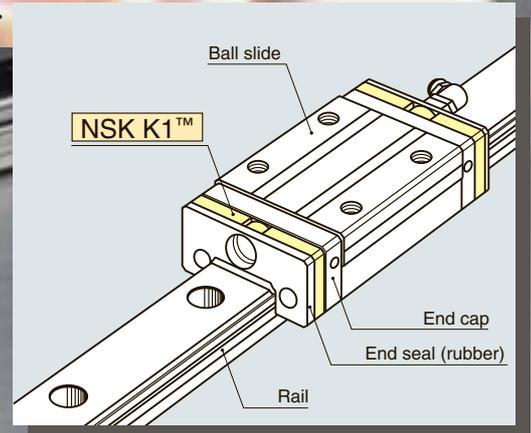


Lubrication Unit NSK K1™ Equipped Linear Guide for Food and Medical Devices

NSK K1™ features new materials which meet FDA standards while exhibiting outstanding performance in food and medical devices where cleanliness and safety are paramount. The revolutionary lubricating unit plays the dual role of seal and lubricant.



- The surprising, new material lubrication seal can be safely used for food and medical devices.
- Incorporates porous synthetic resin, a newly developed material which retains a generous volume of lubricating oil; the continuous release of oil reinforces overall lubricating performance.
- NSK K1™ maintains high performance standards for general machinery, which is widely recognized in the industry, and adopts refined materials for effective application to food and medical devices.
- Easy installation—NSK K1™ is set inside the standard end seal (rubber).

1. Features

- High level of safety for handling food/medical products**
 Materials used conform to strict food additive standards based on the US Food and Drug Administration (FDA) Food Sanitation Law.
- Environmentally-friendly**
 Newly developed porous synthetic resin retains a large quantity of lubricating oil, which is released gradually for continuing lubrication.
 Especially effective under hygienic conditions where oil must not be dispersed.
- Excellent performance under harsh environmental conditions**
 Longer operating life even under harsh environments, where whole machines may be washed with water.

2. Reference number

Example: **LH 30 1000 FL C 2 - F PC T II**

Series code

Size number

Rail length (mm)

Ball slide shape code

I: One rail
II: Two rails per axis

Preload code

Accuracy grade code

F: NSK K1 for food and medical devices

Number of ball slides per rail

C: Special high carbon steel (NSK standard)

D: Special high carbon steel with surface treatment

K: Stainless steel H: Stainless steel with surface treatment

3. Specifications

3-1. Applicable series and sizes

1. Can be installed in NSK linear guide rail/ball slide assembly.
2. Applicable to stainless steel materials and surface-treated products.

4. Dimension table

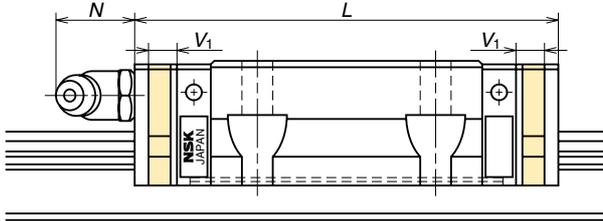


Fig. 1 LH and LS Series

Linear guide type	Extended length by NSK K1 V1 (mm)	Standard ball slide length (mm)	Ball slide length with NSK K1 L (mm)	Nipple projecting N (mm)
LH15 standard type	5.3	55	65.6	(5)
LH15 long type	5.3	74	84.6	(5)
LH20 standard type	5.3	69.8	80.4	(14)
LH20 long type	5.3	91.8	102.4	(14)
LH25 standard type	5.8	79.0	90.6	(14)
LH25 long type	5.8	107	118.6	(14)
LH30 standard type	6.0	85.6	97.6	(14)
LH30 flange type	6.0	98.6	110.6	(14)
LH30 long type	6.0	124.6	136.6	(14)
LH35 standard type	6.5	109	122	(14)
LH35 long type	6.5	143	156	(14)
LH45 standard type	7.5	139	154	(15)
LH45 long type	7.5	171	186	(15)
LH55 standard type	7.5	163	178	(15)
LH55 long type	7.5	201	216	(15)
LH65 standard type	9.0	193	211	(16)
LH65 long type	9.0	253	271	(16)
LS15 standard type	4.8	56.8	66.4	(5)
LS15 short type	4.8	40.4	50	(5)
LS20 standard type	5.3	65.2	75.8	(14)
LS20 short type	5.3	47.2	57.8	(14)
LS25 standard type	5.3	81.6	92.2	(14)
LS25 short type	5.3	59.6	70.2	(14)
LS30 standard type	6.0	96.4	108.4	(14)
LS30 short type	6.0	67.4	79.4	(14)
LS35 standard type	6.5	108	121	(14)
LS35 short type	6.5	77	90	(14)

3-2. Standard specifications

1. Lubrication unit NSK K1™ is installed between end seal and end cap. (Double seal specification and protector specification are applied upon request.)
2. Precision and preload are the same specification as standard products. For accuracy grade details, please refer to CAT. No.E3161 and other related catalogs.
3. Dynamic frictional force is slightly increased when NSK K1™ is installed.

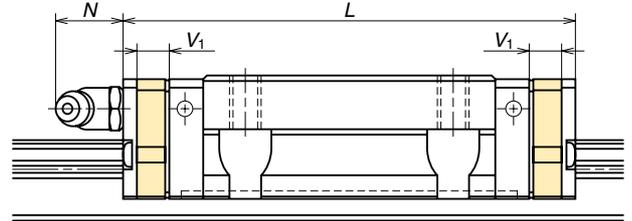


Fig. 2 LW Series

Linear guide type	Extended length by NSK K1 V1 (mm)	Standard ball slide length (mm)	Ball slide length with NSK K1 L (mm)	Nipple projecting N (mm)
LW17	5.1	51.4	61.6	(5)
LW21	6.3	58.8	71.4	(13)
LW27	6.3	74	86.6	(13)
LW35	7.5	108	123	(13)
LW50	7.5	140.6	155.6	(14)

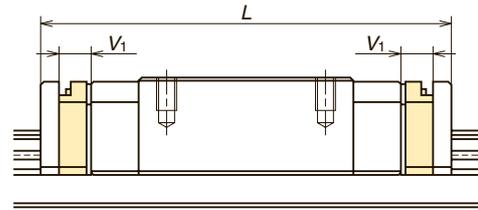


Fig. 3 LU, LE, PU and PE Series

Linear guide type	Extended length by NSK K1 V1 (mm)	Standard ball slide length (mm)	Ball slide length with NSK K1 L (mm)
LU09	3.2	30	36.4
LU12	3.5	35.2	42.2
LU15	4.1	43.6	51.8
LE07	3	31	37
LE09	3.5	39.8	46.8
LE12	4	45	53
LE15	4.8	56.6	66.2

Linear guide type	Extended length by NSK K1 V1 (mm)	Standard ball slide length (mm)	Ball slide length with NSK K1 L (mm)
PU09	3.2	30	36.4
PU12	3.5	35	42
PU15	4.1	43	51.2
PE07	3	31.1	37.1
PE09	3.5	39.8	46.8
PE12	4	45	53
PE15	4.8	56.6	66.2

For more details, please contact the following NSK office.

NSK Office

Handling instructions

To maintain the high efficiency of lubrication unit NSK K1™ over a long period of time, please follow these instructions.

1. Permissible temperature range

- Max. operating temperature: 50°C
- Max. peak temperature: 80°C

2. Use of chemicals

- Never leave the linear guide in close proximity to grease-removing organic solvents such as hexane, thinners, etc.
- Never immerse the linear guide in kerosene or rust preventative oils which contain kerosene.

Note: Other oils present no problems: water-based cutting oil, oil-based cutting oil, grease (mineral oil-AS2, ester-PS2).