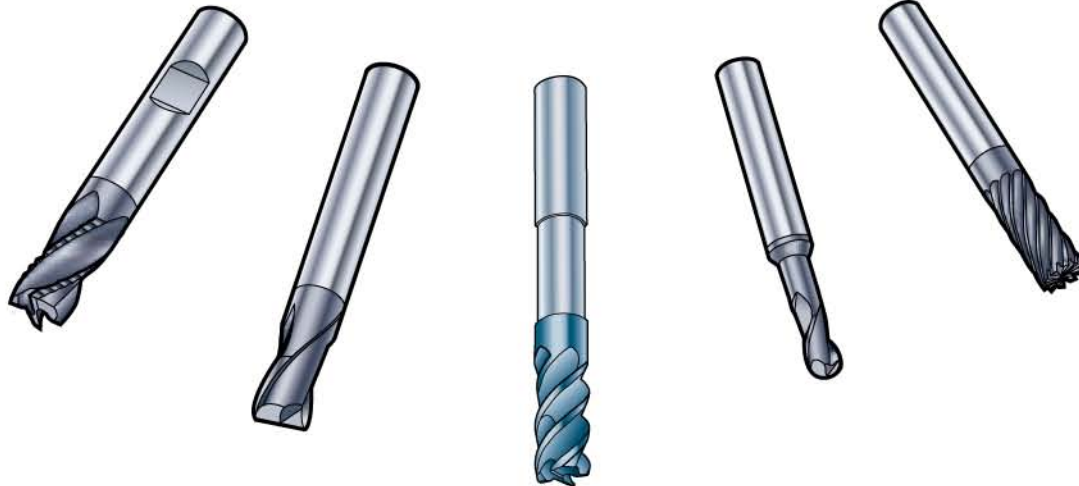


# CoroMill® Plura

## Solid carbide endmills

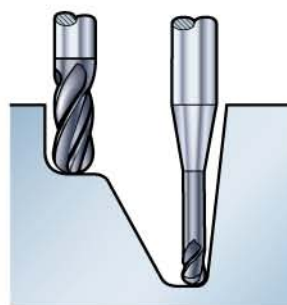
Highest productivity in all materials and applications



Roughing



Semi-finishing



Finishing



Variable flute depth



### Cutting data and programming

Use the PluraGuide for selection of tool and correct cutting data, and for programming.

Order number C-2948-063



Tool options designed to individual customer requirements are available. For information on our Tailor Made program see page I2

ISO application areas:



## Selecting CoroMill® Plura endmills

### Step 1: Select the Plura grade for your workpiece material

#### ISO H : Choose grade GC1610

for semi-finishing to finishing operations in hot work steel = 43 HRC and cold work steel = 52 HRC.

#### Choose grade GC1620

for roughing operations.

#### ISO P M K S H : Choose grade GC1620

for semi-finishing to finishing operations demanding wear resistance, especially in dry machining. This grade also performs well when machining stainless steels wet.

#### ISO P M K N S : Choose grade GC1630

for roughing to semi-finishing operations demanding edge line toughness. This grade also works well in machining of very soft and smearing steels.

#### ISO P M K : Choose grade GC1640

for roughing operations where toughness is important or where stability demands a tough grade.



#### Cutting data and programming

Use the PluraGuide for selection of tool and correct cutting data, and for programming.

#### ISO H

GC1610, GC1620	Dry	Wet
Finishing	<b>GC1610</b>	
Semi finishing		
Roughing	<b>GC1620</b>	

#### ISO PMK

GC1620, GC1630, GC1640	Dry	Wet
Finishing	<b>GC1620</b>	GC1620
Semi finishing	<b>GC1630</b>	GC1630
Roughing	<b>GC1640</b>	GC1640

#### ISO S

GC1620, GC1630, GC1640	Dry	Wet
Finishing		<b>GC1620</b>
Semi finishing		<b>GC1630</b>
Roughing		<b>GC1640</b>

#### ISO N

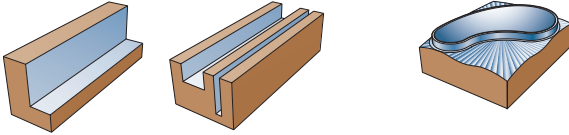
GC1610, GC1620, GC1630	Dry	Wet
Finishing	GC1610	<b>GC1610</b>
Semi finishing	GC1620	<b>GC1620</b>
Roughing	GC1630	<b>GC1630</b>

First choice in Bold

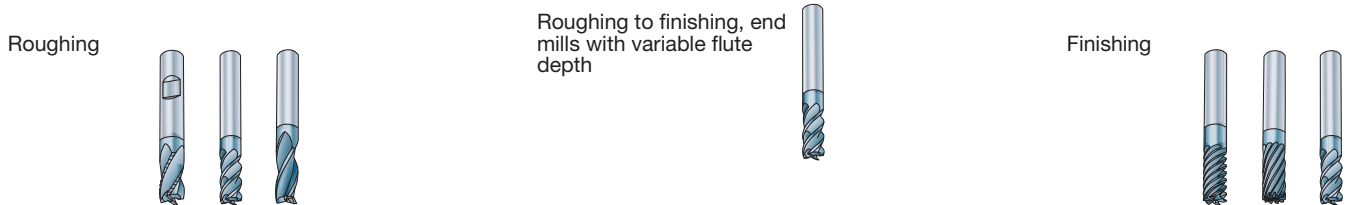
## Selecting CoroMill® Plura endmills

### Step 2: Classify your machining operation

Milling of straight surfaces or grooving. or profiling



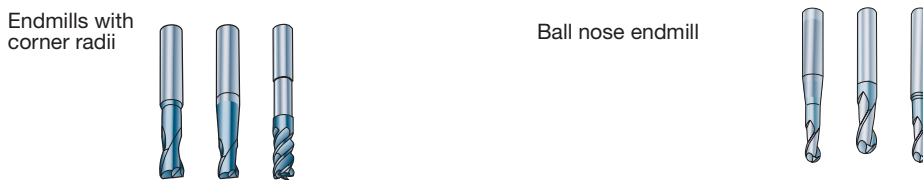
### Step 3: Select your CoroMill® Plura endmill



	ISO <b>P M K S</b>	ISO <b>H</b>	ISO <b>N</b>
	Steel HRc ≤ 47	Hardened steel 43 ≤ HRc ≤ 63	Aluminum
Finishing	Page D82, Page D93	Page D84, Page D95, Page D96	Page D112
Semi finishing			
Roughing	Page D85		Page D110

Note: Roughing endmills exposed to chipping in milling steel ≥ HRc 35 and titanium should be replaced by end mills with variable flute depth.

#### For profiling



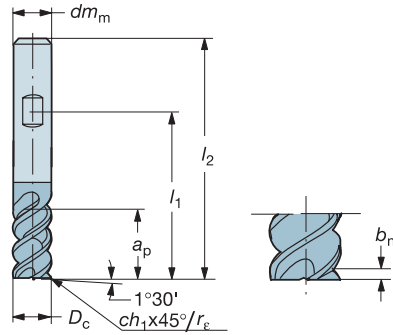
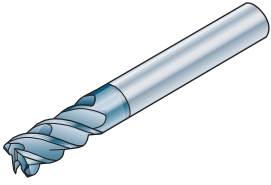
	ISO <b>P M K S</b>	ISO <b>H</b>	ISO <b>N</b>
	Steel HRc ≤ 47	Hardened steel 43 ≤ HRc ≤ 63	Aluminum
Super finishing			
Finishing			
Semi finishing			
Roughing	Page D82	Page D84, Page D97	Page D102, Page D104, Page D111

- For best productivity in finishing – choose four or more cutting edges
- For best stability in semi-finishing – choose two cutting edges
- For best surface finish – choose two cutting edges.

# First choice endmill

Variable flute depth tools

Hardness ≤ 48HRc



D <sub>c</sub> mm	Ordering code	Front type	Dimensions, mm							Max a <sub>p</sub> <sup>1)</sup>	P		M		K		S	
			z <sub>n</sub>	dm <sub>m</sub>	l <sub>1</sub>	l <sub>2</sub>	Helix l <sub>sh</sub> mm <sup>2)</sup>	ch <sub>1</sub>	b <sub>n</sub>		r <sub>e</sub>	GC	GC	GC	GC	GC	GC	GC
<b>Cylindrical shank</b>																		
4	R216.23-04050CAK11P	3	6	21	57	11.20			1	11	☆	☆	☆	☆	☆	☆	☆	☆
5	R216.23-05050CAK13P	3	6	21	57	14.00			1	13	☆	☆	☆	☆	☆	☆	☆	☆
6	R216.24-06050CAK13P	4	6	29	65	16.00			1	13	☆	☆	☆	☆	☆	☆	☆	☆
8	R216.24-08050EAK19P	4	8	44	80	22.40			2	19	☆	☆	☆	☆	☆	☆	☆	☆
10	R216.24-10050EAK22P	4	10	60	100	28.00			2	22	☆	☆	☆	☆	☆	☆	☆	☆
12	R216.24-12050GAK26P	4	12	55	100	35.50			3	26	☆	☆	☆	☆	☆	☆	☆	☆
14	R216.24-14050GAK26P	4	14	59	104	40.00			3	26	☆	☆	☆	☆	☆	☆	☆	☆
16	R216.24-16050IAK32P	4	16	67	115	45.00			4	32	☆	☆	☆	☆	☆	☆	☆	☆
20	R216.24-20050IAK38P	4	20	75	125	56.00			4	38	☆	☆	☆	☆	☆	☆	☆	☆
<b>Weldon</b>																		
6	R216.24-06050CBC13P	4	6	39	57	16.00			1	13	☆	☆	☆	☆	☆	☆	☆	☆
8	R216.24-08050EBC19P	4	8	27	63	22.40			2	19	☆	☆	☆	☆	☆	☆	☆	☆
10	R216.24-10050EBC22P	4	10	52	72	28.00			2	22	☆	☆	☆	☆	☆	☆	☆	☆
12	R216.24-12050GBC26P	4	12	61	83	35.50			3	26	☆	☆	☆	☆	☆	☆	☆	☆
14	R216.24-14050GBC26P	4	14	61	83	40.00			3	26	☆	☆	☆	☆	☆	☆	☆	☆
16	R216.24-16050IBC32P	4	16	68	92	45.00			4	32	☆	☆	☆	☆	☆	☆	☆	☆
20	R216.24-20050IBC38P	4	20	79	104	56.00			4	38	☆	☆	☆	☆	☆	☆	☆	☆
<b>Cylindrical shank</b>																		
4	R216.33-04050-AK11P	3	6		57	11.20	0.1	0.25		11	☆	☆	☆	☆	☆	☆	☆	☆
5	R216.33-05050-AK13P	3	6	21	57	14.00	0.1	0.25		13	☆	☆	☆	☆	☆	☆	☆	☆
6	R216.34-06050-AK13P	4	6	29	65	16.00	0.1	0.25		13	☆	☆	☆	☆	☆	☆	☆	☆
8	R216.34-08050-AK19P	4	8	44	80	22.40	0.1	0.25		19	☆	☆	☆	☆	☆	☆	☆	☆
10	R216.34-10050-AK22P	4	10		100	28.00	0.1	0.25		22	☆	☆	☆	☆	☆	☆	☆	☆
12	R216.34-12050-AK26P	4	12	55	100	35.50	0.1	0.25		26	☆	☆	☆	☆	☆	☆	☆	☆
14	R216.34-14050-AK26P	4	14	59	104	40.00	0.15	0.35		26	☆	☆	☆	☆	☆	☆	☆	☆
16	R216.34-16050-AK32P	4	16	67	115	45.00	0.15	0.35		32	☆	☆	☆	☆	☆	☆	☆	☆
20	R216.34-20050-AK38P	4	20	75	125	56.00	0.15	0.35		38	☆	☆	☆	☆	☆	☆	☆	☆
<b>Weldon</b>																		
6	R216.34-06050-BC13P	4	6	39	57	16.00	0.1	0.25		13	☆	☆	☆	☆	☆	☆	☆	☆
8	R216.34-08050-BC19P	4	8	45	63	22.40	0.1	0.25		19	☆	☆	☆	☆	☆	☆	☆	☆
10	R216.34-10050-BC22P	4	10	52	72	28.00	0.1	0.25		22	☆	☆	☆	☆	☆	☆	☆	☆
12	R216.34-12050-BC26P	4	12	38	83	35.50	0.1	0.25		26	☆	☆	☆	☆	☆	☆	☆	☆
14	R216.34-14050-BC26P	4	14	61	83	40.00	0.12	0.35		26	☆	☆	☆	☆	☆	☆	☆	☆
16	R216.34-16050-BC32P	4	16	68	92	45.00	0.12	0.35		32	☆	☆	☆	☆	☆	☆	☆	☆
20	R216.34-20050-BC38P	4	20	79	104	56.00	0.12	0.35		38	☆	☆	☆	☆	☆	☆	☆	☆

<sup>1)</sup> Maximum cutting edge length.

<sup>2)</sup> Pitch per rev.

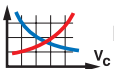
Ordering example: 10 pieces R216.23-04050CAK11P 1620

For more technical information, see our Metalcutting Technical guide

## Plura Guide



First choice: Use Plura Guide. Order number C-2948-063



D162



D172



D79



G3

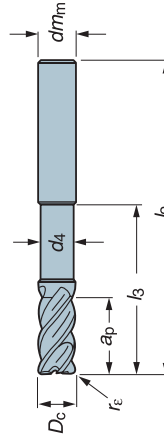
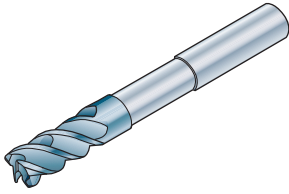


D2

# First choice endmill

Variable flute depth tools

Hardness ≤ 48HRc



D <sub>c</sub> mm	Ordering code	Front type z <sub>n</sub>	Dimensions, mm								P			M			K			S			
			d <sub>m</sub>	l <sub>2</sub>	l <sub>3</sub>	d <sub>4</sub>	r <sub>e</sub>	Helix l <sub>sh</sub> mm <sup>2)</sup>	Max a <sub>p</sub> <sup>1)</sup>	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC			
										1620	1630	1640	1620	1630	1640	1620	1630	1640	1620	1630	1640		
	<b>Cylindrical shank</b>																						
10	R216.24-10050CAK22P	4	10	100	60	9.5	1	28.00	22	☆			☆			☆			☆				
10	R216.24-10050DAK22P	4	10	100	60	9.5	1.5	28.00	22	☆			☆			☆			☆				
10	R216.24-10050FAK22P	4	10	100	60	9.5	2	28.00	22	☆			☆			☆			☆				
10	R216.24-10050GAK22P	4	10	100	60	9.5	2.5	28.00	22	☆			☆			☆			☆				
12	R216.24-12050CAK26P	4	12	100	55	11.4	3	35.50	26	☆			☆			☆			☆				
12	R216.24-12050DAK26P	4	12	100	55	11.4	1	35.50	26	☆			☆			☆			☆				
12	R216.24-12050EAK26P	4	12	100	55	11.4	1.5	35.50	26	☆			☆			☆			☆				
12	R216.24-12050FAK26P	4	12	100	55	11.4	2	35.50	26	☆			☆			☆			☆				
12	R216.24-12050IAK26P	4	12	100	55	11.4	2.5	35.50	26	☆			☆			☆			☆				
16	R216.24-16050CAK36P	4	16	115	67	15.2	1	45.00	36	☆			☆			☆			☆				
16	R216.24-16050DAK36P	4	16	115	67	15.2	1.5	45.00	36	☆			☆			☆			☆				
16	R216.24-16050EAK36P	4	16	115	67	15.2	2	45.00	36	☆			☆			☆			☆				
16	R216.24-16050FAK36P	4	16	115	67	15.2	2.5	45.00	36	☆			☆			☆			☆				
16	R216.24-16050GAK36P	4	16	115	67	15.2	3	45.00	36	☆			☆			☆			☆				
16	R216.24-16050IAK36P	4	16	115	67	15.2	4	45.00	36	☆			☆			☆			☆				
20	R216.24-20050FAK44P	4	20	145	95	19	2.5	56.00	44	☆			☆			☆			☆				
20	R216.24-20050GAK44P	4	20	145	95	19	3	56.00	44	☆			☆			☆			☆				
20	R216.24-20050IAK44P	4	20	145	95	19	4	56.00	44	☆			☆			☆			☆				
25	R216.25-25050GAK54P	5	25	155	99	24	3	71.00	54	☆			☆			☆			☆				
25	R216.25-25050IAK54P	5	25	155	99	24	4	71.00	54	☆			☆			☆			☆				

<sup>1)</sup> Maximum cutting edge length.

<sup>2)</sup> Pitch per rev.

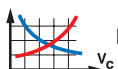
Ordering example: 10 pieces R216.24-10050CAK22P 1620

For more technical information, see our Metalcutting Technical guide

## Plura Guide



First choice: Use Plura Guide. Order number C-2948-063



D172



D79



G3

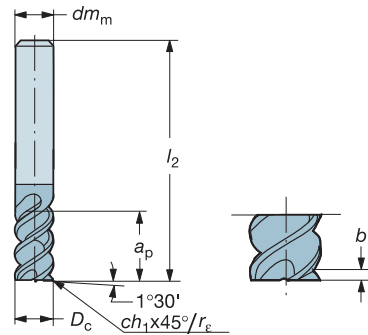
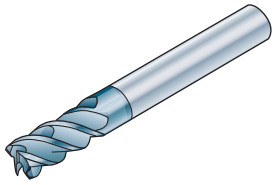


D2

## Roughing endmill

Variable flute depth tools

Hardness  $43 \leq \text{HRC} \leq 63$



$D_c$ mm	Ordering code	Front type	Dimensions, mm							$r_\epsilon$	Max $a_p^{1)}$	P GC	H GC
			$z_n$	$dm_m$	$l_2$	Helix $l_{sh}$ mm <sup>2)</sup>	$ch_1$	$b_n$					
<b>Cylindrical shank</b>													
2	R216.23-02050BAK70H	3	6	57	5.60				0.5	7	☆	☆	
3	R216.23-03050BAK08H	3	6	57	8.00				0.5	8	☆	☆	
4	R216.23-04050CAK11H	3	6	57	11.20				1	11	☆	☆	
5	R216.23-05050CAK13H	3	6	57	14.00				1	13	☆	☆	
6	R216.24-06050CAK13H	4	6	65	16.00				1	13	☆	☆	
8	R216.24-08050EAK19H	4	8	80	22.40				2	19	☆	☆	
10	R216.24-10050EAK22H	4	10	100	28.00				2	22	☆	☆	
12	R216.24-12050GAK26H	4	12	100	35.50				3	26	☆	☆	
14	R216.24-14050GAK26H	4	14	104	40.00				3	26	☆	☆	
16	R216.24-16050IAK32H	4	16	115	45.00				4	32	☆	☆	
20	R216.24-20050IAK38H	4	20	125	56.00				4	38	☆	☆	
<b>Variable flute depth</b>													
2	R216.33-02050-AK70H	3	6	57	5.60			0.25		7	☆	☆	
3	R216.33-03050-AK08H	3	6	57	8.00			0.25		8	☆	☆	
4	R216.33-04050-AK11H	3	6	57	11.20	0.1		0.25		11	☆	☆	
5	R216.33-05050-AK13H	3	6	57	14.00	0.1		0.25		13	☆	☆	
6	R216.34-06050-AK13H	4	6	65	16.00	0.1		0.25		13	☆	☆	
8	R216.34-08050-AK19H	4	8	80	22.40	0.1		0.25		19	☆	☆	
10	R216.34-10050-AK22H	4	10	100	28.00	0.1		0.25		22	☆	☆	
12	R216.34-12050-AK26H	4	12	100	35.50	0.1		0.25		26	☆	☆	
14	R216.34-14050-AK26H	4	14	104	40.00	0.15		0.35		26	☆	☆	
16	R216.34-16050-AK32H	4	16	115	45.00	0.15		0.35		32	☆	☆	
20	R216.34-20050-AK38H	4	20	125	56.00	0.15		0.35		38	☆	☆	

<sup>1)</sup> Maximum cutting edge length.

<sup>2)</sup> Pitch per rev.

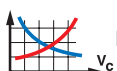
Ordering example: 10 pieces R216.23-02050BAK70H 1620

For more technical information, see our Metalcutting Technical guide

### Plura Guide



First choice: Use Plura Guide. Order number C-2948-063



D162



D172



D79



G3



D2

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