MOTION & CONTROL™

NSK

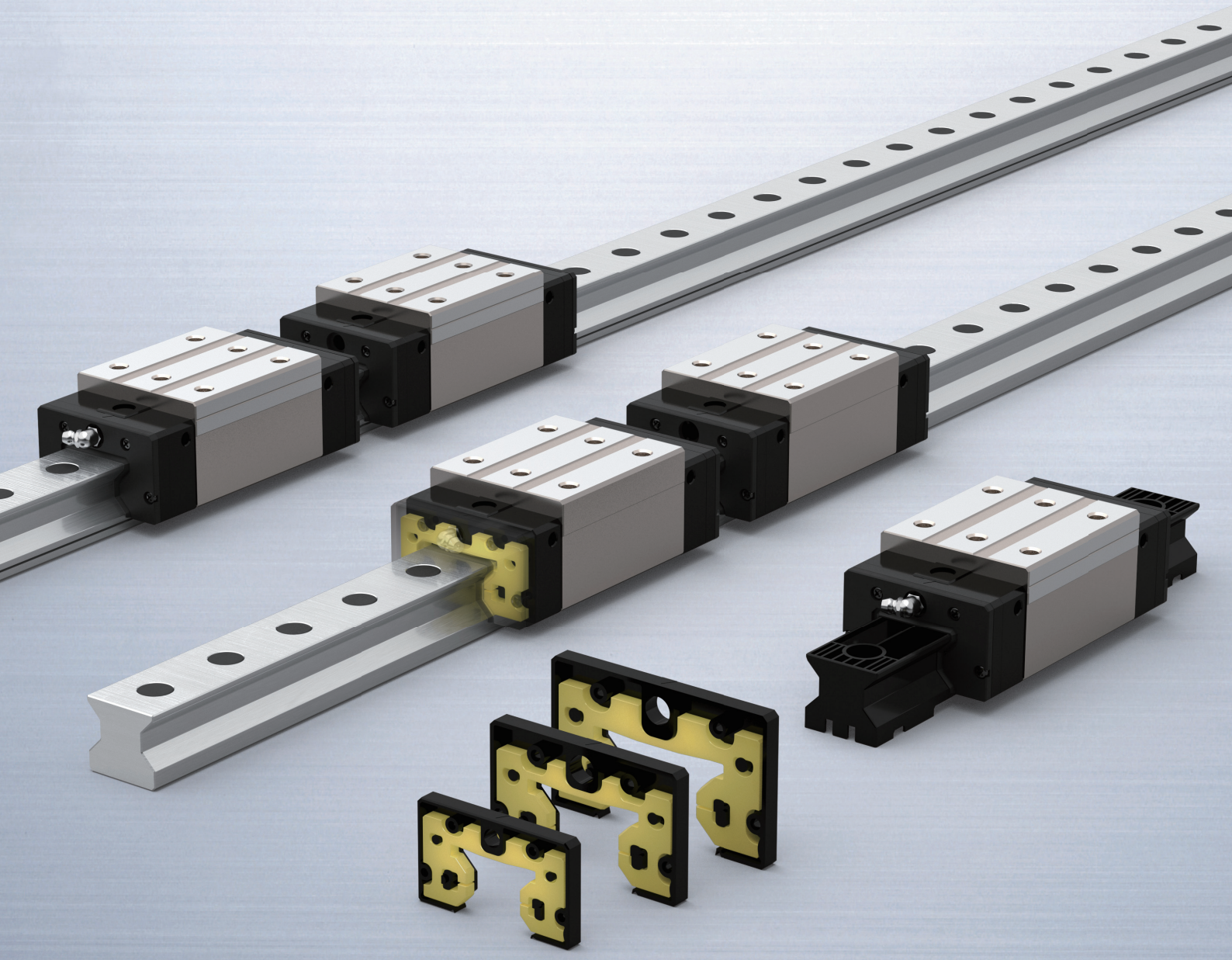
NSK Linear Guides

NSK K1-L Lubrication Unit for Roller Guides

New!

Patented

**With improved capacity to supply lubricant,
K1-L units deliver long periods of maintenance-free operation**



Features

Low Maintenance, Longer Lasting Lubricating Oil Supply

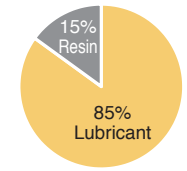
A newly developed oil-retaining material supplies lubricating oil for even longer than the revolutionary original K1, realizing extended machine maintenance intervals.

NSK K1-L Lubrication Units for Roller Guides

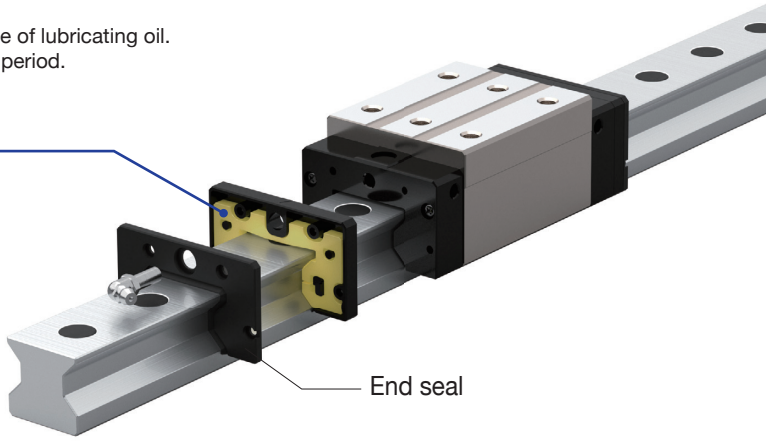
The NSK K1-L unit contains a porous synthetic resin that holds a large volume of lubricating oil. Oil gradually seeps out from the resin to lubricate the roller guide over a long period.

NSK K1-L Lubrication Unit

- About 85% lubricant by weight
- Lubricating oil supply period nearly doubled[1)]



NSK K1-L Composition
(by weight)



1) Compared with the conventional NSK K1 unit.
Note that lubrication performance is influenced significantly by the operating environment. There is no guarantee of values/performance in actual equipment.

Dynamic friction force of NSK K1-L

The table below indicates dynamic friction force per slide and is estimated based on actual usage conditions. The force shown is for standard specifications (with two end, inner, and bottom seals each) with standard grease (AS2) packed within.
When using NSK K1-L, add the dynamic friction force of the table below to the value for standard products.

Dynamic friction force [2)] Unit : N

Model No.	Roller slide length	Roller slide shape code	Standard products (Sealed with packed AS2 grease)		NSK K1-L lubrication units [3)]
				Standard end seal portion	
RA35	Standard	AN, AL, EM	42	6	5
	Long	BN, BL, GM	53		
RA45	Standard	AN, AL, EM	56	8	7
	Long	BN, BL, GM	69		
RA55	Standard	AN, AL, EM	80	8	8
	Long	BN, BL, GM	95		

2) Values are based on a slide fitted with two standard end seals and two NSK K1-L units.
3) Dynamic friction force of NSK K1-L units equals that for conventional NSK K1 units.

Applicable Models

RA35, RA45, RA55

Reference number

Preloaded assembly

RA 35 1000 AN C 2 -** L6 3

- Model
- Size 35, 45, 55
- Rail length(mm)
- Slide code AN, BN, AL, BL, EM, GM
- Material/Surface treatment code
  - C: Special high carbon steel (NSK standard)
  - D: Special high carbon steel + Surface treatment
  - P: Special high carbon steel + V1 seal
  - R: Special high carbon steel + V1 seal + Surface treatment
  - Z: Other, Special
- Number of roller slides per rail
- Design serial number
- Accuracy code
- Preload code

Roller slide (interchangeable)

RAA 35 AN LH H -F

- Interchangeable roller slide model code
  - RAA: RA model interchangeable roller slide
- Size 35, 45, 55
- Slide code AN, BN, AL, BL, EM, GM
- Accuracy code LH: Interchangeable High precision
- Preload code
  - Z: Slight preload, H: Medium preload
- Option code
  - No code: No surface treatment
  - -F: Fluoride low temperature treatment
  - -C: No surface treatment + Rail cover
  - -CF: Fluoride low temperature treatment + Rail cover

* For details on the RA Model, such as accuracy, preload, grease fitting, etc., please refer to the NSK precision machine components catalog **CAT. No. E3162** and High-Rigidity Series RA/RB Model Roller Guides catalog **CAT. No. E3328**. For other details, please consult NSK.

* Special codes different from those above are used in NSK's Quick-Delivery System Click!Speedy™. For details, refer to the System Click!Speedy catalog **CAT. No. E3191**.

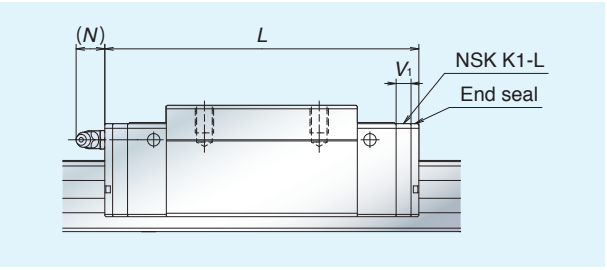
RA model: Slide length with NSK K1-L

The table below shows the dimensions of linear guides with the NSK K1-L lubrication unit.

Slide length with NSK K1-L [4)] Unit : mm

Model No.	Roller slide length	Roller slide shape code	Standard roller slide length	Roller slide length with two NSK K1-L units L	Thickness of NSK K1-L unit [5)] V_1	Protrution of grease fitting N
RA35	Standard	AN, AL, EM	123.8	136.8	6.5	(11)
	Long	BN, BL, GM	152	165		
RA45	Standard	AN, AL, EM	154	168	7	(14)
	Long	BN, BL, GM	190	204		
RA55	Standard	AN, AL, EM	184	198	7	(14)
	Long	BN, BL, GM	234	248		

4) Roller slide length with NSK K1-L = (Standard slide length) + (NSK K1-L thickness V_1 × number of units equipped)
5) The thickness of NSK K1-L units equal to conventional NSK K1.



Slide with NSK K1-L

Accuracy Code

	Preloaded assembly				Interchangeable
	Ultra precision	Super precision	High precision	Precision grade	High precision
Without NSK K1-L	P3	P4	P5	P6	PH
With NSK K1-L	L3	L4	L5	L6	LH

Preload Code

Preloaded assembly		Interchangeable	
Slight preload Z1	Medium preload Z3	Slight preload ZZ	Medium preload ZH
1	3	Z	H

Handling Precautions for NSK K1-L

1. **Permissible operating temperature:**
   50°C maximum (80°C can be tolerated for brief periods)
2. **Chemicals that should not contact NSK K1-L:**
   Do not leave NSK K1-L in organic solvents, such as hexane or other thinners that remove oil, or in anti-corrosion agents containing kerosene.

For more information about NSK products, please contact: **www.nsk.com**

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NSK

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