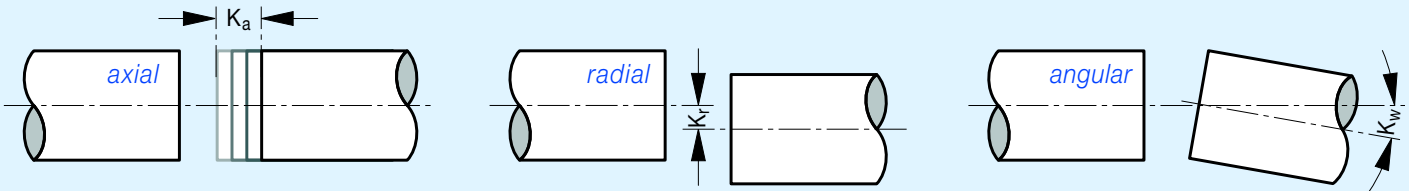


Metal Bellow Couplings Mounting Instruction

Types of misalignment (figure 1)



Assembly

Clean shaft ends and bores in hubs, degrease and check the tolerances.

Insert both shaft trunks into the hubs of the metal bellow coupling, and firmly tighten the screws, after examining the axial installation dimensions.

The tightening torque of the screws and the maximum approved misalignment should not be exceeded (refer to the list of technical data).

Removal

After loosening the backlash-free shaft hub connections, the drive can be pulled apart and the metal bellow coupling can be removed.

Conical bushings for series AK are forced off with a hexagonal socket screw.

Alignment

If several types of misalignment appear simultaneously, then each of the individual values should not exceed 100%. Figure 2 shows how to regulate.

The more precise the alignment, the more reserves are available to handle additional misalignments for operation. This will have an advantageous effect on the service life, balance quality, and the accuracy of transmission.

If several types of misalignment occur at once, then the value must be lower than each of the maximum values.

Please ask for our detailed assembly instructions.

Design example

Application: A bellow coupling CK80/61 has to be installed. The following misalignment values result from the installation situation:

$$\begin{aligned}\Delta K_r &= 0,1 \text{ mm} \\ \Delta K_a &= 0,1 \text{ mm} \\ \Delta K_w &= 0,2^\circ\end{aligned}$$

Are the misalignment values for the CK80/61 acceptable?

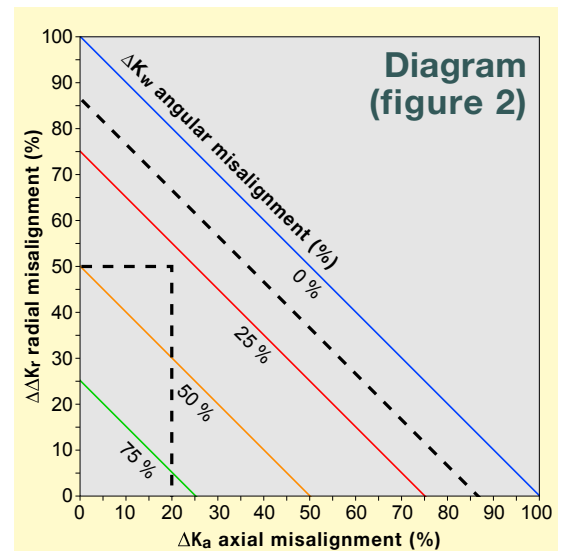
Selection: (cp. details page 11): the tolerable misalignment values are:

$$\begin{aligned}\Delta K_{rn} &= 0,2 \text{ mm} \\ \Delta K_{an} &= 0,5 \text{ mm} \\ \Delta K_{wn} &= 1,5^\circ\end{aligned}$$

The reached radial misalignment $\Delta K_r = 0,1 \text{ mm}$ corresponds to 50% of the max. tolerable value. The value $\Delta K_a = 0,1 \text{ mm}$ corresponds to 20% of the max. tolerable axial misalignment. The angular misalignment with $\Delta K_w = 0,2^\circ$ corresponds to 13% of the overall view.

Interpretation by means of the diagram: Enter the calculated values in the diagram on the right side (dashed line). The combination of the different misalignment values is in the tolerable area.

Interpretation by means of the empirical formula:
 $50\% + 20\% + 13\% < 100\%$.
 The coupling can be installed.



Empirical formula:

$$\frac{\Delta K_r}{\Delta K_{rn}} \times 100\% + \frac{\Delta K_a}{\Delta K_{an}} \times 100\% + \frac{\Delta K_w}{\Delta K_{wn}} \times 100\% < 100\%$$