

NB

SLIDE BUSH + SHAFT
Right-Fit Adjustment

FIT SERIES

Too Big of a Radial Clearance or Preloading
The FIT Series can solve.



Have you ever experienced...*

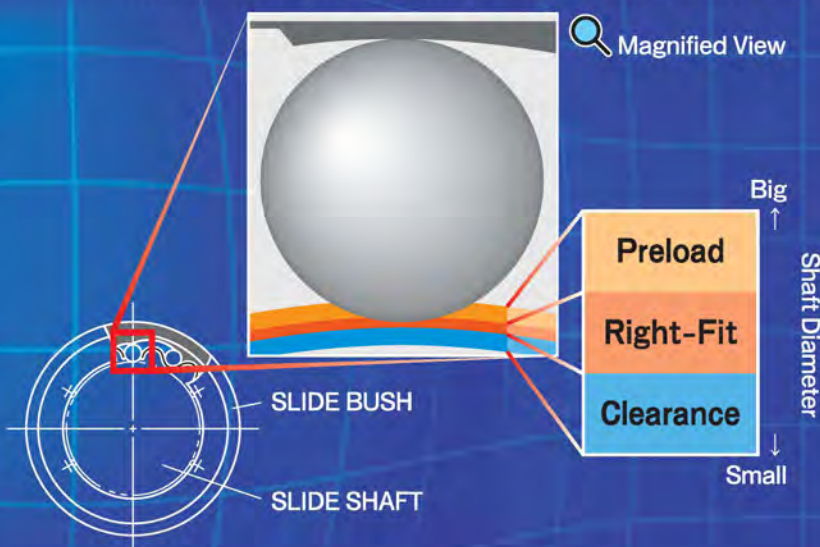
*...difficulty in matching fit?

Due to the combined tolerances of the bush's bore and the shaft's diameter, accuracy can be affected by 'clearance' or increased dynamic friction caused by preloading.

*...obtaining the proper fit?

In some extreme cases, designs have been sacrificed over to other 'types' of linear products to prevent excessive radial clearance or preload resulting in higher production component costs.

Radial Clearance between Slide Bush and Shaft



Right-Fit Adjustment

The FIT SERIES

■ The Best-Fit Clearance Adjustment between Slide Bush and Shaft

NB's FIT Series takes advantage of Nippon Bearing's high accuracy technology to achieve a target clearance.

■ Lower-Cost and High Accuracy

Taking advantage of the lower cost Slide Bush, the linear motion produces a smooth, high-accuracy performance.

Example :

SM16 (2 pcs in close contact)+
Slide Shaft

Standard Product

Maximum clearance + 17 microns

FIT Series

Clearance + 4 microns

Placement deviation at the shaft end
Standard Product 0.046mm

Compared with

FIT Series 0.011mm
Improved by 70%



NIPPON BEARING CO., LTD.

Part Number Structure

example :

F- SMS25GUU ×1 / SNS25×550

FIT series

Slide Shaft part number

Slide Bush part number

Number of Slide Bush on one shaft

- Please refer to the appropriate catalog page for details.
- Please specify on the drawing about the shaft machining, radial clearance, match-marking, etc.

Recommended Radial Clearance

Depending on the application the range varies. The chart below is a guideline.

	Clearance (+) ← 0 → Clearance (-)
Light-motion is required	range 3~8 μm
High-accuracy is required	range 3~8 μm
No-play is required	range 3~8 μm

Slide Bush, Radial Clearance (-) Limit

Negative clearance is opted to reduce backlash. Please refer to the below chart for the recommended negative clearance (preload) limit.

Size	3~8	10~13	16~25	30~35	40	50~60
Radial Clearance Limit	-1 μm	-2 μm	-3 μm	-8 μm	-10 μm	-13 μm

- The off-center of the housing causes uneven loading on the Slide Bush. Please pay special attention to the centering of the housing especially when negative clearance is required
- Please contact NB for details on the radial clearance such as when extra preload is required for other part numbers like SRE, SR, etc.



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