57
 G6
 D2

Inserts for CoroMill® Century

CD10 | **CB50** | **CD10** Wiper | **CB50** | **H10 1020 1030** | Wiper



	□	Max a_p mm	Max a_p in.	Ordering code	P GC 1020	P GC 1030	M GC 1030	K GC 1020	N - H10	S GC 1030	l_a mm	l_a in.	iW mm	iW in.	r_ε mm	r_ε in.	b_s mm	b_s in.
											Dimensions, millimeter, inch (mm, in.)							
Light	11	10	.394	R590-110508H-PL		☆					11	.433	11.5	.453	0.8	.032	2.2	.087
		10	.394	R590-110508H-KL				☆			11	.433	11.5	.453	0.8	.032	2.2	.087
		10	.394	R/L590-110504H-NL					★		11	.433	11.5	.453	0.4	.016	2.2	.087
Wiper	11	2	.079	R590-110504H-KTW	☆			★			11	.433	11.5	.453	0.4	.016	7	.276
		2	.079	R590-110504H-PTW		★	☆			☆	11	.433	11.5	.453	0.4	.016	7	.276
		2	.079	R590-110508H-PW		☆					11	.433	11.5	.453	0.8	.032	7	.276
		2	.079	R590-110508H-KW				☆			11	.433	11.5	.453	0.8	.032	7	.276
		2	.079	R/L590-110504H-NW					☆		11	.433	11.5	.453	0.4	.016	7	.276
						P30	M15	K20	N10	S15								

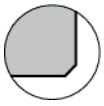
Advanced cutting materials

	□	Max a_p mm	Max a_p in.	Ordering code	K CB CB50	N CD CD10	H CB CB50	l_a mm	l_a in.	iW mm	iW in.	r_ε mm	r_ε in.	κ_ε	b_s mm	b_s in.
								Dimensions, millimeter, inch (mm, in.)								
Light	11	1.2	.047	R/L590-1105H-ZC2-KL	☆		☆	3	.118	11.5	.453			30°	2.35	.092
		2	.079	R/L590-1105H-PC2-NL		☆		3	.118	11.5	.453			1X45°	1.5	.059
		5	.197	R/L590-1105H-PC5-NL		☆		6	.236	11.5	.453			1X45°	1.5	.059
		2	.079	R/L590-1105H-PR2-NL		★		3	.118	11.5	.453	0.4	.016		2.2	.087
		5	.197	R/L590-1105H-PR5-NL		★		6	.236	11.5	.453	0.4	.016		2.2	.087
		2	.079	R/L590-1105H-PS2-NL		☆		3	.118	11.5	.453			0.25X45°	2.2	.087
		5	.197	R/L590-1105H-PS5-NL		☆		6	.236	11.5	.453			0.25X45°	2.2	.087
Wiper	11	1.2	.047	R/L590-1105H-ZC2-KW	☆		☆	3	.118	11.5	.453			30°	5.92	.233
		2	.079	R/L590-1105H-RC2-NW		☆		3	.118	11.5	.453			1X45°	6.3	.248
		2	.079	R/L590-1105H-RR2-NW		☆		3	.118	11.5	.453	0.4	.016		7	.276
		2	.079	R/L590-1105H-RS2-NW		☆		3	.118	11.5	.453			0.25X45°	7	.276
					K05	N05	H05									

Corner


PR, RR, NL, NW
First choice


PC, RC
Highest security

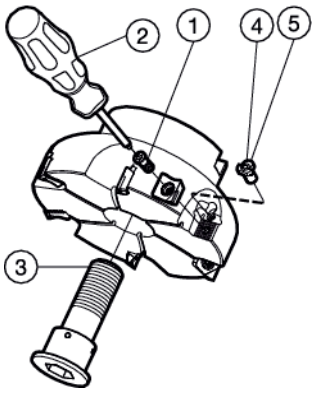

PS, RS
Against burr formation


ZC
First choice ISO K/H

D312 D305 D334 D2 J3

SANDVIK Coromant

Spare parts for CoroMill® Century



Axial setting of the CoroMill Century cutter
Instructions for setting of CoroMill Century are included in each tool package.

Cutter			1	2		4	5
							
D_c mm	D_c inch		Insert screw	Torque wrench (Torx Plus)	Torque value Nm (ft-lbs)	Setting device	Setting device screw
Coromant Capto® and HSK							
40– 125	1.575–	3.150	5513 020-25	5680 100-06 (15IP)	3.0 (2.2)	5513 014-021	5513 014-02
Arbor							
50– 63	2.000–	2.500	5513 020-25	5680 100-06 (15IP)	3.0 (2.2)	5513 014-021	5513 014-02
80		3.000	5513 020-25	5680 100-06 (15IP)	3.0 (2.2)	5513 014-021	5513 014-02
100		4.000	5513 020-25	5680 100-06 (15IP)	3.0 (2.2)	5513 014-021	5513 014-02
125		5.000	5513 020-25	5680 100-06 (15IP)	3.0 (2.2)	5513 014-021	5513 014-02
160		6.000	5513 020-25	5680 100-06 (15IP)	3.0 (2.2)	5513 014-021	5513 014-02
200		8.000	5513 020-25	5680 100-06 (15IP)	3.0 (2.2)	5513 014-021	5513 014-02

1) See adapter for facemills.

Cutter	3		Cutter	3		
D_c mm	Shower screw	Key (Torx Plus)	D_c inch	Shower screw	Key (Torx Plus)	Torque value Nm (in-lbs)
50-63	5512 087-01	5680 043-17	2.000-2.500	5512 088-01	5680 043-17	50 (36)
80	5512 087-02	5680 043-18	3.000	5512 088-02	5680 043-18	90 (66)
100	5512 087-03	5680 043-18	4.000	5512 088-03	5680 043-18	200 (147)
100[1)]	5512 087-04	5680 043-18	5.000-6.000	5512 099-01	5680 043-18	230 (170)
125-160	5512 098-01	5680 043-18				230 (170)

1) CIS Arbor

Cutter D_c mm	Edge guard
40	91 100
50	91 101
63	91 102
80	91 103
100	91 104
125	91 105
160	91 106
200	91 277

Cutter	Coolant tubes	Key
HSK63	5692 020-04	5680 094-04
HSK80	5692 020-05	5680 094-05

Spare parts for cassettes

Cassette	Insert screw	Torque value Nm (in-lbs)	Setting device	Setting device screw	Torque wrench	Key
R/L 590-CA-11	5513 020-25	3.0 (26.55)	5513 014-021	5513 014-02	5680 100-06 (15IP)	–

Spare parts for CoroMill® Century cassette bodies

D_c mm (inch)	Wedge	Wedge screw	Wedge key	Eccentric key
160-500 (6.000 - 20.000)	5431 105-03	339-831	265.2-817 (3.0)	5680 067-01


MAX 5000 RPM

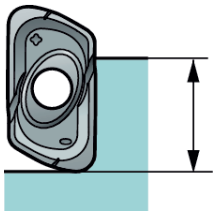
CoroMill® 790

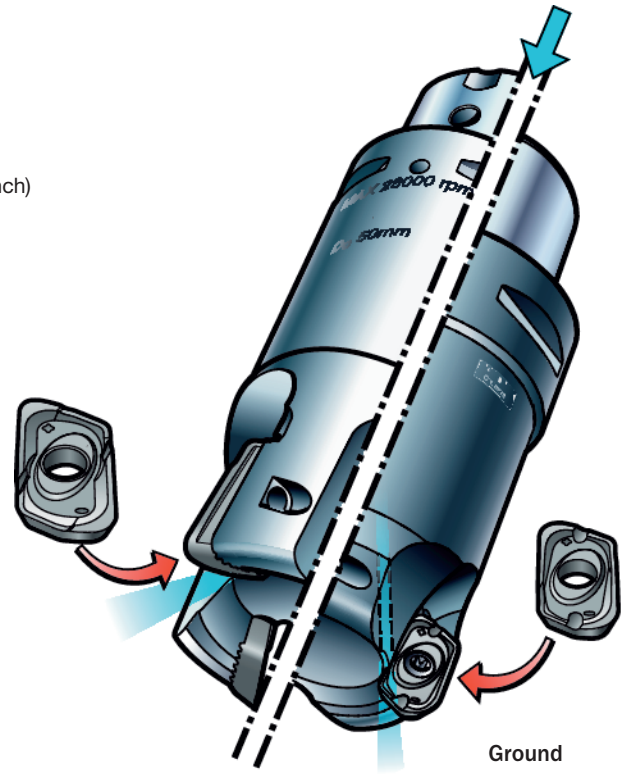
Shoulder milling cutters for non-ferrous materials

High speed machining performance with high security

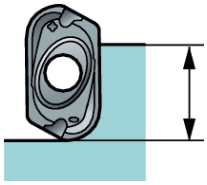
Diameter 25 - 100 mm (1.000 - 5.000 inch)

Insert size 22





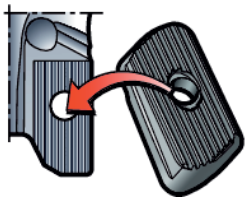
Insert size 16



Torque wrench to be ordered separately

Ground

– for precision



Serrated location to achieve high security and to reduce effects of insert tolerance on the cutter diameter

Torque wrench delivered with the tool

16

r_ε = .020 .031 .062 .079 .093 .125 .157 .197 inch

22

r_ε = .020 .031 .062 .079 .093 .125 .157 .187 .197 .236 .250 inch

ISO application area:

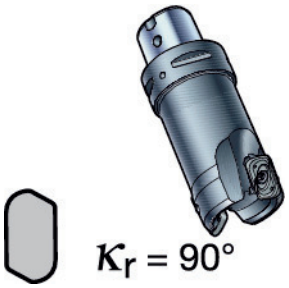
P M K N S H

Tailor Made

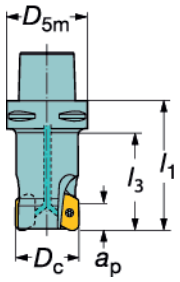
Tool options designed to individual customer requirements are available. For information on our Tailor Made program see page J3.

Shoulder face / endmill 90°

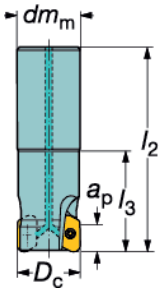
Diameter 25 – 100 mm



Coromant Capto®



Cylindrical



l_1 = programming length

Metric version

		Ordering code					
	D_c mm	Coarse pitch		Close pitch		Extra close pitch	
		Coromant Capto					
16	25	R790-025C5S2-16L	2	-	-	-	-
	32	-	-	R790-032C5S2-16M	3	-	-
	36	-	-	-	-	R790-036C3S1-16H	4
	36	R790-036C3S1-16L	2	-	-	-	-
	40	-	-	R790-040C4S1-16M	3	-	-
	40	-	-	R790-040C5S1-16M	3	-	-
	44	-	-	R790-044C4S1-16M	3	R790-044C4S1-16H	5
	50	-	-	-	-	R790-050C5S1-16H	4
	54	-	-	R790-054C5S1-16M	3	R790-054C5S1-16H	6
	66	-	-	-	-	R790-066C6S1-16H	7
	84	-	-	-	-	R790-084C8S1-16H	9
22	40	-	-	R790-040C4S2-22M	2	-	-
	44	-	-	R790-044C4S1-22M	2	R790-044C4S1-22H	3
	50	R790-050C5S1-22L	2	-	-	-	-
	50	R790-050C5S2-22L	2	-	-	-	-
	50	-	-	R790-050C5S2-22M	3	-	-
	54	-	-	R790-054C5S2-22M	3	R790-054C5S2-22H	4
	63	-	-	R790-063C6S1-22M	3	-	-
	63	-	-	R790-063C6S2-22M	3	-	-
	66	-	-	-	-	R790-066C6S1-22H	5
	66	-	-	R790-066C6S1-22M	3	-	-
	80	-	-	-	-	R790-080C8S1-22H	4
	80	-	-	R790-080C8S1-22M	3	-	-
	84	-	-	-	-	R790-084C8S1-22H	4
	100	-	-	-	-	R790-100C8S1-22H	7
	100	-	-	R790-100C8S1-22M	4	-	-
		HSK					
16	25	R790-025HA06S2-16L	2	-	-	-	-
	32	-	-	R790-032HA06S2-16M	3	-	-
	40	-	-	R790-040HA06S2-16M	3	-	-
	50	-	-	R790-050HA06S1-16M	3	-	-
22	50	-	-	R790-050HA06S2-22M	3	-	-
		Cylindrical shank					
16	25	R790-025A25S2-16L	2	-	-	-	-
	32	-	-	R790-032A32S1-16M	3	-	-
	32	R790-032A32S2-16L	2	-	-	-	-
	40	-	-	R790-040A32S1-16M	3	-	-
	40	R790-040A32S2-16L	2	-	-	-	-
		Arbor					
16	50	-	-	-	-	R790-050Q22S1-16H	4

1) 0 = no coolant, 1 = coolant through center

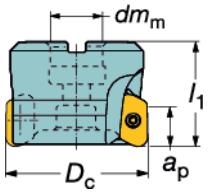
2) n_{max} (max. rev/min) for holders must also be considered.

= Even pitch

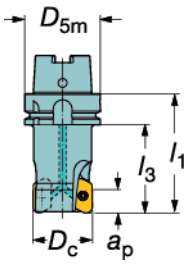
= Differential pitch

 D63
 D64
 G6
 D2

Arbor



HSK type A/C



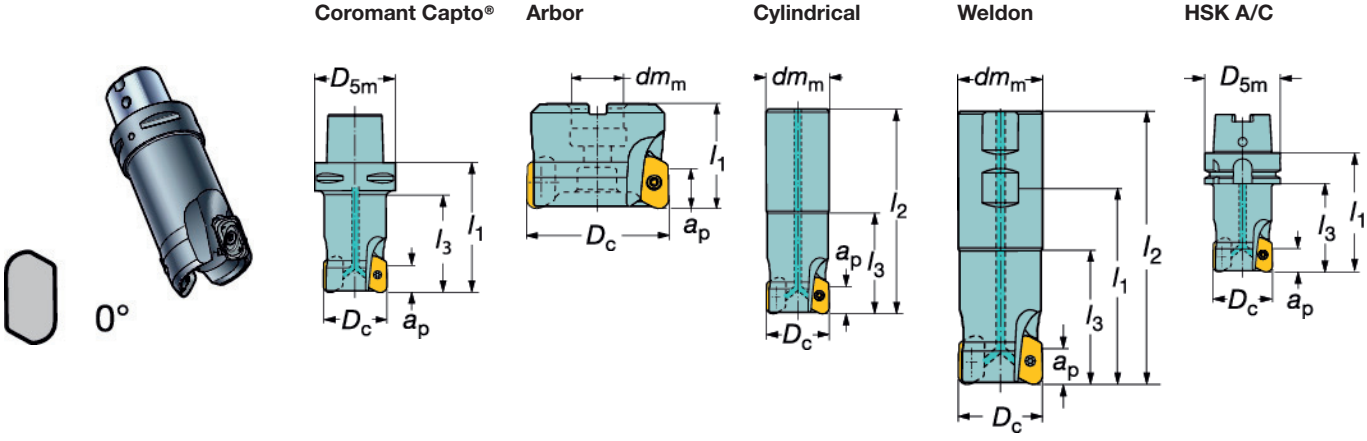
l_1 = programming length

Extra close pitch plus		Coolant[1]	Dimensions KG	D_{5m}	dm_m	l_1	l_2	l_3	Max a_p	n_{max}[2]
-	-	1	0.8	50		74		50	12.0	28000
-	-	1	1.1	50		88		64	12.0	28000
-	4	1	0.8	32		67		50	12.0	44560
-	-	1	0.8	32		67		50	12.0	45600
-	-	1	0.5	40		62		40	12.0	39000
-	-	1	0.9	50		82		60	12.0	28000
-	5	1	1	40		81		60	12.0	39000
-	4	1	1.5	50		97		75	12.0	28000
-	6	1	1.6	50		81		60	12.0	28000
-	7	1	1.7	63		75		40.8	12.0	20000
-	9	1	3	80		75		40.8	12.0	14000
-	-	1	0.8	40		80		76.2	18.0	37500
-	3	1	0.4	40		66		45.8	18.0	28000
-	-	1	1.1	50		66		50	18.0	28000
-	-	1	1.5	50		100		78	18.0	28000
-	-	1	1.2	50		100		78	18.0	20000
-	4	1	0.7	50		66		44	18.0	28000
-	-	1	1.8	63		66		42	18.0	20000
-	-	1	1.4	63		120		102	18.0	14000
-	5	1	1.3	63		75		43.8	18.0	20000
-	-	1	1.8	63		66		66	18.0	20000
-	4	1	4.6	80		120		88	18.0	16000
-	-	1	4.7	80		120		88	18.0	14000
R790-084C8S1-22HX	6	1	3.1	80		84		52	18.0	14000
-	7	1	3.7	80		85		53	18.0	14000
-	-	1	3.1	80		66		66	18.0	14000
-	-	1	1.2	63		81		50	12.0	20000
-	-	1	1.4	63		92		64	12.0	20000
-	-	1	1.7	63		111		80	12.0	20000
-	-	1	2	63		104		75	12.0	20000
-	-	1	1.7	63		100		70	18.0	20000
-	-	1	0.6		25		125	50	12.0	60300
-	-	1	1.1		32		125	35	12.0	49600
-	-	1	1		32		127	64	12.0	49600
-	-	1	1.3		32		150	40	12.0	42500
-	-	1	1.4		32		150	80	12.0	42500
-	4	0	0.8		22	50			12.0	36700

 D63
 D64
 G6
 D2

Shoulder face / endmill 0°

Diameter 1.000 - 5.000 inch



l_1 = programming length

Inch version

		Ordering code						Coolant[1]	Dimensions, inch						
	D_c inch	Coarse pitch		Close pitch		Extra close pitch				D_{5m}	l_1	l_2	l_3	Max a_p	n_{max}[2]
		Coromant Capto													
16	1.500	-	-	RA790-038C5S2-16M	3	-	-	1	1.9	1.968	3.450		2.500	.472	39000
	2.000	-	-	RA790-050C5S1-16M	3	RA790-050C5S1-16H	4	1	3.0	1.968	2.900		2.000	.472	28000
22	1.500	-	-	RA790-038C4S2-22M	2	-	-	1	1.7	1.575	3.000		2.130	.709	37500
	2.000	RA790-050C5S1-22L	2	RA790-050C5S1-22M	3	-	-	1	2.4	1.968	2.598		1.661	.709	20000
	2.000	RA790-050C5S2-22L	2	-	-	-	-	1	3.4	1.968	4.000		3.130	.709	28000
	2.000	-	-	RA790-050C5S2-22M	3	-	-	1	3.4	1.968	4.000		3.130	.709	20000
	2.000	-	-	RA790-050C6S2-22M	3	-	-	1	2.8	2.480	4.000		3.130	.709	20000
	3.000	-	-	RA790-076C8S2-22M	3	-	-	1	2.3	3.150	6.000		4.740	.709	14000
		HSK													
22	2.000	-	-	RA790-050HA06S2-22M	3	-	-	1	2.8	2.480	4.000		2.980	.709	20000
		Cylindrical shank								dm_m					
16	1.000	RA790-025O25S2-16L	2	-	-	-	-	1	1.4	1.000		6.000	2.000	.472	60300
	1.250	-	-	RA790-032O25S1-16M	3	-	-	1	1.7	1.000		6.500	2.500	.472	49900
	1.250	RA790-032O25S2-16L	2	-	-	-	-	1	2.1	1.000		6.500	2.500	.472	49900
	1.500	-	-	RA790-038O32S1-16M	3	-	-	1	2.3	1.250		5.250	1.378	.472	43900
22	1.500	-	-	RA790-038O32S2-22M	2	-	-	1	2.1	1.250	5.118	5.118	3.000	.709	37500
	2.000	RA790-050O32S2-22L	2	-	-	-	-	1	3.8	1.250	6.500	6.500	2.000	.709	31400
		Weldon													
16	1.000	RA790-025M25S2-16L	2	-	-	-	-	1	1.0	1.000	2.860	4.000	1.500	.472	60300
	1.250	RA790-032M32S2-16L	2	-	-	-	-	1	1.9	1.250	2.860	4.000	1.500	.472	49900
	1.500	RA790-038M32S2-16L	2	-	-	-	-	1	2.1	1.250	3.360	4.500	1.750	.472	43900
22	1.500	-	-	RA790-038M38S2-22M	2	-	-	1	3.0	1.500	5.118	6.310	3.238	.709	37500
	2.000	RA790-050M32S2-22L	2	-	-	-	-	1	4.1	1.250	3.750	4.890	2.000	.709	31400
		Arbor													
16	2.000	-	-	RA790-050R19S1-16M	3	-	-	0	1.4	.750	1.580			.472	28000
22	2.500	-	-	RA790-063R25S1-22M	3	-	-	0	2.3	1.000	2.250			.709	24400
	3.000	-	-	RA790-076R25S1-22M	3	-	-	0	2.6	1.000	2.250			.709	24400
	4.000	-	-	RA790-101R38S1-22M	4	-	-	0	5.1	1.500	2.480			.709	20000
	5.000	-	-	-	-	RA790-127R38S1-22H	5	0	7.5	1.500	2.480			.709	20000

[1] 0 = no coolant, 1 = coolant through center

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

Warning!

At elevated RPMs, the weight of the insert and clamping elements increases rapidly. It is recommended that all high speed machining take place only in a well protected machine tool setup.

Make sure, before mounting the insert, that the insert and its seat are in perfect condition and free from burrs or any particles which may seriously affect the clamping arrangement.

Correct insert clamping is achieved by tightening the 16 mm screw using a torque of 26 in.lbs and the 22 mm insert with 43 in.lbs.

Note: A 0.67 ounce insert weighs 772 pounds at 37500 rpm!

= Even pitch

= Differential pitch


D63


D63


G6

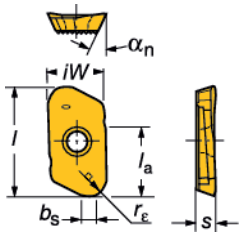

D2

J3

Inserts for CoroMill® 790

Light -PL
Medium -NM

Light -NL



Dimensions, mm (inch)

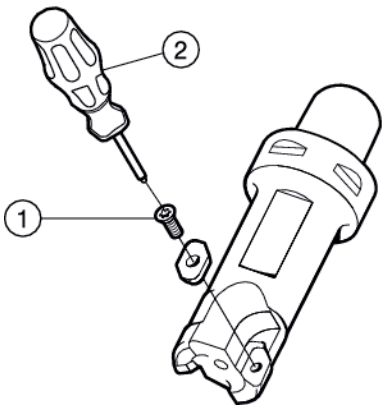
Size	*iW*	*l*	*s*
16	11 (.433)	20 (.787)	4 (.157)
22	16 (.630)	29 (1.142)	5 (.197)

l_a = max recommended cutting depth

				P		M		N	S		H	Dimensions, millimeter, inch (mm, in.)						
				GC	GC	GC	GC	-	GC	GC	GC							
				1010	1030	1010	1030	H13A	1010	1030	1010	l_a mm	l_a in.	b_s mm	b_s in.	r_ε mm	r_ε in.	α_n°
	□	Ordering code																
Light	16	R790-160405PH-NL						★				16	.630	1	.039	0.5	.020	20
		R790-160408PH-NL						★				16	.630	1	.039	0.8	.032	20
		R790-160416PH-NL						★				16	.630	1	.039	1.6	.063	20
		R790-160420PH-NL						★				16	.630	1	.039	2	.079	20
		R790-160424PH-NL						★				16	.630	1	.039	2.4	.094	20
		R790-160431PH-NL						★				16	.630	1	.039	3.1	.122	20
		R790-160440PH-NL						★				16	.630	1	.039	4	.157	20
		R790-160450PH-NL						★				16	.630			5	.197	20
		R790-160408PH-PL		☆	☆	☆	☆		☆	☆	☆	12	.472	1	.039	0.8	.032	20
		R790-160416PH-PL			☆		☆			☆		12	.472	1	.039	1.6	.063	20
		R790-160420PH-PL			☆		☆			☆		12	.472	1	.039	2	.079	20
		R790-160431PH-PL			☆		☆			☆		12	.472	1	.039	3.1	.122	20
		R790-160440PH-PL			☆		☆			☆		12	.472	1	.039	4	.157	20
		R790-160450PH-PL			☆		☆			☆		12	.472			5	.197	20
	22	R790-220508PH-PL		☆	☆	☆	☆		☆	☆	☆	18	.709	1	.039	0.8	.032	25
		R790-220516PH-PL			☆		☆			☆		18	.709	1	.039	1.6	.063	25
		R790-220520PH-PL			☆		☆			☆		18	.709	1	.039	2	.079	25
		R790-220531PH-PL			☆		☆			☆		18	.709	1	.039	3.1	.122	25
		R790-220540PH-PL			☆		☆			☆		18	.709	1	.039	4	.157	25
		R790-220550PH-PL			☆		☆			☆		18	.709	1	.039	5	.197	25
		R790-220564PH-PL			☆		☆			☆		18	.709			6.4	.252	25
Medium	16	R790-160405PH-NM						☆				12	.472	1	.039	0.5	.020	20
		R790-160408PH-NM						☆				12	.472	1	.039	0.8	.032	20
		R790-160416PH-NM						☆				12	.472	1	.039	1.6	.063	20
		R790-160420PH-NM						☆				12	.472	1	.039	2	.079	20
		R790-160424PH-NM						☆				12	.472	1	.039	2.4	.094	20
		R790-160431PH-NM						☆				12	.472	1	.039	3.1	.122	20
		R790-160440PH-NM						☆				12	.472	1	.039	4	.157	20
		R790-160450PH-NM						☆				12	.472			5	.197	20
	22	R790-220505PH-NM						☆				18	.709	1	.039	0.5	.020	25
		R790-220508PH-NM						☆				18	.709	1	.039	0.8	.032	25
		R790-220516PH-NM						☆				18	.709	1	.039	1.6	.063	25
		R790-220520PH-NM						☆				18	.709	1	.039	2	.079	25
		R790-220531PH-NM						☆				18	.709	1	.039	3.1	.122	25
		R790-220540PH-NM						☆				18	.709	1	.039	4	.157	25
		R790-220550PH-NM						☆				18	.709	1	.039	5	.197	25
		R790-220564PH-NM						☆				18	.709			6.4	.252	25
				P10	P30		M15	N15	S10	S15	H10							

D312 D305 D334 D2

Spare parts for CoroMill® 790



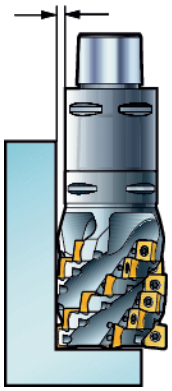
	1	2		
Insert size	Screw	Torque wrench (Torx Plus)	Torque value Nm (ft-lbs)	Molykote
16	5513 020-09	5680 100-06 (15IP)	3.0 (2.2)	5683 010-01
22	5513 020-07	5680 100-07 (20IP)	5.0 (3.7)	5683 010-01

CoroMill® 690

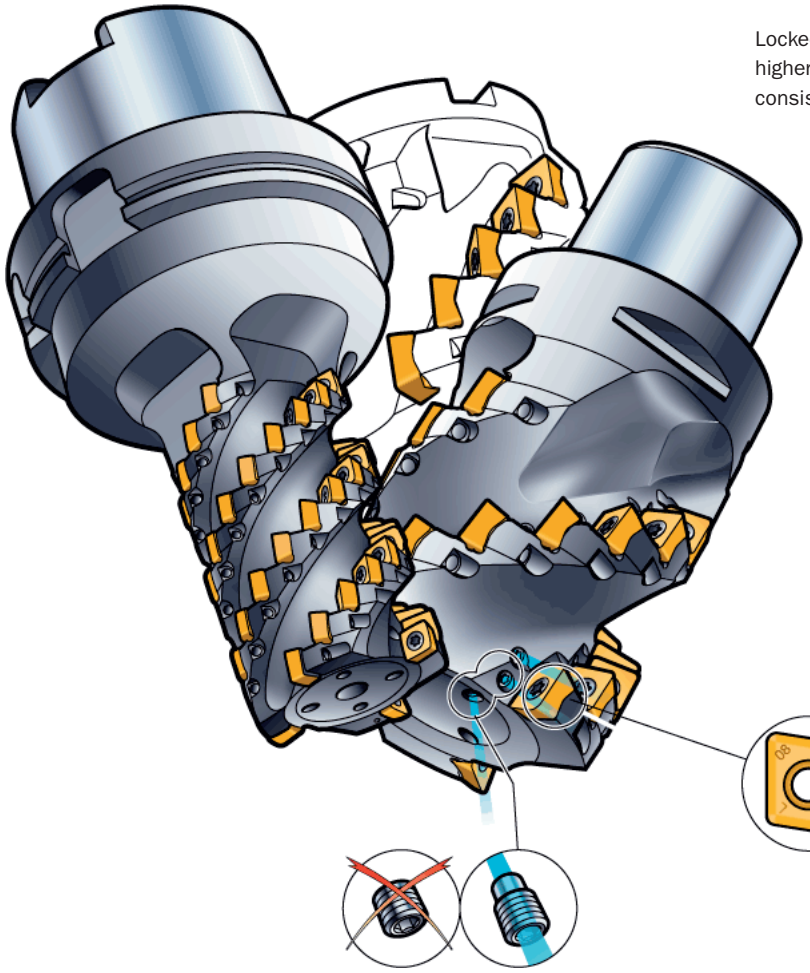
The cutting edge for titanium milling
40-100 mm (1.500-4.000 inch)

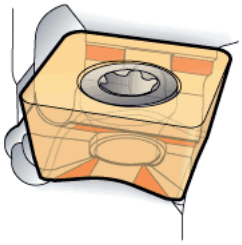
iLock™

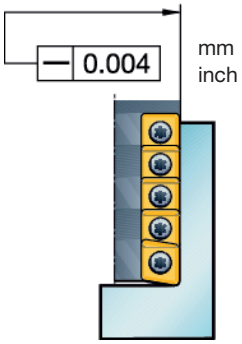
Oversized option



Locked-in precision with rigid stability, higher productivity from product consistency



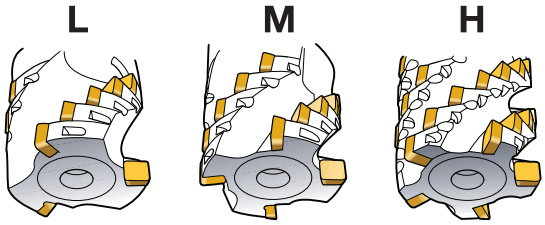




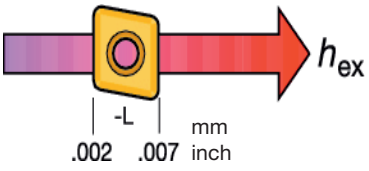
Marking

Alignment of inserts ensures a surface finish within 0.1 mm (.004 inch)

Pitch

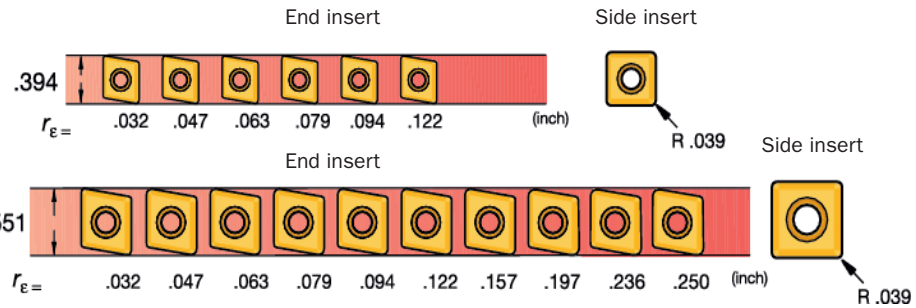


Feed rate recommendations



SL geometry optimized for titanium

2 insert sizes

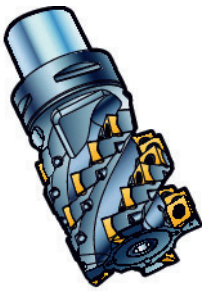


ISO application areas:

S

Long edge milling cutter

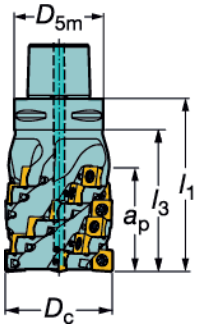
Diameter 40 - 100 mm



$\kappa_r = 90°$

Insert size
10, 14

Coromant Capto®



l_1 = programming length

Metric version

	D_c mm	Ordering code Coarse pitch	z_n/z_c	z_n/z_c	Close pitch	z_n/z_c	z_n/z_c	Extra close pitch	z_n/z_c	z_n/z_c	Coolant[1]	Dimensions kg	D_{5m}	l_1	l_3	Max a_p	n_{max}
		Coromant Capto															
10	40	-	-	-	-	-	-	690-040C6-1046H	12/2	-	1	0.8	63	83	49	46.0	5000
		-	-	-	-	-	-	690-040C6-1053H	12/2	-	1	1.0	63	95	55	53.0	5000
	44	-	-	-	-	-	-	690-044C4-1046H	18/3	-	1	0.8	40	82	62	46.0	5000
	50	-	-	-	-	-	-	690-050C5-1053H	21/3	-	1	1.0	50	90	70	53.0	5000
	54	-	-	-	-	-	-	690-054C5-1053H	21/3	-	1	1.1	50	90	90	53.0	5000
	63	-	-	-	-	-	-	690-063C6-10112H	60/4	-	1	2.9	63	156	134	112.0	5000
		-	-	-	690-063C6-1060M	-	24/3	-	-	-	1	2.1	63	100	78	60.0	5000
	66	-	-	-	-	-	-	690-066C6-10105H	56/4	-	1	3.0	63	150	150	105.0	5000
		-	-	-	-	-	-	690-066C6-1053H	28/4	-	1	2.1	63	92	92	53.0	5000
		-	-	-	690-066C6-1053M	-	21/4	-	-	-	1	2.1	63	95	73	53.0	5000
	80	-	-	-	-	-	-	690-080C8-10105H	70/5	-	1	4.4	80	153	120	105.0	5000
14	50	690-050C6-1449L	8/2	-	-	-	-	-	-	-	1	1.2	63	90	52	49.0	5000
	54	-	-	-	-	-	-	690-054C5-1461H	15/3	-	1	0.9	50	97	77	61.0	5000
	63	-	-	-	-	-	-	690-063C6-1461H	15/3	-	1	1.7	63	103	79	61.0	5000
	66	-	-	-	-	-	-	690-066C6-1449H	12/3	-	1	1.7	63	90	90	49.0	5000
	80	-	-	-	690-080C8-1473M	-	18/3	690-080C8-1473H	24/4	-	1	4.2	80	128	92	73.0	5000
	84	690-084C8-1461L	-	15/3	-	-	-	-	-	-	1	4.2	80	112	82	61.0	5000
		-	-	-	690-084C8-1461M	-	20/4	-	-	-	1	4.2	80	110	80	61.0	5000
		-	-	-	-	-	-	690-084C8-1484H	35/5	-	1	5.0	80	132	132	84.0	5000
	100	-	-	-	690-100C10-1473M	-	20/4	-	-	-	1	6.8	100	130	90	73.0	5000
		-	-	-	690-100C8-14108M	36/4	-	-	-	-	1	6.5	80	160	127	108.0	5000
		690-100C8-1473L	-	18/3	-	-	-	-	-	-	1	6.5	80	124	85	73.0	5000

[1] 1 = coolant through center

Note: Add 2 additional jet nozzles or plug screws per flute to load the cutter.

= Even pitch

= Differential pitch

z_n = Total number of side inserts in the cutter
z_c = Number of flutes/end inserts

 J2

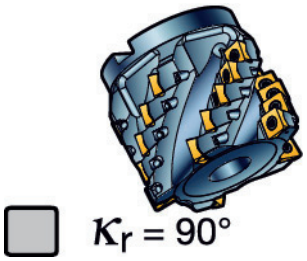
 G6

 D69

 D69

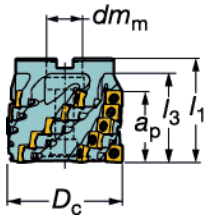
Long edge milling cutter

Diameter 40 - 100 mm

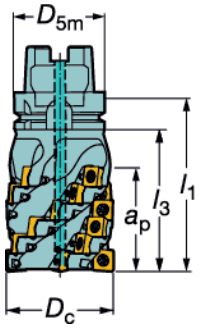


$\kappa_r = 90°$

Arbor



HSK



Insert size
10, 14

l_1 = programming length

Metric version

		Ordering code	z_n/z_c	z_n/z_c		z_n/z_c	z_n/z_c		z_n/z_c	z_n/z_c		Dimensions					
	D_c mm	Coarse pitch			Close pitch			Extra close pitch			Coolant[1]	kg	D_{5m}	l_1	l_3	Max a_p	n_{max}
		HSK															
10	40	-	-	-	-	-	-	690-040HA06-1046H	12/2	-	1	1.2	63	104	48	46.0	5000
	63	-	-	-	690-063HA06-1060M	24/3	-	-	-	-	1	1.9	63	120	94	60.0	5000
		-	-	-	-	-	-	690-063HA12-10105H	56/4	-	1	6.8	125	180	110	105.0	5000
	80	-	-	-	690-080HA10-10105M	56/4	-	-	-	-	1	6.1	100	180	110	105.0	5000
	100	-	-	-	690-100HA10-10105M	56/4	-	-	-	-	1	8.0	100	180	151	105.0	5000
14	50	690-050HA06-1449L	8/2	-	-	-	-	-	-	-	1	1.4	63	110	52	49.0	5000
	80	-	-	-	-	-	-	690-080HA12-1484H	24/4	-	1	7.5	125	162	88	84.0	5000
	100	-	-	-	690-100HA12-14108M	40/4	-	-	-	-	1	7.0	125	185	112	108.0	5000
		Arbor															
10	50	-	-	-	-	-	-	690-050Q22-1046H	18/3	-	0	1.0	22	75	55	46.0	5000
	63	-	-	-	690-063Q27-1046M	-	18/2	-	-	-	0	1.5	27	80	60	46.0	5000
14	63	-	-	-	-	-	-	690-063Q27-1449H	12/3	-	0	0.8	27	80	60	49.0	5000
	80	-	-	-	690-080Q32-1461M	-	15/3	-	-	-	0	4.2	32	98	68	61.0	5000
	100	-	-	-	-	-	-	690-100Q32-1461H	25/5	-	0	6.2	32	90	90	61.0	5000

[1] 0 = no coolant, 1 = coolant through center

Note: Add 2 additional jet nozzles or plug screws per flute to load the cutter.

= Even pitch

= Differential pitch

z_n = Total number of side inserts in the cutter
z_c = Number of flutes/end inserts


J2

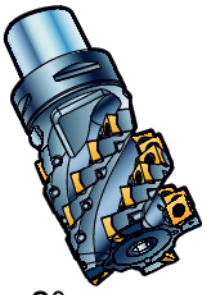

G6


D69


D69

Long edge milling cutter

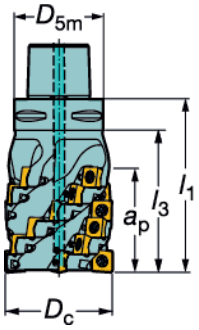
Diameter 1.500 - 4.000 inch



0°

Insert size
10, 14

Coromant Capto®

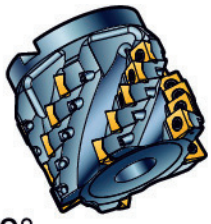


l_1 = programming length

Inch version

	D_c inch	Ordering code Coarse pitch	z_n/z_c	z_n/z_c	Close pitch	z_n/z_c	z_n/z_c	Extra close pitch	z_n/z_c	z_n/z_c	Coolant[1]	Dimensions, inch lbs	D_{5m}	l_1	l_3	Max a_p	n_{max}
		Coromant Capto															
10	1.500	-	-	-	-	-	-	A690-038C6-1046H	12/2	-	1	1.8	2.480	3.268	1.890	1.811	5000
	2.000	-	-	-	-	-	-	A690-051C5-1060H	24/3	-	1	2.4	1.968	3.937	3.937	2.362	5000
		-	-	-	-	-	-	A690-051C6-10105H	42/3	-	1	3.7	2.480	5.906	4.213	4.134	5000
	2.500	-	-	-	-	-	-	A690-063C6-1060H	32/4	-	1	4.6	2.480	3.937	3.032	2.362	5000
		-	-	-	A690-063C6-1060M	-	24/3	-	-	-	1	4.6	2.480	4.016	3.150	2.362	5000
	3.000	-	-	-	A690-076C10-10105M	56/4	-	-	-	-	1	15.4	3.937	6.496	4.252	4.134	5000
		-	-	-	-	-	-	A690-076C6-1075H	50/5	-	1	7.1	2.480	4.567	4.567	2.953	5000
14	2.000	-	-	-	-	-	-	A690-051C6-1449H	12/2	-	1	2.7	2.480	3.543	2.126	1.929	5000
	2.500	-	-	-	-	-	-	A690-063C6-1461H	15/3	-	1	3.5	2.480	4.016	2.953	2.402	5000
	3.000	-	-	-	-	-	-	A690-076C6-1473H	24/4	-	1	6.8	2.480	4.803	4.803	2.874	5000
	4.000	A690-101C8-1473L	-	15/3	-	-	-	-	-	-	1	14.3	3.150	4.882	3.346	2.874	5000

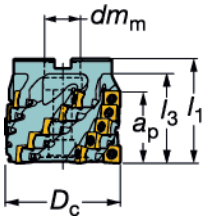
[1] 1 = coolant through center
Note: Add 2 additional jet nozzles or plug screws per flute to load the cutter.



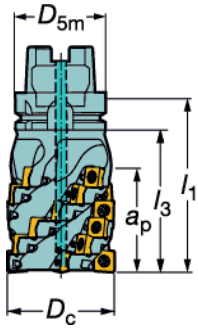
0°

Insert size
10 , 14

Arbor



HSK



l_1 = programming length

Inch version

	D_c inch	Ordering code Coarse pitch	z_n/z_c	z_n/z_c	Close pitch	z_n/z_c	z_n/z_c	Extra close pitch	z_n/z_c	z_n/z_c	Coolant[1]	Dimensions, inch lbs	D_{5m}	l_1	l_3	Max a_p	n_{max}
		HSK															
10	3.000	-	-	-	A690-076HA10-10105M	56/4	-	-	-	-	1	16.5	3.937	7.087	4.331	4.134	5000
14	3000	-	-	-	A690-076HA12-1484M	18/3	-	-	-	-	1	16.5	125	6.378	3.543	3.307	5000
	4.000	A690-101HA10-1473L	-	15/3	-	-	-	-	-	-	1	14.3	3.937	5.433	4.291	3.780	5000
	4.000	-	-	-	A690-101HA12-1496M	28/4	-	-	-	-	1	16.5	125	6.496	3.937	3.780	5000
		Arbor															
10	2.000	-	-	-	-	-	-	A690-051R19-1046H	18/3	-	0	2.2	.750	2.992	2.205	1.811	5000
	3.000	-	-	-	-	-	-	A690-076R31-10105H	70/5	-	0	10.1	1.250	5.906	4.980	4.134	5000

[1] 0 = no coolant, 1 = coolant through center
Note: Add 2 additional jet nozzles or plug screws per flute to load the cutter.

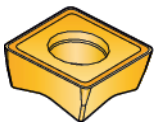
= Even pitch
= Differential pitch

z_n = Total number of side inserts in the cutter z_c = Number of flutes/end inserts

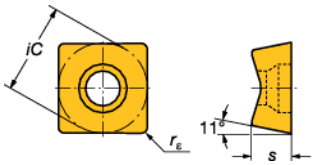
 J2
 G6
 D69
 D69

SANDVIK Coromant

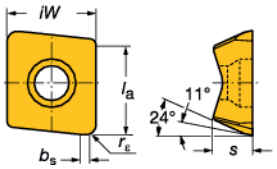
Inserts for CoroMill® 690 long edge cutter



P-SL
Side insert



E-SL
End insert



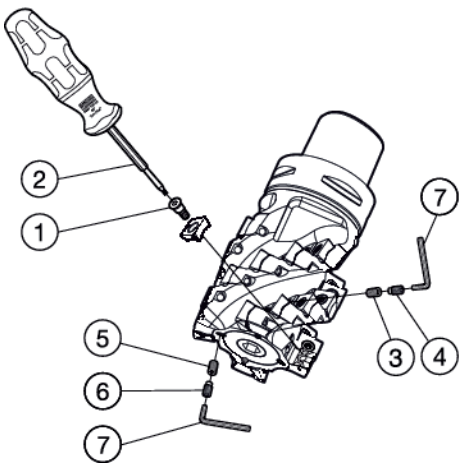
Dimensions, mm (inch)

Size	*iC*	*iW*	l_a	*s*
10	10 (.394)	10.01(.394)	10 (.394)	5.2 (.205)
14	14.5 (.571)	14.5 (.571)	14.75 (.581)	6.35 (.250)

	Insert size	Ordering code	S GC 1030	S GC 2040	S GC S30T	S GC S40T	b_s mm	b_s in.	r_ε mm	r_ε in.
			Dimensions, millimeter, inch (mm, in.)							
Light	10	690-100510M-P-SL	★	☆	★	★			1.0	.039
	14	690-140610M-P-SL	★	☆	★	★			1.0	.039
	10	690-100508M-E-SL	★	☆	★	★	1.0	.039	0.8	.032
		690-100512M-E-SL	☆	☆	★	★	1.0	.039	1.2	.047
		690-100516M-E-SL	★	☆	★	★	1.0	.039	1.6	.063
		690-100520M-E-SL	☆	☆	★	★	1.0	.039	2.0	.079
		690-100524M-E-SL	☆	☆	★	★	1.0	.039	2.4	.094
		690-100531M-E-SL	☆	☆	★	★	1.0	.039	3.1	.122
	14	690-140608M-E-SL	★	☆	★	★	1.0	.039	0.8	.032
		690-140612M-E-SL	☆	☆	★	★	1.0	.039	1.2	.047
		690-140616M-E-SL	★	☆	★	★	1.0	.039	1.6	.063
		690-140620M-E-SL	☆	☆	★	★	1.0	.039	2.0	.079
		690-140624M-E-SL	☆	☆	★	★	1.0	.039	2.4	.094
		690-140631M-E-SL	☆	☆	★	★	1.0	.039	3.1	.122
		690-140640M-E-SL	☆	☆	★	★	1.0	.039	4.0	.157
		690-140650M-E-SL	☆	☆	★	★	1.0	.039	5.0	.197
		690-140660M-E-SL	☆	☆	★	★	1.0	.039	6.0	.236
		690-140664M-E-SL	☆	☆	★	★	1.0	.039	6.35	.250
			S15	S30	S25	S35				

★= First choice

Spare parts



□	Insert screw	Key (Torx Plus)	Torque value Nm	Torque value In-lbs	Torque wrench[2]
10	5513 020-68	5680 046-02 (15IP)	3.0	26	5680 100 06 (15IP)
14	5513 020-55	5680 046-06 (20IP)	5.0	44	5680 100-07 (20IP)

Coolant holes

Cutter dia	3[2] / 5[1] Plug screw	4 / 6 Nozzle[2] (dia 1.0 mm)	7 Key (mm)[2]
40-44 mm / 1.500 inch	3214 010-202	5691 026-13	174.1-862(1.5)
50-100 mm (2.000-4.000 inch)	3214 010-253	5691 026-03	170.3-864(2.0)[3]

Optional nozzles (to be ordered separately)

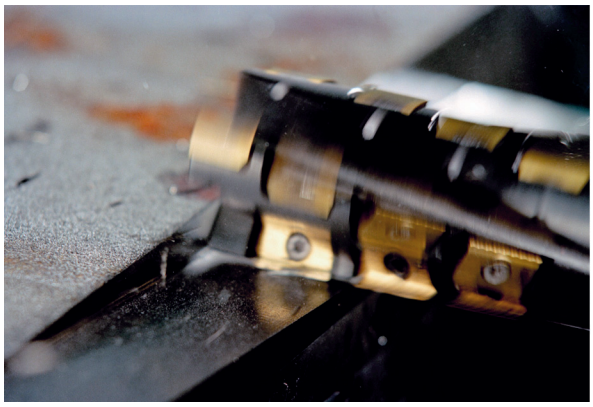
Cutter dia 40-44 mm / 1.500 inch		Cutter dia 50 mm / 2.000 inch	
Ordering code	Hole diameter, mm	Ordering code	Hole diameter, mm
5691 026-11	0.6	5691 026-01	0.6
5691 026-12	0.8	5691 026-02	0.8
5691 026-13	1.0	5691 026-03	1.0
5691 026-14	1.2	5691 026-04	1.2
5691 026-15	1.4	5691 026-05	1.4

1) Delivered with the tool
2) Optional part delivered to separate order.
3) No torque required

D312 D305

Coromant Finishing Long Edge Cutter

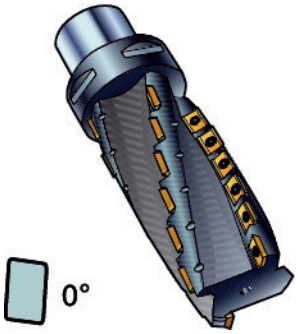
Superior surface finish from an indexable long edge



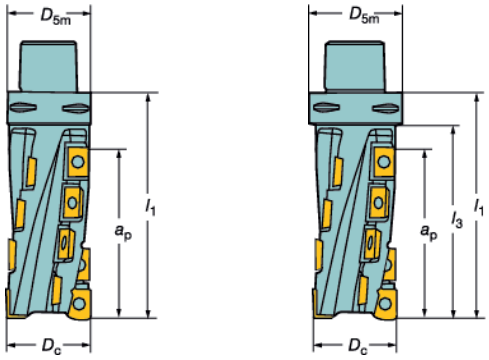
- Choose from many mounting options. Cutting depth a_p 4.00- 6.00 inch (100 - 150 mm) depending on diameter
- Precision tolerance cutter body and unique insert cutting edge produce solid/ brazed tool surface finish
- NO MISMATCH BETWEEN INSERTS
- Superior surface finish
- Reduced inventory costs
- Hassle-free machining
- Low power consumption

Coromant Finishing Long Edge Cutter

***D*c 2.000-3.000 inch / 50, 80 mm (19 mm side/18 mm end insert)**



Coromant Capto®



Metric version

D_c mm	Ordering code Coarse pitch	z_n/z_c		Dimensions D_{5m}	l_1	l_3	Max a_p
	Coromant Capto						
50	R215-050C5-100L	16/2	-	50	141.5	121.5	100
80	R215-080C8-150L	24/2	-	80	200		150

Inch version

D_c inch	Ordering code Coarse pitch	z_n/z_c		Dimensions, inch D_{5m}	l_1	l_3	Max a_p
	Coromant Capto						
2.000	RA215-051C5-102L	16/2	-	1.968	5.821		4.000
3.000	RA215-076C8-152L	25/2	-	3.150	7.874	6.690	6.000

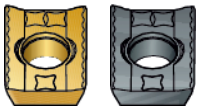
= Even pitch

= Differential pitch

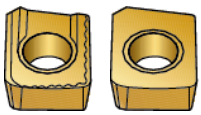
z_n= Number of insert in the cutter Zn = 16
z_c= Effective number of rows Zc = 2

 D71
 D71
 G6
 D2

Inserts for Coromant finishing long edge cutter

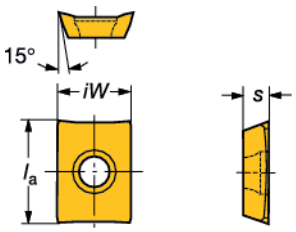


-ML -AL
Side insert

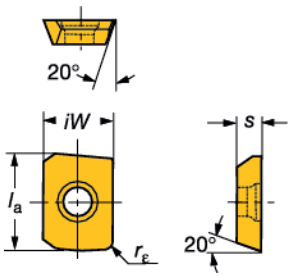


-ML2/PL2 -2
End insert

Side insert
LDHT 19...



End insert
LEHW 18.../LEHT 18...

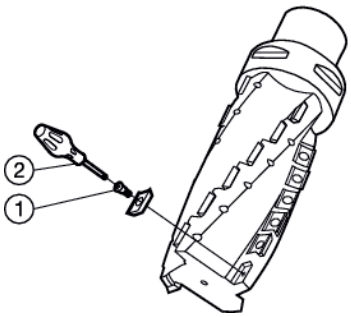


Radius inserts

Note!
Intermediate radii and non-standard grades are delivered on request as engineered inserts.

	Insert size	Ordering code	P GC 1025	P GC 1030	M GC 1025	N GC 1025	N GC B28C	S GC 1025	S GC 1030	H GC 1025	Dimensions, millimeter, inch (mm, in.) l_a mm	l_a in.	s mm	s in.	iW mm	iW in.	r_ε mm	r_ε in.
Light	18	LEHT 18 04 16R-ML2					★				19	.748	4.75	.187			1.6	.063
		LEHT 18 04 16R-PL2		★					☆		19	.748	4.75	.187			1.6	.063
		LEHW 18 04 16R-2	☆		☆	☆		☆		☆	19	.748	4.75	.187			1.6	.063
	19	LDHT 19 04 00-ML	☆		☆	☆		☆		☆	19.1	.752	4.75	.187	13.77	.542	0.2	.008
		LDHT 19 04 00-PL		★					☆		19.1	.752	4.75	.187	13.77	.542	0.2	.008
			P10	P30	M15	N15		S15	S15	H15								

Spare parts



Cutter	1	2				
Insert size						
	Insert screw	Wrench (Torx Plus)	Torque value Nm (in-lbs)	Torque wrench[1]	Molykote	
RA215 18/19	5513 020-50	5680 046-06 (20IP)	5.0 (44)	5680 100-07	5683 010-01	

[1] Accessories, must be ordered separately.

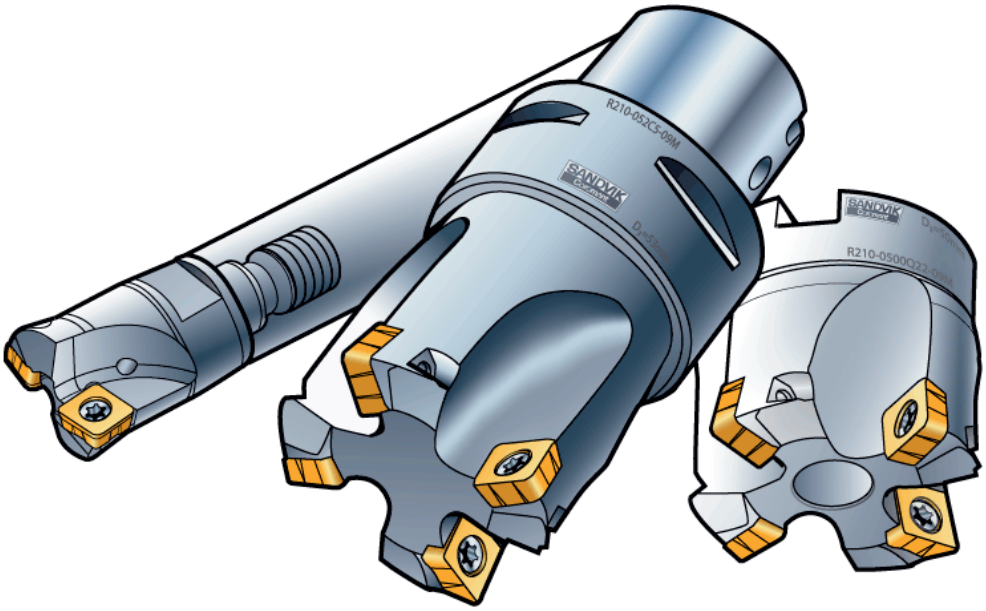
D312 D305 D334 D2

CoroMill® 210

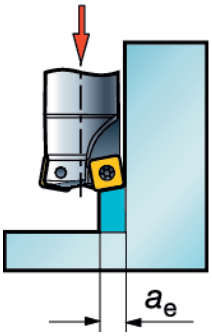
Versatile cutter for both high feed facemilling and plunge milling

Highly productive roughing cutter

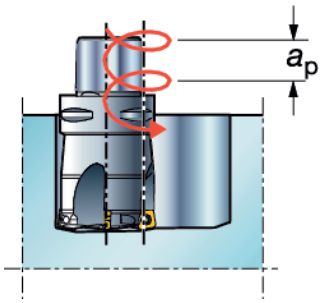
Diameter 25 - 160 mm (1.000 - 6.000 inch)



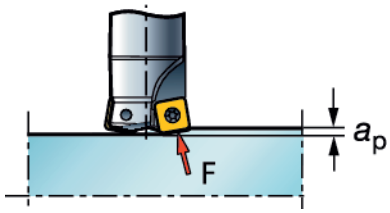
Plunge milling



High feed helical interpolation



High feed facemilling



10° entering angle results in favorable cutting forces directed towards the spindle.

Dimensions, mm (inch)

/	a_p	a_e
09	1.2 (.047)	8 (.315)
14	2.0 (.079)	13 (.512)

Tailor Made

Tool options designed to individual customer requirements are available. For information on our Tailor Made program see page J3.

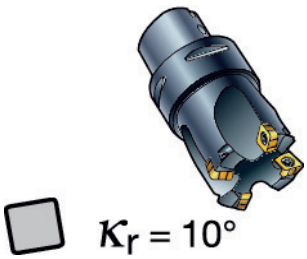
ISO application areas:

P M K S H

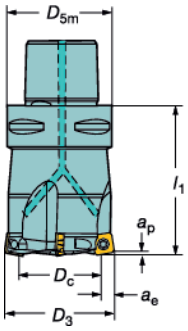
SANDVIK Coromant

High feed and plunge mill

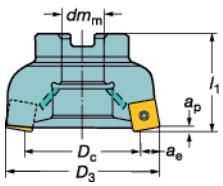
Diameter 25 - 160 mm



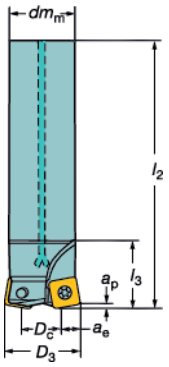
Coromant Capto®



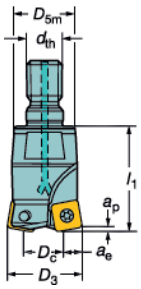
Arbor



Cylindrical



Threaded coupling



l_1 = programming length

Metric version

		Ordering code							Dimensions								
	D_3	Close pitch	⊙	⊙	Extra close pitch	⊙	⊙	Coolant[1]	kg	D_c	D_{5m}	dm_m	l_1	l_2	l_3	Max a_p	a_e max	n_{max}[2]
		Coromant Capto																
09	36	R210-036C3-09M	2	-	R210-036C3-09H	3	-	1	0.5	21.9	32		50			1.2	8	30900
	42	R210-042C4-09M	-	3	R210-042C4-09H	4	-	1	0.8	27.9	40		60			1.2	8	27600
	52	R210-052C5-09M	-	4	R210-052C5-09H	5	-	1	1	37.9	50		70			1.2	8	24000
	54	-	-	-	R210-054C5-09H	5	-	1	1	39.9	50		70			1.2	8	23600
	66	R210-066C6-09M	-	6	-	-	-	1	1.6	51.9	63		72			1.2	8	21300
14	52	R210-052C5-14M	-	3	R210-052C5-14H	4	-	1	0.9	28.0	50		70			2.0	13	20800
	54	-	-	-	R210-054C5-14H	4	-	1	1	30.0	50		70			2.0	13	23600
	66	R210-066C6-14M	-	4	R210-066C6-14H	5	-	1	1.6	42.0	63		72			2.0	13	17700
	82	R210-082C8-14M	-	5	R210-082C8-14H	6	-	1	3	58.0	80		80			2.0	13	15100
	86	-	-	-	R210-086C8-14H	6	-	1	3.2	62.0	80		80			2.0	13	14700
		Cylindrical shank																
09	25	R210-025A20-09M	2	-	-	-	-	1	0.4	10.9		20		180	35	1.2	8	17200
	32	R210-032A25-09M	2	-	R210-032A25-09H	3	-	1	0.8	17.9		25		210	45	1.2	8	11000
	35	-	-	-	R210-035A32-09H	3	-	1	1	20.9		32		210	45	1.2	8	11000
	42	R210-042A32-09M	-	3	R210-042A32-09H	4	-	1	1.5	27.9		32		250	50	1.2	8	8000
		Arbor																
09	50	R210-050Q22-09M	-	4	R210-050Q22-09H	5	-	1	0.5	35.9		22	50			1.2	8	24500
	63	R210-063Q22-09M	-	5	R210-063Q22-09H	6	-	1	0.6	48.9		22	50			1.2	8	21800
	63	R210-063Q27-09M	-	5	-	-	-	1	0.7			27	50			1.2	8	21800
14	63	R210-063Q22-14M	-	4	R210-063Q22-14H	5	-	1	0.7	39.0		22	50			2.0	13	18300
	63	R210-063Q27-14M	-	4	-	-	-	1	0.7			27	50			2.0	13	18300
	80	R210-080Q27-14M	-	5	R210-080Q27-14H	6	-	1	1.2	56.0		27	50			2.0	13	15400
	100	R210-100Q32-14M	-	6	R210-100Q32-14H	7	-	1	1.6	76.0		32	50			2.0	13	13400
	125	R210-125Q40-14M	-	7	-	-	-	1	3.3	101.		40	63			2.0	13	11400
	160	R210-160Q40-14M	-	8	-	-	-	1	5.3	136.		40	63			2.0	13	10400
		CIS Arbor																
09	80	RA210-080J31-09M	-	7	-	-	-	1	1.2	65.9		31.75	63			1.2	8	18800
14	80	RA210-080J31-14M	-	5	-	-	-	1	1.2	56.0		31.75	63			2.0	13	15400
		Threaded coupling												d_{th}				
09	25	R210-025T12-09M[3]	2	-	-	-	-	1	0.2	10.9			35	M12		1.2	8	
	32	R210-032T16-09M[3]	2	-	-	-	-	1	0.3	17.9			45	M16		1.2	8	
	35	-	-	-	R210-035T16-09H	3	-	1	0.4	20.9			50	M16		1.2	8	
	42	-	-	-	R210-042T16-09H	4	-	1	0.3	27.9			50	M16		1.2	8	

1) 0 = no coolant, 1 = coolant through center

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

3) Max. rpm values, $n$max, are not given for threaded shank design as they are always used with long extensions.

⊙ = Even pitch

⊙ = Differential pitch


D75


D75

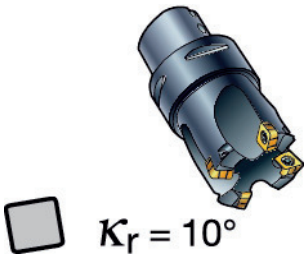

G6


D2

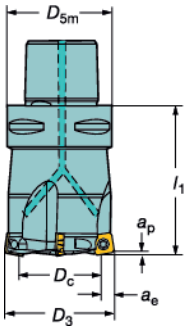
J3

High feed and plunge mill

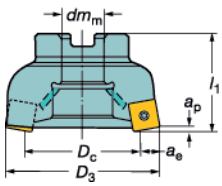
Diameter 1.000 - 6.000 inch



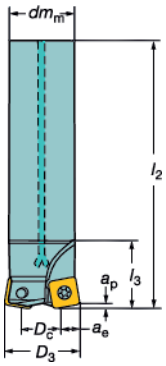
Coromant Capto®



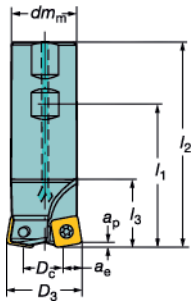
Arbor



Cylindrical



Weldon



l_1 = programming length

Inch version

		Ordering code							Dimensions, inch								
	D_3	Close pitch			Extra close pitch			Coolant[1]		D_c	D_{5m}	dm_m	l_1	l_2	l_3	Max a_p	a_e max	n_{max}[2]
		Coromant Capto																
09	1.500	RA210-038C3-09M	-	3	-	-	-	1	1.3	.945	C3		1.969			.047	.315	29600
	2.000	RA210-051C5-09M	-	4	RA210-051C5-09H	5	-	1	2.2	1.445	C5		2.756			.047	.315	24800
	2.500	RA210-063C5-09M	-	5	-	-	-	1	2.9	1.945	C5		2.756			.047	.315	21700
14	2.000	RA210-051C5-14M	-	3	-	-	-	1	2.6	1.055	C5		2.756			.079	.512	20800
	2.000	-	-	-	RA210-051C5-14H	4	-	1	2.6	1.055	C5		2.756			.079	.512	20800
	2.500	RA210-063C5-14M	-	4	RA210-063C5-14H	5	-	1	2.9	1.555	C5		2.756			.079	.512	18200
		Cylindrical shank																
09	1.000	RA210-025O25-09M	2	-	-	-	-	1	4.2	.445		1.000		10.000	2.500	.047	.315	7400
	1.250	RA210-032O25-09M	2	-	RA210-032O25-09H	3	-	1	4.6	.693		1.000		10.000	2.000	.047	.315	7400
	1.378	-	-	-	RA210-035O32-09H	3	-	1	5.1	.821		1.250		10.000	2.000	.047	.315	7400
	1.500	RA210-038O32-09M	-	3	RA210-038O32-09H	4	-	1	3.3	.945		1.250		10.000	2.000	.047	.315	7400
		Weldon																
09	1.000	RA210-025M25-09M	2	-	-	-	-	1	1.8	.445		1.000	4.000	5.142	2.000	.047	.315	40200
	1.250	RA210-032M32-09M	2	-	-	-	-	1	2.2	.693		1.250	3.141	4.280	2.000	.047	.315	33900
	1.378	-	-	-	RA210-035M32-09H	3	-	1	2.4	.821		1.250	3.141	4.280	2.000	.047	.315	33900
	1.500	RA210-038M32-09M	-	3	-	-	-	1	3.1	.945		1.250	4.500	5.900	2.500	.047	.315	28500
	1.654	-	-	-	RA210-042M38-09H	4	-	1	3.7	1.020		1.500	4.500	5.639	2.500	.047	.315	28500
		Arbor																
09	2.000	RA210-051R19-09M	-	4	RA210-051R19-09H	5	-	1	1.1	1.445		.750	1.969			.047	.315	24800
	2.500	RA210-063R19-09M	-	5	-	-	-	1	1.5	1.945		.750	1.969			.047	.315	21700
14	2.500	RA210-063R19-14M	-	4	RA210-063R19-14H	5	-	1	1.5	1.555		.750	1.969			.079	.512	18200
	3.000	RA210-076R25-14M	-	5	RA210-076R25-14H	6	-	1	2.4	2.055		1.000	1.969			.079	.512	15900
	4.000	RA210-102R38-14M	-	6	RA210-102R38-14H	7	-	1	3.5	3.039		1.500	2.362			.079	.512	13300
	5.000	RA210-127R38-14M	-	7	-	-	-	1	6.0	4.055		1.500	2.480			.079	.512	11300
	6.000	RA210-152R38-14M	8	-	-	-	-	1	8.8	5.055		1.500	2.480			.079	.512	10600

1) 0 = no coolant, 1 = coolant through center

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

= Even pitch

= Differential pitch


D75


D75


G6


D2

J3

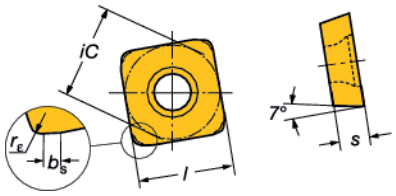
SANDVIK Coromant

Inserts for CoroMill® 210

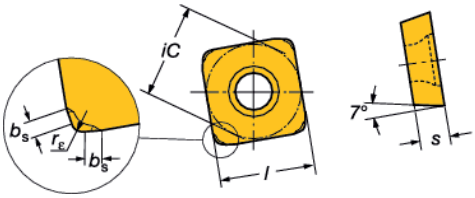
12M

14E

M-XM



E-XM



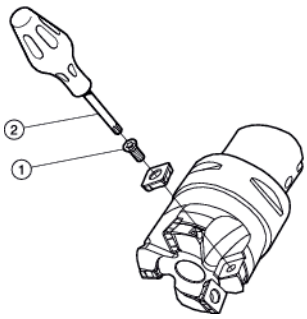
Dimensions, mm (inch)

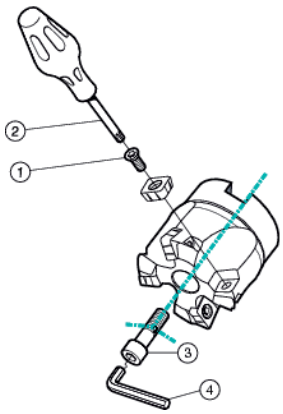
Size	E-xM		M-xM	
	l = *iC*	*s*	*l* = *iC*	*s*
09	9.5 (.374)	4.50 (.177)	9.4 (.370)	4.00 (.158)
14	14.6 (.575)	5.26 (.207)	14.5 (.571)	4.76 (.188)

	□	Ordering code	P							M				K			S						H				Dimensions, millimeter, inch (mm, in.)			
			GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	b_s mm	b_s in.	r_ε mm	r_ε in.
			1030	2030	2040	3040	4220	4230	4240	1030	1040	2030	2040	1020	3040	4220	1010	1030	2030	2040	S30T	S40T	1010	1030	3040	4220				
Medium	09	R210-09 04 12M-MM		☆	☆						☆	☆	★						★	☆							1.0	.039	1.2	.047
		R210-09 04 12M-PM	☆				☆	★	☆	☆					☆		☆	☆	☆		★	★	★	☆		☆	1.0	.039	1.2	.047
		R210-09 04 14E-KM				☆								★	☆											☆		0.8	.032	1.4	.055
		R210-09 04 14E-MM		☆	☆						☆	☆	★						★	☆								0.8	.032	1.4	.055
		R210-09 04 14E-PM	★				☆	☆	☆	☆						☆	☆	☆			★	★	★	☆			☆	0.8	.032	1.4	.055
Medium	14	R210-14 05 12M-KM				☆								☆	☆											☆		1.0	.039	1.2	.047
		R210-14 05 12M-MM		☆	☆						☆	☆	★						★	☆								1.0	.039	1.2	.047
		R210-14 05 12M-PM	☆				☆	★	☆	☆					☆		☆	☆	☆		★	★	★	☆		☆	1.0	.039	1.2	.047
		R210-14 05 14E-KM				☆								★	☆											☆		0.9	.035	1.4	.055
		R210-14 05 14E-MM		☆	☆						☆	☆	★						★	☆								0.9	.035	1.4	.055
		R210-14 05 14E-PM	★				☆	☆	☆	☆						☆	☆	☆			★	★	★	☆			☆	0.9	.035	1.4	.055
			P30	P25	P40	P20	P15	P25	P40	M15	M35	M25	M30	K20	K30	K25	S10	S15	S25	S30	S25	S35	H10	H10	H25	H25				

D312 D305 D334 D2

Spare parts for CoroMill® 210





Cutter			1	2				3	4
	Insert size	dm_m mm, inch	Insert screw	Key (Torx Plus)	Torque value Nm (in-lbs)	 Molykote	 Torque wrench[1]	Screw[2]	Key[1]
	09	–	5513 020-02	5680 046-02 (15IP)	3.0 (2.2)	5683 010-01	5680 100-06 (15IP)	–	–
	14	–	5513 020-50	5680 046-06 (20IP)	5.0 (3.7)	5683 010-01	5680 100-07 (20IP)	–	–
R210	–	**22**	–	–	–	–	–	5512 073-01	3021 010-080 (8.0)
	–	**27**	–	–	–	–	–	5512 073-02	3021 010-100 (10.0)
	–	**32**	–	–	–	–	–	5512 073-05	3021 010-140 (14.0)
	–	**125 - 160**	–	–	–	–	–	5512 098-01	5680 043-18 (50IP)
RA210	–	**.750**	–	–	–	–	–	5512 074-01	3021 011-516(5/16")
	–	**1.000**	–	–	–	–	–	5512 074-02	3021 011-380(3/8")
	–	**1.500**	–	–	–	–	–	5512 074-05	3021 011-580 (5/8")
	–	**1.500**[3]	–	–	–	–	–	5512 099-01	5680 043-18 (50IP)

[1] Accessories, must be ordered separately.
[2] Optimized screw: Low head/Small diameter
[3] For 5 and 6 inch dia cutters with dm_m = 1.500 inch

Feed recommendations for CoroMill® 210

Cutting data

Plunging

Feed values	f_z mm/tooth		f_z inch/tooth		f_z mm/tooth		f_z inch/tooth	
Insert size Tool overhang *iC*	<= 3 x D_3 Starting value	(min.- max.)	<= 3 x D_3 Starting value	(min.- max.)	> 3 x D_3 Starting value	(min.- max.)	> 3 x D_3 Starting value	(min.- max.)
9	0.15	(0.01-0.2)	.006	(.004-.008)	0.10	(0.08-0.15)	.004	(.003-.006)
14	0.20	(0.10-0.25)	.008	(.004-.010)	0.15	(0.10-0.20)	.006	(.004-.008)

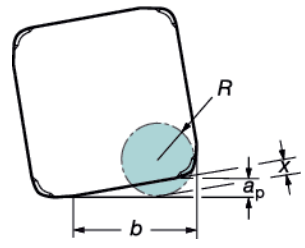
High feed machining

Speed and feed values, feed per tooth

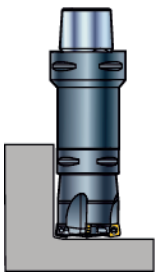
	Material CMC No	HB	Insert size 9 f_z mm/tooth f_z rec	f_z min - f_z max	Insert size 9 f_z inch/tooth f_z rec	f_z min - f_z max	Insert size 14 f_z mm/tooth f_z rec	f_z min - f_z max	Insert size 14 f_z inch/tooth f_z rec	f_z min - f_z max
P	**Unalloyed steel**									
	01.1/01.2	125-150	1.5	(0.4-2.0)	.060	(.016-.080)	2.0	(0.4-3.0)	.080	(.016-.118)
	Low alloy steel									
	02.1	175	1.5	(0.4-2.0)	.060	(.016-.080)	2.0	(0.4-3.0)	.080	(.016-.118)
	02.2	330	1.0	(0.4-1.5)	.040	(.016-.080)	1.5	(0.4-2.0)	.060	(.016-.080)
	High alloy steel									
	03.11	200	1.5	(0.4-1.7)	.060	(.016-.067)	2.0	(0.4-2.5)	.080	(.016-.098)
	03.21	300	1.0	(0.4-1.5)	.040	(.016-.059)	1.5	(0.4-2.0)	.060	(.016-.080)
M	**Stainless steel**									
	05.11	200	1.5	(0.4-1.7)	.060	(.016-.067)	2.0	(0.4-2.5)	.080	(.016-.098)
	05.21	200	1.2	(0.4-1.5)	.040	(.016-.060)	1.5	(0.4-2.0)	.060	(.016-.080)
K	**Gray cast iron**									
	08.2	245	1.5	(0.4-2.0)	.060	(.016-.080)	2.0	(0.4-3.0)	.080	(.016-.118)
	Nodular cast iron									
	09.2	250	1.5	(0.4-2.0)	.060	(.016-.080)	2.0	(0.4-3.0)	.080	(.016-.118)
S	**Heat resistant alloys**									
	20.22	350	0.8	(0.5-1.2)	.030	(.020-.047)	1.0	(0.5-1.5)	.040	(.020-.060)
	Titanium alloys									
	23.22	1050[1)]	0.8	(0.5-1.2)	.030	(.020-.047)	1.0	(0.5-1.5)	.040	(.020-.060)
H	**Hardened steel**									
	04.1	45-55	0.8	(0.4-1.2)	.030	(.016-.047)	1.0	(0.4-1.5)	.040	(.016-.118)

1) Rm = ultimate tensile strength measured in MPa.

Programming



iC	Dimensions, mm (inch) R	*b*	a_p	Uncut material x
9	2.5 (.098)	7.05 (.278)	1.2 (.047)	0.79 (.031)
14	3.5 (.138)	12.0 (.472)	2.0 (.079)	1.48 (.058)

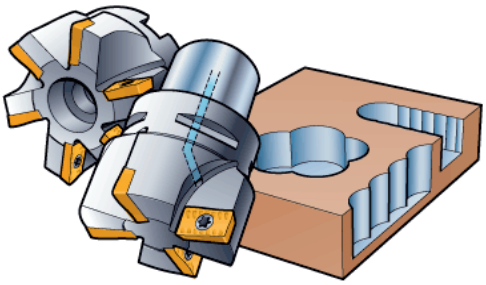


Caution needs to be taken when high feed milling against a steep wall. Reduce feed by 50%.

If recommended machining strategy for machining corners is not followed, feed rate has to be reduced by 50% when machining corners.

Coromant Plunge Cutter

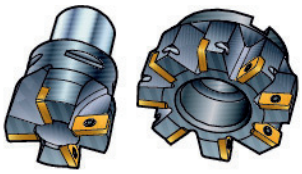
Extreme metal removal rates



- Axial milling
- Large radial depth of cut. Up to .850 inch (21.6 mm)
- Coromant Capto, for superior coupling strength and modularity
- Robust cutters designed to optimize MRR (Metal Removal Rates)
- High productivity
- Superior chip flow
- Low power consumption and low noise
- Low stress on machine spindle

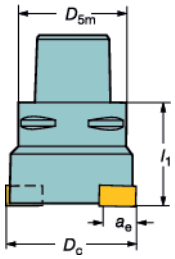
Note: Plunge cutter is not center cutting.

Diameter 80 – 160 mm
Diameter 3.000 - 8.000 inch

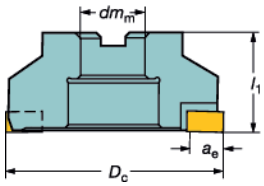


$\kappa_r = 92°$

Coromant Capto



Arbor



Metric version

		Ordering code			Dimensions				
	D_c	Close pitch			KG	D_{5m}	dm_m	l_1	a_e max
		Coromant Capto							
25	80	R215-A080C6-25M	4	-	3.0	63		61	21.6
	85	R215-A085C8-25M	5	-	4.0	80		92	21.6
		Arbor							
25	100	R215-A100Q32-25M	6	-	4.5		32	50	21.6
	125	R215-A125Q40-25M	8	-	6.5		40	63	21.6
	160	R215-A160Q40-25M	8	-	9.0		40	63	21.6

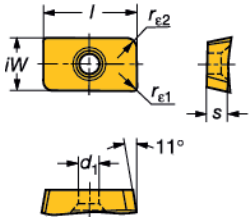
Inch version

		Ordering code			Dimensions, inch				
	D_c	Close pitch			Lbs	D_{5m}	dm_m	l_1	a_e max
		Coromant Capto							
25	3.000	RA215-A076C6-25M	4	-	2.4	2.480		2.390	.850
		Arbor							
25	4.000	RA215-A102R38-25M	6	-	3.5		1.500	2.375	.850
	5.000	RA215-A127R38-25M	8	-	6.6		1.500	2.375	.850
	6.000	RA215-A152R38-25M	8	-	11.5		1.500	2.375	.850
	8.000	RA215-A203R63-25M	12	-	13.7		2.500	2.480	.850

Note:
Bolt circle for cutters 8" and 10" = 4"

 D79
 D79
 G6
 D2

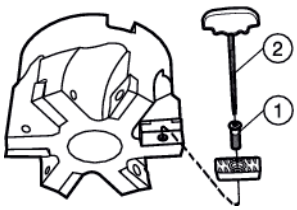
Inserts for Coromant plunge cutter



l_a = max recommended cutting depth

	Insert size	Ordering code	P					M			K			N	S		H	Dimensions, millimeter, inch (mm, in.)											
			GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC													
			1025	1030	4030	4230	4240	1025	1030	4240	4030	4230	4240	1025	1025	1030	1025	*l* mm	*l* in.	*s* mm	*s* in.	*iW* mm	*iW* in.	d_1 mm	d_1 in.	$r_{\varepsilon 1}$ mm	$r_{\varepsilon 1}$ in.	$r_{\varepsilon 2}$ mm	$r_{\varepsilon 2}$ in.
Medium	25	**LPMH 25 06 10-PM**	☆	☆	☆	☆	★	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	25.3	.996	6.35	.250	14.2	.562	5.51	.217	0.79	.031	2.44	.096
			P10	P30	P25	P25	P40	M15	M15	M40	K30	K30	K35	N15	S15	S15	H15												

Spare parts



Cutter		1	2			
	D_c mm (inch)	Screw	Key (Torx Plus)	Torque value Nm (in-lbs)	Molykote	Torque wrench[1]
R215	**80-160**	5513 016-01	5680 048-04 (20IP)	5.0	5683 010-01	5680 100-07
RA215	**(3.000-8.000)**			(44)		

[1] Accessories, must be ordered separately

D312 D305 D334 D2

CoroMill® 345

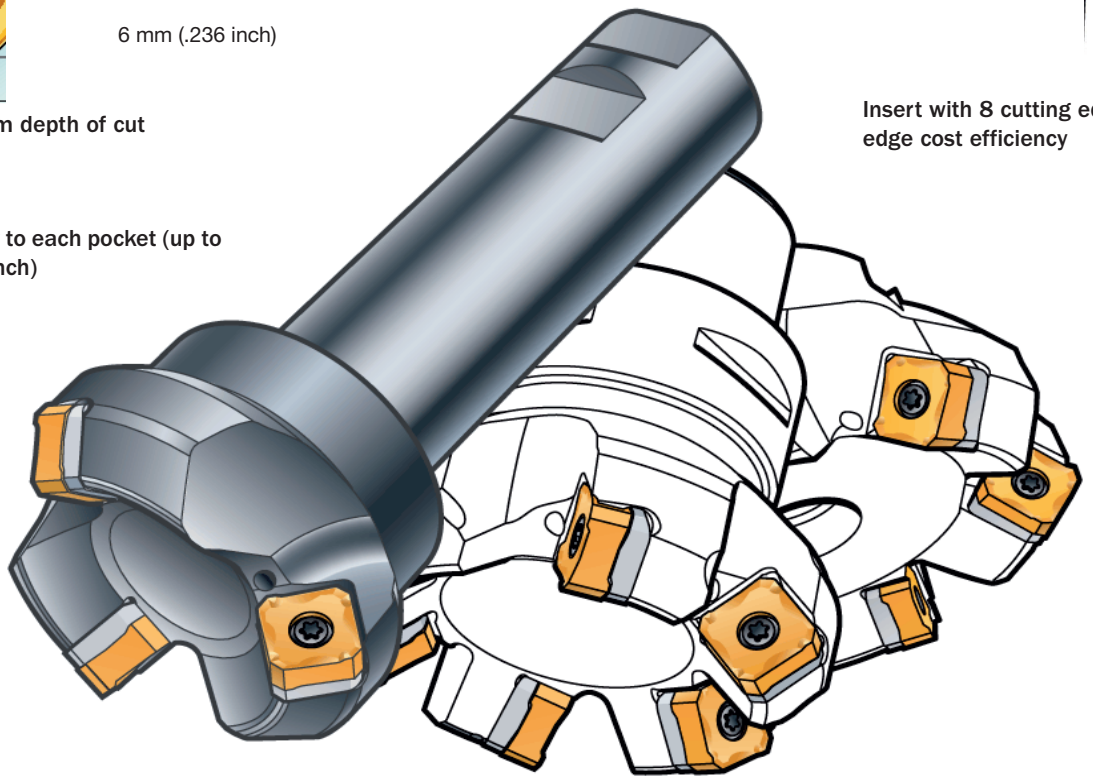
45 degree face mill
Diameter 40 - 250 mm (1.500 - 10.000 inch)

6 mm (.236 inch)

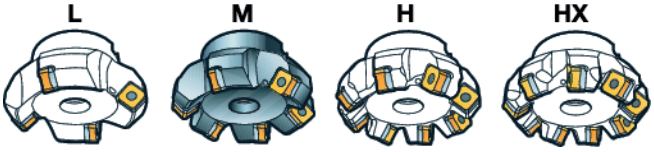
Maximum depth of cut

Insert with 8 cutting edges for great edge cost efficiency

Coolant supply to each pocket (up to ø127 mm, 5 inch)



Couplings: Arbor, Coromant Capto, Cylindrical, Weldon, CIS Arbor, (HSK)



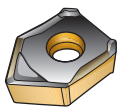
Choice of pitches

Unique design with fixed pocket and shim

Place shim in correct position

Pioneering shim technology

Geometries



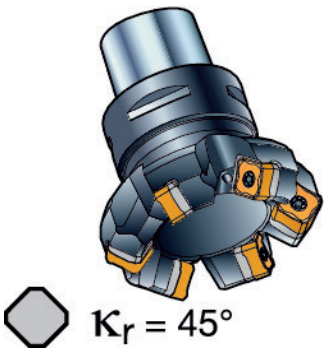
Wiper

Insert geometries -L, -M and -H and new E-PL

ISO application areas:

Face mill

Diameter 40 - 250 mm



$\kappa_r = 45°$

Metric version

D_c mm	Ordering code Coarse pitch			Close pitch			Extra close pitch		
	Coromant Capto								
40	345-040C4-13L	-	3	345-040C4-13M	-	4	-	-	-
50	345-050C5-13L	-	3	345-050C5-13M	-	4	345-050C5-13H	5	-
	345-050C6-13L	-	3	345-050C6-13M	-	4	345-050C6-13H	5	-
63	345-063C5-13L	-	4	345-063C5-13M	-	5	345-063C5-13H	6	-
	345-063C6-13L	-	4	345-063C6-13M	-	5	345-063C6-13H	6	-
80	345-080C6-13L	-	4	345-080C6-13M	-	6	345-080C6-13H	8	-
	-	-	-	345-080C8-13M	-	6	345-080C8-13H	8	-
100	-	-	-	345-100C8-13M	-	7	345-100C8-13H	10	-
	Cylindrical shank								
40	345-040A32-13L	-	3	345-040A32-13M	-	4	-	-	-
50	345-050A32-13L	-	3	345-050A32-13M	-	4	-	-	-
	Arbor								
40	345-040Q22-13L	-	3	345-040Q22-13M	-	4	-	-	-
50	345-050Q22-13L	-	3	345-050Q22-13M	-	4	345-050Q22-13H	5	-
63	345-063Q22-13L	-	4	345-063Q22-13M	-	5	345-063Q22-13H	6	-
80	345-080Q27-13L	-	4	345-080Q27-13M	-	6	345-080Q27-13H	8	-
100	345-100Q32-13L	-	5	345-100Q32-13M	-	7	345-100Q32-13H	10	-
125	345-125Q40-13L	-	6	345-125Q40-13M	-	8	345-125Q40-13H	12	-
160	345-160Q40-13L	-	7	345-160Q40-13M	-	10	345-160Q40-13H	-	12
200	345-200Q60-13L	-	8	345-200Q60-13M	-	12	345-200Q60-13H	-	16
250	345-250Q60-13L	-	10	345-250Q60-13M	-	14	345-250Q60-13H	-	18
	CIS Arbor								
80	A345-080J25-13L	-	4	A345-080J25-13M	-	6	A345-080J25-13H	8	-
100	A345-100J31-13L	-	5	A345-100J31-13M	-	7	A345-100J31-13H	10	-
125	A345-125J38-13L	-	6	A345-125J38-13M	-	8	A345-125J38-13H	12	-
160	A345-160J51-13L	-	7	A345-160J51-13M	-	10	A345-160J51-13H	-	12
200	A345-200J47-13L	-	8	A345-200J47-13M	-	12	A345-200J47-13H	-	16
250	A345-250J47-13L	-	10	A345-250J47-13M	-	14	A345-250J47-13H	-	18

1) 0 = no coolant, 1 = coolant through center

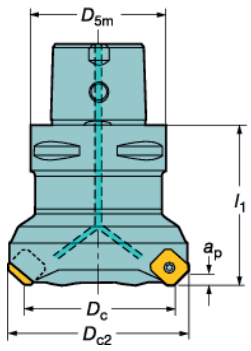
Note!
Mounting dimensions, see Metalcutting Technical guide.

= Even pitch
= Differential pitch

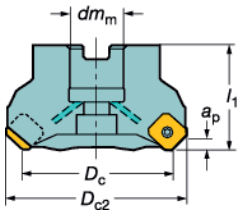
 J2
 G6
 D86
 D87

SANDVIK Coromant

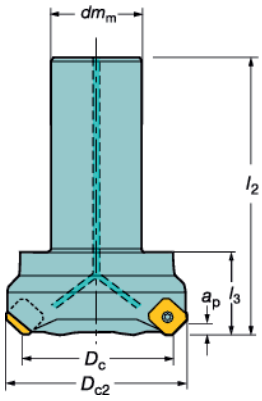
Coromant Capto®



Arbor



Cylindrical

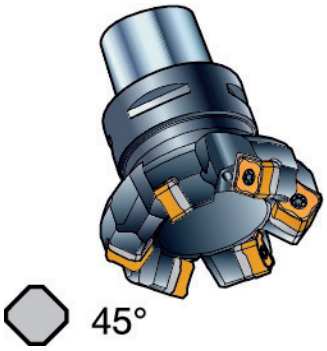


l_1 = programming length

Extra close pitch plus			Coolant[1]	Dimensions KG	dm_m	D_{5m}	D_{c2}	l_1	l_2	l_3	Max a_p
			1	0.6		40	54.08	60			6.0
			1	0.9		50	64.08	60			6.0
			1	1.3		63	64.08	60			6.0
			1	1.1		50	78.08	60			6.0
			1	1.4		63	77.08	60			6.0
			1	2.0		63	94.08	70			6.0
			1	2.8		80	94.08	70			6.0
			1	3.7		80	114.08	80			6.0
			1	0.8	32		54.08		120	40	6.0
			1	1.0	32		64.08		120	40	6.0
			1	0.3	22		54.08	45			6.0
			1	0.4	22		64.08	45			6.0
345-063Q22-13HX	7	-	1	0.6	22		77.08	45			6.0
345-080Q27-13HX	9	-	1	1.1	27		94.08	50			6.0
345-100Q32-13HX	11	-	1	1.8	32		114.08	50			6.0
345-125Q40-13HX	14	-	1	3.0	40		139.08	63			6.0
345-160Q40-13HX	16	-	0	4.1	40		174.08	63			6.0
345-200Q60-13HX	20	-	0	6.6	60		214.08	63			6.0
345-250Q60-13HX	24	-	0	10.3	60		264.08	63			6.0
A345-080J25-13HX	9	-	1	0.9	25.4		94.08	50			6.0
A345-100J31-13HX	11	-	1	1.8	31.75		114.08	63			6.0
A345-125J38-13HX	14	-	1	3.2	38.1		139.08	63			6.0
A345-160J51-13HX	16	-	0	4.7	50.8		174.08	63			6.0
A345-200J47-13HX	20	-	0	6.6	47.625		214.08	63			6.0
A345-250J47-13HX	24	-	0	11.7	47.625		264.08	63			6.0

Face mill

Diameter 1.500 - 10.000 inch



45°

Inch version

D_c inch	Ordering code Coarse pitch			Close pitch			Extra close pitch		
	Weldon								
1.500	A345-038M32-13L	-	3	A345-038M32-13M	-	4	-	-	-
2.000	A345-051M32-13L	-	3	A345-051M32-13M	-	4	-	-	-
2.500	A345-063M32-13L	-	4	-	-	-	-	-	-
	Arbor								
2.000	A345-051R19-13L	-	3	A345-051R19-13M	-	4	A345-051R19-13H	5	-
2.500	A345-063R25-13L	-	4	A345-063R25-13M	-	5	A345-063R25-13H	6	-
3.000	A345-076R25-13L	-	4	A345-076R25-13M	-	6	A345-076R25-13H	8	-
4.000	A345-102R38-13L	-	5	A345-102R38-13M	-	7	A345-102R38-13H	10	-
5.000	A345-127R38-13L	-	6	A345-127R38-13M	-	8	A345-127R38-13H	12	-
6.000	A345-152R38-13L	-	7	A345-152R38-13M	-	10	A345-152R38-13H	-	12
8.000	A345-203R63-13L	-	8	A345-203R63-13M	-	12	A345-203R63-13H	-	16
10.000	A345-254R63-13L	-	10	A345-254R63-13M	-	14	A345-254R63-13H	-	18

1) 0 = no coolant, 1 = coolant through center

Note!

Mounting dimensions, see Metalcutting Technical guide.

Bolt circle for cutters 8" and 10" = 4"

= Even pitch

= Differential pitch

 J2

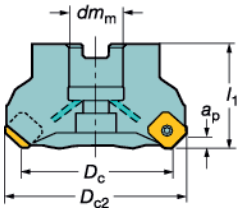
 G6

 D86

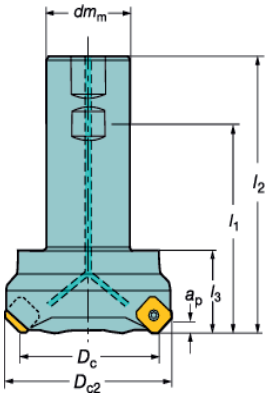
 D87

SANDVIK Coromant

Arbor



Weldon



l_1 = programming length

Extra close pitch plus			Coolant[1)]	Dimensions, inch					
				Lbs	dm_m	D_{c2}	l_1	l_3	Max a_p
	-	-	1	2.1	1.250	2.054	4.724	1.575	.236
	-	-	1	2.6	1.250	2.554	4.724	1.575	.236
	-	-	1	2.8	1.250	3.054	4.724	1.575	.236
	-	-	1	1.0	.750	2.562	1.772		.236
A345-063R25-13HX	7	-	1	1.4	1.000	3.054	1.772		.236
A345-076R25-13HX	9	-	1	2.1	1.000	3.554	1.772		.236
A345-102R38-13HX	11	-	1	3.8	1.500	4.554	2.480		.236
A345-127R38-13HX	14	-	1	6.0	1.500	5.554	2.480		.236
A345-152R38-13HX	16	-	0	8.2	1.500	6.554	2.480		.236
A345-203R63-13HX	20	-	0	18.3	2.500	8.546	2.480		.236
A345-254R63-13HX	24	-	0	26.2	2.500	10.554	2.480		.236

Inserts for CoroMill® 345

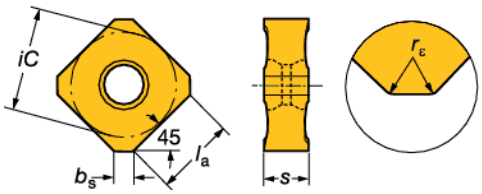
Wiper
PW5, KW5

PW8, KW8

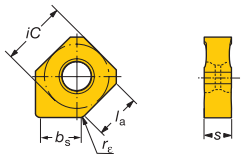
Light

Medium

Heavy



Wiper

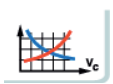


Dimensions, mm (inch)

Size	*l* = *iC*	l_a	*s*
13	13 (.512)	8.8 (.346)	5.60 (.220)

	Ordering code	Max a_p mm	Max a_p inch	P						M								K								S			H					Dimensions, millimeter, inch (mm, in.)			
				GC	GC	GC	GC	GC	CT	GC	GC	GC	GC	GC	CT	GC	GC	GC	GC	GC	GC	GC	-	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	CT				
				1030	3040	4220	4230	4240	530	1030	1040	2030	2040	4240	530	S30T	S40T	1020	3040	3220	4220	4230	4240	H13A	K20W	1030	S30T	S40T	1010	1030	3040	4220	530	b_s mm	b_s in.	r_ε mm	r_ε in.
Light	345R-1305E-KL	6.0	.236															★	☆	☆				☆	☆										2.0	.079	0.8	.032
Light	345R-1305E-PL	6.0	.236	★			☆	☆	☆			☆	★		☆											☆			☆	☆			☆	2.0	.079	0.8	.032
Light	345R-1305M-KL	6.0	.236			☆		☆										★	☆		☆	☆	☆		☆							☆		2.0	.079	0.8	.032
Light	345R-1305M-PL	6.0	.236	★		☆	☆	☆		☆				☆							☆	☆	☆						☆					2.0	.079	0.8	.032
Medium	345L-1305M-PM	6.0	.236	☆			★	☆		☆				☆								☆												2.0	.079	0.8	.032
Medium	345R-1305M-KM	6.0	.236																☆	★				☆										2.0	.079	0.8	.032
Medium	345R-1305M-PM	6.0	.236	☆		☆	★	☆	☆	☆				☆	☆						☆	☆	☆			☆			☆			☆	☆	2.0	.079	0.8	.032
Heavy	345R-1305M-KH	6.0	.236			☆	☆												☆	★	☆	☆		☆						☆	☆		2.0	.079	0.8	.032
Heavy	345R-1305M-PH	6.0	.236	☆	☆	☆	★	☆											☆	☆	☆	☆	☆		☆				★	☆		☆		2.0	.079	0.8	.032
Wiper	345N-1305E-KW8	6.0	.236															★	☆	☆				☆	☆									8.0	.315	1.0	.039
Wiper	345N-1305E-PW5	6.0	.236	☆			☆	☆	☆			☆	☆		☆														☆				☆	5.0	.197	1.0	.039
Wiper	345N-1305E-PW8	6.0	.236	★			☆	☆	☆			☆	☆		☆														☆	☆			☆	8.0	.315	1.0	.039
				P30	P20	P15	P25	P40	P20	M15	M35	M25	M30	M40	M20	M25	M35	K20	K30	K20	K25	K30	K35	K25	K25	S15	S25	S35	H10	H10	H25	H25	H15				

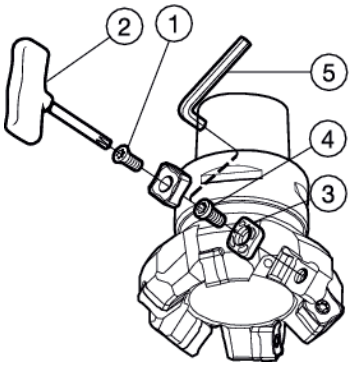
R345-13 05 E-PL
|
E = Highest edge sharpness and precision
M = Highest edge security



D312

D305

Spare parts



Cutter	1	2				3	4	5
			Torque value					
Insert size	Insert screw	Key (Torx Plus)	Nm	In-lbs	Torque wrench[1]	Shim	Shim screw	Key (mm)
13	416.1-834	5680 048-01 (15IP)	3.0	26	5680 100-06	5322 472-04 5322 473-01[2]	5512 090-11	3021 010-040 (4.0)

[1] Optional part to be ordered separately

[2] Shim for left hand cutter. Left hand cutters can be ordered as special.

Coolant screws

				Hex wrench		
	Screw	Thread	Size	Key	Arbor size	Fits these cutters
Metric	5512 073-01	M10	8 mm	3021 010-080	22	345-040Q22-13x
						345-050Q22-13x
	5512 073-02	M12	10 mm	3021 010-100	27	345-080Q27-13x
	5512 073-05	M14	14 mm	3021 010-140	32	345-100Q32-13x
	5512 098-01	M20	50IP	5680 043-18	40	345-125Q40-13x
						345-160Q40-13x
Inch	5512 074-01	3/8-24"	5/16"	3021 011-516	3/4	A345-051R19-13x
	5512 074-02	1/2-20"	3/8"	3021 011-380	1.00	A345-063R25-13x
						A345-076R25-13x
	5512 099-01	3/4-16"	50IP	5680 043-18	1.50 (B-Style)	A345-102R38-13x
	5512 099-01	3/4-16"	50IP	5680 043-18	1.50 (B-Style)	A345-127R38-13x
	5512 099-01	3/4-16"	50IP	5680 043-18	1.50 (B-Style)	A345-152R38-13x
	5512 073-02	M12	10mm	3021 010-100	25.4	A345-080J25-13x
	5512 073-05	M14	14mm	3021 010-140	31.75	A345-100J31-13x
	5512 098-01	M20	50IP	5680 043-18	38.1	A345-125J38-13x

CoroMill® 245

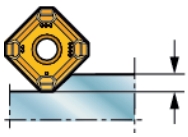
Light cutting facemills

A concept for highest metal removal and mirror finishing

Diameter 32 - 250 mm / 1.250 - 10.000 inch

Roughing to mirror finishing

Insert size 12

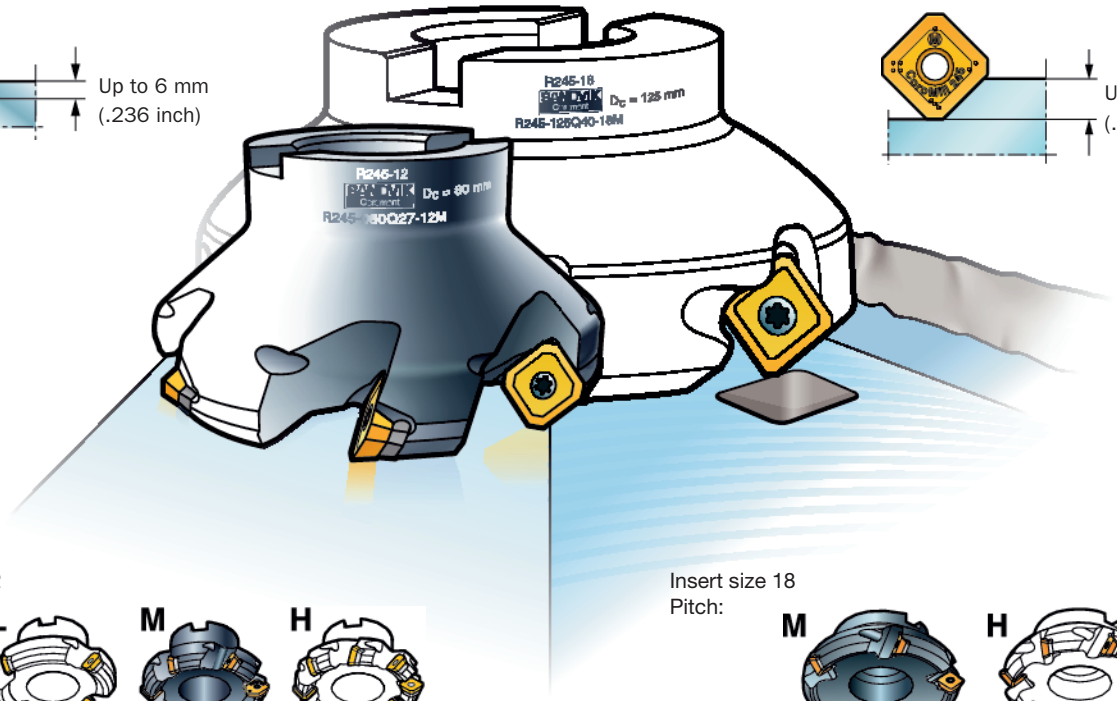


Up to 6 mm
(.236 inch)

Demanding milling with highest security

Insert size 18

Up to 10 mm
(.394 inch)



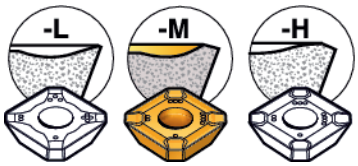
Insert size 12
Pitch:

Condition:	Unstable	General	Stable

Insert size 18
Pitch:

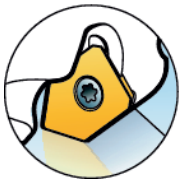
Condition:	General	Stable

Geometries:



Condition:	Light cutting	General	High security

Wiper options



For high feed finishing

General

ISO application areas:

P M K N S H

Tailor Made

Tool options designed to individual customer requirements are available. For information on our Tailor Made program see page J3.

SANDVIK Coromant

CoroMill® 245

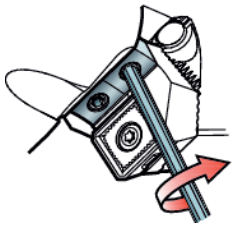
Facemill with exchangeable cassettes

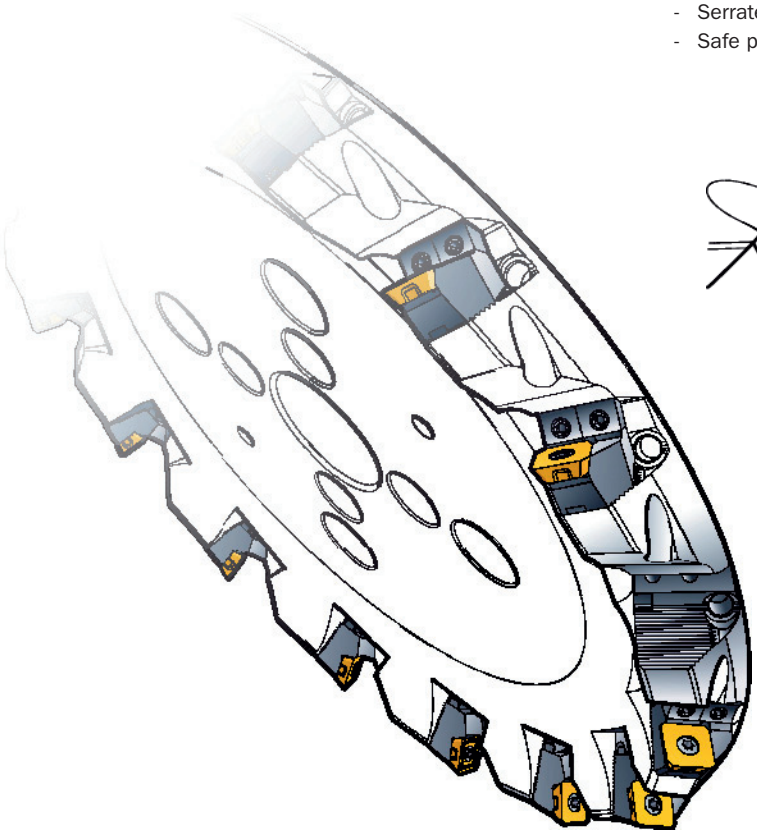
A concept for rough to semi-finishing of ferrous materials

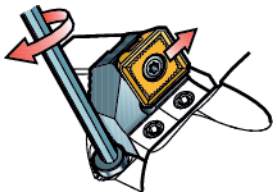
Good basic accuracy by design

- Serrated cassette interface
- Safe performance

- Safe wedge clamping
- Easy maintenance







Setting within 0.1 mm (.039 inch)

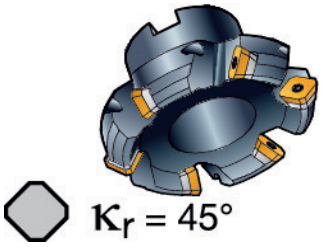
- Setting key
- Cam shaped
- Easy handling

ISO application areas:

P M K

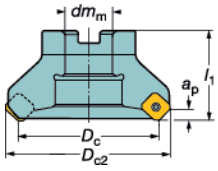
Face mill

Diameter 32 – 250 mm

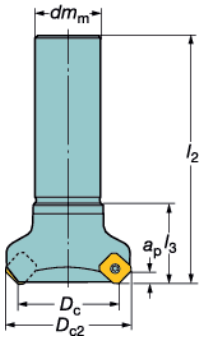


$\kappa_r = 45°$

Arbor



Cylindrical shank



l_1 = programming length

Metric version

□ 1)	D_c mm	Ordering code Coarse pitch		Close pitch			Extra close pitch			Dimensions kg	dm_m	D_{c2}	l_1	l_2	l_3	Max a_p	n_{max} 2)
		Cylindrical shank															
12	32	-	-	R245-032A32-12M3)	3	-	-	-	-	1.0	32.0	44.5		120	39	6	18250
	40	R245-040A32-12L	3	-	-	-	-	-	-	1.1	32.0	52.5		120	39	6	18250
	50	R245-050A32-12L	3	R245-050A32-12M	4	-	-	-	-	1.4	32.0	62.5		120	39	6	16250
	63	R245-063A32-12L	4	R245-063A32-12M	5	-	-	-	-	1.1	32.0	75.5		120	39	6	14400
	80	R245-080A32-12L	4	R245-080A32-12M	6	-	-	-	-	2.1	32.0	92.5		120	39	6	12700
		Arbor															
12	50	R245-050Q22-12L	3	R245-050Q22-12M	4	-	R245-050Q22-12H	5	-	0.5	22.0	62.5	40			6	16250
	63	R245-063Q22-12L	4	R245-063Q22-12M	5	-	R245-063Q22-12H	6	-	0.6	22.0	75.5	40			6	14400
	80	R245-080Q27-12L	4	R245-080Q27-12M	6	-	R245-080Q27-12H	8	-	1.0	27.0	92.5	50			6	12700
	100	R245-100Q32-12L	5	R245-100Q32-12M	7	-	R245-100Q32-12H	10	-	1.4	32.0	112.5	50			6	11300
	125	R245-125Q40-12L	6	R245-125Q40-12M	8	-	R245-125Q40-12H	12	-	2.7	40.0	137.5	63			6	10100
	160	R245-160Q40-12L	7	R245-160Q40-12M	10	-	R245-160Q40-12H	16	-	5.0	40.0	172.5	63			6	8900
	200	R245-200Q60-12L	8	R245-200Q60-12M	12	-	R245-200Q60-12H	20	-	6.7	60.0	212.5	63			6	7950
	250	R245-250Q60-12L	10	R245-250Q60-12M	14	-	R245-250Q60-12H	24	-	8.5	60.0	262.5	63			6	7100
18	80	-	-	R245-080Q32-18M3)	-	4	R245-080Q32-18H	-	5	1.6	32.0	98.8	50			10	6100
	100	-	-	R245-100Q32-18M3)	-	4	R245-100Q32-18H	-	6	1.9	32.0	118.8	50			10	5400
	125	-	-	R245-125Q40-18M	-	5	R245-125Q40-18H	-	7	3.6	40.0	138.8	63			10	4900
	160	-	-	R245-160Q40-18M	-	6	R245-160Q40-18H	-	9	8.7	40.0	178.8	63			10	4300
	200	-	-	R245-200Q60-18M	-	8	R245-200Q60-18H	-	12	12.0	60.0	218.8	63			10	3800
	250	-	-	R245-250Q60-18M	-	10	R245-250Q60-18H	-	14	8.9	60.0	268.8	63			10	3400
		CIS Arbor															
12	80	RA245-080J25.4-12L	4	RA245-080J25.4-12M	6	-	RA245-080J25.4-12H	8	-	1.2	25.4	92.5	50			6	12700
	100	RA245-100J31.75-12L	5	RA245-100J31.75-12M	7	-	RA245-100J31.75-12H	10	-	2.2	31.8	112.5	63			6	11300
	125	RA245-125J38.1-12L	6	RA245-125J38.1-12M	8	-	RA245-125J38.1-12H	12	-	3.4	38.1	137.5	63			6	10100
	160	RA245-160J50.8-12L	7	RA245-160J50.8-12M	10	-	RA245-160J50.8-12H	16	-	5.0	50.8	172.5	63			6	8900
	200	RA245-200J47.625-12L	8	RA245-200J47.625-12M	12	-	RA245-200J47.625-12H	20	-	6.7	47.625	212.5	63			6	7950
	250	RA245-250J47.625-12L	10	RA245-250J47.625-12M	14	-	-	-	-	8.5	47.625	262.5	63			6	7100
18	80	-	-	RA245-080J25-18M3)	-	4	RA245-080J25-18H	-	5	1.5	25.4	101.3	50			10	6100
	100	-	-	RA245-100J31-18M3)	-	4	RA245-100J31-18H	-	6	2.7	31.8	118.8	50			10	5400
	125	-	-	RA245-125J38-18M	-	5	RA245-125J38-18H	-	7	3.7	38.1	143.8	63			10	4900
	160	-	-	RA245-160J51-18M	-	6	RA245-160J51-18H	-	9	9.3	50.8	178.8	63			10	4300
	200	-	-	RA245-200J47-18M	-	8	RA245-200J47-18H	-	12	12.0	47.625	218.8	63			10	3800
	250	-	-	RA245-250J47-18M	-	10	RA245-250J47-18H	-	14	8.9	47.625	268.8	63			10	3400

1) Inserts are ordered separately.

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

3) Without shim

Note!
Mounting dimensions, see Metalcutting Technical guide.
Bolt circle for cutters 200 and 250mm = 4"

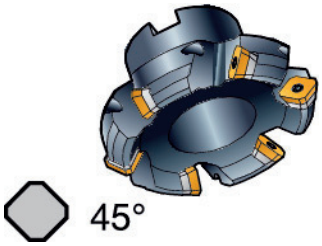
= Even pitch

= Differential pitch

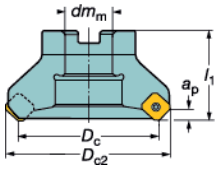
D93 D95 G6 D2 J3

Face mill

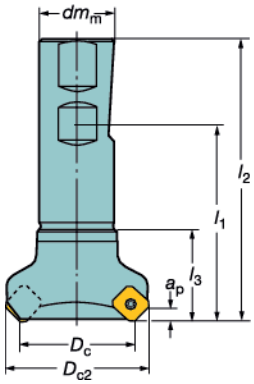
Diameter 1.250 - 10.000 inch



Arbor



Weldon/Whistle Notch



l_1 = programming length

Inch version

		Ordering code								Dimensions, inch							
[1]	D_c inch	Coarse pitch		Close pitch			Extra close pitch				dm_m	D_{c2}	l_1	l_2	l_3	Max a_p	n_{max} [2]
		Whistle Notch/Weldon															
12	1.250	RA245-032MN25-12L	2	RA245-032MN25-12M	3	-	-	-	-	1.6	1.000	1.742	2.716	3.856	1.575	.240	18250
	1.500	RA245-038MN32-12L	3	RA245-038MN32-12M	4	-	-	-	-	1.9	1.250	1.992	2.716	3.856	1.575	.240	18250
	2.000	RA245-051MN32-12L	3	RA245-051MN32-12M	4	-	-	-	-	3.1	1.250	2.492	2.834	3.974	1.575	.240	16250
	2.500	RA245-063MN32-12L	4	RA245-063MN32-12M	5	-	-	-	-	3.3	1.250	2.992	2.834	3.974	1.575	.240	14400
		Arbor															
12	2.000	RA245-051R19-12L	3	RA245-051R19-12M	4	-	RA245-051R19-12H	5	-	1.1	.750	2.492	1.575			.240	16250
	2.500	RA245-063R19-12L	4	RA245-063R19-12M	5	-	RA245-063R19-12H	6	-	1.6	.750	2.992	1.575			.240	14400
	3.000	RA245-076R25-12L	4	RA245-076R25-12M	6	-	RA245-076R25-12H	8	-	2.2	1.000	3.492	1.969			.240	12700
	4.000	RA245-102R38-12L	5	RA245-102R38-12M	7	-	RA245-102R38-12H	10	-	6.8	1.500	4.492	1.969			.240	11300
	5.000	RA245-127R38-12L	6	RA245-127R38-12M	8	-	RA245-127R38-12H	12	-	12.1	1.500	5.492	2.480			.240	10100
	6.000	RA245-152R38-12L	7	RA245-152R38-12M	10	-	RA245-152R38-12H	15	-	18.7	1.500	6.492	2.480			.240	8900
	8.000	RA245-203R63-12L	8	RA245-203R63-12M	12	-	RA245-203R63-12H	20	-	14.8	2.500	8.492	2.480			.240	7950
	10.000	RA245-254R63-12L	10	RA245-254R63-12M	14	-	RA245-254R63-12H	24	-	29.6	2.500	10.492	2.480			.240	7100
18	3.000	-	-	RA245-076R25-18M	-	4	RA245-076R25-18H	-	5	3.1	1.000	3.740	1.969			.394	6300
	4.000	-	-	RA245-102R38-18M	-	4	RA245-102R38-18H	-	6	7.7	1.500	4.740	1.969			.394	5400
	5.000	-	-	RA245-127R38-18M	-	5	RA245-127R38-18H	-	7	14.1	1.500	5.740	2.480			.394	4800
	6.000	-	-	RA245-152R38-18M	-	6	RA245-152R38-18H	-	9	20.5	1.500	6.740	2.480			.394	4400
	8.000	-	-	RA245-203R63-18M	-	8	RA245-203R63-18H	-	12	32.6	2.500	8.740	2.480			.394	3800
	10.000	-	-	RA245-254R63-18M	-	10	RA245-254R63-18H	-	14	54.5	2.500	10.740	2.480			.394	3400

1) Inserts are ordered separately.

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

Note!
Mounting dimensions, see Metalcutting Technical guide.
Bolt circle for cutters 8" and 10" = 4"

= Even pitch

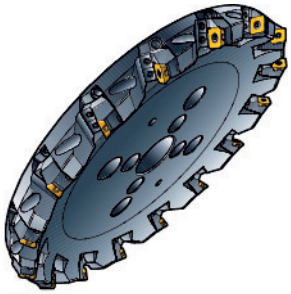
= Differential pitch

D93 D95 G6 D2 J3

Facemill 45° with cassettes

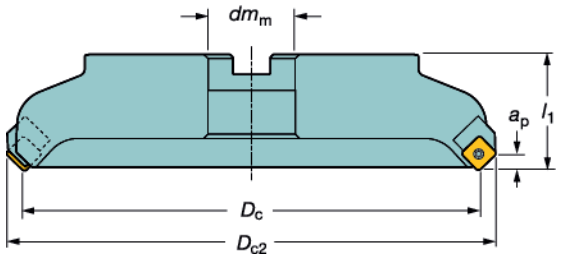
with exchangeable cassettes for arbor mounting

Diameter 160 - 500 mm (6.000 - 20.000 inch)



45°

TO BE QUOTED



l_1 = programming length

		Ordering code				Dimensions						
□ 1)	D_c	Close pitch	⟲	Extra close pitch	⟲	Lbs	KG	dm_m	D_{c2}	l_1	Max a_p	n_{max} 2)
		Inch versions										
18	6.000	S-R/LA245-152R38CS0-18M	5	S-R/LA245-152R38CS0-18H	7	14		1.500	7.039	2.480	.394	1255
	8.000	S-R/LA245-203R63CS0-18M	6	S-R/LA245-203R63CS0-18H	9	20		2.500	8.614	2.480	.394	940
	10.000	S-R/LA245-254R63CS0-18M	8	S-R/LA245-254R63CS0-18H	12	32		2.500	10.583	2.480	.394	750
	12.000	S-R/LA245-305R63CS0-18M	10	S-R/LA245-305R63CS0-18H	14	54		2.500	13.142	3.150	.394	625
	14.000	S-R/LA245-355R63CS0-18M	10	S-R/LA245-355R63CS0-18H	14	60		2.500	13.142	3.150	.394	535
	16.000	S-R/LA245-406R63CS0-18M	12	S-R/LA245-406R63CS0-18H	18	90		2.500	16.488	3.150	.394	470
	20.000	S-R/LA245-508R63CS0-18M	14	S-R/LA245-508R63CS0-18H	22	130		2.500	20.425	3.150	.394	375
		Metric versions										
18	160	S-R/L245-160Q40CS0-18M	5	S-R/L245-160Q40CS0-18H	7		7.0	40	178.8	63	10	1190
	200	S-R/L245-200Q60CS0-18M	6	S-R/L245-200Q60CS0-18H	9		10.0	60	218.8	63	10	950
	250	S-R/L245-250Q60CS0-18M	8	S-R/L245-250Q60CS0-18H	12		16.0	60	268.8	63	10	760
	315	S-R/L245-315Q60CS0-18M	10	S-R/L245-315Q60CS0-18H	14		26.0	60	333.8	80	10	600
	400	S-R/L245-400Q60CS0-18M	12	S-R/L245-400Q60CS0-18H	18		44.0	60	418.8	80	10	475
	500	S-R/L245-500Q60CS0-18M	14	S-R/L245-500Q60CS0-18H	22		69.0	60	518.8	80	10	380
		CIS Arbor										
18	160	S-R/LA245-160J51CS0-18M	5	S-R/LA245-160J51CS0-18H	7		7.0	50.8	178.8	63	10	1190
	200	S-R/LA245-200J47CS0-18M	6	S-R/LA245-200J47CS0-18H	9		10.0	47.625	218.8	63	10	950
	250	S-R/LA245-250J47CS0-18M	8	S-R/LA245-250J47CS0-18H	12		16.0	47.625	268.8	63	10	760
	315	S-R/LA245-315J47CS0-18M	10	S-R/LA245-315J47CS0-18H	14		26.0	47.625	333.8	80	10	600

1) Inserts are ordered separately.

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

⟲ = Differential pitch

 D93
 D95
 G6
 D2
 J3

SANDVIK Coromant

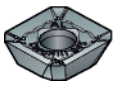
Inserts for CoroMill® 245

Cemented carbide / Cermet

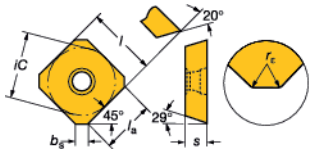
Light

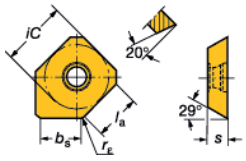
Medium

Heavy


Aluminum


Wiper





The Wiper inserts can also be used for turn milling.

Dimensions, mm (inch)

Size	*iC*	l_a	*s*	Max a_p	Max a_p, wiper
12	13.4 (.528)	10 (.394)	3.97 (.156)	6.5 (.256)	2.5 (.098)
18	18 (.709)	13.9 (.547)	6.10 (.240)	9.75 (.384)	9.75 (.384)

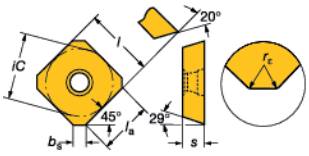
			P						M						K									N				S						H						Dimensions, millimeter, inch (mm, in.)			
			GC	GC	GC	GC	GC	CT	GC	GC	GC	GC	GC	CT	GC	GC	GC	GC	GC	GC	-	GC	GC	GC	-	-	GC	GC	GC	GC	GC	-	GC	GC	GC	GC	GC	GC	CT				
			1030	2040	4220	4230	4240	530	1030	1040	2030	2040	4240	530	1020	3040	3220	4220	4230	4240	H13A	K15W	K20W	1030	H10	H13A	K15W	1010	1030	2030	2040	H13A	S30T	S40T	1010	1030	3040	4220	530	b_s mm	b_s in.	r_ε mm	r_ε in.
	12	R245-12 T3 E-AL																							☆															2.3	.091	2.5	.098
Light		R245-12 T3 E-KL													★		☆				☆	☆				☆	☆						☆							2.0	.079	1.5	.059
Light		R245-12 T3 E-ML	☆							☆	★	☆												☆					☆	☆	☆					☆				2.1	.083	1.5	.059
Light		R245-12 T3 E-PL	★			☆		☆						☆										☆				☆	☆			★	★	★	☆				☆	2.1	.083	1.5	.059
Light		R245-12 T3 M-KL													★	☆	☆						☆																	1.47	.083	1.7	.059
Light		R245-12 T3 M-PL	★		☆	☆	☆		☆				☆					☆	☆	☆								☆	☆			★	★	★				☆		2.05	.081	1.4	.055
Medium	12	R245-12 T3 K-MM								☆	★	☆											☆							☆	☆		★	★						2.0	.079	1.5	.059
Medium		R245-12 T3 M-KM													★	☆	☆				☆		☆			☆						☆					☆			1.47	.079	1.7	.059
Medium		R245-12 T3 M-PM	☆		☆	★	☆	☆	☆				☆	☆				☆	☆	☆								☆	☆						★			☆	☆	2.0	.079	1.5	.059
Medium	18	R245-18 T6 M-KM													★	☆	☆						☆														☆			1.5	.059	1.0	.039
Medium		R245-18 T6 M-MM		☆							☆	★																		☆	☆									1.5	.059	1.0	.039
Medium		R245-18 T6 M-PM	☆		☆	★	☆						☆					☆	☆	☆				☆				☆	☆						★	☆		☆		1.5	.059	1.0	.039
Heavy	12	R245-12 T3 M-KH													☆	☆	★						☆														☆			1.47	.079	1.7	.059
Heavy		R245-12 T3 M-PH			☆	★	☆						☆					☆	☆	☆																		☆		1.53	.060	1.6	.063
Wiper	12	R245-12 T3 E-W	★					☆						☆	★		☆				☆	☆		☆		☆	☆	☆	☆			☆		☆	★	☆			☆	8.2	.323	1.5	.059
Wiper	18	R245-18 T6 E-W	★								★				★									☆					☆	☆						☆				10.8	.425	1.0	.039
			P30	P40	P15	P25	P40	P20	M15	M35	M25	M30	M40	M20	K20	K30	K20	K25	K30	K35	K25	K15	K25	N15	N10	N15		S10	S15	S25	S30	S20	S25	S35	H10	H10	H25	H25	H15				

R245-12 T3 E-PL
|
E = Highest edge sharpness and precision
K = Highest edge sharpness
M = Highest edge security

D312 D305 D334 D2

Inserts for CoroMill® 245

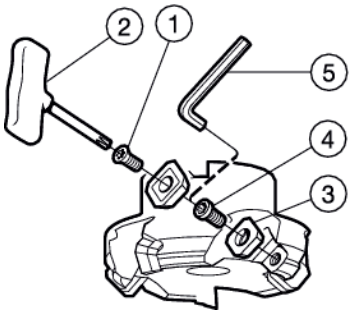
Ceramic



	↕ □	Ordering code	Max a_p mm	Max a_p inch	K CC 6090	K CC 6190	K CB CB50	N CD CD10	H CC 6090	H CC 6190	H CB CB50	iC mm	iC in.	b_s mm	b_s in.	r_ε mm	r_ε in.	l_a mm	l_a in.	s mm	s in.
												Dimensions, millimeter, inch (mm, in.)									
Light	12	R245-12 T3 E	6.0	.236	☆				☆			13.4	.528	0.4	.016	2.5	.098	10.0	.394	3.97	.156
		R245-12 T3 E	2.5	.098			☆	★			☆	13.4	.528	1.4	.055	1.5	.059	3.5	.138	3.97	.156
		R245-12 T3 E1	6.0	.236		☆				☆		13.4	.528	0.4	.016	2.5	.098	10.0	.394	3.97	.156
Wiper	12	R245-12 T3 E-W	2.5	.098			☆	☆			☆	13.4	.528	6.4	.252	2.5	.098	3.5	.138	3.97	.156
					K10	K10	K05	N05	H10	H10	H05										

D312 D305 D334 D2

Spare parts for CoroMill® 245



Cutter			1	2			3	4	5
Insert size	D_c mm	D_c inch	Insert screw	Key (Torx Plus)	Torque value Nm/in.lbs	 Torque wrench[1)]	Shim	Shim screw	Key (mm)
12	32	1.250	5513 020-01	5680 048-01 (15IP)	3.0 (26)	5680 100-06	–	–	–
	40–250	1.500-10.000	5513 020-01	5680 048-01 (15IP)	3.0 (26)	5680 100-06	5322 472-01	5512 090-09	5680 010-01 (3.5)
18	80–100	3.000-4.000	5513 020-55	5680 048-04 (20IP)	5.0 (43)	5680 100-07	–	–	–
	125-250	5.000-10.000	5513 020-26	5680 048-04 (20IP)	5.0 (43)	5680 100-07	5322 472-03	5512 090-10	3021 010-050 (5.0)

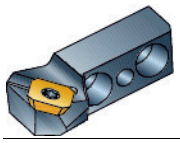
[1)] Accessories, must be ordered separately

Cassette	Insert screw	Torque value in.lbs.	Setting device	Setting device screw	Torque wrench	Key
R/L 245-CA-18	5513 020-55	–	–	–	–	5680 048-04

Spare parts for CoroMill® 245 cassette bodies

D_c mm (inch)	Wedge	Wedge screw	Wedge key	Eccentric key
160-500 (6.000-20.000)	5431 105-03	339-831	265.2-817 (3.0)	5680 067-01

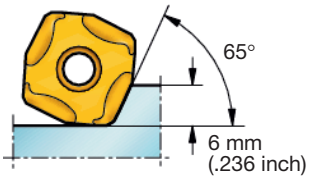
CoroMill® 245 cassettes for Auto-AF cutter

	Ordering code	
	R260.8-245 12	Right hand
	L260.8-245 12	Left hand

CoroMill® 365

Secure face milling in cast iron and steel

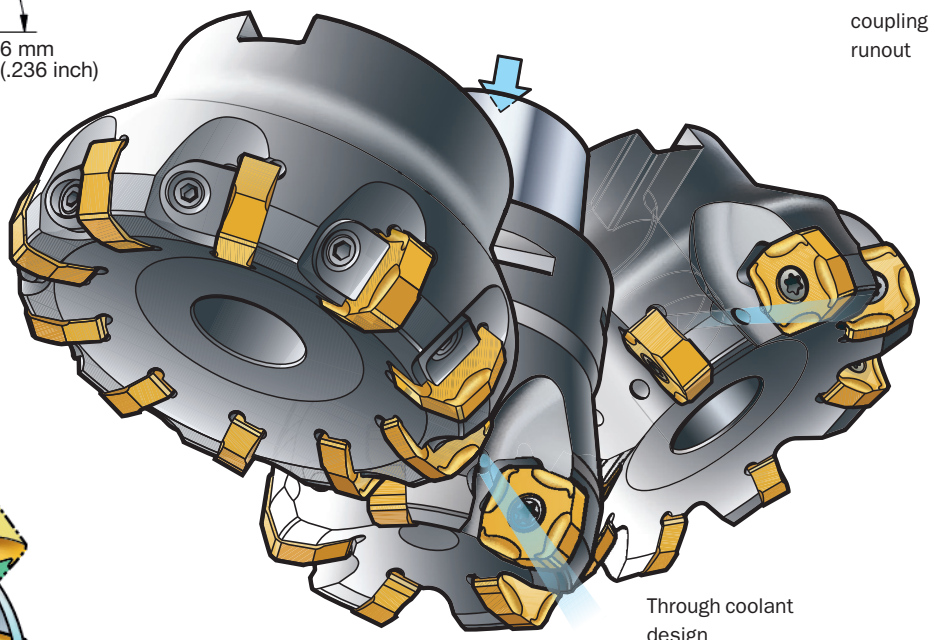
Maximum cost efficiency



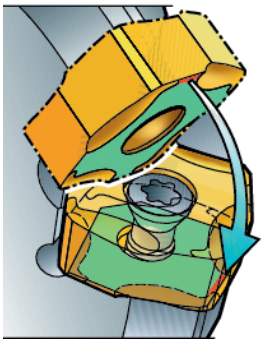
Up to .236 inch depth of cut.

Diameter 40-250 mm / 1.500 - 10.000 inch

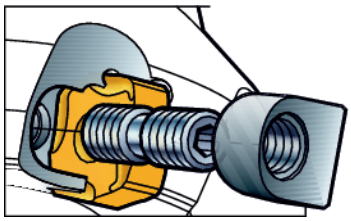
Arbor mounted or integrated with Coromant Capto coupling for minimal runout



Through coolant design

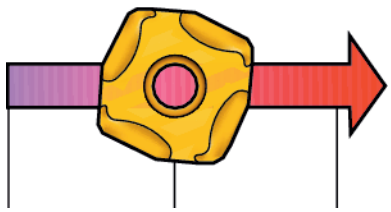


Design offers a large support surface and optimal distribution of cutting forces.



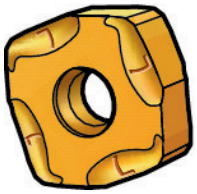
Same insert used for wedge clamp and screw down cutter bodies.

ISO application area:

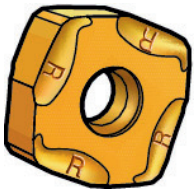


K	f_z	0.12 (.005)	0.25 (.010)	0.35 (.014)
P	f_z	0.15 (.006)	0.22 (.009)	0.28 (.011)

Unique insert design with 8 true cutting edges.

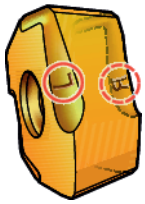


Left-hand insert



Right hand insert

Wiper insert



Geometry and grade laser marked on the insert.

ISO application areas:

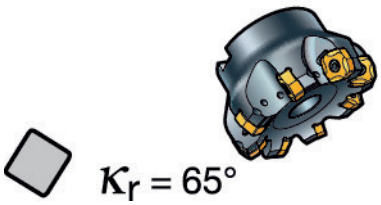
P K H

Inserts marked for easy identification of grade and geometry

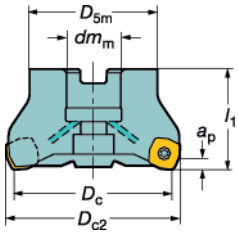
SANDVIK Coromant

Facemill for cast iron

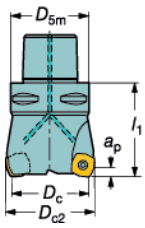
Diameter 40 - 250 mm



Arbor



Coromant Capto®



l_1 = programming length

Metric version

		Ordering code							Dimensions						
	D_c mm	Close pitch			Extra close pitch			Coolant[1]		D_{c2}	D_{5m}	dm_m	l_1	Max a_p	n_{max}[2]
		Coromant Capto													
15	40	R365-040C4-S15M	-	3	-	-	-	1	0.5	46.7	40.0		60.0	6.0	18000
	50	R365-050C5-S15M	-	4	-	-	-	1	0.8	56.7	50.0		60.0	6.0	15700
	60	R365-063C6-S15M	-	5	-	-	-	1	1.5	69.7	63.0		60.0	6.0	13600
		Arbor													
15	50	-	-	-	R365-050Q22-S15H	5	-	1	0.5	56.7	43.0	22	50.0	6.0	15700
	63	R365-063Q22-S15M	-	5	R365-063Q22-S15H	6	-	1	0.7	69.7	50.4	22	50.0	6.0	13600
	80	R365-080Q27-S15M	-	6	R365-080Q27-S15H	8	-	1	1.1	86.7	64.0	27	50.0	6.0	11500
	100	R365-100Q32-S15M	-	7	R365-100Q32-S15H	10	-	1	1.8	106.7	80.0	32	50.0	6.0	9900
	125	R365-125Q40-S15M	-	8	R365-125Q40-S15H	12	-	0	3.4	131.7	100.0	40	63.0	6.0	8500
	160	R365-160Q40-S15M	-	10	R365-160Q40-S15H	14	-	0	5.2	166.7	128.0	40	63.0	6.0	7500
	80	-	-	-	R/L365-080Q27-W15H	10	-	0	1.4	86.7	64.0	27	50.0	6.0	11200
	100	-	-	-	R/L365-100Q32-W15H	14	-	0	2.0	106.7	80.0	32	50.0	6.0	9900
	125	-	-	-	R/L365-125Q40-W15H	18	-	0	3.8	131.7	100.0	40	63.0	6.0	8800
	160	-	-	-	R/L365-160Q40-W15H	22	-	0	5.7	166.4	128.0	40	63.0	6.0	7700
	200	-	-	-	R/L365-200Q60-W15H	28	-	0	10.2	205.6	180.0	60	63.0	6.0	6800
	250	-	-	-	R/L365-250Q60-W15H	36	-	0	15.2	255.6	200.0	60	63.0	6.0	6100
		CIS Arbor													
15	80	RA365-080J25-S15M	-	6	RA365-080J25-S15H	8	-	1	1.1	86.7	64.0	25.4	50.0	6.0	11500
	80	-	-	-	RA365-080J25-W15H	10	-	0	1.4	86.7	64.0	25.4	50.0	6.0	11200
	100	RA365-100J31-S15M	-	7	RA365-100J31-S15H	10	-	0	1.7	106.7	80.0	31.75	63.0	6.0	9900
	100	-	-	-	RA365-100J31-W15H	14	-	0	1.8	106.7	80.0	31.75	63.0	6.0	9900
	125	RA365-125J38-S15M	-	8	RA365-125J38-S15H	12	-	0	3.4	131.4	100.0	38.1	63.0	6.0	8500
	125	-	-	-	RA365-125J38-W15H	18	-	0	3.8	131.7	100.0	38.1	63.0	6.0	8800
	160	RA365-160J51-S15M	-	10	RA365-160J51-S15H	14	-	0	5.6	166.7	128.0	50.8	63.0	6.0	7500
	160	-	-	-	RA365-160J51-W15H	22	-	0	5.7	166.7	128.0	50.8	63.0	6.0	7700

1) 0 = no coolant, 1 = coolant through center

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

Note:

No internal coolant supply in cutter with diameters > 125mm (5 inch)

No internal coolant on wedge clamp cutters

Bolt circle for cutters 200 and 250mm = 4"

= Even pitch

= Differential pitch

RA365-063Q22- S15M

S = Screw clamp

W = Wedge clamp


D41


D45

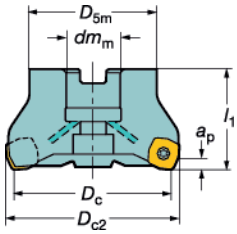

G6


D2

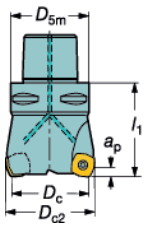
Facemill for cast iron

Diameter 1.500 - 10.000 inch

Arbor



Coromant Capto



l_1 = programming length

Inch version

	D_c inch	Ordering code Close pitch			Extra close pitch			Coolant[1]	Dimensions, inch Use	D_{5m}	dm_m	D_{c2}	l_1	Max a_p	n_{max}[2]
		Coromant Capto													
15	1.500	RA365-038C4-S15M	-	3	-	-	-	1	1.1	1.575		1.764	2.362	.236	18000
	2.000	RA365-051C5-S15M	-	4	-	-	-	1	1.8	1.968		2.264	2.362	.236	15700
	2.500	RA365-063C6-S15M	-	5	-	-	-	1	3.5	2.480		2.764	2.362	.236	13500
		Arbor													
15	2.000	-	-	-	RA365-051R19-S15H	5	-	1	1.1	1.732	.750	2.264	1.968	.236	15700
	2.500	RA365-063R19-S15M	-	5	RA365-063R19-S15H	6	-	1	1.5	2.000	.750	2.764	1.968	.236	13500
	3.000	RA365-076R25-S15M	-	6	RA365-076R25-S15H	8	-	1	2.2	2.402	1.000	3.264	1.968	.236	11900
	4.000	RA365-102R38-S15M	-	7	RA365-102R38-S15H	10	-	1	3.7	3.201	1.500	4.264	1.968	.236	9900
	5.000	RA365-127R38-S15M	-	8	RA365-127R38-S15H	12	-	0	3.7	4.000	1.500	5.264	2.480	.236	8800
	6.000	RA365-152R38-S15M	-	10	RA365-152R38-S15H	14	-	0	10.1	4.803	1.500	6.264	2.480	.236	7900
	3.000	-	-	-	R/LA365-076R25-W15H	10	-	0	2.6	2.402	1.000	3.264	1.968	.236	11600
	4.000	-	-	-	R/LA365-102R38-W15H	14	-	0	4.0	3.083	1.500	4.264	1.968	.236	9800
	5.000	-	-	-	R/LA365-127R38-W15H	18	-	0	8.6	4.000	1.500	5.264	2.480	.236	8700
	6.000	-	-	-	R/LA365-152R38-W15H	22	-	0	11.2	4.016	1.500	6.252	2.480	.236	7900
	8.000	-	-	-	R/LA365-203R63-W15H	28	-	0	22.5	7.087	2.500	8.220	2.480	.236	6800
	10.000	-	-	-	R/LA365-254R63-W15H	36	-	0	34.0	7.874	2.500	10.220	2.480	.236	6000

1) 0 = no coolant, 1 = coolant through center

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

Note:

No internal coolant supply in cutters with diameter > 5 inch

No internal coolant on wedge clamp cutters

Bolt circle for cutters 8" and 10" = 4"

= Even pitch

= Differential pitch

RA365-063R19- S15M

|

S = Screw clamp

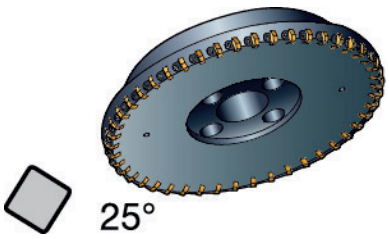
W = Wedge clamp

 D100  D102  G6  D2

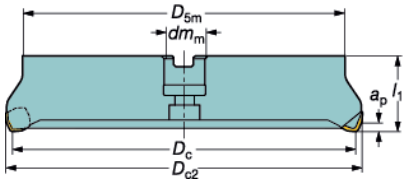
CoroMill® 365 face mill

Diameter 160 - 500 mm / 12.000 - 18.000 inch

Wedge clamp

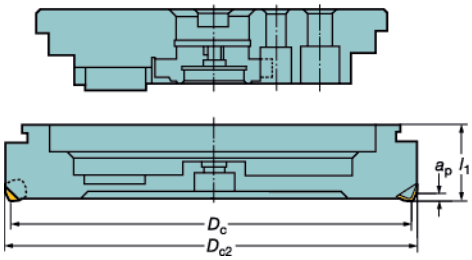


Arbor



S-R/L365

Arbor



S-R/L365 (Cap design)

TO BE QUOTED

Note!

Support body, see page D298.

l_1 = programming length

D_c mm	D_c inch	Ordering code Extra close pitch		Dimensions Lbs	D_{c2}	dm_m	D_{5m}	l_1	Max a_p	n_{max}	Support body
		Inch									
		Arbor									
	12	S-R/LA365-305R63-W15H	46	46.297	12.260	2.480	10.031	2.480	.236	4100	
	14	S-R/LA365-355R63-W15H	52	70.548	14.252	2.480	12.031	2.480	.236	3700	
	16	S-R/LA365-406R63-W15H	58	94.799	16.252	2.480	14.031	2.480	.236	3500	
	18	S-R/LA365-508R63-W15H	72	154.323	20.252	2.480	18.031	2.480	.236	3100	
		Cap mounting									
	10	S-R/LA365-254X25-W15H	36	22.046	10.252	-	-	2.480	.236	4500	**260-425M-1**
	12	S-R/LA365-305X31-W15H	46	30.865	12.260	-	-	2.480	.236	4100	**260-431M-1**
	14	S-R/LA365-355X35-W15H	52	35.274	14.252	-	-	2.480	.236	3700	**260-435M-1**
	16	S-R/LA365-406X40-W15H	58	44.092	16.252	-	-	2.480	.236	3500	**260-440M-1**
	18	S-R/LA365-508X50-W15H	72	83.776	20.252	-	-	2.480	.236	3100	**260-450M-1**
		Metric		KG							
		Arbor									
315		S-R/L365-315Q60-W15H	46	24	321.4	60	265	63	6	4000	
355		S-R/L365-355Q60-W15H	52	32	361.4	60	305	63	6	4100	
400		S-R/L365-400Q60-W15H	58	42	406.4	60	350	63	6	4400	
500		S-R/L365-500Q60-W15H	72	68	506.4	60	450	63	6	4900	
		Cap mounting									
250		S-R/L365-250X25-W15H	36	10	256.4	-	232	63	6	4500	**260-425M-1**
315		S-R/L365-315X31-W15H	46	14	321.4	-	297	63	6	4000	**260-431M-1**
355		S-R/L365-355X35-W15H	52	16	361.4	-	337	63	6	3700	**260-435M-1**
400		S-R/L365-400X40-W15H	58	20	406.4	-	382	63	6	3500	**260-440M-1**
500		S-R/L365-500X50-W15H	72	31	506.4	-	482	63	6	3100	**260-450M-1**
		CIS Arbor									
160		S-LA365-160J51-W15H	22	6	166.4	50.8	128	63	6	5700	
200		S-R/LA365-200J47-W15H	28	8	206.4	47.6	160	63	6	5100	
250		S-R/LA365-250J47-W15H	36	13	256.4	47.6	200	63	6	4500	
315		S-R/LA365-315J47-W15H	46	24	321.4	47.6	265	63	6	4000	
400		S-R/LA365-400J47-W15H	58	42	406.4	47.6	350	63	6	3500	
500		S-R/LA365-500J47-W15H	72	68	506.4	47.6	450	63	6	3100	

= Even pitch

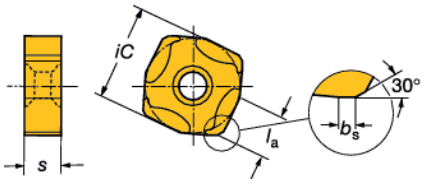
= Differential pitch

D100 D102 G6 D2

Inserts for CoroMill® 365

R/L 365

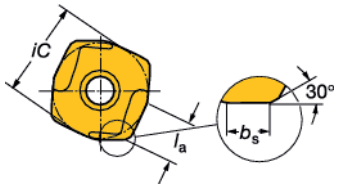
R/L365



Wiper N365

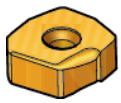
-PW4
-KW4

N365



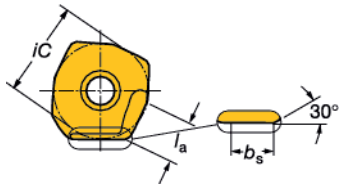
-PW4
-KW4

Wiper N365



-PW8
-KW8

N365



-PW8
-KW8

	↕	Ordering code	Max a_p mm	Max a_p inch	P GC 1030	P GC 4220	P GC 4230	K GC 1020	K GC 3220	K GC 4220	K GC K20D	K GC K20W	S GC 1010	H GC 1010	H GC 4220	*iC* mm	*iC* in.	b_s mm	b_s in.	l_a mm	l_a in.	*s* mm	*s* in.
Light	15	**L365-1505ZNE-KL**	6.0	.236				★								15.0	.591	1.5	.059	6.4	.252	5.66	.223
		R365-1505ZNE-KL	6.0	.236				★			☆	☆				15.0	.591	1.5	.059	6.4	.252	5.66	.223
		R365-1505ZNE-PL	6.0	.236	★	☆	☆			☆			☆	★	☆	15.0	.591	1.5	.059	6.4	.252	5.66	.223
Medium	15	**L365-1505ZNE-KM**	6.0	.236				☆			★	★				15.0	.591	1.5	.059	6.4	.252	5.66	.223
		R365-1505ZNE-PM	6.0	.236	☆	☆	★			☆			☆	★	☆	15.0	.591	1.5	.059	6.4	.252	5.66	.223
Wiper	15	**N365-1505ZNE-KW4**	6.0	.236				☆	☆			☆				15.0	.591	4.0	.157	6.4	.252	5.66	.223
		N365-1505ZNE-KW8	6.0	.236				☆	☆			☆				15.0	.591	8.0	.315	6.4	.252	5.66	.223
		N365-1505ZNE-PW4	6.0	.236	☆											15.0	.591	4.0	.157	6.4	.252	5.66	.223
		N365-1505ZNE-PW8	6.0	.236	☆											15.0	.591	8.0	.315	6.4	.252	5.66	.223
					P30	P20	P20	K20	K15	K25	K15	K20	S10	H10	H25								

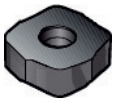
Dimensions, millimeter, inch (mm, in.)

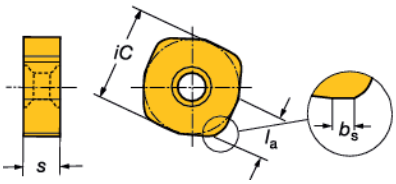
D312 D305

SANDVIK Coromant

Inserts for CoroMill® 365

Ceramic





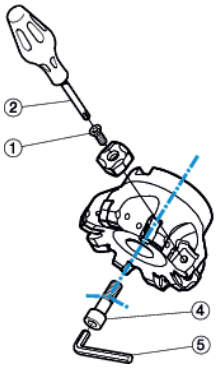
Advanced cutting materials

	□	Ordering code	Max a_p mm	Max a_p inch	K CC 6190	Dimensions, millimeter, inch (mm, in.) b_s mm	b_s in.	r_ε mm	r_ε in.
Light	15	N365-1505ZNE	6.0	.236	★	1.2	.047		
Medium	15	N365-150536E	6.0	.236	★			3.6	.142
					K10				

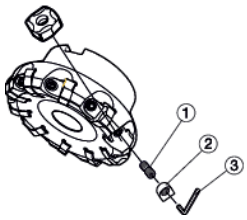
D312 D305

Spare parts for CoroMill® 365

Screw clamp



Wedge clamp



Cutter Screw clamp		1	2					4	5
	D_c	Insert screw	Key (Torx Plus)	Nm	In. lbs	Molykote	Torque wrench[1]	Screw[1)2)]	Hex wrench size
R365	50-63	5513 020-29	5680 046-02 (15IP)	3.0	26	5683 010-01	5680 100-06 (15IP)	5512 073-01	8 mm
	80	5513 020-29	5680 046-02 (15IP)	3.0	26	5683 010-01	5680 100-06 (15IP)	5512 073-02	10 mm
	100	5513 020-29	5680 046-02 (15IP)	3.0	26	5683 010-01	5680 100-06 (15IP)	5512 087-061	12 mm
	125	5513 020-29	5680 046-02 (15IP)	3.0	26	5683 010-01	5680 100-06 (15IP)	5512 098-01	5680 043-18 (50IP)
	160	5513 020-29	5680 046-02 (15IP)	3.0	26	5683 010-01	5680 100-06 (15IP)	–	–
RA365	2.00	5513 020-29	5680 046-02 (15IP)	3.0	26	5683 010-01	5680 100-06 (15IP)	5512 074-01	5/16"
	2.50	5513 020-29	5680 046-02 (15IP)	3.0	26	5683 010-01	5680 100-06 (15IP)	5512 074-01	5/16"
	3.00	5513 020-29	5680 046-02 (15IP)	3.0	26	5683 010-01	5680 100-06 (15IP)	5512 074-02	3/8"
	4.00	5513 020-29	5680 046-02 (15IP)	3.0	26	5683 010-01	5680 100-06 (15IP)	5512 088-051	1/2"
	5.00	5513 020-29	5680 046-02 (15IP)	3.0	26	5683 010-01	5680 100-06 (15IP)	5512 099-01	5680 043-18 (50IP)
	6.00	5513 020-29	5680 046-02 (15IP)	3.0	26	5683 010-01	5680 100-06 (15IP)	–	–

Cutter Wedge clamp		1	2	3		
	D_c	Wedge screw	Wedge	Hex key (mm)	Nm	In-lbs
R365	80-500	339-831	5431 058-01	265.2-817 (3.0)	6.0	53

[1)] Accessories, must be ordered separately
[2)] For through coolant

Maximize your performance with the new generation of milling grades

Inserts in a new insert generation program are introduced to broaden the application area of the CoroMill 365 concept.

	GCI		CGI		NCI		Steel	
	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry
R365-1505ZNE-PL/PM 1030				☆	☆		★	☆
R365-1505ZNE-PL/PM 4230				☆	☆		☆	★
R365-1505ZNE-PL/PM 4220						☆	☆	☆
R/L365-1505ZNE-KL/KM 1020	★		★	☆	★	★	☆	☆
R/L365-1505ZNE-KL/KM K20W	★		★		☆	☆	☆	
R/L365-1505ZNE-KL/KM K20D		★		★				
R/L365-1505ZNE-PL/PM 1010							☆	☆
N365-1505ZNE 6190		★				☆		
N365-150536E 6190		★				☆		

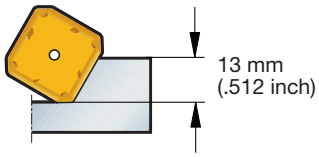
★ First choice

GCI - Gray cast iron
CGI - Compact graphite iron
NCI - Nodular cast iron

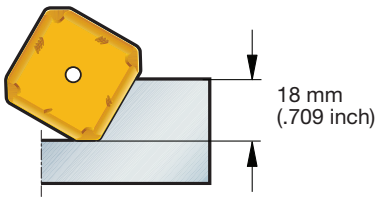
CoroMill® 360

Heavy duty face mill

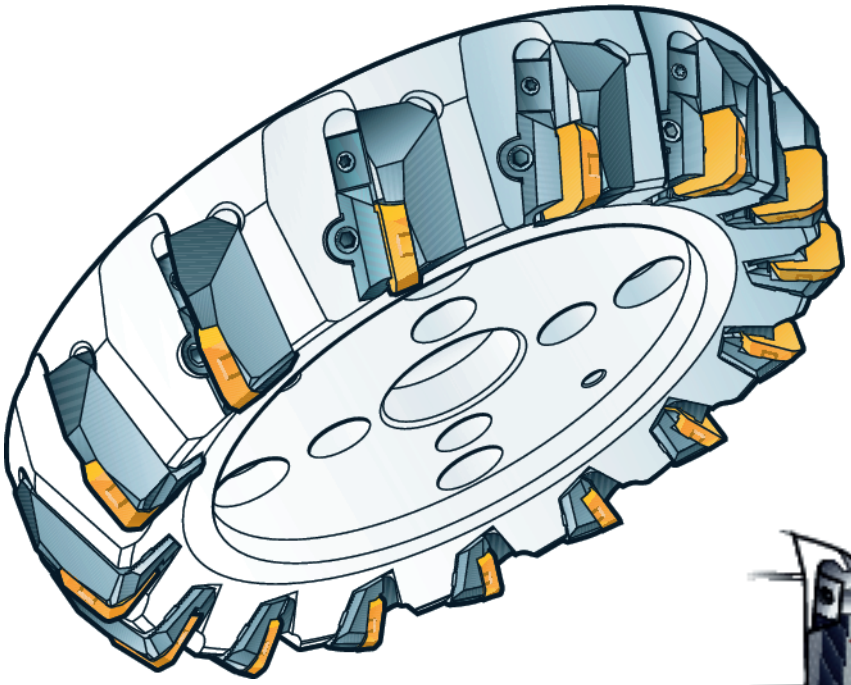
Diameter 160 - 500 mm (6.000 - 20.000 inch)

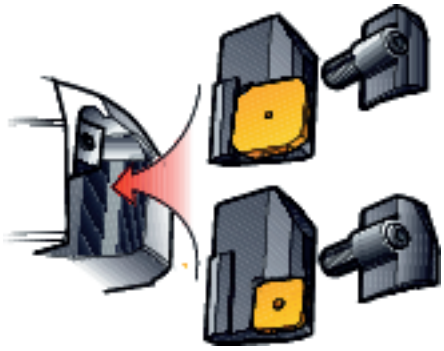


Maximum cutting depth for insert size 19 mm



Maximum cutting depth for insert size 28 mm

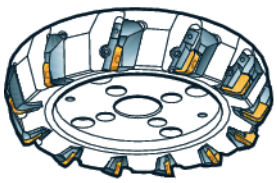


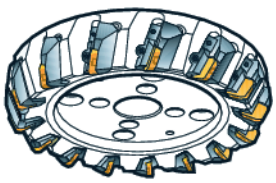


Unique cassette solution

The same body is used for both cassette sizes

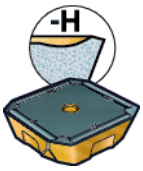
Separate wedge and cassette for respective insert sizes. When replacing, ensure you have the correct size of each.





Cutter pitches

ISO application areas:

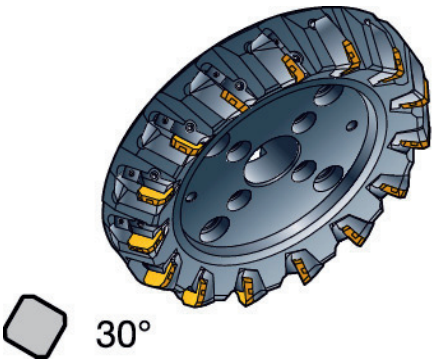


Geometry

CoroMill® 360

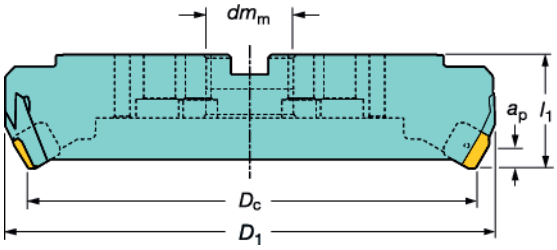
Heavy duty face mill

Right hand



30°

Arbor



l_1 = programming length

Metric version

		Ordering code						Dimensions					
□	D_c	Close pitch	◎	◎	Extra close pitch	◎	◎	kg	D_1	dm_m	l_1	Max a_p	n_{max} 1)
		Arbor											
19	160	360-160Q40-Z6D19	-	6	360-160Q40-Z8E19	8	-	10.7	186.6	40	80	13	795
	200	360-200Q60-Z8D19	-	8	360-200Q60-Z10E19	10	-	14.2	226.6	60	80	13	640
	250	360-250Q60-Z10D19	-	10	360-250Q60-Z12E19	12	-	21.4	276.6	60	80	13	510
	315	360-315Q60-Z12D19	-	12	360-315Q60-Z15E19	15	-	32.6	341.6	60	80	13	405
	400	360-400Q60-Z15D19	-	15	360-400Q60-Z19E19	19	-	49.0	426.6	60	80	13	320
	500	360-500Q60-Z18D19	-	18	360-500Q60-Z24E19	24	-	72.6	526.6	60	80	13	255
28	160	360-160Q40-Z6D28	-	6	360-160Q40-Z8E28	8	-	10.5	186.6	40	80	18	795
	200	360-200Q60-Z8D28	-	8	360-200Q60-Z10E28	10	-	14.0	226.6	60	80	18	640
	250	360-250Q60-Z10D28	-	10	360-250Q60-Z12E28	12	-	21.1	276.6	60	80	18	510
	315	360-315Q60-Z12D28	-	12	360-315Q60-Z15E28	15	-	32.3	341.6	60	80	18	405
	400	360-400Q60-Z15D28	-	15	360-400Q60-Z19E28	19	-	48.6	426.6	60	80	18	320
	500	360-500Q60-Z18D28	-	18	360-500Q60-Z24E28	24	-	72.1	526.6	60	80	18	255
		CIS Arbor											
19	160	A360-160J38-Z6D19	-	6	A360-160J38-Z8E19	8	-	10.7	186.6	38.1	80	13	795
	200	A360-200J47-Z8D19	-	8	A360-200J47-Z10E19	10	-	14.2	226.6	47.625	80	13	640
	250	A360-250J47-Z10D19	-	10	A360-250J47-Z12E19	12	-	21.4	276.6	47.625	80	13	510
	315	A360-315J47-Z12D19	-	12	A360-315J47-Z15E19	15	-	32.6	341.6	47.625	80	13	405
	400	A360-400J47-Z15D19	-	15	A360-400J47-Z19E19	19	-	49.0	426.6	47.625	80	13	320
	500	A360-500J47-Z18D19	-	18	A360-500J47-Z24E19	24	-	72.6	526.6	47.625	80	13	255
28	160	A360-160J38-Z6D28	-	6	A360-160J38-Z8E28	8	-	10.5	186.6	38.1	80	18	795
	200	A360-200J47-Z8D28	-	8	A360-200J47-Z10E28	10	-	14.0	226.6	47.625	80	18	640
	250	A360-250J47-Z10D28	-	10	A360-250J47-Z12E28	12	-	21.1	276.6	47.625	80	18	510
	315	A360-315J47-Z12D28	-	12	A360-315J47-Z15E28	15	-	32.3	341.6	47.625	80	18	405
	400	A360-400J47-Z15D28	-	15	A360-400J47-Z19E28	19	-	48.6	426.6	47.625	80	18	320
	500	A360-500J47-Z18D28	-	18	A360-500J47-Z24E28	24	-	72.1	526.6	47.625	80	18	255

Inch version

		Ordering code						Dimensions					
□	D_c	Close pitch	◎	◎	Extra close pitch	◎	◎	lbs	D_1	dm_m	l_1	Max a_p	n_{max} 1)
		Arbor											
19	6	A360-152R38-Z6D19	-	6	A360-152R38-Z8E19	8	-	21.7	7.047	1.500	3.150	.512	840
	8	A360-203R63-Z8D19	-	8	A360-203R63-Z10E19	10	-	32.9	9.047	2.500	3.150	.512	630
	10	A360-254R63-Z10D19	-	10	A360-254R63-Z12E19	12	-	48.2	11.047	2.500	3.150	.512	500
	12	A360-305R63-Z12D19	-	12	A360-305R63-Z15E19	15	-	65.8	13.047	2.500	3.150	.512	420
	16	A360-406R63-Z15D19	-	15	A360-406R63-Z19E19	19	-	110.9	17.047	2.500	3.150	.512	315
	20	A360-508R63-Z18D19	-	18	A360-508R63-Z24E19	24	-	164.5	21.047	2.500	3.150	.512	250
28	6	A360-152R38-Z6D28	-	6	A360-152R38-Z8E28	8	-	21.6	7.047	1.500	3.150	.709	840
	8	A360-203R63-Z8D28	-	8	A360-203R63-Z10E28	10	-	32.2	9.047	2.500	3.150	.709	630
	10	A360-254R63-Z10D28	-	10	A360-254R63-Z12E28	12	-	48.3	11.047	2.500	3.150	.709	500
	12	A360-305R63-Z12D28	-	12	A360-305R63-Z15E28	15	-	65.9	13.047	2.500	3.150	.709	420
	16	A360-406R63-Z15D28	-	15	A360-406R63-Z19E28	19	-	110.9	17.047	2.500	3.150	.709	315
	20	A360-508R63-Z18D28	-	18	A360-508R63-Z24E28	24	-	163.4	21.047	2.500	3.150	.709	250

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

Note!

Mounting dimensions, see Metalcutting Technical guide.

◎ = Even pitch

◎ = Differential pitch

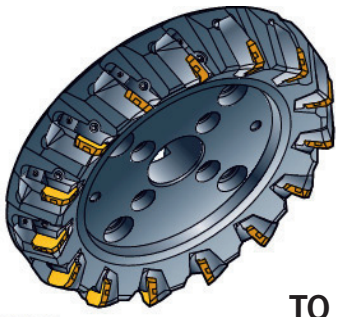
J2 G6 D107 D106

SANDVIK Coromant

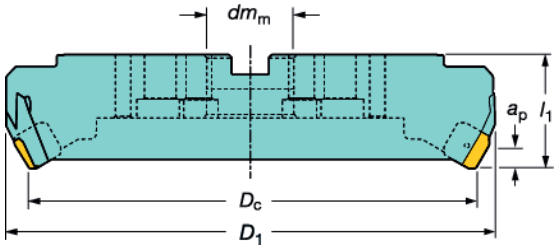
CoroMill® 360

Heavy duty face mill

Left hand



Arbor



30°

TO BE QUOTED

Note: Right hand cutter shown

l_1 = programming length

Metric version

		Ordering code						Dimensions					
D_c	Close pitch			Extra close pitch				D_1	dm_m	l_1	Max a_p	n_{max}[1]
	Arbor											
19	160	S-360L-160Q40-Z6D19	-	6	S-360L-160Q40-Z8E19	8	-	10.7	186.6	40	80	13	795
	200	S-360L-200Q60-Z8D19	-	8	S-360L-200Q60-Z10E19	10	-	14.2	226.6	60	80	13	640
	250	S-360L-250Q60-Z10D19	-	10	S-360L-250Q60-Z12E19	12	-	21.4	276.6	60	80	13	510
	315	S-360L-315Q60-Z12D19	-	12	S-360L-315Q60-Z15E19	15	-	32.6	341.6	60	80	13	405
	400	S-360L-400Q60-Z15D19	-	15	S-360L-400Q60-Z19E19	19	-	49.0	426.6	60	80	13	320
	500	S-360L-500Q60-Z18D19	-	18	S-360L-500Q60-Z24E19	24	-	72.6	526.6	60	80	13	255
28	160	S-360L-160Q40-Z6D28	-	6	S-360L-160Q40-Z8E28	8	-	10.5	186.6	40	80	18	795
	200	S-360L-200Q60-Z8D28	-	8	S-360L-200Q60-Z10E28	10	-	14.0	226.6	60	80	18	640
	250	S-360L-250Q60-Z10D28	-	10	S-360L-250Q60-Z12E28	12	-	21.1	276.6	60	80	18	510
	315	S-360L-315Q60-Z12D28	-	12	S-360L-315Q60-Z15E28	15	-	32.3	341.6	60	80	18	405
	400	S-360L-400Q60-Z15D28	-	15	S-360L-400Q60-Z19E28	19	-	48.6	426.6	60	80	18	320
	500	S-360L-500Q60-Z18D28	-	18	S-360L-500Q60-Z24E28	24	-	72.1	526.6	60	80	18	255
	CIS Arbor												
19	160	S-A360L-160J38-Z6D19	-	6	S-A360L-160J38-Z8E19	8	-	10.7	186.6	38.1	80	13	795
	200	S-A360L-200J47-Z8D19	-	8	S-A360L-200J47-Z10E19	10	-	14.2	226.6	47.625	80	13	640
	250	S-A360L-250J47-Z10D19	-	10	S-A360L-250J47-Z12E19	12	-	21.4	276.6	47.625	80	13	510
	315	S-A360L-315J47-Z12D19	-	12	S-A360L-315J47-Z15E19	15	-	32.6	341.6	47.625	80	13	405
	400	S-A360L-400J47-Z15D19	-	15	S-A360L-400J47-Z19E19	19	-	49.0	426.6	47.625	80	13	320
	500	S-A360L-500J47-Z18D19	-	18	S-A360L-500J47-Z24E19	24	-	72.6	526.6	47.625	80	13	255
28	160	S-A360L-160J38-Z6D28	-	6	S-A360L-160J38-Z8E28	8	-	10.5	186.6	38.1	80	18	795
	200	S-A360L-200J47-Z8D28	-	8	S-A360L-200J47-Z10E28	10	-	14.0	226.6	47.625	80	18	640
	250	S-A360L-250J47-Z10D28	-	10	S-A360L-250J47-Z12E28	12	-	21.1	276.6	47.625	80	18	510
	315	S-A360L-315J47-Z12D28	-	12	S-A360L-315J47-Z15E28	15	-	32.3	341.6	47.625	80	18	405
	400	S-A360L-400J47-Z15D28	-	15	S-A360L-400J47-Z19E28	19	-	48.6	426.6	47.625	80	18	320
	500	S-A360L-500J47-Z18D28	-	18	S-A360L-500J47-Z24E28	24	-	72.1	526.6	47.625	80	18	255

Inch version

		Ordering code						Dimensions					
D_c	Close pitch			Extra close pitch				D_1	dm_m	l_1	Max a_p	n_{max}[1]
	Arbor											
19	6	S-A360L-152R38-Z6D19	-	6	S-A360L-152R38-Z8E19	8	-	21.7	7.047	1.500	3.150	.512	840
	8	S-A360L-203R63-Z8D19	-	8	S-A360L-203R63-Z10E19	10	-	32.9	9.047	2.500	3.150	.512	630
	10	S-A360L-254R63-Z10D19	-	10	S-A360L-254R63-Z12E19	12	-	48.2	11.047	2.500	3.150	.512	500
	12	S-A360L-305R63-Z12D19	-	12	S-A360L-305R63-Z15E19	15	-	65.8	13.047	2.500	3.150	.512	420
	16	S-A360L-406R63-Z15D19	-	15	S-A360L-406R63-Z19E19	19	-	110.9	17.047	2.500	3.150	.512	315
	20	S-A360L-508R63-Z18D19	-	18	S-A360L-508R63-Z24E19	24	-	164.5	21.047	2.500	3.150	.512	250
28	6	S-A360L-152R38-Z6D28	-	6	S-A360L-152R38-Z8E28	8	-	21.6	7.047	1.500	3.150	.709	840
	8	S-A360L-203R63-Z8D28	-	8	S-A360L-203R63-Z10E28	10	-	32.2	9.047	2.500	3.150	.709	630
	10	S-A360L-254R63-Z10D28	-	10	S-A360L-254R63-Z12E28	12	-	48.3	11.047	2.500	3.150	.709	500
	12	S-A360L-305R63-Z12D28	-	12	S-A360L-305R63-Z15E28	15	-	65.9	13.047	2.500	3.150	.709	420
	16	S-A360L-406R63-Z15D28	-	15	S-A360L-406R63-Z19E28	19	-	110.9	17.047	2.500	3.150	.709	315
	20	S-A360L-508R63-Z18D28	-	18	S-A360L-508R63-Z24E28	24	-	163.4	21.047	2.500	3.150	.709	250

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

Note!

Mounting dimensions, see Metalcutting Technical guide.

= Even pitch

= Differential pitch

Left hand cutters delivered to special order.
Please contact your Sandvik Coromant representative.

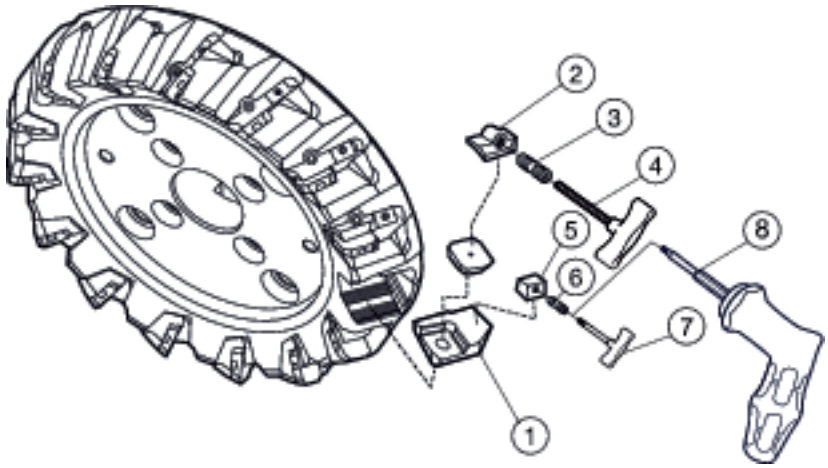

J2


G6


D107


D106

Spare parts for CoroMill® 360



	1		2		3	4		
	Cassette		Insert wedge				Torque value	
Insert size	Right hand	Left hand	Right hand	Left hand	Insert wedge screw	Key	Nm	ft-lbs
19	360R-CA-19	360L-CA-19	360R-IW-19	360L-IW-19	267.21-830	5680 017-04(5.0)	16	11.8
28	360R-CA-28	360L-CA-28	360R-IW-28	360L-IW-28	267.21-830	5680 017-04(5.0)	16	11.8

	5	6	7			8
				Torque value		
Insert size	Cassette wedge	Cassette wedge screw	Key (Torx Plus)	Nm	ft-lbs	Torque wrench[1)]
19	5431 105-08	5516 010-06	5680 048-04(20IP)	6	4.4	5680 100-07
28	5431 105-08	5516 010-06	5680 048-04(20IP)	6	4.4	5680 100-07

1) Accessories, must be ordered separately.

Unequipped bodies

Metric version

	Ordering code						Dimensions			
D_c	Close pitch			Extra close pitch			kg	D_1	dm_m	l_1
	Arbor									
160	360-160Q40-Z6D	-	6	360-160Q40-Z8E	8	-	8.9	186.6	40	80
200	360-200Q60-Z8D	-	8	360-200Q60-Z10E	10	-	11.2	226.6	60	80
250	360-250Q60-Z10D	-	10	360-250Q60-Z12E	12	-	18.4	276.6	60	80
315	360-315Q60-Z12D	-	12	360-315Q60-Z15E	15	-	29.0	341.6	60	80
400	360-400Q60-Z15D	-	15	360-400Q60-Z19E	19	-	44.5	426.6	60	80
500	360-500Q60-Z18D	-	18	360-500Q60-Z24E	24	-	67.2	526.6	60	80
	CIS Arbor									
160	A360-160J38-Z6D	-	6	A360-160J38-Z8E	8	-	8.9	186.6	38.1	80
200	A360-200J47-Z8D	-	8	A360-200J47-Z10E	10	-	11.2	226.6	47.625	80
250	A360-250J47-Z10D	-	10	A360-250J47-Z12E	12	-	18.4	276.6	47.625	80
315	A360-315J47-Z12D	-	12	A360-315J47-Z15E	15	-	29.0	341.6	47.625	80
400	A360-400J47-Z15D	-	15	A360-400J47-Z19E	19	-	44.5	426.6	47.625	80
500	A360-500J47-Z18D	-	18	A360-500J47-Z24E	24	-	67.2	526.6	47.625	80

Inch version

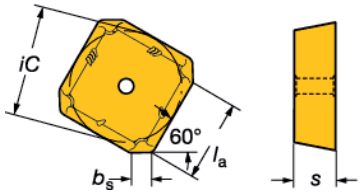
	Ordering code						Dimensions			
D_c	Close pitch			Extra close pitch			kg	D_1	dm_m	l_1
	Arbor									
6	A360-152R38-Z6D	-	6	A360-152R38-Z8E	8	-	17.6	7.346	1.500	3.150
8	A360-203R63-Z8D	-	8	A360-203R63-Z10E	10	-	25.6	8.921	2.500	3.150
10	A360-254R63-Z10D	-	10	A360-254R63-Z12E	12	-	41.7	10.890	2.500	3.150
12	A360-305R63-Z12D	-	12	A360-305R63-Z15E	15	-	58.0	13.449	2.500	3.150
16	A360-406R63-Z15D	-	15	A360-406R63-Z19E	18	-	101.0	16.795	2.500	3.150
20	A360-508R63-Z18D	-	18	A360-508R63-Z24E	24		152.6	20.732	2.500	3.150

Left hand cutters delivered to special order.
Please contact your Sandvik Coromant representative.

Inserts for CoroMill® 360

Cemented carbide

Heavy



Right hand style shown

Dimensions, mm (inch)

Size	*l* = *iC*	l_a	*s*
19	19 (.748)	15 (.591)	6.35 (.250)
28	28 (1.102)	20 (.787)	7.94 (.313)

	iC	Ordering code	Max a_p mm	Max a_p inch	P GC4220	P GC4230	P GC4240	M GC2030	M GC2040	K GC3040	K GC3220	K GC4220	S GC2030	S GC2040	Dimensions, millimeter, inch (mm, in.) b_s mm	b_s in.
Heavy	19	360L-1906M-KH	13.0	.512						★					2.2	.087
		360L-1906M-MH	13.0	.512					★					☆	2.2	.087
		360L-1906M-PH	13.0	.512		★									2.2	.087
		360R-19 06M-KH	13.0	.512						★	★				2.2	.087
		360R-19 06M-MH	13.0	.512				★	★				☆	☆	2.2	.087
		360R-19 06M-PH	13.0	.512	★	★	★					☆			2.2	.087
Heavy	28	360L-2807M-KH	18.0	.709						★					4.6	.181
		360L-2807M-MH	18.0	.709					★					☆	4.6	.181
		360L-2807M-PH	18.0	.709		★									4.6	.181
		360R-28 07M-KH	18.0	.709						★	★				4.6	.181
		360R-28 07M-MH	18.0	.709				★	★				☆	☆	4.6	.181
		360R-28 07M-PH	18.0	.709	★	★	★					☆			4.6	.181
					P15	P25	P40	M25	M30	K30	K20	K25	S25	S30		

★= First choice

Cutting data

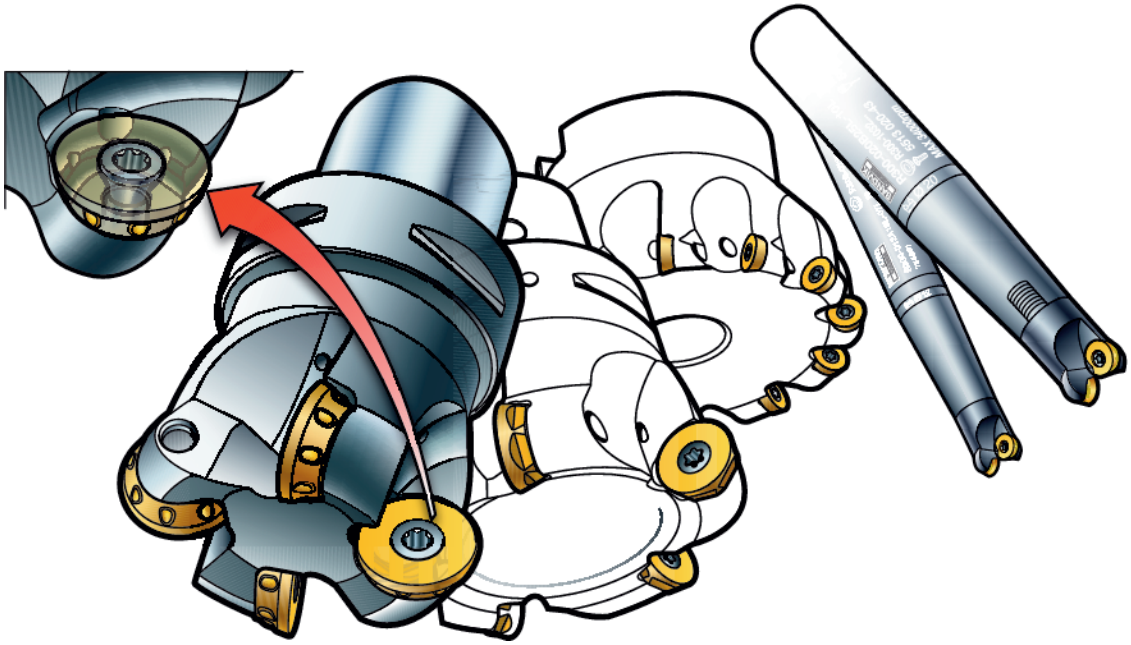
	Feed per tooth, f_z mm (inch)	mm/tooth (inch/tooth)	Cutting speed v_c GC4220 m/min	GC4220 ft/min	Cutting speed v_c GC4230 m/min	GC4230 ft/min	Cutting speed v_c GC4240 m/min	GC4240 ft/min
P	0.46 (.018)	0.30-0.69 (.012-.027)	186 (125-227)	610 (410-745)	151 (102-184)	495 (335-605)	130 (87-157)	425 (285-515)
					GC2030		GC2040	
M	0.46 (.018)	0.30-0.69 (.012-.027)			117 (75-148)	385 (245-485)	113 (72-140)	370 (235-460)
					GC3220		GC3240	
K	0.46 (.018)	0.30-0.69 (.012-.027)			142 (96-174)	465 (315-570)	111 (75-136)	365 (245-445)

D312 D305

CoroMill® 300

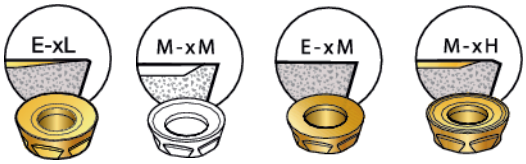
Light cutting face and profile milling cutters

Versatile concept for roughing to high feed semi-finishing



High feed semi-finishing
Extra close pitch version

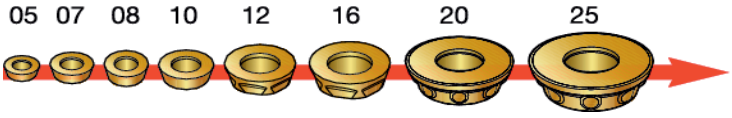
Geometries:



Light cutting | General | First choice semi-finishing | Roughing

Pitch: **L** **M** **H**

Condition: Unstable | First choice roughing | Stable



ISO application areas:

Tailor Made

Tool options designed to individual customer requirements are available. For information on our Tailor Made program see page J3.

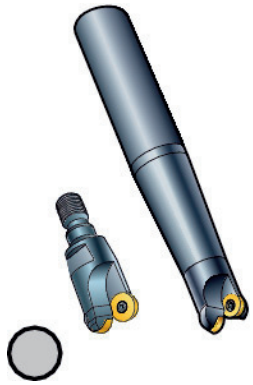
SANDVIK Coromant

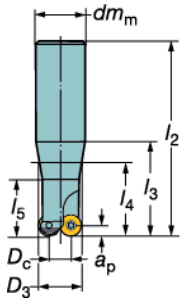
Facemill with round inserts, neutral design

Toroid cutter

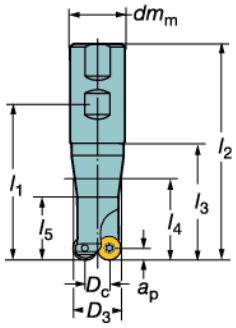
Diameter 10 – 42 mm

Cylindrical

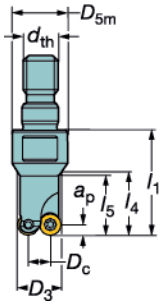




Weldon



Threaded coupling



l_1 = programming length

Metric version

			Ordering code									Dimensions										
		D_3	Coarse pitch			Close pitch			Extra close pitch			kg	D_c	dm_m	l_1	l_2	l_3	l_4	l_5	d_{th}	Max a_p[1]	n_{max}
			Cylindrical shank																			
05		10	R300-010A16L-05L	2	-	-	-	-	-	-	-	0.3	5	16		160	60	24	18		0.7	15900
07	20	12	R300-012A16L-07L	2	-	-	-	-	-	-	-	0.2	5	16		200	60	28	20		1	8900
	24	15	R300-015A20L-07L	2	-	-	-	-	-	-	-	0.5	8	20		200	80	34	25		1.5	12700
08		16	R300-016A20L-08L	2	-	-	-	-	-	-	-	0.5	8	20		200	80	44	25		1.2	12700
10		20	R300-020A25L-10L	2	-	-	-	-	-	-	-	1.2	10	25		250	80	44	30		2	8100
12		24	R300-024A25L-12L	2	-	-	-	-	-	-	-	1.0	12	25		250	80	74	30		5	8900
		25	R300-025A32L-12L	2	-	-	-	-	-	-	-	1.8	13	32		250	80	41	30		5	15800
16		32	R300-032A32L-16L	2	-	-	-	-	-	-	-	1.5	16	32		250	80		30		7	8700
			Weldon																			
07	20	12	R300-012B16L-07L	2	-	-	-	-	-	-	-	0.2	5	16	85	109	60	28	20		1	34000
	24	15	R300-015B20L-07L	2	-	-	-	-	-	-	-	0.4	8	20	106	131	80	34	25		1.5	25000
08		16	R300-016B20L-08L	2	-	-	-	-	-	-	-	0.4	8	20	106	131	80	44	25		1.2	24700
10		20	R300-020B25L-10L	2	-	-	-	-	-	-	-	0.6	10	25	104.5	137	80	44	30		2	34000
12		25	R300-025B32L-12L	2	-	-	-	-	-	-	-	0.8	13	32	105	141	80	44	30		5	20200
			Threaded coupling											D_{5m}								
05		10	R300-10T08-05L	2	-	-	-	-	-	-	-	0.1	5	12.8	25			14.7	14	M8	0.7	
		12	-	-	-	R300-12T08-05M	3	-	-	-	-	0.1		12.8	25			17	15	M8	0.7	
07	20	12	R300-12T08-07L	2	-	-	-	-	-	-	-	0.1	5	12.8	25			16.6	14	M8	1	
		16	-	-	-	R300-16T08-07M	3	-	-	-	-	0.1	9	12.8	25					M8	1	
	20	15	-	-	-	R300-15T08-07M	3	-	-	-	-	0.1	8	12.8	25					M8	1.2	
	24	15	R300-15T08-07L	2	-	R300-15T08-07M	3	-	-	-	-	0.1	8	12.8	25					M8	1.2	
08		16	R300-16T08-08L	2	-	-	-	-	-	-	-	0.1	8	12.8	25					M8	1.5	
		20	-	-	-	R300-20T10-08M	3	-	-	-	-	0.2	12	17.8	30					M10	1.5	
		25	-	-	-	R300-25T12-08M	-	3	-	-	-	0.2	17	21	35					M12	4	
		32	-	-	-	R300-32T16-08M	-	4	R300-32T16-08H	5	-	0.2	24	21	45					M16	4	
		40	-	-	-	R300-40T16-08M	-	5	R300-40T16-08H	6	-	0.4	32	21	45					M16	4	
10		20	R300-20T10-10L	2	-	-	-	-	-	-	-	0.2	10	17.8	30					M10	2	
		25	R300-25T12-10L	2	-	R300-25T12-10M	3	-	-	-	-	0.2	15	20.8	35					M12	2	
		32	-	-	-	-	-	-	R300-32T16-10H	4	-	0.2	22	28.8	45					M16	4	
		35	-	-	-	-	-	-	R300-35T16-10H	4	-	0.4	25	28.8	45					M16	4	
		40	-	-	-	-	-	-	R300-40T16-10H	5	-	0.4	30	28.8	45					M16	4	
		42	-	-	-	-	-	-	R300-42T16-10H	5	-	0.4	32	28.8	45					M16	4	
12		24	R300-24T12-12L	2	-	-	-	-	-	-	-	0.2	12	20.8	35					M12	5	
		32	-	-	-	R300-32T16-12M	3	-	-	-	-	0.2	20	28.8	45					M16	5	
		35	-	-	-	R300-35T16-12M	3	-	-	-	-	0.3	23	28.8	45					M16	5	
		40	-	-	-	R300-40T16-12M	4	-	-	-	-	0.4	28	28.8	45					M16	5	
		42	-	-	-	R300-42T16-12M	4	-	-	-	-	0.4	30	28.8	45					M16	5	
16		32	R300-32T16-16L	2	-	-	-	-	-	-	-	0.2	16	28.8	45					M16	7	

[1] The theoretical maximum a_p for CoroMill 300 is half the diameter of the insert. This should be used only at very small a_e.

= Even pitch

= Differential pitch

 D115

 D119

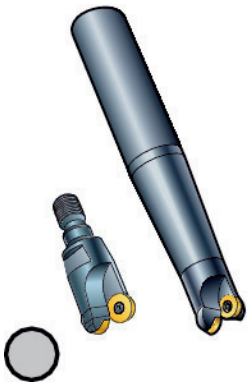
 G6

 D2

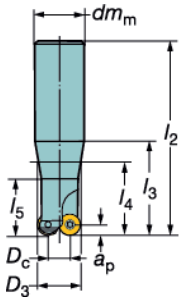
Facemill with round inserts, neutral design

Toroid cutter

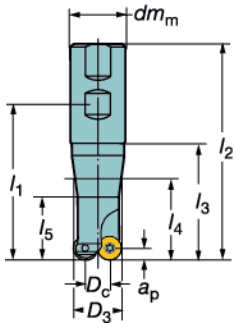
Diameter .375 - 1.250 inch



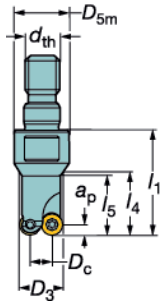
Cylindrical



Weldon



Threaded coupling



l_1 = programming length

Inch version

			Ordering code						Dimensions, inch										
		D_3	Coarse pitch	⊙	⊙	Close pitch	⊙	⊙	Lbs	D_c	dm_m	l_1	l_2	l_3	l_4	l_5	D_{th}	Max a_p[1]	n_{max}
			Cylindrical shank																
05		.375	RA300-010O13L-05L	2	-	-	-	-	0.5	.178	.500		6.000	2.000	1.100			.028	12500
07	20	.500	RA300-013O16L-07L	2	-	-	-	-	0.9	.224	.625		8.000	2.500	1.500			.050	8500
08		.625	RA300-016O19L-08L	2	-	-	-	-	1.7	.310	.750		9.000	3.000	2.100			.060	8300
10		.750	RA300-019O19L-10L	2	-	-	-	-	1.9	.356	.750		9.000	3.000	2.900			.078	8300
13		1.000	RA300-025O25L-13L	2	-	-	-	-	2.2	.500	1.000		10.00	3.000				.250	8800
16		1.250	RA300-032O32L-16L	2	-	-	-	-	3.3	.625	1.250		10.00	3.000				.276	8700
			Weldon																
05		.375	RA300-010M13-05L	2	-	-	-	-	0.3	.178	.500	2.139	3.030	1.250	.750			.028	24700
07	20	.500	RA300-013M16-07L	2	-	-	-	-	0.5	.224	.500	3.122	4.075	2.000	1.032			.050	35200
08		.625	RA300-016M19-08L	2	-	-	-	-	0.6	.310	.750	3.226	4.281	2.250	1.623	1.000		.060	24900
10		.750	RA300-019M25-10L	2	-	-	-	-	1.1	.356	1.000	3.641	4.781	2.500	1.496			.078	35900
			Threaded coupling								D_{5m}								
05		.375	RA300-10T08-05L	2	-	-	-	-	0.2	.218	.504	.906			.575		M8	.030	
		.500	-	-	-	RA300-13T08-05M	3	-	0.4	.303	.504	.906			.594		M8	.030	
07	20	.500	RA300-13T08-07L	2	-	-	-	-	0.7	.224	.504	.906			.559		M8	.040	
		.625	-	-	-	RA300-16T08-07M	3	-	0.7	.349	.504	.906					M8	.040	
08		.625	RA300-16T08-08L	2	-	-	-	-	0.7	.310	.504	.906					M8	.060	
		.750	-	-	-	RA300-19T10-08M	3	-	0.7	.435	.701	1.181					M10	.060	
10		.750	RA300-19T10-10L	2	-	-	-	-	0.7	.356	.701	1.181					M10	.080	

[1] The theoretical maximum a_p for CoroMill 300 is half the diameter of the insert. This should be used only at very small a_e.

* Max RPM of holders must also be considered.

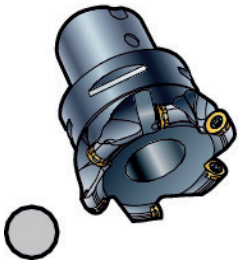
⊙ = Even pitch

⊙ = Differential pitch

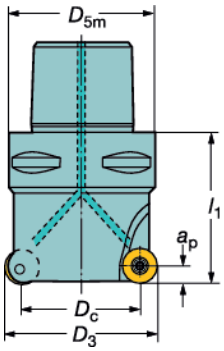
 D116  D119  G6  D2

Facemill with round inserts, positive design

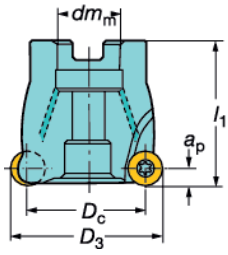
Diameter 35 - 200 mm



Coromant Capto®



Arbor



l_1 = programming length

Metric version

		Ordering code										Dimensions					
	D_3	Coarse pitch			Close pitch			Extra close pitch			Coolant[1]		D_c	D_{5m}	l_1	Max a_p[2]	n_{max}
		Coromant Capto															
8	35	-	-	-	R300-035C3-08M	-	4	R300-035C3-08H	5	-	1	0.3	27	32	40	4	33800
	42	-	-	-	-	-	-	R300-042C4-08H	6	-	1	0.5	34	40	50	4	29800
	52	-	-	-	-	-	-	R300-052C5-08H	8	-	1	1.0	44	50	50	4	26100
	66	-	-	-	-	-	-	R300-066C6-08H	10	-	1	1.7	58	63	50	4	23100
	80	-	-	-	-	-	-	R300-080C6-08H	12	-	1	1.9	72	63	50	4	20500
10	35	-	-	-	-	-	-	R300-035C3-10H	4	-	1	0.3	25	32	40	5	43200
	42	-	-	-	-	-	-	R300-042C4-10H	5	-	1	0.5	32	40	50	5	37200
12	35	-	-	-	R300-035C3-12M	-	3	R300-035C3-12H	4	-	1	0.2	23	32	43	6	32900
	42	-	-	-	R300-042C4-12M	-	3	R300-042C4-12H	4	-	1	0.6	30	40	50	6	28300
	52	-	-	-	-	-	-	R300-052C5-12H	5	-	1	1.0	40	50	50	6	24000
	52	R300-052C5-12L	-	3	R300-052C5-12M	-	4	-	-	-	1	1.0	40	50	50	6	24400
	66	R300-066C6-12L	-	4	R300-066C6-12M	5	-	R300-066C6-12H	7	-	1	1.6	54	63	50	6	21700
	80	-	-	-	R300-080C6-12M	6	-	R300-080C6-12H	8	-	1	1.8	68	63	50	6	18900
16	52	R300-052C5-16L	-	3	R300-052C5-16M	-	4	R300-052C5-16H	5	-	1	1.0	36	50	60	8	20600
	66	R300-066C6-16L	-	4	R300-066C6-16M	-	5	R300-066C6-16H	6	-	1	1.8	50	63	60	8	17600
	80	-	-	-	R300-080C6-16M	-	5	R300-080C6-16H	7	-	1	2.0	64	63	60	8	15400
20	66	-	-	-	R300-066C6-20M	-	4	R300-066C6-20H	5	-	1	1.6	46	63	80	10	
	80	-	-	-	R300-080C6-20M	-	5	R300-080C6-20H	6	-	1	2.0	60	63	80	10	
	100	-	-	-	R300-100C8-20M	-	6	R300-100C8-20H	7	-	1	3.5	80	80	80	10	
		Arbor												dm_m			
8	40	-	-	-	R300-040Q16-08M	-	5	R300-040Q16-08H	6	-	1	0.4	32	16	40	4	30800
	50	-	-	-	-	-	-	R300-050Q22-08H	8	-	1	0.8	42	22	50	4	26700
	52	-	-	-	-	-	-	R300-052Q22-08H	8	-	1	0.8	44	22	50	4	26100
	63	-	-	-	-	-	-	R300-063Q22-08H	10	-	1	0.9	55	22	50	4	23700
	80	-	-	-	-	-	-	R300-080Q27-08H	12	-	1	1.2	72	27	50	4	20500
12	50	R300-050Q22-12L	-	3	R300-050Q22-12M	-	4	R300-050Q22-12H	5	-	1	0.8	38	22	50	6	25000
	52	R300-052Q22-12L	-	3	R300-052Q22-12M	-	4	R300-052Q22-12H	5	-	1	0.9	40	22	50	6	24400
	63	R300-063Q22-12L	-	4	R300-063Q22-12M	5	-	R300-063Q22-12H	7	-	1	0.9	51	22	50	6	22100
	80	-	-	-	R300-080Q27-12M	6	-	R300-080Q27-12H	8	-	1	1.2	68	27	50	6	18900
16	63	R300-063Q22-16L	-	3	R300-063Q22-16M	-	4	R300-063Q22-16H	6	-	1	0.9	47	22	50	8	18200
	80	-	-	-	R300-080Q27-16M	-	5	R300-080Q27-16H	7	-	1	1.1	64	27	50	8	15400
	100	-	-	-	R300-100Q32-16M	-	6	R300-100Q32-16H	8	-	0	1.7	84	32	50	8	13300
	125	-	-	-	R300-125Q32-16M	-	8	R300-125Q32-16H	10	-	0	2.9	109	32	63	8	11900
20	80	R300-080Q27-20L	-	4	R300-080Q27-20M	-	5	R300-080Q27-20H	6	-	1	0.8	60	27	50	10	
	100	R300-100Q32-20L	-	5	R300-100Q32-20M	-	6	R300-100Q32-20H	7	-	1	2.0	80	32	63	10	
	125	R300-125Q40-20L	-	5	R300-125Q40-20M	-	7	R300-125Q40-20H	9	-	1	2.7	105	40	63	10	
	160	R300-160Q40-20L	-	6	R300-160Q40-20M	-	9	R300-160Q40-20H	11	-	0	4.6	140	40	63	10	
	200	R300-200Q60-20L	-	7	R300-200Q60-20M	-	11	-	-	-	0	5.9	180	60	63	10	

1) 0 = no coolant, 1 = coolant through center

2) The theoretical maximum a_p for CoroMill 300 is half the diameter of the insert. This should be used only at very small a_e.

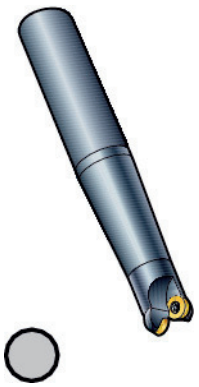
= Even pitch

= Differential pitch

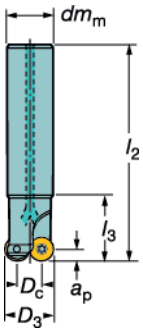
D115 D119 G6 D2

Facemill with round inserts, positive design

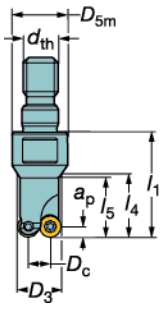
Diameter 25 - 40 mm



Cylindrical



Threaded coupling



l_1 = programming length

Metric version

		Ordering code										Dimensions									
	D_3	Coarse pitch			Close pitch			Extra close pitch			Coolant[1]	kg	D_c	D_{5m}	dm_m	l_1	l_2	l_3	D_{th}	Max a_p	n_{max}
		Cylindrical shank																			
08	25	-	-	-	R300-025A20-08M	-	3	-	-	-	1	0.4	17		20		150	40		4	7200
	32	-	-	-	-	-	-	R300-032A25-08H	5	-	1	0.6	24		25		150	40		4	3590
	32	-	-	-	R300-032A25-08M	-	4	-	-	-	1	0.8	24		25		190	40		4	9000
10	25	-	-	-	R300-025A20-10M	-	2	-	-	-	1	0.5	15		20		150	40		5	2850
	32	-	-	-	-	-	-	R300-032A25-10H	4	-	1	0.7	22		25		150	40		5	2850
	32	-	-	-	R300-032A25-10M	-	3	-	-	-	1	0.7	22		25		190	40		5	1470
12	32	-	-	-	-	-	-	R300-032A25-12H	3	-	1	0.6	20		25		150	40		6	3550
	32	-	-	-	R300-032A25-12M	2	-	-	-	-	1	1.2	20		25		190	40		6	8900
	40	-	-	-	-	-	-	R300-040A32-12H	4	-	1	1.6	28		32		150	40		6	2850
	40	-	-	-	R300-040A32-12M	-	3	-	-	-	1	1.8	28		32		250	40		6	1140
		Threaded coupling																			
08	25	-	-	-	R300-25T12-08M	-	3	-	-	-	1	0.2	17	21		35			M12	4	
	32	-	-	-	R300-32T16-08M	-	4	R300-32T16-08H	5	-	1	0.2	24	21		45			M16	4	
	40	-	-	-	R300-40T16-08M	-	5	R300-40T16-08H	6	-	1	0.4	32	21		45			M16	4	

[1] 0 = no coolant, 1 = coolant through center

= Even pitch

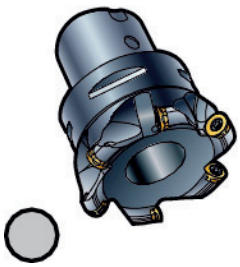
= Differential pitch

 D115
 D119
 G6
 D2

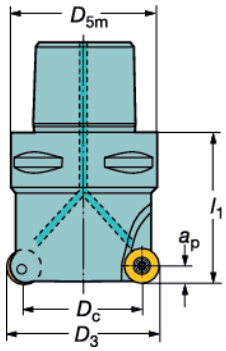
SANDVIK Coromant

Facemill with round inserts, positive design

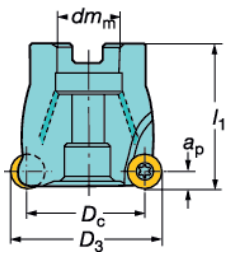
Diameter 1.000 - 8.000 inch



Coromant Capto®



Arbor



Inch version

		Ordering code										Dimensions, inch						
	D_3	Coarse pitch			Close pitch			Extra close pitch			Coolant[1]		D_c	D_{5m}	dm_m	l_1	Max a_p[2]	n_{max}
		Coromant Capto																
13	2.000	-	-	-	-	-	-	RA300-052C5-13H	5	-	1	1.8	1.547	1.968		1.968	.248	16900
	2.000	RA300-052C5-13L	-	3	RA300-052C5-13M	-	4	-	-	-	1	1.8	1.547	1.968		2.000	.248	16600
	2.600	RA300-066C6-13L	-	4	RA300-066C6-13M	-	5	RA300-066C6-13H	7	-	1	2.6	1.980	2.480		2.000	.248	14300
16	3.000	RA300-076C6-16L	4	-	RA300-076C6-16M	5	-	RA300-076C6-16H	-	7	1	4.3	2.362	2.480		2.362	.315	16000
20	3.000	-	-	-	RA300-076C6-20M	-	4	RA300-076C6-20H	5	-	1	4.3	2.228	2.480		3.150	.394	
	4.000	-	-	-	RA300-102C8-20M	-	6	RA300-102C8-20H	7	-	1	7.7	3.213	3.150		3.150	.394	
25	3.000	RA300-076C6-25L	-	3	RA300-076C6-25M	-	4	-	-	-	1	4.3	2.016	2.480		3.150	.492	
	4.000	-	-	-	RA300-102C8-25M	-	4	RA300-102C8-25H	6	-	1	7.7	3.000	3.150		3.150	.492	
		Arbor																
13	2.000	-	-	-	RA300-051R19-13M	-	4	RA300-051R19-13H	5	-	1	1.5	1.508		.750	1.968	.248	16900
	2.000	RA300-051R19-13L	-	3	-	-	-	-	-	-	1	1.5	1.508		.750	1.968	.248	16900
	2.500	RA300-063R19-13L	-	4	RA300-063R19-13M	-	5	RA300-063R19-13H	6	-	1	1.1	1.980		.750	1.968	.248	14700
	3.000	RA300-076R25-13L	-	5	RA300-076R25-13M	-	6	RA300-076R25-13H	7	-	1	3.3	2.492		1.000	1.968	.248	13500
16	2.500	RA300-063R19-16L	-	3	RA300-063R19-16M	-	4	RA300-063R19-16H	6	-	1	1.0	1.850		.750	1.968	.315	18200
	3.000	-	-	-	RA300-076R25-16M	-	5	RA300-076R25-16H	7	-	1	2.6	2.362		1.000	1.968	.315	16000
	4.000	RA300-102R38-16L	-	5	RA300-102R38-16M	-	6	RA300-102R38-16H	8	-	0	4.9	3.386		1.500	2.480	.315	13200
20	3.000	RA300-076R25-20L	-	3	RA300-076R25-20M	-	4	RA300-076R25-20H	5	-	1	1.8	2.228		1.000	2.480	.394	
	4.000	RA300-102R38-20L	-	5	RA300-102R38-20M	-	6	RA300-102R38-20H	7	-	1	4.4	3.213		1.500	2.480	.492	
	5.000	RA300-127R38-20L	-	5	RA300-127R38-20M	-	7	-	-	-	1	6.4	4.213		1.500	2.480	.394	
	6.000	RA300-152R38-20L	-	7	RA300-152R38-20M	-	9	RA300-152R38-20H	10	-	0	9.0	5.213		1.500	2.480	.394	
	8.000	RA300-203R63-20L	-	7	RA300-203R63-20M	-	11	-	-	-	0	13.2	7.213		2.500	2.480	.394	
25	3.000	RA300-076R25-25L	-	3	RA300-076R25-25M	-	4	-	-	-	1	1.8	2.228		1.000	2.480	.394	
	4.000	-	-	-	RA300-102R38-25M	-	4	RA300-102R38-25H	6	-	1	4.4	3.213		1.500	2.480	.394	
	5.000	RA300-127R38-25L	-	4	RA300-127R38-25M	-	5	RA300-127R38-25H	7	-	1	6.4	4.213		1.500	2.480	.394	
	6.000	RA300-152R38-25L	-	5	RA300-152R38-25M	-	7	RA300-152R38-25H	8	-	0	9.0	5.213		1.500	2.480	.394	
	8.000	RA300-203R63-25L	-	6	RA300-203R63-25M	-	8	RA300-203R63-25H	11	-	0	13.2	7.213		2.500	2.480	.394	

[1] 0 = no coolant, 1 = coolant through center

[2] The theoretical maximum a_p for CoroMill 300 is half the diameter of the insert. This should be used only at very small a_e.

Note!
Coolant screws are ordered separately

= Even pitch

= Differential pitch

 D116

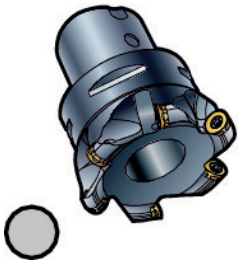
 D119

 G6

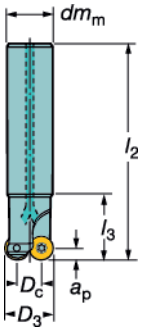
 D2

Facemill with round inserts, positive design

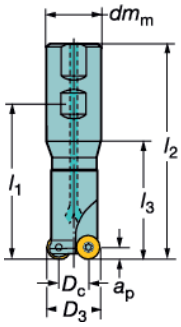
Diameter .375 - 1.500 inch



Cylindrical



Weldon



l_1 = programming length

Inch version

		Ordering code								Dimensions, inch							
	D_3	Coarse pitch		Close pitch		Extra close pitch			Coolant[1]		D_c	dm_m	l_1	l_2	l_3	Max a_p[2]	n_{max}
		Cylindrical shank															
05	.375	RA300-010O13L-05L	2	-	-	-	-	-	0	0.5	.178	.500		6.000	2.000	.028	12500
07	.500	RA300-013O16L-07L	2	-	-	-	-	-	0	0.9	.224	.625		8.000	2.500	.050	8500
08	.625	RA300-016O19L-08L	2	-	-	-	-	-	0	1.7	.310	.750		9.000	3.000	.060	8300
09	1.000	-	-	-	-	RA300-025O25-09H	3	-	1	1.5	.625	1.000		6.000	1.400	.177	27400
	1.000	-	-	RA300-025O25-09M	2	-	-	-	1	2.0	.625	1.000		7.500	1.500	.177	14500
	1.250	-	-	-	-	RA300-032O32-09H	4	-	1	1.5	.905	1.250		6.000	1.400	.177	27400
	1.250	-	-	RA300-032O32-09M	3	-	-	-	1	1.5	.905	1.250		10.000	1.400	.177	7400
	1.500	-	-	-	-	RA300-038O32-09H	4	-	1	2.4	1.142	1.250		6.000	1.400	.177	27400
10	.750	RA300-019O19L-10L	2	-	-	-	-	-	0	1.9	.356	.750		9.000	3.000	.078	8300
13	1.000	RA300-025O25L-13L	2	-	-	-	-	-	1	2.2	.500	1.000		10.000	3.000	.250	8800
	1.250	-	-	-	-	RA300-032O32-13H	3	-	1	1.5	.750	1.250		6.000	1.500	.248	25100
	1.250	-	-	RA300-032O32-13M	2	-	-	-	1	1.5	.750	1.250		10.000	1.500	.248	7400
	1.500	-	-	-	-	RA300-038O32-13H	4	-	1	2.4	1.000	1.250		6.000	1.500	.248	21600
	1.500	-	-	RA300-038O32-13M	3	-	-	-	1	3.3	1.000	1.250		10.000	1.500	.248	7400
16	1.250	RA300-032O32L-16L	2	-	-	-	-	-	1	3.3	.625	1.250		10.000	3.000	.276	8700
		Weldon															
05	.375	RA300-010M13-05L	2	-	-	-	-	-	0	0.3	.178	.500	2.139	3.030	1.250	.028	24700
07	.500	RA300-013M16-07L	2	-	-	-	-	-	0	0.5	.224	.500	3.122	4.075	2.000	.050	35200
08	.625	RA300-016M19-08L	2	-	-	-	-	-	0	0.6	.310	.750	3.226	4.281	2.250	.060	24900
09	1.000	-	-	-	-	RA300-025M25-09H	3	-	0	1.5	.625	1.000	4.142	5.284	2.685	.177	27400
	1.000	-	-	RA300-025M25-09M	2	-	-	-	0	1.5	.625	1.000	4.142	5.284	2.685	.177	14500
	1.250	-	-	-	-	RA300-032M32-09H	4	-	1	1.5	.905	1.250	4.807	5.949	3.354	.177	27400
	1.250	-	-	RA300-032M32-09M	3	-	-	-	1	3.5	.905	1.250	4.807	5.949	3.354	.177	7400
	1.500	-	-	-	-	RA300-038M32-09H	-	4	1	2.0	1.142	1.250	5.141	6.284	4.000	.177	27400
10	.750	RA300-019M25-10L	2	-	-	-	-	-	0	1.1	.356	1.000	3.641	4.781	2.500	.078	35900
13	1.250	-	-	RA300-032M32-13M	2	RA300-032M32-13H	3	-	1	1.5	.750	1.250	4.807	5.949	3.354	.248	25100
	1.500	-	-	RA300-038M32-13M	3	RA300-038M32-13H	4	-	1	2.0	1.000	1.250	5.142	6.284	3.685	.248	21600

1) 0 = no coolant, 1 = coolant through center

2) The theoretical maximum a_p for CoroMill 300 is half the diameter of the insert. This should be used only at very small a_e.

Note!
Coolant screws are ordered separately

= Even pitch

= Differential pitch

 D116  D119  G6  D2

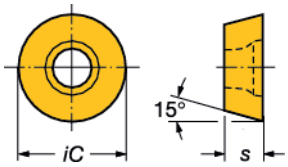
Inserts for CoroMill® 300

E-xL

E-xM

M-xM

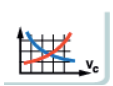
M-xH



Metric version

	iO	Ordering code	P					M					K				N			S									H					Dimensions	
			GC 1025	GC 1030	GC 4220	GC 4230	GC 4240	GC 1030	GC 1040	GC 2030	GC 2040		GC 3040	GC 4220	GC 4240	- H13A	GC 1025	GC 1030	- H13A	GC 1010	GC 1025	GC 1030	GC 2030	GC 2040	- H13A	GC S30T	GC S40T		GC 1010	GC 1025	GC 1030	GC 3040	GC 4220		
			P10	P30	P15	P25	P40	M15	M35	M25	M30		K30	K25	K35	K25	N15	N15	N15	S10	S15	S15	S25	S30	S20	S25	S35		H10	H15	H10	H25	H25		
																																		iC	*s*
Light	08	R300-0828E-PL		★				☆										☆		☆		☆				★	★		★		☆				8	2.78
		R300-0828E-KL														☆			☆					☆											8	2.78
	10	R300-1032E-PL		★				☆										☆		☆		☆				★	★		★		☆				10	3.18
		R300-1032E-KL														☆			☆					☆											10	3.18
	12	R300-1240E-PL		★			☆	☆										☆		☆		☆				★	★		★		☆				12	3.97
		R300-1240E-ML							☆	★	☆												☆												12	3.97
	16	R300-1648E-PL		★			☆	☆										☆				☆				★	★				☆				16	4.76
		R300-1648E-ML							☆	★	☆												☆	☆											16	4.76
	20	R300-2060E-PL		★			☆	☆										☆				☆				★					☆				20	6.48
		R300-2060E-ML							☆	★	☆												☆	☆											20	6.48
Medium	08	R300-0828M-PM		★			☆											☆				☆				★	★				☆				8	2.78
		R300-0828M-MM							☆	★	☆												☆	☆											8	2.78
		R300-0828E-PM	☆	★			☆								☆		☆	☆		☆	☆	☆				★	★		★	☆	☆				8	2.78
		R300-0828E-MM							☆		★													☆											8	2.78
	10	R300-1032M-PM		☆		★	☆											☆				☆				★	★				☆				10	3.18
		R300-1032M-MM							☆	★	☆												★	☆											10	3.18
		R300-1032E-PM	☆	★			☆								☆		☆	☆		☆	☆	☆				★	★		★	☆	☆				10	3.18
		R300-1032E-MM							☆		☆													☆											10	3.18
	12	R300-1240M-PM		☆	☆	★	☆							☆	☆							☆				★	★				☆		☆		12	3.97
		R300-1240M-MM							☆	★	☆												☆	☆											12	3.97
		R300-1240E-PM	☆	★			☆										☆	☆		☆	☆	☆				★	★		★	☆	☆				12	3.97
		R300-1240E-MM							☆	☆	☆												★	☆											12	3.97
	16	R300-1648M-PM		☆		★	☆								☆							☆				★	★				☆				16	4.76
		R300-1648M-MM							☆	★	☆												☆	☆											16	4.76
		R300-1648E-PM	☆	★			☆										☆	☆		☆	☆	☆				★	★		★	☆	☆				16	4.76
		R300-1648E-MM							☆		☆													☆											16	4.76
	20	R300-2060M-PM		☆		★	☆								☆							☆				★					☆				20	6.48
		R300-2060M-MM							☆	★	☆												☆	☆											20	6.48
		R300-2060E-PM		★			☆											☆		☆		☆				★	★		★		☆				20	6.48
		R300-2060E-MM							☆	☆	☆												☆	☆											20	6.48
Heavy	08	R300-0828M-PH		☆	☆	★	☆							☆		☆		☆				☆									☆		☆		8	2.78
		R300-0828M-MH									★													☆											8	2.78
		R300-0828M-KH											☆						☆						☆								☆			8	2.78
	10	R300-1032M-PH		☆	☆	★	☆							☆								☆				★					☆		☆		10	3.18
		R300-1032M-MH								☆	★												★	☆											10	3.18
		R300-1032M-KH											☆																				☆			10	3.18
	12	R300-1240M-PH		☆	☆	★	☆							☆							☆		☆				★			★		☆		☆		12	3.97
		R300-1240M-MH								☆	★												★	☆											12	3.97
		R300-1240M-KH											☆																				★			12	3.97
	16	R300-1648M-PH		☆	☆	★	☆							☆							☆		☆				★			★		☆		☆		16	4.76
		R300-1648M-MH								☆	★												★	☆											16	4.76
		R300-1648M-KH											☆																				★			16	4.76
	20	R300-2060M-PH		☆	☆	★	☆							☆							☆		☆				★			★		☆		☆		20	6.48
		R300-2060M-MH								☆	★												☆	☆											20	6.48
		R300-2060M-KH											☆																							20	6.48

★= First choice


D312


D305

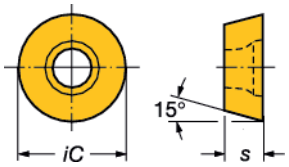
Inserts for CoroMill® 300

E-xL

E-xM

M-xM

M-xH



Inch version

	iO	Ordering code	P					M				K			N		S								H					Dimensions, inch	
			GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC		
			1025	1030	4220	4230	4240	1030	1040	2030	2040	3040	4220	4240	1025	1030	1010	1025	1030	2030	2040	S30T	S40T	1010	1025	1030	3040	4220	*iC*	*s*
Light	13	R300-1340E-ML							☆	★	☆									☆	☆									.500	.156
		R300-1340E-PL		★			☆	☆								☆	☆		☆			★	★	★		☆				.500	.156
	25	R300-2570E-ML							☆	★	☆									☆	☆									1.000	.313
		R300-2570E-PL		★			☆	☆								☆	☆		☆				★	★		☆				1.000	.313
Medium	05	R300-0517E-PM	☆	★			☆							☆	☆	☆		☆	★						☆	☆				.197	.067
		R300-0517E-MM									☆										☆									.197	.067
	07	R300-0724E-PM	☆	★			☆							☆	☆	☆		☆	★						☆	☆				.276	.094
		R300-0724E-MM							☆		★										☆									.276	.094
		R300-0720E-PM	☆	★			☆							☆	☆	☆		☆	★						☆	☆				.276	.078
		R300-0720E-MM							☆		★										☆									.276	.078
	09	R300-0932E-MM									☆										☆									.375	.125
		R300-0932E-PM	☆	☆											☆	☆	☆	☆	☆					★	☆	☆				.375	.125
		R300-0932M-MM								☆	☆									☆	☆									.375	.125
		R300-0932M-PM		☆			☆	☆								☆			☆							☆				.375	.125
	13	R300-1340E-MM							☆	☆	☆									☆	☆									.500	.156
		R300-1340E-PM	☆	☆											☆	☆	☆	☆	☆			★	★	★	☆	☆				.500	.156
		R300-1340M-MM							☆	☆	☆									☆	☆									.500	.156
		R300-1340M-PM		☆		☆	☆												☆			★	★			☆				.500	.156
	25	R300-2570M-MM							☆		☆										☆									1.000	.313
		R300-2570M-PM		☆		★	☆							☆					☆				★			☆				1.000	.313
Heavy	09	R300-0932M-KH										☆																☆		.375	.125
		R300-0932M-MH								☆	☆									☆	☆									.375	.125
		R300-0932M-PH		☆	☆	☆	☆						☆			☆			☆							☆			☆	.375	.125
	13	R300-1340M-KH										☆																☆		.500	.156
		R300-1340M-MH								☆	☆									☆	☆									.500	.156
		R300-1340M-PH		☆	☆	☆	☆						☆				☆		☆					★		☆			☆	.500	.156
	25	R300-2570M-KH										☆																		1.000	.313
		R300-2570M-MH								☆	★									☆	☆									1.000	.313
		R300-2570M-PH		☆	☆	★	☆						☆				☆		☆				★	★		☆			☆	1.000	.313
			P10	P30	P15	P25	P40	M15	M35	M25	M30	K30	K25	K35	N15	N15	S10	S15	S15	S25	S30	S25	S35	H10	H15	H10	H25	H25			

★= First choice

D312 D305

Feed recommendations for CoroMill® 300

Feed recommendations for insert size 08 (*iC*)

f_z (mm/insert, inch/insert)

a_p mm	a_p inch	E-xL rec. (min.- max.) mm	E-xL rec. (min.- max.) inch	E-xM rec. (min.- max.) mm	E-xM rec. (min.- max.) inch	M-xM rec. (min.- max.) mm	M-xM rec. (min.- max.) inch	M-xH rec. (min.- max.) mm	M-xH rec. (min.- max.) inch
0.10	.004	0.54 (0.23-0.68)	.021 (.009-.027)	0.59 (0.23-0.90)	.023 (.009-.035)	0.59 (0.32-0.90)	.023 (.013-.035)	0.68 (0.32-1.13)	.027 (.013-.044)
0.50	.020	0.25 (0.10-0.31)	.010 (.004-.012)	0.27 (0.10-0.41)	.011 (.004-.016)	0.27 (0.14-0.41)	.011 (.006-.016)	0.31 (0.14-0.52)	.012 (.006-.020)
1.00	.039	0.18 (0.08-0.23)	.007 (.003-.009)	0.20 (0.08-0.30)	.008 (.003-.012)	0.20 (0.11-0.30)	.008 (.004-.012)	0.23 (0.11-0.38)	.009 (.004-.015)
1.50	.059	0.15 (0.06-0.19)	.006 (.002-.007)	0.17 (0.06-0.26)	.007 (.002-.010)	0.17 (0.09-0.26)	.007 (.004-.010)	0.19 (0.09-0.32)	.007 (.004-.013)
2.00	.079	0.14 (0.06-0.17)	.006 (.002-.007)	0.15 (0.06-0.23)	.006 (.002-.009)	0.15 (0.08-0.23)	.006 (.003-.009)	0.17 (0.08-0.29)	.007 (.003-.011)
3.00	.118	0.12 (0.05-0.15)	.005 (.002-.006)	0.13 (0.05-0.21)	.005 (.002-.008)	0.13 (0.07-0.21)	.005 (.003-.008)	0.15 (0.07-0.26)	.006 (.003-.010)
4.00	.157	0.12 (0.05-0.15)	.005 (.002-.006)	0.13 (0.05-0.20)	.005 (.002-.008)	0.13 (0.07-0.20)	.005 (.003-.008)	0.15 (0.07-0.25)	.006 (.003-.010)

Feed recommendations for insert size 09 - 10 (*iC*)

f_z (mm/insert, inch/insert)

a_p mm	a_p inch	E-xL rec. (min.- max.) mm	E-xL rec. (min.- max.) inch	E-xM rec. (min.- max.) mm	E-xM rec. (min.- max.) inch	M-xM rec. (min.- max.) mm	M-xM rec. (min.- max.) inch	M-xH rec. (min.- max.) mm	M-xH rec. (min.- max.) inch
0.10	.004	0.75 (0.25-0.90)	.030 (.010-.035)	0.90 (0.25-1.26)	.035 (.010-.050)	0.75 (0.35-1.26)	.030 (.014-.050)	1.01 (0.35-1.51)	.040 (.014-.059)
0.50	.020	0.34 (0.11-0.41)	.013 (.004-.016)	0.41 (0.11-0.57)	.016 (.004-.022)	0.34 (0.16-0.57)	.013 (.006-.022)	0.46 (0.16-0.69)	.018 (.006-.027)
1.00	.039	0.25 (0.08-0.30)	.010 (.003-.012)	0.30 (0.08-0.42)	.012 (.003-.017)	0.25 (0.12-0.42)	.010 (.005-.017)	0.33 (0.12-0.50)	.013 (.005-.020)
1.50	.059	0.21 (0.07-0.25)	.008 (.003-.010)	0.25 (0.07-0.35)	.010 (.003-.014)	0.21 (0.10-0.35)	.008 (.004-.014)	0.28 (0.10-0.42)	.011 (.004-.017)
2.00	.079	0.19 (0.06-0.23)	.007 (.002-.009)	0.23 (0.06-0.31)	.009 (.002-.012)	0.19 (0.09-0.31)	.007 (.004-.012)	0.25 (0.09-0.38)	.010 (.004-.015)
3.00	.118	0.16 (0.05-0.20)	.006 (.002-.008)	0.20 (0.05-0.27)	.008 (.002-.011)	0.16 (0.08-0.27)	.006 (.003-.011)	0.22 (0.08-0.33)	.009 (.003-.013)
4.00	.157	0.15 (0.05-0.18)	.006 (.002-.007)	0.18 (0.05-0.26)	.007 (.002-.010)	0.15 (0.07-0.26)	.006 (.003-.010)	0.20 (0.07-0.31)	.008 (.003-.012)
5.00	.197	0.15 (0.05-0.18)	.006 (.002-.007)	0.18 (0.05-0.25)	.007 (.002-.010)	0.15 (0.07-0.25)	.006 (.003-.010)	0.20 (0.07-0.30)	.008 (.003-.012)

Feed recommendations for insert size 12 - 13 (*iC*)

f_z (mm/insert, inch/insert)

a_p mm	a_p inch	E-xL rec. (min.- max.) mm	E-xL rec. (min.- max.) inch	E-xM rec. (min.- max.) mm	E-xM rec. (min.- max.) inch	M-xM rec. (min.- max.) mm	M-xM rec. (min.- max.) inch	M-xH rec. (min.- max.) mm	M-xH rec. (min.- max.) inch
0.10	.004	0.83 (0.28-1.10)	.033 (.011-.043)	0.99 (0.28-1.38)	.039 (.011-.054)	0.83 (0.39-1.38)	.033 (.015-.054)	1.10 (0.39-1.65)	.043 (.015-.065)
0.50	.020	0.38 (0.13-0.50)	.015 (.005-.020)	0.45 (0.13-0.63)	.018 (.005-.025)	0.38 (0.18-0.63)	.015 (.007-.025)	0.50 (0.18-0.75)	.020 (.007-.030)
1.00	.039	0.27 (0.09-0.36)	.011 (.004-.014)	0.33 (0.09-0.45)	.013 (.004-.018)	0.27 (0.13-0.45)	.011 (.005-.018)	0.36 (0.13-0.54)	.014 (.005-.021)
1.50	.059	0.23 (0.08-0.30)	.009 (.003-.012)	0.27 (0.08-0.38)	.011 (.003-.015)	0.23 (0.11-0.38)	.009 (.004-.015)	0.30 (0.11-0.45)	.012 (.004-.018)
2.00	.079	0.20 (0.07-0.27)	.008 (.003-.011)	0.24 (0.07-0.34)	.009 (.003-.013)	0.20 (0.09-0.34)	.008 (.004-.013)	0.27 (0.09-0.40)	.011 (.004-.016)
3.00	.118	0.17 (0.06-0.23)	.007 (.002-.009)	0.21 (0.06-0.29)	.008 (.002-.011)	0.17 (0.08-0.29)	.007 (.003-.011)	0.23 (0.08-0.35)	.009 (.003-.014)
4.00	.157	0.16 (0.05-0.21)	.006 (.002-.008)	0.19 (0.05-0.27)	.007 (.002-.011)	0.16 (0.07-0.27)	.006 (.003-.011)	0.21 (0.07-0.32)	.008 (.003-.013)
5.00	.197	0.15 (0.05-0.20)	.006 (.002-.008)	0.18 (0.05-0.25)	.007 (.002-.010)	0.15 (0.07-0.25)	.006 (.003-.010)	0.20 (0.07-0.30)	.008 (.003-.012)
6.00	.236	0.15 (0.05-0.20)	.006 (.002-.008)	0.18 (0.05-0.25)	.007 (.002-.010)	0.15 (0.07-0.25)	.006 (.003-.010)	0.20 (0.07-0.30)	.008 (.003-.012)

Feed recommendations for insert size 16 (*iC*)

f_z (mm/insert, inch/insert)

a_p mm	a_p inch	E-xL rec. (min.- max.) mm	E-xL rec. (min.- max.) inch	E-xM rec. (min.- max.) mm	E-xM rec. (min.- max.) inch	M-xM rec. (min.- max.) mm	M-xM rec. (min.- max.) inch	M-xH rec. (min.- max.) mm	M-xH rec. (min.- max.) inch
0.10	.004	1.14 (0.32-1.59)	.045 (.013-.063)	1.27 (0.32-1.90)	.050 (.013-.075)	1.14 (0.44-1.59)	.045 (.017-.063)	1.59 (0.44-2.54)	.063 (.017-.100)
0.50	.020	0.52 (0.14-0.72)	.020 (.006-.028)	0.57 (0.14-0.86)	.022 (.006-.034)	0.52 (0.20-0.72)	.020 (.008-.028)	0.72 (0.20-1.15)	.028 (.008-.045)
1.00	.039	0.37 (0.10-0.52)	.015 (.004-.020)	0.41 (0.10-0.62)	.016 (.004-.024)	0.37 (0.14-0.52)	.015 (.006-.020)	0.52 (0.14-0.83)	.020 (.006-.033)
1.50	.059	0.31 (0.09-0.43)	.012 (.004-.017)	0.34 (0.09-0.51)	.013 (.004-.020)	0.31 (0.12-0.43)	.012 (.005-.017)	0.43 (0.12-0.69)	.017 (.005-.027)
2.00	.079	0.27 (0.08-0.38)	.011 (.003-.015)	0.30 (0.08-0.45)	.012 (.003-.018)	0.27 (0.11-0.38)	.011 (.004-.015)	0.38 (0.11-0.60)	.015 (.004-.024)
3.00	.118	0.23 (0.06-0.32)	.009 (.002-.013)	0.26 (0.06-0.38)	.010 (.002-.015)	0.23 (0.09-0.32)	.009 (.004-.013)	0.32 (0.09-0.51)	.013 (.004-.020)
4.00	.157	0.21 (0.06-0.29)	.008 (.002-.011)	0.23 (0.06-0.35)	.009 (.002-.014)	0.21 (0.08-0.29)	.008 (.003-.011)	0.29 (0.08-0.46)	.011 (.003-.018)
5.00	.197	0.19 (0.05-0.27)	.007 (.002-.011)	0.22 (0.05-0.32)	.009 (.002-.013)	0.19 (0.08-0.27)	.007 (.003-.011)	0.27 (0.08-0.43)	.011 (.003-.017)
6.00	.236	0.19 (0.05-0.26)	.007 (.002-.010)	0.21 (0.05-0.31)	.008 (.002-.012)	0.19 (0.07-0.26)	.007 (.003-.010)	0.26 (0.07-0.41)	.010 (.003-.016)
7.00	.276	0.18 (0.05-0.25)	.007 (.002-.010)	0.20 (0.05-0.30)	.008 (.002-.012)	0.18 (0.07-0.25)	.007 (.003-.010)	0.25 (0.07-0.40)	.010 (.003-.016)
8.00	.315	0.18 (0.05-0.25)	.007 (.002-.010)	0.20 (0.05-0.30)	.008 (.002-.012)	0.18 (0.07-0.25)	.007 (.003-.010)	0.25 (0.07-0.40)	.010 (.003-.016)

Feed recommendations for CoroMill® 300

Hex recommendation

	iC 20mm Hex rec. (min-max)	*iC* .787 inch	*iC* 25.4 mm *iC* 1.000 inch Hex rec. (min-max)
E-xL	0.20 (0.05-0.25)	.008 (.002-.010)	.009 (.002-.011)
E-xM	0.25 (0.05-0.40)	.010 (.002-.016)	
M-xM	0.20 (0.07-0.30)	.008 (.003-.012)	.009 (.003-.013)
M-xH	0.35 (0.07-0.55)	.014 (.003-.022)	.016 (.003-.024)

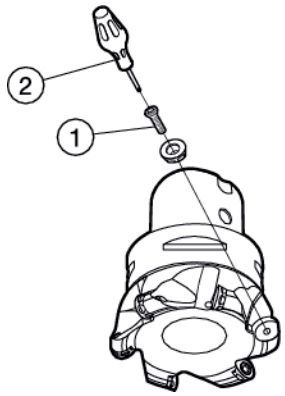
Feed recommendations for insert size 20mm (*iC* .787 inch)

		f_z (insert)							
		E-xL		**E-xM**		**M-xM**		**M-xH**	
a_p mm	inch	rec. (min.- max.) mm	**rec.** (min.- max.) inch	rec. (min.- max.) mm	**rec.** (min.- max.) inch	rec. (min.- max.) mm	**rec.** (min.- max.) inch	rec. (min.- max.) mm	**rec.** (min.- max.) inch
0.10	**.004**	1.42 (0.35-1.77)	.056 (.014-.070)	1.77 (0.35-2.84)	.070 (.014-.112)	1.42 (0.50-2.13)	.056 (.020-.084)	2.48 (0.50-3.90)	.098 (.020-.154)
0.50	**.020**	0.64 (0.16-0.80)	.025 (.006-.031)	0.80 (0.16-1.28)	.031 (.006-.050)	0.64 (0.22-0.96)	.025 (.009-.038)	1.12 (0.22-0.76)	.044 (.009-.069)
1.00	**.039**	0.46 (0.11-0.57)	.018 (.004-.022)	0.57 (0.11-0.92)	.022 (.004-.036)	0.46 (0.16-0.69)	.018 (.006-.027)	0.80 (0.16-1.26)	.031 (.006-.050)
1.50	**.059**	0.38 (0.09-0.47)	.015 (.004-.019)	0.47 (0.09-0.76)	.019 (.004-.030)	0.38 (0.13-0.57)	.015 (.005-.022)	0.66 (0.13-1.04)	.026 (.005-.041)
2.00	**.079**	0.33 (0.08-0.42)	.013 (.003-.017)	0.42 (0.08-0.67)	.017 (.003-.026)	0.33 (0.12-0.50)	.013 (.005-.020)	0.58 (0.12-0.92)	.023 (.005-.036)
3.00	**.118**	0.28 (0.07-0.35)	.011 (.003-.014)	0.35 (0.07-0.56)	.014 (.003-.022)	0.28 (0.10-0.42)	.011 (.004-.017)	0.49 (0.10-0.77)	.019 (.004-.030)
4.00	**.157**	0.25 (0.06-0.31	.010 (.002-.012)	0.31 (0.06-0.50)	.012 (.002-.020)	0.25 (0.09-0.38)	.010 (.004-.015)	0.44 (0.09-0.69)	.017 (.004-.027)
5.00	**.197**	0.23 (0.06-0.29)	.009 (.002-.011)	0.29 (0.06-0.46)	.011 (.002-.018)	0.23 (0.08-0.35)	.009 (.003-.014)	0.40 (0.08-0.64)	.016 (.003-.025)
6.00	**.236**	0.22 (0.05-0.27)	.009 (.002-.011)	0.27 (0.05-0.44)	.011 (.002-.017)	0.22 (0.08-0.33)	.009 (.003-.013)	0.38 (0.08-0.60)	.015 (.003-.024)
7.00	**.276**	0.21 (0.05-0.26)	.008 (.002-.010)	0.26 (0.05-0.42)	.010 (.002-.017)	0.21 (0.07-0.31)	.008 (.003-.012)	0.37 (0.07-0.58)	.015 (.003-.023)
8.00	**.315**	0.20 (0.05-0.26)	.008 (.002-.010)	0.26 (0.05-0.41)	.010 (.002-.016)	0.20 (0.07-0.31)	.008 (.003-.012)	0.36 (0.07-0.56)	.014 (.003-.022)
9.00	**.354**	0.20 (0.05-0.25)	.008 (.002-.010)	0.25 (0.05-0.40)	.010 (.002-.016)	0.20 (0.07-0.30)	.008 (.003-.012)	0.35 (0.07-0.55)	.014 (.003-.022)
10.0	**.394**	0.20 (0.05-0.25)	.008 (.002-.010)	0.25 (0.05-0.40)	.010 (.002-.016)	0.20 (0.07-0.30)	.008 (.003-.012)	0.35 (0.07-0.55)	.014 (.003-.022)

Feed recommendations for insert size 25 mm (*iC* 1.000 inch)

	f_z (insert)					
a_p	**E-xL**		**M-xM**		**M-xH**	
(inch)	rec.	(min.- max.)	rec.	(min.- max.)	rec.	(min.- max.)
.004	.069	(.016-.090)	.069	(.022-.104)	.126	(.022-.189)
.020	.031	(.007-.040)	.031	(.010-.047)	.057	(.010-.085)
.039	.022	(.005-.028)	.022	(.007-.033)	.041	(.007-.061)
.059	.019	(.004-.023)	.019	(.006-.028)	.033	(.006-.050)
.079	.016	(.004-.020)	.016	(.005-.024)	.029	(.005-.044)
.118	.013	(.003-.017)	.013	(.004-.020)	.024	(.004-.037)
.157	.012	(.003-.015)	.012	(.004-.018)	.022	(.004-.032)
.197	.011	(.002-.014)	.011	(.004-.016)	.020	(.004-.030)
.236	.010	(.002-.013)	.010	(.003-.015)	.019	(.003-.028)
.276	.010	(.002-.012)	.010	(.003-.015)	.018	(.003-.026)
.315	.009	(.002-.012)	.009	(.003-.014)	.017	(.003-.026)
.354	.009	(.002-.011)	.009	(.003-.013)	.017	(.003-.025)
.394	.009	(.002-.011)	.009	(.003-.013)	.016	(.003-.024)
.433	.009	(.002-.011)	.009	(.003-.013)	.016	(.003-.024)
.472	.009	(.002-.011)	.009	(.003-.013)	.016	(.003-.024)
.500	.009	(.002-.011)	.009	(.003-.013)	.016	(.003-.024)

Spare parts for CoroMill® 300



*
D3 < 32 = 5513 020-43
D3 ≥ 32 = 5513 020-09

Cutter		1	2			
Insert size				Torque value		
		Insert screw	Key (Torx Plus)	Nm	In-lbs	Molykote
5		5513 020-40	5680 051-01 (6IP)	0.6	5	5683 010-01
7	20	5513 020-41	5680 046-03 (7IP)	0.9	8	5683 010-01
7	24	5513 020-42	5680 046-03 (7IP)	0.9	8	5683 010-01
8		5513 020-56	5680 046-01 (8IP)	1.2	10	5683 010-01
9/10		*	5680 046-02 (15IP)	3.0	26	5683 010-01
12/13		5513 020-09	5680 046-02 (15IP)	3.0	26	5683 010-01
16[1)]		5513 020-50	5680 046-06 (20IP)	5.0	44	5683 010-01
20		5513 020-31	5680 048-06 (25IP)	7.5	66	5683 010-01
25.4		5513 020-71	5680 048-07 (30IP)	10.2	90	5683 010-01

1) Arbor mounting screw with coolant hole, 5512 073-03 (M8); key 3021 010-060

Coolant screws

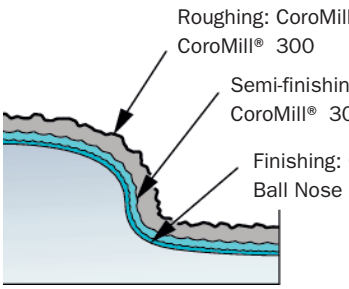
			Hex wrench			Fits these cutters
	Screw	Thread	Size	Key	Arbor size	
Metric	5512 073-02	M12	10 mm	3021 010-100	27	R300-080Q27-20x
	5512 073-05	M16	14 mm	3021 010-140	32	R300-100Q32-20x
	5512 098-01	M20	14 mm	5680 043-18	40	R300-125Q40-20x
Inch	5512 074-02	1/2-20	3/8"	3021 011-380	1.000	RA300-076R25-20x RA300-076R25-25x
	5512 074-05	3/4-16	5/8"	3021 011-580	1.500	RA300-102R38-20x RA300-102R38-25x
	5512 099-01	3/4-16	1/2"	3021 011-120	1.500	RA300-127R38-20x RA300-127R38-25x

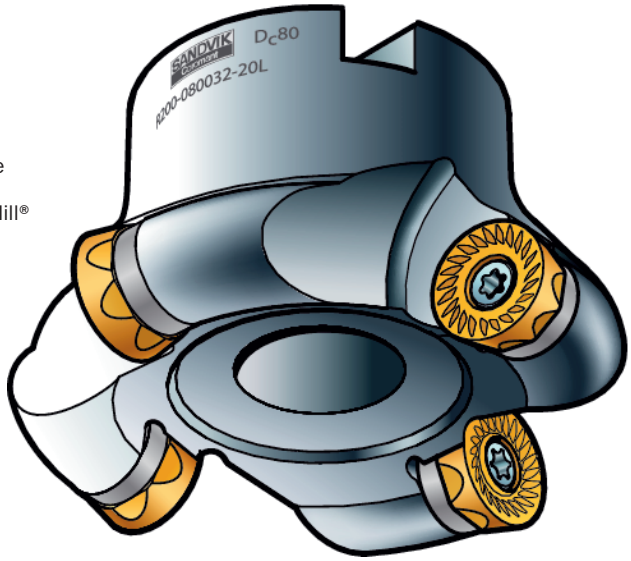
CoroMill® 200

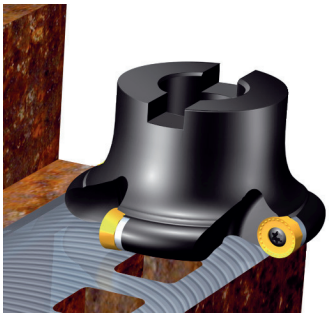
Multi-purpose facemilling and profiling cutter

A concept for secure roughing

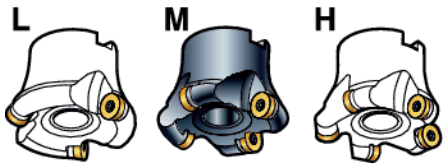
Diameter 25 - 160 mm / 1.000 - 10.000 inch





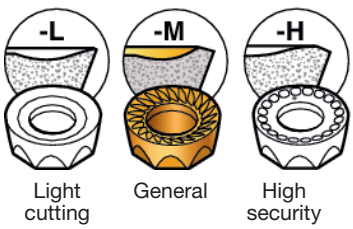


Pitch:

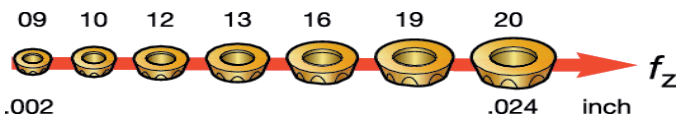


Condition: Unstable General Stable

Geometries:



Light cutting | General | High security



0.05 mm (.002 inch) 0.6 mm (.024 inch)

ISO application areas:

P K H M S

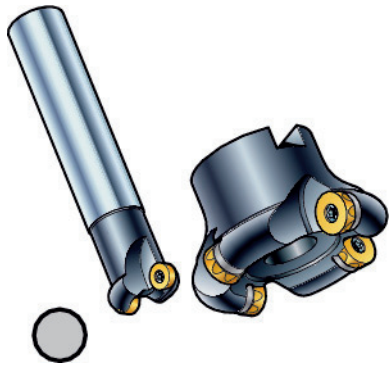
Tailor Made

Tool options designed to individual customer requirements are available. For information on our Tailor Made program see page J3.

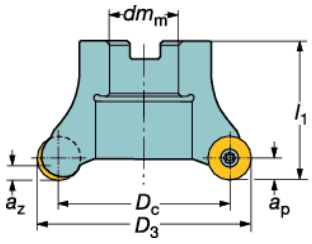
SANDVIK Coromant

Round insert facemill and endmill

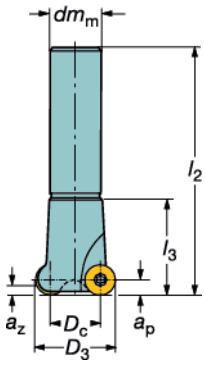
Diameter 25 – 160 mm



Arbor



Cylindrical shank



l_1 = programming length

Metric version

		Ordering code									Dimensions								
	D_3	Coarse pitch			Close pitch			Extra close pitch				D_c	dm_m	l_1	l_2	l_3	a_z	Max a_p	n_{max} [1]
		Cylindrical shank																	
10	25	-	-	-	R200-015A20-10M [2]	2	-	R200-015A20-10H [2]	3	-	0.5	15	20		150	30	2.9	5.0	37500
12	32	-	-	-	R200-020A25-12M [2]	2	-	R200-020A25-12H [2]	3	-	0.8	20	25		190	35	3.7	6.0	31100
	40	R200-028A32-12L [2]	2	-	R200-028A32-12M [2]	3	-	-	-	-	1.7	28	32		240	63	3.7	6.0	26300
	50	R200-038A32-12L [2]	3	-	R200-038A32-12M [2]	4	-	-	-	-	1.7	38	32		240	63	3.7	6.0	22500
16	40	R200-024A32-16L [2]	2	-	R200-024A32-16M [2]	3	-	-	-	-	1.6	24	32		240	63	4.9	8.0	21800
	50	R200-034A32-16L [2]	2	-	R200-034A32-16M [2]	3	-	-	-	-	1.7	34	32		240	63	4.9	8.0	18300
20	50	R200-030A32-20L [2]	2	-	R200-030A32-20M [2]	3	-	-	-	-	1.7	30	32		240	63	6.1	10.0	20900
		Arbor																	
12	50	R200-038Q22-12L	-	3	R200-038Q22-12M	-	4	R200-038Q22-12H [2]	5	-	0.7	38	22	50			3.7	6.0	18800
	52	R200-040Q22-12L	-	3	R200-040Q22-12M	-	4	R200-040Q22-12H [2]	5	-	0.4	40	22	50			3.7	6.0	18000
	63	R200-051Q22-12L	-	3	R200-051Q22-12M	-	4	R200-051Q22-12H [2]	5	-	0.8	51	22	50			3.7	6.0	16200
	80	R200-068Q27-12L	-	4	R200-068Q27-12M	-	6	-	-	-	0.8	68	27	50			3.7	6.0	14000
	100	R200-088Q32-12L	-	4	R200-088Q32-12M	-	6	-	-	-	1.6	88	32	50			3.7	6.0	12300
16	63	R200-047Q22-16L [2]	-	3	R200-047Q22-16M [2]	-	4	-	-	-	0.5	47	22	50			4.9	8.0	15300
	66	R200-050Q27-16L [2]	-	3	R200-050Q27-16M [2]	-	4	R200-050Q27-16H [2]	5	-	0.9	50	27	50			4.9	8.0	14500
	80	R200-064Q27-16L	-	4	R200-064Q27-16M	-	5	R200-064Q27-16H [2]	6	-	1.0	64	27	50			4.9	8.0	13100
	100	R200-084Q32-16L	-	4	R200-084Q32-16M	-	6	-	-	-	1.3	84	32	50			4.9	8.0	11400
	125	R200-109Q32-16L	-	5	R200-109Q32-16M	-	6	-	-	-	2.1	109	32	50			4.9	8.0	10000
20	80	R200-060Q27-20L	-	3	R200-060Q27-20M [2]	4	-	-	-	-	1.1	60	27	50			6.1	10.0	10600
	100	R200-080Q32-20L	-	4	R200-080Q32-20M [2]	6	-	-	-	-	1.4	80	32	63			6.1	10.0	9200
	125	R200-105Q32-20L	-	5	R200-105Q32-20M [2]	6	-	-	-	-	2.2	105	32	63			6.1	10.0	8000
	160	R200-140Q40-20L	-	6	R200-140Q40-20M [2]	8	-	-	-	-	3.5	140	40	63			6.1	10.0	6900
		CIS Arbor																	
12	80	RA200-068J25.4-12L	4	-	RA200-068J25.4-12M	6	-	-	-	-	1.0	68	25.4	50			3.7	6.0	14000
	100	RA200-088J31.75-12L	4	-	RA200-088J31.75-12M	6	-	-	-	-	1.5	88	31.75	63			3.7	6.0	12300
16	66	RA200-050J25.4-16L [2]	3	-	RA200-050J25.4-16M	4	-	-	-	-	0.7	50	25.4	50			4.9	8.0	14500
	80	RA200-064J25.4-16L	4	-	RA200-064J25.4-16M	5	-	-	-	-	1.0	64	25.4	50			4.9	8.0	13100
	100	RA200-084J31.75-16L	4	-	RA200-084J31.75-16M	6	-	-	-	-	1.5	84	31.75	63			4.9	8.0	11400
	125	RA200-109J38.1-16L	5	-	RA200-109J38.1-16M	6	-	-	-	-	3.0	109	38.1	63			4.9	8.0	10000
20	80	RA200-060J25.4-20L	3	-	RA200-060J25.4-20M [2]	4	-	-	-	-	1.0	60	25.4	50			6.1	10.0	10600
	100	RA200-080J31.75-20L	4	-	RA200-080J31.75-20M [2]	6	-	-	-	-	1.5	80	31.75	63			6.1	10.0	9200
	125	RA200-105J38.1-20L	5	-	RA200-105J38.1-20M [2]	6	-	-	-	-	3.0	105	38.1	63			6.1	10.0	8000
	160	RA200-140J50.8-20L	6	-	RA200-140J50.8-20M [2]	8	-	-	-	-	5.0	140	50.8	63			6.1	10.0	6900

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

2) Without shim

= Even pitch

= Differential pitch


D123

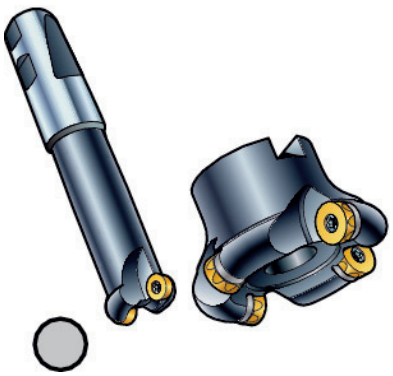

D125


G6

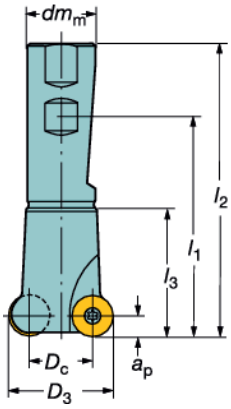

D2

Round insert facemill and endmill

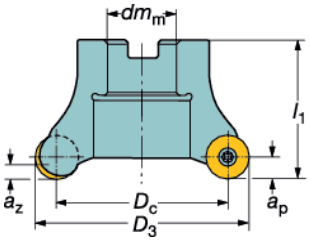
Diameter 1.000 - 10.000 inch



Weldon/Whistle Notch



Arbor



l_1 = programming length

Inch version

		Ordering code						Dimensions, inch								
	D_3	Coarse pitch			Close pitch				D_c	dm_m	l_1	l_2	l_3	a_z	Max a_p	n_{max}[1]
		Whistle Notch/Weldon														
.375	1.000	-	-	-	RA200-016MN25-09M[2]	2	-	2.2	.625	1.000	4.146	5.207	3.000	.110	.187	37500
.500	1.250	-	-	-	RA200-019MN32-13M[2]	2	-	2.2	.750	1.250	4.896	6.035	3.750	.150	.250	31000
	1.500	-	-	-	RA200-025MN32-13M[2]	3	-	2.2	1.000	1.250	5.140	6.280	4.000	.150	.250	26300
	2.000	RA200-038MN32-13L[2]	3	-	RA200-038MN32-13M[2]	4	-	2.2	1.500	1.250	2.886	4.026	1.125	.140	.250	22500
.750	2.000	RA200-032MN32-19L[2]	2	-	RA200-032MN32-19M[2]	3	-	2.2	1.250	1.250	2.886	4.026	1.625	.240	.375	20900

		Ordering code									Dimensions, inch					
	D_3	Coarse pitch			Close pitch			Extra close pitch			D_c	dm_m	l_1	a_z	Max a_p	n_{max}[1]
		Arbor														
.500	2.000	RA200-038R19-13L[2]	-	3	RA200-038R19-13M[2]	-	4	RA200-038R19-13H-HD[2][3]	5	-	1.0	1.500	.750	1.969	.140	.250	18800
	3.000	RA200-063R25-13L	-	4	RA200-063R25-13M	-	5	RA200-063R25-13H[2]	6	-	2.2	2.500	1.000	1.969	.140	.250	18000
	4.000	RA200-089R38-13L	-	5	RA200-089R38-13M	-	8	-	-	-	2.2	3.500	1.500	1.969	.140	.250	16200
	5.000	RA200-114R38-13L	-	6	RA200-114R38-13M	-	10	-	-	-	4.4	4.500	1.500	2.480	.140	.250	14000
	6.000	RA200-140R38-13L	-	8	RA200-140R38-13M	-	12	-	-	-	7.6	5.500	1.500	2.480	.140	.250	12300
.750	3.000	RA200-057R25-19L[2]	-	4	RA200-057R25-19M[2]	-	5	-	-	-	1.0	2.250	1.000	1.969	.240	.375	10600
	4.000	RA200-083R38-19L	-	4	RA200-083R38-19M[2]	-	6	-	-	-	2.2	3.250	1.500	2.480	.240	.375	9200
	5.000	RA200-108R38-19L	-	5	RA200-108R38-19M[2]	-	6	-	-	-	3.3	4.250	1.500	2.480	.230	.375	8000
	6.000	RA200-133R38-19L	-	6	RA200-133R38-19M[2]	-	8	-	-	-	6.2	5.250	1.500	2.480	.230	.375	6900
	8.000	RA200-184R63-19L	-	8	RA200-184R63-19M[2]	-	10	-	-	-	13.	7.250	2.500	2.480	.230	.375	4700
	10.000	RA200-235R63-19L	-	10	RA200-235R63-19M[2]	-	12	-	-	-	15.	9.250	2.500	2.480	.230	.375	2500

1) n_{max} (max. rev/min) for holders must also be considered.
2) Without shim
3) Thicker pockets for heavier feed rates over standard -13H cutter

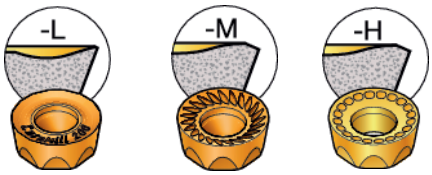
Note:
Bolt circle for cutters 8" and 10" = 4"

= Even pitch
= Differential pitch

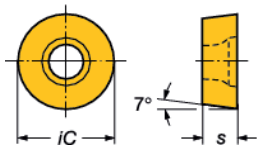
 D123
 D125
 G6
 D2

Inserts for CoroMill® 200

Cemented carbide/ Cermet



Light Medium Heavy



Metric version

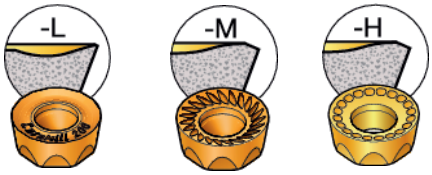
	i.C.	Ordering code	P						M							K					N				S										H						Dimensions	
			GC	GC	GC	GC	GC	CT	GC	GC	GC	GC	GC	GC	CT	GC	GC	GC	GC	-	GC	GC	-	-	GC	GC	GC	GC	GC	-	-	GC	GC	GC	GC	GC	GC	GC	GC	CT	*iC*	*s*
			1025	1030	4220	4230	4240	530	1025	1030	1040	2030	2040	235	530	1020	3040	3220	4220	H13A	1025	1030	H10F	H13A	1010	1025	1030	2030	2040	H10F	H13A	S30T	S40T	1010	1025	1030	3040	4220	530		
Light	10	RCHT 10 T3 M0-PL	☆	★				☆	☆	☆					☆						☆	☆			☆	☆	☆							★	☆	☆			☆	10	3.97
		RCHT 10 T3 M0-ML									☆	★	☆															☆	☆											10	3.97
		RCHT 10 T3 M0-KL																		☆				☆							☆									10	3.97
	12	RCHT 12 04 M0-PL	☆	★				☆	☆	☆					☆						☆	☆			☆	☆	☆							★	☆	☆			☆	12	4.76
		RCHT 12 04 M0-ML									☆	★	☆															☆	☆											12	4.76
		RCHT 12 04 M0-KL																		☆				☆							☆									12	4.76
	16	RCHT 16 06 M0-PL	☆	★					☆	☆											☆	☆				☆	☆								☆	☆				16	6.35
		RCHT 16 06 M0-ML									☆	★	☆															☆	☆											16	6.35
		RCHT 16 06 M0-KL																		☆				☆							☆									16	6.35
	20	RCHT 20 06 M0-PL	☆	★					☆	☆											☆	☆				☆	☆								☆	☆				20	6.35
		RCHT 20 06 M0-ML									☆	★	☆															☆	☆											20	6.35
		RCHT 20 06 M0-KL																		☆				☆							☆									20	6.35
Medium	10	RCKT 10 T3 M0-WM						☆						☆	☆							☆								☆									☆	10	3.97
		RCKT 10 T3 M0-PM		☆	☆	★	☆			☆									☆			☆				☆					★	★			☆		☆		10	3.97
		RCKT 10 T3 M0-MM									☆	★	☆															☆	☆											10	3.97
		RCKT 10 T3 M0-KM															☆	☆																			☆			10	3.97
	12	RCKT 12 04 M0-WM						☆						☆	☆							☆								☆									☆	12	4.76
		RCKT 12 04 M0-PM		☆	☆	★	☆			☆									☆			☆				☆					★	★			☆		☆		12	4.76
		RCKT 12 04 M0-MM									☆	★	☆															☆	☆											12	4.76
		RCKT 12 04 M0-KM														★	☆	☆																			☆			12	4.76
	16	RCKT 16 06 M0-WM												☆								☆								☆										16	6.35
		RCKT 16 06 M0-PM		☆	☆	★	☆			☆									☆			☆				☆					★	★			☆		☆		16	6.35
		RCKT 16 06 M0-MM									☆	★	☆															☆	☆											16	6.35
		RCKT 16 06 M0-KM															☆	☆																			☆			16	6.35
	20	RCKT 20 06 M0-WM												☆								☆								☆										20	6.35
		RCKT 20 06 M0-PM		☆	☆	★	☆			☆									☆			☆				☆					★	★			☆		☆		20	6.35
		RCKT 20 06 M0-MM									☆	★	☆															☆	☆											20	6.35
		RCKT 20 06 M0-KM															☆	☆																			☆			20	6.35
Heavy	10	RCKT 10 T3 M0-PH		☆	☆	☆	★			☆									☆			☆				☆										☆		☆		10	3.97
		RCKT 10 T3 M0-KH															☆	☆																			☆			10	3.97
	12	RCKT 12 04 M0-PH		☆	☆	☆	★			☆									☆			☆				☆										☆		☆		12	4.76
		RCKT 12 04 M0-KH															☆	☆																			☆			12	4.76
	16	RCKT 16 06 M0-PH		☆	☆	☆	★			☆									☆			☆				☆										☆		☆		16	6.35
		RCKT 16 06 M0-KH															☆	☆																			☆			16	6.35
	20	RCKT 20 06 M0-PH		☆	☆	☆	★			☆									☆			☆				☆										☆		☆		20	6.35
		RCKT 20 06 M0-KH															☆	☆																			☆			20	6.35
			P10	P30	P15	P25	P40	P20	M15	M15	M35	M25	M30	M35	M20	K20	K30	K20	K25	K25	N15	N15	N20	N15	S10	S15	S15	S25	S30	S30	S20	S25	S35	H10	H15	H10	H25	H25	H15		

★= First choice

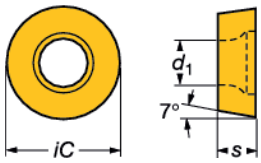
D312 D305 D334 D2

Inserts for CoroMill® 200

Cemented carbide/ Cermet



Light Medium Heavy



Inch version

	EO	Ordering code	P						M					K				N				S									H					Dimensions, inch	
			GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	-	GC	GC	-	-	GC	GC	GC	GC	GC	-	-	GC	GC	GC	GC	GC	GC	GC	GC	GC		
			1025	1030	235	4220	4230	4240	1030	1040	2030	2040	235	3040	3220	4220	H13A	1025	1030	H10F	H13A	1010	1025	1030	2030	2040	H10F	H13A	S30T	S40T	1010	1025	1030	3040	4220	*iC*	*s*
Light	09	RCHT 09 T3 00-ML								☆		☆														☆										.375	.156
		RCHT 09 T3 00-PL	☆	★					☆									☆	☆			☆	☆	☆							★	☆	☆			.375	.156
		RCHT 09 T3 00-KL															☆				☆							☆								.375	.156
	13	RCHT 13 04 00-KL															☆				☆							☆								.500	.188
		RCHT 13 04 00-ML								☆	☆	☆													☆	☆										.500	.188
		RCHT 13 04 00-PL	☆	★					☆									☆	☆			☆	☆	☆							★	☆	☆			.500	.188
	19	RCHT 19 06 00-ML								☆	☆	☆													☆	☆										.750	.250
		RCHT 19 06 00-PL	☆	★					☆									☆	☆				☆	☆								☆	☆			.750	.250
		RCHT 19 06 00-KL															☆				☆							☆								.750	.250
Medium	09	RCKT 09 T3 00-MM								☆	☆	☆													☆	☆										.375	.156
		RCKT 09 T3 00-PM		☆		☆	☆	☆	☆							☆			☆						☆								☆		☆	.375	.156
		RCKT 09 T3 00-WM																		☆							☆									.375	.156
	13	RCKT 13 04 00-KM												☆	☆																			☆		.500	.188
		RCKT 13 04 00-MM								☆	☆	☆													☆	☆										.500	.188
		RCKT 13 04 00-PM		☆		☆	★	☆	☆							☆			☆						☆					★	★			☆		☆	.500	.188
		RCKT 13 04 00-WM			☆								☆							☆							☆									.500	.188
	19	RCKT 19 06 00-KM												☆	☆																			☆		.750	.250
		RCKT 19 06 00-MM								☆	☆	☆													☆	☆										.750	.250
		RCKT 19 06 00-PM		☆		☆	★	☆	☆							☆			☆						☆					★	★			☆		☆	.750	.250
		RCKT 19 06 00-WM			☆								☆							☆							☆									.750	.250
Heavy	09	RCKT 09 T3 00-KH												☆																				☆		.375	.156
		RCKT 09 T3 00-PH		☆		☆	☆	☆	☆							☆									☆								☆		☆	.375	.156
	13	RCKT 13 04 00-KH												☆	☆																			☆		.500	.188
		RCKT 13 04 00-PH		☆		☆	☆	★	☆							☆									☆								☆		☆	.500	.188
	19	RCKT 19 06 00-KH												☆	☆																			☆		.750	.250
		RCKT 19 06 00-PH		☆		☆	☆	★	☆							☆									☆								☆		☆	.750	.250
			P10	P30	P40	P15	P25	P40	M15	M35	M25	M30	M35	K30	K20	K25	K25	N15	N15	N20	N15	S10	S15	S15	S25	S30	S30	S20	S25	S35	H10	H15	H10	H25	H25		

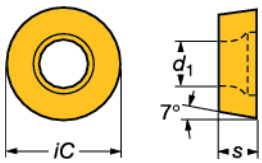
★= First choice

D312 D305 D334 D2

Inserts for CoroMill® 200

Ceramic **Cubic boron nitride**

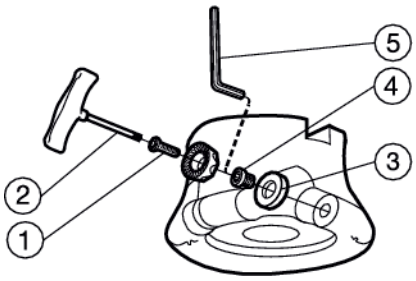




Advanced cutting materials

	↔	Ordering code	K CC 6190	K CB CB50	H CB CB50	Dimensions, millimeter, inch (mm, in.) iC mm	iC in.	s mm	s in.
Light	12	RCHT 12 04 M0		☆	☆	12	.472	4.76	.188
Medium	12	RCKT 12 04 MO	☆			12	.472	4.76	.188
	16	RCKT 16 06 MO	☆			16	.630	6.35	.250
			K10	K05	H05				

Spare parts for CoroMill® 200



Arbor	
Cutter D_c inch	Arbor screw
2.000-2.500	5512 065-01
3.000	5512-065-05
4.000	5512-065-04
5.000-6.000	5512-065-10
8.000-10.000	5512 065-11

Cutter	Insert size mm ↔	Insert size Inch ↔	Without shim 1 Insert screw	Without shim 2 Key[1] (Torx Plus)	With shim 1 Insert screw	With shim 2 Key (Torx Plus)	With shim 3 Shim	With shim 4 Shim screw	With shim 5 Key (mm)
R200	10	-	5513 020-09	5680 046-02 (15IP)	-	-	-	-	-
	12	-	5513 020-09	5680 048-01 (15IP)	5513 020-01	5680 048-01 (15IP)	5322 110-02	5512 090-09	5680 010-01 (3.5)
	16	-	5513 020-07	5680 048-03 (20IP)	5513 020-26	5680 048-03 (20IP)	5322 110-03	5512 090-06	5680 010-050 (5.0)
	20	-	5513 020-08	5680 045-06 (25IP)	5513 020-14	5680 048-06 (25IP)	5322 110-04	5512 090-08	5680 010-060 (6.0)
RA200	-	.375	5513 020-30	5680 046-05 (10IP)	-	-	-	-	-
	-	.500	5513 020-09	5680 048-01 (15IP)	5513 020-01	5680 048-02 (15IP)	5322 110-06	5512 090-09	5680 010-01 (3.5)
	-	.750	5513 020-08	5680 048-06 (25IP)	5513 020-14	5680 048-06 (25IP)	5322 110-07	5512 090-08	3021 010-050 (6.0)

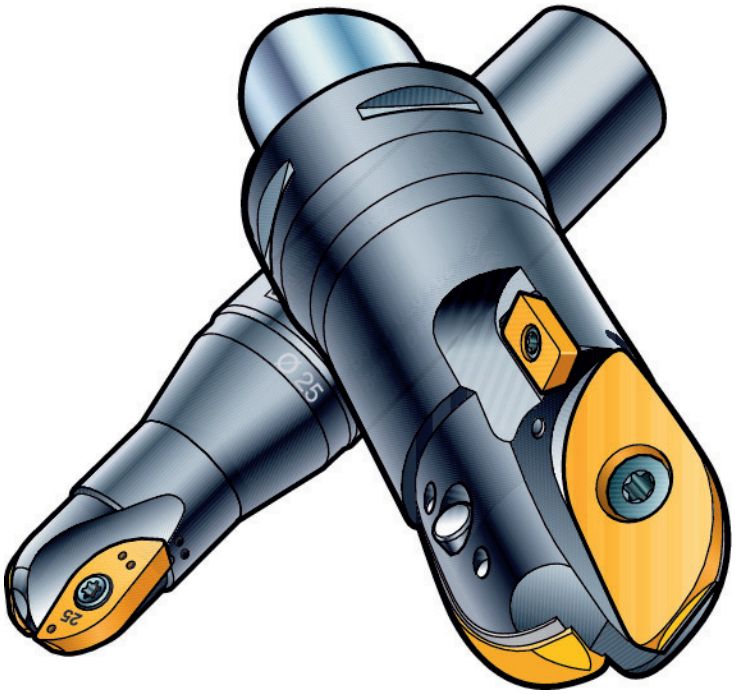
Cutter	Insert size mm ↔	Insert size Inch ↔	 Torque wrench[1]
R200	10	-	5680 100-06
	12	-	5680 100-06
	16	-	5680 100-07
	20	-	5680 100-08
RA200	-	.375	5680 100-05
	-	.500	5680 100-06
	-	.750	5680 100-08

1) Accessories, must be ordered separately.

CoroMill® Ball Nose

Robust ball nose endmill

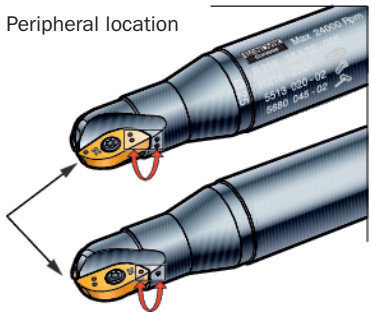
A metal remover for semi-finish profiling



M - inserts for higher security

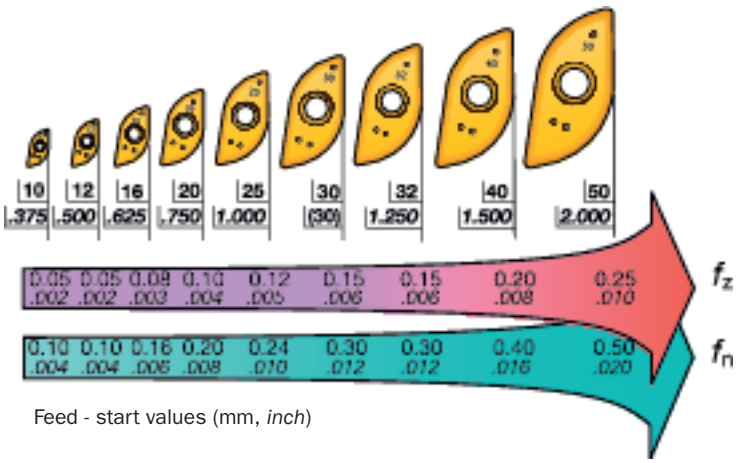
E - inserts with sharper edges and higher precision

Peripheral location



Identical inserts

Central location

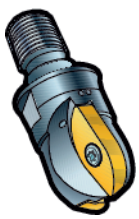


Feed - start values (mm, *inch*)

ISO application areas:

P M K N S H

Flexibility and long reach



Modular cutting heads combined with a variety of shanks

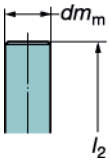
SANDVIK Coromant

CoroMill® Ball Nose endmill

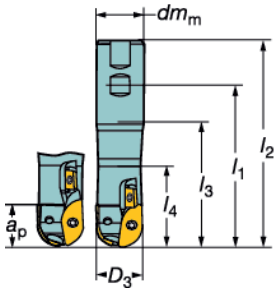
Diameter 10 – 50 mm

Metric version

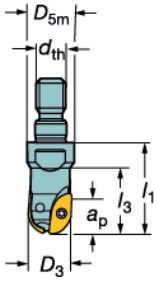
Cylindrical



Weldon



Threaded coupling



l_1 = programming length

D_3	Ordering code	Dimensions kg	l_1	l_2	l_3	l_4	dm_m	Max a_p	d_{th}	n_{max} [2]	Inserts [1] Gauge inserts	Shank protection insert
	Cylindrical shank											
10	R216-10A16-050	0.3		160	50	20	16	8.6		15900	R216-1002	
12	R216-12A20-045	0.4		200	45	20	20	10.8		21000	R216-1202M	
16	R216-16A20-045	0.4		200	45	27	20	14.4		20000	R216-1603M	
20	R216-20A25-055	0.6		200	55	33	25	17.9		24000	R216-20T3M	
25	R216-25A32-065	1.3		250	65	40	32	22.3		24000	R216-2504M	
30	R216-30A32-070	1.4		250	70	50	32	26.9		19500	R216-3006M	APMT160408-M
32	R216-32A32-070	1.4		250	70	50	32	28.6		18500	R216-3206M	
	Weldon											
12	R216-12B20-040	0.2	66	91	40	20	20	10.8		21000	R216-1202M	
	R216-12B20-060	0.2	86	111	60	20	20	10.8		21000	R216-1202M	
16	R216-16B20-040	0.2	66	91	40	27	20	14.4		20000	R216-1603M	
	R216-16B20-060	0.2	86	111	60	27	20	14.4		20000	R216-1603M	
20	R216-20B25-050	0.3	75	107	50	33	25	17.9		24000	R216-20T3M	
	R216-20B25-070	0.4	95	127	70	33	25	17.9		24000	R216-20T3M	
25	R216-25B25-060	0.4	85	117	60	40	25	22.3		24000	R216-2504M	
	R216-25B25-080	0.4	105	137	80	70	25	22.3		24000	R216-2504M	
30	R216-30B32-070	0.6	95	131	70	50	32	26.9		19500	R216-3006M	APMT160408-M
	R216-30B32-100	0.7	125	161	100	80	32	26.9		19500	R216-3006M	APMT160408-M8
32	R216-32B32-070	0.6	95	131	70	50	32	28.6		18500	R216-3206M	
	R216-32B32-100	0.8	125	161	100	82	32	28.6		18500	R216-3206M	
40	R216-40B40-100	1.3	131	171	100	69	40	36.5		8000	R216-4007M	APMT160408-M
	R216-40B40-150	1.7	181	221	150	120	40	36.5		8000	R216-4007M	APMT160408-M
50	R216-50B40-100	2	131	171	100		40	44.6		7000	R216-5007M	
	R216-50B50-125	2.5	161	207	125	95	50	44.6		7000	R216-5007M	APMT160408-M
	R216-50B50-175	3.1	211	257	175	145	50	44.6		7000	R216-5007M	APMT160408-M
	Threaded coupling											
10	R216-10T08	0.1	25		18			8.6	M8		R216-1002M	
12	R216-12T08	0.1	25		18			10.8	M8		R216-1203M	
16	R216-16T08	0.1	25					14.4	M8		R216-16T3M	
20	R216-20T10	0.1	30					17.9	M10		R216-20T3M	
25	R216-25T12	0.2	35					22.3	M12		R216-2504M	
30	R216-30T16	0.2	45					26.9	M16		R216-3006M	
32	R216-32T16	0.2	45					28.6	M16		R216-3206M	

[1] Inserts are ordered separately.

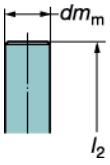
[2] n_{max} (max. rev/min) for holders must also be considered.

 D131
 D132
 G6
 D2

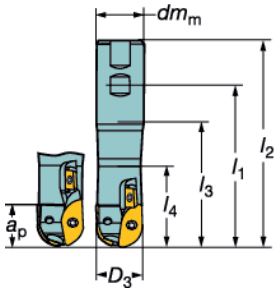
CoroMill® Ball Nose endmill

Diameter .375 - 2.000 inch

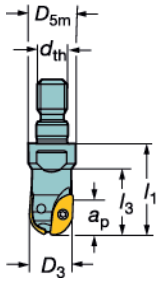
Cylindrical



Weldon



Threaded coupling



l_1 = programming length

Inch version

D_3	Ordering code	Dimensions, inch Lbs	l_1	l_2	l_3	l_4	dm_m/ D_{5m}	Max a_p	d_{th}	n_{max}[2]	Inserts[1] Gauge inserts	Shank protection insert
	Cylindrical shank											
.375	**RA216-10O16-038**	0.9		6.000	1.500	.625	.625	.310		13400	**RA216-1002E-M**	
.500	**RA216-13O16L-051**	0.7		9.000	2.000	1.370	.625	.444		21000	**RA216-1302M**	
.625	**RA216-16O16L-043**	0.7		9.000	1.689		.625	.559			**RA216-1302M**	
.750	**RA216-19O19L-051**	1.2		10.000	2.000		.750	.669			**RA216-19T3M**	
1.000	**RA216-25O25L-067**	2.5		12.000	2.620		1.000	.893			**RA216-2504M**	
1.250	**RA216-32O32L-083**	4.5		14.000	3.250		1.250	1.114			**RA216-3206M**	**APMT160408**
	Weldon											
.500	**RA216-13M19-038**	0.9	2.516	3.531	1.500	.750	.750	.444		21000	**RA216-1302M**	
.500	**RA216-13M19-057**	0.9	3.268	4.281	2.250	.750	.750	.444		21000	**RA216-1302M**	
.625	**RA216-16M19-038**	0.9	2.516	3.531	1.500	1.000	.750	.559		20000	**RA216-1603M**	
.625	**RA216-16M19-057**	0.9	3.266	4.281	2.250	1.000	.750	.559		20000	**RA216-1603M**	
.750	**RA216-19M25-051**	1.5	3.142	4.281	2.000	1.250	1.000	.669		24000	**RA216-19T3M**	
.750	**RA216-19M25-076**	2.0	4.142	5.281	3.000	1.250	1.000	.669		24000	**RA216-19T3M**	
1.000	**RA216-25M25-057**	2.0	3.390	4.531	2.250	1.500	1.000	.893		24000	**RA216-2504M**	
1.000	**RA216-25M25-089**	2.2	4.642	5.780	3.500	3.000	1.000	.893		24000	**RA216-2504M**	
1.250	**RA216-32M32-070**	2.9	3.891	5.031	2.750	2.250	1.250	1.114		18500	**RA216-3206M**	**APMT160408-M**
1.250	**RA216-32M32-101**	3.7	5.141	6.281	4.000	3.250	1.250	1.114		18500	**RA216-3206M**	**APMT160408-M**
1.500	**RA216-38M38-101**	6.6	5.500	6.687	4.000	2.750	1.500	1.299		8000	**RA216-3807M**	**APMT160408-M**
1.500	**RA216-38M38-152**	8.4	7.500	8.687	6.000	4.750	1.500	1.299		8000	**RA216-3807M**	**APMT160408-M**
2.000	**RA216-51M38-101**	9.9	5.500	6.687	4.000		1.500	1.791		7000	**RA216-5107M**	
2.000	**RA216-51M51-127**	11.9	6.407	8.250	5.000	3.500	2.000	1.791		7000	**RA216-5107M**	**APMT160408-M**
2.000	**RA216-51M51-178**	15.0	8.408	10.250	7.000	5.750	2.000	1.791		7000	**RA216-5107M**	**APMT160408-M**
	Threaded coupling											
.375	**RA216-10T08**	0.5	.906		.630			.310	M8		**RA216-1002**	
.500	**RA216-13T08**	0.5	.906		.630			.444	M8		**RA216-1302**	

1) Inserts are ordered separately.

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

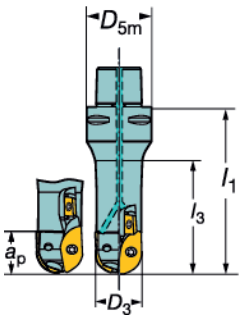
 D131
 D132
 G6
 D2

SANDVIK Coromant

CoroMill® Ball Nose endmill

Diameter 30 - 50 mm (1.250 - 2.000 inch)

Coromant Capto®



l_1 = programming length

Metric version

D_3	Ordering code	Coolant[1]	Dimensions KG	l_1	l_3	l_4	Max a_p	n_{max}[2]	Inserts[3] Gauge inserts	Shank protection insert
	Coromant Capto									
30	**R216-30C3-070**	1	0.4	70	50	50	28.3	18500	**R216-3006M**	
32	**R216-32C3-070**	1	0.4	70	50	50	28.6	18500	**R216-3206M**	
40	**R216-40C4-080**	1	0.8	80	58	58	31.6	8000	**R216-4007M**	**APMT160408-M**
50	**R216-50C5-125**	1	1.2	125	95	95	44.6	7000	**R216-5007M**	**APMT160408-M**

Inch version

D_3	Ordering code	Coolant[1]	Dimensions, inch Lbs	l_1	l_3	l_4	D_{5m}	Max a_p	n_{max}[2]	Inserts[3] Gauge inserts	Shank protection insert
	Coromant Capto										
1.250	**RA216-32C3-070**	1	1.0	2.756	1.968	1.968	1.260	1.114	18500	**RA216-3206**	
1.500	**RA216-38C4-080**	1	1.7	3.150	2.284	2.284	1.575	1.299	8000	**RA216-3807M**	**APMT160408-M**
2.000	**RA216-51C5-125**	1	11.9	4.921	3.740	3.500	1.968	1.791	7000	**RA216-5107M**	**APMT160408-M**

[1] 1 = coolant through center

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

[3] Inserts are ordered separately.

 J2

 D131

 G6

Inserts for CoroMill® Ball Nose endmill

Main inserts

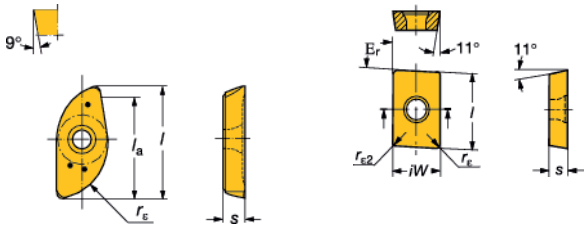
Main inserts


M-M


E-M

Shank protection insert


M



Metric version

	For cutter dia.	r_ε	Ordering code	P					M				K			N			S						H				Dimensions		
				GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	-	GC	GC	-	GC	GC	GC	GC	-	GC	GC	GC	GC	GC			
				1025	1030	2040	4220	4240	1025	1030	2040	4240	4220	4240	H13A	1025	1030	H13A	1010	1025	1030	2040	H13A	S30T	1010	1025	1030	4220	l_a	l	s
Medium	10	5	R216-10 02 E-M	☆	☆	☆			☆	☆	☆					☆	☆		☆	☆	☆	☆			☆	☆	☆		8.6	9.8	1.70
	12	6	R216-12 02 E-M	☆	☆	☆			☆	☆	☆					☆	☆			☆	☆	☆		★		☆	☆		10.8	12	2.38
			R216-12 02 M-M	☆	☆			☆	☆	☆		☆		☆	☆	☆	☆	☆	☆	☆		☆	☆		☆	☆	☆		10.8	12	2.38
	16	8	R216-16 03 E-M	☆	☆	☆			☆	☆	☆					☆	☆			☆	☆	☆		★		☆	☆		14.4	16	3.18
			R216-16 03 M-M	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆		☆	☆	☆	☆	14.4	16	3.18
	20	10	R216-20 T3 E-M	☆	☆	☆			☆	☆	☆					☆	☆			☆	☆	☆		★		☆	☆		17.9	20	3.97
			R216-20 T3 M-M	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆		☆	☆	☆	☆	17.9	20	3.97
	25	12.5	R216-25 04 E-M	☆	☆	☆			☆	☆	☆					☆	☆		☆	☆	☆	☆		★		☆	☆		22.3	24.9	4.76
			R216-25 04 M-M	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆		☆	☆	☆	☆	22.3	24.9	4.76
	30	15	R216-30 06 E-M	☆	☆	☆			☆	☆	☆					☆	☆		☆	☆	☆	☆		★		☆	☆		26.9	29.9	6.35
			R216-30 06 M-M	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆		☆	☆	☆	☆	26.9	29.9	6.35
	32	16	R216-32 06 E-M	☆	☆	☆			☆	☆	☆					☆	☆		☆	☆	☆	☆		★		☆	☆		28.6	31.8	6.35
			R216-32 06 M-M	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆		☆	☆	☆	☆	28.6	31.8	6.35
	40	20	R216-40 07 E-M	☆	☆	☆			☆	☆	☆					☆	☆		☆	☆	☆	☆		★		☆	☆		36.5	39.9	7.94
			R216-40 07 M-M	☆	☆	☆		☆	☆	☆	☆	☆		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆		☆	☆			36.5	39.9	7.94
	50	25	R216-50 07 E-M	☆	☆	☆			☆	☆	☆					☆	☆		☆	☆	☆	☆		★		☆	☆		44.6	49.7	7.94
			R216-50 07 M-M	☆	☆	☆		☆	☆	☆	☆	☆		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆		☆	☆			44.6	49.7	7.94
				P10	P30	P30	P15	P40	M15	M15	M30	M40	K25	K35	K25	N15	N15	N15	S10	S15	S15	S30	S20	S25	H10	H15	H10	H25			

Shank protection insert

	For cutter dia.	Ordering code	P	M	K	Dimensions, millimeter, inch (mm, in.)								
			GC	GC	GC									
			4240	4240	4240	l mm	l in.	iW mm	iW in.	E_r	r_ε mm	r_ε in.	$r_{\varepsilon 2}$ mm	$r_{\varepsilon 2}$ in.
Medium	30-50	APMT 16 04 08-M	☆	☆	☆	16.4	.646	9.25	.364	85°	0.8	.032	0.4	.016
			P40	M40	K35									

R216-10 02 E-M
|
E = Highest edge sharpness and precision
M = Highest edge security

D312 D305 D334 D2

SANDVIK Coromant

Inserts for CoroMill® Ball Nose endmill

Main inserts

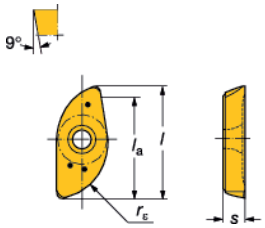
Main inserts

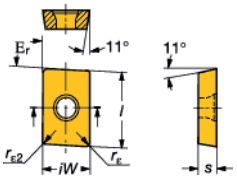
M-M

E-M

Shank protection insert

M





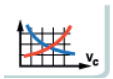
Inch version

	For cutter dia.	r_ε	Ordering code	P			M				K		N			S					H				Dimensions, inch		
				GC	GC	GC	GC	GC	GC	GC	GC	-	GC	GC	-	GC	GC	GC	GC	-	GC	GC	GC	GC			
				1025	1030	4240	1025	1030	2040	4240	4240	H13A	1025	1030	H13A	1010	1025	1030	2040	H13A	1010	1025	1030	4220	l_a	l	s
Medium	.375	.188	**RA216-10 02 E-M**	☆	☆		☆	☆	☆				☆	☆		☆	☆	☆			☆	☆	☆		.310	.370	.067
	.500	.250	**RA216-13 02 E-M**	☆	☆		☆	☆					☆	☆			☆	☆				☆	☆		.444	.494	.094
			RA216-13 02 M-M	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆		☆	☆	☆	☆	☆	☆	☆		.444	.494	.094
	.625	.312	**RA216-16 03 E-M**	☆	☆		☆	☆					☆	☆			☆	☆				☆	☆		.559	.630	.125
			RA216-16 03 M-M	☆	☆	☆	☆	☆	☆	☆	☆		☆	☆		☆	☆	☆	☆		☆	☆	☆	☆	.559	.630	.125
	.750	.375	**RA216-19 T3 E-M**	☆	☆		☆	☆					☆	☆			☆	☆				☆	☆		.669	.745	.156
			RA216-19 T3 M-M	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	.669	.745	.156
	1.000	.500	**RA216-25 04 E-M**	☆	☆		☆	☆					☆	☆			☆	☆				☆	☆		.893	.984	.188
			RA216-25 04 M-M	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	.893	.984	.188
	1.250	.625	**RA216-32 06 E-M**	☆	☆		☆	☆					☆	☆			☆	☆				☆	☆		1.114	1.247	.250
			RA216-32 06 M-M	☆	☆	☆	☆	☆	☆	☆	☆		☆	☆		☆	☆	☆	☆		☆	☆	☆	☆	1.114	1.247	.250
	1.500	.750	**RA216-38 07 M-M**	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆		☆	☆	☆	☆		☆	☆	☆	1.299	1.502	.250
	2.000	1.000	**RA216-51 07 M-M**	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆		☆	☆	☆	☆		☆	☆		1.791	1.996	.312
				P10	P30	P40	M15	M15	M30	M40	K35	K25	N15	N15	N15	S10	S15	S15	S30	S20	H10	H15	H10	H25			

Shank protection insert

	For cutter dia.	Ordering code	P	M	K	Dimensions, millimeter, inch (mm, in.)								
			GC	GC	GC									
			4240	4240	4240	l mm	l in.	iW mm	iW in.	E_r	r_ε mm	r_ε in.	$r_{\varepsilon 2}$ mm	$r_{\varepsilon 2}$ in.
Medium	30-50	**APMT 16 04 08-M**	☆	☆	☆	16.4	.646	9.25	.364	85°	0.8	.032	0.4	.016
			P40	M40	K35									

R216-10 02 E-M
|
E = Highest edge sharpness and precision
M = Highest edge security


D312

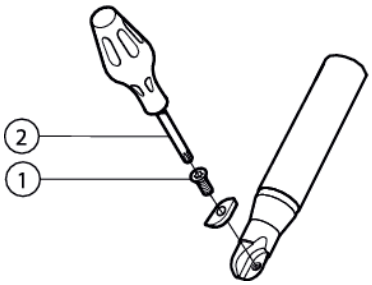
D305

D334

D2

Spare parts for CoroMill® Ball Nose endmill

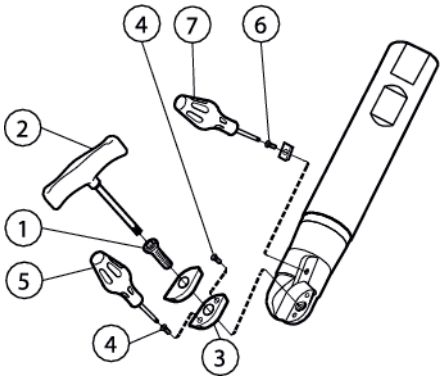
R216



D_3 12-25 and 32 mm
.500-1.000 Inch

Cutter	D_3 inch/mm		1 Insert screw	2 Key (Torx Plus)	Torque value Nm/in.lbs	Molykote	Torque wrench[1]
R216/ RA216	10	-	5513 020-40	5680 051-01 (6IP)	0.6/5	5683 010-01	5680 100-01
	12	1/2"	5513 020-36	5680 046-01 (8IP)	1.2/10	5683 010-01	5680 100-03
	16	5/8"	5513 020-36	5680 046-01 (8IP)	1.2/10	5683 010-01	5680 100-03
	20	3/4"	5513 020-16	5680 048-02 (10IP)	2.0/18	5683 010-01	5680 100-05
	25	1"	5513 020-52	5680 048-01 (15IP)	3.0/26	5683 010-01	5680 100-06
	30	-	5513 020-07	5680 048-04 (20IP)	5.0/44	5683 010-01	5680 100-07
	32	1 1/4"	5513 020-07	5680 048-04 (20IP)	5.0/44	5683 010-01	5680 100-07
	40	1 1/2"	5513 020-31	5680 048-06 (25IP)	7.5/66	5683 010-01	5680 100-08
	50	2"	5513 021-03	5680 048-07 (30IP)	10.0/90	5683 010-01	-

[1] Accessories, must be ordered separately.

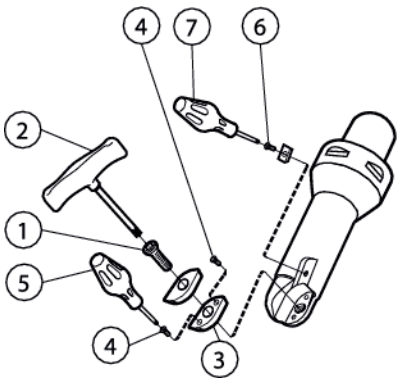


D_3 30, 40 and 50 mm
1.250-2.000 Inch

Cutter	D_3 inch/mm		3 Shim	4 Shim screw	5 Key (Torx Plus)	6 Protection insert screw	7 Key (Torx Plus)	Torque wrench[1]	Torque value Nm/in.lbs
R216/ RA216	30	-	–	–	–	5513 020-09	5680 046-02 (15IP)	5680 100-06	3.0/26
	40/32	1½"/1¼"	–	–	–	5513 020-09	5680 046-02 (15IP)	5680 100-06	3.0/26
	50	2"	5322 475-01	5513 020-09	5680 046-02 (15IP)	5513 020-09	5680 046-02 (15IP)	5680 100-06	3.0/26

[1] Accessories, must be ordered separately

Spare parts



D_3 mm/inch		1 Insert screw	2 Key (Torx Plus)	Torque value Nm	In-lbs	Molykote	Torque wrench[1]
30	-	5513 020-07	5680 048-04 (20IP)	5.0	44	5683 010-01	5680 100-07
32	1 1/4"	5513 020-07	5680 048-04 (20IP)	5.0	44	5683 010-01	5680 100-07
40	1 1/2"	5513 020-31	5680 048-06 (25IP)	7.5	66	5683 010-01	5680 100-08
50	2"	5513 021-03	5680 048-07 (30IP)	10.0	90	5683 010-01	-

[1] Accessories, must be ordered separately.

D_3 mm/inch		3 Shim	4 Shim screw	5 Key (Torx Plus)	6 Protection insert screw	7 Key (Torx Plus)	Torque wrench[1]	Torque value Nm	ft-lbs
50	2"	5322 475-01	5513 020-09	5680 046-02 (15IP)	5513 020-09	5680 046-02 (15IP)	5680 100-06	3.0	2.2

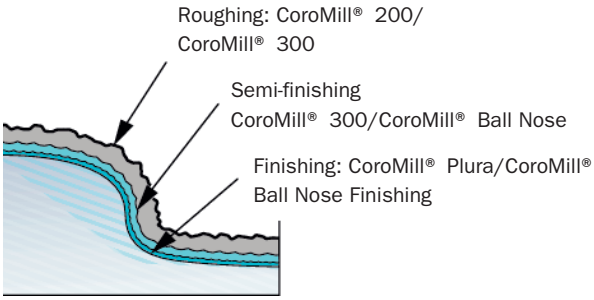
[1] Accessories, must be ordered separately

CoroMill® Ball Nose Finishing

Ball Nose Finishing endmill

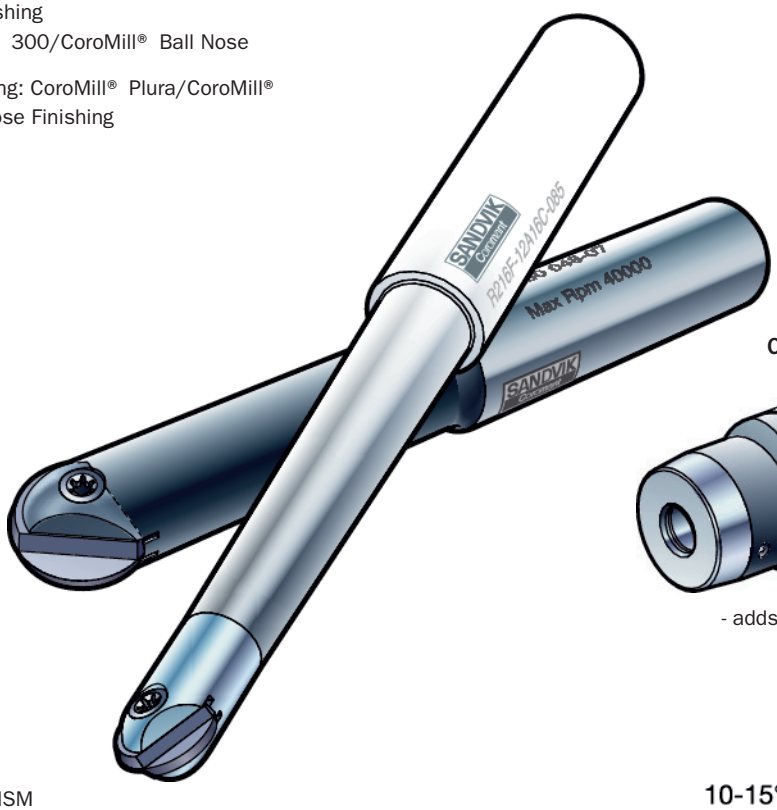
A cutter for high finish profiling

Diameter 8 - 32 mm / .3125 - 1.250 inch

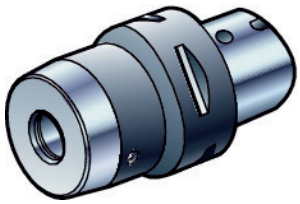


Constant stock allows near net shape milling

Carbide shank option

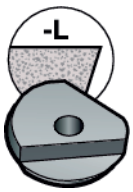


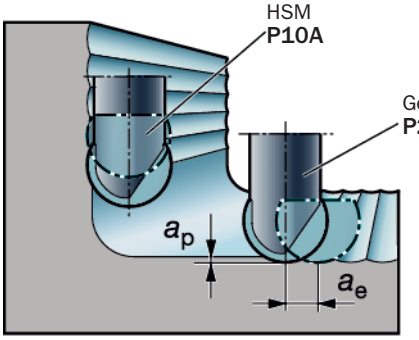
CoroGrip®

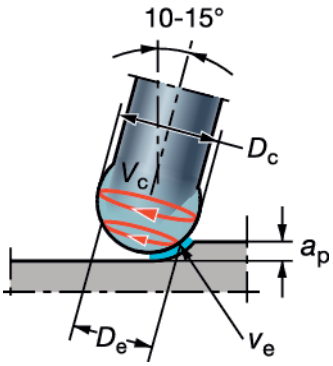


- adds precision

Sharp -L geometry







Use shallow axial and radial cuts for safe productivity. Always calculate the true cutting speed (v_e) based on the effective diameter in cut (D_e).

ISO application areas:

P M K N S H

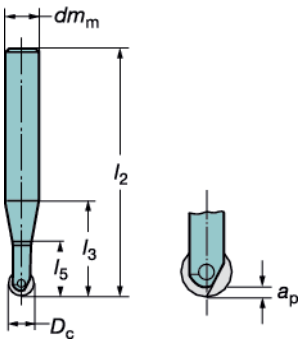
CoroMill® Ball Nose Finishing endmill

Steel and Carbide shank

Diameter 8 - 32 mm

Tolerance
D_c = h9
dm_m = h6

Cylindrical



Metric version

Insert size	D_c mm	Ordering code	Dimensions kg	l_2	l_3	l_5	dm_m	Max a_p	n_{max}
		Cylindrical shank							
8	8	**R216F-08A12C-035**	0.2	92	35	19	12	1.2	40000
		R216F-08A12C-053	0.2	110	53	19	12	1.2	40000
		R216F-08A12C-075	0.2	132	75	19	12	1.2	23400
		R216F-08A12S-035	0.2	92	35	19	12	1.2	40000
		R216F-08A12S-053	0.2	110	53	33.5	12	1.2	33600
		R216F-08A12S-075	0.2	132	75	19	12	1.2	16800
10	10	**R216F-10A12C-053**	0.2	110	53	22	12	1.5	40000
		R216F-10A12C-075	0.3	132	75	22	12	1.5	23400
		R216F-10A12S-038	0.2	95	38	22.4	12	1.5	40000
		R216F-10A12S-053	0.2	110	53	38.7	12	1.5	40000
		R216F-10A12S-075	0.2	132	75	21.8	12	1.5	20300
12	12	**R216F-12A12C-053**	0.3	110	53		12	1.8	40000
		R216F-12A12S-026	0.2	83	26		12	1.8	40000
		R216F-12A12S-053	0.2	110	53		12	1.8	40000
		R216F-12A16C-085	0.4	145	85	21.5	16	1.8	21000
		R216F-12A16S-085	0.3	145	85	22.5	16	1.8	19800
16	16	**R216F-16A16C-063**	0.4	123	63		16	2.4	43000
		R216F-16A16S-032	0.3	92	32		16	2.4	36000
		R216F-16A16S-063	0.3	123	63		16	2.4	36000
		R216F-16A20C-100	0.7	166	100	29.5	20	2.4	25500
		R216F-16A20S-100	0.4	166	100	29.5	20	2.4	20000
20	20	**R216F-20A20S-038**	0.4	104	38		20	3.0	40000
		R216F-20A20S-075	0.4	141	75		20	3.0	40000
		R216F-20A25C-115	1.1	191	115	35	25	3.0	18500
		R216F-20A25S-115	0.7	191	115	35	25	3.0	18400
25	25	**R216F-25A25S-045**	0.5	121	45		25	3.8	40000
		R216F-25A25S-090	0.7	166	90		25	3.8	37100
		R216F-25A32S-135	1.1	215	135	42.5	32	3.8	16500
30/32	30/32	**R216F-32A32S-054**	0.8	134	54		32	4.8	35500
		R216F-32A32S-107	1.7	187	107		32	4.8	32500
		R216F-32A32S-160	1.6	240	160	54	32	4.8	14500

R216F-08A12S-035
|
S = Steel shank
C = Carbide shank

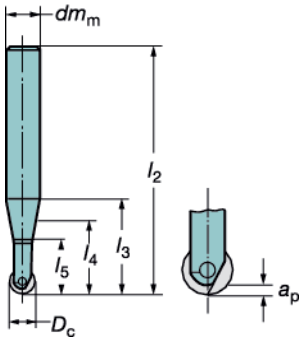
 D136
 D136
 G6
 D2

SANDVIK Coromant

CoroMill® Ball Nose Finishing endmill

Steel and Carbide shank

Diameter .3125 - 1.250 inch



Tolerance
D_c = h9
dm_m = h6

Inch version

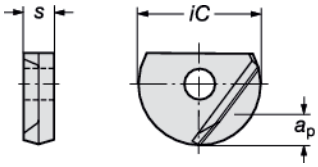
	D_c inch	Ordering code	Dimensions, inch	l_2	l_3	l_4	l_5	dm_m	Max a_p	n_{max}[1]
		Cylindrical shank								
.312	.3125	RA216F-08O13C-075	0.9	5.196	2.952	1.429	.748	.500	.047	40000
		RA216F-08O13S-035	0.9	3.622	1.398	.906	.748	.500	.047	40000
		RA216F-08O13S-053	0.9	4.331	2.091	1.618	1.319	.500	.047	33100
		RA216F-08O13S-075	0.9	5.197	2.957	1.610	.748	.500	.047	16500
.375	.375	RA216F-10O13C-075	0.9	5.187	2.937	1.736	.850	.500	.056	40000
		RA216F-10O13S-038	0.9	3.732	1.508	1.102	.874	.500	.056	40000
		RA216F-10O13S-053	0.9	4.323	2.083	1.937	1.516	.500	.056	40000
		RA216F-10O13S-075	0.9	5.189	2.949	2.417	.850	.500	.056	20400
.500	.500	RA216F-13O13S-026	0.9	3.282	1.047		.961	.500	.075	40000
		RA216F-13O13S-053	0.9	4.344	2.110		2.022	.500	.075	40000
		RA216F-13O16C-085	1.5	5.722	3.360	3.189	.862	.625	.075	40000
		RA216F-13O16S-085	1.5	5.722	3.360	3.102	.898	.625	.075	19800
.625	.625	RA216F-16O16S-032	1.5	3.620	1.257		1.179	.625	.094	36000
		RA216F-16O16S-063	1.5	4.840	2.478		2.400	.625	.094	36000
		RA216F-16O19C-100	1.4	6.532	3.933	3.425	1.122	.750	.094	24000
		RA216F-16O19S-100	2.0	6.533	3.935	2.850	1.158	.750	.094	20000
.750	.750	RA216F-19O19S-038	2.0	4.076	1.477		1.396	.750	.112	40000
		RA216F-19O19S-075	2.0	5.532	2.934		2.853	.750	.112	40000
		RA216F-19O25C-115	4.9	7.501	4.509	2.460	1.362	1.000	.112	40000
		RA216F-19O25S-115	3.3	7.500	4.512	2.602	1.358	1.000	.112	18400
1.000	1.000	RA216F-25O25S-045	2.4	4.772	1.780		1.682	1.000	.150	40000
		RA216F-25O25S-090	3.3	6.543	3.551		3.453	1.000	.150	37100
		RA216F-25O32S-135	5.3	8.472	5.323	4.047	1.681	1.250	.150	16500
1.250	1.250	RA216F-32O32S-054	4.0	5.271	2.121		2.003	1.250	.188	35500
		RA216F-32O32S-107	5.3	7.357	4.208		4.089	1.250	.188	32500
		RA216F-32O32S-160	7.7	9.444	6.294		2.122	1.250	.188	14500

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

R216F-08A12S-035
|
S = Steel shank
C = Carbide shank

 D136
 D136
 G6
 D2

Inserts for CoroMill® Ball Nose Finishing endmill



Tolerances, mm (inch):
iC = +0/-0.016 (+0/-.00063)

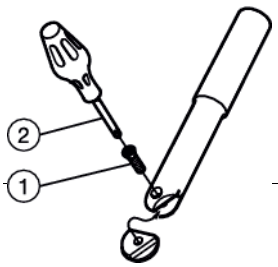
Metric version

	⌀	Ordering code	P GC P20A	M GC P20A	K GC P20A	S GC 1010	H GC 1010	H GC P20A	Dimensions Max a_p	*iC*	*s*
Light	8	R216F-08 24 E-L	☆	☆	☆	☆	☆	☆	4	8	2.4
	10	R216F-10 26 E-L				☆	☆		5	10	2.6
	12	R216F-12 30 E-L				☆	☆		6	12	3
	16	R216F-16 40 E-L	☆	☆	☆	☆	☆	☆	8	16	4
	20	R216F-20 50 E-L	☆	☆	☆	☆	☆	☆	10	20	5
	25	R216F-25 60 E-L				☆	☆		12.5	25	6
	30	R216F-30 70 E-L				☆	☆		15	30	7
	32	R216F-32 70 E-L	☆	☆	☆	☆	☆	☆	16	32	7
			P15	M15	K15	S10	H10	H15			

Inch version

	⌀	Ordering code	P GC P20A	M GC P20A	K GC P20A	S GC 1010	H GC 1010	H GC P20A	Dimensions, inch Max a_p	*iC*	*s*
Light	.312	RA216F-08 24 E-L	☆	☆	☆	☆	☆	☆	.156	.312	.094
	.375	RA216F-10 26 E-L				☆	☆		.188	.375	.100
	.500	RA216F-13 30 E-L				☆	☆		.250	.500	.118
	.625	RA216F-16 40 E-L	☆	☆	☆	☆	☆	☆	.312	.625	.157
	.750	RA216F-19 50 E-L	☆	☆	☆	☆	☆	☆	.375	.750	.197
	1.000	RA216F-25 60 E-L				☆	☆		.500	1.000	.236
	1.250	RA216F-32 70 E-L	☆	☆	☆	☆	☆	☆	.625	1.250	.276
			P15	M15	K15	S10	H10	H15			

Spare parts for CoroMill® Ball Nose Finishing endmill



	1	2[1]				
Cutter	Insert screw	Key (Torx Plus)	Torque value Nm	Torque value In-lbs	Torque wrench[1]	Molykote
R216F-08...	5513 040-01	5680 046-03 (7IP)	0.9		5680 100-02	5683 010-01
R216F-10...	5513 040-02	5680 046-01 (8IP)	1.2		5680 100-03	5683 010-01
R216F-12...	5513 040-03	5680 046-05 (10IP)	2.0		5680 100-05	5683 010-01
R216F-16...	5513 040-04	5680 046-02 (15IP)	3.0		5680 100-06	5683 010-01
R216F-20...	5513 040-05	5680 048-03 (20IP)	5.0		5680 100-07	5683 010-01
R216F-25...	5513 040-06	5680 048-06 (25IP)	7.5		5680 100-08	5683 010-01
R216F-30/32...	5513 040-07	5680 048-08 (40IP)	26.0		-	5683 010-01
RA216F-08	5513 040-01	5680 046-03 (7IP)		7	5680 100-02	5683 010-01
RA216F-10	5513 040-02	5680 046-01 (8IP)		10	35680 100-03	5683 010-01
RA216F-13	5513 040-03	5680 046-05 (10IP)		18	5680 100-05	5683 010-01
RA216F-16	5513 040-04	5680 046-02 (15IP)		26	5680 100-06	5683 010-01
RA216F-19	5513 040-05	5680 048-03 (20IP)		44	5680 100-07	5683 010-01
RA216F-25	5513 040-06	5680 048-06 (25IP)		66	5680 100-08	5683 010-01
RA216F-30/32	5513 040-07	5680 048-08 (40IP]		230	-	5683 010-01

[1] Accessories, must be ordered separately.

D312 D305 D334 D2

SANDVIK Coromant

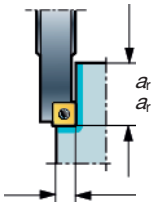
CoroMill® 331

Multi-purpose side and facemilling cutter

High precision capability

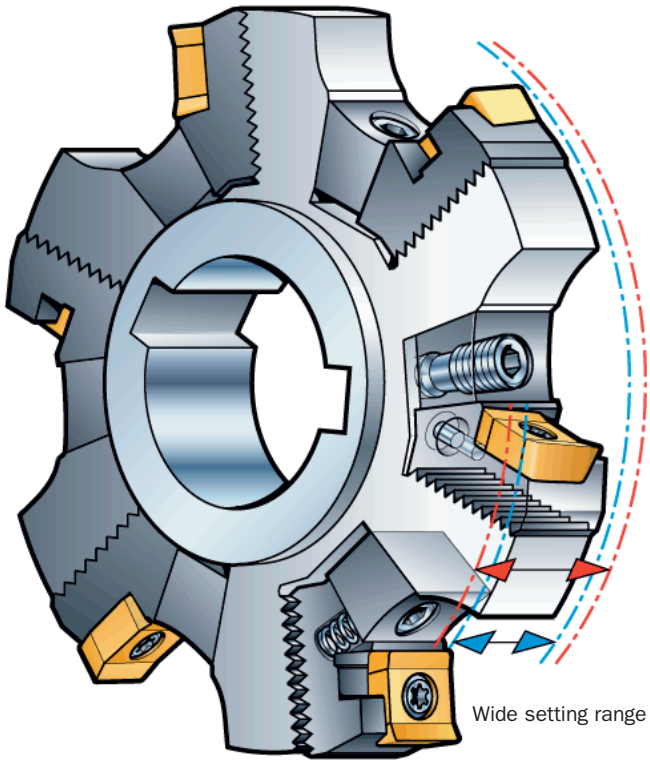
Diameter 3.150 - 12.000 inch (80 - 315 mm)

Half side



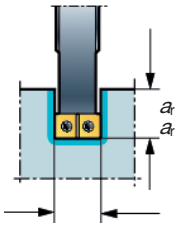
$a_r \leq 114.5$ mm
$a_r \leq 4.311$ inch

$a_p \leq 10.6$ mm
$a_p \leq .417$ inch



Wide setting range

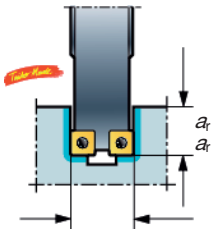
Full slot Cassette version



$a_r \leq 114.5$ mm
$a_r \leq 4.311$ inch

$a_p = 6 - 26.5$ mm
$a_p = .236 - 1.043$ inch

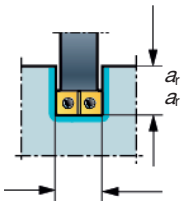
Double half side Tailor Made



$a_r \leq 114.5$ mm
$a_r \leq 4.311$ inch

$a_p = 27.2 - 33.8$ mm
$a_p = 1.071 - 1.331$ inch

Full slot Fixed pocket version



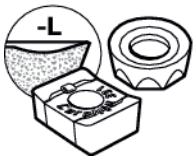
$a_r \leq 34.0$ mm
$a_r \leq .850$ inch

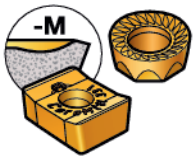
$a_p = 6 - 10$ mm
$a_p = .250 - .500$ inch

ISO application areas:

P M K
N S H

Geometries:





General

0.03 mm (.002 inch) 0.40 mm (.016 inch)

N S

Tailor Made

Tool options designed to individual customer requirements are available. For information on our Tailor Made program see page J3.

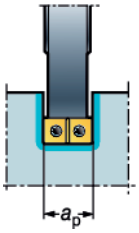
SANDVIK Coromant

Inserts for CoroMill® 331

Only five insert sizes needed

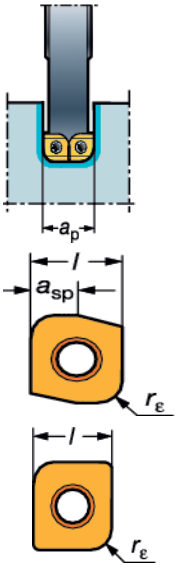
A comprehensive program of standard and Tailor Made inserts for the manufacturing of all types of grooves, as well as some shoulders, backfaces and bores

Insert size and min. - max. width of slot



Insert size	04	05	08	11	14
	Groove width (a_p)				
Min. width, mm, inch	.236 6.0	.315 8.0	.394 10.0	.591 15.0	.807 20.5
Cutter widths, mm/inch CM a_p = .236 - .315 6.0 - 8.0 DM a_p = .315 - .394 8.0 - 10.0 EM a_p = .394 - .472 10.0 - 12.0 KM a_p = .591 - .689 15.0 - 17.5 QM a_p = .807 - .925 20.5 - 23.5		-CM	-DM	-EM	-KM	-QM
Max. width, mm, inch	.315 8.0	.394 10.0	.472 12.0	.689 17.5	.925 23.5
Min. width, mm, inch	.315 8.0	.394 10.0	.472 12.0	.689 17.5	.925 23.5
Cutter widths, mm/inch FM a_p = .472 - .591 12.0 - 15.0 LM a_p = .689 - .807 17.5 - 20.5 RM a_p = .925 - 1.043 23.5 - 26.5			-FM	-LM	-RM
Max. width, mm, inch			.591 15.0	.807 20.5	1.043 26.5

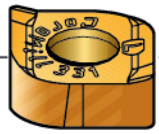
Insert size and available radii



$$a_{sp} \approx \frac{a_p}{2} + .008$$

Tailor Made

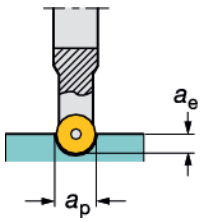
Other radii available as Tailor Made option



Light cutting radius inserts in H tolerance for most materials

r_ε mm r_ε inch Insert size	.020 0.5	.031 0.8	.060 1.52	.090 2.29	.120 3.05	.190 4.83	.250 6.35
04	●		●	●			
05		●	●	●	●		
08		●	●	●	●		
11		●	●	●	●	●	●
14		●	●	●	●	●	●

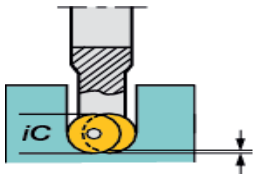
Recommendations for full slot milling with round inserts



Max axial depth of cut (ap) = insert size (iC)

Max radial depth of cut (a_e) = 1/2 iC

Note!
The contact length of the cutting edge is 180°



Note: Crest of 0.02 mm (.0008 inch)

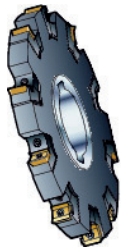
Max depth of slot (a_e) > Insert size (*iC*)

For slots deeper than iC a .020 inch adjustment of each cassette is recommended. This will widen the groove .020+.020 inch and reduce the contact length for each insert to 90°.

Full side and facemill

Diameter 80 – 315 mm

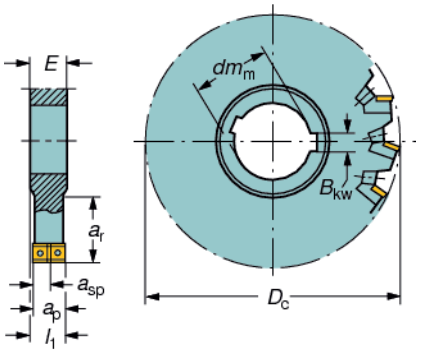
Positive rake



Cassettes, see page D165.

Width 6.0-12.0 mm

Bore with keyway*)



N331.32 type shown

*) Number of keyways, see page D157.

l_1 = programming length

Metric version

Slot width a_p mm	Mounting	D_c mm	z_n	N331.1A	a_p	R/L331.1A	r_ε 2)	a_p	D_c mm	z_n		0.2-1.54	r_ε 6)
	Bore with keyway											**Insert size**	
		80	6	N331.32-080S27CM	*xx.xx*	N331.32-080S27CMx		*xx.xx*			–	04	
		100	8	N331.32-100S32CM	*xx.xx*	N331.32-100S32CMx		*xx.xx*			–	04	
		125	10	N331.32-125S40CM	*xx.xx*	N331.32-125S40CMx		*xx.xx*			–	04	
		160	12	N331.32-160S40CM	*xx.xx*	N331.32-160S40CMx		*xx.xx*			–	04	
		200	16	N331.32-200S50CM	*xx.xx*	N331.32-200S50CMx		*xx.xx*			–	04	
6.0– 8.0	**Arbor**	80	6	R331.32-080Q27CM	*xx.xx*	R331.32-080Q27CMx		*xx.xx*			–	04	
		100	8	R331.32-100Q27CM	*xx.xx*	R331.32-100Q27CMx		*xx.xx*			–	04	
		125	10	R331.32-125Q32CM	*xx.xx*	R331.32-125Q32CMx		*xx.xx*			–	04	
		160	12	R331.32-160Q40CM	*xx.xx*	R331.32-160Q40CMx		*xx.xx*			–	04	
		200	16	R331.32-200Q40CM	*xx.xx*	R331.32-200Q40CMx		*xx.xx*			–	04	
	Cylindrical	80	6	R331.32-080A32CM	*xx.xx*	-		*xx.xx*			–	04	
		100	8	R331.32-100A42CM	*xx.xx*	-		*xx.xx*			–	04	
	Bore with keyway	80	6	N331.32-080S27DM	*xx.xx*	N331.32-080S27DMx		*xx.xx*			–	05	
		100	8	N331.32-100S32DM	*xx.xx*	N331.32-100S32DMx		*xx.xx*			–	05	
		125	10	N331.32-125S40DM	*xx.xx*	N331.32-125S40DMx		*xx.xx*			–	05	
		160	12	N331.32-160S40DM	*xx.xx*	N331.32-160S40DMx		*xx.xx*			–	05	
		200	16	N331.32-200S50DM	*xx.xx*	N331.32-200S50DMx		*xx.xx*			–	05	
7.9–10.0	**Arbor**	80	6	R331.32-080Q27DM	*xx.xx*	R331.32-080Q27DMx		*xx.xx*			–	05	
		100	8	R331.32-100Q27DM	*xx.xx*	R331.32-100Q27DMx		*xx.xx*			–	05	
		125	10	R331.32-125Q32DM	*xx.xx*	R331.32-125Q32DMx		*xx.xx*			–	05	
		160	12	R331.32-160Q40DM	*xx.xx*	R331.32-160Q40DMx		*xx.xx*			–	05	
		200	16	R331.32-200Q40DM	*xx.xx*	R331.32-200Q40DMx		*xx.xx*			–	05	
	Cylindrical	80	6	R331.32-080A32DM	*xx.xx*	-		*xx.xx*			–	05	
		100	8	R331.32-100A42DM	*xx.xx*	-		*xx.xx*			–	05	
	Bore with keyway	80	6	N331.32-080S27EM	*xx.xx*	N331.32-080S27EMx		*xx.xx*	82	6	N331.32-082S27EMQ1)	08	
		100	8	N331.32-100S32EM	*xx.xx*	N331.32-100S32EMx		*xx.xx*	102	8	N331.32-102S32EMQ1)	08	
		125	10	N331.32-125S40EM	*xx.xx*	N331.32-125S40EMx		*xx.xx*	127	10	N331.32-127S40EMQ1)	08	
		160	12	N331.32-160S40EM	*xx.xx*	N331.32-160S40EMx		*xx.xx*	162	12	N331.32-162S40EMQ1)	08	
		200	16	N331.32-200S50EM	*xx.xx*	N331.32-200S50EMx		*xx.xx*	202	16	N331.32-202S50EMQ1)	08	
10.0–12.0	**Arbor**	80	6	R331.32-080Q27EM	*xx.xx*	R331.32-080Q27EMx		*xx.xx*	82	6	R331.32-082Q27EMQ1)	08	
		100	8	R331.32-100Q27EM	*xx.xx*	R331.32-100Q27EMx		*xx.xx*	102	8	R331.32-102Q27EMQ1)	08	
		125	10	R331.32-125Q32EM	*xx.xx*	R331.32-125Q32EMx		*xx.xx*	127	10	R331.32-127Q32EMQ1)	08	
		160	12	R331.32-160Q40EM	*xx.xx*	R331.32-160Q40EMx		*xx.xx*	162	12	R331.32-162Q40EMQ1)	08	
		200	16	R331.32-200Q40EM	*xx.xx*	R331.32-200Q40EMx		*xx.xx*	202	16	R331.32-202Q40EMQ1)	08	
	Cylindrical	80	6	R331.32-080A32EM	*xx.xx*	-		*xx.xx*			–	08	
		100	8	R331.32-100A42EM	*xx.xx*	-		*xx.xx*			–	08	

1) Slot width, a_p = insert size

xx.xx = in the ordering code indicates the width a_p in mm to two decimal places.

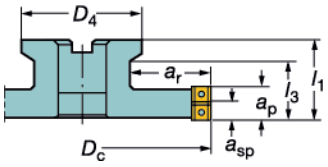
2) x = in the ordering code indicates the insert radius range (r_ε) A, B, D, E or Q.

6) For insert radius range 0.2-1.54, no prefix is read at x in the ordering code. Example: 2 pieces N331.32-080S27CM.

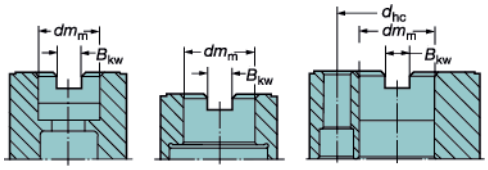
 D160  D165  G6  D2  J3

Full side and facemill

Arbor

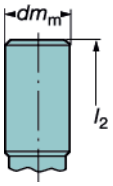


R331.32 type shown



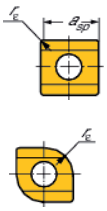
ISO A ISO B ISO C

Cylindrical



Effective number of teeth:

$z_c = \frac{z_n}{2}$



Effective number of teeth:

$z_c = z_n$

l_1 = programming length

For insert radius range, r_ε[2]					Dimensions												
A 1.55-2.60	B 2.61-3.50	D 4.51-5.50	E 5.51-6.50	Q Round	KG	a_r	dm_m	ISO	E	B_{KW}	l_1[3] min.– max.	l_2	l_3	a_{sp}	D_4	d_{hc}	n_{max}[4]
Insert size	Insert size	Insert size	Insert size	Insert size													
04					0.3	19.5	27		14	7	10–11	–	–	4.4	–	–	19 300
04					0.8	25.5	32		14	8	10–11	–	–	4.4	–	–	17 100
04					0.8	34.0	40		14	10	10–11	–	–	4.4	–	–	15 100
04					1.1	51.5	40		14	10	10–11	–	–	4.4	–	–	13 200
04					2.1	64.5	50		14	12	10–11	–	–	4.4	–	–	11 700
04					0.8	20	27	A	–	12.4	63–64	–	40	4.4	54.0	–	19 300
04					1.6	22	27	A	–	12.4	63–64	–	–	4.4	54.0	–	17 100
04					1.8	29.5	32	B	–	14.4	63–64	–	–	4.4	64.0	–	15 100
04					2.6	41	40	B	–	16.4	63–64	–	–	4.4	76.0	–	13 200
04					6.7	51	40	C	–	16.4	63–64	–	–	4.4	96.0	66.7	11 700
					1	23	32		–	–	–	132	–	4.4	–	–	19 300
					1	28	42		–	–	–	152	–	4.4	–	–	17 100
05	05				0.3	19.5	27		16	7	12–13	–	–	5.6	–	–	15 000
05	05				0.5	25.5	32		16	8	12–13	–	–	5.6	–	–	13 200
05	05				0.8	34.0	40		16	10	12–13	–	–	5.6	–	–	11 700
05	05				1.3	51.5	40		16	10	12–13	–	–	5.6	–	–	10 200
05	05				2.1	64.5	50		16	12	12–13	–	–	5.6	–	–	9 100
05	05				0.8	20	27	A	–	12.4	63–64	–	40	5.6	54.0	–	15 000
05	05				1.2	22	27	A	–	12.4	63–64	–	–	5.6	54.0	–	13 200
05	05				1.8	29.5	32	B	–	14.4	63–64	–	–	5.6	64.0	–	11 700
05	05				2.6	41	40	B	–	16.4	63–64	–	–	5.6	76.0	–	10 200
05	05				7	51	40	C	–	16.4	63–64	–	–	5.6	96.0	66.7	9 100
					1	23	32		–	–	–	132	–	6.2	–	–	15 000
					1.9	28	42		–	–	–	152	–	6.2	–	–	13 200
08	08			10	0.3	19.5[5]	27		16	7	13–14	–	–	6.2	–	–	18 100
08	08			10	0.5	25.5[5]	32		16	8	13–14	–	–	6.2	–	–	15 900
08	08			10	0.8	34.0[5]	40		16	10	13–14	–	–	6.2	–	–	14 100
08	08			10	1.3	51.5[5]	40		16	10	13–14	–	–	6.2	–	–	12 400
08	08			10	2.1	64.5[5]	50		16	12	13–14	–	–	6.2	–	–	11 000
08	08			10	1.1	20[5]	27	A	–	12.4	63–64	–	40	6.2	54.0	–	18 100
08	08			10	1.7	22[5]	27	A	–	12.4	63–64	–	–	6.2	54.0	–	15 900
08	08			10	1.8	29.5[5]	32	B	–	14.4	63–64	–	–	6.2	64.0	–	14 100
08	08			10	2.6	41[5]	40	B	–	16.4	63–64	–	–	6.2	76.0	–	12 400
08	08			10	4.3	51[5]	40	C	–	16.4	63–64	–	–	6.2	96.0	66.7	11 000
					1	23	32		–	–	–	132	–	6.2	–	–	18 100
					1.9	28	42		–	–	–	152	–	6.2	–	–	15 900

[3] The programming length, l_1, depends on cutter width setting.

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

[5] Cutters with round inserts = a_r + 1mm

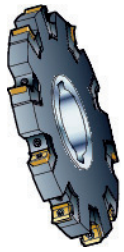
Ordering example for a size 80 cutter pre-set to 6.26 mm: 2 pieces N331.32-080S27CM*06.26*

Tools are delivered preset to minimum width.
Ordering example: 2 pieces N331.32-080S27CM

Full side and facemill

Diameter 80 – 315 mm

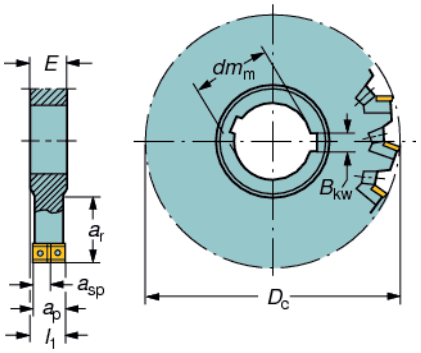
Positive rake



Cassettes, see page D165.

Width 12.0-26.5 mm

Bore with keyway*)



N331.32 type shown

*) Number of keyways, see page D157.

l_1 = programming length

Metric version

Slot width		N331.1A				R/L331.1A							
a_p mm	Mounting	D_c mm	z_n		a_p		r_ε[5]	a_p	D_c	z_n		0.2-1.54 r_ε[6]
	Bore with keyway											Insert size
		80	6	N331.32-080S27FM	*xx.xx*	N331.32-080S27FMx	*xx.xx*		82	6	N331.32-082S27FMQ[1]	08
		100	8	N331.32-100S32FM	*xx.xx*	N331.32-100S32FMx	*xx.xx*		102	8	N331.32-102S32FMQ[1]	08
		125	10	N331.32-125S40FM	*xx.xx*	N331.32-125S40FMx	*xx.xx*		127	10	N331.32-127S40FMQ[1]	08
		160	12	N331.32-160S40FM	*xx.xx*	N331.32-160S40FMx	*xx.xx*		162	12	N331.32-162S40FMQ[1]	08
		200	16	N331.32-200S50FM	*xx.xx*	N331.32-200S50FMx	*xx.xx*		202	16	N331.32-202S50FMQ[1]	08
12.0–15.0	**Arbor**	80	6	R331.32-080Q27FM	*xx.xx*	R331.32-080Q27FMx	*xx.xx*		82	6	R331.32-082Q27FMQ[1]	08
		100	8	R331.32-100Q27FM	*xx.xx*	R331.32-100Q27FMx	*xx.xx*		102	8	R331.32-102Q27FMQ[1]	08
		125	10	R331.32-125Q32FM	*xx.xx*	R331.32-125Q32FMx	*xx.xx*		127	10	R331.32-127Q32FMQ[1]	08
		160	12	R331.32-160Q40FM	*xx.xx*	R331.32-160Q40FMx	*xx.xx*		162	12	R331.32-162Q40FMQ[1]	08
		200	16	R331.32-200Q40FM	*xx.xx*	R331.32-200Q40FMx	*xx.xx*		202	16	R331.32-202Q40FMQ[1]	08
	Bore with keyway	100	6	N331.32-100S32KM	*xx.xx*	N331.32-100S32KMx	*xx.xx*		102	6	N331.32-102S32KMQ[1]	11
		125	8	N331.32-125S40KM	*xx.xx*	N331.32-125S40KMx	*xx.xx*		127	8	N331.32-127S40KMQ[1]	11
		160	10	N331.32-160S40KM	*xx.xx*	N331.32-160S40KMx	*xx.xx*		162	10	N331.32-162S40KMQ[1]	11
		200	12	N331.32-200S50KM	*xx.xx*	N331.32-200S50KMx	*xx.xx*		202	12	N331.32-202S50KMQ[1]	11
		250	16	N331.32-250S50KM	*xx.xx*	N331.32-250S50KMx	*xx.xx*				–	11
15.0–17.5		315	20	N331.32-315S60KM	*xx.xx*	N331.32-315S60KMx	*xx.xx*				–	11
	Arbor	100	6	R331.32-100Q27KM	*xx.xx*	R331.32-100Q27KMx	*xx.xx*		102	6	R331.32-102Q27KMQ[1]	11
		125	8	R331.32-125Q32KM	*xx.xx*	R331.32-125Q32KMx	*xx.xx*		127	8	R331.32-127Q32KMQ[1]	11
		160	10	R331.32-160Q40KM	*xx.xx*	R331.32-160Q40KMx	*xx.xx*		162	10	R331.32-162Q40KMQ[1]	11
		200	12	R331.32-200Q40KM	*xx.xx*	R331.32-200Q40KMx	*xx.xx*		202	12	R331.32-202Q40KMQ[1]	11
		250	16	R331.32-250Q60KM	*xx.xx*	R331.32-250Q60KMx	*xx.xx*				–	11
		315	20	R331.32-315Q60KM	*xx.xx*	R331.32-315Q60KMx	*xx.xx*				–	11
	Bore with keyway	125	8	N331.32-125S40LM	*xx.xx*	N331.32-125S40LMx	*xx.xx*				–	11
		160	10	N331.32-160S40LM	*xx.xx*	N331.32-160S40LMx	*xx.xx*				–	11
		200	12	N331.32-200S50LM	*xx.xx*	N331.32-200S50LMx	*xx.xx*				–	11
		250	16	N331.32-250S50LM	*xx.xx*	N331.32-250S50LMx	*xx.xx*				–	11
		315	20	N331.32-315S60LM	*xx.xx*	N331.32-315S60LMx	*xx.xx*				–	11
17.5–20.5	**Arbor**	125	8	R331.32-125Q32LM	*xx.xx*	R331.32-125Q32LMx	*xx.xx*				–	11
		160	10	R331.32-160Q40LM	*xx.xx*	R331.32-160Q40LMx	*xx.xx*				–	11
		200	12	R331.32-200Q40LM	*xx.xx*	R331.32-200Q40LMx	*xx.xx*				–	11
		250	16	R331.32-250Q60LM	*xx.xx*	R331.32-250Q60LMx	*xx.xx*				–	11
		315	20	R331.32-315Q60LM	*xx.xx*	R331.32-315Q60LMx	*xx.xx*				–	11
	Bore with keyway	160	10	N331.32-160S40QM	*xx.xx*	N331.32-160S40QMx	*xx.xx*				–	14
		200	12	N331.32-200S50QM	*xx.xx*	N331.32-200S50QMx	*xx.xx*				–	14
		250	16	N331.32-250S50QM	*xx.xx*	N331.32-250S50QMx	*xx.xx*				–	14
		315	20	N331.32-315S60QM	*xx.xx*	N331.32-315S60QMx	*xx.xx*				–	14
20.5–23.5	**Arbor**	160	10	R331.32-160Q40QM	*xx.xx*	R331.32-160Q40QMx	*xx.xx*				–	14
		200	12	R331.32-200Q40QM	*xx.xx*	R331.32-200Q40QMx	*xx.xx*				–	14
		250	16	R331.32-250Q60QM	*xx.xx*	R331.32-250Q60QMx	*xx.xx*				–	14
		315	20	R331.32-315Q60QM	*xx.xx*	R331.32-315Q60QMx	*xx.xx*				–	14
	Bore with keyway	160	10	N331.32-160S40RM	*xx.xx*	N331.32-160S40RMx	*xx.xx*				–	14
		200	12	N331.32-200S50RM	*xx.xx*	N331.32-200S50RMx	*xx.xx*				–	14
		250	16	N331.32-250S50RM	*xx.xx*	N331.32-250S50RMx	*xx.xx*				–	14
		315	20	N331.32-315S60RM	*xx.xx*	N331.32-315S60RMx	*xx.xx*				–	14
23.5–26.5	**Arbor**	160	10	R331.32-160Q40RM	*xx.xx*	R331.32-160Q40RMx	*xx.xx*				–	14
		200	12	R331.32-200Q40RM	*xx.xx*	R331.32-200Q40RMx	*xx.xx*				–	14
		250	16	R331.32-250Q60RM	*xx.xx*	R331.32-250Q60RMx	*xx.xx*				–	14
		315	20	R331.32-315Q60RM	*xx.xx*	R331.32-315Q60RMx	*xx.xx*				–	14

[1] Slot width, a_p = insert size

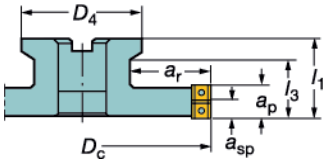
xx.xx = in the ordering code indicates the width a_p in mm to two decimal places.

[5] x = in the ordering code indicates the insert radius range (r_ε) A, B, D, E or Q.

[6] For insert radius range 0.2-1.54, no prefix is read at x in the ordering code. Example: 2 pieces N331.32-080S27CM.

Full side and facemill

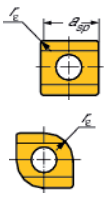
Arbor



R331.32 type shown

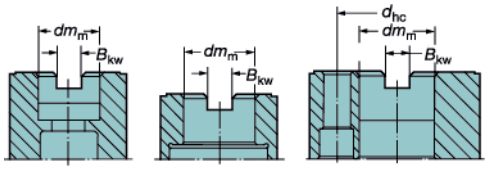
Effective number of teeth:

$z_c = \frac{z_n}{2}$



Effective number of teeth:

$z_c = z_n$



ISO A ISO B ISO C

l_1 = programming length

For insert radius range, rε[5]					Dimensions												
A 1.55-2.60	B 2.61-3.50	C 4.51-5.50	D 5.51-6.50	Q	kg	a_r	dm_m	ISO	E	B_{KW}	l_1[2] min.– max.	l_2	l_3	a_{sp}	D_4	d_{ch}	n_{max}[3]
Insert size	Insert size	Insert size	Insert size	Insert size													
08	08			12	0.4	19.5[4]	27		16	7	14–15.5	–	–	7.6	–	–	18 100
08	08			12	0.6	25.5[4]	32		16	8	14–15.5	–	–	7.6	–	–	15 900
08	08			12	0.9	34.0[4]	40		16	10	14–15.5	–	–	7.6	–	–	14 100
08	08			12	1.6	51.5[4]	40		16	10	14–15.5	–	–	7.6	–	–	12 400
08	08			12	2.5	64.5[4]	50		16	12	14–15.5	–	–	7.6	–	–	11 000
08				12	1.2	20.0[4]	27	A	–	12.4	63–64.5	–	40	7.6	54.0	–	18 100
08				12	1.8	22.0[4]	27	A	–	12.4	63–64.5	–	–	7.6	54.0	–	15 900
08				12	2	29.5[4]	32	B	–	14.4	63–64.5	–	–	7.6	64.0	–	14 100
08				12	3	41.0[4]	40	B	–	16.4	63–64.5	–	–	7.6	76.0	–	12 400
08				12	7.6	51.0[4]	40	C	–	16.4	63–64.5	–	–	7.6	96.0	66.7	11 000
11	11	11	11	16	0.8	25.5[4]	32		18.5	8	16.8–18	–	–	10.6	–	–	14 000
11	11	11	11	16	1.2	34.0[4]	40		18.5	10	16.8–18	–	–	10.6	–	–	12 400
11	11	11	11	16	2	51.5[4]	40		18.5	10	16.8–18	–	–	10.6	–	–	10 800
11	11	11	11	16	3.2	64.5[4]	50		18.5	12	16.8–18	–	–	10.6	–	–	9 600
11	11	11	11		5.1	89.5	50		18.5	12	16.8–18	–	–	10.6	–	–	8 500
11	11	11			8.1	114.5	60		18.5	14	16.8–18	–	–	10.6	–	–	7 600
11	11	11	11	16	1.7	25.7[4]	27	A	–	12.4	63–64.25	–	40	10.6	54.0	–	14 000
11	11	11	11	16	2.3	29.5[4]	32	B	–	14.4	63–64.25	–	–	10.6	64.0	–	12 400
11	11	11	11	16	3.3	41.0[4]	40	B	–	16.4	63–64.25	–	–	10.6	76.0	–	10 800
11	11	11	11	16	8	51.0[4]	40	C	–	16.4	63–64.25	–	–	10.6	96.0	66.7	9 600
11	11	11	11		9.5	56.0	60	C	–	25.7	63–64.25	–	–	10.6	136.0	101.6	8 500
11	11	11	11		16.7	88.5	60	C	–	25.7	63–64.25	–	–	10.6	136.0	101.6	7 600
11	11	11	11		1.4	34.0	40		21.5	10	19.5–21	–	–	10.6	–	–	12 400
11	11	11	11		2.4	51.5	40		21.5	10	19.5–21	–	–	10.6	–	–	10 800
11	11	11	11		3.7	64.5	50		21.5	12	19.5–21	–	–	10.6	–	–	9 600
11	11	11	11		6	89.5	50		21.5	12	19.5–21	–	–	10.6	–	–	8 500
11	11	11	11		9.5	114.5	60		21.5	14	19.5–21	–	–	10.6	–	–	7 600
11	11	11	11		2.5	29.5	32	B	–	14.4	63–64.5	–	–	10.6	64.0	–	12 400
11	11	11	11		3.7	41.0	40	B	–	16.4	63–64.5	–	–	10.6	76.0	–	10 800
11	11	11	11		5.9	51.0	40	C	–	16.4	63–64.5	–	–	10.6	96.0	66.7	9 600
11	11	11	11		10	56.0	60	C	–	25.7	63–64.5	–	–	10.6	136.0	101.6	8 500
11	11	11	11		13.6	88.5	60	C	–	25.7	63–64.5	–	–	10.6	136.0	101.6	7 600
14	14	14	14		2.8	51.5	40		24.5	10	22.5–24	–	–	13.6	–	–	9 000
14	14	14	14		4.4	64.5	50		24.5	12	22.5–24	–	–	13.6	–	–	8 000
14	14	14	14		7.1	89.5	50		24.5	12	22.5–24	–	–	13.6	–	–	7 100
14	14	14	14		11.3	114.5	60		24.5	14	22.5–24	–	–	13.6	–		6 300
14	14	14	14		3.6	41.0	40	B	–	16.4	63–64.5	–	–	13.6	76.0	–	9 000
14	14	14	14		8.8	51.0	40	C	–	16.4	63–64.5	–	–	13.6	96.0	66.7	8 000
14	14	14	14		13.3	56.0	60	C	–	25.7	63–64.5	–	–	13.6	136.0	101.6	7 100
14	14	14	14		19.2	88.5	60	C	–	25.7	63–64.5	–	–	13.6	136.0	101.6	6 300
14	14	14	14		3.3	51.5	40		27.5	10	25.5–27	–	–	13.6	–	–	9 000
14	14	14	14		4.3	64.5	50		27.5	12	25.5–27	–	–	13.6	–	–	8 000
14	14	14	14		8.2	89.5	50		27.5	12	25.5–27	–	–	13.6	–	–	7 100
14	14	14	14		13.1	114.5	60		27.5	14	25.5–27	–	–	13.6	–	–	6 300
14	14	14	14		4.5	41.0	40	B	–	16.4	63–64.5	–	–	13.6	76.0	–	9 000
14	14	14	14		9.2	51.0	40	C	–	16.4	63–64.5	–	–	13.6	96.0	66.7	8 000
14	14	14	14		13.9	56.0	60	C	–	25.7	63–64.5	–	–	13.6	136.0	101.6	7 100
14	14	14	14		20.4	88.5	60	C	–	25.7	63–64.5	–	–	13.6	136.0	101.6	6 300

[2] The programming length, l_1, depends on cutter width setting.

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

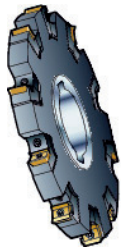
[4] Cutters with round inserts = a_r + 1 mm

Ordering example for a size 80 cutter pre-set to 13.05 mm:
2 pieces N331.32-080S27FM*13.05*
Tools are delivered preset to minimum width.
Ordering example: 2 pieces N331.32-080S27FM

Full side and facemill

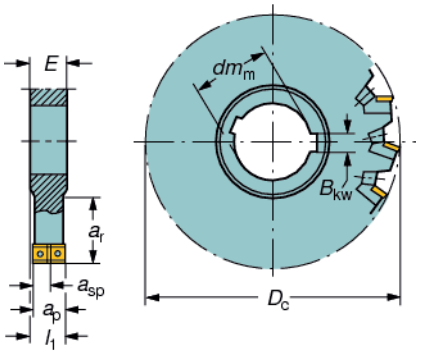
Diameter 3.150 - 8.000 inch

Positive rake



Cassettes, see page D165.

Bore with keyway*)



N331.32 type shown

*) Number of keyways, see page D157.

Width .236 - .394 inch

l_1 = programming length

Inch version

Slot width	Mounting															
		 N331.1A				 R/L331.1A										
		Ordering code				Ordering code					D_c		Ordering code			
a_p inch		D_c inch	z_n		a_p		r_ε[5]	a_p	a_r	Style	inch	z_n	r_ε[6]	a_r	Style	
	Bore with keyway															
		3.150	6	N331.32-080T25CM	0.236	-							–			
		3.150	6	N331.32-080T25CM	*x.xxx*	N331.32-080T25CMx		*x.xxx*	.768				–			
		4.000	8	N331.32-101T32CM	0.236	-							–			
		4.000	8	N331.32-101T32CM	*x.xxx*	N331.32-101T32CMx		*x.xxx*	1.043				–			
		5.000	10	N331.32-127T38CM	*x.xxx*	N331.32-127T38CMx		*x.xxx*	1.437				–			
		6.000	12	N331.32-152T38CM	0.236	-							–			
		6.000	12	N331.32-152T38CM	*x.xxx*	N331.32-152T38CMx		*x.xxx*	1.929				–			
		8.000	16	N331.32-203T51CM	*x.xxx*	N331.32-203T51CMx		*x.xxx*	2.618				–			
.236-.315	**Arbor**	3.150	6	R331.32-080R25CM	0.236	-							–			
		3.150	6	R331.32-080R25CM	*x.xxx*	R331.32-080R25CMx		*x.xxx*	.787	A			–			
		4.000	8	R331.32-101R25CM	0.236	-							–			
		4.000	8	R331.32-101R25CM	*x.xxx*	R331.32-101R25CMx		*x.xxx*	.866	A			–			
		5.000	10	R331.32-127R32CM	*x.xxx*	R331.32-127R32CMx		*x.xxx*	1.201	B			–			
		6.000	12	R331.32-152R38CM	*x.xxx*	R331.32-152R38CMx		*x.xxx*	1.465	B			–			
		8.000	16	R331.32-203R38CM	*x.xxx*	R331.32-203R38CMx		*x.xxx*	2.071	B			–			
	Weldon	3.150	6	R331.32-080M38CM	*x.xxx*	-							–			
		4.000	8	R331.32-101M51CM	*x.xxx*	-							–			
	Bore with keyway	3.150	6	N331.32-080T25DM	0.312	-							–			
		3.150	6	N331.32-080T25DM	*x.xxx*	N331.32-080T25DMx		*x.xxx*	.768				–			
		4.000	8	N331.32-101T32DM	0.312	-							–			
		4.000	8	N331.32-101T32DM	*x.xxx*	N331.32-101T32DMx		*x.xxx*	1.043				–			
		5.000	10	N331.32-127T38DM	0.312	-							–			
		5.000	10	N331.32-127T38DM	*x.xxx*	N331.32-127T38DMx		*x.xxx*	1.437				–			
		6.000	12	N331.32-152T38DM	*x.xxx*	N331.32-152T38DMx		*x.xxx*	1.929				–			
		8.000	16	N331.32-203T51DM	*x.xxx*	N331.32-203T51DMx		*x.xxx*	2.618				–			
.312-.394	**Arbor**	3.150	6	R331.32-080R25DM	0.312	-							–			
		3.150	6	R331.32-080R25DM	*x.xxx*	R331.32-080R25DMx		*x.xxx*	.787	A			–			
		4.000	8	R331.32-101R25DM	0.312	-							–			
		4.000	8	R331.32-101R25DM	*x.xxx*	R331.32-101R25DMx		*x.xxx*	.866	A			–			
		5.000	10	R331.32-127R32DM	*x.xxx*	R331.32-127R32DMx		*x.xxx*	1.201	B			–			
		6.000	12	R331.32-152R38DM	*x.xxx*	R331.32-152R38DMx		*x.xxx*	1.465	B			–			
		8.000	16	R331.32-203R38DM	*x.xxx*	R331.32-203R38DMx		*x.xxx*	2.071	B			–			
	Weldon	3.150	6	R331.32-080M38DM	*x.xxx*	-							–			
		4.000	8	R331.32-101M51DM	*x.xxx*	-							–			

1) Slot width, a_p = insert size

x.xxx = in the ordering code indicates the width a_p in inch to three decimal places.

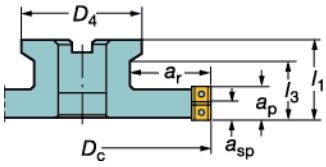
5) x = in the ordering code indicates the insert radius range (r_ε) A, B, D, E or Q.

6) For insert radius range 0.2-1.54, no prefix is read at x in the ordering code. Example: 2 pieces N331.32-080S27CM.

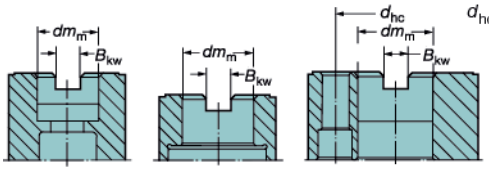
 D160  D165  G6  D2  J3

Full side and facemill

Arbor

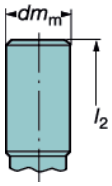


R331.32 type shown



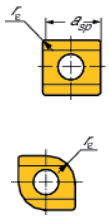
Style A Style B Style C

Weldon



Effective number of teeth:

$$z_c = \frac{z_n}{2}$$



Effective number of teeth:

For slots deeper than iC, a .020 inch adjustment of each cassette is recommended. This will widen the groove .020+.020 inch (0.5+0.5 mm) and reduce the contact length for each insert to 90°.

l_1 = programming length

For insert radius range, r_ε[5]						Dimensions								
.008-.061	A .060-.102	B .103-.177	D .178-.217	E .217-.256	Q Round	E	dm_m	B_{KW}	l_1[2] min.– max.	l_2	l_3	a_{sp}	D_4	n_{max}[3]
Insert size	Insert size	Insert size	Insert size	Insert size	Insert size									
	04					.551	1.000	.250	.394-.433	–	–	.173	–	19 300
	04					.551	1.000	.250	.394-.433	–	–	.173	–	19 300
	04					.551	1.250	.312	.394-.433	–	–	.173	–	17 100
	04					.551	1.250	.312	.394-.433	–	–	.173	–	17 100
	04					.551	1.500	.375	.394-.433	–	–	.173	–	15 100
	04					.551	1.500	.375	.394-.433	–	–	.173	–	13 200
	04					.551	1.500	.375	.394-.433	–	–	.173	–	13 200
	04					.551	2.000	.500	.394-.433	–	–	.173	–	11 700
	04					–	1.000	.384	2.480-2.520	–	1.525	.173	2.126	19 300
	04					–	1.000	.384	2.480-2.520	–	1.525	.173	2.126	19 300
	04					–	1.000	.384	2.480-2.520	–	–	.173	2.126	17 100
	04					–	1.000	.384	2.480-2.520	–	–	.173	2.126	17 100
	04					–	1.250	.509	2.480-2.520	–	–	.173	2.522	15 100
	04					–	1.500	.633	2.480-2.520	–	–	.173	2.992	13 200
	04					–	1.500	.633	2.480-2.520	–	–	.173	3.779	11 700
						–	1.500	–	3.734-3.774	4.921	–	.173	–	19 300
						–	2.000	–	3.670-3.711	5.575	–	.173	–	17 100
	05	05				.630	1.000	.250	.472-.512	–	–	.221	–	15 000
	05	05				.630	1.000	.250	.472-.512	–	–	.221	–	15 000
	05	05				.630	1.250	.312	.472-.512	–	–	.221	–	13 200
	05	05				.630	1.250	.312	.472-.512	–	–	.221	–	13 200
	05	05				.630	1.500	.375	.472-.512	–	–	.221	–	11 700
	05	05				.630	1.500	.375	.472-.512	–	–	.221	–	11 700
	05	05				.630	1.500	.375	.472-.512	–	–	.221	–	10 200
	05	05				.630	2.000	.500	.472-.512	–	–	.221	–	9 100
	05	05				–	1.000	.384	2.480-2.520	–	1.575	.221	2.126	15 000
	05	05				–	1.000	.384	2.480-2.520	–	1.575	.221	2.126	15 000
	05	05				–	1.000	.384	2.480-2.520	–	–	.221	2.126	13 200
	05	05				–	1.000	.384	2.480-2.520	–	–	.221	2.126	13 200
	05	05				–	1.250	.509	2.480-2.520	–	–	.221	2.522	11 700
	05	05				–	1.500	.633	2.480-2.520	–	–	.221	2.992	10 200
	05	05				–	1.500	.633	2.480-2.520	–	–	.221	3.779	9 100
						–	1.500	–	3.734-3.774	4.921	–	.221	–	15 000
						–	2.000	–	3.670-3.711	5.575	–	.221	–	13 200

[2] The programming length, l_1, depends on cutter width setting.

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

Ordering example for a size 3.150 cutter pre-set to 0.315 inch: 2 pieces N331.32-080T25CM*0.315*

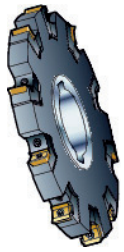
Tools are delivered preset to minimum width.

Ordering example: 2 pieces N331.32-080T25CM

Full side and facemill

Diameter 3.150 - 8.000 inch

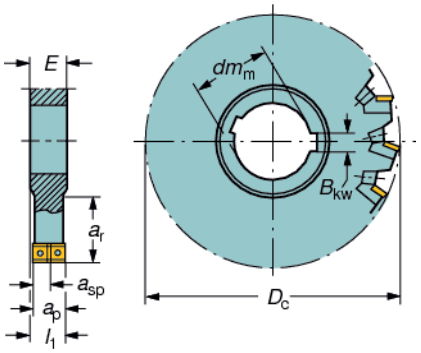
Positive rake



Cassettes, see page D165.

Width .394 - .472 inch

Bore with keyway*)



N331.32 type shown

*) Number of keyways, see page D157.

l_1 = programming length

Inch version

Slot width a_p inch	Mounting	D_c inch	z_n	Ordering code N331.1A	a_p	Ordering code R/L331.1A	r_c[5]	a_p	a_r	Style	D_c inch	z_n	Ordering code	a_r	Style
.394-.472 Round Inserts .375-.453	**Bore with keyway**	3.150	6	N331.32-080T25EM	*x.xxx*	N331.32-080T25EMx		*x.xxx*	.768		3.228	6	N331.32-082T25EMQ[1]	.807	
		4.000	8	N331.32-101T32EM	0.394	-									
		4.000	8	N331.32-101T32EM	*x.xxx*	N331.32-101T32EMx		*x.xxx*	1.043		4.079	8	N331.32-103T32EMQ[1]	1.083	
		5.000	10	N331.32-127T38EM	*x.xxx*	N331.32-127T38EMx		*x.xxx*	1.437		5.079	10	N331.32-129T38EMQ[1]	1.476	
		6.000	12	N331.32-152T38EM	*x.xxx*	N331.32-152T38EMx		*x.xxx*	1.929		6.079	12	N331.32-154T38EMQ[1]	1.970	
		8.000	16	N331.32-203T51EM	*x.xxx*	N331.32-203T51EMx		*x.xxx*	2.618		8.079	16	N331.32-205T51EMQ[1]	2.657	
	Arbor	3.150	6	R331.32-080R25EM	*x.xxx*	R331.32-080R25EMx		*x.xxx*	.787	A	3.228	6	R331.32-082R25EMQ[1]	.827	A
		4.000	8	R331.32-101R25EM	0.394	-									
		4.000	8	R331.32-101R25EM	*x.xxx*	R331.32-101R25EMx		*x.xxx*	.866	A	4.079	8	R331.32-103R25EMQ[1]	.925	A
		5.000	10	R331.32-127R32EM	*x.xxx*	R331.32-127R32EMx		*x.xxx*	1.201	B	5.079	10	R331.32-129R32EMQ[1]	1.200	B
		6.000	12	R331.32-152R38EM	*x.xxx*	R331.32-152R38EMx		*x.xxx*	1.465	B	6.079	12	R331.32-154R38EMQ[1]	1.504	B
		8.000	16	R331.32-203R38EM	*x.xxx*	R331.32-203R38EMx		*x.xxx*	2.071	B	8.079	16	R331.32-205R38EMQ[1]	2.106	B
	Weldon	3.150	6	R331.32-080M38EM	*x.xxx*	-							–		
		4.000	8	R331.32-101M51EM	*x.xxx*	-							–		

[1] Slot width, a_p = insert size

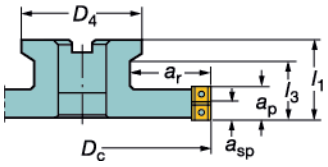
x.xxx = in the ordering code indicates the width a_p in inch to three decimal places.

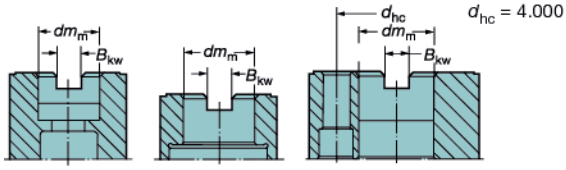
[5] x = in the ordering code indicates the insert radius range (r_ε) A, B, D, E or Q.

D160 D165 G6 D2 J3

Full side and facemill

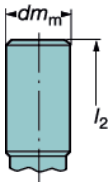
Arbor R331.32 type shown





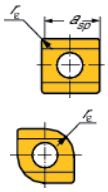
Style A Style B Style C

Weldon



Effective number of teeth:

$$z_c = \frac{z_n}{2}$$



Effective number of teeth:

For slots deeper than iC, a .020 inch adjustment of each cassette is recommended. This will widen the groove .020+.020 inch (0.5+0.5 mm) and reduce the contact length for each insert to 90°.

l_1 = programming length

For insert radius range, r_ε[5]						Dimensions								
.008-.061	A .060-.102	B .103-.177	D .178-.217	E .217-.256	Q Round	E	dm_m	B_{KW}	l_1[2] min.– max.	l_2	l_3	a_{sp}	D_4	n_{max}[3]
08	08	08			09	.630	1.000	.250	.502-.541	–	–	.299	–	18 100
08	08	08			09	.630	1.250	.312	.502-.541	–	–	.299	–	15 900
08	08	08			09	.630	1.250	.312	.502-.541	–	–	.299	–	15 900
08	08	08			09	.630	1.500	.375	.502-.541	–	–	.299	–	14 100
08	08	08			09	.630	1.500	.375	.502-.541	–	–	.299	–	12 400
08	08	08			09	.630	2.000	.500	.502-.541	–	–	.299	–	11 000
08	08	08			09	–	1.000	.384	2.471-2.510	–	1.575	.299	2.126	18 100
08	08	08			09	–	1.000	.384	2.471-2.510	–	–	.299	2.126	15 900
08	08	08			09	–	1.000	.384	2.471-2.510	–	–	.299	2.126	15 900
08	08	08			09	–	1.250	.509	2.471-2.510	–	–	.299	2.522	14 100
08	08	08			09	–	1.500	.633	2.471-2.510	–	–	.299	2.992	12 400
08	08	08			09	–	1.500	.633	2.471-2.510	–	–	.299	3.779	11 000
08						–	1.500	–	3.734-3.774	5.197	–	.299	–	18 100
08						–	2.000	–	3.670-3.711	5.984	–	.299	–	15 900

[2] The programming length, l_1, depends on cutter width setting.

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

Ordering example for a size 80 cutter pre-set to 0.472 inch: 2 pieces N331.32-080T25EM*0.472*

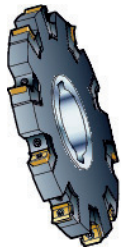
Tools are delivered preset to minimum width.

Ordering example: 2 pieces N331.32-080T25EM

Full side and facemill

Diameter 3.150 - 12.000 inch

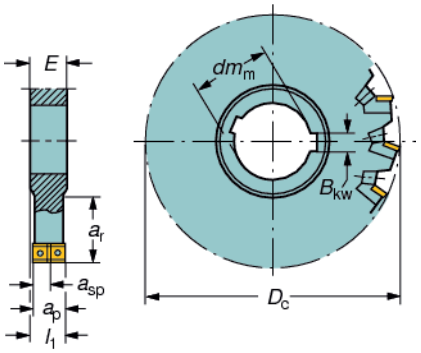
Positive rake



Cassettes, see page D165.

Width .472 - .807 inch

Bore with keyway*)



*) Number of keyways, see page D157.

l_1 = programming length

Inch version

Slot width	Mounting															
				N331.1A				R/L331.1A								
a_p inch		D_c inch		Ordering code	a_p	Ordering code	r_ε[5]	a_p	a_r	Style	D_c inch		Ordering code	a_r	Style
.472-.591 Round .500-.618	**Bore with keyway**														
		3.150	6	N331.32-080T25FM	*x.xxx*	N331.32-080T25FMx		*x.xxx*	.768		3.228	6	N331.32-082T25FMQ[1]	.807	
		4.000	8	N331.32-101T32FM	0.472	-							–		
		4.000	8	N331.32-101T32FM	*x.xxx*	N331.32-101T32FMx		*x.xxx*	1.043		4.079	8	N331.32-103T32FMQ[1]	1.083	
		5.000	10	N331.32-127T38FM	0.472	-							–		
		5.000	10	N331.32-127T38FM	*x.xxx*	N331.32-127T38FMx		*x.xxx*	1.437		5.079	10	N331.32-129T38FMQ[1]	1.476	
		6.000	12	N331.32-152T38FM	*x.xxx*	N331.32-152T38FMx		*x.xxx*	1.929		6.079	12	N331.32-154T38FMQ[1]	1.970	
		8.000	16	N331.32-203T51FM	*x.xxx*	N331.32-203T51FMx		*x.xxx*	2.618		8.079	16	N331.32-205T51FMQ[1]	2.657	
	Arbor	3.150	6	R331.32-080R25FM	*x.xxx*	R331.32-080R25FMx		*x.xxx*	.787	A	3.228	6	R331.32-082R25FMQ[1]	.827	
		4.000	8	R331.32-101R25FM	0.472	-							–		
		4.000	8	R331.32-101R25FM	*x.xxx*	R331.32-101R25FMx		*x.xxx*	.866	A	4.079	8	R331.32-103R25FMQ[1]	.925	
		5.000	10	R331.32-127R32FM	0.472	-							–		
		5.000	10	R331.32-127R32FM	*x.xxx*	R331.32-127R32FMx		*x.xxx*	1.201	B	5.079	10	R331.32-129R32FMQ[1]	1.200	
		6.000	12	R331.32-152R38FM	*x.xxx*	R331.32-152R38FMx		*x.xxx*	1.465	B	6.079	12	R331.32-154R38FMQ[1]	1.504	
		8.000	16	R331.32-203R38FM	*x.xxx*	R331.32-203R38FMx		*x.xxx*	2.071	B	8.079	16	R331.32-205R38FMQ[1]	2.106	
.591-.689	**Bore with keyway**	4.000	6	N331.32-101T32KM	0.591	-							–		
		4.000	6	N331.32-101T32KM	*x.xxx*	N331.32-101T32KMx		*x.xxx*	1.043		4.079	6	N331.32-103T32KMQ[1]	1.083	
		5.000	8	N331.32-127T38KM	*x.xxx*	N331.32-127T38KMx		*x.xxx*	1.437		5.079	8	N331.32-129T38KMQ[1]	1.476	
		6.000	10	N331.32-152T38KM	0.591	-							–		
		6.000	10	N331.32-152T38KM	*x.xxx*	N331.32-152T38KMx		*x.xxx*	1.929		6.079	10	N331.32-154T38KMQ[1]	1.970	
		8.000	12	N331.32-203T51KM	0.591	-							–		
		8.000	12	N331.32-203T51KM	*x.xxx*	N331.32-203T51KMx		*x.xxx*	2.618		8.079	12	N331.32-205T51KMQ[1]	2.657	
		10.000	16	N331.32-254T51KM	*x.xxx*	N331.32-254T51KMx		*x.xxx*	3.622				–		
		12.000	20	N331.32-305T63KM	*x.xxx*	N331.32-305T63KMx		*x.xxx*	4.311				–		
	Arbor	4.000	6	R331.32-101R25KM	0.591	-							–		
		4.000	6	R331.32-101R25KM	*x.xxx*	R331.32-101R25KMx		*x.xxx*	1.024	A	4.079	6	R331.32-103R25KMQ[1]	1.051	
		5.000	8	R331.32-127R32KM	*x.xxx*	R331.32-127R32KMx		*x.xxx*	1.201	B	5.079	8	R331.32-129R32KMQ[1]	1.200	
		6.000	10	R331.32-152R38KM	*x.xxx*	R331.32-152R38KMx		*x.xxx*	1.465	B	6.079	10	R331.32-154R38KMQ[1]	1.504	
		8.000	12	R331.32-203R38KM	*x.xxx*	R331.32-203R38KMx		*x.xxx*	2.071	B	8.079	12	R331.32-205R38KMQ[1]	2.106	
		10.000	16	R331.32-254R63KM	*x.xxx*	R331.32-254R63KMx		*x.xxx*	2.283	C			–		
		12.000	20	R331.32-305R63KM	*x.xxx*	R331.32-305R63KMx		*x.xxx*	3.283	C			–		
.689-.807	**Bore with keyway**	5.000	8	N331.32-127T38LM	*x.xxx*	N331.32-127T38LMx		*x.xxx*	1.437				–		
		6.000	10	N331.32-152T38LM	*x.xxx*	N331.32-152T38LMx		*x.xxx*	1.929				–		
		8.000	12	N331.32-203T51LM	*x.xxx*	N331.32-203T51LMx		*x.xxx*	2.618				–		
		10.000	16	N331.32-254T51LM	*x.xxx*	N331.32-254T51LMx		*x.xxx*	3.622				–		
		12.000	20	N331.32-305T63LM	*x.xxx*	N331.32-305T63LMx		*x.xxx*	4.311				–		
	Arbor	5.000	8	R331.32-127R32LM	*x.xxx*	R331.32-127R32LMx		*x.xxx*	1.201	B			–		
		6.000	10	R331.32-152R38LM	*x.xxx*	R331.32-152R38LMx		*x.xxx*	1.465	B			–		
		8.000	12	R331.32-203R38LM	*x.xxx*	R331.32-203R38LMx		*x.xxx*	2.071	B			–		
		10.000	16	R331.32-254R63LM	*x.xxx*	R331.32-254R63LMx		*x.xxx*	2.283	C			–		
		12.000	20	R331.32-305R63LM	*x.xxx*	R331.32-305R63LMx		*x.xxx*	3.283	C			–		

[1] Slot width, a_p = insert size

x.xxx = in the ordering code indicates the width a_p in inch to three decimal places.

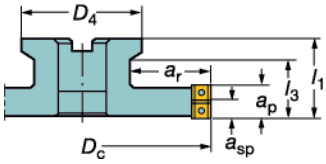
[5] x = in the ordering code indicates the insert radius range (r_ε) A, B, D, E or Q.

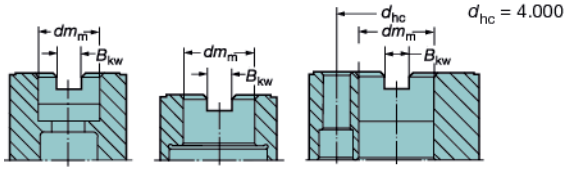
D160 D165 G6 D2 J3

Full side and facemill

Arbor

R331.32 type shown

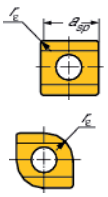




Style A Style B Style C

Effective number of teeth:

$$z_c = \frac{z_n}{2}$$



Effective number of teeth:

For slots deeper than iC, a .020 inch adjustment of each cassette is recommended. This will widen the groove .020+.020 inch (0.5+0.5 mm) and reduce the contact length for each insert to 90°.

l_1 = programming

For insert radius range, rε[5]						Dimensions							
.008-.061	A .060-.102	B .103-.177	D .178-.256	E .217-.256	Q Round	*E*	dm_m	B_{KW}	l_1[2] min.– max.	l_3	a_{sp}	D_4	n_{max}[3]
Insert size	Insert size	Insert size	Insert size	Insert size	Insert size								
08	08	08			13	.630	1.000	.250	.565- .624	–	.500	–	18 100
08	08	08			13	.630	1.250	.312	.565- .624	–	.500	–	15 900
08	08	08			13	.630	1.250	.312	.565- .624	–	.500	–	15 900
08	08	08			13	.630	1.500	.375	.565- .624	–	.500	–	14 100
08	08	08			13	.630	1.500	.375	.565- .624	–	.500	–	14 100
08	08	08			13	.630	1.500	.375	.565- .624	–	.500	–	12 400
08	08	08			13	.630	2.000	.500	.565- .624	–	.500	–	11 000
08	08				13	–	1.000	.383	2.494-2-553	1.575	.500	2.126	18 100
08	08				13	–	1.000	.383	2.494-2-553	–	.500	2.116	15 900
08	08				13	–	1.000	.383	2.494-2-553	–	.500	2.116	15 900
08	08				13	–	1.250	.509	2.494-2-553	–	.500	2.520	14 100
08	08				13	–	1.250	.509	2.494-2-553	–	.500	2.520	14 100
08	08				13	–	1.500	.633	2.494-2-553	–	.500	2.992	12 400
08	08				13	–	1.500	.633	2.494-2-553	–	.500	3.779	11 000
11	11	11	11	11	16	.728	1.250	.312	.681- .730	–	.630	–	14 000
11	11	11	11	11	16	.728	1.250	.312	.681- .730	–	.630	–	14 000
11	11	11	11	11	16	.728	1.500	.375	.681- .730	–	.630	–	12 400
11	11	11	11	11	16	.728	1.500	.375	.681- .730	–	.630	–	10 800
11	11	11	11	11	16	.728	1.500	.375	.681- .730	–	.630	–	10 800
11	11	11	11	11	16	.728	2.000	.500	.681- .730	–	.630	–	9 600
11	11	11	11	11	16	.728	2.000	.500	.681- .730	–	.630	–	9 600
11	11	11	11	11		.728	2.000	.500	.681- .730	–	.630	–	8 500
11	11	11	11			.728	2.500	.625	.681- .730	–	.630	–	7 600
11	11	11	11	11	16	–	1.000	.383	2.500-2.549	1.575	.630	2.116	14 000
11	11	11	11	11	16	–	1.000	.383	2.500-2.549	1.575	.630	2.116	14 000
11	11	11	11	11	16	–	1.250	.509	2.500-2.549	–	.630	2.520	12 400
11	11	11	11	11	16	–	1.500	.633	2.500-2.549	–	.630	2.992	10 800
11	11	11	11	11	16	–	1.500	.633	2.500-2.549	–	.630	3.779	9 600
11	11	11	11	11		–	2.500[4]	1.012	2.500-2.549	–	.630	5.354	8 500
11	11	11	11	11		–	2.500[4]	1.012	2.500-2.549	–	.630	5.354	7 600
11	11	11	11	11		.847	1.500	.375	.768- .827	–	.417	–	12 400
11	11	11	11	11		.847	1.500	.375	.768- .827	–	.417	–	10 800
11	11	11	11	11		.847	2.000	.500	.768- .827	–	.417	–	9 600
11	11	11	11	11		.847	2.000	.500	.768- .827	–	.417	–	8 500
11	11	11	11	11		.847	2.500	.625	.768- .827	–	.417	–	7 600
11	11	11	11	11		–	1.250	.509	2.480- .2.539	–	.417	2.520	12 400
11	11	11	11	11		–	1.500	.633	2.480- .2.539	–	.417	2.992	10 800
11	11	11	11	11		–	1.500	.633	2.480- .2.539	–	.417	3.779	9 600
11	11	11	11	11		–	2.500[4]	1.012	2.480- .2.539	–	.417	5.354	8 500
11	11	11	11	11		–	2.500[4]	1.012	2.480- .2.539	–	.417	5.354	7 600

[2] The programming length, l_1, depends on cutter width setting.

Ordering example for a size 80 cutter pre-set to 0.591 inch:
2 pieces N331.32-080T25FM*0.591*

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

[4] Has 4" bolt hole circle.

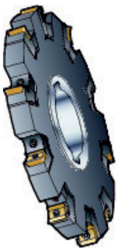
Tools are delivered preset to minimum width.
Ordering example: 2 pieces N331.32-080T25FM

D160 D165 G6 D2 J3

Full side and facemill

Diameter 6.000 - 12.000 inch

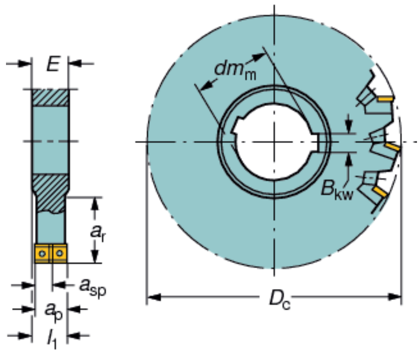
Positive rake



Cassettes, see page D165.

Width .807 - 1.043 inch

Bore with keyway*)



*) Number of keyways, see page D157.

l_1 = programming length

Inch version

Slot width a_p inch	Mounting	D_c inch	z	Ordering code (N331.1A)	a_p	Ordering code (R/L331.1A)	r_c 5)	a_p	a_r	Style	D_c inch	z	Ordering code	a_r	Style
.807-.925	**Bore with keyway**	6.000	10	N331.32-152T38QM	*x.xxx*	N331.32-152T38QMx		*x.xxx*	1.929				–		
		8.000	12	N331.32-203T51QM	*x.xxx*	N331.32-203T51QMx		*x.xxx*	2.618				–		
		10.000	16	N331.32-254T51QM	*x.xxx*	N331.32-254T51QMx		*x.xxx*	3.622				–		
		12.000	20	N331.32-305T63QM	*x.xxx*	N331.32-305T63QMx		*x.xxx*	4.311				–		
	Arbor	6.000	10	R331.32-152R38QM	*x.xxx*	R331.32-152R38QMx		*x.xxx*	1.465	B			–		
		8.000	12	R331.32-203R38QM	*x.xxx*	R331.32-203R38QMx		*x.xxx*	2.071	B			–		
		10.000	16	R331.32-254R63QM	*x.xxx*	R331.32-254R63QMx		*x.xxx*	2.283	C			–		
		12.000	20	R331.32-305R63QM	*x.xxx*	R331.32-305R63QMx		*x.xxx*	3.283	C			–		
.925-1.043	**Bore with keyway**	6.000	10	N331.32-152T38RM	*x.xxx*	N331.32-152T38RMx		*x.xxx*	1.929				–		
		8.000	12	N331.32-203T51RM	*x.xxx*	N331.32-203T51RMx		*x.xxx*	2.618				–		
		10.000	16	N331.32-254T51RM	*x.xxx*	N331.32-254T51RMx		*x.xxx*	3.622				–		
		12.000	20	N331.32-305T63RM	*x.xxx*	N331.32-305T63RMx		*x.xxx*	4.311				–		
	Arbor	6.000	10	R331.32-152R38RM	*x.xxx*	R331.32-152R38RMx		*x.xxx*	1.465	B			–		
		8.000	12	R331.32-203R38RM	*x.xxx*	R331.32-203R38RMx		*x.xxx*	2.071	B			–		
		10.000	16	R331.32-254R63RM	*x.xxx*	R331.32-254R63RMx		*x.xxx*	2.283	C			–		
		12.000	20	R331.32-305R63RM	*x.xxx*	R331.32-305R63RMx		*x.xxx*	3.283	C			–		

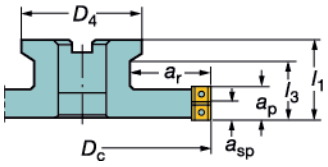
1) Slot width, a_p = insert size

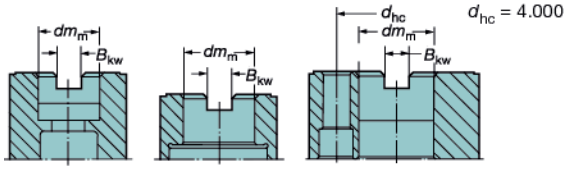
x.xxx = in the ordering code indicates the width a_p in inch to three decimal places.

SANDVIK Coromant

Full side and facemill

Arbor

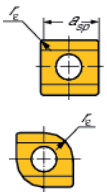




Style A Style B Style C

Effective number of teeth:

$$z_c = \frac{z_n}{2}$$



Effective number of teeth:

For slots deeper than iC, a .020 inch adjustment of each cassette is recommended. This will widen the groove .020+.020 inch (0.5+0.5 mm) and reduce the contact length for each insert to 90°.

l_1 = programming

For insert radius range, rε[5]						Dimensions							
.008-.061	A .060-.102	B .103-.177	D .178-.217	E .217-.256	Q Round	*E*	dm_m	B_{KW}	l_1[2] min.– max.	l_3	a_{sp}	D_4	n_{max}[3]
14	14	14	14	14		.965	1.500	.375	.886- .945	–	.535	–	9 000
14	14	14	14	14		.965	2.000	.500	.886- .945	–	.535	–	8 000
14	14	14	14	14		.965	2.000	.500	.886- .945	–	.535	–	7 100
14	14	14	14	14		.965	2.500	.625	.886- .945	–	.535	–	6 300
14	14	14	14	14		–	1.500	.633	2.480-2.539	–	.535	2.992	9 000
14	14	14	14	14		–	1.500	.633	2.480-2.539	–	.535	3.779	8 000
14	14	14	14	14		–	2.500[2]	1.012	2.480-2.539	–	.535	5.354	7 100
14	14	14	14	14		–	2.500[2]	1.012	2.480-2.539	–	.535	5.354	6 300
14	14	14	14	14		1.083	1.500	.375	1.004-1.063	–	.535	–	9 000
14	14	14	14	14		1.083	2.000	.500	1.004-1.063	–	.535	–	8 000
14	14	14	14	14		1.083	2.000	.500	1.004-1.063	–	.535	–	7 100
14	14	14	14	14		1.083	2.500	.625	1.004-1.063	–	.535	–	6 300
14	14	14	14	14		–	1.500	.633	2.480-2.539	–	.535	2.992	9 000
14	14	14	14	14		–	1.500	.633	2.480-2.539	–	.535	3.779	8 000
14	14	14	14	14		–	2.500[2]	1.012	2.480-2.539	–	.535	5.354	7 100
14	14	14	14	14		–	2.500[2]	1.012	2.480-2.539	–	.535	5.354	6 300

[2] The programming length, l_1, depends on cutter width setting.

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

Ordering example for a size 6 cutter pre-set to 0.925 inch: 2 pieces N331.32-152T38QM*0.925*

Tools are delivered preset to minimum width.
Ordering example: 2 pieces N331.32-152T38QM


D160


D165


G6


D2

J3

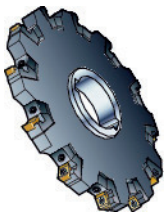
Half side and facemill

Diameter 80 – 160 mm

Max. axial depth 7.6 mm

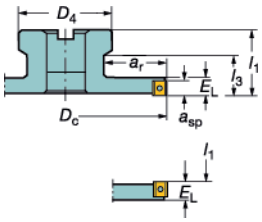
Positive rake

Cassettes, see page D165.



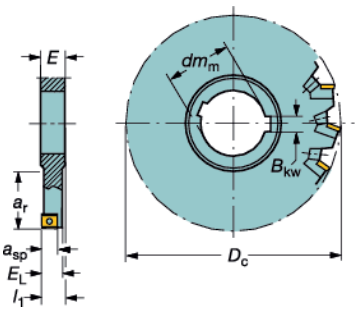
Arbor

R331.52...R

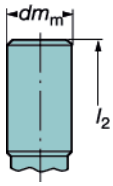


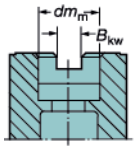
R331.52...L

Bore with keyway*)

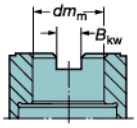


Cylindrical





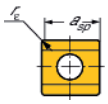
ISO A



ISO B

Effective number of teeth: $z_c = z_n$

R331.52 type shown



l_1 = programming length

Metric version

Mounting					Insert size[1]	Dimensions												
Max. a_{sp}		D_c mm	z_n	Ordering code		kg	a_r	dm_m D_{5m}	ISO	E	B_{KW}	E_L	l_1	l_2	l_3	D_4	n_{max}[2]
7.6	**Bore with keyway**	80	6	**R/L331.52-080S27EM**	08	0.3	19.5	27		16	7	9.5	13	–	–	–	18 100
		100	8	**R/L331.52-100S32EM**	08	0.5	25.5	32		16	8	9.5	13	–	–	–	15 900
		125	10	**R/L331.52-125S40EM**	08	0.8	34.0	40		16	10	9.5	13	–	–	–	14 100
		160	12	**R/L331.52-160S40EM**	08	1.3	51.5	40		16	10	9.5	13	–	–	–	12 400
		80	6	**R/L331.52-080S27FM**	08	0.4	19.5	27		16	7	11.5	14	–	–	–	18 100
		100	8	**R/L331.52-100S32FM**	08	0.6	25.5	32		16	8	11.5	14	–	–	–	15 900
		125	10	**R/L331.52-125S40FM**	08	0.9	34.0	40		16	10	11.5	14	–	–	–	14 100
		160	12	**R/L331.52-160S40FM**	08	1.6	51.5	40		16	10	11.5	14	–	–	–	12 400
	Arbor	80	6	**R331.52-080Q27EMR**	08	0.8	20.0	27	A	–	12.4	9.5	63	–	40.0	54.0	18 100
		80	6	**R331.52-080Q27EML**	08	0.8	20.0	27	A	–	12.4	9.5	53	–	40.0	54.0	18 100
		100	8	**R331.52-100Q27EMR**	08	1.3	22.0	27	A	–	12.4	9.5	63	–	–	54.0	15 900
		100	8	**R331.52-100Q27EML**	08	1.2	22.0	27	A	–	12.4	9.5	53	–	–	54.0	15 900
		125	10	**R331.52-125Q32EMR**	08	2	29.5	32	B	–	14.4	9.5	63	–	–	64.0	14 100
		125	10	**R331.52-125Q32EML**	08	1.8	29.5	32	B	–	14.4	9.5	53	–	–	64.0	14 100
		160	12	**R331.52-160Q40EMR**	08	2.9	41.0	40	B	–	16.4	9.5	63	–	–	76.0	12 400
		160	12	**R331.52-160Q40EML**	08	2.6	41.0	40	B	–	16.4	9.5	53	–	–	76.0	12 400
		80	6	**R331.52-080Q27FMR**	08	0.9	20.0	27	A	–	12.4	11.5	63	–	40.0	54.0	18 100
		80	6	**R331.52-080Q27FML**	08	0.9	20.0	27	A	–	12.4	11.5	51	–	40.0	54.0	18 100
		100	8	**R331.52-100Q27FMR**	08	1.3	22.0	27	A	–	12.4	11.5	63	–	–	54.0	15 900
		100	8	**R331.52-100Q27FML**	08	1.3	22.0	27	A	–	12.4	11.5	51	–	–	54.0	15 900
		125	10	**R331.52-125Q32FMR**	08	2.3	29.5	32	B	–	14.4	11.5	63	–	–	64.0	14 100
		125	10	**R331.52-125Q32FML**	08	2	29.5	32	B	–	14.4	11.5	51	–	–	64.0	14 100
		160	12	**R331.52-160Q40FMR**	08	3.3	41.0	40	B	–	16.4	11.5	63	–	–	76.0	12 400
		160	12	**R331.52-160Q40FML**	08	2.9	41.0	40	B	–	16.4	11.5	51	–	–	76.0	12 400
	Cylindrical	80	6	**R331.52-080A32EMR**	08	1.0	19.5	32		–	–	9.5	–	132.0	–	–	18 100
		80	6	**R331.52-080A32EML**	08	1.0	19.5	32		–	–	9.5	–	131.5	–	–	18 100
		100	8	**R331.52-100A42EMR**	08	1.9	25.5	42		–	–	9.5	–	152	–	–	15 900
		100	8	**R331.52-100A42EML**	08	1.9	25.5	42		–	–	9.5	–	151.5	–	–	15 900

[1] Inserts are ordered separately.

Ordering example: 2 pieces R331.52-080S27EM

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

*) Number of keyways, see page D157.

D160 D165 G6 D2 J3

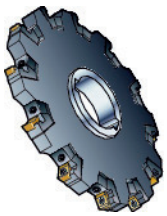
Half side and facemill

Diameter 100 - 315 mm

Max. axial depth 10.6 mm

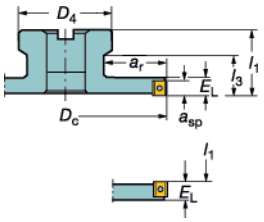
Positive rake

Cassettes, see page D165.



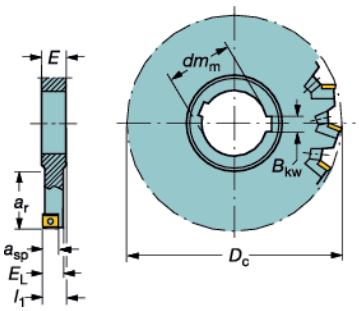
Arbor

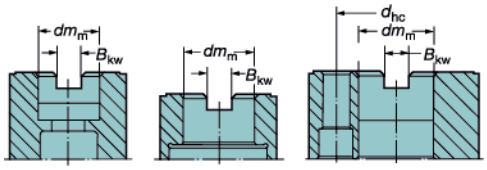
R331.52...R



R331.52...L

Bore with keyway*)

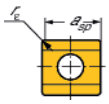




ISO A ISO B ISO C

Effective number of teeth: $z_c = z_n$

R331.52 type shown



l_1 = programming length

Metric version

Mounting					Insert size[2]	Dimensions											
Max. a_{sp}		D_c mm	z_n	Ordering code		kg	a_r	dm_m	ISO	E	B_{KW}	E_L	l_1	l_3	D_4	d_{hc}	n_{max}[3]
	Bore with keyway	100	6	**R/L331.52-100S32KM**	11	0.8	25.5	32		18.5	8	14.4	16.8	–	–	–	14 000
		125	8	**R/L331.52-125S40KM**	11	1.2	34.0	40		18.5	10	14.4	16.8	–	–	–	12 400
		160	10	**R/L331.52-160S40KM**	11	2	51.5	40		18.5	10	14.4	16.8	–	–	–	10 800
		200[1]	12	**R/L331.52-200S50MM**	11	9.5	64.5	50		31.2	12	26.6	29.2	–	–	–	9 600
		250[1]	16	**R/L331.52-250S50MM**	11	17.3	89.5	50		31.2	12	26.6	29.2	–	–	–	8 500
10.6		315[1]	20	**R/L331.52-315S60NM**	11	18.5	114.5	60		34.8	14	30.2	32.8	–	–	–	7 600
	Arbor	100	6	**R331.52-100Q27KMR**	11	1.3	25.7	27	A	–	12.4	14.4	63.0	–	54.0	–	14 000
		100	6	**R331.52-100Q27KML**	11	1.2	25.7	27	A	–	12.4	14.4	48.0	–	54.0	–	14 000
		125	8	**R331.52-125Q32KMR**	11	1.8	29.5	32	B	–	12.4	14.4	63.0	–	64.0	–	12 400
		125	8	**R331.52-125Q32KML**	11	2.3	29.5	32	B	–	12.4	14.4	48.0	–	64.0	–	12 400
		160	10	**R331.52-160Q40KMR**	11	8	41.0	40	B	–	16.4	14.4	63.0	–	76.0	–	10 800
		160	10	**R331.52-160Q40KML**	11	3.3	41.0	40	B	–	16.4	14.4	48.0	–	76.0	–	10 800
		200[1]	12	**R331.52-200Q40MMR**	11	8	51.0	40	C	–	16.4	26.6	63.0	–	96.0	66.7	9 600
		200[1]	12	**R331.52-200Q40MML**	11	8	51.0	40	C	–	16.4	26.6	35.8	–	96.0	66.7	9 600
		250[1]	16	**R331.52-250Q60MMR**	11	20.3	56.0	60	C	–	25.7	26.6	63.0	–	136.0	101.6	8 500
		250[1]	16	**R331.52-250Q60MML**	11	12.7	56.0	60	C	–	25.7	26.6	35.8	–	136.0	101.6	8 500
		315[1]	20	**R331.52-315Q60NMR**	11	8	88.5	60	C	–	25.7	30.2	63.0	–	136.0	101.6	7 600
		315[1]	20	**R331.52-315Q60NML**	11	20.3	88.5	60	C	–	25.7	30.2	32.2	–	136.0	101.6	7 600

[1] Note: Cutters dia 200–315 mm are delivered without covers. If serrations need to be protected, covers should be used. Ordering information on page D165.

Ordering example: 2 pieces R331.52-100S32KM

[2] Inserts are ordered separately.

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

*) Number of keyways, see page D157.

D160 D165 G6 D2 J3

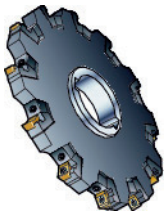
Half side and facemill

Diameter 3.150 - 6.000 inch

Max. axial depth .299 inch

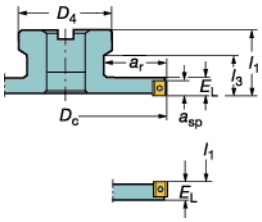
Positive rake

Cassettes, see page D165.



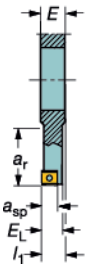
Arbor

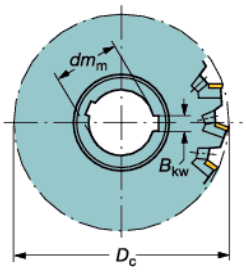
R331.52...R



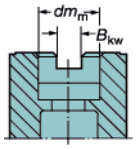
R331.52...L

Bore with keyway*)

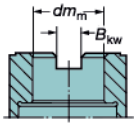




Weldon



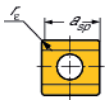
ISO A



ISO B

Effective number of teeth: $z_c = z_n$

R331.52 type shown



l_1 = programming length

Inch version

Mounting									Insert size[1]	Dimensions								
Max. a_{sp}		D_c inch	z_n	Ordering code	a_r	dm_m	ISO			E	B_{KW}	C_i	E_L	l_1	l_2	l_3	D_4	n_{max}[2]
.299	**Bore with keyway**	3.150	6	**R/L331.52-080T25EM**	.768	1.000			08	.630	.250	1.102	.374	.512	–	–	–	18 100
		4.000	8	**R/L331.52-101T32EM**	1.043	1.250			08	.630	.312	1.136	.374	.512	–	–	–	15 900
		5.000	10	**R/L331.52-127T38EM**	1.437	1.500			08	.630	.375	1.666	.374	.512	–	–	–	14 100
		6.000	12	**R/L331.52-152T38EM**	1.929	1.500			08	.630	.375	1.666	.374	.512	–	–	–	12 400
		3.150	6	**R/L331.52-080T25FM**	.768	1.000			08	.630	.250	1.102	.453	.551	–	–	–	18 100
		4.000	8	**R/L331.52-101T32FM**	1.043	1.250			08	.630	.312	1.136	.453	.551	–	–	–	15 900
		5.000	10	**R/L331.52-127T38FM**	1.437	1.500			08	.630	.375	1.666	.453	.551	–	–	–	14 100
		6.000	12	**R/L331.52-152T38FM**	1.929	1.500			08	.630	.375	1.666	.453	.551	–	–	–	12 400
	Arbor	3.150	6	**R331.52-080R25EMR**	.787	1.000	A		08	–	.384		.374	2.480	–	1.575	2.126	18 100
		3.150	6	**R331.52-080R25EML**	.787	1.000	A		08	–	.384		.374	2.087	–	1.181	2.126	18 100
		4.000	8	**R331.52-101R25EMR**	.866	1.000	A		08	–	.384		.374	2.480	–	–	2.126	15 900
		4.000	8	**R331.52-101R25EML**	.866	1.000	A		08	–	.384		.374	2.087	–	–	2.126	15 900
		5.000	10	**R331.52-127R32EMR**	1.201	1.250	B		08	–	.509		.374	2.480	–	–	2.520	14 100
		5.000	10	**R331.52-127R32EML**	1.201	1.250	B		08	–	.509		.374	2.087	–	–	2.520	14 100
		6.000	12	**R331.52-152R38EMR**	1.464	1.500	B		08	–	.633		.374	2.480	–	–	2.992	12 400
		6.000	12	**R331.52-152R38EML**	1.464	1.500	B		08	–	.633		.374	2.087	–	–	2.992	12 400
		3.150	6	**R331.52-080R25FMR**	.787	1.000	A		08	–	.384		.453	2.480	–	1.575	2.126	18 100
		3.150	6	**R331.52-080R25FML**	.787	1.000	A		08	–	.384		.453	2.008	–	1.102	2.126	18 100
		4.000	8	**R331.52-101R25FMR**	.866	1.000	A		08	–	.384		.453	2.480	–	–	2.126	15 900
		4.000	8	**R331.52-101R25FML**	.866	1.000	A		08	–	.384		.453	2.008	–	–	2.126	15 900
		5.000	10	**R331.52-127R32FMR**	1.201	1.250	B		08	–	.509		.453	2.480	–	–	2.520	14 100
		5.000	10	**R331.52-127R32FML**	1.201	1.250	B		08	–	.509		.453	2.008	–	–	2.520	14 100
		6.000	12	**R331.52-152R38FMR**	1.464	1.500	B		08	–	.633		.453	2.480	–	–	2.992	12 400
		6.000	12	**R331.52-152R38FML**	1.464	1.500	B		08	–	.633		.453	2.008	–	–	2.992	12 400
	Weldon	3.150	6	**R331.52-080M38EMR**	.787	1.250			08	–	–		.374	3.734	4.921	–	–	18 100
		3.150	6	**R331.52-080M38EML**	.787	1.250			08	–	–		.374	3.734	4.921	–	–	18 100
		4.000	8	**R331.52-101M51EMR**	.945	2.000			08	–	–		.374	3.670	5.512	–	–	15 900
		4.000	8	**R331.52-101M51EML**	.945	2.000			08	–	–		.374	3.276	5.512	–	–	15 900

[1] Inserts are ordered separately.

Ordering example: 2 pieces R331.52-080T25EM

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

*) Number of keyways, see page D157.

 D160  D165  G6  D2  J3

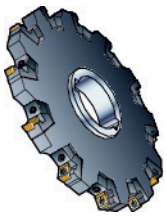
Half side and facemill

Diameter 4.000 - 12.000 inch

Max. axial depth .417 inch

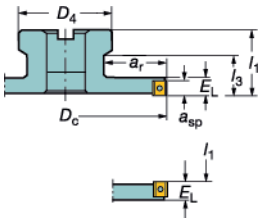
Positive rake

Cassettes, see page D165.



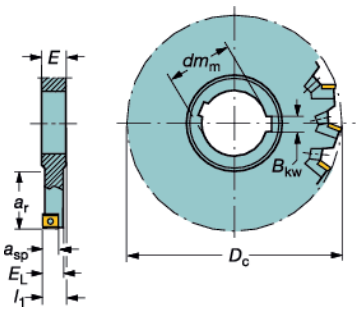
Arbor

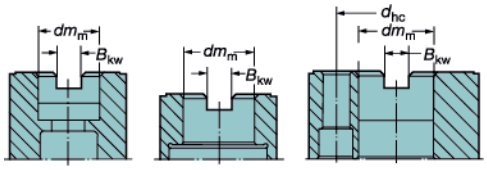
R331.52...R



R331.52...L

Bore with keyway*)

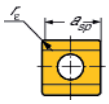




ISO A ISO B ISO C

Effective number of teeth: $z_c = z_n$

R331.52 type shown



l_1 = programming length

Inch version

Mounting								Insert size[1]	Dimensions							
Max. a_{sp}		D_c inch	z_n	Ordering code	a_r	dm_m	ISO		E	B_{KW}	C_i	E_L	l_1	l_3	D_4	n_{max}[2]
	Bore with keyway	4.000	6	**R/L331.52-101T32KM**	1.043	1.250		11	.728	.312	1.386	.567	.661	–	–	14 000
		5.000	8	**R/L331.52-127T38KM**	1.437	1.500		11	.728	.375	1.666	.567	.661	–	–	12 400
		6.000	10	**R/L331.52-152T38KM**	1.929	1.500		11	.728	.375	1.666	.567	.661	–	–	10 800
		8.000	12	**R/L331.52-203T51MM**	2.618	2.000		11	1.228	.500	2.197	1.047	1.150	–	–	9 600
		10.00	16	**R/L331.52-254T51MM**	3.622	2.000		11	1.228	.500	2.197	1.047	1.150	–	–	8 500
.417		12.00	20	**R/L331.52-305T63NM**	4.311	2.500		11	1.370	.625	2.732	1.189	1.291	–	–	7 600
	Arbor	4.000	6	**R331.52-101R25KMR**	1.024	1.000	A	11	–	.384		.567	2.480	1.575	2.126	14 000
		4.000	6	**R331.52-101R25KML**	1.024	1.000	A	11	–	.384		.567	1.890	.984	2.126	14 000
		5.000	8	**R331.52-127R32KMR**	1.201	1.250	B	11	–	.509		.567	2.480	–	2.520	12 400
		5.000	8	**R331.52-127R32KML**	1.201	1.250	B	11	–	.509		.567	1.890	–	2.520	12 400
		6.000	10	**R331.52-152R38KMR**	1.464	1.500	B	11	–	.633		.567	2.480	–	2.992	10 800
		6.000	10	**R331.52-152R38KML**	1.464	1.500	B	11	–	.633		.567	1.890	–	2.992	10 800
		8.000	12	**R331.52-203R38MMR**	2.067	1.500	B	11	–	.633		1.047	2.480	–	3.779	9 600
		8.000	12	**R331.52-203R38MML**	2.067	1.500	B	11	–	.633		1.047	1.409	–	3.779	9 600
		10.00	16	**R331.52-254R63MMR**	2.283	2.500	C	11	–	1.012		1.047	2.480	–	5.354	8 500
		10.00	16	**R331.52-254R63MML**	2.283	2.500	C	11	–	1.012		1.047	1.409	–	5.354	8 500
		12.00	20	**R331.52-305R63NMR**	3.283	2.500	C	11	–	1.012		1.189	2.480	–	5.354	7 600
		12.00	20	**R331.52-305R63NML**	3.283	2.500	C	11	–	1.012		1.189	1.268	–	5.354	7 600

[1] Inserts are ordered separately.

Ordering example: 2 pieces R331.52-101T32KM

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

*) Number of keyways, see page D157.

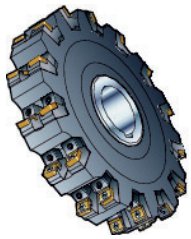
D160 D165 G6 D2 J3

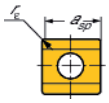
Double half side and facemill

Diameter 200 - 315 mm

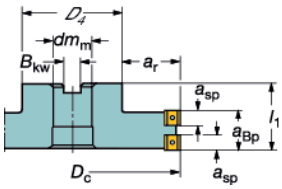
Positive rake

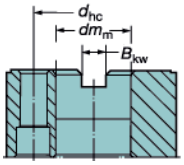
Cassettes, see page D165.



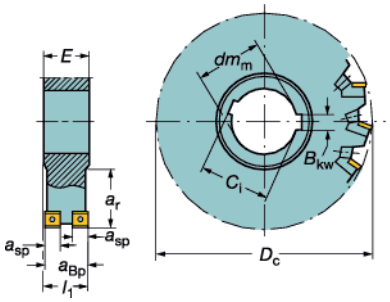


Arbor





Bore with keyway



Effective number of teeth: $z_c = z_n$

Width 27.2 - 33.8 mm

ISO C

l_1 = programming length

Metric version

Slot width a_{Bp} mm	Mounting	D_c mm	z_n		a_{Bp}	Insert size[1]	Dimensions kg	a_r	dm_m	ISO	E	B_{KW}	l_1 min.– max.	a_{sp}	D_4	d_{ch}	n_{max}[2]
27.2–30.2	**Bore with keyway**	200	24	N331.52-200S50MM*xx.xx*		11	9.5	64.5	50		31.2	12	29.2–30.7	10.6	–	–	9600
		250	32	N331.52-250S50MM*xx.xx*		11	17.3	89.5	50		31.2	12	29.2–30.7	10.6	–	–	8500
	Arbor	200	24	R331.52-200Q40MM*xx.xx*		11	8.0	51.0	40	C	–	16.4	63.0–64.5	10.6	96.0	66.7	9600
		250	32	R331.52-250Q60MM*xx.xx*		11	12.7	56.0	60	C	–	25.7	63.0–64.5	10.6	136.0	101.6	8500
30.8–33.8	**Bore with keyway**	315	32	N331.52-315S60NM*xx.xx*		11	18.5	114.5	60		34.8	14	32.8–34.3	10.6	–		7600
	Arbor	315	24	R331.52-315Q60NM*xx.xx*		11	20.3	88.5	60	C	–	25.7	63.0–64.5	10.6	136.0	101.6	8500

1) Inserts are ordered separately.

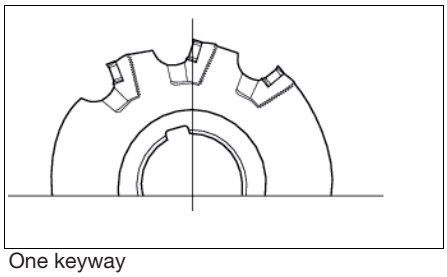
2) n_{max} (max. rev/min) for holders must also be considered.

Ordering example for a cutter pre-set to 27.32 mm:
2 pieces N331.52-200S50MM*27.32*

Tools are delivered preset to minimum width.

Ordering example: 2 pieces N331.52-200S50MM

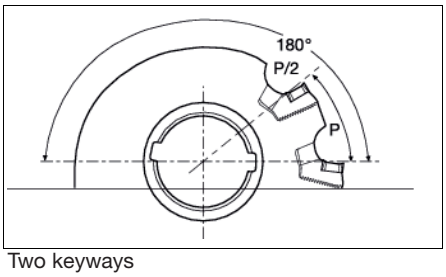
xx.xx in the ordering code indicates the width a_{Bp} in inch to three decimal places.



One keyway

Position of the keyways for standard, Tailor Made and special 331 S/F milling cutters.

Cutters with a diameter smaller than 124 mm and insert size 04, 05 or 08 and cutters with a diameter smaller than 140 mm and insert size 11 or 14, have one keyway.



Two keyways

Cutters with a diameter larger than 124 mm and insert size 04, 05 or 08, and cutters with a diameter larger than 140 mm and insert size 11 or 14, have two keyways.

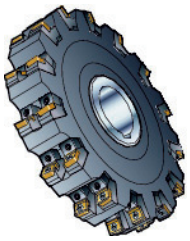
 D160  D165  G6  D2  J3

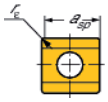
Double half side and facemill

Diameter 8.000 - 12.000 inch

Positive rake

Cassettes, see page D165.



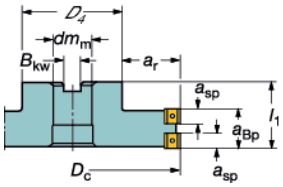


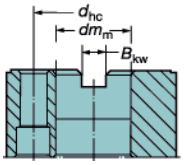
N331.1A

R/L331.1A

Width 1.071 - 1.331 inch

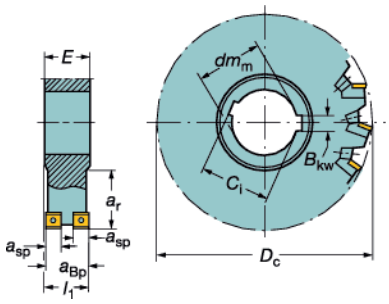
Arbor





ISO C

Bore with keyway



Effective number of teeth: $z_c = z_n$

l_1 = programming length

Inch version

Slot width a_{Bp} inch	Mounting	D_c inch	Zn		a_{Bp}	a_r	dm_m	ISO	Insert size[1]	Dimensions E	B_{KW}	C_i	l_1 min.– max.	a_{sp}	n_{max}[2]
1.071-1.189	**Bore with keyway**	8.000	24	N331.52-203T51MM*x.xxx*	2.618	2.000			11	1.228	.500	2.106	1.150-1.209	.417	9 600
		10.000	32	N331.52-254T51MM*x.xxx*	3.622	2.000			11	1.228	.500	2.106	1.150-1.209	.417	8500
	Arbor	8.000	24	R331.52-203R38MM*x.xxx*	2.067	1.500		C	11	–	.646	–	2.480-2.539	.417	9 600
		10.000	32	R331.52-254R63MM*x.xxx*	2.283	2.500		C	11	–	1.012	–	2.480-2.539	.417	8500
1.213-1.331	**Bore with keyway**	12.000	40	N331.52-305T63NM*x.xxx*	4.311	2.500			11	1.370	.625	2.528	1.291-1.350	.417	7 600
	Arbor	12.000	40	R331.52-305R63NM*x.xxx*	3.283	2.500		C	11	–	1.012	–	2.480-2.539	.417	8 500

1) Inserts are ordered separately.

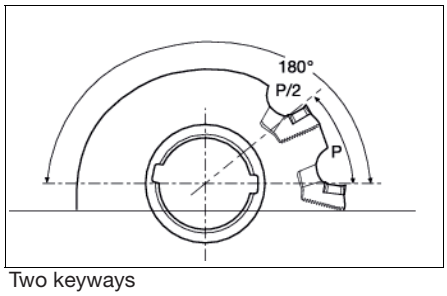
2) n_{max} (max. rev/min) for holders must also be considered.

Ordering example for a cutter pre-set to 1.189 inch: 2 pieces N331.52-203T51MM*1.189*

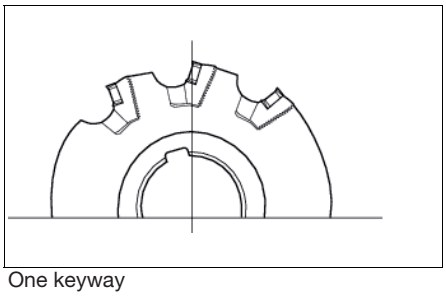
Tools are delivered preset to minimum width.

Ordering example: 2 pieces N331.52-203T51MM

x.xxx in the ordering code indicates the width a_{Bp} in inch to three decimal places.



Two keyways



One keyway

Position of the keyways for standard, Tailor Made and special 331 S/F milling cutters.

The following cutters have two keyways:
- Cutters with diameter 5 inch or larger and insert size 04, 05 or 08.
- Cutters with diameter 6 inch or larger and insert size 11 or 14.
- All others have one keyway.

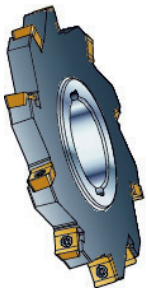
The distance between the keyway is 180° minus half a pitch.

D160 D165 G6 D2 J3

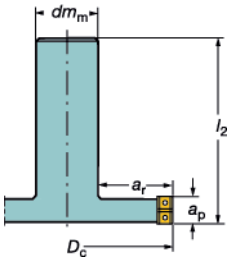
Full side and facemill with fixed pockets

Diameter 40 - 125 mm

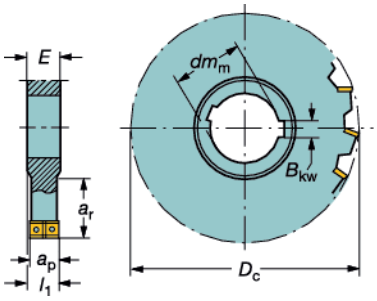
Positive rake



Cylindrical

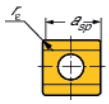


Bore with keyway



Effective number of teeth:

$Z_c = \frac{Z_n}{2}$



Width 6 - 10 mm

l_1 = programming length

Metric version

Slot width a_p mm	D_c mm	z_n	Ordering code	Insert size[1]	Dimensions KG	a_r	dm_m	E	B_{KW}	l_1	l_2	n_{max}[2]
			Cylindrical									
6	40	4	**R331.35-040A16CM060**	04	0.5	11	16	–	–	–	120	29 000
8	40	4	**R331.35-040A16DM080**	05	0.5	11	16	–	–	–	120	22 300
10	40	4	**R331.35-040A16EM100**	08	0.5	11	16	–	–	–	120	27 000
6	50	6	**R331.35-050A20CM060**	04	0.7	14	20	–	–	–	130	25 000
8	50	6	**R331.35-050A20DM080**	05	0.7	14	20	–	–	–	130	19 500
10	50	6	**R331.35-050A20EM100**	08	0.7	14	20	–	–	–	130	23 500
6	63	6	**R331.35-063A25CM060**	04	1.1	18	25	–	–	–	140	22 000
8	63	6	**R331.35-063A25DM080**	05	1.1	18	25	–	–	–	140	17 000
10	63	6	**R331.35-063A25EM100**	08	1.1	18	25	–	–	–	140	21 000
6	80	8	**R331.35-080A32CM060**	04	1.5	23	32	–	–	–	150	19 000
8	80	8	**R331.35-080A32DM080**	05	1.5	23	32	–	–	–	150	15 000
10	80	8	**R331.35-080A32EM100**	08	1.5	23	32	–	–	–	150	18 000
			Bore with keyway									
6	100	10	**N331.35-100S32CM060**	04	0.7	25.5	32	8	8	6	–	17 000
8	100	10	**N331.35-100S32DM080**	05	0.9	25.5	32	10	8	8	–	13 000
8	125	12	**N331.35-125S40DM080**	05	1.0	34	40	10	10	8	–	15 000
10	125	12	**N331.35-125S40EM100**	08	1.0	34	40	12	10	10	–	11 500

[1] Inserts are ordered separately.

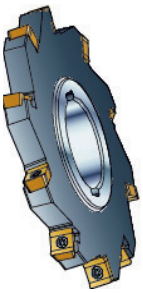
Ordering example: 2 pieces R331.35-040A16CM060

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

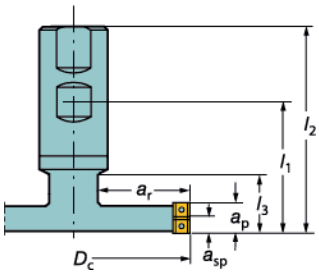
 D160  D165  G6  D2  J3

Full side and facemill with fixed pockets

Diameter 1.500 - 3.000 inch
Positive rake



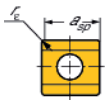
Weldon



Width .250 - .500 inch
Width 6 - 10 mm

Effective number of teeth:

$$Z_c = \frac{Z_n}{2}$$



l_1 = programming length

Inch version

Slot width				Insert size[1]	Dimensions								
a_p	D_c	Zn	Ordering code		KG	a_r	dm_m	E	B_{KW}	l_1	l_2	l_3	n_{max}[2]
			Weldon										
.250	1.500	4	R331.35-038M25CMA04	04	0.6	.409	1.000	–	–	3.000	4.142	1.500	30 000
	2.000	6	R331.35-051M25CMA04	04	0.7	.583	1.000	–	–	3.000	4.142	1.500	25 000
	2.500	6	R331.35-063M32CMA04	04	1.1	.732	1.250	–	–	3.000	4.142	1.500	22 000
	3.000	8	R331.35-076M32CMA04	04	1.3	.850	1.250	–	–	3.000	4.142	–	19 500
.312	1.500	4	R331.35-038M25DMA05	04	0.6	.409	1.000	–	–	3.000	4.142	1.500	30 000
	2.000	6	R331.35-051M25DMA05	04	0.7	.583	1.000	–	–	3.000	4.142	1.500	25.000
	2.500	6	R331.35-063M32DMA05	04	1.1	.732	1.250	–	–	3.000	4.142	1.500	22 000
	3.000	8	R331.35-076M32DMA05	04	1.3	.850	1.250	–	–	3.000	4.142	–	19 500
.375	1.500	4	R331.35-038M25EMA06	05	0.6	.409	1.000	–	–	3.000	4.142	1.500	23 500
	2.000	6	R331.35-051M25EMA06	05	0.7	.583	1.000	–	–	3.000	4.142	1.500	19 500
	2.500	6	R331.35-063M32EMA06	05	1.1	.732	1.250	–	–	3.000	4.142	1.500	17 000
	3.000	8	R331.35-076M32EMA06	05	1.3	.850	1.250	–	–	3.000	4.142	–	15 000
.500	1.500	4	R331.35-038M25EMA08	08	0.6	.409	1.000	–	–	3.000	4.142	1.500	28 000
	2.000	6	R331.35-051M25EMA08	08	0.7	.583	1.000	–	–	3.000	4.142	1.500	23 500
	2.500	6	R331.35-063M32EMA08	08	1.2	.732	1.250	–	–	3.000	4.142	1.500	20 500
	3.000	8	R331.35-076M32EMA08	08	1.4	.850	1.250	–	–	3.000	4.142	–	18 500

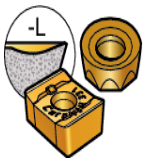
[1] Inserts are ordered separately.
[2] n_{max} (max. rev/min) for holders must also be considered.

Ordering example: 2 pieces R331.35-038M25CMA04

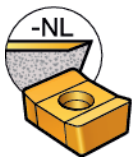
D160 D165 G6 D2 J3

Inserts for CoroMill® 331

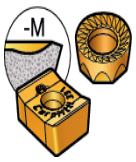
Neutral design



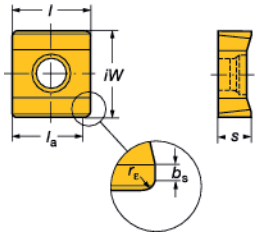
Light -PL
-ML
-KL
-WL



Light -NL



Medium



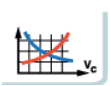
Neutral design
Dimensions, mm (inch)

Size	l_a	l	iW	s
04	4.6 (.181)	5.1 (.201)	9.5 (.374)	3.5 (.138)
05	5.7 (.224)	6.5 (.256)	9.5 (.374)	4.45 (.175)
08	7.7 (.303)	8.5 (.335)	9.5 (.374)	4.95 (.195)
11	10.7 (.421)	11.5 (.453)	11.5 (.453)	4.95 (.195)
14	13.7 (.539)	14.5 (.571)	11.5 (.453)	4.95 (.195)

			P				M				K				N			S						H			Dimensions, millimeter, inch (mm, in.)			
			GC	GC	GC	CT	GC	GC	GC	CT	GC	GC	GC	-	GC	-	-	GC	GC	GC	-	GC	GC	GC	GC	CT				
			1025	4230	4240	530	1040	2030	2040	530	1020	3040	3220	H13A	1025	H10	H13A	1025	2030	2040	H13A	S30T	S40T	1025	3040	530				
	↕ □	Ordering code																									b_s mm	b_s in.	r_ε mm	r_ε in.
Light	04	N331.1A-04 35 05E-KL									☆	☆	☆												☆		0.4	.016	0.5	.020
		N331.1A-04 35 05H-ML					☆	★	☆										☆	☆							0.4	.016	0.5	.020
		N331.1A-04 35 05H-NL	☆												☆	★		☆						☆			0.2	.008	0.5	.020
		N331.1A-04 35 05H-PL		☆	☆																	★					0.4	.016	0.5	.020
		N331.1A-04 35 05H-WL																									0.4	.016	0.5	.020
	05	N331.1A-05 45 08E-KL									☆	☆	☆												☆		1.2	.047	0.8	.032
		N331.1A-05 45 08H-ML					☆	★	☆										☆	☆							1.2	.047	0.8	.032
		N331.1A-05 45 08H-NL	☆												☆	★		☆						☆			0.8	.032	0.8	.032
		N331.1A-05 45 08H-PL		☆	☆																	★					1.2	.047	0.8	.032
		N331.1A-05 45 08H-WL																									1.2	.047	0.8	.032
	08	N331.1A-08 45 08E-KL									☆	☆	☆												☆		1.2	.047	0.8	.032
		N331.1A-08 45 08H-ML					☆	★	☆										☆	☆							1.2	.047	0.8	.032
		N331.1A-08 45 08H-NL	☆												☆	★		☆						☆			0.9	.035	0.8	.032
		N331.1A-08 45 08H-PL		☆	☆																	★					1.2	.047	0.8	.032
		N331.1A-08 45 08H-WL																									1.2	.047	0.8	.032
	11	N331.1A-11 50 08E-KL									☆	☆	☆												☆		1.2	.047	0.8	.032
		N331.1A-11 50 08H-ML					☆	★	☆										☆	☆							1.2	.047	0.8	.032
		N331.1A-11 50 08H-NL	★												☆	★		★						☆			1.3	.051	0.8	.032
		N331.1A-11 50 08H-PL		☆	☆																	★					1.2	.047	0.8	.032
		N331.1A-11 50 08H-WL																									1.2	.047	0.8	.032
	14	N331.1A-14 50 08E-KL									☆	☆	☆												☆		1.2	.047	0.8	.032
		N331.1A-14 50 08H-ML					☆	★	☆										☆	☆							1.2	.047	0.8	.032
		N331.1A-14 50 08H-NL	☆												☆	★		☆						☆			1.1	.043	0.8	.032
		N331.1A-14 50 08H-PL		☆	☆																	★					1.2	.047	0.8	.032
		N331.1A-14 50 08H-WL																									1.2	.047	0.8	.032
Medium	04	N331.1A-04 35 05H-MM					☆	☆	☆										☆	☆			★				0.4	.016	0.5	.020
		N331.1A-04 35 05M-KM									★	☆	☆												☆		0.4	.016	0.5	.020
		N331.1A-04 35 05M-PM		★	☆																						0.4	.016	0.5	.020
	05	N331.1A-05 45 08E-KM									★	☆	☆												☆		1.2	.047	0.8	.032
		N331.1A-05 45 08H-MM					☆	☆	☆										☆	☆			★				1.2	.047	0.8	.032
		N331.1A-05 45 08H-PM		☆																							1.2	.047	0.8	.032
		N331.1A-05 45 08M-KM									☆	☆	☆												☆		1.2	.047	0.8	.032
		N331.1A-05 45 08M-PM		★	☆																						1.2	.047	0.8	.032
	08	N331.1A-08 45 08E-KM									★	☆	☆												☆		1.2	.047	0.8	.032
		N331.1A-08 45 08H-MM					☆	☆	☆										☆	☆			★				1.2	.047	0.8	.032
		N331.1A-08 45 08H-PM		★																							1.2	.047	0.8	.032
		N331.1A-08 45 08H-WM				☆				☆				☆			☆				☆					☆	1.2	.047	0.8	.032
		N331.1A-08 45 08M-KM									★	☆	☆												☆		1.2	.047	0.8	.032
		N331.1A-08 45 08M-PM		★	☆																						1.2	.047	0.8	.032
	11	N331.1A-11 50 08E-KM									★	☆	☆												☆		1.2	.047	0.8	.032
		N331.1A-11 50 08H-MM					☆	☆	☆										☆	☆			★				1.2	.047	0.8	.032
		N331.1A-11 50 08H-PM		★																							1.2	.047	0.8	.032
		N331.1A-11 50 08H-WM				☆				☆				☆			☆				☆					☆	1.2	.047	0.8	.032
		N331.1A-11 50 08M-KM									☆	☆	☆												☆		1.2	.047	0.8	.032
		N331.1A-11 50 08M-PM		★	☆																						1.2	.047	0.8	.032
	14	N331.1A-14 50 08E-KM									☆	☆	☆												☆		1.2	.047	0.8	.032
		N331.1A-14 50 08H-MM					☆	☆	☆										☆	☆			★				1.2	.047	0.8	.032
		N331.1A-14 50 08H-PM		☆																							1.2	.047	0.8	.032
		N331.1A-14 50 08H-WM												☆			☆				☆					☆	1.2	.047	0.8	.032
		N331.1A-14 50 08M-KM									☆	☆	☆												☆		1.2	.047	0.8	.032
		N331.1A-14 50 08M-PM		★	☆																						1.2	.047	0.8	.032
			P10	P25	P40	P20	M35	M25	M30	M20	K20	K30	K20	K25	N15	N10	N15	S15	S25	S30	S20	S25	S35	H15	H25	H15				

N331.1A-04 35 05M-PM
|
M = Highest edge security
E = Highest edge sharpness and precision
H = Highest edge sharpness and higher precision

★= First choice



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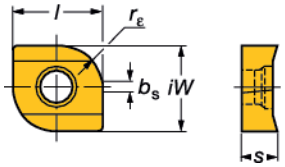
SANDVIK Coromant

Inserts for CoroMill® 331

Radius insert



Right and left hand design
Dimensions, mm (inch)

Size	*l*	*iW*	*s*
04	5.1 (.201)	9.5 (.374)	3.5 (.138)
05	6.5 (.256)	9.5 (.374)	4.45 (.175)
08	8.5 (.335)	9.5 (.374)	4.95 (.195)
11	11.5 (.453)	11.5 (.453)	4.95 (.195)
14	14.5 (.571)	11.5 (.453)	4.95 (.195)

Radius – WL

			P			M		N			S			H		Dimensions, millimeter, inch (mm, in.)			
			GC	GC	GC	GC	GC	GC	GC	-	GC	GC	-	GC	GC				
	□	Ordering code	1025	1030	4240	1030	1040	1025	1030	H10F	1025	1030	H10F	1025	1030	b_s	b_s in.	r_ε mm	r_ε in.
Light	04	R/L331.1A-04 35 15H-WL	☆	☆			☆	☆	☆		☆	☆		☆	☆	0.4	.016	1.52	.060
		R/L331.1A-04 35 23H-WL	☆	☆			☆	☆	☆		☆	☆		☆	☆	0.4	.016	2.29	.090
	05	R/L331.1A-05 45 15H-WL	☆	☆			☆	☆	☆		☆	☆		☆	☆	1.2	.047	1.52	.060
		R/L331.1A-05 45 23H-WL	☆	☆			☆	☆	☆	☆	☆	☆	☆	☆	☆	1.2	.047	2.29	.090
		R/L331.1A-05 45 30H-WL	☆	☆			☆	☆	☆		☆	☆		☆	☆	1.3	.051	3.05	.120
	08	R/L331.1A-08 45 30H-WL	☆	☆			☆	☆	☆	☆	☆	☆	☆	☆	☆	1.3	.051	3.05	.120
		R/L331.1A-08 45 15H-WL	☆	☆			☆	☆	☆		☆	☆		☆	☆	1.2	.047	1.52	.060
		R/L331.1A-08 45 23H-WL	☆	☆			☆	☆	☆	☆	☆	☆	☆	☆	☆	1.2	.047	2.29	.090
	11	R/L331.1A-11 50 15H-WL	☆	☆			☆	☆	☆		☆	☆		☆	☆	1.2	.047	1.52	.060
		R/L331.1A-11 50 23H-WL	☆	☆			☆	☆	☆	☆	☆	☆	☆	☆	☆	1.2	.047	2.29	.090
		R/L331.1A-11 50 30H-WL	☆	☆			☆	☆	☆		☆	☆		☆	☆	1.3	.051	3.05	.120
		R/L331.1A-11 50 48H-WL	☆	☆			☆	☆	☆		☆	☆		☆	☆	1.5	.059	4.83	.190
		R/L331.1A-11 50 63H-WL	☆	☆			☆	☆	☆		☆	☆		☆	☆	1.6	.063	6.35	.250
	14	R/L331.1A-14 50 48H-WL	☆	☆	☆		☆	☆	☆	☆	☆	☆	☆	☆	☆	1.5	.059	4.83	.190
		R/L331.1A-14 50 15H-WL	☆	★		☆	☆	☆	☆		☆	☆		☆	☆	1.2	.047	1.52	.060
		R/L331.1A-14 50 23H-WL	☆	☆			☆	☆	☆		☆	☆		☆	☆	1.2	.047	2.29	.090
		R/L331.1A-14 50 30H-WL	☆	☆	☆		☆	☆	☆	☆	☆	☆	☆	☆	☆	1.3	.051	3.05	.120
		R/L331.1A-14 50 63H-WL	☆	☆	☆		☆	☆	☆		☆	☆		☆	☆	1.6	.063	6.35	.250
			P10	P30	P40	M15	M35	N15	N15	N20	S15	S15	S30	H15	H10				

N331.1A-04 35 05M-PM
|
M = Highest edge security
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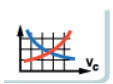
H = Highest edge sharpness and higher precision

★= First choice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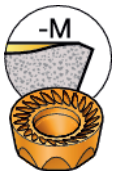
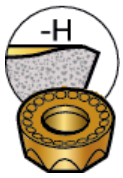
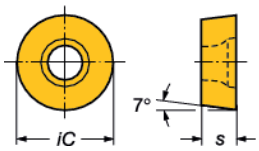
Inserts for CoroMill® 331

Round insert







Round Inserts
Dimensions, mm (inch)

Size	iC	s
09	(.375)	3.95 (.156)
10	(.394)	3.95 (.156)
12	(.472)	4.76 (.187)
13	(.500)	4.77 (.188)
16	(.629)	6.35 (.250)

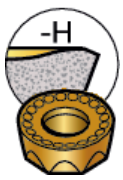
Metric version

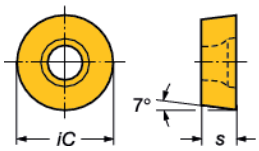
	iC	Ordering code	P						M							K					N				S								H					
			GC	GC	GC	GC	GC	CT	GC	GC	GC	GC	GC	GC	CT	GC	GC	GC	GC	-	GC	GC	-	-	GC	GC	GC	GC	GC	-	-	GC	GC	GC	GC	GC	GC	GC	CT
			1025	1030	4220	4230	4240	530	1025	1030	1040	2030	2040	235	530	1020	3040	3220	4220	H13A	1025	1030	H10F	H13A	1010	1025	1030	2030	2040	H10F	H13A	S30T	S40T	1010	1025	1030	3040	4220	530
Light	10	RCHT 10 T3 M0-KL																		☆				☆							☆								
		RCHT 10 T3 M0-ML									☆	★	☆															☆	☆										
		RCHT 10 T3 M0-PL	☆	★				☆	☆	☆					☆						☆	☆			☆	☆	☆							★	☆	☆			☆
	12	RCHT 12 04 M0-KL																		☆				☆							☆								
		RCHT 12 04 M0-ML									☆	★	☆															☆	☆										
		RCHT 12 04 M0-PL	☆	★				☆	☆	☆					☆						☆	☆			☆	☆	☆							★	☆	☆			☆
	16	RCHT 16 06 M0-KL																		☆				☆							☆								
		RCHT 16 06 M0-ML									☆	★	☆															☆	☆										
		RCHT 16 06 M0-PL	☆	★					☆	☆											☆	☆				☆	☆								☆	☆			
Medium	10	RCKT 10 T3 M0-KM															☆	☆																		☆			
		RCKT 10 T3 M0-MM									☆	★	☆															☆	☆										
		RCKT 10 T3 M0-PM		☆	☆	★	☆			☆									☆			☆					☆					★	★			☆		☆	
		RCKT 10 T3 M0-WM						☆						☆	☆								☆							☆									☆
	12	RCKT 12 04 M0-KM														★	☆	☆																		☆			
		RCKT 12 04 M0-MM									☆	★	☆															☆	☆										
		RCKT 12 04 M0-PM		☆	☆	★	☆			☆									☆			☆					☆					★	★			☆		☆	
		RCKT 12 04 M0-WM						☆						☆	☆								☆							☆									☆
	16	RCKT 16 06 M0-KM															☆	☆																		☆			
		RCKT 16 06 M0-MM									☆	★	☆															☆	☆										
		RCKT 16 06 M0-PM		☆	☆	★	☆			☆									☆			☆					☆					★	★			☆		☆	
		RCKT 16 06 M0-WM												☆									☆							☆									
Heavy	10	RCKT 10 T3 M0-KH															☆	☆																		☆			
		RCKT 10 T3 M0-PH		☆	☆	☆	★			☆									☆								☆									☆		☆	
	12	RCKT 12 04 M0-KH															☆	☆																		☆			
		RCKT 12 04 M0-PH		☆	☆	☆	★			☆									☆								☆									☆		☆	
	16	RCKT 16 06 M0-KH															☆	☆																		☆			
		RCKT 16 06 M0-PH		☆	☆	☆	★			☆									☆								☆									☆		☆	
			P30	P30	P20	P20	P40	P15	M15	M15	M35	M25	M40	M35	M10	K20	K30	K15	K25	K20	N15	N15	N15	N15	S10	S15	S15	S20	S30	S25	S20	S25	S35	H10	H15	H10	H25	H25	H25

D312 D305

Inserts for CoroMill® 331

Round insert





Round Inserts
Dimensions, mm (inch)

Size	iC	s
09	(.375)	3.95 (.156)
10	(.394)	3.95 (.156)
12	(.472)	4.76 (.187)
13	(.500)	4.77 (.188)
16	(.629)	6.35 (.250)

Inch version

	iC	Ordering code	P						M					K				N				S								H				
			GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	-	GC	GC	-	-	GC	GC	GC	GC	GC	-	-	GC	GC	GC	GC	GC	GC
			1025	1030	235	4220	4230	4240	1030	1040	2030	2040	235	3040	3220	4220	H13A	1025	1030	H10F	H13A	1010	1025	1030	2030	2040	H10F	H13A	S30T	S40T	1010	1025	1030	3040	4220
Light	09	RCHT 09 T3 00-KL															☆				☆							☆							
		RCHT 09 T3 00-ML								☆		☆													☆										
		RCHT 09 T3 00-PL	☆	★					☆									☆	☆			☆	☆	☆							★	☆	☆		
	13	RCHT 13 04 00-KL															☆				☆							☆							
		RCHT 13 04 00-ML								☆	☆	☆													☆	☆									
		RCHT 13 04 00-PL	☆	★					☆									☆	☆			☆	☆	☆							★	☆	☆		
Medium	09	RCKT 09 T3 00-MM								☆	☆	☆													☆	☆									
		RCKT 09 T3 00-PM		☆		☆	☆	☆	☆							☆			☆					☆									☆		☆
		RCKT 09 T3 00-WM																		☆								☆							
	13	RCKT 13 04 00-KM												☆	☆																			☆	
		RCKT 13 04 00-MM								☆	☆	☆													☆	☆									
		RCKT 13 04 00-PM		☆		☆	★	☆	☆							☆			☆					☆					★	★			☆		☆
		RCKT 13 04 00-WM			☆								☆							☆								☆							
Heavy	09	RCKT 09 T3 00-KH												☆																			☆	
		RCKT 09 T3 00-PH		☆		☆	☆	☆	☆							☆								☆									☆		☆
	13	RCKT 13 04 00-KH												☆	☆																			☆	
		RCKT 13 04 00-PH		☆		☆	☆	★	☆							☆								☆									☆		☆
			P30	P30	P40	P20	P20	P40	M15	M35	M25	M40	M35	K30	K15	K25	K20	N15	N15	N15	N15	S10	S15	S15	S20	S30	S25	S20	S25	S35	H10	H15	H10	H25	H25

Advanced cutting materials

	iC	Ordering code	K		H	Dimensions, millimeter, inch (mm, in.)			
			CC	CB	CB				
			6190	CB50	CB50	iC mm	iC in.	s mm	s in.
Light	12	RCHT 12 04 M0		☆	☆	12	.472	4.76	.188
Medium	12	RCKT 12 04 MO	☆			12	.472	4.76	.188
	16	RCKT 16 06 MO	☆			16	.630	6.35	.250
			K10	K05	H05				

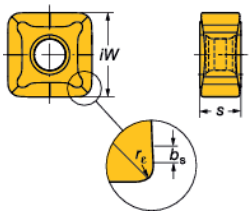
N331.1A-04 35 05M-PM
|
M = Highest edge security
E = Highest edge sharpness and precision
H = Highest edge sharpness and higher precision

Ordering example: 10 pieces N331.1A-11 50 08H-PM 4030
★= First choice

D312 D305 D334 D2 J3

Inserts for CoroMill® 331

8 cutting edges



Medium

	i	□	Ordering code	P GC 1030	P GC 4220	P GC 4230	P GC 4240	K GC 1020	K GC 1030	K GC 3040	K GC 4220	b_s	b_s in.	r_ε mm	r_ε in.
Medium	13		N331.1D-136508E-PM	☆	☆	☆	★	★	☆	☆	☆	1.2	.047	0.8	.032
			N331.1D-136520E-PM	☆	☆	☆	★	★	☆	☆	☆	1.2	.047	2.0	.079
				P30	P15	P25	P40	K20		K30	K25				

Dimensions, millimeter, inch (mm, in.)

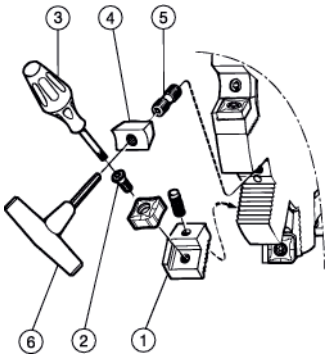
N331.1A-04 35 05M-PM

★= First choice

M = Highest edge security
E = Highest edge sharpness and precision
H = Highest edge sharpness and higher precision

Spare parts

8-edge insert type



Note that the diameter of the cutter increases by .126 inch (3.2 mm) when using the new 8 cutting edge cassettes.

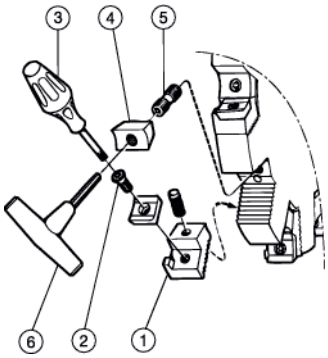
Cutter type	1 Cassette, Right	1 Cassette Left	2 Screw	3 Key (Torx Plus)	Torque wrench[1]	4 Wedge	5 Screw	6 Key (mm)
QM	5321 260-01	5321 260-02	5513 020-25	5680 046-02 (15IP)	5680 100-06	5431 105-05	339-831	265.2-817 (3.0)
RM	5321 260-01	5321 260-02	5513 020-25	5680 046-02 (15IP)	5680 100-06	5431 105-05	339-831	265.2-817 (3.0)

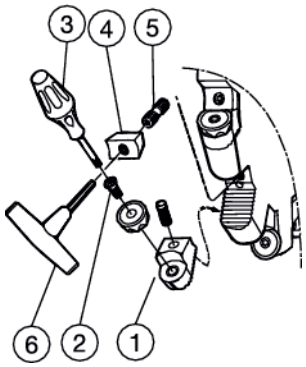
1) Optional part to be ordered separately

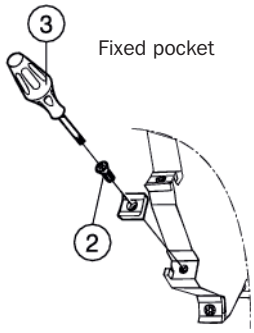
Note!
Cutter bodies can be ordered separately. For further information contact your Sandvik Coromant sales representative.

D312 D305

Spare parts for CoroMill® 331







R331.32, R331.35, N331.32, Full side and facemill

Cutter type	1	2	3		4	5	6
	Cassette, Right	Left	Insert screw	Key (Torx Plus)	Torque wrench[4]	Wedge	Screw	Key (mm)
CM/CMX	5321 240-15	5321 240-16	5513 020-19	5680 046-03 (7IP)	5680 100-02	5431 105-07	5516 014-06	5680 048-02 (10IP)
DM/DMX	5321 240-13	5321 240-14	5513 020-34	5680 046-01 (8IP)	5680 100-03	5431 105-06	5516 014-04[1]	5680 048-01 (15IP)
EM/EMX	5321 240-01	5321 240-02	5513 020-24	5680 046-04 (9IP)	5680 100-04	5431 105-01	339-831[2]	265.2-817 (3.0)
FM/FMX	5321 240-03	5321 240-04	5513 020-24	5680 046-04 (9IP)	5680 100-04	5431 105-02	339-831[2]	265.2-817 (3.0)
KM/KMX	5321 240-07	5321 240-08	5513 020-29	5680 046-02 (15IP)	5680 100-06	5431 105-04	339-831[3]	265.2-817 (3.0)
LM/LMX	5321 240-07	5321 240-08	5513 020-29	5680 046-02 (15IP)	5680 100-06	5431 105-04	339-831	265.2-817 (3.0)
QM/QMX	5321 240-09	5321 240-10	5513 020-29	5680 046-02 (15IP)	5680 100-06	5431 105-05	339-831	265.2-817 (3.0)
RM/RMX	5321 240-09	5321 240-10	5513 020-29	5680 046-02 (15IP)	5680 100-06	5431 105-05	339-831	265.2-817 (3.0)

1) For cutters N331.32-080S27DM/DMX and R331.32-080Q27DM/DMX, use screw 5516 014-05.

Ordering example: 10 pieces 5321 240-15

2) For cutters N331.32-080S27EM/EMX/FM/FMX and R331.32-080Q27EM/EMX/FM/FMX, use screw 269-832.

3) For cutter N331.32-100S32KM/KMX, use screw 5516 010-02.

R/L331.52, Half side and facemill and R/N331.52, Double half side and facemill

Cutter type	1	2	3		4	5	6	7
	Cassette, Right	Left	Insert screw	Key (Torx Plus)	Torque wrench[4]	Wedge	Screw	Key (mm)	Cover[3]
EM, EMR/L	5321 240-01	5321 240-02	5513 020-24	5680 046-04 (9IP)	5680 100-04	5431 105-01	339-831[1]	265.2-817 (3.0)	5321 240-11
FM, FMR/L	5321 240-03	5321 240-04	5513 020-24	5680 046-04 (9IP)	5680 100-04	5431 105-02	339-831[1]	265.2-817 (3.0)	5321 240-11
KM, KMR/L	5321 240-07	5321 240-08	5513 020-29	5680 046-02	5680 100-06	5431 105-04	339-831[2]	265.2-817 (3.0)	5321 240-12
MM, MMR/L	5321 240-05	5321 240-06	5513 020-29	5680 046-02	5680 100-06	5431 105-03	339-831	265.2-817 (3.0)	5321 240-12
NM, NMR/L	5321 240-07	5321 240-08	5513 020-29	5680 046-02	5680 100-06	5431 105-04	339-831	265.2-817 (3.0)	5321 240-12

1) For cutters R/L331.52-080S27EM/FM and R/L331.52-080Q27EM/FM, use screw 269-832.

Ordering example: 10 pieces 5321 240-01

2) For cutter R/L331.52-100S32KM, use screw 5516 010-02.

3) Only for half side and facemill cutter

N331.32, R331.32, Full side and facemill for round inserts

Cutter type		1	2	3		4	5	6
	Insert size	Cassette, Neutral	Insert screw	Key (Torx Plus)	Torque wrench[4]	Wedge	Screw	Key (mm)
EMQ	10	5321 250-02	5513 020-09	5680 046-02 (15IP)	5680 100-06	5431 105-01	339-831[1]	265.2-817 (3.0)
FMQ	12	5321 250-03	5513 020-09	5680 046-02 (15IP)	5680 100-06	5431 105-02	339-831[1]	265.2-817 (3.0)
KMQ	16	5321 250-05	5513 020-07	5680 046-06 (20IP)	5680 100-07	5431 105-04	339-831[2]	265.2-817 (3.0)

1) For cutters N331.32-080S27EMQ/FMQ and R331.32-080Q27EMQ/FMQ, use screw 269-832.

Ordering example: 10 pieces 5321 240-02

2) For cutter N331.32-100S32KMQ, use screw 5516 010-02.

R331.35, N331.35 Fixed pocket

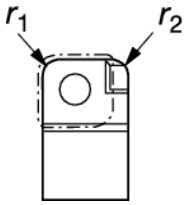
Insert size	2	3	
	Insert screw	Key (Torx Plus)	Torque wrench[4]
04	5513 020-19	5680 046-03 (7IP)	5680 100-02
05	5513 020-34	5680 046-01 (8IP)	5680 100-03
08	5513 020-24	5680 046-04 (9IP)	5680 100-04

4) To be ordered separately.

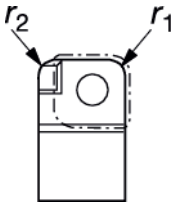
Spare parts for CoroMill® 331

Standard cassettes for radius inserts

Left hand cassette radius



Right hand cassette radius



Cutter body radius

Insert size				Cassette		Dimensions, mm/inch						Modified cutter body radius		
		For insert radius				For insert chamfer		Cassette radius						
□	Cutter type	Metric	Inch	Right	Left	Metric	Inch	r_1		r_2		r		Insert screw
04	CMA	1.55–2.6	.061-.098	5321 240-15.11	5321 240-16.11	0.81-1.3	.032-.052	1	.039	1	.039	–	–	5513 020-19
05	DMA	1.55–2.6	.061-.098	5321 240-13.11	5321 240-14.11	0.81-1.3	.032-.052	1	.039	1	.039	–	–	5513 020-34
	DMB	2.61–3.5	.099-.138	5321 240-13.22	5321 240-14.22	1.31-2.0	.052-.079	2	.039	2	.039	2	.079	5513 020-34
08	EMA	1.55–2.6	.061-.098	5321 240-01.11	5321 240-02.11	0.81-1.3	.032-.052	1	.039	1	.039	–	–	5513 020-24
	EMB	2.61–3.5	.099-.138	5321 240-01.22	5321 240-02.22	1.31-2.0	.052-.079	2	.079	2	.039	2	.079	5513 020-24
	–	3.51–4.0	.138-.157	5321 240-01.33	5321 240-02.33	–	–	3	.118	3	.118	3	.118	
	FMA	1.55–2.6	.061-.098	5321 240-03.11	5321 240-04.11	0.81-1.3	.032-.052	1	.039	1	.039	–	–	5513 020-24
	FMB	2.61–3.5	.099-.138	5321 240-03.22	5321 240-04.22	1.31-2.0	.052-.079	2	.079	2	.039	2	.079	5513 020-24
	–	3.51–4.0	.138-.157	5321 240-03.33	5321 240-04.33	–	–	3	.118	3	.118	3	.118	
11	KMA,LMA	1.55–2.6	.061-.098	5321 240-07.11	5321 240-08.11	1.01-1.5	.040-.059	1	.039	1	.039	–	–	5513 020-29
	KMB,LMB	2.61–3.5	.099-.138	5321 240-07.22	5321 240-08.22	1.51-2.0	.059-.079	2	.079	2	.079	2	.079	
	–	3.51–4.5	.138-.177	5321 240-07.33	5321 240-08.33	–	–	3	.118	3	.118	3	.118	
	KMD,LMD	4.51–5.5	.178-.217	5321 240-07.40	5321 240-08.40	–	–	4	.157	0	0	4	.157	5513 020-29
	–	4.51–5.5	.178-.217	5321 240-07.44	5321 240-08.44	–	–	4	.157	4	.157	4	.157	
	KME,LME	5.51–6.5	.217-.256	5321 240-07.50	5321 240-08.50	–	–	5	.197	0	0	5	.197	
	–	5.51–6.5	.217-.256	5321 240-07.55	5321 240-08.55	–	–	5	.197	5	.197	5	.197	
14	QMA, RMA	1.55–2.6	.061-.098	5321 240-09.11	5321 240-10.11	1.01-1.5	.040-.059	1	.039	1	.039	–	–	5513 020-29
	QMB,RMB	2.61–3.5	.099-.138	5321 240-09.22	5321 240-10.22	1.51-2.0	.059-.079	2	.079	2	.079	2	.079	
	–	3.51–4.5	.138-.177	5321 240-09.33	5321 240-10.33	–	–	3	.118	3	.118	3	.118	
	QMD,RMD	4.51–5.5	.178-.217	5321 240-09.40	5321 240-10.40	–	–	4	.157	0	0	4	.157	5513 020-29
	–	4.51–5.5	.178-.217	5321 240-09.44	5321 240-10.44	–	–	4	.157	4	.157	4	.157	
	QME,RME	5.51–6.5	.217-.256	5321 240-09.50	5321 240-10.50	–	–	5	.197	0	0	5	.197	
	–	5.51–6.5	.217-.256	5321 240-09.55	5321 240-10.55	–	–	5	.197	5	.197	5	.197	

Ordering example: 10 pieces 5321 240-15.11

Standard cassettes for round inserts

Neutral cassette radius

Cutter body radius

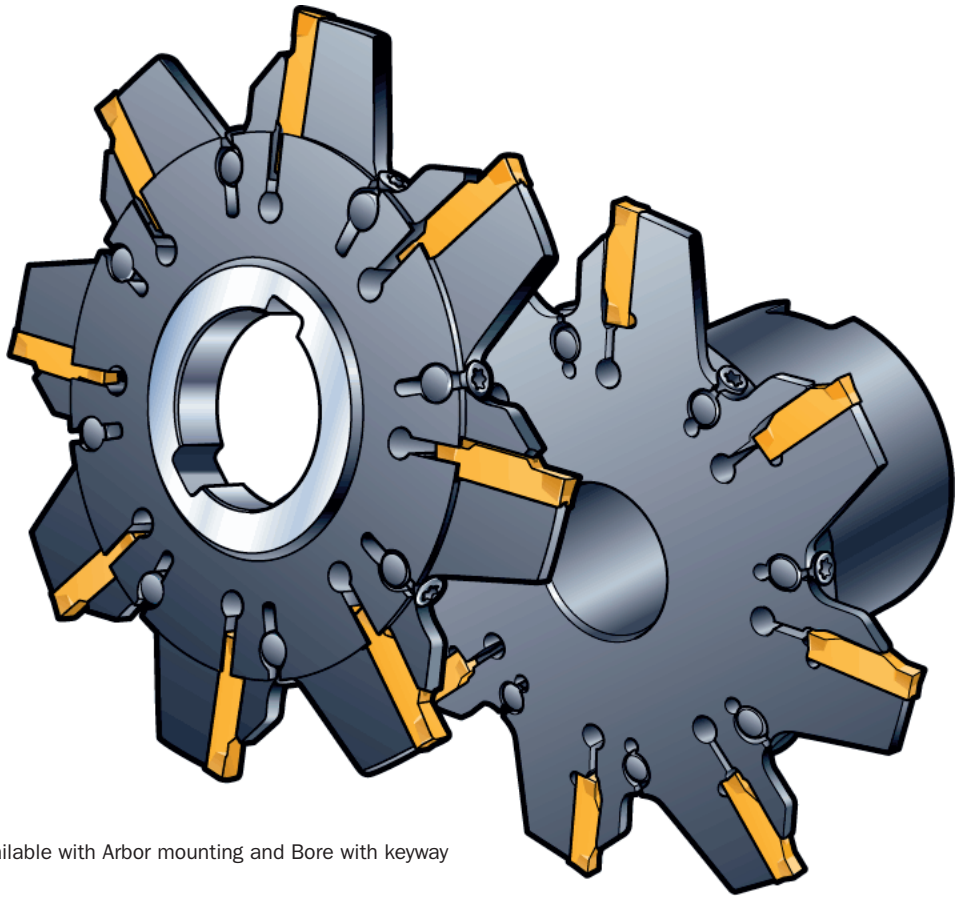
Insert size				Cassette	Dimensions, mm/inch		
					Modified cutter body radius		
○	Cutter type	For insert radius		Neutral	r		Insert screw
09	EMQ	4	.187	5321 250-01	4	.157	5513 020-30
10	EMQ	5	.197	5321 250-02	4	.157	5513 020-09
12	FMQ	6	.236	5321 250-03	5	.197	5513 020-09
13	EMQ	7	.250	5321 250-04	5	.197	5513 020-09
16	KMQ	8	.315	5321 250-05	6	.236	5513 020-07

Ordering example: 10 pieces 5321 250-02

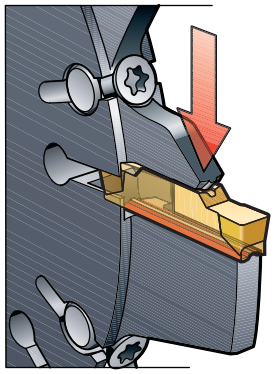
CoroMill® 329

Slot milling cutter

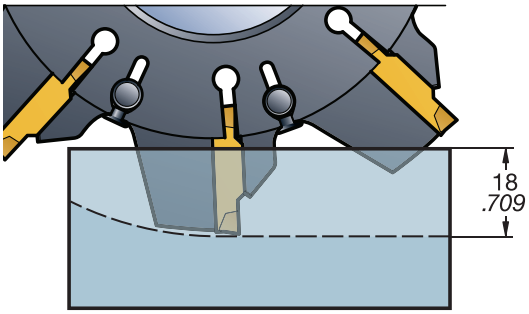
Accurate slots and high speed capability



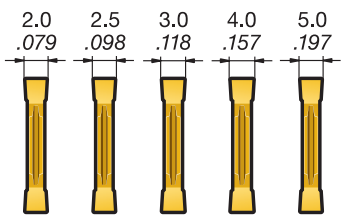
Available with Arbor mounting and Bore with keyway



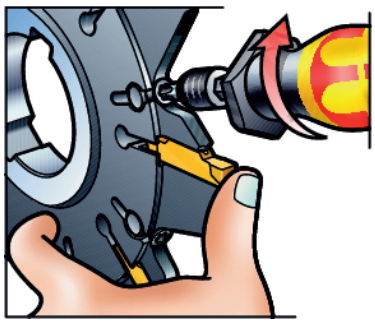
Mechanical fixturing ensures secure clamping



Maximum depth of cut (inch)



Available insert widths (inch/mm)

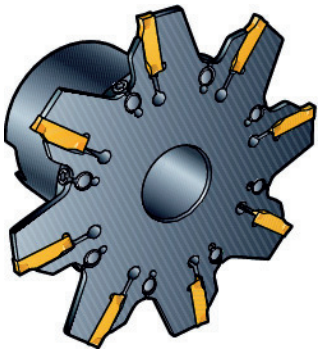


When mounting the inserts in the cutter body, press down the insert to make sure it reaches the bottom before fixing the screw.

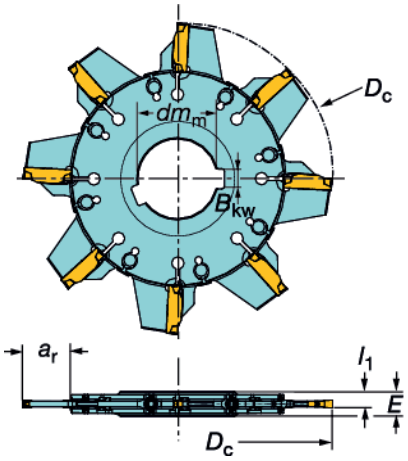
Grooving cutter

Diameter 100 - 160 mm

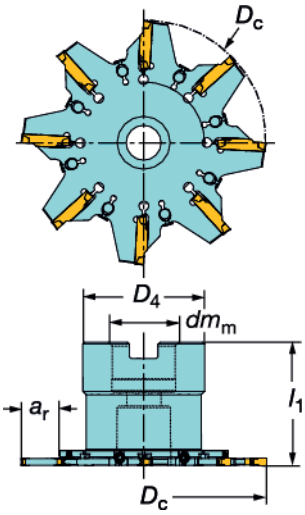
Positive geometry



Bore with keyway



Arbor



Metric version

D_c mm	Ordering code	Lbs	Seat size[1]		Dimensions a_r	dm_m	D_4	l_1	E	B_{KW}	n_{max}[2]
	Arbor										
100	329-100Q22-E	0.66	E	6	15	22	43	50		10.4	4700
	329-100Q22-F	1.10	F	6	15	22	42	50		10.4	4400
	329-100Q22-G	1.05	G	6	15	22	42	50		10.4	4300
	329-100Q22-H	1.04	H	6	15	22	42	50		10.4	3600
	329-100Q22-J	1.09	J	6	15	22	43	50		10.4	3350
125	329-125Q32-E	1.70	E	9	18	32	60	63		14.4	4100
	329-125Q32-F	1.76	F	9	18	32	60	63		14.4	3800
	329-125Q32-G	1.77	G	8	18	32	60	63		14.4	3700
	329-125Q32-H	1.78	H	8	18	32	63	63		14.4	3150
	329-125Q32-J	1.82	J	7	18	32	63	63		14.4	2900
160	329-160Q40-G	2.06	G	11	18	40	72	63		16.4	3300
	Bore with 1 keyway										
100	329-100S22-E	1.11	E	6	15	22		6	10	14.4	4700
	329-100S22-F	0.57	F	6	15	22		6.25	10	14.4	4400
	329-100S22-G	0.57	G	6	15	22		6.5	10	14.4	4300
	329-100S22-H	0.57	H	6	15	22		7	10	14.4	3600
	329-100S22-J	0.59	J	6	15	22		7.5	10	14.4	3350
	Bore with 2 keyways										
125	329-125S32-E	0.67	E	9	18	32		6	10	8	4100
	329-125S32-F	0.68	F	9	18	32		6.25	10	8	3800
	329-125S32-G	0.71	G	8	18	32		6.5	10	8	3700
	329-125S32-H	0.70	H	8	18	32		7	10	8	3150
	329-125S32-J	0.73	J	7	18	32		7.5	10	8	2900
160	329-160S40-G	0.97	G	11	18	40		6.5	10	10	3300

1) To correspond with seat size on insert.

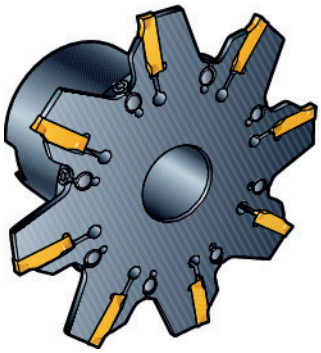
2) n_{max} (max. rev/min) for holders must also be considered.

 G6
 D170
 D169

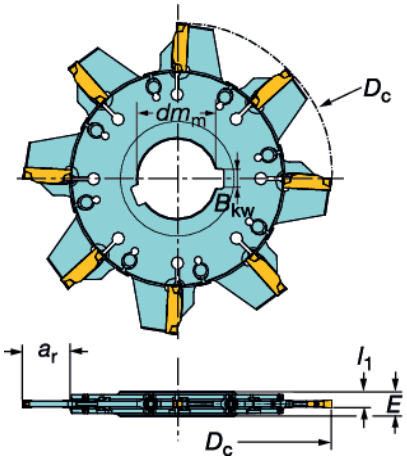
Grooving cutter

Diameter 4.000-5.000 inch

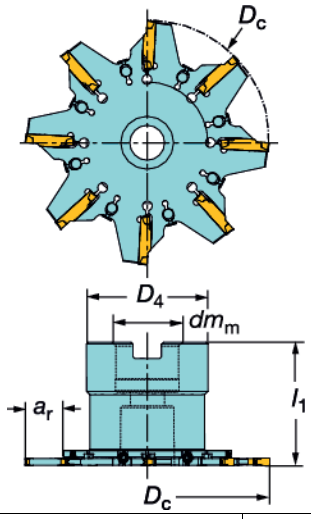
Positive geometry



Bore with keyway



Arbor



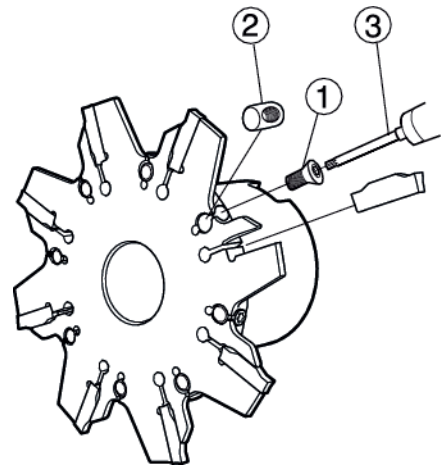
Inch version

D_c inch	Ordering code	Lbs	Seat size[1]		Dimensions, inch a_r	dm_m	D_4	l_1	E	B_{KW}	n_{max}[2]
	Arbor										
4.000	A329-102R25-E	2.38	E	6	.591	1.000	1.968	1.968		.384	4700
	A329-102R25-F	2.51	F	5	.591	1.000	1.968	1.968		.384	4300
	A329-102R25-G	2.56	G	6	.591	1.000	1.968	1.968		.384	4200
	A329-102R19-H	2.43	H	6	.591	.750	1.654	1.968		.321	3500
	A329-102R19-J	2.07	J	6	.591	.750	1.693	1.968		.321	3350
5.000	A329-127R32-E	3.92	E	9	.709	1.250	2.362	2.480		.509	4100
	A329-127R32-F	3.92	F	9	.709	1.250	2.362	2.480		.567	3700
	A329-127R32-G	3.96	G	8	.709	1.250	2.362	2.480		.509	3600
	A329-127R32-H	3.83	H	8	.709	1.250	2.362	2.480		.509	3050
	A329-127R32-J	4.12	J	7	.709	1.250	2.480	2.480		.509	2900
	Bore with 1 keyway										
4.000	A329-102T25-E	2.23	E	6	.591	1.000		.236	.394	.250	4700
	A329-102T25-F	1.19	F	6	.591	1.000		.246	.394	.250	4400
	A329-102T25-G	2.23	G	6	.591	1.000		.256	.394	.250	4300
	Bore with 2 keyways										
5.000	A329-127T38-E	1.50	E	9	.709	1.500		.295	.394	.375	4100
	A329-127T38-F	1.68	F	9	.709	1.500		.236	.394	.375	3700
	A329-127T38-G	1.47	G	8	.709	1.500		.246	.394	.375	3600
	A329-127T32-H	1.46	H	8	.709	1.250		.266	.394	.312	3050

[1] To correspond with seat size on insert.

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

Spare parts



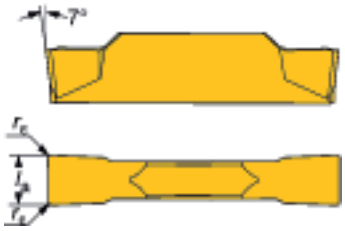

G6


D170

1	2		3	Torque value	
Screw	Locking nut	Molykote	Screwdriver	Nm	In-lbs
5513 017-03	5534 021-02	5683 010-01	5680 046-02 (15IP)	3	26

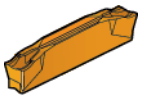
Note: Always apply Molykote 1000 to screw prior to use.

Inserts for CoroMill® 329

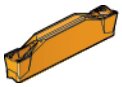


Tolerances, mm (inch):
l_a = +0.10/0 (+.004/0)
r_ε = ±0.10 (±.004)

For ISO application areas, see bottom of the page.

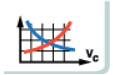
	Selection criteria, mm, inch				P						M						K				N	S						
					GC	GC	GC	GC	GC	CT	GC	GC	GC	GC	GC	-	GC	GC	GC	-	-	GC	GC	GC	GC	GC	-
					1125	1145	2135	3115	4225	525	1005	1105	1125	1145	2135	H13A	1125	3115	4225	H13A	H13A	1005	1105	1125	1145	2135	H13A
	l_a	r_ε	Seat size[1]	Ordering code																								
				CoroCut® 2-edge																								
 123-CM	2.00	0.20	E	N123E2-0200-0002-CM	☆	☆	☆	☆	☆	☆		☆	☆	☆	☆		☆	☆	☆				☆	☆	☆	☆		
	.079	*.008*			☆	☆	☆	☆	☆	☆		☆	☆	☆	☆		☆	☆	☆				☆	☆	☆	☆		
	2.50	0.20	F	N123F2-0250-0002-CM	☆	☆	☆	☆	☆			☆	☆	☆	☆		☆	☆	☆				☆	☆	☆	☆		
	.098	*.008*			☆	☆	☆	☆	☆			☆	☆	☆	☆		☆	☆	☆				☆	☆	☆	☆		
	3.00	0.20	G	N123G2-0300-0002-CM	☆	☆	☆	☆	☆	☆		☆	☆	☆	☆		☆	☆	☆				☆	☆	☆	☆		
	.118	*.008*			☆	☆	☆	☆	☆	☆		☆	☆	☆	☆		☆	☆	☆				☆	☆	☆	☆		
	4.00	0.20	H	N123H2-0400-0002-CM	☆	☆	☆	☆	☆	☆		☆	☆	☆	☆		☆	☆	☆				☆	☆	☆	☆		
	.157	*.008*			☆	☆	☆	☆	☆	☆		☆	☆	☆	☆		☆	☆	☆				☆	☆	☆	☆		
	5.00	0.20	J	N123J2-0500-0002-CM	☆	☆	☆						☆	☆	☆		☆							☆	☆	☆		
	.197	*.008*			☆	☆	☆						☆	☆	☆		☆							☆	☆	☆		

For ISO application areas, see bottom of the page.

	Selection criteria, mm, inch				P						M						K				N	S						
					GC	GC	GC	GC	GC	CT	GC	GC	GC	GC	GC	-	GC	GC	GC	-	-	GC	GC	GC	GC	GC	-
					1125	1145	2135	3115	4225	525	1005	1105	1125	1145	2135	H13A	1125	3115	4225	H13A	H13A	1005	1105	1125	1145	2135	H13A
	l_a	r_ε	Seat size[1]	Ordering code																								
				CoroCut® 2-edge																								
 123-TF	3.00	0.30	G	N123G2-0300-0003-TF	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆			☆
	.118	*.012*			☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆			☆
	4.00	0.40	H	N123H2-0400-0004-TF	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆			☆
	.157	*.016*			☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆			☆
	5.00	0.40	J	N123J2-0500-0004-TF	☆	☆	☆	☆	☆		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆		☆	☆
	.197	*.016*			☆	☆	☆	☆	☆		☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆		☆	☆

[1] To correspond with seat size on holder.

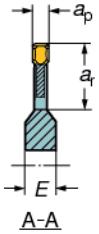
Note: For additional geometries, see Parting and Grooving chapter in supplement/catalog.

 D312  D305

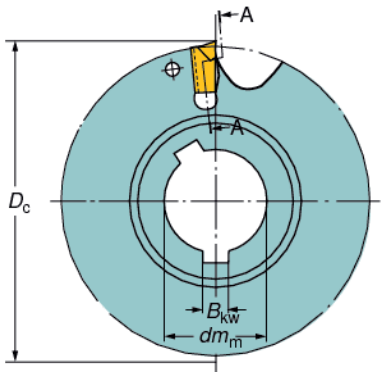
Slitting cutter

Diameter 80-315 mm

Positive geometry



Bore with keyway



Ø80 mm: One keyway only

Metric version

Slot width				Dimensions						
Max a_p	D_c mm	**Ordering code**		KG	a_f	dm_m	Seat size	E	B_{KW}	n_{max} [1]
2.08	80	**330.20-080020-220**	8	0.4	17	27	20	8	7	1000
	100	**330.20-100020-220**	10	0.5	24	32	20	8	8	800
2.6	80	**330.20-080025-225**	7	0.4	17	27	25	8	7	1000
	100	**330.20-100025-225**	9	0.5	24	32	25	8	8	800
	125	**330.20-125025-225**	11	0.3	31	40	25	8	10	640
	160	**330.20-160025-225**	14	0.5	49	40	25	8	10	500
3.12	80	**330.20-080030-230**	7	0.4	17	27	30	8	7	1000
	100	**330.20-100030-230**	9	0.2	24	32	30	8	8	800
	125	**330.20-125030-230**	11	0.3	31	40	30	8	10	640
	160	**330.20-160030-230**	14	0.5	49	40	30	8	10	500
	200	**330.20-200030-230**	18	0.7	62	50	30	8	12	400
4.12	80	**330.20-080040-240**	7	0.4	18	27	40	8	7	1000
	100	**330.20-100040-240**	8	0.2	24	32	40	8	8	800
	125	**330.20-125040-240**	10	0.4	32	40	40	8	10	640
	160	**330.20-160040-240**	13	0.5	49	40	40	8	10	500
	200	**330.20-200040-240**	17	0.9	62	50	40	8	12	400
	250	**330.20-250040-240**	21	1.4	87	50	40	8	12	320
5.12	80	**330.20-080050-250**	7	0.4	18	27	50	8	7	800
	100	**330.20-100050-250**	8	0.4	24	32	50	10	8	640
	125	**330.20-125050-250**	10	0.4	31	40	50	10	10	510
	160	**330.20-160050-250**	13	1.0	49	40	50	10	10	400
	200	**330.20-200050-250**	17	1.0	62	50	50	10	12	320
	250	**330.20-250050-250**	21	1.5	87	50	50	10	12	250
6.12	100	**330.20-100060-260**	8	0.3	24	32	60	12	8	640
	125	**330.20-125060-260**	10	0.4	31	40	60	12	10	510
	160	**330.20-160060-260**	12	0.7	49	40	60	12	10	400
	200	**330.20-200060-260**	16	1.1	62	50	60	12	12	320
	250	**330.20-250060-260**	19	1.8	87	50	60	12	12	250
	315	**330.20-315060-260**	24	2.7	119	50	60	12	12	200

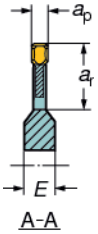
[1] n_{max} (max. rev/min) for holders must also be considered.

 D22
 D173
 G6
 D2

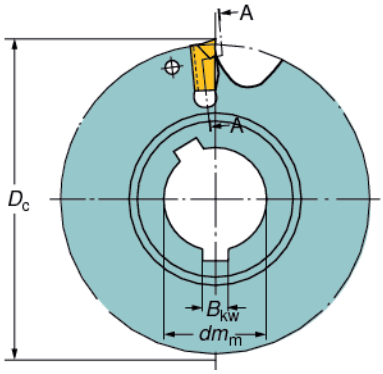
Slitting cutter

Diameter 3.000 - 10.000 inch

Positive geometry



Bore with keyway



Ø80 mm: One keyway only

Inch version

Slot width Max a_p	D_c inch	**Ordering code**		Dimensions, inch Lbs	a_r	dm_m	Seat size	E	B_{KW}	n_{max}
.084	3.000	**A330.20-076020-220**	8	0.9	.659	1.000	20	.315	.250	1000
	4.000	**A330.20-101020-220**	10	1.1	.982	1.250	20	.315	.312	800
.104	3.000	**A330.20-076025-225**	7	0.9	.664	1.000	25	.315	.250	1000
	4.000	**A330.20-101025-225**	9	1.1	.987	1.250	25	.315	.312	800
.125	3.000	**A330.20-076030-230**	7	0.9	.670	1.000	30	.315	.250	1000
	4.000	**A330.20-101030-230**	9	1.1	.993	1.250	30	.315	.312	800
	5.000	**A330.20-127030-230**	11	1.4	1.375	1.500	30	.315	.375	640
	6.000	**A330.20-152030-230**	14	1.6	1.875	1.500	30	.315	.375	500
	8.000	**A330.20-203030-230**	18	1.5	2.560	2.000	30	.315	.500	400
.164	3.000	**A330.20-076040-240**	7	0.9	.678	1.000	40	.315	.250	1000
	4.000	**A330.20-101040-240**	8	1.1	1.000	1.250	40	.315	.312	800
	5.000	**A330.20-127040-240**	10	1.4	1.382	1.500	40	.315	.375	640
	6.000	**A330.20-152040-240**	13	1.8	1.882	1.500	40	.315	.375	510
	8.000	**A330.20-203040-240**	17	1.9	2.567	2.000	40	.315	.500	400
	10.000	**A330.20-254040-240**	21	2.9	3.567	2.000	40	.315	.500	320
.204	3.000	**A330.20-076050-250**	7	1.0	.666	1.000	50	.394	.250	800
	4.000	**A330.20-101050-250**	8	1.1	.989	1.250	50	.394	.312	640
	6.000	**A330.20-152050-250**	13	1.9	1.871	1.500	50	.394	.375	400
	8.000	**A330.20-203050-250**	17	2.1	2.556	2.000	50	.394	.500	320
	10.000	**A330.20-254050-250**	21	3.3	3.556	2.000	50	.394	.500	250
.240	5.000	**A330.20-127050-250**	10	1.7	1.371	1.500	50	.394	.375	510
.243	4.000	**A330.20-101060-260**	8	1.3	.978	1.250	60	.472	.312	640

 D22
 D173
 G6
 D2

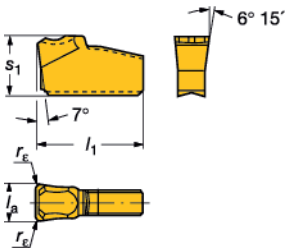
SANDVIK Coromant

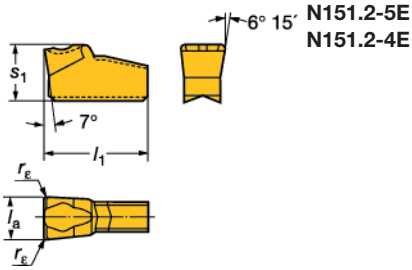
Inserts for T-MAX Q-cutter


330.20


N151.2-4E


N151.2-5E

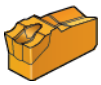




		Ordering code	P							M							K							N	S							Dimensions, millimeter, inch (mm, in.)							
			GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	-	GC	GC	GC	GC	GC	-	-	-	GC	GC	GC	GC	-									
			1125	1145	2135	235	4225	4230	4240	1125	1145	2135	235	4230	4240	H13A	1125	3020	4225	4230	4240	H13A	H13A	1005	1125	1145	2135	H13A											
	□																												l_a mm	l_a in.	l_1 mm	l_1 in.	s_1 mm	s_1 in.	r_ε mm	r_ε in.
Medium	20	N151.2-200-5E	☆	☆	☆	☆	☆			☆	☆	☆	☆				☆	☆	☆			☆	☆	☆	☆	☆	☆	☆		2.0	.079	4.4	.173	4.2	.164	0.2	.008
	25	N151.2-250-4E	☆	☆	☆	☆	☆			☆	☆	☆	☆			☆	☆		☆			☆	☆		☆	☆	☆	☆		2.5	.098	5.5	.216	5.6	.220	0.3	.012
	25	N151.2-250-5E	☆	☆	☆	☆	☆			☆	☆	☆	☆				☆	☆	☆			☆	☆	☆	☆	☆	☆	☆		2.5	.098	5.5	.216	5.5	.216	0.2	.008
	30	N151.2-300-4E	☆	☆	☆	☆	☆			☆	☆	☆	☆			☆	☆	☆	☆			☆	☆		☆	☆	☆	☆		3.0	.118	5.5	.216	5.6	.220	0.3	.012
	30	N151.2-300-5E	☆	☆	☆	☆	☆			☆	☆	☆	☆				☆	☆	☆			☆	☆	☆	☆	☆	☆	☆		3.0	.118	5.5	.216	5.6	.220	0.2	.008
	40	N151.2-400-4E	☆	☆	☆	☆	☆			☆	☆	☆	☆			☆	☆	☆	☆			☆	☆		☆	☆	☆	☆		4.0	.157	6.8	.268	7.2	.284	0.3	.012
	40	N151.2-400-5E	☆	☆	☆	☆	☆			☆	☆	☆	☆				☆	☆	☆			☆	☆	☆	☆	☆	☆	☆		4.0	.157	6.8	.268	7.2	.284	0.2	.008
	50	N151.2-500-4E	☆	☆	☆	☆	☆			☆	☆	☆	☆			☆	☆	☆	☆			☆	☆		☆	☆	☆	☆		5.0	.197	6.8	.268	7.4	.289	0.4	.016
	50	N151.2-500-5E	☆	☆	☆	☆	☆			☆	☆	☆	☆				☆	☆	☆			☆	☆	☆	☆	☆	☆	☆		5.0	.197	6.8	.268	7.4	.289	0.2	.008
	60	N151.2-600-4E	☆	☆	☆	☆	☆			☆	☆	☆	☆			☆	☆	☆	☆			☆	☆		☆	☆	☆	☆		6.0	.236	8.4	.331	8.8	.347	0.4	.016
	60	N151.2-600-5E	☆	☆	☆	☆	☆			☆	☆	☆	☆				☆	☆	☆			☆	☆	☆	☆	☆	☆	☆		6.0	.236	8.4	.331	8.7	.341	0.2	.008
	20	330.20-20-AA						☆	☆					☆	☆					☆	☆	☆	☆						☆		2.1	.081	8.0	.315	4.2	.164	0.19	.008
	25	330.20-25-AA						☆	☆					☆	☆					☆	☆	☆	☆						☆		2.6	.102	10.0	.394	5.5	.216	0.2	.008
	30	330.20-30-AA						☆	☆					☆	☆					☆	☆	☆	☆						☆		3.1	.123	10.0	.394	5.6	.220	0.3	.012
	40	330.20-40-AA						☆	☆					☆	☆					☆	☆	☆	☆						☆		4.1	.162	12.8	.504	7.2	.282	0.3	.012
	50	330.20-50-AA						☆	☆					☆	☆					☆	☆	☆	☆						☆		5.1	.202	12.8	.504	7.3	.289	0.37	.015
	60	330.20-60-AA						☆	☆					☆	☆					☆	☆	☆	☆						☆		6.1	.241	15.3	.602	8.8	.347	0.37	.015

330.20 is a close tolerance insert with a geometry and grade program adapted for milling operations.

N151.2-4E is a Q-Cut turning insert which can be used for milling low carbon materials.

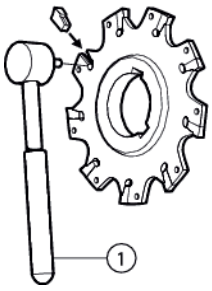


N151.2-5E is a Q-Cut turning insert but also useful for milling copper and aluminum.

Note!
For grade descriptions, see page D334.

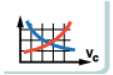
Spare parts for T-Max Q-Cutter

330.20



Insert size		1
Seat size		Key[1]
20	2.0	5680 056-02
25.30.40.50	2.5-5.0	5680 056-01
60	6.0	5680 056-03

[1] Delivered with the tool


D312


D305

CoroMill® 328

Grooving/Threading cutter

Circlip grooving for holes over dia 1.535 inch (39 mm)

Grooving widths .051-.203 inch (1.30-5.15 mm)

Weldon, arbor and bore with keyway mounting

Insert program

- Grooving / Circlip grooving
- Circlip grooves with chamfer
- Threading inserts, 60° V-profile

Application areas

For use in internal machining of eccentric components, e.g, gearbox casings, high volume assembly, mainly on machining centers.

Features

- A universal cutter for use in materials P/M/K/N/S
- Sharp cutting edges for high quality grooves
- One grade; PVD coated GC1025 for all materials
- Multiple edges for highly productive, economic machining

Cutter bodies with 2 - 8 inserts each, with 3 cutting edges for high productivity and economy.

ISO application areas:

P M K N S

SANDVIK Coromant

Code key for CoroMill® 328

CoroMill® 328 insert

Chamfering

328	R	13	–	110	45	–	GC
1	2	3		4	7		6

Threading

328	R	13	–	150	VM	–	TH
1	2	3		8	9		6

Grooving

328	R	13	–	110	01	–	GM
1	2	3		4	5		6

1 Product name
2 Right hand insert
3 Insert size
4 Insert width
5 Radius ex 02 = radius 0.2 mm (.008 inch)
6 Geometry
GM = Grooving
GC = Grooving and chamfering
TH = Threading
7 Chamfer 45°
8 Thread pitch mm: pitch x 100
9 Type of thread VM = V-Profile 60°

CoroMill® 328 cutters

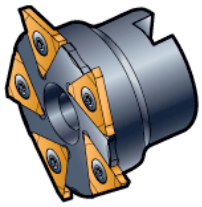
328	–	039	B	25	–	13	M
1		2	3	4		5	6

1 Product name
2 Cutting diameter, D_c
3 Shank type B = Weldon
Q = Arbor
S = Bore with keyway
4 Shank/couplings diameter (d_{mm})
5 Insert size
6 Pitch

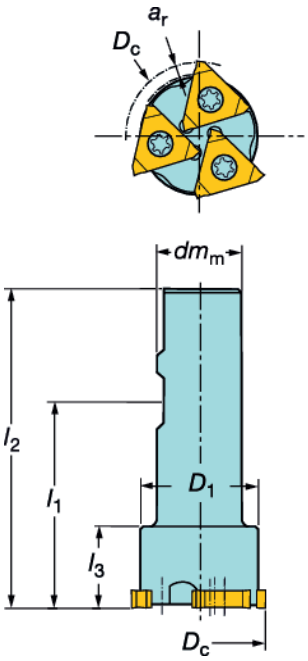
CoroMill® 328

Grooving cutter

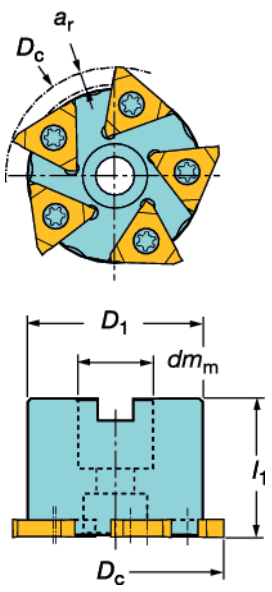
Diameter 38 - 80 mm / 1.535 - 2.480 inch



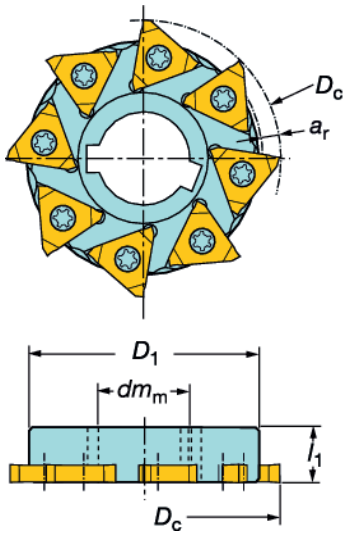
Weldon



Arbor



Bore with keyway



l_1 = programming length

Metric version

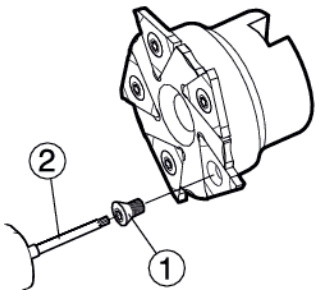
Ordering code	Insert size[1]		Dimensions								Gauge insert	Nm[2]
			KG	dm_m	D_c	D_1	l_1	l_2	l_3	a_r max		
Weldon												
328-039B25-13M	13	2	0.5	25	39	32	93	125	23	3	328R13-130	6.5
328-044B25-13M		3	0.5	25	44	34	93	125	23	4	328R13-130	6.5
Arbor												
328-063Q22-13M	13	5	0.5	22	63	51	40			5	328R13-130	6.5
Bore with keyway												
328-063S22-13M	13	5	0.1	22	63	51	14.2			5	328R13-130	6.5
328-080S27-13M		8	0.3	27	80	68	16.2			5	328R13-130	6.5

Inch version

Ordering code	Insert size[1]		Dimensions, inch								Gauge insert	ft-lbs[3]
			Lbs	dm_m	D_c	D_1	l_1	l_2	l_3	a_r max		
Weldon												
A328-039B19-13M	13	2	1.1	.750	1.535	1.260	3.898	4.921	.906	.118	328R13-130	4.8
A328-044B19-13M		3	1.1	.750	1.732	1.339	3.898	4.921	.906	.157	328R13-130	4.8
Arbor												
A328-063Q19-13M	13	5	1.1	.750	2.480	2.008	1.575			.197	328R13-130	4.8

1) To correspond with insert size on insert
2) Insert tightening torque, Nm.
3) Insert tightening torque ft-lbs.

Spare parts



Cutter	1	2	
	Screw	Key (Torx Plus)	Screw driver (Torx Plus) [1]
328	5513 039-05	5680 048-04(20IP)	5680 046-06 (20IP)

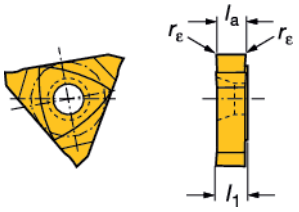
1) Optional part, to be ordered separately

 D177
 D176
 G6
 D2

SANDVIK Coromant

Inserts for CoroMill® 328

For circlip grooves



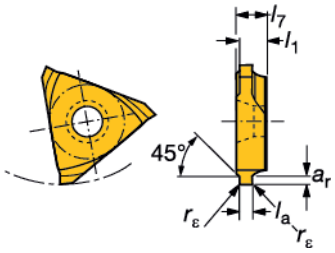
Tolerances, inch (mm):
l_a = + 0.11 (.0043)
+0.09 (.0035)

	Insert size[1]	Ordering code	P GC 1025	M GC 1025	K GC 1025	N GC 1025	S GC 1025	l_a mm	l_a in.	l_1 mm	l_1 in.	r_ε mm	r_ε in.
								Dimensions, millimeter, inch (mm, in.)					
Medium	13	328R13-130 00-GM	★	★	★	★	★	1.3	.051	5.4	.213	0.1	.004
		328R13-160 00-GM	★	★	★	★	★	1.6	.063	5.4	.213	0.1	.004
		328R13-185 02-GM	★	★	★	★	★	1.85	.073	5.4	.213	0.2	.006
		328R13-215 02-GM	★	★	★	★	★	2.15	.085	5.4	.213	0.2	.006
		328R13-265 02-GM	★	★	★	★	★	2.65	.104	5.4	.213	0.2	.006
		328R13-315 02-GM	★	★	★	★	★	3.15	.124	5.4	.213	0.2	.006
		328R13-415 02-GM	★	★	★	★	★	4.15	.163	5.4	.213	0.2	.006
		328R13-515 02-GM	★	★	★	★	★	5.15	.203	5.4	.213	0.2	.006
			P10	M15		N15	S15						

[1] To correspond with insert size on holder.

Inserts for CoroMill® 328

Circlip grooves with chamfer



Tolerances, inch (mm):
l_a = +0.11(.0043)
+0.09 (.0035)

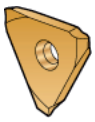
	Insert size[1]	Ordering code	P GC 1025	M GC 1025	K GC 1025	N GC 1025	S GC 1025	l_1 mm	l_1 in.	l_7 mm	l_7 in.	l_a mm	l_a in.	a_r max mm	a_r max in.	r_ε mm	r_ε in.
								Dimensions, millimeter, inch (mm, in.)									
Medium	13	328R13-110 45-GC	★	★	★	★	★	4.42	.174	5.45	.215	1.1	.043	0.5	.020	0.1	.004
		328R13-130 45-GC	★	★	★	★	★	4.52	.178	5.45	.215	1.3	.051	0.7	.028	0.1	.004
		328R13-130 4509-GC	★	★	★	★	★	4.5	.177	5.45	.215	1.3	.051	0.85	.034	0.1	.004
		328R13-160 45-GC	★	★	★	★	★	4.42	.174	5.45	.215	1.6	.063	1	.039	0.2	.006
		328R13-160 4509-GC	★	★	★	★	★	4.4	.177	5.45	.215	1.6	.063	0.85	.034	0.2	.008
		328R13-185 45-GC	★	★	★	★	★	4.54	.179	5.45	.215	1.85	.073	1.25	.049	0.2	.006
		328R13-215 45-GC	★	★	★	★	★	4.7	.185	5.45	.215	2.15	.085	1.5	.059	0.2	.006
		328R13-265 45-GC	★	★	★	★	★	4.44	.175	5.45	.215	2.65	.104	1.75	.069	0.2	.006
		328R13-265 4515-GC	★	★	★	★	★	4.4	.173	5.45	.215	2.65	.104	1.5	.059	0.2	.008
		328R13-315 45-GC	★	★	★	★	★	4.69	.185	5.45	.215	3.15	.124	1.75	.069	0.2	.006
		328R13-415 45-GC	★	★	★	★	★	4.89	.192	5.45	.215	4.15	.163	2.5	.098	0.2	.006
		328R13-415 4520-GC	★	★	★	★	★	4.9	.193	5.45	.215	4.15	.163	2	.079	0.2	.008
		328R13-515 45-GC	★	★	★	★	★	5.85	.230	6.1	.240	5.15	.203	3	.118	0.2	.006
			P30	M15		N15	S15										

[1] To correspond with insert size on holder.

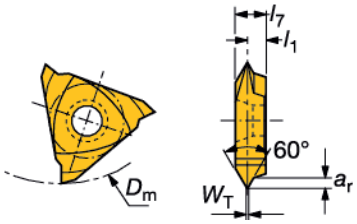
D312 D305 D334 D2

Inserts for CoroMill® 328

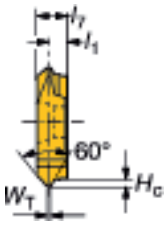
Threading

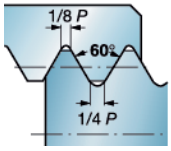
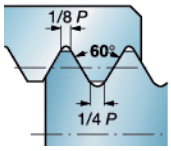
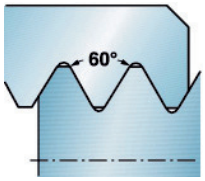


60° V-profile
Partial profile
Internal



Metric 60°
UN 60°
Full profile
Internal



	Insert size[1]	Pitch, mm min	Pitch, mm max	Pitch, TPI min	Pitch, TPI max	Ordering code	P GC 1025	M GC 1025	K GC 1025	N GC 1025	S GC 1025	Dimensions, mm, inch l_1	l_7	a_r max	W_T	H_C
						**UN 60°**										
	13			04		**328R13-04 UN-TH**	★	★	★	★	★	5.05	7.6		0.79	3.43
												.199	*.299*		*.031*	*.135*
				06		**328R13-06 UN-TH**	★	★	★	★	★	3.45	5.25		0.53	2.29
												.136	*.207*		*.021*	*.090*
				08		**328R13-08 UN-TH**	★	★	★	★	★	3.85	5.25		0.4	1.73
												.152	*.207*		*.016*	*.068*
				10		**328R13-10 UN-TH**	★	★	★	★	★	4.1	5.25		0.32	1.37
												.161	*.207*		*.013*	*.054*
				11		**328R13-11 UN-TH**	★	★	★	★	★	4.2	5.25		0.29	1.24
												.165	*.207*		*.011*	*.049*
				12		**328R13-12 UN-TH**	★	★	★	★	★	4.25	5.25		0.26	1.14
												.167	*.207*		*.010*	*.045*
				14		**328R13-14 UN-TH**	★	★	★	★	★	4.35	5.25		0.23	0.99
												.171	*.207*		*.009*	*.039*
				16		**328R13-16 UN-TH**	★	★	★	★	★	4.45	5.25		0.2	0.86
												.175	*.207*		*.008*	*.034*
				18		**328R13-18 UN-TH**	★	★	★	★	★	4.5	5.25		0.18	0.76
												.177	*.207*		*.007*	*.030*
				20		**328R13-20 UN-TH**	★	★	★	★	★	4.6	5.25		0.16	0.69
												.181	*.207*		*.006*	*.027*
						**Metric 60°**										
	13	1.5				**328R13-150 MM-TH**	★	★	★	★	★	4.4	5.25		0.18	0.81
												.173	*.207*		*.007*	*.032*
		2.0				**328R13-200 MM-TH**	★	★	★	★	★	4.2	5.25		0.25	1.08
												.165	*.207*		*.010*	*.043*
		3.0				**328R13-300 MM-TH**	★	★	★	★	★	3.9	5.25		0.37	1.69
												.154	*.207*		*.015*	*.067*
		3.5				**328R13-350 MM-TH**	★	★	★	★	★	3.7	5.25		0.43	1.89
												.146	*.207*		*.017*	*.074*
		4.0				**328R13-400 MM-TH**	★	★	★	★	★	3.5	5.25		0.5	2.17
												.138	*.207*		*.020*	*.085*
		4.5				**328R13-450 MM-TH**	★	★	★	★	★	3.3	5.25		0.56	2.44
												.130	*.207*		*.022*	*.096*
		5.0				**328R13-500 MM-TH**	★	★	★	★	★	3.75	5.85		0.63	2.71
												.148	*.230*		*.025*	*.107*
		5.5				**328R13-550 MM-TH**	★	★	★	★	★	3.55	5.85		0.69	2.98
												.140	*.230*		*.027*	*.117*
		6.0				**328R13-600 MM-TH**	★	★	★	★	★	5.15	7.6		0.75	3.25
												.203	*.299*		*.030*	*.128*
						**V-profile 60°**										
	13	1.5	3.5	7	16	**328R13-150 VM-TH**	★	★	★	★	★	3.3	5.45	2.1	0.19	
												.130	*.215*	*.083*	*.008*	
		4	6	4	6	**328R13-400 VM-TH**	★	★	★	★	★	2.7	5.45	3.5	0.5	
												.106	*.215*	*.136*	*.020*	
							P30	M15		N15	S15					

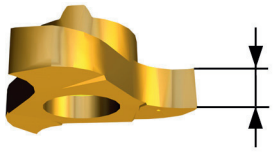
[1] To correspond with insert size on holder.

D312 D305 D334 D2

CoroMill® 327

Grooving/Threading cutter

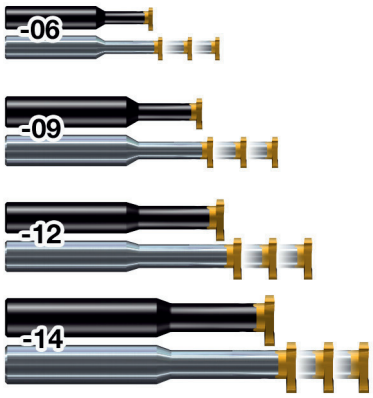
Slot and thread milling for holes over dia. 10 mm (.394 inch)



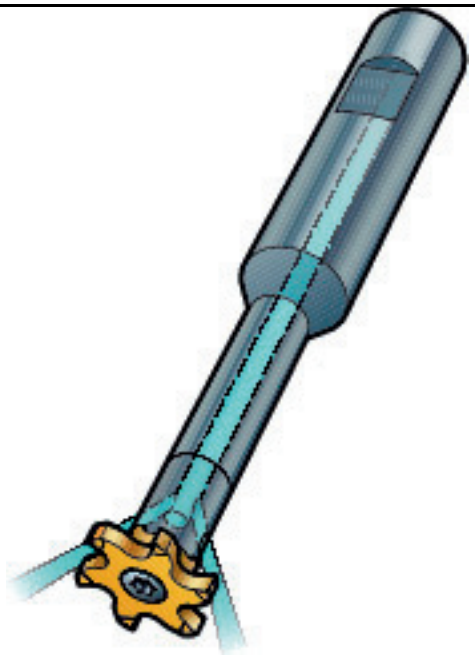
Grooving widths 0.7-5.15 mm (.028-.203 inch)

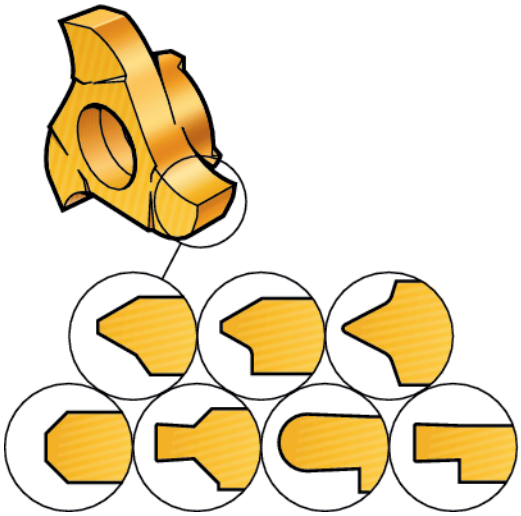
Weldon shank

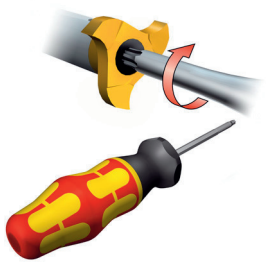
Steel and carbide shanks with different lengths, providing stable setup and higher productivity



Four different cutter sizes, all with three or six cutting edges for high metal removal rate







Application areas

For use in internal machining of eccentric components, e.g, gearbox casings, high volume assembly, mainly on machining centers.

Features

- A universal cutter for use in materials P/M/K/N/S
- Sharp cutting edges for high quality grooves
- One grade; PVD coated GC1025 for all materials
- Multiple edges for highly productive, economic machining

Insert program

- Grooving
- Grooving / Full radius
- Chamfering
- Circlip grooves with chamfer
- Threading

V-Profile 60°
Metric 60°
Withworth 55°
UN 60°

ISO application areas:

P M K N S

Code key for CoroMill® 327

CoroMill 327 insert

Chamfering

327	R	06	–	12	120	45	–	CH
1	2	3		4	5	9		7

Threading

327	R	06	–	12	100	VM	–	TH
1	2	3		4	10	11		7

Profiling

327	R	06	–	10	120	06	–	RM
1	2	3		4	5	6		7

Grooving

327	R	12	–	28	150	01	–	GM	M
1	2	3		4	5	6		7	8

1 Product name
2 Right hand insert
3 Coupling size (interface)
4 D_{min} (mm)
5 Insert width
6 Radius ex 02 = radius 0.2 mm (.008 inch)
7 Type of insert
GM = Grooving
RM = Fullnose radius
CH = Chamfering
GC = Grooving and chamfering
TH = Threading
8 M = Close pitch
9 Chamfer 45°
10 Thread pitch
mm: pitch x 100
inch: No. of threads per inch
11 Type of thread
VM = V-Profile 60°
MM = Metric 60°
WH = Whitworth 55°

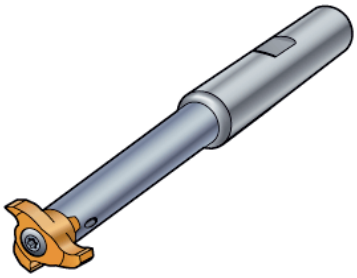
CoroMill® 327 holders

327	–	12	B	15	S	C	–	06
1		2	3	4	5	6		7

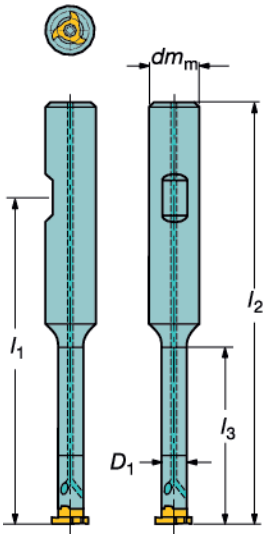
1 Product name
2 Shank diameter (d_{mm})
3 Shank type
B = Weldon
4 Reach length
5 Shank materials
S = steel
E = solid carbide
6 Internal coolant
7 Coupling size (interface)

CoroMill® 327

Grooving cutter



Weldon



Tolerance : dm_m
Solid carbide shank : h6
Steel shank : g6

l_1 = programming length

Metric version

Insert size[1]	Ordering code	Dimensions KG	dm_m	D_1	l_1	l_2	l_3	Gauge insert	Nm[2]
06	327-12B15SC-06	0.1	12	6	52	74	15	327R06-10 100 00-GM	1.8
	327-12B21EC-06	0.1	12	6	58	80	21	327R06-10 100 00-GM	1.8
	327-12B30EC-06	0.1	12	6	68	90	30	327R06-10 100 00-GM	1.8
	327-12B42EC-06	0.1	12	6	78	100	42	327R06-10 100 00-GM	1.8
09	327-16B18SC-09	0.1	16	9	56	80	18	327R09-18 150 02-GM	4.3
	327-16B32EC-09	0.2	16	9	76	100	32	327R09-18 150 02-GM	4.3
	327-16B45EC-09	0.2	16	9	86	110	45	327R09-18 150 02-GM	4.3
	327-16B64EC-09	0.2	16	9	106	130	64	327R09-18 150 02-GM	4.3
12	327-16B24SC-12	0.1	16	12	56	80	24	327R12-22 150 02-GM	6.5
	327-16B42EC-12	0.2	16	12	76	100	42	327R12-22 150 02-GM	6.5
	327-16B60EC-12	0.2	16	12	106	130	60	327R12-22 150 02-GM	6.5
	327-16B85EC-12	0.3	16	12	136	160	85	327R12-22 150 02-GM	6.5
14	327-16B42EC-14	0.2	16	14.3	76	100	42	327R14-28 150 02-GM	6.5
	327-16B60EC-14	0.2	16	14.3	106	130	60	327R14-28 150 02-GM	6.5
	327-16B85EC-14	0.4	16	14.3	136	160	85	327R14-28 150 02-GM	6.5
	327-20B35SC-14	0.2	20	14.3	75	100	36	327R14-28 150 02-GM	6.5

Inch version

Insert size[1]	Ordering code	Dimensions, inch Lbs	dm_m	D_1	l_1	l_2	l_3	Gauge insert	ft-lbs[3]
06	A327-13B21EC-06	0.2	.500	.236	2.264	3.150	.827	327R06-10 100 00-GM	1.3
	A327-13B30EC-06	0.2	.500	.236	2.658	3.543	1.181	327R06-10 100 00-GM	1.3
	A327-13B42EC-06	0.2	.500	.236	3.051	3.937	1.654	327R06-10 100 00-GM	1.3
09	A327-16B18SC-09	0.2	.625	.354	2.205	3.150	.709	327R09-18 150 02-GM	3.2
	A327-16B32EC-09	0.4	.625	.354	2.992	3.937	1.260	327R09-18 150 02-GM	3.2
	A327-16B45EC-09	0.4	.625	.354	3.386	4.331	1.772	327R09-18 150 02-GM	3.2
	A327-16B64EC-09	0.4	.625	.354	4.173	5.118	2.520	327R09-18 150 02-GM	3.2
12	A327-16B24SC-12	0.2	.625	.472	2.205	3.150	.945	327R12-22 150 02-GM	4.8
	A327-16B42EC-12	0.4	.625	.472	2.992	3.937	1.654	327R12-22 150 02-GM	4.8
	A327-16B60EC-12	0.6	.625	.472	4.173	5.118	2.362	327R12-22 150 02-GM	4.8
	A327-16B85EC-12	0.7	.625	.472	5.354	6.299	3.346	327R12-22 150 02-GM	4.8
14	A327-16B42EC-14	0.4	.625	.563	2.992	3.937	1.654	327R14-28 150 02-GM	4.8
	A327-16B60EC-14	0.6	.625	.563	4.173	5.118	2.362	327R14-28 150 02-GM	4.8
	A327-16B85EC-14	0.7	.625	.563	5.354	6.299	3.346	327R14-28 150 02-GM	4.8

1) To correspond with insert size on insert

2) Insert tightening torque, Nm.

3) Insert tightening torque ft-lbs.

327-12B42 EC-06
|
E=Solid carbide shank
S=Steel shank

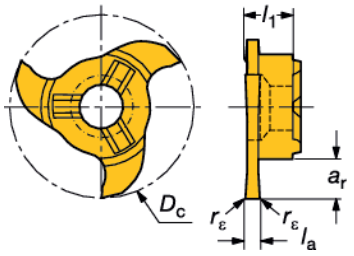
 G6

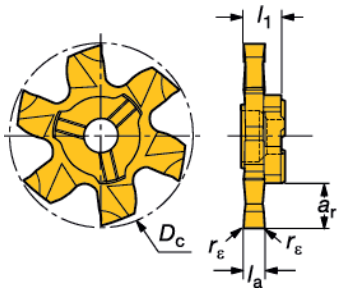
 D182

 D186

Inserts for CoroMill® 327

Grooving





Tolerances, inch (mm):
l_a = +0.02 (.0008)

Insert size[1]	Ordering code	Number of teeth z	P GC 1025	M GC 1025	K GC 1025	N GC 1025	S GC 1025	D_c mm	D_c in.	a_r max mm	a_r max in.	l_a mm	l_a in.	l_1 mm	l_1 in.	r_ε mm	r_ε in.
06	327R06-10 10000-GM	3	★	★	★	★	★	9.7	.382	1.5	.059	1.0	.039	3.5	.138		
	327R06-10 15002-GM	3	★	★	★	★	★	9.7	.382	1.5	.059	1.5	.059	3.5	.138	0.2	.008
	327R06-10 20002-GM	3	★	★	★	★	★	9.7	.382	1.5	.059	2.0	.079	3.5	.138	0.2	.008
	327R06-10 25002-GM	3	★	★	★	★	★	9.7	.382	1.5	.059	2.5	.098	3.5	.138	0.2	.008
09	327R09-18 15002-GM	3	★	★	★	★	★	17.7	.697	3.5	.138	1.5	.059	5.75	.226	0.2	.008
	327R09-18 20002-GM	3	★	★	★	★	★	17.7	.697	3.5	.138	2.0	.079	5.75	.226	0.2	.008
	327R09-18 25002-GM	3	★	★	★	★	★	17.7	.697	3.5	.138	2.5	.098	5.75	.226	0.2	.008
	327R09-18 30002-GM	3	★	★	★	★	★	17.7	.697	3.5	.138	3.0	.118	5.75	.226	0.2	.008
	327R09-18 15001-GMM	6	★	★	★	★	★	17.7	.697	3.5	.138	1.5	.059	5.75	.226	0.1	.004
	327R09-18 20002-GMM	6	★	★	★	★	★	17.7	.697	3.5	.138	2.0	.079	5.75	.226	0.2	.008
	327R09-18 25002-GMM	6	★	★	★	★	★	17.7	.697	3.5	.138	2.5	.098	5.75	.226	0.2	.008
	327R09-18 30002-GMM	6	★	★	★	★	★	17.7	.697	3.5	.138	3.0	.118	5.75	.226	0.2	.008
12	327R12-22 15002-GM	3	★	★	★	★	★	21.7	.854	4.5	.177	1.5	.059	5.7	.224	0.2	.008
	327R12-22 20002-GM	3	★	★	★	★	★	21.7	.854	4.5	.177	2.0	.079	5.7	.224	0.2	.008
	327R12-22 25002-GM	3	★	★	★	★	★	21.7	.854	4.5	.177	2.5	.098	5.7	.224	0.2	.008
	327R12-22 30002-GM	3	★	★	★	★	★	21.7	.854	4.5	.177	3.0	.118	5.7	.224	0.2	.008
	327R12-22 40002-GM	3	★	★	★	★	★	21.7	.854	4.5	.177	4.0	.157	5.7	.224	0.2	.008
	327R12-28 15001-GMM	6	★	★	★	★	★	27.7	1.091	6.5	.256	1.5	.059	6.2	.244	0.1	.004
	327R12-28 20002-GMM	6	★	★	★	★	★	27.7	1.091	6.5	.256	2.0	.079	6.2	.244	0.2	.008
	327R12-28 25002-GMM	6	★	★	★	★	★	27.7	1.091	6.5	.256	2.5	.098	6.2	.244	0.2	.008
	327R12-28 30002-GMM	6	★	★	★	★	★	27.7	1.091	6.5	.256	3.0	.118	6.25	.246	0.2	.008
	327R12-28 40002-GMM	6	★	★	★	★	★	27.7	1.091	6.5	.256	4.0	.157	6.25	.246	0.2	.008
14	327R14-28 15000-GM	3	★	★	★	★	★	27.7	1.091	6.5	.256	1.5	.059	6.5	.256	0.2	.008
	327R14-28 20002-GM	3	★	★	★	★	★	27.7	1.091	6.5	.256	2.0	.079	6.5	.256	0.2	.008
	327R14-28 25002-GM	3	★	★	★	★	★	27.7	1.091	6.5	.256	2.5	.098	6.5	.256	0.2	.008
	327R14-28 30002-GM	3	★	★	★	★	★	27.7	1.091	6.5	.256	3.0	.118	6.5	.256	0.2	.008
	327R14-28 35002-GM	3	★	★	★	★	★	27.7	1.091	6.5	.256	3.5	.138	6.5	.256	0.2	.008
	327R14-28 40002-GM	3	★	★	★	★	★	27.7	1.091	6.5	.256	4.0	.157	6.5	.256	0.2	.008
	327R14-35 15001-GMM	6	★	★	★	★	★	34.7	1.366	10.0	.394	1.5	.059	6.25	.246	0.1	.004
	327R14-35 20002-GMM	6	★	★	★	★	★	34.7	1.366	10.0	.394	2.0	.079	6.25	.246	0.2	.008
	327R14-35 25002-GMM	6	★	★	★	★	★	34.7	1.366	10.0	.394	2.5	.098	6.25	.246	0.2	.008
	327R14-35 30002-GMM	6	★	★	★	★	★	34.7	1.366	10.0	.394	3.0	.118	6.25	.246	0.2	.008
			P30	M15		N15	S15										

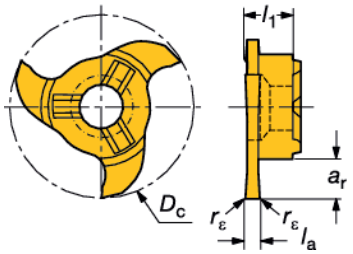
1) To correspond with insert size on holder.

D312 D305 D334 D2

Inserts for CoroMill® 327

Grooving

For circlip grooves



Tolerances for circlip grooves, mm (inch)
l_a 0.7-0.9 (.028-.035)

l_a = +0.07(+.00276)
+0.05 (+.00197)

l_a 1.1-5.15 mm (.043-.203 in.)

l_a = +0.11 (+.0043)
+0.09 (+.0035)

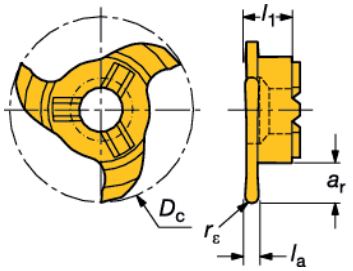
Insert size[1]	Ordering code	Number of teeth z	P GC 1025	M GC 1025	K GC 1025	N GC 1025	S GC 1025	Dimensions, millimeter, inch (mm, in.) D_c mm	D_c in.	a_r max mm	a_r max in.	l_a mm	l_a in.	l_1 mm	l_1 in.	r_ε mm	r_ε in.
06	327R06-10 07000-GM	3	★	★	★	★	★	9.7	.382	1.5	.059	0.7	.028	3.5	.138	0.2	.008
	327R06-10 08000-GM	3	★	★	★	★	★	9.7	.382	1.5	.059	0.8	.032	3.5	.138	0.2	.008
	327R06-10 09000-GM	3	★	★	★	★	★	9.7	.382	1.5	.059	0.9	.035	3.5	.138	0.2	.008
	327R06-10 11000-GM	3	★	★	★	★	★	9.7	.382	1.5	.059	1.1	.043	3.5	.138	0.2	.008
	327R06-10 13000-GM	3	★	★	★	★	★	9.7	.382	1.5	.059	1.3	.051	3.5	.138	0.2	.008
	327R06-10 16000-GM	3	★	★	★	★	★	9.7	.382	1.5	.059	1.6	.063	3.5	.138	0.2	.008
09	327R09-18 11000-GM	3	★	★	★	★	★	17.7	.697	3.5	.138	1.1	.043	5.75	.226	0.2	.008
	327R09-18 13000-GM	3	★	★	★	★	★	17.7	.697	3.5	.138	1.3	.051	5.75	.226	0.2	.008
	327R09-18 16000-GM	3	★	★	★	★	★	17.7	.697	3.5	.138	1.6	.063	5.75	.226	0.2	.008
12	327R12-22 16000-GM	3	★	★	★	★	★	21.7	.854	4.5	.177	1.6	.063	5.7	.224	0.2	.008
	327R12-22 18502-GM	3	★	★	★	★	★	21.7	.854	4.5	.177	1.85	.073	5.7	.224	0.2	.008
	327R12-22 21502-GM	3	★	★	★	★	★	21.7	.854	4.5	.177	2.15	.085	5.7	.224	0.2	.008
	327R12-22 26502-GM	3	★	★	★	★	★	21.7	.854	4.5	.177	2.65	.104	5.7	.224	0.2	.008
	327R12-22 31502-GM	3	★	★	★	★	★	21.7	.854	4.5	.177	3.15	.124	5.7	.224	0.2	.008
	327R12-22 41502-GM	3	★	★	★	★	★	21.7	.854	4.5	.177	4.15	.163	5.7	.224	0.2	.008
	327R12-22 51502-GM	3	★	★	★	★	★	21.7	.854	4.5	.177	5.15	.203	5.7	.224	0.2	.008
			P30	M15		N15	S15										

1) To correspond with insert size on holder.

D312 D305 D334 D2

Inserts for CoroMill® 327

Grooving - full radius



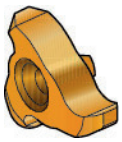
Tolerances, inch (mm):
l_a = +0.03 (.0001)

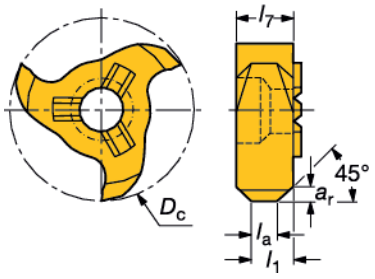
Insert size[1]	Ordering code	Number of teeth z	P GC 1025	M GC 1025	K GC 1025	N GC 1025	S GC 1025	D_c mm	D_c in.	a_r max mm	a_r max in.	l_a mm	l_a in.	l_1 mm	l_1 in.	r_ε mm	r_ε in.
06	327R06-12 22011-RM	3	★	★	★	★	★	11.7	.461	2.5	.098	2.2	.087	3.5	.138	1.1	.043
09	327R09-18 22011-RM	3	★	★	★	★	★	17.7	.697	3.5	.138	2.2	.087	5.75	.226	1.1	.043
12	327R12-22 10005-RM	3	★	★	★	★	★	21.7	.854	4.5	.177	1.0	.039	5.75	.226	0.5	.020
	327R12-22 20010-RM	3	★	★	★	★	★	21.7	.854	4.5	.177	2.0	.079	5.75	.226	1.0	.039
	327R12-22 30015-RM	3	★	★	★	★	★	21.7	.854	4.5	.177	3.0	.118	5.75	.226	1.5	.059
	327R12-22 40020-RM	3	★	★	★	★	★	21.7	.854	4.5	.177	4.0	.157	5.75	.226	2.0	.079
			P10	M15		N15	S15										

1) To correspond with insert size on holder.

Inserts for CoroMill® 327

Chamfering





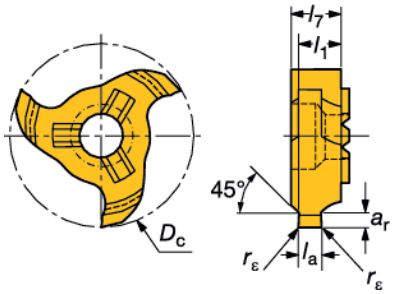
Insert size[1]	Ordering code	Number of teeth z	P GC 1025	M GC 1025	K GC 1025	N GC 1025	S GC 1025	D_c mm	D_c in.	a_r max mm	a_r max in.	l_a mm	l_a in.	l_1 mm	l_1 in.	l_7 mm	l_7 in.
06	327R06-12 12045-CH	3	★	★	★	★	★	11.7	.461	0.8	.032	1.2	.047	2.5	.098	3.5	.138
12	327R12-22 20045-CH	3	★	★	★	★	★	21.7	.854	1.7	.067	2.0	.079	4.1	.161	5.85	.230
			P10	M15		N15	S15										

1) To correspond with insert size on holder.

D312 D305 D334 D2

Inserts for CoroMill® 327

Circlip grooves with chamfer



Tolerances, inch (mm):
l_a = +0.11 (.0043)
= +0.09 (.0035)

Insert size[1]	Ordering code	Number of teeth z	P GC 1025	M GC 1025	K GC 1025	N GC 1025	S GC 1025	Dimensions, millimeter, inch (mm, in.) D_c mm	D_c in.	a_r mm	a_r in.	l_a mm	l_a in.	l_1 mm	l_1 in.	l_7 mm	l_7 in.	r_ε mm	r_ε in.
12	**327R12-22 11045-GC**	3	★	★	★	★	★	21.7	.854	0.5	.020	1.1	.043	5.07	.200	5.85	.230		
	327R12-22 1304508-GC	3	★	★	★	★	★	21.7	.854	0.8	.031	1.3	.051	5.17	.204	5.85	.230		
	327R12-22 13045-GC	3	★	★	★	★	★	21.7	.854	0.7	.026	1.3	.051	5.17	.204	5.85	.230		
	327R12-22 1604508-GC	3	★	★	★	★	★	21.7	.854	0.8	.031	1.6	.063	5.07	.200	5.85	.230		
	327R12-22 16045-GC	3	★	★	★	★	★	21.7	.854	1.0	.039	1.6	.063	5.17	.204	5.85	.230		
	327R12-22 18545-GC	3	★	★	★	★	★	21.7	.854	1.25	.049	1.85	.073	5.19	.204	5.85	.230		
	327R12-22 21545-GC	3	★	★	★	★	★	21.7	.854	1.5	.059	2.15	.085	5.34	.210	5.85	.230	0.2	.006
	327R12-22 2654518-GC	3	★	★	★	★	★	21.7	.854	1.8	.071	2.65	.104	5.09	.200	5.85	.230	0.2	.008
	327R12-22 26545-GC	3	★	★	★	★	★	21.7	.854	1.5	.059	2.65	.104	5.09	.200	5.85	.230	0.2	.006
	327R12-22 31545-GC	3	★	★	★	★	★	21.7	.854	1.75	.069	3.15	.124	5.34	.210	5.85	.230	0.2	.008
	327R12-22 4154525-GC	3	★	★	★	★	★	21.7	.854	2.5	.098	4.15	.163	5.34	.210	5.85	.230	0.2	.008
	327R12-22 41545-GC	3	★	★	★	★	★	21.7	.854	2.0	.079	4.15	.163	5.34	.210	5.85	.230	0.2	.008
			P30	M15		N15	S15												

[1] To correspond with insert size on holder.

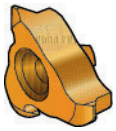
D312 D305 D334 D2

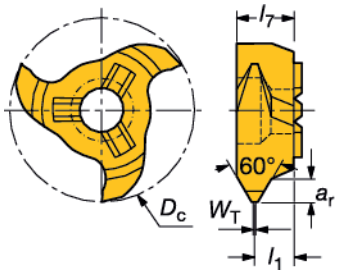
Inserts for CoroMill® 327

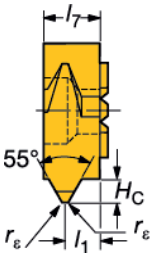
Threading

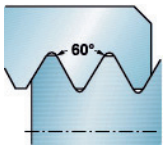
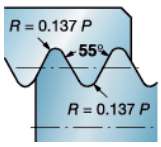
60° V-profile
Partial profile
Internal

Whitworth 55°
Full profile
External/internal







	Insert size[1]	Pitch, mm min	Pitch, mm max	Pitch, TPI min	Pitch, TPI max	Ordering code	Number of teeth z_n	P GC 1025	M GC 1025	K GC 1025	N GC 1025	S GC 1025	Dimensions, mm, inch D_c	l_1	l_7	a_r max	W_T	H_C	r_ε
						**V-profile 60°**													
	06	1	2	12	24	327R06-12 100VM-TH	3	★	★	★	★	★	11.7	2.45	3.6	1.2	0.12		
													.461	*.096*	*.142*	*.049*	*.005*		
		2.5	3	8	10	327R06-12 250VM-TH	3	★	★	★	★	★	11.7	2.1	3.6	1.7	0.31		
													.461	*.083*	*.142*	*.066*	*.012*		
	09	1	2	12	24	327R09-18 100VM-TH	3	★	★	★	★	★	17.7	5	5.85	1.2	0.12		
													.697	*.197*	*.230*	*.049*	*.005*		
						327R09-18 100VM-THM	6	★	★	★	★	★	17.7	2.95	5.85	1.2	0.12		
													.697	*.116*	*.230*	*.049*	*.005*		
		2.5	3.5	7	10	327R09-18 250VM-TH	3	★	★	★	★	★	17.7	4.1	5.85	2.6	0.31		
													.697	*.161*	*.230*	*.101*	*.012*		
						327R09-18 250VM-THM	6	★	★	★	★	★	17.7	2.95	5.85	2.6	0.31		
													.697	*.116*	*.230*	*.101*	*.012*		
	12	1	2	12	24	327R12-22 100VM-TH	3	★	★	★	★	★	21.7	4.6	5.85	1.2	0.12		
													.854	*.181*	*.230*	*.049*	*.005*		
						327R12-22 100VM-THM	6	★	★	★	★	★	21.7	4.6	5.95	1.2	0.12		
													.854	*.181*	*.234*	*.049*	*.005*		
		2.5	4.5	5	10	327R12-22 250VM-TH	3	★	★	★	★	★	21.7	3.7	5.85	2.6	0.31		
													.854	*.146*	*.230*	*.101*	*.012*		
						327R12-22 250VM-THM	6	★	★	★	★	★	21.7	3.7	5.95	2.6	0.31		
													.854	*.146*	*.234*	*.101*	*.012*		
						**Whitworth 55°**													
	06			11		327R06-12 11WH-TH	3	★	★	★	★	★	11.7	2	3.6			1.48	0.31
													.461	*.079*	*.142*			*.058*	*.012*
				14		327R06-12 14WH-TH	3	★	★	★	★	★	11.7	2.3	3.6			1.16	0.24
													.461	*.091*	*.142*			*.046*	*.009*
				19		327R06-12 19WH-TH	3	★	★	★	★	★	11.7	2.45	3.6			0.86	0.18
													.461	*.096*	*.142*			*.034*	*.007*
	09			11		327R09-18 11WH-TH	3	★	★	★	★	★	17.7	4.4	5.85			1.48	0.31
													.697	*.173*	*.230*			*.058*	*.012*
				14		327R09-18 14WH-TH	3	★	★	★	★	★	17.7	4.65	5.85			1.16	0.24
													.697	*.183*	*.230*			*.046*	*.009*
				19		327R09-18 19WH-TH	3	★	★	★	★	★	17.7	4.85	5.85			0.86	0.18
													.697	*.191*	*.230*			*.034*	*.007*
								P30	M15		N15	S15							

1) To correspond with insert size on holder.

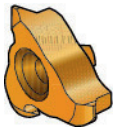
D312 D305 D334 D2

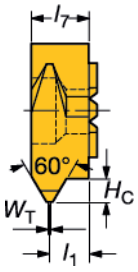
SANDVIK Coromant

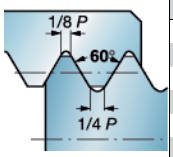
Inserts for CoroMill® 327

Threading

UN 60°
Full profile
Internal





	Insert size[1]	Pitch, TPI	Ordering code	Number of teeth z_n	P GC 1025	M GC 1025	K GC 1025	N GC 1025	S GC 1025	Dimensions, mm, inch D_c	l_1	l_7	W_T	H_C
			**UN 60°**											
	09	8	327R09-18 08UN-TH	3	★	★	★	★	★	17.7	4.4	5.85	0.4	1.73
										.697	*.173*	*.230*	*.016*	*.068*
			327R09-18 08UN-THM	6	★	★	★	★	★	17.7	4.4	5.85	0.4	1.73
										.697	*.173*	*.230*	*.016*	*.068*
		10	327R09-18 10UN-TH	3	★	★	★	★	★	17.7	4.65	5.85	0.32	1.37
										.697	*.183*	*.230*	*.013*	*.054*
			327R09-18 10UN-THM	6	★	★	★	★	★	17.7	4.65	5.85	0.32	1.37
										.697	*.183*	*.230*	*.013*	*.054*
		11	327R09-18 11UN-TH	3	★	★	★	★	★	17.7	4.75	5.85	0.29	1.24
										.697	*.187*	*.230*	*.011*	*.049*
			327R09-18 11UN-THM	6	★	★	★	★	★	17.7	4.75	5.85	0.29	1.24
										.697	*.187*	*.230*	*.011*	*.049*
		12	327R09-18 12UN-TH	3	★	★	★	★	★	17.7	4.85	5.85	0.26	1.14
										.697	*.191*	*.230*	*.010*	*.045*
			327R09-18 12UN-THM	6	★	★	★	★	★	17.7	4.85	5.85	0.26	1.14
										.697	*.191*	*.230*	*.010*	*.045*
		14	327R09-18 14UN-TH	3	★	★	★	★	★	17.7	4.95	5.85	0.23	0.99
										.697	*.195*	*.230*	*.009*	*.039*
			327R09-18 14UN-THM	6	★	★	★	★	★	17.7	4.95	5.85	0.23	0.99
										.697	*.195*	*.230*	*.009*	*.039*
		16	327R09-18 16UN-TH	3	★	★	★	★	★	17.7	5	5.85	0.2	0.86
										.697	*.197*	*.230*	*.008*	*.034*
			327R09-18 16UN-THM	6	★	★	★	★	★	17.7	5	5.85	0.2	0.86
										.697	*.197*	*.230*	*.008*	*.034*
		18	327R09-18 18UN-TH	3	★	★	★	★	★	17.7	5.1	5.85	0.18	0.76
										.697	*.201*	*.230*	*.007*	*.030*
			327R09-18 18UN-THM	6	★	★	★	★	★	17.7	5.1	5.85	0.18	0.76
										.697	*.201*	*.230*	*.007*	*.030*
		20	327R09-18 20UN-TH	3	★	★	★	★	★	17.7	5.15	5.85	0.16	0.69
										.697	*.203*	*.230*	*.006*	*.027*
			327R09-18 20UN-THM	6	★	★	★	★	★	17.7	5.15	5.85	0.16	0.69
										.697	*.203*	*.230*	*.006*	*.027*
		24	327R09-18 24UN-TH	3	★	★	★	★	★	17.7	5.2	5.85	0.13	0.58
										.697	*.205*	*.230*	*.005*	*.023*
			327R09-18 24UN-THM	6	★	★	★	★	★	17.7	5.2	5.85	0.13	0.58
										.697	*.205*	*.230*	*.005*	*.023*
					P30	M15		N15	S15					

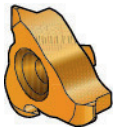
[1] To correspond with insert size on holder.

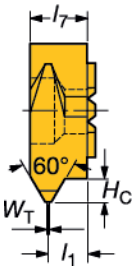
D312 D305 D334 D2

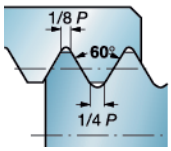
Inserts for CoroMill® 327

Threading

Metric 60°
Full profile
Internal

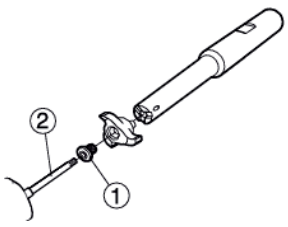




	Insert size[1]	Pitch, mm	Ordering code	Number of teeth z_n	P GC 1025	M GC 1025	K GC 1025	N GC 1025	S GC 1025	Dimensions, mm, inch D_c	l_1	l_7	W_T	H_C
			Metric 60°											
	09	1.5	**327R09-18 150MM-TH**	3	★	★	★	★	★	17.7	4.8	5.85	0.18	0.81
										.697	*.189*	*.230*	*.007*	*.810*
			327R09-18 150MM-THM	6	★	★	★	★	★	17.7	4.8	5.85	0.18	0.81
										.697	*.189*	*.230*	*.007*	*.810*
		2	**327R09-18 200MM-TH**	3	★	★	★	★	★	17.7	4.6	5.85	0.25	1.08
										.697	*.181*	*.230*	*.010*	*1.080*
			327R09-18 200MM-THM	6	★	★	★	★	★	17.7	4.6	5.85	0.25	1.08
										.697	*.181*	*.230*	*.010*	*1.080*
		3	**327R09-18 300MM-TH**	3	★	★	★	★	★	17.7	4.3	5.85	0.37	1.62
										.697	*.169*	*.230*	*.015*	*1.620*
			327R09-18 300MM-THM	6	★	★	★	★	★	17.7	4.3	5.85	0.37	1.62
										.697	*.169*	*.230*	*.015*	*1.620*
		3.5	**327R09-18 350MM-TH**	3	★	★	★	★	★	17.7	4.1	5.85	0.43	1.89
										.697	*.161*	*.230*	*.017*	*1.890*
			327R09-18 350MM-THM	6	★	★	★	★	★	17.7	4.1	5.85	0.43	1.89
										.697	*.161*	*.230*	*.017*	*1.890*
	12	1.5	**327R12-22 150MM-TH**	3	★	★	★	★	★	21.7	4.8	5.85	0.18	0.81
										.854	*.189*	*.230*	*.007*	*.810*
		1.75	**327R12-22 175MM-TH**	3	★	★	★	★	★	21.7	4.7	5.85	0.21	0.95
										.854	*.185*	*.230*	*.008*	*.950*
		2	**327R12-22 200MM-TH**	3	★	★	★	★	★	21.7	4.6	5.85	0.25	1.08
										.854	*.181*	*.230*	*.010*	*1.080*
		3	**327R12-22 300MM-TH**	3	★	★	★	★	★	21.7	4.3	5.85	0.37	1.62
										.854	*.169*	*.230*	*.015*	*1.620*
		3.5	**327R12-22 350MM-TH**	3	★	★	★	★	★	21.7	4.1	5.85	0.43	1.89
										.854	*.161*	*.230*	*.017*	*1.890*
		4	**327R12-22 400MM-TH**	3	★	★	★	★	★	21.7	3.9	5.85	0.5	2.16
										.854	*.154*	*.230*	*.020*	*2.160*
		4.5	**327R12-22 450MM-TH**	3	★	★	★	★	★	21.7	3.7	5.85	0.56	2.43
										.854	*.146*	*.230*	*.022*	*2.430*
					P30	M15		N15	S15					

1) To correspond with insert size on holder.

Spare parts for CoroMill® 327



	1	2
Insert size	Screw	Screwdriver (Torx Plus)
06	5513 039-03	5680 046-01 (8IP)
09	5513 039-02	5680 046-02 (15IP)
12	5513 039-04	5680 046-06 (20IP)
14	5513 039-04	5680 046-06 (20IP)

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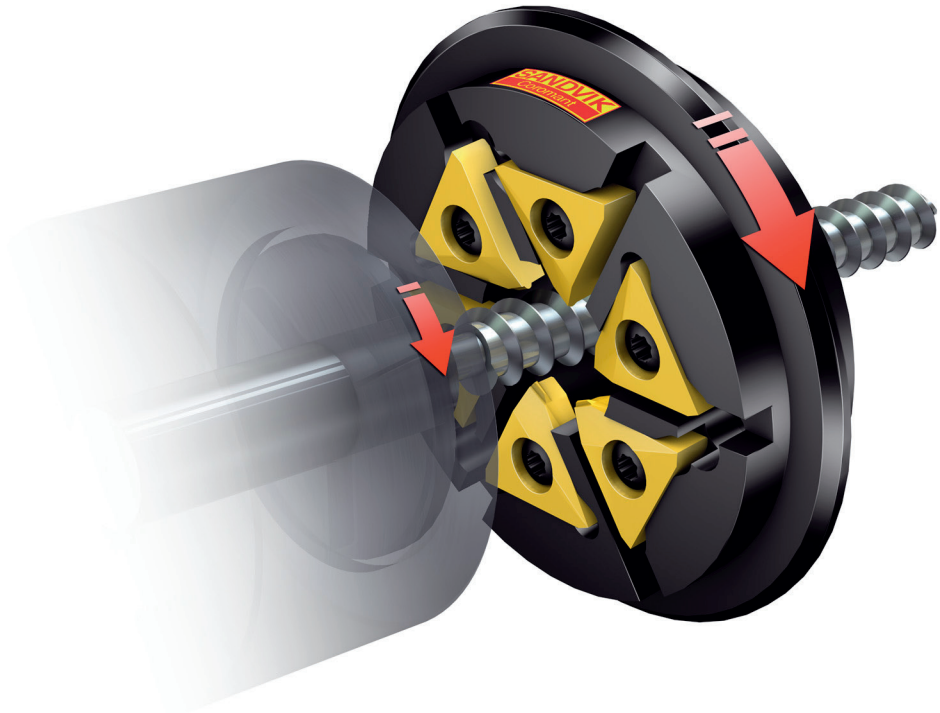
CoroMill® 325

Thread whirling cutter

For threading of long slender components



Ideal for medical bone screws and implants

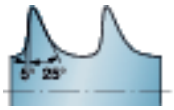
The growing use of medical bone screws, implants and other micro-components creates a need for techniques that produce special thread forms quickly and at high tolerances.

New thread whirling inserts and holders from Sandvik Coromant meet this need and are compatible with a large number of sliding head machines. They can thread long, slender components from rough stock at high speeds, without the need for a dedicated thread whirling machine.

Standard and special inserts

Standard inserts for HA and HB threads fit all thread whirling rings and follow thread standard **ISO 5835-1991** for medical screws.

HA thread



HB thread

Wide range of sliding head machine types

Whirling ring codes	MTM	Spindle producer
325-12AP40-16M	Citizen	PCM
325-12AQ40-16M	Citizen	Jarvis
325-12BB40-16M	Star	Star
325-12CC52-16M	Tsugami	Tsugami
325-12DD40-16M	Tornos	Tornos
325-12EE32-16M	-	WTO

Insert assortment

Insert code and grade	For thread
325R16-150HAF01, GC1105	HA 4
325R16-175HAF01, GC1105	HA 4.5; HA 5
325R16-175HBF01, GC1105	HB 4
325R16-275HBF01, GC1105	HB 6.5

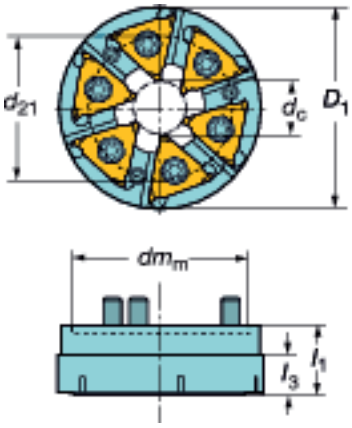
ISO application areas:

M N S

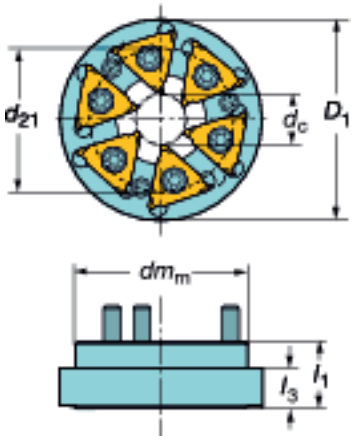
CoroMill® 325

Thread whirling cutters

Design 1



Design 2



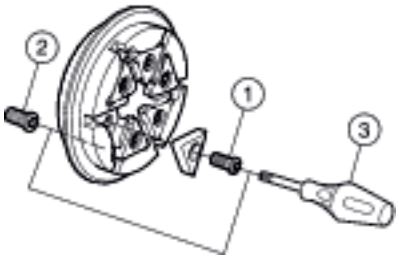
l_1 = programming length

Machine type	Spindle	△	iC	d_c	Ordering code	Design	⌖	KG	Dimensions, mm, inch dm_m	d_{21}	D_1	l_1	l_3	Gauge insert	Nm[1]
Citizen	PCM	16	3/8	12	**325-12AP40-16M**	1	6	0.12	40	32.5	46	15.5	-	325R16-150HAF01	6.5
				.472					*1.575*	*1.280*	*1.811*	*.610*	-		
Citizen	Jarvis			12	**325-12AQ40-16M**	1	6	0.12	40	32	46	13.5	-	325R16-150HAF01	6.5
				.472					*1.575*	*1.260*	*1.811*	*.531*	-		
Star	Star			12	**325-12BB40-16M**	2	6	0.12	40	32	47	15	9	325R16-150HAF01	6.5
				.472					*1.575*	*1.260*	*1.850*	*.591*	*.354*		
Tsugami	Tsugami			20	**325-20CC52-16M**	2	6	0.15	52	42	65	17	6	325R16-150HAF01	6.5
				.787					*2.047*	*1.654*	*2.559*	*.669*	*.236*		
Tornos	Tornos			12	**325-12DD40-16M**	2	6	0.12	40	15	57	15	6	325R16-150HAF01	6.5
				.472					*1.575*	*.591*	*2.244*	*.591*	*.236*		
	WTO			12	**325-12EE32-16M**	2	6	0.12	32	28	43.8	18.2	10.5	325R16-150HAF01	6.5
				.472					*1.260*	*1.102*	*1.724*	*.717*	*.413*		

1) Insert tightening torque, Nm.

Whirling rings for other machines/spindle units can also be ordered. Contact your local Sandvik Coromant representative for more information.

Spare parts for CoroMill® 325



Cutter	1	2	3
	Insert screw	Mounting screw	Screwdriver (Torx Plus)
325-12AP40-16M	5513 039-05	5513 039-05	5680 046-02 (20IP)
325-12AQ40-16M	5513 039-05	5513 039-05	5680 046-02 (20IP)
325-12BB40-16M	5513 039-05	5513 039-05	5680 046-02 (20IP)
325-12CC52-16M	5513 039-05	5513 020-55	5680 046-02 (20IP)
325-12DD40-16M	5513 039-05	5513 039-05	5680 046-02 (20IP)
325-12EE32-16M	5513 039-05	5513 039-05	5680 046-02 (20IP)

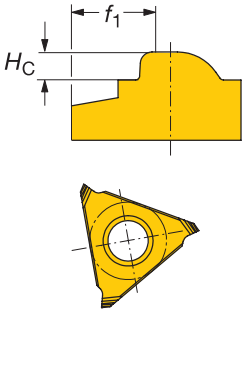
 J2

 D191

Inserts for CoroMill® 325

Thread whirling

HA threads

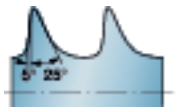


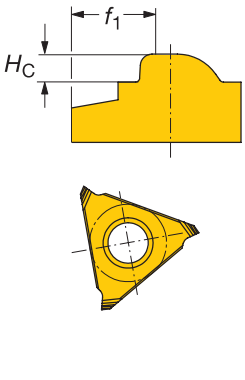
ISO 5835-1991

Tolerances, inch (mm):
H_c = ±0.01 (±.0004)
f_1 = ±0.02 (±.0008)

		Pitch, mm		Dimensions, millimeter, inch (mm, in.)							M GC 1105	N GC 1105	S GC 1105
	iC		**Ordering code**	H_C mm	H_C in.	f_1 mm	f_1 in.	*iW* mm	*iW* in.	For thread	M20	N20	S20
16	3/8	1.50	**325R16-150HAF01**	0.480	.0189	2.680	.1055	4.100	.1614	HA 4	★	☆	★
		1.75	**325R16-175HAF01**	0.750	.0295	2.620	.1031	4.100	.1614	HA 4.5/HA 5	★	☆	★

HB threads





ISO 5835-1991

		Pitch, mm		Dimensions, millimeter, inch (mm, in.)							M GC 1105	N GC 1105	S GC 1105
	iC		**Ordering code**	H_C mm	H_C in.	f_1 mm	f_1 in.	*iW* mm	*iW* in.	For thread	M20	N20	S20
16	3/8	1.75	**325R16-175HBF01**	1.025	.0404	2.660	.1047	4.100	.1614	HB 4	★	☆	★
		2.75	**325R16-275HBF01**	1.750	.0689	2.080	.0819	4.100	.1614	HB 6.5	★	☆	★

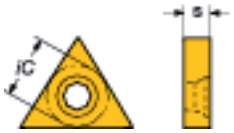
Specially-formed inserts can also be ordered. See your local Sandvik Coromant representative for more information.

D312 D305

Inserts for CoroMill® 325

Thread whirling

Blanks

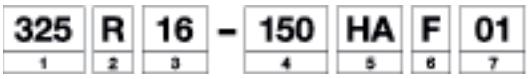


Tolerances, inch (mm):
s = ±0.02 (±.0008)

△	*iC*	**Ordering code**	Dimensions, millimeter, inch (mm, in.) *s* mm	*s* in.	P - H10F	M - H10F	K - H10F	N - H10F	S - H10F
16	3/8	**325R16-0400-BG**	4.0	.157	★	★	★	★	★
		325R16-0500-BG	5.5	.217	★	★	★	★	★

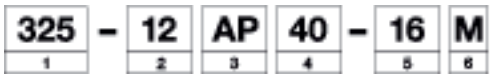
Code key for CoroMill® 325

Inserts



1	Product family
2	R = Right hand L = Left hand
3	Insert size, mm
4	Pitch, mm
5	Thread type HA = HA profile HB = HB profile
6	Edge performance F = Sharp cutting edge
7	Number of teeth

Cutters



1	Product family
2	Diameter D_c mm
3	Machine type / Spindle maker A = Citizen B = Star C = Tsugami D = Tornos E = WTO P = PCM Q = Jarvis
4	Mounting size, mm
5	Insert sizes, mm
6	Close pitch

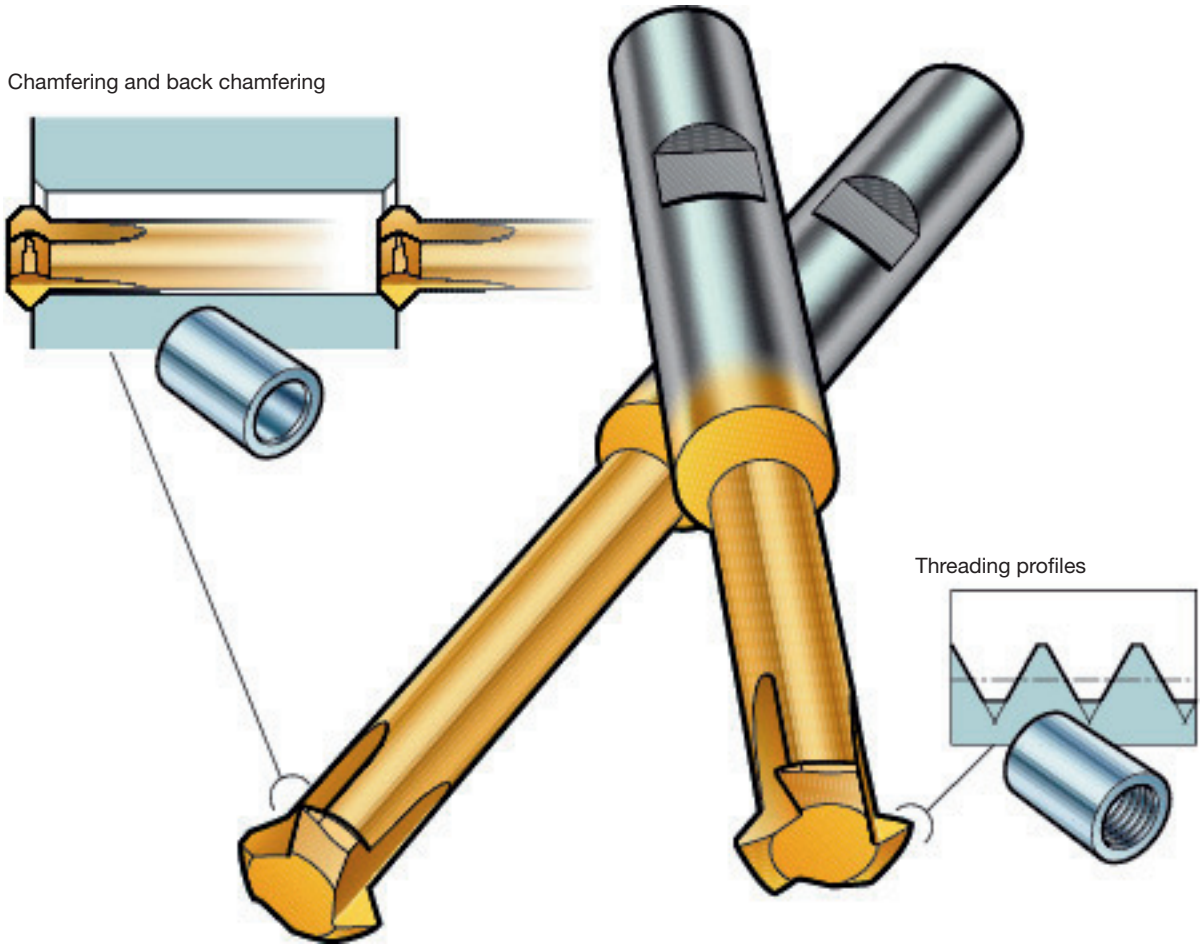
CoroMill® 326

Solid end mill

Chamfer and threading applications

Weldon shank

Chamfering and back chamfering



Threading profiles

Grade GC1025

ISO application area:

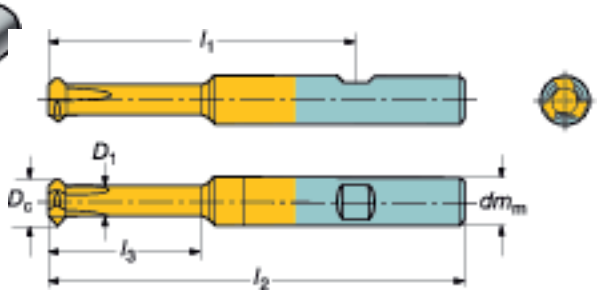
P M K N S H

HydroGrip® pencil chuck

SANDVIK Coromant

CoroMill® 326

Solid carbide endmills



Solid carbide: h6

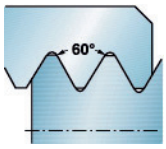
Internal threading

Chamfering

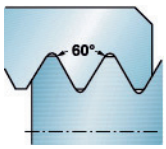
l_1 = programming length

Internal thread milling tools

Metric version

	D_c mm	Pitch, mm min	Pitch, mm max	Pitch, TPI min	Pitch, TPI max	Number of teeth z	Ordering code	Dimensions dm_m	D_1	l_1	l_2	l_3	a_r max	W_T	P GC 1025	M GC 1025	K GC 1025	N GC 1025	S GC 1025
							V-profile 60°												
	5.8	0.5	1.5	16	50	3	**326R06-B15050VM-TH**	6	3.5	39.7	58	15	0.91	0.06	★	★	★	★	★
	7.8	0.5	1.5	16	50	3	**326R08-B25050VM-TH**	8	5.5	49.5	68	25	0.91	0.06	★	★	★	★	★
		1.0	2.0	12	24	3	**326R08-B25100VM-TH**	8	5	49.5	68	25	1.19	0.12	★	★	★	★	★

Inch version

	D_c inch	Pitch, mm min	Pitch, mm max	Pitch, TPI min	Pitch, TPI max	Number of teeth z	Ordering code	Dimensions, inch dm_m	D_1	l_1	l_2	l_3	a_r max	W_T	P GC 1025	M GC 1025	K GC 1025	N GC 1025	S GC 1025
							V-profile 60°												
	.228	0.5	1.5	16	50	3	**A326R06-M15050VM-TH**	.250	.138	1.563	2.284	.591	.036	.002	★	★	★	★	★
	.307	0.5	1.5	16	50	3	**A326R08-M25050VM-TH**	.312	.216	1.949	2.677	.984	.036	.002	★	★	★	★	★
		1.0	2.0	12	24	3	**A326R08-M25100VM-TH**	.312	.197	1.949	2.677	.984	.047	.005	★	★	★	★	★

Chamfering tools

Metric version

D_c mm	Number of teeth z	Ordering code	Dimensions dm_m	D_1	l_1	l_2	l_3	l_a	a_r max	P GC 1025	M GC 1025	K GC 1025	N GC 1025	S GC 1025
5.8	3	**326R06-B1502006-CH**	6	4.2	39.5	58	15	0.2	0.6	★	★	★	★	★
	3	**326R06-B2502006-CH**	6	4.2	49.5	68	25	0.2	0.6	★	★	★	★	★
7.8	3	**326R08-B2502012-CH**	8	5	49	68	25	0.2	1.2	★	★	★	★	★
	3	**326R08-B3502012-CH**	8	5	59	78	35	0.2	1.2	★	★	★	★	★

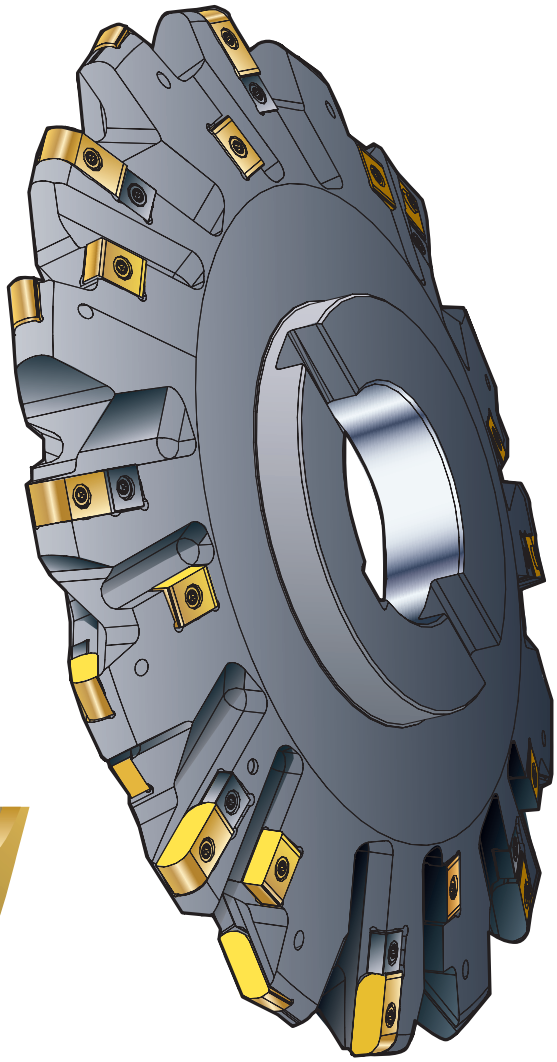
Inch version

D_c inch	Number of teeth z	Ordering code	Dimensions, inch dm_m	D_1	l_1	l_2	l_3	l_a	a_r max	P GC 1025	M GC 1025	K GC 1025	N GC 1025	S GC 1025
.228	3	**A326R06-M1502006-CH**	.250	.165	1.555	2.284	.591	.008	.024	★	★	★	★	★
	3	**A326R06-M2502006-CH**	.250	.165	1.949	2.677	.984	.008	.024	★	★	★	★	★
.307	3	**A326R08-M2502012-CH**	.312	.197	1.929	2.677	.984	.008	.047	★	★	★	★	★
	3	**A326R08-M3502012-CH**	.312	.197	2.323	3.071	1.378	.008	.047	★	★	★	★	★

CoroMill® 170

Rough gear milling with precision

Tool profile according to DIN3972-4



High productivity

- Secure and stable insert seats
- High feed rates
- High cutting speeds

Insert geometries

-M -H

High precision cutter body and inserts

Minimal and even finishing allowance

ISO application areas:

P

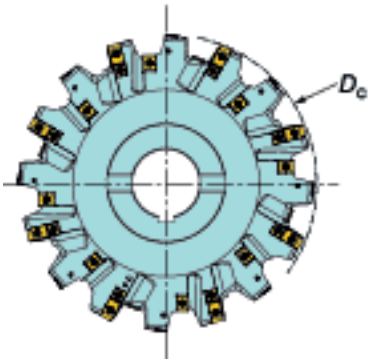
SANDVIK Coromant

CoroMill® 170

Rough gear milling with precision

Profile in accordance with DIN3972-4

TO BE QUOTED



Module	D_c	Ordering code	Dimensions, mm, inch dm_m[2]	D_{5m}	E	Number of inserts, z_n	Number of root inserts, z_r	Number of flank inserts, z_f	Root insert	Flank insert
12	210	S-170-12-210Q50N018A	50	120	70	18	12	6	170-12-240740...	170-00-200801...
	8.268		*1.969*	*4.724*	*2.756*					
	270	S-170-12-270Q60N018C	60	140	70	18	12	6	170-12-240740...	170-00-200801...
	10.630		*2.362*	*5.512*	*2.756*					
	350	S-170-12-350Q80N024C	80	170	90	24	16	8	170-12-240740...	170-00-200801...
	13.780		*3.150*	*6.693*	*3.543*					
	400	S-170-12-400Q90N030D	90[1]	170	100	30	20	10	170-12-240740...	170-00-200801...
	15.748		*3.543*[1]	*6.693*	*3.937*					
	410	S-170-12-410Q100N030E	100	190	90	30	20	10	170-12-240740...	170-00-200801...
	16.142		*3.937*	*7.480*	*3.543*					
	480	S-170-12-480Q100N036E	100	190	90	36	24	12	170-12-240740...	170-00-200801...
	18.898		*3.937*	*7.480*	*3.543*					
14	210	S-170-14-210Q50N018A	50	120	70	18	12	6	170-14-240750...	170-00-200801...
	8.268		*1.969*	*4.724*	*2.756*					
	270	S-170-14-270Q60N018C	60	140	70	18	12	6	170-14-240750...	170-00-200801...
	10.630		*2.362*	*5.512*	*2.756*					
	350	S-170-14-350Q80N024D	80	170	90	24	16	8	170-14-240750...	170-00-200801...
	13.780		*3.150*	*6.693*	*3.543*					
	400	S-170-14-400Q90N030D	90[1]	170	100	30	20	10	170-14-240750...	170-00-200801...
	15.748		*3.543*[1]	*6.693*	*3.937*					
	450	S-170-14-450Q100N036E	100	190	90	36	24	12	170-14-240750...	170-00-200801...
	17.717		*3.937*	*7.48*	*3.543*					
16	270	S-170-16-270Q60N024C	60	140	90	24	12	12	170-16-240860...	170-00-200801...
	10.63		*2.362*	*5.512*	*3.543*					
	350	S-170-16-350Q80N032D	80	170	90	32	16	16	170-16-240860...	170-00-200801...
	13.78		*3.150*	*6.693*	*3.543*					
	400	S-170-16-400Q90N032D	90[1]	170	100	32	16	16	170-16-240860...	170-00-200801...
	15.748		*3.543*[1]	*6.693*	*3.937*					
	450	S-170-16-450Q100N040E	100	190	100	40	20	20	170-16-240860...	170-00-200801...
	17.717		*3.937*	*7.48*	*3.937*					
	500	S-170-16-500Q100N048E	100	190	100	48	24	24	170-16-240860...	170-00-200801...
	19.685		*3.937*	*7.480*	*3.937*					
18	270	S-170-18-270Q60N024C	60	140	90	24	12	12	170-18-240870...	170-00-200801...
	10.63		*2.362*	*5.512*	*3.543*					
	350	S-170-18-350Q80N032D	80	170	90	32	16	16	170-18-240870...	170-00-200801...
	13.780		*3.150*	*6.693*	*3.543*					
	400	S-170-18-400Q90N032D	90[1]	170	100	32	16	16	170-18-240870...	170-00-200801...
	15.748		*3.543*[1]	*6.693*	*3.937*					
	450	S-170-18-450Q100N040E	100	190	100	40	20	20	170-18-240870...	170-00-200801...
	17.717		*3.937*	*7.480*	*3.937*					
	500	S-170-18-500Q100N048E	100	190	100	48	24	24	170-18-240870...	170-00-200801...
	19.685		*3.937*	*7.480*	*3.937*					

[1] Cutter bodies only have radial keyways.

[2] Coupling dimensions in accordance with DIN138

Continued...

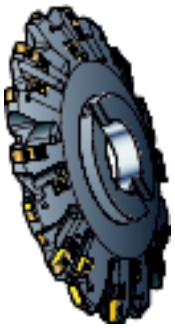
 J2

 D199

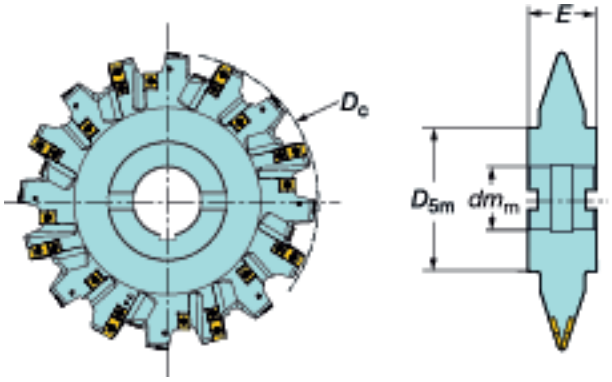
 D199

CoroMill® 170

Precision cutter for rough gear milling
Profile in accordance with DIN3972-4



TO BE QUOTED



Continued...

Module	D_c	Ordering code	Dimensions, mm, inch dm_m[2]	D_{5m}	E	Number of inserts, z_n	Number of root inserts, z_r	Number of flank inserts, z_f	Root insert	Flank insert
20	270	S-170-20-270Q60N024B	60	130	90	24	12	12	170-20-281075...	170-00-200801...
	10.630		*2.362*	*5.118*	*3.543*					
	350	S-170-20-350Q80N032D	80	170	100	32	16	16	170-20-281075...	170-00-200801...
	13.78		*3.150*	*6.693*	*3.937*					
	400	S-170-20-400Q90N032D	90[1]	170	100	32	16	16	170-20-281075...	170-00-200801...
	15.748		*3.543*[1]	*6.693*	*3.937*					
	450	S-170-20-450Q100N040E	100	190	110	40	20	20	170-20-281075...	170-00-200801...
	17.717		*3.937*	*7.480*	*4.331*					
	500	S-170-20-500Q100N048E	100	190	110	48	24	24	170-20-281075...	170-00-200801...
	19.685		*3.937*	*7.480*	*4.331*					
22	270	S-170-22-270Q60N024B	60	130	90	24	12	12	170-22-281085...	170-00-200801...
	10.63		*2.362*	*5.118*	*3.543*					
	350	S-170-22-350Q80N032D	80	170	100	32	16	16	170-22-281085...	170-00-200801...
	13.78		*3.150*	*6.693*	*3.937*					
	400	S-170-22-400Q90N032D	90[1]	170	100	32	16	16	170-22-281085...	170-00-200801...
	15.748		*3.543*[1]	*6.693*	*3.937*					
	450	S-170-22-450Q100N040E	100	190	110	40	20	20	170-22-281085...	170-00-200801...
	17.717		*3.937*	*7.480*	*4.331*					
	500	S-170-22-500Q100N048E	100	190	110	48	24	24	170-22-281085...	170-00-200801...
	19.685		*3.937*	*7.480*	*4.331*					

1) Cutter bodies only have radial keyways.
2) Coupling dimensions in accordance with DIN138

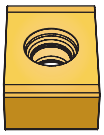
Continued...


J2

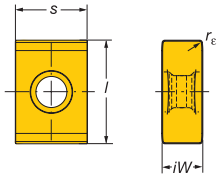

D199

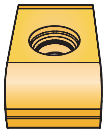

D199

Inserts for CoroMill® 170

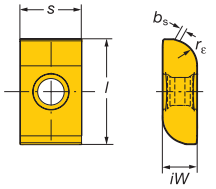


Flank insert



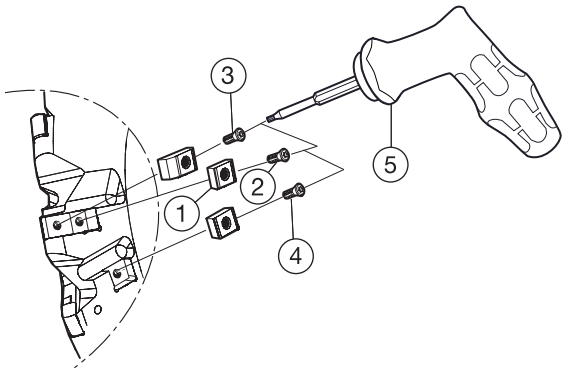


Root insert



Module	Ordering code	P GC 1030	P GC 4240	Dimensions, millimeter, inch (mm, in.) l mm	l in.	s mm	s in.	iW mm	iW in.	b_s mm	b_s in.	r_ε mm	r_ε in.
	Root insert												
12	170-12-240740E-PRMN	★	☆	24	.945	14	.551	7	.276	1.0	.039	4.0	.157
	170-12-240740E-PRHN	★	☆	24	.945	14	.551	7	.276	1.0	.039	4.0	.157
14	170-14-240750E-PRMN	★	☆	24	.945	14	.551	7	.276	1.0	.039	5.0	.197
	170-14-240750E-PRHN	★	☆	24	.945	14	.551	7	.276	1.0	.039	5.0	.197
16	170-16-240860E-PRMN	★	☆	24	.945	14	.551	8	.315	1.0	.039	6.0	.236
	170-16-240860E-PRHN	★	☆	24	.945	14	.551	8	.315	1.0	.039	6.0	.236
18	170-18-240870E-PRMN	★	☆	24	.945	14	.551	8	.315	1.0	.039	7.0	.276
	170-18-240870E-PRHN	★	☆	24	.945	14	.551	8	.315	1.0	.039	7.0	.276
20	170-20-281075E-PRMN	★	☆	28	1.102	14	.551	10	.394	1.0	.039	7.5	.295
	170-20-281075E-PRHN	★	☆	28	1.102	14	.551	10	.394	1.0	.039	7.5	.295
22	170-22-281085E-PRMN	★	☆	28	1.102	14	.551	10	.394	1.0	.039	8.5	.335
	170-22-281085E-PRHN	★	☆	28	1.102	14	.551	10	.394	1.0	.039	8.5	.335
	Flank insert												
12-22	170-00-200801E-PFMN	★	☆	20	.787	14	.551	8	.315	-	-	0.5	.020
	170-00-200801E-PFHN	★	☆	20	.787	14	.551	8	.315	-	-	0.5	.020
		P30	P40										

★= First choice



Spare parts

Module	1. Shim	2. Shim screw	3. Root insert screw	4. Flank insert screw	5. Torque wrench[1)]
12-18	5322 520-01	5513 020-55	5513 020-55	5513 020-55	5680 100-07 (20IP)
20-22	5322 520-01	5513 020-55	5513 020-26	5513 020-26	5680 100-07 (20IP)

[1)]Accessories must be ordered separately.

D312 D305

Feed recommendations

Starting values

Module	Diameter mm	Diameter inch	z_c [1]	a_{e1} mm	a_{e1} inch	a_{e2} mm	a_{e2} inch	Geometry ..H. f_{z1} mm	Geometry ..H. f_{z1} inch	Geometry ..H. f_{z2} mm	Geometry ..H. f_{z2} inch	Geometry ..M. f_{z1} mm	Geometry ..M. f_{z1} inch	Geometry ..M. f_{z2} mm	Geometry ..M. f_{z2} inch
12	210	8.268	6/3	27	1.063	-	-	0.31-0.43	.012-.017	-	-	0.24-0.36	.009-.014	-	-
	270	10.630	6/3	27	1.063	-	-	0.36-0.48	.015-.019	-	-	0.27-0.39	.011-.015	-	-
	350	13.780	8/4	27	1.063	-	-	0.41-0.53	.016-.021	-	-	0.31-0.43	.012-.017	-	-
	400	15.748	10/5	27	1.063	-	-	0.44-0.56	.017-.022	-	-	0.34-0.46	.013-.018	-	-
	410	16.142	10/5	27	1.063	-	-	0.44-0.56	.017-.022	-	-	0.34-0.46	.013-.018	-	-
	480	18.898	12/6	27	1.063	-	-	0.60-0.66	.024-.026	-	-	0.37-0.49	.015-.019	-	-
14	210	8.268	6/3	31.5	1.240	-	-	0.31-0.43	.012-.017	-	-	0.22-0.34	.009-.013	-	-
	270	10.630	6/3	31.5	1.240	-	-	0.33-0.45	.013-.018	-	-	0.25-0.37	.010-.015	-	-
	350	13.780	8/4	31.5	1.240	-	-	0.38-0.5	.015-.020	-	-	0.29-0.41	.011-.016	-	-
	400	15.748	10/5	31.5	1.240	-	-	0.40-0.52	.016-.020	-	-	0.31-0.43	.012-.017	-	-
	450	17.717	12/6	31.5	1.240	-	-	0.43-0.51	.017-.020	-	-	0.33-0.45	.013-.018	-	-
16	270	10.630	6/3	36	1.417	-	-	0.31-0.43	.012-.017	-	-	0.23-0.35	.009-.014	-	-
	350	13.780	8/4	36	1.417	-	-	0.35-0.47	.014-.019	-	-	0.27-0.39	.011-.015	-	-
	400	15.748	8/4	36	1.417	-	-	0.38-0.5	.015-.020	-	-	0.29-0.41	.011-.016	-	-
	450	17.717	10/5	36	1.417	-	-	0.40-0.52	.016-.020	-	-	0.31-0.43	.012-.017	-	-
	500	19.685	12/6	36	1.417	-	-	0.42-0.54	.017-.021	-	-	0.33-0.45	.013-.018	-	-
18	270	10.630	6/3	40.5	1.594	-	-	0.29-0.41	.011-.016	-	-	0.22-0.34	.009-.013	-	-
	350	13.780	8/4	40.5	1.594	-	-	0.33-0.45	.013-.018	-	-	0.25-0.37	.010-.015	-	-
	400	15.748	8/4	40.5	1.594	-	-	0.35-0.47	.014-.019	-	-	0.27-0.39	.011-.015	-	-
	450	17.717	10/5	40.5	1.594	-	-	0.38-0.5	.015-.020	-	-	0.29-0.41	.011-.016	-	-
	500	19.685	12/6	40.5	1.594	-	-	0.40-0.52	.016-.020	-	-	0.31-0.43	.012-.017	-	-
20	270	10.630	6/3	45	1.772	-	-	0.28-0,40	.011-.016	-	-	0.21-0.33	.008-.013	-	-
	350	13.780	8/4	45	1.772	-	-	0.31-0.43	.012-.017	-	-	0.24-0.36	.009-.014	-	-
	400	15.748	8/4	45	1.772	-	-	0.34-0.46	.013-.018	-	-	0.26-0.38	.010-.015	-	-
	450	17.717	10/5	45	1.772	-	-	0.36-0.48	.015-.019	-	-	0.27-0.39	.011-.015	-	-
	500	19.685	12/6	45	1.772	-	-	0.38-0.5	.015-.020	-	-	0.29-0.41	.011-.016	-	-
22	270	10.630	6/3	40	1.575	10	.394	0.29-0.41	.011-.016	0.60-0.74	.024-.029	0.22-0.34	.009-.013	0.47-0.59	.019-.023
	350	13.780	8/4	40	1.575	10	.394	0.33-0.45	.013-.018	0.69-0.81	.027-.032	0.25-0.37	.010-.015	0.54-0.66	.021-.024
	400	15.748	8/4	40	1.575	10	.394	0.36-0.48	.015-.019	0.74-0.86	.029-.034	0.27-0.39	.011-.015	0.58-0.70	.023-.028
	450	17.717	10/5	40	1.575	10	.394	0.38-0.5	.015-.020	0.79-0.91	.031-.036	0.29-0.41	.011-.016	0.62-0.74	.024-.029
	500	19.685	12/6	40	1.575	10	.394	0.40-0.52	.016-.020	0.83-0.95	.033-.037	0.31-0.43	.012-.017	0.65-0.77	.026-.030

[1] Effective number of inserts, root inserts/flank inserts

Cutting speed recommendations

Starting values

P	v_c m/min (ft/min)
GC1030	120-160 (395-525)
GC4240	100-140 (330-460)

Code key for CoroMill® 170

Cutter

1 Product family

2 Module

3 Diameter D_c, mm

4 Mounting

Q = Arbor metric
R = Arbor inch
J = Arbor CIS

5 Mounting size

e.g. 080 = 80 mm

6 N = Neutral style

7 Number of inserts

8 Diameter of radial keyway

A = 120 mm (4.724 inch)
B = 130 mm (5.118 inch)
C = 140 mm (5.512 inch)
D = 170 mm (6.693 inch)
E = 190 mm (7.480 inch)

Insert

1 Product family

2 Module

3 Insert size

20 = 20 mm (.787 inch)
24 = 24 mm (.945 inch)
28 = 28 mm (1.102 inch)

4 Insert thickness

07 = 7 mm (.276 inch)
08 = 8 mm (.315 inch)
10 = 10 mm (.394 inch)

5 Radius

e.g. 40 = 4.0 mm

6 Edge performance

E = Highest sharpness and precision

7 Main ISO applications area

P = Steel

8 Type of insert

F = Flank insert
R = Root insert

9 Operation

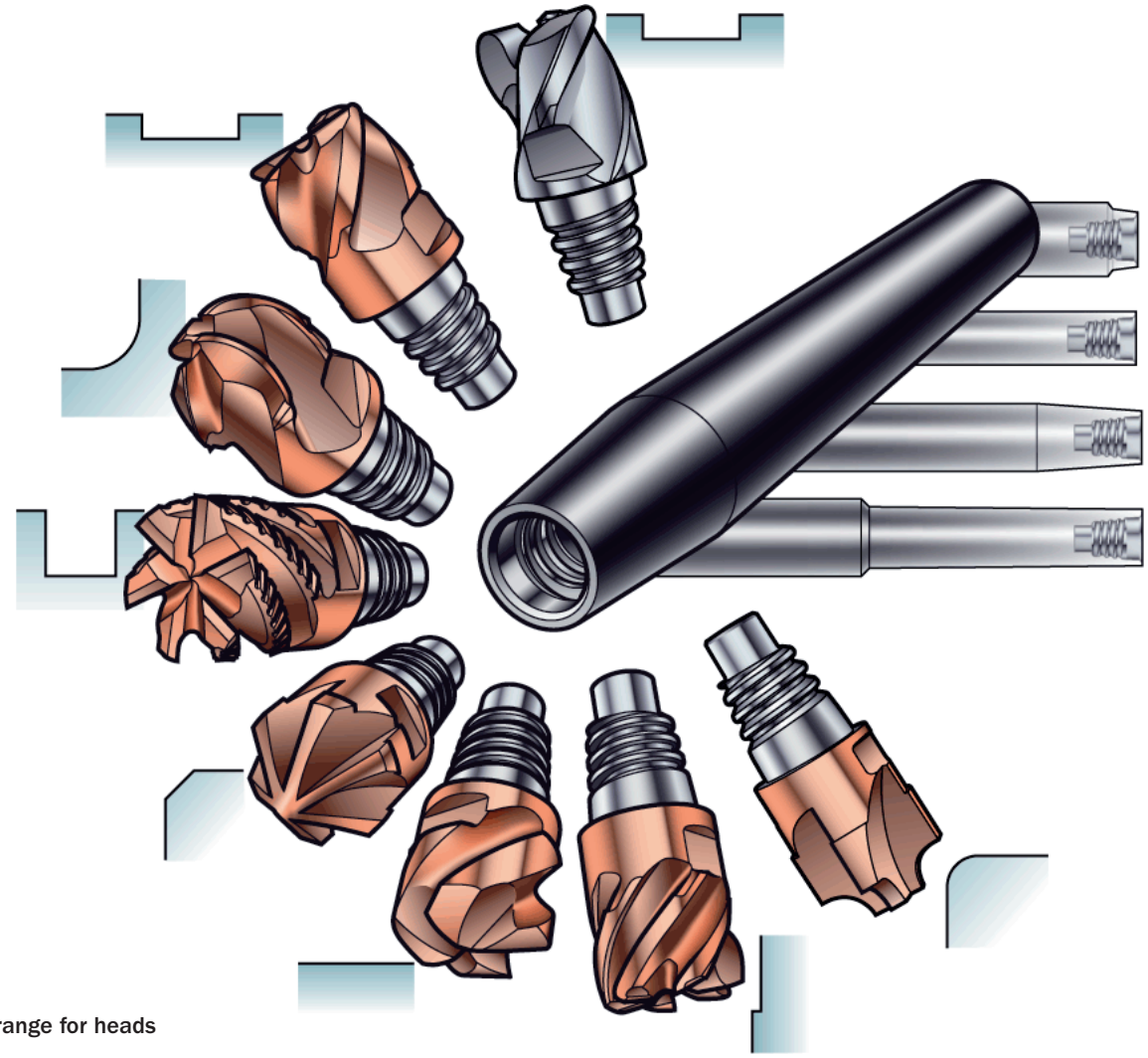
L = Light
M = Medium
H = Heavy

10 Geometry

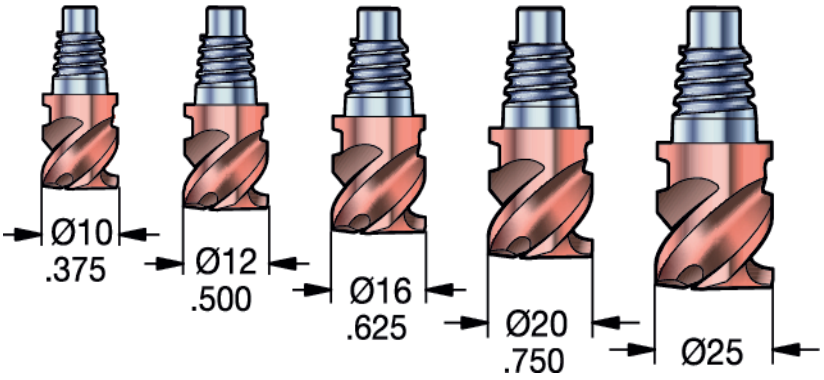
N = Neutral

CoroMill® 316

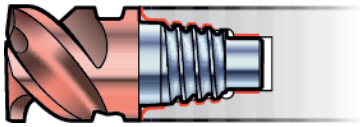
The Exchangeable-Head Milling System



Diameter range for heads



Flexible system with assortment of heads



Interface

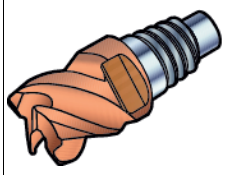
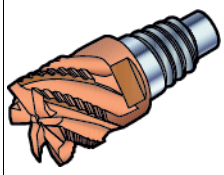
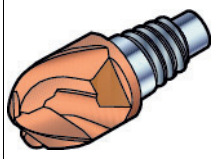
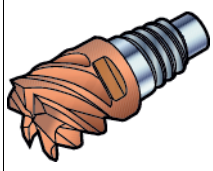
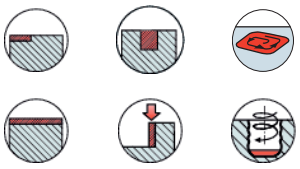
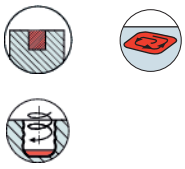
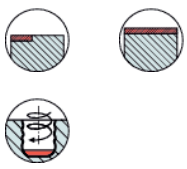
Self-centering screw thread

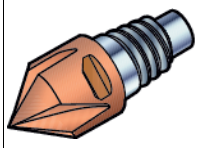
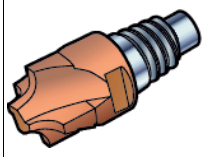
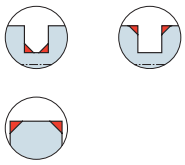
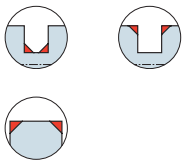
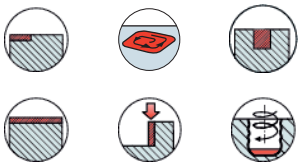
ISO application areas:

P M K N S

SANDVIK Coromant

Tool selection guide

	Roughing/semi-finishing First choice	Roughing, high feed	Roughing Kordell	Profiling	Finishing
					
Page	D204	D207	D208	D210	D209
Design	Corner radius Center cutting	High feed cutter Non-center cutting	Kordell design Center cutting	Ball nose end mill Center cutting	Multi edge Non-center cutting with/without radius
Geometry	P	P	K	G	L
Cutter diameter (D_c)	10-25 mm .375-1.000 inch	10-25 mm .375-1.000 inch	10-25 mm .375-1.000 inch	10-25 mm .375-1.000 inch	10-25 mm .375-1.000 inch
Corner radius (r_ε), dia. mm/ inch	0.5-4 mm .015-.250 inch	1.5-3 mm .060-.080 inch	0.4 mm .015-.062 inch	5-12 mm .188-.500 inch	0-1.5 mm .015-.250 inch
Application					

	Chamfering	Chamfering	Aluminum milling		
					
Page	D211	D212	D206		
Design	Chamfer 15, 30, 45, 49, 60	Chamfer radius	Corner radius Center cutting		
Geometry	G	G	A		
Cutter diameter (D_c)	10-16 mm .375-.625 inch	10-25 mm .375-1.000 inch	10-25 mm -		
Corner radius (r_ε), dia. mm/ inch	No radius	1.5-8 mm .062-.313 inch	0-4 mm		
Application					

 Shoulder milling

 Slot milling

 Facemilling

 Axial / plunge milling

 Pocket milling

 Ramping

 Profiling

 Chamfering

 Chamfering inside

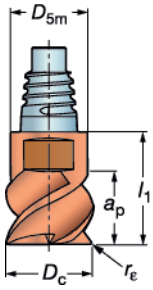
 Chamfering outside

Corner radius end mill

General milling, first choice

Center cutting

Helix angle: 50°
Tolerances: D_c = h9



Metric version

D_c mm	Ordering code	Coupling size	z_n	Dimensions D_{5m}	l_1	r_ε	Max a_p	kg	P GC 1030	M GC 1030	K GC 1030	S GC 1030
10	316-10SM350-10005P	E10	3	9.7	12.4	0.5	5.5	0.02	☆	☆	☆	☆
	316-10SM350-10010P		3	9.7	12.4	1.0	5.5	0.02	☆	☆	☆	☆
	316-10SM450-10005P		4	9.7	12.4	0.5	5.5	0.02	☆	☆	☆	☆
	316-10SM450-10010P		4	9.7	12.4	1.0	5.5	0.02	☆	☆	☆	☆
	316-10SM450-10015P		4	9.7	12.4	1.5	5.5	0.02	☆	☆	☆	☆
	316-10SM450-10020P		4	9.7	12.4	2.0	5.5	0.02	☆	☆	☆	☆
	316-10SM450-10030P		4	9.7	12.4	3.0	5.5	0.02	☆	☆	☆	☆
12	316-12SM350-12005P	E12	3	11.7	14.5	0.5	6.5	0.04	☆	☆	☆	☆
	316-12SM350-12010P		3	11.7	14.5	1.0	6.5	0.04	☆	☆	☆	☆
	316-12SM450-12005P		4	11.7	14.5	0.5	6.5	0.04	☆	☆	☆	☆
	316-12SM450-12010P		4	11.7	14.5	1.0	6.5	0.04	☆	☆	☆	☆
	316-12SM450-12015P		4	11.7	14.5	1.5	6.5	0.04	☆	☆	☆	☆
	316-12SM450-12020P		4	11.7	14.5	2.0	6.5	0.04	☆	☆	☆	☆
	316-12SM450-12030P		4	11.7	14.5	3.0	6.5	0.04	☆	☆	☆	☆
	316-12SM450-12040P		4	11.7	14.5	4.0	6.5	0.04	☆	☆	☆	☆
16	316-16SM350-16005P	E16	3	15.5	18.7	0.5	8.5	0.07	☆	☆	☆	☆
	316-16SM350-16010P		3	15.5	18.7	1.0	8.5	0.07	☆	☆	☆	☆
	316-16SM450-16005P		4	15.5	18.7	0.5	8.5	0.07	☆	☆	☆	☆
	316-16SM450-16010P		4	15.5	18.7	1.0	8.5	0.07	☆	☆	☆	☆
	316-16SM450-16015P		4	15.5	18.7	1.5	8.5	0.07	☆	☆	☆	☆
	316-16SM450-16020P		4	15.5	18.7	2.0	8.5	0.07	☆	☆	☆	☆
	316-16SM450-16030P		4	15.5	18.7	3.0	8.5	0.07	☆	☆	☆	☆
	316-16SM450-16040P		4	15.5	18.7	4.0	8.5	0.07	☆	☆	☆	☆
20	316-20SM350-20005P	E20	3	19.3	21.3	0.5	11.0	0.13	☆	☆	☆	☆
	316-20SM350-20010P		3	19.3	21.3	1.0	11.0	0.13	☆	☆	☆	☆
	316-20SM450-20005P		4	19.3	21.3	0.5	11.0	0.13	☆	☆	☆	☆
	316-20SM450-20010P		4	19.3	21.3	1.0	11.0	0.13	☆	☆	☆	☆
	316-20SM450-20015P		4	19.3	21.3	1.5	11.0	0.13	☆	☆	☆	☆
	316-20SM450-20020P		4	19.3	21.3	2.0	11.0	0.13	☆	☆	☆	☆
	316-20SM450-20030P		4	19.3	21.3	3.0	11.0	0.13	☆	☆	☆	☆
	316-20SM450-20040P		4	19.3	21.3	4.0	11.0	0.13	☆	☆	☆	☆
25	316-25SM550-25010P	E25	5	24.2	25.6	1.0	13.5	0.21	☆	☆	☆	☆
	316-25SM550-25015P		5	24.2	25.6	1.5	13.5	0.21	☆	☆	☆	☆
	316-25SM550-25020P		5	24.2	25.6	2.0	13.5	0.21	☆	☆	☆	☆

z_n = number of cutting edges


D213


J2

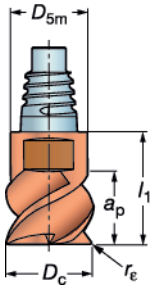

G93

Corner radius end mill

General milling, first choice

Center cutting

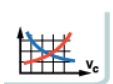
Helix angle: 50°
Tolerances: D_c = h9



Inch version

D_c	Ordering code	Coupling size	z_n	Dimensions, inch D_{5m}	l_1	r_ε	Max a_p	Lbs	P GC 1030	M GC 1030	K GC 1030	S GC 1030
.375	A316-10SM350-03704P	E10	3	.364	.488	.015	.209	0.04	☆	☆	☆	☆
.375	A316-10SM350-03708P		3	.364	.488	.031	.209	0.04	☆	☆	☆	☆
.375	A316-10SM350-03715P		3	.364	.488	.062	.209	0.04	☆	☆	☆	☆
.375	A316-10SM450-03704P		4	.364	.488	.015	.209	0.04	☆	☆	☆	☆
.375	A316-10SM450-03708P		4	.364	.488	.031	.209	0.04	☆	☆	☆	☆
.375	A316-10SM450-03715P		4	.364	.488	.062	.209	0.04	☆	☆	☆	☆
.500	A316-12SM350-05004P	E12	3	.484	.575	.015	.276	0.09	☆	☆	☆	☆
.500	A316-12SM350-05008P		3	.484	.575	.031	.276	0.09	☆	☆	☆	☆
.500	A316-12SM350-05015P		3	.484	.575	.062	.276	0.09	☆	☆	☆	☆
.500	A316-12SM450-05004P		4	.484	.575	.015	.276	0.09	☆	☆	☆	☆
.500	A316-12SM450-05008P		4	.484	.575	.031	.276	0.09	☆	☆	☆	☆
.500	A316-12SM450-05015P		4	.484	.575	.062	.276	0.09	☆	☆	☆	☆
.625	A316-16SM350-06204P	E16	3	.610	.736	.015	.335	0.15	☆	☆	☆	☆
.625	A316-16SM350-06208P		3	.610	.736	.031	.335	0.15	☆	☆	☆	☆
.625	A316-16SM350-06215P		3	.610	.736	.062	.335	0.15	☆	☆	☆	☆
.625	A316-16SM450-06204P		4	.610	.736	.015	.335	0.15	☆	☆	☆	☆
.625	A316-16SM450-06208P		4	.610	.736	.031	.335	0.15	☆	☆	☆	☆
.625	A316-16SM450-06215P		4	.610	.736	.062	.335	0.15	☆	☆	☆	☆
.750	A316-20SM350-07508P	E20	3	.728	.839	.031	.413	0.29	☆	☆	☆	☆
.750	A316-20SM350-07515P		3	.728	.839	.062	.413	0.29	☆	☆	☆	☆
.750	A316-20SM350-07532P		3	.728	.839	.125	.413	0.29	☆	☆	☆	☆
.750	A316-20SM450-07508P		4	.728	.839	.031	.413	0.29	☆	☆	☆	☆
.750	A316-20SM450-07515P		4	.728	.839	.062	.413	0.29	☆	☆	☆	☆
.750	A316-20SM450-07532P		4	.728	.839	.125	.413	0.29	☆	☆	☆	☆
.750	A316-20SM450-07563P		4	.728	.839	.250	.413	0.29	☆	☆	☆	☆
1.000	A316-25SM350-10015P	E25	3	.965	1.008	.062	.551	0.46	☆	☆	☆	☆
1.000	A316-25SM350-10032P		3	.965	1.008	.125	.551	0.46	☆	☆	☆	☆
1.000	A316-25SM350-10063P		3	.965	1.008	.250	.551	0.46	☆	☆	☆	☆
1.000	A316-25SM550-10015P		5	.965	1.008	.062	.551	0.46	☆	☆	☆	☆
1.000	A316-25SM550-10032P		5	.965	1.008	.125	.551	0.46	☆	☆	☆	☆
1.000	A316-25SM550-10047P		5	.965	1.008	.188	.551	0.46	☆	☆	☆	☆
1.000	A316-25SM550-10063P		5	.965	1.008	.250	.551	0.46	☆	☆	☆	☆

z_n = number of cutting edges


D213


J2

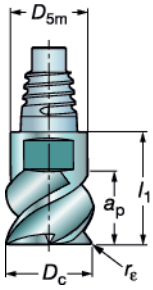

G93

Corner radius end mill

Aluminum milling

Center cutting

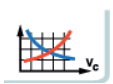
Helix angle: 45°
Tolerances: D_c = h9



Metric version

D_c mm	Ordering code	Coupling size	z_n	Dimensions D_{5m}	l_1	r_ε	Max a_p	KG	P GC 1030	M GC 1030	K GC 1030	N - H10F	S GC 1030
10	316-10SM345-10000A	E10	3	9.7	12.4	0.0	5.5	0.02				☆	
	316-10SM345-10010A		3	9.7	12.4	1.0	5.5	0.02				☆	
	316-10SM345-10025A		3	9.7	12.4	2.5	5.5	0.02				☆	
12	316-12SM345-12000A	E12	3	11.7	14.5	0.0	6.5	0.04				☆	
	316-12SM345-12010A		3	11.7	14.5	1.0	6.5	0.04				☆	
	316-12SM345-12025A		3	11.7	14.5	2.5	6.5	0.04				☆	
	316-12SM345-12040A		3	11.7	14.5	4.0	6.5	0.04				☆	
16	316-16SM345-16000A	E16	3	15.5	18.7	0.0	8.5	0.07				☆	
	316-16SM345-16015A		3	15.5	18.7	1.5	8.5	0.07				☆	
	316-16SM345-16025A		3	15.5	18.7	2.5	8.5	0.07				☆	
	316-16SM345-16040A		3	15.5	18.7	4.0	8.5	0.07				☆	
20	316-20SM345-20000A	E20	3	19.3	21.3	0.0	11.0	0.13				☆	
	316-20SM345-20025A		3	19.3	21.3	2.5	11.0	0.13				☆	
	316-20SM345-20040A		3	19.3	21.3	4.0	11.0	0.13				☆	
25	316-25SM345-25000A	E25	3	24.2	25.6	0.0	13.5	0.21				☆	
	316-25SM345-25040A		3	24.2	25.6	4.0	13.5	0.21				☆	

z_n = number of cutting edges


D213

J2

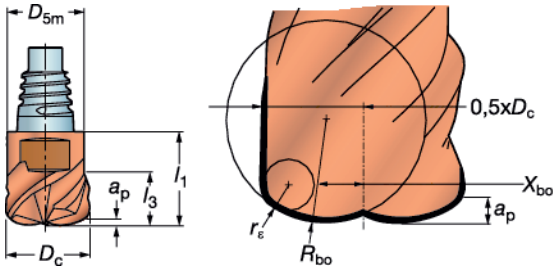
G93

High feed end mill

Rough milling

Non-center cutting

Helix angle: 50°
Tolerances: D_c = h9



Metric version

D_c mm	Ordering code	Coupling size	z_n	Dimensions D_{5m}	l_1	l_3	r_ε	R_{comp} 1)	R_{bo}	X_{bo}	Max a_p	kg	P GC 1030	M GC 1030	K GC 1030	S GC 1030
10	316-10HM350-10015P	E10	3	9.7	12.4	5.5	1.5	1.99	5.00	1.70	0.7	0.02	☆	☆	☆	☆
	316-10HM450-10015P		4	9.7	12.4	5.5	1.5	1.99	5.00	1.70	0.7	0.02	☆	☆	☆	☆
12	316-12HM350-12015P	E12	3	11.7	14.5	6.5	1.5	2.10	6.00	2.25	0.8	0.04	☆	☆	☆	☆
	316-12HM450-12015P		4	11.7	14.5	6.5	1.5	2.10	6.00	2.25	0.8	0.04	☆	☆	☆	☆
16	316-16HM350-16020P	E16	3	15.5	18.7	8.5	2.0	2.75	8.00	3.10	1.0	0.07	☆	☆	☆	☆
	316-16HM450-16020P		4	15.5	18.7	8.5	2.0	2.75	8.00	3.10	1.0	0.07	☆	☆	☆	☆
20	316-20HM350-20020P	E20	3	19.3	21.3	11.0	2.0	3.07	10.00	4.00	1.3	0.13	☆	☆	☆	☆
	316-20HM450-20020P		4	19.3	21.3	11.0	2.0	3.07	10.00	4.00	1.3	0.13	☆	☆	☆	☆
25	316-25HM450-25030P	E25	4	24.2	25.6	13.0	3.0	4.21	12.00	5.00	1.6	0.21	☆	☆	☆	☆

1) R_{comp} = value to be programmed when machining radius
z_n = number of cutting edges

Inch version

D_c	Ordering code	Coupling size	z_n	Dimensions, inch D_{5m}	l_1	l_3	r_ε	R_{comp} 1)	R_{bo}	X_{bo}	Max a_p	Lbs	P GC 1030	M GC 1030	K GC 1030	S GC 1030
.375	A316-10HM450-03715P	E10	4	.364	.488	.209	.060	.076	.181	.070	.024	0.04	☆	☆	☆	☆
.500	A316-12HM450-05015P	E12	4	.484	.575	.276	.060	.086	.236	.100	.033	0.09	☆	☆	☆	☆
.625	A316-16HM450-06220P	E16	4	.610	.736	.335	.080	.110	.315	.120	.039	0.15	☆	☆	☆	☆
.750	A316-20HM450-07520P	E20	4	.728	.839	.413	.080	.117	.354	.160	.047	0.29	☆	☆	☆	☆

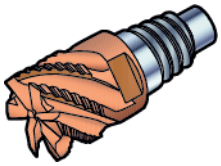
1) R_{comp} = value to be programmed when machining radius
z_n = number of cutting edges

D213 J2 G93

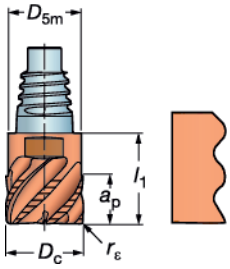
Roughing endmill

Kordell

Center cutting



Helix angle: 40° - 45°
Tolerances: D_c = h12



Metric version

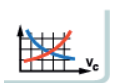
D_c mm	Ordering code	Coupling size	z_n	Dimensions D_{5m}	l_1	r_ε	Max a_p	kg	P GC 1030	M GC 1030	K GC 1030	S GC 1030
10	316-10SM440-10004K	E10	4	9.7	12.4	0.4	5.5	0.02	☆	☆	☆	☆
	316-10SM545-10004K		5	9.7	12.4	0.4	5.5	0.02	☆	☆	☆	☆
12	316-12SM440-12004K	E12	4	11.7	14.5	0.4	6.5	0.04	☆	☆	☆	☆
	316-12SM545-12004K		5	11.7	14.5	0.4	6.5	0.04	☆	☆	☆	☆
16	316-16SM440-16004K	E16	4	15.5	18.7	0.4	8.5	0.07	☆	☆	☆	☆
	316-16SM645-16004K		6	15.5	18.7	0.4	8.5	0.07	☆	☆	☆	☆
20	316-20SM645-20004K	E20	6	19.3	21.3	0.4	11.0	0.13	☆	☆	☆	☆
25	316-25SM845-25004K	E25	8	24.2	25.6	0.4	13.5	0.21	☆	☆	☆	☆

z_n = number of cutting edges

Inch version

D_c	Ordering code	Coupling size	z_n	Dimensions, inch D_{5m}	l_1	r_ε	Max a_p	Lbs	P GC 1030	M GC 1030	K GC 1030	S GC 1030
.375	A316-10SM440-03704K	E10	4	.364	.488	.015	.209	0.04	☆	☆	☆	☆
.500	A316-12SM440-05004K	E12	4	.484	.575	.015	.276	0.09	☆	☆	☆	☆
.500	A316-12SM440-05015K		4	.484	.575	.062	.276	0.09	☆	☆	☆	☆
.625	A316-16SM440-06204K	E16	4	.610	.736	.015	.335	0.15	☆	☆	☆	☆
.625	A316-16SM440-06215K		4	.610	.736	.062	.335	0.15	☆	☆	☆	☆
.750	A316-20SM440-07504K	E20	4	.728	.839	.015	.413	0.29	☆	☆	☆	☆
.750	A316-20SM645-07504K		6	.728	.839	.015	.413	0.29	☆	☆	☆	☆
1.000	A316-25SM845-10004K	E25	8	.965	1.008	.015	.551	0.46	☆	☆	☆	☆

z_n = number of cutting edges



D213

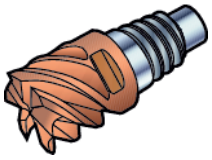

J2


G93

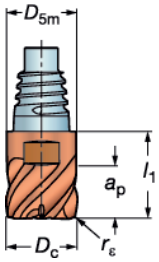
Finishing endmill

Multi edge

Non-center cutting



Helix angle: 50°
Tolerances: D_c = h9



Metric version

D_c mm	Ordering code	Coupling size	z_n	Dimensions D_{5m}	l_1	r_ε	Max a_p	kg	P GC 1030	M GC 1030	K GC 1030	S GC 1030
10	316-10FM650-10000L	E10	6	9.7	12.4	0.0	5.5	0.02	☆	☆	☆	☆
	316-10FM650-10010L		6	9.7	12.4	1.0	5.5	0.02	☆	☆	☆	☆
12	316-12FM650-12000L	E12	6	11.7	14.5	0.0	6.5	0.04	☆	☆	☆	☆
	316-12FM650-12010L		6	11.7	14.5	1.0	6.5	0.04	☆	☆	☆	☆
16	316-16FM650-16000L	E16	6	15.5	18.7	0.0	8.5	0.07	☆	☆	☆	☆
	316-16FM650-16015L		6	15.5	18.7	1.5	8.5	0.07	☆	☆	☆	☆
20	316-20FM850-20000L	E20	8	19.3	21.3	0.0	11.0	0.13	☆	☆	☆	☆
	316-20FM850-20015L		8	19.3	21.3	1.5	11.0	0.13	☆	☆	☆	☆
25	316-25FM850-25010L	E25	8	24.2	25.6	1.0	13.5	0.21	☆	☆	☆	☆

Inch version

D_c	Ordering code	Coupling size	z_n	Dimensions, inch D_{5m}	l_1	r_ε	Max a_p	Lbs	P GC 1030	M GC 1030	K GC 1030	S GC 1030
.375	A316-10FM650-03704L	E10	6	.364	.488	.015	.209	0.04	☆	☆	☆	☆
.375	A316-10FM650-03708L		6	.364	.488	.031	.209	0.04	☆	☆	☆	☆
.375	A316-10FM650-03715L		6	.364	.488	.062	.209	0.04	☆	☆	☆	☆
.500	A316-12FM650-05004L	E12	6	.484	.575	.015	.276	0.09	☆	☆	☆	☆
.500	A316-12FM650-05008L		6	.484	.575	.031	.276	0.09	☆	☆	☆	☆
.500	A316-12FM650-05015L		6	.484	.575	.062	.276	0.09	☆	☆	☆	☆
.625	A316-16FM650-06208L	E16	6	.610	.736	.031	.335	0.15	☆	☆	☆	☆
.625	A316-16FM650-06215L		6	.610	.736	.062	.335	0.15	☆	☆	☆	☆
.625	A316-16FM850-06208L		8	.610	.736	.031	.335	0.15	☆	☆	☆	☆
.625	A316-16FM850-06215L		8	.610	.736	.062	.335	0.15	☆	☆	☆	☆
.750	A316-20FM850-07508L	E20	8	.728	.839	.031	.413	0.29	☆	☆	☆	☆
.750	A316-20FM850-07515L		8	.728	.839	.062	.413	0.29	☆	☆	☆	☆
.750	A316-20FM850-07532L		8	.728	.839	.125	.413	0.29	☆	☆	☆	☆
.750	A316-20FMA50-07508L		10	.728	.839	.031	.413	0.29	☆	☆	☆	☆
.750	A316-20FMA50-07515L		10	.728	.839	.062	.413	0.29	☆	☆	☆	☆
.750	A316-20FMA50-07532L		10	.728	.839	.125	.413	0.29	☆	☆	☆	☆
1.000	A316-25FMA50-10015L	E25	10	.965	1.008	.062	.551	0.46	☆	☆	☆	☆
1.000	A316-25FMA50-10032L		10	.965	1.008	.125	.551	0.46	☆	☆	☆	☆
1.000	A316-25FMA50-10063L		10	.965	1.008	.250	.551	0.46	☆	☆	☆	☆
1.000	A316-25FMC50-10015L		12	.965	1.008	.062	.551	0.46	☆	☆	☆	☆
1.000	A316-25FMC50-10032L		12	.965	1.008	.125	.551	0.46	☆	☆	☆	☆
1.000	A316-25FMC50-10063L		12	.965	1.008	.250	.551	0.46	☆	☆	☆	☆

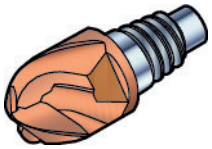
z_n = number of cutting edges

D213 J2 G93

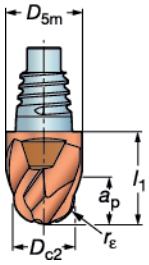
Ball nose end mill

Profile milling

Center cutting



Helix angle: 40°
Tolerances: D_c = h9



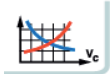
Metric version

D_{c2} mm	Ordering code	Coupling size	z_n	Dimensions D_{5m}	l_1	r_ε	Max a_p	kg	P GC 1030	M GC 1030	K GC 1030	S GC 1030
10	316-10BM440-10050G	E10	4	9.7	12.4	5.0	5.5	0.02	☆	☆	☆	☆
12	316-12BM440-12060G	E12	4	11.7	14.5	6.0	6.5	0.04	☆	☆	☆	☆
16	316-16BM440-16080G	E16	4	15.5	18.7	8.0	8.5	0.07	☆	☆	☆	☆
20	316-20BM240-200AG	E20	2	19.3	21.3	10.0	11.0	0.13	☆	☆	☆	☆
	316-20BM440-200AG		4	19.3	21.3	10.0	11.0	0.13	☆	☆	☆	☆
25	316-25BM240-250DG	E25	2	24.2	25.6	12.5	13.5	0.20	☆	☆	☆	☆
	316-25BM440-250DG		4	24.2	25.6	12.5	13.5	0.21	☆	☆	☆	☆

Inch version

D_{c2}	Ordering code	Coupling size	z_n	Dimensions, inch D_{5m}	l_1	r_ε	Max a_p	Lbs	P GC 1030	M GC 1030	K GC 1030	S GC 1030
.375	A316-10BM440-03750G	E10	4	.364	.488	.188	.209	0.04	☆	☆	☆	☆
.500	A316-12BM440-05060G	E12	4	.484	.575	.250	.276	0.09	☆	☆	☆	☆
.625	A316-16BM440-06280G	E16	4	.610	.736	.312	.335	0.15	☆	☆	☆	☆
.750	A316-20BM440-075AG	E20	4	.728	.839	.375	.413	0.29	☆	☆	☆	☆
1.000	A316-25BM440-100CG	E25	4	.965	1.008	.500	.551	0.44	☆	☆	☆	☆

z_n = number of cutting edges

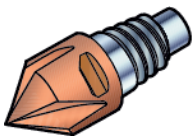
 D213
 J2
 G93

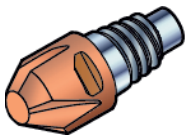
SANDVIK Coromant

Chamfering end mill

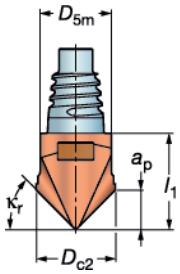
Chamfer milling

Center and non-center cutting

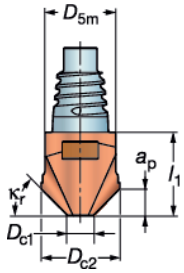




Helix angle: 0°
Tolerances: D_c = h10



Angle 15°, 30°, 45°



Angle 49°, 60°

Metric version

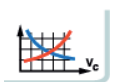
D_{c2}	Ordering code	Coupling size	z_n	Dimensions D_{5m}	l_1	D_{c1}	κ_r	Max a_p	kg	P GC 1030	M GC 1030	K GC 1030	S GC 1030
10	316-10CM400-10045G	E10	4	9.7	12.4		45	4.25	0.02	☆	☆	☆	☆
	316-10CM400-10060G		4	9.7	12.4	3.5	60	5.6	0.02	☆	☆	☆	☆
12	316-12CM600-12015G	E12	6	11.7	14.5		15	1.2	0.04	☆	☆	☆	☆
	316-12CM600-12030G		6	11.7	14.5		30	2.6	0.04	☆	☆	☆	☆
	316-12CM600-12045G		6	11.7	14.5		45	4.5	0.04	☆	☆	☆	☆
	316-12CM600-12060G		6	11.7	14.5	4.5	60	6.5	0.04	☆	☆	☆	☆
16	316-16CM800-16045G	E16	8	15.5	18.7		45	6.5	0.07	☆	☆	☆	☆

z_n = number of cutting edges

Inch version

D_{c2}	Ordering code	Coupling size	z_n	Dimensions, inch D_{5m}	l_1	D_{c1}	κ_r	Max a_p	lbs	P GC 1030	M GC 1030	K GC 1030	S GC 1030
.375	A316-10CM400-03730G	E10	4	.364	.488		30	.073	0.04	☆	☆	☆	☆
	A316-10CM400-03745G		4	.364	.488		45	.128	0.04	☆	☆	☆	☆
	A316-10CM400-03749G		4	.364	.488	.118	49	.148	0.04	☆	☆	☆	☆
	A316-10CM400-03760G		4	.364	.488	.118	60	.222	0.04	☆	☆	☆	☆
.500	A316-12CM600-05030G	E12	6	.484	.575		30	.110	0.09	☆	☆	☆	☆
	A316-12CM600-05045G		6	.484	.575		45	.191	0.09	☆	☆	☆	☆
	A316-12CM600-05049G		6	.484	.575	.118	49	.220	0.09	☆	☆	☆	☆
	A316-12CM600-05060G		6	.484	.575	.177	60	.280	0.09	☆	☆	☆	☆
.625	A316-16CM800-06230G	E16	8	.610	.736		30	.146	0.15	☆	☆	☆	☆
	A316-16CM800-06245G		8	.610	.736		45	.256	0.15	☆	☆	☆	☆
	A316-16CM800-06249G		8	.610	.736	.118	49	.291	0.15	☆	☆	☆	☆
	A316-16CM800-06260G		8	.610	.736	.276	60	.303	0.15	☆	☆	☆	☆

z_n = number of cutting edges



D213

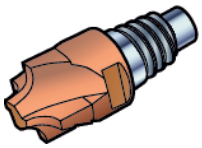
J2

G93

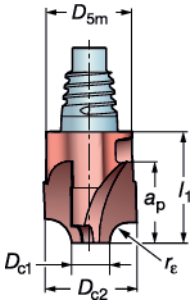
Chamfering radius end mill

Chamfer radius milling

Non-center cutting



Helix angle: 0°
Tolerances: D_{c2}= h10



Metric version

D_{c2}	Ordering code	Coupling size	z_n	Dimensions D_{5m}	l_1	D_{c1}	r_ε	Max a_p	kg	P GC 1030	M GC 1030	K GC 1030	S GC 1030
10	316-10UM400-10015G	E10	4	9.7	12.4	5	1.5	1.5	0.02	☆	☆	☆	☆
	316-10UM400-10030G		4	9.7	12.4	4	3	3	0.02	☆	☆	☆	☆
12	316-12UM400-12030G	E12	4	11.7	14.5	5	3	3	0.04	☆	☆	☆	☆
	316-12UM400-12040G		4	11.7	14.5	4	4	4	0.04	☆	☆	☆	☆
16	316-16UM400-16040G	E16	4	15.5	18.7	6	4	4	0.07	☆	☆	☆	☆
	316-16UM400-16050G		4	15.5	18.7	6	5	5	0.07	☆	☆	☆	☆
20	316-20UM400-20060G	E20	4	19.3	21.3	8	6	6	0.13	☆	☆	☆	☆
25	316-25UM400-25080G	E25	4	24.2	25.6	8	8	8	0.21	☆	☆	☆	☆

z_n = number of cutting edges

Inch version

D_{c2}	Ordering code	Coupling size	z_n	Dimensions, inch D_{5m}	l_1	D_{c1}	r_ε	Max a_p	Lbs	P GC 1030	M GC 1030	K GC 1030	S GC 1030
.375	A316-10UM400-03715G	E10	4	.364	.488	.236	.062	.062	0.04	☆	☆	☆	☆
	A316-10UM400-03732G		4	.364	.488	.118	.125	.125	0.04	☆	☆	☆	☆
.500	A316-12UM400-05032G	E12	4	.484	.575	.197	.125	.125	0.09	☆	☆	☆	☆
	A316-12UM400-05040G		4	.484	.575	.177	.156	.156	0.09	☆	☆	☆	☆
.625	A316-16UM400-06247G	E16	4	.610	.736	.236	.188	.188	0.15	☆	☆	☆	☆
.750	A316-20UM400-07563G	E20	4	.728	.839	.236	.250	.250	0.29	☆	☆	☆	☆
1.000	A316-25UM400-10080G	E25	4	.965	1.008	.315	.313	.313	0.46	☆	☆	☆	☆

z_n = number of cutting edges


D213

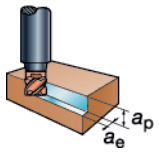
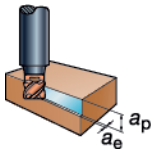
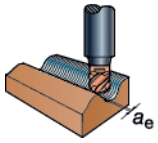
J2

G93

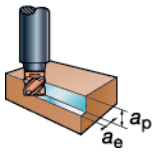
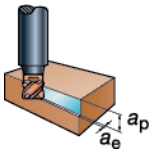
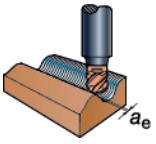
SANDVIK Coromant

CoroMill® 316 cutting data

Speed recommendations

CoroMill® 316								
			$a_p \leq 0.5 \times D_c$	$a_e \leq 1.0 \times D_c$	$a_p \leq 0.5 \times D_c$	$a_e \leq 0.3 \times D_c$	$a_e \leq 0.005 \times D_c$	
ISO	CMC	HB	v_c m/min	V_c feet/min	v_c m/min	V_c feet/min	v_c m/min	V_c feet/min
P	01.1	125	190	625	280	920	630	2065
	01.2	150	170	560	255	835	580	1905
	01.4	210	150	490	225	740	510	1675
	02.1	175	165	540	245	805	555	1820
	02.2	300	100	330	150	490	340	1115
	03.11	200	170	560	250	820	570	1870
	03.22	380	80	260	120	395	280	920
M	05.11	200	70	230	110	360	240	785
	05.21	200	55	180	85	280	190	625
	05.51	230	45	150	70	230	155	510
K	07.1	130	120	395	180	590	395	1295
	08.1	180	130	425	190	625	420	1380
	08.2	245	110	360	160	525	360	1180
	09.1	250	105	345	155	510	350	1150
N	30.22	90	1000	3280	1100	3610	1300	4265
S	20.22	350	25	80	35	115	80	260
	23.22	350	40	150	80	260	150	490

Feed recommendations

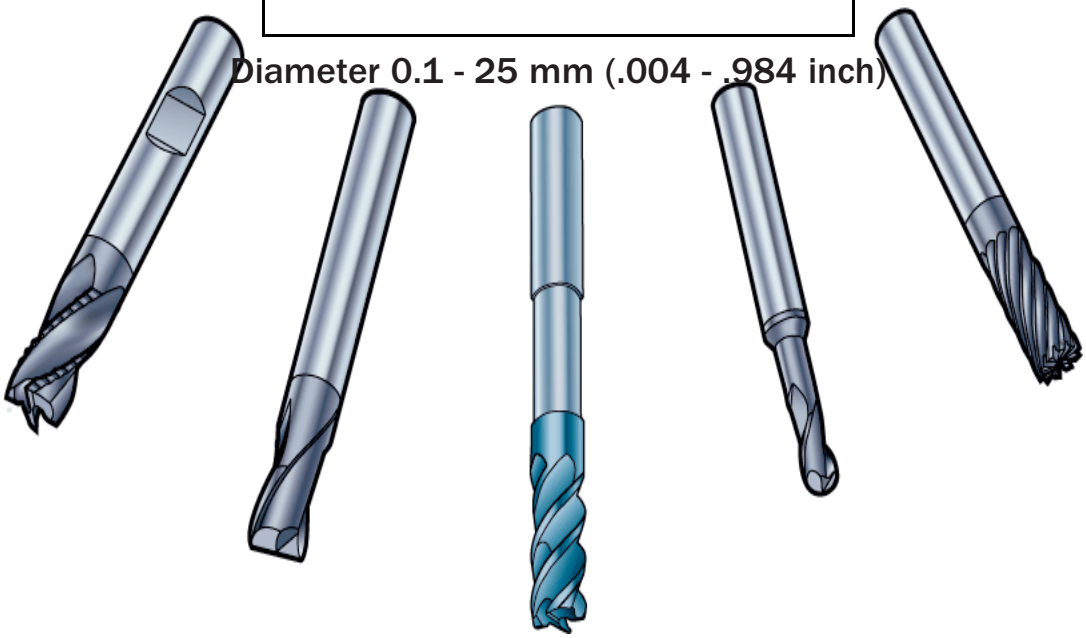
CoroMill® 316 GC1030/H10F								 High feed	
		$a_p \leq 0.5 \times D_c$	$a_e \leq 1.0 \times D_c$	$a_p \leq 0.5 \times D_c$	$a_e \leq 0.3 \times D_c$	$a_e \leq 0.005 \times D_c$	$a_e \leq 0.005 \times D_c$	*316-**H**50-****P	
D_c mm	D_c inch	f_z mm/tooth	f_z inch/tooth	f_z mm/tooth	f_z inch/tooth	f_z mm/tooth	f_z inch/tooth	f_z mm/tooth	f_z inch/tooth
10	.375	0.045	.0018	0.070	.0028	0.120	.0047	0.25	.0098
12	.500	0.055	.0022	0.085	.0033	0.140	.0055	0.30	.0118
16	.625	0.065	.0026	0.110	.0043	0.160	.0063	0.40	.0157
20	.750	0.080	.0031	0.130	.0051	0.180	.0071	0.50	.0197
25	1.000	0.100	.0039	0.160	.0063	0.200	.0079	0.60	.0236

CoroMill® Plura

Solid carbide endmills

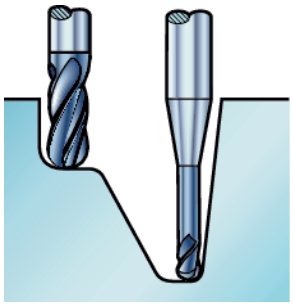
Highest productivity in all materials and applications

Diameter 0.1 - 25 mm (.004 - .984 inch)



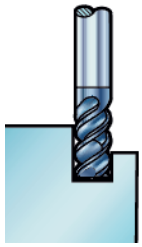
Roughing

Semi-finishing



Finishing

Variable flute depth



Cutting data and programming

Use PluraGuide for selecting tools and correct cutting data, and for programming.

Order number C-2948-117

ISO application areas:

P M K N S H

Tailor Made

Tool options designed to individual customer requirements are available. For information on our Tailor Made program see page J3.

SANDVIK Coromant

Code key for solid carbide endmills

R	A	21	5	.	3	A	-	100	30	–	A	C	22	H
1	2	3	4		5	6	7	8	9	10	11	12	13	14

1 Direction of rotation

R Right hand
L Left hand

2 System of measurement

A Inch version

3 Type of tool

21 Endmill

4 Drilling function

5 Non-drilling
6 Drilling

6 Number of teeth

1- 1 to 9 teeth
A- 10 to 32 teeth

7 **Coolant**

C Internal coolant supply
- External coolant supply

8 Cutting diameter

Inch tools.
Cutting diameter D_c or D_3 in 1/64 inch.

Example: 10 = 5/32 inch

Metric tools.
Cutting diameter D_c or D_3 in 1/10 mm.

Example: 100 = 10.0 mm

9 Helix angle

Degree of helix rounded to nearest 5 degrees

12 Length of shank

S Short shank length
C Long shank length
K Shank length > "C"
L Shank length > "K"
X Shank length > "L"
E Short l_2 and l_3 or l_{22}
I Medium l_2, medium l_3 or l_{22}
J Medium l_2, long l_3 or l_{22}
O Long l_2, medium l_3 or l_{22}
P Long l_2, long l_3 or l_{22}

13 Max cutting depth, a_p

Inch tools.
Cutting length in 1/16 inch
If D_c or D_{c2} < 1/8 in 1/64 inch
Example: 09 = 9/16 inch for D_c 3/16 inch

Metric tools.
Cutting length in mm
If D_c or D_{c2} < 3mm in 1/10 mm
Example:
07 = 7 mm for D_c 6 mm
70 = 7 mm for D_c 2.5 mm

5 Basic design of endmill

0 Concave chamfer endmill
1 Square form with/without corner chamfer, tight tolerance at D_c
2 Square form with corner radius
3 Square form with/without corner chamfer
4 Full radius (ball nose) form (6 or less teeth)
5 Conical full radius (ball nose) form (6 or less teeth)
6 Full radius (ball nose) with spherical form
7 Conical straight form
8 45° chamfer endmill
9 30° chamfer endmill
H High feed end mill
T Turn-mill endmill

10 Corner radius/Conical angle

Corner radius				**Conical angle**	
Metric tools.		Inch tools.		Metric tools.	
– No radius		– No radius		– No radius/Angle	
A	<0.5 mm	A	1/64 inch	M	0.5°
B	0.5 mm	B	1/32 inch	N	1°
C	1.0 mm	C	3/64 inch	O	1.5°
D	1.5 mm	D	1/16 inch	P	2°
E	2.0 mm	E	5/64 inch	Q	2.5°
F	2.5 mm	F	3/32 inch	R	3°
etc.		etc.		S	3.5°
				T	4°
				etc.	

11 Shank type

A Cylindrical

B Weldon

C Cylindrical with neck

E-J Cylindrical with neck (Necklength/D_c, mm)

E = 0.1 - 1.9 H = 6.0 - 7.9

F = 2.0 - 3.9 I = 8.0 - 9.9

G = 4.0 - 5.9 J = 10 - 11.9

14 Geometry type

	Cutting edge	**TW % of D_c or D_{c2}**	**Rake angle γ°**
K	Kordell	50-60	9°-12°
B	Chipbreaker	60	4°-7°
U	Kordell	<50	9°-12°
A	Straight	<45	12°-15°
P	Straight	45-55	9°-12°
N	Straight	56-65	9°-12°
L	Straight	66-75	4°-12°
G	Straight	50-75	-3°-3°
H	Straight	>75	<-3°

TW = Core diameter

Select your CoroMill® Plura endmill

Step 1: Select the Plura grade for your workpiece material

Grade recommendations

ISO P M K

GC1620, GC1630, GC1640	**Dry**	Wet
Finishing	GC1620	GC1620
Semi-finishing	GC1630	GC1630
Roughing	GC1640	GC1640

ISO N

H10F	**Dry**	Wet
Finishing	H10F	GC1620
Semi-finishing	H10F	GC1630
Roughing	H10F	GC1640

ISO S

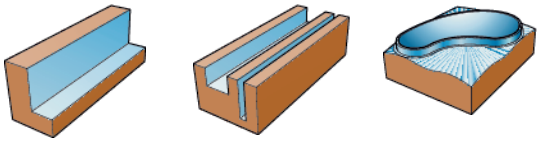
GC1620, GC1630, GC1640	Dry	**Wet**
Finishing		GC1620
Semi-finishing		GC1630
Roughing		GC1640

ISO H

GC1610, GC1700	**Dry**	Wet
Finishing	GC1610/GC1700	
Semi-finishing	GC1610/GC1700	
Roughing	GC1610/GC1700	

Step 2: Classify your machining operation

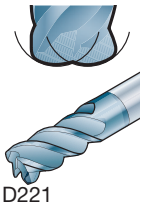
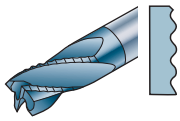
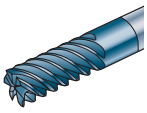
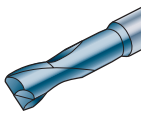
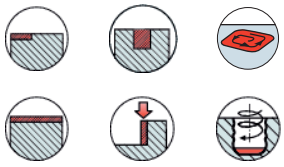
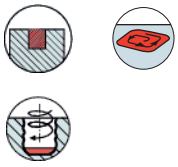
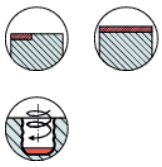
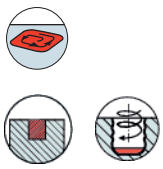
Milling of straight surfaces, grooving or profiling.

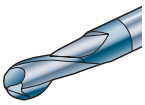
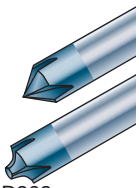
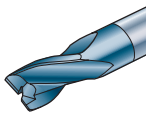
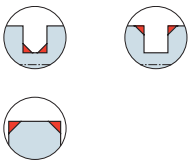
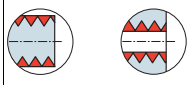


Cutting data and programming

Use PluraGuide for selecting tools and correct cutting data, and for programming.

Select your CoroMill® Plura endmill

	Roughing/semi-finishing First choice	Roughing, high feed	Roughing Kordell	Finishing	Hard steel milling
					
Page	D219	D221	D238	D242	D248
Design	Variable flute depth (VFD), helix angle -50°	High feed cutter (HFC, helix angle - 50°)	Kordell, helix angle - 40°	Multi-edge endmill, helix angle - 50°	Corner radius
Cutter diameter (D_c) mm (inch)	2-25 (.079-.984)	4-20 (.157-.787)	6-25 (.236-.984)	3-20 (.118-.787)	2-16 (.079-.630)
Corner radius (r_ε), dia. mm/inch	0.2-4 (.008-.157)	0.5-2 (.020-.079)	Non-radius	0.5-2 (.020-.079)	0.2-3 (.008-.118)
Application					

	Profiling	Chamfering	Key slot-milling	Turn-milling	Thread milling
					
Page	D252	D268	D270	D272	D275
Design	Ball Nose endmill (BNE), helix angle -30°	Chamfering/chamfering radius endmill, 45°, 60°	Slotting end mill, helix angle -30°	Flat end, helix angle - 30°	Metric 60° Pitch 0.5-3 mm
Cutter diameter (D_c) mm (inch)	0.1-20 (.004-.787)	4-8 (.157-.315)	2-20 (.079-.787)	6-12 (.236-.472)	3.2-19 (.126-.748),M4-M24
Corner radius (r_ε), dia. mm/inch	0.1-10 (.004-.394)	0.5-6 (.020-.236)	Non-radius	0.5-1 (.020-.039)	
Application					

 Shoulder milling

 Pocket milling

 Chamfering

 Turn-milling

 Slot milling

 Ramping

 Chamfering inside

 Thread milling, external

 Facemilling

 Profiling

 Chamfering outside

 Thread milling, internal

 Axial / plunge milling

 Slotting

 Deep slotting

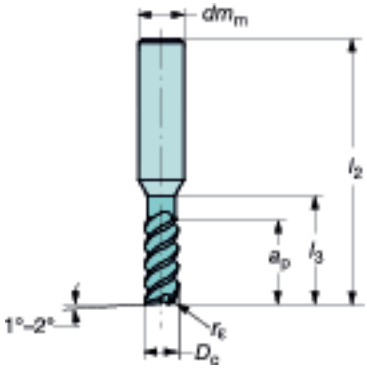
Roughing, semi-finishing end mill

Center cutting

Variable flute depth tools

First choice
Cylindrical with neck
Hardness ≤ 48HRc

Helix angle: -50°
Tolerances: D_c: h9
dm_m: h6



Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	l_3	d_4	r_ε	Helix l_{sh} mm[2]	Max a_p[1]	P GC 1640	M GC 1640	K GC 1640	S GC 1640
3	.118	R216.24-03050ACC05P	4	4	57	8.5	2.9	0.2	8.00	5.0	☆	☆	☆	☆
		R216.24-03050BCC05P	4	4	57	8.5	2.9	0.5	8.00	5.0	☆	☆	☆	☆
4	.157	R216.24-04050ACC07P	4	6	57	8.5	3.8	0.2	11.20	7.0	☆	☆	☆	☆
		R216.24-04050BCC07P	4	6	57	11	3.8	0.5	11.20	7.0	☆	☆	☆	☆
5	.197	R216.24-05050BCC08P	4	6	57	14	4.75	0.5	14.00	8.0	☆	☆	☆	☆
		R216.24-05050CCC08P	4	6	57	14	4.75	1	14.00	8.0	☆	☆	☆	☆
6	.236	R216.24-06050BCC10P	4	6	57	16	5.7	0.5	16.00	10.0	☆	☆	☆	☆
		R216.24-06050CCC10P	4	6	57	16	5.7	1	16.00	10.0	☆	☆	☆	☆
8	.315	R216.24-08050BCC13P	4	8	63	22	7.6	0.5	16.00	13.0	☆	☆	☆	☆
		R216.24-08050CCC13P	4	8	63	22	7.6	1	16.00	13.0	☆	☆	☆	☆
		R216.24-08050ECC13P	4	8	63	22	7.6	2	16.00	13.0	☆	☆	☆	☆
10	.394	R216.24-10050BCC16P	4	10	72	28	9.5	0.5	22.40	16.0	☆	☆	☆	☆
		R216.24-10050CCC16P	4	10	72	28	9.5	1	22.40	16.0	☆	☆	☆	☆
		R216.24-10050ECC16P	4	10	72	28	9.5	2	22.40	16.0	☆	☆	☆	☆
12	.472	R216.24-12050BCC19P	4	12	83	33	11.4	0.5	35.50	19.0	☆	☆	☆	☆
		R216.24-12050CCC19P	4	12	83	33	11.4	1	35.50	19.0	☆	☆	☆	☆
		R216.24-12050ECC19P	4	12	83	33	11.4	2	35.50	19.0	☆	☆	☆	☆
16	.630	R216.24-16050BCC26P	4	16	92	42	15.2	0.5	45.00	26.0	☆	☆	☆	☆
		R216.24-16050CCC26P	4	16	92	42	15.2	1	45.00	26.0	☆	☆	☆	☆
		R216.24-16050ECC26P	4	16	92	42	15.2	2	45.00	26.0	☆	☆	☆	☆
20	.787	R216.24-20050CCC32P	4	20	104	52	19	1	56.00	32.0	☆	☆	☆	☆
		R216.24-20050ECC32P	4	20	104	52	19	2	56.00	32.0	☆	☆	☆	☆
		R216.24-20050ICC32P	4	20	104	52	19	4	56.00	32.0	☆	☆	☆	☆
3	.118	R216.34-03050-CC05P	4	6	57	8.5	2.9		8.00	0.5	☆	☆	☆	☆
4	.157	R216.34-04050-CC07P	4	6	57	11	3.8		11.20	7.0	☆	☆	☆	☆
5	.197	R216.34-05050-CC08P	4	6	57	14	4.75		14.00	8.0	☆	☆	☆	☆
6	.236	R216.34-06050-CC10P	4	6	57	16	5.7		16.00	10.0	☆	☆	☆	☆
8	.315	R216.34-08050-CC13P	4	6	57	7.6	5.7		16.00	13.0	☆	☆	☆	☆
10	..393	R216.34-10050-CC16P	4	8	63	22	7.6		22.40	16.0	☆	☆	☆	☆
12	..472	R216.34-12050-CC19P	4	10	57	28	9.5		28.00	19.0	☆	☆	☆	☆
14	.551	R216.34-14050-CC22P	4	14	83	36	11.4		35.50	22.0	☆	☆	☆	☆
16	.630	R216.34-16050-CC26P	4	16	92	42	15.2		45.00	26.0	☆	☆	☆	☆
18	.709	R216.34-18050-CC29P	4	18	92	42	17.1		56.00	29.0	☆	☆	☆	☆
20	.787	R216.34-20050-CC32P	4	20	104	52	19		56.00	32.0	☆	☆	☆	☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

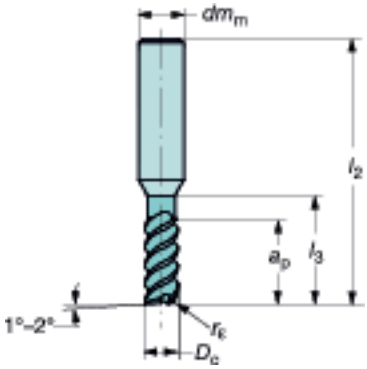
Roughing, semi-finishing end mill

Center cutting

Variable flute depth tools

First choice
Cylindrical with neck
Hardness ≤ 48HRc

Helix angle: -50°
Tolerances: D_c: h9
dm_m: h6



Inch version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions, inch dm_m	l_2	l_3	r_ε	d_4	Max a_p[1]	P GC 1640	M GC 1640	K GC 1640	S GC 1640
6.35	.250	**RA216.34-1650-CK06P**	4	.250	3.000	.608	–	.237	.405	☆	☆	☆	☆
7.94	.312	**RA216.34-2050-CK08P**	4	.312	3.000	.759	–	.297	.506	☆	☆	☆	☆
9.52	.375	**RA216.34-2450-CK09P**	4	.375	3.000	.911	–	.356	.608	☆	☆	☆	☆
11.11	.438	**RA216.34-2850-CK11P**	4	.438	3.500	1.063	–	.416	.709	☆	☆	☆	☆
12.70	.500	**RA216.34-3250-CK12P**	4	.500	3.500	1.215	–	.475	.810	☆	☆	☆	☆
15.88	.625	**RA216.34-4050-CK16P**	4	.625	3.500	1.519	–	.594	1.013	☆	☆	☆	☆
19.05	.750	**RA216.34-4850-CK19P**	4	.750	4.000	1.822	–	.713	1.215	☆	☆	☆	☆

1) Maximum cutting edge length.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

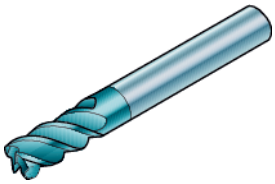
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

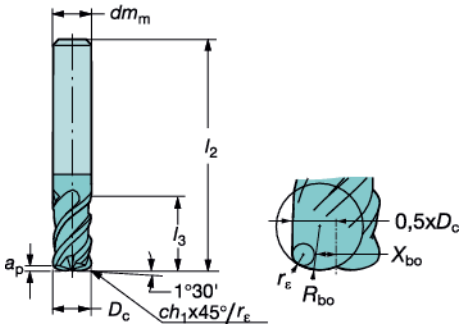
High feed end mill

Non-center cutting

Hardness 43≤HRc≤63



Helix angle: -50°
Tolerances: D_c: h9
dm_m: h6



Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	l_3	r_ε	R_{comp} [1]	R_{bo}	X_{bo}	Max a_p	P GC 1620	M GC 1620	K GC 1620	S GC 1620	H GC 1610
		Cylindrical shank														
4	.157	R215.H4-04050BAC01H	4	6	57	11	0.5	0.620	4.0	0.6	0.1					☆
6	.236	R215.H4-06050BAC02H	4	6	57	15	0.5	0.690	9.0	0.7	0.2					☆
8	.315	R215.H4-08050CAC02H	4	8	63	20	1	1.230	12.0	0.78	0.2					☆
10	.394	R215.H4-10050DAC03H	4	10	72	26	1.5	1.770	15.0	0.8	0.3					☆
12	.472	R215.H4-12050DAC04H	4	12	30	30	1.5	1.880	18.0	1	0.4					☆
16	.630	R215.H4-16050EAC05H	4	16	92	36	2	2.460	24.0	1.5	0.5					☆
20	.787	R215.H4-20050EAC06H	4	20	104	45	2	2.610	30.0	2.2	0.6					☆
4	.157	R215.H4-04050BAC02P	4	6	57	11	0.5	0.670	2.0	0.8	0.2	☆	☆	☆	☆	
6	.236	R215.H4-06050BAC03P	4	6	57	15	0.5	0.750	3.0	1.4	0.3	☆	☆	☆	☆	
8	.315	R215.H4-08050CAC05P	4	8	63	20	1	1.380	4.0	1.54	0.5	☆	☆	☆	☆	
10	.394	R215.H4-10050DAC07P	4	10	72	26	1.5	1.990	5.0	1.7	0.7	☆	☆	☆	☆	
12	.472	R215.H4-12050DAC08P	4	12	83	30	1.5	2.100	6.0	2.25	0.8	☆	☆	☆	☆	
16	.630	R215.H4-16050EAC10P	4	16	92	36	2	2.750	8.0	3.1	1.0	☆	☆	☆	☆	
20	.787	R215.H4-20050EAC13P	4	20	104	45	2	3.070	10.0	4	1.3	☆	☆	☆	☆	
6	.236	R215.H4-06050BAK02P	4	6	100	15	0.5	0.750	3.0	1.4	0.2	☆	☆	☆	☆	
8	.315	R215.H4-08050CAK02P	4	8	120	20	1	1.380	4.0	1.54	0.2	☆	☆	☆	☆	
10	.394	R215.H4-10050DAK03P	4	10	150	26	1.5	1.990	5.0	1.7	0.3	☆	☆	☆	☆	
12	.472	R215.H4-12050DAK08P	4	12	93	30	1.5	2.100	6.0	2.25	0.8	☆	☆	☆	☆	
16	.630	R215.H4-16050EAK10P	4	16	112	36	2	2.747	8.0	3.1	1.0	☆	☆	☆	☆	
20	.787	R215.H4-20050EAK13P	4	20	130	45	2	3.072	10.0	4	1.3	☆	☆	☆	☆	

1) R_{comp} = value to be programmed when machining radius

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

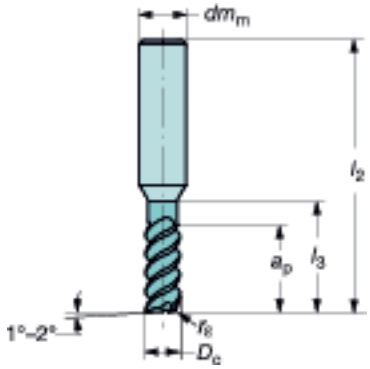
Roughing, semi-finishing end mill

Center cutting

Variable flute depth tools

First choice
Cylindrical with neck
Hardness ≤ 48HRc

Helix angle: 45°
Tolerances: D_c: h9
dm_m: h6



Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	l_3	d_4	r_ε	Helix l_{sh} mm[2]	Max a_p[1]	P GC 1640	M GC 1640	K GC 1640	S GC 1640
2	.079	R216.23-02045ACC05P	3	6	57	7.5	1.92	0.08	5.60	5.0	☆	☆	☆	☆
3	.118	R216.23-03045ACC07P	3	6	57	10.5	2.9	0.08	8.00	7.0	☆	☆	☆	☆
4	.157	R216.23-04045ACC09P	3	6	57	13.5	3.8	0.16	11.20	9.0	☆	☆	☆	☆
5	.197	R216.23-05045ACC11P	3	6	57	16.5	4.75	0.16	14.00	11.0	☆	☆	☆	☆
6	.236	R216.23-06045ACC13P	3	6	57	19.5	5.7	0.16	16.00	13.0	☆	☆	☆	☆
8	.315	R216.23-08045ACC18P	3	8	63	25	7.6	0.16	22.40	18.0	☆	☆	☆	☆
10	.394	R216.23-10045ACC22P	3	10	72	30	9.5	0.25	28.00	22.0	☆	☆	☆	☆
12	.472	R216.23-12045ACC26P	3	12	83	36	11.4	0.25	35.00	26.0	☆	☆	☆	☆
16	.630	R216.23-16045ACC34P	3	16	92	42	15.2	0.25	45.00	34.0	☆	☆	☆	☆
20	.787	R216.23-20045ACC42P	3	20	104	52	15.2	0.4	56.00	42.0	☆	☆	☆	☆
2	.079	R216.33-02045-CC05P	3	6	57	7.5	1.92		6.30	5.0	☆	☆	☆	☆
3	.118	R216.33-03045-CC07P	3	6	57	10.5	2.9		10.00	7.0	☆	☆	☆	☆
4	.157	R216.33-04045-CC09P	3	6	57	15	3.8		12.50	9.0	☆	☆	☆	☆
5	.197	R216.33-05045-CC11P	3	6	57	16	4.75		16.00	11.0	☆	☆	☆	☆
6	.236	R216.33-06045-CC13P	3	6	57	19	5.7		20.00	13.0	☆	☆	☆	☆
8	.315	R216.33-08045-CC18P	3	8	63	25	7.6		25.00	18.0	☆	☆	☆	☆
10	.394	R216.33-10045-CC22P	3	10	72	30	9.5		31.50	22.0	☆	☆	☆	☆
12	.472	R216.33-12045-CC26P	3	12	83	36	11.4		40.00	26.0	☆	☆	☆	☆
16	.630	R216.33-16045-CC34P	3	16	92	42	15.2		50.00	34.0	☆	☆	☆	☆
20	.787	R216.33-20045-CC42P	3	20	104	52	19		63.00	42.0	☆	☆	☆	☆

Inch version

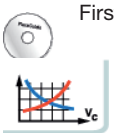
D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions, inch dm_m	l_2	l_3	d_4	Max a_p[1]	P GC 1640	M GC 1640	K GC 1640	S GC 1640
1.59	.062	RA216.33-0445-CK03P	3	.062	2.000	.246	.059	.164	☆	☆	☆	☆
2.38	.094	RA216.33-0645-CK03P	3	.094	2.500	.341	.089	.227	☆	☆	☆	☆
3.18	.125	RA216.33-0845-CK04P	3	.125	2.500	.434	.118	.289	☆	☆	☆	☆
4.76	.188	RA216.33-1245-CK06P	3	.188	2.500	.622	.178	.414	☆	☆	☆	☆
6.35	.250	RA216.33-1645-CK08P	3	.250	3.000	.809	.237	.539	☆	☆	☆	☆
7.94	.312	RA216.33-2045-CK10P	3	.312	3.000	.996	.297	.664	☆	☆	☆	☆
9.52	.375	RA216.33-2445-CK13P	3	.375	3.000	1.243	.356	.829	☆	☆	☆	☆
11.11	.438	RA216.33-2845-CK15P	3	.438	3.500	1.431	.416	.954	☆	☆	☆	☆
12.70	.500	RA216.33-3245-CK17P	3	.500	3.500	1.431	.475	1.079	☆	☆	☆	☆
15.88	.625	RA216.33-4045-CK21P	3	.625	3.500	1.535	.594	1.329	☆	☆	☆	☆
19.05	.750	RA216.33-4845-CK25P	3	.750	4.000	1.890	.713	1.579	☆	☆	☆	☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

First choice: Use Plura Guide. Order number C-2948-117


D328

D334

D214

G6

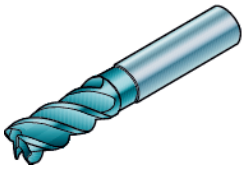
D2

Roughing, semi-finishing end mill

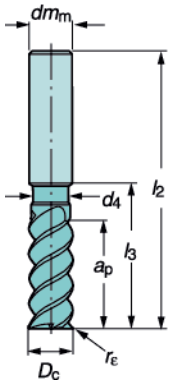
Center cutting

Variable flute depth tools

Hardness ≤ 48HRc
Differential pitch



Helix angle: -50°
Tolerances: D_c: h9
dm_m: h6



Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	l_3	d_4	r_ε	Helix l_{sh} mm[2]	Max a_p[1]	P GC 1620	M GC 1620	K GC 1620	S GC 1620
		Cylindrical shank												
2	.079	R216.23-02050ACC07P	3	6	57	9.5	1.92	0.2	5.60	7.0	☆	☆	☆	☆
3	.118	R216.23-03050ACC08P	3	6	57	10	2.9	0.3	8.00	8.0	☆	☆	☆	☆
4	.157	R216.23-04050BCC11P	3	6	57	15	3.8	0.5	11.20	11.0	☆	☆	☆	☆
5	.197	R216.23-05050BCC13P	3	6	57	16	4.75	0.5	14.00	13.0	☆	☆	☆	☆
6	.236	R216.24-06050BCC13P	4	6	57	19	5.7	0.5	16.00	13.0	☆	☆	☆	☆
6	.236	R216.24-06050CCC13P	4	6	57	19	5.7	1	16.00	13.0	☆	☆	☆	☆
8	.315	R216.24-08050BCC19P	4	8	63	25	7.6	0.5	22.40	19.0	☆	☆	☆	☆
8	.315	R216.24-08050CCC19P	4	8	63	25	7.7	1	22.40	19.0	☆	☆	☆	☆
8	.315	R216.24-08050DCC19P	4	8	63	25	7.7	1.5	22.40	19.0	☆	☆	☆	☆
8	.315	R216.24-08050ECC19P	4	8	63	25	7.7	2	22.40	19.0	☆	☆	☆	☆
10	.394	R216.24-10050BCC22P	4	10	72	30	9.5	0.5	28.00	22.0	☆	☆	☆	☆
10	.394	R216.24-10050CCC22P	4	10	72	30	9.5	1	28.00	22.0	☆	☆	☆	☆
10	.394	R216.24-10050DCC22P	4	10	72	30	9.5	1.5	28.00	22.0	☆	☆	☆	☆
10	.394	R216.24-10050ECC22P	4	10	72	30	9.5	2	28.00	22.0	☆	☆	☆	☆
12	.472	R216.24-12050BCC26P	4	12	83	36	11.4	0.5	35.50	26.0	☆	☆	☆	☆
12	.472	R216.24-12050CCC26P	4	12	83	36	11.4	1	35.50	26.0	☆	☆	☆	☆
12	.472	R216.24-12050DCC26P	4	12	83	36	11.4	1.5	35.50	26.0	☆	☆	☆	☆
12	.472	R216.24-12050ECC26P	4	12	83	36	11.4	2	35.50	26.0	☆	☆	☆	☆
12	.472	R216.24-12050FCC26P	4	12	83	36	11.4	2.5	35.50	26.0	☆	☆	☆	☆
12	.472	R216.24-12050GCC26P	4	12	83	36	11.4	3	35.50	26.0	☆	☆	☆	☆
16	.630	R216.24-16050BCC32P	4	16	92	42	15.2	0.5	45.00	32.0	☆	☆	☆	☆
16	.630	R216.24-16050CCC32P	4	16	92	42	15.2	1	45.00	32.0	☆	☆	☆	☆
16	.630	R216.24-16050ECC32P	4	16	92	42	15.2	2	45.00	32.0	☆	☆	☆	☆
16	.630	R216.24-16050FCC32P	4	16	92	42	15.2	2.5	45.00	32.0	☆	☆	☆	☆
16	.630	R216.24-16050ICC32P	4	16	92	42	15.2	4	45.00	32.0	☆	☆	☆	☆
20	.787	R216.24-20050CCC38P	4	20	104	52	19	1	56.00	38.0	☆	☆	☆	☆
20	.787	R216.24-20050ECC38P	4	20	104	52	19	2	56.00	38.0	☆	☆	☆	☆
20	.787	R216.24-20050FCC38P	4	20	104	52	19	2.5	56.00	38.0	☆	☆	☆	☆
20	.787	R216.24-20050GCC38P	4	20	104	52	19	3	56.00	38.0	☆	☆	☆	☆
20	.787	R216.24-20050ICC38P	4	20	104	52	19	4	56.00	38.0	☆	☆	☆	☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

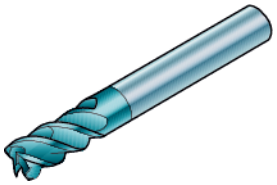
D328 D334 D214 G6 D2

Roughing, semi-finishing end mill

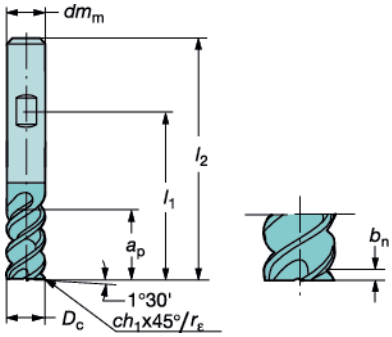
Center cutting

Variable flute depth tools

Hardness ≤ 48HRc



Helix angle: -50°
Tolerances: D_c: h10/h9
dm_m: h6



Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_1	l_2	ch_1	b_n	r_ε	Helix l_{sh} mm[2]	Max a_p[1]	P GC1620	P GC1630	P GC1640	M GC1620	M GC1630	M GC1640	K GC1620	K GC1630	K GC1640	S GC1620	S GC1630	S GC1640
		Cylindrical shank with radius																					
4	.157	R216.23-04050CAK11P	3	6		57			1	11.20	11.0	☆	☆		☆	☆		☆	☆		☆	☆	
5	.197	R216.23-05050CAK13P	3	6		57			1	14.00	13.0	☆	☆		☆	☆		☆	☆		☆	☆	
6	.236	R216.24-06050CAK13P	4	6		65			1	16.00	13.0	☆	☆		☆	☆		☆	☆		☆	☆	
8	.315	R216.24-08050EAK19P	4	8		80			2	22.40	19.0	☆	☆		☆	☆		☆	☆		☆	☆	
10	.394	R216.24-10050EAK22P	4	10		100			2	28.00	22.0	☆	☆		☆	☆		☆	☆		☆	☆	
12	.472	R216.24-12050GAK26P	4	12		100			3	35.50	26.0	☆	☆		☆	☆		☆	☆		☆	☆	
14	.551	R216.24-14050GAK26P	4	14		104			3	40.00	26.0	☆	☆		☆	☆		☆	☆		☆	☆	
16	.630	R216.24-16050IAK32P	4	16		115			4	45.00	32.0	☆	☆		☆	☆		☆	☆		☆	☆	
20	.787	R216.24-20050IAK38P	4	20		125			4	56.00	38.0	☆	☆		☆	☆		☆	☆		☆	☆	
		Cylindrical shank																					
4	.157	R216.33-04050-AK11P	3	6		57	0.10	0.25		11.20	11.0	☆	☆		☆	☆		☆	☆		☆	☆	
5	.197	R216.33-05050-AK13P	3	6		57	0.10	0.25		14.00	13.0	☆	☆		☆	☆		☆	☆		☆	☆	
6	.236	R216.34-06050-AK13P	4	6		65	0.10	0.25		16.00	13.0	☆	☆		☆	☆		☆	☆		☆	☆	
8	.315	R216.34-08050-AK19P	4	8		80	0.10	0.25		22.40	19.0	☆	☆		☆	☆		☆	☆		☆	☆	
10	.394	R216.34-10050-AK22P	4	10		100	0.10	0.25		28.00	22.0	☆	☆		☆	☆		☆	☆		☆	☆	
12	.472	R216.34-12050-AK26P	4	12		100	0.10	0.25		35.50	26.0	☆	☆		☆	☆		☆	☆		☆	☆	
14	.551	R216.34-14050-AK26P	4	14		104	0.15	0.35		40.00	26.0	☆	☆		☆	☆		☆	☆		☆	☆	
16	.630	R216.34-16050-AK32P	4	16		115	0.15	0.35		45.00	32.0	☆	☆		☆	☆		☆	☆		☆	☆	
20	.787	R216.34-20050-AK38P	4	20		125	0.15	0.35		56.00	38.0	☆	☆		☆	☆		☆	☆		☆	☆	
		Weldon with radius																					
6	.236	R216.24-06050CBC13P	4	6	39	57			1	16.00	13.0	☆	☆		☆	☆		☆	☆		☆	☆	
8	.315	R216.24-08050EBC19P	4	8	45	63			2	22.40	19.0	☆	☆		☆	☆		☆	☆		☆	☆	
10	.394	R216.24-10050EBC22P	4	10	52	72			2	28.00	22.0	☆	☆		☆	☆		☆	☆		☆	☆	
12	.472	R216.24-12050GBC26P	4	12	61	83			3	35.50	26.0	☆	☆		☆	☆		☆	☆		☆	☆	
14	.551	R216.24-14050GBC26P	4	14	61	83			3	40.00	26.0	☆	☆		☆	☆		☆	☆		☆	☆	
16	.630	R216.24-16050IBC32P	4	16	68	92			4	45.00	32.0	☆	☆		☆	☆		☆	☆		☆	☆	
20	.787	R216.24-20050IBC38P	4	20	79	104			4	56.00	38.0	☆	☆		☆	☆		☆	☆		☆	☆	
		Weldon																					
6	.236	R216.34-06050-BC13P	4	6	39	57	0.10	0.25		16.00	13.0	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
8	.315	R216.34-08050-BC19P	4	8	45	63	0.10	0.25		22.40	19.0	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
10	.394	R216.34-10050-BC22P	4	10	52	72	0.10	0.25		28.00	22.0	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
12	.472	R216.34-12050-BC26P	4	12	61	83	0.10	0.25		35.50	26.0	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
14	.551	R216.34-14050-BC26P	4	14	61	83	0.12	0.35		40.00	26.0	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
16	.630	R216.34-16050-BC32P	4	16	68	92	0.12	0.35		45.00	32.0	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆
20	.787	R216.34-20050-BC38P	4	20	79	104	0.12	0.35		56.00	38.0	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

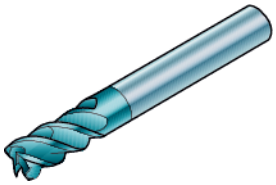
SANDVIK Coromant

Roughing, semi-finishing end mill

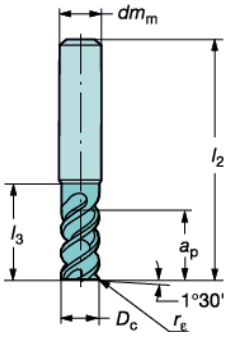
Center cutting

Variable flute depth

Hardness ≤ 48HRc
Differential pitch



Helix angle: -50°
Tolerances: D_c: h10
dm_m: h6



Inch version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions, inch dm_m	l_2	l_3	r_ε	Max a_p[1]	P GC 1620	P GC 1630	M GC 1630	K GC 1630	H GC 1630
		Cylindrical shank with radius											
4.75	.187	**RA216.23-1250AAK06P**	3	.250	3.000	.500	.015	.375		☆	☆	☆	
4.75	.187	**RA216.23-1250AAK09P**	3	.250	3.000	.750	.015	.562	☆				
4.75	.187	**RA216.23-1250BAK09P**	3	.250	3.000	.750	.031	.562	☆				
6.35	.250	**RA216.24-1650AAK08P**	4	.250	3.000		.015	.500					☆
6.35	.250	**RA216.24-1650AAK12P**	4	.250	3.000		.015	.750	☆				
6.35	.250	**RA216.24-1650BAK12P**	4	.250	3.000		.031	.750	☆				
7.92	.312	**RA216.24-2050AAK10P**	4	.375	3.500	.750	.015	.625		☆	☆	☆	
7.92	.312	**RA216.24-2050AAK15P**	4	.375	3.500	1.250	.015	.937	☆				
7.92	.312	**RA216.24-2050BAK15P**	4	.375	3.500		.031	.937	☆				
9.52	.375	**RA216.24-2450AAK12P**	4	.375	3.500		.015	.750		☆	☆	☆	
9.52	.375	**RA216.24-2450AAK18P**	4	.375	3.500		.015	1.125	☆				
9.52	.375	**RA216.24-2450BAK18P**	4	.375	3.500		.031	1.125	☆				
12.70	.500	**RA216.24-3250BAK16P**	4	.500	4.000		.031	1.000		☆	☆	☆	
12.70	.500	**RA216.24-3250BAK24P**	4	.500	4.000		.031	1.500	☆				
12.70	.500	**RA216.24-3250DAK24P**	4	.500	4.000		.062	1.500	☆				
15.88	.625	**RA216.24-4050BAK20P**	4	.625	4.500		.031	1.250		☆	☆	☆	
15.88	.625	**RA216.24-4050DAK30P**	4	.625	4.500		.062	1.875	☆				
19.05	.750	**RA216.24-4850BAK24P**	4	.750	5.000		.031	1.500					☆
19.05	.750	**RA216.24-4850DAK36P**	4	.750	5.000		.062	2.250	☆				

1) Maximum cutting edge length.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

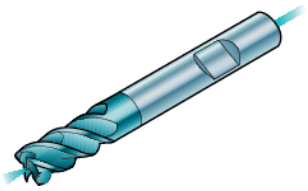
D328 D334 D214 G6 D2

Roughing, semi-finishing end mill

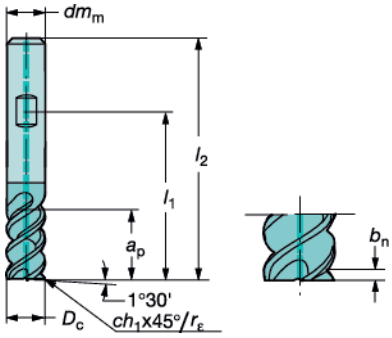
Non-center cutting

Variable flute depth tools

With internal coolant supply
Hardness <48 HRc
Differential pitch



Helix angle: -50°
Tolerances: D_c: h12
dm_m: h6



l_1 = programming length

Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_1	l_2	b_n	Helix l_{sh} mm[2]	Max a_p[1]	P GC 1640	M GC 1640	K GC 1640	S GC 1640
		Weldon											
6	.236	**R215.34C06050-BC13P**	4	6	39	57	0.25	16.00	13.0	☆	☆	☆	☆
8	.315	**R215.34C08050-BC19P**	4	8	45	63	0.25	22.40	19.0	☆	☆	☆	☆
10	.394	**R215.34C10050-BC22P**	4	10	52	72	0.25	28.00	22.0	☆	☆	☆	☆
12	.472	**R215.34C12050-BC26P**	4	12	61	83	0.25	35.50	26.0	☆	☆	☆	☆
16	.630	**R215.34C16050-BC32P**	4	16	68	92	0.35	45.00	32.0	☆	☆	☆	☆
20	.787	**R215.34C20050-BC38P**	4	20	79	104	0.35	56.00	38.0	☆	☆	☆	☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

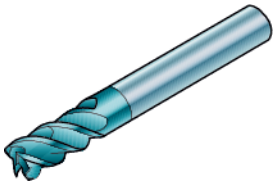
D328 D334 D214 G6 D2

Roughing, semi-finishing end mill

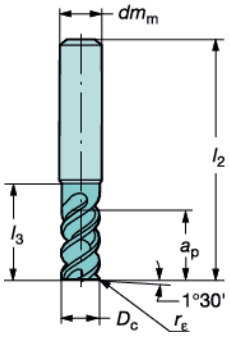
Center cutting

Variable flute depth tools

Hardness 43HRc to 63HRc



Helix angle: -50°
Tolerances: D_c: h10
dm_m: h6



Inch version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions, inch dm_m	l_2	l_3	r_ε	Max a_p[1]	P GC 1620	H GC 1620
		Cylindrical shank with radius								
4.75	.187	**RA216.23-1250AAK06H**	3	.250	3.000		.015	.375	☆	☆
4.75	.187	**RA216.23-1250BAK06H**	3	.250	3.000		.031	.375	☆	☆
6.35	.250	**RA216.24-1650AAK08H**	4	.250	3.000		.015	.500	☆	☆
6.35	.250	**RA216.24-1650BAK08H**	4	.250	3.000		.031	.500	☆	☆
7.92	.312	**RA216.24-2050AAK10H**	4	.375	3.500	1.000	.015	.625	☆	☆
7.92	.312	**RA216.24-2050BAK10H**	4	.375	3.500	1.000	.031	.625	☆	☆
9.52	.375	**RA216.24-2450AAK12H**	4	.375	3.500		.015	.750	☆	☆
9.52	.375	**RA216.24-2450BAK12H**	4	.375	3.500		.031	.750	☆	☆
12.70	.500	**RA216.24-3250BAK16H**	4	.500	4.000		.031	1.000	☆	☆
12.70	.500	**RA216.24-3250DAK16H**	4	.500	4.000		.062	1.000	☆	☆
15.88	.625	**RA216.24-4050DAK20H**	4	.625	4.500		.062	1.250	☆	☆
19.05	.750	**RA216.24-4850DAK24H**	4	.750	5.000		.062	1.500	☆	☆

[1] Maximum cutting edge length.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

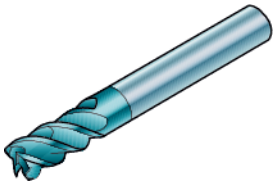
D328 D334 D214 G6 D2

Roughing, semi-finishing end mill

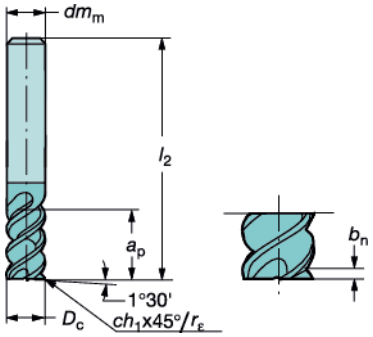
Center cutting

Variable flute depth tools

Hardness 43≤HRc≤63



Helix angle: -50°
Tolerances: D_c: h8
dm_m: h6



Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	ch_1	b_n	r_ε	Helix l_{sh} mm[2]	Max a_p[1]	P GC 1620	M GC 1620	K GC 1620	S GC 1620	H GC 1620
		Cylindrical shank with radius													
2	.079	R216.23-02050BAK70H	3	6	57			0.5	5.60	7.0	☆	☆	☆	☆	☆
3	.118	R216.23-03050BAK08H	3	6	57			0.5	8.00	8.0	☆				☆
4	.157	R216.23-04050CAK11H	3	6	57			1	11.20	11.0	☆				☆
5	.197	R216.23-05050CAK13H	3	6	57			1	14.00	13.0	☆				☆
6	.236	R216.24-06050CAK13H	4	6	65			1	16.00	13.0	☆				☆
8	.315	R216.24-08050EAK19H	4	8	80			2	22.40	19.0	☆				☆
10	.394	R216.24-10050EAK22H	4	10	100			2	28.00	22.0	☆				☆
12	.472	R216.24-12050GAK26H	4	12	100			3	35.50	26.0	☆				☆
14	.551	R216.24-14050GAK26H	4	14	104			3	40.00	26.0	☆				☆
16	.630	R216.24-16050IAK32H	4	16	115			4	45.00	32.0	☆				☆
20	.787	R216.24-20050IAK38H	4	20	125			4	56.00	38.0	☆				☆
		Cylindrical shank													
2	.079	R216.33-02050-AK70H	3	6	57		0.25		5.60	7.0	☆				☆
3	.118	R216.33-03050-AK08H	3	6	57		0.25		8.00	8.0	☆				☆
4	.157	R216.33-04050-AK11H	3	6	57	0.10	0.25		11.20	11.0	☆				☆
5	.197	R216.33-05050-AK13H	3	6	57	0.10	0.25		14.00	13.0	☆				☆
6	.236	R216.34-06050-AK13H	4	6	65	0.10	0.25		16.00	13.0	☆				☆
8	.315	R216.34-08050-AK19H	4	8	80	0.10	0.25		22.40	19.0	☆				☆
10	.394	R216.34-10050-AK22H	4	10	100	0.10	0.25		28.00	22.0	☆				☆
12	.472	R216.34-12050-AK26H	4	12	100	0.10	0.25		35.50	26.0	☆				☆
14	.551	R216.34-14050-AK26H	4	14	104	0.15	0.35		40.00	26.0	☆				☆
16	.630	R216.34-16050-AK32H	4	16	115	0.15	0.35		45.00	32.0	☆				☆
20	.787	R216.34-20050-AK38H	4	20	125	0.15	0.35		56.00	38.0	☆				☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

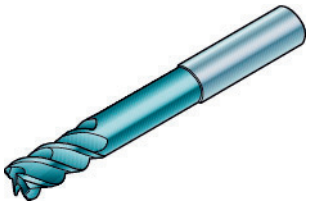
D328 D334 D214 G6 D2

Roughing, semi-finishing end mill

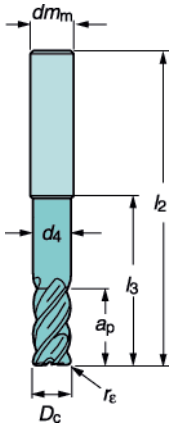
Center cutting

Variable flute depth tools

Hardness ≤ 48HRc



Helix angle: -50°
Tolerances: D_c: h9
dm_m: h8



D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	l_3	d_4	r_ε	Helix l_{sh} mm[2]	Max a_p[1]	P GC 1620	M GC 1620	K GC 1620	N GC 1620	S GC 1620	H GC 1620
10	.394	R216.24-10050CCK22P	4	10	100	58	9.5	1	28.00	22.0	☆	☆	☆		☆	
10	.394	R216.24-10050DCK22P	4	10	100	42	9.5	1.5	28.00	22.0	☆	☆	☆		☆	
10	.394	R216.24-10050ECK22P	4	10	100	42	9.5	2	28.00	22.0	☆	☆	☆		☆	
10	.394	R216.24-10050FCK22P	4	10	100	42	9.5	2.5	28.00	22.0	☆	☆	☆		☆	
10	.394	R216.24-10050GCK22P	4	10	100	42	9.5	3	28.00	22.0	☆	☆	☆		☆	
12	.472	R216.24-12050CCK26P	4	12	100	53	11.4	1	35.50	26.0	☆	☆	☆		☆	
12	.472	R216.24-12050DCK26P	4	12	100	53	11.4	1.5	35.50	26.0	☆	☆	☆		☆	
12	.472	R216.24-12050ECK26P	4	12	100	53	11.4	2	35.50	26.0	☆	☆	☆		☆	
12	.472	R216.24-12050FCK26P	4	12	100	53	11.4	2.5	35.50	26.0	☆	☆	☆		☆	
12	.472	R216.24-12050GCK26P	4	12	100	55	11.4	3	35.50	26.0	☆					☆
12	.472	R216.24-12050ICK26P	4	12	100	53	11.4	4	35.50	26.0	☆	☆	☆		☆	
16	.630	R216.24-16050CCK36P	4	16	115	65	15.2	1	45.00	36.0	☆	☆	☆		☆	
16	.630	R216.24-16050DCK36P	4	16	115	65	15.2	1.5	45.00	36.0	☆	☆	☆		☆	
16	.630	R216.24-16050ECK36P	4	16	115	65	15.2	2	45.00	36.0	☆	☆	☆		☆	
16	.630	R216.24-16050FCK36P	4	16	115	65	15.2	2.5	45.00	36.0	☆	☆	☆		☆	
16	.630	R216.24-16050GCK36P	4	16	115	65	15.2	3	45.00	36.0	☆	☆	☆		☆	
16	.630	R216.24-16050ICK36P	4	16	115	65	15.2	4	45.00	36.0	☆	☆	☆		☆	
16	.630	R216.24-16050OCK36P	1	16	115	67	15.2	6.35	45.00	36.0	☆	☆	☆	☆	☆	☆
20	.787	R216.24-20050FCK44P	4	20	145	80	19	2.5	56.00	44.0	☆	☆	☆		☆	
20	.787	R216.24-20050GCK44P	4	20	145	80	19	3	56.00	44.0	☆	☆	☆		☆	
20	.787	R216.24-20050ICK44P	4	20	145	80	19	4	56.00	44.0	☆	☆	☆		☆	
20	.787	R216.24-20050OCK44P	4	25	145	80	19	6.35	56.00	44.0	☆	☆	☆	☆	☆	☆
25	.984	R216.25-25050GCK54P	5	25	156	99	24	3	71.00	54.0	☆	☆	☆		☆	
25	.984	R216.25-25050ICK54P	5	25	156	99	24	4	71.00	54.0	☆	☆	☆		☆	
25	.984	R216.25-25050OCK54P	5	25	156	99	24	6.35	71.00	54.0	☆	☆	☆	☆	☆	☆
12	.472	R216.24-12050GCL26P	1	12	105	60	11.4	3	50.00	26.0	☆	☆	☆	☆	☆	☆
16	.630	R216.24-16050GCL36P	1	16	128	80	15.2	3	45.00	36.0	☆	☆	☆		☆	
16	.630	R216.24-16050OCL36P	1	16	128	80	15.2	6.35	45.00	36.0	☆	☆	☆	☆	☆	☆
20	.787	R216.24-20050GCL44P	4	20	150	100	19	3	56.00	44.0	☆	☆	☆	☆	☆	☆
20	.787	R216.24-20050OCL44P	1	20	150	100	19	6.35	56.00	44.0	☆	☆	☆	☆	☆	☆
25	.984	R216.25-25050GCL54P	5	25	181	125	24	3	71.00	54.0	☆	☆	☆	☆	☆	☆
25	.984	R216.25-25050OCL54P	5	25	181	125	24	6.35	71.00	54.0	☆	☆	☆	☆	☆	☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

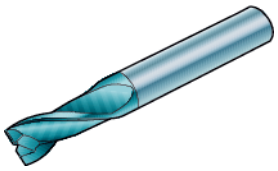
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

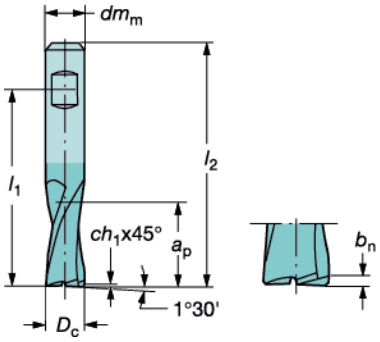
Roughing, semi-finishing end mill

Center cutting

Hardness <48HRc



Helix angle: -30°
Tolerances: D_c: h10
dm_m: h6



l_1 = programming length

Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_1	l_2	ch_1	b_n	Helix l_{sh} mm[2]	Max a_p[1]	P GC 1630	M GC 1630	K GC 1630	S GC 1630
		Cylindrical shank												
1	.039	R216.32-01030-AC30P	2	6		57			5.60	3.0	☆	☆	☆	☆
1.5	.059	R216.32-01530-AC30P	2	6		57			9.00	3.0	☆	☆	☆	☆
2	.079	R216.32-02030-AC60P	2	6		57			11.20	6.0	☆	☆	☆	☆
2.5	.098	R216.32-02530-AC70P	2	6		57			14.00	7.0	☆	☆	☆	☆
3	.118	R216.32-03030-AC07P	2	6		57			16.00	7.0	☆	☆	☆	☆
3.5	.138	R216.32-03530-AC07P	2	6		57			20.00	7.0	☆	☆	☆	☆
4	.157	R216.32-04030-AC08P	2	6		57		0.25	22.40	8.0	☆	☆	☆	☆
4.5	.177	R216.32-04530-AC08P	2	6		57		0.25	25.00	8.0	☆	☆	☆	☆
5	.197	R216.32-05030-AC10P	2	6		57		0.25	28.00	10.0	☆	☆	☆	☆
6	.236	R216.32-06030-AC10P	2	6		57		0.25	35.50	10.0	☆	☆	☆	☆
7	.276	R216.32-07030-AC13P	2	8		63		0.25	40.00	13.0	☆	☆	☆	☆
8	.315	R216.32-08030-AC16P	2	8		63		0.25	45.00	16.0	☆	☆	☆	☆
9	.354	R216.32-09030-AC16P	2	10		72	0.10	0.25	50.00	16.0	☆	☆	☆	☆
10	.394	R216.32-10030-AC19P	2	10		72	0.10	0.25	56.00	19.0	☆	☆	☆	☆
11	.433	R216.32-11030-AC22P	2	11		83	0.10	0.25	63.00	22.0	☆	☆	☆	☆
12	.472	R216.32-12030-AC22P	2	12		83	0.10	0.25	71.00	22.0	☆	☆	☆	☆
14	.551	R216.32-14030-AC22P	2	14		83	0.15	0.35	80.00	22.0	☆	☆	☆	☆
16	.630	R216.32-16030-AC26P	2	16		92	0.15	0.35	90.00	26.0	☆	☆	☆	☆
18	.709	R216.32-18030-AC26P	2	18		92	0.15	0.35	100.00	26.0	☆	☆	☆	☆
20	.787	R216.32-20030-AC32P	2	20		104	0.15	0.35	112.00	32.0	☆	☆	☆	☆
		Weldon												
10	.394	R216.32-10030-BC19P	2	10	52	72	0.12	0.25	56.00	19.0	☆	☆	☆	☆
12	.472	R216.32-12030-BC22P	2	12	60.5	83	0.12	0.25	71.00	22.0	☆	☆	☆	☆
16	.630	R216.32-16030-BC26P	2	16	68	92	0.15	0.35	90.00	26.0	☆	☆	☆	☆
18	.709	R216.32-18030-BC26P	2	18	68	92	0.15	0.35	100.00	26.0	☆	☆	☆	☆
20	.787	R216.32-20030-BC32P	2	20	79	104	0.15	0.35	112.00	32.0	☆	☆	☆	☆

1) Maximum cutting edge length.

2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

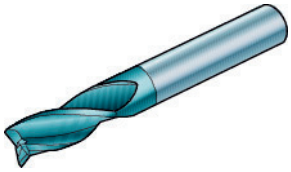
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

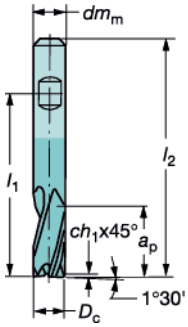
Roughing, semi-finishing end mill

Center cutting

Hardness <48HRc



Helix angle: -30°
Tolerances: D_c: h10
dm_m: h6



l_1 = programming length

Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_1	l_2	ch_1	b_n	Helix l_{sh} mm[2]	Max a_p[1]	P GC 1630	M GC 1630	K GC 1630	S GC 1630
		Cylindrical shank												
1	.039	R216.33-01030-AC30P	3	6		57			5.60	3.0	☆	☆	☆	☆
1.5	.059	R216.33-01530-AC30P	3	6		57			9.00	3.0	☆	☆	☆	☆
2	.079	R216.33-02030-AC60P	3	6		57			11.20	6.0	☆	☆	☆	☆
2.5	.098	R216.33-02530-AC70P	3	6		57			14.00	7.0	☆	☆	☆	☆
3	.118	R216.33-03030-AC07P	3	6		57			16.00	7.0	☆	☆	☆	☆
3.5	.138	R216.33-03530-AC07P	3	6		57			16.00	7.0	☆	☆	☆	☆
4	.157	R216.33-04030-AC08P	3	6		57		0.25	22.40	8.0	☆	☆	☆	☆
4.5	.177	R216.33-04530-AC08P	3	6		57		0.25	25.00	8.0	☆	☆	☆	☆
5	.197	R216.33-05030-AC10P	3	6		57		0.25	28.00	10.0	☆	☆	☆	☆
5.5	.216	R216.33-05530-AC10P	3	6		57		0.25	31.50	10.0	☆	☆	☆	☆
6	.236	R216.33-06030-AC10P	3	6		57		0.25	35.50	10.0	☆	☆	☆	☆
6.5	.256	R216.33-06530-AC13P	3	8		63		0.25	35.50	13.0	☆	☆	☆	☆
7	.276	R216.33-07030-AC13P	3	8		63		0.25	40.00	13.0	☆	☆	☆	☆
7.5	.295	R216.33-07530-AC16P	3	8		63		0.25	45.00	16.0	☆	☆	☆	☆
8	.315	R216.33-08030-AC16P	3	8		63		0.25	45.00	16.0	☆	☆	☆	☆
9	.354	R216.33-09030-AC16P	3	10		72	0.10	0.25	50.00	16.0	☆	☆	☆	☆
10	.394	R216.33-10030-AC19P	3	10		72	0.10	0.25	56.00	19.0	☆	☆	☆	☆
11	.433	R216.33-11030-AC22P	3	12		83	0.10	0.25	63.00	22.0	☆	☆	☆	☆
12	.472	R216.33-12030-AC22P	3	12		83	0.10	0.25	71.00	22.0	☆	☆	☆	☆
13	.512	R216.33-13030-AC22P	3	14		83	0.15	0.35	71.00	22.0	☆	☆	☆	☆
14	.551	R216.33-14030-AC22P	3	14		83	0.15	0.35	80.00	22.0	☆	☆	☆	☆
15	.591	R216.33-15030-AC26P	3	16		92	0.15	0.35	90.00	26.0	☆	☆	☆	☆
16	.630	R216.33-16030-AC26P	3	16		92	0.15	0.35	90.00	26.0	☆	☆	☆	☆
18	.709	R216.33-18030-AC26P	3	18		92	0.15	0.35	100.00	26.0	☆	☆	☆	☆
20	.787	R216.33-20030-AC32P	3	20		104	0.15	0.35	112.00	32.0	☆	☆	☆	☆
		Cylindrical shank, extra long												
1	.039	R216.33-01030-AK40P	3	6		57			5.60	4.0	☆	☆	☆	☆
1.5	.059	R216.33-01530-AK60P	3	6		57			9.00	6.0	☆	☆	☆	☆
2	.079	R216.33-02030-AK80P	3	6		57			11.20	8.0	☆	☆	☆	☆
3	.118	R216.33-03030-AK12P	3	6		57			18.00	12.0	☆	☆	☆	☆
4	.157	R216.33-04030-AK14P	3	6		57		0.25	22.40	14.0	☆	☆	☆	☆
5	.197	R216.33-05030-AK16P	3	6		57		0.25	28.00	16.0	☆	☆	☆	☆
6	.236	R216.33-06030-AK22P	3	6		65		0.25	35.50	22.0	☆	☆	☆	☆
8	.315	R216.33-08030-AK28P	3	8		80		0.25	45.00	28.0	☆	☆	☆	☆
10	.394	R216.33-10030-AK32P	3	10		100	0.10	0.25	56.00	32.0	☆	☆	☆	☆
12	.472	R216.33-12030-AK38P	3	12		100	0.10	0.25	71.00	38.0	☆	☆	☆	☆
16	.630	R216.33-16030-AK50P	3	16		115	0.15	0.35	90.00	50.0	☆	☆	☆	☆
20	.787	R216.33-20030-AK50P	3	20		125	0.15	0.35	112.00	50.0	☆	☆	☆	☆
		Weldon												
6	.236	R216.33-06030-BC10P	3	6	39	57		0.25	35.50	10.0	☆	☆	☆	☆
8	.315	R216.33-08030-BC16P	3	8	45	63		0.25	45.00	16.0	☆	☆	☆	☆
9	.354	R216.33-09030-BC16P	3	10	52	72	0.10	0.25	50.00	16.0	☆	☆	☆	☆
10	.394	R216.33-10030-BC19P	3	10	52	72	0.10	0.25	56.00	19.0	☆	☆	☆	☆
12	.472	R216.33-12030-BC22P	3	12	60.5	83	0.10	0.25	71.00	22.0	☆	☆	☆	☆
14	.551	R216.33-14030-BC22P	3	14	60.5	83	0.15	0.35	80.00	22.0	☆	☆	☆	☆
16	.630	R216.33-16030-BC26P	3	16	68	92	0.15	0.35	90.00	26.0	☆	☆	☆	☆
18	.709	R216.33-18030-BC26P	3	18	68	92	0.15	0.35	100.00	26.0	☆	☆	☆	☆
20	.787	R216.33-20030-BC32P	3	20	79	104	0.15	0.35	112.00	32.0	☆	☆	☆	☆

1) Maximum cutting edge length.

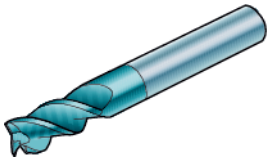
2) Pitch per rev.

D328 D334 D214 G6 D2

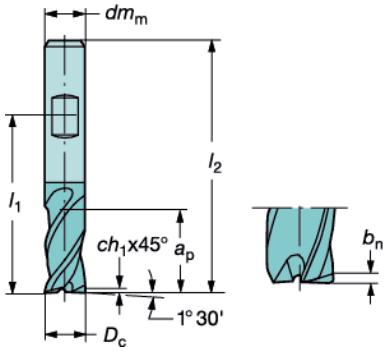
Roughing, semi-finishing end mill

Center cutting

Hardness <48 HRc



Helix angle: -45°
Tolerances: D_c: h10
dm_m: h6



l_1 = programming length

Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_1	l_2	ch_1	b_n	Helix l_{sh} mm[2]	Max a_p[1]	P GC 1620	P GC 1630	M GC 1620	M GC 1630	K GC 1620	K GC 1630	S GC 1620	S GC 1630
		Cylindrical shank																
2	.079	R216.33-02045-AC60P	3	6		57			6.30	6.0	☆	☆	☆	☆	☆	☆	☆	☆
3	.118	R216.33-03045-AC07P	3	6		57			10.00	7.0	☆	☆	☆	☆	☆	☆	☆	☆
4	.157	R216.33-04045-AC08P	3	6		57	0.10	0.25	12.50	8.0	☆	☆	☆	☆	☆	☆	☆	☆
5	.197	R216.33-05045-AC10P	3	6		57	0.10	0.25	16.00	10.0	☆	☆	☆	☆	☆	☆	☆	☆
6	.236	R216.33-06045-AC10P	3	6		57	0.10	0.25	20.00	10.0	☆	☆	☆	☆	☆	☆	☆	☆
7	.276	R216.33-07045-AC13P	3	8		63	0.10	0.25	22.40	13.0	☆	☆	☆	☆	☆	☆	☆	☆
8	.315	R216.33-08045-AC16P	3	8		63	0.10	0.25	25.00	16.0	☆	☆	☆	☆	☆	☆	☆	☆
9	.354	R216.33-09045-AC16P	3	10		72	0.10	0.25	28.00	16.0	☆	☆	☆	☆	☆	☆	☆	☆
10	.394	R216.33-10045-AC19P	3	10		72	0.10	0.25	31.50	19.0	☆	☆	☆	☆	☆	☆	☆	☆
12	.472	R216.33-12045-AC22P	3	12		83	0.10	0.25	40.00	22.0	☆	☆	☆	☆	☆	☆	☆	☆
14	.551	R216.33-14045-AC22P	3	14		83	0.15	0.35	45.00	22.0	☆	☆	☆	☆	☆	☆	☆	☆
16	.630	R216.33-16045-AC26P	3	16		92	0.15	0.35	50.00	26.0	☆	☆	☆	☆	☆	☆	☆	☆
18	.709	R216.33-18045-AC26P	3	18		92	0.15	0.35	56.00	26.0	☆	☆	☆	☆	☆	☆	☆	☆
20	.787	R216.33-20045-AC32P	3	20		104	0.15	0.35	63.00	32.0	☆	☆	☆	☆	☆	☆	☆	☆
		Weldon																
6	.236	R216.33-06045-BC10P	3	6	39	57	0.10	0.25	20.00	10.0		☆		☆		☆		☆
8	.315	R216.33-08045-BC16P	3	8	45	63	0.10	0.25	25.00	16.0		☆		☆		☆		☆
10	.394	R216.33-10045-BC19P	3	10	52	72	0.10	0.25	31.50	19.0		☆		☆		☆		☆
12	.472	R216.33-12045-BC22P	3	12	60.5	83	0.10	0.25	40.00	22.0		☆		☆		☆		☆
14	.551	R216.33-14045-BC22P	3	14	60.5	83	0.15	0.35	45.00	22.0		☆		☆		☆		☆
16	.630	R216.33-16045-BC26P	3	16	68	92	0.15	0.35	50.00	26.0		☆		☆		☆		☆
18	.709	R216.33-18045-BC26P	3	18	68	92	0.15	0.35	56.00	26.0		☆		☆		☆		☆
20	.787	R216.33-20045-BC32P	3	20	79	104	0.15	0.35	63.00	32.0		☆		☆		☆		☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

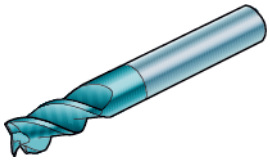
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

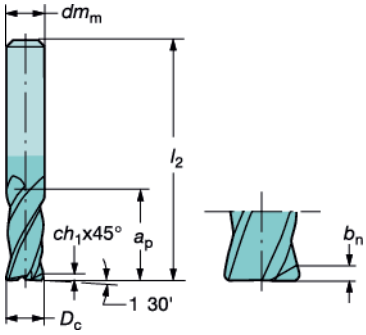
Roughing, semi-finishing end mill

Center cutting

Hardness <48HRc



Helix angle: -30°
Tolerances: D_c: h10
dm_m: h6



l_1 = programming length

Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	ch_1	b_n	Helix l_{sh} mm[2]	Max a_p[1]	P GC 1620	P GC 1630	M GC 1620	M GC 1630	K GC 1620	K GC 1630	N GC 1620	S GC 1620	S GC 1630	H GC 1620
		Cylindrical shank, Short																	
2	.079	R216.34-02030-AS40N	4	6	50			11.20	4.0	☆	☆	☆	☆	☆	☆		☆	☆	
3	.118	R216.34-03030-AS05N	4	6	50			18.00	5.0	☆	☆	☆	☆	☆	☆		☆	☆	
4	.157	R216.34-04030-AS08N	4	6	54		0.25	22.40	8.0	☆	☆	☆	☆	☆	☆		☆	☆	
5	.197	R216.34-05030-AS09N	4	6	54		0.25	28.00	9.0	☆	☆	☆	☆	☆	☆		☆	☆	
6	.236	R216.34-06030-AS10N	4	6	54		0.25	35.50	10.0	☆	☆	☆	☆	☆	☆		☆	☆	
7	.276	R216.34-07030-AS11N	4	8	58		0.25	40.00	11.0	☆	☆	☆	☆	☆	☆		☆	☆	
8	.315	R216.34-08030-AS12N	4	8	58		0.25	45.00	12.0	☆	☆	☆	☆	☆	☆		☆	☆	
10	.394	R216.34-10030-AS14N	4	10	66	0.10	0.25	56.00	14.0	☆	☆	☆	☆	☆	☆		☆	☆	
12	.472	R216.34-12030-AS16N	4	12	73	0.10	0.25	71.00	16.0	☆	☆	☆	☆	☆	☆		☆	☆	
14	.551	R216.34-14030-AS18N	4	14	75	0.15	0.35	80.00	18.0	☆	☆	☆	☆	☆	☆		☆	☆	
16	.630	R216.34-16030-AS22N	4	16	82	0.15	0.35	90.00	22.0	☆	☆	☆	☆	☆	☆		☆	☆	
18	.709	R216.34-18030-AS24N	4	18	84	0.15	0.35	100.00	24.0	☆	☆	☆	☆	☆	☆		☆	☆	
20	.787	R216.34-20030-AS26N	4	20	92	0.15	0.35	112.00	26.0	☆	☆	☆	☆	☆	☆		☆	☆	
		Cylindrical shank, long																	
2	.079	R216.34-02030-AC70N	4	6	57			11.20	7.0	☆	☆	☆	☆	☆	☆		☆	☆	
3	.118	R216.34-03030-AC08N	4	6	57			16.00	8.0	☆	☆	☆	☆	☆	☆		☆	☆	
3.5	.138	R216.34-03530-AC10N	4	6	57			20.00	10.0	☆	☆	☆	☆	☆	☆		☆	☆	
4	.157	R216.34-04030-AC11N	4	6	57		0.25	22.40	11.0	☆	☆	☆	☆	☆	☆		☆	☆	
4.5	.177	R216.34-04530-AC11N	4	6	57		0.25	25.00	11.0	☆	☆	☆	☆	☆	☆		☆	☆	
5	.197	R216.34-05030-AC13N	4	6	57		0.25	28.00	13.0	☆	☆	☆	☆	☆	☆		☆	☆	
5.5	.216	R216.34-05530-AC13N	4	6	57		0.25	31.50	13.0	☆	☆	☆	☆	☆	☆		☆	☆	
6	.236	R216.34-06030-AC13N	4	6	57		0.25	35.50	13.0	☆	☆	☆	☆	☆	☆		☆	☆	
6.5	.256	R216.34-06530-AC16N	4	8	63		0.25	35.50	16.0	☆	☆	☆	☆	☆	☆		☆	☆	
7	.276	R216.34-07030-AC16N	4	8	63		0.25	40.00	16.0	☆	☆	☆	☆	☆	☆		☆	☆	
8	.315	R216.34-08030-AC19N	4	8	63		0.25	45.00	19.0	☆	☆	☆	☆	☆	☆		☆	☆	
9	.354	R216.34-09030-AC19N	4	10	72	0.10	0.25	50.00	19.0	☆	☆	☆	☆	☆	☆		☆	☆	
10	.394	R216.34-10030-AC22N	4	10	72	0.10	0.25	56.00	22.0	☆	☆	☆	☆	☆	☆		☆	☆	
12	.472	R216.34-12030-AC26N	4	12	83	0.10	0.25	71.00	26.0	☆	☆	☆	☆	☆	☆		☆	☆	
14	.551	R216.34-14030-AC26N	4	14	83	0.15	0.35	80.00	26.0	☆	☆	☆	☆	☆	☆		☆	☆	
16	.630	R216.34-16030-AC32N	4	16	92	0.15	0.35	90.00	32.0	☆	☆	☆	☆	☆	☆		☆	☆	
18	.709	R216.34-18030-AC32N	4	18	92	0.15	0.35	100.00	32.0	☆	☆	☆	☆	☆	☆		☆	☆	
20	.787	R216.34-20030-AC38N	4	20	104	0.15	0.35	112.00	38.0	☆	☆	☆	☆	☆	☆		☆	☆	

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

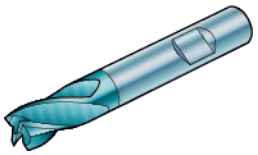
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

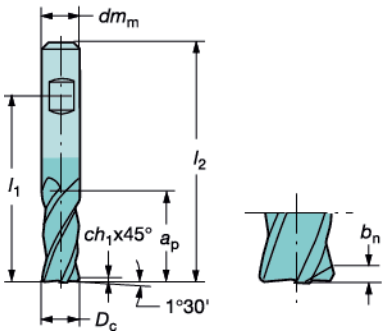
Roughing, semi-finishing end mill

Center cutting

Hardness <48HRc



Helix angle: -30°
Tolerances: D_c: h10
dm_m: h6



l_1 = programming length

Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_1	l_2	ch_1	b_n	Helix l_{sh} mm[2]	Max a_p[1]	P GC1620	P GC1630	M GC1620	M GC1630	K GC1620	K GC1630	N GC1620	S GC1620	S GC1630	H GC1620
		Weldon, Short																		
6	.236	R216.34-06030-BS10N	4	6	36	54		0.25	35.50	10.0		☆		☆		☆			☆	
8	.315	R216.34-08030-BS12N	4	8	40	58		0.25	45.00	12.0		☆		☆		☆			☆	
10	.394	R216.34-10030-BS14N	4	10	46	66	0.10	0.25	56.00	14.0		☆		☆		☆			☆	
12	.472	R216.34-12030-BS16N	4	12	50.5	73	0.10	0.25	71.00	16.0		☆		☆		☆			☆	
14	.551	R216.34-14030-BS18N	4	14	52.5	75	0.15	0.35	80.00	18.0		☆		☆		☆			☆	
16	.630	R216.34-16030-BS22N	4	16	58	82	0.15	0.35	90.00	22.0		☆		☆		☆			☆	
18	.709	R216.34-18030-BS24N	4	18	60	84	0.15	0.35	100.00	24.0		☆		☆		☆			☆	
20	.787	R216.34-20030-BS26N	4	20	67	92	0.15	0.35	112.00	26.0		☆		☆		☆			☆	
		Weldon, Long																		
6	.236	R216.34-06030-BC13N	4	6	39	57		0.25	35.50	13.0		☆		☆		☆			☆	
8	.315	R216.34-08030-BC19N	4	8	45	63		0.25	45.00	19.0		☆		☆		☆			☆	
10	.394	R216.34-10030-BC22N	4	10	52	72	0.10	0.25	56.00	22.0		☆		☆		☆			☆	
12	.472	R216.34-12030-BC26N	4	12	60.5	83	0.10	0.25	71.00	26.0		☆		☆		☆			☆	
14	.551	R216.34-14030-BC26N	4	14	60.5	83	0.15	0.35	80.00	26.0		☆		☆		☆			☆	
16	.630	R216.34-16030-BC32N	4	16	68	92	0.15	0.35	90.00	32.0		☆		☆		☆			☆	
18	.709	R216.34-18030-BC32N	4	18	68	92	0.15	0.35	100.00	32.0		☆		☆		☆			☆	
20	.787	R216.34-20030-BC38N	4	20	79	104	0.15	0.35	112.00	38.0		☆		☆		☆			☆	
25	.984	R216.34-25030-BC45N	4	25	89	121	0.15	0.35	140.00	45.0		☆		☆		☆			☆	

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

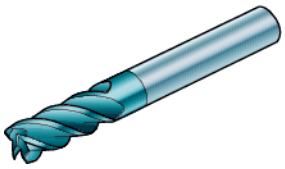
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

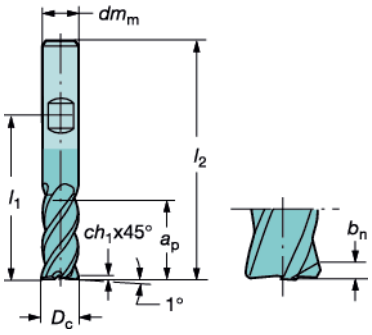
Roughing, semi-finishing end mill

Center cutting

Hardness <48HRc



Helix angle: -45°
Tolerances: D_c: h10
dm_m: h6



l_1 = programming length

Metric version

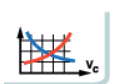
D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_1	l_2	ch_1	b_n	Helix l_{sh} mm[2]	Max a_p[1]	P GC 1620	P GC 1630	M GC 1620	M GC 1630	K GC 1620	K GC 1630	N GC 1620	S GC 1620	S GC 1630	H GC 1620
		Cylindrical shank, long																		
2	.079	R216.34-02045-AC70N	4	6		57			6.30	7.0	☆	☆	☆	☆	☆	☆		☆	☆	
3	.118	R216.34-03045-AC08N	4	6		57			10.50	8.0	☆	☆	☆	☆	☆	☆		☆	☆	
4	.157	R216.34-04045-AC11N	4	6		57	0.10	0.25	12.50	11.0	☆	☆	☆	☆	☆	☆		☆	☆	
5	.197	R216.34-05045-AC13N	4	6		57	0.10	0.25	16.00	13.0	☆	☆	☆	☆	☆	☆		☆	☆	
6	.236	R216.34-06045-AC13N	4	6		57	0.10	0.25	20.00	13.0	☆	☆	☆	☆	☆	☆		☆	☆	
8	.315	R216.34-08045-AC19N	4	8		63	0.10	0.25	25.00	19.0	☆	☆	☆	☆	☆	☆		☆	☆	
10	.394	R216.34-10045-AC22N	4	10		72	0.10	0.25	31.50	22.0	☆	☆	☆	☆	☆	☆		☆	☆	
12	.472	R216.34-12045-AC26N	4	12		83	0.10	0.25	40.00	26.0	☆	☆	☆	☆	☆	☆		☆	☆	
14	.551	R216.34-14045-AC26N	4	14		83	0.15	0.35	45.00	26.0	☆	☆	☆	☆	☆	☆		☆	☆	
16	.630	R216.34-16045-AC32N	4	16		92	0.15	0.35	50.00	32.0	☆	☆	☆	☆	☆	☆		☆	☆	
18	.709	R216.35-18045-AC32N	5	18		92	0.15	0.35	56.00	32.0	☆	☆	☆	☆	☆	☆		☆	☆	
20	.787	R216.35-20045-AC38N	5	20		104	0.15	0.35	63.00	38.0	☆	☆	☆	☆	☆	☆		☆	☆	
		Cylindrical shank, extra long																		
6	.236	R216.34-06045-AK22N	4	6		65	0.10	0.25	20.00	22.0	☆		☆		☆			☆		
8	.315	R216.34-08045-AK28N	4	8		80	0.10	0.25	28.00	28.0	☆		☆		☆			☆		
10	.394	R216.34-10045-AK32N	4	10		100	0.10	0.25	31.50	32.0	☆		☆		☆			☆		
12	.472	R216.34-12045-AK40N	4	12		100	0.10	0.25	40.00	40.0	☆		☆		☆			☆		
14	.551	R216.34-14045-AK50N	4	14		104	0.15	0.35	45.00	50.0	☆		☆		☆			☆		
16	.630	R216.35-16045-AK50N	5	16		115	0.15	0.35	56.00	50.0	☆		☆		☆			☆		
20	.787	R216.35-20045-AK55N	5	20		125	0.15	0.35	63.00	55.0	☆		☆		☆			☆		
20	.787	R216.36-20045-AK75N	6	20		145	0.15	0.35	63.00	75.0	☆		☆		☆			☆		
25	.984	R216.38-25045-AK90N	8	25		153	0.15	0.35	80.00	90.0	☆		☆		☆			☆		
		Weldon																		
6	.236	R216.34-06045-BC13N	4	6	39	57	0.10	0.25	20.00	13.0		☆		☆		☆			☆	
8	.315	R216.34-08045-BC19N	4	8	45	63	0.10	0.25	25.00	19.0		☆		☆		☆			☆	
10	.394	R216.34-10045-BC22N	4	10	52	72	0.10	0.25	31.50	22.0		☆		☆		☆			☆	
12	.472	R216.34-12045-BC26N	4	12	60.5	83	0.10	0.25	40.00	26.0		☆		☆		☆			☆	
14	.551	R216.34-14045-BC26N	4	14	60.5	83	0.15	0.35	45.00	26.0		☆		☆		☆			☆	
16	.630	R216.34-16045-BC32N	4	16	68	92	0.15	0.35	50.00	32.0		☆		☆		☆			☆	
20	.787	R216.35-20045-BC38N	5	20	79	104	0.15	0.35	63.00	38.0		☆		☆		☆			☆	

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

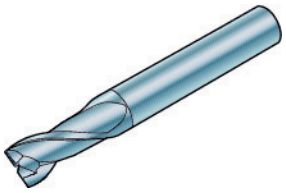
PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

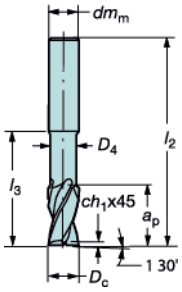
 D328  D334  D214  G6  D2

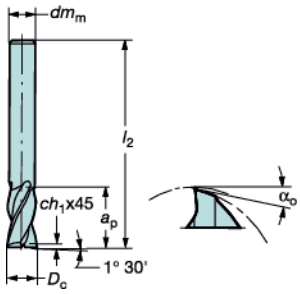
Roughing, semi-finishing end mill

Center cutting



Helix angle: -30°,
Tolerances: D_c: h10
dm_m: h6





This cutter has a new design improving drilling capability.

Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	l_3	d_4	Helix l_{sh} mm[2]	ch_1	α_o	Max a_p[1]	N H10F
		Cylindrical shank										
2	.079	**R216.32-02030-AC60A**	2	6	57	9.5		11.20		13	6.0	☆
3	.118	**R216.32-03030-AC07A**	2	6	57	10.4		18.00		13	7.0	☆
4	.157	**R216.32-04030-AC08A**	2	6	57	15.3		22.40		13	8.0	☆
5	.197	**R216.32-05030-AC10A**	2	6	57	16.1		28.00		13	10.0	☆
6	.236	**R216.32-06030-AC10A**	2	6	57			35.50		13	10.0	☆
8	.315	**R216.32-08030-AC16A**	2	8	63			45.00		13	16.0	☆
10	.394	**R216.32-10030-AC19A**	2	10	72			56.00	0.1	13	19.0	☆
12	.472	**R216.32-12030-AC22A**	2	12	83			71.00	0.1	13	22.0	☆
2	.079	**R216.32-02025-AK80A**	2	6	57	10		14.00		20	8.0	☆
3	.118	**R216.32-03025-AK12A**	2	6	57	15		22.40		20	12.0	☆
4	.157	**R216.32-04025-AK14A**	2	6	57	18		28.00		14	14.0	☆
5	.197	**R216.32-05025-AK16A**	2	6	57			35.50		14	16.0	☆
6	.236	**R216.32-06025-AK22A**	2	6	65			45.00		14	22.0	☆
8	.315	**R216.32-08025-AK28A**	2	8	80			56.00		14	28.0	☆
10	.394	**R216.32-10025-AK32A**	2	10	90			71.00	0.1	12	32.0	☆
12	.472	**R216.32-12025-AK38A**	2	12	100			90.00	0.1	12	38.0	☆
2	.079	**R216.32-02025-AP30A**	2	3	57	6	1.9	14.00		20	3.0	☆
3	.118	**R216.32-03025-AP04A**	2	3	57	7	2.9	22.40		20	4.0	☆
4	.157	**R216.32-04025-AP06A**	2	4	57	10	3.8	28.00		14	6.0	☆
5	.197	**R216.32-05025-AP08A**	2	6	57	16	4.8	35.50		14	8.0	☆
6	.236	**R216.32-06025-AP10A**	2	6	65	28	5.7	45.00		14	10.0	☆
8	.315	**R216.32-08025-AP12A**	2	8	80	35	7.7	56.00		14	12.0	☆
10	.394	**R216.32-10025-AP14A**	2	10	90	45	9.7	71.00	0.1	12	14.0	☆
12	.472	**R216.32-12025-AP16A**	2	12	100	50	11.7	90.00	0.1	12	16.0	☆
16	.630	**R216.32-16025-AP20A**	2	16	115	63	15.5	112.00	0.15	12	20.0	☆
20	.787	**R216.32-20025-AP20A**	2	20	125	70	19.5	140.00	0.15	10	20.0	☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

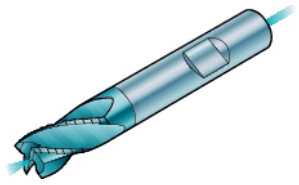
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

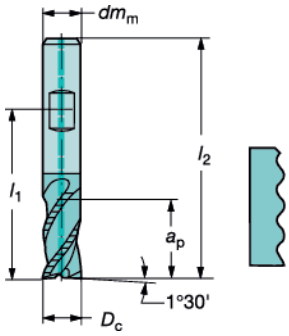
Roughing endmill

Kordell with internal coolant

Non-center cutting
Hardness <28HRc



Helix angle: -40°
Tolerances: D_c: h12
dm_m: h6



l_1 = programming length

Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_1	l_2	Helix l_{sh} mm[2]	Max a_p[1]	P GC 1640	M GC 1640	K GC 1640	S GC 1640
		Weldon										
6	.236	R215.34C06040-DS07K	4	6	36	54	25.00	7.0	☆	☆	☆	☆
8	.315	R215.34C08040-DS09K	4	8	40	58	31.50	9.0	☆	☆	☆	☆
10	.394	R215.34C10040-DS11K	4	10	46	66	40.00	11.0	☆	☆	☆	☆
12	.472	R215.34C12040-DS12K	4	12	50.5	73	45.00	12.0	☆	☆	☆	☆
16	.630	R215.34C16040-DS16K	4	16	58	82	63.00	16.0	☆	☆	☆	☆
20	.787	R215.34C20040-DS20K	4	20	67	92	80.00	20.0	☆	☆	☆	☆
6	.236	R215.34C06040-DC13K	4	6	39	57	25.00	13.0	☆	☆	☆	☆
8	.315	R215.34C08040-DC19K	4	8	45	63	31.50	19.0	☆	☆	☆	☆
10	.394	R215.34C10040-DC22K	4	10	52	72	40.00	22.0	☆	☆	☆	☆
12	.472	R215.34C12040-DC26K	4	12	60.5	83	45.00	26.0	☆	☆	☆	☆
16	.630	R215.34C16040-DC32K	4	16	68	92	63.00	32.0	☆	☆	☆	☆
18	.709	R215.34C18040-DC32K	4	18	68	92	71.00	32.0	☆	☆	☆	☆
20	.787	R215.34C20040-DC38K	4	20	79	104	80.00	38.0	☆	☆	☆	☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

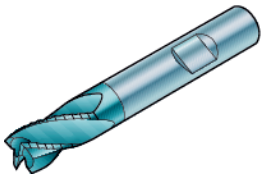
D328 D334 D214 G6 D2

Roughing endmill

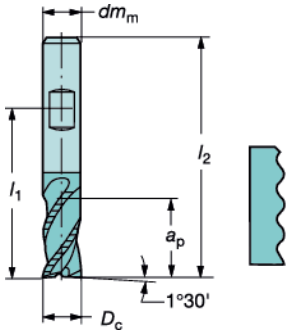
Center cutting

Kordell

Hardness <28HRc



Helix angle: -30°,-40°
Tolerances: D_c: h12
dm_m: h6



l_1 = programming length

Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_1	l_2	Helix l_{sh} mm[2]	Max a_p[1]	P GC 1640	M GC 1640	K GC 1640
		Weldon, Short									
6	.236	R216.33-06030-BS07K	3	6	36	54	35.50	7.0	☆	☆	☆
8	.315	R216.33-08030-BS09K	3	6	40	58	45.00	9.0	☆	☆	☆
10	.394	R216.33-10030-BS11K	3	10	46	66	56.00	11.0	☆	☆	☆
12	.472	R216.33-12030-BS12K	3	12	50.5	73	71.00	12.0	☆	☆	☆
14	.551	R216.33-14030-BS14K	3	14	52.5	75	80.00	14.0	☆	☆	☆
16	.630	R216.33-16030-BS16K	3	16	58	82	90.00	16.0	☆	☆	☆
20	.787	R216.33-20030-BS20K	3	20	67	92	112.00	20.0	☆	☆	☆
		Weldon, Long									
6	.236	R216.34-06040-BC13K	4	6	39	57	25.00	13.0	☆	☆	☆
8	.315	R216.34-08040-BC19K	4	8	45	63	31.50	19.0	☆	☆	☆
10	.394	R216.34-10040-BC22K	4	10	52	72	40.00	22.0	☆	☆	☆
12	.472	R216.34-12040-BC26K	4	12	60.5	83	45.00	26.0	☆	☆	☆
14	.551	R216.34-14040-BC26K	4	14	60.5	83	56.00	26.0	☆	☆	☆
16	.630	R216.34-16040-BC32K	4	16	68	92	63.00	32.0	☆	☆	☆
18	.709	R216.34-18040-BC32K	4	18	68	92	71.00	32.0	☆	☆	☆
20	.787	R216.34-20040-BC38K	4	20	79	104	80.00	38.0	☆	☆	☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

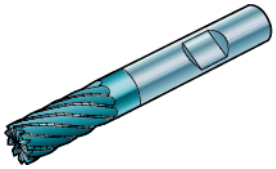
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

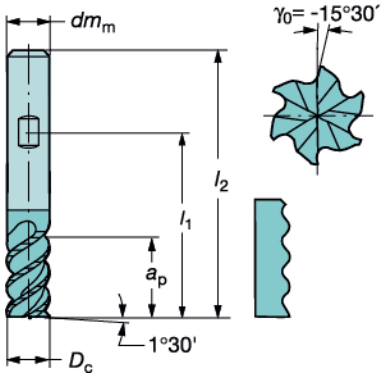
Roughing endmill

Center cutting

Kordell



Helix angle: -45°
Tolerances: D_c: h12
dm_m: h6



l_1 = programming length

Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_1	l_2	Helix l_{sh} mm[2]	Max a_p[1]	P GC 1640	M GC 1640	K GC 1640	S GC 1640
		Cylindrical shank										
16	.630	R216.36-16045ICC32K	6	16	68	92	63.00	32.0	☆	☆	☆	☆
20	.787	R216.36-20045ICC38K	6	20	79	104	80.00	38.0	☆	☆	☆	☆
25	.984	R216.38-25045ICC45K	8	25	89	121	80.00	45.0	☆	☆	☆	☆
16	.630	R216.36-16045ICK32K	6	16	68	112	63.00	32.0	☆	☆	☆	☆
20	.787	R216.36-20045ICK38K	6	20	79	130	80.00	38.0	☆	☆	☆	☆
25	.984	R216.38-25045ICK45K	8	25	89	156	80.00	45.0	☆	☆	☆	☆
		Weldon										
12	.472	R216.35-12045-BC28K	5	12	60.5	83	45.00	28.0	☆	☆	☆	☆
16	.630	R216.36-16045-BC32K	6	16	68	92	63.00	32.0	☆	☆	☆	☆
20	.787	R216.36-20045-BC38K	6	20	79	104	80.00	38.0	☆	☆	☆	☆
25	.984	R216.38-25045-BC45K	8	25	89	121	80.00	45.0	☆	☆	☆	☆

1) Maximum cutting edge length.

2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

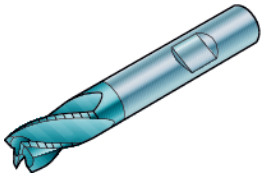
D328 D334 D214 G6 D2

Roughing endmill

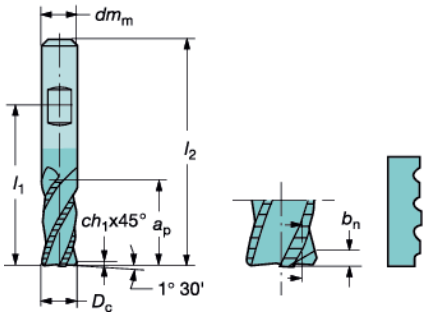
Center cutting

Chip dividing

Kordell
Hardness <48HRc



Helix angle: -30°
Tolerances: D_c: h10
dm_m: h6



l_1 = programming length

Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_1	l_2	ch_1	b_n	Helix l_{sh} mm[2]	Max a_p[1]	S GC 1620
		Weldon									
6	.236	**R216.34-06030-BC13B**	4	6	39	57		0.25	35.50	13.0	☆
8	.315	**R216.34-08030-BC19B**	4	8	45	63		0.25	45.00	19.0	☆
10	.394	**R216.34-10030-BC22B**	4	10	52	72	0.10	0.25	56.00	22.0	☆
12	.472	**R216.34-12030-BC26B**	4	12	60.5	83	0.10	0.25	71.00	26.0	☆
14	.551	**R216.34-14030-BC26B**	4	14	60.5	83	0.15	0.35	80.00	26.0	☆
16	.630	**R216.34-16030-BC32B**	4	16	68	92	0.15	0.35	90.00	32.0	☆
18	.709	**R216.34-18030-BC32B**	4	18	68	92	0.15	0.35	100.00	32.0	☆
20	.787	**R216.34-20030-BC38B**	4	20	79	104	0.15	0.35	112.00	38.0	☆
25	.984	**R216.35-25030-BC45B**	5	25	93	125	0.15	0.35	140.00	45.0	☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

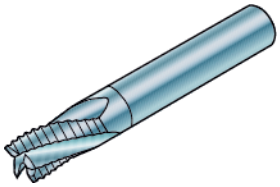
D328 D334 D214 G6 D2

Roughing endmill

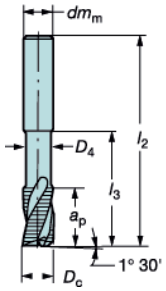
Center cutting

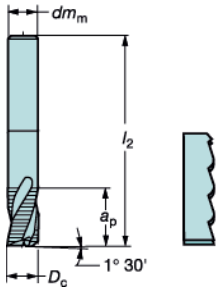
Roughing

Kordell design



Helix angle: -40°
Tolerances: D_c: h12
dm_m: h5





Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	l_3	Helix l_{sh} mm[2]	D_4	Max a_p[1]	N - H10F
		Cylindrical shank								
6	.236	**R216.33-06040-AC13U**	3	6	57		25.00		13.0	☆
8	.315	**R216.33-08040-AC19U**	3	8	63		31.50		19.0	☆
10	.394	**R216.33-10040-AC22U**	3	10	72		40.00		22.0	☆
12	.472	**R216.33-12040-AC26U**	3	12	83		45.00		26.0	☆
14	.551	**R216.33-14040-AC26U**	3	14	83		56.00		26.0	☆
16	.630	**R216.33-16040-AC32U**	3	16	92		63.00		32.0	☆
18	.709	**R216.33-18040-AC32U**	3	18	92		71.00		32.0	☆
20	.787	**R216.33-20040-AC38U**	3	20	104		80.00		38.0	☆
		Cylindrical shank, long								
6	.236	**R216.33-06040-AJ10U**	3	8	63	24	25.00	5.6	10.0	☆
8	.315	**R216.33-08040-AJ12U**	3	10	72	29	31.50	7.5	12.0	☆
10	.394	**R216.33-10040-AJ14U**	3	12	83	35	40.00	9.3	14.0	☆
12	.472	**R216.33-12040-AJ16U**	3	12	100	50	45.00	11.5	16.0	☆
16	.630	**R216.33-16040-AJ20U**	3	16	115	63	63.00	15.5	20.0	☆
20	.787	**R216.33-20040-AJ20U**	3	20	125	70	80.00	19.5	20.0	☆
25	.984	**R216.33-25040-AJ25U**	3	25	135	75	100.00	24	25.0	☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

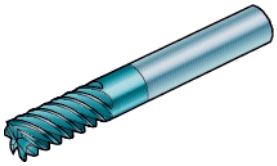
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

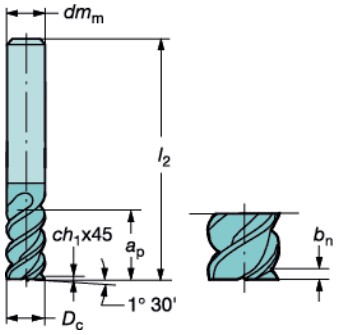
Finishing endmill

Non-center cutting

Hardness <48HRc



Helix angle: -50°
Tolerances: D_c: h7
dm_m: h5



Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	ch_1	b_n	Helix l_{sh} mm[2]	Max a_p[1]	P GC 1610	P GC 1620	M GC 1620	K GC 1620	S GC 1620	H GC 1610
		Cylindrical shank with radius													
3	.118	**R215.34-03050-AC08L**	4	6	57	0.12	0.25	8.00	8.0		☆	☆	☆	☆	
4	.157	**R215.34-04050-AC11L**	4	6	57	0.12	0.25	11.20	11.0		☆	☆	☆	☆	
5	.197	**R215.35-05050-AC13L**	5	6	57	0.12	0.25	14.00	13.0		☆	☆	☆	☆	
6	.236	**R215.36-06050-AC13L**	6	6	57	0.12	0.25	16.00	13.0		☆	☆	☆	☆	
8	.315	**R215.36-08050-AC19L**	6	8	63	0.12	0.25	22.40	19.0		☆	☆	☆	☆	
10	.394	**R215.36-10050-AC22L**	6	10	72	0.12	0.25	28.00	22.0		☆	☆	☆	☆	
12	.472	**R215.36-12050-AC26L**	6	12	83	0.12	0.12	35.20	26.0		☆	☆	☆	☆	
16	.630	**R215.36-16050-AC32L**	6	16	92	0.19	0.35	45.00	32.0		☆	☆	☆	☆	
20	.787	**R215.38-20050-AC38L**	8	20	104	0.19	0.35	56.00	38.0		☆	☆	☆	☆	

1) Maximum cutting edge length.

2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

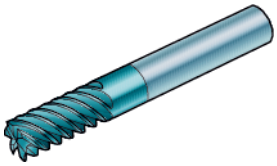
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

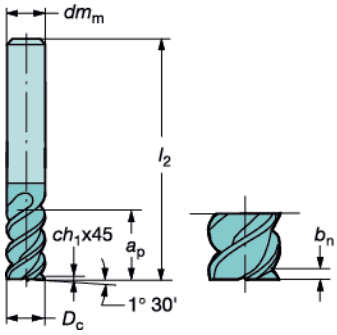
Finishing endmill

Non-center cutting

Hardness <48HRc



Helix angle: -60°
Tolerances: D_c: h10
dm_m: h6



Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	ch_1	b_n	Helix l_{sh} mm[2]	Max a_p[1]	P GC1610	P GC1620	M GC1620	K GC1620	S GC1620	H GC1610
		Cylindrical shank													
6	.236	**R215.36-06060-AC13L**	6	6	57	0.10	0.25	11.20	13.0		☆	☆	☆	☆	
8	.315	**R215.36-08060-AC19L**	6	8	63	0.10	0.25	16.00	19.0		☆	☆	☆	☆	
10	.394	**R215.36-10060-AC22L**	6	10	72	0.10	0.25	20.00	22.0		☆	☆	☆	☆	
12	.472	**R215.36-12060-AC26L**	6	12	83	0.10	0.25	22.40	26.0		☆	☆	☆	☆	
14	.551	**R215.36-14060-AC26L**	6	14	83	0.15	0.35	28.00	26.0		☆	☆	☆	☆	
16	.630	**R215.36-16060-AC32L**	6	16	92	0.15	0.35	31.50	32.0		☆	☆	☆	☆	
18	.709	**R215.36-18060-AC32L**	6	18	92	0.15	0.35	35.50	32.0		☆	☆	☆	☆	
20	.787	**R215.36-20060-AC38L**	6	20	104	0.15	0.35	40.00	38.0		☆	☆	☆	☆	

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

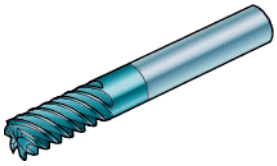
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

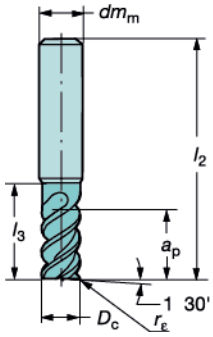
Finishing endmill

Non-center cutting

Hardness <48HRc



Helix angle: -50°
Tolerances: D_c: h10
dm_m: h6



Inch version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions, inch dm_m	l_2	l_3	r_ε	Helix l_{sh}[2]	Max a_p[1]	P GC 1610	P GC 1620	M GC 1620	K GC 1620	S GC 1620	H GC 1610
		Cylindrical shank with radius													
1.57	.062	RA215.24-0450AAK13L	4	.250	3.000	.250	.015	.007	.200		☆	☆	☆	☆	
2.36	.093	RA215.24-0650AAK18L	4	.250	3.000	.375	.015	.010	.286		☆	☆	☆	☆	
2.36	.093	RA215.24-0650BAK18L	4	.250	3.000	.375	.031	.010	.286		☆	☆	☆	☆	
3.18	.125	RA215.24-0850AAK06L	4	.250	3.000	.500	.015	.014	.375		☆	☆	☆	☆	
3.18	.125	RA215.24-0850BAK06L	4	.250	3.000	.500	.031	.014	.375		☆	☆	☆	☆	
3.96	.156	RA215.24-1050AAK08L	4	.250	3.000	.625	.015	.017	.500		☆	☆	☆	☆	
3.96	.156	RA215.24-1050BAK08L	4	.250	3.000	.625	.031	.017	.500		☆	☆	☆	☆	
4.75	.187	RA215.26-1250AAK09L	6	.250	3.000	.750	.015	.022	.571		☆	☆	☆	☆	
4.75	.187	RA215.26-1250BAK09L	6	.250	3.000	.750	.031	.022	.571		☆	☆	☆	☆	
6.35	.250	RA215.26-1650AAK12L	6	.250	3.000		.015	.028	.750		☆	☆	☆	☆	
6.35	.250	RA215.26-1650BAK12L	6	.250	3.000		.031	.028	.750		☆	☆	☆	☆	
6.35	.250	RA215.26-1650BAL18L	6	.250	4.000		.031	.028	1.125		☆	☆	☆	☆	
7.92	.312	RA215.26-2050AAK15L	6	.375	3.500	1.250	.015	.035	1.000		☆	☆	☆	☆	
7.92	.312	RA215.26-2050BAK15L	6	.375	3.500	1.250	.031	.035	1.000		☆	☆	☆	☆	
7.92	.312	RA215.26-2050BAL23L	6	.375	4.500	1.750	.031	.035	1.400		☆	☆	☆	☆	
9.52	.375	RA215.26-2450BAK18L	6	.375	3.500		.031	.043	1.125		☆	☆	☆	☆	
9.52	.375	RA215.26-2450DAK18L	6	.375	3.500		.062	.043	1.125		☆	☆	☆	☆	
9.52	.375	RA215.26-2450DAL27L	6	.375	4.500		.062	.043	1.666		☆	☆	☆	☆	
12.70	.500	RA215.26-3250BAK24L	6	.500	4.000		.031	.055	1.500		☆	☆	☆	☆	
12.70	.500	RA215.26-3250DAK24L	6	.500	4.000		.062	.055	1.500		☆	☆	☆	☆	
12.70	.500	RA215.26-3250DAL36L	6	.500	5.000		.062	.055	2.250		☆	☆	☆	☆	
15.88	.625	RA215.26-4050DAK30L	6	.625	4.500		.062	.070	1.875		☆	☆	☆	☆	
15.88	.625	RA215.26-4050HAK30L	6	.625	4.500		.125	.070	1.875		☆	☆	☆	☆	
15.88	.625	RA215.26-4050HAL45L	6	.625	5.500		.125	.070	2.800		☆	☆	☆	☆	
19.05	.750	RA215.28-4850DAK36L	8	.750	5.000		.062	.087	2.250		☆	☆	☆	☆	
19.05	.750	RA215.28-4850HAK36L	8	.750	5.000		.125	.087	2.250		☆	☆	☆	☆	
19.05	.750	RA215.28-4850HAL54L	8	.750	6.000		.125	.087	3.375		☆	☆	☆	☆	

1) Maximum cutting edge length.

2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

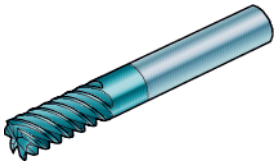
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

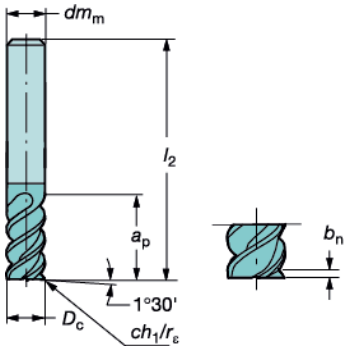
Finishing endmill

Non-center cutting

Hardness 43≤HRc≤63



Helix angle: -50°
Tolerances: D_c: h10
dm_m: h6



Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	ch_1	b_n	r_ε	Helix l_{sh} mm[2]	Max a_p[1]	P GC 1610	P GC 1620	M GC 1620	K GC 1620	S GC 1620	H GC 1610
		Cylindrical shank with radius														
3	.118	R215.24-03050BAC08H	4	6	57			0.5	10.00	8.0	☆					☆
4	.157	R215.24-04050BAC11H	4	6	57			0.5	14.00	11.0	☆					☆
6	.236	R215.26-06050BAC13H	6	6	57			0.5	20.00	13.0	☆					☆
8	.315	R215.26-08050BAC19H	6	8	63			0.5	28.00	19.0	☆					☆
10	.394	R215.26-10050CAC22H	6	10	72			1	31.50	22.0	☆					☆
10	.394	R215.26-10050DAC22H	6	10	72			1.5	31.50	22.0	☆					☆
10	.394	R215.26-10050EAC22H	6	10	72			2	31.50	22.0	☆					☆
12	.472	R215.26-12050CAC26H	6	12	83			1	35.50	26.0	☆					☆
16	.630	R215.26-16050DAC32H	6	16	92			1.5	56.00	32.0	☆					☆
20	.787	R215.28-20050DAC38H	8	20	104			1.5	63.00	38.0	☆					☆
		Cylindrical shank														
3	.118	R215.34-03050-AC08H	4	6	57				10.00	8.0	☆					☆
4	.157	R215.34-04050-AC11H	4	6	57	0.10	0.25		14.00	11.0	☆					☆
6	.236	R215.36-06050-AC13H	6	6	57	0.10	0.25		20.00	13.0	☆					☆
8	.315	R215.36-08050-AC19H	6	6	63	0.10	0.25		28.00	19.0	☆					☆
10	.394	R215.36-10050-AC22H	6	10	72	0.10	0.25		31.50	22.0	☆					☆
12	.472	R215.36-12050-AC26H	6	12	83	0.10	0.25		40.00	26.0	☆					☆
16	.630	R215.36-16050-AC32H	6	16	92	0.20	0.35		56.00	32.0	☆					☆
20	.787	R215.38-20050-AC38H	8	20	104	0.12	0.35		63.00	38.0	☆					☆

1) Maximum cutting edge length.

2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

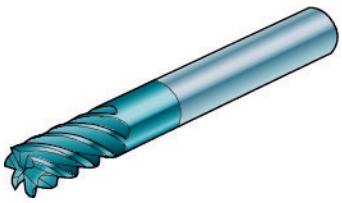
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

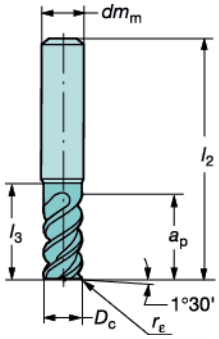
Finishing endmill

Non-center cutting

Hardness from 43HRc to 63HRc



Helix angle: -50°
Tolerances: D_c: h10
dm_m: h6



Inch version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions, inch dm_m	l_2	l_3	r_ε	Helix l_{sh}[2]	Max a_p[1]	P GC 1610	P GC 1620	M GC 1620	K GC 1620	S GC 1620	H GC 1610
		Cylindrical shank with radius													
3.18	.125	**RA215.24-0850AAK04H**	4	.250	3.000	.500	.015	.014	.250	☆					☆
4.78	.188	**RA215.26-1250AAK06H**	6	.250	3.000	.750	.015	.022	.375	☆					☆
6.35	.250	**RA215.26-1650AAK08H**	6	.250	3.000		.015	.028	.500	☆					☆
9.52	.375	**RA215.26-2450BAK12H**	6	.375	3.500		.031	.043	.750	☆					☆
12.70	.500	**RA215.26-3250BAK16H**	6	.500	4.000		.031	.055	1.000	☆					☆
15.88	.625	**RA215.26-4050DAK20H**	6	.625	4.500		.062	.070	1.250	☆					☆
19.05	.750	**RA215.28-4850DAK24H**	8	.750	5.000		.062	.087	1.500	☆					☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

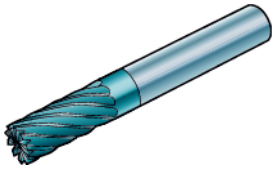
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

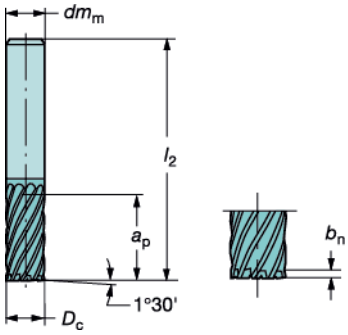
Finishing endmill

Non-center cutting

Hardness 43≤HRc≤63



Helix angle: -30°
Tolerances: D_c: h9
dm_m: h6



Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	b_n	Helix l_{sh} mm[2]	Max a_p[1]	P GC1610	P GC1620	M GC1620	K GC1620	S GC1620	H GC1610
		Cylindrical shank with radius												
5	.197	R215.36-05030-AC13H	6	6	57	0.25	28.00	13.0	☆					☆
6	.236	R215.36-06030-AC13H	6	6	57	0.25	35.50	13.0	☆					☆
8	.315	R215.38-08030-AC19H	8	8	63	0.25	45.00	19.0	☆					☆
10	.394	R215.3A-10030-AC22H	10	10	72	0.25	56.00	22.0	☆					☆
12	.472	R215.3C-12030-AC26H	12	12	83	0.25	71.00	26.0	☆					☆
14	.551	R215.3E-14030-AC26H	14	14	83	0.35	80.00	26.0	☆					☆
16	.630	R215.3G-16030-AC32H	16	16	92	0.35	90.00	32.0	☆					☆
20	.787	R215.3G-20030-AC38H	16	20	104	0.35	112.00	38.0	☆					☆

Inch version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions, inch dm_m	l_2	ch_1	Helix l_{sh}[2]	Max a_p[1]	P GC1610	P GC1620	M GC1620	K GC1620	S GC1620	H GC1610
		Cylindrical shank with radius												
6.35	.250	RA215.36-1630-AK08H	6	.250	2.000	.015	.055	.500	☆					☆
9.52	.375	RA215.3A-2430-AK12H	10	.375	2.500	.015	.087	.750	☆					☆
12.70	.500	RA215.3C-3230-AK16H	12	.500	3.000	.015	.110	1.000	☆					☆
15.88	.625	RA215.3G-4030-AK20H	16	.625	3.500	.015	.140	1.250	☆					☆
19.05	.750	RA215.3G-4830-AK24H	16	.750	4.000	.015	.174	1.500	☆					☆

1) Maximum cutting edge length.

2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

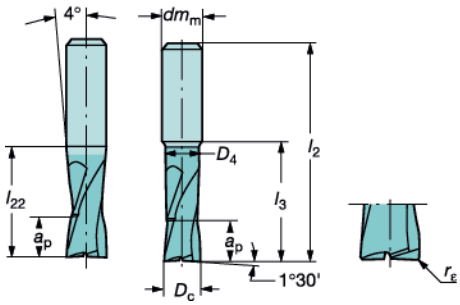
D328 D334 D214 G6 D2

Corner radius end mill

Center cutting

Hardness 43≤HRc≤63

Helix angle: -30°
Tolerances: D_c: h7
dm_m: h5



Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	l_3	r_ε	Helix l_{sh} mm[2]	D_4	Max a_p[1]	P GC 1610	P GC 1620	M GC 1620	K GC 1620	N GC 1620	S GC 1620	H GC 1610	H GC 1620
		Cylindrical shank with radius																
2	.079	R216.22-02030AAI20G	2	6	57	18	0.2	11.20		2.0	☆						☆	
3	.118	R216.22-03030BAI03G	2	6	57	19	0.5	18.00		3.0	☆						☆	
4	.157	R216.22-04030BAI04G	2	6	57	20	0.5	22.40		4.0	☆						☆	
5	.197	R216.22-05030BAI05G	2	6	57	20	0.5	28.00	4.7	5.0	☆						☆	
6	.236	R216.22-06030CAI06G	2	8	57	21	1	35.50	5.7	6.0	☆						☆	
8	.315	R216.22-08030CAI08G	2	10	63	27	1	45.00	7.7	8.0	☆						☆	
10	.394	R216.22-10030DAI10G	2	12	72	32	1.5	56.00	9.7	10.0	☆						☆	
12	.472	R216.22-12030DAI12G	2	12	83	36	1.5	71.00	11.7	12.0	☆						☆	
6	.236	R216.24-06030CAI06G	4	8	57	21	1	35.50	5.7	6.0	☆						☆	
8	.315	R216.24-08030CAI08G	4	8	63	27	1	45.00	7.7	8.0	☆						☆	
10	.394	R216.24-10030DAI10G	4	10	72	32	1.5	56.00	9.7	10.0	☆						☆	
12	.472	R216.24-12030DAI12G	4	12	83	36	1.5	71.00	11.7	12.0	☆						☆	
16	.630	R216.24-16030EAI16G	4	16	92	42	2	90.00	15.5	16.0	☆						☆	
2	.079	R216.22-02030AAJ20G	2	6	72	20	0.2	11.20	1.9	2.0	☆						☆	
3	.118	R216.22-03030AAJ03G	2	6	72	20	0.3	18.00	2.9	3.0	☆						☆	
4	.157	R216.24-04030AAJ04G	4	6	72	20	0.4	22.40	3.8	4.0	☆						☆	
5	.197	R216.24-05030BAJ05G	4	6	72	20	0.5	28.00	4.7	5.0	☆						☆	
6	.236	R216.24-06030BAJ06G	4	6	72	24	0.5	35.50	5.7	6.0	☆						☆	
8	.315	R216.24-08030BAJ08G	4	8	80	29	0.5	45.00	7.7	8.0	☆						☆	
8	.315	R216.24-08030CAJ08G	4	8	80	29	1	45.00	7.7	8.0	☆						☆	
8	.315	R216.24-08030DAJ08G	4	8	80	29	1.5	45.00	7.7	8.0	☆						☆	
10	.394	R216.24-10030BAJ10G	4	10	100	35	0.5	56.00	9.7	10.0	☆						☆	
10	.394	R216.24-10030CAJ10G	4	10	100	35	1	56.00	9.7	10.0	☆						☆	
12	.472	R216.24-12030BAJ12G	4	12	100	36	0.5	71.00	11.7	12.0	☆						☆	
12	.472	R216.24-12030CAJ12G	4	12	100	36	1	71.00	11.7	12.0	☆						☆	
12	.472	R216.24-12030EAJ12G	4	12	100	36	2	71.00	11.7	12.0	☆						☆	

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

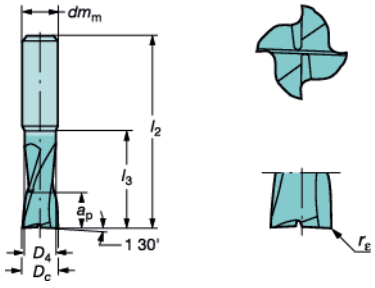
D328 D334 D214 G6 D2

Corner radius end mill

Center cutting

Hardness from 43HRc to 58HRc

Helix angle: -30°
Tolerances: D_c: h7
dm_m: h5



Inch version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions, inch dm_m	l_2	l_3	D_4	r_ε	Helix l_{sh}[2]	Max a_p[1]	P GC 1610	H GC 1610
		Cylindrical shank with radius										
3.18	.125	**RA216.24-0830BAK02G**	4	.250	3.000	.750	.120	.031	.028	.125	☆	☆
3.96	.156	**RA216.24-1030BAK02G**	4	.250	3.000	.750	.150	.031	.055	.156	☆	☆
4.78	.188	**RA216.24-1230DAK03G**	4	.250	3.000	.750	.182	.062	.043	.188	☆	☆
6.35	.250	**RA216.24-1630DAK04G**	4	.250	3.000	1.000	.242	.062	.055	.250	☆	☆
9.52	.375	**RA216.24-2430DAK06G**	4	.375	3.500	1.250	.365	.062	.087	.375	☆	☆
9.52	.375	**RA216.24-2430HAK06G**	4	.375	3.500	1.250	.365	.125	.087	.375	☆	☆
12.70	.500	**RA216.24-3230HAK08G**	4	.500	4.000	1.500	.485	.125	.110	.500	☆	☆

1) Maximum cutting edge length.

2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

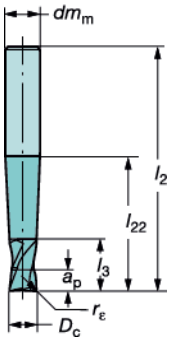
D328 D334 D214 G6 D2

Corner radius end mill

Center cutting

Hardness 43≤HRc≤63

Helix angle: -30°
Tolerances: D_c: h7
dm_m: h5



Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	l_3	l_{22}	r_ε	Helix l_{sh} mm[2]	Max a_p[1]	P GC 1610	H GC 1610
		Cylindrical shank with radius, extra long										
3	.118	**R216.22-03030BAP03G**	2	6	80	4	38.4	0.5	16.00	3.0	☆	☆
4	.157	**R216.22-04030BAP04G**	2	6	90	5	50.8	0.5	22.40	4.0	☆	☆
6	.236	**R216.22-06030BAP06G**	2	10	100	7	52.8	0.5	35.50	6.0	☆	☆
6	.236	**R216.24-06030CAP06G**	4	8	100	7	52.8	1	35.50	6.0	☆	☆
8	.315	**R216.24-08030CAP08G**	4	10	100	10	53.0	1	5.00	8.0	☆	☆
10	.394	**R216.24-10030CAP10G**	4	12	125	12	57.8	1	56.00	10.0	☆	☆
10	.394	**R216.24-10030GAP10G**	4	12	125	12	57.8	3	56.00	10.0	☆	☆
12	.472	**R216.24-12030CAP12G**	4	14	140	14	59.8	1	71.00	12.0	☆	☆
12	.472	**R216.24-12030GAP12G**	4	14	140	14	59.8	3	71.00	12.0	☆	☆
16	.630	**R216.24-16030CAP16G**	4	16	150	18	63.9	1	90.00	16.0	☆	☆
16	.630	**R216.24-16030GAP16G**	4	16	150	18	63.9	3	90.00	16.0	☆	☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

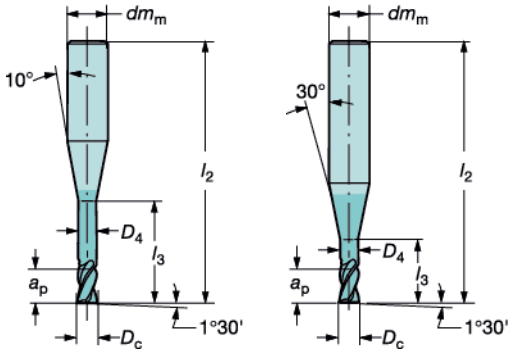
D328 D334 D214 G6 D2

General purpose endmill

Center cutting

Hardness <63 HRc

Helix angle: -30°
Tolerances: D_c: h10
dm_m: h6



Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	l_3	D_4	Helix l_{sh} mm[2]	Max a_p[1]	P GC 1620	P GC 1630	M GC 1620	M GC 1630	K GC 1620	K GC 1630	N GC 1620	S GC 1620	S GC 1630	H GC 1620
		Cylindrical shank, 2.5 x D_c																	
0.4	.016	**R216.32-00430-AE04G**	2	6	54	1	0.36	2.24	0.4	☆		☆		☆		☆	☆		☆
0.5	.020	**R216.32-00530-AE05G**	2	6	54	1.2	0.46	2.80	0.5	☆		☆		☆		☆	☆		☆
0.6	.024	**R216.32-00630-AE06G**	2	6	54	1.5	0.56	3.55	0.6	☆		☆		☆		☆	☆		☆
0.8	.032	**R216.32-00830-AE08G**	2	6	54	2	0.76	4.50	0.8	☆		☆		☆		☆	☆		☆
1	.039	**R216.32-01030-AE10G**	2	6	54	2.5	0.96	5.60	1.0	☆		☆		☆		☆	☆		☆
		Cylindrical shank, 10 x D_c																	
0.5	.020	**R216.32-00530-AI05G**	2	6	57	2.5	0.46	2.80	0.5	☆		☆		☆		☆	☆		☆
0.6	.024	**R216.32-00630-AI06G**	2	6	57	3	0.56	3.55	0.6	☆		☆		☆		☆	☆		☆
0.8	.032	**R216.32-00830-AI08G**	2	6	57	4	0.76	4.50	0.8	☆		☆		☆		☆	☆		☆
1	.039	**R216.32-01030-AI10G**	2	6	57	5	0.96	5.60	1.0	☆		☆		☆		☆	☆		☆
		Cylindrical shank, 5 x D_c																	
0.5	.020	**R216.32-00530-AJ05G**	2	6	57	5	0.46	2.80	0.5	☆		☆		☆		☆	☆		☆
0.6	.024	**R216.32-00630-AJ06G**	2	6	57	6	0.56	3.55	0.6	☆		☆		☆		☆	☆		☆
0.8	.032	**R216.32-00830-AJ08G**	2	6	57	8	0.76	4.50	0.8	☆		☆		☆		☆	☆		☆
1	.039	**R216.32-01030-AJ10G**	2	6	57	10	0.96	5.60	1.0	☆		☆		☆		☆	☆		☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

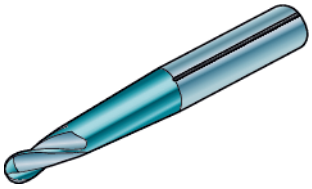
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

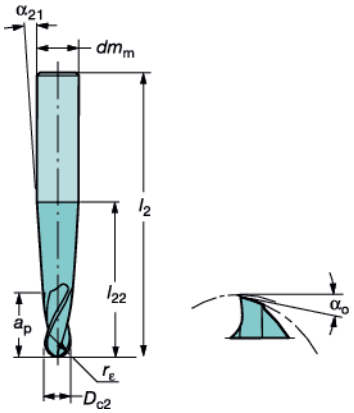
Conical ball nose end mill

Center cutting

Spherical design



Helix angle: 40°



Metric version

D_{c2}	Ordering code	Front type, z_n	Dimensions dm_m	l_2	l_{22}	r_ε	α_o	α_{21}	Max a_p	P GC 1620	P GC 1630	M GC 1620	M GC 1630	K GC 1620	K GC 1630	N GC 1620	N GC 1630	S GC 1620	S GC 1630	H GC 1620
	Cylindrical shank																			
4.0	R216.52-04040RAL10G	2	8.0	80	42.9	2.0	16°	3°	10.0		☆		☆		☆		☆		☆	
6.0	R216.52-06040RAL12G	2	10.0	100	43.9	3.0	14°	3°	12.0		☆		☆		☆		☆		☆	
4.0	R216.53-04040RAL40G	3	8.0	80	39.6	2.0	16°	3°	40.0	☆		☆		☆		☆		☆		☆
8.0	R216.53-08040RAL15G	3	12.0	100	44.9	4.0	14°	3°	15.0		☆		☆		☆		☆		☆	
10.0	R216.53-10040RAL18G	3	14.0	115	45.9	5.0	12°	3°	18.0		☆		☆		☆		☆		☆	
12.0	R216.53-12040RAL20G	3	16.0	115	46.8	6.0	12°	3°	20.0		☆		☆		☆		☆		☆	
16.0	R216.53-16040RAL22G	3	20.0	125	48.8	8.0	12°	3°	22.0		☆		☆		☆		☆		☆	
6.0	R216.54-06040RAL40G	4	10.0	100	40.6	3.0	14°	3°	40.0	☆		☆		☆		☆		☆		☆
8.0	R216.54-08040RAL40G	4	12.0	100	40.6	4.0	14°	3°	40.0	☆		☆		☆		☆		☆		☆
10.0	R216.54-10040RAL40G	4	14.0	115	42.6	5.0	12°	3°	40.0	☆		☆		☆		☆		☆		☆
12.0	R216.54-12040RAL42G	4	16.0	115	43.5	6.0	12°	3°	42.0	☆		☆		☆		☆		☆		☆
16.0	R216.54-16040RAL45G	4	20.0	125	46.0	8.0	12°	3°	45.0	☆		☆		☆		☆		☆		☆

z_n = number of cutting edges

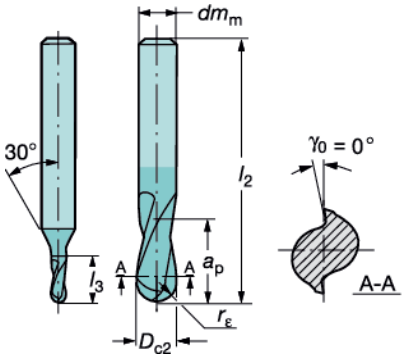
For cutting data and tool recommendation, please consult PluraGuide (C-2948-117).

D328 D334 D214 G6 D2

Ball nose end mill

Hardness 43HRc to 63HRc

Helix angle: -30°
Tolerances: D_{c2} : h7
dm_m: h5



Inch version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions, inch dm_m	l_2	l_3	r_ε	Max a_p[1]	P GC 1610	P GC 1620	M GC 1620	K GC 1620	N GC 1620	S GC 1620	H GC 1610	H GC 1620
		Cylindrical shank														
1.57	.062	**RA216.42-0430-AK08G**	2	.250	3.000	.250	.031	.125	☆						☆	
3.18	.125	**RA216.42-0830-AK04G**	2	.250	3.000	.500	.062	.250	☆						☆	
2.36	.093	**RA216.42-0630-AK12G**	2	.250	3.000	.375	.046	.187	☆						☆	
3.96	.156	**RA216.42-1030-AK05G**	2	.250	3.000	.650	.078	.312	☆						☆	
4.75	.187	**RA216.42-1230-AK06G**	2	.250	3.000	.750	.093	.375	☆						☆	
6.35	.250	**RA216.42-1630-AK08G**	2	.250	3.000		.125	.500	☆						☆	
7.92	.312	**RA216.42-2030-AK10G**	2	.375	3.500	1.250	.156	.625	☆						☆	
9.53	.375	**RA216.42-2430-AK12G**	2	.375	3.500		.188	.750	☆						☆	
12.70	.500	**RA216.42-3230-AK16G**	2	.500	4.000		.250	1.000	☆						☆	

1) Maximum cutting edge length.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

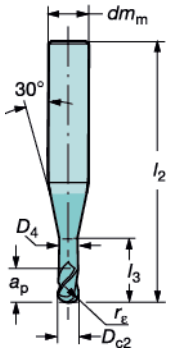
Ball nose end mill

Center cutting

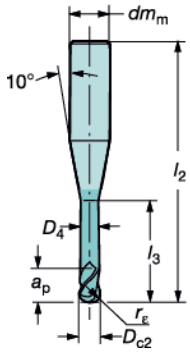
Hardness <63 HRc

Helix angle: -30°
Tolerances: D_{c2} : h7
dm_m: h5

2.5 - 5 x D_c



10 x D_c



Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	l_3	D_4	r_ε	Helix l_{5h} mm[2]	Max a_p[1]	P GC 1620	M GC 1620	K GC 1620	N GC 1620	S GC 1620	H GC 1620
		Cylindrical shank, 2.5 x D_c														
0.4	.016	R216.42-00430-AE04G	2	6	54	1	0.36	0.2	2.24	0.4	☆	☆	☆	☆	☆	☆
0.5	.020	R216.42-00530-AE05G	2	6	54	1.2	0.46	0.25	2.80	0.5	☆	☆	☆	☆	☆	☆
0.6	.024	R216.42-00630-AE06G	2	6	54	1.5	0.56	0.3	3.55	0.6	☆	☆	☆	☆	☆	☆
0.8	.032	R216.42-00830-AE08G	2	6	54	2	0.76	0.4	4.50	0.8	☆	☆	☆	☆	☆	☆
1	.039	R216.42-01030-AE10G	2	6	54	2.5	0.96	0.5	5.60	1.0	☆	☆	☆	☆	☆	☆
		Cylindrical shank, 10 x D_c														
0.5	.020	R216.42-00530-AJ05G	2	6	60	5	0.46	0.25	2.80	0.5	☆	☆	☆	☆	☆	☆
0.6	.024	R216.42-00630-AJ06G	2	6	57	3	0.56	0.3	3.55	0.6	☆	☆	☆	☆	☆	☆
0.8	.032	R216.42-00830-AJ08G	2	6	57	4	0.76	0.4	4.50	0.8	☆	☆	☆	☆	☆	☆
1	.039	R216.42-01030-AJ10G	2	6	57	5	0.96	0.5	5.60	1.0	☆	☆	☆	☆	☆	☆
		Cylindrical shank, 5 x D_c														
0.5	.020	R216.42-00530-AO05G	2	6	57	2.5	0.46	0.25	2.80	0.5	☆	☆	☆	☆	☆	☆
0.6	.024	R216.42-00630-AO06G	2	6	57	6	0.56	0.3	3.55	0.6	☆	☆	☆	☆	☆	☆
0.8	.032	R216.42-00830-AO08G	2	6	57	4.2	0.76	0.4	4.50	0.8	☆	☆	☆	☆	☆	☆
1	.039	R216.42-01030-AO10G	2	6	57	5	0.96	0.5	5.60	1.0	☆	☆	☆	☆	☆	☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

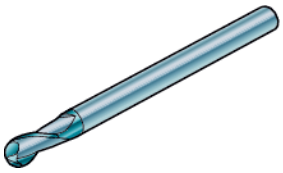
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

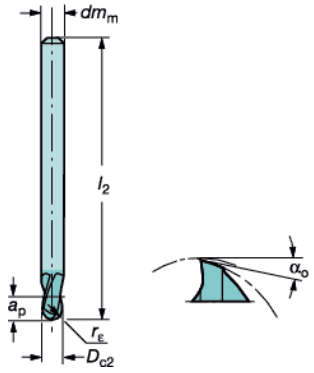
SANDVIK Coromant

Ball nose end mill

Hardness 43≤HRc≤63



Helix angle: -30°
Tolerances: dm_m: h5
D_{c2} : h7



Metric version

D_{c2} mm	D_{c2} inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	r_ε	Helix l_{sh} mm[2]	α_o	Max a_p[1]	P - P10	M - P10	K - P10	N - P10	S - P10	H - P10
		Cylindrical shank, extra long													
3	.118	**R216.42-03030-AQ05G**	2	3	100	1.5	18.00	20	5.0	☆	☆	☆	☆	☆	☆
4	.157	**R216.42-04030-AQ06G**	2	4	100	2	22.40	14	6.0	☆	☆	☆	☆	☆	☆
6	.236	**R216.42-06030-AQ09G**	2	6	125	3	35.50	14	9.0	☆	☆	☆	☆	☆	☆
8	.315	**R216.42-08030-AQ12G**	2	8	150	4	45.00	14	12.0	☆	☆	☆	☆	☆	☆
10	.394	**R216.42-10030-AQ15G**	2	10	150	5	56.00	12	15.0	☆	☆	☆	☆	☆	☆
12	.472	**R216.42-12030-AQ18G**	2	12	150	6	71.00	12	18.0	☆	☆	☆	☆	☆	☆

1) Maximum cutting edge length.
2) Pitch per rev.

z_n = number of cutting edges

PluraGuide

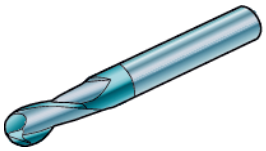
Cutting data
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

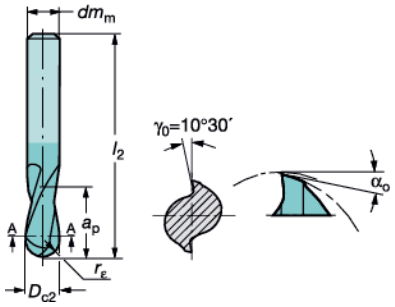
Ball nose end mill

Center cutting

Hardness <48HRc



Helix angle: -30°
Tolerances: D_{c2} : h7
dm_m: h5



Metric version

D_{c2} mm	D_{c2} inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	r_ε	Helix l_{sh} mm[2]	α_o	Max a_p[1]	P GC 1620	M GC 1620	K GC 1620	S GC 1620
		Cylindrical shank											
1	.039	**R216.42-01030-AC30P**	2	6	57	0.5	5.60	20	3.0	☆	☆	☆	☆
1.5	.059	**R216.42-01530-AC30P**	2	6	57	0.75	9.00	20	3.0	☆	☆	☆	☆
2	.079	**R216.42-02030-AC60P**	2	6	57	1	11.20	20	6.0	☆	☆	☆	☆
2.5	.098	**R216.42-02530-AC70P**	2	6	57	1.25	14.00	20	7.0	☆	☆	☆	☆
3	.118	**R216.42-03030-AC07P**	2	6	57	1.5	16.00	20	7.0	☆	☆	☆	☆
4	.157	**R216.42-04030-AC08P**	2	6	57	2	22.40	14	8.0	☆	☆	☆	☆
5	.197	**R216.42-05030-AC10P**	2	6	57	2.5	28.00	14	10.0	☆	☆	☆	☆
6	.236	**R216.42-06030-AC10P**	2	6	57	3	35.50	14	10.0	☆	☆	☆	☆
7	.276	**R216.42-07030-AC13P**	2	8	63	3.5	40.00	14	13.0	☆	☆	☆	☆
8	.315	**R216.42-08030-AC16P**	2	8	63	4	45.00	14	16.0	☆	☆	☆	☆
9	.354	**R216.42-09030-AC16P**	2	10	72	4.5	50.00	12	16.0	☆	☆	☆	☆
10	.394	**R216.42-10030-AC19P**	2	10	72	5	56.00	12	19.0	☆	☆	☆	☆
12	.472	**R216.42-12030-AC22P**	2	12	83	6	71.00	12	22.0	☆	☆	☆	☆
14	.551	**R216.42-14030-AC22P**	2	14	83	7	80.00	12	22.0	☆	☆	☆	☆
16	.630	**R216.42-16030-AC26P**	2	16	92	8	90.00	12	26.0	☆	☆	☆	☆
18	.709	**R216.42-18030-AC26P**	2	18	92	9	100.00	12	26.0	☆	☆	☆	☆
20	.787	**R216.42-20030-AC32P**	2	20	104	10	112.00	10	32.0	☆	☆	☆	☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

z_n = number of cutting edges

PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

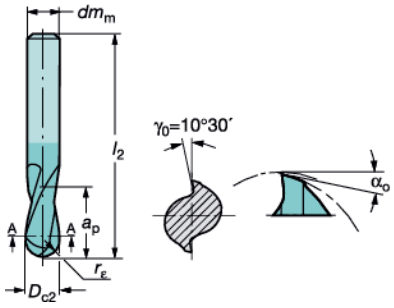
D328 D334 D214 G6 D2

SANDVIK Coromant

Ball nose end mill

Hardness <48HRc

Helix angle: -30°
Tolerances: D_{c2} : h7
dm_m: h5



Metric version

D_{c2} mm	D_{c2} inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	r_ε	Helix l_{sh} mm[2]	α_o	Max a_p[1]	P GC 1620	M GC 1620	K GC 1620	S GC 1620
		Cylindrical shank											
3	.118	R216.44-03030-AK08N	4	6	80	1.5	16.00	20	8.0	☆	☆	☆	☆
4	.157	R216.44-04030-AK11N	4	6	80	2	22.40	14	11.0	☆	☆	☆	☆
5	.197	R216.44-05030-AK13N	4	6	80	2.5	28.00	14	13.0	☆	☆	☆	☆
6	.236	R216.44-06030-AK13N	4	6	80	3	35.50	14	13.0	☆	☆	☆	☆
7	.276	R216.44-07030-AK16N	4	8	100	3.5	40.00	14	16.0	☆	☆	☆	☆
8	.315	R216.44-08030-AK19N	4	8	100	4	45.00	14	19.0	☆	☆	☆	☆
9	.354	R216.44-09030-AK19N	4	10	100	4.5	50.00	12	19.0	☆	☆	☆	☆
10	.394	R216.44-10030-AK22N	4	10	100	5	56.00	12	22.0	☆	☆	☆	☆
12	.472	R216.44-12030-AK26N	4	12	100	6	71.00	12	26.0	☆	☆	☆	☆
16	.630	R216.44-16030-AK32N	4	16	100	8	90.00	12	32.0	☆	☆	☆	☆
20	.787	R216.44-20030-AK38N	4	20	125	10	112.00	10	38.0	☆	☆	☆	☆

Inch version

D_{c2} mm	D_{c2} inch	Ordering code	Front type, z_n	Dimensions, inch dm_m	l_2	r_ε	Helix l_{sh}[2]	α_o	Max a_p[1]	P GC 1610	P GC 1620	M GC 1620	K GC 1620	N GC 1620	S GC 1620	H GC 1610	H GC 1620
		Cylindrical shank															
0.06	.062	RA216.44-0430-AK08N	4	.250	3.000	.031	.014	20	.125		☆	☆	☆	☆	☆		☆
0.09	.093	RA216.44-0630-AK12N	4	.250	3.000	.046	.022	20	.187		☆	☆	☆	☆	☆		☆
0.12	.125	RA216.44-0830-AK04N	4	.250	3.000	.062	.028	20	.250		☆	☆	☆	☆	☆		☆
0.16	.156	RA216.44-1030-AK05N	4	.250	3.000	.078	.035	14	.312		☆	☆	☆	☆	☆		☆
0.19	.187	RA216.44-1230-AK06N	4	.250	3.000	.093	.043	14	.375		☆	☆	☆	☆	☆		☆
0.25	.250	RA216.44-1630-AK08N	4	.250	3.000	.125	.055	14	.500		☆	☆	☆	☆	☆		☆
0.31	.312	RA216.44-2030-AK10N	4	.375	3.500	.156	.070	14	.625		☆	☆	☆	☆	☆		☆
0.38	.375	RA216.44-2430-AK12N	4	.375	3.500	.187	.087	12	.750		☆	☆	☆	☆	☆		☆
0.50	.500	RA216.44-3230-AK16N	4	.500	4.000	.250	.110	12	1.000		☆	☆	☆	☆	☆		☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

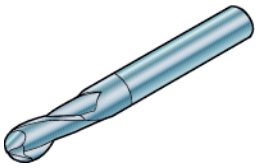
PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

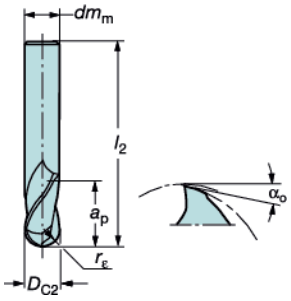
D328 D334 D214 G6 D2

Ball nose end mill

Center cutting



Helix angle: -30°
Tolerances: D_c: h9
dm_m: h5



Metric version

D_{c2} mm	D_{c2} inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	r_ε	Helix l_{sh} mm[2]	α_o	Max a_p[1]	N - H10F
		Cylindrical shank								
2	.079	**R216.42-02030-AK60A**	2	6	60	1	11.20	20	6.0	☆
3	.118	**R216.42-03030-AK07A**	2	6	80	1.5	18.00	20	7.0	☆
4	.157	**R216.42-04030-AK08A**	2	6	80	2	22.40	14	8.0	☆
5	.197	**R216.42-05030-AK10A**	2	6	80	2.5	28.00	14	10.0	☆
6	.236	**R216.42-06030-AK10A**	2	6	80	3	35.50	14	10.0	☆
8	.315	**R216.42-08030-AK16A**	2	8	100	4	45.00	14	16.0	☆
10	.394	**R216.42-10030-AK19A**	2	10	100	5	56.00	12	19.0	☆
12	.472	**R216.42-12030-AK22A**	2	12	100	6	71.00	12	22.0	☆
16	.630	**R216.42-16030-AK26A**	2	16	100	8	90.00	12	26.0	☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

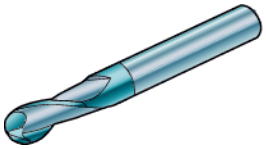
PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

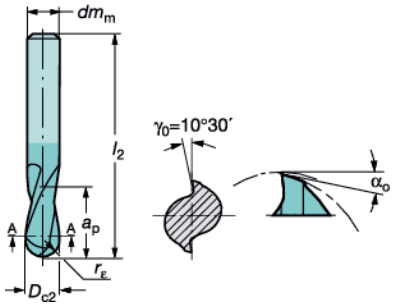
D328 D334 D214 G6 D2

Ball nose end mill

Hardness <48HRc



Helix angle: -30°
Tolerances: D_{c2} : h7
dm_m: h5



Inch version

D_{c2} mm	D_{c2} inch	Ordering code	Front type, z_n	Dimensions, inch dm_m	l_2	r_ε	Helix l_{sh}[2]	α_o	Max a_p[1]	P GC 1610	P GC 1620	M GC 1620	K GC 1620	N GC 1620	S GC 1620	H GC 1610	H GC 1620
		Cylindrical shank, Short															
1.57	.062	**RA216.42-0430-AK08P**	2	.250	3.000	.031	.014	20	.125		☆	☆	☆	☆	☆		☆
2.36	.093	**RA216.42-0630-AK12P**	2	.250	3.000	.046	.022	20	.187		☆	☆	☆	☆	☆		☆
3.18	.125	**RA216.42-0830-AK04P**	2	.250	3.000	.062	.028	20	.250		☆	☆	☆	☆	☆		
3.96	.156	**RA216.42-1030-AK05P**	2	.250	3.000	.078	.035	14	.312		☆	☆	☆	☆	☆		☆
4.75	.187	**RA216.42-1230-AK06P**	2	.250	3.000	.093	.043	14	.375		☆	☆	☆	☆	☆		☆
6.35	.250	**RA216.42-1630-AK08P**	2	.250	3.000	.125	.055	14	.500		☆	☆	☆	☆	☆		☆
7.92	.312	**RA216.42-2030-AK10P**	2	.375	3.500	.156	.070	14	.625		☆	☆	☆	☆	☆		☆
9.52	.375	**RA216.42-2430-AK12P**	2	.375	3.500	.187	.087	12	.750		☆	☆	☆	☆	☆		☆
12.70	.500	**RA216.42-3230-AK16P**	2	.500	4.000	.250	.110	12	1.000		☆	☆	☆	☆	☆		☆
		Cylindrical shank, long															
1.57	.062	**RA216.42-0430-AS08P**	2	.250	2.000	.031	.014	20	.125		☆	☆	☆	☆	☆		☆
2.36	.093	**RA216.42-0630-AS12P**	2	.250	2.000	.046	.022	20	.187		☆	☆	☆	☆	☆		
3.18	.125	**RA216.42-0830-AS04P**	2	.250	2.000	.062	.028	20	.250		☆	☆	☆	☆	☆		☆
3.96	.156	**RA216.42-1030-AS05P**	2	.250	2.000	.078	.035	14	.312		☆	☆	☆	☆	☆		☆
4.75	.187	**RA216.42-1230-AS06P**	2	.250	2.000	.093	.043	14	.375		☆	☆	☆	☆	☆		☆
6.35	.250	**RA216.42-1630-AS08P**	2	.250	2.000	.125	.055	14	.500		☆	☆	☆	☆	☆		☆
7.92	.312	**RA216.42-2030-AS10P**	2	.375	2.500	.156	.070	14	.625		☆	☆	☆	☆	☆		☆
9.52	.375	**RA216.42-2430-AS12P**	2	.375	2.500	.187	.087	12	.750		☆	☆	☆	☆	☆		☆
12.70	.500	**RA216.42-3230-AS16P**	2	.500	3.000	.250	.110	12	1.000		☆	☆	☆	☆	☆		☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

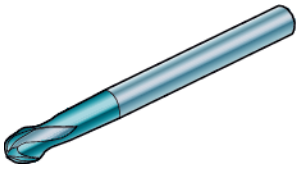
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

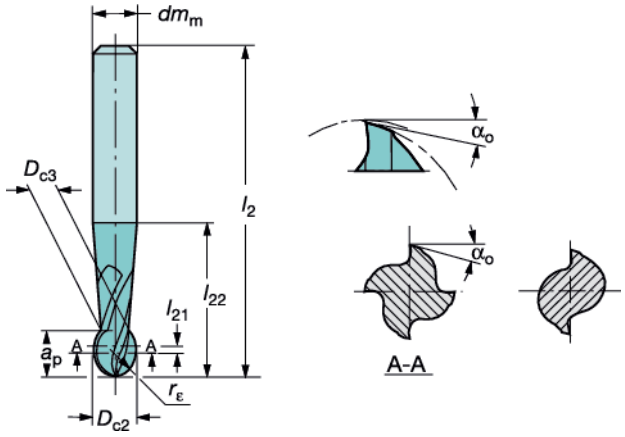
Ball nose end mill

Hardness 43≤HRc≤63

Spherical design



Helix angle: -30°
Tolerances: D_{c2} : h7
dm_m: h5



Metric version

D_{c2} mm	D_{c2} inch	Ordering code	Front type, z_n	Dimensions dm_m	D_{c3}	l_2	l_{21}	l_{22}	r_ε	Helix l_{sh} mm[2]	α_o	Max a_p[1]	P GC 1610	H GC 1610
		Cylindrical shank												
1	.039	R216.62-01030-AO20G	2	6		75	1.5	20	0.5	5.60	20	2.0	☆	☆
2	.079	R216.62-02030-AO30G	2	6	1.7	75	1.5	20	1	11.20	20	3.0	☆	☆
3	.118	R216.62-03030-AO04G	2	6	2.5	80	1.5	30	1.5	16.00	20	4.0	☆	☆
4	.157	R216.62-04030-AO05G	2	6	3.3	80	1.5	30	2	22.40	14	5.0	☆	☆
5	.197	R216.62-05030-AO07G	2	6	4.1	80	2	43	2.5	28.00	14	7.0	☆	☆
6	.236	R216.62-06030-AO07G	2	6	4.7	100	2	30	3	35.50	14	7.0	☆	☆
8	.315	R216.62-08030-AO09G	2	8	6.5	100	3	36	4	45.00	14	9.0	☆	☆
10	.394	R216.62-10030-AO11G	2	10	8.2	100	3	43	5	56.00	12	11.0	☆	☆
12	.472	R216.62-12030-AO13G	2	12	9.8	100	3	52	6	71.00	12	13.0	☆	☆
16	.630	R216.62-16030-AO15G	2	16	13.4	150	3	61	8	90.00	12	15.0	☆	☆
5	.197	R216.64-05030-AO07G	4	6	4.1	80	2	43	2.5	28.00	14	7.0	☆	☆
6	.236	R216.64-06030-AO07G	4	6	4.7	100	2	30	3	35.50	14	7.0	☆	☆
8	.315	R216.64-08030-AO09G	4	8	6.5	100	3	36	4	45.00	14	9.0	☆	☆
10	.394	R216.64-10030-AO11G	4	10	8.2	100	3	43	5	56.00	12	11.0	☆	☆
12	.472	R216.64-12030-AO13G	4	12	9.8	100	3	52	6	71.00	12	13.0	☆	☆
16	.630	R216.64-16030-AO15G	4	16	13.4	150	3	61	8	90.00	12	15.0	☆	☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

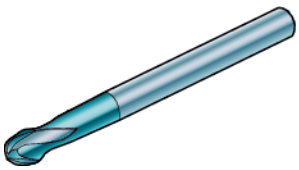
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

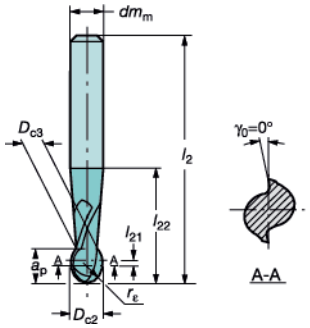
Ball nose end mill

Hardness 43HRc to 63HRc

Spherical design



Helix angle: -30°
Tolerances: D_{c2} : h9
dm_m: h6



Inch version

D_{c2} mm	D_{c2} inch	Ordering code	Front type, z_n	Dimensions, inch dm_m	D_{c3}	l_2	l_{21}	l_{22}	r_ε	Helix l_{sh}[2]	Max a_p[1]	P GC 1610	P GC 1620	M GC 1620	K GC 1620	N GC 1620	S GC 1620	H GC 1610	H GC 1620
		Cylindrical shank																	
1.57	.062	**RA216.62-0430-AK04G**	2	.250	.046	3.000		.125	.031	.014	.062	☆						☆	
2.36	.093	**RA216.62-0630-AK06G**	2	.250	.078	3.000		.187	.046	.022	.093	☆						☆	
3.18	.125	**RA216.62-0830-AK02G**	2	.250	.109	3.000		.250	.062	.028	.125	☆						☆	
3.96	.156	**RA216.62-1030-AK02G**	2	.250	.140	3.000		.312	.078	.035	.156	☆						☆	
4.75	.187	**RA216.62-1230-AK03G**	2	.250	.156	3.000		.375	.093	.043	.187	☆						☆	
6.35	.250	**RA216.62-1630-AK04G**	2	.250	.203	3.000		.500	.125	.055	.250	☆						☆	
7.92	.312	**RA216.62-2030-AK07G**	2	.375	.250	3.500	.125	.625	.156	.070	.437	☆						☆	
9.52	.375	**RA216.62-2430-AK08G**	2	.375	.343	3.500	.125	.750	.187	.087	.500	☆						☆	
12.70	.500	**RA216.62-3230-AK10G**	2	.500	.406	4.000	.125	1.000	.250	.110	.625	☆						☆	

1) Maximum cutting edge length.

2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

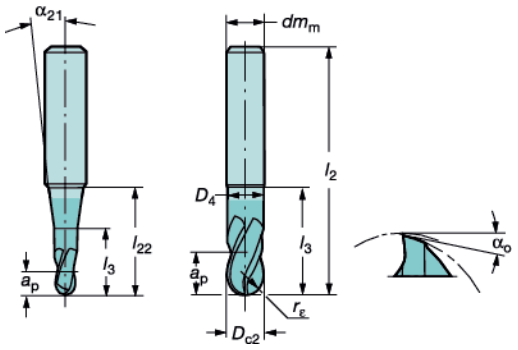
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

Ball nose end mill

Hardness 43≤HRc≤63

Helix angle: -30°
Tolerances: D_{c2} : h7
dm_m: h5



Metric version

D_{c2} mm	D_{c2} inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	l_3	l_{22}	D_4	r_ε	Helix l_{sh} mm[2]	α_o	α_{21}	Max a_p[1]	P GC1610	P GC1620	M GC1620	K GC1620	N GC1620	S GC1620	H GC1610	H GC1620
		Cylindrical shank																			
1	.039	R216.42-01030-AI10G	2	6	57	2	20		0.5	5.60	20	4°	1.0	☆	☆	☆	☆	☆	☆	☆	☆
1.5	.059	R216.42-01530-AI15G	2	6	57	3	20		0.75	9.00	20	4°	1.5	☆						☆	
2	.079	R216.42-02030-AI20G	2	6	57	4	20		1	11.20	20	4°	2.0	☆	☆	☆	☆	☆	☆	☆	☆
2.5	.098	R216.42-02530-AI25G	2	6	57	4	20		1.25	14.00	20	4°	2.5	☆						☆	
3	.118	R216.42-03030-AI03G	2	6	57	5	20		1.5	16.00	20	4°	3.0	☆	☆	☆	☆	☆	☆	☆	☆
4	.157	R216.42-04030-AI04G	2	6	57	6	20		2	22.40	14	4°	4.0	☆	☆	☆	☆	☆	☆	☆	☆
5	.197	R216.42-05030-AI05G	2	6	57	20		4.7	2.5	28.00	14	4°	5.0	☆	☆	☆	☆	☆	☆	☆	☆
6	.236	R216.42-06030-AI06G	2	8	57	21		5.7	3	35.50	14	4°	6.0	☆	☆	☆	☆	☆	☆	☆	☆
8	.315	R216.42-08030-AI08G	2	8	63	27		7.7	4	45.00	14	4°	8.0	☆	☆	☆	☆	☆	☆	☆	☆
10	.394	R216.42-10030-AI10G	2	10	72	32		9.7	5	56.00	12	4°	10.0	☆	☆	☆	☆	☆	☆	☆	☆
12	.472	R216.42-12030-AI12G	2	12	83	36		11.7	6	71.00	12	4°	12.0	☆	☆	☆	☆	☆	☆	☆	☆
		Cylindrical shank, long																			
1	.039	R216.42-01030-AP10G	2	6	80	2			0.5	5.60	20	2°30´	1.0	☆	☆	☆	☆	☆	☆	☆	☆
2	.079	R216.42-02030-AP20G	2	6	80	3			1	11.20	20	2°30´	2.0	☆	☆	☆	☆	☆	☆	☆	☆
3	.118	R216.42-03030-AP03G	2	6	80	4			1.5	18.00	20	2°30´	3.0	☆	☆	☆	☆	☆	☆	☆	☆
4	.157	R216.42-04030-AP04G	2	8	90	5			2	22.40	14	2°30´	4.0	☆	☆	☆	☆	☆	☆	☆	☆
5	.197	R216.42-05030-AP05G	2	8	100	6			2.5	28.00	14	2°30´	5.0	☆	☆	☆	☆	☆	☆	☆	☆
6	.236	R216.42-06030-AP06G	2	10	100	7			3	35.50	14	2°30´	6.0	☆	☆	☆	☆	☆	☆	☆	☆
8	.315	R216.42-08030-AP08G	2	12	100	10			4	45.00	14	2°30´	8.0	☆	☆	☆	☆	☆	☆	☆	☆
10	.394	R216.42-10030-AP10G	2	14	125	12			5	56.00	12	2°30´	10.0	☆	☆	☆	☆	☆	☆	☆	☆
12	.472	R216.42-12030-AP12G	2	16	140	14			6	71.00	12	2°30´	12.0	☆	☆	☆	☆	☆	☆	☆	☆
6	.236	R216.44-06030-AI06G	4	8	57	20			3	35.50	14	4°	6.0	☆						☆	
8	.315	R216.44-08030-AI08G	4	8	63	26			4	45.00	14	4°	8.0	☆						☆	
10	.394	R216.44-10030-AI10G	4	10	72	30			5	56.00	12	4°	10.0	☆						☆	
12	.472	R216.44-12030-AI12G	4	12	83	36			6	71.00	12	4°	12.0	☆						☆	
16	.630	R216.44-16030-AI16G	4	16	92	42			8	90.00	12	4°	16.0	☆						☆	

1) Maximum cutting edge length.

2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

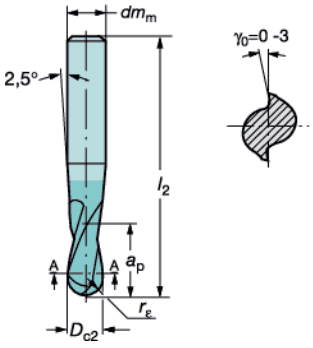
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

Ball nose end mill

Hardness from 43HRc to 58HRc

Helix angle: -30°
Tolerances: D_{c2} : h9
dm_m: h6



Inch version

D_{c2} mm	D_{c2} inch	Ordering code	Front type, z_n	Dimensions, inch dm_m	l_2	l_{22}	r_ε	Max a_p[1]	P GC 1620	M GC 1620	K GC 1620	N GC 1620	S GC 1620	H GC 1620
		Cylindrical shank												
1.57	.062	**RA216.42-0430-AL04G**	2	.250	4.000	2.226	.031	.063	☆	☆	☆	☆	☆	☆
2.36	.093	**RA216.42-0630-AL06G**	2	.250	4.000	1.907	.047	.094	☆	☆	☆	☆	☆	☆
3.18	.125	**RA216.42-0830-AL03G**	2	.250	4.000	1.598	.063	.125	☆	☆	☆	☆	☆	☆
3.96	.156	**RA216.42-1030-AL04G**	2	.250	4.000	1.289	.078	.156	☆	☆	☆	☆	☆	☆
4.75	.187	**RA216.42-1230-AL05G**	2	.250	4.000	.976	.094	.188	☆	☆	☆	☆	☆	☆
6.35	.250	**RA216.42-1630-AL06G**	2	.375	4.500	1.783	.125	.250	☆	☆	☆	☆	☆	☆
7.92	.312	**RA216.42-2030-AL08G**	2	.500	5.000	2.590	.156	.313	☆	☆	☆	☆	☆	☆
9.53	.375	**RA216.42-2430-AL09G**	2	.500	5.000	1.973	.188	.375	☆	☆	☆	☆	☆	☆
12.70	.500	**RA216.42-3230-AL12G**	2	.625	5.500	2.159	.250	.500	☆	☆	☆	☆	☆	☆

1) Maximum cutting edge length.

For more technical information, see our Metalcutting Technical Guide.

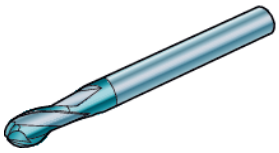
PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

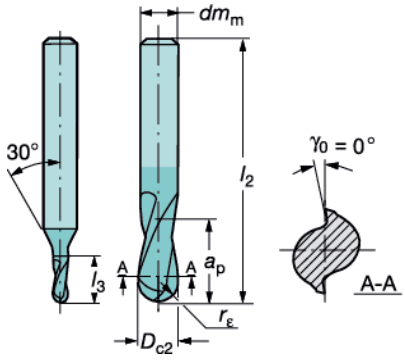
D328 D334 D214 G6 D2

Ball nose end mill

Hardness from 43HRc to 63HRc



Helix angle: -30°
Tolerances: D_{c2} : h7
dm_m: h5



Metric version

D_{c2} mm	D_{c2} inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	l_3	r_ε	Helix l_{sh} mm[2]	α_o	Max a_p[1]	P GC 1610	P GC 1620	M GC 1620	K GC 1620	N GC 1620	S GC 1620	H GC 1610	H GC 1620
		Cylindrical shank																
1	.039	**R216.42-01030-AC15G**	2	6	57	4.5	0.5	5.60	20	1.5	☆						☆	
2	.079	**R216.42-02030-AC30G**	2	6	57	6	1	11.20	20	3.0	☆						☆	
3	.118	**R216.42-03030-AC04G**	2	6	57	6.9	1.5	18.00	20	4.0	☆						☆	
4	.157	**R216.42-04030-AC05G**	2	6	57	14	2	22.40	14	5.0	☆						☆	
5	.197	**R216.42-05030-AC06G**	2	6	57	15	2.5	28.00	14	6.0	☆						☆	
6	.236	**R216.42-06030-AC10G**	2	6	57		3	35.50	14	10.0	☆						☆	
8	.315	**R216.42-08030-AC16G**	2	8	63		4	45.00	14	16.0	☆						☆	
10	.394	**R216.42-10030-AC19G**	2	10	72		5	56.00	12	19.0	☆						☆	
12	.472	**R216.42-12030-AC22G**	2	12	83		6	71.00	12	22.0	☆						☆	
1	.039	**R216.42-01030-AK15G**	2	6	57	3	0.5	5.60	20	1.5	☆	☆	☆	☆	☆	☆	☆	☆
1.5	.059	**R216.42-01530-AK20G**	2	6	57	4	0.75	9.00	20	2.0	☆	☆	☆	☆	☆	☆	☆	☆
2	.079	**R216.42-02030-AK30G**	2	6	57	6	1	11.20	20	3.0	☆	☆	☆	☆	☆	☆	☆	☆
2.5	.098	**R216.42-02530-AK30G**	2	6	57	6	1.25	14.00	20	3.0	☆	☆	☆	☆	☆	☆	☆	☆
3	.118	**R216.42-03030-AK04G**	2	6	57	7	1.5	16.00	20	4.0	☆	☆	☆	☆	☆	☆	☆	☆
4	.157	**R216.42-04030-AK05G**	2	6	80	8	2	22.40	14	5.0	☆	☆	☆	☆	☆	☆	☆	☆
5	.197	**R216.42-05030-AK06G**	2	6	80	6	2.5	28.00	14	6.0	☆	☆	☆	☆	☆	☆	☆	☆
6	.236	**R216.42-06030-AK10G**	2	6	80		3	35.50	14	10.0	☆	☆	☆	☆	☆	☆	☆	☆
8	.315	**R216.42-08030-AK16G**	2	8	100		4	45.00	14	16.0	☆	☆	☆	☆	☆	☆	☆	☆
10	.394	**R216.42-10030-AK19G**	2	10	100		5	56.00	12	19.0	☆	☆	☆	☆	☆	☆	☆	☆
12	.472	**R216.42-12030-AK22G**	2	12	100		6	71.00	12	22.0	☆	☆	☆	☆	☆	☆	☆	☆
16	.630	**R216.42-16030-AK32G**	2	16	125		8	90.00	12	32.0	☆	☆	☆	☆	☆	☆	☆	☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

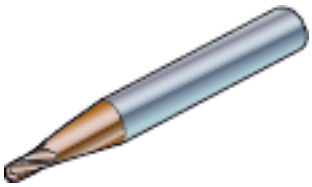
PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

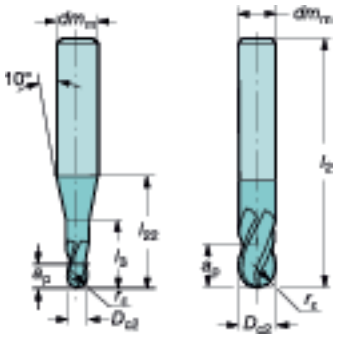
D328 D334 D214 G6 D2

Ball nose end mill

Hardness from 43HRc to 63HRc



Helix angle: 30°
Tolerances: D_{c2} : 0/-0.01
dm_m: h4
r_ε: +0.003
-0.007



Metric version

D_{c2} mm	D_{c2} inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	l_{22}	l_3	r_ε	Max a_p[1]	H GC 1700
		Cylindrical shank								
3	.118	**R216.42-03030-AC04G**	2	6	70	14	6.9	1.5	5.0	☆
3	.118	**R216.42-03030-AS04G**	2	6	57			1.5	5.0	☆
4	.157	**R216.42-04030-AC06G**	2	6	70	13	7	3	6.0	☆
4	.157	**R216.42-04030-AS06G**	2	6	57			3	6.0	☆
5	.197	**R216.42-05030-AC07G**	2	6	80	11	8.5	2.5	8.0	☆
5	.197	**R216.42-05030-AS07G**	2	6	57			2.5	8.0	☆
6	.236	**R216.42-06030-AC09G**	2	6	90			3	9.0	☆
6	.236	**R216.42-06030-AS09G**	2	6	57			3	9.0	☆
8	.315	**R216.42-08030-AC12G**	2	8	100			4	12.0	☆
8	.315	**R216.42-08030-AS12G**	2	8	63			4	12.0	☆
10	.394	**R216.42-10030-AC15G**	2	10	100			5	15.0	☆
10	.394	**R216.42-10030-AS15G**	2	10	72			5	15.0	☆
12	.472	**R216.42-12030-AC18G**	2	12	110			6	18.0	☆
12	.472	**R216.42-12030-AS18G**	2	12	83			6	18.0	☆

1) Maximum cutting edge length.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

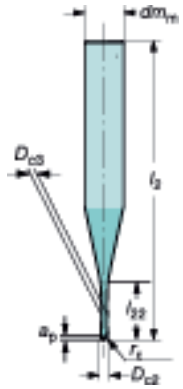
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

Ball nose end mill

Hardness from 43HRc to 63HRc

Helix angle: 30°
Tolerances: D_{c2} : 0/-0.01
dm_m: h4
r_ε: +0.003
-0.007



Metric version

D_{c2} mm	D_{c2} inch	Ordering code	Front type, z_n	Dimensions D_{c3}	dm_m	l_2	l_{22}	r_ε	Max a_p[1]	H GC 1700
		Cylindrical shank								
0.1	.004	R216.42-00130-EC01G	2	0.08	4	45	0.15	0.05	0.08	☆
0.1	.004	R216.42-00130-FC01G	2	0.08	4	45	0.3	0.05	0.08	☆
0.1	.004	R216.42-00130-HC01G	2	0.08	4	45	0.75	0.05	0.08	☆
0.2	.008	R216.42-00230-EC02G	2	0.17	4	45	0.3	0.1	0.15	☆
0.2	.008	R216.42-00230-FC02G	2	0.17	4	45	0.6	0.1	0.15	☆
0.2	.008	R216.42-00230-GC02G	2	0.17	4	45	1	0.1	0.15	☆
0.2	.008	R216.42-00230-HC02G	2	0.17	4	45	1.5	0.1	0.15	☆
0.2	.008	R216.42-00230-IC02G	2	0.17	4	45	2	0.1	0.15	☆
0.3	.012	R216.42-00330-EC03G	2	0.27	4	45	0.45	0.15	0.25	☆
0.3	.012	R216.42-00330-FC03G	2	0.27	4	45	0.9	0.15	0.25	☆
0.3	.012	R216.42-00330-GC03G	2	0.27	4	45	1.5	0.15	0.25	☆
0.3	.012	R216.42-00330-HC03G	2	0.27	4	45	2	0.15	0.25	☆
0.3	.012	R216.42-00330-JC03G	2	0.27	4	45	3	0.15	0.25	☆
0.4	.016	R216.42-00430-EC04G	2	0.37	4	45	0.6	0.2	0.3	☆
0.4	.016	R216.42-00430-FC04G	2	0.37	4	45	1.2	0.2	0.3	☆
0.4	.016	R216.42-00430-GC04G	2	0.37	4	45	2	0.2	0.3	☆
0.4	.016	R216.42-00430-HC04G	2	0.37	4	45	3	0.2	0.3	☆
0.4	.016	R216.42-00430-IC04G	2	0.37	4	45	3.5	0.2	0.3	☆
0.4	.016	R216.42-00430-JC04G	2	0.37	4	45	4	0.2	0.3	☆
0.5	.020	R216.42-00530-EC05G	2	0.47	4	45	0.75	0.25	0.35	☆
0.5	.020	R216.42-00530-FC05G	2	0.47	4	45	1.5	0.25	0.35	☆
0.5	.020	R216.42-00530-HC05G	2	0.47	4	45	3	0.25	0.35	☆
0.5	.020	R216.42-00530-JC05G	2	0.47	4	45	5	0.25	0.35	☆
0.6	.024	R216.42-00630-EC06G	2	0.57	4	45	0.9	0.3	0.4	☆
0.6	.024	R216.42-00630-FC06G	2	0.57	4	45	1.8	0.3	0.4	☆
0.6	.024	R216.42-00630-GC06G	2	0.57	4	45	3	0.3	0.4	☆
0.6	.024	R216.42-00630-IC06G	2	0.57	4	45	5	0.3	0.4	☆
0.6	.024	R216.42-00630-JC06G	2	0.57	4	45	6	0.3	0.4	☆
0.8	.032	R216.42-00830-EC08G	2	0.77	4	45	1.2	0.4	0.5	☆
0.8	.032	R216.42-00830-FC08G	2	0.77	4	45	2.4	0.4	0.5	☆
0.8	.032	R216.42-00830-GC08G	2	0.77	4	45	4	0.4	0.5	☆
0.8	.032	R216.42-00830-HC08G	2	0.77	4	45	6	0.4	0.5	☆
1	.039	R216.42-01030-EC10G	2	0.96	6	45	1.5	0.5	0.8	☆
1	.039	R216.42-01030-FC10G	2	0.96	6	45	3	0.5	0.8	☆
1	.039	R216.42-01030-HC10G	2	0.96	6	45	6	0.5	0.8	☆
1	.039	R216.42-01030-IC10G	2	0.96	6	45	8	0.5	0.8	☆
1	.039	R216.42-01030-JC10G	2	0.96	6	50	10	0.5	0.8	☆

1) Maximum cutting edge length.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

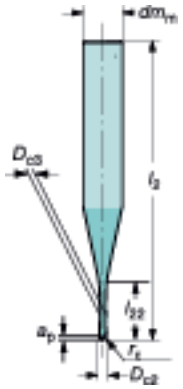
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

Ball nose end mill

Hardness from 43HRc to 63HRc

Helix angle: 30°
Tolerances: D_{c2} : 0/-0.01
dm_m: h4
r_ε: +0.003
-0.007



Metric version

D_{c2} mm	D_{c2} inch	Ordering code	Front type, z_n	Dimensions D_{c3}	dm_m	l_2	l_{22}	r_ε	Max a_p[1]	H GC 1700
1.2	.047	R216.42-01230-EC12G	2	1.15	6	45	1.8	0.6	1.1	☆
1.2	.047	R216.42-01230-FC12G	2	1.15	6	45	3.6	0.6	1.1	☆
1.5	.059	R216.42-01530-EC15G	2	1.44	6	45	2.25	0.75	1.35	☆
1.5	.059	R216.42-01530-FC15G	2	1.44	6	45	4.5	0.75	1.35	☆
1.5	.059	R216.42-01530-GC15G	2	1.44	6	45	8	0.75	1.35	☆
1.5	.059	R216.42-01530-IC15G	2	1.44	6	50	12	0.75	1.35	☆
2	.079	R216.42-02030-EC20G	2	1.92	6	45	3	1	1.7	☆
2	.079	R216.42-02030-FC20G	2	1.92	6	45	6	1	1.7	☆
2	.079	R216.42-02030-GC20G	2	1.92	6	45	8	1	1.7	☆
2	.079	R216.42-02030-HC20G	2	1.92	6	50	12	1	1.7	☆
2	.079	R216.42-02030-IC20G	2	1.92	6	50	16	1	1.7	☆
2	.079	R216.42-02030-JC20G	2	1.92	6	55	20	1	1.7	☆
2.5	.098	R216.42-02530-EC25G	2		6	55	3.75	1.25		☆
2.5	.098	R216.42-02530-FC25G	2		6	55	7.5	1.25		☆
2.5	.098	R216.42-02530-GC25G	2		6	55	12.5	1.25		☆
2.5	.098	R216.42-02530-HC25G	2		6	55	15	1.25		☆
2.5	.098	R216.42-02530-IC25G	2		6	55	20	1.25		☆

1) Maximum cutting edge length.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

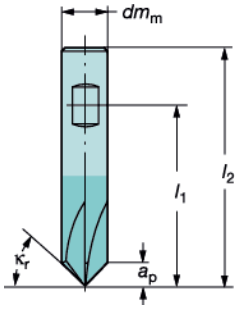
D328 D334 D214 G6 D2

Chamfering end mill

Center cutting

Hardness <63 HRc

Tolerances: D_c: h10
dm_m: h6



Metric version

Ordering code	Front type z_n	Dimensions dm_m	κ_r	l_1	l_2	Max a_p	P GC 1620	M GC 1620	K GC 1620	N GC 1620	S GC 1620	H GC 1620
Cylindrical shank												
R215.84-01000-AC25G	4	6	45		57	2.5	☆	☆	☆	☆	☆	☆
R215.84-01500-AC43G	4	10	45		100	4.25	☆	☆	☆	☆	☆	☆
R215.85-02000-AC30G	5	8	45		80	3	☆	☆	☆	☆	☆	☆
R215.86-03000-AC05G	6	12	45		83	4.5	☆	☆	☆	☆	☆	☆
R215.94-01500-AC74G	4	10	60		100	7.35	☆	☆	☆	☆	☆	☆
Weldon												
R215.84-01500-BC43G	4	10	45	80	100	4.25	☆	☆	☆	☆	☆	☆
R215.86-03000-BC05G	6	12	45	60.5	83	4.5	☆	☆	☆	☆	☆	☆
R215.94-01500-BC74G	4	10	60	80	100	7.35	☆	☆	☆	☆	☆	☆

For more technical information, see our Metalcutting Technical Guide.

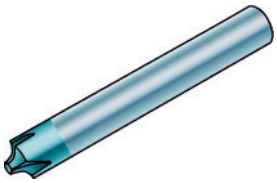
PluraGuide

First choice: Use Plura Guide. Order number C-2948-117

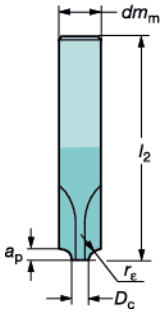
D328 D334 D214 G6 D2

Chamfering radius end mill

Hardness <63HRc



Tolerances: dm_m: h6



Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_2	r_ε	Max a_p[1]	P GC 1620	M GC 1620	K GC 1620	N GC 1620	S GC 1620	H GC 1620
		Cylindrical shank											
4	.157	R215.03-04000BAC01G	3	6	57	0.5	0.5	☆	☆	☆	☆	☆	☆
4	.157	R215.03-04000CAC01G	3	6	57	0.75	0.8	☆	☆	☆	☆	☆	☆
4	.157	R215.04-04000CAC01G	4	8	63	1	1.0	☆	☆	☆	☆	☆	☆
4	.157	R215.04-04000DAC02G	4	8	63	1.5	1.5	☆	☆	☆	☆	☆	☆
5	.197	R215.04-05000EAC02G	4	10	72	2	2.0	☆	☆	☆	☆	☆	☆
5	.197	R215.04-05000FAC03G	4	10	72	2.5	2.5	☆	☆	☆	☆	☆	☆
5	.197	R215.04-05000GAC03G	4	12	83	3	3.0	☆	☆	☆	☆	☆	☆
6	.236	R215.04-06000IAC04G	4	14	83	4	4.0	☆	☆	☆	☆	☆	☆
6	.236	R215.04-06000KAC05G	4	16	92	5	5.0	☆	☆	☆	☆	☆	☆
8	.315	R215.04-08000MAC06G	4	20	104	6	6.0	☆	☆	☆	☆	☆	☆

1) Maximum cutting edge length.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

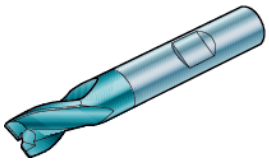
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

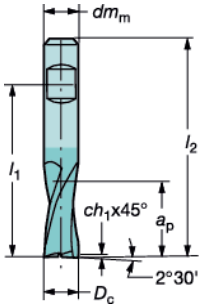
Slotting endmill

Hardness <48 HRc

Key slot



Helix angle: -30°
Tolerances: D_c: h10/e8
dm_m: h6



Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_1	l_2	ch_1	Helix l_{sh} mm[2]	Max a_p[1]	P GC 1630	M GC 1630	K GC 1630	N GC 1630	S GC 1630
		Weldon												
2	.079	R216.12-02030-BS30P	2	6	32	50	0.10	11.20	3.0	☆	☆	☆	☆	☆
2.5	.098	R216.12-02530-BS30P	2	6	32	50	0.10	14.00	3.0	☆	☆	☆	☆	☆
2.8	.110	R216.12-02830-BS40P	2	6	32	50	0.10	16.00	4.0	☆	☆	☆	☆	☆
3	.118	R216.12-03030-BS04P	2	6	14	50	0.10	16.00	4.0	☆	☆	☆	☆	☆
3.5	.138	R216.12-03530-BS04P	2	6	32	50	0.10	20.00	4.0	☆	☆	☆	☆	☆
3.8	.150	R216.12-03830-BS05P	2	6	36	54	0.10	22.40	5.0	☆	☆	☆	☆	☆
4	.157	R216.12-04030-BS05P	2	6	36	54	0.10	22.40	5.0	☆	☆	☆	☆	☆
4.8	.189	R216.12-04830-BS06P	2	6	36	54	0.15	28.00	6.0	☆	☆	☆	☆	☆
5	.197	R216.12-05030-BS06P	2	6	36	54	0.15	28.00	6.0	☆	☆	☆	☆	☆
5.75	.226	R216.12-05830-BS07P	2	6	36	54	0.15	35.50	7.0	☆	☆	☆	☆	☆
6	.236	R216.12-06030-BS07P	2	6	36	54	0.15	35.50	7.0	☆	☆	☆	☆	☆
6.75	.266	R216.12-06830-BS08P	2	8	40	58	0.15	40.00	8.0	☆	☆	☆	☆	☆
7	.276	R216.12-07030-BS08P	2	8	40	58	0.15	40.00	8.0	☆	☆	☆	☆	☆
7.75	.305	R216.12-07830-BS09P	2	8	40	58	0.15	45.00	9.0	☆	☆	☆	☆	☆
8	.315	R216.12-08030-BS09P	2	8	40	58	0.15	45.00	9.0	☆	☆	☆	☆	☆
9	.354	R216.12-09030-BS10P	2	10	46	66	0.25	50.00	10.0	☆	☆	☆	☆	☆
9.7	.382	R216.12-09730-BS11P	2	10	46	66	0.15	56.00	11.0	☆	☆	☆	☆	☆
10	.394	R216.12-10030-BS11P	2	10	46	66	0.25	56.00	11.0	☆	☆	☆	☆	☆
11.7	.461	R216.12-11730-BS12P	2	12	50.5	73	0.25	71.00	12.0	☆	☆	☆	☆	☆
12	.472	R216.12-12030-BS12P	2	12	50.5	73	0.25	71.00	12.0	☆	☆	☆	☆	☆
13.7	.539	R216.12-13730-BS14P	2	14	52.5	75	0.25	80.00	14.0	☆	☆	☆	☆	☆
14	.551	R216.12-14030-BS14P	2	14	52.5	75	0.25	80.00	14.0	☆	☆	☆	☆	☆
15.7	.618	R216.12-15730-BS16P	2	16	58	82	0.25	90.00	16.0	☆	☆	☆	☆	☆
16	.630	R216.12-16030-BS16P	2	16	58	82	0.25	90.00	16.0	☆	☆	☆	☆	☆
17.7	.697	R216.12-17730-BS18P	2	18	60	84	0.25	100.00	18.0	☆	☆	☆	☆	☆
18	.709	R216.12-18030-BS18P	2	18	60	84	0.25	100.00	18.0	☆	☆	☆	☆	☆
19.7	.776	R216.12-19730-BS20P	2	20	67	92	0.25	112.00	20.0	☆	☆	☆	☆	☆
20	.787	R216.12-20030-BS20P	2	20	67	92	0.35	112.00	20.0	☆	☆	☆	☆	☆

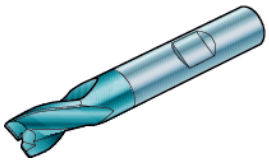
1) Maximum cutting edge length.
2) Pitch per rev.

D328 D334 D214 G6 D2

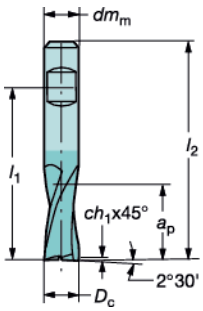
Slotting endmill

Hardness <48 HRc

Key slot



Helix angle: -30°
Tolerances: D_c: h10/e8
dm_m: h6



Metric version

D_c mm	D_c inch	Ordering code	Front type, z_n	Dimensions dm_m	l_1	l_2	ch_1	Helix l_{sh} mm[2]	Max a_p[1]	P GC 1630	M GC 1630	K GC 1630	N GC 1630	S GC 1630
		Weldon												
1.8	.071	R216.13-01830-BS30P	3	6	32	50	0.10	10.00	3.0	☆	☆	☆	☆	☆
2	.079	R216.13-02030-BS30P	3	6	32	50	0.10	11.20	3.0	☆	☆	☆	☆	☆
2.8	.110	R216.13-02830-BS40P	3	6	32	50	0.10	16.00	4.0	☆	☆	☆	☆	☆
3	.118	R216.13-03030-BS04P	3	6	32	50	0.10	16.00	4.0	☆	☆	☆	☆	☆
3.8	.150	R216.13-03830-BS05P	3	6	36	54	0.10	22.40	5.0	☆	☆	☆	☆	☆
4	.157	R216.13-04030-BS05P	3	6	36	54	0.10	22.40	5.0	☆	☆	☆	☆	☆
4.8	.189	R216.13-04830-BS06P	3	6	36	54	0.15	28.00	6.0	☆	☆	☆	☆	☆
5	.197	R216.13-05030-BS06P	3	6	36	54	0.15	28.00	6.0	☆	☆	☆	☆	☆
5.75	.226	R216.13-05830-BS07P	3	6	36	54	0.15	35.50	7.0	☆	☆	☆	☆	☆
6	.236	R216.13-06030-BS07P	3	6	36	54	0.15	35.50	7.0	☆	☆	☆	☆	☆
6.75	.266	R216.13-06830-BS08P	3	8	40	58	0.15	40.00	8.0	☆	☆	☆	☆	☆
7	.276	R216.13-07030-BS08P	3	8	40	58	0.15	40.00	8.0	☆	☆	☆	☆	☆
7.75	.305	R216.13-07830-BS09P	3	8	40	58	0.15	45.00	9.0	☆	☆	☆	☆	☆
8	.315	R216.13-08030-BS09P	3	8	40	58	0.15	45.00	9.0	☆	☆	☆	☆	☆
9	.354	R216.13-09030-BS10P	3	10	46	66	0.25	50.00	10.0	☆	☆	☆	☆	☆
9.7	.382	R216.13-09730-BS11P	3	10	46	66	0.25	56.00	11.0	☆	☆	☆	☆	☆
10	.394	R216.13-10030-BS11P	3	10	46	66	0.25	56.00	11.0	☆	☆	☆	☆	☆
11.7	.461	R216.13-11730-BS12P	3	12	50.5	73	0.25	71.00	12.0	☆	☆	☆	☆	☆
12	.472	R216.13-12030-BS12P	3	12	50.5	73	0.25	71.00	12.0	☆	☆	☆	☆	☆
13.7	.539	R216.13-13730-BS14P	3	14	52.5	75	0.25	80.00	14.0	☆	☆	☆	☆	☆
14	.551	R216.13-14030-BS14P	3	14	52.5	75	0.25	80.00	14.0	☆	☆	☆	☆	☆
15.7	.618	R216.13-15730-BS16P	3	16	58	82	0.25	90.00	16.0	☆	☆	☆	☆	☆
16	.630	R216.13-16030-BS16P	3	16	58	82	0.25	90.00	16.0	☆	☆	☆	☆	☆
17.7	.697	R216.13-17730-BS18P	3	18	60	84	0.25	100.00	18.0	☆	☆	☆	☆	☆
18	.709	R216.13-18030-BS18P	3	18	60	84	0.25	100.00	18.0	☆	☆	☆	☆	☆
19.7	.776	R216.13-19730-BS20P	3	20	67	92	0.25	112.00	20.0	☆	☆	☆	☆	☆
20	.787	R216.13-20030-BS20P	3	20	67	92	0.35	112.00	20.0	☆	☆	☆	☆	☆

1) Maximum cutting edge length.
2) Pitch per rev.

For more technical information, see our Metalcutting Technical Guide.

PluraGuide

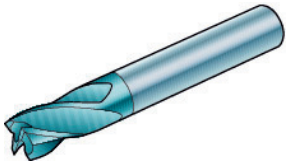
First choice: Use Plura Guide. Order number C-2948-117

D328 D334 D214 G6 D2

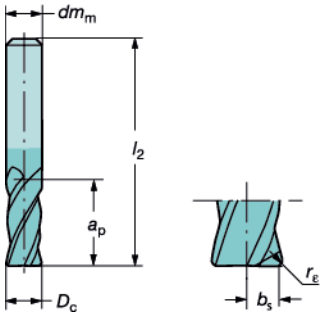
Endmills for Turn-Milling

Center cutting

Hardness <48 HRc



Helix angle: -30°
Tolerances: D_c: h10
dm_m: h6



Metric version

D_c mm	D_c inch	Ordering code	Front type z_n	Dimensions dm_m	l_2	b_s	r_ε	Helix l_{sh} mm[2]	Max a_p[1]	P GC 1620	M GC 1620	K GC 1620	S GC 1620
		Cylindrical shank											
6	.236	**R216.T4-06030BAS10N**	4	6	54	2.5	0.5	35.50	10	☆	☆	☆	☆
8	.315	**R216.T4-08030BAS12N**	4	8	58	3.5	0.5	45.00	12	☆	☆	☆	☆
10	.394	**R216.T4-10030CAS14N**	4	10	66	4	1	56.00	14	☆	☆	☆	☆
12	.472	**R216.T4-12030CAS16N**	4	12	73	5	1	71.00	16	☆	☆	☆	☆

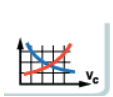
1) Maximum cutting edge length.

2) Pitch per rev.

Note: A specialized CoroMill® Plura endmill with a cutting geometry designed for use in Turn-Mill operations. See Metalcutting Technical guide.

PluraGuide

First choice: Use Plura Guide. Order number C-2948-117


D328

D334

D214

G6

D2

CoroMill® Plura

Thread milling cutter

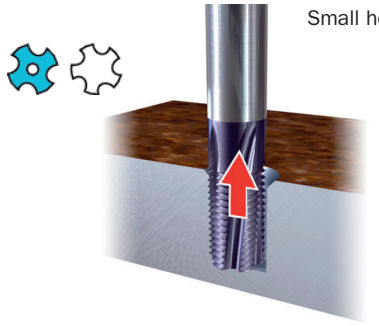
Completes a thread in only one pass

Diameter .189 - .783 inch (3.2 - 19 mm)

Just one tool for most threads with the same pitch

Right hand threads

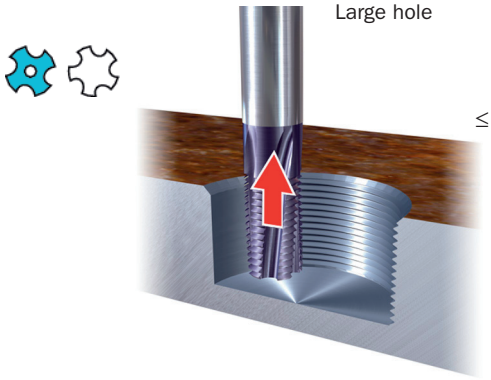
Small hole



≤ 48 HRC

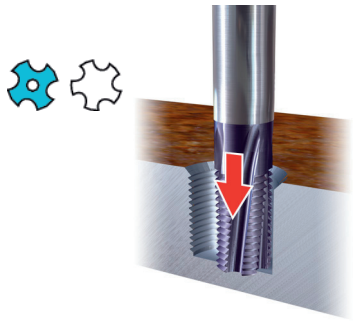
Right hand threads

Large hole



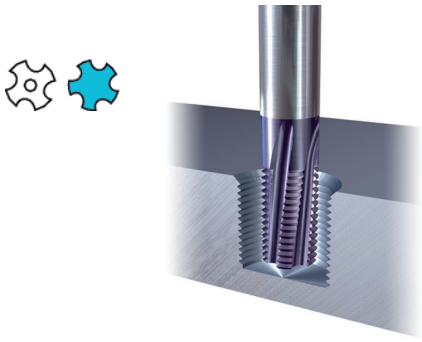
≤ 48 HRC

Left hand threads

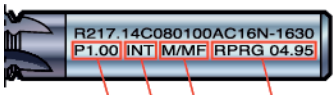


≤ 48 HRC

Right hand threads



≤ 56 HRC
- requires more than one pass



Pitch

Internal Thread

Thread type

Individual tool radius programming value

Secure performance

- Cutting small chips - easy to evacuate.
- Easy to remove tool in the event of breakage.

Common machine tool and setup requirements

- Capable of simultaneous helical interpolation in three axes (X-Y-Z).
- Tool mounting in conventional chucks.

Cutting data and programming

Use PluraGuide for selecting tools and correct cutting data, and for programming.

Please contact your local Sandvik Coromant office for more information.

PluraGuide

For cutting data and tool recommendation, please consult PluraGuide (C-2948-117).

ISO application areas:

P M K N S H

Code key for CoroMill® Plura thread milling endmills

R	21	7	.	1	5	C	100	300	A	C	22	H
1	2	3		4	5	6	7	8	9	10	11	12

1 Direction of rotation

R Right hand

2 Type of tool

21 Endmill

3 Function

7 Thread milling

4 Type of thread

1= Metric/Metric Fine internal thread

2= Metric/Metric Fine external thread

3= UNC/UNF internal thread

4= UNC/UNF external thread

5= NPT internal thread

6= NPT external thread

7= NPTF internal thread

8= NPTF external thread

5 Number of teeth

1-9 1 to 9 teeth

6 Cutting fluid supply

C Internal coolant

\- No coolant through

7 Diameter of tool

Cutting diameter in 1/10 mm

8 Pitch

Pitch in 1/10 mm

9 Shank type

A Cylindrical shank

B Weldon shank

10 Length of shank

S Short shank length
C Long shank length
K Shank length > "C"
L Shank length > "K"
X Shank length > "L"

11 Max cutting depth, a_p

Cutting length in mm (If D_c or D_{c2} < 3 mm in 1/10 mm)

12 Geometry type

N 10° helix, 9-12° rake angle, internal thread

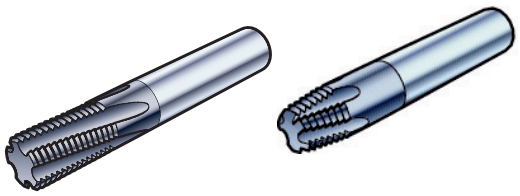
H 30° helix, < 0° rake angle, internal thread

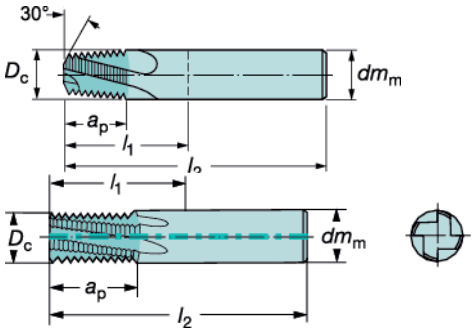
CoroMill® Plura Thread milling cutter

Internal threads

Inch, 60°

Hardness <48HRc





Ordering code	Thread	Coolant[1]	Front type z_n	Dimensions, inch Pitch P_{th}[2]	D_c	dm_m	l_1	l_2	Max a_p	P GC 1630	M GC 1630	K GC 1630	N GC 1630	S GC 1630
Cylindrical shank														
R217.53-079270AC11N	1/8-27 NPT	0	3	27	.311	.315	.866	2.284	.453	☆	☆	☆	☆	☆
R217.53-099180AC15N	1/4-18 NPT	0	3	18	.390	.394	1.024	2.598	.627	☆	☆	☆	☆	☆
R217.54-159140AC20N	1/2-14 NPT	0	4	14	.626	.630	1.339	3.228	.806	☆	☆	☆	☆	☆
R217.55-199115AC27N	1/2-14 NPT	0	5	11.5	.784	.787	1.654	3.622	1.068	☆	☆	☆	☆	☆
R217.73-079270AC11N	1/8-27 NPTF	0	3	27	.311	.315	.866	2.284	.453	☆	☆	☆	☆	☆
R217.73-099180AC15N	1/4-18 NPTF	0	3	18	.390	.394	1.024	2.598	.627	☆	☆	☆	☆	☆
R217.74-159140AC20N	1/2-14 NPTF	0	4	14	.626	.630	1.339	3.228	.806	☆	☆	☆	☆	☆
R217.75-199115AC27N	1/2-14 NPTF	0	5	11.5	.784	.787	1.654	3.622	1.068	☆	☆	☆	☆	☆
R217.33C048200AC13N	1/4-20 UNC	1	3	20	.189	.236	.827	2.244	.551	☆	☆	☆	☆	☆
R217.33C048280AC13N	1/4-28 UNF	1	3	28	.189	.236	.827	2.244	.536	☆	☆	☆	☆	☆
R217.33C055180AC14N	5/16-18 UNC	1	3	18	.216	.236	.827	2.244	.556	☆	☆	☆	☆	☆
R217.33C060240AC13N	5/16-24 UNF	1	3	24	.236	.236	.827	2.244	.541	☆	☆	☆	☆	☆
R217.34C075160AC19N	3/8-16 UNC	1	4	16	.295	.315	1.063	2.480	.750	☆	☆	☆	☆	☆
R217.34C080140AC19N	7/16-14 UNC	1	4	14	.315	.315	1.063	2.480	.785	☆	☆	☆	☆	☆
R217.34C080200AC19N	7/16-20 UNF	1	4	20	.315	.315	1.063	2.480	.750	☆	☆	☆	☆	☆
R217.34C100120AC21N	9/16-12 UNC	1	4	12	.394	.394	1.260	2.835	.833	☆	☆	☆	☆	☆
R217.34C100130AC21N	1/2-13 UNC	1	4	13	.394	.394	1.260	2.835	.846	☆	☆	☆	☆	☆
R217.34C100180AC22N	9/16-18 UNF	1	4	18	.394	.394	1.260	2.835	.889	☆	☆	☆	☆	☆
R217.34C120110AC25N	5/8-11 UNC	1	4	11	.472	.472	1.496	3.268	1.000	☆	☆	☆	☆	☆
R217.35C140100AC33N	3/4-10 UNC	1	5	10	.551	.551	1.496	3.268	1.300	☆	☆	☆	☆	☆
R217.35C140160AC31N	3/4-16 UNF	1	5	16	.551	.551	1.496	3.268	1.250	☆	☆	☆	☆	☆

1) 0 = no coolant, 1 = coolant through center, 6 = coolant through flange, 7 = coolant through center and through flange

2) Pitch numbers are given per inch (TPI).

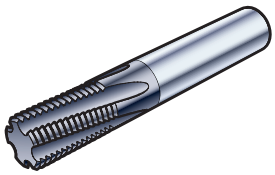
D333 D334 D214 G6 D2

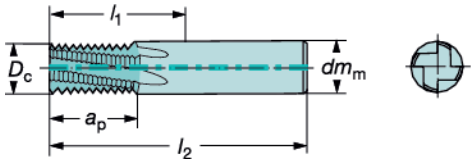
CoroMill® Plura Thread milling cutter

Internal threads

Metric/Metric Fine, 60°

Hardness <48HRc





Thread type	Ordering code	Coolant[1]	Front type z_n	Dimensions Pitch P_{th}	D_c	dm_m	l_1	l_2	Max a_p	P GC 1630	M GC 1630	K GC 1630	N GC 1630	S GC 1630
	Cylindrical shank													
M4x0.7	**R217.13-032070AC08N**	0	3	0.7	3.2	6	21	57	8.4	☆	☆	☆	☆	☆
M5x0.8	**R217.13-041080AC11N**	0	3	0.8	4.1	6	21	57	11.2	☆	☆	☆	☆	☆
M6x0.5	**R217.13C048050AC10N**	1	3	0.5	4.8	6	21	57	10	☆	☆	☆	☆	☆
M6x1.0	**R217.14C045100AC13N**	1	4	1	4.5	6	21	57	13	☆	☆	☆	☆	☆
M8x0.75	**R217.13C060075AC12N**	1	3	0.75	6	6	21	57	12	☆	☆	☆	☆	☆
M8x1.25	**R217.14C060125AK17N**	1	4	1.25	6	6	29	65	17.5	☆	☆	☆	☆	☆
M10x1.0	**R217.14C080100AC16N**	1	4	1	8	8	27	63	16	☆	☆	☆	☆	☆
M10x1.5	**R217.14C075150AK21N**	1	4	1.5	7.5	8	36	72	21	☆	☆	☆	☆	☆
M12x1.75	**R217.14C095175AK26N**	1	4	1.75	9.5	10	40	80	26.25	☆	☆	☆	☆	☆
M14x1.5	**R217.14C120150AC22N**	1	4	1.5	12	12	38	83	22.5	☆	☆	☆	☆	☆
M14x2.0	**R217.15C100200AK30N**	1	5	2	10	10	43	83	30	☆	☆	☆	☆	☆
M16x2.0	**R217.15C120200AK34N**	1	5	2	12	12	47	92	34	☆	☆	☆	☆	☆
M18x1.5	**R217.15C160150AC30N**	1	5	1.5	16	16	44	92	30	☆	☆	☆	☆	☆
M20x2.5	**R217.15C160250AK42N**	1	5	2.5	16	16	57	105	42.5	☆	☆	☆	☆	☆
M24x3.0	**R217.15C190300AK50N**	1	5	3	19	20	75	125	50	☆	☆	☆	☆	☆

1) 0 = no coolant, 1 = coolant through center, 6 = coolant through flange, 7 = coolant through center and through flange

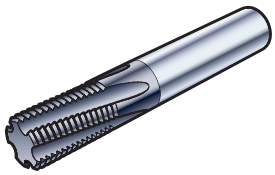
D333 D334 D214 G6 D2

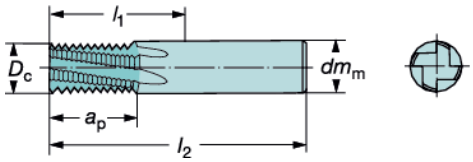
CoroMill® Plura Thread milling cutter

Internal threads

Metric/Metric Fine, 60°

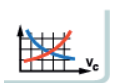
Hardness 1620 48-63HRc





Thread type	Ordering code	Coolant[1]	Front type z_n	Dimensions Pitch P_{th}	D_c	dm_m	l_1	l_2	Max a_p	P GC 1620	H GC 1620
	Cylindrical shank										
M6x1.0	**R217.14-045100AC10H**	0	4	1	4.5	6	21	57	10	☆	☆
M8x1.25	**R217.15-060125AC12H**	0	5	1.25	6	6	21	57	12.5	☆	☆
M10x1.5	**R217.15-080150AC16H**	0	5	1.5	8	8	27	63	16.5	☆	☆
M12x1.75	**R217.15-090175AC19H**	0	5	1.75	9	10	32	72	19.25	☆	☆
M16x2.0	**R217.15-120200AC26H**	0	5	2	12	12	38	83	26	☆	☆
>=M12x1.0	**R217.15-100100AC20H**	0	5	1	10	10	32	72	20	☆	☆
>=M14x1.5	**R217.16-120150AC27H**	0	6	1.5	12	12	38	83	27	☆	☆

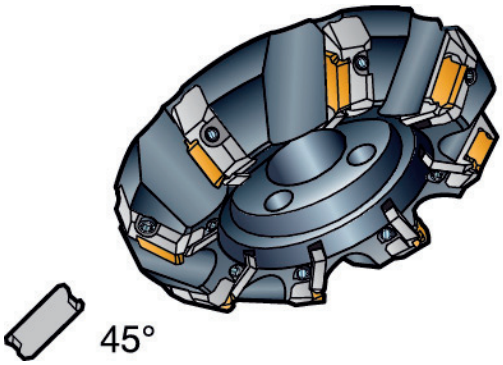
[1] 0 = no coolant, 1 = coolant through center, 6 = coolant through flange, 7 = coolant through center and through flange

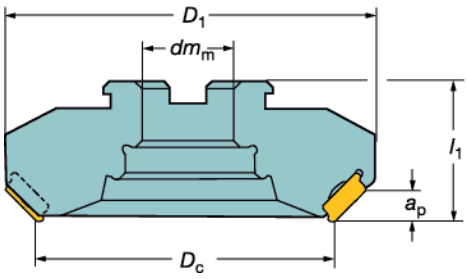
 D333  D334  D214  G6  D2

Heavy duty facemill T-Max 45

Face mill

Diameter 3.937-15.748 inch (100 – 400 mm)
Adjustable
Positive/negative rake





l_1 = programming length

Metric version

		Ordering code						Dimensions					
	D_c mm	Coarse pitch			Close pitch				dm_m	D_1	l_1	Max a_p	n_{max} [1]
		Arbor											
18	100	-	-	-	R260.7-100-30	6	-	3.5	32	135	63	12	5000
	125	-	-	-	R260.7-125-30	8	-	4.5	40	158.6	63	12	4500
		R260.7-125-40	-	6	-	-	-	4.5	40	158.6	63	12	4500
	160	-	-	-	R260.7-160-30	10	-	7.0	40	192.2	63	12	4000
		R260.7-160-40	-	8	-	-	-	7.0	40	192.2	63	12	4000
	200	-	-	-	R260.7-200-30	14	-	12.0	60	231.1	63	12	3500
		R260.7-200-40	-	10	-	-	-	12.0	60	231.1	63	12	3500
	250	R260.7-250-40	-	10	-	-	-	16.0	60	280.2	63	12	3000
	315	R260.7-315-40	-	12	-	-	-	25.0	60	344.4	80	12	2800
	400	R260.7-400-40	-	16	-	-	-	40.5	60	428.7	80	12	2500

Inch version

		Ordering code						Dimensions, inch					
	D_c inch	Coarse pitch			Close pitch				dm_m	D_1	l_1	Max a_p	n_{max} [1]
		Arbor											
18	3.937	-	-	-	RA260.7-100-30	6	-	7.7	1.250	5.314	2.480	.470	5000
	4.921	-	-	-	RA260.7-125-30	8	-	9.9	1.500	6.244	2.480	.470	4500
		RA260.7-125-40	-	6	-	-	-	9.9	1.500	6.244	2.480	.470	4500
	6.299	-	-	-	RA260.7-160-30	10	-	15.4	1.500	7.566	2.480	.470	4000
		RA260.7-160-40	-	8	-	-	-	15.4	1.500	7.566	2.480	.470	4000
	7.874	-	-	-	RA260.7-200-30	14	-	26.5	2.500	9.098	2.480	.470	3500
		RA260.7-200-40	-	10	-	-	-	26.5	2.500	9.098	2.480	.470	3500
	9.843	RA260.7-250-40	-	10	-	-	-	35.3	2.500	11.031	2.480	.470	3000
	12.402	RA260.7-315-40	-	12	-	-	-	55.1	2.500	13.559	3.150	.470	2800
	15.748	RA260.7-400-40	-	16	-	-	-	89.3	2.500	16.878	3.150	.470	2500

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

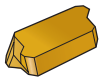
Note!
Mounting dimensions, see Metalcutting Technical guide.
Bolt circle for cutters 200 and 250mm = 4"

= Even pitch
= Differential pitch

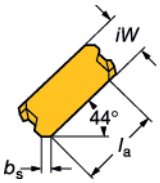
GC D334 D280 G6 D2

SANDVIK Coromant

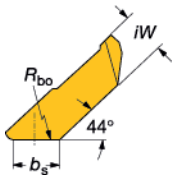
Inserts for heavy duty facemill T-MAX 45

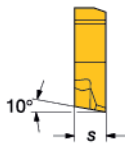


LNCX -11



LNCX-1W
Wiper





LNCX -32

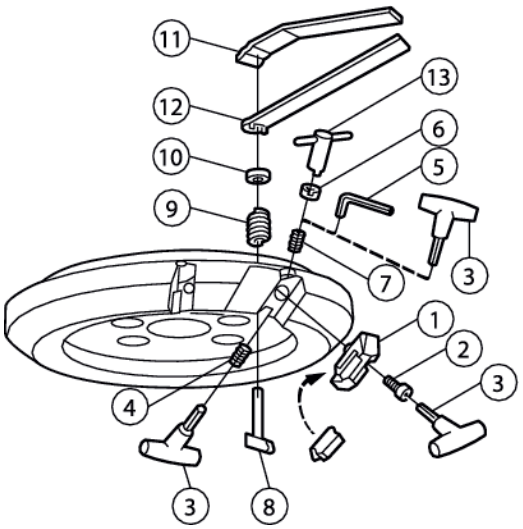
		P												M								K							N		S		H			Dimensions, mm, inch				
		GC	GC	GC	GC	GC	GC	GC	GC	GC	-	-	-	GC	GC	GC	GC	-	-	-		GC	GC	GC	GC	GC	GC	GC	-		GC	-	GC	GC	GC					
		2040	235	3040	4020	4030	4040	4220	4230	4240	S6	SM30	SMA	2040	235	4030	4240	S6	SM30	SMA		3020	3040	4020	4030	4220	4230	4240	H13A		H13A	2040	H13A	3040	4020	4220					
	Ordering code																																				l_a	s	iW	b_s	R_{bo}
18	**LNCX 18 06 AZ L-11**			☆	☆	☆	☆	☆	★	☆					☆		☆						☆	☆		☆	☆	☆						☆	☆	☆	18.77	6.4	10	2	
																																					.739	*.252*	*.394*	*.079*	
	LNCX 18 06 AZ R-11	☆	☆	☆		☆		☆	★	☆	☆	☆	☆	★	☆	☆	☆	☆	☆	☆		☆	☆		☆	☆	☆	☆	☆		☆	☆	☆	☆		☆	18.77	6.4	10	2	
																																					.739	*.252*	*.394*	*.079*	
	LNCX 18 06 AZ R-1W											☆							☆																			10.5	9.28	10	400
																																						.413	*.365*	*.394*	*15.748*
	LNCX 18 06 AZ R-32		☆						★						☆												☆										18.62	6.8	10	2.2	
																																					.733	*.268*	*.394*	*.087*	
		P40	P40	P20	P15	P25	P40	P15	P25	P40	P40	P30	P25	M30	M35	M15	M40	M35	M30	M10		K20	K30	K25	K30	K25	K30	K35	K25		N15	S30	S20	H25	H25	H25					

Note!
For grade descriptions, see page D334.

D312 D334

Spare parts for T-Max 45

RA260.7
R260.7



Cutter			1	2	3	4	5	6	7
	D_c mm		Seat	Screw	Key (mm)	Screw	Key (mm)	Nut	Screw
R260.7-	100 – 200	-30	260.7-830M	3212 010-310	265.2-821 (4.0)	3214 010-409	3021 010-040 (4.0)	260.7-842	3214 010-408
R260.7-	125 – 400	-40	260.7-831M	3212 010-310	265.2-821 (4.0)	3214 010-409	3021 010-040 (4.0)	260.7-842	3214 010-408

Cutter			8	9	10	11		**Accessories[2]** 12[2]	13[2]
	D_c mm		Clamp	Spring	Bayonet washer	Indexing lever	Seat for wiper inserts	Clamp removal key for bayonet washer	Locking key for relocking shim location in event of the cutter re-setting
R260.7-	100 – 200	-30	260.7-820	260.7-841	260.7-840	260.7-856M	5321-046-01	260.7-857[1]	260.7-855M
R260.7-	125 – 400	-40	260.7-821	260.7-841	260.7-840	260.7-856M	5321-046-02	260.7-857[1]	260.7-855M

1) For cutters with diameter 4 inch (100 mm), use key 260.7-858.
2) Accessories, must be ordered separately.

Ordering example: 10 pieces 260.7-830M

Cutter				1	2	3	4	5	6	7
	D_c inch			Seat	Screw	Key (mm)	Screw	Key (mm)	Nut	Screw
RA260.7-	3.973 – 7.874	-30	**R**	260.7-830M	3212 010-310	265.2-821 (4.0)	3214 010-409	3021 010-040 (4.0)	260.7-842	3214 010-408
RA260.7-	4.921 – 15.748	-40	**L**	260.7-831M	3212 010-310	265.2-821 (4.0)	3214 010-409	3021 010-040 (4.0)	260.7-842	3214 010-408

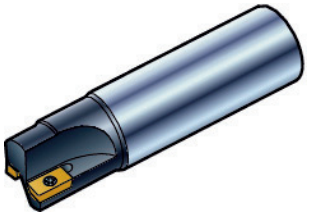
Cutter				8	9	10	11		**Accessories[2]** 12[2]	13[2]
	D_c inch			Clamp	Spring	Bayonet washer	Indexing lever	Seat for wiper inserts	Clamp removal key for bayonet washer	Locking key for relocking shim location in event of the cutter re-setting
RA260.7-	3.973 – 7.874	-30	**R**	260.7-820	260.7-841	260.7-840	260.7-856M	5321-046-01	260.7-857[1]	260.7-855M
RA260.7-	4.921 – 15.748	-40	**L**	260.7-821	260.7-841	260.7-840	260.7-856M	5321-046-02	260.7-857[1]	260.7-855M

1) For cutters with diameter 4 inch (100 mm), use key 260.7-858.
2) Accessories, must be ordered separately.

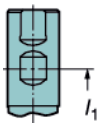
Ordering example: 10 pieces 260.7-830M

U-Max® drilling endmill

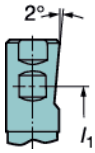
Diameter 12 - 40 mm / .500 - 1.500 inch



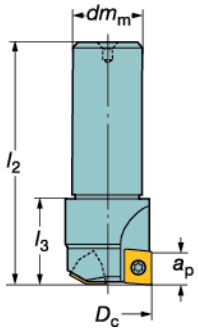
Weldon



Weldon/Whistle Notch



Cylindrical threaded



l_1 = programming length

Metric version

D_c mm	Ordering code Coarse pitch			Dimensions kg	l_1	l_2	l_3	dm_m	Max a_p	n_{max} 2)	Inserts 1) Peripheral	Central
	Cylindrical shank											
20	**R216.2-020**	1	-	0.3	115	115	39.7	20	15.0	15120	**R216.2-170308-2**	
25	**R216.2-025**	2	-	0.5	120	120	39.9	25	15.0	12095	**R216.2-15T308-1**	**R216.2-07T3**
32	**R216.2-032**	2	-	0.8	130	130	39.9	32	15.0	9460	**R216.2-15T308-1**	**R216.2-07T3**
40	**R216.2-040**	2	-	1.1	160	160	39.9	32	15.0	8460	**R216.2-15T312-2**	**R216.2-09T3**
	Whistle Notch/Weldon											
12	**R216.2-712** 3)	1	-	0.1	49	73	20	16	8.0	25200	**R216.2-080204-1A**	
16	**R216.2-716** 3)	1	-	0.2	54	78	25	16	10.0	18900	**R216.2-100204**	
20	**R216.2-520**	1	-	0.4	65	90	37.3	20	15.0	15120	**R216.2-170308-2**	
25	**R216.2-525**	2	-	0.4	64	96	39.9	25	15.0	12095	**R216.2-15T308-1**	**R216.2-07T3**
32	**R216.2-532**	2	-	0.6	64	100	40.3	32	15.0	9460	**R216.2-15T308-1**	**R216.2-07T3**
40	**R216.2-540**	2	-	0.7	67	103	40.6	32	15.0	8460	**R216.2-15T312-2**	**R216.2-09T3**

Inch version

D_c inch	Ordering code Coarse pitch			Dimensions, inch Lbs	l_1	l_2	l_3	dm_m	Max a_p	n_{max} 2)	Inserts 1) Peripheral	Central
	Weldon											
.500	**R216.2-313**	1	-	0.3	1.921	2.874	.787	.630	.315	25200	**R216.2-080204-2A**	
.625	**R216.2-316**	1	-	0.1	2.118	3.071	.984	.630	.393	18900	**R216.2-100204**	
.750	**R216.2-319**	1	-	0.5	2.485	3.500	1.469	.787	.591	15120	**R216.2-170308-1**	
1.000	**R216.2-325**	2	-	0.6	2.672	3.678	1.571	.787	.591	12095	**R216.2-15T308-1**	**R216.2-07T3**
1.250	**R216.2-332**	2	-	1.3	2.735	3.884	1.588	1.260	.591	9460	**R216.2-15T308-1**	**R216.2-07T3**
1.500	**R216.2-338**	2	-	0.9	2.859	4.000	1.598	1.260	.591	8460	**R216.2-15T312-2**	**R216.2-09T3**

1) Inserts are ordered separately.

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

3) Weldon/Plain parallel only.

= Even pitch

= Differential pitch

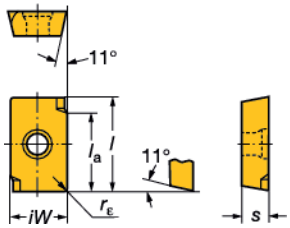
GC D334 D282 G6 D2

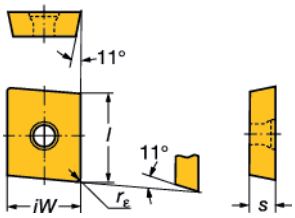
Inserts for U-MAX drilling endmill

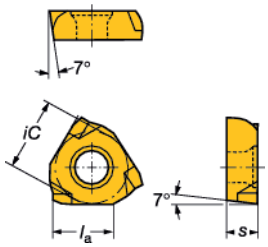
-08
-10
-17
Combi insert

-15
Peripheral insert

-07
-09
Central insert



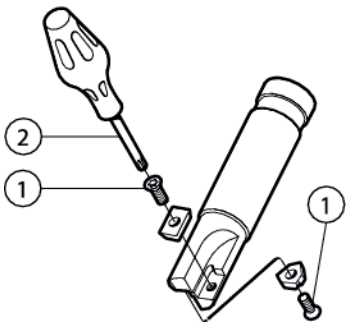




	Ordering code	P SM30	M SM30	Dimensions, millimeter, inch (mm, in.) l_a mm	l_a in.	l mm	l in.	iW mm	iW in.	s mm	s in.	r_ε mm	r_ε in.	iC mm	iC in.
07	**R216.2-07 T3**	☆	☆	7.6	.299	7	.276			3.97	.156			9.5	.374
08	**R216.2-08 02 04-1A**	☆	☆	8.2	.323	9.5	.374	6.3	.248	2.38	.094	0.4	.016		
09	**R216.2-09 T3**	☆	☆	9.3	.366	9	.354			3.97	.156			13	.512
10	**R216.2-10 02 04**	☆	☆	10.2	.402	11.5	.453	8.3	.327	2.38	.094	0.4	.016		
15	**R216.2-15 T3 08-1**	☆	☆			15.2	.598	9.5	.374	3.97	.156	0.8	.032		
	R216.2-15 T3 12-2	☆	☆			15.2	.598	12.5	.492	3.97	.156	1.2	.047		
17	**R216.2-17 03 08-1**	☆	☆	15	.591	17.5	.689	9.52	.375	3.18	.125	0.8	.032		
	R216.2-17 03 08-2	☆	☆	15	.591	17.5	.689	10	.394	3.18	.125	0.8	.032		
		P30	M30												

Spare parts for U-Max drilling endmill

R216.2



Cutter	D_c mm	D_c inch	1 Insert screw	2 Key (Torx Plus)	Torque value Nm (in-lbs)	 Torque wrench	 Molykote
R216.2-	12 | 16	.500 | .625	5513 020-21	5680 046-03 (7IP)	6 (0.9)	5680 100-02[1]	5683 010-01
R216.2-	20 | 32	.750 | 1.250	5513 020-16	5680 046-05 (10IP)	18 (2.0)	5680 100-05[1]	5683 010-01
R216.2-	40	1.500	5513 020-02	5680 046-02 (15IP)	26 (3.0)	5680 100-06[1]	5683 010-01

1) Accessories, must be ordered separately.

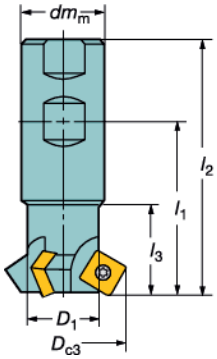
D312 D334

U-Max® chamfering endmill

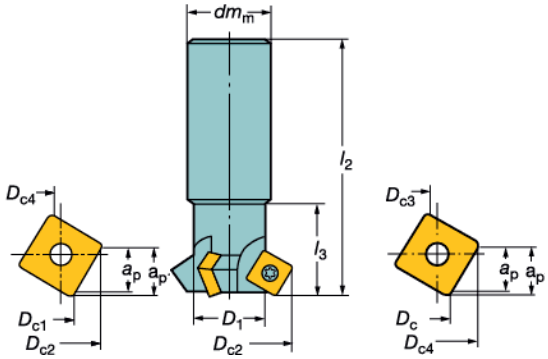
Diameter 11.7-36.5 mm / .470-1.440 inch

Negative rake

Weldon



Cylindrical



l_1 = programming length

Metric version

	D_c mm	Ordering code Coarse pitch			Dimensions D_1	D_{c2}	D_{c3}	D_{c4}	l_1	l_2	l_3	dm_m	Max a_p	Max a_p	n_{max} [1]
		Cylindrical shank													
12	11.7	R215.64-12A20-4512	1	-	19.4	27.1	3.29	26.4	175	175	37.8	20	7.9	8.1	25200
	11.7	R215.64-12A20-6012	1	-	19.4	22.9	3.29	22.2	175	175	37.8	20	9.6	10.0	25200
	32.5	R215.64-32A32-4512	3	-	31.4	48.6	23.61	48.2	175	175	36	32	7.9	8.1	9385
	36.5	R215.64-36A32-6012	3	-	27.2	47.8	27.79	47.6	175	175	36	32	9.6	10.0	8855

Inch version

	D_c	Ordering code Coarse pitch			Dimensions, inch D_1	D_{c2}	D_{c3}	D_{c4}	l_1	l_2	l_3	dm_m	Max a_p	Max a_p	n_{max} [1]
		Weldon													
12	.470	RA215.64-12M19-6012	1	-	.724	.877	.122	.874	3.504	4.528	1.083	.750	.380	.394	25200
	.500	RA215.64-12M19-4512	1	-	.724	1.050	.150	1.091	3.504	4.528	1.083	.750	.310	.319	20845
	1.280	RA215.64-32M32-4512	3	-	1.200	1.900	.930	1.898	4.140	5.276	1.083	1.250	.310	.319	9385
	1.440	RA215.64-36M32-6012	3	-	1.070	1.870	1.090	1.880	4.140	5.276	1.083	1.250	.380	.394	8855

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

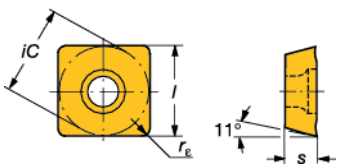
= Even pitch

= Differential pitch

Inserts for U-MAX chamfering endmill

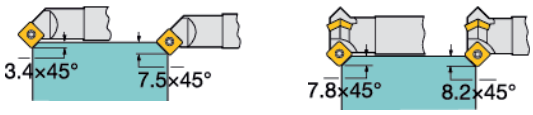
SPMT -WL

SPMT -WH



Maximum chamfer size

U-MAX 45°



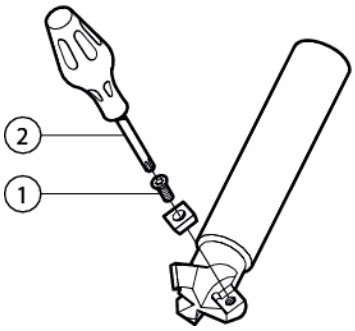
U-MAX 60°

	Ordering code	P			M		K		N	S	Dimensions, millimeter, inch (mm, in.)									
		GC 4030	GC 4040	- SM30	GC 4040	- SM30	GC 4030	- H13A	- H13A	- H13A	l mm	l in.	d_1 mm	d_1 in.	s mm	s in.	r_ε mm	r_ε in.	iC mm	iC in.
12	SPMT 12 04 08-WH	☆	☆	☆	☆	☆	☆	☆	☆	☆	12.7	.500	4.4	.173	4.76	.188	0.8	.032	12.7	.500
	SPMT 12 04 08-WL	☆	☆		☆		☆	☆	☆	☆	12.7	.500	4.4	.173	4.76	.188	0.8	.032	12.7	.500
		P25	P40	P30	M40	M30	K30	K25	N15	S20										

D312 D334 D284 G6 D2

Spare parts for U-Max chamfering endmill

RA215.64
R215.64



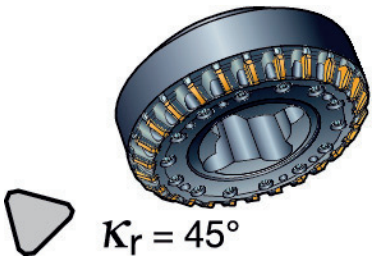
Cutter	D_c mm	D_c inch	1 Insert screw	2 Key (Torx Plus)	Torque value Nm (in-lbs)	 Torque wrench	 Molykote
RA215.64 **R215.64-**	**12 | 36.5**	**.460 | 1.440**	5513 020-29	5680 046-02 (15IP)	3.0 (26)	5680 100-06[1)]	5683 010-01

1) Accessories, must be ordered separately.

Sandvik AUTO

Sandvik AUTO – Roughing

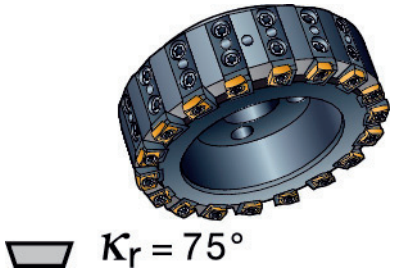
45°



R/LA260.3
R/L260.3
R/L260.31
Negative rake
Diameter 125-500 mm / 3.150-19.685 inch
Page D286

AUTO-AF – Finishing

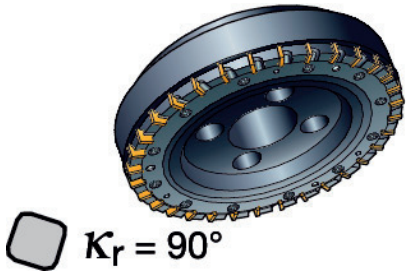
75° (15°)



R/LA 260.8
R/L260.8
R/L260.82
Sandvik AUTO -AF adjustable cutter for facemilling
Positive rake
Diameter 125-500 mm / 3.150-9.843 inch
Page D289

AUTO-FS – Finishing

90° (0°)



R/LA262.4
R/L262.42
R/262.4
R/262.42
Negative rake
Diameter 125-500 mm / 4.921-19.685 inch
Page D293

Cylinder boring

Tailor Made

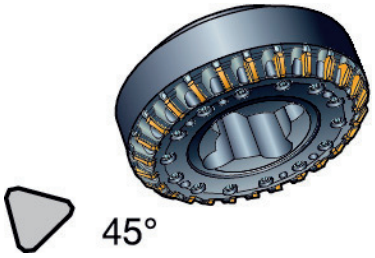
R/L260.20
Positive rake
Diameter 63-101.6 mm / 2.480-4.000 inch
Page D296

For more technical information, see our Metalcutting Technical Guide.

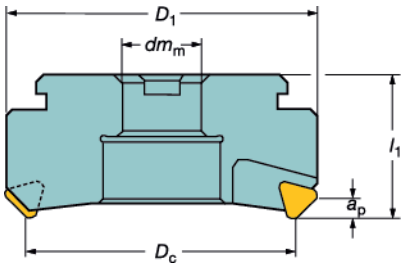
Sandvik AUTO – Roughing

Face mill

Diameter 125-500 mm / 3.150-19.685 inch

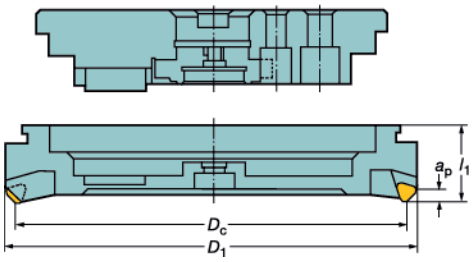


Arbor



R/L260.3

Arbor



R/L260.31 (Cap design)

Note!

Support body for Cap design must be ordered separately, see page D298.

l_1 = programming length

Metric version

	D_c mm	Ordering code Close pitch			Dimensions KG	dm_m	D_1	l_1 1)	Max a_p	n_{max} 2)	Support body
		Arbor									
12	125	R/L260.3-125M-10	20	-	5.7	40	145.2	63	6.0	1400	
	160	R/L260.3-160M-10	26	-	8.9	40	180.2	63	6.0	1250	
	200	R/L260.3-200M-10	32	-	17.5	60	220.2	63	6.0	1100	
		Cap mounting									
12	250	R/L260.31-250-10	40	-	19.0		270.2	63	6.0	1000	260-425M-1
	315	R/L260.31-315-10	50	-	25.0		335.2	63	6.0	900	260-431M-1
	355	R/L260.31-355-10	56	-	30.0		375.2	63	6.0	800	260-435M-1
	400	R/L260.31-400-10	64	-	35.0		420.2	63	6.0	800	260-440M-1
	500	R/L260.31-500-10	80	-	51.0		520.2	63	6.0	700	260-450M-1

Inch version

	D_c inch	Ordering code Close pitch			Dimensions, inch Lbs	dm_m	D_1	l_1 1)	Max a_p	n_{max} 2)
		Arbor								
12	3.150	R/LA260.3-080M-10	10	-	5.5	1.000	3.945	2.375	.236	1700
	3.937	R/LA260.3-100M-10	14	-	7.9	1.250	4.732	2.375	.236	1550
	4.921	R/LA260.3-125M-10	20	-	11.9	1.500	5.716	2.375	.236	1400
	6.299	R/LA260.3-160M-10	26	-	26.9	1.500	7.094	2.375	.236	1250
	7.874	R/LA260.3-200M-10	32	-	38.6	2.500	8.669	2.375	.236	1100
	9.843	R/LA260.3-250M-10	40	-	55.1	2.500	10.638	2.375	.236	1000
	12.402	R/LA260.3-315M-10	50	-	88.2	2.500	13.197	2.375	.236	900
	13.976	R/LA260.3-355M-10	56	-	105.8	2.500	14.772	2.375	.236	800
	15.748	R/LA260.3-400M-10	64	-	121.3	2.500	16.543	2.375	.236	800
	19.685	R/LA260.3-500M-10	80	-	198.4	2.500	20.480	2.375	.236	700

1) With precision inserts.

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

Note!
Support body dimensions, see page D298.
Mounting dimensions, see Metalcutting Technical guide.

Bolt circle for cutters 200 and 250mm = 4"

= Even pitch

= Differential pitch

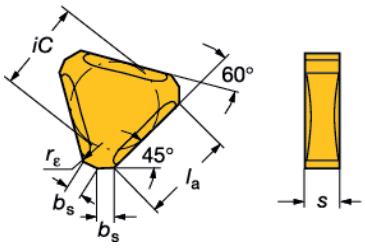
 D287  D288  G6  D2

Inserts for Sandvik AUTO cutters

WL
KM
KX

CA

AN

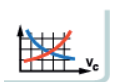


		Ordering code	P			M		K					H	Dimensions, millimeter, inch (mm, in.)									
			GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC											
	△		3040	4230	4240	4230	4240	3040	4230	4240	K20D	K20W	3040	Max a_p mm	Max a_p in.	iC mm	iC in.	s mm	s in.	b_s mm	b_s in.	l_a mm	l_a in.	r_ε mm	r_ε in.
Light	12	TNEF 12 04 AN-WL	☆					☆				☆	☆	6	.236	12.7	.500	4.76	.188	1.75	.069	12	.472	2	.079
Medium	12	TNEF 12 04 AN-KM									☆	☆		6	.236	12.7	.500	4.76	.188	1.25	.049	12	.472	2	.079
		TNEF 12 04 AN-KX										☆		6	.236	12.7	.500	4.76	.188	1.25	.049	12	.472		
		TNEF 12 04 AN-CA	☆					☆				☆	☆	6	.236	12.7	.500	4.76	.188	1.5	.059	12	.472	3	.118
		TNHF 12 04 AN-CA		☆	☆	☆	☆		☆	☆				6	.236	12.7	.500	4.76	.188	1.5	.059	12	.472	3	.118
		TNEN 12 04 AN	☆					☆				☆	☆	6	.236	12.7	.500	4.76	.188	2.5	.098	12	.472		
			P20	P25	P40	M15	M40	K30	K30	K35	K20	K25	H25												

Advanced cutting materials

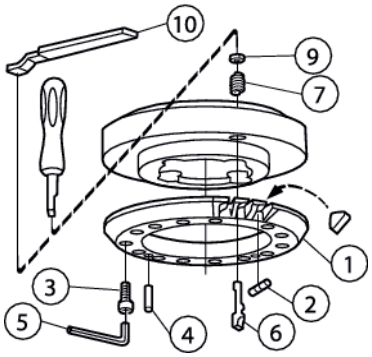
TNCN
ANE
AN

		Ordering code	K	H	Dimensions, millimeter, inch (mm, in.)									
			CC	CC										
	△		6190	6190	Max a_p mm	Max a_p in.	iC mm	iC in.	s mm	s in.	b_s mm	b_s in.	l_a mm	l_a in.
Light	12	TNCN 12 04 ANE	☆	☆	6	.236	12.7	.500	4.76	.188	2.5	.098	12	.472
Medium	12	TNCN 12 04 AN	☆	☆	6	.236	12.7	.500	4.76	.188	2.5	.098	12	.472
			K10	H10										

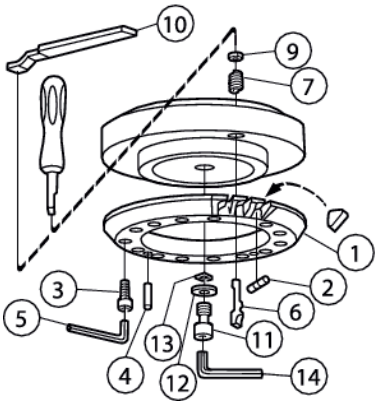
 D312
 D305
 D334
 D2

Spare parts for Sandvik AUTO

R/L260.3



R/L260.31
Cap design



Cutter	D_c mm (inch)			1 Seating ring	2 Location roller	3 Screw	4 Taper pin	5 Key (mm)	6 Wedge
R/LA260.3- R/L260.3	080M	(3.150)	R	R260.3-D[2] M-80[1]	260.3-846	3212 010-361	3112 010-563	3021 010-050 (5.0)	260.3-822
	200M	(7.874)	L	L260.3-D[2] M-80[1]	260.3-847				260.3-823
R/L260.31-	250	(9.843)	R	R260.3-D[2] M-80[1]	260.3-846	3212 010-361	3112 010-563	3021 010-050 (5.0)	260.3-822
	500	(19.68	L	L260.3-D[2] M-80[1]	260.3-847				260.3-823

Cutter	D_c mm (inch)		7 Spring	9 Bayonet washer	10 Indexing lever	11[3] Screw	12 Washer	13 Locking ring	14 Key (mm)
R/LA260.3- R/L260.3-	080M-200M	-10	260.3-831	260.4-830	260.3-833M	–	–	–	–
R/LA260.31 R/L260.31-	250-500 (9.843-19.685)	-10	260.3-831	260.4-830	260.3-833M	260.31-831	3411 011-170	260.31-840	3021 010-140 (14.0)

1) Incl. location rollers.
2) D = D_c = Cutter diameter.
3) Torque ≤ 120 Nm

Accessories[1]

Cutter		 Mounting fixture for mounting location roller in seating ring	 Location screw for location seating ring during assembly	 Key (mm)	 Puller screw for removing seating	 Key (mm)
R/LA260.3, R/LA260.31 R/L260.3, R/L260.31	R	260.3-850	68/660	3021 010-050	3214 010-416	3021 010-040
	L			(5.0)		(4.0)

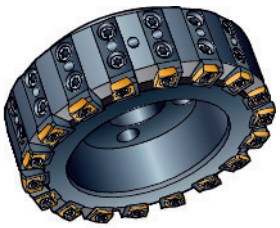
Cutter		 Dummy insert Used when the recommended feed per tooth cannot be used.	 Wedge	 Nut	 Wedge key for removing bayonet washer
R/LA260.3, R/LA260.31 R/L260.3, R/L260.31	R	260.3-845	260.3-824	260.3-844	260.3-835
	L		260.3-825		

1) Accessories, must be ordered separately.

AUTO-AF – Finishing

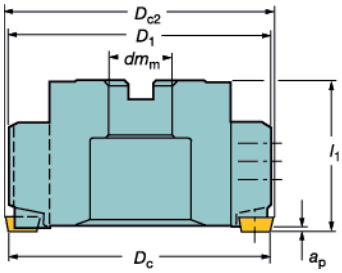
Face mill

Diameter 80 - 500 mm
Adjustable
Positive



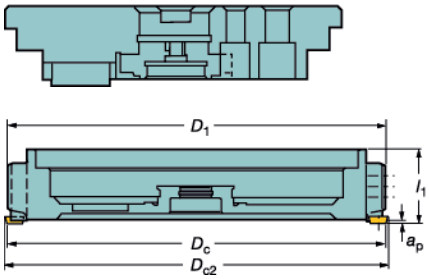
15°

Arbor



R/L260.8

Arbor



R/L260.82 (Cap design)

Note! Support body for Cap design must be ordered separately, see page D298.

l_1 = programming length

Metric version

	D_c	Ordering code	Insert type		Dimensions							
	mm	Extra close pitch	F	L	kg	dm_m	D_1	D_{c2}	l_1	Max a_p	n_{max}[1]	Support body
		Arbor										
12	80	R/L260.8-080Q22-12H-F	8		1.5	22	84.9	84	63	1.0	5985	
		R/L260.8-080Q22-12H-FL	7	1	1.5	22	84.9	84	63	1.0	5985	
	100	R/L260.8-100Q32-12H-F	10		2.0	32	103.6	104	63	1.0	5350	
		R/L260.8-100Q32-12H-FL	9	1	2.0	32	103.6	104	63	1.0	5350	
	125	R/L260.8-125Q40-12H-F	14		3.0	40	127.6	129	63	1.0	4785	
		R/L260.8-125Q40-12H-FL	12	2	3.0	40	127.6	129	63	1.0	4785	
	160	R/L260.8-160Q40-12H-F	18		5.0	40	161.8	164	63	1.0	4230	
		R/L260.8-160Q40-12H-FL	15	3	5.0	40	161.8	164	63	1.0	4230	
	200	R/L260.8-200Q60-12H-F	24		8.0	60	201.1	204	63	1.0	3785	
		R/L260.8-200Q60-12H-FL	20	4	8.0	60	201.1	204	63	1.0	3785	
	250	R/L260.8-250Q60-12H-F	30		13.0	60	250.6	254	63	1.0	3385	
		R/L260.8-250Q60-12H-FL	25	5	13.0	60	250.6	254	63	1.0	3385	
		Cap mounting										
12	250	R/L260.82-250-12H-F	30		8.0		250.6	254	63	1.0	3385	260-425M-1
		R/L260.82-250-12H-FL	25	5	8.0		250.6	254	63	1.0	3385	260-425M-1
	315	R/L260.82-315-12H-F	32		13.0		315.2	319	63	1.0	3015	260-431M-1
		R/L260.82-315-12H-FL	28	4	13.0		315.2	319	63	1.0	3015	260-431M-1
	355	R/L260.82-355-12H-F	40		15.0		355	359	63	1.0	2840	260-435M-1
		R/L260.82-355-12H-FL	36	4	15.0		355	359	63	1.0	2840	260-435M-1
	400	R/L260.82-400-12H-F	40		18.0		399.8	404.0	63	1.0	2675	260-440M-1
		R/L260.82-400-12H-FL	36	4	18.0		399.8	404.0	63	1.0	2675	260-440M-1
	500	R/L260.82-500-12H-F	48		44.0		499.8	504.0	63	1.0	2395	260-450M-1
		R/L260.82-500-12H-FL	42	6	44.0		499.8	504.0	63	1.0	2395	260-450M-1

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

Note!
Support body dimensions, see page D298.
Mounting dimensions, see Metalcutting Technical guide.

Bolt circle for cutters 200 and 250mm = 4"

= Even pitch
= Differential pitch

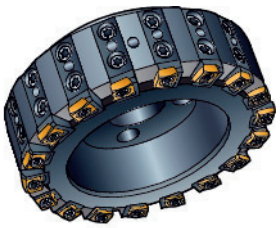
When -F and -L inserts are combined in the same cutter (FL), the -F insert should be adjusted 0.01 mm below the -L insert.

D291 D292 G6 D2

AUTO-AF – Finishing

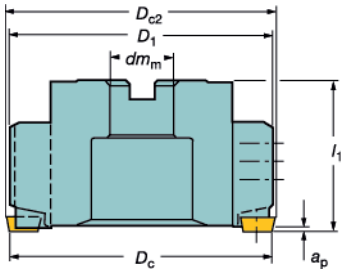
Face mill

Diameter 3.150 - 9.843 inch
Adjustable
Positive



15°

Arbor



R/L260.8

l_1 = programming length

Inch version

		Ordering code	Insert type		Dimensions, inch						
□	D_c inch	**Extra close pitch**	F	L	Lbs	dm_m	D_1	D_{c2}	l_1	Max a_p	n_{max} [1]
		Arbor									
12	3.150	R/LA260.8-080R19-12H-F	8		3.3	.750	3.342	3.307	2.480	.039	5985
		R/LA260.8-080R19-12H-FL	7	1	3.3	.750	3.342	3.307	2.480	.039	5985
	3.937	R/LA260.8-100R32-12H-F	10		4.4	1.250	4.079	4.095	2.480	.039	5350
		R/LA260.8-100R32-12H-FL	9	1	4.4	1.250	4.079	4.095	2.480	.039	5350
	4.921	R/LA260.8-125R38-12H-F	14		6.6	1.500	5.024	5.079	2.480	.039	4785
		R/LA260.8-125R38-12H-FL	12	2	6.6	1.500	5.024	5.079	2.480	.039	4785
	6.299	R/LA260.8-160R38-12H-F	18		15.3	1.500	6.370	6.457	2.480	.039	4230
		R/LA260.8-160R38-12H-FL	15	3	15.3	1.500	6.370	6.457	2.480	.039	4230
	7.874	R/LA260.8-200R63-12H-F	24		17.6	2.500	7.917	8.031	2.480	.039	3785
		R/LA260.8-200R63-12H-FL	20	4	17.6	2.500	7.917	8.031	2.480	.039	3785
	9.843	R/LA260.8-250R63-12H-F	30		28.7	2.500	9.866	10.000	2.480	.039	3385
		R/LA260.8-250R63-12H-FL	20	5	28.7	2.500	9.866	10.000	2.480	.039	3385

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

Note!
Support body dimensions, see page D298.
Mounting dimensions, see Metalcutting Technical guide.

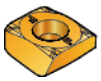
Bolt circle for cutters 200 and 250mm = 4"

= Even pitch
= Differential pitch

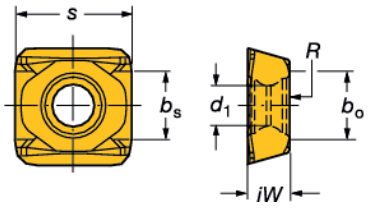
When -F and -L inserts are combined in the same cutter (FL), the -F insert should be adjusted 0.01 mm below the -L insert.

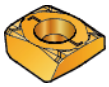
 D291
 D292
 G6
 D2

Inserts for AUTO AF Finishing

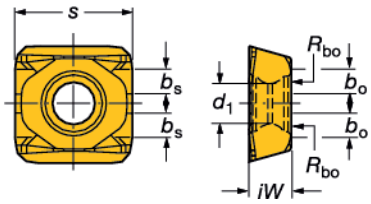


N260.8 -F





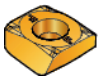
N260.8 -L



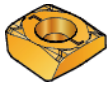
		P	K			N	S	H		Dimensions, millimeter, inch (mm, in.)											
		GC	GC	CB	-	-	-	GC	CB												
□	Ordering code	3040	3040	CB50	H13A	H13A	H13A	3040	CB50	s mm	s in.	d_1 mm	d_1 in.	iW mm	iW in.	b_s mm	b_s in.	b_o mm	b_o in.	R_{bo} mm	R_{bo} in.
12	N260.8-1204-F	☆	☆	☆	☆	☆	☆	☆	☆	12.7	.500	4.4	.173	4.76	.187	7.0	.276	7.0	.276	800	31.496
	N260.8-1204-L	☆	☆		☆	☆	☆	☆		12.7	.500	4.4	.173	4.76	.187	2.5	.098	2.5	.098	150	5.906
		P20	K30	K05	K25	N15	S20	H25	H05												

For grade descriptions, see page D334.

Insert design

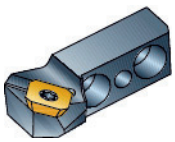


Type F, wiper
- with long parallel lands and four cutting edges/insert, right or left hand. To be used where high quality surface finish is required.



Type L
- with shorter parallel lands, have four right and four left hand cutting edges/insert.
  Low axial cutting forces facilitate milling of modern, thin walled components on weak machines, where L inserts should be used.
  L inserts can also be used in combination with F inserts.

CoroMill® 245 cassettes



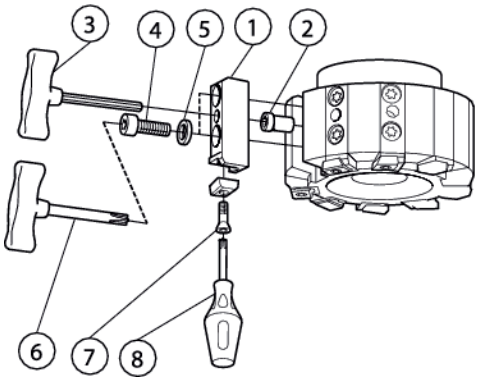
Ordering code	
R260.8-245 12	Right hand
L260.8-245 12	Left hand

D312 D305 D334 D2

Spare parts for AUTO-AF

Cap design

R/LA260.8-F
R/L260.8-F R/L260.82-F
R/L260.8-FL R/L260.82-FL
R/LA260.8-FL



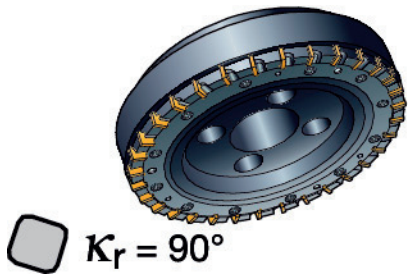
Cutter	D_c mm (inch)	Insert type	1 Cassette	2 Eccentric pin	3 Key (mm)	4 Screw	5 Washer	6 Key (Torx Plus)	7 Insert screw	8 Key (Torx Plus)
R/LA260.8 R/L260.8-	080 (3.150) – 125 (4.921)	-F	R260.8-1-12F L260.8-1-12F	265.2-874	265.2-821 (4.0)	3212 012-359	5541014-07	5680 048-07 (30IP)	416.1-834	5680 046-02 (15IP)
R/LA260.8 R/L260.8-	160 (6.299) – 250 (7.874)	-F	R260.8-2-12F L260.8-2-12F	265.2-874	265.2-821 (4.0)	3212 012-359	5541014-07	5680 048-07 (30IP)	416.1-834	5680 046-02 (15IP)
R/L260.82-	250 (9.843) – 500	-F	R260.8-3-12F L260.8-3-12F	265.2-874	265.2-821 (4.0)	3212 012-359	5541014-07	5680 048-07 (30IP)	416.1-834	5680 046-02 (15IP)
R/LA260.8 R/L260.8-	080 (3.150) – 125 (4.921)	-FL	R260.8-1-12L L280.8-1-12L	265.2-874	265.2-821 (4.0)	3212 012-359	5541014-07	5680 048-07 (30IP)	416.1-834	5680 046-02 (15IP)
R/LA260.8 R/L260.8-	160 (6.299) – 250 (7.874)	-FL	R260.8-2-12L L260.8-2-12L	265.2-874	265.2-821 (4.0)	3212 012-359	5541014-07	5680 048-07 (30IP)	416.1-834	5680 046-02 (15IP)
R/L260.82-	250 (9.843) – 500 (19.685)	-FL	R260.8-3-12L L260.8-3-12L	265.2-874	265.2-821 (4.0)	3212 012-359	5541014-07	5680 048-07 (30IP)	416.1-834	5680 046-02 (15IP)
R/L260.82-	80 (3.150) – 500 (19.685)	-FL	R260.8-245-12 L260.8-245-12	265.2-874	265.2-821 (4.0)	3212 012-359	5541014-07	5680 048-07 (30IP)	5513 020-09	5680 046-02 (15IP)

AUTO-FS – Finishing

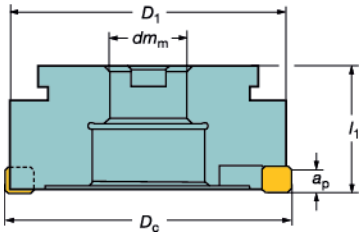
Square shoulder facemill

Diameter 125-500 mm / 4.921-19.685 inch

Negative rake

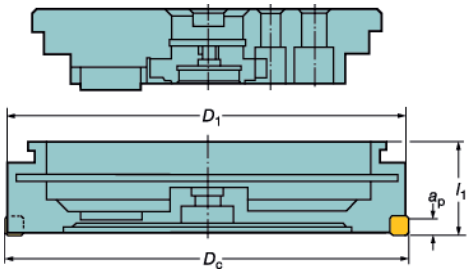


Arbor



R/L262.4
R/LA262.4

Arbor



R/L262.42 (Cap design)

Note! Support body for Cap design must be ordered separately, see page D298.

l_1 = programming length

Metric version

		Ordering code						Dimensions						
	D_c mm	Close pitch	⊙	⊙	Extra close pitch	⊙	⊙	kg	dm_m	D_1	l_1	Max a_p	n_{max} 1)	Support body
		Arbor												
12	125	R/L262.4-125A-15	20	-	-	-	-	7.0	40	124.6	63	8.0	2200	
	160	R/L262.4-160A-15	26	-	-	-	-	10.0	40	159.6	63	8.0	1950	
	200	R/L262.4-200A-15	32	-	-	-	-	14.0	60	199.6	63	8.0	1750	
	250	-	-	-	R262.4-250A-15	32	-	22.0	60	249.6	63	8.0	1550	
	315	-	-	-	R262.4-315A-15	32	-	20.0	60	314.6	63	8.0	1400	
	400	-	-	-	R/L262.4-400A-15	40	-	64.0	60	399.6	63	8.0	1250	
	500	-	-	-	R262.4-500A-15	48	-	92.0	60	499.6	63	8.0	1100	
		Cap mounting												
12	250	R/L262.42-250A-15	32	-	-	-	-	13.0		249.6	63	8.1	1550	260-425M-1
	315	R/L262.42-315A-15	32	-	-	-	-	20.0		314.6	63	8.1	1400	260-431M-1
	355	R/L262.42-355A-15	40	-	-	-	-	23.0		354.6	63	8.1	1300	260-435M-1
	400	R/L262.42-400A-15	40	-	-	-	-	27.0		399.6	63	8.1	1250	260-440M-1
	500	R/L262.42-500A-15	48	-	-	-	-	39.0		499.6	63	8.1	1100	260-450M-1

Inch version

		Ordering code			Dimensions, inch					
	D_c inch	Close pitch	⊙	⊙	Lbs	dm_m	D_1	l_1	Max a_p	n_{max} 1)
		Arbor								
12	4.921	R/LA262.4-125A-15	20	-	15.4	1.500	4.882	2.375	.320	2200
	6.299	R/LA262.4-160A-15	26	-	22.0	1.500	6.260	2.375	.320	1950
	7.874	R/LA262.4-200A-15	32	-	30.9	2.500	7.835	2.375	.320	1750
	9.843	R/LA262.4-250A-15	32	-	39.7	2.500	9.803	2.480	.320	1550
	12.402	R/LA262.4-315A-15	32	-	72.8	2.500	12.362	2.480	.320	1400
	15.748	R/LA262.4-400A-15	40	-	121.	2.500	15.709	2.480	.320	1250
	19.685	R/LA262.4-500A-15	48	-	198.	2.500	19.646	2.480	.320	1100

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

Note!
Support body dimensions, see page D298.
Mounting dimensions, see Metalcutting Technical guide.
Bolt circle for cutters 200 and 250mm = 4"

⊙ = Even pitch
⊙ = Differential pitch

 D294
 D295
 G6
 D2

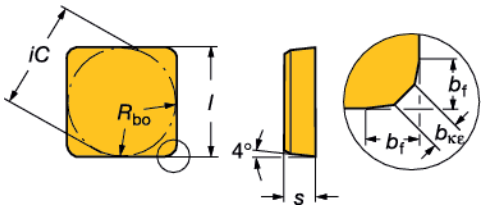
Inserts for AUTO-FS – Finishing

Finishing


SBEN


SBEX


SBEX-11



	↕□	Ordering code	P	K					N	H		Dimensions, millimeter, inch (mm, in.)									
			GC	GC	GC	-	GC	GC	GC	GC	-										
			3040	3040	3220	H1P	K15W	K20W	K15W	3040	H1P	*iC* mm	*iC* in.	*s* mm	*s* in.	b_f mm	b_f in.	$b_{k\varepsilon}$ mm	$b_{k\varepsilon}$ in.	R_{bo} mm	R_{bo} in.
Light	12	**SBEX 12 04 ZZ-11**	☆	☆	★		★	☆	☆	☆		12.7	.500	4.8	.188			0.7	.028		
		SBEX 12 03 ZZ-11			★		★	☆	☆			12.7	.500	3.2	.125			0.7	.028		
		SBEX 12 04 ZZ				☆					☆	12.7	.500	4.8	.188			0.7	.028		
Wiper	12	**SBEN 12 03 ZZ**			★		★	★	☆			12.7	.500	3.2	.125	1.2	.047	0.7	.028	2960	116.535
		SBEN 12 04 ZZ			★		★	★	☆			12.7	.500	4.8	.188	1.2	.047	0.7	.028	2960	116.535
			P20	K30	K20	K05	K15	K25		H25	H10										

For grade descriptions, see page D334.

SBEN
- Coated grade for high cutting speed
- Wiper insert combined with SBEX -11 inserts
  As a wiper insert it will automatically be positioned 0.05 mm below the SBEX -11 inserts.
- Optimized corner geometry

SBEX
- Negative chipformer with strong cutting edges
- Use SBEN as wiper insert
- Coated grades for high cutting speeds

SBEX-11
- Positive chipformer generates lower cutting forces, appr. 30%, eliminating vibration.
- Use SBEN as wiper insert.


D312

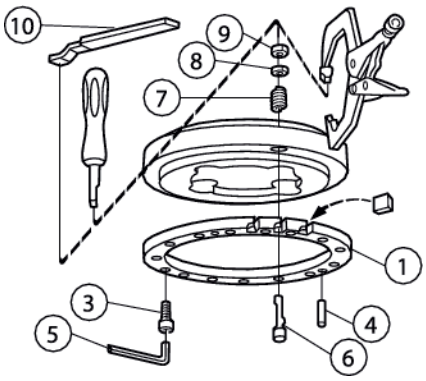
D305

D334

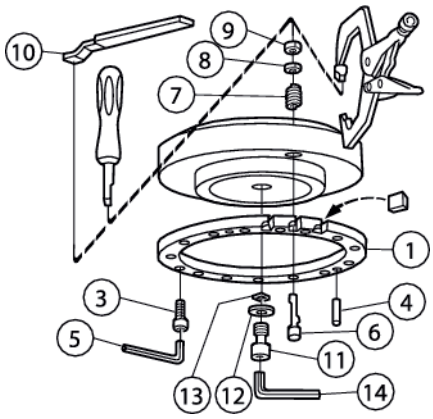
D2

Spare parts for AUTO-FS

R/L262.4
R/LA262.4



Cap design
R/L262.42



Cutter	D_c mm (inch)		1	3	4	5	6	7
			Seating ring	Screw	Taper pin	Key (mm)	Wedge	Spring
R/L262.42-	250A (9.843) | 500A (19.685)	R -15 L	R260.4-D[1] -85 L260.4-D[1] -85	3212 010-349	3112 010-563	3021 010-040 (4.0)	260.4-821	260.4-835
R/LA262.4 R/L262.4	125A (4.921) | 200A (19.685)	R -15 L	R260.4-D[1] -85 L260.4-D[1] -85	3212 010-349	3112 010-563	3021 010-040 (4.0)	260.4-821	260.4-835

Cutter	D_c mm (inch)		8	9	10	11	12	13	14
			Cup spring	Bayonet washer	Indexing lever	Screw	Washer	Lock ring	Key (mm)
R/L262.4-	125A (4.921) | 200A (7.874)	R -15 L	3846 010-033	260.4-831M	260.3-833M	–	–	–	–
R/L262.42-	250A (9.843) | 500A (19.685)	R -15 L	3846 010-033	260.4-831M	260.3-833M	260.31-831[2]	3411 011-170	260.31-840	3021 010-140 (14.0)

[1] D = D_c = Cutter diameter.
[2] Torque ≤ 120 Nm

Accessories[1]

Cutter	 Location screw for location seating ring during assembly	 Key (mm)	 Puller screw for removing seating	 Key (mm)	 Tongs For removing bayonet washer
R/L262.4, R/L262.42	68/781	3021 010-040 (4.0)	3214 010-309	174.1-863 (2.5)	260.4-836

[1] Accessories, must be ordered separately.

Inserts for AUTO cylinder boring cutter R/L260.20

Sandvik Auto cylinder boring cutter

Tailor Made

A positive cutter for roughing of cylinder bores.
- A Tailor Made concept for most cylinder bores currently on the market.
- Operates with low cutting forces.
- Improved bore size control, better consistency.
- Reduced tool and service costs.
- Inserts with parallel land result in better surface, i.e. reduced withdrawal marks.
- The grade profile provides the right grade for any material and cutting data.
- Recommended cutting depth .040-.240 inch.

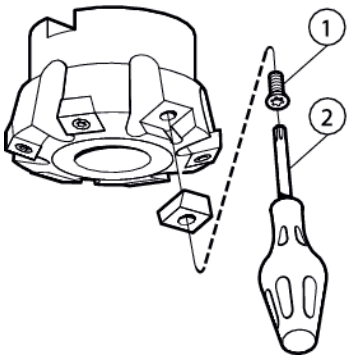
Inserts for AUTO cylinder boring cutter R/L260.20

SDKX
SDMX

□□	Ordering code	K GC 3015	K - H13A	N - H13A	S - H13A	Dimensions s	l_a	d_1	iW
15	SDMX 15 06 08	☆				.625	.433	.220	.250
	SDMX 15 06 ZN	☆				.625	.433	.220	.250
	SDKX 15 06 08		☆	☆	☆	.625	.433	.220	.250
	SDKX 15 06 ZN		☆	☆	☆	.625	.433	.220	.250

Spare parts

R/L260.20



Cutter	1	2		
	Insert screw	Key (Torx Plus)	Torque value Nm (in-lbs)	Molykote
R/L260.20	5513 016-01	5680 048-04 (20IP)	5.0 (44.3)	5683 010-01

1) Accessories, must be ordered separately.

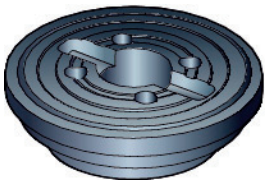
D312 D334 D2 D305

SANDVIK Coromant

Support body

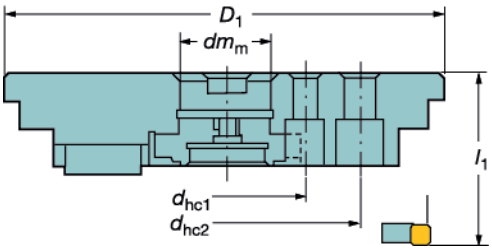
For Cap design cutters

Diameter 250 – 500 mm



Support bodies are supplied as standard with spacers mounted to compensate for a spindle inclination of 0.1:1000.

Arbor



l_1 = programming length

Metric version

Cutter dia. D_c mm	Ordering code	For Cap cutter	Dimensions kg	l_1 [1]	dm_m	D_1	d_{hc1}	d_{hc2}
250	**260-425M-1**	L260.31-250-10	11.5	80	60	222.4	101.6	177.8
		R/L262.42-250A-15						
		R/L260.82-250-12H-F						
		R/L260.82-250-12H-FL						
315	**260-431M-1**	L260.31-315-10	20.0	80	60	287.4	101.6	177.8
		R/L262.42-315A-15						
		R/L260.82-315-12H-F						
		R/L260.82-315-12H-FL						
355	**260-435M-1**	L260.31-355-10	29.0	80	60	327.4	101.6	177.8
		R/L262.42-355A-15						
		R/L260.82-355-12H-F						
		R/L260.82-355-12H-FL						
400	**260-440M-1**	L260.31-400-10	39.0	80	60	372.4	101.6	177.8
		R/L262.42-400A-15						
		R/L260.82-400-12H-F						
		R/L260.82-400-12H-FL						
500	**260-450M-1**	L260.31-500-10	67.0	80	60	472.4	101.6	177.8
		R/L262.42-500A-15						
		R/L260.82-500-12H-F						
		R/L260.82-500-12H-FL						

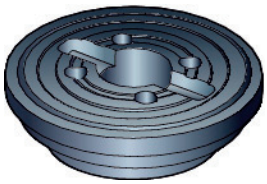
[1] With cutter unit mounted.

D299

Support body

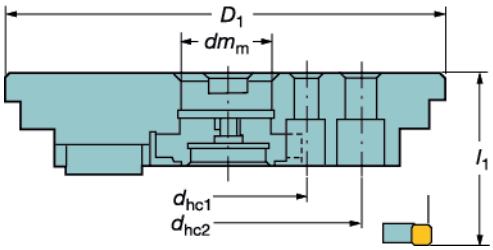
For Cap design cutters

Diameter 9.843-19.827 inch



Support bodies are supplied as standard with spacers mounted to compensate for a spindle inclination of 0.1:1000.

Arbor



l_1 = programming length

Inch version

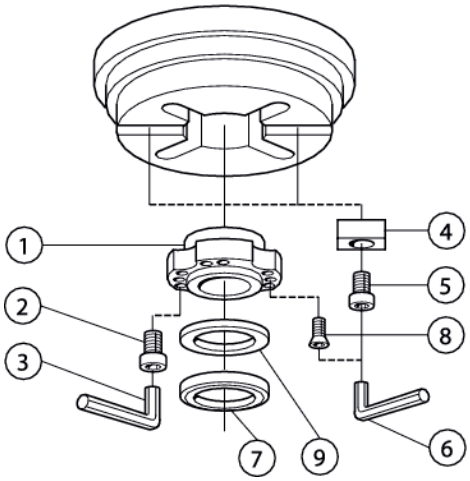
Cutter dia. D_c inch	**Ordering code**	For Cap cutter	Dimensions, inch Lbs	l_1 1)	dm_m	D_1	d_{hc1}	d_{hc2}
9.843	**A260-425M-1**	L260.31-250-10	25.4	2.375	2.500	8.756	4	7
		R/L262.42-250A-10						
		R/L260.82-250-12H-F						
		R/L260.82-250-12H-FL						
		R/L262.42-250A-05						
		R/L262.42-250A-15						
12.543	**A260-431M-1**	L260.31-315-10	44.1	2.375	2.500	8.756	4	7
		R/L262.42-315A-10						
		R/L260.82-315-12H-F						
		R/L260.82-315-12H-FL						
		R/L262.42-315A-05						
		R/L262.42-315A-15						
13.976	**A260-435M-1**	L260.31-355-10	63.9	2.375	2.500	8.756	4	7
		R/L262.42-355A-10						
		R/L260.82-355-12H-F						
		R/L260.82-355-12H-FL						
		R/L262.42-355A-05						
		R/L262.42-355A-15						
15.890	**A260-440M-1**	L260.31-400-10	86.0	2.375	2.500	8.756	4	7
		R/L262.42-400A-10						
		R/L260.82-400-12H-F						
		R/L260.82-400-12H-FL						
		R/L262.42-400A-05						
		R/L262.42-400A-15						
19.827	**A260-450M-1**	L260.31-500-10	147.7	2.375	2.500	8.756	4	7
		R/L262.42-500A-10						
		R/L260.82-500-12H-F						
		R/L260.82-500-12H-FL						
		R/L262.42-500A-05						
		R/L262.42-500A-15						

1) With cutter unit mounted.

D299

Spare parts for support body

260/A260



	1	2	3	4	5	6	7[1]	8[1]	9[1][2]
	Centering sleeve	Screw	Key (mm)	Driving wedge	Screw	Key (mm)	Backing ring	Screw	Spacer set
260-	260-838	3212 010-411	3021 010-060 (6.0)	260-837	3212 010-311	3021 010-040 (4.0)	260-835	3213 010-399	260 836-1
A260-	260-839	3212 010-411	3021 010-060 (6.0)	260-837	3212 010-311	3021 010-040 (4.0)	260-835	3213 010-399	260 836-1

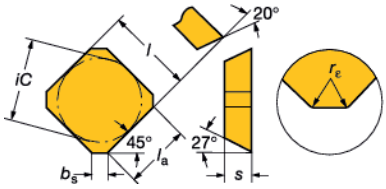
1) Accessories, must be ordered separately.

2) For adjusting the support body when using R/L262.42 in milling machines with a spindle inclination larger than 0.1:1000 mm.
Contains spacers 0.02. 0.05 and 0.1 mm thick. See Metalcutting Technical guide.

Facemilling 45°

SEER
SEKR

SEKN/SEK
SEMN/SEM



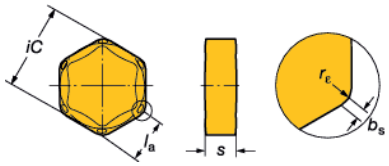
Dimensions, mm (inch)

Size	*iC*	l_a	*l*
12	12.7 (.500)	9.6 (.378)	12.7 (.500)
15	15.9 (.625)	12.7 (.500)	15.9 (.625)

	Insert size	Ordering code	P						M						K						N		S				H	Dimensions, millimeter, inch (mm, in.)						
			GC	GC	GC	GC	GC	CT	GC	GC	GC	GC	CT	GC	GC	GC	GC	-	CT	-	GC	GC	-	GC										
			2030	2040	3040	4230	4240	530	2030	2040	4230	4240	530	3020	3040	4230	4240	H13A	530	H13A	2030	2040	H13A	3040	*s* mm	*s* in.	b_s mm	b_s in.	r_ε mm	r_ε in.	ANSI
Medium	12	**SEKR 12 03 AZ-WM**				☆	☆																		3.18	.125	1.6	.063	1.5	.059	SEKR 12 03 AZ-WM
		SEKR 12 04 AZ-WM				☆	☆	☆						☆					☆						4.76	.188	1.6	.063	1.5	.059	SEKR 12 04 AZ-WM
	15	**SEKR 15 04 AZ-WM**							☆																4.76	.188	1.6	.063	1.5	.059	SEKR 15 04 AZ-WM
	12	**SEKN 12 03 AZ**	☆		☆	☆	☆	☆	☆		☆	☆	☆		☆	☆	☆		☆		☆			☆	3.18	.125	1.7	.067	1.2	.047	SEK 42A
		SEKN 12 04 AZ		☆	☆	☆	☆	☆		☆	☆	☆	☆	☆	☆	☆	☆		☆			☆		☆	4.76	.188	1.7	.067	1.2	.047	SEK 43A
		SEMN 12 04 AZ						☆				☆						☆	☆	☆			☆		4.76	.188	2.0	.079			SEM 43A
	15	**SEKN 15 04 AZ**			☆	☆	☆				☆	☆		☆	☆	☆	☆							☆	4.76	.188	1.6	.063	1.5	.059	SEK 53A
			P25	P40	P20	P25	P40	P20	M25	M30	M15	M40	M20	K20	K30	K30	K35	K25	N15	N15	S25	S30	S20	H25										

Face milling 45°/60° (45°/30°)

KM



	Insert size	Ordering code	K	Dimensions, millimeter, inch (mm, in.)									
			GC										
			K20D	Max a_p mm	Max a_p in.	*iC* mm	*iC* in.	l_a mm	l_a in.	*s* mm	*s* in.	r_ε mm	r_ε in.
Medium	09	**HNGX 09 05 20-KM**	☆	3.8	.150	15.9	.625	9.0	.354	5.56	.219	2.0	.079
			K20										

For grade descriptions, see page D334.

★= First choice

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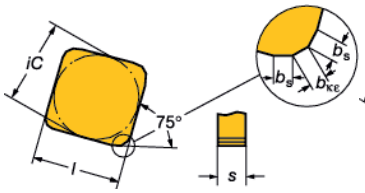
SANDVIK Coromant

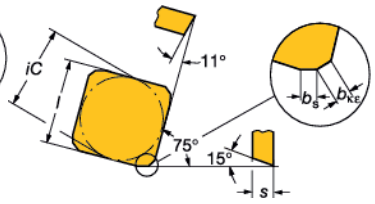
Face milling 75° (15°)

SPKR/SMKR -WH SPKN/SMK SPEX/SME

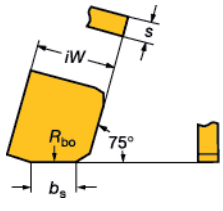
SNKN/SNK



SNKN



SPKN
SPKR-WH



SPEX

Dimensions, mm (inch)

Size	*iC*	*l*	*iW*	R_{bo}
12	12.7 (.500)	12.7 (.500)	12.7 (.500)	500
15	15.9 (.625)	15.9 (.625)	15.9 (.625)	500
19	19.0 (.750)	19.0 (.750)	-	-

	Insert size	Ordering code	P						M					K						N	H		Dimensions, millimeter, inch (mm, in.)						ANSI
			GC	GC	GC	GC	CT	-	GC	GC	GC	CT	-	GC	GC	GC	-	-	-	CT	GC	-							
			2040	3040	4230	4240	530	SM30	2030	2040	4230	530	SM30	3020	3040	4230	H13A	H1P	HM	530	3040	H1P	*s* mm	*s* in.	b_s mm	b_s in.	$b_{k\varepsilon}$ mm	$b_{k\varepsilon}$ in.	
Medium	12	**SPKN 12 03 ED R**	☆		☆	☆	☆	☆	☆			☆	☆	☆	☆		☆		☆				3.18	.125	1.4	.055	1	.039	SMK 42E2 R
		SNKN 12 04 EN N			☆										☆				☆				4.76	.188	1.5	.059	0.9	.035	SNK 43E2
		SPKN 12 03 ED L					☆					☆					☆						3.18	.125	1.4	.055	1	.039	SMK 42E2 L
		SPKN 12 04 ED R													☆								4.76	.188	1.4	.055	1	.039	SMK 43E2 R
	15	**SPKN 15 04 ED R**		☆	☆	☆				☆				☆	☆						☆		4.76	.188	1.4	.055	1	.039	SMK 53E2 R
		SPKN 15 04 ED L			☆									☆									4.76	.188	1.4	.055	1	.039	SMK 53E2 L
	19	**SPKN 19 04 ED R**						☆					☆										4.76	.188	2.7	.106	1	.039	SMK 63E3 R
Heavy	12	**SPKR 12 03 ED R-WH**			☆	☆					☆					☆							3.18	.125	1.4	.055			SMKR 42E2 R-WH
		SPKR 12 04 ED R-WH			☆						☆					☆							4.76	.188	1.4	.055			SMKR 43E2 R-WH
	15	**SPKR 15 04 ED R-WH**			☆	☆					☆					☆							4.76	.188	1.4	.055			SMKR 53E2 R-WH
	19	**SPKR 19 04 ED R-WH**			☆						☆					☆							4.76	.188	2.7	.106			SMKR 63E3 R-WH
Wiper	12	**SPEX 12 03 ED R-1**																☆				☆	3.18	.125	10.0	.394			SME 42E12 R
		SPEX 12 04 ED R-1																☆				☆	4.76	.188	10.0	.394			SME 43E12 R
	15	**SPEX 15 04 ED R-1**					☆					☆								☆			4.76	.188	10.0	.394			SME 53E12 R
			P40	P20	P25	P40	P20	P30	M25	M30	M15	M20	M30	K20	K30	K30	K25	K05	K15	N15	H25	H10							

For grade descriptions, see page D334.

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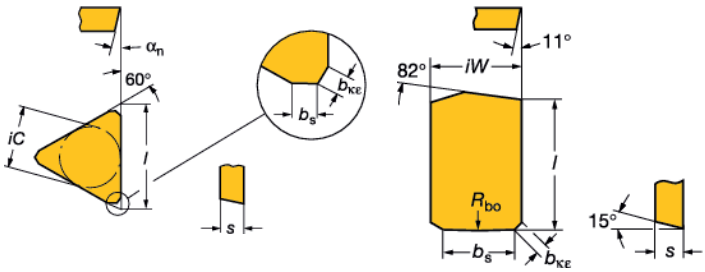
Shoulder milling 90° (0°)


TPKR


TPKN/TPK


BPKX



	☐	Ordering code	P								M				K						N		S			H	Dimensions, mm, inch						ANSI
			GC	GC	GC	GC	GC	CT	-	-	GC	GC	CT	-	GC	GC	GC	GC	-	-	CT	-	GC	GC	-	GC							
			2030	2040	3040	4230	4240	530	S6	SM30	2030	2040	530	SM30	3020	3040	4230	4240	H13A	HM	530	H13A	2030	2040	H13A	3040							
																											iC	*l*	*s*	b_s	$b_{\kappa\varepsilon}$	α_n°	
Medium	3/8	TPKN 16 03 PP R			☆	☆	☆	☆		☆			☆	☆	☆	☆	☆	☆		☆	☆					☆		9.5	16.5	3.2	1.2	1.0	11	TPK 32P2 R
																											.375	.650	.125	.047	.039	11	
	3/4	BPKX 19 04 PD R							☆					☆														19.0	4.8	2.6	0.7	11	BPKX 19 04 PD R
																												.750	.188	.102	.028	11	
	1/2	TPKN 22 04 PD R	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆		12.7	22.0	4.8	1.4	0.7	11	TPK 43P2 R
																												.500	.866	.188	.055	.028	11	
		BPKX 15 04 PD R																										15.9	4.8	2.0	0.7	11	BPKX 15 04 PD R
																												.625	.188	.079	.028	11	
Heavy	3/8	TPKR 16 03 PP R-WH			☆	☆	☆									☆	☆	☆								☆		9.5	16.5	3.2	1.2		11	TPKR 32P2 R-WH
																												.375	.650	.125	.047		11	
	1/2	TPKR 22 04 PD R-WH			☆	☆	☆									☆	☆	☆								☆		12.7	22.0	4.8	1.4		11	TPKR 43P2 R-WH
																												.500	.866	.188	.055		11	
			P25	P40	P20	P25	P40	P20	P40	P30	M25	M30	M20	M30	K20	K30	K30	K35	K25	K15	N15	N15	S25	S30	S20	H25							

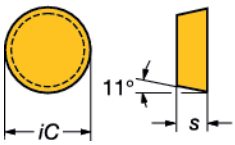
For grade descriptions, see page D334.

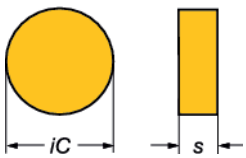
Round inserts for other cutters

Ceramic

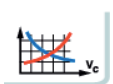

RPGN


RNGN





	ISO	☐	*iC*	S CC 6060	ANSI
	RNGN120700E	12	12.7	☆	RNG45A
	RNGN 12 07 00T01020	12	12.7	☆	RNG45T0320
	RPGN060300E	06	1/4	☆	RPG22A
	RPGN090300E	09	3/8	☆	RPG32A
	RPGN120400E	12	1/2	☆	RPG43A
				S10	


D312

D305

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D2

SANDVIK Coromant

New wrench guarantees correct torque

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

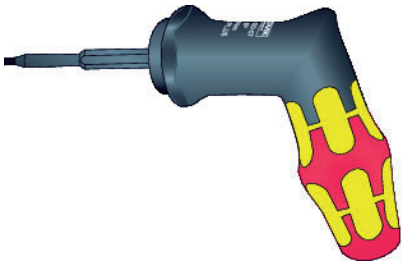
The wrenches, available in 6 sizes and tested to withstand 10,000 insert tightenings, are each calibrated for the torque needed for correct insert clamping of Sandvik Coromant milling cutters.

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

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

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

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



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

Features and benefits

Preset torque value related to corresponding Torx Plus screw.
- Always correct torque.

Fixed stop in counterclockwise rotation.
- Easy to loosen the screw.

Audible signal when the preset torque is reached.
- Further tightening of the screw is impossible.

Secure, tamper-proof construction.
- Manipulation of pre-set torque not possible.

Handle is marked with Torx Plus size and torque value.
- The right tool, easily at hand.

Ergonomic handle.
- Ensure a very good grip.

Nickle-free blade.
- Good for the environment and the user.

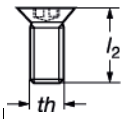
One piece design.
- Easy handling, no loose blades.

Torx Plus® torque wrench

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

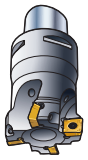
Insert screw dimensions and torque values

Note: Always apply Molykote 1000 to screw prior to use.



Screw							Torx Plus torque wrench
	Size	**Nm**	ft-lbs	*th*	l_2		Ordering code
416.1-831	8IP	1.2	.664	M2.5–4h	7.00	60°	5680 100-03
416.1-832	9IP	1.4	.886	M3–4h	8.50	60°	5680 100-04
416.1-833	10IP	2.0	1.476	M3.5–4h	9.40	60°	5680 100-05
416.1-834	15IP	3.0	2.214	M4–4h	11.00	60°	5680 100-06
5513 015-01	9IP	1.2	.886	M3.5–4h	8.00	90°	5680 100-03
5513 015-03	9IP	1.2	.886	M3.5–4h	4.15	90°	5680 100-04
5513 015-04	9IP	1.2	.886	M3.5–4h	5.20	90°	5680 100-04
5513 015-05	9IP	1.2	.886	M3.5–4h	7.10	90°	5680 100-04
5513 015-06	9IP	1.2	.886	M3.5–4h	9.10	90°	5680 100-04
5513 015-07	9IP	1.2	.886	M4–4h	9.00	90°	5680 100-04
5513 015-08	9IP	1.2	.886	M3.5–4h	11.40	90°	5680 100-04
5513 016-01	20IP	5.0	3.690	M5–4h	14.00	60°	5680 100-07
5513 020-01	15IP	3.0	2.214	M3.5–4h	12.10	60°	5680 100-06
5513 020-02	15IP	3.0	2.214	M4–4h	8.50	60°	5680 100-06
5513 020-03	7IP	0.8	.590	M2.5–4h	6.50	60°	5680 100-02
5513 020-04	9IP	1.2	.886	M3–4h	7.20	60°	5680 100-04
5513 020-05	7IP	0.8	.590	M2.2–4h	6.40	60°	5680 100-02
5513 020-06	20IP	5.0	3.690	M4–4h	12.20	60°	5680 100-07
5513 020-07	20IP	5.0	3.690	M5–4h	11.05	60°	5680 100-07
5513 020-08	25IP	7.5	5.535	M6–4h	12.20	60°	5680 100-08
5513 020-09	15IP	3.0	2.214	M3.5–4h	8.10	60°	5680 100-06
5513 020-10	15IP	3.0	2.214	M3.5–4h	10.10	60°	5680 100-06
5513 020-11	9IP	1.2	.886	M3.5–4h	5.20	60°	5680 100-04
5513 020-12	9IP	1.2	.886	M3.5–4h	11.00	60°	5680 100-04
5513 020-13	15IP	3.0	2.214	M4–4h	13.60	60°	5680 100-06
5513 020-14	25IP	7.5	5.535	M6–4h	18.25	60°	5680 100-08
5513 020-15	30IP	10.0	7.380	M7–4h	21.35	60°	–
5513 020-16	10IP	3.0	2.214	M3.5–4h	7.60	60°	5680 100-05
5513 020-17	15IP	3.0	2.214	M4–0.5–4h	11.00	60°	5680 100-06
5513 020-18	15IP	3.0	2.214	M4–0.5–4h	14.00	60°	5680 100-06
5513 020-19	7IP	0.8	.590	M2.2–4h	6.40	60°	5680 100-02
5513 020-20	7IP	0.8	.590	M2.5–4h	7.20	60°	5680 100-02
5513 020-21	7IP	2.0	1.476	M2.5–4h	4.70	60°	5680 100-02
5513 020-22	10IP	2.0	1.476	M3.5–0.35–4h	8.90	60°	5680 100-05
5513 020-24	9IP	1.2	.886	M3–4h	8.50	60°	5680 100-04
5513 020-25	15IP	3.0	2.214	M4–4h	12.10	60°	5680 100-06
5513 020-26	20IP	5.0	3.690	M5–4h	17.25	60°	5680 100-07
5513 020-29	15IP	3.0	2.214	M4–4h	11.00	60°	5680 100-06
5513 020-30	10IP	2.0	1.476	M3.5-4h	9.40	60°	5680 100-05
5513 020-31	25IP	7.5	5.535	M6–4h	15.25	60°	5680 100-08
5513 020-32	15IP	3.0	2.214	M3.5–4h	10.00	60°	5680 100-06
5513 020-34	8IP	1.2	.886	M2.5–4h	8.70	60°	5680 100-03
5513 020-35	8IP	1.2	.886	M2.5–4h	7.30	60°	5680 100-03
5513 020-36	8IP	1.2	.886	M2.5–4h	5.95	60°	5680 100-03
5513 020-37	15IP	3.0	2.214	M3.5–4h	6.60	60°	5680 086-06
5513 020-39	15IP	3.0	2.214	M3.5–4h	8.30	60°	5680 100-06
5513 020-40	6IP	0.6	.443	M2–4h	3.50	60°	5680 100-01
5513 020-41	7IP	0.9	.664	M2.2–4h	4.70	60°	5680 100-02
5513 020-42	7IP	0.9	.664	M2.2–4h	5.20	60°	5680 100-02
5513 020-43	15IP	3.0	2.214	M3.5–4h	7.30	60°	5680 100-06
5513 020-44	6IP	0.6	.443	M2–4h	3.85	60°	5680 100-01
5513 020-45	7IP	0.9	.664	M2.5–4h	4.20	60°	5680 100-02
5513 020-46	7IP	0.9	.664	M2.5–4h	5.20	60°	5680 100-02
5513 020-47	7IP	0.9	.664	M2.2–4h	5.20	60°	5680 100-02
5513 020-48	7IP	0.9	.664	M2.5–4h	5.70	60°	5680 100-02
5513 020-50	20IP	5.0	3.688	M5-4H	10.8	60°	5680 046-06
5513 020-52	15IP	3.0	2.214	M2–4h	3.35	60°	5680 100-02
5513 020-55	20IP			M5-4h	14.25	60°	5680 100-07
5513 020-56	81P			M2.5-4h	7	60°	5680 100-03
5513 021-03	30IP	10.0	7.380	M8-6g	18.00	62°	–
5513 022-01	15IP	3.0	2.214	6-32 UNC-3A	9.65	60°	5680 100-06
5513 036-01	15IP			M4	12.1	60°	–
5513 022-02	15IP	3.0	2.214	10-32 UNF-3A	15.88	82°	5680 100-06
5513 022-03	15IP	3.0	2.214	10-32 UNF-3A	12.70	82°	5680 100-06
5513 024-01	8IP	1.2	.886	M2.5	8.30	60°	5680 100-03
5513 040-01	7IP	0.9	.664	M2.5	6.25	41°	5680 100-02
5513 040-02	8IP	1.2	.886	M3	7.80	40°	5680 100-03
5513 040-03	10IP	2.0	1.476	M3.5	9.50	40°	5680 100-05
5513 040-04	15IP	3.0	2.214	M4	13.30	40°	5680 100-06
5513 040-05	20IP	5.0	3.690	M5	16.20	40°	–
5513 040-06	25IP	7.5	5.535	M6	20.00	40°	–
5513 040-07	40IP	26.0	19.188	M8	25.00	40°	–

Shoulder milling

κ_r 90° (0°)	Insert geometry	Insert size	Feed per tooth, f_z (mm/tooth) Starting value	(min.- max.)	Max. chip thickness, h_{ex}, mm Starting value	(min.- max.)	Feed per tooth, f_z (inch/tooth) Starting value	(min.- max.)	Max. chip thickness, h_{ex}, (inch) Starting value	(min.- max.)
CoroMill® 490	M-PL	8	0.10	(0.05-0.15)	0.10	(0.05-0.15)	.004	(.002-.006)	.004	(.002-.006)
	M-PM		0.17	(0.10-0.20)	0.17	(0.10-0.20)	.007	(.004-.008)	.007	(.004-.008)
	M-PH		0.22	(0.15-0.25)	0.22	(0.15-0.25)	.006	(.006-.010)	.006	(.006-.010)
	E-ML		0.15	(0.12-0.18)	0.15	(0.12-0.18)	.006	(.005-.007)	.006	(.005-.007)
	E-MM		0.17	(0.15-0.20)	0.17	(0.15-0.20)	.007	(.006-.008)	.007	(.006-.008)
	M-MM		0.17	(0.10-0.17)	0.17	(0.10-0.17)	.007	(.006-.008)	.007	(.006-.008)
	M-KL		0.10	(0.05-0.15)	0.10	(0.05-0.15)	.004	(.002-.006)	.004	(.002-.006)
	M-KM		0.17	(0.10-0.20)	0.17	(0.10-0.20)	.007	(.004-.008)	.007	(.004-.008)
	M-KH		0.25	(0.15-0.30)	0.25	(0.15-0.30)	.010	(.006-.012)	.010	(.006-.012)
	M-PL	14	0.10	(0.05-0.15)	0.10	(0.05-0.15)	.004	(.002-.006)	.004	(.002-.006)
	M-PM		0.17	(0.12-0.25)	0.17	(0.12-0.25)	.007	(.005-.010)	.007	(.005-.010)
	M-PH		0.28	(0.20-0.35)	0.28	(0.20-0.35)	.011	(.008-.014)	.011	(.008-.014)
	E-ML		0.14	(0.08-0.18)	0.14	(0.08-0.18)	.006	(.003-.007)	.006	(.003-.007)
	E-MM		0.12	(0.12-0.22)	0.12	(0.12-0.22)	.007	(.005-.009)	.007	(.005-.009)
	M-MM		0.16	(0.12-0.20)	0.16	(0.12-0.20)	.006	(.005-.008)	.006	(.005-.008)
CoroMill® 390	E-PL	11	0.08	(0.05- 0.12)	0.08	(0.05- 0.12)	.003	(.002-.005)	.003	(.002-.005)
	E-ML		0.10	(0.05- 0.15)	0.10	(0.05- 0.15)	.004	(.002-.006)	.004	(.002-.006)
	E-KL		0.08	(0.05- 0.12)	0.08	(0.05- 0.12)	.003	(.002-.005)	.003	(.002-.005)
	E-NL		0.20	(0.10-0.30)	0.20	(0.10-0.30)	.008	(.004-.012)	.008	(.004-.012)
	M-PL	11	0.08	(0.05- 0.12)	0.08	(0.05- 0.12)	.003	(.002-.006)	.003	(.002-.006)
	M-KL		0.10	(0.05- 0.15)	0.10	(0.05- 0.15)	.004	(.003-.006)	.004	(.003-.006)
	E-PL	17	0.08	(0.05- 0.12)	0.08	(0.05- 0.12)	.003	(.002-.005)	.003	(.002-.005)
	E-ML		0.10	(0.05- 0.15)	0.10	(0.05- 0.15)	.004	(.002-.006)	.004	(.002-.006)
	E-KL		0.08	(0.05- 0.12)	0.08	(0.05- 0.12)	.003	(.002-.005)	.003	(.002-.005)
	E-NL		0.2	(0.10-0.30)	0.2	(0.10-0.30)	.008	(.004-.012)	.008	(.004-.012)
	M-PL	17	0.08	(0.05- 0.15)	0.08	(0.05- 0.15)	.003	(.002-.006)	.003	(.002-.006)
	M-KL		0.10	(0.08-0.15)	0.10	(0.08-0.15)	.004	(.003-.006)	.004	(.003-.006)
	E-PM	11	0.10	(0.08-0.15)	0.10	(0.08-0.15)	.004	(.003-.006)	.004	(.003-.006)
	E-MM		0.13	(0.08-0.20)	0.13	(0.08-0.20)	.005	(.003-.008)	.005	(.003-.008)
	E-KM		0.12	(0.12-0.20)	0.12	(0.12-0.20)	.005	(.005-.008)	.005	(.005-.008)
	M-PM	11	0.10	(0.08-0.15)	0.10	(0.08-0.15)	.004	(.003-.006)	.004	(.003-.006)
	M-MM		0.13	(0.08-0.20)	0.13	(0.08-0.20)	.005	(.003-.008)	.005	(.003-.008)
	M-KM		0.12	(0.12-0.20)	0.12	(0.12-0.20)	.005	(.005-.008)	.005	(.005-.008)
	E-PM	17	0.10	(0.08-0.15)	0.10	(0.08-0.15)	.004	(.003-.006)	.004	(.003-.006)
	E-MM		0.15	(0.08-0.20)	0.15	(0.08-0.20)	.006	(.003-.008)	.006	(.003-.008)
	E-KM		0.15	(0.12-0.20)	0.15	(0.12-0.20)	.005	(.005-.008)	.005	(.005-.008)
	M-PM	17	0.10	(0.08-0.15)	0.10	(0.08-0.15)	.004	(.003-.006)	.004	(.003-.006)
	M-MM		0.15	(0.08-0.20)	0.15	(0.08-0.20)	.006	(.003-.008)	.006	(.003-.008)
	M-KM		0.15	(0.12-0.20)	0.15	(0.12-0.20)	.006	(.005-.008)	.006	(.005-.008)
	M-PH	11	0.12	(0.08-0.15)	0.12	(0.08-0.20)	.005	(.003-.008)	.005	(.003-.008)
	M-MH		0.16	(0.08-0.22)	0.16	(0.08-0.22)	.006	(.003-.009)	.006	(.003-.009)
	M-KH		0.15	(0.12-0.22)	0.15	(0.12-0.22)	.006	(.005-.009)	.006	(.005-.009)
	M-PH	17	0.20	(0.15-0.35)	0.20	(0.15-0.35)	.008	(.006-.014)	.008	(.006-.014)
	M-KH		0.20	(0.15-0.35)	0.20	(0.15-0.35)	.008	(.006-.014)	.008	(.006-.014)
	H-PL	18	0.10	(0.05-0.19)	0.10	(0.05-0.19)	.004	(.002-.007)	.004	(.002-.007)
	H-ML		0.10	(0.05-0.19)	0.10	(0.05-0.19)	.004	(.002-.007)	.004	(.002-.007)
	H-KL		0.10	(0.05-0.19)	0.10	(0.05-0.19)	.004	(.002-.007)	.004	(.002-.007)
	M-PM	18	0.20	(0.08-0.30)	0.20	(0.08-0.30)	.008	(.003-.012)	.008	(.003-.012)
	M-MM		0.20	(0.08-0.30)	0.20	(0.08-0.30)	.008	(.003-.012)	.008	(.003-.012)
	M-KM		0.20	(0.08-0.30)	0.20	(0.08-0.30)	.008	(.003-.012)	.008	(.003-.012)
	E (PCD)	11	0.15	(0.10-0.25)	0.15	(0.10-0.25)	.006	(.004-.010)	.006	(.004-.010)
	E (PCD)	17	0.15	(0.10-0.25)	0.15	(0.10-0.25)	.006	(.004-.010)	.006	(.004-.010)

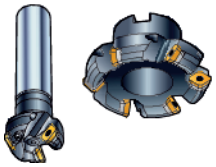
Shoulder milling

κ_r 90° (0°)	Insert geometry	Insert size	Feed per tooth, f_z (mm/tooth) Starting value	(min.- max.)	Max. chip thickness, h_{ex}, mm Starting value	(min.- max.)	Feed per tooth, f_z (inch/tooth) Starting value	(min.- max.)	Max. chip thickness, h_{ex}, (inch) Starting value	(min.- max.)
CoroMill® 290 	M-PL		0.08	(0.05-0.15)	0.08	(0.05-0.15)	.003	(.002-.006)	.003	(.002-.006)
	M-KL		0.10	(0.08-0.15)	0.10	(0.08-0.15)	.004	(.003-.006)	.004	(.003-.006)
	E-PL		0.06	(0.05-0.09)	0.06	(0.05-0.09)	.002	(.002-.004)	.002	(.002-.004)
	E-KL	12	0.08	(0.07-0.12)	0.08	(0.07-0.12)	.003	(.003-.005)	.003	(.003-.005)
	E-ML		0.10	(0.08-0.15)	0.10	(0.08-0.15)	.004	(.003-.006)	.004	(.003-.006)
	M-PM M-KM	12	0.17	(0.10-0.20)	0.17	(0.10-0.20)	.007	(.004-.008)	.007	(.004-.008)
	M-PL M-ML M-KL M-WL	12	0.10	(0.10-0.20)	0.10	(0.10-0.20)	.007	(.004-.008)	.007	(.004-.008)
	M-PM M-MM M-KM M-WM	12	0.12	(0.08-0.15)	0.12	(0.08-0.15)	.005	(.003-.006)	.005	(.003-.006)
	M-PH M-KH M-WH	12	0.25	(0.10-0.30)	0.25	(0.10-0.30)	.010	(.004-.012)	.010	(.004-.012)
	E		0.10	(0.05-0.15)	0.10	(0.05-0.15)	.004	(.002-.006)	.004	(.002-.006)
	E (CBN)		0.10	(0.05-0.15)	0.10	(0.05-0.15)	.004	(.002-.006)	.004	(.002-.006)
CoroMill® 690 	M-P-SL M-E-SL	10	0.10	(0.05-0.2)	0.10	(0.05-0.15)	.004	(.002-.008)	.004	(.002-.006)
	M-P-SL M-E-SL	14	0.12	(0.05-0.2)	0.12	(0.05-0.15)	.005	(.002-.008)	.005	(.002-.006)
Coromant Finishing Long Edge  *18 end cutting inserts	-PL2 -PL -ML2 -ML -2 -AL	18*/19	0.15	(0.05-0.2)	0.15	(0.05-0.2)	.005	(.002-.008)	.005	(.002-.008)
CoroMill® 790 	H-NL	16	0.2	(0.1-0.3)	0.2	(0.1-0.3)	.008	(.004-.012)	.008	(.004-.012)
	H-NM	16	0.3	(0.1-0.4)	0.3	(0.1-0.4)	.012	(.004-.016)	.012	(.004-.016)
	H-PL	16	0.15	(0.1-0.2)	0.15	(0.1-0.2)	.006	(.004-.008)	.006	(.004-.008)
	H-NL	22	0.3	(0.1-0.4)	0.3	(0.1-0.4)	.012	(.004-.016)	.012	(.004-.016)
	H-NM	22	0.6	(0.2-0.6)	0.6	(0.2-0.6)	.024	(.008-.024)	.024	(.008-.024)
	H-PL	22	0.15	(0.1-0.2)	0.05	(0.02-0.08)	.006	(.004-.008)	.002	(.002-.003)
CoroMill® Century  R590 RA590	-NL CD10		0.15	(0.1-0.2)	0.15	(0.1-0.2)	.006	(.002-.012)	.006	(.002-.012)
	-NL H10		0.20	(0.1-0.4)	0.20	(0.1-0.4)	.008	(.004-.016)	.008	(.004-.016)

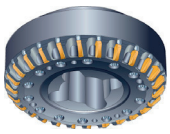
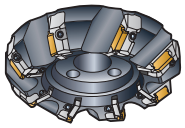
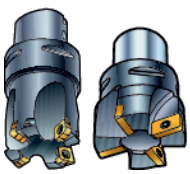
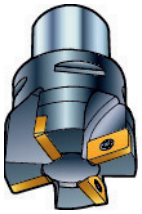
Shoulder milling

κ_r 90° (0°)	Insert geometry	Insert size	Feed per tooth, f_z (mm/tooth) Starting value	(min.- max.)	Max. chip thickness, h_{ex}, mm Starting value	(min.- max.)	Feed per tooth, f_z (inch/tooth) Starting value	(min.- max.)	Max. chip thickness, h_{ex}, (inch) Starting value	(min.- max.)
AUTO-FS Finishing  R/LA262.4 R/L262.4 R/L262.42	SBEN SBEX SBEX-11		0.17	(0.1-0.3)	0.17	(0.1-0.3)	.007	(.004-.012)	.007	(.004-.012)
T-Line Roughing  R260.90	CDE		0.17	(0.1-0.3)	0.17	(0.1-0.3)	.007	(.004-.012)	.007	(.004-.012)

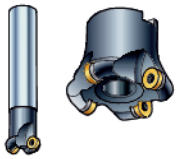
Facemilling

κ_r 75° -10°	Insert geometry	Insert size	Starting value	(min. - max.)	Starting value	(min.- max.)	Starting value	(min. - max.)	Starting value	(min. - max.)
CoroMill® 345 	E-PL E-ML E-KL M-PL M-KL	13	0.15	(0.07-0.20)	0.10	(0.07-0.14)	.006	(.003-.008)	.004	(.003-.006)
	M-PM M-MM M-KM		0.30	(0.15-0.45)	0.21	(0.10-0.32)	.012	(.006-.018)	.008	(.004-.013)
	M-PH		0.45	(0.35-0.55)	0.32	(0.25-0.39)	.012	(.014-.022)	.013	(.010-.015)
	M-KH		0.40	(0.30-0.50)	0.28	(0.21-0.35)	.016	(.012-.020)	.011	(.008-.014)
CoroMill® 245 	E-PL E-ML E-KL		0.14	(0.08-0.21)	0.10	(0.06-0.15)	.006	(.003-.008)	.004	(.002-.006)
	CT530 H13A H10		0.11	(0.07-0.17)	0.08	(0.06-0.12)	.004	(.003-.007)	.003	(.008-.014)
	M-PL M-KL		0.17	(0.07-0.21)	0.12	(0.06-0.15)	.007	(.003-.008)	.005	(.002-.006)
	M-PM M-KM		0.24	(0.10-0.28)	0.17	(0.07-0.20)	.009	(.004-.011)	.007	(.003-.008)
	CT530 H13A		0.12	(0.08-0.18)	0.09	(0.06-0.13)	.005	(.003-.007)	.004	(.002-.005)
	K-MM		0.23	(0.10-0.28)	0.16	(0.07-0.20)	.009	(.004-.011)	.006	(.003-.008)
	M-PH M-KH		0.35	(0.10-0.42)	0.25	(0.07-0.30)	.014	(.004-.017)	.010	(.003-.030)
	E-AL		0.24	(0.10-0.28)	0.17	(0.07-0.28)	.009	(.004-.011)	.010	(.003-.08)
	E Ceramic CC6190		0.21	(0.10-0.30)	0.15	(0.07-0.20)	.008	(.004-.012)	.006	(.003-.008)
	E CBN CB50		0.14	(0.07-0.21)	0.10	(0.06-0.15)	.006	(.003-.008)	.004	(.002-.006)
	E PCD CD10		0.14	(0.07-0.21)	0.10	(0.06-0.15)	.006	(.003-.008)	.004	(.002-.006)

Face and plunge milling

κ_r 75° -10°	Insert geometry	Insert size	Feed per tooth, f_z (mm/tooth) Starting value	(min.- max.)	Max. chip thickness, h_{ex}, mm Starting value	(min.- max.)	Feed per tooth, f_z (inch/tooth) Starting value	(min.- max.)	Max. chip thickness, h_{ex}, (inch) Starting value	(min.- max.)
CoroMill® 365 	-PL	15	0.20	(0.12-0.28)	0.18	(0.11-0.25)	.008	(.005-.011)	.008	(.004-.010)
	-PM		0.22	(0.15-0.28)	0.20	(0.14-0.25)	.009	(.005-.011)	.008	(.006-.010)
	-KL		0.22	(0.12-0.35)	0.20	(0.11-0.32)	.009	(.004-.011)	.008	(.004-.013)
	-KM		0.25	(0.15-0.35)	0.23	(0.14-0.32)	.010	(.006-.014)	.009	(.006-.013)
Sandvik AUTO 	TNHF-WL TNEF-WL		0.17	(0.08-0.21)	0.12	(0.06-0.15)	.007	(.003-.008)	.005	(.002-.006)
	TNHF-CA TNEF-CA		0.24	(0.1-0.42)	0.17	(0.07-0.30)	.009	(.004-.017)	.007	(.003-.012)
	TNHF-65 TNEF-65		0.24	(0.1-0.28)	0.17	(0.07-0.20)	.009	(.004-.011)	.007	(.003-.008)
	TNJN		0.35	(0.1-0.70)	0.25	(0.07-0.50)	.014	(.004-.028)	.010	(.003-.020)
	TNEN		0.24	(0.1-0.28)	0.17	(0.07-0.20)	.009	(.004-.011)	.007	(.003-.008)
	TNCN									
AUTO-AF 	N260.8-F N260.8-L		0.15	(0.08-0.20)	0.15	(0.08-0.20)	.006	(.003-.008)	.006	(.003-.008)
CoroMill® 360 	PM	19	0.45	(0.30-0.70)	0.40	(0.25-0.60)	.018	(.012-.028)	.016	(.010-.024)
	MM	28								
	KH									
T-MAX® 45 	LNCX -11		0.35	(0.10-1.0)	0.25	(0.07-0.70)	.014	(.004-.039)	.010	(.003-.028)
	-12		0.35	(0.10-0.70)	0.25	(0.07-0.50)	.014	(.004-.028)	.010	(.003-.020)
	-13		0.35	(0.10-0.70)	0.25	(0.07-0.50)	.014	(.004-.028)	.010	(.003-.020)
CoroMill® 210 			Facemilling				Facemilling			
	M-PM	09	1.0	(0.40-2.0)	0.17	(0.07-0.35)	0.039	(.003-.014)	.007	(.003-.014)
	M-KM	14	1.5	(0.5-3.0)	0.26	(0.08-0.52)	.059	(.020-.118)	.010	(.003-.020)
	M-MM									
	E-PM		Plunge milling				Plunge milling			
	E-MM	09	0.15	(0.01-0.2)	0.17	(0.07-0.35)	.006	(.001-.008)	.007	(.003-.014)
	E-KM	14	0.20	(0.01-0.25)	0.26	(0.08-0.52)	.008	(.001-.008)	.010	(.003-.020)
Coromant Plunge Cutter 	LPMH-PM LPMH-MM	25	0.20	(0.10-0.30)			.008	(.004-.012)		

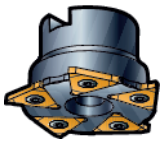
Round insert and Ball Nose

	Insert geometry	Insert size mm	Insert size inch	Feed per tooth, f_z	Max. chip thickness, h_{ex}, mm Starting value	Max. chip thickness, h_{ex}, mm (min.- max.)	Max. chip thickness, h_{ex}, (inch) Starting value	Max. chip thickness, h_{ex}, (inch) (min.- max.)
Round								
CoroMill® 200 	-PL -ML -KL	10 12 16 20	.375 .500 .750		0.08	(0.05-0.12)	.003	(.002-.005)
	-PM -KM -MM -WM	10 12 16 20	.375 .500 .750		0.17	(0.10-0.20)	.007	(.004-.008)
	-PH -KH -WH	10 12 16 20	.375 .500 .750		0.25	(0.10-0.30)	.010	(.002-.012)
	CBN	12			0.10	(0.05-0.15)	.004	(.002-.006)
	Ceramic	12 , 16			0.20	(0.07-0.30)	.008	(.003-0.30)
CoroMill® 300 	E-PL E-ML	8 10 12 13 16 20 25.4		Face milling round insert (a_p <iC/2)	0.08 0.13 0.15 0.18 0.20	(0.05-0.15) (0.05-0.15) (0.05-0.20) (0.05-0.20) (0.05-0.25)	.005 .005 .006 .007 .008	(.002-.006) (.002-.006) (.002-.008) (.002-.008) (.002-.010)
	E-PM E-MM	5 7 8 9 10 12 13 16 20		$f_z = \frac{h_{ex} \times iC}{2 \times \sqrt{a_p \times iC - a_p^2}}$	0.08 0.10 0.13 0.18 0.18 0.18 0.2 0.2 0.25	(0.05-0.12) (0.05-0.15) (0.05-0.20) (0.05-0.25) (0.05-0.25) (0.05-0.25) (0.05-0.30) (0.05-0.30) (0.05-0.40)	.003 .004 .005 .007 .007 .007 .008 .008 .010	(.002-.005) (.002-.006) (.002-.008) (.002-.010) (.002-.010) (.002-.010) (.002-.012) (.002-.012) (.002-.016)
	M-PM M-MM	8 10 12 13 16 20 25.4		Side milling (a_e<D_{cap}/2) and round insert (a_p<iC/2)	0.13 0.15 0.15 0.18 0.2	(0.07-0.20) (0.07-0.25) (0.07-0.25) (0.07-0.25) (0.07-0.30)	.005 .006 .006 .007 .008	(.003-.008) (.003-.010) (.003-.010) (.003-.010) (.003-.012)
	M-PH M-MH	8 9 10 12 13 16 20		$f_z = \frac{h_{ex} \times iC \times D_{cap}}{4 \times \sqrt{a_p \times iC \times a_p^2 \times \sqrt{D_{cap} \times a_e - a_e^2}}}$	0.15 0.20 0.20 0.25 0.35	(0.07-0.25) (0.07-0.30) (0.07-0.30) (0.07-0.40) (0.07-0.55)	.006 .008 .008 .008 .010 .014	(.003-.010) (.003-.012) (.003-.012) (.003-.012) (.003-.016) (.003-.022)
Ball nose								
CoroMill Ball nose 	M-MM	10 12 16 20 25 30 32 40 50	.375 .500 .625 .750 1.00 1.25 1.50 2.00	Feed per tooth (inch/tooth), cutter centered $f_z = \frac{D_c \times h_{ex}}{D_{cap}}$	0.10 0.10 0.15 0.15 0.17 0.17 0.20	(0.08-0.21) (0.08-0.21) (0.08-0.25) (0.08-0.25) (0.08-0.28) (0.08-0.28) (0.10-0.42)	.004 .004 .006 .007 .008 .010	(.003-.008) (.003-.008) (.003-.010) (.003-.011) (.004-.017) (.004-.017)
R216	E-M	10 12 16 20 25 30 32 40 50	.375 .500 .625 .750 1.00 1.25 1.5 2.00	Feed per tooth (inch/tooth), side milling $f_z = \frac{D_3 \times h_{ex}}{\sqrt{D_{cap}^2 - (D_{cap} - 2 \times a_e)^2}}$	0.10 0.10 0.10 0.15 0.15 0.17 0.17 0.2 0.20	(0.05.-0.21) (0.05.-0.21) (0.05.-0.21) (0.05.-0.25) (0.05.-0.25) (0.05-0.28) (0.05-0.28) (0.05-0.35) (0.05-0.35)	.004 .004 .004 .006 .006 .007 .007 .008 .008	(.002-0.21) (.002-0.21) (.002-0.21) (.002-0.25) (.002-0.25) (.002-0.25) (.002-0.25) (.002-0.25) (.002-0.25)

Round insert and Ball

	Insert geometry	Insert size mm	Insert size Inch	Feed per tooth, f_z (mm/tooth) Starting value	(min.- max.)	Max. chip thickness, h_{ex}, mm Starting value	(min.- max.)	Feed per tooth, f_z (inch/tooth) Starting value	(min.- max.)	Max. chip thickness, h_{ex}, (inch) Starting value	(min.- max.)
Ball nose											
CoroMill® Ball Nose Finishing 	E-L	8	.312	0.12	(0.10-0.25)	0.07	(0.05-0.18)	.005	(.004-.010)	.003	(.002-.007)
		10	.375	0.12	(0.10-0.25)	0.07	(0.05-0.18)	.005	(.004-.010)	.004	(.002-.007)
		12	.500	0.15	(0.15-0.35)	0.09	(0.07-0.22)	.006	(.006-.014)	.004	(.003-.009)
		16	.625	0.17	(0.15-0.35)	0.11	(0.07-0.25)	.007	(.006-.014)	.004	(.003-.010)
		20	.750	0.17	(0.15-0.35)	0.11	(0.07-0.25)	.007	(.006-.014)	.004	(.003-.010)
		25	1.00	0.20	(0.15-0.35)	0.13	(0.07-0.40)	.008	(.006-.016)	.005	(.003-.011)
		30	1.00	0.20	(0.15-0.35)	0.13	(0.07-0.40)	.008	(.006-.016)	.005	(.003-.011)
		32	1.25	0.20	(0.15-0.35)	0.13	(0.07-0.40)	.008	(.006-.016)	.005	(.003-.011)

Slot milling

	Insert geometry	Insert size mm	Insert size Inch	Feed per tooth, f_z (mm/tooth) Starting value	(min.- max.)	Max. chip thickness, h_{ex}, mm Starting value	(min.- max.)	Feed per tooth, f_z (inch/tooth) Starting value	(min.- max.)	Max. chip thickness, h_{ex}, (inch) Starting value	(min.- max.)
Side and face mills											
CoroMill® 327 	-GM -GMM -GC -CH -TH -THM -RM	06,09,12, 14		0.15	(0.07-0.25)	0.06	(0.02-0.1)	.006	(.003-.010)	.002	(.001-.004)
CoroMill® 328 	-GM -GC -TH	13		0.15	(0.1-0.2)	0.1	(0.05-0.15)	.006	(.004-.008)	.004	(.002-.006)
CoroMill® 329 	Seat size -D,-E -F,-G -H,-J,-K			0.1	(0.07-0.17)	0.07	(0.05-0.12)	.004	(.003-.007)	.003	(.002-.005)
CoroMill® 331  	-PL, -ML, -KL	04, 05		0.15	(0.05-0.22)	0.10	(0.05-0.15)	.006	(.002-.009)	.004	(.002-.006)
	-WL, -NL	08, 11, 13, 14		0.18	(0.07-0.22)	0.12	(0.08-0.15)	.007	(.003-.009)	.005	(.003-.006)
	-PM, -ML	04, 05		0.19	(0.08-0.29)	0.13	(0.08-0.20)	.007	(.003-.011)	.005	(.003-.008)
	-KM, -WM	08, 11, 14		0.25	(0.10-0.29)	0.17	(0.10-0.20)	.010	(.004-.011)	.007	(.004-.008)
	RCHT/ RCKT -PL, -ML, -KL			0.11	(0.05-0.22)	0.10	(0.08-0.12)	.004	(.003-.007)	.003	(.002-.005)
	-WM, -PM, -MM, -KM	9, 10, 12, 13,16		0.24	(0.10-0.28)	0.17	(0.10-0.20)	.009	(.004-.011)	.007	(.004-.012)
	-WH, -KH, -PH			0.35	(0.10-0.42)	0.25	(0.10-0.30)	.014	(.004-.017)	.010	(.004-.012)
T-MAX® Q-Cutter For slotting 	330.20										
	-AA	2-4		0.09	(0.02-0.12)	0.06	(0.02-0.06)	.004	(.001-.005)	.002	(.001-.003)
	-4A	5-6		0.09	(0.02-0.12)	0.08	(0.02-0.12)	.004	(.001-.005)	.003	(.001-.005)
	-5E			0.09	(0.02-0.12)	0.08	(0.02-0.12)	.004	(.001-.005)	.003	(.001-.005)

Milling with large engagement, metric values

ISO P MC No.	CMC No.	Material	Specific cutting force k_c 0.4 N/mm²	Hardness Brinell HB	mc	CT530 Max chip thickness, h_{ex} mm 0.1 – 0.15 – 0.2 Cutting speed v_c, m/min	GC1010 Max chip thickness, h_{ex} mm 0.05 – 0.1 – 0.2 Cutting speed v_c, m/min
		Steel					
		Unalloyed					
P1.1.Z.AN	01.1	C = 0.1–0.25%	1500	125	0.25	430–390–350	-
P1.2.Z.AN	01.2	C = 0.25–0.55%	1600	150	0.25	385–350–315	-
P1.3.Z.AN	01.3	C = 0.55–0.80%	1700	170	0.25	365–330–300	-
P1.3.Z.AN	01.4		1800	210	0.25	315–290–260	-
P1.3.Z.HT	01.5		2000	300	0.25	235–210–195	-
		Low alloyed (alloying elements ≤ 5%)					
P2.1.Z.AN	02.1	Non-hardened	1700	175	0.25	300–275–245	-
P2.5.Z.HT	02.2	Hardened and tempered	1900	300	0.25	195–180–160	-
		High alloyed (alloying elements > 5%)					
P3.0.Z.AN	03.11	Annealed	1950	200	0.25	230–205–185	180-165-135
P3.1.Z.AN	03.13	Hardened tool steel	2150	200	0.25	190–170–155	150-135-110
P3.0.Z.HT	03.21		2900	300	0.25	165–150–135	130-120-100
P3.0.Z.HT	03.22		3100	380	0.25	105–95–85	80-75-60
		Castings					
P1.5.C.UT	06.1	Unalloyed	1400	150	0.25	305–280–250	245-220-180
P2.6.C.UT	06.2	Low alloyed (alloying elements ≤ 5%)	1600	200	0.25	245–220–200	195-175-145
P3.0.C.UT	06.3	High alloyed (alloying elements > 5%)	1950	200	0.25	180–160–145	140-130-105

ISO M MC No.	CMC No.	Material	Specific cutting force k_c 0.4 N/mm²	Hardness Brinell HB	mc	CT530 Max chip thickness, h_{ex} mm 0.1 – 0.15 – 0.2 Cutting speed v_c, m/min	GC1025 Max chip thickness, h_{ex} mm 0.05 – 0.1 – 0.2 Cutting speed v_c, m/min
		Stainless steel					
		Ferritic/martensitic					
P5.0.Z.AN	05.11	Non-hardened	1800	200	0.21	285 –255 –230	255 –225 –180
P5.0.Z.PH	05.12	PH-hardened	2850	330	0.21	205 –185 –165	180 –160 –130
P5.0.Z.HT	05.13	Hardened	2350	330	0.21	215 –190 –170	185 –165 –135
		Austenitic					
M1.0.Z.AQ	05.21	Non-hardened	1950	200	0.21	265 –240 –215	250 –225 –180
M1.0.Z.PH	05.22	PH-hardened	2850	330	0.21	200 –175 –160	170 –155 –125
M2.0.Z.AQ	05.23	Super austenitic	2250	200		–	–
		Austenitic-ferritic (Duplex)					
M3.1.Z.AQ	05.51	Non-weldable ≥ 0.05%C	2000	230	0.21	260 –235 –210	205 –185 –145
M3.2.Z.AQ	05.52	Weldable < 0.05%C	2450	260	0.21	230 –205 –185	175 –155 –125
		Stainless steel – Cast					
		Ferritic/martensitic					
P5.0.C.UT	15.11	Non-hardened	1700	200	0.25	255 –230 –205	225 –200 –160
P5.0.C.PH	15.12	PH-hardened	2450	330	0.25	180 –160 –145	155 –140 –115
P5.0.C.HT	15.13	Hardened	2150	330	0.25	195 –175 –155	170 –155 –120
M1.0.C.UT	15.21	Non hardened	1800	200	0.25	255 –225 –205	235 –210 –170
M1.0C.PH	15.22	PH-hardened	2450	330	0.25	180 –160 –145	160 –140 –115
M2.0.C.AQ	15.23	Super austenitic	2150	200		–	–
		Austenitic-ferritic (Duplex)					
M3.1.C.AQ	15.51	Non-weldable ≥ 0.05%C	1800	230	0.25	245 –220 –195	195 –175 –140
M3.2.C.AQ	15.52	Weldable < 0.05%C	2250	260	0.25	215 –190 –170	160 –145 –115

ISO K MC No.	CMC No.	Material	Specific cutting force k_c 0.4 N/mm²	Hardness Brinell HB	mc	CB50 Max chip thickness, h_{ex} mm 0.1 – 0.15 – 0.2 Cutting speed v_c, m/min	CC6190 Max chip thickness, h_{ex} mm 0.1 – 0.2 – 0.3 Cutting speed v_c, m/min
		Malleable cast iron					
	07.1	Ferritic (short chipping)	790	130	0.28	-	1300 –1050 –880
K1.1.C.NS	07.2	Pearlitic (long chipping)	900	230	0.28	-	1100 –890 –730
		Gray cast iron					
K2.1.C.UT	08.1	Low tensile strength	890	180	0.28	850 –720 –620	1600–1300–1050
K2.2.C.UT	08.2	High tensile strength	1100	245	0.28	910 –780 –670	1200–990–810
		Nodular cast iron					
K3.1.C.UT	09.1	Ferritic	900	160	0.28	-	1000–830–680
K3.3.C.UT	09.2	Pearlitic	1350	250	0.28	495 –420 –360	840 –690 –570

Conditions:

Cutter, dia. 5.000 inch (125 mm), centered over the workpiece. Working engagement 4.000 inch (100 mm).

GC1025	GC1030	GC4220	GC4230	GC4240	GC3040	GC2030	GC2040	SM30
Max chip thickness, h_{ex} mm								
0.05–0.1–0.2	0.05–0.1–0.2	0.1– 0.2–0.3	0.1– 0.2–0.3	0.1-0.2-0.3	0.1–0.2–0.3	0.1–0.2–0.4	0.1–0.2–0.4	0.1–0.2–0.4
Cutting speed v_c, m/min								
340-310-255	375–340–280	490–405–330	400–330–270	340-280-230	390 –320 –260	295–240–165	295 –240 –165	265 –230 –170
305-280-230	335–305–250	440–360–295	360–295–245	305-250-205	350 –285 –235	265–215–145	265 –215 –145	240 –205 –150
290-260-215	320–290–235	415–340–280	340–280–230	290-235-195	330 –270 –220	250–205–135	250 –205 –135	225 –195 –145
250-230-185	275–250–205	365–300–245	295–245–200	250-205-170	290 –235 –195	220–180–120	220 –180 –120	195 –170 –125
185-170-140	205–185–155	270–220–180	220–180–150	185-155-125	215 –175 –145	160–130–90	160 –130 –90	145 –125 –90
280-255-210	265–240–195	345–285–230	280–230–190	240-195-160	275 –225 –185	205–170–115	205 –170 –115	185 –160 –120
155-140-115	170–155–130	225–185–150	185–150–125	155-130-105	180 –145 –120	135–110–75	135 –110 –75	120 –105 –75
180-165-135	180–165–135	300–245–200	195–160–130	165-135-110	205 –170 –140	155–130–85	155 –130 –85	140 –120 –90
150–135–110	150–135–110	215–180–145	160–130–110	135-110-90	170 –140 –115	125–105–70	125 –105 –70	115 –100 –75
130–120–100	130–120–100	190–155–125	140–115–95	120-100-80	150 –125 –100	110-90–60	110 –90 –60	105 –90 –65
80–75–60	80–75–60	120–95–80	85–70–60	75-60-50	95 –75 –65	70–55–38	70 –55 –38	65 –55 –41
245–220–180	245–220–180	350–290–235	260–215–175	220-180-150	280 –230 –190	210–170–115	210 –170 –115	190 –165 –120
195–175–145	195–175–145	280–230–190	205–170–140	175-145-120	220 –180 –150	170–140–95	170 –140 –95	150 –130 –95
140–130–105	140–130–105	205–170–140	150–125–100	130-105-85	160 –135 –110	120–100–70	120 –100 –70	110 –95 –70

GC1030	1040	S30T	S40T	GC2030	GC2040	GC4230	GC4240	SM30
Max chip thickness, h_{ex} mm								
0.05-0.1-0,2	0.05-0.15-0.25	0.05-0.15-0.25	0.1-0.2-0.3	0.05 – 0.15 – 0.25	0.1 – 0.2 – 0.3	0.1 – 0.2 – 0.3	0.1-0.2-0.4	0.1 – 0.2 – 0.4
Cutting speed v_c, m/min								
255 –225 –180	185 – 140 – 105	255 – 190 – 140	250 – 200 – 160	240 –190 –155	240 –190 –155	275 –220 –175	210 –170 –110	185 –160 –115
180 –160 –130	130 – 100 – 70	180 – 135 – 100	170 – 135 – 110	170 –135 –110	165 –130 –105	190 –150 –120	140 –110 –70	105 –90 –65
185 –165 –135	135 – 100 – 75	185 – 140 – 105	180 – 145 – 115	175 –140 –115	175 –140 –110	200 –160 –125	160 –125 –80	110 –95 –70
250 –225 –180	180 – 135 – 100	250 – 185 – 140	210 – 165 – 135	235 –190 –150	200 –160 –130	-	185 –150 –95	170 –150 –110
170 –155 –125	125 – 95 – 70	170 – 130 – 95	165 – 130 – 105	165 –130 –105	160 –125 –100	-	135 –105 –70	100 –85 –65
–	125 – 90 – 70	170 – 125 – 95	145 – 115 – 95	–	–	–	–	–
205 –185 –145	150 – 115 – 85	205 – 155 – 115	175 – 140 – 110	195 –155 –125	170 –135 –105	-	170 –135 –85	100 –85 –65
175 –155 –125	125 – 95 – 70	175 – 130 – 95	140 – 115 – 90	165 –130 –105	135 –110 –85	-	135 –110 –70	130 –110 –80
225 –200 –160	165 – 125 – 90	225 – 165 – 125	220 – 175 – 140	215 –170 –135	210 –170 –135	245 –195 –155	185 –150 –95	165 –145 –105
155 –140 –115	115 – 85 – 65	155 – 115 – 85	150 – 120 – 95	150 –120 –95	145 –115 –90	165 –130 –105	120 –100 –65	90 –80 –60
170 –155 –120	125 – 90 – 70	170 – 125 – 95	165 – 135 – 105	160 –130 –105	160 –130 –100	180 –145 –115	145 –115 –75	100 –85 –65
235 –210 –170	175 – 130 – 95	235 – 175 – 130	200 – 160 – 130	225 –180 –145	190 –155 –125	-	180 –140 –90	165 –140 –105
160 –140 –115	115 – 85 – 65	160 – 115 – 85	150 – 120 – 95	150 –120 –95	145 –115 –90	-	125 –100 –65	90 –80 –60
–	110 – 85 – 60	155 – 115 – 85	130 – 105 – 85	–	–	–	–	–
195 –175 –140	145 – 105 – 80	195 – 15 – 110	165 – 130 – 105	185 –150 –120	160 –125 –100	-	160 –125 –80	160 –135 –100
160 –145 –115	115 – 85 – 65	160 – 120 – 90	135 – 105 – 85	150 –120 –95	130 –100 –80	-	125 –100 –65	120 –105 –75

GC3220	GC3040	K20W	GC4220	GC4230	GC1020	H13A	K20D	
Max chip thickness, h_{ex} mm								
0.1 – 0.2 – 0.3	0.1 – 0.2 – 0.4	0.1 – 0.2 – 0.3	0.1 – 0.2 – 0.3	0.1 – 0.2 – 0.3	0.1 – 0.2 – 0.3	0.1 – 0.2 – 0.4	0.1-0.2-0.3	
Cutting speed v_c, m/min								
305–250–205	240–195–135	255–210–170	255 –210 –170	215 –175 –145	295–240–200	120–105–75	265-220-180	
255–210–170	200–165–110	210–170–140	210 –170 –140	175 –145 –120	240–195– 160	100– 85–65	220-180-150	
335–275–225	260–215–145	290–240–195	275 –225 –185	230 –190 –155	335–275–225	130–110–85	290-240-195	
270–220–180	210–170–115	220–180–150	220 –180 –150	185 –155 –125	255–210–170	105– 90–65	235-190-155	
210–170–140	165–135–90	175–140–115	175 –140 –115	145 –120 –100	200–165–135	80– 70–50	180-150-125	
195–160–130	150–125–85	160–130–110	160 –130 –110	135 –110 –90	185–150–125	75– 65–50	170-140-115	

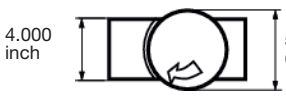
Milling with large engagement, metric values

ISO N MC No.	CMC No.	Material	Specific cutting force k_c 0.4 N/mm²	Hardness Brinell HB	mc	CD10 Max chip thickness, h_{ex} mm 0.1 – 0.15 – 0.2 Cutting speed v_c, m/min	H10 Max chip thickness, h_{ex} mm 0.1 – 0.15 – 0.2 Cutting speed v_c, m/min
		Aluminum alloys					
N1.2.Z.UT	30.11	Wrought or wrought and coldworked, non-aging	400	60		1900 –1750 –1600	940 –870 –810
N1.2.Z.AG	30.12	Wrought or wrought and aged	650	100		1700 –1550 –1450	850 –780 –730
		Aluminum alloys					
N1.3.C.UT	30.21	Cast, non-aging	600	75	0.25	1900 –1750 –1600	940 –870 –810
N1.3.C.AG	30.22	Cast or cast and aged	700	90	0.25	1700 –1550 –1450	850 –790 –730
		Aluminum alloys					
N1.1.Z.UT	30.3	Al >99%	350	30		1900 –1750 –1600	950 –880 –810
		Aluminum alloys					
	30.41	Cast, 13–15% Si	700	130		760 –700 –650	380 –350 –325
N1.4.C.NS	30.42	Cast, 16–22% Si	700	130		570 –530 –485	285 –265 –245
		Copper and copper alloys					
N3.3.U.UT	33.1	Free cutting alloys, ≥1% Pb	550	110	0.25	940 –870 –810	470 –435 –405
N3.2.C.UT	33.2	Brass, leaded bronzes, ≤1% Pb	550	90		940 –870 –810	470 –435 –405
N3.1.U.UT	33.3	Bronze and non-leaded copper incl. electrolytic copper	1350	100	0.25	660 –610 –570	330 –305 –285

ISO S MC No.	CMC No.	Material	Specific cutting force k_c 0.4 N/mm²	Hardness Brinell HB	mc	GC1025 Max chip thickness, h_{ex} mm 0.05 – 0.15 – 0.2 Cutting speed v_c, m/min	GC1030 Max chip thickness, h_{ex} mm 0.1 – 0.15 – 0.2 Cutting speed v_c, m/min
		Heat resistant super alloys					
		Iron base					
S1.0.U.AN	20.11	Annealed or solution treated	2400	200	0.25	65 –60 –55	65 –60 –55
S1.0.U.AG	20.12	Aged or solution treated and aged	2500	280	0.25	45 –45 –40	45 –45 –40
		Nickel base					
S2.0.Z.AN	20.21	Annealed or solution treated	2650	250	0.25	60 –55 –50	60 –55 –50
S2.0.Z.AG	20.22	Aged or solution treated and aged	2900	350	0.25	37 –34 –32	37 –34 –32
S2.0.C.NS	20.24	Cast or cast and aged	3000	320	0.25	45 –40 –39	45 –40 –39
		Cobalt base					
S3.0.Z.AN	20.31	Annealed or solution treated	2700	200	0.25	25 –22 –20	25 –22 –20
S3.0.Z.AG	20.32	Solution treated and aged	3000	300	0.25	18 –16 –14	18 –16 –14
S3.0.C.NS	20.33	Cast or cast and aged	31000	320	0.25	16 –14 –13	16 –14 –13
		Titanium alloys1)		**Rm2)**			
S4.1.Z.UT	23.1	Commercial pure (99.5% Ti)	1300	400	0.23	130 –120 –110	130 –120 –110
S4.2.Z.AN	23.21	α, near α and α + β alloys, annealed	1400	950	0.23	60 –55 –50	60 –55 –50
S4.3.Z.AG	23.22	α + β alloys in aged cond., β alloys, annealed or aged	1400	1050	0.23	45 –40 –39	45 –40 –39

ISO H MC No.	CMC No.	Material	Specific cutting force k_c 0.4 N/mm²	Hardness Brinell HB	mc	CB50 Max chip thickness, h_{ex} mm 0.07 – 0.12 – 0.2 Cutting speed v_c, m/min	CT530 Max chip thickness, h_{ex} mm 0.07 – 0.12 – 0.2 Cutting speed v_c, m/min
		Extra hard steel					
H1.3.Z.HA	04.1	Hardened and tempered	4200	59 HRC	0.25	160 –140 –115	80 –75 –55
		Chilled cast iron					
H2.0.C.UT	10.1	Cast or cast and aged	2200	400	0.28	310 –270 –215	155 –140 –110

1) 30-45° lead angle. Positive cutting geometry and coolant should be used.
2) Rm = ultimate tensile strength measured in MPa.



Conditions:
Cutter, dia. 5.000 inch (125 mm), centered over the workpiece. Working engagement 4.000 inch (100 mm).

CT530	GC1025	GC1030	H10F	H13A				
Max chip thickness, h_{ex} mm								
0.1 – 0.15 – 0.2	0.1 – 0.15 – 0.2	0.1 – 0.15 – 0.2	0.1 – 0.15 – 0.2	0.1 – 0.15 – 0.2				
Cutting speed v_c, m/min								
1050–960–890	990–910–850	990–910–850	940–870–810	750–700–650				
930–860–800	890–820–760	890–820–760	850–780–730	680–630–580				
1050–960–890	990–910–850	990–910–850	940–870–810	1700–1600–1450				
930–860–800	990–920–850	990–920–850	850–790–730	1450–1350–1250				
1050–960–890	990–920–850	990–920–850	950–880–810	760–700–650				
415–385–355	395–370–340	395–370–340	380–350–325	300–280–260				
310–290–270	300–275–255	300–275–255	285–265–245	225–210–195				
520–480–445	495–460–425	495–460–425	470–435–405	375–350–325				
520–480–445	495–460–425	495–460–425	470–435–405	375–350–325				
365–335–310	345–320–295	345–320–295	330–305–285	265–245–225				

H13A	H10F	S30T	S40T	GC2030	GC2040			
Max chip thickness, h_{ex} mm								
0.1-0.15-0.2	0.1 – 0.15 – 0.2	0.1 – 0.15 – 0.2	0.1 – 0.15 – 0.2	0.05 – 0.15 – 0.2	0.1 – 0.15 – 0.25			
Cutting speed v_c, m/min								
60-55-50	55 –50 –45	–	–	60 –55 –50	60 –55 –45			
45-40-38	40 –37 –35	–	–	45 –40 –37	45 –40 –34			
55-55-50	50 –50 –45	–	–	55 –50 –50	55 –50 –45			
35-33-30	32 –30 –27	–	–	34 –32 –30	34 –32 –27			
45-40-38	40 –37 –34	–	–	40 –39 –36	40 –39 –34			
23-21-18	22 –19 –17	–	–	23 –21 –18	23 –21 –17			
17-15-13	15 –14 –12	–	–	17 –15 –13	17 –15 –12			
16-14-13	14 –13 –12	–	–	15 –14 –12	15 –14 –11			
125-115-110	115 –105 –100	150 –135 –125	125 –115 –110	120 –115 –105	120 –115 –100			
50-45-45	45 –40 –38	65 –60 –55	45 –40 –39	50 –45 –40	45 –40 –36			
38-36-33	34 –31 –29	50 –50 –45	38 –36 –33	40 –39 –36	37 –34 –30			

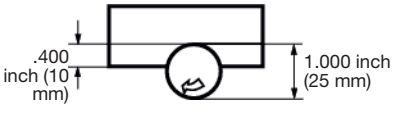
GC4220	GC3040	GC1010	GC1025	GC1030				
Max chip thickness, h_{ex} mm								
0.1 – 0.15 – 0.25	0.1 – 0.2 – 0.25	0.07 – 0.12 – 0.2	0.07 – 0.12 – 0.2	0.07-0.12-0.2				
Cutting speed v_c, m/min								
55–45–36	45–33–29	110-95-80	40–36–29	40-36-29				
100–90–70	85–65–55	215-185-150	75–70–55	75-70-55				

Milling with small engagement, metric values

ISO P			Specific cutting force k_c 0.4	Hardness Brinell		CT530	GC1010
						Max chip thickness, h_{ex} mm	
						0.1 – 0.15 – 0.2	0.05 – 0.1 – 0.2
MC No.	CMC No.	Material	N/mm²	HB	mc	Cutting speed v_c, m/min	
		Steel					
		Unalloyed					
P1.1.Z.AN	01.1	C = 0.1–0.25%	1500	125	0.25	500 –490 –475	-
P1.2.Z.AN	01.2	C = 0.25–0.55%	1600	150	0.25	450 –440 –430	-
P1.3.Z.AN	01.3	C = 0.55–0.80%	1700	170	0.25	425 –415 –405	-
P1.3.Z.AN	01.4		1800	210	0.25	370 –360 –355	-
P1.3.Z.HT	01.5		2000	300	0.25	275 –265 –260	-
		Low-alloy (alloying elements ≤5%)					
P2.1.Z.AN	02.1	Non-hardened	1700	175	0.25	350 –345 –335	-
P2.5.Z.HT	02.2	Hardened and tempered	1900	300	0.25	230 –225 –220	-
		High-alloy (alloying elements >5%)					
P3.0.Z.AN	03.11	Annealed	1950	200	0.25	265 –260 –255	195 –190 –185
P3.1.Z.AN	03.13	Hardened tool steel	2150	200	0.25	220 –215 –210	160 –160 –150
P3.0.Z.HT	03.21		2900	300	0.25	190 –190 –185	140 –140 –135
P3.0.Z.HT	03.22		3100	380	0.25	120 –120 –115	90 –85 –85
		Castings					
P1.5.C.UT	06.1	Unalloyed	1400	150	0.25	355 –350 –340	265 –255 –245
P2.6.C.UT	06.2	Low-alloy (alloying elements ≤5%)	1600	200	0.25	285 –280 –275	210 –205 –195
P3.0.C.UT	06.3	High-alloy (alloying elements >5%)	1950	200	0.25	210 –205 –200	155 –150 –145

ISO M			Specific cutting force k_c 0.4	Hardness Brinell		CT530	GC1025
						Max chip thickness, h_{ex} mm	
						0.1 – 0.15 – 0.2	0.05 – 0.1 – 0.2
MC No.	CMC No.	Material	N/mm²	HB	mc	Cutting speed v_c, m/min	
		Stainless steel					
		Ferritic/martensitic					
P5.0.Z.AN	05.11	Non-hardened	1800	200	0.21	340 –335 –325	275 –270 –255
P5.0.Z.PH	05.12	PH-hardened	2850	330	0.21	245 –240 –235	195 –190 –180
P5.0.Z.HT	05.13	Hardened	2350	330	0.21	255 –250 –240	200 –195 –190
		Austenitic					
M1.0.Z.AQ	05.21	Non-hardened	1950	200	0.21	320 –310 –300	270 –265 –255
M1.0.Z.PH	05.22	PH-hardened	2850	330	0.21	235 –230 –225	190 –185 –175
M2.0.Z.AQ	05.23	Super austenitic	2250	200		-	-
		Austenitic-ferritic (Duplex)					
M3.1.Z.AQ	05.51	Non-weldable ≥ 0.05%C	2000	230	0.21	310 –300 –295	225 –220 –210
M3.2.Z.AQ	05.52	Weldable < 0.05%C	2450	260	0.21	275 –270 –260	190 –185 –175
		Stainless steel – Cast					
		Ferritic/martensitic					
P5.0.C.UT	15.11	Non-hardened	1700	200	0.25	305 –295 –290	245 –240 –230
P5.0C.PH	15.12	PH-hardened	2450	330	0.25	215 –210 –205	170 –170 –160
P5.0.C.HT	15.13	Hardened	2150	330	0.25	235 –225 –220	185 –180 –175
		Austenitic					
M1.0.C.UT	15.21	Austenitic	1800	200	0.25	300 –295 –285	260 –250 –240
M1.0C.PH	15.22	PH-hardened	2450	330	0.25	215 –210 –205	170 –170 –160
M2.0.C.AQ	15.23	Super austenitic	2150	200		-	-
		Austenitic-ferritic (Duplex)					
M3.1.C.AQ	15.51	Non-weldable ≥ 0.05%C	1800	230	0.25	295 –285 –280	215 –205 –195
M3.2.C.AQ	15.52	Weldable < 0.05%C	2250	260	0.25	255 –250 –245	175 –170 –165

ISO K			Specific cutting force k_c 0.4	Hardness Brinell		CB50	CC6190
						Max chip thickness, h_{ex} mm	
						0.1 – 0.15 – 0.2	0.1 – 0.2 – 0.3
MC No.	CMC No.	Material	N/mm²	HB	mc	Cutting speed v_c, m/min	
		Malleable cast iron					
	07.1	Ferritic (short chipping)	790	130	0.28	-	1500 –1450 –1400
K1.1.C.NS	07.2	Pearlitic (long chipping)	900	230	0.28	-	1250 –1200 –1150
		Gray cast iron					
K2.1.C.UT	08.1	Low tensile strength	890	180	0.28	1100 –1050 –1000	1850 –1750 –1700
K2.2.C.UT	08.2	High tensile strength	1100	245	0.28	1150 –1100 –1100	1400 –1350 –1300
		Nodular cast iron					
K3.1.C.UT	09.1	Ferritic	900	160	0.28	-	1200 –1150 –1100
K3.3.C.UT	09.2	Pearlitic	1350	250	0.28	630 –610 –590	980 –930 –890



Conditions:
Side milling, cutter dia. 1.000 inch (25 mm). Working engagement .400 inch (10 mm).

GC1025	GC1030	GC4220	GC4230	GC4240	GC3040	GC2030	GC2040	SM30
Max chip thickness, h_{ex} mm								
0.05-0.1-0.2	0.05-0.1-0.2	0.1-0.15-0.3	0.1-0.2-0.3	0.1-0.2-0.3	0.1 – 0.15 – 0.3	0.05 – 0.15 – 0.25	0.1 – 0.2 – 0.3	0.1 – 0.2 – 0.3
Cutting speed v_c, m/min								
365-360-345	405-395-380	570 –560 –520	465 –445 –425	395-380-360	455 –445 – 415	340 –335 – 320	340 –325 – 315	300 –290 –280
330-325-310	365-355-340	510 –500 –470	420 –400 –385	355-340-325	410 –400 –375	305 –300 –290	305 –295 –280	270 –260 –250
310-305-290	345-335-320	485 –475 –445	395 –380 –360	335-320-310	385 –375 –350	290 –280 –270	290 –275 –265	255 –245 –235
270-265-255	300-295-280	425 –415 –390	345 –330 –315	295-280-270	335 –330 –305	255 –250 –240	255 –245 –235	220 –215 –205
200-195-190	220-220-210	310 –305 –285	255 –245 –235	220-210-200	250 –245 –225	185 –185 –175	185 –180 –170	165 –160 –155
300-295-285	285-280-265	400 –390 –365	325 –315 –300	280-265-255	320 –310 –290	240 –235 –225	240 –230 –220	210 –205 –195
170-165-160	185-180-175	260 –255 –240	215 –205 –195	180-175-165	205 –205 –190	155 –155 –145	155 –150 –145	135 –130 –130
195-190-185	195-190-185	350 –340 –320	225 –215 –205	190-185-175	240 –235 –220	180 –175 –170	180 –175 –165	160 –155 –150
160-160-150	160-160-150	250 –245 –230	185 –180 –170	160-150-145	200 –195 –185	150 –145 –140	150 –140 –135	130 –125 –125
140-140-135	140-140-135	220 –215 –200	165 –155 –150	140-135-125	175 –170 –160	130 –125 –120	130 –125 –120	115 –110 –110
90-85-85	90-85-85	135 –135 –125	100 –95 –95	85-85-80	110 –105 –100	80 –80 –75	80 –75 –75	70 –70 –65
265-255-245	265-255-245	410 –400 –375	305 –290 –280	255-245-235	325 –315 –295	240 –235 –225	240 –230 –220	215 –205 –200
210-205-195	210-205-195	325 –320 –295	240 –230 –220	205-195-190	260 –255 –235	195 –190 –185	195 –185 –180	170 –165 –160
155-150-145	155-150-145	240 –235 –220	175 –170 –160	150-145-140	190 –185 –175	145 –140 –135	145 –135 –130	125 –120 –115

GC1030	GC1040	S30T	S40T	GC2030	GC2040	GC4230	GC4240	SM30
Max chip thickness, h_{ex} mm								
0.05-0.1-0.2	0.05-0.15-0.25	0.05-0.15-0.25	0.1-0.2-0.25	0.05-0.15-0.25	0.1-0.2-0.25	0.1-0.2-0.25	0.1-0.2-0.3	0.1-0.2-0.3
Cutting speed v_c, m/min								
275 –270 –255	210 –195 –185	285 –265 –250	295 –280 –275	260 –250 –235	285 –270 –265	325 –310 –305	250 –240 –225	210 –200 –195
195 –190 –180	145 –140 –130	200 –185 –175	205 –195 –275	185 –175 –170	195 –185 –180	225 –215 –210	165 –160 –150	120 –115 –110
200 –195 –190	155 –145 –135	210 –195 –180	215 –205 –200	195 –185 –175	205 –195 –190	235 –225 –220	190 –180 –170	125 –120 –115
270 –265 –255	205 –190 –175	280 –260 –245	250 –235 –230	255 –245 –230	240 –225 –220	-	220 –210 –200	195 –185 –180
190 –185 –175	140 –135 –125	190 –180 –170	195 –185 –180	180 –170 –160	190 –180 –175	-	160 –150 –145	115 –110 –105
-	140 –130 –120	190 –180 –170	175 –165 –160	-	-	-	-	-
225 –220 –210	170 –160 –150	230 –215 –200	205 –195 –190	215 –205 –195	200 –190 –185	-	200 –190 –180	190 –180 –175
190 –185 –175	140 –130 –125	195 –180 –170	165 –160 –155	180 –170 –160	160 –155 –150	-	160 –155 –145	145 –140 –135
245 –240 –230	185 –175 –165	250 –235 –220	2 –250 –235	235 –225 –210	250 –240 –235	290 –275 –270	225 –210 –200	185 –180 –175
170 –170 –160	130 –120 –110	175 –165 –155	180 –170 –165	160 –155 –145	170 –165 –160	195 –185 –185	145 –140 –130	105 –100 –95
185 –180 –175	185 –175 –170	190 –180 –165	200 –190 –185	175 –165 –160	190 –180 –175	215 –205 –200	175 –165 –155	115 –110 –105
260 –250 –240	195 –180 –170	265 –250 –235	240 –225 –220	245 –230 –220	230 –215 –210	-	210 –200 –190	185 –180 –170
170 –170 –160	130 –120 –110	175 –165 –155	180 –170 –165	160 –155 –145	170 –165 –160	-	145 –140 –130	105 –100 –95
-	125 –120 –110	175 –160 –150	155 –145 –145	-	-	-	-	-
215 –205 –195	160 –150 –140	220 –205 –190	195 –185 –180	205 –195 –185	190 –180 –175	-	190 –180 –170	180 –170 –165
175 –170 –165	130 –125 –115	180 –170 –160	160 –150 –145	165 –160 –150	150 –145 –140	-	150 –140 –135	135 –130 –125

GC3220	GC3040	K20W	GC4220	GC4230	GC1020	H13A	K20D	
Max chip thickness, h_{ex} mm								
0.1-0.15-0.25	0.1-0.2-0.3	0.1-0.2-0.3	0.1-0.15-0.25	0.1-0.15-0.25	0.1-0.2-0.3	0.1-0.2-0.3	0.1-0.2-0.3	
Cutting speed v_c, m/min								
360–350–335	280–270–255	295-285-270	295–290–275	250–245–235	340-325-315	135-130-125	310-295-285	
295–290–275	230–220–210	245-235-225	245–240–225	205–200–190	280-265-255	110-110-105	255-245-235	
390–380–365	305–290–280	340-325-310	320–315–300	270–265–255	390-375-360	145-140-140	340-325-310	
310–305–290	245–235–225	260-245-235	260–250–240	215–210–205	295-285-270	120-115-110	270-260-250	
245–240–230	190–185–175	200-195-185	200–195–190	170–165–160	230-220-210	95-90-85	210-205-195	
225–220–215	175–170–160	185-180-170	185–185–175	155–155–145	215-205-195	85-85-80	195-190-180	

Milling with small engagement, metric values

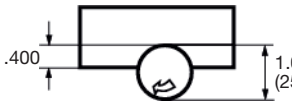
ISO N			Specific cutting force k_c 0.4	Hardness Brinell		CD10	CT530
						Max chip thickness, h_{ex} mm	
						0.1 – 0.15 – 0.2	0.1 – 0.15 – 0.2
MC No.	CMC No.	Material	N/mm²	HB	mc	Cutting speed v_c, m/min	
		Aluminum alloys					
N1.2.Z.UT	30.11	Wrought or wrought and coldworked, non-aging	400	60		2100 –2100 –2050	1150 –1150 –1100
N1.2.Z.AG	30.12	Wrought or wrought and aged	650	100		1900 –1850 –1850	1050 –1050 –1000
		Aluminum alloys					
N1.3.C.UT	30.21	Cast, non-aging	600	75	0.25	2100 –2100 –2050	1150 –1150 –1000
N1.3.C.AG	30.22	Cast or cast and aged	700	90	0.25	1900 –1900 –1850	1050 –1050 –1100
		Aluminum alloys					
N1.1.Z.UT	30.3	Al >99%	350	30		2150 –2100 –2050	1150 –1150 –1150
		Aluminum alloys					
	30.41	Cast, 13–15% Si	700	130		850 –840 –820	470 –460 –450
N1.4.C.NS	30.42	Cast, 16–22% Si	700	130		640 –630 –620	350 –345 –340
		Copper and copper alloys					
N3.3.U.UT	33.1	Free cutting alloys, ≥1% Pb	550	110	0.25	1050 –1050 –1050	580 –570 –560
N3.2.C.UT	33.2	Brass, leaded bronzes, ≤1% Pb	550	90		1050 –1050 –1000	580 –570 –560
N3.1.U.UT	33.3	Bronze and non-leaded copper incl. electrolytic copper	1350	100	0.25	740 –730 –720	410 –400 –395

ISO S			Specific cutting force k_c 0.4	Hardness Brinell		GC1025	GC1030
						Max chip thickness, h_{ex} mm	
						0.5 – 0.15 – 0.2	0.05-0.15-0.2
MC No.	CMC No.	Material	N/mm²	HB	mc	Cutting speed v_c, m/min	
		Heat resistant super alloys					
		Iron base					
S1.0.U.AN	20.11	Annealed or solution treated	2400	200	0.25	70 –70 –70	70-70-70
S1.0.U.AG	20.12	Aged or solution treated and aged	2500	280	0.25	55 –50 –50	55-50-50
		Nickel base					
S2.0.Z.AN	20.21	Annealed or solution treated	2650	250	0.25	70 –65 –65	70-65-65
S2.0.Z.AG	20.22	Aged or solution treated and aged	2900	350	0.25	40 –40 –40	40-40-40
S2.0.C.NS	20.24	Cast or cast and aged	3000	320	0.25	50 –50 –50	50-50-50
		Cobalt base					
S3.0.Z.AN	20.31	Annealed or solution treated	2700	200	0.25	30 –29 –28	30-29-28
S3.0.Z.AG	20.32	Solution treated and aged	3000	300	0.25	21 –20 –20	21-20-20
S3.0.C.NS	20.33	Cast or cast and aged	3100	320	0.25	20 –19 –18	20-19-18
		Titanium alloys1)		**Rm[1)]**			
S4.1.Z.UT	23.1	Commercial pure (99.5% Ti)	1300	400	0.23	150 –145 –140	150-145-140
S4.2.Z.AN	23.21	α, near α and α + β alloys, annealed	1400	950	0.23	65 –65 –65	65 –65 –65
S4.3.Z.AG	23.22	α + β alloys in aged cond., β alloys, annealed or aged	1400	1050	0.23	50 –50 –50	50 –50 –50

ISO H			Specific cutting force k_c 0.4	Hardness Brinell		CB50	CT530
						Max chip thickness, h_{ex} mm	
						0.07 – 0.12 – 0.2	0.07 – 0.1 – 0.2
MC No.	CMC No.	Material	N/mm²	HB	mc	Cutting speed v_c, m/min	
		Extra hard steel					
H1.3.Z.HA	04.1	Hardened and tempered	4200	59 HRC	0.25	190 –180 –175	95 –90 –85
		Chilled cast iron					
H2.0.C.UT	10.1	Cast or cast and aged	2250	400	0.28	355 –345 –330	180 –175 –165

1) 30-45° lead angle. Positive cutting geometry and coolant should be used.

2) Rm = ultimate tensile strength measured in MPa.



Conditions:

Side milling, cutter dia. 1.000 inch (25 mm). Working engagement .400 inch (10 mm).

GC1025	GC1030	H10F	H13A				
Max chip thickness, h_{ex} mm							
0.1-0.15-0.2	0.1-0.15-0.2	0.1-0.15-0.2	0.1-0.15-0.2				
Cutting speed v_c, m/min							
1100 –1100 –1050 1000 –980 –970	1100 –1100 –1050 1000 –980 –970	1050 –1050 –1000 950 –940 –920	850 –830 –820 760 –750 –740				
1100 –1100 –1050 110 –1100 –1100	1100 –1100 –1050 1100 –1100 –1100	1050 –1050 –1000 950 –940 –920	1900 –1900 –1850 1650 –1600 –1600				
1100 –1100 –1100	1100 –1100 –1100	1050 –1050 –1050	850 –840 –825				
445 –440 –430 335 –330 –325	445 –440 –430 335 –330 –325	425 –420 –410 320 –315 –310	340 –335 –330 255 –250 –245				
560 –550 –540 560 –550 –540 390 –380 –375	560 –550 –540 560 –550 –540 390 –380 –375	530 –520 –510 530 –520 –510 370 –365 –360	425 –415 –410 425 –415 –410 295 –290 –285				

H13A	H10F	S30T	S40T	GC2030	GC2040		
Max chip thickness, h_{ex} mm							
0.1-0.15-0.2	0.1-0.2-0.3	0.1-0.15-0.2	0.1-0.15-0.2	0.05-0.15-0.2	0.05-0.15-0.25		
Cutting speed v_c, m/min							
65-65-65 50-50-50	60 –60 –60 45 –45 –40	– –	– –	65 –65 –65 50 –45 –45	65 –65 –60 50 –45 –45		
65-65-60 40-39-38 50-50-50	60 –55 –55 36 –35 –33 45 –45 –40	– – –	– – –	65 –60 –60 39 –38 –37 50 –45 –45	65 –60 –60 39 –38 –37 50 –45 –45		
28-27-26 20-19-19 19-19-18	26 –24 –23 18 –17 –16 17 –16 –16	– – –	– – –	28 –27 –26 20 –19 –19 19 –18 –17	28 –27 –26 20 –19 –19 19 –18 –17		
140-140-135 55-55-55 45-40-40	130 –125 –120 50 –50 –45 38 –37 –36	165 –165 –160 75 -75 -70 65 –55 –66	140 –140 –135 50-50-50 45-40-40	140 –135 –135 55-55-55 50 –45 –45	140 –135 –135 50 –50 –50 40 –40 –40		

GC4220	GC3040	GC1010	GC1025	GC1030			
Max chip thickness, h_{ex} mm							
0.1-0.12-0.25	0.1-0.2-0.25	0.07-0.12-0.2	0.07-0.12-0.2	0.07-0.12-0.2			
Cutting speed v_c, m/min							
65–65–60	55-50-50	130-125-120	45–45–45	45-45-45			
125–125–115	100-95-95	250-240-230	90–85–85	90-85-85			

Milling with large engagement, inch values

ISO P			Specific cutting force k_c .016	Hardness Brinell		CT530	GC1010
						Max chip thickness, h_{ex} inch	
MC No.	CMC No.	Material	lbs/in²	HB	mc	.004 – .006 – .008 Cutting speed v_c, ft/min	.002 – .004 – .008
		Steel					
		Unalloyed					
P1.1.Z.AN	01.1	C = 0.10 – 0.25%	216,500	125	0.25	1400-1250-1150	-
P1.2.Z.AN	01.2	C = 0.25 – 0.55%	233,000	150	0.25	1250-1150-1050	-
P1.3.Z.AN	01.3	C = 0.55 – 0.80%	247,000	170	0.25	1200-1050-970	-
P1.3.Z.AN	01.4		260,500	210	0.25	1050-940-850	-
P1.3.Z.HT	01.5		291,500	300	0.25	770-690-630	-
		Low alloyed (alloying elements ≤ 5%)					
P2.1.Z.AN	02.1	Non-hardened	246,500	175	0.25	980-890-800	-
P2.5.Z.HT	02.2	Hardened and tempered	278,500	300	0.25	640-580-520	-
		High alloyed (alloying elements > 5%)					
P3.0.Z.AN	03.11	Annealed	282,000	200	0.25	740-670-610	590-540-440
P3.1.Z.AN	03.13	Hardened tool steel	311,000	200	0.25	620-560-500	490-445-360
P3.0.Z.HT	03.21		420,000	300	0.25	540-485-440	430-390-315
P3.0.Z.HT	03.22		448,500	380	0.25	340-305-275	270-245-200
		Castings					
P1.5.C.UT	06.1	Unalloyed	204,000	150	0.25	1000-910-820	800-720-590
P2.6.C.UT	06.2	Low alloyed (alloying elements ≤ 5%)	230,500	200	0.25	800-720-650	630-570-470
P3.0.C.UT	06.3	High alloyed (alloying elements > 5%)	283,500	200	0.25	580-530-475	465-420-345

ISO M			Specific cutting force k_c .016	Hardness Brinell		CT530	GC1025
						Max chip thickness, h_{ex} inch	
MC No.	CMC No.	Material	lbs/in²	HB	mc	.004 – .006 – .008 Cutting speed v_c, ft/min	.002 – .004 – .008
		Stainless steel					
		Ferritic/martensitic					
P5.0.Z.AN	05.11	Non-hardened	262,000	200	0.21	940-830-740	830-740-590
P5.0.Z.PH	05.12	PH-hardened	411,500	330	0.21	670-600-530	590-520-415
P5.0.Z.HT	05.13	Hardened	340,000	330	0.21	700-620-550	610-540-430
		Austenitic					
M1.0.Z.AQ	05.21	Non-hardened	285,000	200	0.21	870-780-690	820-730-580
M1.0.Z.PH	05.22	PH-hardened	414,000	330	0.21	640-580-510	560-500-400
M2.0.Z.AQ	05.23	Super austenitic	328,000	200		–	–
		Austenitic-ferritic (Duplex)					
M3.1.Z.AQ	05.51	Non-weldable ≥ 0.05%C	286,500	230	0.21	850-760-680	670-600-475
M3.2.Z.AQ	05.52	Weldable < 0.05%C	356,500	260	0.21	750-670-600	570-510-405
		Stainless steel – Cast					
		Ferritic/martensitic					
P5.0.C.UT	15.11	Non-hardened	246,500	200	0.25	830-740-660	740-660-520
P5.0C.PH	15.12	PH-hardened	354,500	330	0.25	590-520-465	520-460-365
P5.0.C.HT	15.13	Hardened	311,000	330	0.25	640-570-510	560-500-395
M1.0.C.UT	15.21	Non hardened	261,000	200	0.25	830-740-660	780-690-550
M1.0C.PH	15.22	PH-hardened	356,000	330	0.25	590-530-470	520-460-365
M2.0.C.AQ	15.23	Super austenitic	310,500	200		–	–
		Austenitic-ferritic (Duplex)					
M3.1.C.AQ	15.51	Non-weldable ≥ 0.05%C	258,000	230	0.25	810-720-640	640-570-450
M3.2.C.AQ	15.52	Weldable < 0.05%C	326,500	260	0.25	700-630-560	530-475-375

ISO K			Specific cutting force k_c .016	Hardness Brinell		CB50	CC6190
						Max chip thickness, h_{ex} inch	
MC No.	CMC No.	Material	lbs/in²	HB	mc	.004 – .006 – .008 Cutting speed v_c, ft/min	.004 – .008 – .012
		Malleable cast iron					
	07.1	Ferritic (short chipping)	115,000	130	0.28	-	4250-3500-2850
K1.1.C.NS	07.2	Pearlitic (long chipping)	131,000	230	0.28	-	3550-2900-2350
		Gray cast iron					
K2.1.C.UT	08.1	Low tensile strength	130,000	180	0.28	2750-2350-2000	5150-4200-3450
K2.2.C.UT	08.2	High tensile strength	159,500	245	0.28	2950-2550-2150	3900-3200-2600
		Nodular cast iron					
K3.1.C.UT	09.1	Ferritic	130,000	160	0.28	-	3300-2700-2200
K3.3.C.UT	09.2	Pearlitic	194,500	250	0.28	1600-1350-1150	2750-2250-1850

Conditions:

Cutter, dia. 5.000 inch (125 mm) Working engagement 4.000 inch (100 mm)

GC1025	GC1030	GC4220	GC4230	GC4240	GC3040	GC2030	GC2040	SM30
Max chip thickness, h_{ex} inch								
.002-.004-.008	.002-.004-.008	.004-.008-.012	.004-.008-.012	.004-.008-.012	.004-.008-.012	.004-.008-.016	.004-.008-.016	.004-.008-.016
Cutting speed v_c, ft/min								
1100-1000-820	1250-1100-910	1600-1300-1050	1300-1050-870	1100-910-740	1250-1050-850	960-780-520	960-780-520	870-740-540
1000-910-740	1100-1000-820	1450-1200-960	1150-960-780	1000-820-670	1150-930-760	860-700-470	860-700-470	780-670-490
950-860-700	1050-940-770	1350-1100-910	1100-900-740	940-770-630	1100-880-720	810-660-440	810-660-440	740-630-460
820-750-610	910-820-670	1200-970-790	970-790-650	820-670-550	940-770-630	710-580-390	710-580-390	650-550-405
610-550-450	670-610-500	880-720-590	710-580-475	610-500-405	700-570-465	520-430-285	520-430-285	475-405-300
920-830-680	860-780-640	1100-920-750	920-750-610	780-640-520	890-730-600	670-550-370	670-550-370	610-520-380
510-460-375	560-510-415	730-600-490	600-490-400	510-415-340	580-475-390	440-360-240	440-360-240	400-340-250
590-540-440	590-540-440	970-800-650	630-510-420	540-440-360	680-550-450	510-415-275	510-415-275	460-395-290
490-445-360	490-445-360	710-580-475	520-430-350	445-360-295	560-460-375	415-340-225	415-340-225	385-330-240
430-390-315	430-390-315	610-500-410	455-370-305	390-315-260	490-400-325	365-300-200	365-300-200	335-285-210
270-245-200	270-245-200	385-315-255	285-235-190	245-200-160	305-250-205	225-185-125	225-185-125	210-180-130
800-720-590	800-720-590	1150-940-770	850-690-570	720-590-480	910-740-610	680-560-370	680-560-370	620-530-390
630-570-470	630-570-470	910-740-610	680-550-450	570-470-385	720-590-485	550-445-300	550-445-300	495-425-310
465-420-345	465-420-345	670-550-445	495-405-330	420-345-280	530-435-355	400-325-220	400-325-220	360-310-225

GC1030	1040	S30T	S40T	GC2030	GC2040	GC4230	GC4240	SM30
Max chip thickness, h_{ex} inch								
.002-.004-.008	.002-.006-.010	.002-.006-.010	.004-.008-.012	.002-.006-.010	.004-.008-.012	.004-.008-.012	.004-.008-.016	.004-.008-.016
Cutting speed v_c, ft/min								
830-740-590	610-450-330	830-610-450	810-650-510	790-630-500	780-620-495	900-710-570	690-550-345	600-520-380
590-520-415	430-315-235	580-430-320	560-445-355	560-445-350	540-425-340	620-490-390	455-365-230	345-295-215
610-540-430	445-330-245	610-445-330	590-470-375	580-460-365	570-450-360	640-510-410	520-410-260	360-305-225
820-730-580	590-435-325	810-600-445	680-540-430	770-610-485	660-520-415		610-485-305	560-480-355
560-500-400	415-305-225	560-415-305	540-425-340	540-425-340	520-410-325		440-350-220	330-285-205
–	405-300-220	560-415-305	475-375-300	–	–	–	–	–
670-600-475	495-365-270	670-495-365	570-450-360	640-510-405	550-435-345		550-435-275	550-470-345
570-510-405	410-305-225	570-420-310	460-365-290	540-425-340	440-350-280		440-350-220	420-360-265
740-660-520	540-400-295	730-540-400	720-570-455	700-560-445	690-550-440	800-630-500	610-485-305	540-460-335
520-460-365	375-275-200	510-380-280	490-390-310	485-385-305	470-375-295	540-430-340	400-320-200	300-255-190
560-500-395	405-300-220	560-410-305	540-430-345	530-420-335	520-415-330	590-470-375	475-375-240	330-280-205
780-690-550	560-415-310	770-570-425	650-520-415	730-580-465	630-500-395		580-460-290	530-455-335
520-460-365	365-270-200	520-380-280	490-390-310	485-385-305	470-375-300		400-320-200	300-260-190
–	365-270-200	500-370-275	425-340-270	–	–	–	–	–
640-570-450	470-350-255	640-470-345	540-430-340	610-485-385	520-410-325		520-415-260	520-445-325
530-475-375	385-285-210	530-390-290	430-345-275	495-395-315	415-330-265		410-325-205	390-335-245

GC3220	GC3040	K20W	GC4220	GC4230	GC1020	H13A	K20D	
Max chip thickness, h_{ex} inch								
.004-.008-.012	.004-.008-.016	.004-.008-.012	.004-.008-.012	.004-.008-.012	.004-.008-.016	.004-.008-.016	.004-.008-.012	
Cutting speed v_c, ft/min								
1000-820-670	790-640-430	830-680-560	830-680-560	700-570-465	960-780-640	395-335-245	870-710-580	
830-680-550	650-530-355	680-560-455	680-560-455	570-470-385	780-640-520	325-280-205	720-590-480	
1100-890-730	850-700-465	950-780-640	900-740-600	760-620-510	1100-900-730	430-365-270	950-780-630	
870-720-580	680-560-375	720-590-485	720-590-485	610-495-405	830-680-550	340-290-215	760-620-510	
680-560-455	530-435-290	560-460-375	560-460-375	475-390-320	650-530-435	270-230-170	590-485-395	
640-520-425	495-405-270	520-430-350	520-430-350	440-360-295	600-490-400	250-215-155	550-450-370	

Milling with large engagement, inch values

ISO N MC No.	CMC No.	Material	Specific cutting force k_c .016 lbs/in²	Hardness Brinell HB	mc	CD10 Max chip thickness, h_{ex} inch .004-.006-.008 Cutting speed v_c, ft/min	H10 Max chip thickness, h_{ex} inch .004-.006-.008 Cutting speed v_c, ft/min
		Aluminum alloys					
N1.2.Z.UT	30.11	Wrought or wrought and coldworked, non-aging	58,000	60		6150-5700-5250	3050-2850-2650
N1.2.Z.AG	30.12	Wrought or wrought and aged	94,500	100		5550-5100-4750	2750-2550-2350
		Aluminum alloys					
N1.3.C.UT	30.21	Cast, non-aging	87,000	75	0.25	6150-5700-5250	3050-2850-2650
N1.3.C.AG	30.22	Cast or cast and aged	101,500	90	0.25	5550-5150-4750	2750-2550-2350
		Aluminum alloys					
N1.1.Z.UT	30.3	Al >99%	50,500	30		6200-5700-5300	3100-2850-2650
		Aluminum alloys					
	30.41	Cast, 13–15% Si	101,500	130		2450-2300-2100	1250-1150-1050
N1.4.C.NS	30.42	Cast, 16–22% Si	101,500	130		1850-1700-1600	930-860-790
		Copper and copper alloys					
N3.3.U.UT	33.1	Free cutting alloys, ≥1% Pb	79,500	110	0.25	3100-2850-2650	1550-1450-1300
N3.2.C.UT	33.2	Brass, leaded bronzes, ≤1% Pb	80,000	90		3100-2850-2650	1550-1400-1300
N3.1.U.UT	33.3	Bronze and non-leaded copper incl. electrolytic copper	196,000	100	0.25	2150-2000-1850	1100-1000-920

ISO S MC No.	CMC No.	Material	Specific cutting force k_c .016 lbs/in²	Hardness Brinell HB	mc	GC1025 Max chip thickness, h_{ex} inch .004-.006-.008 Cutting speed v_c, ft/min	GC1030 Max chip thickness, h_{ex} inch .004-.006-.008 Cutting speed v_c, ft/min
		Heat resistant super alloys					
		Iron base					
S1.0.U.AN	20.11	Annealed or solution treated	348,000	200	0.25	200-180-160	200-180-160
S1.0.U.AG	20.12	Aged or solution treated and aged	359,000	280	0.25	150-135-120	150-135-120
		Nickel base					
S2.0.Z.AN	20.21	Annealed or solution treated	383,000	250	0.25	190-170-155	190-170-155
S2.0.Z.AG	20.22	Aged or solution treated and aged	420,500	350	0.25	120-105-95	120-105-95
S2.0.C.NS	20.24	Cast or cast and aged	436,500	320	0.25	145-130-120	150-140-120
		Cobalt base					
S3.0.Z.AN	20.31	Annealed or solution treated	391,500	200	0.25	80-70-65	80-70-65
S3.0.Z.AG	20.32	Solution treated and aged	432,000	300	0.25	55-50-45	55-50-45
S3.0.C.NS	20.33	Cast or cast and aged	450,500	320	0.25	50-45-40	50-45-40
		Titanium alloys1)		**Rm2)**			
S4.1.Z.UT	23.1	Commercial pure (99.5% Ti)	188,500	400	0.23	415-375-340	415-375-340
S4.2.Z.AN	23.21	α, near α and α + β alloys, annealed	203,000	950	0.23	185-165-150	185-165-150
S4.3.Z.AG	23.22	α + β alloys in aged cond., β alloys, annealed or aged	203,000	1050	0.23	145-130-120	145-130-120

ISO H MC No.	CMC No.	Material	Specific cutting force k_c .016 lbs/in²	Hardness Brinell HB	mc	CB50 Max chip thickness, h_{ex} inch .003-.005-.008 Cutting speed v_c, ft/min	CT630 Max chip thickness, h_{ex} inch .003-.004-.008 Cutting speed v_c, ft/min
		Extra hard steel					
H1.3.Z.HA	04.1	Hardened and tempered	606,500	59 HRC	0.25	520-455-370	260-245-185
		Chilled cast iron					
H2.0.C.UT	10.1	Cast or cast and aged	326,500	400	0.28	990-870-700	495-465-350

1) 30-45° lead angle. Positive cutting geometry and coolant should be used.

2) Rm = ultimate tensile strength measured in MPa.

Conditions:
Cutter, dia. 5.000 inch (125 mm) Working engagement 4.000 inch (100 mm)

CT530	GC1025	GC1030	H10F	H13A		
Max chip thickness, h_{ex} inch						
.004-.006-.008	.004-.006-.008	.004-.006-.008	.004-.006-.008	.004-.006-.008		
Cutting speed v_c, ft/min						
3400-3100-2900	3200-3000-2750	3200-3000-2750	3050-2850-2650	2450-2250-2100		
3050-2800-2600	2900-2700-2500	2900-2700-2500	2750-2550-2350	2200-2050-1900		
3400-3150-2900 3050-2800-2600	3250-3000-2750 3250-3000-2750	3250-3000-2750 3250-3000-2750	3050-2850-2650 2750-2550-2350	5600-5150-4800 4750-4400-4050		
3400-3150-2900	3250-3000-2800	3250-3000-2800	3100-2850-2650	2450-2300-2100		
1350-1250-1150 1000-940-870	1300-1200-1100 970-900-830	1300-1200-1100 970-900-830	1250-1150-1050 930-860-790	990-910-850 740-690-630		
1700-1550-1450 1700-1550-1450 1200-1100-1000	1600-1500-1400 1600-1500-1400 1150-1050-970	1600-1500-1400 1600-1500-1400 1150-1050-970	1550-1450-1300 1550-1400-1300 1100-1000-920	1250-1150-1050 1250-1150-1050 860-800-740		

H13A	H10F	S30T	S40T	GC2030	GC2040	
Max chip thickness, h_{ex} inch						
.004-.006-.008	.004-.006-.008	.004-.006-.008	.004-.006-.008	.004-.006-.008	.004-.006-.010	
Cutting speed v_c, ft/min						
195-180-170 145-130-120	180-165-155 130-120-115	- -	- -	185-165-150 135-125-110	190-170-140 140-125-105	
185-175-160 115-105-100 145-135-125	170-160-145 105-95-90 130-120-110	- - -	- - -	175-160-145 110-100-90 135-120-110	180-165-135 115-100-85 135-125-100	
75-65-60 55-50-45 50-45-40	70-65-55 50-45-39 45-40-37	- - -	- - -	75-65-60 55-50-45 50-45-39	75-65-55 55-50-39 50-45-35	
410-380-350 165-150-140 125-115-105	375-345-320 145-135-125 110-105-95	485-445-415 215-200-185 170-155-145	415-380-355 150-140-125 125-115-115	385-350-315 155-140-125 135-120-110	400-370-325 145-130-115 120-110-100	

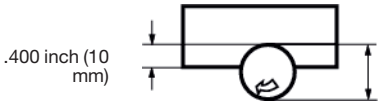
GC4220	GC3040	GC1010	GC1025	GC1030		
Max chip thickness, h_{ex} inch						
.004-.006-.010	.004-.008-.010	.003-.005-.008	.003-.005-.008	.003-.005-.008		
Cutting speed v_c, ft/min						
175-150-115	140-110-95	360-310-255	130-115-95	130-115-95		
330-285-220	270-205-180	690-600-490	250-215-175	250-215-175		

Milling with small engagement, inch values

ISO P MC No.	CMC No.	Material	Specific cutting force k_c .016 lbs/in²	Hardness Brinell HB	mc	CT530 Max chip thickness, h_{ex} inch .004-.006-.008 Cutting speed v_c, ft/min	GC1010 Max chip thickness, h_{ex} inch .002-.004-.008 Cutting speed v_c, ft/min
		Steel					
		Unalloyed					
P1.1.Z.AN	01.1	C = 0.10 –0.25%	216,500	125	0.25	1650-1600-1550	-
P1.2.Z.AN	01.2	C = 0.25–0.55%	233,000	150	0.25	1450-1450-1400	-
P1.3.Z.AN	01.3	C = 0.55–0.80%	247,000	170	0.25	1400-1350-1350	-
P1.3.Z.AN	01.4		260,500	210	0.25	1200-1200-1150	-
P1.3.Z.HT	01.5		291,500	300	0.25	890-880-860	-
		Low-alloy (alloying elements ≤5%)					
P2.1.Z.AN	02.1	Non-hardened	246,500	175	0.25	1150-1100-1100	-
P2.5.Z.HT	02.2	Hardened and tempered	278,500	300	0.25	750-730-720	-
		High-alloy (alloying elements >5%)					
P3.0.Z.AN	03.11	Annealed	282,000	200	0.25	870-850-830	640-630-600
P3.1.Z.AN	03.13	Hardened tool steel	311,000	200	0.25	720-700-690	530-520-495
P3.0.Z.HT	03.21		420,000	300	0.25	630-620-600	465-455-435
P3.0.Z.HT	03.22		448,500	380	0.25	395-385-380	290-285-270
		Castings					
P1.5.C.UT	06.1	Unalloyed	204,000	150	0.25	1150-1150-1100	860-840-810
P2.6.C.UT	06.2	Low-alloy (alloying elements ≤5%)	230,500	200	0.25	930-910-890	690-670-640
P3.0.C.UT	06.3	High-alloy (alloying elements >5%)	283,500	200	0.25	680-670-650	500-490-470

ISO M MC No.	CMC No.	Material	Specific cutting force k_c .016 lbs/in²	Hardness Brinell HB	mc	CT530 Max chip thickness, h_{ex} inch .004-.006-.008 Cutting speed v_c, ft/min	GC1025 Max chip thickness, h_{ex} inch .004-.006-.008 Cutting speed v_c, ft/min
		Stainless steel					
		Ferritic/martensitic					
P5.0.Z.AN	05.11	Non-hardened	262,000	200	0.21	1100-1100-1050	910-890-840
P5.0.Z.PH	05.12	PH-hardened	411,500	330	0.21	800-780-760	640-630-590
P5.0.Z.HT	05.13	Hardened	340,000	330	0.21	830-810-790	660-650-610
		Austenitic					
M1.0.Z.AQ	05.21	Non-hardened	285,000	200	0.21	1050-1000-990	890-870-830
M1.0.Z.PH	05.22	PH-hardened	414,000	330	0.21	770-750-730	620-600-570
M2.0.Z.AQ	05.23	Super austenitic	328,000	200		-	-
		Austenitic-ferritic (Duplex)					
M3.1.Z.AQ	05.51	Non-weldable ≥ 0.05%C	286,500	230	0.21	1000-990-970	740-720-680
M3.2.Z.AQ	05.52	Weldable < 0.05%C	356,500	260	0.21	900-880-860	620-610-580
		Stainless steel – Cast					
		Ferritic/martensitic					
P5.0.C.UT	15.11	Non-hardened	246,500	200	0.25	990-970-940	810-790-750
P5.0c.PH	15.12	PH-hardened	354,500	330	0.25	700-680-670	560-550-520
P5.0.C.HT	15.13	Hardened	311,000	330	0.25	760-740-720	610-590-570
		Austenitic					
M1.0.C.UT	15.21	Austenitic	261,000	200	0.25	990-960-940	850-830-790
M1.0c.PH	15.22	PH-hardened	356,000	330	0.25	700-690-670	570-550-520
M2.0.C.AQ	15.23	Super austenitic	310,500	200		-	-
		Austenitic-ferritic (Duplex)					
M3.1.C.AQ	15.51	Non-weldable ≥ 0.05%C	258,000	230	0.25	960-940-910	700-680-650
M3.2.C.AQ	15.52	Weldable < 0.05%C	326,500	260	0.25	840-820-800	580-560-540

ISO K MC No.	CMC No.	Material	Specific cutting force k_c .016 lbs/in²	Hardness Brinell HB	mc	CB50 Max chip thickness, h_{ex} inch 0.004-0.006-0.008 Cutting speed v_c, ft/min	CC6190 Max chip thickness, h_{ex} inch 0.004-0.006-0.012 Cutting speed v_c, ft/min
		Malleable cast iron					
	07.1	Ferritic (short chipping)	115,000	130	0.28	-	5000-4800-4550
K1.1.C.NS	07.2	Pearlitic (long chipping)	131,000	230	0.28	-	4100-3950-3750
		Gray cast iron					
K2.1.C.UT	08.1	Low tensile strength	130,000	180	0.28	3550-3400-3300	6050-5750-5500
K2.2.C.UT	08.2	High tensile strength	159,500	245	0.28	3800-3650-3550	4600-4400-4200
		Nodular cast iron					
K3.1.C.UT	09.1	Ferritic	130,000	160	0.28	-	3850-3700-3550
K3.3.C.UT	09.2	Pearlitic	194,500	250	0.28	2050-2000-1900	3200-3050-2900



Conditions:

Sidemilling, cutter dia. 1.000 inch (25 mm). Working engagement .400 inch (10 mm).

GC1025	GC1030	GC4220	GC4230	GC4240	GC3040	GC2030	GC2040	SM30
Max chip thickness, h_{ex} inch								
.002-.004-.008	.002-.004-.008	.004-.006-.012	.004-.006-.012	.004-.008-.012	.004-.006-.012	.004- .006-.010	.004-.008-.012	.004-.008-.012
Cutting speed v_c, ft/min								
1200-1200-1150	1350-1300-1250	1850-1850-1700	1500-1450-1400	1300-1250-1200	1500-1450-1350	1100-1100-1050	1100-1050-1000	980-950-910
1100-1050-1000	1200-1150-1100	1700-1650-1550	1350-1300-1250	1150-1100-1050	1350-1300-1200	1000-990-940	1000-960-920	880-850-820
1000-1000-960	1150-1100-1050	1600-1550-1450	1300-1250-1200	1100-1050-1000	1250-1250-1150	950-930-880	950-900-860	830-800-780
890-870-830	980-960-920	1400-1350-1250	1150-1100-1050	960-920-880	1100-1050-1000	830-820-780	830-800-760	730-700-680
660-650-620	730-710-680	1000-1000-940	840-800-760	710-680-650	810-800-740	610-600-570	610-590-560	540-520-500
990-970-930	930-910-870	1300-1300-1200	1050-1000-980	910-870-830	1050-1000-950	790-770-740	790-750-720	690-660-640
550-540-520	610-590-570	860-840-780	700-670-640	590-570-540	680-660-620	510-500-480	510-490-470	450-435-420
640-630-600	640-630-600	1150-1100-1050	740-700-670	630-600-570	790-770-720	590-580-550	590-570-540	520-500-485
530-520-495	530-520-495	830-810-760	610-580-560	520-495-475	660-640-600	485-475-450	485-465-440	430-415-405
465-455-435	465-455-435	720-700-660	530-510-485	455-435-415	570-560-520	425-415-400	425-405-390	380-365-355
290-285-270	290-285-270	450-440-410	335-320-305	285-270-260	360-350-330	265-260-250	265-255-240	235-230-220
860-840-810	860-840-810	1350-1300-1200	990-950-910	840-810-770	1050-1050-970	790-780-740	790-760-730	700-680-650
690-670-640	690-670-640	1050-1050-970	790-760-720	670-640-610	850-830-770	640-630-600	640-610-580	560-540-520
500-490-470	500-490-470	780-760-710	580-550-530	490-470-450	620-610-570	465-455-435	465-445-425	410-395-380

GC1030	1040	S30T	S40T	GC2030	GC2040	GC4230	GC4240	SM30
Max chip thickness, h_{ex} inch								
.002-.004-.008	.002-.006-.010	.002-.006.010	.004-.008-.010	.002-.006-.010	.004-.008-.010	.004-.008-.010	.004-.008-.012	.004-.008-.012
Cutting speed v_c, ft/min								
910-890-840	680-640-600	930-870-810	970-920-900	860-820-780	930-890-860	1050-1000-990	820-780-740	680-660-640
640-630-590	485-450-420	660-610-570	670-630-620	610-580-550	640-610-590	740-700-680	540-520-490	390-375-360
660-650-610	500-470-440	680-540-590	710-670-650	630-600-570	680-640-630	770-730-710	620-590-560	405-390-375
890-870-830	660-640-580	910-850-800	810-770-750	840-800-760	780-740-730	-	730-690-660	630-610-590
620-600-570	465-435-405	630-590-550	640-610-590	580-560-530	620-590-570	-	520-500-475	375-360-350
-	455-425-395	630-590-550	570-540-520	-	-	-	-	-
740-720-680	560-520-490	750-710-660	680-650-630	700-670-630	650-620-610	-	650-620-590	620-600-580
620-610-580	465-435-405	640-600-560	550-520-510	590-560-530	530-500-490	-	530-500-475	475-460-445
810-790-750	610-570-530	830-770-720	860-820-800	770-730-690	830-790-770	950-900-880	730-690-660	610-590-570
560-550-520	420-390-365	580-540-500	580-550-540	530-500-475	560-530-520	650-610-600	475-455-430	340-330-315
610-590-570	455-425-400	620-580-550	650-620-600	580-550-520	620-590-580	710-670-650	570-540-510	370-360-345
850-830-790	640-590-550	870-810-760	780-740-720	800-760-720	750-710-690		690-660-630	600-580-560
570-550-520	420-395-365	580-540-510	590-560-540	530-500-480	560-540-520		480-455-430	340-330-315
-	415-385-360	570-530-495	510-480-470	-	-	-	-	-
700-680-650	530-495-460	710-670-620	640-610-600	670-630-600	620-590-570		620-590-560	590-570-550
580-560-540	430-405-375	590-560-520	520-490-480	540-520-490	495-470-460		490-465-440	440-425-410

GC3220	GC3040	K20W	GC4220	GC4230	GC1020	H13A	K20D	
Max chip thickness, h_{ex} inch								
.004-.006-.010	.004-.008-.012	.004-.008-.012	.004-.006-.010	.004-.006-.010	.004-.008-.012	.004-.008-.012	.004-.008-.012	
Cutting speed v_c, ft/min								
1150-1150-1100	920-880-840	970-930-890	970-950-910	810-800-760	1100-1050-1000	445-430-415	1000-970-930	
970-950-900	760-720-690	800-760-730	800-780-740	670-660-630	920-870-840	365-355-340	840-800-770	
1250-1250-1200	1000-950-910	1100-1050-1000	1050-1050-980	890-870-830	1300-1250-1150	485-465-450	1100-1050-1000	
1000-1000-960	800-770-730	840-810-770	840-830-790	710-690-660	970-930-890	385-370-360	890-850-810	
800-780-750	630-600-570	660-630-600	660-650-620	560-540-520	760-730-690	305-295-285	690-660-630	
740-730-700	580-560-530	610-590-560	610-600-570	520-500-480	700-670-640	280-270-260	650-620-590	

Milling with small engagement, inch values

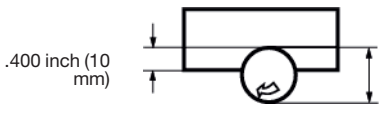
ISO N MC No.	CMC No.	Material	Specific cutting force k_c .016 lbs/in²	Hardness Brinell HB	mc	CD10 Max chip thickness, h_{ex} inch .004-.006-.008 Cutting speed v_c, ft/min	CT530 Max chip thickness, h_{ex} inch .004-.006-.008 Cutting speed v_c, ft/min
		Aluminum alloys					
N1.2.Z.UT	30.11	Wrought or wrought and coldworked, non-aging	58,000	60		6950-6800-6700	3800-3750-3700
N1.2.Z.AG	30.12	Wrought or wrought and aged	94,500	100		6250-6150-6050	3450-3400-3300
		Aluminum alloys					
N1.3.C.UT	30.21	Cast, non-aging	87,000	75	0.25	6950-6800-6700	3800-3750-3700
N1.3.C.AG	30.22	Cast or cast and aged	101,500	90	0.25	6250-6150-6050	3450-3400-3300
		Aluminum alloys					
N1.1.Z.UT	30.3	Al >99%	50,500	30		7000-6850-6750	3850-3750-3700
		Aluminum alloys					
	30.41	Cast, 13–15% Si	101,500	130		2800-2750-2700	1550-1500-1500
N1.4.C.NS	30.42	Cast, 16–22% Si	101,500	130		2100-2050-2000	1150-1150-1100
		Copper and copper alloys					
N3.3.U.UT	33.1	Free cutting alloys, ≥1% Pb	79,500	110	0.25	3500-3400-3350	1900-1900-1850
N3.2.C.UT	33.2	Brass, leaded bronzes, ≤1% Pb	80,000	90		3450-3400-3350	1900-1900-1850
N3.1.U.UT	33.3	Bronze and non-leaded copper incl. electrolytic copper	196,000	100	0.25	2450-2400-2350	1350-1300-1300

ISO S MC No.	CMC No.	Material	Specific cutting force k_c .016 lbs/in²	Hardness Brinell HB	mc	GC1025 Max chip thickness, h_{ex} inch .002-.006-.008 Cutting speed v_c, ft/min	GC1030 Max chip thickness, h_{ex} inch .002-.006-.008 Cutting speed v_c, ft/min
		Heat resistant super alloys					
		Iron base					
S1.0.U.AN	20.11	Annealed or solution treated	348,000	200	0.25	235-225-225	235-225-225
S1.0.U.AG	20.12	Aged or solution treated and aged	359,000	280	0.25	175-170-165	175-170-165
		Nickel base					
S2.0.Z.AN	20.21	Annealed or solution treated	383,000	250	0.25	225-215-215	225-215-215
S2.0.Z.AG	20.22	Aged or solution treated and aged	420,500	350	0.25	140-135-130	140-135-130
S2.0.C.NS	20.24	Cast or cast and aged	436,500	320	0.25	175-165-160	175-165-160
		Cobalt base					
S3.0.Z.AN	20.31	Annealed or solution treated	391,500	200	0.25	100-95-90	100-95-90
S3.0.Z.AG	20.32	Solution treated and aged	432,000	300	0.25	70-65-65	70-65-65
S3.0.C.NS	20.33	Cast or cast and aged	450,500	320	0.25	65-60-60	65-60-60
		Titanium alloys1)		**Rm2)**			
S4.1.Z.UT	23.1	Commercial pure (99.5% Ti)	188,500	400	0.23	490-475-465	490-475-465
S4.2.Z.AN	23.21	α, near α and α + β alloys, annealed	203,000	950	0.23	220-210-210	220-210-210
S4.3.Z.AG	23.22	α + β alloys in aged cond., β alloys, annealed or aged	203,000	1050	0.23	170-165-160	170-165-160

ISO H MC No.	CMC No.	Material	Specific cutting force k_c .016 lbs/in²	Hardness Brinell HB	mc	CB50 Max chip thickness, h_{ex} inch .003-.005-.008 Cutting speed v_c, ft/min	CT530 Max chip thickness, h_{ex} inch .003-.004-.008 Cutting speed v_c, ft/min
		Extra hard steel					
H1.3.Z.HA	04.1	Hardened and tempered	606,500	59 HRC	0.25	610-600-570	305-300-285
		Chilled cast iron					
H2.0.C.UT	10.1	Cast or cast and aged	326,500	400	0.28	1150-1150-1100	580-570-540

1) 30-45° lead angle. Positive cutting geometry and coolant should be used.

2) Rm = ultimate tensile strength measured in MPa.



Conditions:

Sidemilling, cutter dia. 1.000 inch (25 mm). Working engagement .400 inch (10 mm).

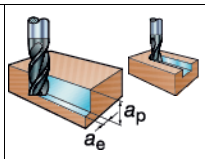
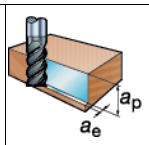
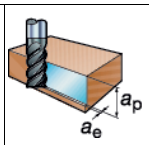
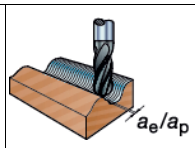
GC1025	GC1030	H10F	H13A					
Max chip thickness, h_{ex} inch								
.004-.006-.008	.004-.006-.008	.004-.006-.008	.004-.006-.008					
Cutting speed v_c, ft/min								
3650-3600-3500	3650-3600-3500	3450-3400-3350	2750-2700-2700					
3300-3200-3150	3300-3200-3150	3100-3050-3000	2500-2450-2400					
3650-3600-3500	3650-3600-3500	3450-3400-3350	6300-6200-6100					
3650-3600-3500	3650-3600-3500	3150-3050-3000	6360-5300-5200					
3650-3600-3550	3650-3600-3550	3500-3450-3350	2800-2750-2700					
1450-1450-1400	1450-1450-1400	1400-1350-1350	1100-1100-1100					
1100-1100-1050	1100-1100-1050	1050-1050-1000	840-820-810					
1850-1800-1750	1850-1800-1750	1750-1700-1700	1400-1350-1350					
1850-1800-1750	1850-1800-1750	1750-1700-1700	1400-1350-1350					
1250-1250-1250	1250-1250-1250	1200-1200-1150	970-950-940					

H13A	H10F	S30T	S40T	GC2030	GC2040			
Max chip thickness, h_{ex} inch								
.004-.006-.008	.004-.008-.012	.004-.006-.008	.004-.006-.008	.002-.006-.008	.002-.006-.010			
Cutting speed v_c, ft/min								
220-215-215	200-195-190	-	-	220-210-210	225-210-210			
160-160-155	150-145-140	-	-	160-155-155	160-160-150			
210-210-205	195-185-180	-	-	210-200-200	210-210-195			
130-130-125	115-115-110	-	-	130-125-125	135-130-125			
160-160-155	145-140-135	-	-	160-155-150	165-155-150			
90-90-85	85-80-75	-	-	90-90-85	90-90-85			
65-65-60	60-55-55	-	-	65-65-60	65-65-60			
60-60-60	55-55-50	-	-	60-60-55	60-60-55			
465-455-445	420-405-395	540-540-530	465-460-450	460-440-435	460-440-445			
185-180-175	165-160-155	245-240-235	170-165-160	185-175-175	165-160-160			
140-140-135	125-120-115	190-185-185	140-140-135	155-150-150	135-135-135			

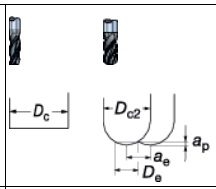
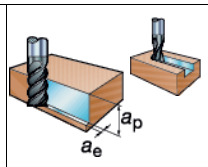
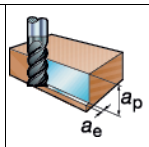
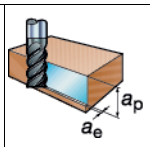
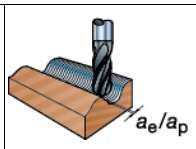
GC4220	GC3040	GC1010	GC1025	GC1030				
Max chip thickness, h_{ex} inch								
.004-.005-.010	.004-.008-.010	.003-.005-.008	.003-.005-.008	.003-.005-.008				
Cutting speed v_c, ft/min								
215-215-195	175-165-160	420-405-390	155-150-140	155-150-140				
410-400-370	335-315-305	810-790-750	295-285-270	295-285-270				

CoroMill® Plura cutting data

Speed recommendations

CoroMill® Plura	GC1620 GC1630 H10F										
				$a_p \times a_e > D_c$		$a_p \times a_e > D_c$		$a_e \leq 0.05 \times D_c$		$a_e \leq 0.05 \times D_c$ or D_{c2} $a_p \leq 0.05 \times D_c$ or D_{c2}	
ISO	**CMC**	**HB**	**HRC**	v_c m/min	v_c feet/min	v_c m/min	v_c feet/min	v_c m/min	v_c feet/min	v_c m/min	v_c feet/min
P	01.1	125		155	510	200	660	375	1230	690	2260
	01.2	150		135	440	185	610	340	1120	630	2070
	01.4	200		120	390	140	460	255	840	470	1540
	02.2	250		100	330	130	430	245	800	450	1480
	02.2	300		90	300	120	390	220	720	410	1350
	03.22	400		75	250	95	310	180	590	335	1100
	03.22	450		65	210	85	280	160	520	300	980
M	05.11	200		60	200	90	300	165	540	300	980
	05.21	200		60	200	75	250	145	480	270	890
	05.51	230		45	150	55	180	110	360	200	660
K	07.1	150		135	440	180	590	330	1080	610	2000
	09.2	200		100	330	130	430	240	790	440	1440
	08.1	180		85	280	110	360	210	690	385	1260
N	30.22	90		1000	3280	1100	3610	1250	4100	1300	4270
S	20.22	350		50	165	60	195	100	330	150	490
	23.22	350		70	230	80	260	160	525	300	985
H	04.1		50	55	180	80	260	GC1610			
	04.1		55	-	-	55	180				
	04.1		60	-	-	40	130				

Feed recommendations

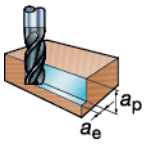
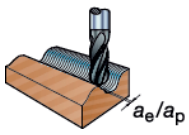
CoroMill® Plura	GC1620 GC1630 H10F										
Metric	D_c or D_{c2}		f_z	f_z	f_z	f_z	f_z	f_z	f_z	f_z	f_z
$n = \frac{1000 \times v_c}{\pi \times D_c}$ (rpm)	mm	inch	mm/tooth	inch/tooth	mm/tooth	inch/tooth	mm/tooth	inch/tooth	mm/tooth	inch/tooth	inch/tooth
	0.5	.020	PluraGuide								
$v_f = n \times f_z \times z_n$ (mm/min)	1	.039	0.002	.0001	0.002	.0001	0.013	.0005	0.023	.0009	
	2	.079	0.004	.0002	0.003	.0001	0.032	.0013	0.056	.0022	
$D_e = 2 \times \sqrt{a_p \times (D_{c2} - a_p)}$ (mm)	3	.118	0.006	.0002	0.007	.0003	0.039	.0015	0.07	.0028	
	3.175	.125 (1/8")	0.006	.0003	0.008	.0003	0.040	.0016	0.072	.0028	
	4	.157	0.008	.0003	0.014	.0006	0.045	.0018	0.08	.0031	
Inch	4.76	.188 (3/16")	0.010	.0004	0.019	.0008	0.046	.0018	0.078	.0031	
	5	.197	0.011	.0004	0.021	.0008	0.046	.0018	0.078	.0031	
$n = \frac{v_c \times 12}{\pi \times D_e}$ (rpm)	6	.236	0.014	.0006	0.03	.0012	0.055	.0022	0.099	.0039	
	6.35	.250 (1/4")	0.015	.0006	0.031	.0012	0.056	.0022	0.102	.0040	
	8	.315	0.020	.0008	0.033	.0013	0.063	.0025	0.114	.0045	
$v_f = n \times f_z \times z_n$ (inch/min)	9.525	.375 (3/8")	0.025	.0010	0.050	.0020	0.069	.0027	0.124	.0049	
	10	.394	0.027	.0011	0.055	.0022	0.071	.0028	0.127	.0050	
$D_e = 2 \times \sqrt{a_p \times (D_{c2} - a_p)}$ (inch)	12	.472	0.036	.0014	0.071	.0028	0.077	.0030	0.139	.0055	
	12.7	.500 (1/2")	0.039	.0015	0.074	.0029	0.079	.0031	0.143	.0056	
Note: In the formula for n the parameters v_c and D_c can be replaced with v_e and D_{c2}.	15.875	.625 (5/8")	0.054	.0021	0.089	.0035	0.089	.0035	0.160	.0063	
	16	.630	0.055	.0022	0.09	.0035	0.089	.0035	0.161	.0063	
	19.05	.750 (3/4")	0.073	.0029	0.105	.0041	0.097	.0038	0.175	.0069	
	20	.787	0.078	.0031	0.11	.0043	0.1	.0039	0.18	.0071	
	25	.787	0.11	.0043	0.11	.0043	0.11	.0043	-	-	

PluraGuide

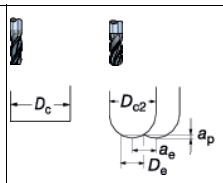
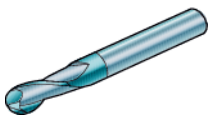
First choice: Use Plura Guide. Order number: C-2948-063.

CoroMill® Plura cutting data

Speed recommendations

CoroMill® Plura		GC1610									
				$a_e < 0.004 \times D_c$ $a_p < 0.020 \times D_c$		$a_e < 0.002 \times D_c$ $a_p < 0.040 \times D_c$		$a_e \leq 0.004 \times D_{c2}$ or D_e $a_p \leq 0.004 \times D_{c2}$ or D_e		$a_e \leq 0.0004 \times D_{c2}$ or D_e $a_p \leq 0.004 \times D_{c2}$ or D_e	
ISO	**CMC**	**HB**	**HRC**	v_e m/min	v_e feet/min	v_e m/min	v_e feet/min	v_e m/min	v_e feet/min	v_e m/min	v_e feet/min
P	03.22	400		170	560	200	660	320	1050	815	2650
	03.22	450		150	490	180	590	280	920	715	2350
K	08.1	200		265	870	300	980	510	1650	1300	4250
	09.2	250		220	720	255	840	420	1400	1070	3500
H	04.1		48	130	430	170	560	270	890	680	2250
	04.1		52	120	390	155	510	210	690	600	1950
	04.1		55	105	340	110	360	200	660	425	1400
	04.1		58	75	250	90	300	145	480	370	1200
	04.1		60	65	210	80	260	130	430	320	1050
	04.1		62	60	200	65	210	100	330	265	850

Feed recommendations

CoroMill® Plura GC1610						
			$a_e \leq 0.004 \times D_{c2}$ or D_e $a_p \leq 0.004 \times D_{c2}$ or D_e		$a_e \leq 0.0004 \times D_{c2}$ or D_e $a_p \leq 0.004 \times D_{c2}$ or D_e	
Metric	D_c or D_{c2} mm	inch	f_z mm/tooth	f_z inch/tooth	f_z mm/tooth	f_z inch/tooth	f_z mm/tooth	f_z inch/tooth
$n = \frac{v_e \times 1000}{\pi \times D_e}$ (rpm)	1	.039	-	-	0.015	.0006	0.040	.0016
	2	.079	-	-	0.035	.0014	0.055	.0022
$v_f = n \times f_z \times z_n$ (mm/min)	3	.118	0.040	.0016	0.050	.0020	0.070	.0028
	3.175	.125 (1/8")	0.041	.0016	0.055	.0022	0.072	.0028
$D_e = 2 \times \sqrt{a_p \times (D_{c2} - a_p)}$ (mm)	4	.157	0.045	.0018	0.080	.0031	0.080	.0031
	4.76	.188 (3/16")	0.037	.0015	0.088	.0034	0.088	.0034
	5	.197	0.035	.0014	0.090	.0035	0.090	.0035
	6	.236	0.030	.0012	0.100	.0039	0.100	.0039
	6.35	.250 (1/4")	0.034	.0014	0.103	.0040	0.103	.0040
Inch	8	.315	0.055	.0022	0.115	.0045	0.115	.0045
$n = \frac{v_c \times 12}{\pi \times D_e}$ (rpm)	9.525	.375 (3/8")	0.066	.0026	0.123	.0048	0.123	.0048
	10	.394	0.070	.0028	0.125	.0049	0.125	.0049
	12	.472	0.075	.0030	0.140	.0055	0.140	.0055
$v_f = n \times f_z \times z_n$ (inch/min)	12.7	.500 (1/2")	0.078	.0031	0.144	.0056	0.144	.0056
	15.875	.625 (5/8")	0.090	.0035	-	-	-	-
	16	.630	0.090	.0035	0.160	.0063	0.160	.0063
$D_e = 2 \times \sqrt{a_p \times (D_{c2} - a_p)}$ (inch)	19.05	.750 (3/4")	0.098	.0038	-	-	-	-

High security demands in HSM

The machine tools used for HSM must be safely guarded, as splinters or parts of damaged tools might cause serious accidents. High speed machinery has to be “bullet proof”. Dry milling extends tool life.

Dry milling extends tool life

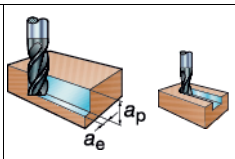
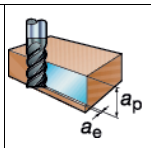
CoroMill Plura endmills are developed to withstand constant high cutting speeds and temperatures. Their tool life and reliability are, in most cases, much better suited to a dry environment. Tool life improvements of more than 40% are not unusual.

PluraGuide

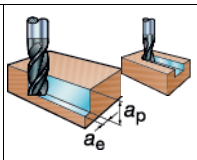
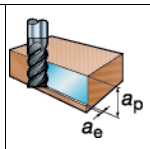
First choice: Use Plura Guide. Order number: C-2948-063.

CoroMill® Plura cutting data

Speed recommendations

CoroMill® Plura GC1640							
				 $a_p \times a_e \le D_c$		 $a_p \times a_e < 0.5 \times D_c$	
ISO	**CMC**	**HB**	**HRC**	v_c m/min	V_c feet/min	v_c m/min	V_c feet/min
P	01.1	125		145	475	160	525
	01.2	150		135	445	145	475
	01.4	200		100	330	110	360
	02.2	250		85	280	95	310
	02.2	300		80	260	85	280
	03.22	350		75	245	80	260
M	05.11	200		65	215	70	230
	05.21	200		50	165	55	180
	05.51	230		35	115	40	130
K	07.1	150		130	425	140	450
	09.2	200		105	345	115	375
	08.2	250		70	230	75	245
S	20.22	350		25	60	25	80
	23.22	350		40	130	45	150

Feed recommendations

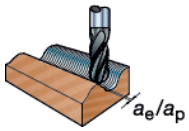
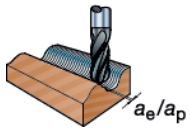
CoroMill® Plura GC1640								
Metric $n = \frac{v_c \times 1000}{\pi \times D_c}$ (rpm) $v_f = n \times f_z \times z_n$ (mm/min)		D_c mm	D_c inch	f_z mm/tooth	f_z inch/tooth	f_z mm/tooth	f_z inch/tooth
		6	.236	0.013	.0005	0.019	.0007
		6.35	.250 (1/4")	0.013	.0005	0.022	.0009
		8	.315	0.016	.0006	0.035	.0014
		9.525	.375 (3/8")	0.023	.0009	0.041	.0016
		10	.394	0.025	.0010	0.043	.0017
		12	.472	0.031	.0012	0.055	.0022
		12.7	.500 (1/2")	0.035	.0014	0.057	.0023
		15.875	.625 (5/8")	0.052	.0020	0.068	.0027
		16	.630	0.053	.0021	0.069	.0027
		19.05	.750 (3/4")	0.065	.0026	0.081	.0032
		20	.787	0.069	.0027	0.085	.0033

PluraGuide

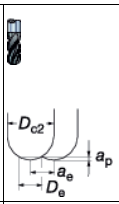
First choice: Use Plura Guide. Order number: C-2948-063.

CoroMill® Plura cutting data

Speed recommendations

GC1620								GC1610							
				$a_e \le 0.1 \times D_{c2}$ $a_p \le 0.1 \times D_{c2}$		$a_e \le 0.1 \times D_{c2}$ $a_p \le 0.1 \times D_{c2}$						$a_e \le 0.1 \times D_{c2}$ ae $\le 0.1 \times D_{c2}$		$a_e \le 0.01 \times D_{c2}$ $a_e \le 0.01 \times D_{c2}$	
ISO	CMC	HB	HRC	v_e m/min	v_e feet/min	v_e m/min	v_e feet/min	ISO	CMC	HB	HRC	v_e m/min	v_e feet/min	v_e m/min	v_e feet/min
P	02.2	300		202	663	315	1033	P	03.22	400		320	1050	815	2673
	03.22	400		162	531	260	853		03.22	450		280	918	715	2345
	03.22	450		140	459	225	738								
H	04.1		50	107	851	171	561	H	04.1		48	270	886	680	2230
	04.1		55	98	321	156	512		04.1		52	210	689	600	1968
									04.1		55	200	656	425	1394
									04.1		58	145	476	370	1214
									04.1		60	130	426	320	1050
									04.1		62	100	328	265	869

Feed recommendations

GC1610 GC1620						
			$a_e < 0.1 \times D_{c2}$ $a_p < 0.1 \times D_{c2}$		$a_e < 0.01 \times D_{c2}$ $a_p < 0.01 \times D_{c2}$	
Metric $n = \frac{v_e \times 1000}{\pi \times D_e}$ (rpm) $v_f = n \times f_z \times z_n$ (mm/min) $D_e = 2 \times \sqrt{a_p \times (D_{c2} - a_p)}$ (mm)	D_{c2} mm	inch	f_z mm/tooth	f_z inch/tooth	f_z mm/tooth	f_z inch/tooth
			PluraGuide			
	1	.039	0.015	.0006	0.040	.0016
	2	.079	0.035	.0014	0.055	.0022
	3	.118	0.050	.0020	0.070	.0028
	3.175	.125	0.055	.0022	0.072	.0028
	4	.157	0.080	.0031	0.080	.0031
	4.76	.188	0.088	.0034	0.088	.0034
Inch $n = \frac{v_c \times 12}{\pi \times D_e}$ (rpm) $v_f = n \times f_z \times z_n$ (inch/min) $D_e = 2 \times \sqrt{a_p \times (D_{c2} - a_p)}$ (inch)	5	.197	0.090	.0035	0.090	.0035
	6	.236	0.100	.0039	0.100	.0039
	6.35	.250	0.103	.0040	0.103	.0040
	8	.315	0.115	.0045	0.115	.0045
	9.525	.375	0.123	.0048	0.123	.0048
	10	.394	0.125	.0049	0.125	.0049
	12	.472	0.140	.0055	0.140	.0055
	12.7	.500	0.144	.0056	0.144	.0056
	15.875	.625	-	-	-	-
	16	.630	0.160	.0063	0.160	.0063

PluraGuide

First choice: Use Plura Guide. Order number: C-2948-063.

CoroMill® Plura thread milling cutting data

Speed and feed recommendations

The cutting data in the table below are recommended starting values for selected thread diameters. For more specific data, together with program for the thread to be made, use Plura Guide.

Metric version

ISO	Material	CMC No.	Hardness HB	Hardness HRC	Thread mill Thread	Dimensions, mm D_c	z_n	With internal coolant supply	$l_{Th} = 0.5 \times a_p$ Cutting speed v_c, m/min	$l_{Th} = 0.5 \times a_p$ Feed/tooth f_z, mm/tooth	$l_{Th} = a_p$ Cutting speed v_c, m/min	$l_{Th} = a_p$ Feed/tooth f_z, mm/tooth
P	**Unalloyed steel**	01.1	125		M4	3.2	3	–	152	0.030	141	0.018
					M10	8.2	4	•	132	0.052	124	0.029
					M20	16	5	•	141	0.130	131	0.069
	Low alloy steel	02.2	300		M4	3.2	3	–	147	0.012	137	0.006
					M10	8.2	4	•	164	0.086	153	0.05
					M20	16	5	•	173	0.089	162	0.118
	High alloy steel	03.21	450		M4	3.2	3	–	163	0.035	151	0.015
					M10	8.2	4	•	164	0.061	153	0.049
					M20	16	5	•	173	0.012	162	0.118
M	**Stainless steel**	05.11	200		M4	3.2	3	–	81	0.024	75	0.009
					M10	8.2	4	•	82	0.052	76	0.036
					M20	16	5	•	86	0.089	93	0.089
		05.21	200		M4	3.2	3	–	53	0.018	49	0.007
					M10	8.2	4	•	53	0.052	50	0.027
					M20	16	5	•	56	0.089	53	0.072
		05.51	230		M4	3.2	3	–	53	0.018	49	0.007
					M10	8.2	4	•	53	0.052	50	0.027
					M20	16	5	•	56	0.131	53	0.074
K	**Malleable cast iron**	07.2			M4	3.2	3	–	80	0.020	77	0.016
					M10	8.2	4	•	89	0.061	83	0.036
					M20	16	5	•	82	0.084	83	0.089
	Nodular cast iron	08.2			M4	3.2	3	–	76	0.018	73	0.014
					M10	8.2	4	•	86	0.038	79	0.034
					M20	16	5	•	79	0.075	80	0.080
	Gray cast iron	09.1			M4	3.2	3	–	101	0.027	97	0.020
					M10	8.2	4	•	104	0.047	105	0.048
					M20	16	5	•	104	0.089	97	0.067
N	**Aluminum**	30.11	60		M4	3.2	3	–	503	0.040	503	0.035
					M10	8.2	4	•	1120	0.089	1060	0.061
					M20	16	5	•	1130	0.089	1060	0.089
		30.21	95		M4	3.2	3	–	434	0.040	404	0.018
					M10	8.2	4	•	461	0.061	432	0.061
					M20	16	5	•	467	0.089	436	0.089
		33.2	150		M4	3.2	3	–	273	0.028	262	0.021
					M10	8.2	4	•	278	0.053	260	0.026
					M20	16	5	•	282	0.089	263	0.071
S	**Heat resistant alloys**	20.11	200		M4	3.2	3	–	35	0.006	35	0.003
					M10	8.2	4	•	37	0.023	35	0.013
					M20	16	5	•	38	0.066	38	0.063
	Titanium alloys	20.22	300		M4	3.2	3	–	30	0.030	29	0.020
					M10	8,2	4	•	32	0.013	30	0.007
					M20	16	5	•	32	0.037	30	0.018
		23.21	300		M4	3.2	3	–	55	0.012	51	0.060
					M10	8.2	4	•	58	0.037	54	0.020
					M20	12	6	•	59	0.089	55	0.051
H	**Hardened steel**	04.1		55	M4	4.5	4	–	43	0.010	40	0.005
					M10	8.2	5	–	42	0.022	45	0.035*
					M20	12	5	–	45	0.042	42	0.021
		04.1		60	M4	4.5	4	–	30	0.005	30	0.003*
					M10	8.2	5	–	29	0.011	28	0.006*
					M20	12	5	–	30	0.022	28	0.010

CoroMill® Plura thread milling cutting data

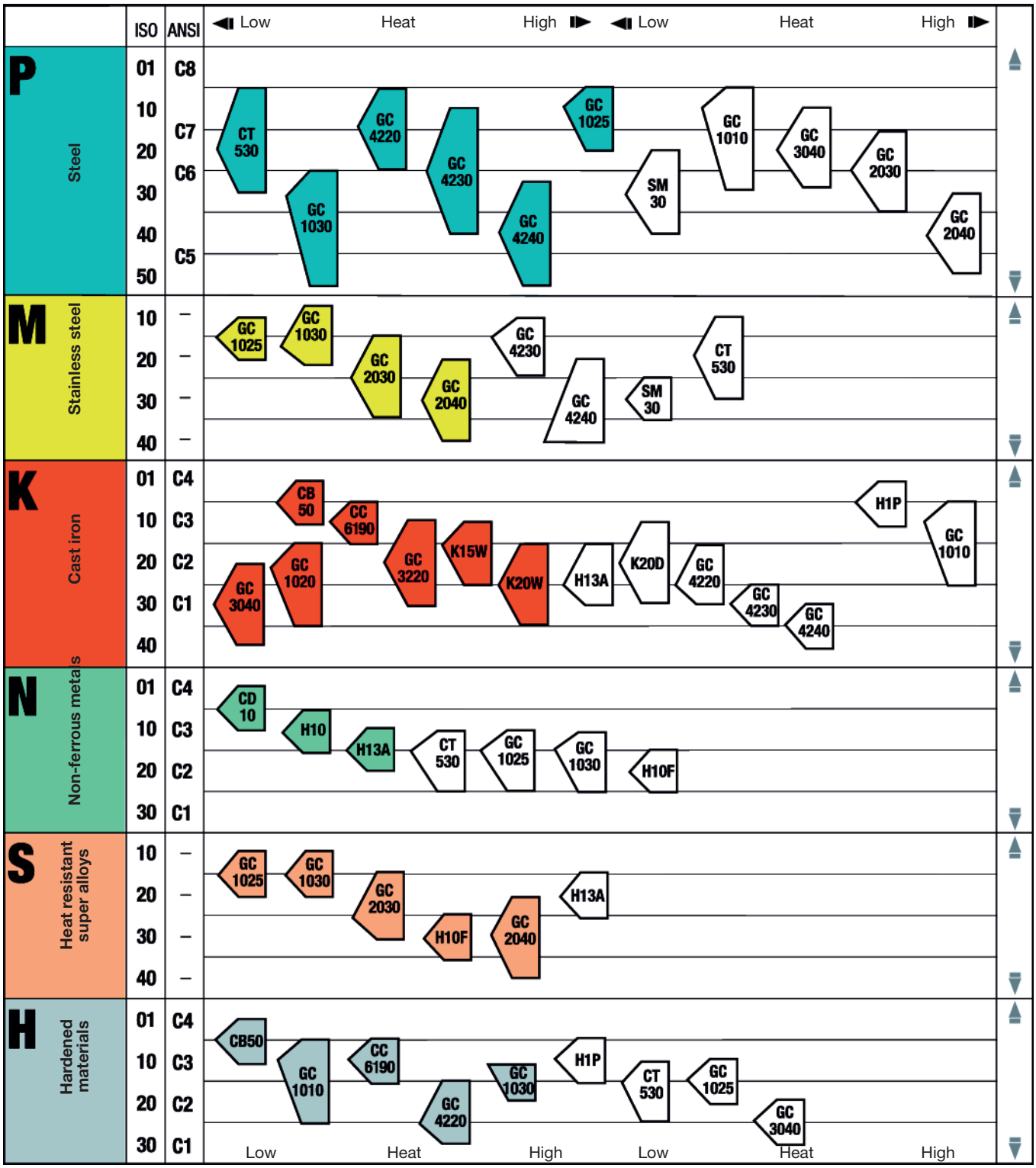
Speed and feed recommendations

The cutting data in the table below are recommended starting values for selected thread diameters. For more specific data, together with program for the thread to be made, use Plura Guide.

Inch version

ISO	Material	Hardness HB	Hardness HRC	Thread mill Dimensions, inch Thread	D_c	z_n	With internal coolant supply	Cutting speed v_c ft/min	$f_{Th} = 0.5 \times a_p$ Feed/tooth, fz inch	Cutting speed v_c, ft/min	$f_{Th} = a_p$ Feed/tooth, fz inch
P	**Unalloyed steel**			M4	.126	3	–	500	.0012	465	.0007
	01.1	125		M10	.323	4	•	435	.0020	410	.0012
				M20	.630	5	•	465	.0051	430	.0028
	Low alloy steel			M4	.126	3	–	485	.0005	440	.0003
	02.2	300		M10	.323	4	•	540	.0034	500	.0020
				M20	.630	5	•	570	.0036	535	.0046
	High alloy steel			M4	.126	3	–	540	.0014	500	.0006
	03.21	450		M10	.323	4	•	550	.0024	520	.0020
				M20	.630	5	•	570	.0005	540	.0046
M	**Stainless steel**			M4	.126	3	–	265	.0010	245	.0004
	05.11	200		M10	.323	4	•	270	.0020	250	.0014
				M20	.630	5	•	280	.0036	310	.0036
				M4	.126	3	–	175	.0007	160	.0007
	05.21	200		M10	.323	4	•	175	.0020	165	.0012
				M20	.630	5	•	185	.0036	175	.0029
				M4	.126	3	–	175	.0008	160	.0003
	05.51	230		M10	.323	4	•	175	.0020	165	.0012
				M20	.630	5	•	185	.0052	175	.0030
K	**Malleable cast iron**			M4	.126	3	–	265	.0008	260	.0006
	07.2			M10	.323	4	•	290	.0022	275	.0014
				M20	.630	5	•	270	.0032	275	.0036
	Nodular cast iron			M4	.126	3	–	260	.0007	250	.0006
	08.2			M10	.323	4	•	310	.0014	285	.0013
				M20	.630	5	•	285	.0030	290	.0032
	Gray cast iron			M4	.126	3	–	340	.0012	330	.0008
	09.1			M10	.323	4	•	345	.0020	340	.0020
				M20	.630	5	•	345	.0036	330	.0026
N	**Aluminum**			M4	.126	3	–	1660	.0016	1660	.0014
	30.11	60		M10	.323	4	•	3700	.0036	3500	.0024
				M20	.630	5	•	3750	.0036	3500	.0036
	30.21	95		M4	.126	3	–	1430	.0016	1330	.0007
				M10	.323	4	•	1520	.0025	1420	.0034
				M20	.630	5	•	1540	.0036	1445	.0036
	33.2	150		M4	.126	3	–	900	.0011	890	.0009
				M10	.323	4	•	920	.0021	870	.0012
				M20	.630	5	•	930	.0036	880	.0028
S	**Heat resistant alloys**			M4	.126	3	–	115	.0002	115	.0001
	20.11	200		M10	.323	4	•	120	.0011	115	.0006
				M20	.630	5	•	125	.0026	125	.0025
	Titanium alloys			M4	.126	3	–	100	.0012	100	.0008
	20.22	300		M10	.323	4	•	105	.0006	100	.0003
				M20	.630	5	•	105	.0015	100	.0007
	23.21	300		M4	.126	3	–	180	.0005	165	.0022
				M10	.323	4	•	190	.0015	175	.0008
				M20	.472	6	•	195	.0036	180	.0022
H	**Hardened steel**			M4	.177	4	–	140	.0004	130	.0002
	04.1		55	M10	.323	5	–	135	.0010	150	.0014*
				M20	.472	5	–	150	.0017	135	.0009
	04.1		60	M4	.177	4	–	100	.0002	100	.0001*
				M10	.323	5	–	100	.0005	100	.0002*
				M20	.472	5	–	100	.0010	100	.0004

Grades for milling



The position and form of the grade symbols indicate the suitable field of application.

= Basic grades

= Complementary grades

Center of the field of application.

Recommended field of application.

Stable

Unstable

SANDVIK Coromant

Grades for milling

Steel

Basic grades

GC4230 (HC) - P30 (P10-P40)
All-around grade for modern machining with a good balance of security and productivity. Coated carbide grade for light to heavy milling (both wet and dry) in unalloyed and low alloyed steels. First choice in face milling and an optimizer for higher productivity in shoulder milling.
GC4220 (HC) - P15 (P05-P25)
Coated carbide grade optimized for best productivity in steel milling. Grade for dry machining with high chip removal rate.
GC4240 (HC) – P40 (P35 – P50)
Coated carbide grade for toughness demanding operations in steel milling. For end mill and square shoulder concepts, grade GC4240 should be used in more stable conditions like short overhang, face milling, shallow shoulder milling, etc. For other concepts, grade GC4240 is the first or backup choice in toughness-demanding operations. Offers the benefit of security. Suitable for small batch production of mixed material. Works well both with and without coolant.
GC1030 (HC) – P30 (P15 – P35)
PVD-coated carbide grade. GC1030 is the first choice in unstable conditions like long edge, chip jamming, deep shoulder and endmilling, long overhang, turnmill operations, etc. Can be used as a backup choice in toughness-demanding operations. In combination with periphery ground inserts, first choice for sticky materials, e.g., low-carbon steel.

Complementary grades

CT530 (HT) – P15 (P10 – P15)
Cermet grade for light milling operations mainly without coolant. The high resistance to plastic deformation and smearing/built-up edges makes it suitable for a wide cutting speed range. Ideal grade for Wiper inserts.
GC1010 (HC) – P10 (P05-P15)
PVD-coated carbide grade for milling within the application area of typical pre-hardened and plastic mold steel from 36HRC and above.
GC2030 (HC) – P35 (P25 – P40)
PVD coated carbide grade for milling of low-carbon steels that tend to build up edges. Also very suitable for 90 degree milling in mixed materials.
GC2040 (HC) – P45 (P30 – P50)
Coated carbide grade for milling of steels when a combination of sharp cutting edges and a tough grade is needed at low speeds. Very useful for small batch production of mixed materials.
GC3040 (HC) – P20 (P10 – P40)
Coated carbide grade with very good abrasive wear resistance for rough milling of steel at medium to high speeds.
SM30 (HW) – P35 (P30 – P40)
Uncoated carbide grade for medium to rough milling at low to moderate cutting speed. Good edge security in hard materials and in unstable conditions.
GC1025 (HC) – P30 (P15 – P30)
PVD coated carbide grade for light milling of steel. Combined with periphery ground inserts, first choice for sticky materials, e.g. low carbon steels.

Austenitic/ferritic/martensitic stainless steel

Basic grades

GC1030 (HC) – M15 (M10 – M25)
PVD-coated carbide grade for light milling of stainless steel. In combination with periphery ground inserts, 1st choice for sticky and work hardening materials.
GC2030 (HC) – M25 (M15 – M30)
PVD coated carbide grade for milling of stainless steels (mainly austenitic types) at medium to high speeds. Combined with positive geometries, also suitable for heat resistant material and titanium.
GC2040 (HC) – M30 (M20 – M40)
Coated carbide grade for milling of stainless steels with abrasive tendencies, e. g. cast components, ferritic/martensitic stainless steels and PH steels at medium speeds. Also useful for small batch production of mixed materials.
GC1040 (HC) - M35 (M25-M40)
A tough PVD-coated carbide grade, for milling under difficult conditions with low to intermediate cutting speed and/or feed. For applications where demands on edgeline security and edge sharpness are high. Primarily for sticky austenitic and duplex stainless steels. Dry machining is first choice, but may also be used in wet machining.

Complementary grades

GC4240 (HC) – M40 (M30 – M40)
Coated carbide grade for medium to heavy operations in stainless steel castings. Very suitable for small batch production of mixed materials.
CT530 (HT) – M10 (M10 – M15)
Cermet grade for light milling of austenitic/ duplex stainless steels. The high resistance to plastic deformation/ smearing/ built-up edges makes it suitable for a wide cutting speed range in dry conditions.
SM30 (HW) – M30 (M20 – M30)
Uncoated carbide grade for medium to rough milling at low to moderate cutting speed. Good edge security at unstable conditions.
GC4230 (HC) – M30 (M25 – M35)
Coated carbide grade for light to heavy milling in martensitic stainless steels.
GC1025 (HC) – M15 (M10 – M20)
PVD coated carbide grade for light milling of stainless steel. Combined with periphery ground inserts, first choice for sticky and work hardening materials.
GC1010 (HC) – M10 (M05 – M10)
PVD-coated grade for very stable conditions.
S30T (HC) – M25 (M15 – M35)
A PVD-coated cemented carbide, for milling under stable conditions with medium to high cutting speeds, For applications where demands on edgeline security and reliability are high, such as sticky austenitic and duplex stainless steels. Dry machining is first choice, but may also be used in wet machining.
S40T (HC) – M45 (M30 – M45)
A tough MT-CVD coated cemented carbide, for milling in very toughness-demanding operations in stainless steels. Also useful in operations with abrasive tendencies, e.g., cast components, ferritic/ martensitic stainless steels and PH-steels at medium speeds. Also useful for small batch production of mixed materials.

Grades for milling

K Cast iron

Basic grades

GC3040 (HC) – K30 (K20 – K40)
Coated carbide grade for toughness-demanding milling of cast iron, e.g. nodular cast iron, in wet conditions or high tensile iron. Long predictable tool life at low to medium cutting speeds.
GC3220 (HC) – K15 (K10 – K25)
CVD-coated carbide grade for medium to rough milling of gray cast iron mainly under dry conditions. Long predictable tool life at medium to high cutting speeds.

GC1020 (HC) – K20 (K10 – K25)
PVD coated carbide grade for medium to rough milling of gray and nodular cast iron under wet conditions. To be used at medium to high speeds with predictable tool life.
CB50 (BN) – K10 (K01 – K20)
CB50 is a cubic boron nitride tipped grade. It gives a high edge toughness combined with good wear resistance. CB50 is well suited for machining of cast iron under favorable conditions.
K20W (HC) - K20 (K15 - K30)
Coated carbide grade for medium to rough milling of gray cast iron under wet conditions. To be used at low to medium speeds.
CC6190 (CN) – K05 (K01 – K15)
Silicon nitride ceramic grade for light roughing to semi-finishing of gray cast iron at high cutting speeds.

Complementary grades

K20D (HC) - K15 (K10-K20)
MT-CVD coated grade for medium to rough milling of cast iron, mainly without coolant. Long tool life with high speed capability.
H13A (HW) – K20 (K10 – K25)
Uncoated carbide grade with wear resistance and toughness for light to medium milling at moderate cutting speeds. Ideal choice for milling of ferritic nodular cast iron.
GC1010 (HC) – K05 (K01-K10)
PVD-coated carbide grade for finish milling in gray and nodular cast iron. A long tool life can be achieved with a sustained surface finish.
GC4220 (HC) – K25 (K20 – K30)
Coated carbide grade for light to heavy milling of cast iron at medium speeds. To complement GC3000 grades in operations where a thinner coating gives advantages.
GC4230 (HC) – K30 (K20 – K35)
Coated carbide grade for light to heavy milling of nodular cast iron.
GC4240 (HC) – K40 (K30 – K40)
Coated carbide grade for medium to heavy operations at low speeds where the toughness demand is high.
K15W (HC) – K15 (K10-K25)
Coated carbide grade for milling of gray cast iron under wet conditions. To be used at medium speeds.

N Non-ferrous metals, plastics, wood

Basic grades

CD10 (DP) – N05 (N01 – N10)
Polycrystalline diamond tipped grade for machining of non-ferrous and non-metallic materials. Gives long tool life, clean cut and good surface finish.
H10 (HW) – N10 (N05 – N15)
Uncoated fine-grained carbide grade that gives excellent edge sharpness for milling of aluminum.
H13A (HW) – N15 (N10 – N25)
Uncoated carbide grade suitable for milling of aluminum alloys in combination with “sharp” cutting edges.

Complementary grades

CT530 (HT) – N15 (N10 – N20)
Cermet grade mainly recommended at high RPM when milling aluminum due to the low tendency to build up edges and low weight of the inserts.
GC1025 (HC) – N15 (N10 – N25)
PVD coated carbide grade for rough milling of aluminum alloys in combination with ground cutting edges.
H10F (HW) – N15 (N10 – N25)
Uncoated carbide grade suitable for milling of aluminum alloys in combination with "sharp" cutting edges.
GC1030 (HC) - N15 (N10-N25)
PVD coated carbide grade for rough milling of aluminum alloys in combination with ground cutting edges.

Grades for milling

S Heat resistant alloys
Titanium alloys

Basic grades

H10F (HW) – S25 (S20 – S30)
Uncoated carbide grade with fine grain sizes. High notch wear resistance makes it suitable for milling of aerospace materials, e.g. titanium.
GC2030 (HC) – S20 (S15 – S25)
PVD-coated carbide grade for semi-finishing to light roughing of heat resistant super alloys at low speeds.
GC1030 (HC) – S15 (S10 – S20)
PVDncoated carbide grade for milling of heat resistant super alloys at medium speeds. Good resistance to built-up edges and plastic deformation.
GC2040 (HC) – S30 (S25 – S40)
Coated carbide grade for milling of cast heat resistant alloys.
S30T (HC) – S25 (S15 – S30)
First choice grade for titanium milling. PVD-coated grade that combines high edge strength and bulk toughness. It has good resistance to micro-chipping and keeps the cutting edge line intact longer. The grade focuses on high performance at elevated cutting speeds.
S40T (HC) – S35 (S25 – S45)
CVD-coated grade for milling of titanium. First choice grade during moderate to severe vibrations and in toughness-demanding operations. It has high bulk toughness and high edge strength. Wear grows slowly, making cutting edge duller without breaking.
GC1010 (HC) – S10 (S05 – S10)
PVD-coated carbide grade for milling of titanium in very good conditions. An optimizer with excellent wear resistance at elevated cutting speeds. Sensitive to instability and vibrations.

Complementary grades

H13A (HW) – S20 (S15 – S25)
Uncoated carbide grade with good abrasive wear resistance and toughness for milling of heat resistant alloys under moderate cutting speeds and feeds.
GC1025 (HC) – S20 (S10 – S20)
PVD-coated carbide grade for milling of heat resistant super alloys at medium speeds. Good resistance to built-up edges and plastic deformation.
GC1040 (HC) – S30 (S20 – S35)
A tough PVD-coated carbide grade, for milling under difficult conditions with low to intermediate cutting speed and/or feed. For applications where demands on edgeline security and edge sharpness are high. Primarily for sticky austenitic and duplex stainless steels.

H Hardened steel

Basic grades

CB50 (BN) – H05 (H01 – H10)
CB50 is a cubic boron nitride tipped grade combining high edge toughness with good wear resistance. CB50 is well suited for machining of hardened steel under favorable conditions.
CC6190 (HC) – H10 (H05 – H15)
Silicon nitride ceramic grade suitable for semi-finish milling of chilled cast iron at medium to high speed.
GC1010 (HC) – H10 (H05-H15)
PVD-coated carbide grade for machining in hardened steel. Can handle a large portion of machining demands from roughing to finishing operations. Due to exceptional plastic deformation resistance, thermal crack resistance and good wear resistance, the grade can withstand long cutting times. Suitable for machining of hardened steel from 36HRC and above.
GC1030 (HC) - H10 (H10 – H20)
PVD coated carbide grade for milling of hardened components at low feeds and moderate speeds.
GC4220 (HC) – H25 (H15 – H30)
Coated carbide grade for light roughing under favorable conditions of hardened steel up to HRC 60. Can withstand high temperatures.

Complementary grades

CT530 (HT) – H25 (H10 – H25)
Cermet grade for finish milling of hardened steel components at low to medium speeds.
GC3040 (HC) – H25 (H20 – H30)
Coated carbide grade for rough milling of hardened steel at fair conditions and low to medium speeds.
GC1025 (HC) – H15 (H10 – H20)
PVD coated carbide grade for milling of hardened components at low feeds and moderate speeds.
H1P (HW) – H10 (H05 – H15)
Uncoated carbide grade for finishing chilled cast iron at medium speeds.

Letter symbols specifying the designation of hard cutting materials:

Hardmetals:

HW	Uncoated hardmetal containing primarily tungsten carbide (WC)
HT	Uncoated hardmetal, also called cermet, containing primarily titanium carbides (TIC) or titanium nitrides (TIN) or both.
HC	Hardmetals as above, but coated

Ceramics:

CA	Oxide ceramics containing primarily aluminum oxide (Al_2O_3).
CM	Mixed ceramics containing primarily aluminum oxide (Al_2O_3) but containing components other than oxides.
CN	Nitride ceramics containing primarily silicon nitride (Si_3N_4).
CC	Ceramics as above, but coated.

Diamond:

DP	Polycrystalline diamond[1)]

Cubic boron nitride:

BN	Polycrystalline boron nitride[1)]

[1)] Polycrystalline diamond and polycrystalline boron nitride are also named *superhard cutting materials*.