ADD engineering

SOLID CARBIDE TWIST DRILL

McHOLE

Germany | India | Russia

Germany | India | Russia

	PART NO		PAGE	DESIGNATION	DIN	ANGLE POINT
	31100	3-20 mm	4-5	SC Twist drill 3xD Without internal coolant	6537	140°
	31200	3-20 mm	6-7	SC Twist drill 3xD With internal coolant	6537	140°
	51100	3-20 mm	8-9	SC Twist drill 5xD Without internal coolant	6537	140°
	51200	3-20 mm	10-11	SC Twist drill 5xD With internal coolant	6537	140°
	71200	3-20 mm	12-13	SC Twist drill 7xD With internal coolant		140°
	120200	3-20 mm	14-15	SC Twist drill 12xD With internal coolant		140°
	200200	3-14 mm	16	SC Twist drill 20xD With internal coolant		135°
	250200	3-14 mm	16	SC Twist drill 25xD With internal coolant		135°
	300200	3-10 mm	17	SC Twist drill 30xD With internal coolant		135°
	400200	3-8 mm	17	SC Twist drill 40xD With internal coolant		135°

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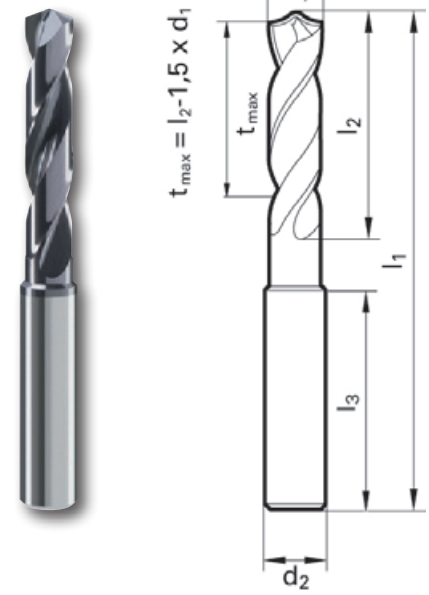
31100 3xD WITHOUT INTERNAL COOLANT



High performance solid carbide twist drills for machining of long and short chipping materials like construction steel, case hardening steels, heat treatable steels, and nitriding steels
Tensile strength up to 1200N/mm/2
TiAln coating

Order Sample
ø6 mm

HA-Shank 31100-060 HA
HB-Shank 31100-060 HB
HE-Shank 31100-060 HE

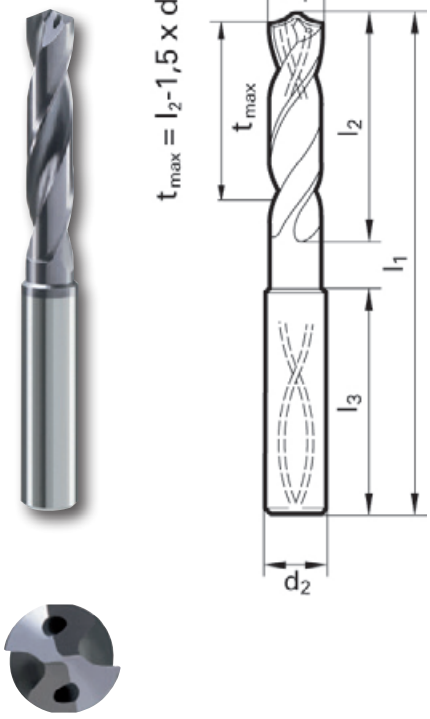
d1 m7	d2	l1	l2	l3	Part No
3.000	6.0	62.0	20.0	36.0	030
3.100	6.0	62.0	20.0	36.0	031
3.200	6.0	62.0	20.0	36.0	032
3.300	6.0	62.0	20.0	36.0	033
3.400	6.0	62.0	20.0	36.0	034
3.500	6.0	62.0	20.0	36.0	035
3.600	6.0	62.0	20.0	36.0	036
3.700	6.0	62.0	20.0	36.0	037
3.800	6.0	66.0	24.0	36.0	038
3.900	6.0	66.0	24.0	36.0	039
4.000	6.0	66.0	24.0	36.0	040
4.100	6.0	66.0	24.0	36.0	041
4.200	6.0	66.0	24.0	36.0	042
4.300	6.0	66.0	24.0	36.0	043
4.400	6.0	66.0	24.0	36.0	044
4.500	6.0	66.0	24.0	36.0	045
4.600	6.0	66.0	24.0	36.0	046
4.650	6.0	66.0	24.0	36.0	0465
4.700	6.0	66.0	24.0	36.0	047
4.800	6.0	66.0	28.0	36.0	048
4.900	6.0	66.0	28.0	36.0	049
5.000	6.0	66.0	28.0	36.0	050
5.100	6.0	66.0	28.0	36.0	051
5.200	6.0	66.0	28.0	36.0	052
5.300	6.0	66.0	28.0	36.0	053
5.400	6.0	66.0	28.0	36.0	054
5.500	6.0	66.0	28.0	36.0	055
5.550	6.0	66.0	28.0	36.0	0555
5.600	6.0	66.0	28.0	36.0	056
5.700	6.0	66.0	28.0	36.0	057
5.800	6.0	66.0	28.0	36.0	058
5.900	6.0	66.0	28.0	36.0	059
6.000	6.0	66.0	28.0	36.0	060
6.100	8.0	79.0	34.0	36.0	061
6.200	8.0	79.0	34.0	36.0	062
6.300	8.0	79.0	34.0	36.0	063
6.400	8.0	79.0	34.0	36.0	064
6.500	8.0	79.0	34.0	36.0	065
6.600	8.0	79.0	34.0	36.0	066
6.700	8.0	79.0	34.0	36.0	067
6.800	8.0	79.0	34.0	36.0	068
6.900	8.0	79.0	34.0	36.0	069
7.000	8.0	79.0	34.0	36.0	070
7.100	8.0	79.0	41.0	36.0	071
7.200	8.0	79.0	41.0	36.0	072
7.300	8.0	79.0	41.0	36.0	073
7.400	8.0	79.0	41.0	36.0	074
7.500	8.0	79.0	41.0	36.0	075
7.600	8.0	79.0	41.0	36.0	076
7.700	8.0	79.0	41.0	36.0	077
7.800	8.0	79.0	41.0	36.0	078
7.900	8.0	79.0	41.0	36.0	079
8.000	8.0	79.0	41.0	36.0	080
8.100	10.0	89.0	47.0	40.0	081
8.200	10.0	89.0	47.0	40.0	082
8.300	10.0	89.0	47.0	40.0	083
8.400	10.0	89.0	47.0	40.0	084

SC-TWIST DRILL 3xD
WITHOUT INTERNAL COOLANT

ADD engineering

d1 m7	d2	l1	l2	l3	Part No
8.500	10.0	89.0	47.0	40.0	085
8.600	10.0	89.0	47.0	40.0	086
8.700	10.0	89.0	47.0	40.0	087
8.800	10.0	89.0	47.0	40.0	088
8.900	10.0	89.0	47.0	40.0	089
9.000	10.0	89.0	47.0	40.0	090
9.100	10.0	89.0	47.0	40.0	091
9.200	10.0	89.0	47.0	40.0	092
9.250	10.0	89.0	47.0	40.0	0925
9.300	10.0	89.0	47.0	40.0	093
9.400	10.0	89.0	47.0	40.0	094
9.500	10.0	89.0	47.0	40.0	095
9.600	10.0	89.0	47.0	40.0	096
9.700	10.0	89.0	47.0	40.0	097
9.800	10.0	89.0	47.0	40.0	098
9.900	10.0	89.0	47.0	40.0	099
10.000	10.0	89.0	47.0	40.0	100
10.100	12.0	102.0	55.0	45.0	101
10.200	12.0	102.0	55.0	45.0	102
10.300	12.0	102.0	55.0	45.0	103
10.400	12.0	102.0	55.0	45.0	104
10.500	12.0	102.0	55.0	45.0	105
10.600	12.0	102.0	55.0	45.0	106
10.700	12.0	102.0	55.0	45.0	107
10.800	12.0	102.0	55.0	45.0	108
10.900	12.0	102.0	55.0	45.0	109
11.000	12.0	102.0	55.0	45.0	110
11.100	12.0	102.0	55.0	45.0	111
11.200	12.0	102.0	55.0	45.0	112
11.300	12.0	102.0	55.0	45.0	113
11.400	12.0	102.0	55.0	45.0	114
11.500	12.0	102.0	55.0	45.0	115
11.600	12.0	102.0	55.0	45.0	116
11.700	12.0	102.0	55.0	45.0	117
11.800	12.0	102.0	55.0	45.0	118
11.900	12.0	102.0	55.0	45.0	119
12.000	12.0	102.0	55.0	45.0	120
12.200	14.0	107.0	60.0	45.0	122
12.500	14.0	107.0	60.0	45.0	125
12.700	14.0	107.0	60.0	45.0	127
13.000	14.0	107.0	60.0	45.0	130
13.500	14.0	107.0	60.0	45.0	135
13.700	14.0	107.0	60.0	45.0	137
14.000	14.0	107.0	60.0	45.0	140
14.200	16.0	115.0	65.0	48.0	142
14.500	16.0	115.0	65.0	48.0	145
14.700	16.0	115.0	65.0	48.0	147
15.000	16.0	115.0	65.0	48.0	150
15.200	16.0	115.0	65.0	48.0	152
15.500	16.0	115.0	65.0	48.0	155
15.700	16.0	115.0	65.0	48.0	157
16.000	16.0	115.0	65.0	48.0	160
16.500	18.0	123.0	73.0	48.0	165
17.000	18.0	123.0	73.0	48.0	170
17.500	18.0	123.0	73.0	48.0	175
18.000	18.0	123.0	73.0	48.0	180
18.500	20.0	131.0	79.0	50.0	185
19.000	20.0	131.0	79.0	50.0	190
19.500	20.0	131.0	79.0	50.0	195
20.000	20.0	131.0	79.0	50.0	200

31200 3xD WITH INTERNAL COOLANT



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Tensile strength up to 1200N/mm/2
TiAln coating

Order Sample
ø 6 mm

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HB-Shank 31200-060 HB
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3.000	6.0	62.0	20.0	36.0	030
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3.300	6.0	62.0	20.0	36.0	033
3.400	6.0	62.0	20.0	36.0	034
3.500	6.0	62.0	20.0	36.0	035
3.600	6.0	62.0	20.0	36.0	036
3.700	6.0	62.0	20.0	36.0	037
3.800	6.0	66.0	24.0	36.0	038
3.900	6.0	66.0	24.0	36.0	039
4.000	6.0	66.0	24.0	36.0	040
4.100	6.0t	66.0	24.0	36.0	041
4.200	6.0	66.0	24.0	36.0	042
4.300	6.0	66.0	24.0	36.0	043
4.400	6.0	66.0	24.0	36.0	044
4.500	6.0	66.0	24.0	36.0	045
4.600	6.0	66.0	24.0	36.0	046
4.650	6.0	66.0	24.0	36.0	0465
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5.500	6.0	66.0	28.0	36.0	055
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6.500	8.0	79.0	34.0	36.0	065
6.600	8.0	79.0	34.0	36.0	066
6.700	8.0	79.0	34.0	36.0	067
6.800	8.0	79.0	34.0	36.0	068
6.900	8.0	79.0	34.0	36.0	069
7.000	8.0	79.0	34.0	36.0	070
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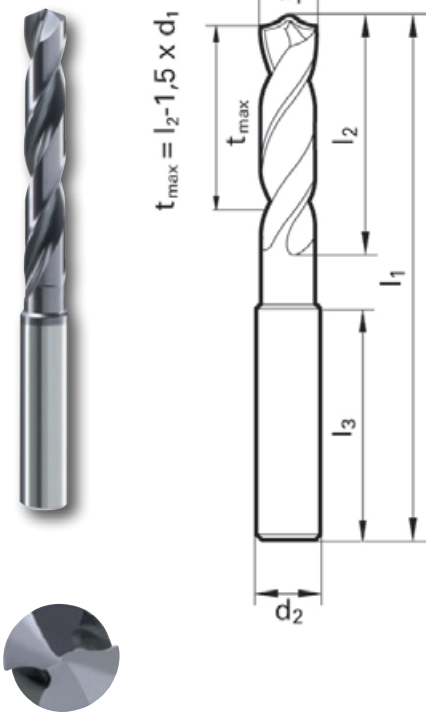
8.200	10.0	89.0	47.0	40.0	082
8.300	10.0	89.0	47.0	40.0	083
8.400	10.0	89.0	47.0	40.0	084
8.500	10.0	89.0	47.0	40.0	085

d1 m7	d2	l1	l2	l3	Part No
8.600	10.0	89.0	47.0	40.0	086
8.700	10.0	89.0	47.0	40.0	087
8.800	10.0	89.0	47.0	40.0	088
8.900	10.0	89.0	47.0	40.0	089
9.000	10.0	89.0	47.0	40.0	090
9.100	10.0	89.0	47.0	40.0	091
9.200	10.0	89.0	47.0	40.0	092
9.250	10.0	89.0	47.0	40.0	0925
9.300	10.0	89.0	47.0	40.0	093
9.400	10.0	89.0	47.0	40.0	094
9.500	10.0	89.0	47.0	40.0	095
9.600	10.0	89.0	47.0	40.0	096
9.700	10.0	89.0	47.0	40.0	097
9.800	10.0	89.0	47.0	40.0	098
9.900	10.0	89.0	47.0	40.0	099
10.000	10.0	89.0	47.0	40.0	100
10.100	12.0	102.0	55.0	45.0	101
10.200	12.0	102.0	55.0	45.0	102
10.300	12.0	102.0	55.0	45.0	103
10.400	12.0	102.0	55.0	45.0	104
10.500	12.0	102.0	55.0	45.0	105
10.600	12.0	102.0	55.0	45.0	106
10.700	12.0	102.0	55.0	45.0	107
10.800	12.0	102.0	55.0	45.0	108
10.900	12.0	102.0	55.0	45.0	109
11.000	12.0	102.0	55.0	45.0	110
11.100	12.0	102.0	55.0	45.0	111
11.200	12.0	102.0	55.0	45.0	112
11.300	12.0	102.0	55.0	45.0	113
11.400	12.0	102.0	55.0	45.0	114
11.500	12.0	102.0	55.0	45.0	115
11.600	12.0	102.0	55.0	45.0	116
11.700	12.0	102.0	55.0	45.0	117
11.800	12.0	102.0	55.0	45.0	118
11.900	12.0	102.0	55.0	45.0	119
12.000	12.0	102.0	55.0	45.0	120
12.200	14.0	107.0	60.0	45.0	122
12.500	14.0	107.0	60.0	45.0	125
12.700	14.0	107.0	60.0	45.0	127
13.000	14.0	107.0	60.0	45.0	130
13.500	14.0	107.0	60.0	45.0	135
13.700	14.0	107.0	60.0	45.0	137
14.000	14.0	107.0	60.0	45.0	140
14.200	16.0	115.0	65.0	48.0	142
14.500	16.0	115.0	65.0	48.0	145
14.700	16.0	115.0	65.0	48.0	147
15.000	16.0	115.0	65.0	48.0	150
15.200	16.0	115.0	65.0	48.0	152
15.500	16.0	115.0	65.0	48.0	155
15.700	16.0	115.0	65.0	48.0	157
16.000	16.0	115.0	65.0	48.0	160
16.500	18.0	123.0	73.0	48.0	165
17.000	18.0	123.0	73.0	48.0	170
17.500	18.0	123.0	73.0	48.0	175
18.000	18.0	123.0	73.0	48.0	180
18.500	20.0	131.0	79.0	50.0	185
19.000	20.0	131.0	79.0	50.0	190
19.500	20.0	131.0	79.0	50.0	195
20.000	20.0	131.0	79.0	50.0	200

51100 5xD WITHOUT INTERNAL COOLANT



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3.700	6.0	66.0	28.0	36.0	037
3.800	6.0	74.0	36.0	36.0	038
3.900	6.0	74.0	36.0	36.0	039
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4.100	6.0	74.0	36.0	36.0	041
4.200	6.0	74.0	36.0	36.0	042
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4.400	6.0	74.0	36.0	36.0	044
4.500	6.0	74.0	36.0	36.0	045
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4.650	6.0	74.0	36.0	36.0	0465
4.700	6.0	74.0	36.0	36.0	047
4.800	6.0	82.0	44.0	36.0	048
4.900	6.0	82.0	44.0	36.0	049
5.000	6.0	82.0	44.0	36.0	050
5.100	6.0	82.0	44.0	36.0	051
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6.500	8.0	91.0	53.0	36.0	065
6.600	8.0	91.0	53.0	36.0	066
6.700	8.0	91.0	53.0	36.0	067
6.800	8.0	91.0	53.0	36.0	068
6.900	8.0	91.0	53.0	36.0	069
7.000	8.0	91.0	53.0	36.0	070
7.100	8.0	91.0	53.0	36.0	071
7.200	8.0	91.0	53.0	36.0	072
7.300	8.0	91.0	53.0	36.0	073
7.400	8.0	91.0	53.0	36.0	074
7.500	8.0	91.0	53.0	36.0	075
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8.200	10.0	103.0	61.0	40.0	082
8.300	10.0	103.0	61.0	40.0	083
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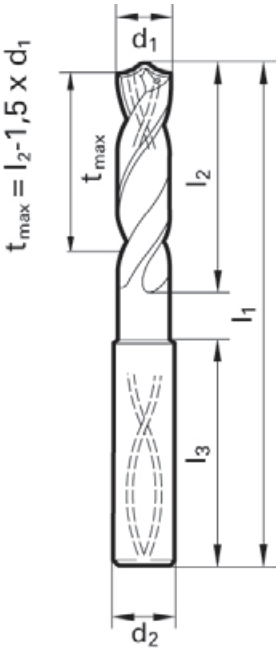
SC-TWIST DRILL 5xD
WITHOUT INTERNAL COOLANT

ADD engineering

d1 m7	d2	l1	l2	l3	Part No
9.000	10.0	103.0	61.0	40.0	090
9.100	10.0	103.0	61.0	40.0	091
9.200	10.0	103.0	61.0	40.0	092
9.250	10.0	103.0	61.0	40.0	0925
9.300	10.0	103.0	61.0	40.0	093
9.400	10.0	103.0	61.0	40.0	094
9.500	10.0	103.0	61.0	40.0	095
9.600	10.0	103.0	61.0	40.0	096
9.700	10.0	103.0	61.0	40.0	097
9.800	10.0	103.0	61.0	40.0	098
9.900	10.0	103.0	61.0	40.0	099
9.920	10.0	103.0	61.0	40.0	0992
10.000	10.0	103.0	61.0	40.0	100
10.100	12.0	118.0	71.0	45.0	101
10.200	12.0	118.0	71.0	45.0	102
10.300	12.0	118.0	71.0	45.0	103
10.400	12.0	118.0	71.0	45.0	104
10.500	12.0	118.0	71.0	45.0	105
10.600	12.0	118.0	71.0	45.0	106
10.700	12.0	118.0	71.0	45.0	107
10.800	12.0	118.0	71.0	45.0	108
10.900	12.0	118.0	71.0	45.0	109
11.000	12.0	118.0	71.0	45.0	110
11.100	12.0	118.0	71.0	45.0	111
11.200	12.0	118.0	71.0	45.0	112
11.300	12.0	118.0	71.0	45.0	113
11.400	12.0	118.0	71.0	45.0	114
11.500	12.0	118.0	71.0	45.0	115
11.600	12.0	118.0	71.0	45.0	116
11.700	12.0	118.0	71.0	45.0	117
11.800	12.0	118.0	71.0	45.0	118
11.900	12.0	118.0	71.0	45.0	119
12.000	12.0	118.0	71.0	45.0	120
12.100	14.0	124.0	77.0	45.0	121
12.200	14.0	124.0	77.0	45.0	122
12.300	14.0	124.0	77.0	45.0	123
12.400	14.0	124.0	77.0	45.0	124
12.500	14.0	124.0	77.0	45.0	125
12.700	14.0	124.0	77.0	45.0	127
13.000	14.0	124.0	77.0	45.0	130
13.500	14.0	124.0	77.0	45.0	135
13.700	14.0	124.0	77.0	45.0	137
13.800	14.0	124.0	77.0	45.0	138
13.900	14.0	124.0	77.0	45.0	139
14.000	14.0	124.0	77.0	45.0	140
14.100	16.0	133.0	83.0	48.0	141
14.200	16.0	133.0	83.0	48.0	142
14.500	16.0	133.0	83.0	48.0	145
14.700	16.0	133.0	83.0	48.0	147
15.000	16.0	133.0	83.0	48.0	150
15.200	16.0	133.0	83.0	48.0	152
15.500	16.0	133.0	83.0	48.0	155
15.700	16.0	133.0	83.0	48.0	157
15.800	16.0	133.0	83.0	48.0	158
16.000	16.0	133.0	83.0	48.0	160
16.500	18.0	143.0	93.0	48.0	165
17.000	18.0	143.0	93.0	48.0	170
17.500	18.0	143.0	93.0	48.0	175
18.000	18.0	143.0	93.0	48.0	180
18.500	20.0	153.0	101.0	50.0	185
19.000	20.0	153.0	101.0	50.0	190
19.500	20.0	153.0	101.0	50.0	195
20.000	20.0	153.0	101.0	50.0	200

51200 5xD WITH INTERNAL COOLANT



High performance solid carbide twist drills for machining of long and short chipping materials like construction steel, case hardening steels, heat treatable steels, and nitriding steels
Tensile strength up to 1200N/mm/2
TiAln coating

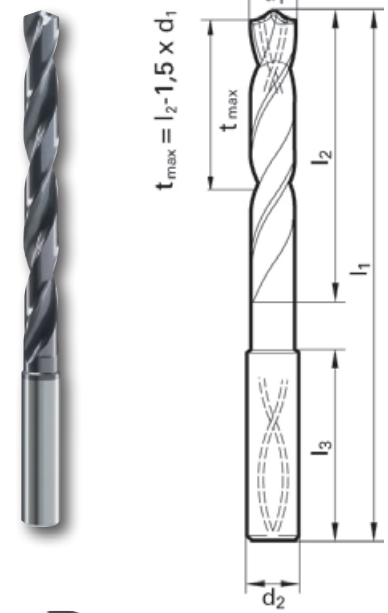
Order Sample
ø 6 mm

HA-Shank 51200-060 HA
HB-Shank 51200-060 HB
HE-Shank 51200-060 HE

d1 m7	d2	l1	l2	l3	Part No
3.000	6.0	66.0	28.0	36.0	030
3.100	6.0	66.0	28.0	36.0	031
3.200	6.0	66.0	28.0	36.0	032
3.300	6.0	66.0	28.0	36.0	033
3.400	6.0	66.0	28.0	36.0	034
3.500	6.0	66.0	28.0	36.0	035
3.600	6.0	66.0	28.0	36.0	036
3.700	6.0	66.0	28.0	36.0	037
3.800	6.0	74.0	36.0	36.0	038
3.900	6.0	74.0	36.0	36.0	039
4.000	6.0	74.0	36.0	36.0	040
4.100	6.0	74.0	36.0	36.0	041
4.200	6.0	74.0	36.0	36.0	042
4.300	6.0	74.0	36.0	36.0	043
4.400	6.0	74.0	36.0	36.0	044
4.500	6.0	74.0	36.0	36.0	045
4.600	6.0	74.0	36.0	36.0	046
4.650	6.0	74.0	36.0	36.0	0465
4.700	6.0	74.0	36.0	36.0	047
4.800	6.0	82.0	44.0	36.0	048
4.900	6.0	82.0	44.0	36.0	049
5.000	6.0	82.0	44.0	36.0	050
5.100	6.0	82.0	44.0	36.0	051
5.200	6.0	82.0	44.0	36.0	052
5.300	6.0	82.0	44.0	36.0	053
5.400	6.0	82.0	44.0	36.0	054
5.500	6.0	82.0	44.0	36.0	055
5.550	6.0	82.0	44.0	36.0	0555
5.600	6.0	82.0	44.0	36.0	056
5.700	6.0	82.0	44.0	36.0	057
5.800	6.0	82.0	44.0	36.0	058
5.900	6.0	82.0	44.0	36.0	059
6.000	6.0	82.0	44.0	36.0	060
6.100	8.0	91.0	53.0	36.0	061
6.200	8.0	91.0	53.0	36.0	062
6.300	8.0	91.0	53.0	36.0	063
6.400	8.0	91.0	53.0	36.0	064
6.500	8.0	91.0	53.0	36.0	065
6.600	8.0	91.0	53.0	36.0	066
6.700	8.0	91.0	53.0	36.0	067
6.800	8.0	91.0	53.0	36.0	068
6.900	8.0	91.0	53.0	36.0	069
7.000	8.0	91.0	53.0	36.0	070
7.100	8.0	91.0	53.0	36.0	071
7.200	8.0	91.0	53.0	36.0	072
7.300	8.0	91.0	53.0	36.0	073
7.400	8.0	91.0	53.0	36.0	074
7.500	8.0	91.0	53.0	36.0	075
7.600	8.0	91.0	53.0	36.0	076
7.700	8.0	91.0	53.0	36.0	077
7.800	8.0	91.0	53.0	36.0	078
7.900	8.0	91.0	53.0	36.0	079
8.000	8.0	91.0	53.0	36.0	080
8.100	10.0	103.0	61.0	40.0	081
8.200	10.0	103.0	61.0	40.0	082
8.300	10.0	103.0	61.0	40.0	083
8.400	10.0	103.0	61.0	40.0	084
8.500	10.0	103.0	61.0	40.0	085
8.600	10.0	103.0	61.0	40.0	086
8.700	10.0	103.0	61.0	40.0	087
8.800	10.0	103.0	61.0	40.0	088
8.900	10.0	103.0	61.0	40.0	089
9.000	10.0	103.0	61.0	40.0	090

d1 m7	d2	l1	l2	l3	Part No
9.100	10.0	103.0	61.0	40.0	091
9.200	10.0	103.0	61.0	40.0	092
9.250	10.0	103.0	61.0	40.0	0925
9.300	10.0	103.0	61.0	40.0	093
9.400	10.0	103.0	61.0	40.0	094
9.500	10.0	103.0	61.0	40.0	095
9.600	10.0	103.0	61.0	40.0	096
9.700	10.0	103.0	61.0	40.0	097
9.800	10.0	103.0	61.0	40.0	098
9.900	10.0	103.0	61.0	40.0	099
9.920	10.0	103.0	61.0	40.0	0992
10.000	10.0	103.0	61.0	40.0	100
10.100	12.0	118.0	71.0	45.0	101
10.200	12.0	118.0	71.0	45.0	102
10.300	12.0	118.0	71.0	45.0	103
10.400	12.0	118.0	71.0	45.0	104
10.500	12.0	118.0	71.0	45.0	105
10.600	12.0	118.0	71.0	45.0	106
10.700	12.0	118.0	71.0	45.0	107
10.800	12.0	118.0	71.0	45.0	108
10.900	12.0	118.0	71.0	45.0	109
11.000	12.0	118.0	71.0	45.0	110
11.100	12.0	118.0	71.0	45.0	111
11.200	12.0	118.0	71.0	45.0	112
11.300	12.0	118.0	71.0	45.0	113
11.400	12.0	118.0	71.0	45.0	114
11.500	12.0	118.0	71.0	45.0	115
11.600	12.0	118.0	71.0	45.0	116
11.700	12.0	118.0	71.0	45.0	117
11.800	12.0	118.0	71.0	45.0	118
11.900	12.0	118.0	71.0	45.0	119
12.000	12.0	118.0	71.0	45.0	120
12.100	14.0	124.0	77.0	45.0	121
12.200	14.0	124.0	77.0	45.0	122
12.300	14.0	124.0	77.0	45.0	123
12.400	14.0	124.0	77.0	45.0	124
12.500	14.0	124.0	77.0	45.0	125
12.700	14.0	124.0	77.0	45.0	127
13.000	14.0	124.0	77.0	45.0	130
13.500	14.0	124.0	77.0	45.0	135
13.700	14.0	124.0	77.0	45.0	137
13.800	14.0	124.0	77.0	45.0	138
13.900	14.0	124.0	77.0	45.0	139
14.000	14.0	124.0	77.0	45.0	140
14.100	16.0	133.0	83.0	48.0	141
14.200	16.0	133.0	83.0	48.0	142
14.500	16.0	133.0	83.0	48.0	145
14.700	16.0	133.0	83.0	48.0	147
15.000	16.0	133.0	83.0	48.0	150
15.200	16.0	133.0	83.0	48.0	152
15.500	16.0	133.0	83.0	48.0	155
15.700	16.0	133.0	83.0	48.0	157
15.800	16.0	133.0	83.0	48.0	158
16.000	16.0	133.0	83.0	48.0	160
16.500	18.0	143.0	93.0	48.0	165
17.000	18.0	143.0	93.0	48.0	170
17.500	18.0	143.0	93.0	48.0	175
18.000	18.0	143.0	93.0	48.0	180
18.500	20.0	153.0	101.0	50.0	185
19.000	20.0	153.0	101.0	50.0	190
19.500	20.0	153.0	101.0	50.0	195
20.000	20.0	153.0	101.0	50.0	200

71200 7xD WITH INTERNAL COOLANT



High performance solid carbide twist drills for machining of long and short chipping materials like construction steel, case hardening steels, heat treatable steels, and nitriding steels
Tensile strength up to 1200N/mm/2
TiAln coating

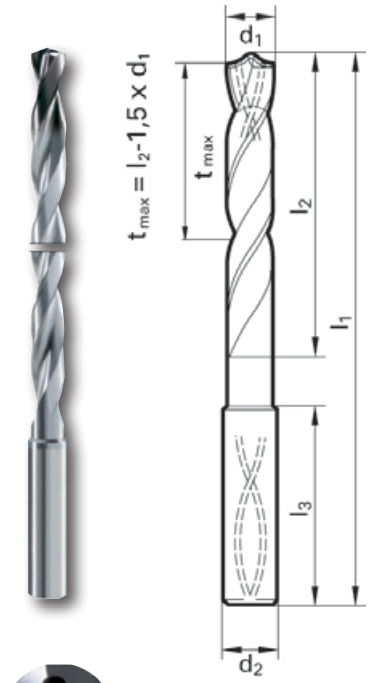
Order Sample
ø 6 mm

HA-Shank 71200-060 HA
HB-Shank 71200-060 HB
HE-Shank 71200-060 HE

d1 m7	d2V	l1	l2	l3	Part No
3.000	6.0	70.0	30.0	36.0	030
3.100	6.0	70.0	30.0	36.0	031
3.170	6.0	70.0	30.0	36.0	0317
3.200	6.0	70.0	30.0	36.0	032
3.250	6.0	70.0	30.0	36.0	0325
3.300	6.0	70.0	30.0	36.0	033
3.400	6.0	75.0	35.5	36.0	034
3.500	6.0	75.0	35.5	36.0	035
3.570	6.0	75.0	35.5	36.0	0357
3.600	6.0	75.0	35.5	36.0	036
3.700	6.0	75.0	35.5	36.0	037
3.800	6.0	75.0	37.5	36.0	038
3.900	6.0	75.0	37.5	36.0	039
3.970	6.0	75.0	37.5	36.0	0397
4.000	6.0	75.0	37.5	36.0	040
4.100	6.0	75.0	37.5	36.0	041
4.200	6.0	75.0	37.5	36.0	042
4.300	6.0	85.0	45.0	36.0	043
4.400	6.0	85.0	45.0	36.0	044
4.500	6.0	85.0	45.0	36.0	045
4.600	6.0	85.0	45.0	36.0	046
4.700	6.0	85.0	45.0	36.0	047
4.800	6.0	90.0	50.0	36.0	048
4.900	6.0	90.0	50.0	36.0	049
5.000	6.0	90.0	50.0	36.0	050
5.100	6.0	90.0	50.0	36.0	051
5.200	6.0	90.0	50.0	36.0	052
5.300	6.0	90.0	50.0	36.0	053
5.400	6.0	97.0	57.0	36.0	054
5.500	6.0	97.0	57.0	36.0	055
5.700	6.0	97.0	57.0	36.0	057
5.800	6.0	97.0	57.0	36.0	058
5.900	6.0	97.0	57.0	36.0	059
6.000	6.0	97.0	57.0	36.0	060
6.200	8.0	106.0	66.0	36.0	062
6.300	8.0	106.0	66.0	36.0	063
6.500	8.0	106.0	66.0	36.0	065
6.600	8.0	106.0	66.0	36.0	066
6.700	8.0	106.0	66.0	36.0	067
6.800	8.0	106.0	66.0	36.0	068
6.900	8.0	116.0	76.0	36.0	069
7.000	8.0	116.0	76.0	36.0	070
7.100	8.0	116.0	76.0	36.0	071
7.200	8.0	116.0	76.0	36.0	072
7.500	8.0	116.0	76.0	36.0	075
7.600	8.0	116.0	76.0	36.0	076
7.700	8.0	116.0	76.0	36.0	077

d1 m7	d2V	l1	l2	l3	Part No
7.800	8.0	116.0	76.0	36.0	078
8.000	8.0	116.0	76.0	36.0	080
8.100	10.0	131.0	87.0	40.0	081
8.200	10.0	131.0	87.0	40.0	082
8.400	10.0	131.0	87.0	40.0	084
8.500	10.0	131.0	87.0	40.0	085
8.600	10.0	131.0	87.0	40.0	086
8.700	10.0	131.0	87.0	40.0	087
8.800	10.0	131.0	87.0	40.0	088
9.000	10.0	131.0	87.0	40.0	090
9.100	10.0	139.0	95.0	40.0	091
9.200	10.0	139.0	95.0	40.0	092
9.300	10.0	139.0	95.0	40.0	093
9.400	10.0	139.0	95.0	40.0	094
9.500	10.0	139.0	95.0	40.0	095
9.700	10.0	139.0	95.0	40.0	097
9.800	10.0	139.0	95.0	40.0	098
9.900	10.0	139.0	95.0	40.0	099
10.000	10.0	139.0	95.0	40.0	100
10.200	12.0	155.0	106.0	45.0	102
10.500	12.0	155.0	106.0	45.0	105
10.800	12.0	155.0	106.0	45.0	108
11.000	12.0	155.0	106.0	45.0	110
11.200	12.0	163.0	114.0	45.0	112
11.500	12.0	163.0	114.0	45.0	115
11.800	12.0	163.0	114.0	45.0	118
12.000	12.0	163.0	114.0	45.0	120
12.200	14.0	182.0	133.0	45.0	122
12.500	14.0	182.0	133.0	45.0	125
12.700	14.0	182.0	133.0	45.0	127
13.000	14.0	182.0	133.0	45.0	130
13.500	14.0	182.0	133.0	45.0	135
14.000	14.0	182.0	133.0	45.0	140
14.200	16.0	204.0	152.0	48.0	142
14.500	16.0	204.0	152.0	48.0	145
15.000	16.0	204.0	152.0	48.0	150
15.500	16.0	204.0	152.0	48.0	155
16.000	16.0	204.0	152.0	48.0	160
16.500	18.0	223.0	171.0	48.0	165
17.000	18.0	223.0	171.0	48.0	170
17.500	18.0	223.0	171.0	48.0	175
18.000	18.0	223.0	171.0	48.0	180
18.500	20.0	244.0	190.0	50.0	185
19.000	20.0	244.0	190.0	50.0	190
19.500	20.0	244.0	190.0	50.0	195
20.000	20.0	244.0	190.0	50.0	200

120200 12xD WITH INTERNAL COOLANT



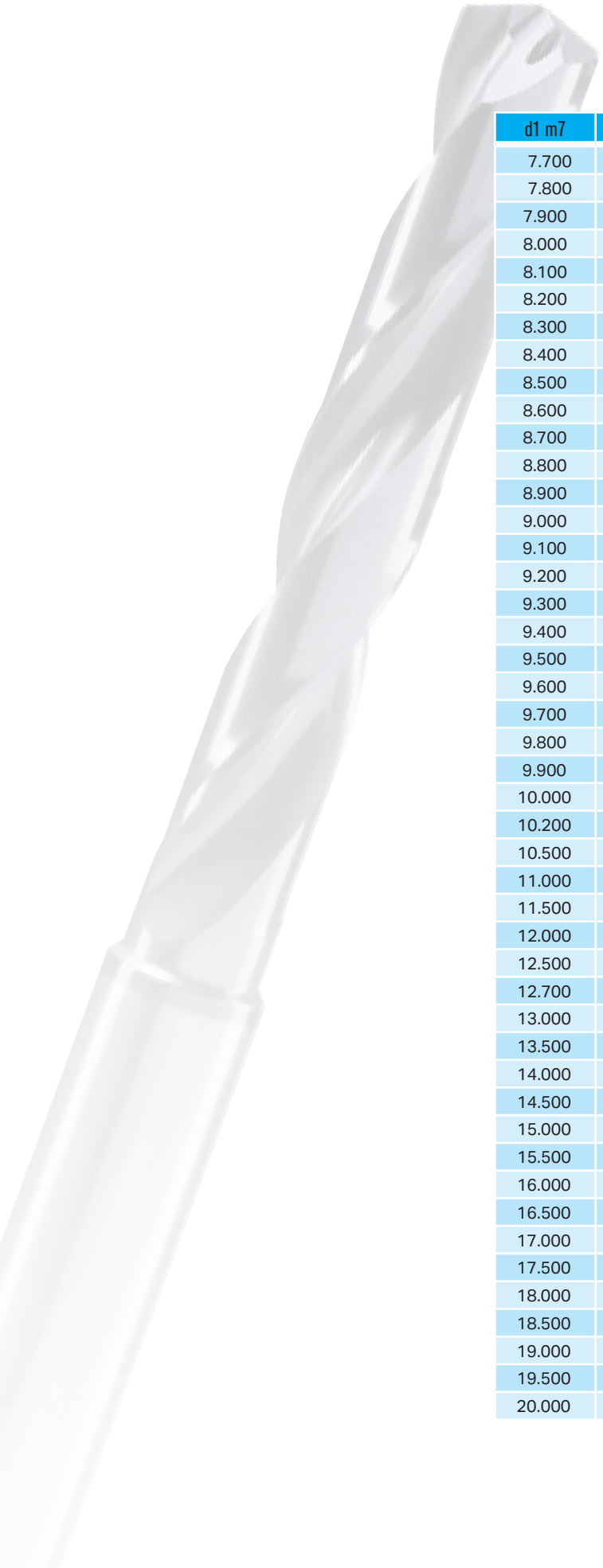
High performance solid carbide drills for machining of deep holes in materials like steel, cast iron and nonferrous materials. This drill has good performance also by machining of sticky and long chipping materials.
Optimized chip flutes and design of drill geometry ensure very good chip evacuation.
TiAlN coating

Order Sample
ø 6 mm

HA-Shank 120200-060 HA

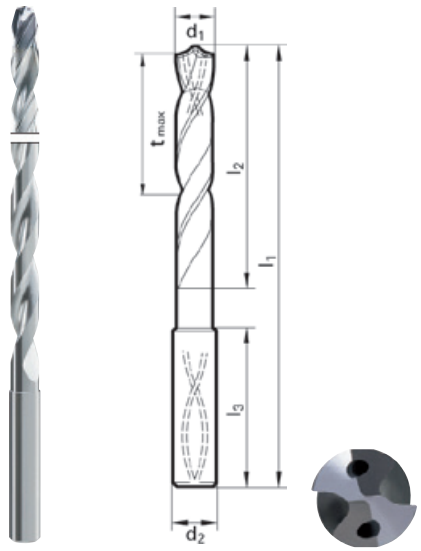
d1 m7	d2	l1	l2	l3	Part No
3.000	6.0	90.0	50.0	36.0	030
3.100	6.0	90.0	50.0	36.0	031
3.200	6.0	90.0	50.0	36.0	032
3.300	6.0	90.0	50.0	36.0	033
3.400	6.0	90.0	50.0	36.0	034
3.500	6.0	90.0	50.0	36.0	035
3.600	6.0	90.0	50.0	36.0	036
3.700	6.0	90.0	50.0	36.0	037
3.800	6.0	102.0	64.0	36.0	038
3.900	6.0	102.0	64.0	36.0	039
4.000	6.0	102.0	64.0	36.0	040
4.100	6.0	102.0	64.0	36.0	041
4.200	6.0	102.0	64.0	36.0	042
4.300	6.0	102.0	64.0	36.0	043
4.400	6.0	102.0	64.0	36.0	044
4.500	6.0	102.0	64.0	36.0	045
4.600	6.0	102.0	64.0	36.0	046
4.700	6.0	102.0	64.0	36.0	047
4.800	6.0	116.0	78.0	36.0	048
4.900	6.0	116.0	78.0	36.0	049
5.000	6.0	116.0	78.0	36.0	050
5.100	6.0	116.0	78.0	36.0	051
5.200	6.0	116.0	78.0	36.0	052
5.300	6.0	116.0	78.0	36.0	053
5.400	6.0	116.0	78.0	36.0	054
5.500	6.0	116.0	78.0	36.0	055
5.600	6.0	116.0	78.0	36.0	056
5.700	6.0	116.0	78.0	36.0	057
5.800	6.0	116.0	78.0	36.0	058
5.900	6.0	116.0	78.0	36.0	059
6.000	6.0	116.0	78.0	36.0	060
6.100	8.0	146.0	108.0	36.0	061
6.200	8.0	146.0	108.0	36.0	062
6.300	8.0	146.0	108.0	36.0	063
6.400	8.0	146.0	108.0	36.0	064
6.500	8.0	146.0	108.0	36.0	065
6.600	8.0	146.0	108.0	36.0	066
6.700	8.0	146.0	108.0	36.0	067
6.800	8.0	146.0	108.0	36.0	068
6.900	8.0	146.0	108.0	36.0	069
7.000	8.0	146.0	108.0	36.0	070
7.100	8.0	146.0	108.0	36.0	071
7.200	8.0	146.0	108.0	36.0	072
7.300	8.0	146.0	108.0	36.0	073
7.400	8.0	146.0	108.0	36.0	074
7.500	8.0	146.0	108.0	36.0	075
7.600	8.0	146.0	108.0	36.0	076

SC-TWIST DRILL 12xD
WITH INTERNAL COOLANT



d1 m7	d2	l1	l2	l3	Part No
7.700	8.0	146.0	108.0	36.0	077
7.800	8.0	146.0	108.0	36.0	078
7.900	8.0	146.0	108.0	36.0	079
8.000	8.0	146.0	108.0	36.0	080
8.100	10.0	162.0	120.0	40.0	081
8.200	10.0	162.0	120.0	40.0	082
8.300	10.0	162.0	120.0	40.0	083
8.400	10.0	162.0	120.0	40.0	084
8.500	10.0	162.0	120.0	40.0	085
8.600	10.0	162.0	120.0	40.0	086
8.700	10.0	162.0	120.0	40.0	087
8.800	10.0	162.0	120.0	40.0	088
8.900	10.0	162.0	120.0	40.0	089
9.000	10.0	162.0	120.0	40.0	090
9.100	10.0	162.0	120.0	40.0	091
9.200	10.0	162.0	120.0	40.0	092
9.300	10.0	162.0	120.0	40.0	093
9.400	10.0	162.0	120.0	40.0	094
9.500	10.0	162.0	120.0	40.0	095
9.600	10.0	162.0	120.0	40.0	096
9.700	10.0	162.0	120.0	40.0	097
9.800	10.0	162.0	120.0	40.0	098
9.900	10.0	162.0	120.0	40.0	099
10.000	10.0	162.0	120.0	40.0	100
10.200	12.0	204.0	156.0	45.0	102
10.500	12.0	204.0	156.0	45.0	105
11.000	12.0	204.0	156.0	45.0	110
11.500	12.0	204.0	156.0	45.0	115
12.000	12.0	204.0	156.0	45.0	120
12.500	14.0	230.0	182.0	45.0	125
12.700	14.0	230.0	182.0	45.0	127
13.000	14.0	230.0	182.0	45.0	130
13.500	14.0	230.0	182.0	45.0	135
14.000	14.0	230.0	182.0	45.0	140
14.500	16.0	260.0	208.0	48.0	145
15.000	16.0	260.0	208.0	48.0	150
15.500	16.0	260.0	208.0	48.0	155
16.000	16.0	260.0	208.0	48.0	160
16.500	18.0	285.0	234.0	48.0	165
17.000	18.0	285.0	234.0	48.0	170
17.500	18.0	285.0	234.0	48.0	175
18.000	18.0	285.0	234.0	48.0	180
18.500	20.0	310.0	258.0	50.0	185
19.000	20.0	310.0	258.0	50.0	190
19.500	20.0	310.0	258.0	50.0	195
20.000	20.0	310.0	258.0	50.0	200

200200 20xD WITH INTERNAL COOLANT



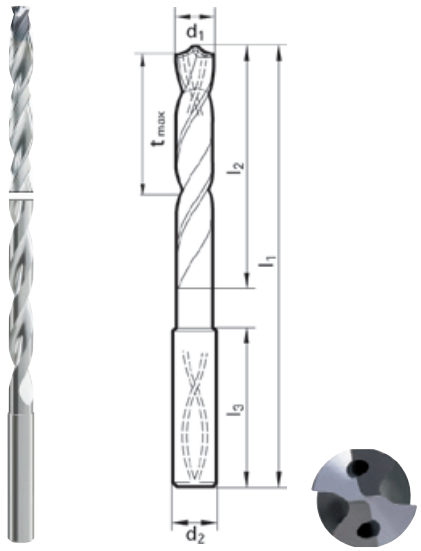
d1 h7	d2	l1	l2	l3	Part No
3.000	6.000	110,00	70,00	36,00	030
3.500	6.000	136,00	96,00	36,00	035
3,970	6.000	136,00	96,00	36,00	0397
4.000	6.000	136,00	96,00	36,00	040
4.500	6.000	158,00	118,00	36,00	045
4.760	6.000	158,00	118,00	36,00	0476
5.000	6.000	158,00	118,00	36,00	050
5.500	6.000	180,00	140,00	36,00	055
5.560	6.000	180,00	140,00	36,00	0556
6.000	6.000	180,00	140,00	36,00	060
6.350	8.000	202,00	162,00	36,00	0635
6.500	8.000	202,00	162,00	36,00	065
7.000	8.000	202,00	162,00	36,00	070
7.140	8.000	223,00	183,00	36,00	0714
7.500	8.000	223,00	183,00	36,00	075
8.000	8.000	223,00	183,00	36,00	080
8.500	10.000	249,00	205,00	40,00	085
9.000	10.000	249,00	205,00	40,00	090
10.000	10.000	271,00	227,00	40,00	100
12.000	12.000	323,00	274,00	45,00	120
14.000	14.000	367,00	318,00	45,00	140

Spiral deep hole drills for machining deep holes
up to 20x dia. for non and alloyed steels and cast iron.
TiAlN coating

Order Sample : ø 6 mm

HA-Shank 200200-060HA

250200 25xD WITH INTERNAL COOLANT



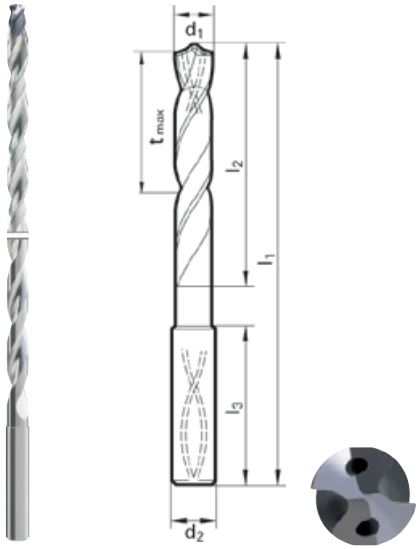
d1 h7	d2	l1	l2	l3	Part No
3.000	6.000	125,00	85,00	36,00	030
3.500	6.000	156,00	116,00	36,00	035
3,970	6.000	156,00	116,00	36,00	0397
4.000	6.000	156,00	116,00	36,00	040
4.500	6.000	183,00	143,00	36,00	045
4.760	6.000	183,00	143,00	36,00	0476
5.000	6.000	183,00	143,00	36,00	050
5.500	6.000	210,00	170,00	36,00	055
5.560	6.000	210,00	170,00	36,00	0556
6.000	6.000	210,00	170,00	36,00	060
6.350	8.000	237,00	197,00	36,00	0635
6.500	8.000	237,00	197,00	36,00	065
7.000	8.000	237,00	197,00	36,00	070
7.140	8.000	263,00	223,00	36,00	0714
7.500	8.000	263,00	223,00	36,00	075
8.000	8.000	263,00	223,00	36,00	080
8.500	10.000	294,00	250,00	40,00	085
9.000	10.000	294,00	250,00	40,00	090
10.000	10.000	321,00	277,00	40,00	100
12.000	12.000	386,00	337,00	45,00	120

Spiral deep hole drills for machining deep holes
up to 25x dia. for non and alloyed steels and cast iron.
TiAlN coating

Order Sample : ø 6 mm

HA-Shank 250200-060HA

300200 30xD WITH INTERNAL COOLANT



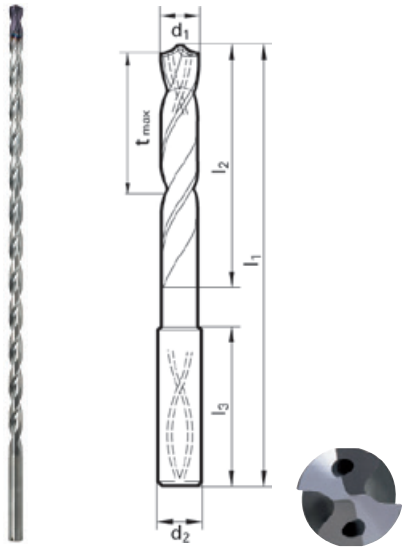
d1 h7	d2	l1	l2	l3	Part No
3.000	6.000	140,00	100,00	36,00	030
3.500	6.000	176,00	136,00	36,00	035
3,970	6.000	176,00	136,00	36,00	0397
4.000	6.000	176,00	136,00	36,00	040
4.500	6.000	208,00	168,00	36,00	045
4.760	6.000	208,00	168,00	36,00	0476
5.000	6.000	208,00	168,00	36,00	050
5.500	6.000	240,00	200,00	36,00	055
5.560	6.000	240,00	200,00	36,00	0556
6.000	6.000	240,00	200,00	36,00	060
6.350	8.000	272,00	232,00	36,00	0635
6.500	8.000	272,00	232,00	36,00	065
7.000	8.000	272,00	232,00	36,00	070
7.140	8.000	303,00	263,00	36,00	0714
7.500	8.000	303,00	263,00	36,00	075
8.000	8.000	303,00	263,00	36,00	080
8.500	10.000	339,00	295,00	40,00	085
9.000	10.000	339,00	295,00	40,00	090
10.000	10.000	371,00	327,00	40,00	100

Spiral deep hole drills for machining deep holes
up to 30x dia. for non- and alloyed steels and cast iron.
TiAlN coating

Order Sample : ø 6 mm

HA-Shank 300200-060HA

400200 40xD WITH INTERNAL COOLANT



d1 h7	d2	l1	l2	l3	Part No
3.000	6.000	170,00	130,00	36,00	030
3,170	6.000	193,00	153,00	36,00	0317
3.500	6.000	193,00	153,00	36,00	035
3.970	6.000	216,00	176,00	36,00	0397
4.000	6.000	216,00	176,00	36,00	040
4.500	6.000	238,00	198,00	36,00	045
4.760	6.000	258,00	218,00	36,00	0476
5.000	6.000	258,00	218,00	36,00	050
5.500	6.000	280,00	240,00	36,00	055
5.560	6.000	300,00	260,00	36,00	0556
6.000	6.000	300,00	260,00	36,00	060
6.350	8.000	322,00	282,00	36,00	0635
6.500	8.000	322,00	282,00	36,00	065
7.000	8.000	342,00	302,00	36,00	070
7.140	8.000	363,00	323,00	36,00	0714
7.500	8.000	363,00	323,00	36,00	075
8.000	8.000	383,00	343,00	36,00	080

Spiral deep hole drills for machining deep holes
up to 30x dia. for non- and alloyed Steels and cast iron.
TiAlN coating

Order Sample : ø 6 mm

HA-Shank 400200-060HA

CUTTING DATA SC-TWIST DRILL 3xD - 40xD

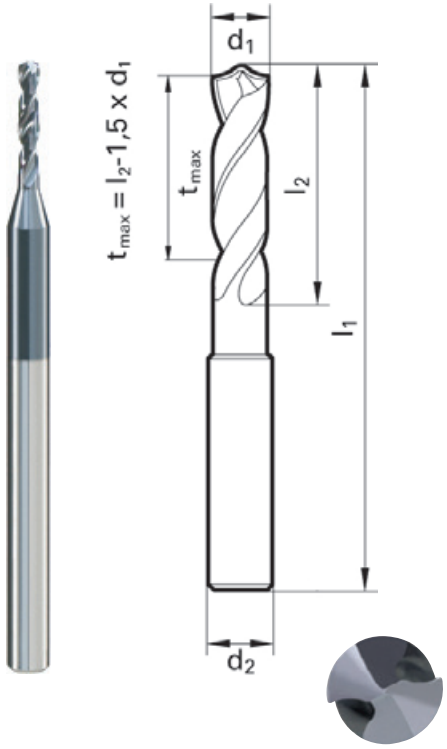
					3xD ohne IK	3xD With IC	5xD ohne IK	5xD With IC	7xD With IC		12xD - 40xD With IC	
Material designation	Material No	Tensile Strength/Hard	Kühlmittel	Vc (m/min)	Line	Line	Line	Line	Vc (m/min)	Line	Vc (m/min)	Line
Structural Steels	1.0035 / 1.0486 / 1.0345 / 1.0425	< 500 N/mm²	Oil emulsion	130	7	7	7	7	130	6	90	6
Structural Steels	1.0050 / 1.0070 / 1.8937	> 500 - 850 N/mm²	Oil emulsion	110	6	6	6	6	110	5	80	5
Cutting Steels	1.0718 / 1.0736	< 850 N/mm²	Oil emulsion	145	8	8	8	8	145	7	100	7
Cutting Steels	1.0727 / 1.0728 / 1.0757	850 - 1000 N/mm²	Oil emulsion	110	7	8	7	8	110	7	90	7
Non-Alloyed Heat Treatable Steels	1.0402 / 1.1178	< 700 N/mm²	Oil emulsion	120	7	8	7	8	120	7	90	7
Non-Alloyed Heat Treatable Steels	1.0503 / 1.1191	700 - 850 N/mm²	Oil emulsion	110	7	7	7	7	110	6	80	6
Non-Alloyed Heat Treatable Steels	1.0601 / 1.1221	850 - 1000 N/mm²	Oil emulsion	105	7	7	7	7	105	6	80	6
Alloyed Heat Treatable Steels	1.5131 / 1.7003 / 1.7030	850 - 1000 N/mm²	Oil emulsion	105	7	7	7	7	105	6	80	6
Alloyed Heat Treatable Steels	1.5710 / 1.7035 / 1.7225	1000 - 1200 N/mm²	Oil emulsion	100	6	7	6	7	100	6	60	6
Non-Alloy Hardening Steels	1.0301 / 1.1121	< 750 N/mm²	Oil emulsion	130	8	8	8	8	130	7	90	7
Alloyed Hardening Steels		850 - 1000 N/mm²	Oil emulsion	120	7	7	7	7	120	6	80	6
Alloyed Hardening Steels	1.5752 / 1.7131 / 1.7264	1000 - 1200 N/mm²	Oil emulsion	85	5	5	5	5	85	4	60	4
Nitriding Steel		> 850 - 1000 N/mm²	Oil emulsion	100	6	7	6	7	100	6	60	6
Nitriding Steel	1.8519 / 1.8550	1000 - 1200 N/mm²	Oil emulsion	90	5	5	5	5	90	4	50	4
Tools Steels	1.1750 / 1.2067 / 1.2307	< 850 N/mm²	Oil emulsion	65	6	6	6	6	65	5	50	5
Tools Steels	1.2080 / 1.2083 / 1.2419 / 1.2767	850 - 1000 N/mm²	Oil emulsion	55	5	5	5	5	55	4	40	4
Spring Steel	1.5026 / 1.7176 / 1.8159	< 330 N/mm²	Oil emulsion	45	3	3	3	3	45	2	35	2
Stainless Steel, Sulfurized	1.4005 / 1.4104 / 1.4105 / 1.4305	< 850 N/mm²	Cutting Oil	55	4	5	4	5	55	4	40	4
Stainless Steel, Austenitic	1.4301 / 1.4541 / 1.4571	< 850 N/mm²	Cutting Oil	45	4	5	4	5	45	4	40	4
Stainless Steel, Martensitic	1.4057 / 1.4122 / 1.4521	< 850 N/mm²	Cutting Oil	45	3	5	3	5	45	4	40	4
Hardened Steels		< 40 - 48 HRC	Cutting Oil	45	3	3	3	3	45	2		
Hardened Steels		> 48 - 60 HRC	Cutting Oil	25	2	2	2	2	25	1		
Special Alloys	Nimonic, Inconel,Monel,Ha-stelloy	< 1200 N/mm²	Cutting Oil	25	4	4	4	4	25	3		
Cast Iron	0.6010 / 0.6020	< 240 HB	Oil emulsion	210	8	9	8	9	210	8	120	8
Cast Iron	0.6025 / 0.6035	< 300 HB	Oil emulsion	155	8	9	8	9	155	8	120	8
Nodular And Malleable	0.7050 / 0.8035	< 240 HB	Oil emulsion	155	7	9	7	9	155	8	90	8
Nodular And Malleable	0.7070 / 0.8170	< 300 HB	Oil emulsion	125	7	8	7	8	125	7	80	7
Hard Cast		< 350 HB	Oil emulsion	35	3	3	3	3	35	2		
Titanium And Titanium Alloys	3.7024 / 3.7114 / 3.7124	< 850 N/mm²	Oil emulsion	40	4	4	4	4	40	3		
Titanium And Titanium Alloys	3.7154 / 3.7165 / 3.7184	850 - 1200 N/mm²	Oil emulsion	35	3	3	3	3	35	2		
Aluminium And Al Alloys	3.0255 / 3.2315 / 3.3515	< 400 N/mm²	Oil emulsion	260	9	9	9	9	260	8	150	8
Aluminium Alloys	3.0615 / 3.1325 / 3.3245 / 3.4365	< 450 N/mm²	Oil emulsion	260	9	9	9	9	260	8	150	8
Al-Casting Alloys	3.2131 / 3.2153 / 3.2573	< 600 N/mm²	Oil emulsion	220	9	9	9	9	220	8	150	8
Al-Casting Alloys	3.2581 / 3.2583	< 600 N/mm²	Oil emulsion	180	8	9	8	9	180	8	120	8
Magnesium Alloys	3.5200 / 3.5812.05 / 3.5612.05	< 450 N/mm²	Air	260	8	8	8	8	260	7	150	7
Brass, Short-Chipping	2.0380 / 2.0401 / 2.0410	< 600 N/mm²	Oil emulsion	270	8	8	8	8	270	7	120	7
Brass, Long-Chipping	2.0250 / 2.0280 / 2.0332	< 600 N/mm²	Oil emulsion	180	7	7	7	7	180	6	120	6

FEED RATE TABLE 3xD - 40xD

mm/U	Ø3	Ø4	Ø5	Ø6	Ø8	Ø10	Ø12	Ø16	Ø20
1	0,032	0,040	0,040	0,050	0,063	0,080	0,080	0,100	0,125
2	0,040	0,050	0,050	0,063	0,080	0,100	0,100	0,125	0,160
3	0,050	0,063	0,063	0,080	0,100	0,125	0,125	0,160	0,200
4	0,063	0,080	0,080	0,100	0,125	0,160	0,160	0,200	0,250
5	0,080	0,100	0,100	0,125	0,160	0,200	0,200	0,250	0,315
6	0,100	0,125	0,125	0,160	0,200	0,250	0,250	0,315	0,400
7	0,125	0,160	0,160	0,200	0,250	0,315	0,315	0,400	0,500
8	0,160	0,200	0,200	0,250	0,315	0,400	0,400	0,500	0,630
9	0,160	0,200	0,250	0,315	0,315	0,400	0,500	0,630	0,630

Tools with internal coolant cutting speed can be 10% higher

41100 4xD WITHOUT INTERNAL COOLANT



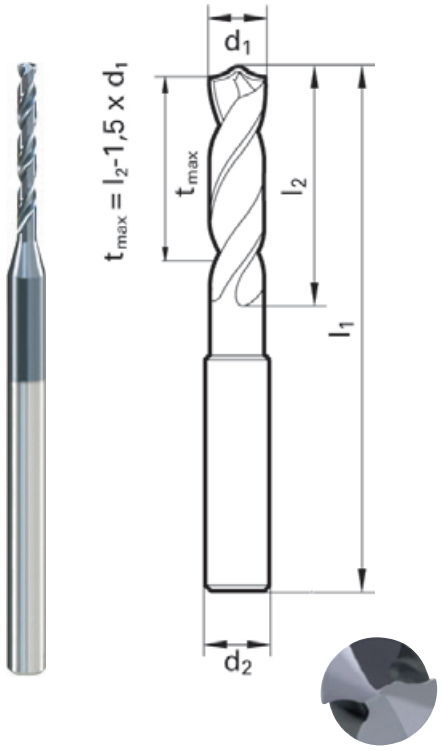
High performance mini solid carbide drills for short and long chipping materials like construction steel, case hardening steel, Steel castings, head treatable steel and cast iron with tensile strength up to 1200N/mm/2 carbon steel and high alloyed aluminum materials can be machined as well with this drill. Dedicated geometry, and top angle 140°, allow high cutting data and a very good chip evacuation. TiAlN coating

Order Sample
ø 3 mm

HA-Shank 41100-030HA

d1 m7	d2	l1	l2	Part No
0,80	3,000	47,00	4,80	008
0,85	3,000	47,00	5,10	0085
0,90	3,000	47,00	5,40	009
0,95	3,000	47,00	5,70	0095
1,00	3,000	47,00	6,00	010
1,05	3,000	47,00	6,30	0105
1,10	3,000	47,00	6,60	011
1,15	3,000	47,00	6,90	0115
1,20	3,000	47,00	7,20	012
1,25	3,000	47,00	7,50	0125
1,30	3,000	47,00	7,80	013
1,35	3,000	47,00	8,10	0135
1,40	3,000	47,00	8,40	014
1,45	3,000	47,00	8,70	0145
1,50	3,000	47,00	9,00	015
1,55	3,000	47,00	9,30	0155
1,60	3,000	47,00	9,60	016
1,65	3,000	47,00	9,90	0165
1,70	3,000	47,00	10,20	017
1,75	3,000	47,00	10,50	0175
1,80	3,000	52,00	10,80	018
1,85	3,000	52,00	11,10	0185
1,90	3,000	52,00	11,40	019
1,95	3,000	52,00	11,70	0195
2,00	4,000	59,00	12,00	020
2,05	4,000	59,00	12,30	0205
2,10	4,000	59,00	12,60	021
2,15	4,000	59,00	12,90	0215
2,20	4,000	59,00	13,20	022
2,25	4,000	59,00	13,50	0225
2,30	4,000	59,00	13,80	023
2,35	4,000	59,00	14,10	0235
2,40	4,000	59,00	14,40	024
2,45	4,000	59,00	14,70	0245
2,50	4,000	59,00	15,00	025
2,55	4,000	59,00	15,30	0255
2,60	4,000	59,00	15,60	026
2,65	4,000	59,00	15,90	0265
2,70	4,000	59,00	16,20	027
2,75	4,000	59,00	16,50	0275
2,80	4,000	59,00	16,80	028
2,85	4,000	59,00	17,10	0285
2,90	4,000	59,00	17,40	029
2,95	4,000	59,00	17,70	0295
3,00	4,000	59,00	18,00	030

70100 7xD WITHOUT INTERNAL COOLANT



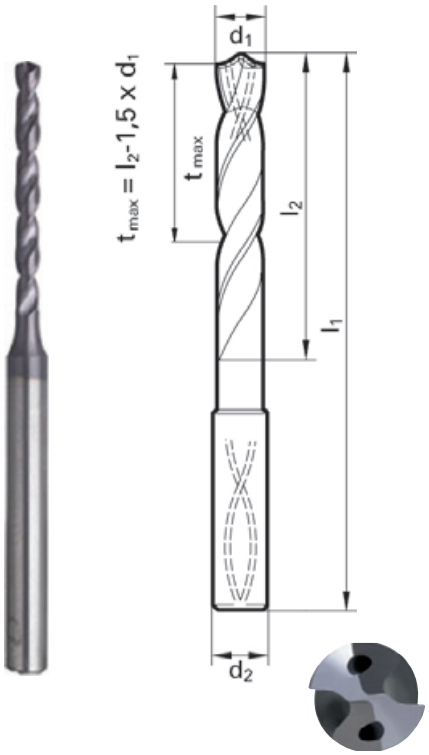
High performance mini solid carbide drills for short and long chipping materials like construction steel, case hardening steel, steel castings, head treatable steel and cast iron with tensile strength up to 1200N/mm/2 carbon steel and high alloyed aluminum materials can be machined as well with this drill. Dedicated geometry, and top angle 140°, allow high cutting data and a very good chip evacuation. TiAlN coating

Order Sample
ø 3 mm

HA-Shank 70100-030HA

d1 m7	d2	l1	l2	Part No
0,80	3,000	47,00	6,40	008
0,85	3,000	47,00	6,80	0085
0,90	3,000	47,00	7,20	009
0,95	3,000	47,00	7,60	0095
1,00	3,000	47,00	8,00	010
1,05	3,000	47,00	8,40	0105
1,10	3,000	47,00	8,80	011
1,15	3,000	47,00	9,20	0115
1,20	3,000	52,00	10,80	012
1,25	3,000	52,00	11,30	0125
1,30	3,000	52,00	11,70	013
1,35	3,000	52,00	12,20	0135
1,40	3,000	52,00	12,60	014
1,45	3,000	52,00	13,10	0145
1,50	3,000	52,00	13,50	015
1,55	3,000	52,00	14,00	0155
1,60	3,000	52,00	14,40	016
1,65	3,000	52,00	14,90	0165
1,70	3,000	52,00	15,30	017
1,75	3,000	52,00	15,80	0175
1,80	3,000	52,00	16,20	018
1,85	3,000	52,00	16,70	0185
1,90	3,000	52,00	17,10	019
1,95	3,000	52,00	17,60	0195
2,00	4,000	63,00	18,00	020
2,05	4,000	63,00	18,50	0205
2,10	4,000	63,00	18,90	021
2,15	4,000	63,00	19,40	0215
2,20	4,000	63,00	19,80	022
2,25	4,000	63,00	20,30	0225
2,30	4,000	63,00	20,70	023
2,35	4,000	63,00	21,20	0235
2,40	4,000	63,00	21,60	024
2,45	4,000	63,00	22,10	0245
2,50	4,000	63,00	22,50	025
2,55	4,000	63,00	23,00	0255
2,60	4,000	67,00	23,40	026
2,65	4,000	67,00	23,90	0265
2,70	4,000	67,00	24,30	027
2,75	4,000	67,00	24,80	0275
2,80	4,000	67,00	25,20	028
2,85	4,000	67,00	25,70	0285
2,90	4,000	67,00	26,10	029
2,95	4,000	67,00	26,60	0295
3,00	4,000	67,00	27,00	030

81200 8xD WITH INTERNAL COOLANT



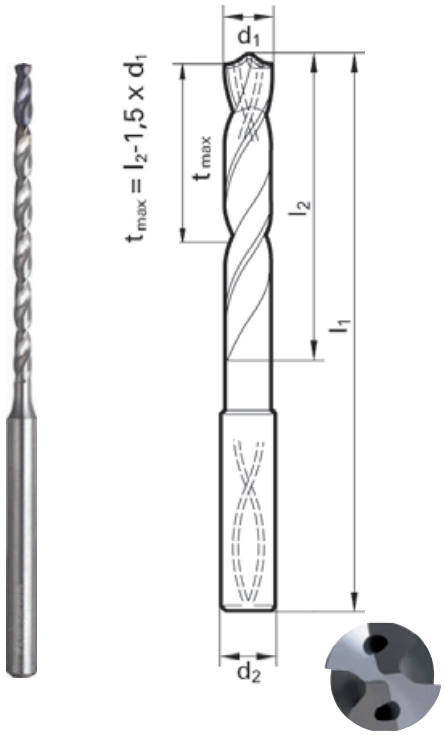
High performance mini solid carbide drills for short and long chipping materials like construction steel, case hardening steel, steel castings, head treatable steel and cast iron with tensile strength up to 1200N/mm/2 carbon steel and high alloyed aluminum materials can be machined as well with this drill. Dedicated geometry, and top angle 140°, allow high cutting data and a very good chip evacuation. TiAlN coating

d1 h7	d2	l1	l2	Part No
1,40	4,000	52,00	15,00	014
1,45	4,000	52,00	16,00	0145
1,50	4,000	52,00	17,00	015
1,55	4,000	52,00	17,00	0155
1,59	4,000	52,00	18,00	0159
1,60	4,000	52,00	18,00	016
1,65	4,000	52,00	18,00	0165
1,70	4,000	56,00	19,00	017
1,75	4,000	56,00	19,00	0175
1,80	4,000	56,00	20,00	018
1,85	4,000	56,00	20,00	0185
1,90	4,000	56,00	21,00	019
1,95	4,000	56,00	21,00	0195
1,98	4,000	56,00	22,00	0198
2,00	4,000	56,00	22,00	020
2,05	4,000	56,00	23,00	0205
2,10	4,000	62,00	23,00	021
2,15	4,000	62,00	24,00	0215
2,20	4,000	62,00	24,00	022
2,25	4,000	62,00	25,00	0225
2,30	4,000	62,00	25,00	023
2,35	4,000	62,00	26,00	0235
2,38	4,000	62,00	26,00	0238
2,40	4,000	62,00	26,00	024
2,45	4,000	62,00	27,00	0245
2,50	4,000	62,00	28,00	025
2,55	4,000	62,00	28,00	0255
2,60	4,000	66,00	29,00	026
2,65	4,000	66,00	29,00	0265
2,70	4,000	66,00	30,00	027
2,75	4,000	66,00	30,00	0275
2,78	4,000	66,00	31,00	0278
2,80	4,000	66,00	31,00	028
2,85	4,000	66,00	31,00	0285
2,90	4,000	66,00	32,00	029
2,95	4,000	66,00	32,00	0295
3,00	4,000	66,00	33,00	030

Order Sample
ø 3 mm

HA-Shank 81200-030HA

150200 15xD WITH INTERNAL COOLANT



d1 h7	d2	l1	l2	Part No
1,40	4,000	62,00	25,00	014
1,50	4,000	62,00	27,00	015
1,59	4,000	62,00	29,00	0159
1,60	4,000	62,00	29,00	016
1,70	4,000	70,00	31,00	017
1,80	4,000	70,00	32,00	018
1,90	4,000	70,00	34,00	019
1,98	4,000	70,00	36,00	0198
2,00	4,000	70,00	36,00	020
2,10	4,000	78,00	38,00	021
2,20	4,000	78,00	40,00	022
2,30	4,000	78,00	42,00	023
2,38	4,000	78,00	44,00	0238
2,40	4,000	78,00	44,00	024
2,50	4,000	78,00	45,00	025
2,60	4,000	87,00	47,00	026
2,70	4,000	87,00	48,00	027
2,78	4,000	87,00	50,00	0278
2,80	4,000	87,00	50,00	028
2,90	4,000	87,00	52,00	029
3,00	4,000	87,00	54,00	030

High performance mini solid carbide drills for short and long chipping materials like construction steel, case hardening steel, steel castings, head treatable steel and cast iron with tensile strength up to 1200N/mm/2 carbon steel and high alloyed aluminum materials can be machined as well with this drill. Dedicated geometry, and top angle 140°, allow high cutting data and a very good chip evacuation. TiAlN coating

Order Sample
ø 3 mm

HA-Shank 150200-030HA

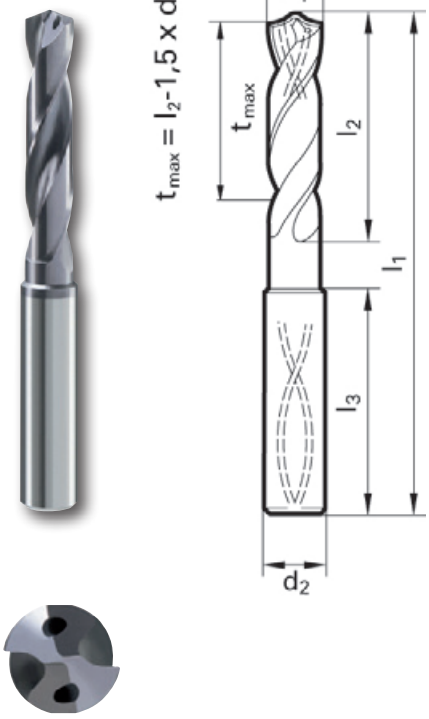
CUTTING DATA SC-TWIST DRILL 4xD - 15xD

Material Designation	Material Number	Tensile Strength/Hard	Kühlmittel	Vc (m/min)	4xD ohne IK Line	7xD With IC Line	8xD ohne IK Line	15xD With IC Line
Structural Steels	1.0035 / 1.0486 / 1.0345 / 1.0425	< 500 N/mm²	Oil emulsion	90 - 120	9	7	3	3
Structural Steels	1.0050 / 1.0070 / 1.8937	> 500 - 850 N/mm²	Oil emulsion	90 - 110	9	7	3	3
Cutting Steels	1.0718 / 1.0736	< 850 N/mm²	Oil emulsion	90 - 120	9	7	4	4
Cutting Steels	1.0727 / 1.0728 / 1.0757	850 - 1000 N/mm²	Oil emulsion	80 - 100	8	6	4	4
Non-Alloyed Heat Treatable Steels	1.0402 / 1.1178	< 700 N/mm²	Oil emulsion	80 - 110	9	7	3	3
Non-Alloyed Heat Treatable Steels	1.0503 / 1.1191	700 - 850 N/mm²	Oil emulsion	80 - 110	9	7	3	3
Non-Alloyed Heat Treatable Steels	1.0601 / 1.1221	850 - 1000 N/mm²	Oil emulsion	80 - 100	8	6	3	3
Alloyed Heat Treatable Steels	1.5131 / 1.7003 / 1.7030	850 - 1000 N/mm²	Oil emulsion	80 - 100	8	6	3	3
Alloyed Heat Treatable Steels	1.5710 / 1.7035 / 1.7225	1000 - 1200 N/mm²	Oil emulsion	60 - 80	7	5	3	3
Non-Alloy Hardened Steels	1.0301 / 1.1121	< 750 N/mm²	Oil emulsion	90 - 110	8	6	2	2
Alloyed Hardening Steels		850 - 1000 N/mm²	Oil emulsion	70 - 100	8	6	3	3
Alloyed Hardening Steels	1.5752 / 1.7131 / 1.7264	1000 - 1200 N/mm²	Oil emulsion	60 - 80	7	5	3	3
Nitriding Steel		> 850 - 1000 N/mm²	Oil emulsion	60 - 80	7	5	2	2
Nitriding Steel	1.8519 / 1.8550	1000 - 1200 N/mm²	Oil emulsion	50 - 70	7	5	2	2
Tool Steels	1.1750 / 1.2067 / 1.2307	< 850 N/mm²	Oil emulsion	40 - 60	7	5	3	3
Tool Steels	1.2080 / 1.2083 / 1.2419 / 1.2767	850 - 1000 N/mm²	Oil emulsion	40 - 60	7	5	3	3
High Speed Steel	1.3243 / 1.3343 / 1.3344	650 - 1000 N/mm²	Oil emulsion	40 - 60	2	2	2	2
Spring Steel	1.5026 / 1.7176 / 1.8159	< 330 HB	Oil emulsion	40- 60	2	2	2	2
Stainless Steels, Sulfurized	1.4005 / 1.4104 / 1.4105 / 1.4305	< 850 N/mm²	Cutting Oil	30	2	2	2	2
Stainless Steels, Austensitic	1.4301 / 1.4541 / 1.4571	< 850 N/mm²	Cutting Oil	15	1	1	1	1
Stainless Steels, Martensitic	1.4057 / 1.4122 / 1.4521	< 850 N/mm²	Cutting Oil	30	2	2	2	2
Hardened Steels		< 40 - 48 HRC	Cutting Oil					
Hardened Steels		> 48 - 60 HRC	Cutting Oil					
Special Alloy	Nimonic, Inconel,Monel,Hastelloy	< 1200 N/mm²	Cutting Oil	10	1	1	1	1
Cast Iron	0.6010 / 0.6020	< 240 HB	Oil emulsion	< 150	13	11	5	5
Cast Iron	0.6025 / 0.6035	< 300 HB	Oil emulsion	< 140	13	11	5	5
Nodular And Malleable	0.7050 / 0.8035	< 240 HB	Oil emulsion	< 140	13	11	5	5
Nodular And Malleable	0.7070 / 0.8170	< 300 HB	Oil emulsion	< 130	12	10	5	5
Hard Cast		< 350 HB	Oil emulsion					
Titanium And Titanium Alloys	3.7024 / 3.7114 / 3.7124	< 850 N/mm²	Oil emulsion	15	1	1	1	1
Titanium And Titanium Alloys	3.7154 / 3.7165 / 3.7184	850 - 1200 N/mm²	Oil emulsion	15	1	1	1	1
Aluminium Alloys	3.0255 / 3.2315 / 3.3515	< 400 N/mm²	Oil emulsion	60 - 80	13	12	13	13
Al Forgeable Alloy	3.0615 / 3.1325 / 3.3245 / 3.4365	< 450 N/mm²	Oil emulsion	60 - 80	13	12	13	13
Al-Casting Alloys< 10% Si	3.2131 / 3.2153 / 3.2573	< 600 N/mm²	Oil emulsion	120 - 150	4	4	4	4
Al-Casting Alloys > 10% Si	3.2581 / 3.2583	< 600 N/mm²	Oil emulsion	120 - 150	4	4	4	4

FEED RATE TABLE 4xD - 15xD

mm/U	Ø 0,8	Ø 1,0	Ø 1,5	Ø 2,0	Ø 2,5	Ø 3,0
1	0,008	0,012	0,021	0,032	0,045	0,060
2	0,016	0,022	0,036	0,052	0,070	0,090
3	0,024	0,032	0,051	0,072	0,095	0,120
4	0,032	0,042	0,066	0,092	0,120	0,150
5	0,04	0,06	0,09	0,12	0,15	0,18
6	0,05	0,07	0,10	0,14	0,17	0,21
7	0,06	0,08	0,12	0,16	0,20	0,24
8	0,07	0,09	0,13	0,18	0,22	0,27
9	0,08	0,10	0,15	0,20	0,25	0,30
10	0,08	0,10	0,15	0,21	0,26	0,31
11	0,08	0,11	0,16	0,22	0,27	0,33
12	0,09	0,11	0,17	0,23	0,28	0,34
13	0,09	0,12	0,18	0,24	0,30	0,36

SC-TWIST DRILL INOX 31300 3xD WITH INTERNAL COOLANT



High performance solid carbide twist drills for machining materials like stainless steel, special alloys and Titanium Alloys up to 1200N/mm/2
TiAlN coating

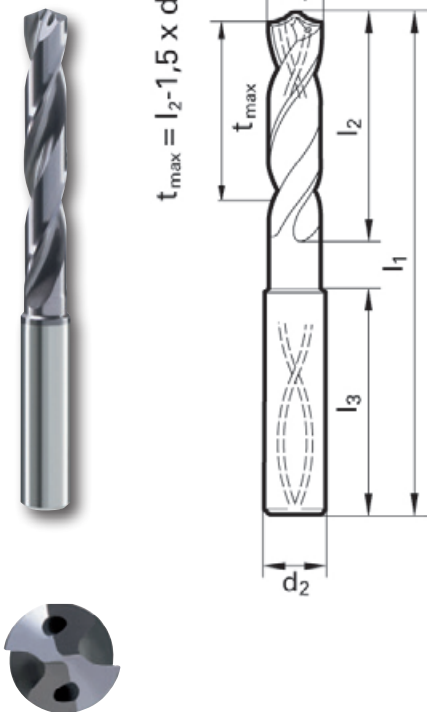
Order Sample
ø 6 mm

HA-Shank 31300-060 HA
HB-Shank 31300-060 HB
HE-Shank 31300-060 HE

d1 m7	d2	l1	l2	l3	Part No
3.000	6.0	62.0	20.0	36.0	030
3.100	6.0	62.0	20.0	36.0	031
3.200	6.0	62.0	20.0	36.0	032
3.250	6.0	62.0	20.0	36.0	0325
3.300	6.0	62.0	20.0	36.0	033
3.400	6.0	62.0	20.0	36.0	034
3.500	6.0	62.0	20.0	36.0	035
3.600	6.0	62.0	20.0	36.0	036
3.700	6.0	62.0	20.0	36.0	037
3.800	6.0	66.0	24.0	36.0	038
3.900	6.0	66.0	24.0	36.0	039
4.000	6.0	66.0	24.0	36.0	040
4.100	6.0	66.0	24.0	36.0	041
4.200	6.0	66.0	24.0	36.0	042
4.300	6.0	66.0	24.0	36.0	043
4.400	6.0	66.0	24.0	36.0	044
4.500	6.0	66.0	24.0	36.0	045
4.600	6.0	66.0	24.0	36.0	046
4.650	6.0	66.0	24.0	36.0	0465
4.700	6.0	66.0	24.0	36.0	047
4.800	6.0	66.0	28.0	36.0	048
4.900	6.0	66.0	28.0	36.0	049
5.000	6.0	66.0	28.0	36.0	050
5.100	6.0	66.0	28.0	36.0	051
5.200	6.0	66.0	28.0	36.0	052
5.300	6.0	66.0	28.0	36.0	053
5.400	6.0	66.0	28.0	36.0	054
5.500	6.0	66.0	28.0	36.0	055
5.550	6.0	66.0	28.0	36.0	0555
5.600	6.0	66.0	28.0	36.0	056
5.700	6.0	66.0	28.0	36.0	057
5.800	6.0	66.0	28.0	36.0	058
5.900	6.0	66.0	28.0	36.0	059
6.000	6.0	66.0	28.0	36.0	060
6.100	8.0	79.0	34.0	36.0	061
6.200	8.0	79.0	34.0	36.0	062
6.300	8.0	79.0	34.0	36.0	063
6.400	8.0	79.0	34.0	36.0	064
6.500	8.0	79.0	34.0	36.0	065
6.600	8.0	79.0	34.0	36.0	066
6.700	8.0	79.0	34.0	36.0	067
6.800	8.0	79.0	34.0	36.0	068
6.900	8.0	79.0	34.0	36.0	069
7.000	8.0	79.0	34.0	36.0	070
7.100	8.0	79.0	41.0	36.0	071
7.200	8.0	79.0	41.0	36.0	072
7.300	8.0	79.0	41.0	36.0	073
7.400	8.0	79.0	41.0	36.0	074
7.500	8.0	79.0	41.0	36.0	075
7.600	8.0	79.0	41.0	36.0	076
7.700	8.0	79.0	41.0	36.0	077
7.800	8.0	79.0	41.0	36.0	078
7.900	8.0	79.0	41.0	36.0	079
8.000	8.0	79.0	41.0	36.0	080
8.100	10.0	89.0	47.0	40.0	081
8.200	10.0	89.0	47.0	40.0	082
8.300	10.0	89.0	47.0	40.0	083
8.400	10.0	89.0	47.0	40.0	084
8.500	10.0	89.0	47.0	40.0	085
8.600	10.0	89.0	47.0	40.0	086
8.700	10.0	89.0	47.0	40.0	087

d1 m7	d2	l1	l2	l3	Part No
8.800	10.0	89.0	47.0	40.0	088
8.900	10.0	89.0	47.0	40.0	089
9.000	10.0	89.0	47.0	40.0	090
9.100	10.0	89.0	47.0	40.0	091
9.200	10.0	89.0	47.0	40.0	092
9.300	10.0	89.0	47.0	40.0	093
9.400	10.0	89.0	47.0	40.0	094
9.500	10.0	89.0	47.0	40.0	095
9.600	10.0	89.0	47.0	40.0	096
9.700	10.0	89.0	47.0	40.0	097
9.800	10.0	89.0	47.0	40.0	098
9.900	10.0	89.0	47.0	40.0	099
10.000	10.0	89.0	47.0	40.0	100
10.100	12.0	102.0	55.0	45.0	101
10.200	12.0	102.0	55.0	45.0	102
10.300	12.0	102.0	55.0	45.0	103
10.400	12.0	102.0	55.0	45.0	104
10.500	12.0	102.0	55.0	45.0	105
10.600	12.0	102.0	55.0	45.0	106
10.700	12.0	102.0	55.0	45.0	107
10.800	12.0	102.0	55.0	45.0	108
10.900	12.0	102.0	55.0	45.0	109
11.000	12.0	102.0	55.0	45.0	110
11.100	12.0	102.0	55.0	45.0	111
11.200	12.0	102.0	55.0	45.0	112
11.300	12.0	102.0	55.0	45.0	113
11.400	12.0	102.0	55.0	45.0	114
11.500	12.0	102.0	55.0	45.0	115
11.600	12.0	102.0	55.0	45.0	116
11.700	12.0	102.0	55.0	45.0	117
11.800	12.0	102.0	55.0	45.0	118
11.900	12.0	102.0	55.0	45.0	119
12.000	12.0	102.0	55.0	45.0	120
12.200	14.0	107.0	60.0	45.0	122
12.500	14.0	107.0	60.0	45.0	125
12.700	14.0	107.0	60.0	45.0	127
12.800	14.0	107.0	60.0	45.0	128
13.000	14.0	107.0	60.0	45.0	130
13.300	14.0	107.0	60.0	45.0	133
13.500	14.0	107.0	60.0	45.0	135
13.700	14.0	107.0	60.0	45.0	137
14.000	14.0	107.0	60.0	45.0	140
14.200	16.0	115.0	65.0	48.0	142
14.300	16.0	115.0	65.0	48.0	143
14.500	16.0	115.0	65.0	48.0	145
14.700	16.0	115.0	65.0	48.0	147
15.000	16.0	115.0	65.0	48.0	150
15.200	16.0	115.0	65.0	48.0	152
15.300	16.0	115.0	65.0	48.0	153
15.500	16.0	115.0	65.0	48.0	155
15.700	16.0	115.0	65.0	48.0	157
16.000	16.0	115.0	65.0	48.0	160
16.500	18.0	123.0	73.0	48.0	165
17.000	18.0	123.0	73.0	48.0	170
17.500	18.0	123.0	73.0	48.0	175
18.000	18.0	123.0	73.0	48.0	180
18.500	20.0	131.0	79.0	50.0	185
19.000	20.0	131.0	79.0	50.0	190
19.500	20.0	131.0	79.0	50.0	195
20.000	20.0	131.0	79.0	50.0	200

SC -TWIST DRILL INOX 51300 5xD WITH INTERNAL COOLANT



High performance solid carbide twist drills for machining materials like stainless steel, special alloys and Titanium Alloys up to 1200N/mm/2
TiAlN coating

Order Sample
ø 6 mm

HA-Shank 51300-060 HA
HB-Shank 51300-060 HB
HE-Shank 51300-060 HE

d1 m7	d2	l1	l2	l3	Part No
3.000	6.0	66.0	28.0	36.0	030
3.100	6.0	66.0	28.0	36.0	031
3.200	6.0	66.0	28.0	36.0	032
3.250	6.0	66.0	28.0	36.0	0325
3.300	6.0	66.0	28.0	36.0	033
3.400	6.0	66.0	28.0	36.0	034
3.500	6.0	66.0	28.0	36.0	035
3.600	6.0	66.0	28.0	36.0	036
3.700	6.0	66.0	28.0	36.0	037
3.800	6.0	74.0	36.0	36.0	038
3.900	6.0	74.0	36.0	36.0	039
4.000	6.0	74.0	36.0	36.0	040
4.100	6.0	74.0	36.0	36.0	041
4.200	6.0	74.0	36.0	36.0	042
4.300	6.0	74.0	36.0	36.0	043
4.400	6.0	74.0	36.0	36.0	044
4.500	6.0	74.0	36.0	36.0	045
4.600	6.0	74.0	36.0	36.0	046
4.650	6.0	74.0	36.0	36.0	0465
4.700	6.0	74.0	36.0	36.0	047
4.800	6.0	82.0	44.0	36.0	048
4.900	6.0	82.0	44.0	36.0	049
5.000	6.0	82.0	44.0	36.0	050
5.100	6.0	82.0	44.0	36.0	051
5.200	6.0	82.0	44.0	36.0	052
5.300	6.0	82.0	44.0	36.0	053
5.400	6.0	82.0	44.0	36.0	054
5.500	6.0	82.0	44.0	36.0	055
5.550	6.0	82.0	44.0	36.0	0555
5.600	6.0	82.0	44.0	36.0	056
5.700	6.0	82.0	44.0	36.0	057
5.800	6.0	82.0	44.0	36.0	058
5.900	6.0	82.0	44.0	36.0	059
6.000	6.0	82.0	44.0	36.0	060
6.100	6.0	91.0	53.0	36.0	061
6.200	8.0	91.0	53.0	36.0	062
6.300	8.0	91.0	53.0	36.0	063
6.400	8.0	91.0	53.0	36.0	064
6.500	8.0	91.0	53.0	36.0	065
6.600	8.0	91.0	53.0	36.0	066
6.700	8.0	91.0	53.0	36.0	067
6.800	8.0	91.0	53.0	36.0	068
6.900	8.0	91.0	53.0	36.0	069
7.000	8.0	91.0	53.0	36.0	070
7.100	8.0	91.0	53.0	36.0	071
7.200	8.0	91.0	53.0	36.0	072
7.300	8.0	91.0	53.0	36.0	073
7.400	8.0	91.0	53.0	36.0	074
7.500	8.0	91.0	53.0	36.0	075
7.600	8.0	91.0	53.0	36.0	076
7.700	8.0	91.0	53.0	36.0	077
7.800	8.0	91.0	53.0	36.0	078
7.900	8.0	91.0	53.0	36.0	079
8.000	8.0	91.0	53.0	36.0	080
8.100	10.0	103.0	61.0	40.0	081
8.200	10.0	103.0	61.0	40.0	082
8.300	10.0	103.0	61.0	40.0	083
8.400	10.0	103.0	61.0	40.0	084
8.500	10.0	103.0	61.0	40.0	085

d1 m7	d2	l1	l2	l3	Part No
8.600	10.0	103.0	61.0	40.0	086
8.700	10.0	103.0	61.0	40.0	087
8.800	10.0	103.0	61.0	40.0	088
8.900	10.0	103.0	61.0	40.0	089
9.000	10.0	103.0	61.0	40.0	090
9.100	10.0	103.0	61.0	40.0	091
9.200	10.0	103.0	61.0	40.0	092
9.300	10.0	103.0	61.0	40.0	093
9.400	10.0	103.0	61.0	40.0	094
9.500	10.0	103.0	61.0	40.0	095
9.600	10.0	103.0	61.0	40.0	096
9.700	10.0	103.0	61.0	40.0	097
9.800	10.0	103.0	61.0	40.0	098
9.900	10.0	103.0	61.0	40.0	099
10.000	10.0	103.0	61.0	40.0	100
10.100	12.0	118.0	71.0	45.0	101
10.200	12.0	118.0	71.0	45.0	102
10.300	12.0	118.0	71.0	45.0	103
10.400	12.0	118.0	71.0	45.0	104
10.500	12.0	118.0	71.0	45.0	105
10.600	12.0	118.0	71.0	45.0	106
10.700	12.0	118.0	71.0	45.0	107
10.800	12.0	118.0	71.0	45.0	108
10.900	12.0	118.0	71.0	45.0	109
11.000	12.0	118.0	71.0	45.0	110
11.100	12.0	118.0	71.0	45.0	111
11.200	12.0	118.0	71.0	45.0	112
11.300	12.0	118.0	71.0	45.0	113
11.400	12.0	118.0	71.0	45.0	114
11.500	12.0	118.0	71.0	45.0	115
11.600	12.0	118.0	71.0	45.0	116
11.700	12.0	118.0	71.0	45.0	117
11.800	12.0	118.0	71.0	45.0	118
11.900	12.0	118.0	71.0	45.0	119
12.000	12.0	118.0	71.0	45.0	120
12.200	14.0	124.0	77.0	45.0	122
12.500	14.0	124.0	77.0	45.0	125
12.700	14.0	124.0	77.0	45.0	127
12.800	14.0	124.0	77.0	45.0	128
13.000	14.0	124.0	77.0	45.0	130
13.300	14.0	124.0	77.0	45.0	133
13.500	14.0	124.0	77.0	45.0	135
13.700	14.0	124.0	77.0	45.0	137
14.000	14.0	124.0	77.0	45.0	140
14.200	16.0	133.0	83.0	48.0	142
14.300	16.0	133.0	83.0	48.0	143
14.500	16.0	133.0	83.0	48.0	145
14.700	16.0	133.0	83.0	48.0	147
15.000	16.0	133.0	83.0	48.0	150
15.200	16.0	133.0	83.0	48.0	152
15.300	16.0	133.0	83.0	48.0	153
15.500	16.0	133.0	83.0	48.0	155
15.700	16.0	133.0	83.0	48.0	157
16.000	16.0	133.0	83.0	48.0	160
16.500	18.0	143.0	93.0	48.0	165
17.000	18.0	143.0	93.0	48.0	170
17.500	18.0	143.0	93.0	48.0	175
18.000	18.0	143.0	93.0	48.0	180
18.500	20.0	153.0	101.0	50.0	185
19.000	20.0	153.0	101.0	50.0	190
19.500	20.0	153.0	101.0	50.0	195
20.000	20.0	153.0	101.0	50.0	200

CUTTING DATA SC-TWIST DRILL INOX 31300

Material Designation	Material No	Tensile Strength/Hard	Kühlmittel	Vc (m/min)	3xD With IC Line
Stainless Steel, Sulfurized	1.4005 / 1.4104 / 1.4105 / 1.4305	< 850 N/mm²	Cutting Oil	80	5
Stainless Steels, Austenitic	1.4301 / 1.4541 / 1.4571	< 850 N/mm²	Cutting Oil	60	2-3
Stainless Steels, Martensitic	1.4057 / 1.4122 / 1.4521	< 850 N/mm²	Cutting Oil	80	5
Special Alloy	Nimonic, Inconel,Monel,Hastelloy	< 1200 N/mm²	Cutting Oil	30	2
Titanium And Titanium Alloys	3.7024 / 3.7114 / 3.7124	< 850 N/mm²	Oil emulsion	35	2

FEED RATE TABLE

mm/U	Ø 3,0	Ø 4,0	Ø 5,0	Ø 6,0	Ø 8,0	Ø 10,0	Ø 12,0	Ø 16,0	Ø 20,0
1	0,03	0,04	0,04	0,05	0,06	0,08	0,08	0,10	0,12
2	0,04	0,05	0,05	0,06	0,08	0,10	0,10	0,12	0,16
3	0,05	0,06	0,06	0,08	0,10	0,12	0,20	0,16	0,20
4	0,06	0,08	0,08	0,10	0,12	0,16	0,16	0,20	0,25
5	0,08	0,10	0,10	0,125	0,16	0,20	0,20	0,25	0,30
6	0,10	0,12	0,12	0,16	0,20	0,25	0,25	0,30	0,40
7	0,12	0,16	0,16	0,20	0,25	0,30	0,30	0,40	0,50
8	0,16	0,20	0,20	0,25	0,30	0,40	0,40	0,50	0,60
9	0,16	0,20	0,20	0,30	0,30	0,40	0,50	0,60	0,60

CUTTING DATA SC-TWIST DRILL INOX 51300

Material Designation	Material No	Tensile Strength/Hard	Kühlmittel	Vc (m/min)	Line
Stainless Steel,Sulfurized	1.4005 / 1.4104 / 1.4105 / 1.4305	< 850 N/mm²	Cutting Oil	80	5
Stainless Steels,Austenitic	1.4301 / 1.4541 / 1.4571	< 850 N/mm²	Cutting Oil	60	2-3
Stainless Steels,Martensitic	1.4057 / 1.4122 / 1.4521	< 850 N/mm²	Cutting Oil	80	5
Special Alloy	Nimonic, Inconel,Monel,Hastelloy	< 1200 N/mm²	Cutting Oil	30	2
Titanium And Titanium Alloys	3.7024 / 3.7114 / 3.7124	< 850 N/mm²	Oil emulsion	35	2

FEED RATE TABLE

mm/U	Ø 3,0	Ø 4,0	Ø 5,0	Ø 6,0	Ø 8,0	Ø 10,0	Ø 12,0	Ø 16,0	Ø 20,0
1	0,03	0,04	0,04	0,05	0,06	0,08	0,08	0,10	0,12
2	0,04	0,05	0,05	0,06	0,08	0,10	0,10	0,12	0,16
3	0,05	0,06	0,06	0,08	0,10	0,12	0,20	0,16	0,20
4	0,06	0,08	0,08	0,10	0,12	0,16	0,16	0,20	0,25
5	0,08	0,10	0,10	0,125	0,16	0,20	0,20	0,25	0,30
6	0,10	0,12	0,12	0,16	0,20	0,25	0,25	0,30	0,40
7	0,12	0,16	0,16	0,20	0,25	0,30	0,30	0,40	0,50
8	0,16	0,20	0,20	0,25	0,30	0,40	0,40	0,50	0,60
9	0,16	0,20	0,20	0,30	0,30	0,40	0,50	0,60	0,60

ADD engineering