5. Computation of the Rotary Stroke Bearing

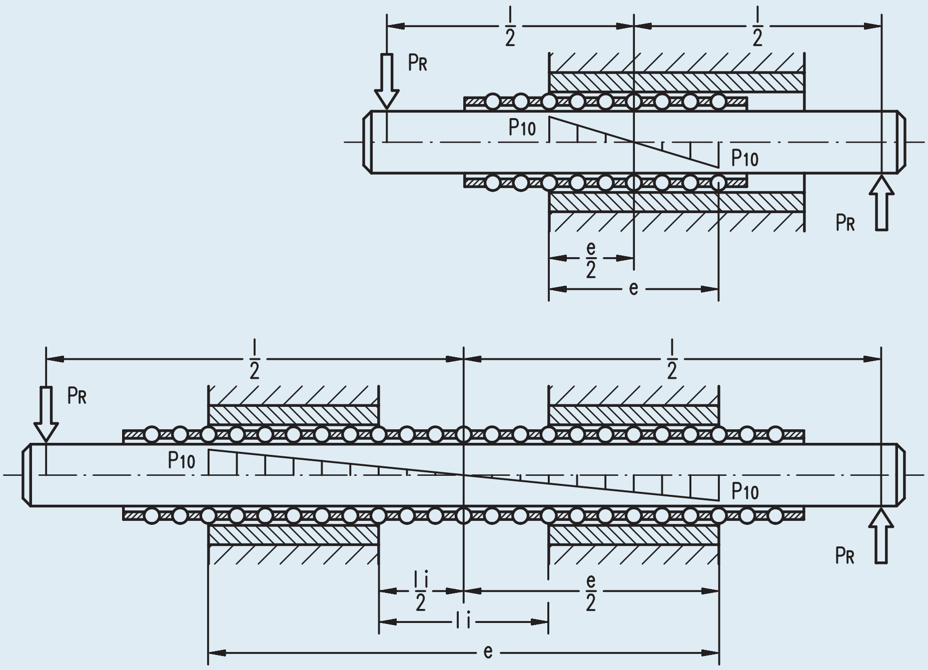

Fig. 23

5.2.2 Radial load as pure moment

The end zones of contact length e are the most heavily loaded for both divided and undivided contact zones.

Moment $\mathbf{M = P_R \cdot l}$ [Nm]
P_R in N, l in m

Specific radial force
$\mathbf{P_{10} = g \cdot M}$ [N]
g in m^{-1}

The factor g is taken from the diagram (Fig. 25). In the case of an undivided contact length, the distance is $l_i = 0$.

Deflection to be expected at the point of application of radial force P_R:

Deflection $\mathbf{A} = \frac{\mathbf{l}}{\mathbf{e}} \cdot \mathbf{P_{10}} \cdot \mathbf{R_{10}}$ [µm]

R_{10} in µm/N from table (Fig. 27 or 28)

The deflection of the shaft is not taken into account.

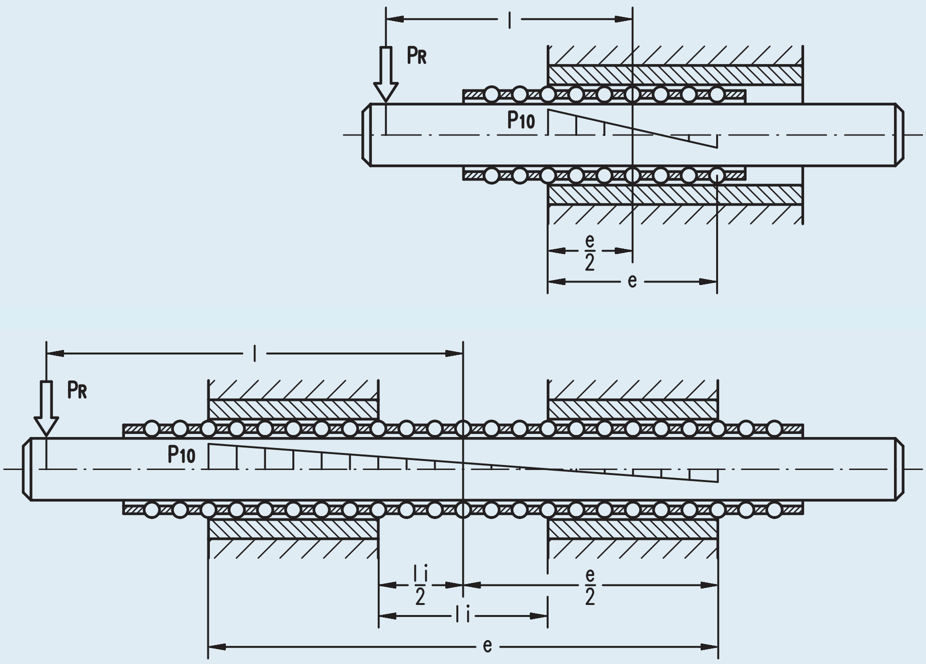

Fig. 24

5.2.3 Uneven radial load

The ball zone next to the point of application of the radial force is most heavily loaded.

The specific radial force P_{10} is a combination of the moment M and the radial force P_R.

Specific radial force

$\mathbf{P_{10} = g \cdot M + h \cdot P_R}$ [N]
g in m^{-1}, h dimensionless,
M in Nm, P_R in N

The factors g and h are taken from the diagrams (Fig. 25 and 26) depending on the distance l_i.
In the case of an undivided contact length, the distance is $l_i = 0$.