

## RECOMMENDED CUTTING CONDITIONS

Workpiece Material	Stainless Steel				Carbon Steel, Alloy Steel Cast Iron Copper, Copper Alloys		Structural Steel Aluminium Alloys	
	Austenitic		Martensitic Ferritic		Revolution (min <sup>-1</sup> )	Feed rate (mm/rev)	Revolution (min <sup>-1</sup> )	Feed rate (mm/rev)
	AISI 304, AISI 316		AISI 430					
Drill Dia. DC (mm)	Revolution (min <sup>-1</sup> )	Feed rate (mm/rev)	Revolution (min <sup>-1</sup> )	Feed rate (mm/rev)	Revolution (min <sup>-1</sup> )	Feed rate (mm/rev)	Revolution (min <sup>-1</sup> )	Feed rate (mm/rev)
<b>0.5</b>	7600	0.01	8800	0.01	11250	0.01	15000	0.02
<b>1.0</b>	4800	0.02	6300	0.05	10000	0.05	12000	0.05
<b>2.0</b>	2400	0.04	3200	0.06	5500	0.09	6400	0.09
<b>3.0</b>	1600	0.07	2100	0.10	3700	0.13	4300	0.13
<b>4.0</b>	1200	0.09	1600	0.10	2800	0.15	3200	0.15
<b>5.0</b>	950	0.12	1300	0.13	2200	0.18	2600	0.18
<b>6.0</b>	800	0.14	1100	0.15	1800	0.20	2100	0.19
<b>8.0</b>	600	0.18	800	0.18	1400	0.22	1600	0.24
<b>10.0</b>	480	0.22	640	0.21	1100	0.25	1300	0.28
<b>12.0</b>	400	0.24	530	0.25	930	0.30	1100	0.34
<b>13.0</b>	370	0.26	490	0.28	860	0.32	1000	0.36
<b>14.0</b>	340	0.30	450	0.27	730	0.31	930	0.36
<b>15.0</b>	320	0.31	425	0.28	680	0.32	870	0.38
<b>16.0</b>	300	0.32	400	0.30	640	0.34	820	0.42
<b>18.0</b>	270	0.34	350	0.32	570	0.36	725	0.43
<b>20.0</b>	240	0.36	320	0.35	510	0.38	660	0.45

Note 1) Please reduce the revolution and feed rate depending on the drilling situation when the installation of workpiece or machine lacks rigidity.

Note 2) Please use a collet type drill chuck or a milling chuck.

Note 3) Use sufficient cutting fluid.

Note 4) For precipitation-hardened stainless steel (JIS SUS630 and SUS631), MVE, MVS and MMS are recommended.

Note 5) When drilling holes greater than 4 x drill diameter hole depths, please use a peck feed.

Note 6) The above-mentioned cutting conditions are standard when using water-soluble cutting fluid.

Please reduce the revolution when using water-insoluble cutting fluid.