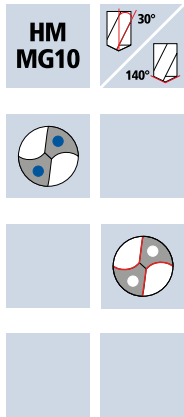


# Spiral flute drills Supradrill® U

5xd

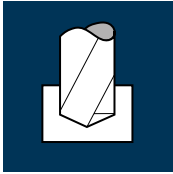


Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500				Inox Stainless		GG(G) Aluminium
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Example: Order-N°.							Article-N°.    ø-Code		NANO-U <sup>2</sup>	
							<b>B62015 0250</b>		<b>B62015</b>	
									<b>B63015</b>	
Ø Code	d <sub>1</sub> m7	d <sub>2</sub> h5	l <sub>1</sub>	l <sub>2</sub>	l <sub>4</sub>	L <sub>max</sub>				
0250*	2.50	6.0	66.0	28.0	36	20.8				●
0255*	2.55	6.0	66.0	28.0	36	20.7				●
0260*	2.60	6.0	66.0	28.0	36	20.6				●
0265*	2.65	6.0	66.0	28.0	36	20.6				●
0270*	2.70	6.0	66.0	28.0	36	20.6				●
0280*	2.80	6.0	66.0	28.0	36	20.4				●
0285*	2.85	6.0	66.0	28.0	36	20.4				●
0290*	2.90	6.0	66.0	28.0	36	20.4				●
0295*	2.95	6.0	66.0	28.0	36	20.3				●
0300	3.00	6.0	66.0	28.0	36	20.2				●
0305	3.05	6.0	66.0	28.0	36	20.2				●
0310	3.10	6.0	66.0	28.0	36	20.2				●
0315	3.15	6.0	66.0	28.0	36	20.1				●
0320	3.20	6.0	66.0	28.0	36	20.0				●
0330	3.30	6.0	66.0	28.0	36	20.0				●
0340	3.40	6.0	66.0	28.0	36	19.8				●
0350	3.50	6.0	66.0	28.0	36	19.8				●
0360	3.60	6.0	66.0	28.0	36	19.6				●
0370	3.70	6.0	66.0	28.0	36	19.6				●
0375	3.75	6.0	66.0	28.0	36	19.5				●
0380	3.80	6.0	74.0	36.0	36	27.4				●
0385	3.85	6.0	74.0	36.0	36	27.3				●
* without internal cooling										

## Application

## Material



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

d <sub>1</sub> [mm]	v <sub>c</sub> [m/min]	f [mm]	n [min <sup>-1</sup> ]	v <sub>f</sub> [mm/min]	Q [cm <sup>2</sup> /min]
2.50	140	0.0600	17825	1070	5.2
2.60	140	0.0600	17140	1028	5.5
2.80	140	0.0650	15915	1035	6.4
2.90	140	0.0700	15365	1076	7.1
3.00	170	0.0800	18040	1443	10.2
3.30	170	0.0850	16400	1394	11.9
3.50	170	0.0900	15460	1391	13.4
3.70	170	0.0950	14625	1389	14.9
3.80	170	0.1000	14240	1424	16.1

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

2.50	110	0.0600	14005	840	4.1
2.60	110	0.0600	13465	808	4.3
2.80	110	0.0650	12505	813	5.0
2.90	110	0.0700	12075	845	5.6
3.00	130	0.0800	13795	1104	7.8
3.30	130	0.0850	12540	1066	9.1
3.50	130	0.0900	11825	1064	10.2
3.70	130	0.0950	11185	1063	11.4
3.80	130	0.1000	10890	1089	12.4

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

2.50	80	0.0450	10185	458	2.2
2.60	80	0.0450	9795	441	2.3
2.80	80	0.0500	9095	455	2.8
2.90	80	0.0500	8780	439	2.9
3.00	110	0.0600	11670	700	4.9
3.30	110	0.0650	10610	690	5.9
3.50	110	0.0700	10005	700	6.7
3.70	110	0.0750	9465	710	7.6
3.80	110	0.0750	9215	691	7.8

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

2.50	55	0.0400	7005	280	1.4
2.60	55	0.0400	6735	269	1.4
2.80	55	0.0400	6255	250	1.5
2.90	55	0.0450	6035	272	1.8
3.00	70	0.0500	7425	371	2.6
3.30	70	0.0550	6750	371	3.2
3.50	70	0.0600	6365	382	3.7
3.70	70	0.0600	6020	361	3.9
3.80	70	0.0650	5865	381	4.3

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

2.50	25	0.0250	3185	80	0.4
2.60	25	0.0250	3060	77	0.4
2.80	25	0.0300	2840	85	0.5
2.90	25	0.0300	2745	82	0.5
3.00	40	0.0400	4245	170	1.2
3.30	40	0.0450	3860	174	1.5
3.50	40	0.0450	3640	164	1.6
3.70	40	0.0500	3440	172	1.8
3.80	40	0.0500	3350	168	1.9

Stainless steel [Cr-Ni/1.4301]

3.00	60	0.0450	6365	286	2.0
3.30	60	0.0500	5785	289	2.5
3.50	60	0.0550	5455	300	2.9
3.70	60	0.0550	5160	284	3.1
3.80	60	0.0600	5025	302	3.4

Cast iron (lamellar / spheroidal)

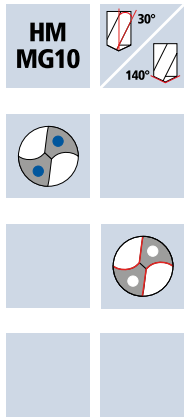
2.50	160	0.0650	20370	1324	6.5
2.60	160	0.0650	19590	1273	6.8
2.80	160	0.0700	18190	1273	7.8
2.90	160	0.0750	17560	1317	8.7
3.00	220	0.0850	23345	1984	14.0
3.30	220	0.0950	21220	2016	17.2
3.50	220	0.1000	20010	2001	19.3
3.70	220	0.1050	18925	1987	21.4
3.80	220	0.1100	18430	2027	23.0

Wrought aluminium alloys Si < 6% hardened

2.50	220	0.0500	28010	1401	6.9
2.60	220	0.0500	26935	1347	7.2
2.80	220	0.0550	25010	1376	8.5
2.90	220	0.0600	24150	1449	9.6
3.00	250	0.0650	26525	1724	12.2
3.30	250	0.0750	24115	1809	15.5
3.50	250	0.0800	22735	1819	17.5
3.70	250	0.0800	21505	1720	18.5
3.80	250	0.0850	20940	1780	20.2

# Spiral flute drills Supradrill® U

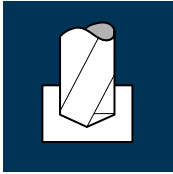
5xd



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 <sup>2</sup>	
							<b>B62015 0390</b>		<b>B62015</b>	
									<b>B63015</b>	
Ø Code	d <sub>1</sub> m7	d <sub>2</sub> h5	l <sub>1</sub>	l <sub>2</sub>	l <sub>4</sub>	L <sub>max</sub>				
0390	3.90	6.0	74.0	36.0	36	27.4				●
0400	4.00	6.0	74.0	36.0	36	26.9				●
0410	4.10	6.0	74.0	36.0	36	26.9				●
0420	4.20	6.0	74.0	36.0	36	26.8				●
0430	4.30	6.0	74.0	36.0	36	26.8				●
0440	4.40	6.0	74.0	36.0	36	26.6				●
0445	4.45	6.0	74.0	36.0	36	26.6				●
0450	4.50	6.0	74.0	36.0	36	26.6				●
0460	4.60	6.0	74.0	36.0	36	26.5				●
0465	4.65	6.0	74.0	36.0	36	26.5				●
0470	4.70	6.0	74.0	36.0	36	26.5				●
0480	4.80	6.0	82.0	44.0	36	34.4				●
0490	4.90	6.0	82.0	44.0	36	34.4				●
0495	4.95	6.0	82.0	44.0	36	34.3				●
0500	5.00	6.0	82.0	44.0	36	34.8				●
0505	5.05	6.0	82.0	44.0	36	34.7				●
0510	5.10	6.0	82.0	44.0	36	34.7				●
0520	5.20	6.0	82.0	44.0	36	34.6				●
0525	5.25	6.0	82.0	44.0	36	34.6				●
0530	5.30	6.0	82.0	44.0	36	34.6				●
0540	5.40	6.0	82.0	44.0	36	34.5				●
0550	5.50	6.0	82.0	44.0	36	34.5				●
0555	5.55	6.0	82.0	44.0	36	34.4				●

## Application



## Material

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



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



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



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



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



Stainless steel  
[Cr-Ni/1.4301]



Cast iron  
(lamellar / spheroidal)



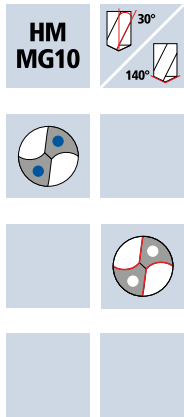
Wrought aluminium alloys  
Si < 6%  
hardened



$d_1$ [mm]	$v_c$ [m/min]	$f$ [mm]	$n$ [min <sup>-1</sup> ]	$v_f$ [mm/min]	$Q$ [cm <sup>3</sup> /min]
4.00	170	0.1050	13530	1421	17.9
4.20	170	0.1100	12885	1417	19.6
4.40	170	0.1150	12300	1415	21.5
4.50	170	0.1200	12025	1443	22.9
4.80	170	0.1250	11275	1409	25.5
5.00	170	0.1300	10825	1407	27.6
5.20	170	0.1350	10405	1405	29.8
5.30	170	0.1400	10210	1429	31.5
5.50	170	0.1450	9840	1427	33.9
4.00	130	0.1050	10345	1086	13.6
4.20	130	0.1100	9850	1084	15.0
4.40	130	0.1150	9405	1082	16.4
4.50	130	0.1200	9195	1103	17.5
4.80	130	0.1250	8620	1078	19.5
5.00	130	0.1300	8275	1076	21.1
5.20	130	0.1350	7960	1075	22.8
5.30	130	0.1400	7810	1093	24.1
5.50	130	0.1450	7525	1091	25.9
4.00	110	0.0800	8755	700	8.8
4.20	110	0.0850	8335	709	9.8
4.40	110	0.0900	7960	716	10.9
4.50	110	0.0900	7780	700	11.1
4.80	110	0.0950	7295	693	12.5
5.00	110	0.1000	7005	701	13.8
5.20	110	0.1050	6735	707	15.0
5.30	110	0.1050	6605	694	15.3
5.50	110	0.1100	6365	700	16.6
4.00	70	0.0650	5570	362	4.6
4.20	70	0.0700	5305	371	5.1
4.40	70	0.0750	5065	380	5.8
4.50	70	0.0750	4950	371	5.9
4.80	70	0.0800	4640	371	6.7
5.00	70	0.0850	4455	379	7.4
5.20	70	0.0850	4285	364	7.7
5.30	70	0.0900	4205	379	8.4
5.50	70	0.0900	4050	365	8.7
4.00	40	0.0550	3185	175	2.2
4.20	40	0.0550	3030	167	2.3
4.40	40	0.0600	2895	174	2.6
4.50	40	0.0600	2830	170	2.7
4.80	40	0.0650	2655	173	3.1
5.00	40	0.0650	2545	165	3.2
5.20	40	0.0700	2450	172	3.6
5.30	40	0.0700	2400	168	3.7
5.50	40	0.0750	2315	174	4.1
4.00	60	0.0600	4775	287	3.6
4.20	60	0.0650	4545	295	4.1
4.40	60	0.0700	4340	304	4.6
4.50	60	0.0700	4245	297	4.7
4.80	60	0.0750	3980	299	5.4
5.00	60	0.0750	3820	287	5.6
5.20	60	0.0800	3675	294	6.2
5.30	60	0.0800	3605	288	6.4
5.50	60	0.0850	3470	295	7.0
4.00	220	0.1150	17505	2013	25.3
4.20	220	0.1200	16675	2001	27.7
4.40	220	0.1250	15915	1989	30.2
4.50	220	0.1300	15560	2023	32.2
4.80	220	0.1350	14590	1970	35.6
5.00	220	0.1450	14005	2031	39.9
5.20	220	0.1500	13465	2020	42.9
5.30	220	0.1500	13215	1982	43.7
5.50	220	0.1550	12730	1973	46.9
4.00	250	0.0900	19895	1791	22.5
4.20	250	0.0950	18945	1800	24.9
4.40	250	0.1000	18085	1809	27.5
4.50	250	0.1000	17685	1769	28.1
4.80	250	0.1050	16580	1741	31.5
5.00	250	0.1100	15915	1751	34.4
5.20	250	0.1150	15305	1760	37.4
5.30	250	0.1200	15015	1802	39.8
5.50	250	0.1200	14470	1736	41.3

# Spiral flute drills Supradrill® U

5xd

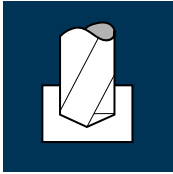


Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500				Inox Stainless		GG(G) Aluminium
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Example: Order-N°.							Article-N°.    ø-Code		NANO-U <sup>2</sup>	
							<b>B62015 0560</b>		<b>B62015</b>	
									<b>B63015</b>	
Ø Code	d <sub>1</sub> m7	d <sub>2</sub> h5	l <sub>1</sub>	l <sub>2</sub>	l <sub>4</sub>	L <sub>max</sub>				
0560	5.60	6.0	82.0	44.0	36	34.4				●
0565	5.65	6.0	82.0	44.0	36	34.4				●
0570	5.70	6.0	82.0	44.0	36	34.4				●
0575	5.75	6.0	82.0	44.0	36	34.5				●
0580	5.80	6.0	82.0	44.0	36	34.5				●
0590	5.90	6.0	82.0	44.0	36	34.5				●
0600	6.00	6.0	82.0	44.0	36	34.5				●
0610	6.10	8.0	91.0	53.0	36	41.4				●
0620	6.20	8.0	91.0	53.0	36	41.2				●
0630	6.30	8.0	91.0	53.0	36	41.2				●
0640	6.40	8.0	91.0	53.0	36	41.1				●
0650	6.50	8.0	91.0	53.0	36	41.1				●
0660	6.60	8.0	91.0	53.0	36	41.0				●
0670	6.70	8.0	91.0	53.0	36	41.0				●
0680	6.80	8.0	91.0	53.0	36	40.9				●
0690	6.90	8.0	91.0	53.0	36	40.9				●
0700	7.00	8.0	91.0	53.0	36	40.7				●
0710	7.10	8.0	91.0	53.0	36	40.7				●
0720	7.20	8.0	91.0	53.0	36	40.6				●
0725	7.25	8.0	91.0	53.0	36	40.6				●
0730	7.30	8.0	91.0	53.0	36	40.6				●
0740	7.40	8.0	91.0	53.0	36	40.5				●
0745	7.45	8.0	91.0	53.0	36	40.4				●

## Application

## Material



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



d <sub>1</sub> [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]
5.60	170	0.1450	9665	1401	34.5
5.80	170	0.1550	9330	1446	38.2
6.00	170	0.1600	9020	1443	40.8
6.20	170	0.1650	8730	1441	43.5
6.50	170	0.1700	8325	1415	47.0
6.80	170	0.1800	7960	1433	52.0
7.00	170	0.1850	7730	1430	55.0
7.20	170	0.1900	7515	1428	58.1
7.40	170	0.1950	7315	1426	61.3

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



5.60	130	0.1450	7390	1072	26.4
5.80	130	0.1550	7135	1106	29.2
6.00	130	0.1600	6895	1103	31.2
6.20	130	0.1650	6675	1101	33.3
6.50	130	0.1700	6365	1082	35.9
6.80	130	0.1800	6085	1095	39.8
7.00	130	0.1850	5910	1093	42.1
7.20	130	0.1900	5745	1092	44.4
7.40	130	0.1950	5590	1090	46.9

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



5.60	110	0.1100	6255	688	16.9
5.80	110	0.1150	6035	694	18.3
6.00	110	0.1200	5835	700	19.8
6.20	110	0.1250	5645	706	21.3
6.50	110	0.1300	5385	700	23.2
6.80	110	0.1350	5150	695	25.3
7.00	110	0.1400	5000	700	26.9
7.20	110	0.1450	4865	705	28.7
7.40	110	0.1500	4730	710	30.5

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



5.60	70	0.0950	3980	378	9.3
5.80	70	0.0950	3840	365	9.6
6.00	70	0.1000	3715	372	10.5
6.20	70	0.1050	3595	378	11.4
6.50	70	0.1100	3430	377	12.5
6.80	70	0.1150	3275	377	13.7
7.00	70	0.1150	3185	366	14.1
7.20	70	0.1200	3095	371	15.1
7.40	70	0.1250	3010	376	16.2

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



5.60	40	0.0750	2275	171	4.2
5.80	40	0.0750	2195	165	4.3
6.00	40	0.0800	2120	170	4.8
6.20	40	0.0850	2055	175	5.3
6.50	40	0.0850	1960	167	5.5
6.80	40	0.0900	1870	168	6.1
7.00	40	0.0950	1820	173	6.7
7.20	40	0.0950	1770	168	6.8
7.40	40	0.1000	1720	172	7.4

Material
Stainless steel [Cr-Ni/1.4301]



5.60	60	0.0850	3410	290	7.1
5.80	60	0.0900	3295	297	7.8
6.00	60	0.0900	3185	287	8.1
6.20	60	0.0950	3080	293	8.8
6.50	60	0.1000	2940	294	9.8
6.80	60	0.1050	2810	295	10.7
7.00	60	0.1100	2730	300	11.6
7.20	60	0.1100	2655	292	11.9
7.40	60	0.1150	2580	297	12.8

Material
Cast iron (lamellar / spheroidal)



5.60	220	0.1600	12505	2001	49.3
5.80	220	0.1650	12075	1992	52.6
6.00	220	0.1700	11670	1984	56.1
6.20	220	0.1750	11295	1977	59.7
6.50	220	0.1850	10775	1993	66.1
6.80	220	0.1950	10300	2009	72.9
7.00	220	0.2000	10005	2001	77.0
7.20	220	0.2050	9725	1994	81.2
7.40	220	0.2100	9465	1988	85.5

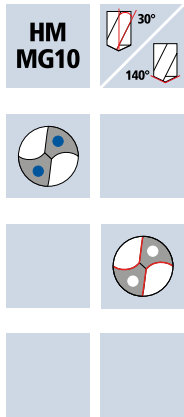
Material
Wrought aluminium alloys Si < 6% hardened



5.60	250	0.1250	14210	1776	43.8
5.80	250	0.1300	13720	1784	47.1
6.00	250	0.1350	13265	1791	50.6
6.20	250	0.1400	12835	1797	54.2
6.50	250	0.1450	12245	1776	58.9
6.80	250	0.1500	11705	1756	63.8
7.00	250	0.1550	11370	1762	67.8
7.20	250	0.1600	11050	1768	72.0
7.40	250	0.1650	10755	1775	76.3

# Spiral flute drills Supradrill® U

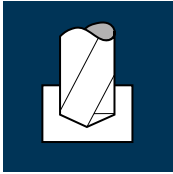
5xd



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 <sup>2</sup>	
							<b>B62015 0750</b>		<b>B62015</b>	
									<b>B63015</b>	
Ø Code	d <sub>1</sub> m7	d <sub>2</sub> h5	l <sub>1</sub>	l <sub>2</sub>	l <sub>4</sub>	L <sub>max</sub>				
0750	7.50	8.0	91.0	53.0	36	40.5				●
0755	7.55	8.0	91.0	53.0	36	40.4				●
0760	7.60	8.0	91.0	53.0	36	40.4				●
0765	7.65	8.0	91.0	53.0	36	40.4				●
0770	7.70	8.0	91.0	53.0	36	40.4				●
0780	7.80	8.0	91.0	53.0	36	40.4				●
0790	7.90	8.0	91.0	53.0	36	40.4				●
0800	8.00	8.0	91.0	53.0	36	40.4				●
0810	8.10	10.0	103.0	61.0	40	46.3				●
0820	8.20	10.0	103.0	61.0	40	46.2				●
0830	8.30	10.0	103.0	61.0	40	46.2				●
0840	8.40	10.0	103.0	61.0	40	46.1				●
0850	8.50	10.0	103.0	61.0	40	46.1				●
0860	8.60	10.0	103.0	61.0	40	46.0				●
0870	8.70	10.0	103.0	61.0	40	46.0				●
0875	8.75	10.0	103.0	61.0	40	45.9				●
0880	8.80	10.0	103.0	61.0	40	45.9				●
0885	8.85	10.0	103.0	61.0	40	45.8				●
0890	8.90	10.0	103.0	61.0	40	45.8				●
0900	9.00	10.0	103.0	61.0	40	45.7				●
0910	9.10	10.0	103.0	61.0	40	45.7				●
0920	9.20	10.0	103.0	61.0	40	45.6				●
0925	9.25	10.0	103.0	61.0	40	45.5				●

## Application



## Material

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



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



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



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



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



Stainless steel  
[Cr-Ni/1.4301]



Cast iron  
(lamellar / spheroidal)



Wrought aluminium alloys  
Si < 6%  
hardened

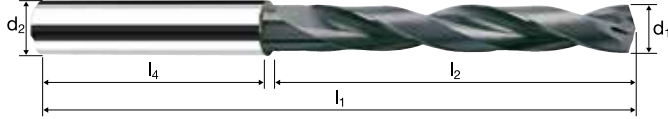
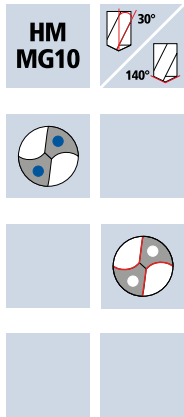


d <sub>1</sub> [mm]	v <sub>c</sub> [m/min]	f [mm]	n [min <sup>-1</sup> ]	v <sub>f</sub> [mm/min]	Q [cm <sup>3</sup> /min]
7.50	170	0.1950	7215	1407	62.2
7.60	170	0.2000	7120	1424	64.6
7.80	170	0.2050	6940	1423	68.0
8.00	170	0.2100	6765	1421	71.4
8.20	170	0.2150	6600	1419	74.9
8.50	170	0.2250	6365	1432	81.3
8.80	170	0.2300	6150	1415	86.0
9.00	170	0.2350	6015	1414	89.9
9.20	170	0.2400	5880	1411	93.8
7.50	130	0.1950	5515	1075	47.5
7.60	130	0.2000	5445	1089	49.4
7.80	130	0.2050	5305	1088	52.0
8.00	130	0.2100	5175	1087	54.6
8.20	130	0.2150	5045	1085	57.3
8.50	130	0.2250	4870	1096	62.2
8.80	130	0.2300	4700	1081	65.7
9.00	130	0.2350	4600	1081	68.8
9.20	130	0.2400	4500	1080	71.8
7.50	110	0.1500	4670	701	30.9
7.60	110	0.1500	4605	691	31.3
7.80	110	0.1550	4490	696	33.3
8.00	110	0.1600	4375	700	35.2
8.20	110	0.1650	4270	705	37.2
8.50	110	0.1700	4120	700	39.7
8.80	110	0.1750	3980	697	42.4
9.00	110	0.1800	3890	700	44.5
9.20	110	0.1850	3805	704	46.8
7.50	70	0.1250	2970	371	16.4
7.60	70	0.1250	2930	366	16.6
7.80	70	0.1300	2855	371	17.7
8.00	70	0.1350	2785	376	18.9
8.20	70	0.1350	2715	367	19.4
8.50	70	0.1400	2620	367	20.8
8.80	70	0.1450	2530	367	22.3
9.00	70	0.1500	2475	371	23.6
9.20	70	0.1550	2420	375	24.9
7.50	40	0.1000	1700	170	7.5
7.60	40	0.1000	1675	168	7.6
7.80	40	0.1050	1630	171	8.2
8.00	40	0.1050	1590	167	8.4
8.20	40	0.1100	1555	171	9.0
8.50	40	0.1150	1500	173	9.8
8.80	40	0.1150	1445	166	10.1
9.00	40	0.1200	1415	170	10.8
9.20	40	0.1250	1385	173	11.5
7.50	60	0.1150	2545	293	12.9
7.60	60	0.1150	2515	289	13.1
7.80	60	0.1200	2450	294	14.0
8.00	60	0.1250	2385	298	15.0
8.20	60	0.1250	2330	291	15.4
8.50	60	0.1300	2245	292	16.6
8.80	60	0.1350	2170	293	17.8
9.00	60	0.1400	2120	297	18.9
9.20	60	0.1400	2075	291	19.3
7.50	220	0.2150	9335	2007	88.7
7.60	220	0.2150	9215	1981	89.9
7.80	220	0.2250	8980	2021	96.5
8.00	220	0.2300	8755	2014	101.2
8.20	220	0.2350	8540	2007	106.0
8.50	220	0.2450	8240	2019	114.6
8.80	220	0.2500	7960	1990	121.0
9.00	220	0.2550	7780	1984	126.2
9.20	220	0.2650	7610	2017	134.1
7.50	250	0.1650	10610	1751	77.3
7.60	250	0.1700	10470	1780	80.7
7.80	250	0.1750	10200	1785	85.3
8.00	250	0.1800	9945	1790	90.0
8.20	250	0.1800	9705	1747	92.3
8.50	250	0.1900	9360	1778	100.9
8.80	250	0.1950	9045	1764	107.3
9.00	250	0.2000	8840	1768	112.5
9.20	250	0.2050	8650	1773	117.9



# Spiral flute drills Supradrill® U

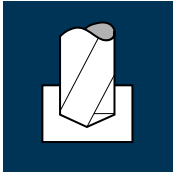
5xd



Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500				Inox Stainless		GG(G) Aluminium
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Ø Code	d <sub>1</sub> m7	d <sub>2</sub> h5	l <sub>1</sub>	l <sub>2</sub>	l <sub>4</sub>	L <sub>max</sub>	NANO-U <sup>2</sup>	
							B62015	B63015
Example: Order-Nº. <b>B62015 0930</b>								
0930	9.30	10.0	103.0	61.0	40	45.6		●
0940	9.40	10.0	103.0	61.0	40	45.5		●
0950	9.50	10.0	103.0	61.0	40	45.5		●
0955	9.55	10.0	103.0	61.0	40	45.4		●
0960	9.60	10.0	103.0	61.0	40	45.4		●
0965	9.65	10.0	103.0	61.0	40	45.3		●
0970	9.70	10.0	103.0	61.0	40	45.4		●
0980	9.80	10.0	103.0	61.0	40	45.3		●
0990	9.90	10.0	103.0	61.0	40	45.4		●
1000	10.00	10.0	103.0	61.0	40	45.4		●
1010	10.10	12.0	118.0	71.0	45	53.3		●
1020	10.20	12.0	118.0	71.0	45	53.2		●
1030	10.30	12.0	118.0	71.0	45	53.2		●
1040	10.40	12.0	118.0	71.0	45	53.1		●
1050	10.50	12.0	118.0	71.0	45	53.1		●
1060	10.60	12.0	118.0	71.0	45	53.0		●
1070	10.70	12.0	118.0	71.0	45	52.9		●
1080	10.80	12.0	118.0	71.0	45	52.8		●
1090	10.90	12.0	118.0	71.0	45	52.8		●
1100	11.00	12.0	118.0	71.0	45	52.7		●
1110	11.10	12.0	118.0	71.0	45	52.7		●
1120	11.20	12.0	118.0	71.0	45	52.6		●
1130	11.30	12.0	118.0	71.0	45	52.6		●

## Application



## Material

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



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



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



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



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



Stainless steel  
[Cr-Ni/1.4301]



Cast iron  
(lamellar / spheroidal)



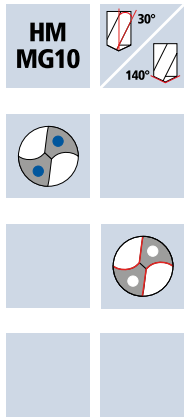
Wrought aluminium alloys  
Si < 6%  
hardened



d <sub>1</sub> [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]
9.40	170	0.2450	5755	1410	97.9
9.50	170	0.2500	5695	1424	100.9
9.60	170	0.2550	5635	1437	104.0
9.80	170	0.2600	5520	1435	108.3
10.00	170	0.2650	5410	1434	112.6
10.20	170	0.2700	5305	1432	117.0
10.50	170	0.2750	5155	1418	122.8
10.80	170	0.2850	5010	1428	130.8
11.00	170	0.2900	4920	1427	135.6
9.40	130	0.2450	4400	1078	74.8
9.50	130	0.2500	4355	1089	77.2
9.60	130	0.2550	4310	1099	79.6
9.80	130	0.2600	4220	1097	82.8
10.00	130	0.2650	4140	1097	86.2
10.20	130	0.2700	4055	1095	89.5
10.50	130	0.2750	3940	1084	93.8
10.80	130	0.2850	3830	1092	100.0
11.00	130	0.2900	3760	1090	103.6
9.40	110	0.1900	3725	708	49.1
9.50	110	0.1900	3685	700	49.6
9.60	110	0.1900	3645	693	50.1
9.80	110	0.1950	3575	697	52.6
10.00	110	0.2000	3500	700	55.0
10.20	110	0.2050	3435	704	57.5
10.50	110	0.2100	3335	700	60.6
10.80	110	0.2150	3240	697	63.8
11.00	110	0.2200	3185	701	66.6
9.40	70	0.1550	2370	367	25.5
9.50	70	0.1600	2345	375	26.6
9.60	70	0.1600	2320	371	26.9
9.80	70	0.1650	2275	375	28.3
10.00	70	0.1650	2230	368	28.9
10.20	70	0.1700	2185	372	30.4
10.50	70	0.1750	2120	371	32.1
10.80	70	0.1800	2065	372	34.1
11.00	70	0.1850	2025	375	35.6
9.40	40	0.1250	1355	169	11.8
9.50	40	0.1250	1340	168	11.9
9.60	40	0.1300	1325	172	12.5
9.80	40	0.1300	1300	169	12.7
10.00	40	0.1350	1275	172	13.5
10.20	40	0.1350	1250	169	13.8
10.50	40	0.1400	1215	170	14.7
10.80	40	0.1450	1180	171	15.7
11.00	40	0.1450	1155	168	15.9
9.40	60	0.1450	2030	294	20.4
9.50	60	0.1450	2010	292	20.7
9.60	60	0.1500	1990	299	21.6
9.80	60	0.1500	1950	293	22.1
10.00	60	0.1550	1910	296	23.3
10.20	60	0.1550	1870	290	23.7
10.50	60	0.1600	1820	291	25.2
10.80	60	0.1650	1770	292	26.8
11.00	60	0.1700	1735	295	28.0
9.40	220	0.2700	7450	2012	139.6
9.50	220	0.2700	7370	1990	141.0
9.60	220	0.2750	7295	2006	145.2
9.80	220	0.2800	7145	2001	150.9
10.00	220	0.2850	7005	1996	156.8
10.20	220	0.2900	6865	1991	162.7
10.50	220	0.3000	6670	2001	173.3
10.80	220	0.3100	6485	2010	184.2
11.00	220	0.3150	6365	2005	190.5
9.40	250	0.2100	8465	1778	123.4
9.50	250	0.2100	8375	1759	124.7
9.60	250	0.2150	8290	1782	129.0
9.80	250	0.2200	8120	1786	134.7
10.00	250	0.2200	7960	1751	137.5
10.20	250	0.2250	7800	1755	143.4
10.50	250	0.2350	7580	1781	154.2
10.80	250	0.2400	7370	1769	162.0
11.00	250	0.2450	7235	1773	168.5

# Spiral flute drills Supradrill® U

5xd

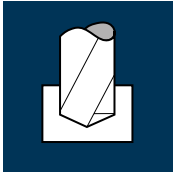


Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500				Inox Stainless		GG(G) Aluminium
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Example: Order-N°.							Article-N°.    ø-Code		NANO-U <sup>2</sup>	
							<b>B62015 1140</b>		<b>B62015</b>	
									<b>B63015</b>	
Ø Code	d <sub>1</sub> m7	d <sub>2</sub> h5	l <sub>1</sub>	l <sub>2</sub>	l <sub>4</sub>	L <sub>max</sub>				
1140	11.40	12.0	118.0	71.0	45	52.5			●	
1150	11.50	12.0	118.0	71.0	45	52.4			●	
1160	11.60	12.0	118.0	71.0	45	52.4			●	
1170	11.70	12.0	118.0	71.0	45	52.4			●	
1180	11.80	12.0	118.0	71.0	45	52.3			●	
1190	11.90	12.0	118.0	71.0	45	52.4			●	
1200	12.00	12.0	118.0	71.0	45	52.3			●	
1210	12.10	14.0	124.0	77.0	45	56.3			●	
1220	12.20	14.0	124.0	77.0	45	56.2			●	
1230	12.30	14.0	124.0	77.0	45	56.2			●	
1240	12.40	14.0	124.0	77.0	45	56.1			●	
1250	12.50	14.0	124.0	77.0	45	56.1			●	
1260	12.60	14.0	124.0	77.0	45	56.0			●	
1270	12.70	14.0	124.0	77.0	45	55.9			●	
1280	12.80	14.0	124.0	77.0	45	55.8			●	
1290	12.90	14.0	124.0	77.0	45	55.8			●	
1300	13.00	14.0	124.0	77.0	45	55.7			●	
1310	13.10	14.0	124.0	77.0	45	55.7			●	
1320	13.20	14.0	124.0	77.0	45	55.6			●	
1330	13.30	14.0	124.0	77.0	45	55.6			●	
1340	13.40	14.0	124.0	77.0	45	55.4			●	
1350	13.50	14.0	124.0	77.0	45	55.4			●	
1360	13.60	14.0	124.0	77.0	45	55.3			●	

## Application

## Material



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




d <sub>1</sub> [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]
11.50	170	0.3050	4705	1435	149.1
11.80	170	0.3100	4585	1421	155.4
12.00	170	0.3150	4510	1421	160.7
12.20	170	0.3200	4435	1419	165.9
12.50	170	0.3300	4330	1429	175.4
12.80	170	0.3350	4230	1417	182.4
13.00	170	0.3400	4165	1416	188.0
13.20	170	0.3450	4100	1415	193.6
13.50	170	0.3550	4010	1424	203.8

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




11.50	130	0.3050	3600	1098	114.0
11.80	130	0.3100	3505	1087	118.8
12.00	130	0.3150	3450	1087	122.9
12.20	130	0.3200	3390	1085	126.8
12.50	130	0.3300	3310	1092	134.0
12.80	130	0.3350	3235	1084	139.5
13.00	130	0.3400	3185	1083	143.7
13.20	130	0.3450	3135	1082	148.0
13.50	130	0.3550	3065	1088	155.7

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




11.50	110	0.2300	3045	700	72.7
11.80	110	0.2350	2965	697	76.2
12.00	110	0.2400	2920	701	79.3
12.20	110	0.2450	2870	703	82.2
12.50	110	0.2500	2800	700	85.9
12.80	110	0.2550	2735	697	89.7
13.00	110	0.2600	2695	701	93.0
13.20	110	0.2650	2655	704	96.3
13.50	110	0.2700	2595	701	100.3

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




11.50	70	0.1900	1940	369	38.3
11.80	70	0.1950	1890	369	40.3
12.00	70	0.2000	1855	371	42.0
12.20	70	0.2050	1825	374	43.7
12.50	70	0.2100	1785	375	46.0
12.80	70	0.2150	1740	374	48.1
13.00	70	0.2150	1715	369	48.9
13.20	70	0.2200	1690	372	50.9
13.50	70	0.2250	1650	371	53.1

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




11.50	40	0.1550	1105	171	17.8
11.80	40	0.1550	1080	167	18.3
12.00	40	0.1600	1060	170	19.2
12.20	40	0.1650	1045	172	20.2
12.50	40	0.1650	1020	168	20.7
12.80	40	0.1700	995	169	21.8
13.00	40	0.1750	980	172	22.8
13.20	40	0.1750	965	169	23.1
13.50	40	0.1800	945	170	24.3

Stainless steel  
[Cr-Ni/1.4301]




11.50	60	0.1750	1660	291	30.2
11.80	60	0.1800	1620	292	31.9
12.00	60	0.1850	1590	294	33.3
12.20	60	0.1900	1565	297	34.8
12.50	60	0.1900	1530	291	35.7
12.80	60	0.1950	1490	291	37.4
13.00	60	0.2000	1470	294	39.0
13.20	60	0.2050	1445	296	40.5
13.50	60	0.2100	1415	297	42.5

Cast iron  
(lamellar / spheroidal)



11.50	220	0.3300	6090	2010	208.7
11.80	220	0.3350	5935	1988	217.4
12.00	220	0.3450	5835	2013	227.7
12.20	220	0.3500	5740	2009	234.8
12.50	220	0.3550	5600	1988	244.0
12.80	220	0.3650	5470	1997	256.9
13.00	220	0.3700	5385	1993	264.5
13.20	220	0.3750	5305	1989	272.2
13.50	220	0.3850	5185	1996	285.7

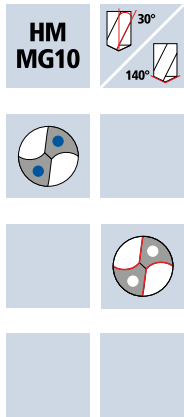
Wrought aluminium alloys  
Si < 6%  
hardened



11.50	250	0.2550	6920	1765	183.3
11.80	250	0.2600	6745	1754	191.8
12.00	250	0.2650	6630	1757	198.7
12.20	250	0.2700	6525	1762	206.0
12.50	250	0.2800	6365	1782	218.7
12.80	250	0.2850	6215	1771	227.9
13.00	250	0.2900	6120	1775	235.6
13.20	250	0.2950	6030	1779	243.4
13.50	250	0.3000	5895	1769	253.1

# Spiral flute drills Supradrill® U

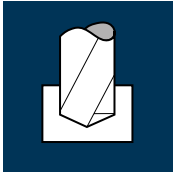
5xd



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 <sup>2</sup>	
							<b>B62015 1370</b>		<b>B62015</b>	
									<b>B63015</b>	
Ø Code	d <sub>1</sub> m7	d <sub>2</sub> h5	l <sub>1</sub>	l <sub>2</sub>	l <sub>4</sub>	L <sub>max</sub>				
1370	13.70	14.0	124.0	77.0	45	55.4				●
1380	13.80	14.0	124.0	77.0	45	55.3				●
1390	13.90	14.0	124.0	77.0	45	55.3				●
1400	14.00	14.0	124.0	77.0	45	55.3				●
1410	14.10	16.0	133.0	83.0	48	59.3				●
1420	14.20	16.0	133.0	83.0	48	59.2				●
1430	14.30	16.0	133.0	83.0	48	59.2				●
1440	14.40	16.0	133.0	83.0	48	59.1				●
1450	14.50	16.0	133.0	83.0	48	59.1				●
1460	14.60	16.0	133.0	83.0	48	58.9				●
1470	14.70	16.0	133.0	83.0	48	58.9				●
1480	14.80	16.0	133.0	83.0	48	58.8				●
1490	14.90	16.0	133.0	83.0	48	58.8				●
1500	15.00	16.0	133.0	83.0	48	58.7				●
1510	15.10	16.0	133.0	83.0	48	58.7				●
1520	15.20	16.0	133.0	83.0	48	58.6				●
1530	15.30	16.0	133.0	83.0	48	58.5				●
1540	15.40	16.0	133.0	83.0	48	58.4				●
1550	15.50	16.0	133.0	83.0	48	58.4				●
1560	15.60	16.0	133.0	83.0	48	58.3				●
1570	15.70	16.0	133.0	83.0	48	58.3				●
1580	15.80	16.0	133.0	83.0	48	58.3				●
1590	15.90	16.0	133.0	83.0	48	58.3				●

## Application



## Material

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



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



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



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



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



Stainless steel  
[Cr-Ni/1.4301]



Cast iron  
(lamellar / spheroidal)



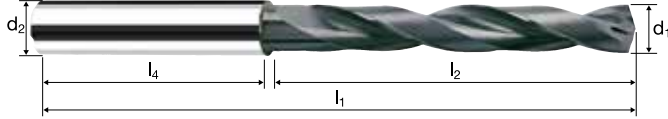
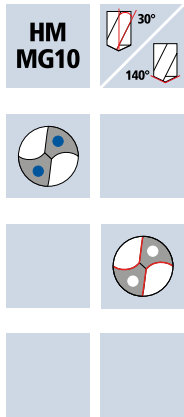
Wrought aluminium alloys  
Si < 6%  
hardened



d <sub>1</sub> [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]
13.80	170	0.3650	3920	1431	214.0
14.00	170	0.3700	3865	1430	220.1
14.20	170	0.3750	3810	1429	226.3
14.50	170	0.3800	3730	1417	234.1
14.80	170	0.3900	3655	1426	245.2
15.00	170	0.3950	3610	1426	252.0
15.20	170	0.4000	3560	1424	258.4
15.50	170	0.4100	3490	1431	270.0
15.80	170	0.4150	3425	1421	278.7
13.80	130	0.3650	3000	1095	163.8
14.00	130	0.3700	2955	1093	168.3
14.20	130	0.3750	2915	1093	173.1
14.50	130	0.3800	2855	1085	179.1
14.80	130	0.3900	2795	1090	187.5
15.00	130	0.3950	2760	1090	192.7
15.20	130	0.4000	2720	1088	197.4
15.50	130	0.4100	2670	1095	206.6
15.80	130	0.4150	2620	1087	213.2
13.80	110	0.2750	2535	697	104.3
14.00	110	0.2800	2500	700	107.8
14.20	110	0.2850	2465	703	111.3
14.50	110	0.2900	2415	700	115.7
14.80	110	0.2950	2365	698	120.0
15.00	110	0.3000	2335	701	123.8
15.20	110	0.3050	2305	703	127.6
15.50	110	0.3100	2260	701	132.2
15.80	110	0.3150	2215	698	136.8
13.80	70	0.2300	1615	372	55.6
14.00	70	0.2350	1590	374	57.5
14.20	70	0.2350	1570	369	58.4
14.50	70	0.2400	1535	368	60.8
14.80	70	0.2450	1505	369	63.4
15.00	70	0.2500	1485	371	65.6
15.20	70	0.2550	1465	374	67.8
15.50	70	0.2600	1440	374	70.6
15.80	70	0.2650	1410	374	73.3
13.80	40	0.1850	925	171	25.6
14.00	40	0.1850	910	168	25.9
14.20	40	0.1900	895	170	26.9
14.50	40	0.1950	880	172	28.3
14.80	40	0.1950	860	168	28.9
15.00	40	0.2000	850	170	30.0
15.20	40	0.2050	840	172	31.2
15.50	40	0.2050	820	168	31.7
15.80	40	0.2100	805	169	33.2
13.80	60	0.2100	1385	291	43.5
14.00	60	0.2150	1365	294	45.2
14.20	60	0.2200	1345	296	46.9
14.50	60	0.2250	1315	296	48.9
14.80	60	0.2300	1290	297	51.0
15.00	60	0.2300	1275	293	51.8
15.20	60	0.2350	1255	295	53.5
15.50	60	0.2400	1230	295	55.7
15.80	60	0.2450	1210	297	58.1
13.80	220	0.3950	5075	2005	299.8
14.00	220	0.4000	5000	2000	307.9
14.20	220	0.4050	4930	1997	316.2
14.50	220	0.4150	4830	2005	331.0
14.80	220	0.4250	4730	2010	345.8
15.00	220	0.4300	4670	2008	354.9
15.20	220	0.4350	4605	2003	363.5
15.50	220	0.4450	4520	2011	379.5
15.80	220	0.4500	4430	1994	390.9
13.80	250	0.3050	5765	1758	263.0
14.00	250	0.3100	5685	1762	271.3
14.20	250	0.3150	5605	1766	279.6
14.50	250	0.3200	5490	1757	290.1
14.80	250	0.3300	5375	1774	305.2
15.00	250	0.3350	5305	1777	314.1
15.20	250	0.3400	5235	1780	323.0
15.50	250	0.3450	5135	1772	334.3
15.80	250	0.3500	5035	1762	345.5

# Spiral flute drills Supradrill® U

5xd

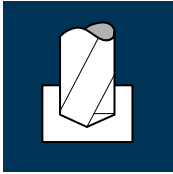


Rm < 850	Rm 850-1100	Rm 1100-1300	Rm 1300-1500				Inox Stainless		GG(G) Aluminium
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Example: Order-N°.							Article-N°.    ø-Code		NANO-U <sup>2</sup>	
							<b>B62015 1600</b>		<b>B62015</b>	
									<b>B63015</b>	
Ø Code	d <sub>1</sub> m7	d <sub>2</sub> h5	l <sub>1</sub>	l <sub>2</sub>	l <sub>4</sub>	L <sub>max</sub>				
1600	16.00	16.0	133.0	83.0	48	58.3	●			
1610	16.10	18.0	143.0	93.0	48	66.3	●			
1620	16.20	18.0	143.0	93.0	48	66.2	●			
1630	16.30	18.0	143.0	93.0	48	66.2	●			
1640	16.40	18.0	143.0	93.0	48	66.1	●			
1650	16.50	18.0	143.0	93.0	48	66.0	●			
1660	16.60	18.0	143.0	93.0	48	65.9	●			
1670	16.70	18.0	143.0	93.0	48	65.9	●			
1680	16.80	18.0	143.0	93.0	48	65.8	●			
1690	16.90	18.0	143.0	93.0	48	65.8	●			
1700	17.00	18.0	143.0	93.0	48	65.7	●			
1710	17.10	18.0	143.0	93.0	48	65.7	●			
1720	17.20	18.0	143.0	93.0	48	65.5	●			
1730	17.30	18.0	143.0	93.0	48	65.5	●			
1740	17.40	18.0	143.0	93.0	48	65.4	●			
1750	17.50	18.0	143.0	93.0	48	65.4	●			
1760	17.60	18.0	143.0	93.0	48	65.3	●			
1770	17.70	18.0	143.0	93.0	48	65.3	●			
1780	17.80	18.0	143.0	93.0	48	65.2	●			
1790	17.90	18.0	143.0	93.0	48	65.3	●			
1800	18.00	18.0	143.0	93.0	48	65.3	●			

## Application

## Material



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

d <sub>1</sub> [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]
16.00	170	0.4200	3380	1420	285.4
16.20	170	0.4250	3340	1420	292.6
16.50	170	0.4350	3280	1427	305.1
16.80	170	0.4400	3220	1417	314.1
17.00	170	0.4450	3185	1417	321.7
17.20	170	0.4550	3145	1431	332.5
17.50	170	0.4600	3090	1421	341.9
17.80	170	0.4700	3040	1429	355.6
18.00	170	0.4750	3005	1427	363.2

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

16.00	130	0.4200	2585	1086	218.3
16.20	130	0.4250	2555	1086	223.8
16.50	130	0.4350	2510	1092	233.5
16.80	130	0.4400	2465	1085	240.4
17.00	130	0.4450	2435	1084	246.0
17.20	130	0.4550	2405	1094	254.3
17.50	130	0.4600	2365	1088	261.7
17.80	130	0.4700	2325	1093	271.9
18.00	130	0.4750	2300	1093	278.0

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

16.00	110	0.3200	2190	701	140.9
16.20	110	0.3250	2160	702	144.7
16.50	110	0.3300	2120	700	149.6
16.80	110	0.3350	2085	699	154.8
17.00	110	0.3400	2060	700	159.0
17.20	110	0.3450	2035	702	163.1
17.50	110	0.3500	2000	700	168.4
17.80	110	0.3550	1965	698	173.6
18.00	110	0.3600	1945	700	178.2

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

16.00	70	0.2650	1395	370	74.3
16.20	70	0.2700	1375	371	76.5
16.50	70	0.2750	1350	371	79.4
16.80	70	0.2800	1325	371	82.2
17.00	70	0.2850	1310	373	84.8
17.20	70	0.2850	1295	369	85.8
17.50	70	0.2900	1275	370	88.9
17.80	70	0.2950	1250	369	91.8
18.00	70	0.3000	1240	372	94.7

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

16.00	40	0.2150	795	171	34.4
16.20	40	0.2150	785	169	34.8
16.50	40	0.2200	770	169	36.2
16.80	40	0.2250	760	171	37.9
17.00	40	0.2250	750	169	38.3
17.20	40	0.2300	740	170	39.5
17.50	40	0.2350	730	172	41.3
17.80	40	0.2350	715	168	41.8
18.00	40	0.2400	705	169	43.1

Stainless steel [Cr-Ni/1.4301]

16.00	60	0.2450	1195	293	58.9
16.20	60	0.2500	1180	295	60.8
16.50	60	0.2550	1155	295	63.0
16.80	60	0.2600	1135	295	65.4
17.00	60	0.2600	1125	293	66.4
17.20	60	0.2650	1110	294	68.4
17.50	60	0.2700	1090	294	70.8
17.80	60	0.2750	1075	296	73.6
18.00	60	0.2750	1060	292	74.2

Cast iron (lamellar / spheroidal)

16.00	220	0.4550	4375	1991	400.2
16.20	220	0.4650	4325	2011	414.5
16.50	220	0.4700	4245	1995	426.6
16.80	220	0.4800	4170	2002	443.7
17.00	220	0.4850	4120	1998	453.6
17.20	220	0.4900	4070	1994	463.4
17.50	220	0.5000	4000	2000	481.1
17.80	220	0.5100	3935	2007	499.4
18.00	220	0.5150	3890	2003	509.8

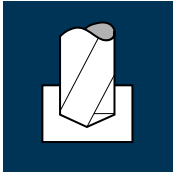
Wrought aluminium alloys Si < 6% hardened

16.00	250	0.3550	4975	1766	355.1
16.20	250	0.3600	4910	1768	364.3
16.50	250	0.3650	4825	1761	376.6
16.80	250	0.3750	4735	1776	393.6
17.00	250	0.3800	4680	1778	403.7
17.20	250	0.3800	4625	1758	408.4
17.50	250	0.3900	4545	1773	426.4
17.80	250	0.3950	4470	1766	439.4
18.00	250	0.4000	4420	1768	449.9





## Application



## Material

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



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



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



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



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



Stainless steel  
[Cr-Ni/1.4301]



Cast iron  
(lamellar / spheroidal)



Wrought aluminium alloys  
Si < 6%  
hardened



d <sub>1</sub> [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]
18.50	170	0.4850	2925	1419	381.3
18.70	170	0.4900	2895	1419	389.6
19.00	170	0.5000	2850	1425	404.0
19.20	170	0.5050	2820	1424	412.3
19.30	170	0.5100	2805	1431	418.5
19.50	170	0.5150	2775	1429	426.8
19.70	170	0.5200	2745	1427	435.1
19.80	170	0.5200	2735	1422	437.9
20.00	170	0.5250	2705	1420	446.1
18.50	130	0.4850	2235	1084	291.4
18.70	130	0.4900	2215	1085	298.1
19.00	130	0.5000	2180	1090	309.0
19.20	130	0.5050	2155	1088	315.1
19.30	130	0.5100	2145	1094	320.1
19.50	130	0.5150	2120	1092	326.1
19.70	130	0.5200	2100	1092	332.8
19.80	130	0.5200	2090	1087	334.6
20.00	130	0.5250	2070	1087	341.4
18.50	110	0.3700	1895	701	188.5
18.70	110	0.3750	1870	701	192.6
19.00	110	0.3800	1845	701	198.8
19.20	110	0.3850	1825	703	203.4
19.30	110	0.3850	1815	699	204.4
19.50	110	0.3900	1795	700	209.1
19.70	110	0.3950	1775	701	213.7
19.80	110	0.3950	1770	699	215.3
20.00	110	0.4000	1750	700	219.9
18.50	70	0.3100	1205	374	100.4
18.70	70	0.3100	1190	369	101.3
19.00	70	0.3150	1175	370	104.9
19.20	70	0.3200	1160	371	107.5
19.30	70	0.3200	1155	370	108.1
19.50	70	0.3250	1145	372	111.1
19.70	70	0.3300	1130	373	113.7
19.80	70	0.3300	1125	371	114.3
20.00	70	0.3350	1115	374	117.3
18.50	40	0.2450	690	169	45.5
18.70	40	0.2500	680	170	46.7
19.00	40	0.2550	670	171	48.5
19.20	40	0.2550	665	170	49.1
19.30	40	0.2550	660	168	49.2
19.50	40	0.2600	655	170	50.9
19.70	40	0.2650	645	171	52.1
19.80	40	0.2650	645	171	52.6
20.00	40	0.2650	635	168	52.9
18.50	60	0.2850	1030	294	78.9
18.70	60	0.2900	1020	296	81.2
19.00	60	0.2900	1005	292	82.6
19.20	60	0.2950	995	294	85.0
19.30	60	0.2950	990	292	85.5
19.50	60	0.3000	980	294	87.8
19.70	60	0.3050	970	296	90.2
19.80	60	0.3050	965	294	90.6
20.00	60	0.3100	955	296	93.0
18.50	220	0.5300	3785	2006	539.2
18.70	220	0.5350	3745	2004	550.3
19.00	220	0.5450	3685	2008	569.4
19.20	220	0.5500	3645	2005	580.4
19.30	220	0.5500	3630	1997	584.1
19.50	220	0.5550	3590	1993	595.1
19.70	220	0.5650	3555	2009	612.2
19.80	220	0.5650	3535	1997	615.0
20.00	220	0.5700	3500	1995	626.7
18.50	250	0.4100	4300	1763	473.9
18.70	250	0.4150	4255	1766	485.0
19.00	250	0.4200	4190	1760	499.0
19.20	250	0.4250	4145	1762	510.0
19.30	250	0.4300	4125	1774	518.9
19.50	250	0.4350	4080	1775	530.0
19.70	250	0.4400	4040	1778	541.8
19.80	250	0.4400	4020	1769	544.6
20.00	250	0.4450	3980	1771	556.4