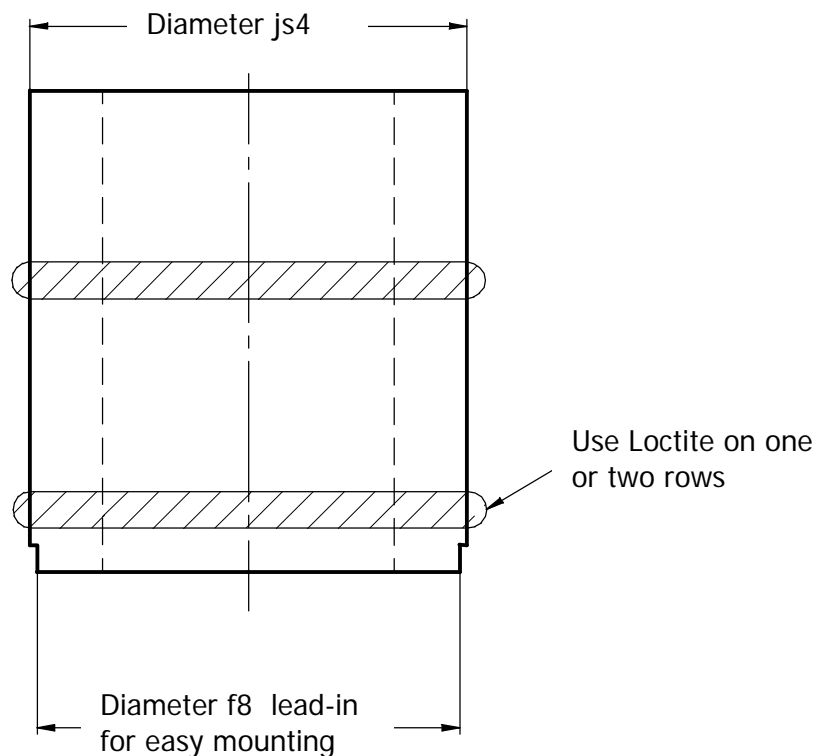


Recommendation for glue fitting of cylindrical guide bushings

1. Preparing the bushing and bore (H5 or JS4):

- Guide bushing and bore must be cleaned prior to assembly (**free of oil- and grease!!**).
- Clean guide bushing and bore with **Loctite 7070** or equivalent cleaning solvent.

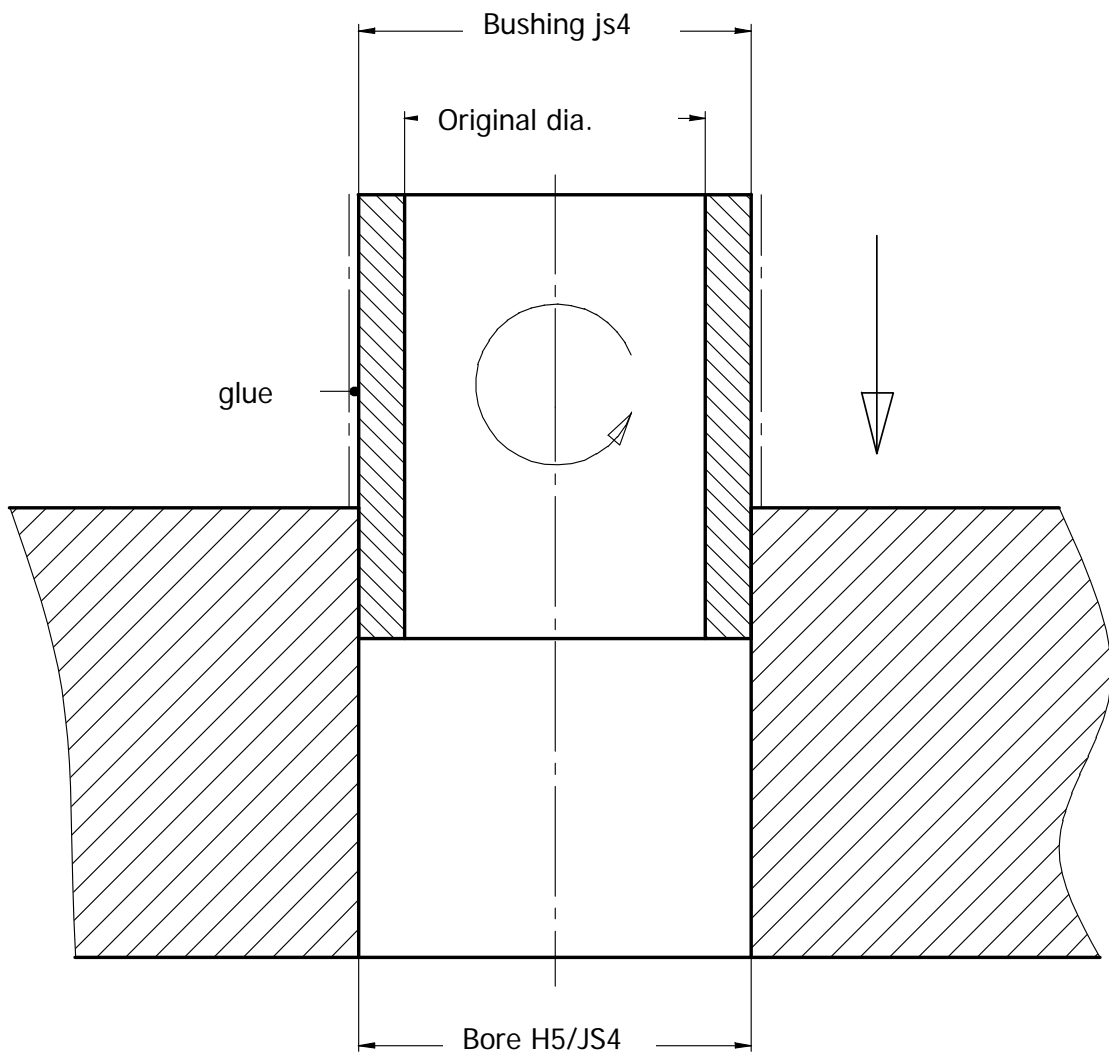


2. glue-in the bushing

- Apply the glue, Loctite 648, to the bushing OD.

3. mounting the bushing (for precise glue-fit):

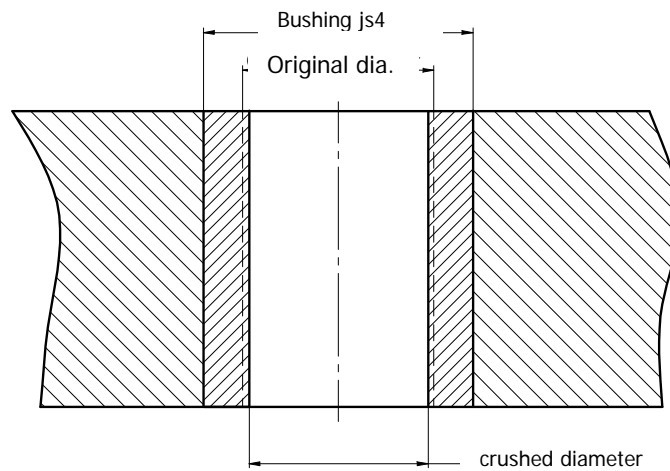
- Locate the bushing, perpendicular to the bore, by using the stepped diameter (f8 tolerance on outer diameter)
- Slightly rotate the guide bushing while installing it into the bore. A slight press-fit is also possible by using the recommended tolerance JS4/H5 (less than $1/1000\text{mm}$)
- In the case of a slight press-fit, the bushing gets retained by the glue in the glue groove, for a strong connection.
- Leave the assembled die-set over night (aprox. 12h) until the glue has cured.



4. Why should cylindrical bushings not be pressed in?

A) press-fit of bushing along its whole length, equal to the plate thickness:

- Press-fitting of the bushing may crush the internal diameter. Therefore, the ID gets smaller and the increased preload would over load/destroy the ball- or roller-body and shorten it's life expectancy.



B) Press-fit on the partial length of the bushing:

- By mounting the bushing with a press-fit, the internal diameter may get crushed out of tolerance. Therefore, the ID gets smaller and the increased preload would over load/destroy the ball- or roller-body and shorten it's life expectancy.
- Additionally, the cylindricity of the ID could no longer be guaranteed, increasing the possibility of cage creep when in use.

