

RECOMMENDED CUTTING CONDITIONS

Work Material	Aluminium Alloy (Si<5%)				Copper, Copper alloy			
Coolant type	Water insoluble cutting oil • Water soluble cutting oil				Water insoluble cutting oil • Water soluble cutting oil			
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)
0.8	50	19800	0.01 (0.008—0.016)	195	40	15900	0.01 (0.008—0.016)	155
1.0	60	19000	0.015 (0.010—0.020)	285	50	15900	0.015 (0.010—0.020)	235
1.2	70	18500	0.015 (0.012—0.024)	275	60	15900	0.015 (0.012—0.024)	235
1.6	80	15900	0.02 (0.016—0.032)	315	70	13900	0.02 (0.016—0.032)	275
2.0	90	14300	0.03 (0.020—0.040)	425	80	12700	0.03 (0.020—0.040)	380
2.5	100	12700	0.035 (0.025—0.050)	440	90	11400	0.035 (0.025—0.050)	395
3.0	100	10600	0.045 (0.030—0.060)	475	100	10600	0.045 (0.030—0.060)	475

1) For safety and success, High pressure coolant is required. (Minimum coolant pressure=1,000PSI)

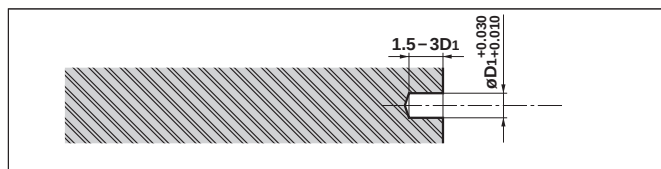
2) Coolant filter must be less than 5 microns. Fine filtration is necessary to prevent blockage of the coolant holes.

3) A pilot hole or guide bushing is required.

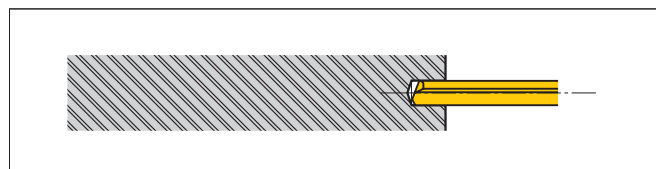
SPECIAL APPLICATION NOTES

- A pilot hole or guide bushing is required.
- Coolant filter must be less than 5 microns.
Fine filtration is necessary to prevent blockage of the coolant holes.
- High pressure coolant is required. At least 10MPa.
(If the pressure is too low, chip blockage can occur.)

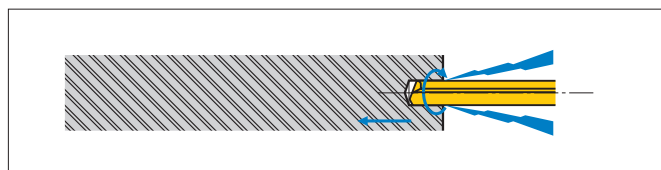
HOW TO USE



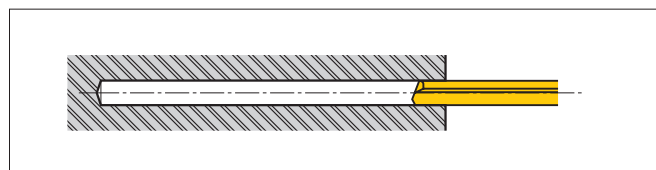
- 1. Pilot hole drilling.**
(Mitsubishi MWE or MWS is recommended.)



- 2. Penetrate the pilot hole without being rotated or with counter-rotating of under 300 rpm.**
Stop the MGS gun drill 1 mm-2 mm short of the pilot hole bottom.



- 3. Turn the coolant on, raise cutting speed and feed to the recommended cutting condition, and commence drilling.**



- 4. Return to "Pos 2" after drilling, turn the coolant off, and stop the drill rotating.**