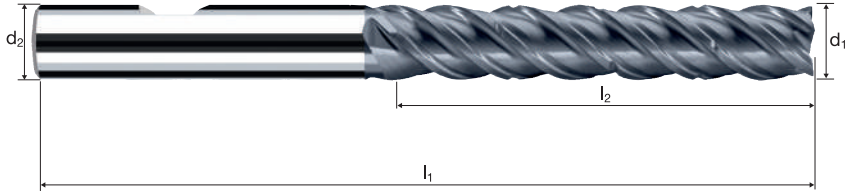
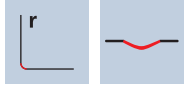


# Cylindrical end mills E-Cut

Smooth-edged, chip breaker, extra-long version 5.2xd



HM  
MG10     $\lambda$  45°  
                   $\gamma$  10°

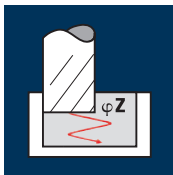


Roughing HPC    Roughing HDC    Finishing

Rm < 850    Rm 850-1100    Rm 1100-1300    Rm 1300-1500    HRC 48-56    Inox Stainless    Ti Titanium    GG(G) Tool Steel

										POLYCHROM	
Example: Order-N°.										P8420	
										P8320	
$\emptyset$ Code	$d_1$ e8	$d_2$ h6	$l_1$	$l_2$	$l_4$	r	$\alpha$	z			
180*	3.00	6.00	63	16.00	25.26	0.050	4.5°	4	●		
220*	4.00	6.00	70	21.00	29.39	0.100	3.0°	4	●		
260	5.00	6.00	73	26.00	33.52	0.100	1.5°	4	●		
300	6.00	6.00	73	32.00	-	0.100	0.0°	4	●		
391	8.00	8.00	84	42.00	-	0.150	0.0°	4	●		
450	10.00	10.00	100	53.00	-	0.200	0.0°	4	●		
501	12.00	12.00	117	63.00	-	0.200	0.0°	4	●		
610	16.00	16.00	144	84.00	-	0.200	0.0°	4	●		
682	20.00	20.00	169	105.00	-	0.250	0.0°	4	●		
* without chip breaker only											

## Application



## Material

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

d1 [mm]	z	v <sub>c</sub> [m/min]	f <sub>z</sub> [mm]	a <sub>p</sub> [mm]	a <sub>e</sub> [mm]	n [min <sup>-1</sup> ]	v <sub>r</sub> [mm/min]	φZ [°]
3.00	4	90	0.014	16.000	2.700	9550	535	1.5°
4.00	4	90	0.020	21.000	3.600	7160	575	1.5°
5.00	4	90	0.030	26.000	4.500	5730	690	1.5°
6.00	4	90	0.037	32.000	5.400	4775	705	1.5°
8.00	4	90	0.039	42.000	7.200	3580	560	1.5°
10.00	4	90	0.052	53.000	9.000	2865	595	1.5°
12.00	4	90	0.065	63.000	10.800	2385	620	1.5°
16.00	4	90	0.072	84.000	14.400	1790	515	1.5°
20.00	4	90	0.088	105.000	18.000	1430	505	1.5°

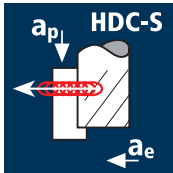
Steel  
850 - 1100 N/mm<sup>2</sup>

3.00	4	85	0.012	16.000	2.700	9020	435	2°
4.00	4	85	0.019	21.000	3.600	6765	515	2°
5.00	4	85	0.028	26.000	4.500	5410	605	2°
6.00	4	85	0.035	32.000	5.400	4510	630	2°
8.00	4	85	0.033	42.000	7.200	3380	445	2°
10.00	4	85	0.044	53.000	9.000	2705	475	2°
12.00	4	85	0.055	63.000	10.800	2255	495	2°
16.00	4	85	0.066	84.000	14.400	1690	445	2°
20.00	4	85	0.080	105.000	18.000	1355	435	2°

Inox normal  
[Cr-Ni/1.4301]  
[Cr-Ni-Mo/1.4571]

3.00	4	55	0.008	16.000	2.700	5835	185	1.5°
4.00	4	55	0.013	21.000	3.600	4375	230	1.5°
5.00	4	55	0.019	26.000	4.500	3500	265	1.5°
6.00	4	55	0.024	32.000	5.400	2920	280	1.5°
8.00	4	55	0.023	42.000	7.200	2190	200	1.5°
10.00	4	55	0.030	53.000	9.000	1750	210	1.5°
12.00	4	55	0.038	63.000	10.800	1460	220	1.5°
16.00	4	55	0.046	84.000	14.400	1095	200	1.5°
20.00	4	55	0.050	105.000	18.000	875	175	1.5°

## Application



## Material

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

d1 [mm]	z	v <sub>c</sub> [m/min]	f <sub>z</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]
3.00	4	260	0.064	16.000	0.075	27585	7100	8.5
4.00	4	260	0.086	21.000	0.100	20690	7155	15.0
5.00	4	260	0.109	26.000	0.125	16550	7190	23.4
6.00	4	260	0.133	32.000	0.150	13795	7320	35.1
8.00	4	260	0.177	42.000	0.200	10345	7320	61.5
10.00	4	260	0.219	53.000	0.250	8275	7255	96.1
12.00	4	260	0.263	63.000	0.300	6895	7265	137.3
16.00	4	260	0.290	84.000	0.400	5175	5990	201.3
20.00	4	260	0.364	105.000	0.500	4140	6025	316.2

Steel  
850 - 1100 N/mm<sup>2</sup>

3.00	4	266	0.072	16.000	0.075	28225	8170	9.8
4.00	4	266	0.097	21.000	0.100	21170	8235	17.3
5.00	4	266	0.122	26.000	0.125	16935	8275	26.9
6.00	4	266	0.149	32.000	0.150	14110	8425	40.4
8.00	4	266	0.199	42.000	0.200	10585	8425	70.8
10.00	4	266	0.247	53.000	0.250	8465	8350	110.6
12.00	4	266	0.296	63.000	0.300	7055	8365	158.1
16.00	4	266	0.326	84.000	0.400	5290	6895	231.7
20.00	4	266	0.409	105.000	0.500	4235	6935	364.0

Inox normal  
[Cr-Ni/1.4301]  
[Cr-Ni-Mo/1.4571]

3.00	4	184	0.045	16.000	0.075	19525	3535	4.2
4.00	4	184	0.065	21.000	0.100	14640	3825	8.0
5.00	4	184	0.080	26.000	0.125	11715	3770	12.2
6.00	4	184	0.095	32.000	0.150	9760	3730	17.9
8.00	4	184	0.128	42.000	0.200	7320	3755	31.5
10.00	4	184	0.161	53.000	0.250	5855	3770	49.9
12.00	4	184	0.194	63.000	0.300	4880	3780	71.4
16.00	4	184	0.209	84.000	0.400	3660	3055	102.6
20.00	4	184	0.269	105.000	0.500	2930	3150	165.4

Suitable cutting data for other applications and materials can be found in the cutting data software **ToolExpert E-Cut**

