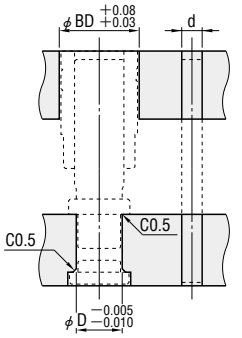
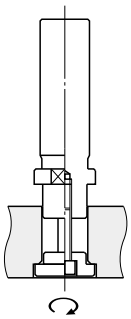
■Installing a guide post set

■Machining the mounting holes for guide post and bushing

- Guide post and bushing mounting holes should be machined by boring or jig grinding after the machining of all other holes is completed and after any machining deformation removed (for example by regrinding the top and bottom surfaces).
- One method of creating a position reference for upper and lower dies is to create a dummy hole and insert a pin.



Machining of mounting hole



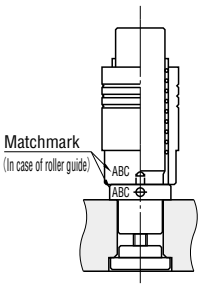
Installing guide post

■Installing guide posts

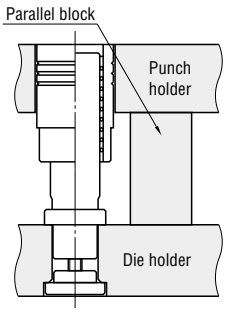
- After cleaning the mounting hole, fix the guide post in place using a bolt.
- In the case of a roller guide post set, offsetting the reference plane of one guide post by 90° from the other posts helps prevent errors when the die set is assembled.
- Check the post perpendicularity. (0.01mm/100mm or less)
- When press-fitting the post, use a hydraulic press or similar means and insert the post slowly. Tapping the post with a hammer may cause post bending or deformation.

■Installing guide bushings

- Place the bushing onto the guide post.
  (For a roller guide, align the matchmark and symbol.)
- Place a parallel block on the die holder and place the punch holder on it.
- Slide the guide bushing to check for any interference.
- Use solvent to clean any oil or dirt from the contact surface, then apply an anaerobic adhesive agent (Loctite 638 **P.940** is recommended) into the guide bushing's adhesive groove, and insert the bushing into the mounting hole. Set the guide bushing so that it will not come out from the punch holder and allow the adhesive to harden under those conditions. (3 to 6 hours at normal temperatures)



Aligning the post and bushing



Installing guide bushing

■Installing stoppers

- **Movable stopper**···After the adhesive agent has completely hardened, insert the spring and cage, and tighten the hexagon shaft of movable stopper RSTM・STM using a spanner.
- **Fixed stopper**···After the adhesive agent has completely hardened, insert the spring and cage, and attach the fixed stopper RSTK・STK.

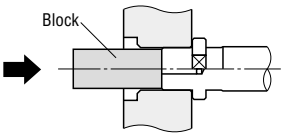
■Removing and installing guide posts

Removing

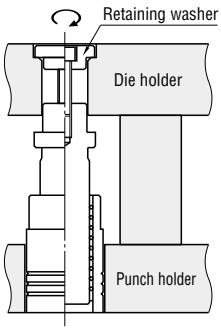
- Remove the movable stopper, ball cage and spring from the guide post.
- Loosen the bolt and remove the retaining washer.
- In order to avoid damaging the internal surfaces of the mounting hole or tap holes, position a cushion block (such as a copper alloy block) and tap the block with a hammer to remove the guide post.

Installing

- Attach the spring, cage and movable stopper to the guide post, then insert the guide post into the guide bushing.
- Place a parallel block onto the punch holder and position the die holder on top of it so that the die holder does not contact the roller guide or ball guide.
- Slide each guide post up and down to check for any interference with the mounting hole. If necessary, adjust the punch holder position.
- After cleaning the mounting hole, fix the guide post in place using a bolt.



Removing post



Installing post