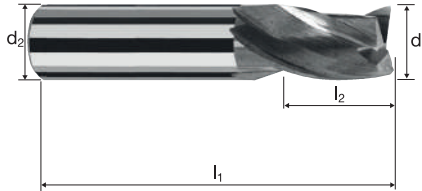
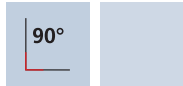


# Cylindrical end mills

Smooth-edged, short-shank version



HM  $\lambda$  30°  
MG10  $\gamma$  12°



Roughing

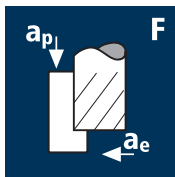
Finishing



Rm < 850 Rm 850-1100 Aluminium Copper / CuZn Brass Gold


Ø Code	d <sub>1</sub> e8	d <sub>2</sub> h6	l <sub>1</sub>	l <sub>2</sub>	l <sub>4</sub>	α	z	Example: Order-N°.	
								Coating	Article-N°.
								15232	120
120	1.50	6.00	38	3.00	11.92	11.5°	3	●	
140	2.00	6.00	38	3.00	11.15	11.0°	3	●	
160	2.50	6.00	38	3.00	10.88	10.0°	3	●	
180	3.00	6.00	38	4.00	11.96	8.0°	3	●	
200	3.50	6.00	38	4.00	11.02	7.0°	3	●	
220	4.00	6.00	38	5.00	11.59	5.5°	3	●	
240	4.50	6.00	38	5.00	10.66	4.5°	3	●	
260	5.00	6.00	38	6.00	10.72	3.0°	3	●	
300	6.00	6.00	38	7.00	-	0.0°	3	●	
391	8.00	8.00	41	9.00	-	0.0°	3	●	
450	10.00	10.00	48	11.00	-	0.0°	3	●	

## Application





## Material

Steel  
< 850 N/mm<sup>2</sup>



d1 [mm]	z	v <sub>c</sub> [m/min]	f <sub>f</sub> [mm]	a <sub>p</sub> [mm]	a <sub>e</sub> [mm]	n [min <sup>-1</sup> ]	v <sub>r</sub> [mm/min]
2.00	3	60	0.005	2.000	0.200	9550	145
3.00	3	60	0.010	3.000	0.300	6365	190
4.00	3	60	0.015	4.000	0.400	4775	215
5.00	3	60	0.015	5.000	0.500	3820	170
6.00	3	60	0.020	6.000	0.600	3185	190
8.00	3	60	0.025	8.000	0.800	2385	180
10.00	3	60	0.035	10.000	1.000	1910	200

Short-chipping brass  
[CuZn]


2.00	3	140	0.005	2.000	0.200	22280	335
3.00	3	140	0.010	3.000	0.300	14855	445
4.00	3	140	0.010	4.000	0.400	11140	335
5.00	3	140	0.020	5.000	0.500	8915	535
6.00	3	140	0.025	6.000	0.600	7425	555
8.00	3	140	0.030	8.000	0.800	5570	500
10.00	3	140	0.040	10.000	1.000	4455	535

Gold




2.00	3	160	0.005	2.000	0.200	25465	380
3.00	3	160	0.010	3.000	0.300	16975	510
4.00	3	160	0.010	4.000	0.400	12730	380
5.00	3	160	0.020	5.000	0.500	10185	610
6.00	3	160	0.025	6.000	0.600	8490	635
8.00	3	160	0.030	8.000	0.800	6365	575
10.00	3	160	0.040	10.000	1.000	5095	610

Wrought aluminium  
Construction aluminium




2.00	3	250	0.005	2.000	0.200	39790	595
3.00	3	250	0.010	3.000	0.300	26525	795
4.00	3	250	0.015	4.000	0.400	19895	895
5.00	3	250	0.020	5.000	0.500	15915	955
6.00	3	250	0.025	6.000	0.600	13265	995
8.00	3	250	0.030	8.000	0.800	9945	895
10.00	3	250	0.040	10.000	1.000	7960	955

## Application





## Material

Steel  
< 850 N/mm<sup>2</sup>



d1 [mm]	z	v <sub>c</sub> [m/min]	f <sub>f</sub> [mm]	a <sub>p</sub> [mm]	a <sub>e</sub> [mm]	n [min <sup>-1</sup> ]	v <sub>r</sub> [mm/min]	Q [cm <sup>3</sup> /min]
2.00	3	45	0.005	1.000	2.000	7160	105	0.2
3.00	3	45	0.010	1.500	3.000	4775	145	0.6
4.00	3	45	0.010	2.000	4.000	3580	105	0.9
5.00	3	45	0.015	2.500	5.000	2865	130	1.6
6.00	3	45	0.015	3.000	6.000	2385	105	1.9
8.00	3	45	0.020	4.000	8.000	1790	105	3.4
10.00	3	45	0.030	5.000	10.000	1430	130	6.4

Short-chipping brass  
[CuZn]


2.00	3	120	0.005	1.000	2.000	19100	285	0.6
3.00	3	120	0.005	1.500	3.000	12730	190	0.9
4.00	3	120	0.010	2.000	4.000	9550	285	2.3
5.00	3	120	0.015	2.500	5.000	7640	345	4.3
6.00	3	120	0.015	3.000	6.000	6365	285	5.2
8.00	3	120	0.025	4.000	8.000	4775	360	11.5
10.00	3	120	0.035	5.000	10.000	3820	400	20.1

Gold




2.00	3	140	0.005	1.000	2.000	22280	335	0.7
3.00	3	140	0.005	1.500	3.000	14855	225	1.0
4.00	3	140	0.010	2.000	4.000	11140	335	2.7
5.00	3	140	0.015	2.500	5.000	8915	400	5.0
6.00	3	140	0.015	3.000	6.000	7425	335	6.0
8.00	3	140	0.025	4.000	8.000	5570	420	13.4
10.00	3	140	0.035	5.000	10.000	4455	470	23.4

Wrought aluminium  
Construction aluminium



2.00	3	200	0.005	1.000	2.000	31830	475	1.0
3.00	3	200	0.005	1.500	3.000	21220	320	1.4
4.00	3	200	0.010	2.000	4.000	15915	475	3.8
5.00	3	200	0.015	2.500	5.000	12730	575	7.2
6.00	3	200	0.015	3.000	6.000	10610	475	8.6
8.00	3	200	0.025	4.000	8.000	7960	595	19.1
10.00	3	200	0.035	5.000	10.000	6365	670	33.4