STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Cutting speed	Feed: *f* (ipr)			
			ø*Dc* (in)			
		Vc (sfm)	ø0.393 - ø0.468	ø0.472 - ø0.547	ø0.551 - ø0.625	ø0.629 - ø0.783
P	Low carbon steel (C < 0.3) (1010, 1020, 1025, etc.)	260 -450	0.006 - 0.011	0.007 - 0.012	0.008 - 0.014	0.01 - 0.017
P	High carbon steel (C > 0.3) (1045, 1055, etc.)	230 - 400	0.006 - 0.011	0.007 - 0.012	0.008 - 0.014	0.01 - 0.017
P	Low alloy steel (5120, etc.)	230 - 400	0.005 - 0.011	0.006 - 0.012	0.007 - 0.014	0.009 - 0.015
P	Alloy steel (4140, 5120, etc.)	130 - 300	0.005 - 0.011	0.006 - 0.012	0.007 - 0.013	0.009 - 0.015
M	Stainless steel (304, 316, etc.)	100 - 230	0.004 - 0.007	0.005 - 0.008	0.006 - 0.009	0.006 - 0.010
K	Gray cast iron (No.250B, etc.)	260 - 600	0.008 - 0.014	0.010 - 0.015	0.011 - 0.017	0.014 - 0.021
K	Ductile cast iron (80-55-06, etc.)	260 - 450	0.008 - 0.014	0.010 - 0.015	0.011 - 0.017	0.014 - 0.021
N	Aluminum alloys (7075, etc.)	260 - 720	0.010 - 0.015	0.011 - 0.017	0.014 - 0.020	0.015 - 0.024
S	Titanium alloys (Ti-6Al-4V, etc.)	65 - 160	0.003 - 0.006	0.004 - 0.011	0.005 - 0.008	0.006 - 0.009
S	Nickel-based alloys	65 - 160	0.003 - 0.006	0.004 - 0.006	0.005 - 0.007	0.006 - 0.009

- Cutting conditions in the above table show standard cutting conditions.
- Cutting conditions may change due to the rigidity and power of the machine and the workpiece material.
- Machined hole diameter may change depending upon the rigidity of the machine tool or cutting conditions.
- In case of L/D = 8 drill, the recommended range of cutting speeds and feeds is between the minimum and median values listed above.