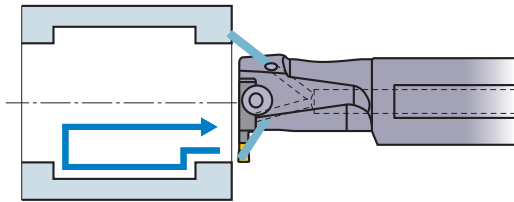


● Notes on multi-function machining (MF, MS, MM and BM breakers)

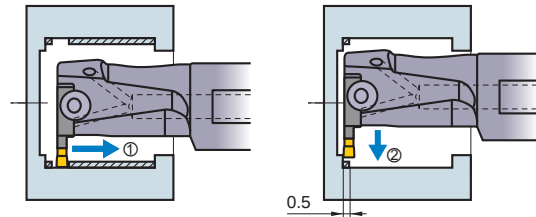
For internal grooving, the machining methods for external grooving (F035 – F036) can be used, but please note the following precautions.

Coolant



- Supply large amounts of coolant for effective chip disposal during cutting. Maintain supply until the tool has been retracted completely for improved chip disposal.

Machining blind holes

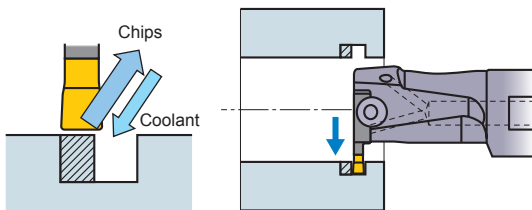


- As continuous chips tend to elongate at the back of the bore, the above operation is recommended. The recommended width of cut for $\varnothing$ is 0.5mm.

Machining Wide Grooves

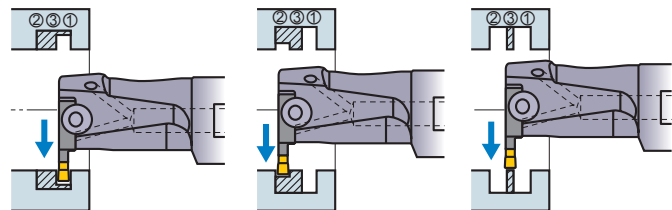
Grooving

- When the cutting edge width is $x 2 \geq$ groove width



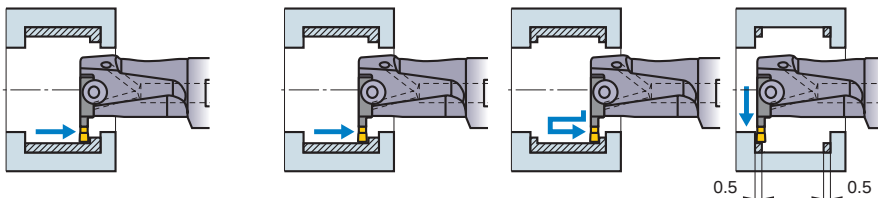
- When the depth of cut is shallower than the cutting edge width, continuous chips are usually produced. When plunging in several passes, it is recommended to carry out machining in the steps above. This ensures that coolant reaches the cutting edge and chips are easily discharged.

- When the cutting edge width is $x 2 <$ groove width



- When the groove depth is larger than the cutting edge width, carry out plunging in the steps above to break up chips efficiently.

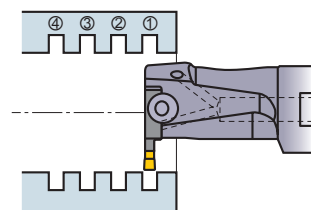
Turning



- When chip breaking and disposal are especially important, cross-feed machining is recommended.

- Wide face grooving when the corner R of the work piece is equal to the corner R of the insert, machine as shown above. (When corner R of the work piece is larger than corner R of the insert, refer to the description of external wide grooving.)
- If the groove depth exceeds a given level, chips may elongate at the wall. In such a case, increase the feed and carry out machining as shown above.

Machining instruction



- It is recommended to carry out grooving from the front end of the workpiece. This reduces workpiece deflection.