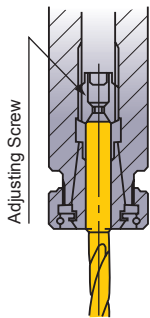


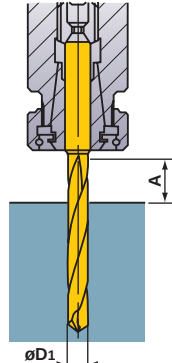
OPERATIONAL GUIDANCE

Drill Holding



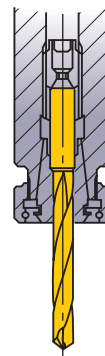
Thrust bearing type collet chuck holds the drill securely.

Drill Length



$$A \geq D_1 \times 2$$

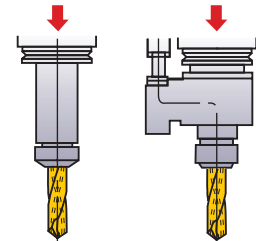
Drill Installation



Do not clamp on the flutes.

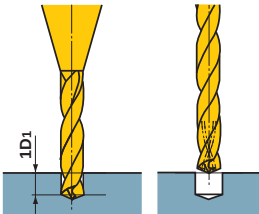
Through Coolant Type

Spindles Through Coolant Type
Revolving Coolant Machine Type



Coolant pressure is approx. 1.5MPa—7MPa
Recommended coolant pressure: $\geq 3\text{MPa}$

Drill Installation

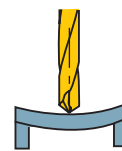


- 1) Make approx. $1D_1$ (D_1 : drill diameter) pilot hole by using the MHS with the shortest flutes.
- 2) Use the pilot hole as a guide and machine by the drill with coolant hole. Depending on the application, carry out pecking.

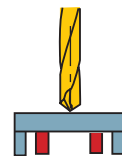
Coolant Handling

- 1) Dirt and dust particles in old coolant can clog the oil hole and prevent effective flow. Regular coolant exchange is recommended.
- 2) Small particles of swarf will jam in the oil hole. Use a filter as a preventative measure. When using small diameter drills, use a fine mesh filter.

Thin Workpiece

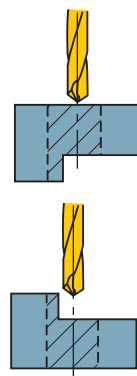


If Bending Occurs



Support the Workpiece

Interrupted Cutting



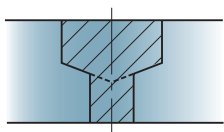
One Process

- ① Lower the feed when drilling the interrupted part.

Requires Prior Machining

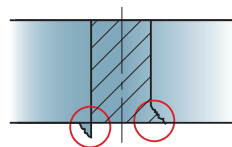
- ① Spot face with an end mill prior to drilling.

Stepped Holes



- ① Divide the machining into two processes.
 - ② Drill the larger hole first.
- ★ Tools for chamfering and spot facing can be produced to order.

Burring and Workpiece Chipping



- ① Lower the feed rate when breaking through.
- ② Change the point angle.