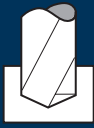


Application



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]
2.50	140	0.060	17825	1070	5.5	1.2
2.60	140	0.060	17140	1030	5.5	1.2
2.80	140	0.065	15915	1035	6.5	1.2
2.90	140	0.070	15365	1075	7.0	1.1
3.00	170	0.080	18040	1445	10.0	0.8
3.30	170	0.085	16400	1395	12.0	0.9
3.50	170	0.090	15460	1390	13.5	0.9
3.70	170	0.095	14625	1390	15.0	0.8
3.80	170	0.100	14240	1425	16.0	1.2

Steel
500 - 850 N/mm²

2.50	110	0.060	14005	840	4.0	1.5
2.60	110	0.060	13465	810	4.5	1.5
2.80	110	0.065	12505	815	5.0	1.5
2.90	110	0.070	12075	845	5.5	1.4
3.00	130	0.080	13795	1105	8.0	1.1
3.30	130	0.085	12540	1065	9.0	1.1
3.50	130	0.090	11825	1065	10.0	1.1
3.70	130	0.095	11185	1065	11.5	1.1
3.80	130	0.100	10890	1090	12.5	1.5

Steel
850 - 1100 N/mm²

2.50	80	0.045	10185	460	2.5	2.7
2.60	80	0.045	9795	440	2.5	2.8
2.80	80	0.050	9095	455	3.0	2.7
2.90	80	0.050	8780	440	3.0	2.8
3.00	110	0.060	11670	700	5.0	1.7
3.30	110	0.065	10610	690	6.0	1.7
3.50	110	0.070	10005	700	6.5	1.7
3.70	110	0.075	9465	710	7.5	1.7
3.80	110	0.075	9215	690	8.0	2.4

Steel
1100 - 1300 N/mm²

2.50	55	0.040	7005	280	1.5	4.4
2.60	55	0.040	6735	270	1.5	4.6
2.80	55	0.040	6255	250	1.5	4.9
2.90	55	0.045	6035	270	2.0	4.5
3.00	70	0.050	7425	370	2.5	3.3
3.30	70	0.055	6750	370	3.0	3.2
3.50	70	0.060	6365	380	3.5	3.1
3.70	70	0.060	6020	360	4.0	3.3
3.80	70	0.065	5865	380	4.5	4.3

Material

Steel
1300 - 1500 N/mm²

2.50	25	0.025	3185	80	0.5	15.6
2.60	25	0.025	3060	75	0.5	16.5
2.80	25	0.030	2840	85	0.5	14.4
2.90	25	0.030	2745	80	0.5	15.3
3.00	40	0.040	4245	170	1.0	7.1
3.30	40	0.045	3860	175	1.5	6.8
3.50	40	0.045	3640	165	1.5	7.2
3.70	40	0.050	3440	170	2.0	6.9
3.80	40	0.050	3350	170	2.0	9.7

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

2.50	50	0.030	6365	190	1.0	6.6
2.60	50	0.035	6120	215	1.0	5.7
2.80	50	0.035	5685	200	1.0	6.1
2.90	50	0.035	5490	190	1.5	6.4
3.00	60	0.045	6365	285	2.0	4.3
3.30	60	0.050	5785	290	2.5	4.1
3.50	60	0.055	5455	300	3.0	3.9
3.70	60	0.055	5160	285	3.0	4.1
3.80	60	0.060	5025	300	3.5	5.5

Cast iron
(lamellar / spheroidal)

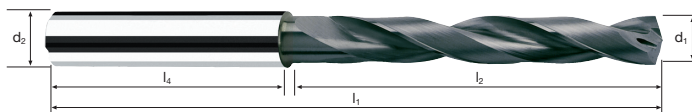
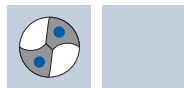
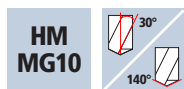
2.50	160	0.065	20370	1325	6.5	0.9
2.60	160	0.065	19590	1275	7.0	1.0
2.80	160	0.070	18190	1275	8.0	1.0
2.90	160	0.075	17560	1315	8.5	0.9
3.00	220	0.085	23345	1985	14.0	0.6
3.30	220	0.095	21220	2015	17.0	0.6
3.50	220	0.100	20010	2000	19.0	0.6
3.70	220	0.105	18925	1985	21.5	0.6
3.80	220	0.110	18430	2025	23.0	0.8

Wrought aluminium
alloys Si < 6%

2.50	220	0.050	28010	1400	7.0	0.9
2.60	220	0.050	26935	1345	7.0	0.9
2.80	220	0.055	25010	1375	8.5	0.9
2.90	220	0.060	24150	1450	9.5	0.8
3.00	250	0.065	26525	1725	12.0	0.7
3.30	250	0.075	24115	1810	15.5	0.7
3.50	250	0.080	22735	1820	17.5	0.7
3.70	250	0.080	21505	1720	18.5	0.7
3.80	250	0.085	20940	1780	20.0	0.9

Spiral flute drills Supradrill® U

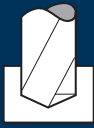
5xd



Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500				Inox Stainless		GG(G) Aluminium
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Example: Order-N°.							Article-N°.		ø-Code				NANO-U ²	
							B62015		.0250				B62015	
													B63015	
ø Code	d1 m7	d2 h5	l1	l2	l4	L _{max}								
.0250*	2.50	6	66	28	36	20.8								●
.0255*	2.55	6	66	28	36	20.7								●
.0260*	2.60	6	66	28	36	20.6								●
.0265*	2.65	6	66	28	36	20.6								●
.0270*	2.70	6	66	28	36	20.6								●
.0280*	2.80	6	66	28	36	20.4								●
.0285*	2.85	6	66	28	36	20.4								●
.0290*	2.90	6	66	28	36	20.4								●
.0295*	2.95	6	66	28	36	20.3								●
.0300	3.00	6	66	28	36	20.2								●
.0305	3.05	6	66	28	36	20.2								●
.0310	3.10	6	66	28	36	20.2								●
.0315	3.15	6	66	28	36	20.1								●
.0320	3.20	6	66	28	36	20.0								●
.0330	3.30	6	66	28	36	20.0								●
.0340	3.40	6	66	28	36	19.8								●
.0350	3.50	6	66	28	36	19.8								●
.0360	3.60	6	66	28	36	19.6								●
.0370	3.70	6	66	28	36	19.6								●
.0375	3.75	6	66	28	36	19.5								●
.0380	3.80	6	74	36	36	27.4								●
.0385	3.85	6	74	36	36	27.3								●
* without internal cooling														

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	170	0.105	13530	1420	18.0	1.1
4.20	170	0.110	12885	1415	19.5	1.1
4.40	170	0.115	12300	1415	21.5	1.1
4.50	170	0.120	12025	1445	23.0	1.1
4.80	170	0.125	11275	1410	25.5	1.5
5.00	170	0.130	10825	1405	27.5	1.5
5.20	170	0.135	10405	1405	30.0	1.5
5.30	170	0.140	10210	1430	31.5	1.4
5.50	170	0.145	9840	1425	34.0	1.5

Steel
500 - 850 N/mm²

4.00	130	0.105	10345	1085	13.5	1.5
4.20	130	0.110	9850	1085	15.0	1.5
4.40	130	0.115	9405	1080	16.5	1.5
4.50	130	0.120	9195	1105	17.5	1.4
4.80	130	0.125	8620	1080	19.5	1.9
5.00	130	0.130	8275	1075	21.0	1.9
5.20	130	0.135	7960	1075	23.0	1.9
5.30	130	0.140	7810	1095	24.0	1.9
5.50	130	0.145	7525	1090	26.0	1.9

Steel
850 - 1100 N/mm²

4.00	110	0.080	8755	700	9.0	2.3
4.20	110	0.085	8335	710	10.0	2.3
4.40	110	0.090	7960	715	11.0	2.2
4.50	110	0.090	7780	700	11.0	2.3
4.80	110	0.095	7295	695	12.5	3.0
5.00	110	0.100	7005	700	13.5	3.0
5.20	110	0.105	6735	705	15.0	2.9
5.30	110	0.105	6605	695	15.5	3.0
5.50	110	0.110	6365	700	16.5	3.0

Steel
1100 - 1300 N/mm²

4.00	70	0.065	5570	360	4.5	4.5
4.20	70	0.070	5305	370	5.0	4.3
4.40	70	0.075	5065	380	6.0	4.2
4.50	70	0.075	4950	370	6.0	4.3
4.80	70	0.080	4640	370	6.5	5.6
5.00	70	0.085	4455	380	7.5	5.5
5.20	70	0.085	4285	365	8.0	5.7
5.30	70	0.090	4205	380	8.5	5.5
5.50	70	0.090	4050	365	8.5	5.7

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]
4.00	40	0.055	3185	175	2.0	9.2
4.20	40	0.055	3030	165	2.5	9.7
4.40	40	0.060	2895	175	2.5	9.1
4.50	40	0.060	2830	170	2.5	9.4
4.80	40	0.065	2655	175	3.0	11.8
5.00	40	0.065	2545	165	3.0	12.7
5.20	40	0.070	2450	170	3.5	12.2
5.30	40	0.070	2400	170	4.0	12.2
5.50	40	0.075	2315	175	4.0	11.8

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

4.00	60	0.060	4775	285	3.5	5.7
4.20	60	0.065	4545	295	4.0	5.5
4.40	60	0.070	4340	305	4.5	5.2
4.50	60	0.070	4245	295	4.5	5.4
4.80	60	0.075	3980	300	5.5	6.9
5.00	60	0.075	3820	285	5.5	7.3
5.20	60	0.080	3675	295	6.5	7.0
5.30	60	0.080	3605	290	6.5	7.1
5.50	60	0.085	3470	295	7.0	7.0

Cast iron
(lamellar / spheroidal)

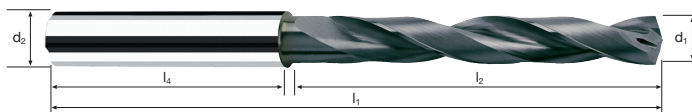
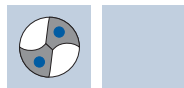
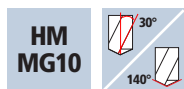
4.00	220	0.115	17505	2015	25.5	0.8
4.20	220	0.120	16675	2000	27.5	0.8
4.40	220	0.125	15915	1990	30.5	0.8
4.50	220	0.130	15560	2025	32.0	0.8
4.80	220	0.135	14590	1970	35.5	1.0
5.00	220	0.145	14005	2030	40.0	1.0
5.20	220	0.150	13465	2020	43.0	1.0
5.30	220	0.150	13215	1980	43.5	1.0
5.50	220	0.155	12730	1975	47.0	1.0

Wrought aluminium
alloys Si < 6%

4.00	250	0.090	19895	1790	22.5	0.9
4.20	250	0.095	18945	1800	25.0	0.9
4.40	250	0.100	18085	1810	27.5	0.9
4.50	250	0.100	17685	1770	28.0	0.9
4.80	250	0.105	16580	1740	31.5	1.2
5.00	250	0.110	15915	1750	34.5	1.2
5.20	250	0.115	15305	1760	37.5	1.2
5.30	250	0.120	15015	1800	39.5	1.2
5.50	250	0.120	14470	1735	41.0	1.2

Spiral flute drills Supradrill® U

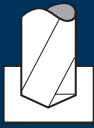
5xd



Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500				Inox Stainless		GG(G) Aluminium
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Example: Order-N°.		Article-N°.		ø-Code				NANO-U ²	
		B62015		.0390				B62015	
								B63015	
ø Code	d1 m7	d2 h5	l1	l2	l4	L _{max}			
.0390	3.90	6	74	36	36	27.4			●
.0400	4.00	6	74	36	36	26.9			●
.0410	4.10	6	74	36	36	26.9			●
.0420	4.20	6	74	36	36	26.8			●
.0430	4.30	6	74	36	36	26.8			●
.0440	4.40	6	74	36	36	26.6			●
.0445	4.45	6	74	36	36	26.6			●
.0450	4.50	6	74	36	36	26.6			●
.0460	4.60	6	74	36	36	26.5			●
new! .0465	4.65	6	74	36	36	26.5			●
.0470	4.70	6	74	36	36	26.5			●
.0480	4.80	6	82	44	36	34.4			●
.0490	4.90	6	82	44	36	34.4			●
.0495	4.95	6	82	44	36	34.3			●
.0500	5.00	6	82	44	36	34.8			●
.0505	5.05	6	82	44	36	34.7			●
.0510	5.10	6	82	44	36	34.7			●
.0520	5.20	6	82	44	36	34.6			●
.0525	5.25	6	82	44	36	34.6			●
.0530	5.30	6	82	44	36	34.6			●
.0540	5.40	6	82	44	36	34.5			●
.0550	5.50	6	82	44	36	34.5			●
new! .0555	5.55	6	82	44	36	34.4			●

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]
5.80	170	0.155	9330	1445	38.0	1.4
6.00	170	0.160	9020	1445	41.0	1.4
6.20	170	0.165	8730	1440	43.5	1.7
6.50	170	0.170	8325	1415	47.0	1.7
6.80	170	0.180	7960	1435	52.0	1.7
7.00	170	0.185	7730	1430	55.0	1.7
7.20	170	0.190	7515	1430	58.0	1.7
7.40	170	0.195	7315	1425	61.5	1.7
7.50	170	0.195	7215	1405	62.0	1.7

Steel
500 - 850 N/mm²

5.80	130	0.155	7135	1105	29.0	1.9
6.00	130	0.160	6895	1105	31.0	1.9
6.20	130	0.165	6675	1100	33.0	2.2
6.50	130	0.170	6365	1080	36.0	2.3
6.80	130	0.180	6085	1095	40.0	2.2
7.00	130	0.185	5910	1095	42.0	2.2
7.20	130	0.190	5745	1090	44.5	2.2
7.40	130	0.195	5590	1090	47.0	2.2
7.50	130	0.195	5515	1075	47.5	2.3

Steel
850 - 1100 N/mm²

5.80	110	0.115	6035	695	18.5	3.0
6.00	110	0.120	5835	700	20.0	3.0
6.20	110	0.125	5645	705	21.5	3.5
6.50	110	0.130	5385	700	23.0	3.5
6.80	110	0.135	5150	695	25.0	3.5
7.00	110	0.140	5000	700	27.0	3.5
7.20	110	0.145	4865	705	28.5	3.5
7.40	110	0.150	4730	710	30.5	3.4
7.50	110	0.150	4670	700	31.0	3.5

Steel
1100 - 1300 N/mm²

5.80	70	0.095	3840	365	9.5	5.7
6.00	70	0.100	3715	370	10.5	5.6
6.20	70	0.105	3595	375	11.5	6.6
6.50	70	0.110	3430	375	12.5	6.6
6.80	70	0.115	3275	375	13.5	6.5
7.00	70	0.115	3185	365	14.0	6.7
7.20	70	0.120	3095	370	15.0	6.6
7.40	70	0.125	3010	375	16.0	6.5
7.50	70	0.125	2970	370	16.5	6.6

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]
5.80	40	0.075	2195	165	4.5	12.5
6.00	40	0.080	2120	170	5.0	12.2
6.20	40	0.085	2055	175	5.5	14.1
6.50	40	0.085	1960	165	5.5	14.9
6.80	40	0.090	1870	170	6.0	14.4
7.00	40	0.095	1820	175	6.5	14.0
7.20	40	0.095	1770	170	7.0	14.3
7.40	40	0.100	1720	170	7.5	14.3
7.50	40	0.100	1700	170	7.5	14.3

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

5.80	60	0.090	3295	295	8.0	7.0
6.00	60	0.090	3185	285	8.0	7.3
6.20	60	0.095	3080	295	9.0	8.4
6.50	60	0.100	2940	295	10.0	8.3
6.80	60	0.105	2810	295	10.5	8.3
7.00	60	0.110	2730	300	11.5	8.1
7.20	60	0.110	2655	290	12.0	8.4
7.40	60	0.115	2580	295	12.5	8.2
7.50	60	0.115	2545	295	13.0	8.2

Cast iron
(lamellar / spheroidal)

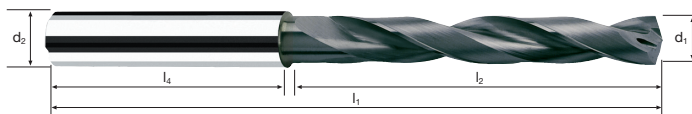
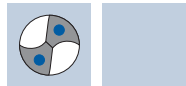
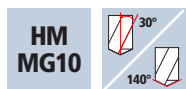
5.80	220	0.165	12075	1990	52.5	1.0
6.00	220	0.170	11670	1985	56.0	1.0
6.20	220	0.175	11295	1975	59.5	1.3
6.50	220	0.185	10775	1995	66.0	1.2
6.80	220	0.195	10300	2010	73.0	1.2
7.00	220	0.200	10005	2000	77.0	1.2
7.20	220	0.205	9725	1995	81.0	1.2
7.40	220	0.210	9465	1990	85.5	1.2
7.50	220	0.215	9335	2005	88.5	1.2

Wrought aluminium
alloys Si < 6%

5.80	250	0.130	13720	1785	47.0	1.2
6.00	250	0.135	13265	1790	50.5	1.2
6.20	250	0.140	12835	1795	54.0	1.4
6.50	250	0.145	12245	1775	59.0	1.4
6.80	250	0.150	11705	1755	63.5	1.4
7.00	250	0.155	11370	1760	67.5	1.4
7.20	250	0.160	11050	1770	72.0	1.4
7.40	250	0.165	10755	1775	76.5	1.4
7.50	250	0.165	10610	1750	77.5	1.4

Spiral flute drills Supradrill® U

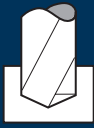
5xd



Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500				Inox Stainless	GG(G) Aluminium
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Example: Order-N°.							Article-N°.		ø-Code				NANO-U ²	
							B62015		.0560				B62015	
													B63015	
ø Code	d1 m7	d2 h5		l1	l2	l4	L _{max}							
.0560	5.60	6		82	44	36	34.4							●
.0565	5.65	6		82	44	36	34.4							●
.0570	5.70	6		82	44	36	34.4							●
.0575	5.75	6		82	44	36	34.5							●
.0580	5.80	6		82	44	36	34.5							●
.0590	5.90	6		82	44	36	34.5							●
.0600	6.00	6		82	44	36	34.5							●
.0610	6.10	8		91	53	36	41.4							●
.0620	6.20	8		91	53	36	41.2							●
.0630	6.30	8		91	53	36	41.2							●
.0640	6.40	8		91	53	36	41.1							●
.0650	6.50	8		91	53	36	41.1							●
.0660	6.60	8		91	53	36	41.0							●
.0670	6.70	8		91	53	36	41.0							●
.0680	6.80	8		91	53	36	40.9							●
.0690	6.90	8		91	53	36	40.9							●
.0700	7.00	8		91	53	36	40.7							●
.0710	7.10	8		91	53	36	40.7							●
.0720	7.20	8		91	53	36	40.6							●
.0725	7.25	8		91	53	36	40.6							●
.0730	7.30	8		91	53	36	40.6							●
.0740	7.40	8		91	53	36	40.5							●
.0745	7.45	8		91	53	36	40.4							●

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	170	0.200	7120	1425	64.5	1.7
7.80	170	0.205	6940	1425	68.0	1.7
8.00	170	0.210	6765	1420	71.5	1.7
8.20	170	0.215	6600	1420	75.0	2.0
8.50	170	0.225	6365	1430	81.0	1.9
8.80	170	0.230	6150	1415	86.0	1.9
9.00	170	0.235	6015	1415	90.0	1.9
9.20	170	0.240	5880	1410	93.5	1.9
9.40	170	0.245	5755	1410	98.0	1.9

Steel
500 - 850 N/mm²

7.60	130	0.200	5445	1090	49.5	2.2
7.80	130	0.205	5305	1090	52.0	2.2
8.00	130	0.210	5175	1085	54.5	2.2
8.20	130	0.215	5045	1085	57.5	2.6
8.50	130	0.225	4870	1095	62.0	2.5
8.80	130	0.230	4700	1080	65.5	2.6
9.00	130	0.235	4600	1080	68.5	2.5
9.20	130	0.240	4500	1080	72.0	2.5
9.40	130	0.245	4400	1080	75.0	2.5

Steel
850 - 1100 N/mm²

7.60	110	0.150	4605	690	31.5	3.5
7.80	110	0.155	4490	695	33.0	3.5
8.00	110	0.160	4375	700	35.0	3.5
8.20	110	0.165	4270	705	37.0	3.9
8.50	110	0.170	4120	700	39.5	3.9
8.80	110	0.175	3980	695	42.5	4.0
9.00	110	0.180	3890	700	44.5	3.9
9.20	110	0.185	3805	705	47.0	3.9
9.40	110	0.190	3725	710	49.5	3.8

Steel
1100 - 1300 N/mm²

7.60	70	0.125	2930	365	16.5	6.6
7.80	70	0.130	2855	370	17.5	6.6
8.00	70	0.135	2785	375	19.0	6.5
8.20	70	0.135	2715	365	19.5	7.6
8.50	70	0.140	2620	365	20.5	7.6
8.80	70	0.145	2530	365	22.0	7.5
9.00	70	0.150	2475	370	23.5	7.4
9.20	70	0.155	2420	375	25.0	7.3
9.40	70	0.155	2370	365	25.5	7.5

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]
7.60	40	0.100	1675	170	7.5	14.3
7.80	40	0.105	1630	170	8.0	14.3
8.00	40	0.105	1590	165	8.5	14.7
8.20	40	0.110	1555	170	9.0	16.3
8.50	40	0.115	1500	175	10.0	15.8
8.80	40	0.115	1445	165	10.0	16.7
9.00	40	0.120	1415	170	11.0	16.1
9.20	40	0.125	1385	175	11.5	15.6
9.40	40	0.125	1355	170	12.0	16.1

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	8.4
7.80	60	0.120	2450	295	14.0	8.2
8.00	60	0.125	2385	300	15.0	8.1
8.20	60	0.125	2330	290	15.5	9.6
8.50	60	0.130	2245	290	16.5	9.5
8.80	60	0.135	2170	295	18.0	9.3
9.00	60	0.140	2120	295	19.0	9.3
9.20	60	0.140	2075	290	19.5	9.4
9.40	60	0.145	2030	295	20.5	9.3

Cast iron
(lamellar / spheroidal)

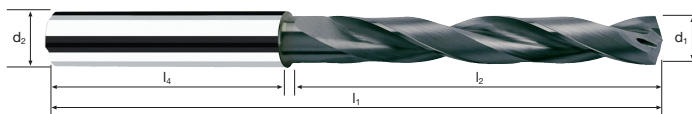
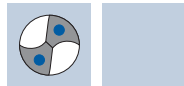
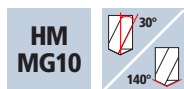
7.60	220	0.215	9215	1980	90.0	1.2
7.80	220	0.225	8980	2020	96.5	1.2
8.00	220	0.230	8755	2015	101.5	1.2
8.20	220	0.235	8540	2005	106.0	1.4
8.50	220	0.245	8240	2020	114.5	1.4
8.80	220	0.250	7960	1990	121.0	1.4
9.00	220	0.255	7780	1985	126.5	1.4
9.20	220	0.265	7610	2015	134.0	1.4
9.40	220	0.270	7450	2010	139.5	1.4

Wrought aluminium
alloys Si < 6%

7.60	250	0.170	10470	1780	80.5	1.4
7.80	250	0.175	10200	1785	85.5	1.4
8.00	250	0.180	9945	1790	90.0	1.4
8.20	250	0.180	9705	1745	92.0	1.6
8.50	250	0.190	9360	1780	101.0	1.6
8.80	250	0.195	9045	1765	107.5	1.6
9.00	250	0.200	8840	1770	112.5	1.5
9.20	250	0.205	8650	1775	118.0	1.5
9.40	250	0.210	8465	1780	123.5	1.5

Spiral flute drills Supradrill® U

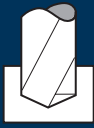
5xd



Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500				Inox Stainless		GG(G) Aluminium
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Example: Order-N°.							Article-N°.		ø-Code				NANO-U ²	
							B62015		.0750				B62015	
													B63015	
ø Code	d1 m7	d2 h5	l1	l2	l4	L _{max}								
.0750	7.50	8	91	53	36	40.5							●	
.0755	7.55	8	91	53	36	40.4							●	
.0760	7.60	8	91	53	36	40.4							●	
.0765	7.65	8	91	53	36	40.4							●	
.0770	7.70	8	91	53	36	40.4							●	
.0780	7.80	8	91	53	36	40.4							●	
.0790	7.90	8	91	53	36	40.4							●	
.0800	8.00	8	91	53	36	40.4							●	
.0810	8.10	10	103	61	40	46.3							●	
.0820	8.20	10	103	61	40	46.2							●	
.0830	8.30	10	103	61	40	46.2							●	
.0840	8.40	10	103	61	40	46.1							●	
.0850	8.50	10	103	61	40	46.1							●	
.0860	8.60	10	103	61	40	46.0							●	
.0870	8.70	10	103	61	40	46.0							●	
.0875	8.75	10	103	61	40	45.9							●	
.0880	8.80	10	103	61	40	45.9							●	
.0885	8.85	10	103	61	40	45.8							●	
.0890	8.90	10	103	61	40	45.8							●	
.0900	9.00	10	103	61	40	45.7							●	
.0910	9.10	10	103	61	40	45.7							●	
.0920	9.20	10	103	61	40	45.6							●	
.0925	9.25	10	103	61	40	45.5							●	

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]
9.50	170	0.250	5695	1425	101.0	1.9
9.60	170	0.255	5635	1435	104.0	1.9
9.80	170	0.260	5520	1435	108.0	1.9
10.00	170	0.265	5410	1435	112.5	1.9
10.20	170	0.270	5305	1430	117.0	2.2
10.50	170	0.275	5155	1420	123.0	2.2
10.80	170	0.285	5010	1430	131.0	2.2
11.00	170	0.290	4920	1425	135.5	2.2
11.50	170	0.305	4705	1435	149.0	2.2

Steel
500 - 850 N/mm²

9.50	130	0.250	4355	1090	77.5	2.5
9.60	130	0.255	4310	1100	79.5	2.5
9.80	130	0.260	4220	1095	82.5	2.5
10.00	130	0.265	4140	1095	86.0	2.5
10.20	130	0.270	4055	1095	89.5	2.9
10.50	130	0.275	3940	1085	94.0	2.9
10.80	130	0.285	3830	1090	100.0	2.9
11.00	130	0.290	3760	1090	103.5	2.9
11.50	130	0.305	3600	1100	114.5	2.9

Steel
850 - 1100 N/mm²

9.50	110	0.190	3685	700	49.5	3.9
9.60	110	0.190	3645	695	50.5	3.9
9.80	110	0.195	3575	695	52.5	3.9
10.00	110	0.200	3500	700	55.0	3.9
10.20	110	0.205	3435	705	57.5	4.5
10.50	110	0.210	3335	700	60.5	4.5
10.80	110	0.215	3240	695	63.5	4.6
11.00	110	0.220	3185	700	66.5	4.5
11.50	110	0.230	3045	700	72.5	4.5

Steel
1100 - 1300 N/mm²

9.50	70	0.160	2345	375	26.5	7.3
9.60	70	0.160	2320	370	27.0	7.4
9.80	70	0.165	2275	375	28.5	7.2
10.00	70	0.165	2230	370	29.0	7.4
10.20	70	0.170	2185	370	30.0	8.6
10.50	70	0.175	2120	370	32.0	8.6
10.80	70	0.180	2065	370	34.0	8.6
11.00	70	0.185	2025	375	35.5	8.4
11.50	70	0.190	1940	370	38.5	8.5

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]
9.50	40	0.125	1340	170	12.0	16.0
9.60	40	0.130	1325	170	12.5	16.0
9.80	40	0.130	1300	170	13.0	16.0
10.00	40	0.135	1275	170	13.5	16.0
10.20	40	0.135	1250	170	14.0	18.8
10.50	40	0.140	1215	170	14.5	18.7
10.80	40	0.145	1180	170	15.5	18.6
11.00	40	0.145	1155	165	15.5	19.2
11.50	40	0.155	1105	170	17.5	18.5

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

9.50	60	0.145	2010	290	20.5	9.4
9.60	60	0.150	1990	300	21.5	9.1
9.80	60	0.150	1950	295	22.5	9.2
10.00	60	0.155	1910	295	23.0	9.2
10.20	60	0.155	1870	290	23.5	11.0
10.50	60	0.160	1820	290	25.0	11.0
10.80	60	0.165	1770	290	26.5	10.9
11.00	60	0.170	1735	295	28.0	10.7
11.50	60	0.175	1660	290	30.0	10.8

Cast iron
(lamellar / spheroidal)

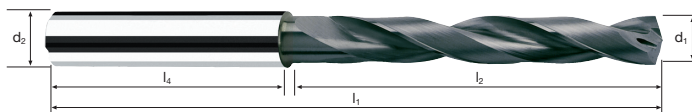
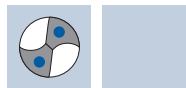
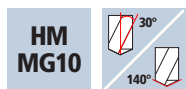
9.50	220	0.270	7370	1990	141.0	1.4
9.60	220	0.275	7295	2005	145.0	1.4
9.80	220	0.280	7145	2000	151.0	1.4
10.00	220	0.285	7005	1995	156.5	1.4
10.20	220	0.290	6865	1990	162.5	1.6
10.50	220	0.300	6670	2000	173.0	1.6
10.80	220	0.310	6485	2010	184.0	1.6
11.00	220	0.315	6365	2005	190.5	1.6
11.50	220	0.330	6090	2010	209.0	1.6

Wrought aluminium
alloys Si < 6%

9.50	250	0.210	8375	1760	125.0	1.5
9.60	250	0.215	8290	1780	129.0	1.5
9.80	250	0.220	8120	1785	134.5	1.5
10.00	250	0.220	7960	1750	137.5	1.6
10.20	250	0.225	7800	1755	143.5	1.8
10.50	250	0.235	7580	1780	154.0	1.8
10.80	250	0.240	7370	1770	162.0	1.8
11.00	250	0.245	7235	1775	168.5	1.8
11.50	250	0.255	6920	1765	183.5	1.8

Spiral flute drills Supradrill® U

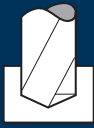
5xd



Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500				Inox Stainless		GG(G) Aluminium
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Example: Order-N°.		Article-N°.		ø-Code				NANO-U ²	
		B62015		.0930				B62015	
								B63015	
ø Code	d1 m7	d2 h5	l1	l2	l4	L _{max}			
.0930	9.30	10	103	61	40	45.6			●
.0940	9.40	10	103	61	40	45.5			●
.0950	9.50	10	103	61	40	45.5			●
.0955	9.55	10	103	61	40	45.4			●
.0960	9.60	10	103	61	40	45.4			●
.0965	9.65	10	103	61	40	45.3			●
.0970	9.70	10	103	61	40	45.4			●
.0980	9.80	10	103	61	40	45.3			●
.0990	9.90	10	103	61	40	45.4			●
.1000	10.00	10	103	61	40	45.4			●
.1010	10.10	12	118	71	45	53.3			●
.1020	10.20	12	118	71	45	53.2			●
.1030	10.30	12	118	71	45	53.2			●
.1040	10.40	12	118	71	45	53.1			●
.1050	10.50	12	118	71	45	53.1			●
.1060	10.60	12	118	71	45	53.0			●
.1070	10.70	12	118	71	45	52.9			●
.1080	10.80	12	118	71	45	52.8			●
.1090	10.90	12	118	71	45	52.8			●
.1100	11.00	12	118	71	45	52.7			●
.1110	11.10	12	118	71	45	52.7			●
.1120	11.20	12	118	71	45	52.6			●
.1130	11.30	12	118	71	45	52.6			●

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]
11.80	170	0.310	4585	1420	155.5	2.2
12.00	170	0.315	4510	1420	160.5	2.2
12.20	170	0.320	4435	1420	166.0	2.4
12.50	170	0.330	4330	1430	175.5	2.4
12.80	170	0.335	4230	1415	182.0	2.4
13.00	170	0.340	4165	1415	188.0	2.4
13.20	170	0.345	4100	1415	193.5	2.4
13.50	170	0.355	4010	1425	204.0	2.3
13.80	170	0.365	3920	1430	214.0	2.3

Steel
500 - 850 N/mm²

11.80	130	0.310	3505	1085	118.5	2.9
12.00	130	0.315	3450	1085	122.5	2.9
12.20	130	0.320	3390	1085	127.0	3.1
12.50	130	0.330	3310	1090	134.0	3.1
12.80	130	0.335	3235	1085	139.5	3.1
13.00	130	0.340	3185	1085	144.0	3.1
13.20	130	0.345	3135	1080	148.0	3.1
13.50	130	0.355	3065	1090	156.0	3.0
13.80	130	0.365	3000	1095	164.0	3.0

Steel
850 - 1100 N/mm²

11.80	110	0.235	2965	695	76.0	4.5
12.00	110	0.240	2920	700	79.0	4.5
12.20	110	0.245	2870	705	82.5	4.8
12.50	110	0.250	2800	700	86.0	4.8
12.80	110	0.255	2735	695	89.5	4.8
13.00	110	0.260	2695	700	93.0	4.8
13.20	110	0.265	2655	705	96.5	4.7
13.50	110	0.270	2595	700	100.0	4.7
13.80	110	0.275	2535	695	104.0	4.8

Steel
1100 - 1300 N/mm²

11.80	70	0.195	1890	370	40.5	8.5
12.00	70	0.200	1855	370	42.0	8.5
12.20	70	0.205	1825	375	44.0	9.0
12.50	70	0.210	1785	375	46.0	9.0
12.80	70	0.215	1740	375	48.5	8.9
13.00	70	0.215	1715	370	49.0	9.0
13.20	70	0.220	1690	370	50.5	9.0
13.50	70	0.225	1650	370	53.0	9.0
13.80	70	0.230	1615	370	55.5	9.0

Material

Steel
1300 - 1500 N/mm²

11.80	40	0.155	1080	165	18.0	19.0
12.00	40	0.160	1060	170	19.0	18.5
12.20	40	0.165	1045	170	20.0	19.8
12.50	40	0.165	1020	170	21.0	19.8
12.80	40	0.170	995	170	22.0	19.7
13.00	40	0.175	980	170	22.5	19.7
13.20	40	0.175	965	170	23.5	19.6
13.50	40	0.180	945	170	24.5	19.5
13.80	40	0.185	925	170	25.5	19.5

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

11.80	60	0.180	1620	290	31.5	10.8
12.00	60	0.185	1590	295	33.5	10.6
12.20	60	0.190	1565	295	34.5	11.4
12.50	60	0.190	1530	290	35.5	11.6
12.80	60	0.195	1490	290	37.5	11.5
13.00	60	0.200	1470	295	39.0	11.3
13.20	60	0.205	1445	295	40.5	11.3
13.50	60	0.210	1415	295	42.0	11.3
13.80	60	0.210	1385	290	43.5	11.4

Cast iron
(lamellar / spheroidal)

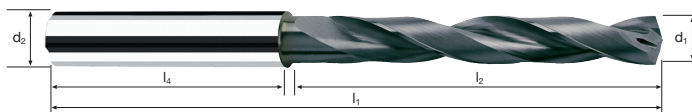
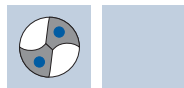
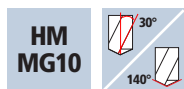
11.80	220	0.335	5935	1990	217.5	1.6
12.00	220	0.345	5835	2015	228.0	1.6
12.20	220	0.350	5740	2010	235.0	1.7
12.50	220	0.355	5600	1990	244.0	1.7
12.80	220	0.365	5470	1995	256.5	1.7
13.00	220	0.370	5385	1990	264.0	1.7
13.20	220	0.375	5305	1990	272.5	1.7
13.50	220	0.385	5185	1995	285.5	1.7
13.80	220	0.395	5075	2005	300.0	1.7

Wrought aluminium
alloys Si < 6%

11.80	250	0.260	6745	1755	192.0	1.8
12.00	250	0.265	6630	1755	198.5	1.8
12.20	250	0.270	6525	1760	205.5	1.9
12.50	250	0.280	6365	1780	218.5	1.9
12.80	250	0.285	6215	1770	228.0	1.9
13.00	250	0.290	6120	1775	235.5	1.9
13.20	250	0.295	6030	1780	243.5	1.9
13.50	250	0.300	5895	1770	253.5	1.9
13.80	250	0.305	5765	1760	263.0	1.9

Spiral flute drills Supradrill® U

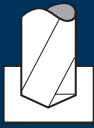
5xd



Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500				Inox Stainless		GG(G) Aluminium
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Example: Order-N°.		Article-N°.		ø-Code				NANO-U ²	
		B62015		.1140				B62015	
								B63015	
ø Code	d1 m7	d2 h5	l1	l2	l4	L _{max}			
.1140	11.40	12	118	71	45	52.5			●
.1150	11.50	12	118	71	45	52.4			●
.1160	11.60	12	118	71	45	52.4			●
.1170	11.70	12	118	71	45	52.4			●
.1180	11.80	12	118	71	45	52.3			●
.1190	11.90	12	118	71	45	52.4			●
.1200	12.00	12	118	71	45	52.3			●
.1210	12.10	14	124	77	45	56.3			●
.1220	12.20	14	124	77	45	56.2			●
.1230	12.30	14	124	77	45	56.2			●
.1240	12.40	14	124	77	45	56.1			●
.1250	12.50	14	124	77	45	56.1			●
.1260	12.60	14	124	77	45	56.0			●
.1270	12.70	14	124	77	45	55.9			●
.1280	12.80	14	124	77	45	55.8			●
.1290	12.90	14	124	77	45	55.8			●
.1300	13.00	14	124	77	45	55.7			●
.1310	13.10	14	124	77	45	55.7			●
.1320	13.20	14	124	77	45	55.6			●
.1330	13.30	14	124	77	45	55.6			●
.1340	13.40	14	124	77	45	55.4			●
.1350	13.50	14	124	77	45	55.4			●
.1360	13.60	14	124	77	45	55.3			●

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]
14.00	170	0.370	3865	1430	220.0	2.3
14.20	170	0.375	3810	1430	226.5	2.5
14.50	170	0.380	3730	1415	233.5	2.5
14.80	170	0.390	3655	1425	245.0	2.5
15.00	170	0.395	3610	1425	252.0	2.5
15.20	170	0.400	3560	1425	258.5	2.5
15.50	170	0.410	3490	1430	270.0	2.4
15.80	170	0.415	3425	1420	278.5	2.5
16.00	170	0.420	3380	1420	285.5	2.5

Steel
500 - 850 N/mm²

14.00	130	0.370	2955	1095	168.5	3.0
14.20	130	0.375	2915	1095	173.5	3.2
14.50	130	0.380	2855	1085	179.0	3.3
14.80	130	0.390	2795	1090	187.5	3.2
15.00	130	0.395	2760	1090	192.5	3.2
15.20	130	0.400	2720	1090	198.0	3.2
15.50	130	0.410	2670	1095	206.5	3.2
15.80	130	0.415	2620	1085	212.5	3.2
16.00	130	0.420	2585	1085	218.0	3.2

Steel
850 - 1100 N/mm²

14.00	110	0.280	2500	700	108.0	4.7
14.20	110	0.285	2465	705	111.5	5.0
14.50	110	0.290	2415	700	115.5	5.1
14.80	110	0.295	2365	700	120.5	5.0
15.00	110	0.300	2335	700	123.5	5.0
15.20	110	0.305	2305	705	128.0	5.0
15.50	110	0.310	2260	700	132.0	5.0
15.80	110	0.315	2215	700	137.0	5.0
16.00	110	0.320	2190	700	140.5	5.0

Steel
1100 - 1300 N/mm²

14.00	70	0.235	1590	375	57.5	8.8
14.20	70	0.235	1570	370	58.5	9.6
14.50	70	0.240	1535	370	61.0	9.6
14.80	70	0.245	1505	370	63.5	9.5
15.00	70	0.250	1485	370	65.5	9.5
15.20	70	0.255	1465	375	68.0	9.4
15.50	70	0.260	1440	375	71.0	9.3
15.80	70	0.265	1410	375	73.5	9.3
16.00	70	0.265	1395	370	74.5	9.5

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]
14.00	40	0.185	910	170	26.0	19.5
14.20	40	0.190	895	170	27.0	20.9
14.50	40	0.195	880	170	28.0	20.8
14.80	40	0.195	860	170	29.0	20.8
15.00	40	0.200	850	170	30.0	20.7
15.20	40	0.205	840	170	31.0	20.7
15.50	40	0.205	820	170	32.0	20.6
15.80	40	0.210	805	170	33.5	20.6
16.00	40	0.215	795	170	34.0	20.6

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

14.00	60	0.215	1365	295	45.5	11.2
14.20	60	0.220	1345	295	46.5	12.0
14.50	60	0.225	1315	295	48.5	12.0
14.80	60	0.230	1290	295	50.5	12.0
15.00	60	0.230	1275	295	52.0	11.9
15.20	60	0.235	1255	295	53.5	11.9
15.50	60	0.240	1230	295	55.5	11.9
15.80	60	0.245	1210	295	58.0	11.9
16.00	60	0.245	1195	295	59.5	11.9

Cast iron
(lamellar / spheroidal)

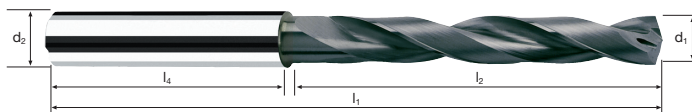
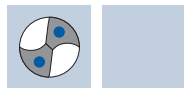
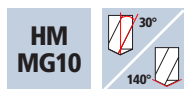
14.00	220	0.400	5000	2000	308.0	1.7
14.20	220	0.405	4930	1995	316.0	1.8
14.50	220	0.415	4830	2005	331.0	1.8
14.80	220	0.425	4730	2010	346.0	1.8
15.00	220	0.430	4670	2010	355.0	1.8
15.20	220	0.435	4605	2005	364.0	1.8
15.50	220	0.445	4520	2010	379.5	1.7
15.80	220	0.450	4430	1995	391.0	1.8
16.00	220	0.455	4375	1990	400.0	1.8

Wrought aluminium
alloys Si < 6%

14.00	250	0.310	5685	1760	271.0	1.9
14.20	250	0.315	5605	1765	279.5	2.0
14.50	250	0.320	5490	1755	290.0	2.0
14.80	250	0.330	5375	1775	305.5	2.0
15.00	250	0.335	5305	1775	313.5	2.0
15.20	250	0.340	5235	1780	323.0	2.0
15.50	250	0.345	5135	1770	334.0	2.0
15.80	250	0.350	5035	1760	345.0	2.0
16.00	250	0.355	4975	1765	355.0	2.0

Spiral flute drills Supradrill® U

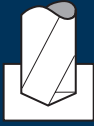
5xd



Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500				Inox Stainless		GG(G) Aluminium
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Example: Order-N°.							Article-N°.		ø-Code				NANO-U ²	
							B62015		.1370				B62015	
													B63015	
ø Code	d1 m7	d2 h5	l1	l2	l4	L _{max}								
.1370	13.70	14	124	77	45	55.4						●		
.1380	13.80	14	124	77	45	55.3						●		
.1390	13.90	14	124	77	45	55.3						●		
.1400	14.00	14	124	77	45	55.3						●		
.1410	14.10	16	133	83	48	59.3						●		
.1420	14.20	16	133	83	48	59.2						●		
.1430	14.30	16	133	83	48	59.2						●		
.1440	14.40	16	133	83	48	59.1						●		
.1450	14.50	16	133	83	48	59.1						●		
.1460	14.60	16	133	83	48	58.9						●		
.1470	14.70	16	133	83	48	58.9						●		
.1480	14.80	16	133	83	48	58.8						●		
.1490	14.90	16	133	83	48	58.8						●		
.1500	15.00	16	133	83	48	58.7						●		
.1510	15.10	16	133	83	48	58.7						●		
.1520	15.20	16	133	83	48	58.6						●		
.1530	15.30	16	133	83	48	58.5						●		
.1540	15.40	16	133	83	48	58.4						●		
.1550	15.50	16	133	83	48	58.4						●		
.1560	15.60	16	133	83	48	58.3						●		
.1570	15.70	16	133	83	48	58.3						●		
.1580	15.80	16	133	83	48	58.3						●		
.1590	15.90	16	133	83	48	58.3						●		

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]
16.20	170	0.425	3340	1420	292.5	2.8
16.50	170	0.435	3280	1425	304.5	2.8
16.60	170	0.435	3260	1420	307.5	2.8
16.80	170	0.440	3220	1415	313.5	2.8
17.00	170	0.445	3185	1415	321.0	2.8
17.20	170	0.455	3145	1430	332.5	2.7
17.50	170	0.460	3090	1420	341.5	2.8
17.80	170	0.470	3040	1430	356.0	2.7
18.00	170	0.475	3005	1425	362.5	2.7

Steel
500 - 850 N/mm²

16.20	130	0.425	2555	1085	223.5	3.7
16.50	130	0.435	2510	1090	233.0	3.6
16.60	130	0.435	2495	1085	235.0	3.6
16.80	130	0.440	2465	1085	240.5	3.6
17.00	130	0.445	2435	1085	246.5	3.6
17.20	130	0.455	2405	1095	254.5	3.6
17.50	130	0.460	2365	1090	262.0	3.6
17.80	130	0.470	2325	1095	272.5	3.6
18.00	130	0.475	2300	1095	278.5	3.6

Steel
850 - 1100 N/mm²

16.20	110	0.325	2160	700	144.5	5.7
16.50	110	0.330	2120	700	149.5	5.7
16.60	110	0.330	2110	695	150.5	5.7
16.80	110	0.335	2085	700	155.0	5.6
17.00	110	0.340	2060	700	159.0	5.6
17.20	110	0.345	2035	700	162.5	5.6
17.50	110	0.350	2000	700	168.5	5.6
17.80	110	0.355	1965	700	174.0	5.6
18.00	110	0.360	1945	700	178.0	5.6

Steel
1100 - 1300 N/mm²

16.20	70	0.270	1375	370	76.5	10.7
16.50	70	0.275	1350	370	79.0	10.7
16.60	70	0.275	1340	370	80.0	10.7
16.80	70	0.280	1325	370	82.0	10.7
17.00	70	0.285	1310	375	85.0	10.5
17.20	70	0.285	1295	370	86.0	10.6
17.50	70	0.290	1275	370	89.0	10.6
17.80	70	0.295	1250	370	92.0	10.6
18.00	70	0.300	1240	370	94.0	10.6

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]
16.20	40	0.215	785	170	35.0	23.4
16.50	40	0.220	770	170	36.5	23.3
16.60	40	0.220	765	170	37.0	23.3
16.80	40	0.225	760	170	37.5	23.2
17.00	40	0.225	750	170	38.5	23.2
17.20	40	0.230	740	170	39.5	23.1
17.50	40	0.235	730	170	41.0	23.1
17.80	40	0.235	715	170	42.5	23.0
18.00	40	0.240	705	170	43.5	23.0

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

16.20	60	0.250	1180	295	61.0	13.5
16.50	60	0.255	1155	295	63.0	13.4
16.60	60	0.255	1150	295	64.0	13.4
16.80	60	0.260	1135	295	65.5	13.4
17.00	60	0.260	1125	295	67.0	13.4
17.20	60	0.265	1110	295	68.5	13.3
17.50	60	0.270	1090	295	71.0	13.3
17.80	60	0.275	1075	295	73.5	13.3
18.00	60	0.275	1060	290	74.0	13.5

Cast iron
(lamellar / spheroidal)

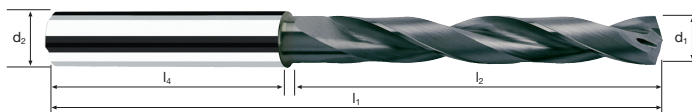
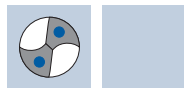
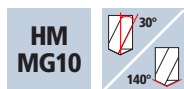
16.20	220	0.465	4325	2010	414.5	2.0
16.50	220	0.470	4245	1995	426.5	2.0
16.60	220	0.475	4220	2005	434.0	2.0
16.80	220	0.480	4170	2000	443.5	2.0
17.00	220	0.485	4120	2000	454.0	2.0
17.20	220	0.490	4070	1995	463.5	2.0
17.50	220	0.500	4000	2000	481.0	2.0
17.80	220	0.510	3935	2005	499.0	2.0
18.00	220	0.515	3890	2005	510.0	2.0

Wrought aluminium
alloys Si < 6%

16.20	250	0.360	4910	1770	365.0	2.2
16.50	250	0.365	4825	1760	376.5	2.2
16.60	250	0.370	4795	1775	384.0	2.2
16.80	250	0.375	4735	1775	393.5	2.2
17.00	250	0.380	4680	1780	404.0	2.2
17.20	250	0.380	4625	1760	409.0	2.2
17.50	250	0.390	4545	1775	427.0	2.2
17.80	250	0.395	4470	1765	439.0	2.2
18.00	250	0.400	4420	1770	450.5	2.2

Spiral flute drills Supradrill® U

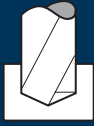
5xd



Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500				Inox Stainless		GG(G) Aluminium
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Example: Order-N°.							Article-N°.		ø-Code		NANO-U ²	
							B62015		.1600		B62015	
											B63015	
ø Code	d1 m7	d2 h5	l1	l2	l4	L _{max}						
.1600	16.00	16	133	83	48	58.3						●
.1610	16.10	18	143	93	48	66.3						●
.1620	16.20	18	143	93	48	66.2						●
.1630	16.30	18	143	93	48	66.2						●
.1640	16.40	18	143	93	48	66.1						●
.1650	16.50	18	143	93	48	66.0						●
.1660	16.60	18	143	93	48	65.9						●
.1670	16.70	18	143	93	48	65.9						●
.1680	16.80	18	143	93	48	65.8						●
.1690	16.90	18	143	93	48	65.8						●
.1700	17.00	18	143	93	48	65.7						●
.1710	17.10	18	143	93	48	65.7						●
.1720	17.20	18	143	93	48	65.5						●
.1730	17.30	18	143	93	48	65.5						●
.1740	17.40	18	143	93	48	65.4						●
.1750	17.50	18	143	93	48	65.4						●
.1760	17.60	18	143	93	48	65.3						●
.1770	17.70	18	143	93	48	65.3						●
.1780	17.80	18	143	93	48	65.2						●
.1790	17.90	18	143	93	48	65.3						●
.1800	18.00	18	143	93	48	65.3						●

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]
18.50	170	0.485	2925	1420	381.5	3.0
18.70	170	0.490	2895	1420	390.0	3.0
19.00	170	0.500	2850	1425	404.0	3.0
19.20	170	0.505	2820	1425	412.5	3.0
19.30	170	0.510	2805	1430	418.5	3.0
19.50	170	0.515	2775	1430	427.0	3.0
19.70	170	0.520	2745	1425	434.5	3.0
19.80	170	0.520	2735	1420	437.0	3.0
20.00	170	0.525	2705	1420	446.0	3.0

Steel
500 - 850 N/mm²

18.50	130	0.485	2235	1085	291.5	3.9
18.70	130	0.490	2215	1085	298.0	3.9
19.00	130	0.500	2180	1090	309.0	3.9
19.20	130	0.505	2155	1090	315.5	3.9
19.30	130	0.510	2145	1095	320.5	3.9
19.50	130	0.515	2120	1090	325.5	3.9
19.70	130	0.520	2100	1090	332.0	3.9
19.80	130	0.520	2090	1085	334.0	3.9
20.00	130	0.525	2070	1085	341.0	3.9

Steel
850 - 1100 N/mm²

18.50	110	0.370	1895	700	188.0	6.1
18.70	110	0.375	1870	700	192.5	6.1
19.00	110	0.380	1845	700	198.5	6.1
19.20	110	0.385	1825	705	204.0	6.0
19.30	110	0.385	1815	700	205.0	6.0
19.50	110	0.390	1795	700	209.0	6.0
19.70	110	0.395	1775	700	213.5	6.0
19.80	110	0.395	1770	700	215.5	6.0
20.00	110	0.400	1750	700	220.0	6.0

Steel
1100 - 1300 N/mm²

18.50	70	0.310	1205	375	101.0	11.4
18.70	70	0.310	1190	370	101.5	11.5
19.00	70	0.315	1175	370	105.0	11.5
19.20	70	0.320	1160	370	107.0	11.4
19.30	70	0.320	1155	370	108.0	11.4
19.50	70	0.325	1145	370	110.5	11.4
19.70	70	0.330	1130	375	114.5	11.2
19.80	70	0.330	1125	370	114.0	11.4
20.00	70	0.335	1115	375	118.0	11.2

Material

Steel
1300 - 1500 N/mm²

18.50	40	0.245	690	170	45.5	25.0
18.70	40	0.250	680	170	46.5	25.0
19.00	40	0.255	670	170	48.0	25.0
19.20	40	0.255	665	170	49.0	24.9
19.30	40	0.255	660	170	49.5	24.9
19.50	40	0.260	655	170	51.0	24.8
19.70	40	0.265	645	170	52.0	24.8
19.80	40	0.265	645	170	52.5	24.8
20.00	40	0.265	635	170	53.5	24.8

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

18.50	60	0.285	1030	295	79.5	14.4
18.70	60	0.290	1020	295	81.0	14.4
19.00	60	0.290	1005	290	82.0	14.6
19.20	60	0.295	995	295	85.5	14.3
19.30	60	0.295	990	290	85.0	14.6
19.50	60	0.300	980	295	88.0	14.3
19.70	60	0.305	970	295	90.0	14.3
19.80	60	0.305	965	295	91.0	14.3
20.00	60	0.310	955	295	92.5	14.3

Cast iron
(lamellar / spheroidal)

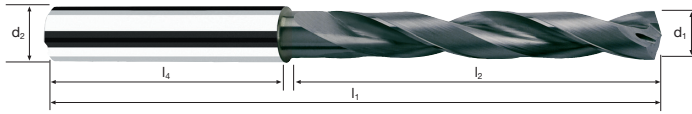
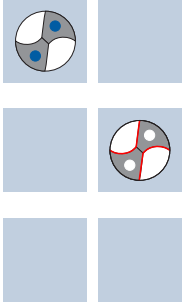
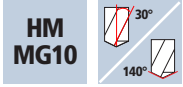
18.50	220	0.530	3785	2005	539.0	2.1
18.70	220	0.535	3745	2005	550.5	2.1
19.00	220	0.545	3685	2010	570.0	2.1
19.20	220	0.550	3645	2005	580.5	2.1
19.30	220	0.550	3630	1995	583.5	2.1
19.50	220	0.555	3590	1990	594.5	2.1
19.70	220	0.565	3555	2010	612.5	2.1
19.80	220	0.565	3535	1995	614.5	2.1
20.00	220	0.570	3500	1995	626.5	2.1

Wrought aluminium
alloys Si < 6%

18.50	250	0.410	4300	1765	474.5	2.4
18.70	250	0.415	4255	1765	484.5	2.4
19.00	250	0.420	4190	1760	499.0	2.4
19.20	250	0.425	4145	1760	509.5	2.4
19.30	250	0.430	4125	1775	519.5	2.4
19.50	250	0.435	4080	1775	530.0	2.4
19.70	250	0.440	4040	1780	542.5	2.4
19.80	250	0.440	4020	1770	545.0	2.4
20.00	250	0.445	3980	1770	556.0	2.4

Spiral flute drills Supradrill® U

5xd



Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500			Inox Stainless	GG(G) Aluminium
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Example: Order-N°.		Article-N°.		ø-Code				NANO-U ²	
		B62015	.1850					B62015	
								B63015	
ø Code	d1 m7	d2 h5	l1	l2	l4	L _{max}			
.1850	18.50	20	153	101	50	71.0			●
.1870	18.70	20	153	101	50	70.9			●
.1900	19.00	20	153	101	50	70.7			●
.1910	19.10	20	153	101	50	70.6			●
.1920	19.20	20	153	101	50	70.5			●
.1930	19.30	20	153	101	50	70.5			●
.1950	19.50	20	153	101	50	70.4			●
.1970	19.70	20	153	101	50	70.3			●
.1980	19.80	20	153	101	50	70.2			●
.2000	20.00	20	153	101	50	70.2			●