



# NB

Linear Systems

[www.nbcorporation.com](http://www.nbcorporation.com)

# The Acceleration Behind Your Best Ideas

Slide Bush

## Seamless Ball Retainers. Widest Variety.

The NB Slide Bush family features solid steel outer ring construction and is available with optional integral wiper seals in both high quality and precision grades. Seamless ball retainers provide smoother motion and higher rigidity. Product variety includes Lightweight, Standard, Clearance Adjustable, Open and Double-Wides. The innovative Double-Wide type offers added stability when additional moment loads are required. Slide Bush types are available in Inch and both Asian and European metric dimensions.



## Flange Type - Slide Bush



## Unique Design. No Bulky Housings.

NB Flange type offers the best of both worlds; the benefits of a Slide Bush with the mounting ease of a flange. When your application calls for ease of assembly, you can select a completely integrated system. You may choose from single, double-wide, or center mount configurations. Flange types are available in Inch, Asian or European metric dimensions.

## Slide Units and Accessories

### Highly Precise. Assembly/Maintenance Friendly.

The NB prefabricated housing blocks are more than fully interchangeable with other major manufacturers. NB's extremely tight Slide Unit tolerance levels set standards that exceed other manufacturers "precision" grade products. The Slide Unit surface finish (as well as Shaft Support Accessories) are "clear anodized" to maintain a clean appearance. Service friendly features for bushing retention easily makes NB the preferred choice.



## High Load Self-Aligning

TOPBALL is NB's premier Slide Bush, offering up to 27 times the normal travel life of a conventional slide bush.

Our uniquely produced load plates incorporate ground raceway surfaces. These surfaces provide a circular arch contact for the ball resulting in greater dispersion of loads for three times the normal load capacities.

TOPBALL Slide Bush is available in 3/16 to 2 inch sizes and is fully interchangeable with conventional linear bushings. All feature self-alignment capabilities and NB's unique optional floating *wiper seal*. A full line of prefabricated units is also offered. Corrosion resistant types are also available upon request.



## Euro Metric Series - TK Type



## Fully Interchangeable High Performance

TOPBALL Euro Metric slide bush offers a range from 10mm to 40mm. All feature self-alignment capability and unique optional floating *wiper seal* which maintains equal and constant contact with the shaft and does not add to the overall length of the bushing. Smooth running, low friction and long life make TOPBALL the *popular choice*. A full line of prefabricated units is also available.



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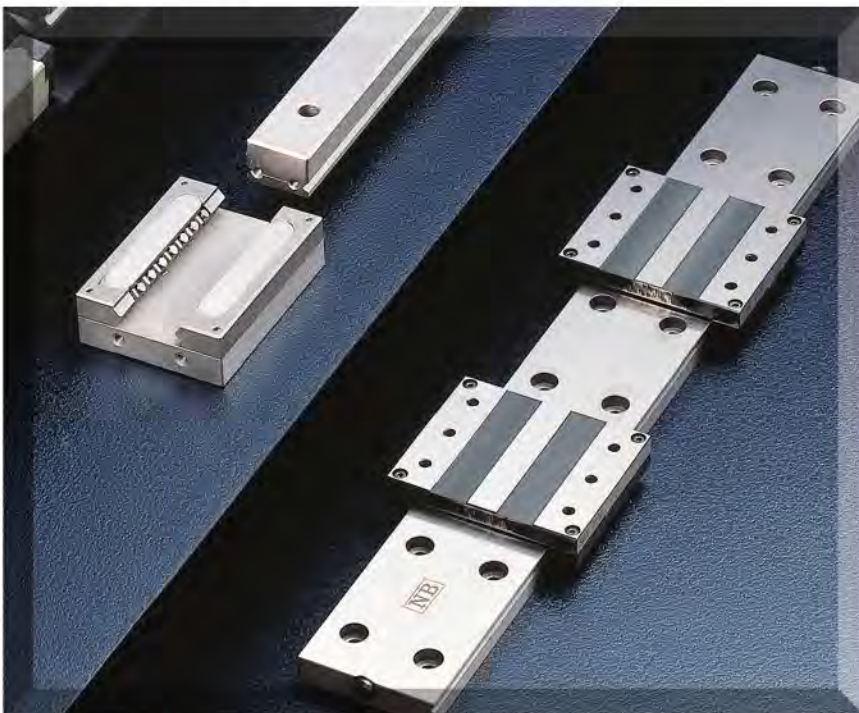
## Miniature Slide Guides

### Less Space Required More Load Achieved

The compact design offered by NB's Miniature Slide Guide allows designers to reduce machinery size and weight. NB technology stabilizes uneven multidirectional load factors for the ultimate in smooth continuous movement. Precise high-speed operation is assured. Precision-machined steel balls, as rolling elements, promote exceptionally low resistance. This provides smooth, stable operation at low cost. The Retained Ball (SEBS-B type) allows the block to be removed from the rail, simplifying installation and reducing assembly cost. Types available include Standard, Long and the high moment Wide types.



## SER Crossed Roller Type



### High Load Capacity Long Life

The use of precision roller elements combined with a larger contact surface allows higher load capacities and longer life. Only two raceway grooves are used which result in a very compact package. The all stainless steel design provides excellent corrosion resistance and thermal characteristics, making the SERS type ideal for clean room or vacuum applications. Types available would include Standard or high-moment Wide types. Optional tapped rail mounting holes are available to simplify installation upon request.



## Eliminates Backlash Reduces Friction

NB's Ball Spline family is designed for mechanical applications, which may require both linear motion, combined with superior torque transmission. Recirculating steel balls on the side of the outer race allow for economy of space and high-speed rotation. Backlash is eliminated. NB provides unmatched precision with a full range of sizes and configurations, including custom, machined orders in a timely fashion.



## SGL and SGW Types



## Heavy Duty High Load Stability Easy Installation

The Slide Guide series is designed to maintain stability under extremely high load conditions. The use of 4 ball circuits and arch ball groove design (ball elements positioned at a 45 degree contact angle) stabilize uneven multidirectional load factors and assure smooth continuous movement throughout the work cycle.

The Slide Guide block incorporates a ball retainer for easy removal from the rail. This reduces assembly and maintenance time. Side seals are a standard feature, and optional features include under seals, scrapers, double wiper seals, and special rail mounting caps. For corrosive applications another optional feature for the block and rail is Raydent coating.

## Highly Precise

NB offers highly precise machined shaft for use with a slide bush or as a custom component in other applications. These applications may require pipe shaft, which reduces weight (without reducing rigidity and allows for channeling). The fine shaft is mass-produced to offer lower cost and shorter lead times; and also available in inch or metric dimensions.



## C u s t o m   S h a f t



## Unmatched Quality

NB Slide Shaft is case-hardened heat-treated high-carbon chromium bearing steel or corrosive-resistant Martensite stainless steel for maximum performance quality. Our precision machining capabilities and quality controls are unmatched, guaranteeing highly consistent results on specially engineered custom shafts, such as spindle and roll shafts.



## Adjustment Free High Rigidity Ultra Space Saving

NB's BG type is a compact single axis actuator, which integrates a slide guide and precision ball screw. This eliminates complex precision adjustment and reduces installation time dramatically. The "U" shaped guide rail provides very high rigidity and can be used for one-end supported applications. High positioning accuracy is achieved by the combination of the precision ground guide rail; slide block and precision ball screw arrangements. In comparison to conventional positioning tables, the NB BG type allows for more compact designs and dramatic space saving.



## Slide Ways and Tables - SV Type



### High Precision Low Friction

The NB slide table is a precision table equipped with a slide way. Its high-precision and low friction makes it well suited for use in electronics, automatic assembly machines and optical measurement devices. The mounting surfaces of the table and bed are precision finished for high performance. Low friction is achieved by the non-recirculating mechanism, which provides stable motion from high to low speeds.

### Gonio Way - RV Type

### Hi Precision Curved Rail

The hardened curved V-grooves, which are finished with a precise grinding process provide an accurate center of rotation.

## STUDROLLER™ - NV Type Anti-Creep Cage Technology Greater Capacity

Popular sizes expand your possibilities, while the number of rollers is increased by 20 to 55 percent. **STUDROLLER** lets you down size, lower component costs and develop more compact designs.



Today, Nippon Bearing Co., Ltd is recognized as an international leader and innovator in the world of linear motion technology. Since its founding in 1937, NB has emerged as the leading manufacturer of high quality linear motion products in Japan. Through worldwide exposure, we are now setting new international standards for performance and quality control industry wide. Our continued growth and high degree of product acceptance can be attributed to unique product designs, attention to detail and fresh approaches to meeting the linear motion needs of our valued customers. NB offers interchange options for all major linear motion manufacturers as well as access to NB's creatively unique designs. We are dedicated to providing only quality product, dependable delivery, outstanding service, and competitive prices. We hope that you will include NB in your plans.



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