NACHi

High feed, high performance DIN338 Drill

AG Power Drills

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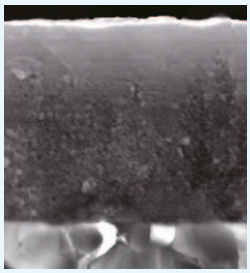
Original Flute geometry which combines high rigidity and smooth chip evacuation realize stable and high efficiency drilling.

AG Coating which provides high heat and wear resistance increase the tool life.

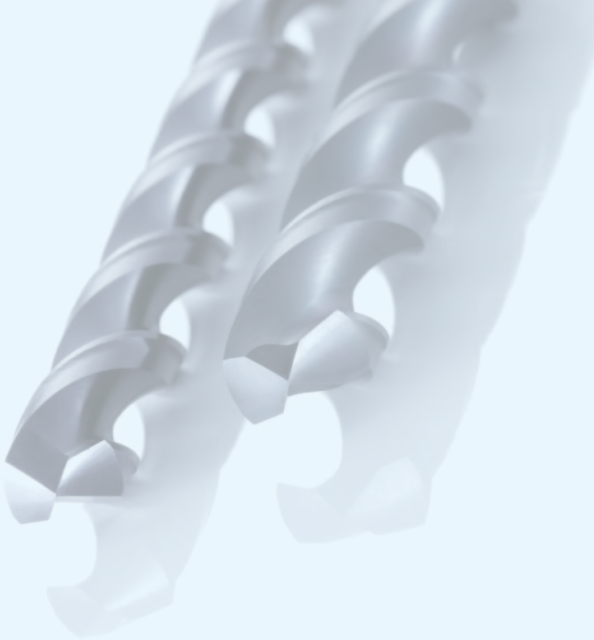


Anti heat and oxidation layer

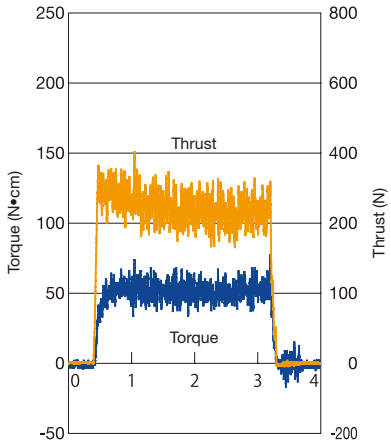
TiAl Anti wear layer

Tool material

High rigidity flute geometry and wide pocket



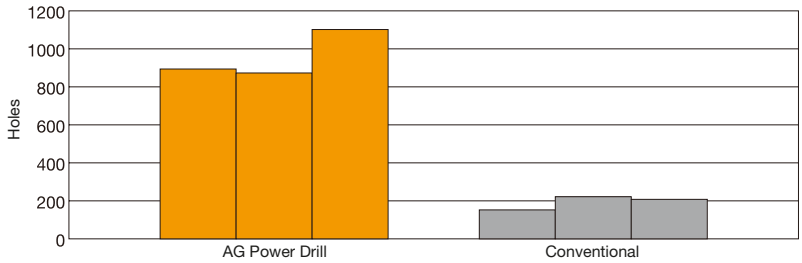
Cutting Force



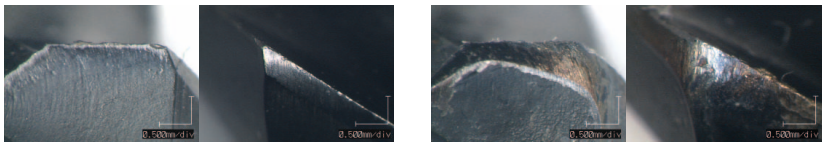
Drilling condition

Ø 3.0 mm Tool	**15 mm non step blind hole** Cutting Depth
30 m/min Cutting Speed	**C50 Carbon Steel (180HB)** Work material
330 mm/min (0.1 mm/rev) Feed	**Water Soluble** Cutting Fluid

Non step drilling of tempered alloy steel



Wear comparison after 204 hole drilling



AGPSD Conventional

Drilling condition

Ø 6.0 mm Tool	**230 mm/min** Feed	**42CrMo4 (32HRC)** Work material
24 m/min Cutting Speed	**30 mm non step blind hole** Cutting Depth	**Water Soluble** Cutting Fluid

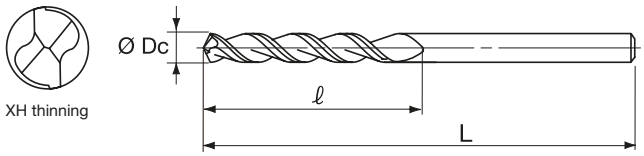
Standard Drilling Condition

Work Material	Carbon Steels S50C		Alloy Steels, Pre-Hardened Steels SCM440 NAK HPM		Mold Steels, Hardened Steels SKD61 NAK HPM		Cast Irons FC, FCD	
	~200HB		20~30HRC		30~40HRC			
Drill Dia. (mm)	Rotation (min^{-1})	Feed (mm/min)	Rotation (min^{-1})	Feed (mm/min)	Rotation (min^{-1})	Feed (mm/min)	Rotation (min^{-1})	Feed (mm/min)
1	7200	250	5700	170	4300	90	8600	340
2	4300	300	3400	200	2600	110	5200	420
3	3200	330	2500	230	1900	110	3800	460
5	1900	330	1500	230	1100	110	2300	470
8	1200	340	960	230	720	110	1400	450
10	960	340	760	230	570	110	1100	440
13	730	300	590	210	440	110	880	390

1) The table values are for drilling with water soluble cutting fluid.
2) Provide sufficent amount cuutting fluid to the cutting point and in the flute.
3) In non water soluble cutting fluid, reduce the rotation and feed by 20 %
4) Use the table values for drilling depths under 5×D.
5) When for hole depth more then 5×D, reduce the rotation and feed by 20 %
6) When for hole depth more then 5×D deep, add step seediing.
   However, a work material and drilling condition to Chip removal may be worse. In that case, add A even if drilling depth 5×D is as follows.
7) In step feed, return to the entrance hole.
8) Step feed interval is about 0.5~1×D. In small diameter, about 0.2~0.5×D.
9) Use a collet chuck, milling chuck.
10) Reduce rotation and feed by 20 % in drilling rolled surface or surface as forged.

AG Power Drills

DIN 338 HSS Co AG h8 118° 34° 1.0 13.0



L6536

Unit: mm

Dc	ℓ	L
1.0	12	34
1.1	14	36
1.2	16	38
1.3		
1.4	18	40
1.5		
1.6	20	43
1.7		
1.8	22	46
1.9		
2.0	24	49
2.1		
2.2	27	53
2.3		
2.4	30	57
2.5		
2.6		
2.7	33	61
2.8		
2.9		
3.0		
3.1	36	65
3.2		
3.3		
3.4	39	70
3.5		
3.6		
3.7		
3.8	43	75
3.9		
4.0		
4.1		
4.2		
4.3	47	80
4.4		
4.5		
4.6		
4.7		
4.8	52	86
4.9		
5.0		
5.1		
5.2		
5.3		
5.4	57	93
5.5		
5.6		
5.7		
5.8		
5.9		
6.0		
6.1	63	101
6.2		
6.3		
6.4		
6.5		
6.6		
6.7		

Dc	ℓ	L
6.8	69	109
6.9		
7.0		
7.1		
7.2		
7.3		
7.4		
7.5		
7.6	75	117
7.7		
7.8		
7.9		
8.0		
8.1		
8.2		
8.3		
8.4		
8.5		
8.6	81	125
8.7		
8.8		
8.9		
9.0		
9.1		
9.2		
9.3		
9.4		
9.5		
9.6	87	133
9.7		
9.8	87	133
9.9		
10.0		
10.1		
10.2		
10.3		
10.4		
10.5		
10.6		
10.7	94	142
10.8		
10.9		
11.0		
11.1		
11.2		
11.3		
11.4		
11.5	94	142
11.6		
11.7		
11.8		
11.9	101	151
12.0		
12.1		
12.2		
12.3		
12.4		
12.5		
12.6		
12.7		
12.8		
12.9		
13.0		

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NACHI DIN 338 Series	
Type	**List No.**
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HSS + TiN	L520P
HSSCo + AG	L6536

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