

## Liner Motion Products with High Precision Miniature Ball Bearings

Six pieces of miniature ball bearing contribute to the smoother performance without engagement. Non looseness is achieved by controlling the pre-load during the assembly process. Low cost with higher precision and simplified design is materialized by stainless rail and ultra high precision pressed parts (electroless nickel).

### Features

- Uses six pieces of ultra high precision ball bearing.
- No looseness between rail and head by pre-loading design.
- Apply to sliding parts with lighter load.
- Smoother movement is achieved by rotating bearings.
- Simplified design for easier mounting to various machineries.
- Low cost is achieved by the simplified design.

### Recommended application

- Monetary related instruments
- Various controlling / gearing instruments

### ★Standard Dimension Table (Stainless rail)

#### 25SW Series

unit: mm

Item Number	Boundary dimensions		
	Rail Length (L)	Mobile Range	Fixing hole (n)
25SW160S	160	88	2
25SW240S	240	168	3
25SW320S	320	248	4
25SW400S	400	328	5
25SW480S	480	408	6
25SW560S	560	488	7
25SW640S	640	568	8
25SW720S	720	648	9
25SW800S	800	728	10
25SW880S	880	808	11
25SW960S	960	888	12
25SW1040S	1040	968	13
25SW1200S	1200	1128	15

#### 20SW Series

20SW160SSN	160	84	2
20SW240SSN	240	164	3
20SW570SSN	570	500	7

#### Material

Rail: Stainless steel

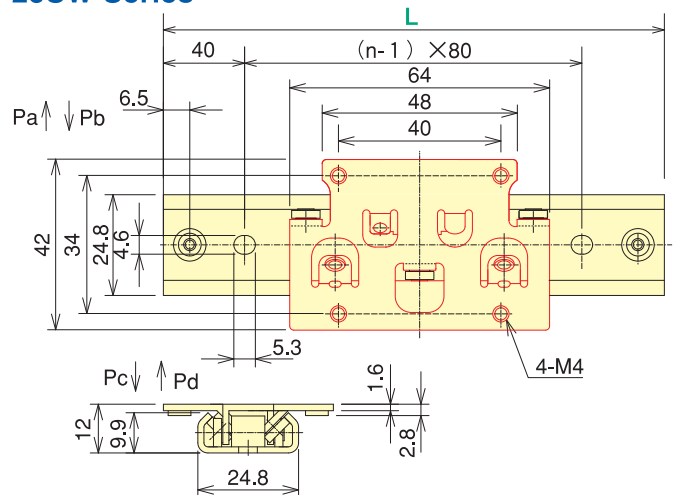
Bearing: Stainless steel (double sealed)

Plate: Electroless nickel plating

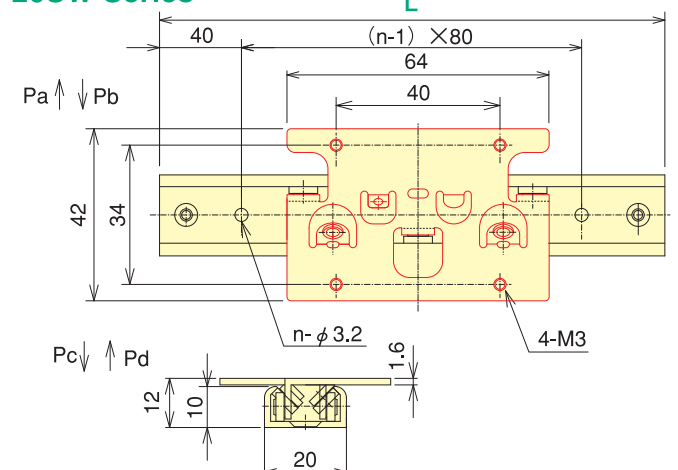
Load direction	Pa	Pb	Pc	Pd
Static tolerance load (N)	50	100	200	100
Dynamic tolerance load (N)	10	20	80	30

Moment load can cause the looseness on this product due to its nature of design.

#### 25SW Series

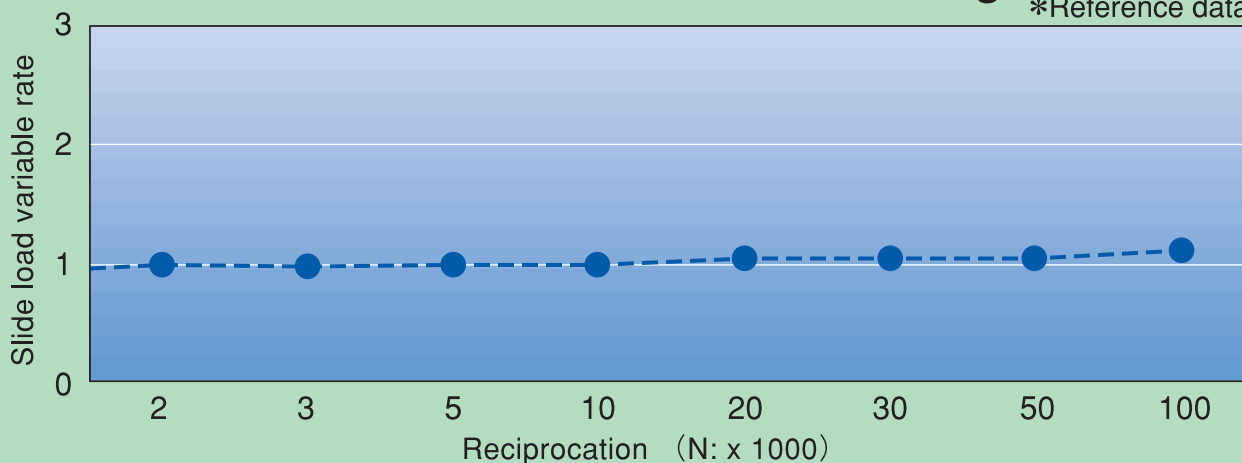


#### 20SW Series



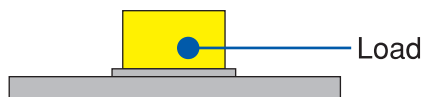
## Endurance Test Data (level setting)

\*Reference data



### Testing Condition

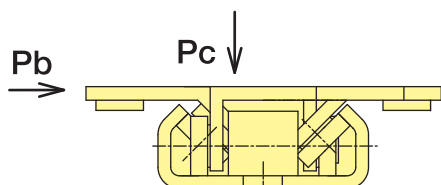
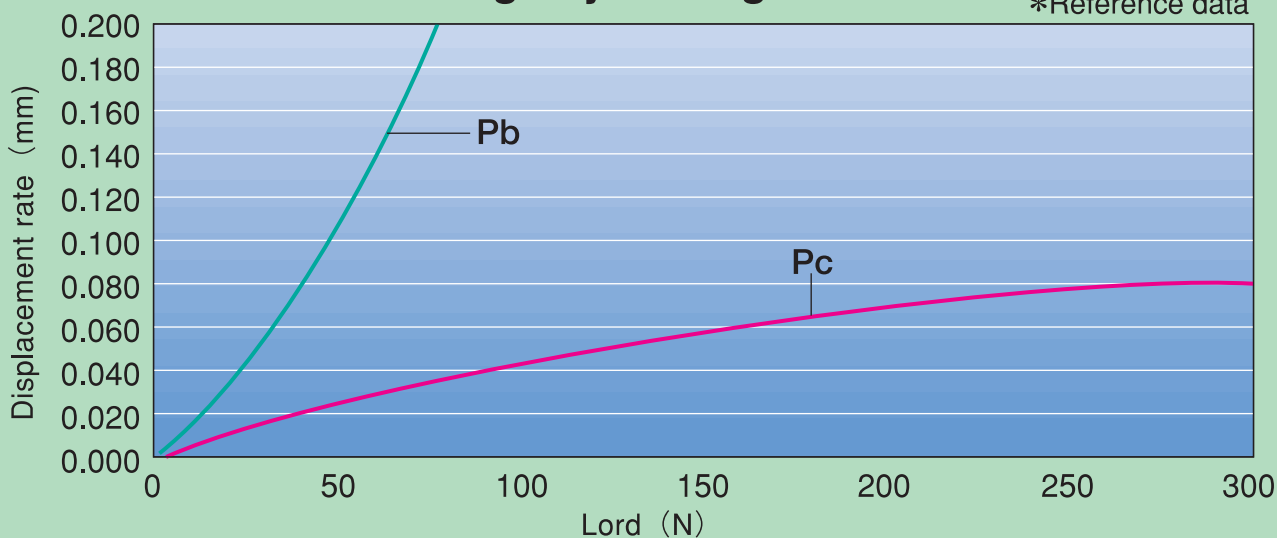
Load : 30N  
 Speed : 160mm/sec  
 Lubrication : Coated



**Slide load is stable after 100,000 times of reciprocation.**

## Rigidity Testing Data

\*Reference data



### Rigidity

**Due to its nature of the design, this product has more rigidity on Pc direction compared with Pb direction. The application for Pc direction is rather recommended.**

## NSK Micro Precision Co., Ltd.

**Head office/Sales Division Headquarters**  
 No.1202, Nippon Building, 2-6-2 Otemachi, Chiyoda-ku, Tokyo 100-0004 Japan  
 Tel : +81-3-3270-2431 Fax : +81-3-3245-1372  
**Osaka Sales Office**  
 301 Wakita-Tenmabashi Building, 2-13, Tenmabashi-Kyomachi,  
 Chuo-ku, Osaka-shi, Osaka 540-0032 Japan  
 Tel : +81-6-6942-0858 Fax : +81-6-6941-9113  
**Matsumoto Sales Office**  
 B210 Futabacho Bldg., 10-22 Futaba, Matsumoto-shi, Nagano 390-0833 Japan  
 Tel : +81-263-27-8680 Fax : +81-263-27-8933

<http://www.nskmicro.co.jp/>