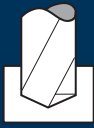


## Application



## Material

Steel  
< 500 N/mm<sup>2</sup>

d1 [mm]	v <sub>c</sub> [m/min]	f [mm]	n [min <sup>-1</sup> ]	v <sub>f</sub> [mm/min]	Q [cm <sup>3</sup> /min]	T [sek]
3.00	150	0.080	15915	1275	9.0	1.3
3.30	150	0.090	14470	1300	11.0	1.2
3.50	150	0.095	13640	1295	12.5	1.2
3.80	150	0.105	12565	1320	15.0	1.6
4.00	150	0.110	11935	1315	16.5	1.6
4.20	150	0.120	11370	1365	19.0	1.5
4.50	150	0.140	10610	1485	23.5	1.4
4.80	150	0.145	9945	1440	26.0	2.0
5.00	150	0.155	9550	1480	29.0	1.9

Steel  
500 - 850 N/mm<sup>2</sup>

3.00	120	0.070	12730	890	6.5	1.8
3.30	120	0.075	11575	870	7.5	1.9
3.50	120	0.080	10915	875	8.5	1.8
3.80	120	0.090	10050	905	10.5	2.3
4.00	120	0.095	9550	905	11.5	2.3
4.20	120	0.105	9095	955	13.0	2.2
4.50	120	0.120	8490	1020	16.0	2.0
4.80	120	0.125	7960	995	18.0	2.9
5.00	120	0.130	7640	995	19.5	2.9

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

3.00	100	0.065	10610	690	5.0	2.4
3.30	100	0.070	9645	675	6.0	2.4
3.50	100	0.075	9095	680	6.5	2.4
3.80	100	0.080	8375	670	7.5	3.2
4.00	100	0.090	7960	715	9.0	2.9
4.20	100	0.095	7580	720	10.0	2.9
4.50	100	0.110	7075	780	12.5	2.7
4.80	100	0.115	6630	760	14.0	3.7
5.00	100	0.120	6365	765	15.0	3.7

Steel  
1100 - 1300 N/mm<sup>2</sup>

3.00	70	0.050	7425	370	2.5	4.4
3.30	70	0.055	6750	370	3.0	4.4
3.50	70	0.055	6365	350	3.5	4.6
3.80	70	0.060	5865	350	4.0	6.1
4.00	70	0.065	5570	360	4.5	5.8
4.20	70	0.070	5305	370	5.0	5.6
4.50	70	0.085	4950	420	6.5	4.9
4.80	70	0.090	4640	420	7.5	6.8
5.00	70	0.090	4455	400	8.0	7.2

## Material

Steel  
1300 - 1500 N/mm<sup>2</sup>

d1 [mm]	v <sub>c</sub> [m/min]	f [mm]	n [min <sup>-1</sup> ]	v <sub>f</sub> [mm/min]	Q [cm <sup>3</sup> /min]	T [sek]
3.00	40	0.035	4245	150	1.0	10.9
3.30	40	0.040	3860	155	1.5	10.4
3.50	40	0.045	3640	165	1.5	9.7
3.80	40	0.045	3350	150	1.5	14.2
4.00	40	0.050	3185	160	2.0	13.1
4.20	40	0.055	3030	165	2.5	12.7
4.50	40	0.065	2830	185	3.0	11.2
4.80	40	0.070	2655	185	3.5	15.4
5.00	40	0.070	2545	180	3.5	15.9

Stainless steel  
[Cr-Ni/1.4301]

3.00	60	0.035	6365	225	1.5	7.3
3.30	60	0.040	5785	230	2.0	7.0
3.50	60	0.045	5455	245	2.5	6.6
3.80	60	0.045	5025	225	2.5	9.4
4.00	60	0.050	4775	240	3.0	8.7
4.20	60	0.055	4545	250	3.5	8.4
4.50	60	0.065	4245	275	4.5	7.5
4.80	60	0.070	3980	280	5.0	10.2
5.00	60	0.070	3820	265	5.0	10.8

Titanium alloys  
>300 HB  
[Ti6Al4V]

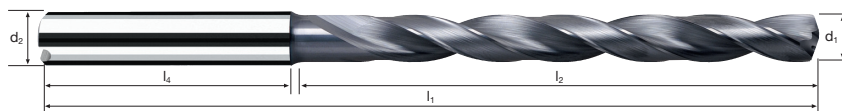
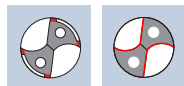
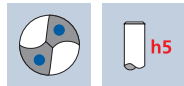
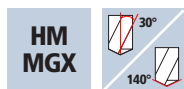
3.00	35	0.035	3715	130	1.0	12.6
3.30	35	0.040	3375	135	1.0	12.0
3.50	35	0.045	3185	145	1.5	11.1
3.80	35	0.045	2930	130	1.5	16.3
4.00	35	0.050	2785	140	2.0	15.0
4.20	35	0.055	2655	145	2.0	14.4
4.50	35	0.065	2475	160	2.5	13.0
4.80	35	0.070	2320	160	3.0	17.8
5.00	35	0.070	2230	155	3.0	18.5

Cast iron  
(lamellar / spheroidal)

3.00	220	0.075	23345	1750	12.5	0.9
3.30	220	0.080	21220	1700	14.5	1.0
3.50	220	0.085	20010	1700	16.5	0.9
3.80	220	0.095	18430	1750	20.0	1.2
4.00	220	0.100	17505	1750	22.0	1.2
4.20	220	0.110	16675	1835	25.5	1.1
4.50	220	0.125	15560	1945	31.0	1.1
4.80	220	0.135	14590	1970	35.5	1.4
5.00	220	0.140	14005	1960	38.5	1.5

# Spiral flute drills XDrill®

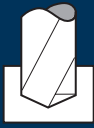
8xd



Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500				Inox Stainless	Ti Titanium	GG(G)
-------------	----------------	-----------------	-----------------	--	--	--	-------------------	----------------	-------

Example: Order-N°.		Article-N°.		ø-Code				DURO-X	
		B72020		.0300				B72020	
ø Code	d1 m7	d2 h5	l1	l2	l4	L <sub>max</sub>			
.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/mm<sup>2</sup>

d1 [mm]	v <sub>c</sub> [m/min]	f [mm]	n [min <sup>-1</sup> ]	v <sub>f</sub> [mm/min]	Q [cm <sup>3</sup> /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/mm<sup>2</sup>

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/mm<sup>2</sup>

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/mm<sup>2</sup>

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/mm<sup>2</sup>

d1 [mm]	v <sub>c</sub> [m/min]	f [mm]	n [min <sup>-1</sup> ]	v <sub>f</sub> [mm/min]	Q [cm <sup>3</sup> /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

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]

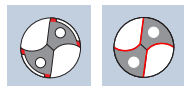
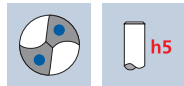
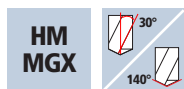
5.50	35	0.080	2025	160	4.0	17.8
5.80	35	0.080	1920	155	4.0	18.3
6.00	35	0.090	1855	165	4.5	17.2
6.20	35	0.095	1795	170	5.0	19.5
6.50	35	0.100	1715	170	5.5	19.4
6.80	35	0.105	1640	170	6.0	19.3
7.00	35	0.105	1590	165	6.5	19.9
7.20	35	0.110	1545	170	7.0	22.8
7.50	35	0.115	1485	170	7.5	22.7

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



<b>Rm</b> < 850	<b>Rm</b> 850-1100	<b>Rm</b> 1100-1300	<b>Rm</b> 1300-1500			<b>Inox</b> Stainless	<b>Ti</b> Titanium	<b>GG(G)</b>
--------------------	-----------------------	------------------------	------------------------	--	--	--------------------------	-----------------------	--------------

Example: Order-N°.							Article-N°.		ø-Code		DURO-X	
							<b>B72020</b>		<b>.0530</b>		<b>B72020</b>	
ø Code	d1 m7	d2 h5	l1	l2	l4	L <sub>max</sub>						
.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/mm<sup>2</sup>

d1 [mm]	v <sub>c</sub> [m/min]	f [mm]	n [min <sup>-1</sup> ]	v <sub>f</sub> [mm/min]	Q [cm <sup>3</sup> /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/mm<sup>2</sup>

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/mm<sup>2</sup>

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/mm<sup>2</sup>

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/mm<sup>2</sup>

d1 [mm]	v <sub>c</sub> [m/min]	f [mm]	n [min <sup>-1</sup> ]	v <sub>f</sub> [mm/min]	Q [cm <sup>3</sup> /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

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]

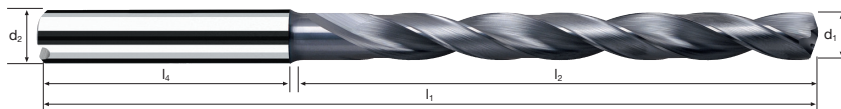
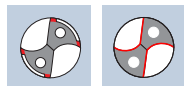
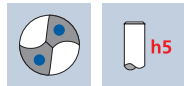
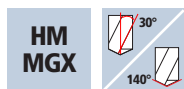
7.60	35	0.115	1465	170	7.5	22.7
8.00	35	0.120	1395	165	8.5	23.3
8.20	35	0.125	1360	170	9.0	25.5
8.50	35	0.130	1310	170	9.5	25.4
8.80	35	0.135	1265	170	10.5	25.3
9.00	35	0.135	1240	165	10.5	26.1
9.20	35	0.140	1210	170	11.5	28.4
9.50	35	0.145	1175	170	12.0	28.4
9.80	35	0.150	1135	170	13.0	28.3

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®

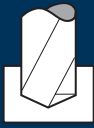
8xd



<b>Rm</b> < 850	<b>Rm</b> 850-1100	<b>Rm</b> 1100-1300	<b>Rm</b> 1300-1500			<b>Inox</b> Stainless	<b>Ti</b> Titanium	<b>GG(G)</b>
--------------------	-----------------------	------------------------	------------------------	--	--	--------------------------	-----------------------	--------------

Example: Order-N°.							Article-N°.		ø-Code		DURO-X	
							<b>B72020</b>		<b>.0760</b>		<b>B72020</b>	
ø Code	d1 m7	d2 h5	l1	l2	l4	L <sub>max</sub>						
.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/mm<sup>2</sup>

d1 [mm]	v <sub>c</sub> [m/min]	f [mm]	n [min <sup>-1</sup> ]	v <sub>f</sub> [mm/min]	Q [cm <sup>3</sup> /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/mm<sup>2</sup>

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/mm<sup>2</sup>

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/mm<sup>2</sup>

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/mm<sup>2</sup>

d1 [mm]	v <sub>c</sub> [m/min]	f [mm]	n [min <sup>-1</sup> ]	v <sub>f</sub> [mm/min]	Q [cm <sup>3</sup> /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

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]

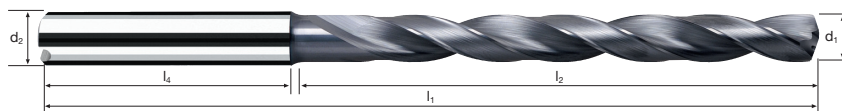
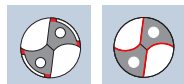
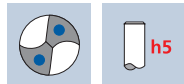
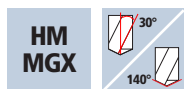
10.00	35	0.150	1115	165	13.0	29.1
10.20	35	0.155	1090	170	14.0	31.1
10.50	35	0.160	1060	170	14.5	31.0
10.80	35	0.160	1030	165	15.0	31.9
11.00	35	0.165	1015	165	15.5	31.9
11.50	35	0.165	970	160	16.5	36.1
11.80	35	0.165	945	155	17.0	37.2
12.00	35	0.170	930	160	18.0	36.0
12.50	35	0.175	890	155	19.0	43.7

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

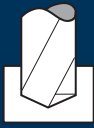


<b>Rm</b> < 850	<b>Rm</b> 850-1100	<b>Rm</b> 1100-1300	<b>Rm</b> 1300-1500			<b>Inox</b> Stainless	<b>Ti</b> Titanium	<b>GG(G)</b>
--------------------	-----------------------	------------------------	------------------------	--	--	--------------------------	-----------------------	--------------

Example: Order-N°.		Article-N°.		ø-Code				DURO-X	
		<b>B72020</b>		<b>.0990</b>				<b>B72020</b>	
ø Code	d1 m7	d2 h5	l1	l2	l4	L <sub>max</sub>			
.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/mm<sup>2</sup>

d1 [mm]	v <sub>c</sub> [m/min]	f [mm]	n [min <sup>-1</sup> ]	v <sub>f</sub> [mm/min]	Q [cm <sup>3</sup> /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/mm<sup>2</sup>

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/mm<sup>2</sup>

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/mm<sup>2</sup>

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/mm<sup>2</sup>

d1 [mm]	v <sub>c</sub> [m/min]	f [mm]	n [min <sup>-1</sup> ]	v <sub>f</sub> [mm/min]	Q [cm <sup>3</sup> /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

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

