

LINEAR GUIDE SPECIFICATION SHEET FOR NEW APPLICATIONS



Customer Name:

Date:

Customer POC:

PO Number:

Customer Email:

Customer Phone:

Application:

ex: machine tool, transport, etc.

Speed and Travel:

Stroke: mm

Stroke Time (t): sec

Max Speed: m/min

Acceleration: m/s²

Ramp Time (t1): sec

Environment:

Temperature Range: deg C / deg F

General Industry
Wash Down
Clean Room
Vacuum
Outside Use
Splash
Corrosive
High Humidity
Contaminated
Food/Medical

Other Comments:

Duty Cycle:

Life Expectation: (years)

Cycles per Hour:

Operating Hours: (per day)

Operating Days: (per year)

Application Details (Please enter any other special considerations not covered):

Load Conditions:

Mounting Orientation: (horizontal/vertical)

Y-coord: (distance) mm

Z-coord: (distance) mm

COG coords: (distance)

dX: mm

dY: mm

dZ: mm

Slider span: mm

Rail span: mm

LINEAR GUIDE SIZING SPECIFICATION SHEET



Customer Name:

Date:

Customer POC:

PO Number:

Customer Email:

Customer Phone:

Application:

ex: machine tool, transport, etc.

Series: See page 3 for more details

Accessories:

Comments:

Size: Slider Shape:

NSK K1
Multiple K1
(Please add comments)

Number of Slides per Rail:

Double Seals
Metal Protector

Grease:

Brass Rail Hole Caps
Plastic Rail Hole Caps

Surface Treatment:

Standard Cut: +/- 0.5mm
Butting Cut: 0~0.5mm

Accuracy: For interchangeable type part numbers, only PC accuracy is available. See the Precision Machine Components catalog (pg A22) for more details.

Overall Rail Length (mm):

G1 Dimension (mm):

Preload: See page 3 for more details

Rail A Length (mm):

G2 Dimension (mm):

Rail Material: Standard: High Carbon Steel Optional: Stainless Steel

Rail B Length (mm):

Rail A G1 (mm):

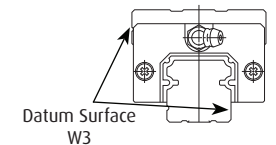
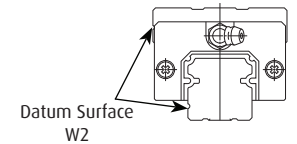
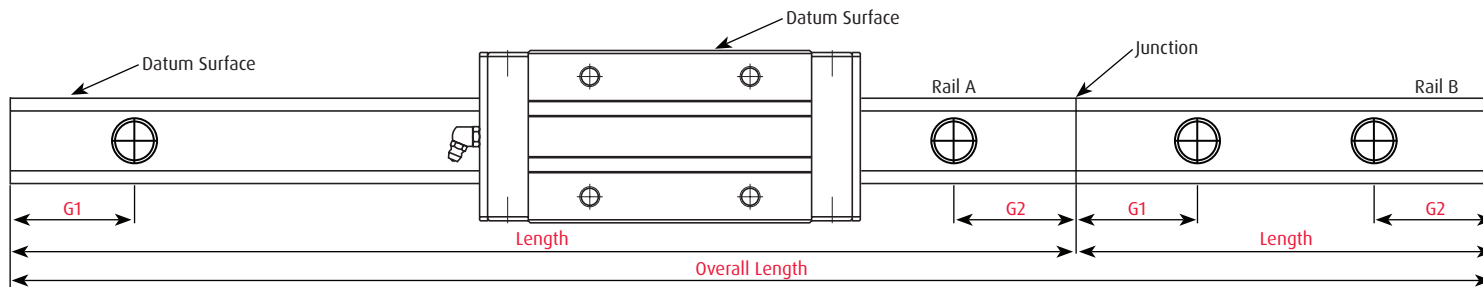
Part Number:

Rail A G2 (mm):

Quantity: Matched Set?: Yes No Datum Setup: W2 W3

Rail B G1 (mm):

Rail B G2 (mm):



LINEAR GUIDE EXPLANATION OF TERMS

Series:

NH: Self-aligning for high loads in vertical direction, resistant to impact loads
 NS: Self-aligning for medium loads in vertical direction, resistant to impact loads
 LW: Wide design for single rail applications

LE/PE: Wide miniature design for single rail applications, stainless steel standard
 LU/PU: Miniature design with equal load carrying capacity in vertical and lateral directions

Shapes:

Series	Ball Slide Model	Shape/Installation Method	Series	Ball Slide Model	Shape/Installation Method	Series	Ball Slide Model	Shape/Installation Method
NH SH	AN BN		NS SH	CL AL		LW	EL	
	AL BL			JM EM		LU	AL, TL, AR, TR, BL, UL	
	EM GM					LE	AL, TL, AR, TR, BL, UL, CL, SL	

Surface Treatment:

Available surface treatments are:
 - Armoloy Coating
 - Low Temp Chrome Plating
 - Fluorine Low Temp Chrome Plating

*Please refer to the Precision Machine Components catalog for available sizes by series and shape
 ** EL, GL, FL, and HL shapes for NH and NS series linear guides are equivalent to the EM/GM shapes

Preload:

NH Series Interchangeable Type

Model No.	Fine Clearance ZT	Slight Preload ZZ	Medium Preload ZH
NH15	-4 — 15	-4 — 0	-7 — -3
NH20		-5 — 0	-8 — -3
NH25		-5 — 0	-9 — -4
NH30		-7 — 0	-12 — -5
NH35	-5 — 15	-7 — 0	-12 — -5
NH45		-7 — 0	-14 — -7
NH55		-9 — 0	-18 — -9
NH65		-9 — 0	-19 — -10

Minus sign denotes that a value is an amount of preload (elastic deformation of balls).

Unit: μm

NS Series Interchangeable Type

Model No.	Fine Clearance ZT	Slight Preload ZZ	Medium Preload ZH
NS15	-4 — 15	-4 — 0	-7 — -3
NS20	-4 — 15	-4 — 0	-7 — -3
NS25	-5 — 15	-5 — 0	-9 — -4
NS30	-5 — 15	-5 — 0	-9 — -4
NS35	-5 — 15	-6 — 0	-10 — -4

Minus sign denotes that a value is an amount of preload (elastic deformation of balls).

Unit: μm

LW Series Interchangeable Type

Model No.	Fine Clearance ZT	Slight Preload ZZ
LW17	-3 — 15	-3.5 — 0
LW21	-3 — 15	-3.5 — 0
LW27	-4 — 15	-4 — 0
LW35	-5 — 15	-5 — 0
LW50	-5 — 15	-7 — 0

Minus sign denotes that a value is an amount of preload (elastic deformation of balls).

Unit: μm

LU Series Interchangeable Type

Model No.	Fine Clearance ZT
LU09	
LU12	0 — 15
LU15	

Unit: μm

LE Series Interchangeable Type

Model No.	Fine Clearance ZT
LE09	
LE12	0 — 15
LE15	

Unit: μm

Running Parallelism of Ball Slide

Rail overall length (mm)		Interchangeable Type
over	or less	Normal Grade PC
—	50	6
50	80	6
80	125	6.5
125	200	7
200	250	8
250	315	9
315	400	11
400	500	12
500	630	14
630	800	16
800	1000	18
1000	1250	20
1250	1600	23
1600	2000	26
2000	2500	29
2500	3150	32
3150	4000	34

Unit: μm

LINEAR GUIDE EXPLANATION OF TERMS

Accuracy:

For interchangeable part numbers, only PC accuracy is available.

Mounting height H - distance from rail bottom datum face to ball slide top face.

Mounting width - Distance from rail side datum face to ball slide side datum face.

Running parallelism - variation of top of ball slide to bottom of rail or from side of ball slide to side of rail when the ball slide is moving.

Tolerance of NH Series Interchangeable Type: Normal Grade PC

Characteristics	Model No.	
	NH15, 20, 25, 30, 35	NH45, 55, 65
Mounting height H	±20	±30
Variation of mounting height H	15 ¹ 30 ²	20 ¹ 35 ²
Mounting width W ₂ or W ₃	±30	±35
Variation of mounting width W ₂ or W ₃	25	30

Notes: ¹Variation on the same rail ²Variation on multiple rails Unit: μm

Tolerance of NS and LW Series Interchangeable Type: Normal Grade PC

Characteristics	Model No.	
	NS LW17, 21, 27, 35, 50	
Mounting height H	±20	
Variation of mounting height H	15 ¹ 30 ²	
Mounting width W ₂ or W ₃	±30	
Variation of mounting width W ₂ or W ₃	25	

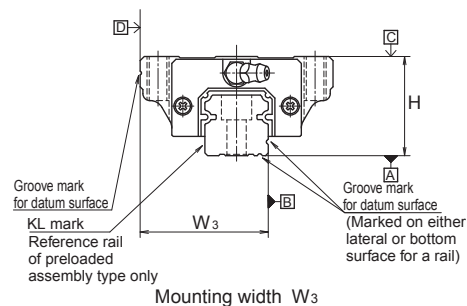
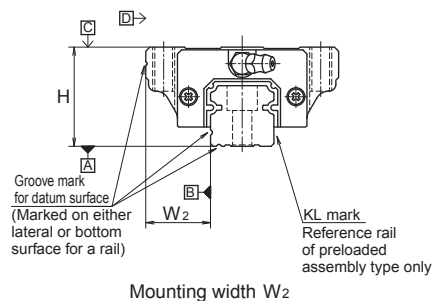
Notes: ¹Variation on the same rail ²Variation on multiple rails Unit: μm

Tolerance of LE and LE Series Interchangeable Type: Normal Grade PC

Characteristics	Model No.	
	LU09, 12, 15	LE09, 12, 15
Mounting height H	±20	
Variation of mounting height H	40	
Mounting width W ₂ or W ₃	±20	
Variation of mounting width W ₂ or W ₃	45	

Unit: μm

Datum Setup:



Matched Set:

A matched set is a set of two or more rail and ball slide setups that are ground to the appropriate height variation tolerances.