New Type of Rolling Element Linear Motion Bearing

Translide™

Extended lineup with individual parts for rails and sliders available for purchase. Innovative rolling element linear motion bearing achieves superior cost effectiveness. Standard features include NSK K1™ lubrication unit and high performance seal; especially suitable for transport equipment.
Inexpensive linear guide realized through an unprecedented manufacturing process

New Type of Rolling Element Linear Motion Bearing—Translide™
Translide™, a new type of rolling element linear motion bearing, is well suited to transportation equipment; for example, manufacturing lines of automobiles, automobile parts, and the like. It defies all traditional understanding within the industry in every aspect, and is surely a landmark in the progress of linear motion bearing technology.

1 Features

Inexpensive
Newly developed manufacturing process of rail, and design review of ball slide contribute to substantial cost reductions.

High capacity
Optimum ball diameter for higher capacity design.

High dust proof capability
Dust-tight high performance end seals, bottom seals, and inner seals are built-in as a standard feature. (Optional protector is available for protection against hot debris such as welding spatters or hard contamination.)

Maintenance free
NSK K1™ lubrication unit is equipped as a standard specification for long-term maintenance-free operation.

Rust prevention
NSK provides a lineup of products with antirust surface treatment for corrosive environments.

Interchangeable rails and ball slides (New product)
Launched interchangeable type of rails and ball slides for random matching.

2 Structure
Enhanced dustproof design and simple structure has contributed toward longer life. (Refer to Fig. 1)

3 Accuracy and Clearance

Accuracy grade: Normal grade for transportation  Running parallelism: 100 µm or less  Clearance: 60 µm or less

4 Application
Suitable for transporting equipment: Automobile manufacturing, machine tools (loader/un-loader), tire manufacturing equipment, woodworking machines, automatic doors, and the like.

Extended lineup to answer various market demands

5 Reference Number
Reference numbers are assigned to identify a Translide after finalizing all specifications. These reference numbers will be shown on a specification drawing. Please specify the reference number to identify the product when ordering.

5.1 Assembled Type

Example: TS 30 2400 AN P 2 - ** KL S

- Translide
- Model number
- Rail length (mm)
- Shape code of ball slide
- Preload code S: Clearance of 60µm or less
- Accuracy grade KL: Normal grade for transportation
- Design serial number
- Number of ball sliders assembled to a rail

Surface treatment/Rail design code
- P: No surface treatment/Countersinks on a rail top face (Type I)
- V: No surface treatment/Tapped holes on a rail bottom face (Type II)
- R: Fluoride low temperature chrome plating/Countersinks on the top face of rail (Type I)
- W: Fluoride low temperature chrome plating/Tapped holes on the bottom face of rail (Type II)

5.2 Interchangeable

(1) Interchangeable ball slide

Example: TAS 30 AN - F

- Translide: Interchangeable ball slide
- Model number
- Shape code of ball slide
- No code: No surface treatment + AS2 Grease
- F: Fluoride low temperature chrome plating + AS2 Grease
- F50: Fluoride low temperature chrome plating + LG2 Grease

(2) Interchangeable rail

Example: TS 30 2400 L P N T ** PL S

- Translide: Interchangeable rail
- Model number
- Rail length (mm)
- Shape code of ball slide
- Clearance code S: Clearance of 60µm or less
- Accuracy grade PL: Normal grade for transportation
- Design serial number
- Butting rail code
- N: No butting
- L: Rail for butting

Balls are glued to the tracks in order to take this picture.
Availability of separate rails and sliders reflects users’ purchase needs

6 Dimensions

6.1 Assembled Type

Dimensions are shown in Table 1.

6.2 Interchangeable Type

(1) Interchangeable ball slide

Refer to Table 1 for details of dimensions.

(2) Interchangeable rail

Refer to 6.1 Assembled Type for rail type, and Table 1 for details of dimensions.

Table 1 Dimensions

<table>
<thead>
<tr>
<th>Model number</th>
<th>Assembly</th>
<th>Width</th>
<th>Length</th>
<th>Mounting hole</th>
<th>Grease fitting</th>
<th>Width</th>
<th>Height</th>
<th>Pitch</th>
<th>Type I</th>
<th>Type II</th>
<th>G (Recommended)</th>
<th>Max. length</th>
<th>Dynamic Static</th>
<th>Allowable static moment load (kgf•m)</th>
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<td>34</td>
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Note: Alvania Grease S2 (AS2) is packed in the ball slides.

6.2 Interchangeable Type

(1) Interchangeable ball slide

Refer to Table 1 for details of dimensions.

(2) Interchangeable rail

Refer to 6.1 Assembled Type for rail type, and Table 1 for details of dimensions.

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Note: Alvania Grease S2 (AS2) is packed in the ball slides.

6 Results of Endurance Test

Deterioration in surface roughness is not observed on ball tracks of a rail after running the distance of the estimated life. (Refer to Fig. 2)

Fig. 2 Comparison of surface roughness before and after the test

Precautions for using Translide™

Please follow the precautions below for your safety.

- Ambient temperature: 50°C maximum (80°C, instantaneous)
- Maximum speed: 200 m/min.
- Allowable mounting accuracy: Parallelism of two sets: 100 µm, Height variation of two sets: 500 µm/500 mm.
- Consult with NSK when using a Translide in a single rail configuration.
- Be sure to take safety measures against falling loads if you mount a Translide upside down.
- Never use in an environment where degreasing solvents are present.
- Balls fall out if a ball slide is removed from a rail. Use a provisional rail if you need to dismount a ball slide from a rail. NSK assembles interchangeable ball slides on provisional rails for shipping. Take great care when inserting a ball slide in a rail.

The basic dynamic load rating C is a load that furnishes 50 km rating fatigue life; it is a vertical and constant load to the ball slide mounting surface. To convert C to C₁₀₀ for a 100 km fatigue life, divide C by 1.26.

The maximum length of fluoride low temperature chrome plated products is 4 000 (G=80).