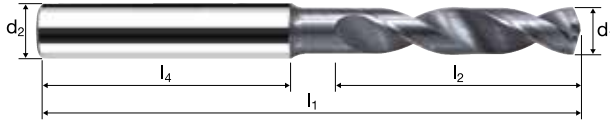
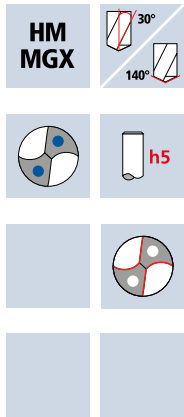


Spiral flute drills XDrill®

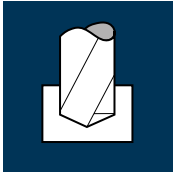
3xd



Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500	HRC 48-56			Inox Stainless	Ti Titanium	GG(G)
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Example: Order-N°.							DURO-X B72011		
Article-N°.		ø-Code							
B72011 0300									
Ø Code	d ₁ m7	d ₂ h5	l ₁	l ₂	l ₄	L _{max}			
0300	3.00	6.0	62.0	20.0	36	16.2	●		
0310	3.10	6.0	62.0	20.0	36	16.2	●		
0320	3.20	6.0	62.0	20.0	36	16.0	●		
0330	3.30	6.0	62.0	20.0	36	16.0	●		
0340	3.40	6.0	62.0	20.0	36	15.8	●		
0350	3.50	6.0	62.0	20.0	36	15.8	●		
0360	3.60	6.0	62.0	20.0	36	15.6	●		
0370	3.70	6.0	62.0	20.0	36	15.6	●		
0380	3.80	6.0	66.0	24.0	36	19.4	●		
0390	3.90	6.0	66.0	24.0	36	19.4	●		
0400	4.00	6.0	66.0	24.0	36	18.9	●		
0410	4.10	6.0	66.0	24.0	36	18.9	●		
0420	4.20	6.0	66.0	24.0	36	18.8	●		
0430	4.30	6.0	66.0	24.0	36	18.7	●		
0440	4.40	6.0	66.0	24.0	36	18.6	●		
0450	4.50	6.0	66.0	24.0	36	18.6	●		
0460	4.60	6.0	66.0	24.0	36	18.5	●		
0470	4.70	6.0	66.0	24.0	36	18.5	●		
0480	4.80	6.0	66.0	28.0	36	18.4	●		
0490	4.90	6.0	66.0	28.0	36	18.4	●		
0500	5.00	6.0	66.0	28.0	36	18.7	●		
0510	5.10	6.0	66.0	28.0	36	18.7	●		
0520	5.20	6.0	66.0	28.0	36	18.6	●		

Application



Material

Steel
< 500 N/mm²



Steel
500 - 850 N/mm²



Steel
850 - 1100 N/mm²



Steel
1100 - 1300 N/mm²



Steel
1300 - 1500 N/mm²



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



Titanium alloys
> 300 HB
[Ti6Al4V]



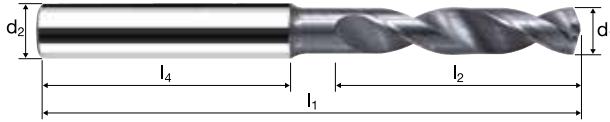
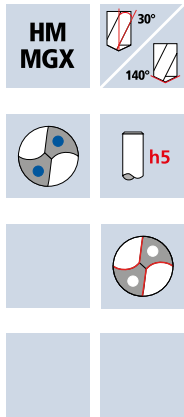
Cast iron
(lamellar / spheroidal)



d_1 [mm]	v_c [m/min]	f [mm]	n [min ⁻¹]	v_f [mm/min]	Q [cm ³ /min]
3.00	180	0.1400	19100	2674	18.9
3.30	180	0.1550	17360	2691	23.0
3.50	180	0.1650	16370	2701	26.0
3.80	180	0.1750	15080	2639	29.9
4.00	180	0.1950	14325	2793	35.1
4.20	180	0.2100	13640	2864	39.7
4.50	180	0.2400	12730	3055	48.6
4.80	180	0.2550	11935	3043	55.1
5.00	180	0.2650	11460	3037	59.6
3.00	160	0.1200	16975	2037	14.4
3.30	160	0.1300	15435	2007	17.2
3.50	160	0.1400	14550	2037	19.6
3.80	160	0.1500	13405	2011	22.8
4.00	160	0.1650	12730	2101	26.4
4.20	160	0.1800	12125	2183	30.2
4.50	160	0.2050	11320	2321	36.9
4.80	160	0.2200	10610	2334	42.2
5.00	160	0.2300	10185	2343	46.0
3.00	140	0.1100	14855	1634	11.6
3.30	140	0.1200	13505	1621	13.9
3.50	140	0.1300	12730	1655	15.9
3.80	140	0.1400	11725	1642	18.6
4.00	140	0.1550	11140	1727	21.7
4.20	140	0.1650	10610	1751	24.3
4.50	140	0.1900	9905	1882	29.9
4.80	140	0.2000	9285	1857	33.6
5.00	140	0.2100	8915	1872	36.8
3.00	100	0.0850	10610	902	6.4
3.30	100	0.0900	9645	868	7.4
3.50	100	0.1000	9095	910	8.8
3.80	100	0.1050	8375	879	10.0
4.00	100	0.1150	7960	915	11.5
4.20	100	0.1250	7580	948	13.1
4.50	100	0.1450	7075	1026	16.3
4.80	100	0.1550	6630	1028	18.6
5.00	100	0.1600	6365	1018	20.0
3.00	55	0.0650	5835	379	2.7
3.30	55	0.0700	5305	371	3.2
3.50	55	0.0750	5000	375	3.6
3.80	55	0.0800	4605	368	4.2
4.00	55	0.0900	4375	394	4.9
4.20	55	0.0950	4170	396	5.5
4.50	55	0.1100	3890	428	6.8
4.80	55	0.1200	3645	437	7.9
5.00	55	0.1250	3500	438	8.6
3.00	70	0.0650	7425	483	3.4
3.30	70	0.0700	6750	473	4.0
3.50	70	0.0750	6365	477	4.6
3.80	70	0.0800	5865	469	5.3
4.00	70	0.0900	5570	501	6.3
4.20	70	0.0950	5305	504	7.0
4.50	70	0.1100	4950	545	8.7
4.80	70	0.1200	4640	557	10.1
5.00	70	0.1250	4455	557	10.9
3.00	40	0.0650	4245	276	2.0
3.30	40	0.0700	3860	270	2.3
3.50	40	0.0750	3640	273	2.6
3.80	40	0.0800	3350	268	3.0
4.00	40	0.0900	3185	287	3.6
4.20	40	0.0950	3030	288	4.0
4.50	40	0.1100	2830	311	5.0
4.80	40	0.1200	2655	319	5.8
5.00	40	0.1250	2545	318	6.2
3.00	240	0.1250	25465	3183	22.5
3.30	240	0.1400	23150	3241	27.7
3.50	240	0.1500	21825	3274	31.5
3.80	240	0.1600	20105	3217	36.5
4.00	240	0.1750	19100	3343	42.0
4.20	240	0.1900	18190	3456	47.9
4.50	240	0.2200	16975	3735	59.4
4.80	240	0.2350	15915	3740	67.7
5.00	240	0.2400	15280	3667	72.0

Spiral flute drills XDrill®

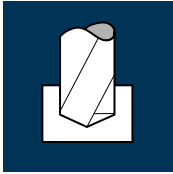
3xd



Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500	HRC 48-56			Inox Stainless	Ti Titanium	GG(G)
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Example: Order-N°.							DURO-X B72011		
Article-N°.		ø-Code							
B72011 0530									
Ø Code	d ₁ m7	d ₂ h5	l ₁	l ₂	l ₄	L _{max}			
0530	5.30	6.0	66.0	28.0	36	18.6	●		
0540	5.40	6.0	66.0	28.0	36	18.5	●		
0550	5.50	6.0	66.0	28.0	36	18.5	●		
0560	5.60	6.0	66.0	28.0	36	18.4	●		
0570	5.70	6.0	66.0	28.0	36	18.4	●		
0580	5.80	6.0	66.0	28.0	36	18.4	●		
0590	5.90	6.0	66.0	28.0	36	18.4	●		
0600	6.00	6.0	66.0	28.0	36	18.5	●		
0610	6.10	8.0	79.0	34.0	36	29.3	●		
0620	6.20	8.0	79.0	34.0	36	29.2	●		
0630	6.30	8.0	79.0	34.0	36	29.2	●		
0640	6.40	8.0	79.0	34.0	36	29.1	●		
0650	6.50	8.0	79.0	34.0	36	29.1	●		
0660	6.60	8.0	79.0	34.0	36	29.0	●		
0670	6.70	8.0	79.0	34.0	36	29.0	●		
0680	6.80	8.0	79.0	34.0	36	28.8	●		
0690	6.90	8.0	79.0	34.0	36	28.8	●		
0700	7.00	8.0	79.0	34.0	36	28.7	●		
0710	7.10	8.0	79.0	41.0	36	28.7	●		
0720	7.20	8.0	79.0	41.0	36	28.6	●		
0730	7.30	8.0	79.0	41.0	36	28.6	●		
0740	7.40	8.0	79.0	41.0	36	28.5	●		
0750	7.50	8.0	79.0	41.0	36	28.5	●		

Application



Material

Steel
< 500 N/mm²



Steel
500 - 850 N/mm²



Steel
850 - 1100 N/mm²



Steel
1100 - 1300 N/mm²



Steel
1300 - 1500 N/mm²



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



Titanium alloys
> 300 HB
[Ti6Al4V]



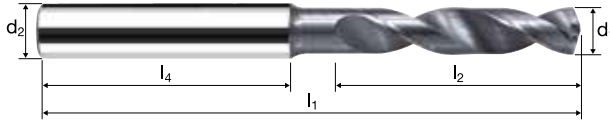
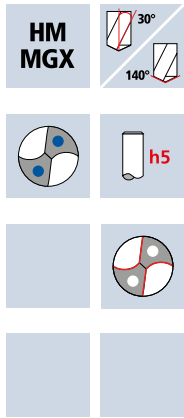
Cast iron
(lamellar / spheroidal)



d_1 [mm]	v_c [m/min]	f [mm]	n [min ⁻¹]	v_f [mm/min]	Q [cm ³ /min]
5.50	180	0.2950	10415	3072	73.0
5.80	180	0.3100	9880	3063	80.9
6.00	180	0.3300	9550	3152	89.1
6.20	180	0.3500	9240	3234	97.6
6.50	180	0.3700	8815	3262	108.2
6.80	180	0.3850	8425	3244	117.8
7.00	180	0.3950	8185	3233	124.4
7.20	180	0.4100	7960	3264	132.9
7.50	180	0.4250	7640	3247	143.4
5.50	160	0.2500	9260	2315	55.0
5.80	160	0.2650	8780	2327	61.5
6.00	160	0.2850	8490	2420	68.4
6.20	160	0.3000	8215	2465	74.4
6.50	160	0.3150	7835	2468	81.9
6.80	160	0.3300	7490	2472	89.8
7.00	160	0.3400	7275	2474	95.2
7.20	160	0.3500	7075	2476	100.8
7.50	160	0.3650	6790	2478	109.5
5.50	140	0.2300	8100	1863	44.3
5.80	140	0.2450	7685	1883	49.7
6.00	140	0.2600	7425	1931	54.6
6.20	140	0.2750	7190	1977	59.7
6.50	140	0.2900	6855	1988	66.0
6.80	140	0.3050	6555	1999	72.6
7.00	140	0.3150	6365	2005	77.2
7.20	140	0.3200	6190	1981	80.6
7.50	140	0.3350	5940	1990	87.9
5.50	100	0.1750	5785	1012	24.1
5.80	100	0.1850	5490	1016	26.8
6.00	100	0.2000	5305	1061	30.0
6.20	100	0.2100	5135	1078	32.6
6.50	100	0.2200	4895	1077	35.7
6.80	100	0.2300	4680	1076	39.1
7.00	100	0.2400	4545	1091	42.0
7.20	100	0.2450	4420	1083	44.1
7.50	100	0.2550	4245	1083	47.8
5.50	55	0.1350	3185	430	10.2
5.80	55	0.1450	3020	438	11.6
6.00	55	0.1500	2920	438	12.4
6.20	55	0.1600	2825	452	13.6
6.50	55	0.1700	2695	458	15.2
6.80	55	0.1800	2575	464	16.8
7.00	55	0.1850	2500	463	17.8
7.20	55	0.1900	2430	462	18.8
7.50	55	0.1950	2335	455	20.1
5.50	70	0.1350	4050	547	13.0
5.80	70	0.1450	3840	557	14.7
6.00	70	0.1500	3715	557	15.8
6.20	70	0.1600	3595	575	17.4
6.50	70	0.1700	3430	583	19.3
6.80	70	0.1800	3275	590	21.4
7.00	70	0.1850	3185	589	22.7
7.20	70	0.1900	3095	588	23.9
7.50	70	0.1950	2970	579	25.6
5.50	40	0.1350	2315	313	7.4
5.80	40	0.1450	2195	318	8.4
6.00	40	0.1500	2120	318	9.0
6.20	40	0.1600	2055	329	9.9
6.50	40	0.1700	1960	333	11.1
6.80	40	0.1800	1870	337	12.2
7.00	40	0.1850	1820	337	13.0
7.20	40	0.1900	1770	336	13.7
7.50	40	0.1950	1700	332	14.6
5.50	240	0.2650	13890	3681	87.5
5.80	240	0.2800	13170	3688	97.4
6.00	240	0.3000	12730	3819	108.0
6.20	240	0.3200	12320	3942	119.0
6.50	240	0.3350	11755	3938	130.7
6.80	240	0.3500	11235	3932	142.8
7.00	240	0.3600	10915	3929	151.2
7.20	240	0.3700	10610	3926	159.8
7.50	240	0.3850	10185	3921	173.2

Spiral flute drills XDrill®

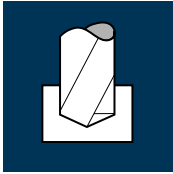
3xd



Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500	HRC 48-56			Inox Stainless	Ti Titanium	GG(G)
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Example: Order-N°.							DURO-X B72011	
∅ Code	d ₁ m7	d ₂ h5	l ₁	l ₂	l ₄	L _{max}		
0760	7.60	8.0	79.0	41.0	36	28.4	●	
0770	7.70	8.0	79.0	41.0	36	28.4	●	
0780	7.80	8.0	79.0	41.0	36	28.3	●	
0790	7.90	8.0	79.0	41.0	36	28.4	●	
0800	8.00	8.0	79.0	41.0	36	28.4	●	
0810	8.10	10.0	89.0	47.0	40	32.3	●	
0820	8.20	10.0	89.0	47.0	40	32.2	●	
0830	8.30	10.0	89.0	47.0	40	32.2	●	
0840	8.40	10.0	89.0	47.0	40	32.1	●	
0850	8.50	10.0	89.0	47.0	40	32.1	●	
0860	8.60	10.0	89.0	47.0	40	31.9	●	
0870	8.70	10.0	89.0	47.0	40	31.9	●	
0880	8.80	10.0	89.0	47.0	40	31.8	●	
0890	8.90	10.0	89.0	47.0	40	31.8	●	
0900	9.00	10.0	89.0	47.0	40	31.7	●	
0910	9.10	10.0	89.0	47.0	40	31.7	●	
0920	9.20	10.0	89.0	47.0	40	31.6	●	
0930	9.30	10.0	89.0	47.0	40	31.6	●	
0940	9.40	10.0	89.0	47.0	40	31.4	●	
0950	9.50	10.0	89.0	47.0	40	31.4	●	
0960	9.60	10.0	89.0	47.0	40	31.3	●	
0970	9.70	10.0	89.0	47.0	40	31.3	●	
0980	9.80	10.0	89.0	47.0	40	31.3	●	

Application



Material

Steel
< 500 N/mm²



Steel
500 - 850 N/mm²



Steel
850 - 1100 N/mm²



Steel
1100 - 1300 N/mm²



Steel
1300 - 1500 N/mm²



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



Titanium alloys
> 300 HB
[Ti6Al4V]



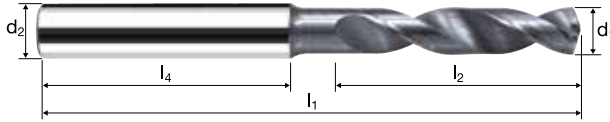
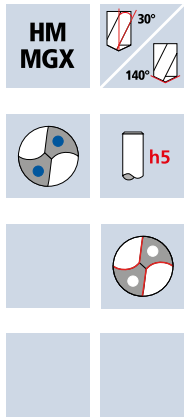
Cast iron
(lamellar / spheroidal)



d_1 [mm]	v_c [m/min]	f [mm]	n [min ⁻¹]	v_f [mm/min]	Q [cm ³ /min]
7.60	180	0.4300	7540	3242	147.1
8.00	180	0.4550	7160	3258	163.8
8.20	180	0.4650	6985	3248	171.5
8.50	180	0.4800	6740	3235	183.6
8.80	180	0.5000	6510	3255	198.0
9.00	180	0.5100	6365	3246	206.5
9.20	180	0.5200	6230	3240	215.4
9.50	180	0.5400	6030	3256	230.8
9.80	180	0.5550	5845	3244	244.7
7.60	160	0.3700	6700	2479	112.5
8.00	160	0.3900	6365	2482	124.8
8.20	160	0.4000	6210	2484	131.2
8.50	160	0.4150	5990	2486	141.1
8.80	160	0.4250	5785	2459	149.5
9.00	160	0.4350	5660	2462	156.6
9.20	160	0.4450	5535	2463	163.7
9.50	160	0.4600	5360	2466	174.8
9.80	160	0.4750	5195	2468	186.1
7.60	140	0.3400	5865	1994	90.5
8.00	140	0.3600	5570	2005	100.8
8.20	140	0.3650	5435	1984	104.8
8.50	140	0.3800	5245	1993	113.1
8.80	140	0.3950	5065	2001	121.7
9.00	140	0.4050	4950	2005	127.5
9.20	140	0.4100	4845	1987	132.1
9.50	140	0.4250	4690	1993	141.3
9.80	140	0.4400	4545	2000	150.8
7.60	100	0.2600	4190	1089	49.4
8.00	100	0.2700	3980	1075	54.0
8.20	100	0.2800	3880	1086	57.4
8.50	100	0.2900	3745	1086	61.6
8.80	100	0.3000	3615	1085	66.0
9.00	100	0.3050	3535	1078	68.6
9.20	100	0.3150	3460	1090	72.5
9.50	100	0.3250	3350	1089	77.2
9.80	100	0.3350	3250	1089	82.1
7.60	55	0.2000	2305	461	20.9
8.00	55	0.2100	2190	460	23.1
8.20	55	0.2150	2135	459	24.2
8.50	55	0.2200	2060	453	25.7
8.80	55	0.2300	1990	458	27.8
9.00	55	0.2350	1945	457	29.1
9.20	55	0.2400	1905	457	30.4
9.50	55	0.2500	1845	461	32.7
9.80	55	0.2550	1785	455	34.3
7.60	70	0.2000	2930	586	26.6
8.00	70	0.2100	2785	585	29.4
8.20	70	0.2150	2715	584	30.8
8.50	70	0.2200	2620	576	32.7
8.80	70	0.2300	2530	582	35.4
9.00	70	0.2350	2475	582	37.0
9.20	70	0.2400	2420	581	38.6
9.50	70	0.2500	2345	586	41.6
9.80	70	0.2550	2275	580	43.8
7.60	40	0.2000	1675	335	15.2
8.00	40	0.2100	1590	334	16.8
8.20	40	0.2150	1555	334	17.7
8.50	40	0.2200	1500	330	18.7
8.80	40	0.2300	1445	332	20.2
9.00	40	0.2350	1415	333	21.2
9.20	40	0.2400	1385	332	22.1
9.50	40	0.2500	1340	335	23.7
9.80	40	0.2550	1300	332	25.0
7.60	240	0.3900	10050	3920	177.8
8.00	240	0.4100	9550	3916	196.8
8.20	240	0.4200	9315	3912	206.6
8.50	240	0.4400	8990	3956	224.5
8.80	240	0.4550	8680	3949	240.2
9.00	240	0.4650	8490	3948	251.2
9.20	240	0.4750	8305	3945	262.2
9.50	240	0.4900	8040	3940	279.2
9.80	240	0.5050	7795	3937	296.9

Spiral flute drills XDrill®

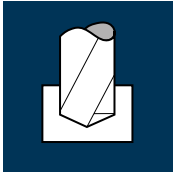
3xd



Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500	HRC 48-56			Inox Stainless	Ti Titanium	GG(G)
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Example: Order-N°.							DURO-X B72011	
		Article-N°.		ø-Code				
		B72011		0990				
Ø Code	d ₁ m7	d ₂ h5	l ₁	l ₂	l ₄	L _{max}		
0990	9.90	10.0	89.0	47.0	40	31.3	●	
1000	10.00	10.0	89.0	47.0	40	31.3	●	
1010	10.10	12.0	102.0	55.0	45	37.3	●	
1020	10.20	12.0	102.0	55.0	45	37.2	●	
1030	10.30	12.0	102.0	55.0	45	37.2	●	
1040	10.40	12.0	102.0	55.0	45	37.1	●	
1050	10.50	12.0	102.0	55.0	45	37.0	●	
1060	10.60	12.0	102.0	55.0	45	36.9	●	
1070	10.70	12.0	102.0	55.0	45	36.9	●	
1080	10.80	12.0	102.0	55.0	45	36.8	●	
1090	10.90	12.0	102.0	55.0	45	36.8	●	
1100	11.00	12.0	102.0	55.0	45	36.7	●	
1110	11.10	12.0	102.0	55.0	45	36.7	●	
1120	11.20	12.0	102.0	55.0	45	36.5	●	
1130	11.30	12.0	102.0	55.0	45	36.5	●	
1140	11.40	12.0	102.0	55.0	45	36.4	●	
1150	11.50	12.0	102.0	55.0	45	36.4	●	
1160	11.60	12.0	102.0	55.0	45	36.3	●	
1170	11.70	12.0	102.0	55.0	45	36.3	●	
1180	11.80	12.0	102.0	55.0	45	36.2	●	
1190	11.90	12.0	102.0	55.0	45	36.3	●	
1200	12.00	12.0	102.0	55.0	45	36.3	●	

Application



Material

Steel
< 500 N/mm²



Steel
500 - 850 N/mm²



Steel
850 - 1100 N/mm²



Steel
1100 - 1300 N/mm²



Steel
1300 - 1500 N/mm²



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



Titanium alloys
> 300 HB
[Ti6Al4V]

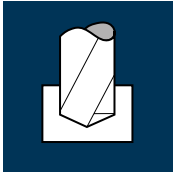


Cast iron
(lamellar / spheroidal)



d ₁ [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]
10.00	180	0.5650	5730	3238	254.3
10.20	180	0.5750	5615	3229	263.8
10.50	180	0.5900	5455	3219	278.7
10.80	180	0.6050	5305	3210	294.0
11.00	180	0.6100	5210	3178	302.0
11.20	180	0.6150	5115	3146	309.9
11.50	180	0.6200	4980	3088	320.7
11.80	180	0.6300	4855	3059	334.5
12.00	180	0.6400	4775	3056	345.6
10.00	160	0.4850	5095	2471	194.1
10.20	160	0.4950	4995	2473	202.0
10.50	160	0.5050	4850	2449	212.1
10.80	160	0.5200	4715	2452	224.6
11.00	160	0.5250	4630	2431	231.0
11.20	160	0.5300	4545	2409	237.3
11.50	160	0.5300	4430	2348	243.9
11.80	160	0.5400	4315	2330	254.8
12.00	160	0.5500	4245	2335	264.1
10.00	140	0.4450	4455	1983	155.7
10.20	140	0.4550	4370	1988	162.5
10.50	140	0.4650	4245	1974	170.9
10.80	140	0.4750	4125	1959	179.5
11.00	140	0.4850	4050	1964	186.7
11.20	140	0.4850	3980	1930	190.2
11.50	140	0.4900	3875	1899	197.2
11.80	140	0.4950	3775	1869	204.3
12.00	140	0.5050	3715	1876	212.2
10.00	100	0.3400	3185	1083	85.1
10.20	100	0.3450	3120	1076	88.0
10.50	100	0.3550	3030	1076	93.1
10.80	100	0.3650	2945	1075	98.5
11.00	100	0.3650	2895	1057	100.4
11.20	100	0.3700	2840	1051	103.5
11.50	100	0.3750	2770	1039	107.9
11.80	100	0.3800	2700	1026	112.2
12.00	100	0.3850	2655	1022	115.6
10.00	55	0.2600	1750	455	35.7
10.20	55	0.2650	1715	455	37.1
10.50	55	0.2750	1665	458	39.6
10.80	55	0.2800	1620	454	41.6
11.00	55	0.2850	1590	453	43.1
11.20	55	0.2850	1565	446	43.9
11.50	55	0.2850	1520	433	45.0
11.80	55	0.2900	1485	431	47.1
12.00	55	0.2950	1460	431	48.7
10.00	70	0.2600	2230	580	45.5
10.20	70	0.2650	2185	579	47.3
10.50	70	0.2750	2120	583	50.5
10.80	70	0.2800	2065	578	53.0
11.00	70	0.2850	2025	577	54.8
11.20	70	0.2850	1990	567	55.9
11.50	70	0.2850	1940	553	57.4
11.80	70	0.2900	1890	548	59.9
12.00	70	0.2950	1855	547	61.9
10.00	40	0.2600	1275	332	26.0
10.20	40	0.2650	1250	331	27.1
10.50	40	0.2750	1215	334	28.9
10.80	40	0.2800	1180	330	30.3
11.00	40	0.2850	1155	329	31.3
11.20	40	0.2850	1135	324	31.9
11.50	40	0.2850	1105	315	32.7
11.80	40	0.2900	1080	313	34.3
12.00	40	0.2950	1060	313	35.4
10.00	240	0.5150	7640	3935	309.0
10.20	240	0.5200	7490	3895	318.3
10.50	240	0.5400	7275	3929	340.2
10.80	240	0.5500	7075	3891	356.5
11.00	240	0.5550	6945	3855	366.3
11.20	240	0.5600	6820	3819	376.3
11.50	240	0.5650	6645	3754	390.0
11.80	240	0.5700	6475	3691	403.6
12.00	240	0.5800	6365	3692	417.5

Application



Material

Steel
< 500 N/mm²



Steel
500 - 850 N/mm²



Steel
850 - 1100 N/mm²



Steel
1100 - 1300 N/mm²



Steel
1300 - 1500 N/mm²



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



Titanium alloys
> 300 HB
[Ti6Al4V]



Cast iron
(lamellar / spheroidal)



d ₁ [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]
12.50	180	0.6650	4585	3049	374.2
13.00	180	0.6950	4405	3062	406.4
13.50	180	0.7050	4245	2993	428.4
14.00	180	0.7150	4095	2928	450.7
14.50	180	0.7250	3950	2864	472.9
15.00	180	0.7450	3820	2846	502.9
15.50	180	0.7600	3695	2808	529.9
15.80	180	0.7700	3625	2791	547.3
16.00	180	0.7750	3580	2775	557.8
12.50	160	0.5700	4075	2323	285.1
13.00	160	0.5950	3920	2332	309.6
13.50	160	0.6050	3775	2284	326.9
14.00	160	0.6100	3640	2220	341.8
14.50	160	0.6200	3510	2176	359.4
15.00	160	0.6400	3395	2173	384.0
15.50	160	0.6500	3285	2135	402.9
15.80	160	0.6600	3225	2129	417.3
16.00	160	0.6650	3185	2118	425.8
12.50	140	0.5250	3565	1872	229.7
13.00	140	0.5450	3430	1869	248.1
13.50	140	0.5550	3300	1832	262.2
14.00	140	0.5650	3185	1800	277.0
14.50	140	0.5700	3075	1753	289.4
15.00	140	0.5900	2970	1752	309.7
15.50	140	0.6000	2875	1725	325.5
15.80	140	0.6050	2820	1706	334.5
16.00	140	0.6100	2785	1699	341.6
12.50	100	0.4000	2545	1018	124.9
13.00	100	0.4150	2450	1017	135.0
13.50	100	0.4200	2360	991	141.9
14.00	100	0.4300	2275	978	150.6
14.50	100	0.4350	2195	955	157.7
15.00	100	0.4450	2120	943	166.7
15.50	100	0.4550	2055	935	176.4
15.80	100	0.4600	2015	927	181.7
16.00	100	0.4650	1990	925	186.1
12.50	55	0.3100	1400	434	53.3
13.00	55	0.3200	1345	430	57.1
13.50	55	0.3250	1295	421	60.2
14.00	55	0.3300	1250	413	63.5
14.50	55	0.3350	1205	404	66.7
15.00	55	0.3450	1165	402	71.0
15.50	55	0.3500	1130	396	74.6
15.80	55	0.3550	1110	394	77.3
16.00	55	0.3550	1095	389	78.2
12.50	70	0.3100	1785	553	67.9
13.00	70	0.3200	1715	549	72.8
13.50	70	0.3250	1650	536	76.8
14.00	70	0.3300	1590	525	80.8
14.50	70	0.3350	1535	514	84.9
15.00	70	0.3450	1485	512	90.5
15.50	70	0.3500	1440	504	95.1
15.80	70	0.3550	1410	501	98.2
16.00	70	0.3550	1395	495	99.6
12.50	40	0.3100	1020	316	38.8
13.00	40	0.3200	980	314	41.6
13.50	40	0.3250	945	307	44.0
14.00	40	0.3300	910	300	46.2
14.50	40	0.3350	880	295	48.7
15.00	40	0.3450	850	293	51.8
15.50	40	0.3500	820	287	54.2
15.80	40	0.3550	805	286	56.0
16.00	40	0.3550	795	282	56.7
12.50	240	0.6050	6110	3697	453.6
13.00	240	0.6300	5875	3701	491.3
13.50	240	0.6400	5660	3622	518.5
14.00	240	0.6500	5455	3546	545.8
14.50	240	0.6600	5270	3478	574.4
15.00	240	0.6750	5095	3439	607.7
15.50	240	0.6900	4930	3402	641.9
15.80	240	0.7000	4835	3385	663.6
16.00	240	0.7050	4775	3366	676.9