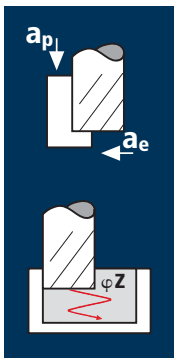




## Application



## Material

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

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

Cold work tool steel  
(12% Cr)  
high alloyed  
[1.2379]

Stainless steel  
[Cr-Ni/1.4301]

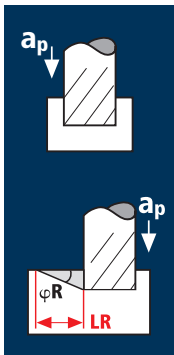
d1 [mm]	z	v <sub>c</sub> [m/min]	f <sub>z</sub> [mm]	a <sub>p</sub> [mm]	a <sub>e</sub> [mm]	n [min <sup>-1</sup> ]	v <sub>f</sub> / v <sub>fZ</sub> [mm/min]	Q [cm <sup>2</sup> /min]	φZ [°]	φA [°]
4	4	180	0.035	6.0	1.6	14325	2005	19.0	20°	See ToolExpert HelixRamp (www.fraisa.com)
5	4	180	0.040	7.5	2.0	11460	1835	27.5	20°	
6	4	180	0.050	9.0	2.4	9550	1910	41.5	20°	
8	4	180	0.060	12.0	3.2	7160	1720	66.0	20°	
10	4	180	0.075	15.0	4.0	5730	1720	103.0	20°	
12	4	180	0.085	18.0	4.8	4775	1625	140.5	20°	
16	4	180	0.095	24.0	6.4	3580	1360	209.0	20°	
20	4	180	0.110	30.0	8.0	2865	1260	302.5	20°	

4	4	150	0.030	6.0	1.6	11935	1430	13.5	18°	See ToolExpert HelixRamp (www.fraisa.com)
5	4	150	0.035	7.5	2.0	9550	1335	20.0	18°	
6	4	150	0.040	9.0	2.4	7960	1275	27.5	18°	
8	4	150	0.050	12.0	3.2	5970	1195	46.0	18°	
10	4	150	0.065	15.0	4.0	4775	1240	74.5	18°	
12	4	150	0.075	18.0	4.8	3980	1195	103.0	18°	
16	4	150	0.085	24.0	6.4	2985	1015	156.0	18°	
20	4	150	0.100	30.0	8.0	2385	955	229.0	18°	

4	4	70	0.030	6.0	1.6	5570	670	6.5	12°	See ToolExpert HelixRamp (www.fraisa.com)
5	4	70	0.035	7.5	2.0	4455	625	9.5	12°	
6	4	70	0.040	9.0	2.4	3715	595	13.0	12°	
8	4	70	0.050	12.0	3.2	2785	555	21.5	12°	
10	4	70	0.060	15.0	4.0	2230	535	32.0	12°	
12	4	70	0.075	18.0	4.8	1855	555	48.0	12°	
16	4	70	0.085	24.0	6.4	1395	475	73.0	12°	
20	4	70	0.095	30.0	8.0	1115	425	102.0	12°	

4	4	90	0.020	6.0	1.6	7160	575	5.5	12°	See ToolExpert HelixRamp (www.fraisa.com)
5	4	90	0.025	7.5	2.0	5730	575	8.5	12°	
6	4	90	0.030	9.0	2.4	4775	575	12.5	12°	
8	4	90	0.035	12.0	3.2	3580	500	19.0	12°	
10	4	90	0.045	15.0	4.0	2865	515	31.0	12°	
12	4	90	0.055	18.0	4.8	2385	525	45.5	12°	
16	4	90	0.065	24.0	6.4	1790	465	71.5	12°	
20	4	90	0.080	30.0	8.0	1430	460	110.5	12°	

## Application



## Material

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high alloyed  
[1.2379]

Stainless steel  
[Cr-Ni/1.4301]

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>f</sub> / v <sub>fR</sub> [mm/min]	Q [cm <sup>2</sup> /min]	φR [°]	LR [mm]
4	4	145	0.025	5.0	4	11540	1155	23.0	32°	8.0
5	4	145	0.030	6.3	5	9230	1110	34.5	32°	10.4
6	4	145	0.040	7.5	6	7695	1230	55.5	32°	12.0
8	4	145	0.045	10.0	8	5770	1040	83.0	32°	16.0
10	4	145	0.055	12.5	10	4615	1015	127.0	32°	20.0
12	4	145	0.065	15.0	12	3845	1000	180.0	32°	24.0
16	4	145	0.070	20.0	16	2885	810	259.0	32°	32.0
20	4	145	0.085	25.0	20	2310	785	392.5	32°	40.0

4	4	120	0.020	5.0	4	9550	765	15.5	29°	9.0
5	4	120	0.025	6.3	5	7640	765	24.0	29°	11.7
6	4	120	0.030	7.5	6	6365	765	34.5	29°	13.5
8	4	120	0.040	10.0	8	4775	765	61.0	29°	18.0
10	4	120	0.050	12.5	10	3820	765	95.5	29°	22.6
12	4	120	0.055	15.0	12	3185	700	126.0	29°	27.1
16	4	120	0.065	20.0	16	2385	620	198.5	29°	36.1
20	4	120	0.075	25.0	20	1910	575	287.5	29°	45.1

4	4	55	0.025	5.0	4	4375	440	9.0	19°	14.5
5	4	55	0.025	6.3	5	3500	350	11.0	19°	18.9
6	4	55	0.030	7.5	6	2920	350	16.0	19°	21.8
8	4	55	0.040	10.0	8	2190	350	28.0	19°	29.0
10	4	55	0.045	12.5	10	1750	315	39.5	19°	36.3
12	4	55	0.055	15.0	12	1460	320	57.5	19°	43.6
16	4	55	0.065	20.0	16	1095	285	91.0	19°	58.1
20	4	55	0.070	25.0	20	875	245	122.5	19°	72.6

4	4	70	0.015	5.0	4	5570	335	6.5	14°	20.1
5	4	70	0.020	6.3	5	4455	355	11.0	14°	26.1
6	4	70	0.025	7.5	6	3715	370	16.5	14°	30.1
8	4	70	0.025	10.0	8	2785	280	22.5	14°	40.1
10	4	70	0.035	12.5	10	2230	310	39.0	14°	50.1
12	4	70	0.040	15.0	12	1855	295	53.0	14°	60.2
16	4	70	0.050	20.0	16	1395	280	89.5	14°	80.2
20	4	70	0.060	25.0	20	1115	270	135.0	14°	100.3