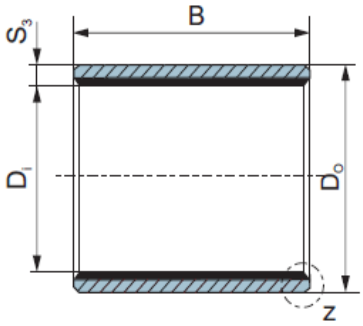
Bushing Tolerances

Wrapped Bushings

It is not possible to accurately measure the external and internal diameters of a wrapped bushing in its free condition. In the free state, a wrapped bushing will not be perfectly cylindrical. The bushing will conform to the housing when the split is tightly closed. For this reason the OD & ID of a wrapped bushing can only be checked with special gauges and test equipment.

Below is an example on how to determine the bushing's ID & OD tolerances with respect to the mating shaft and housing tolerances after installation:



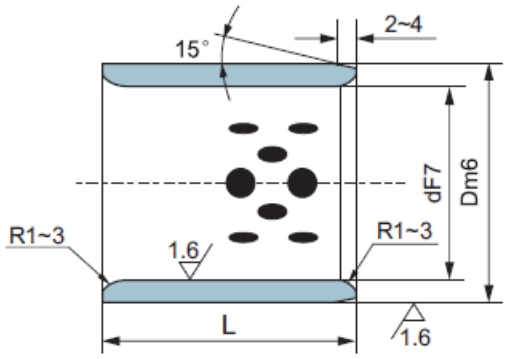
Units: mm

Shaft D_s	Housing H7 D_H	OD tolerance D_o	ID after fixed $D_{i,a}$	Clearance C_D
6 $^{-0.010}_{-0.022}$	8 $^{+0.015}$	8 $^{+0.055}_{+0.025}$	6.055 5.990	0.077 0.000

The chart and diagram shows that after installation this bushing will have a total OD tolerance of **0.030 mm**. Also, the ID tolerance is **0.065 mm** after installation.

Standard Bushings (non-wrapped)

Standard bushing tolerances are specified on their respective dimension tables. For example:



Units: mm

dF7		Dm6	
8	$^{+0.028}_{+0.013}$	12	$^{+0.018}_{+0.007}$
10		14	

If a bushing with an **8 mm** ID (d) and a **12 mm** OD (D) is used, the ID (d) dimension specifies an **F7** tolerance which corresponds to **13 µm / 28 µm**. The OD (D) dimension specifies an **m6** tolerance which corresponds to **7 µm / 18 µm.**

Note: Uppercase tolerances refer to different values from lowercase tolerances.

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