LINEAR GUIDE SPECIFICATION SHEET FOR NEW APPLICATIONS

NSK

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/s^2
Ramp Time (t1):	sec

Duty Cycle:

Life Expectation: (years)

Cycles per Hour:

Operating Hours: (per day)

Operating Days: (per year)

Environment:

Temperature Range:

○ deg C

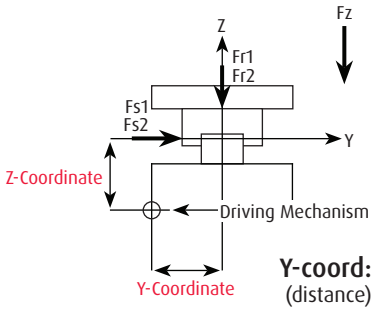
◉ deg F

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

Other Comments:

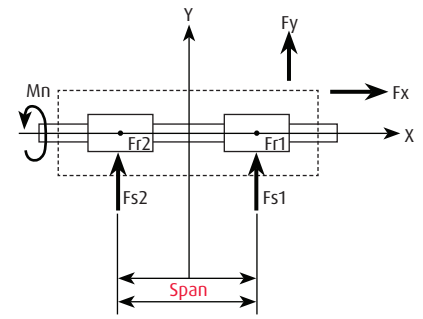
Load Conditions:

Mounting Orientation: (horizontal/vertical)

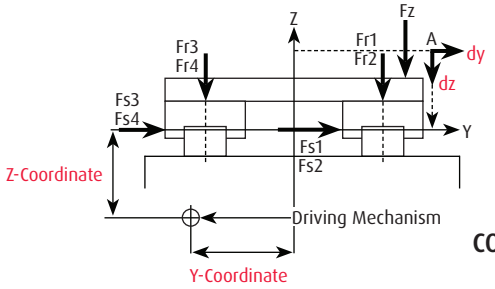


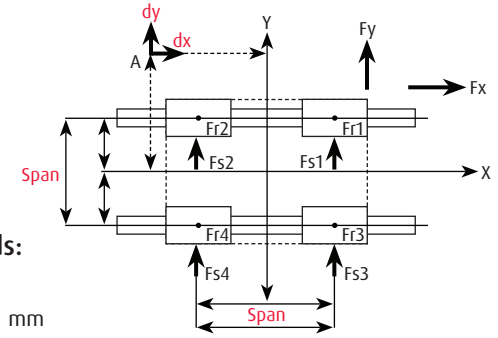
Y-coord: (distance) mm

Z-coord: (distance) mm



Slider span: mm





COG coords: (distance)

dX: mm

dY: mm

dZ: mm

Y-coord: (distance) mm

Z-coord: (distance) mm

Slider span: mm

Rail span: mm

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

Phone: 1-800-255-4773 Fax: (317) 728-5050

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

Size: **Slider Shape:**

Number of Slides per Rail:

Grease:

Surface Treatment:

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

Preload: See page 3 for more details

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

Part Number:

Quantity: **Matched Set?:** ◉ Yes ○ No **Datum Setup:** ◉ W2 ○ W3

Accessories:
- ☐ NSK K1
  - ☐ Multiple K1 (Please add comments)
- ☐ Double Seals
- ☐ Metal Protector
- ☐ Brass Rail Hole Caps
- ☐ Plastic Rail Hole Caps

Comments:

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

Overall Rail Length (mm):

Rail A Length (mm):

Rail B Length (mm):

G1 Dimension (mm):

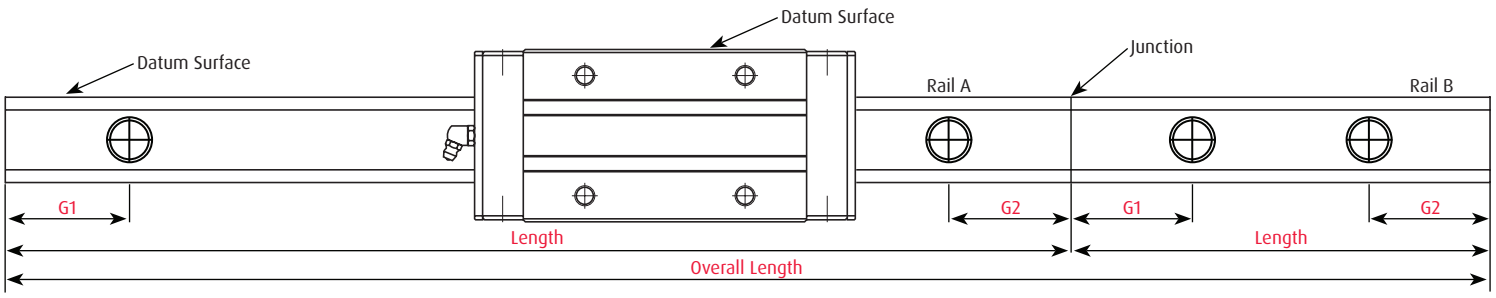
G2 Dimension (mm):

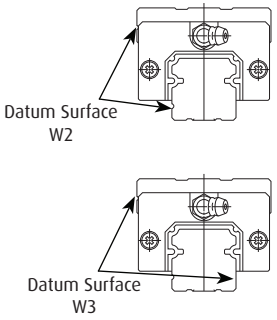
Rail A G1 (mm):

Rail A G2 (mm):

Rail B G1 (mm):

Rail B G2 (mm):





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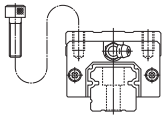
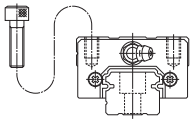
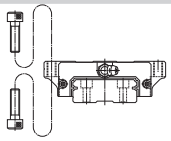
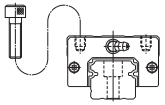
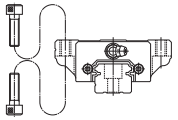
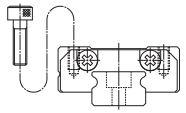
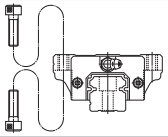
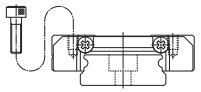
LINEAR GUIDE EXPLANATION OF TERMS

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	0 — 15
LU12	
LU15	

Unit: μm

LE Series Interchangeable Type

Model No.	Fine Clearance ZT
LE09	0 — 15
LE12	
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

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: [1]Variation on the same rail [2]Variation 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

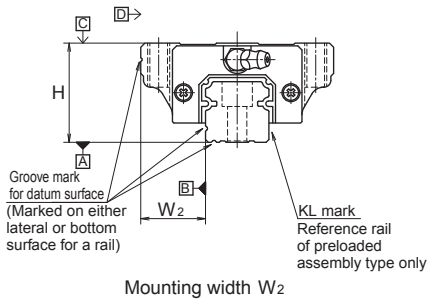
Notes: [1]Variation on the same rail [2]Variation on multiple rails Unit: µm

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

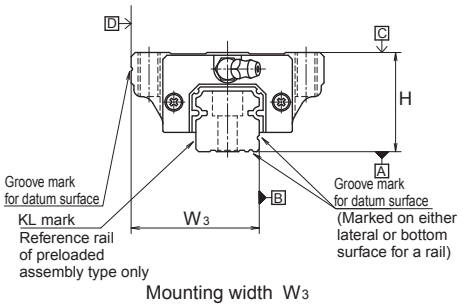
Characteristics \ Model No.	LU09, 12, 15 LE09, 12, 15
Mounting height H	±20
Variation of mounting height H	40
Mounting width W_2 or W_3	±20
Variation of mounting width W_2 or W_3	45

Unit: µm

Datum Setup:



Mounting width W_2



Mounting width W_3

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.