

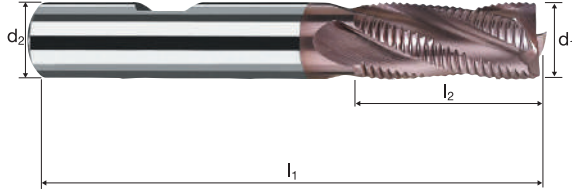
# Cylindrical end mills

Profiled NRF, normal version

HSS

HSS-E  
Co8

$\lambda$  25°  
 $\gamma$  10°



Roughing

Finishing



Rm  
< 850

Rm  
850-1100

Rm  
1100-1300

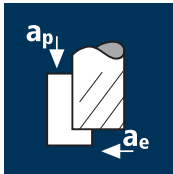
Inox  
Stainless

Ti  
Titanium

GG(G)

Example: Order-N°.										UNICUT-4X	
										U0610	
$\emptyset$ Code	$d_1$ k12	$d_2$ h6	$l_1$	$l_2$	$l_4$	45°	$\alpha$	$z$			
260	5.00	6.00	57	13.00	20.55	0.40	1.0°	3	●		
300	6.00	6.00	57	13.00	-	0.40	0.0°	3	●		
342	7.00	10.00	66	16.00	25.50	0.40	3.5°	3	●		
391	8.00	8.00	63	19.00	-	0.40	0.0°	4	●		
402	8.00	10.00	69	19.00	28.50	0.40	2.5°	4	●		
420	9.00	10.00	69	19.00	28.50	0.40	1.5°	4	●		
450	10.00	10.00	72	22.00	-	0.40	0.0°	4	●		
470	11.00	12.00	79	22.00	33.50	0.40	1.0°	4	●		
501	12.00	12.00	83	26.00	-	0.40	0.0°	4	●		
540	13.00	12.00	83	26.00	-	0.40	0.0°	4	●		
570	14.00	12.00	83	26.00	-	0.40	0.0°	4	●		
581	15.00	12.00	83	26.00	-	0.50	0.0°	4	●		
610	16.00	16.00	92	32.00	-	0.50	0.0°	4	●		
640	18.00	16.00	92	32.00	-	0.50	0.0°	4	●		
671	20.00	16.00	98	38.00	-	0.50	0.0°	4	●		
682	20.00	20.00	104	38.00	-	0.50	0.0°	4	●		
710	22.00	20.00	104	38.00	-	0.70	0.0°	4	●		
741	24.00	20.00	111	45.00	-	0.70	0.0°	4	●		
761	25.00	20.00	111	45.00	-	0.70	0.0°	4	●		
772	25.00	25.00	121	45.00	-	0.70	0.0°	4	●		

## Application



## Material

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



d1 [mm]	z	v <sub>c</sub> [m/min]	f <sub>s</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]
5.00	3	60	0.025	5.000	2.000	3820	285	2.9
6.00	3	60	0.025	6.000	2.400	3185	240	3.4
8.00	4	60	0.035	8.000	3.200	2385	335	8.6
10.00	4	60	0.045	10.000	4.000	1910	345	13.8
12.00	4	60	0.070	12.000	4.800	1590	445	25.7
16.00	4	60	0.095	16.000	6.400	1195	455	46.4
20.00	4	60	0.115	20.000	8.000	955	440	70.3
22.00	4	60	0.130	22.000	8.800	870	450	87.4
25.00	4	60	0.145	25.000	10.000	765	445	110.8

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



5.00	3	48	0.025	5.000	2.000	3055	230	2.3
6.00	3	48	0.025	6.000	2.400	2545	190	2.8
8.00	4	48	0.035	8.000	3.200	1910	265	6.8
10.00	4	48	0.045	10.000	4.000	1530	275	11.0
12.00	4	48	0.070	12.000	4.800	1275	355	20.5
16.00	4	48	0.095	16.000	6.400	955	365	37.2
20.00	4	48	0.115	20.000	8.000	765	350	56.2
22.00	4	48	0.130	22.000	8.800	695	360	69.9
25.00	4	48	0.145	25.000	10.000	610	355	88.6

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



5.00	3	25	0.025	5.000	2.000	1590	120	1.2
6.00	3	25	0.025	6.000	2.400	1325	100	1.4
8.00	4	25	0.035	8.000	3.200	995	140	3.6
10.00	4	25	0.045	10.000	4.000	795	145	5.7
12.00	4	25	0.070	12.000	4.800	665	185	10.7
16.00	4	25	0.095	16.000	6.400	495	190	19.4
20.00	4	25	0.115	20.000	8.000	400	185	29.3
22.00	4	25	0.130	22.000	8.800	360	190	36.4
25.00	4	25	0.145	25.000	10.000	320	185	46.2

Cast iron  
(lamellar / spheroidal)



5.00	3	42	0.025	5.000	2.000	2675	200	2.0
6.00	3	42	0.025	6.000	2.400	2230	165	2.4
8.00	4	42	0.035	8.000	3.200	1670	235	6.0
10.00	4	42	0.045	10.000	4.000	1335	240	9.6
12.00	4	42	0.070	12.000	4.800	1115	310	18.0
16.00	4	42	0.095	16.000	6.400	835	320	32.5
20.00	4	42	0.115	20.000	8.000	670	305	49.2
22.00	4	42	0.130	22.000	8.800	610	315	61.2
25.00	4	42	0.145	25.000	10.000	535	310	77.5



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



5.00	3	55	0.015	5.000	5.000	3500	160	3.9
6.00	3	55	0.020	6.000	6.000	2920	175	6.3
8.00	4	55	0.025	8.000	8.000	2190	220	14.0
10.00	4	55	0.035	10.000	10.000	1750	245	24.5
12.00	4	55	0.055	12.000	12.000	1460	320	46.2
16.00	4	55	0.070	16.000	16.000	1095	305	78.4
20.00	4	55	0.090	20.000	20.000	875	315	126.1
22.00	4	55	0.095	22.000	22.000	795	300	146.4
25.00	4	55	0.110	25.000	25.000	700	310	192.6

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



5.00	3	45	0.015	5.000	5.000	2865	130	3.2
6.00	3	45	0.020	6.000	6.000	2385	145	5.2
8.00	4	45	0.025	8.000	8.000	1790	180	11.5
10.00	4	45	0.035	10.000	10.000	1430	200	20.1
12.00	4	45	0.055	12.000	12.000	1195	265	37.8
16.00	4	45	0.070	16.000	16.000	895	250	64.2
20.00	4	45	0.090	20.000	20.000	715	260	103.1
22.00	4	45	0.095	22.000	22.000	650	245	119.7
25.00	4	45	0.110	25.000	25.000	575	250	157.6

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



5.00	3	22	0.015	5.000	5.000	1400	65	1.6
6.00	3	22	0.020	6.000	6.000	1165	70	2.5
8.00	4	22	0.025	8.000	8.000	875	90	5.6
10.00	4	22	0.035	10.000	10.000	700	100	9.8
12.00	4	22	0.055	12.000	12.000	585	130	18.5
16.00	4	22	0.070	16.000	16.000	440	125	31.4
20.00	4	22	0.090	20.000	20.000	350	125	50.4
22.00	4	22	0.095	22.000	22.000	320	120	58.5
25.00	4	22	0.110	25.000	25.000	280	125	77.0

Cast iron  
(lamellar / spheroidal)



5.00	3	36	0.015	5.000	5.000	2290	105	2.6
6.00	3	36	0.020	6.000	6.000	1910	115	4.1
8.00	4	36	0.025	8.000	8.000	1430	145	9.2
10.00	4	36	0.035	10.000	10.000	1145	160	16.0
12.00	4	36	0.055	12.000	12.000	955	210	30.3
16.00	4	36	0.070	16.000	16.000	715	200	51.3
20.00	4	36	0.090	20.000	20.000	575	205	82.5
22.00	4	36	0.095	22.000	22.000	520	200	95.8
25.00	4	36	0.110	25.000	25.000	460	200	126.1

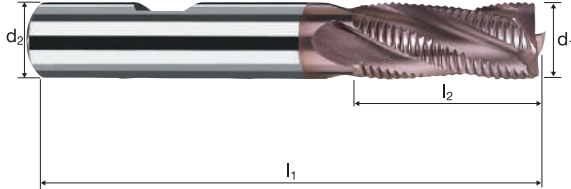
# Cylindrical end mills

Profiled NRF, normal version

HSS

HSS-E  
Co8

$\lambda$  25°  
 $\gamma$  10°



Roughing

Finishing



Rm  
< 850

Rm  
850-1100

Rm  
1100-1300

Inox  
Stainless

Ti  
Titanium

GG(G)

Example:  
Order-N°.

Coating  
**U**

Article-N°.  
**0610**

ø-Code  
**800**

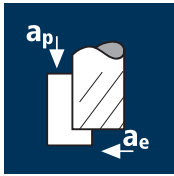


UNICUT-4X

**U0610**

$\emptyset$ Code	$d_1$ k12	$d_2$ h6	$l_1$	$l_2$	$l_4$	45°	$\alpha$	z	
800	28.00	25.00	121	45.00	-	0.70	0.0°	6	●
810	30.00	25.00	121	45.00	-	0.70	0.0°	6	●
832	32.00	32.00	133	53.00	-	0.70	0.0°	6	●
860	36.00	32.00	133	53.00	-	0.90	0.0°	6	●
881	40.00	32.00	143	63.00	-	0.90	0.0°	6	●

## Application



## Material

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



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



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



Cast iron  
(lamellar / spheroidal)



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



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



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



Cast iron  
(lamellar / spheroidal)



d1 [mm]	z	v <sub>c</sub> [m/min]	f <sub>s</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]
28.00	6	60	0.115	28.000	11.200	680	470	147.6
30.00	6	60	0.120	30.000	12.000	635	460	165.0
32.00	6	60	0.130	32.000	12.800	595	465	190.7
36.00	6	60	0.145	36.000	14.400	530	460	239.3
40.00	6	60	0.160	40.000	16.000	475	460	293.4
28.00	6	48	0.115	28.000	11.200	545	375	118.1
30.00	6	48	0.120	30.000	12.000	510	365	132.0
32.00	6	48	0.130	32.000	12.800	475	370	152.5
36.00	6	48	0.145	36.000	14.400	425	370	191.4
40.00	6	48	0.160	40.000	16.000	380	365	234.7
28.00	6	25	0.115	28.000	11.200	285	195	61.5
30.00	6	25	0.120	30.000	12.000	265	190	68.8
32.00	6	25	0.130	32.000	12.800	250	195	79.5
36.00	6	25	0.145	36.000	14.400	220	190	99.7
40.00	6	25	0.160	40.000	16.000	200	190	122.2
28.00	6	42	0.115	28.000	11.200	475	330	103.3
30.00	6	42	0.120	30.000	12.000	445	320	115.5
32.00	6	42	0.130	32.000	12.800	420	325	133.5
36.00	6	42	0.145	36.000	14.400	370	325	167.5
40.00	6	42	0.160	40.000	16.000	335	320	205.3
28.00	6	55	0.085	28.000	28.000	625	320	250.0
30.00	6	55	0.090	30.000	30.000	585	315	283.6
32.00	6	55	0.095	32.000	32.000	545	310	319.3
36.00	6	55	0.105	36.000	36.000	485	305	397.1
40.00	6	55	0.120	40.000	40.000	440	315	504.2
28.00	6	45	0.085	28.000	28.000	510	260	204.5
30.00	6	45	0.090	30.000	30.000	475	260	232.0
32.00	6	45	0.095	32.000	32.000	450	255	261.3
36.00	6	45	0.105	36.000	36.000	400	250	324.9
40.00	6	45	0.120	40.000	40.000	360	260	412.5
28.00	6	22	0.085	28.000	28.000	250	130	100.0
30.00	6	22	0.090	30.000	30.000	235	125	113.4
32.00	6	22	0.095	32.000	32.000	220	125	127.7
36.00	6	22	0.105	36.000	36.000	195	125	158.8
40.00	6	22	0.120	40.000	40.000	175	125	201.7
28.00	6	36	0.085	28.000	28.000	410	210	163.6
30.00	6	36	0.090	30.000	30.000	380	205	185.6
32.00	6	36	0.095	32.000	32.000	360	205	209.0
36.00	6	36	0.105	36.000	36.000	320	200	259.9
40.00	6	36	0.120	40.000	40.000	285	205	330.0