

DRILLING (SOLID CARBIDE)**MINI-MWS****RECOMMENDED CUTTING CONDITIONS****SB/LB/XB/DB Type Drill (l/d<10)**

Work Material	Mild Steel ($\leq 180\text{HB}$)				Carbon Steel, Alloy Steel (180—280HB)			
	Ck10				Ck45, 42CrMo4			
Drill Dia. (mm)	Cutting Speed (m/min)	Revolution (min^{-1})	Feed rate (Min.—Max.) (mm/rev)	Table Feed (mm/min)	Cutting Speed (m/min)	Revolution (min^{-1})	Feed rate (Min.—Max.) (mm/rev)	Table Feed (mm/min)
0.5	40	25400	0.01 (0.005—0.015)	250	40	25400	0.01 (0.005—0.015)	250
1.0	50	15900	0.035 (0.020—0.050)	555	50	15900	0.035 (0.020—0.050)	555
1.5	50	10600	0.055 (0.035—0.080)	580	50	10600	0.055 (0.035—0.080)	580
2.0	50	7900	0.07 (0.040—0.100)	550	50	7900	0.07 (0.040—0.100)	550
2.5	60	7600	0.085 (0.050—0.125)	645	60	7600	0.085 (0.050—0.125)	645
2.95	90	9500	0.10 (0.060—0.130)	950	80	8400	0.10 (0.060—0.130)	840

Work Material	Carbon Steel, Alloy Steel (280—350HB)				Austenitic Stainless Steel ($\leq 200\text{HB}$)			
	36CrNiMo4				X5CrNi1810, X5CrNiMo17-12-2			
Drill Dia. (mm)	Cutting Speed (m/min)	Revolution (min^{-1})	Feed rate (Min.—Max.) (mm/rev)	Table Feed (mm/min)	Cutting Speed (m/min)	Revolution (min^{-1})	Feed rate (Min.—Max.) (mm/rev)	Table Feed (mm/min)
0.5	30	19000	0.01 (0.005—0.015)	190	20	12700	0.008 (0.005—0.010)	100
1.0	40	12700	0.035 (0.020—0.050)	440	30	9500	0.03 (0.020—0.044)	285
1.5	40	8400	0.055 (0.035—0.080)	460	30	6300	0.05 (0.035—0.070)	315
2.0	40	6300	0.07 (0.040—0.100)	440	30	4700	0.06 (0.040—0.080)	280
2.5	50	6300	0.085 (0.050—0.125)	535	40	5000	0.075 (0.050—0.100)	375
2.95	70	7400	0.10 (0.060—0.130)	740	40	4200	0.08 (0.060—0.100)	335