CLAMPING SLEEVES

Instructions for installation and application

(see figures 1 to 4 on the revers)

The clamping sleeve is used for operation with normal traditional pressure oil.

This comprises all the liquid media chemically and thermically (up to 100° C) resistant against the seeve (material: bronze) and the seals (material: plastic).

A working pressure from 50 to 450 bars can be applied.

The clamping sleeves (fig.3) is produced in the tolerances of outer diameter g6 and inner diameter H7.

The seat bore (fig.4) is to be made in H7. The range of the bore has to have slip phases of 20° and the transistions must have radius.

The oil inlet and ventilation bores should be burred and rounded.

The surface roughness of the seat bore in the range of the profile gaskets may maximally be only Rmax = 6 – 10 ym (Ra < 1,6 ym).

Some solid grease is to applied at the slip phases, the fit of the bearing surface and at the clamping sleeve itself.
Mounting should be done cautiously in order to avoid damages to the seals.

An adequate mounting tool of plastic (fig. 2) facilitates the installation of the sleeves. If so requested such a tool will also be supplied.

For preventing axial displacement of the sleeves in the seat bore (possibly existing axial play) the sleeve always must be pretensioned by approximately 0,3% of the installation length.

This pretension can be effected by adapting the cover (fig.1).

The ventilation of the sleeve is important, it must always be located at the highest point, as otherwise air pockets will arise.

The clamping surfaces should be free of cooling liquids, greases and of impurities of only kind.

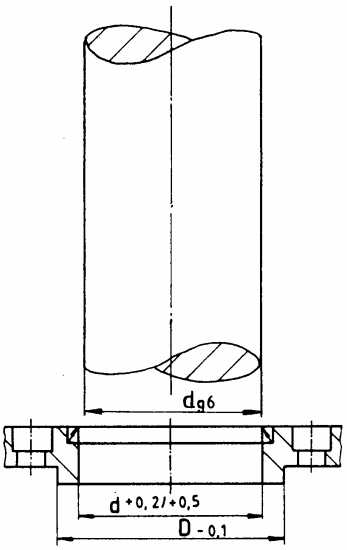
Scarpers reduce the penetration if dirt.

Especially important:

Clamping sleeves must not be exposed to " empty tension".

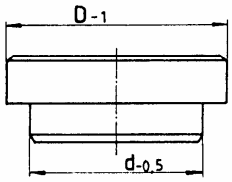
Otherwise there is the danger of destroying them.

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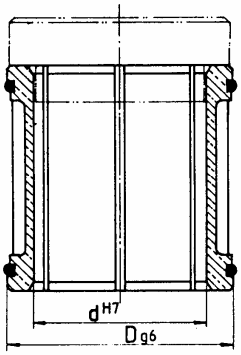


Clamping parts of the machine

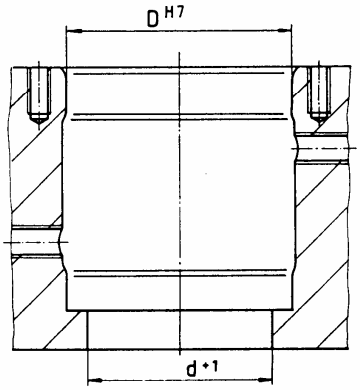
Cover, fig. 1



Installation help, fig. 2
(plastic)



Clamping sleeve, fig. 3



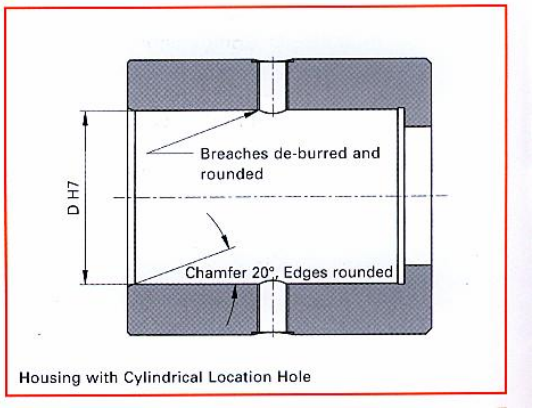
Seat casing, fig. 4

Configuration of the seat bores

For avoiding damages to their gaskets when installing clamping sleeves special attention should be given to this paragraph.
At the beginning of the seat bore and in the range of the bolster sufficiently dimensioned, rounded, 20° slip phases must unconditionally be provided. Also the transistions of the oil inlet and ventilation bores must carefully be burred and rounded.

Cylindrical seat bore

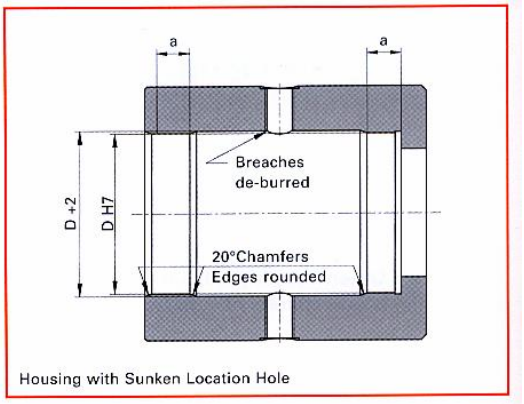
This form of the seat bore can be produced most easily. However, there is the disadvantage that the gaskets of the sleeve will rub during the installation over the total length of the seat bore at its case. If not surficient attention is given here to the condition of the surface and to burring and rounding of the oil inlet and ventilation bores the gaskets might be damaged or completely removed already when mounting. Thus leakages would be preprogrammed.



Housing with Cylindrical Location Hole

Encased seat bore

Although the encased for of the seat bore is somewhat more difficult in its preparationit it offers, correctly formed and executed, optimum protection of the gaskets when installing the clamping sleeves. The burred oil inlet and ventilation bores are in the range of the encasing, so that the gaskets must be pushed only through a short fitting range of the surface of the encasing.

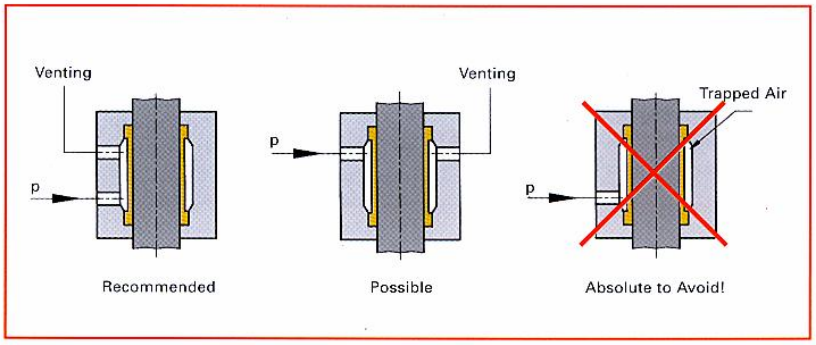


Housing with Sunken Location Hole

Location of the pressure oil and ventilation connections

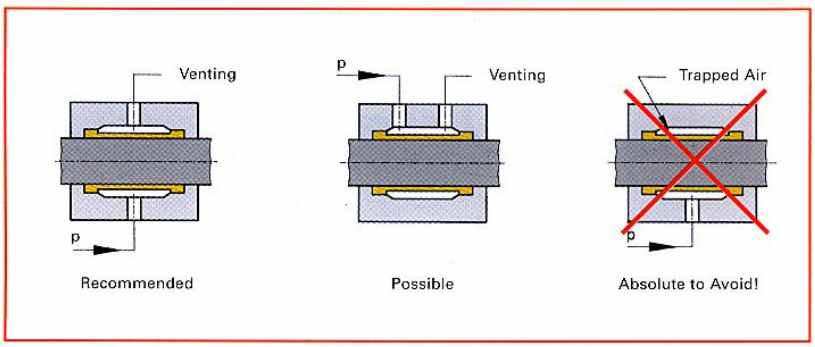
With vertical installation of the clampin sleeve

It is recommended to feed in the pressure oil at the lowest point of the installation space for the sleeve and to provide a possibility of ventilation at the highest point (left figure).
Also the solution shown in the middle figure is possible.
An execution as indicated in the right figure will unconditionally result in damages.



With horizontal installation of the clamping sleeve

The recommendations for the installation of vertically installed sleeves are also valid for horizontally arranged sleeves. The figures shown below are to make this clear.



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