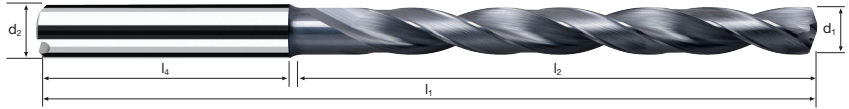
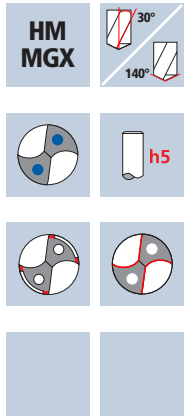


Spiral flute drills XDrill®

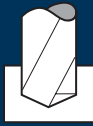
8xd



Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500				Inox Stainless	Ti Titanium	GG(G)
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Example: Order-N°.							DURO-X B72020	
		Article-N°.		ø-Code				
		B72020		.0300				
ø Code	d1 m7	d2 h5	l1	l2	l4	L _{max}		
.0300	3.0	6	73	34	36	27.2		●
.0310	3.1	6	73	34	36	27.2		●
.0320	3.2	6	73	34	36	27.0		●
.0330	3.3	6	73	34	36	27.0		●
.0340	3.4	6	73	34	36	26.8		●
.0350	3.5	6	73	34	36	26.8		●
.0360	3.6	6	73	34	36	26.6		●
.0370	3.7	6	73	34	36	26.6		●
.0380	3.8	6	82	43	36	35.4		●
.0390	3.9	6	82	43	36	35.4		●
.0400	4.0	6	82	43	36	34.9		●
.0410	4.1	6	82	43	36	34.9		●
.0420	4.2	6	82	43	36	34.8		●
.0430	4.3	6	82	43	36	34.7		●
.0440	4.4	6	82	43	36	34.6		●
.0450	4.5	6	82	43	36	34.6		●
.0460	4.6	6	82	43	36	34.5		●
.0470	4.7	6	82	43	36	34.5		●
.0480	4.8	6	95	56	36	47.4		●
.0490	4.9	6	95	56	36	47.3		●
.0500	5.0	6	95	56	36	47.7		●
.0510	5.1	6	95	56	36	47.7		●
.0520	5.2	6	95	56	36	47.6		●

Application



Material

Steel
< 500 N/mm²

d1 [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]	T [sek]
5.50	150	0.170	8680	1475	35.0	1.9
5.80	150	0.180	8230	1480	39.0	1.9
6.00	150	0.190	7960	1510	42.5	1.9
6.20	150	0.205	7700	1580	47.5	2.1
6.50	150	0.210	7345	1540	51.0	2.1
6.80	150	0.220	7020	1545	56.0	2.1
7.00	150	0.230	6820	1570	60.5	2.1
7.20	150	0.235	6630	1560	63.5	2.5
7.50	150	0.245	6365	1560	69.0	2.5

Steel
500 - 850 N/mm²

5.50	120	0.145	6945	1005	24.0	2.8
5.80	120	0.150	6585	990	26.0	2.9
6.00	120	0.165	6365	1050	29.5	2.7
6.20	120	0.175	6160	1080	32.5	3.1
6.50	120	0.180	5875	1060	35.0	3.1
6.80	120	0.190	5615	1065	38.5	3.1
7.00	120	0.195	5455	1065	41.0	3.1
7.20	120	0.200	5305	1060	43.0	3.7
7.50	120	0.210	5095	1070	47.5	3.6

Steel
850 - 1100 N/mm²

5.50	100	0.135	5785	780	18.5	3.7
5.80	100	0.140	5490	770	20.5	3.7
6.00	100	0.150	5305	795	22.5	3.6
6.20	100	0.160	5135	820	25.0	4.0
6.50	100	0.170	4895	830	27.5	4.0
6.80	100	0.175	4680	820	30.0	4.0
7.00	100	0.180	4545	820	31.5	4.0
7.20	100	0.185	4420	820	33.5	4.7
7.50	100	0.195	4245	830	36.5	4.7

Steel
1100 - 1300 N/mm²

5.50	70	0.100	4050	405	9.5	7.0
5.80	70	0.105	3840	405	10.5	7.0
6.00	70	0.115	3715	425	12.0	6.7
6.20	70	0.120	3595	430	13.0	7.7
6.50	70	0.125	3430	430	14.5	7.7
6.80	70	0.135	3275	440	16.0	7.5
7.00	70	0.135	3185	430	16.5	7.6
7.20	70	0.140	3095	435	17.5	8.9
7.50	70	0.145	2970	430	19.0	9.0

Material

Steel
1300 - 1500 N/mm²

d1 [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]	T [sek]
5.50	40	0.080	2315	185	4.5	15.4
5.80	40	0.080	2195	175	4.5	16.2
6.00	40	0.090	2120	190	5.5	14.9
6.20	40	0.095	2055	195	6.0	17.0
6.50	40	0.100	1960	195	6.5	16.9
6.80	40	0.105	1870	195	7.0	16.9
7.00	40	0.105	1820	190	7.5	17.3
7.20	40	0.110	1770	195	8.0	19.9
7.50	40	0.115	1700	195	8.5	19.8

Cold work tool steel
(12% Cr)
high alloyed
[1.2379]
Stainless steel
[Cr-Ni/1.4301]

5.50	60	0.080	3470	280	6.5	10.2
5.80	60	0.080	3295	265	7.0	10.7
6.00	60	0.090	3185	285	8.0	9.9
6.20	60	0.095	3080	295	9.0	11.2
6.50	60	0.100	2940	295	10.0	11.2
6.80	60	0.105	2810	295	10.5	11.1
7.00	60	0.105	2730	285	11.0	11.5
7.20	60	0.110	2655	290	12.0	13.4
7.50	60	0.115	2545	295	13.0	13.1

Titanium alloys
>300 HB
[Ti6Al4V]

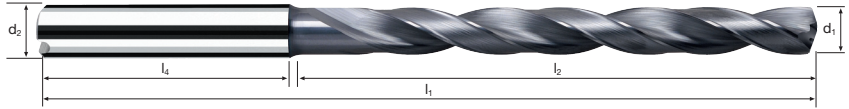
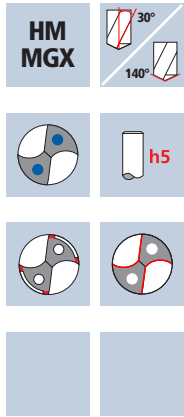
5.50	35	0.080	2025	160	4.0	17.8
5.80	35	0.080	1920	155	4.0	18.3
6.00	35	0.090	1855	165	4.5	17.2
6.20	35	0.095	1795	170	5.0	19.5
6.50	35	0.100	1715	170	5.5	19.4
6.80	35	0.105	1640	170	6.0	19.3
7.00	35	0.105	1590	165	6.5	19.9
7.20	35	0.110	1545	170	7.0	22.8
7.50	35	0.115	1485	170	7.5	22.7

Cast iron
(lamellar / spheroidal)

5.50	220	0.155	12730	1975	47.0	1.4
5.80	220	0.160	12075	1930	51.0	1.5
6.00	220	0.175	11670	2040	57.5	1.4
6.20	220	0.185	11295	2090	63.0	1.6
6.50	220	0.195	10775	2100	69.5	1.6
6.80	220	0.200	10300	2060	75.0	1.6
7.00	220	0.210	10005	2100	81.0	1.6
7.20	220	0.215	9725	2090	85.0	1.9
7.50	220	0.225	9335	2100	93.0	1.8

Spiral flute drills XDrill®

8xd



Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500				Inox Stainless	Ti Titanium	GG(G)
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Example: Order-N°.							DURO-X	
Article-N°.		ø-Code					B72020	
ø Code	d1 m7	d2 h5	l1	l2	l4	L _{max}		
.0530	5.3	6	95	56	36	47.6	●	
.0540	5.4	6	95	56	36	47.5	●	
.0550	5.5	6	95	56	36	47.5	●	
.0560	5.6	6	95	56	36	47.4	●	
.0570	5.7	6	95	56	36	47.4	●	
.0580	5.8	6	95	56	36	47.3	●	
.0590	5.9	6	95	56	36	47.4	●	
.0600	6.0	6	95	56	36	47.2	●	
.0610	6.1	8	105	66	36	55.3	●	
.0620	6.2	8	105	66	36	55.2	●	
.0630	6.3	8	105	66	36	55.2	●	
.0640	6.4	8	105	66	36	55.1	●	
.0650	6.5	8	105	66	36	55.1	●	
.0660	6.6	8	105	66	36	55.0	●	
.0670	6.7	8	105	66	36	55.0	●	
.0680	6.8	8	105	66	36	54.8	●	
.0690	6.9	8	105	66	36	54.8	●	
.0700	7.0	8	105	66	36	54.7	●	
.0710	7.1	8	115	76	36	64.7	●	
.0720	7.2	8	115	76	36	64.6	●	
.0730	7.3	8	115	76	36	64.6	●	
.0740	7.4	8	115	76	36	64.4	●	
.0750	7.5	8	115	76	36	64.4	●	

Application



Material

Steel
< 500 N/mm²

d1 [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]	T [sek]
7.60	150	0.250	6280	1570	71.0	2.5
8.00	150	0.260	5970	1550	78.0	2.5
8.20	150	0.270	5825	1575	83.0	2.8
8.50	150	0.280	5615	1570	89.0	2.7
8.80	150	0.285	5425	1545	94.0	2.8
9.00	150	0.295	5305	1565	99.5	2.7
9.20	150	0.300	5190	1555	103.5	3.1
9.50	150	0.310	5025	1560	110.5	3.1
9.80	150	0.320	4870	1560	117.5	3.1

Steel
500 - 850 N/mm²

7.60	120	0.215	5025	1080	49.0	3.6
8.00	120	0.225	4775	1075	54.0	3.6
8.20	120	0.230	4660	1070	56.5	4.0
8.50	120	0.240	4495	1080	61.5	4.0
8.80	120	0.245	4340	1065	65.0	4.0
9.00	120	0.250	4245	1060	67.5	4.1
9.20	120	0.260	4150	1080	72.0	4.5
9.50	120	0.265	4020	1065	75.5	4.5
9.80	120	0.275	3900	1075	81.0	4.5

Steel
850 - 1100 N/mm²

7.60	100	0.195	4190	815	37.0	4.7
8.00	100	0.205	3980	815	41.0	4.7
8.20	100	0.210	3880	815	43.0	5.3
8.50	100	0.220	3745	825	47.0	5.2
8.80	100	0.225	3615	815	49.5	5.3
9.00	100	0.230	3535	815	52.0	5.3
9.20	100	0.235	3460	815	54.0	5.9
9.50	100	0.245	3350	820	58.0	5.9
9.80	100	0.255	3250	830	62.5	5.8

Steel
1100 - 1300 N/mm²

7.60	70	0.150	2930	440	20.0	8.8
8.00	70	0.155	2785	430	21.5	8.9
8.20	70	0.160	2715	435	23.0	10.0
8.50	70	0.165	2620	430	24.5	10.0
8.80	70	0.170	2530	430	26.0	10.0
9.00	70	0.175	2475	435	27.5	9.9
9.20	70	0.180	2420	435	29.0	11.1
9.50	70	0.185	2345	435	31.0	11.1
9.80	70	0.190	2275	430	32.5	11.2

Material

Steel
1300 - 1500 N/mm²

d1 [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]	T [sek]
7.60	40	0.115	1675	195	9.0	19.8
8.00	40	0.120	1590	190	9.5	20.2
8.20	40	0.125	1555	195	10.5	22.2
8.50	40	0.130	1500	195	11.0	22.1
8.80	40	0.135	1445	195	12.0	22.1
9.00	40	0.135	1415	190	12.0	22.6
9.20	40	0.140	1385	195	13.0	24.8
9.50	40	0.145	1340	195	14.0	24.7
9.80	40	0.150	1300	195	14.5	24.7

Cold work tool steel
(12% Cr)
high alloyed
[1.2379]
Stainless steel
[Cr-Ni/1.4301]

7.60	60	0.115	2515	290	13.0	13.3
8.00	60	0.120	2385	285	14.5	13.5
8.20	60	0.125	2330	290	15.5	14.9
8.50	60	0.130	2245	290	16.5	14.9
8.80	60	0.135	2170	295	18.0	14.6
9.00	60	0.135	2120	285	18.0	15.1
9.20	60	0.140	2075	290	19.5	16.7
9.50	60	0.145	2010	290	20.5	16.6
9.80	60	0.150	1950	295	22.5	16.3

Titanium alloys
>300 HB
[Ti6Al4V]

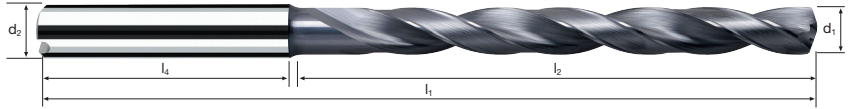
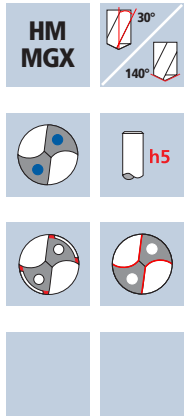
7.60	35	0.115	1465	170	7.5	22.7
8.00	35	0.120	1395	165	8.5	23.3
8.20	35	0.125	1360	170	9.0	25.5
8.50	35	0.130	1310	170	9.5	25.4
8.80	35	0.135	1265	170	10.5	25.3
9.00	35	0.135	1240	165	10.5	26.1
9.20	35	0.140	1210	170	11.5	28.4
9.50	35	0.145	1175	170	12.0	28.4
9.80	35	0.150	1135	170	13.0	28.3

Cast iron
(lamellar / spheroidal)

7.60	220	0.225	9215	2075	94.0	1.9
8.00	220	0.240	8755	2100	105.5	1.8
8.20	220	0.245	8540	2090	110.5	2.1
8.50	220	0.250	8240	2060	117.0	2.1
8.80	220	0.260	7960	2070	126.0	2.1
9.00	220	0.265	7780	2060	131.0	2.1
9.20	220	0.275	7610	2095	139.5	2.3
9.50	220	0.280	7370	2065	146.5	2.3
9.80	220	0.290	7145	2070	156.0	2.3

Spiral flute drills XDrill®

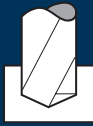
8xd



Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500				Inox Stainless	Ti Titanium	GG(G)
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Example: Order-N°.							DURO-X	
Article-N°.		ø-Code					B72020	
Ø Code	d1 m7	d2 h5	l1	l2	l4	L _{max}		
.0760	7.6	8	115	76	36	64.3	●	
.0770	7.7	8	115	76	36	64.4	●	
.0780	7.8	8	115	76	36	64.3	●	
.0790	7.9	8	115	76	36	64.3	●	
.0800	8.0	8	115	76	36	64.1	●	
.0810	8.1	10	129	86	40	72.3	●	
.0820	8.2	10	129	86	40	72.2	●	
.0830	8.3	10	129	86	40	72.2	●	
.0840	8.4	10	129	86	40	72.1	●	
.0850	8.5	10	129	86	40	72.0	●	
.0860	8.6	10	129	86	40	71.9	●	
.0870	8.7	10	129	86	40	71.9	●	
.0880	8.8	10	129	86	40	71.8	●	
.0890	8.9	10	129	86	40	71.8	●	
.0900	9.0	10	129	86	40	71.7	●	
.0910	9.1	10	138	95	40	80.7	●	
.0920	9.2	10	138	95	40	80.5	●	
.0930	9.3	10	138	95	40	80.5	●	
.0940	9.4	10	138	95	40	80.4	●	
.0950	9.5	10	138	95	40	80.4	●	
.0960	9.6	10	138	95	40	80.3	●	
.0970	9.7	10	138	95	40	80.3	●	
.0980	9.8	10	138	95	40	80.2	●	

Application



Material

Steel
< 500 N/mm²

d1 [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]	T [sek]
10.00	150	0.325	4775	1550	121.5	3.1
10.20	150	0.335	4680	1570	128.5	3.4
10.50	150	0.345	4545	1570	136.0	3.4
10.80	150	0.350	4420	1545	141.5	3.4
11.00	150	0.355	4340	1540	146.5	3.4
11.50	150	0.360	4150	1495	155.5	3.9
11.80	150	0.360	4045	1455	159.0	4.0
12.00	150	0.370	3980	1475	167.0	3.9
12.50	150	0.385	3820	1470	180.5	4.6

Steel
500 - 850 N/mm²

10.00	120	0.280	3820	1070	84.0	4.5
10.20	120	0.285	3745	1065	87.0	5.0
10.50	120	0.295	3640	1075	93.0	4.9
10.80	120	0.300	3535	1060	97.0	5.0
11.00	120	0.305	3470	1060	100.5	5.0
11.50	120	0.310	3320	1030	107.0	5.6
11.80	120	0.310	3235	1005	110.0	5.7
12.00	120	0.315	3185	1005	113.5	5.7
12.50	120	0.330	3055	1010	124.0	6.7

Steel
850 - 1100 N/mm²

10.00	100	0.260	3185	830	65.0	5.8
10.20	100	0.265	3120	825	67.5	6.4
10.50	100	0.270	3030	820	71.0	6.4
10.80	100	0.275	2945	810	74.0	6.5
11.00	100	0.280	2895	810	77.0	6.5
11.50	100	0.285	2770	790	82.0	7.3
11.80	100	0.285	2700	770	84.0	7.5
12.00	100	0.290	2655	770	87.0	7.5
12.50	100	0.305	2545	775	95.0	8.7

Steel
1100 - 1300 N/mm²

10.00	70	0.195	2230	435	34.0	11.0
10.20	70	0.200	2185	435	35.5	12.2
10.50	70	0.205	2120	435	37.5	12.1
10.80	70	0.210	2065	435	40.0	12.1
11.00	70	0.215	2025	435	41.5	12.1
11.50	70	0.215	1940	415	43.0	13.9
11.80	70	0.215	1890	405	44.5	14.3
12.00	70	0.220	1855	410	46.5	14.0
12.50	70	0.230	1785	410	50.5	16.5

Material

Steel
1300 - 1500 N/mm²

d1 [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]	T [sek]
10.00	40	0.150	1275	190	15.0	25.3
10.20	40	0.155	1250	195	16.0	27.1
10.50	40	0.160	1215	195	17.0	27.1
10.80	40	0.160	1180	190	17.5	27.7
11.00	40	0.165	1155	190	18.0	27.7
11.50	40	0.165	1105	180	18.5	32.1
11.80	40	0.165	1080	180	19.5	32.1
12.00	40	0.170	1060	180	20.5	32.0
12.50	40	0.175	1020	180	22.0	37.6

Cold work tool steel
(12% Cr)
high alloyed
[1.2379]
Stainless steel
[Cr-Ni/1.4301]

10.00	60	0.150	1910	285	22.5	16.8
10.20	60	0.155	1870	290	23.5	18.2
10.50	60	0.160	1820	290	25.0	18.2
10.80	60	0.160	1770	285	26.0	18.5
11.00	60	0.165	1735	285	27.0	18.4
11.50	60	0.165	1660	275	28.5	21.0
11.80	60	0.165	1620	265	29.0	21.8
12.00	60	0.170	1590	270	30.5	21.3
12.50	60	0.175	1530	270	33.0	25.1

Titanium alloys
>300 HB
[Ti6Al4V]

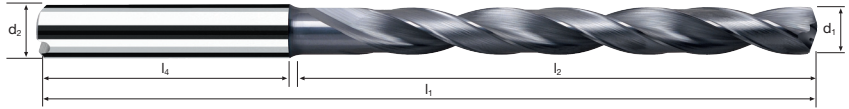
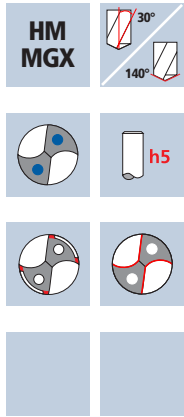
10.00	35	0.150	1115	165	13.0	29.1
10.20	35	0.155	1090	170	14.0	31.1
10.50	35	0.160	1060	170	14.5	31.0
10.80	35	0.160	1030	165	15.0	31.9
11.00	35	0.165	1015	165	15.5	31.9
11.50	35	0.165	970	160	16.5	36.1
11.80	35	0.165	945	155	17.0	37.2
12.00	35	0.170	930	160	18.0	36.0
12.50	35	0.175	890	155	19.0	43.7

Cast iron
(lamellar / spheroidal)

10.00	220	0.295	7005	2065	162.0	2.3
10.20	220	0.305	6865	2095	171.0	2.5
10.50	220	0.310	6670	2070	179.0	2.5
10.80	220	0.315	6485	2045	187.5	2.6
11.00	220	0.325	6365	2070	196.5	2.5
11.50	220	0.330	6090	2010	209.0	2.9
11.80	220	0.330	5935	1960	214.5	2.9
12.00	220	0.335	5835	1955	221.0	2.9
12.50	220	0.350	5600	1960	240.5	3.5

Spiral flute drills XDrill®

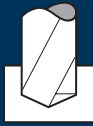
8xd



Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500			Inox Stainless	Ti Titanium	GG(G)
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Example: Order-N°.							DURO-X	
Article-N°.		ø-Code					B72020	
ø Code	d1 m7	d2 h5	l1	l2	l4	L _{max}		
.0990	9.9	10	138	95	40	80.3	●	
.1000	10.0	10	138	95	40	80.0	●	
.1010	10.1	12	153	105	45	88.3	●	
.1020	10.2	12	153	105	45	88.2	●	
.1030	10.3	12	153	105	45	88.1	●	
.1040	10.4	12	153	105	45	88.0	●	
.1050	10.5	12	153	105	45	88.0	●	
.1060	10.6	12	153	105	45	87.9	●	
.1070	10.7	12	153	105	45	87.9	●	
.1080	10.8	12	153	105	45	87.8	●	
.1090	10.9	12	153	105	45	87.8	●	
.1100	11.0	12	153	105	45	87.6	●	
.1110	11.1	12	162	114	45	96.6	●	
.1120	11.2	12	162	114	45	96.5	●	
.1130	11.3	12	162	114	45	96.5	●	
.1140	11.4	12	162	114	45	96.4	●	
.1150	11.5	12	162	114	45	96.4	●	
.1160	11.6	12	162	114	45	96.3	●	
.1170	11.7	12	162	114	45	96.3	●	
.1180	11.8	12	162	114	45	96.2	●	
.1190	11.9	12	162	114	45	96.2	●	
.1200	12.0	12	162	114	45	95.9	●	
.1250	12.5	14	181	133	45	113.0	●	

Application



Material

Steel
< 500 N/mm²

d1 [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]	T [sek]
12.80	150	0.395	3730	1475	190.0	4.6
13.00	150	0.400	3675	1470	195.0	4.6
13.50	150	0.405	3615	1465	200.5	4.6
14.00	150	0.410	3410	1400	215.5	4.8
14.50	150	0.420	3295	1385	228.5	5.6
14.80	150	0.425	3225	1370	235.5	5.6
15.00	150	0.430	3185	1370	242.0	5.6
15.50	150	0.440	3080	1355	255.5	5.7
16.00	150	0.450	2985	1345	270.5	5.7

Steel
500 - 850 N/mm²

12.80	120	0.335	2985	1000	128.5	6.8
13.00	120	0.340	2940	1000	132.5	6.8
13.50	120	0.345	2895	1000	137.0	6.7
14.00	120	0.350	2730	955	147.0	7.0
14.50	120	0.360	2635	950	157.0	8.1
14.80	120	0.365	2580	940	161.5	8.2
15.00	120	0.370	2545	940	166.0	8.2
15.50	120	0.375	2465	925	174.5	8.3
16.00	120	0.385	2385	920	185.0	8.3

Steel
850 - 1100 N/mm²

12.80	100	0.310	2485	770	99.0	8.8
13.00	100	0.315	2450	770	102.0	8.8
13.50	100	0.320	2410	770	105.5	8.7
14.00	100	0.325	2275	740	114.0	9.1
14.50	100	0.330	2195	725	119.5	10.7
14.80	100	0.335	2150	720	124.0	10.7
15.00	100	0.340	2120	720	127.0	10.7
15.50	100	0.345	2055	710	134.0	10.8
16.00	100	0.355	1990	705	141.5	10.9

Steel
1100 - 1300 N/mm²

12.80	70	0.235	1740	410	53.0	16.5
13.00	70	0.240	1715	410	54.5	16.5
13.50	70	0.245	1690	415	57.0	16.2
14.00	70	0.245	1590	390	60.0	17.2
14.50	70	0.250	1535	385	63.5	20.1
14.80	70	0.255	1505	385	66.0	20.1
15.00	70	0.260	1485	385	68.0	20.0
15.50	70	0.265	1440	380	71.5	20.3
16.00	70	0.270	1395	375	75.5	20.4

Material

Steel
1300 - 1500 N/mm²

d1 [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]	T [sek]
12.80	40	0.180	995	180	23.0	37.6
13.00	40	0.185	980	180	24.0	37.5
13.50	40	0.185	965	180	24.5	37.4
14.00	40	0.190	910	175	27.0	38.4
14.50	40	0.195	880	170	28.0	45.5
14.80	40	0.195	860	170	29.0	45.4
15.00	40	0.200	850	170	30.0	45.4
15.50	40	0.205	820	170	32.0	45.3
16.00	40	0.205	795	165	33.0	46.5

Cold work tool steel
(12% Cr)
high alloyed
[1.2379]
Stainless steel
[Cr-Ni/1.4301]

12.80	60	0.180	1490	270	34.5	25.0
13.00	60	0.185	1470	270	36.0	25.0
13.50	60	0.185	1445	265	36.5	25.4
14.00	60	0.190	1365	260	40.0	25.8
14.50	60	0.195	1315	255	42.0	30.3
14.80	60	0.195	1290	250	43.0	30.9
15.00	60	0.200	1275	255	45.0	30.3
15.50	60	0.205	1230	250	47.0	30.8
16.00	60	0.205	1195	245	49.5	31.3

Titanium alloys
>300 HB
[Ti6Al4V]

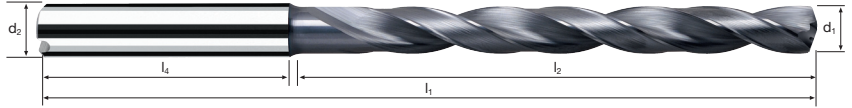
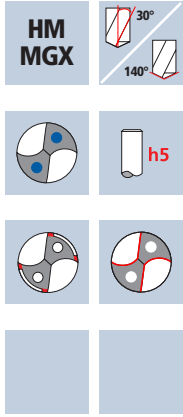
12.80	35	0.180	870	155	20.0	43.6
13.00	35	0.185	855	160	21.0	42.2
13.50	35	0.185	845	155	21.0	43.5
14.00	35	0.190	795	150	23.0	44.8
14.50	35	0.195	770	150	25.0	51.5
14.80	35	0.195	755	145	25.0	53.3
15.00	35	0.200	745	150	26.5	51.4
15.50	35	0.205	720	150	28.5	51.3
16.00	35	0.205	695	140	28.0	54.8

Cast iron
(lamellar / spheroidal)

12.80	220	0.355	5470	1940	249.5	3.5
13.00	220	0.360	5385	1940	257.5	3.5
13.50	220	0.370	5305	1965	269.0	3.4
14.00	220	0.375	5000	1875	288.5	3.6
14.50	220	0.380	4830	1835	303.0	4.2
14.80	220	0.385	4730	1820	313.0	4.2
15.00	220	0.390	4670	1820	321.5	4.2
15.50	220	0.400	4520	1810	341.5	4.3
16.00	220	0.405	4375	1770	356.0	4.3

Spiral flute drills XDrill®

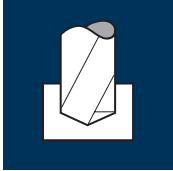
8xd



Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500			Inox Stainless	Ti Titanium	GG(G)
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Example: Order-N°.							DURO-X	
							B72020	
		Article-N°.		ø-Code				
		B72020		.1280				
ø Code	d1 m7	d2 h5	l1	l2	l4	L _{max}		
.1280	12.8	14	181	133	45	112.7	●	
.1300	13.0	14	181	133	45	112.6	●	
.1350	13.5	14	181	133	45	112.3	●	
.1380	13.8	14	181	133	45	112.1	●	
.1400	14.0	14	181	133	45	111.9	●	
.1450	14.5	16	203	152	48	128.9	●	
.1480	14.8	16	203	152	48	128.7	●	
.1500	15.0	16	203	152	48	128.6	●	
.1550	15.5	16	203	152	48	128.3	●	
.1580	15.8	16	203	152	48	128.1	●	
.1600	16.0	16	203	152	48	127.8	●	

Application



Material

Steel
< 500 N/mm²

d1 [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]	T [sek]
4.00	130	0.085	10345	880	11.0	2.4
5.00	130	0.105	8275	870	17.0	3.3
6.00	130	0.125	6895	860	24.5	3.3
7.00	130	0.145	5910	855	33.0	4.5
8.00	130	0.170	5175	880	44.0	4.3
9.00	130	0.190	4600	875	55.5	5.5
10.00	130	0.210	4140	870	68.5	5.5
11.00	130	0.230	3760	865	82.0	6.7
12.00	130	0.255	3450	880	99.5	6.6

Steel
500 - 850 N/mm²

4.00	100	0.085	7960	675	8.5	3.1
5.00	100	0.105	6365	670	13.0	4.3
6.00	100	0.125	5305	665	19.0	4.3
7.00	100	0.145	4545	660	25.5	5.8
8.00	100	0.170	3980	675	34.0	5.6
9.00	100	0.190	3535	670	42.5	7.2
10.00	100	0.210	3185	670	52.5	7.2
11.00	100	0.230	2895	665	63.0	8.7
12.00	100	0.255	2655	675	76.5	8.6

Steel
850 - 1100 N/mm²

4.00	70	0.065	5570	360	4.5	5.8
5.00	70	0.080	4455	355	7.0	8.1
6.00	70	0.095	3715	355	10.0	8.0
7.00	70	0.110	3185	350	13.5	10.9
8.00	70	0.130	2785	360	18.0	10.5
9.00	70	0.145	2475	360	23.0	13.5
10.00	70	0.160	2230	355	28.0	13.6
11.00	70	0.175	2025	355	33.5	16.3
12.00	70	0.190	1855	350	39.5	16.5

Steel
1100 - 1300 N/mm²

4.00	50	0.055	3980	220	3.0	9.5
5.00	50	0.065	3185	205	4.0	14.0
6.00	50	0.080	2655	210	6.0	13.5
7.00	50	0.095	2275	215	8.5	17.8
8.00	50	0.105	1990	210	10.5	18.1
9.00	50	0.120	1770	210	13.5	23.1
10.00	50	0.135	1590	215	17.0	22.4
11.00	50	0.145	1445	210	20.0	27.6
12.00	50	0.160	1325	210	24.0	27.5

Material

Cold work tool steel
(12% Cr)
high alloyed
[1.2379]
Stainless steel
[Cr-Ni/1.4301]

d1 [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]	T [sek]
4.00	50	0.045	3980	180	2.5	11.6
5.00	50	0.055	3185	175	3.5	16.4
6.00	50	0.070	2655	185	5.0	15.4
7.00	50	0.080	2275	180	7.0	21.2
8.00	50	0.090	1990	180	9.0	21.1
9.00	50	0.105	1770	185	12.0	26.2
10.00	50	0.115	1590	185	14.5	26.0
11.00	50	0.125	1445	180	17.0	32.2
12.00	50	0.135	1325	180	20.5	32.1

Cast iron
(lamellar / spheroidal)

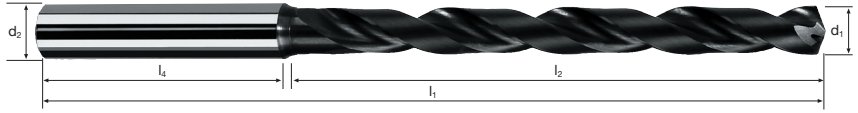
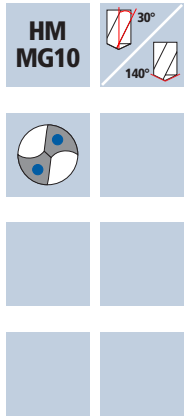
4.00	150	0.090	11935	1075	13.5	1.9
5.00	150	0.115	9550	1100	21.5	2.6
6.00	150	0.135	7960	1075	30.5	2.6
7.00	150	0.160	6820	1090	42.0	3.5
8.00	150	0.185	5970	1105	55.5	3.4
9.00	150	0.205	5305	1090	69.5	4.4
10.00	150	0.230	4775	1100	86.5	4.4
11.00	150	0.250	4340	1085	103.0	5.3
12.00	150	0.275	3980	1095	124.0	5.3

Wrought aluminium
alloys Si < 6%

4.00	200	0.080	15915	1275	16.0	1.6
5.00	200	0.100	12730	1275	25.0	2.2
6.00	200	0.120	10610	1275	36.0	2.2
7.00	200	0.140	9095	1275	49.0	3.0
8.00	200	0.160	7960	1275	64.0	3.0
9.00	200	0.180	7075	1275	81.0	3.8
10.00	200	0.200	6365	1275	100.0	3.8
11.00	200	0.220	5785	1275	121.0	4.5
12.00	200	0.240	5305	1275	144.0	4.5

Spiral flute drills Supradrill® N

8xd



Rm < 850	Rm 850-1100	Rm 1100-1300					Inox Stainless	GG(G) Aluminium
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Example: Order-N°.							Article-N°.		ø-Code			DURO-SD
							B52020		.0400			B52020
												B53020
ø Code	d1 m7	d2 h6	l1	l2	l4	L _{max}						
.0400	4.0	6	82	44	36	34.9					●	
.0420	4.2	6	82	44	36	34.8					●	
.0450	4.5	6	82	44	36	34.6					●	
.0480	4.8	6	82	44	36	34.4					●	
.0500	5.0	6	95	57	36	47.7					●	
.0550	5.5	6	95	57	36	47.5					●	
.0580	5.8	6	95	57	36	47.3					●	
.0600	6.0	6	95	57	36	47.4					●	
.0650	6.5	8	114	76	36	64.1					●	
.0680	6.8	8	114	76	36	63.8					●	
.0700	7.0	8	114	76	36	63.7					●	
.0750	7.5	8	114	76	36	63.4					●	
.0780	7.8	8	114	76	36	63.3					●	
.0800	8.0	8	114	76	36	63.3					●	
.0850	8.5	10	138	95	40	81.0					●	
.0900	9.0	10	138	95	40	80.7					●	
.0950	9.5	10	138	95	40	80.4					●	
.1000	10.0	10	138	95	40	80.2					●	
.1050	10.5	12	162	114	45	97.0					●	
.1100	11.0	12	162	114	45	96.6					●	
.1150	11.5	12	162	114	45	96.4					●	
.1200	12.0	12	162	114	45	96.2					●	

Application



Material

Steel
< 500 N/mm²

d1 [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]	T [sek]
12.50	130	0.265	3310	875	107.5	7.7
13.00	130	0.275	3185	875	116.0	7.7
13.50	130	0.285	3065	875	125.0	7.7
14.00	130	0.295	2955	870	134.0	7.7
14.50	130	0.305	2855	870	143.5	8.9
15.00	130	0.315	2760	870	153.5	8.9
16.00	130	0.335	2585	865	174.0	8.9

Steel
500 - 850 N/mm²

12.50	100	0.265	2545	675	83.0	10.0
13.00	100	0.275	2450	675	89.5	10.0
13.50	100	0.285	2360	675	96.5	10.0
14.00	100	0.295	2275	670	103.0	10.0
14.50	100	0.305	2195	670	110.5	11.5
15.00	100	0.315	2120	670	118.5	11.5
16.00	100	0.335	1990	665	133.5	11.5

Steel
850 - 1100 N/mm²

12.50	70	0.200	1785	355	43.5	19.1
13.00	70	0.210	1715	360	48.0	18.8
13.50	70	0.215	1650	355	51.0	19.0
14.00	70	0.225	1590	360	55.5	18.7
14.50	70	0.230	1535	355	58.5	21.8
15.00	70	0.240	1485	355	62.5	21.7
16.00	70	0.255	1395	355	71.5	21.6

Steel
1100 - 1300 N/mm²

12.50	50	0.165	1275	210	26.0	32.3
13.00	50	0.175	1225	215	28.5	31.4
13.50	50	0.180	1180	210	30.0	32.1
14.00	50	0.185	1135	210	32.5	32.0
14.50	50	0.195	1100	215	35.5	36.0
15.00	50	0.200	1060	210	37.0	36.7
16.00	50	0.215	995	215	43.0	35.7

Material

Cold work tool steel
(12% Cr)
high alloyed
[1.2379]
Stainless steel
[Cr-Ni/1.4301]

d1 [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]	T [sek]
12.50	50	0.145	1275	185	22.5	36.6
13.00	50	0.150	1225	185	24.5	36.5
13.50	50	0.155	1180	185	26.5	36.4
14.00	50	0.160	1135	180	27.5	37.4
14.50	50	0.165	1100	180	29.5	43.0
15.00	50	0.170	1060	180	32.0	42.9
16.00	50	0.185	995	185	37.0	41.5

Cast iron
(lamellar / spheroidal)

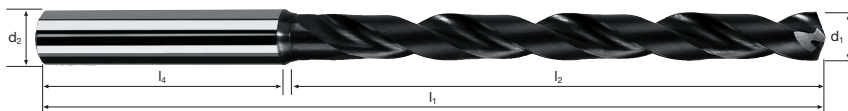
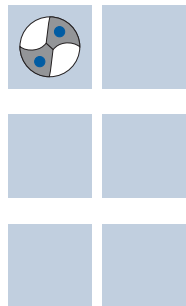
12.50	150	0.285	3820	1090	134.0	6.2
13.00	150	0.295	3675	1085	144.0	6.2
13.50	150	0.310	3535	1095	156.5	6.2
14.00	150	0.320	3410	1090	168.0	6.2
14.50	150	0.330	3295	1085	179.0	7.1
15.00	150	0.345	3185	1100	194.5	7.0
16.00	150	0.365	2985	1090	219.0	7.0

Wrought aluminium
alloys Si < 6%

12.50	200	0.250	5095	1275	156.5	5.3
13.00	200	0.260	4895	1275	169.0	5.3
13.50	200	0.270	4715	1275	182.5	5.3
14.00	200	0.280	4545	1275	196.5	5.3
14.50	200	0.290	4390	1275	210.5	6.1
15.00	200	0.300	4245	1275	225.5	6.1
16.00	200	0.320	3980	1275	256.5	6.0

Spiral flute drills Supradrill® N

8xd



Rm < 850	Rm 850-1100	Rm 1100-1300					Inox Stainless	GG(G) Aluminium
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Example: Order-N°.		Article-N°. B52020	ø-Code .1250					DURO-SD	
ø Code	d1 m7	d2 h6	l1	l2	l4	L _{max}			
.1250	12.5	14	181	133	45	113.0		●	
.1300	13.0	14	181	133	45	112.6		●	
.1350	13.5	14	181	133	45	112.3		●	
.1400	14.0	14	181	133	45	112.1		●	
.1450	14.5	16	203	152	48	128.9		●	
.1500	15.0	16	203	152	48	128.6		●	
.1600	16.0	16	203	152	48	128.0		●	

Application



Material

Steel
< 500 N/mm²

d1 [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]	T [sek]
3.00	100	0.120	10610	1275	9.0	2.4
4.00	100	0.120	7960	955	12.0	3.8
5.00	100	0.120	6365	765	15.0	6.0
6.00	100	0.150	5305	795	22.5	7.0
8.00	100	0.150	3980	595	30.0	12.2
10.00	100	0.200	3185	635	50.0	14.5
12.00	100	0.200	2655	530	60.0	20.9
14.00	100	0.240	2275	545	84.0	23.3
16.00	100	0.240	1990	480	96.5	30.5

Steel
500 - 850 N/mm²

3.00	75	0.115	7960	915	6.5	3.4
4.00	75	0.115	5970	685	8.5	5.3
5.00	75	0.115	4775	550	11.0	8.3
6.00	75	0.145	3980	575	16.5	9.7
8.00	75	0.145	2985	435	22.0	16.7
10.00	75	0.190	2385	455	35.5	20.2
12.00	75	0.190	1990	380	43.0	29.2
14.00	75	0.230	1705	390	60.0	32.6
16.00	75	0.230	1490	345	69.5	42.4

Steel
850 - 1100 N/mm²

3.00	50	0.100	5305	530	3.5	5.8
4.00	50	0.100	3980	400	5.0	9.0
5.00	50	0.100	3185	320	6.5	14.3
6.00	50	0.140	2655	370	10.5	15.1
8.00	50	0.140	1990	280	14.0	25.9
10.00	50	0.180	1590	285	22.5	32.2
12.00	50	0.180	1325	240	27.0	46.3
14.00	50	0.220	1135	250	38.5	50.9
16.00	50	0.220	995	220	44.0	66.5

Steel
1100 - 1300 N/mm²

3.00	35	0.090	3715	335	2.5	9.2
4.00	35	0.090	2785	250	3.0	14.4
5.00	35	0.090	2230	200	4.0	22.9
6.00	35	0.125	1855	230	6.5	24.3
8.00	35	0.125	1395	175	9.0	41.5
10.00	35	0.160	1115	180	14.0	51.0
12.00	35	0.160	930	150	17.0	74.0
14.00	35	0.200	795	160	24.5	79.5
16.00	35	0.200	695	140	28.0	104.6

Material

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

d1 [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]	T [sek]
3.00	40	0.100	4245	425	3.0	7.3
4.00	40	0.100	3185	320	4.0	11.3
5.00	40	0.100	2545	255	5.0	18.0
6.00	40	0.140	2120	295	8.5	18.9
8.00	40	0.140	1590	225	11.5	32.3
10.00	40	0.180	1275	230	18.0	39.9
12.00	40	0.180	1060	190	21.5	58.4
14.00	40	0.220	910	200	31.0	63.6
16.00	40	0.220	795	175	35.0	83.7

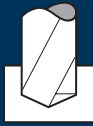
Cast iron
(lamellar / spheroidal)

3.00	80	0.160	8490	1360	9.5	2.3
4.00	80	0.160	6365	1020	13.0	3.5
5.00	80	0.160	5095	815	16.0	5.6
6.00	80	0.210	4245	890	25.0	6.3
8.00	80	0.210	3185	670	33.5	10.8
10.00	80	0.260	2545	660	52.0	13.9
12.00	80	0.260	2120	550	62.0	20.2
14.00	80	0.320	1820	580	89.5	21.9
16.00	80	0.320	1590	510	102.5	28.7

Wrought aluminium
alloys Si < 6%

3.00	180	0.120	19100	2290	16.0	1.3
4.00	180	0.120	14325	1720	21.5	2.1
5.00	180	0.120	11460	1375	27.0	3.3
6.00	180	0.150	9550	1435	40.5	3.9
8.00	180	0.150	7160	1075	54.0	6.8
10.00	180	0.200	5730	1145	90.0	8.0
12.00	180	0.200	4775	955	108.0	11.6
14.00	180	0.240	4095	985	151.5	12.9
16.00	180	0.240	3580	860	173.0	17.0

Application



Material

Steel
< 500 N/mm²

d1 [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]	T [sek]
3.00	100	0.120	10610	1275	9.0	3.3
4.00	100	0.120	7960	955	12.0	5.0
5.00	100	0.120	6365	765	15.0	8.0
6.00	100	0.150	5305	795	22.5	9.1
8.00	100	0.150	3980	595	30.0	16.2
10.00	100	0.200	3185	635	50.0	19.2
12.00	100	0.200	2655	530	60.0	27.2
14.00	100	0.240	2275	545	84.0	31.0
16.00	100	0.240	1990	480	96.5	40.5

Steel
500 - 850 N/mm²

3.00	75	0.115	7960	915	6.5	4.6
4.00	75	0.115	5970	685	8.5	7.0
5.00	75	0.115	4775	550	11.0	11.1
6.00	75	0.145	3980	575	16.5	12.6
8.00	75	0.145	2985	435	22.0	22.2
10.00	75	0.190	2385	455	35.5	26.8
12.00	75	0.190	1990	380	43.0	37.9
14.00	75	0.230	1705	390	60.0	43.4
16.00	75	0.230	1490	345	69.5	56.3

Steel
850 - 1100 N/mm²

3.00	50	0.100	5305	530	3.5	7.9
4.00	50	0.100	3980	400	5.0	12.0
5.00	50	0.100	3185	320	6.5	19.0
6.00	50	0.140	2655	370	10.5	19.6
8.00	50	0.140	1990	280	14.0	34.5
10.00	50	0.180	1590	285	22.5	42.7
12.00	50	0.180	1325	240	27.0	60.0
14.00	50	0.220	1135	250	38.5	67.7
16.00	50	0.220	995	220	44.0	88.4

Steel
1100 - 1300 N/mm²

3.00	35	0.090	3715	335	2.5	12.4
4.00	35	0.090	2785	250	3.0	19.2
5.00	35	0.090	2230	200	4.0	30.4
6.00	35	0.125	1855	230	6.5	31.6
8.00	35	0.125	1395	175	9.0	55.2
10.00	35	0.160	1115	180	14.0	67.7
12.00	35	0.160	930	150	17.0	96.0
14.00	35	0.200	795	160	24.5	105.8
16.00	35	0.200	695	140	28.0	138.9

Material

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

d1 [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]	T [sek]
3.00	40	0.100	4245	425	3.0	9.8
4.00	40	0.100	3185	320	4.0	15.0
5.00	40	0.100	2545	255	5.0	23.9
6.00	40	0.140	2120	295	8.5	24.6
8.00	40	0.140	1590	225	11.5	42.9
10.00	40	0.180	1275	230	18.0	53.0
12.00	40	0.180	1060	190	21.5	75.8
14.00	40	0.220	910	200	31.0	84.6
16.00	40	0.220	795	175	35.0	111.1

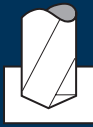
Cast iron
(lamellar / spheroidal)

3.00	80	0.160	8490	1360	9.5	3.1
4.00	80	0.160	6365	1020	13.0	4.7
5.00	80	0.160	5095	815	16.0	7.5
6.00	80	0.210	4245	890	25.0	8.2
8.00	80	0.210	3185	670	33.5	14.4
10.00	80	0.260	2545	660	52.0	18.5
12.00	80	0.260	2120	550	62.0	26.2
14.00	80	0.320	1820	580	89.5	29.2
16.00	80	0.320	1590	510	102.5	38.1

Wrought aluminium
alloys Si < 6%

3.00	180	0.120	19100	2290	16.0	1.8
4.00	180	0.120	14325	1720	21.5	2.8
5.00	180	0.120	11460	1375	27.0	4.4
6.00	180	0.150	9550	1435	40.5	5.1
8.00	180	0.150	7160	1075	54.0	9.0
10.00	180	0.200	5730	1145	90.0	10.6
12.00	180	0.200	4775	955	108.0	15.1
14.00	180	0.240	4095	985	151.5	17.2
16.00	180	0.240	3580	860	173.0	22.6

Application



Material

Steel
< 500 N/mm²

d1 [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]	T [sek]
3.00	90	0.120	9550	1145	8.0	4.5
4.00	90	0.120	7160	860	11.0	7.0
5.00	90	0.120	5730	690	13.5	11.0
6.00	90	0.150	4775	715	20.0	12.7
8.00	90	0.150	3580	535	27.0	22.5
9.00	90	0.200	3185	635	40.5	21.2
10.00	90	0.200	2865	575	45.0	26.4
12.00	90	0.200	2385	475	53.5	37.9
14.00	90	0.240	2045	490	75.5	43.1

Steel
500 - 850 N/mm²

3.00	70	0.115	7425	855	6.0	6.1
4.00	70	0.115	5570	640	8.0	9.4
5.00	70	0.115	4455	510	10.0	14.9
6.00	70	0.145	3715	540	15.5	16.8
8.00	70	0.145	2785	405	20.5	29.8
9.00	70	0.190	2475	470	30.0	28.7
10.00	70	0.190	2230	425	33.5	35.7
12.00	70	0.190	1855	350	39.5	51.4
14.00	70	0.230	1590	365	56.0	57.9

Steel
850 - 1100 N/mm²

3.00	45	0.100	4775	480	3.5	10.8
4.00	45	0.100	3580	360	4.5	16.7
5.00	45	0.100	2865	285	5.5	26.6
6.00	45	0.140	2385	335	9.5	27.0
8.00	45	0.140	1790	250	12.5	48.2
9.00	45	0.180	1590	285	18.0	47.3
10.00	45	0.180	1430	255	20.0	59.5
12.00	45	0.180	1195	215	24.5	83.7
14.00	45	0.220	1025	225	34.5	93.9

Steel
1100 - 1300 N/mm²

3.00	30	0.090	3185	285	2.0	18.2
4.00	30	0.090	2385	215	2.5	27.9
5.00	30	0.090	1910	170	3.5	44.6
6.00	30	0.125	1590	200	5.5	45.3
8.00	30	0.125	1195	150	7.5	80.4
9.00	30	0.160	1060	170	11.0	79.2
10.00	30	0.160	955	155	12.0	97.9
12.00	30	0.160	795	125	14.0	144.0
14.00	30	0.200	680	135	21.0	156.4

Material

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

d1 [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]	T [sek]
3.00	35	0.100	3715	370	2.5	14.0
4.00	35	0.100	2785	280	3.5	21.4
5.00	35	0.100	2230	225	4.5	33.7
6.00	35	0.140	1855	260	7.5	34.8
8.00	35	0.140	1395	195	10.0	61.8
9.00	35	0.180	1240	225	14.5	59.9
10.00	35	0.180	1115	200	15.5	75.9
12.00	35	0.180	930	165	18.5	109.1
14.00	35	0.220	795	175	27.0	120.7

Cast iron
(lamellar / spheroidal)

3.00	70	0.160	7425	1190	8.5	4.4
4.00	70	0.160	5570	890	11.0	6.7
5.00	70	0.160	4455	715	14.0	10.6
6.00	70	0.210	3715	780	22.0	11.6
8.00	70	0.210	2785	585	29.5	20.6
9.00	70	0.260	2475	645	41.0	20.9
10.00	70	0.260	2230	580	45.5	26.2
12.00	70	0.260	1855	480	54.5	37.5
14.00	70	0.320	1590	510	78.5	41.4

Wrought aluminium
alloys Si < 6%

3.00	160	0.120	16975	2035	14.5	2.6
4.00	160	0.120	12730	1530	19.0	3.9
5.00	160	0.120	10185	1220	24.0	6.2
6.00	160	0.150	8490	1275	36.0	7.1
8.00	160	0.150	6365	955	48.0	12.6
9.00	160	0.200	5660	1130	72.0	11.9
10.00	160	0.200	5095	1020	80.0	14.9
12.00	160	0.200	4245	850	96.0	21.2
14.00	160	0.240	3640	875	134.5	24.1

Application



Material

Steel
< 500 N/mm²

d1 [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]	T [sek]
3.00	90	0.120	9550	1145	8.0	5.5
4.00	90	0.120	7160	860	11.0	8.4
5.00	90	0.120	5730	690	13.5	13.2
6.00	90	0.150	4775	715	20.0	15.4
7.00	90	0.150	4095	615	23.5	20.4
8.00	90	0.150	3580	535	27.0	27.0
9.00	90	0.200	3185	635	40.5	25.5
10.00	90	0.200	2865	575	45.0	31.6
12.00	90	0.200	2385	475	53.5	46.1

Steel
500 - 850 N/mm²

3.00	70	0.115	7425	855	6.0	7.4
4.00	70	0.115	5570	640	8.0	11.3
5.00	70	0.115	4455	510	10.0	17.8
6.00	70	0.145	3715	540	15.5	20.3
7.00	70	0.145	3185	460	17.5	27.3
8.00	70	0.145	2785	405	20.5	35.7
9.00	70	0.190	2475	470	30.0	34.4
10.00	70	0.190	2230	425	33.5	42.8
12.00	70	0.190	1855	350	39.5	62.6

Steel
850 - 1100 N/mm²

3.00	45	0.100	4775	480	3.5	13.2
4.00	45	0.100	3580	360	4.5	20.0
5.00	45	0.100	2865	285	5.5	31.9
6.00	45	0.140	2385	335	9.5	32.8
7.00	45	0.140	2045	285	11.0	44.1
8.00	45	0.140	1790	250	12.5	57.8
9.00	45	0.180	1590	285	18.0	56.7
10.00	45	0.180	1430	255	20.0	71.3
12.00	45	0.180	1195	215	24.5	101.9

Steel
1100 - 1300 N/mm²

3.00	30	0.090	3185	285	2.0	22.2
4.00	30	0.090	2385	215	2.5	33.5
5.00	30	0.090	1910	170	3.5	53.5
6.00	30	0.125	1590	200	5.5	54.9
7.00	30	0.125	1365	170	6.5	73.9
8.00	30	0.125	1195	150	7.5	96.4
9.00	30	0.160	1060	170	11.0	95.1
10.00	30	0.160	955	155	12.0	117.3
12.00	30	0.160	795	125	14.0	175.2

Material

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

d1 [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]	T [sek]
3.00	35	0.100	3715	370	2.5	17.1
4.00	35	0.100	2785	280	3.5	25.7
5.00	35	0.100	2230	225	4.5	40.4
6.00	35	0.140	1855	260	7.5	42.2
7.00	35	0.140	1590	225	8.5	55.9
8.00	35	0.140	1395	195	10.0	74.2
9.00	35	0.180	1240	225	14.5	71.9
10.00	35	0.180	1115	200	15.5	90.9
12.00	35	0.180	930	165	18.5	132.7

Cast iron
(lamellar / spheroidal)

3.00	70	0.160	7425	1190	8.5	5.3
4.00	70	0.160	5570	890	11.0	8.1
5.00	70	0.160	4455	715	14.0	12.7
6.00	70	0.210	3715	780	22.0	14.1
7.00	70	0.210	3185	670	26.0	18.8
8.00	70	0.210	2785	585	29.5	24.7
9.00	70	0.260	2475	645	41.0	25.1
10.00	70	0.260	2230	580	45.5	31.3
12.00	70	0.260	1855	480	54.5	45.6

Wrought aluminium
alloys Si < 6%

3.00	160	0.120	16975	2035	14.5	3.1
4.00	160	0.120	12730	1530	19.0	4.7
5.00	160	0.120	10185	1220	24.0	7.5
6.00	160	0.150	8490	1275	36.0	8.6
7.00	160	0.150	7275	1090	42.0	11.5
8.00	160	0.150	6365	955	48.0	15.1
9.00	160	0.200	5660	1130	72.0	14.3
10.00	160	0.200	5095	1020	80.0	17.8
12.00	160	0.200	4245	850	96.0	25.8

Application



Material

Steel
< 500 N/mm²

d1 [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]	T [sek]
0.20	100	0.004	60000	240	0.0	0.3
0.30	100	0.006	60000	360	0.0	0.3
0.40	100	0.008	60000	480	0.0	0.3
0.50	100	0.010	60000	600	0.0	0.3
0.60	100	0.012	53050	635	0.0	0.3
0.70	100	0.014	45475	635	0.0	0.3
0.80	100	0.016	39790	635	0.5	0.4
0.90	100	0.018	35370	635	0.5	0.4
1.00	100	0.020	31830	635	0.5	0.5

Steel
500 - 850 N/mm²

0.20	80	0.004	60000	240	0.0	0.3
0.30	80	0.007	60000	420	0.0	0.2
0.40	80	0.009	60000	540	0.0	0.2
0.50	80	0.011	50930	560	0.0	0.3
0.60	80	0.013	42440	550	0.0	0.3
0.70	80	0.016	36380	580	0.0	0.4
0.80	80	0.018	31830	575	0.5	0.4
0.90	80	0.020	28295	565	0.5	0.5
1.00	80	0.022	25465	560	0.5	0.5

Steel
850 - 1100 N/mm²

0.20	40	0.003	60000	180	0.0	0.3
0.30	40	0.005	42440	210	0.0	0.5
0.40	40	0.006	31830	190	0.0	0.6
0.50	40	0.008	25465	205	0.0	0.8
0.60	40	0.009	21220	190	0.0	0.9
0.70	40	0.011	18190	200	0.0	1.1
0.80	40	0.012	15915	190	0.0	1.3
0.90	40	0.014	14145	200	0.0	1.4
1.00	40	0.015	12730	190	0.0	1.6

Steel
1100 - 1300 N/mm²

0.20	50	0.004	60000	240	0.0	0.3
0.30	50	0.005	53050	265	0.0	0.4
0.40	50	0.007	39790	280	0.0	0.4
0.50	50	0.009	31830	285	0.0	0.5
0.60	50	0.011	26525	290	0.0	0.6
0.70	50	0.013	22735	295	0.0	0.7
0.80	50	0.015	19895	300	0.0	0.8
0.90	50	0.016	17685	285	0.0	1.0
1.00	50	0.018	15915	285	0.0	1.1

Material

Cast iron
(lamellar / spheroidal)

d1 [mm]	v _c [m/min]	f [mm]	n [min ⁻¹]	v _f [mm/min]	Q [cm ³ /min]	T [sek]
0.20	130	0.004	60000	240	0.0	0.3
0.30	130	0.007	60000	420	0.0	0.2
0.40	130	0.009	60000	540	0.0	0.2
0.50	130	0.011	60000	660	0.0	0.2
0.60	130	0.013	60000	780	0.0	0.2
0.70	130	0.016	59115	945	0.5	0.2
0.80	130	0.018	51725	930	0.5	0.3
0.90	130	0.020	45980	920	0.5	0.3
1.00	130	0.022	41380	910	0.5	0.3

Wrought aluminium
alloys Si < 6%

0.20	160	0.004	60000	240	0.0	0.3
0.30	160	0.007	60000	420	0.0	0.2
0.40	160	0.009	60000	540	0.0	0.2
0.50	160	0.011	60000	660	0.0	0.2
0.60	160	0.013	60000	780	0.0	0.2
0.70	160	0.016	60000	960	0.5	0.2
0.80	160	0.018	60000	1080	0.5	0.2
0.90	160	0.020	56590	1130	0.5	0.2
1.00	160	0.022	50930	1120	1.0	0.3