STANDARD CUTTING CONDITIONS

ISO	Workpiece materials	Selection criteria	Chip-breaker	Grade	Cutting speed *Vc* (sfm)
P	Low carbon steel (C < 0.3) (70, 1025, etc.)	First choice	DS	AH6030	525 - 820
		Priority on wear resistance	DJ	AH9030	525 - 1050
	Carbon steel (C > 0.3) (1045C, 1055, etc.)	First choice	DJ	AH9030	260 - 820
		Priority on impact resistance	DS	AH6030	260 - 820
	Low alloy steel (SCM415, etc.)	First choice	DS	AH6030	525 - 820
		Priority on wear resistance	DJ	AH9030	525 - 820
	Alloy steel (4140, etc.)	First choice	DJ	AH9030	260 - 660
		Priority on impact resistance	DS	AH6030	260 - 660
M	Stainless steel (Austenitic) (304, 316, etc.)	First choice	DS	AH6030	330 - 660
		-	DJ	AH9030	330 - 660
	Stainless steel (Martensitic and ferritic) (430, 416, etc.)	First choice	DS	AH6030	330 - 660
		-	DJ	AH9030	330 - 660
	Stainless steel (Precipitation hardening) (S17400, etc.)	First choice	DS	AH6030	260 - 400
		-	DJ	AH9030	260 - 400
K	Gray cast iron (No.250B, etc.)	First choice	DJ	AH9030	260 - 820
		Priority on impact resistance	DS	AH6030	260 - 660
	Ductile cast iron (700, etc.)	First choice	DJ	AH9030	260 - 660
		Priority on impact resistance	DS	AH6030	260 - 500
N	Aluminum alloy	First choice	DS	AH6030	660 - 1310
		-	DJ	AH9030	660 - 1310
S	High temperature alloy (Inconel718, etc.)	First choice	DS	AH6030	60 - 200
		-	DJ	AH9030	60 - 200
	Titanium Alloy (Ti-6Al-4V, etc.)	First choice	DS	AH6030	130 - 400
		-	DJ	AH9030	130 - 400
H	Hardened steel (Over 40HRC)	First choice	DJ	AH9030	170 - 330
		Priority on impact resistance	DS	AH6030	130 - 260

● Drill body of L/D = 4 is not recommended for stainless steel or superalloys drilling

Feed: *f* (ipr)					
L/D = 2, 3			L/D = 4		
ø*D*c (in)			ø*D*c (in)		
ø0.812 - ø1.062	ø1.125 - ø1.500	ø1.562 - ø2.000	ø0.812 - ø1.062	ø1.100 - ø1.500	ø1.562 - ø2.000
0.0015 - 0.004	0.0015 - 0.004	0.0015 - 0.004	0.002 - 0.004	0.002 - 0.004	0.002 - 0.004
0.0015 - 0.004	0.0015 - 0.004	0.0015 - 0.004	0.002 - 0.004	0.002 - 0.004	0.002 - 0.004
0.002 - 0.006	0.002 - 0.006	0.003 - 0.007	0.002 - 0.006	0.002 - 0.006	0.003 - 0.007
0.0015 - 0.005	0.0015 - 0.005	0.0015 - 0.006	0.002 - 0.006	0.002 - 0.005	0.002 - 0.006
0.0015 - 0.005	0.0015 - 0.005	0.0015 - 0.005	0.002 - 0.006	0.002 - 0.005	0.002 - 0.005
0.0015 - 0.005	0.002 - 0.006	0.0015 - 0.006	0.002 - 0.006	0.002 - 0.006	0.002 - 0.006
0.002 - 0.006	0.003 - 0.006	0.003 - 0.007	0.002 - 0.006	0.002 - 0.006	0.003 - 0.007
0.002 - 0.005	0.002 - 0.005	0.002 - 0.006	0.002 - 0.005	0.002 - 0.005	0.002 - 0.006
0.0015 - 0.004	0.0015 - 0.005	0.0015 - 0.005	-	-	-
0.0015 - 0.004	0.0015 - 0.005	0.0015 - 0.005	-	-	-
0.0015 - 0.004	0.0015 - 0.005	0.0015 - 0.005	-	-	-
0.0015 - 0.004	0.0015 - 0.005	0.0015 - 0.005	-	-	-
0.0015 - 0.003	0.0015 - 0.004	0.0015 - 0.004	-	-	-
0.0015 - 0.003	0.0015 - 0.004	0.0015 - 0.004	-	-	-
0.002 - 0.006	0.002 - 0.007	0.003 - 0.008	0.002 - 0.006	0.002 - 0.006	0.003 - 0.007
0.002 - 0.005	0.003 - 0.006	0.003 - 0.007	0.002 - 0.005	0.002 - 0.006	0.003 - 0.007
0.002 - 0.006	0.002 - 0.007	0.003 - 0.008	0.002 - 0.006	0.002 - 0.006	0.003 - 0.007
0.002 - 0.005	0.002 - 0.006	0.003 - 0.007	0.002 - 0.005	0.002 - 0.006	0.003 - 0.007
0.004 - 0.007	0.004 - 0.008	0.004 - 0.01	0.004 - 0.007	0.004 - 0.008	0.004 - 0.008
0.002 - 0.007	0.004 - 0.008	0.004 - 0.01	0.002 - 0.005	0.004 - 0.008	0.004 - 0.008
0.0015 - 0.007	0.0015 - 0.003	0.0015 - 0.003	-	-	-
0.0015 - 0.007	0.0015 - 0.004	0.0015 - 0.004	-	-	-
0.002 - 0.004	0.002 - 0.005	0.002 - 0.005	-	-	-
0.002 - 0.004	0.002 - 0.005	0.002 - 0.005	-	-	-
0.0015 - 0.007	0.0015 - 0.003	0.0015 - 0.004	0.002 - 0.003	0.002 - 0.003	0.002 - 0.003
0.0015 - 0.007	0.0015 - 0.003	0.0015 - 0.004	0.002 - 0.003	0.002 - 0.003	0.002 - 0.003