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KS PERMAGLIDE® plain bearings

Calibrating the bearing bore after mounting

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(Only applies to P1 plain bearings)

Calibration

KS PERMAGLIDE[®] plain bearings are ready to install on delivery, and should only be calibrated if a bearing clearance with a narrower tolerance cannot otherwise be reached.



Calibration considerably shortens the service life of KS PERMAGLIDE[®] P1 bushes (see Tab. 1).

Figure 1 shows calibration using a mandrel.

Table 1 contains standard values for the diameter of the calibrating mandrel d $_{\rm K}$. Precise values can only be ascertained through tests.

Better possibilities

The bearing clearance tolerance can be reduced through the following measures, which do not adversely affect service life:

- Narrower tolerances for housing bore
- Narrower shaft tolerances



- 1 Calibrating mandrel, case hardening depth Eht > 0.6, HRC 56 to 64
- 2 KS PERMAGLIDE® P10 bush
- 3 Housing
- B Bush width
- $D_{\rm iE}$ Diameter of the bush in press-fit state
- d_{κ} Diameter of the calibrating mandrel
- r Edge, rounded



Fig. 1: Calibration

Desired inside diameter of bush	Diameter of calibrating mandrel ¹⁾ d _ĸ	Service life ²⁾
D _{iE}	-	100% L _N
D _{iE} +0.02	D _{iE} +0.06	80% L _N
D _{iE} +0.03	D _{iE} +0.08	60% L _N
D _{iE} +0.04	D _{iE} +0.10	30% L _N

Tab. 1: Standard values for the calibration mandrel diameter and the reduction in service life

 D_{iE} Inside diameter of the bush in press-fit state.

Standard value, based on steel housing.
Crandard value, for damaging

²⁾ Standard value for dry running.

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