

Linear Guide

Produced at **SURUGA Production Platform**, one of MISUMI group companies. (Excluding some of the products)  
Striving to be a creative company with an outstanding machining technology.

■ Company Name SURUGA Production Platform Corporation  
■ HQ 505 Nanatsu Shinya, Shimizu-ku, Shizuoka-shi, Shizuoka-ken ZIP424-8566  
■ Established May 8th, 1964

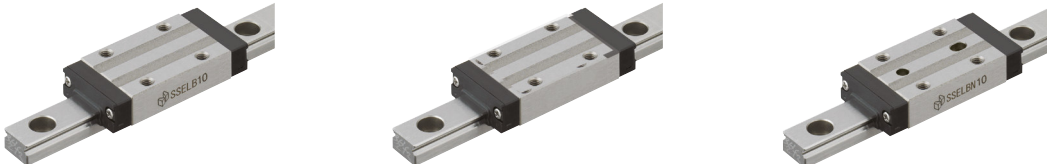
Expands its business with "Precision Machining Technology" based on micron-level accuracies. Known as a leading manufacturer of the punch & dies components in the domestic market, we manufacture press dies components as well as plastic mold components, optical devices and FA system components.



Miniature Linear Guide



Product Name	Standard	C-VALUE Products - Standard Blocks	Standard Blocks with Dowel Holes
Page	533	535	537



Long	C-VALUE Products - Long Blocks	Long Blocks with Dowel Holes
539	541	543



Short Blocks / Short Blocks with Dowel Holes	Wide Standard Blocks	Wide Long Blocks	Extra Long Blocks
545 - 547	549	551	553

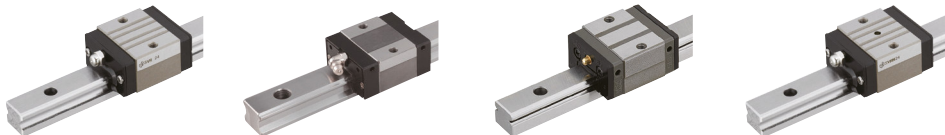


Wide Rails, Standard Blocks	C-VALUE Products - Wide Rails, Standard Blocks	Wide Rails, Standard Blocks with Dowel Holes
555	557	559

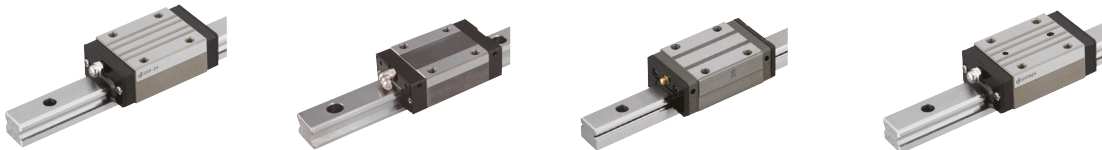


Wide Rails, Long Blocks	Wide Rails, Long Blocks with Dowel Holes	Wide Rails, Wide Standard Blocks	Wide Rails, Wide Long Blocks
561	563	565	567

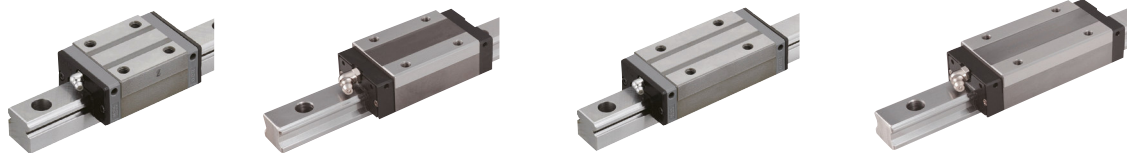
Medium/ Heavy Load Linear Guide



Product Name	Medium Load, Carbon Steel / Stainless Steel	C-VALUE Products - Medium Load, Carbon Steel	Medium Load, Plastic Retainer, Carbon Steel / Stainless Steel	Medium Load, With Dowel Holes, Carbon Steel
Page	569, 589	571	573, 591	597

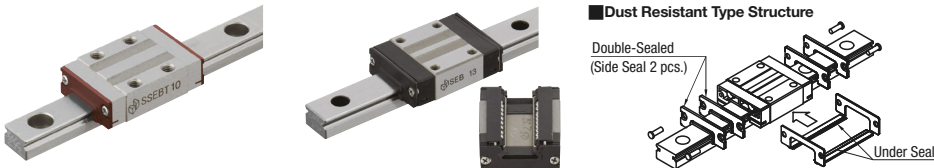


Medium Load, Carbon Steel / Stainless Steel	C-VALUE Products - Heavy Load, Carbon Steel	Heavy Load, Plastic Retainer, Carbon Steel / Stainless Steel	Heavy Load, With Dowel Holes, Carbon Steel
575, 589	577	579, 593	597

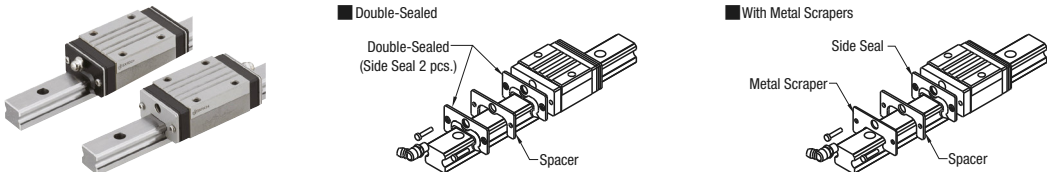


Super Heavy Load, Plastic Retainer, Carbon Steel / Stainless Steel	C-VALUE Products - Super Heavy Load, Carbon Steel	Extra Super Heavy Load, Plastic Retainer, Carbon Steel	C-VALUE Products - Extra Super Heavy Load, Carbon Steel
581, 595	583	585	587

Heat / Dust Resistant Linear Guide

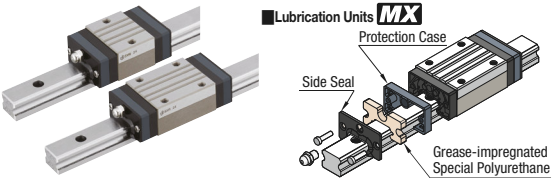


Product Name	Miniature Linear Guides - Heat Resistant	Miniature Linear Guides - Dust Resistant
Page	599	601



Linear Guides for Medium/Heavy Load - Dust Resistant
603-606

With Lubrication Unit Linear Guide



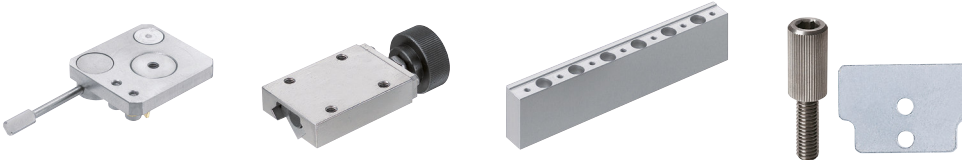
Product Name	With Medium/Heavy Load Lubrication Units
Page	569, 575, 589, 597, 603-606

Linear Guide LTBC Plating

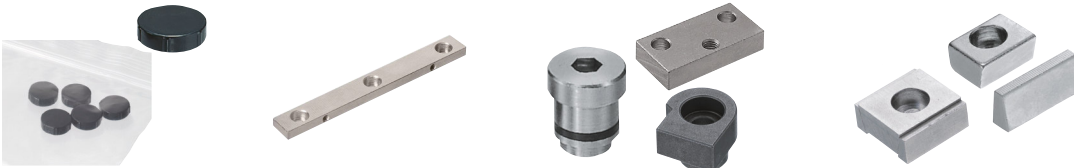


Product Name	LTBC Plating
Page	531

Linear Guide Optional



Product Name	Linear Guide Clamps - For Miniature Linear Guides	Linear Guide Clamps - For Medium/Heavy Load Linear Guides	Height Adjusting Blocks for Linear Guides	Stopper Bolts / Block Stopper Plate
Page	607	608	609-611	612



Product Name	Rail Mounting Hole Caps (Package)	Rail Push Plates	Linear Locks / Linear Guide Lock Plates	Linear Guide Lock Units / Linear Guide Taper Locks
Page	612	612	613-614	614

Cross Roller Table



Product Name	Cross Roller Tables	Cross Roller Guides	Ball Slide Guides	Pneumatically Driven Linear Guides
Page	617-618	619	620	623-626



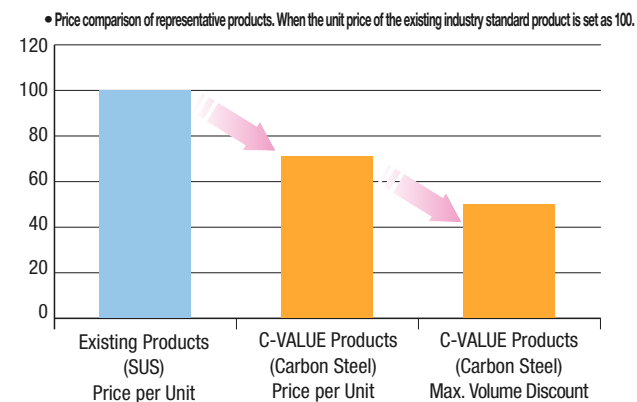
# Linear Guide C-VALUE Products Overview

## Miniature Linear Guides

### Price

The lead time for Lg. Qty. orders is not constant. Quotation request and price negotiations are troublesome... With MISUMI

**Price Reduced 32% Max. at 1pc., Reduced 52% Max at 40pc. Purchase!**



### Lg. Qty. Orders are Economical and Smooth

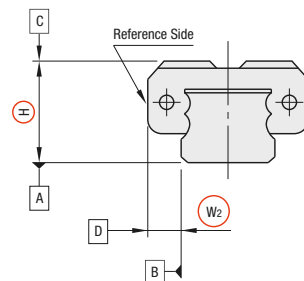
- 1) Price Reduced 52% Max. compared with the existing products
- 2) Enhanced service for standard Lg. Qty. orders of C-VALUE Products

### Features

**Equiv. Load Ratings to the Existing Products! Improved Radial Clearance Compared to Standard Grade!**

Euivalent precision to that of the standard grades from other companies. Replace with confidence.

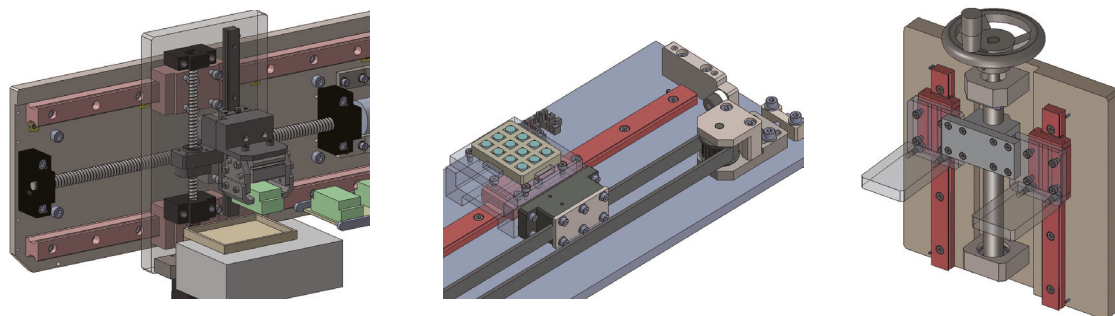
Accuracy/Load Comparison Table (Unit: $\mu\text{m}$ )			
	Existing Products (High Grade)	C-VALUE Products (Standard Grade)	Existing Products (Standard Grade)
MISUMI Representative Type	SSEB	C-SEB	SSEBZ
Material	Stainless Steel	Carbon Steel	Stainless Steel
Precision	Radial Clearance	-3~0	-3~+7
	Height H Tolerance	$\pm 20$	$\pm 20$
	Pair Variation of Height H	15	30
	Width W2 Tolerance	$\pm 25$	$\pm 25$
	Pair Variation of Width W2	20	40
Load Rating	Running Parallelism	3~14	13~21.5
		Equiv.	



### App. Example

Depending on the required precision, you can use this product for various applications from the motor driving ball screw and belt, cylinder drive to manual operations.

C-VALUE Products - App. Example

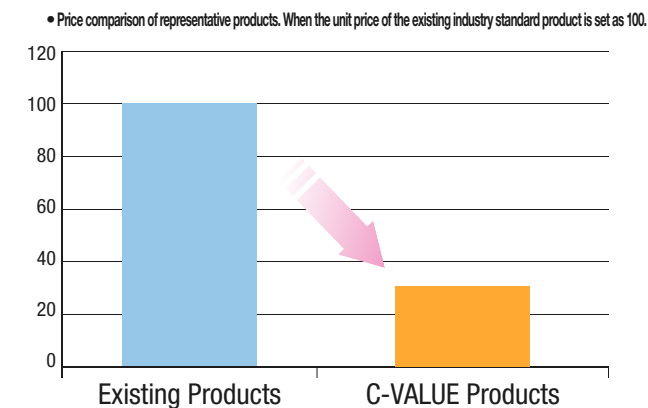


## Linear Guides for Medium and Heavy Load

### Price

Customers' demand on cost reduction is severe... We want to get expensive Linear Guides for Medium/Heavy Load a lot cheaper... With MISUMI

**Price Reduced 70% Max. at 1pc. Purchase!**



### Significant Price Reduction and Assured Fast Delivery

- 1) Can be purchased from 1 pc at a low price
- 2) Short delivery time promised - Shipped within 4 workdays

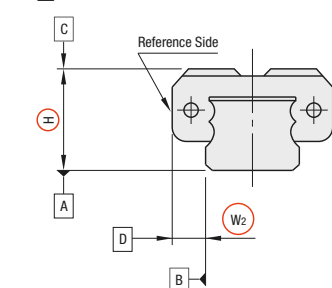
### Difference

Some of the dimensional accuracy and load ratings are different from those of the existing products. Installation dimensions are the same.

\* The external dimensions are different.

Accuracy/Load Comparison Table (Unit: $\mu\text{m}$ )		
	Existing Products	C-VALUE Products
MISUMI Representative Type	SXR	C-SXR
Material	Carbon Steel	Carbon Steel
Precision	Radial Clearance	-4~+3
	Height H Tolerance	$\pm 100$
	Pair Variation of Height H	20
	Width W2 Tolerance	$\pm 100$
	Pair Variation of Width W2	20
Load Rating	Running Parallelism	7~16
		10~24

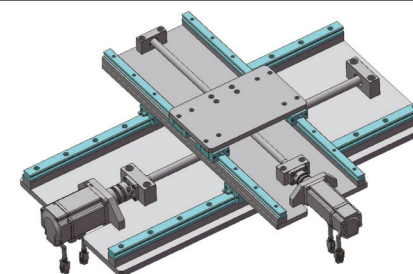
### Position of H Dimension/W2 Dimension



### App. Example

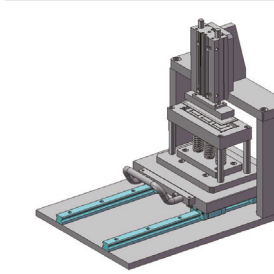
Use C-VALUE Products for lower precision requirement than the existing products and for application or process with medium/low load (Linear Guides for Medium/Heavy Load only). Consider selecting the existing products for the heart of the device and selecting the C-VALUE Products for conveyance parts or rough positioning.

Existing Products App. Example

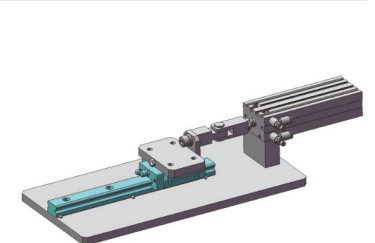


<High Precision XY Table>  
Drives with a Ball Screw. Used for high-precision positioning with high frequency.

C-VALUE Products App. Example



<Manual Press Fitting Machine>  
Used for manual operation with low frequency

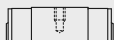

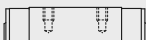














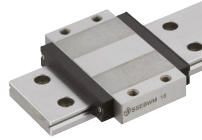
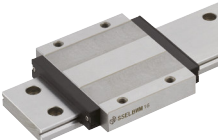






<Air Cylinder Drive Section>  
Used for medium-accuracy positioning







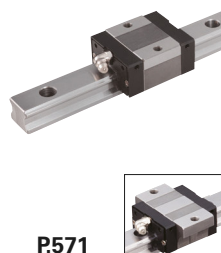










Linear Guide Product List

Miniature Linear Guides

Specifications			Short	Standard	Long	Extra Long
Type	Rail	Block				
Existing Products	Standard Rail 	Standard	 P545~P548	 P533, P537	 P539, P543	 P553
		Wide	-	 P549	 P551	-
C-VALUE Products	Wide Rail 	Standard	-	 P535	 P541	-
Existing Products		Standard	-	 P555, P559	 P561, P564	-
C-VALUE Products	Wide Rail 	Wide	-	 P565	 P567	-
		Standard	-	 P557	-	-
Special Configurations			Dust Resistant  P601	Heat Resistant  P599	LTBC Plating  P532	

Linear Guides for Medium/Heavy Load

Lubrication Units **MX** : Products applicable to Self-Lubrication Type

Specifications		Medium Load	Heavy Load	Super Heavy Load	Extra Super Heavy Load
Existing Products	Standard	 Carbon Steel: P569 Stainless Steel: P589	 Carbon Steel: P575 Stainless Steel: P589	-	-
	Standard with Dowel Holes	 P597	 P597	-	-
C-VALUE Products	Standard <b>C-VALUE</b>	 P571	 P577	 P583	 P587
Existing Products	With Plastic Retainers	 Carbon Steel: P573 Stainless Steel: P591	 Carbon Steel: P579 Stainless Steel: P593	 Carbon Steel: P581 Stainless Steel: P595	 P585
Special Configurations		Self-Lubrication		Dust Resistant	
		 P569, P575, P589 P597, P603~P.606		Double-Sealed  P.603~P.606	With Metal Scrapers  P.603~P.606

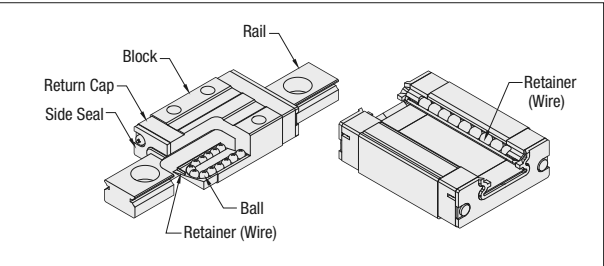


# Structure and Precision of Linear Guides

# Linear Guide Preload and Allowable Load

## Linear Guide - Structure and Features

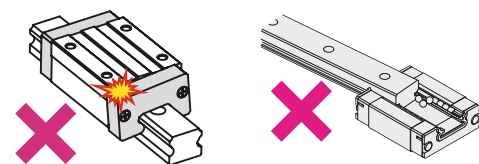
### Miniature Type



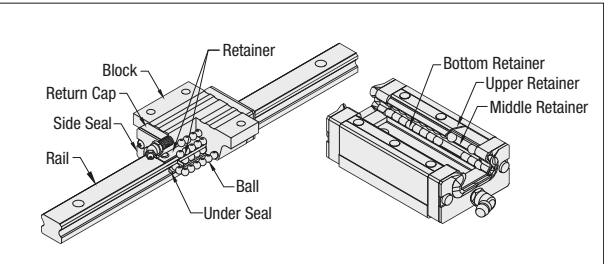
- Linear guides utilize steel balls rolling on precisely ground raceways, and the balls are recirculated by plastic return caps.
- End seals prevent foreign substances from intruding into the blocks.
- Miniature Type has two rows of contacting steel balls in a 4-point raceway contact design.
- Medium/Heavy Load Types have four rows of contacting steel balls in a 2-point raceway contact design.
- Load ratings are the same for all four directions (radial, reverse-radial, and lateral directions). Can be used in any orientation.
- Cautions

Do not apply a shock to the return cap. Doing so will affect the ball circulation and may cause sliding defects.

Balls do not fall out of MISUMI linear guides when removed from rails as the blocks are equipped with ball-retainers. However, the balls may fall out by rapidly removing blocks from the rail or inserting the rail into the block at a slant. Remove and install the blocks with caution.



### Medium/Heavy Load Type



## Precision

### Dimensional Accuracy

Type	Accuracy Standards		Existing Products			C-VALUE Products
			Precision Grade	High Grade	Standard Grade	Standard Grade
Miniature Type	Height H Tolerance		±10	±20	±20	±40
	Pair Variation of Height H		7	15	40	30
	Width W <sub>2</sub> Tolerance		±15	±25	±25	±40
	Pair Variation of Width W <sub>2</sub>		10	20	40	30
Medium/ Heavy Load Type	Accuracy Standards		High Grade	Interchangeable	Standard Grade	Standard Grade
	Height H Tolerance		±40	±20	±100	±120
	Pair Variation of Height H		15	15	20	40
	Width W <sub>2</sub> Tolerance		±20	±30	±100	±100
	Pair Variation of Width W <sub>2</sub>	24, 28	15	25	20	40
		33, 42	15	25	30	40
		30, 36, 40, 42	-	25	-	40

### Running Parallelism

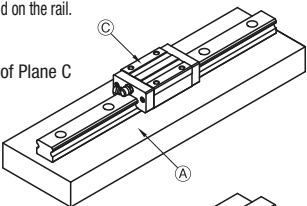
Unit: μm

Rail Length (mm)		Miniature				Medium/Heavy Load			
		Existing Products	C-VALUE	Existing Products	C-VALUE	Existing Products	C-VALUE	Existing Products	C-VALUE
over	or Less	Precision Grade	High Grade	Standard Grade	Standard Grade	High Grade	Interchangeable	Standard Grade	Standard Grade
	50	2	3	13	13	7	6	7	10
50	80	2	3	13	13	7	6	7	10
80	125	3	7	15	15	7	6.5	7	10
125	200	3	7	15	15	7	7	7	10
200	250	3.5	9	17	17	7	8	7	10
250	315	4	11	18	18	8	9	12	10
315	400	5	11	18	18	8	11	12	12
400	500	5	12	19	19	9	12	14	13
500	630	6	13.5	21	21	11	14	18	15
630	800	6	14	21.5	21.5	13	16	21	17
800	1000	-	-	-	-	14.5	18	23	19
1000	1250	-	-	-	-	16	20	25	22
1250	1600	-	-	-	-	-	23	27	23
1600	2000	-	-	-	-	-	26	28.5	24

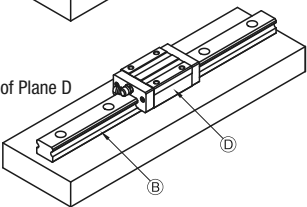
### [Running Parallelism]

Measured while the rail is bolted firmly to a standard datum surface base. A relative variation of block's top surface C against the rail's bottom surface A, and a relative variation of block's datum surface D against the rail's datum surface B are measured, as the block is run from end to end on the rail.

- Running Parallelism of Plane C against Plane A



- Running Parallelism of Plane D against Plane B



## Selection of Radial Clearance (Preload)

Type	Preload	Size (Height H Dimension)	Radial Clearance (μm)
Miniature	Existing Products	Light Preload	-3~-0
	C-VALUE Products	Slight Clearance	0~+15
Medium/Heavy Load	Existing Products	Normal Clearance	-3~+7
		24	-4~+2
		28	-5~+2
		33	-6~+3
	Interchangeable, Light Preload	24, 28	-4~-0
		30, 36, 40, 42	-5~-0
		*42	-7~-0
		24	-4~+4
	C-VALUE Products	Normal Clearance	-5~+5
		28, 30	-5~+5
		33, 36, 40	-6~+6
		45	-7~+7

\* marked size is for Super Heavy / Extra Super Heavy Load.

## Friction Force (Required Thrust Force)

Linear Guide friction force (required thrust) varies depending on load, speed and lubricant property. Especially when moment load is applied, Preload Type friction force increases. Although seal resistance varies according to seal lip press-fit allowance and lubrication conditions, it is not proportionate to load and keeps a constant value.

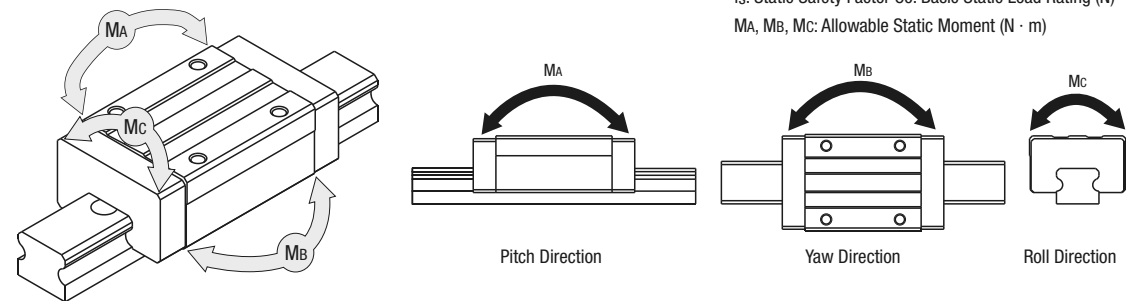
Friction force is obtained by the following formula.

$$F = \mu \cdot W + f$$

F : Friction (N)  
μ : Dynamic Friction Coefficient  
W : Applied Load  
f : Seal Resistance (2N ~ 5N)

## Allowable Load

- Basic Dynamic Load Rating (C)  
Basic dynamic load rating is defined as: a load applied in a constant direction and ran under equal condition on a group of linear guide specimen where 90% of specimen will reach 50x10<sup>6</sup>m without experiencing any damages due to rolling fatigues.
- Basic Static Load Rating (Co)  
Basic static load rating is defined as: a load applied on non-moving linear guides where a sum of rolling element plastic deformation amount and rolling surface plastic deformation amount becomes equal to 0.0001 times that of the diameter of the rolling element (balls).
- Allowable Static Moment (MA, MB, MC)  
Allowable static moment is a critical static moment load defined by permanent deformation value similar to basic static load rating Co.



- Static Safety Factor (fs)  
Basic Static Load Rating Co, in the static state or in low speed, is divided by Static Safety Factor fs in Table - 2 depending on operating conditions.

$$\text{Allowable Load (N)} \leq Co/fs$$
$$\text{Allowable Moment (N} \cdot \text{m)} \leq (MA, MB, MC)/fs$$

fs: Static Safety Factor Co: Basic Static Load Rating (N)  
MA, MB, MC: Allowable Static Moment (N · m)

## Table-2. Static Safety Factor (fs Lower Limit)

Condition of Use	Lower Limits of fs
For normal operating condition	1~2
When smooth running performance is required	2~4
When vibrations and impacts exist	3~5

- Clearance and preload of MISUMI Linear Guides are controlled with minute ball size adjustments.
- Increased rigidity and reduced elastic deformation will result by preloading (negative clearance).
- Generally, selecting some preloads would cause favorable effects on accuracy and life of Linear Guides.
- MISUMI-manufactured Blocks and rails guarantee their own radial clearances (preload) and accuracies as sets of blocks and rails. Be sure to use the blocks and rails in sets.



# Operating Life Calculation for Linear Guides

## Operating Life

When Linear Guide is loaded in linear reciprocating motion, scaly damages called flaking appear due to material fatigue as the stress works on the rolling elements and rolling contact surfaces constantly. Total travel distance until the first flaking occurs is called Life of Linear Guides.

## Rated Life

Rated life is the total travel distance that 90% of linear guides of the same type can reach, under the same conditions, with no occurrence of flaking damage. Rated life can be obtained from the Basic Dynamic Load Rating and the actual load applied on the linear bushings, as shown below.

$$L = \left( \frac{C}{P} \right)^3 \cdot 50$$

Load must be calculated before actually using Linear Guides. To obtain load during linear reciprocating motion, it is necessary to fully consider vibration and impact during motion, and also distribution status in relation to Linear Guides. So, it is not easy to obtain load by calculation. Operating temperature also critically affects life. All these conditions considered, the above-mentioned calculation formula is as follows.

$$L = \left( \frac{f_H \cdot f_T \cdot f_C}{f_W} \cdot \frac{C}{P} \right)^3 \cdot 50$$

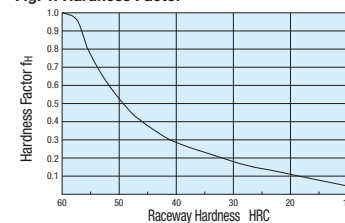
L : Rated Life (km)  
f<sub>H</sub> : Hardness Factors (See Fig. 1)  
f<sub>T</sub> : Temperature Factors (See Fig. 2)  
f<sub>C</sub> : Contact Factors (See Table-1)  
f<sub>W</sub> : Load Factors (See Table-2)  
C : Basic Dynamic Load Rating (N)  
P : Applied Load (N)

### Hardness Factor (f<sub>H</sub>)

For Linear Guide applications, sufficient hardness is required for ball contact shafts. Insufficient hardness causes less allowable load, resulting in shorter life.

Please correct the rated life according to the hardness factors.

Fig. 1. Hardness Factor



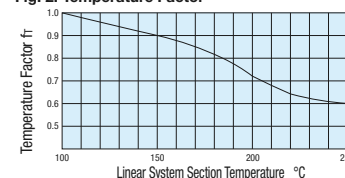
### Temperature Factor (f<sub>T</sub>)

If the Linear Guide temperature exceeds 100°C, the Linear Guide and shaft hardness decreases, resulting in less allowable load and shorter life than used at a room temperature.

Please correct the rated life according to the temperature factors.

\* Please use Linear Guides under the allowable temperature shown on each product page.

Fig. 2. Temperature Factor



### Contact Factor (f<sub>C</sub>)

For actual applications, more than 2 blocks are generally used per shaft. In this case, load applied to each block varies depending on machining precision but is not uniformly distributed. As a result, per-block allowable load varies depending on per-shaft Linear Guide quantity.

Please correct the rated life according to Table-1 Contact Factor.

Table-1. Contact Factor

Number of Linear Guide on One Shaft	Contact Factor f <sub>C</sub>
1	1.00
2	0.81
3	0.72
4	0.66
5	0.61

### Load Factor (f<sub>W</sub>)

To calculate load applied to the Linear Guides, in addition to object weight, it requires inertia force attributed to motion velocity or moment loads. Further, it is necessary to accurately determine the temporal change of each. It, however, is difficult to attain accurate calculations due to potential vibration and impacts caused during reciprocating motion, other than repeated start-stop motions. Table-2 Load Factor helps simplify operating life calculation.

Table-2. Load Factor

Condition of Use	f <sub>W</sub>
No shocks/vibrations, low speed: 15m/min. or less	1.0~1.5
No significant shocks/vibrations, medium speed: 60m/min. or less	1.5~2.0
With shocks/vibrations, high speed: 60m/min. or more	2.0~3.5

### Applied Load P Calculation Method

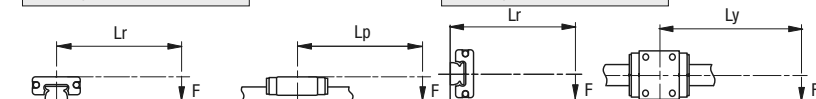
When load is applied to the a block, convert moment load into applied load by the following formula.

• Horizontal Installation

$$P = F + \frac{C_o}{M_c} \cdot x(FxL_r) + \frac{C_o}{M_a} \cdot x(FxL_p)$$

• Lateral Installation

$$P = F + \frac{C_o}{M_c} \cdot x(FxL_r) + \frac{C_o}{M_b} \cdot x(FxL_y)$$



P: Applied Load (N)  
F: Downward Load (N)  
C<sub>o</sub>: Static Load Rating (N)  
M<sub>a</sub>: Allowable Static Moment - Pitch Direction (N · m)  
M<sub>b</sub>: Allowable Static Moment - Yaw Direction (N · m)  
M<sub>c</sub>: Allowable Static Moment - Roll Direction (N · m)  
L<sub>p</sub>: Distance from Block Center to Load Center in Pitch Direction (m)  
L<sub>y</sub>: Distance from Block Center to Load Center in Yaw Direction (m)  
L<sub>r</sub>: Distance from Block Center to Load Center in Roll Direction (m)

## Load Calculation

Linear Guides perform linear reciprocating motion while supporting object weight. Therefore, load applied to Linear Guides varies depending on the center of gravity of the object, thrust force applied position or changes in speed at start, stop, acceleration and deceleration. For Linear Guide selections, these conditions must be fully considered.

Table-3. Condition of Use and Load Calculation Formula

Classification	Operating Condition and Load	Classification	Operating Condition and Load
1	<b>Horizontal Axes</b>  $P_1 = \frac{1}{4}W + \frac{X_0}{2X}W + \frac{Y_0}{2Y}W$ $P_2 = \frac{1}{4}W - \frac{X_0}{2X}W + \frac{Y_0}{2Y}W$ $P_3 = \frac{1}{4}W + \frac{X_0}{2X}W - \frac{Y_0}{2Y}W$ $P_4 = \frac{1}{4}W - \frac{X_0}{2X}W - \frac{Y_0}{2Y}W$	3	<b>Wall Mounted Horizontal Axes</b>  $P_1 = P_2 = P_3 = P_4 = \frac{\ell_1}{2Y}W$ $P_{1S} = P_{3S} = \frac{1}{4}W + \frac{X_0}{2X}W$ $P_{2S} = P_{4S} = \frac{1}{4}W - \frac{X_0}{2X}W$
2	<b>Vertical Axes</b>  $P_1 = P_2 = P_3 = P_4 = \frac{\ell_1}{2X}W$ $P_{1S} = P_{2S} = P_{3S} = P_{4S} = \frac{Y_0}{2X}W$	4	<b>At Acceleration/Deceleration</b>  <p>• When accelerating from a start</p> $P_1 = P_3 = \frac{1}{4}W \left( 1 + \frac{2V_1 \cdot \ell_1}{g \cdot t_1 \cdot X} \right)$ $P_2 = P_4 = \frac{1}{4}W \left( 1 - \frac{2V_1 \cdot \ell_1}{g \cdot t_1 \cdot X} \right)$ <p>• When decelerating to a stop</p> $P_1 = P_3 = \frac{1}{4}W \left( 1 - \frac{2V_1 \cdot \ell_1}{g \cdot t_3 \cdot X} \right)$ $P_2 = P_4 = \frac{1}{4}W \left( 1 + \frac{2V_1 \cdot \ell_1}{g \cdot t_3 \cdot X} \right)$ <p>• At constant speed</p> $P_1 = P_2 = P_3 = P_4 = \frac{1}{4}W$ <p>g: Gravitational Acceleration = 9.8x10<sup>3</sup>mm/sec<sup>2</sup></p>

W : Applied Load (N) P<sub>1</sub>, P<sub>2</sub>, P<sub>3</sub>, P<sub>4</sub>: Load applied to Linear Guides (N)

X, Y: Linear Guide Span (mm) V: Travel Speed (mm/sec) t<sub>1</sub>: Acceleration Time (sec) t<sub>3</sub>: Deceleration Time (sec)

## Average of Fluctuating Loads

In general, load applied to Linear Guides varies depending on their applications. For example, there are cases at the start and stop of reciprocating motion, during constant motion or transfer with/without a workpiece. Therefore, it requires average load under which the life equals to the one under these fluctuating loads.

① When load changes in stages according to the distance (Fig. 3)

Travel distance  $\ell_1$  under load P<sub>1</sub>

Travel distance  $\ell_2$  under load P<sub>2</sub>

⋮

For travel distance  $\ell_n$  under load P<sub>n</sub>,

average load P<sub>m</sub> is obtained by the following formula.

$$P_m = \sqrt[3]{\frac{1}{\ell} (P_1^3 \ell_1 + P_2^3 \ell_2 + \dots + P_n^3 \ell_n)}$$

P<sub>m</sub>: Average of Fluctuating Loads (N)  $\ell$ : Total Travel Distance (m)

② When load changes almost linearly (Fig. 4),

average load P<sub>m</sub> is approximately obtained by the following formula.

$$P_m = \frac{1}{3} (P_{min} + 2 \cdot P_{max})$$

P<sub>min</sub>: Minimum Fluctuating Load (N)  
P<sub>max</sub>: Maximum Fluctuating Load (N)

③ When load changes in a sine curve as shown on Fig. 5 (a) and (b),

average load P<sub>m</sub> is approximately obtained by the following formula.

Fig. 5 (a) P<sub>m</sub>=0.65P<sub>max</sub>

Fig. 5 (b) P<sub>m</sub>=0.75P<sub>max</sub>

Fig. 3 Staged Fluctuating Loads

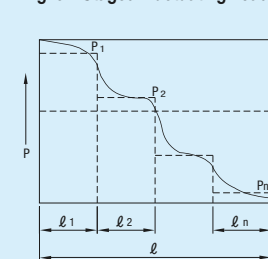


Fig. 4 Constant Fluctuating Loads

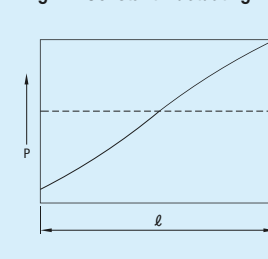
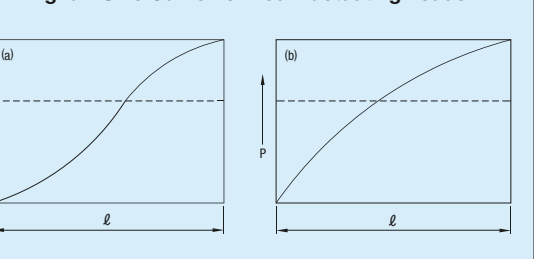


Fig. 5 Sine Curve Formed Fluctuating Loads

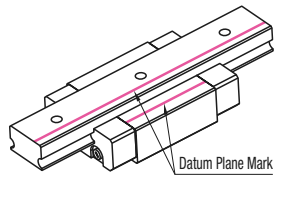
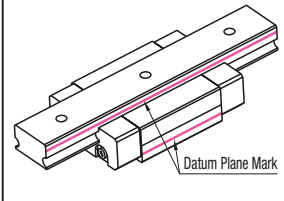
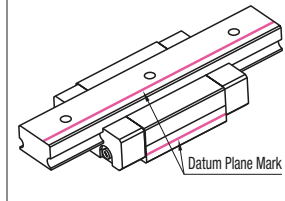
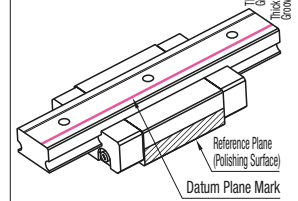




# Installation and Maintenance of Linear Guides

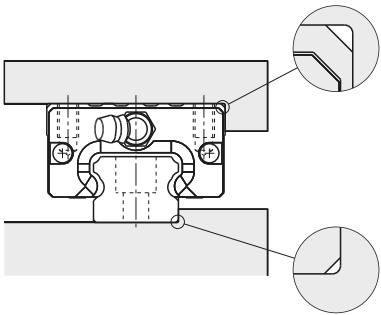
## Installation Method of Linear Guides

MISUMI Linear Guides have a datum surface (a surface with a straight groove) on both the rail and block. (See the diagram below.)  
When installing Linear Guides, correctly match the datum of the guides and installation bases.

Miniature Linear Guides Common to Existing and C-VALUE Products	Linear Guides for Medium/Heavy Load		
	Existing Products	Existing Products (with Plastic Retainer)	C-VALUE Products
			

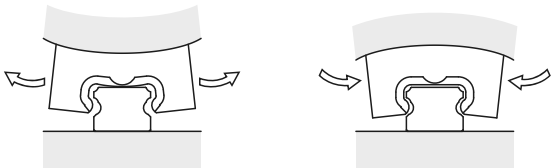
## Mounting Surface Shape

Linear Guides are designed to obtain accuracies when mounted on base plates. Generally, the datum plane is placed against the shoulder on the mounting surface. In that case, corners should have reliefs or corner radius should be machined smaller than chamfering of rails and blocks. See each product page for chamfering dimensions of products.



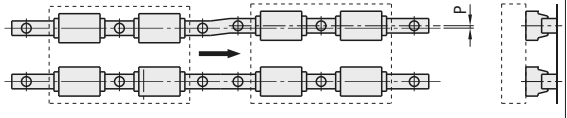
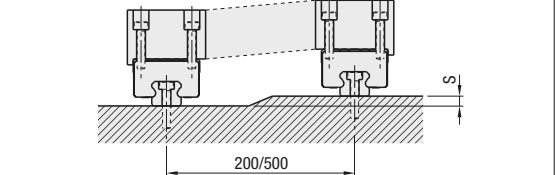
## Block Mounting Surface Flatness

Blocks may be deformed depending on its mounting surface flatness. Block deformation may cause clearance, which might give less/more preload and cause sliding defects. Securing 5μ mounting surface flatness is recommended.



## Installation Error Tolerance

•Installation Error Tolerance is the value which does not influence operating life under common usage.

Running Parallelism Error Tolerance		Height Error Tolerance	
			

Installation Error Tolerance		Radial Clearance	Parallelism Error Tolerance of 2 Axes (P)	Height Error Tolerance of 2 Axes (S)
Type				
Existing Products	Medium/Heavy Load Type	Light Preload, Normal Clearance	20μm or Less	330μm or Less / 500mm
	H24 H28 H30		25μm or Less	130μm or Less / 500mm
	H33 H36 H40	Normal Clearance	30μm or Less	130μm or Less / 500mm
	H42 H45		40μm or Less	170μm or Less / 500mm
Miniature Type		Light Preload	6μm or Less	15μm or Less / 200mm
(Common to Existing and C-VALUE Products)		Slight Clearance	10μm or Less	30μm or Less / 200mm

## Rail Installation

- When datum is provided on installation bases
  - ① Remove burrs and dusts on the mounting surfaces before installation.
  - ② Place a rail on the installation side of the base gently, and tighten the screws temporarily while pushing the rail against the datum shoulder.
  - ③ Installation methods Fig. 1-3 are recommended when using linear guides where shocks, vibrations and heavy loads may exist, and high precision is required.
  - ④ Fully tighten the rail mounting screws to specified torque with a torque wrench. (For torque standards, see Table-1.)

Fig.1: Push Plate Method

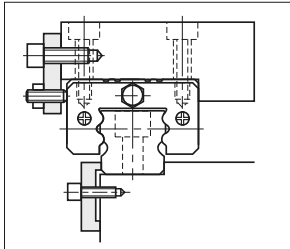


Fig.2: Taper Gib Method

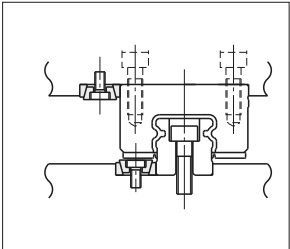
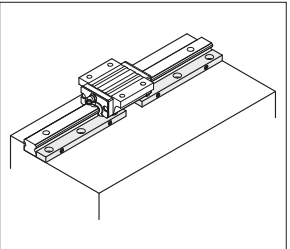


Fig.3: Push Screw Method



- When datum is not provided on installation bases

- Straight Gauge
- ① Place a rail on the installation side of the base gently, and tighten the screws temporarily.
  - ② Place a straightedge parallel to the temporarily tightened rail.
  - ③ Use the straightedge as a reference, snug down the screws while measuring the parallelism of the rail with a dial indicator as shown in Fig.4.
  - ④ Fully tighten the rail mounting screws to specified torque with a torque wrench.
  - ⑤ The secondary rail can be installed in the same straightedge method as the primary master rail, or by using the primary rail as a datum reference. In either method, use a dial indicator to measure the parallelism while the rail is being fastened down.

Fig.4: Straightedge Method

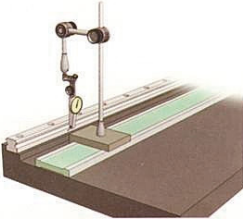


Fig.5: Secondary Rail Mounting Method

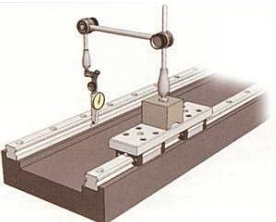


Table-1: Screw Tightening Torque (for SCM Material)

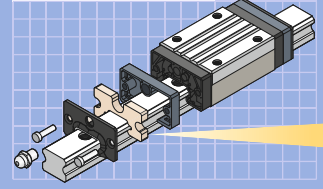
Type	Nominal of Thread	Recommended Torque (N · m)
Medium/Heavy Load Type	M3	2.0
	M5	8.8
	M6	12.7
	M8	29.4
Miniature Type	M2	0.4
	M2.5	0.6
	M3	1.0
	M4	2.5

## Maintenance (Grease Application)

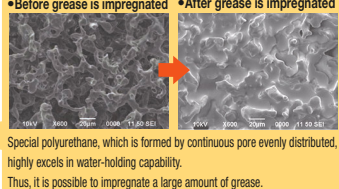
- Grease forms lubricating film between steel balls and rolling surface of linear guides. This reduces friction and prevents seizures. Grease loss and deterioration will cause shorter life of linear guides. Apply grease appropriately depending on your condition of use. Grease listed below is applied to MISUMI Linear Guides before shipping, and the products can be used out of box.
- Miniature Type: Filled with Lithium soap based grease (Multemp Grease PS2 by Kyodo Yushi Co., Ltd.).
- Medium/Heavy Load Type: Filled with Lithium soap based grease (Alvania Grease S2 by Showa Shell Sekiyu K.K.).
- Recommended Lubrication Intervals: Every 6 month  
Every 3 month when travel distance is extensive, or every 1000km.  
\*Recommended above is the lubrication interval based on travel distance. If the grease degrades or gets contaminated faster depending on the operating environment, you will need to shorten the lubrication interval as needed.
- Lubrication Unit **MX** significantly extends lubrication intervals.

## Lubrication Units Which Provide Long-term Maintenance-free Operation **MX**

Lubrication Unit **MX** Structure



Enlarged Photos of Special Polyurethane Pores



Features

- 1 Long Term Maintenance-free Condition**  
Lubrication Unit **MX** is a self-lubrication unit constructed of grease impregnated special polyurethane. Capillary action provides appropriate supply of grease to the track surface of the linear guide. Oil film is always formed between the steel ball and the rail and provides long term maintenance-free operation.
- 2 Cost Advantages**  
Since lubrication frequency can be significantly reduced, you can save maintenance cost.



# Details of Special Greases / Rail Length (L Dimension) Configurable Type

# Linear Guides with LTBC Plating

## About Special Greases

The standard grease used in the linear guides can be changed to the following types.

Part Number	Product Name	Main Features
<b>L Type</b>	ET-100K (Made by Kyodo Yushi)	Excels in heat resistance, oxidation stability, adhesion and adhesive power. In addition, splash or leakage is little.
<b>G Type</b>	LG2 (Made by NSK Ltd.)	Special grease for linear guides, ball screws and etc. for clean-room use.

Product Name	Page	Grease Selection	Unit Price Added to the price of Standard Type
<b>Miniature Linear Guides</b> Not applicable to Heat/Dust Resistant products or products with Lubrication Unit (listed on our website).	P.533~P.568	<b>L</b> <b>G</b>	
<b>Medium/Heavy Load Linear Guide</b> Not applicable to Plastic Retainer Type.	P.569~P.572		

Add the unit price in the above table to the unit price of applicable standard product.

<Price Calculation Example> SEBL10L-270 (Standard Preload Type)

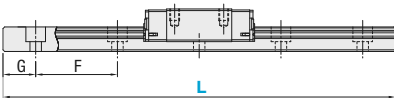
(Standard Type Unit Price) + (Additional Unit Price in the Table) = (Total)

## Details of the Dimensions about L Dimension Configurable Type

Both ends of the rail are evenly cut for L Configurable. For the number of rail mounting holes (M) in that case, see the table below. In addition, G dimensions are calculated with the formula below.

$$G = \frac{L - (M - 1) \times F}{2}$$

Example: For SSEB13-168, G =  $\frac{168 - (7 - 1) \times 25}{2} = 9$  (mm)



### Miniature Linear Guides - Standard Rails

H	6, 8	10	13	16	20	Number of Mounting Holes M
<b>L</b>	26~35	36~47	46~57	71~87	101~139	2
	36~50	48~67	58~82	88~127	140~199	3
	51~65	68~87	83~107	128~167	200~259	4
	66~80	88~107	108~132	168~207	260~319	5
	81~95	108~127	133~157	208~247	320~379	6
	96~110	128~147	158~182	248~287	380~439	7
	111~125	148~167	183~207	288~327	440~499	8
	126~129	168~187	208~232	328~367	500~559	9
	-	188~207	233~257	368~407	560~619	10
	-	208~227	258~282	408~447	620~679	11
	-	228~247	283~307	448~487	680~699	12
	-	248~267	308~332	488~527	-	13
	-	268~274	333~357	528~567	-	14
	-	-	358~382	568~607	-	15
	-	-	383~407	608~647	-	16
	-	-	408~432	648~669	-	17
	-	-	433~457	-	-	18
	-	-	458~469	-	-	19
<b>F</b>	15	20	25	40	60	

### Miniature Type - Wide Rails

H	6, 5	9	12	14	16	Number of Mounting Holes M
<b>L</b>	-	51~67	51~67	71~89	71~89	2
	51~67	68~97	68~97	90~129	90~129	3
	68~87	98~127	98~127	130~169	130~169	4
	88~107	128~157	128~157	170~209	170~209	5
	108~127	158~187	158~187	210~249	210~249	6
	128~129	188~217	188~217	250~289	250~289	7
	-	218~247	218~247	290~329	290~329	8
	-	248~277	248~277	330~369	330~369	9
	-	278~289	278~289	370~409	370~409	10
	-	-	-	410~449	410~449	11
	-	-	-	450~489	450~489	12
	-	-	-	490~529	490~529	13
	-	-	-	530~569	530~569	14
	-	-	-	570~609	570~609	15
	-	-	-	610~649	610~649	16
<b>F</b>	20	30	40			

M (number of mounting holes) for H16 type will be Mx2 since there are two rows of mounting holes.

Min. length of L dimension varies depending on the number of blocks. See each product page for details.

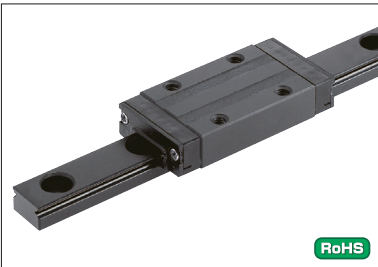
### Medium/Heavy Load Type

H	24, 28*1	28*2, 30	33, 36, 40	42, 45	Number of Mounting Holes M
<b>L</b>	101~131	-	-	-	2
	132~191	160~199	160~201	201~279	3
	192~251	200~259	202~261	281~343	4
	252~311	260~319	262~321	344~423	5
	312~371	320~379	322~381	424~503	6
	372~431	380~439	382~441	504~583	7
	432~491	440~499	442~501	584~663	8
	492~551	500~559	502~561	664~743	9
	552~611	560~619	562~621	744~823	10
	612~671	620~679	622~681	824~903	11
	672~731	680~739	682~741	904~983	12
	732~791	740~799	742~801	984~1063	13
	792~851	800~859	802~861	1064~1143	14
	852~911	860~919	862~921	1144~1223	15
	912~971	920~979	922~981	1224~1303	16
	972~1031	980~1039	982~1041	1304~1383	17
	1032~1091	1040~1099	1042~1101	1384~1463	18
	1092~1151	1100~1159	1102~1161	1464~1543	19
	1152~1211	1160~1219	1162~1221	1544~1623	20
	1212~1271	1220~1279	1222~1281	1624~1703	21
	1272~1331	1280~1339	1282~1341	1704~1783	22
	1332~1391	1340~1399	1342~1401	1784~1863	23
	1392~1451	1400~1459	1402~1461	1864~1943	24
	1452~1511	1460~1519	1462~1521	1944~1959	25
	1512~1571	1520~1579	1522~1581	-	26
	1572~1631	1580~1639	1582~1641	-	27
	1632~1691	1640~1699	1642~1701	-	28
	1692~1751	1700~1759	1702~1761	-	29
	1752~1811	1760~1819	1762~1821	-	30
	1812~1871	1820~1879	1822~1881	-	31
	1872~1931	1880~1939	1882~1941	-	32
	1932~1959	1940~1959	1942~1959	-	33
<b>F</b>	60		80		

Min. length of L dimension varies depending on the number of blocks. See each product page for details.

\*1. C-VALUE Super Heavy Load Applicable Dimension (P583)

\*2. Medium/Heavy Load Applicable Dimension (P569~P580)



## Low Temperature Black Chrome Plated Linear Guide Features

LTBC Plating on linear guides is 5um of fluoropolymer layer chemically deposited as black film on rails and blocks, and it has long-lasting rust prevention effect. The coating layer is immune to cracking from tight radii strike-folding and does not flake under repeated bending. Any superficial coating particles that may come off the rolling contact surfaces are mixed in with the grease and remain its lubricity. (Note) Surface treatment will not be applied to mounting holes of rails and blocks of low temperature black chrome plated linear guides.

## Description of Low Temperature Black Chrome Plated Model Type:

For low temperature black chrome plated products, change the first letter of part numbers "S" to "R".

(Ex.)	[Standard]	[Low Temperature Black Chrome Plated Products]
	:SEB10-115	=> :REB10-115
	:SSEB16-270	=> :RESEB16-270
	:SKR24-520	=> :RXR24-520
	:SSVR33-700	=> :RSVR33-700

The precision grade and standard type of the existing products and C-VALUE products are not available. Only the high grade type of the existing products is available.

Cannot be combined with Alteration WC (Parallel Use of 2 Rails).

## Table: Low Temperature Black Chrome Plated Miniature Linear Guides

Rail	Block Length	Block Type	Catalog Page	Carbon Steel				Stainless Steel			
				1 block		2 blocks		1 block		2 blocks	
				Selectable	Configurable	Selectable	Configurable	Selectable	Configurable	Selectable	Configurable
Standard	Standard	Standard	P533	REB	REBL	RE2B	RE2BL	RSEB	RSEBL	RSE2B	RSE2BL
	Long	Standard	P539	RELB	RELBL	REL2B	REL2BL	RSELB	RSELBL	RSEL2B	RSEL2BL
Wide	Standard	Standard	P555	REBW	REBWL	RE2BW	RE2BWL	RSEBW	RSEBWL	RSE2BW	RSE2BWL
	Long	Standard	P563	RELBW	RELBWL	REL2BW	REL2BWL	RSELBW	RSELBWL	RSEL2BW	RSEL2BWL

## Table: Low Temperature Black Chrome Plated Medium and Heavy Load Linear Guides

Rail	Block Length	Block Type	Catalog Page	Carbon Steel				Stainless Steel			
				1 block		2 blocks		1 block		2 blocks	
				Selectable	Configurable	Selectable	Configurable	Selectable	Configurable	Selectable	Configurable
Standard	Medium Load	Standard	P569, 589	RVR	RVRRL	RV2R	RV2RL	RSVR	RSVRL	RSV2R	RSV2RL
		With Dowel Holes	P597	RVRN	RVRNL	RV2RN	RV2RNL	-	-	-	-
		Wide (Through Holes)	P569	RVW	RVWL	RV2W	RV2WL	-	-	-	-
		Wide (Tapped Holes)	P569	RVWT	RVWTL	RV2WT	RV2WTL	-	-	-	-
		Standard	P575, 589	RXR	RXRRL	RX2R	RX2RL	RSXR	RSXRL	RSX2R	RSX2RL
	Heavy Load	With Dowel Holes	P597	RXRN	RXRNL	RX2RN	RX2RNL	-	-	-	-
		Wide (Through Holes)	P575	RXW	RXWL	RX2W	RX2WL	-	-	-	-
		Wide (Tapped Holes)	P575	RXWT	RXWTL	RX2WT	RX2WTL	-	-	-	-
		Standard	P575, 589	RXR	RXRRL	RX2R	RX2RL	RSXR	RSXRL	RSX2R	RSX2RL
		With Dowel Holes	P597	RXRN	RXRNL	RX2RN	RX2RNL	-	-	-	-

## Price of LTBC Plating Surface Treatment (For low temperature black chrome plated products, add the prices below for surface treatment to the unit price of Linear Guides.)

Part Number					Part Number					Part Number					Part Number				
Type		H	L	Unit Price Block 1 pc. Block 2 pcs.	Type		H	L	Unit Price Block 1 pc. Block 2 pcs.	Type		H	L	Unit Price Block 1 pc. Block 2 pcs.	Type		H	L	Unit Price Block 1 pc. Block 2 pcs.
Miniature Linear Guides - Standard Rails	8		40~55		Miniature Type - Wide Rails	9		50~110		Medium/Heavy Load Type	24		100~220		Page P569, P575 P589, P597	28		100~220	
			56~70					111~140					221~280						
			71~85					141~170					281~340						
			86~100					171~200					341~400						
			101~115					201~230					401~460						
			116~130					231~260					461~520						
			35~75					261~290					521~580						
			76~95					50~110					581~640						
			96~115					111~140					641~700						
			116~135					141~170					701~760						
	10		136~155			12		171~200			28		761~820						
			156~175					201~230					821~880						
			176~195					231~260					881~940						
			196~215					261~290					941~1000						
			216~235					70~150					160~280						
			236~255					151~190					281~340						
			256~275					191~230					341~400						
			45~95					231~270					401~460						
			96~120					271~310					461~520						
			121~145					311~350					521~580						
	13		146~170			14		351~390			33		581~640						
			171~195					391~430					641~700						
			196~220					431~470					701~760						
			221~245					70~150					761~820						
			246~270					151~190					821~880						
			271~295					191~230					881~940						
			296~320					231~270					941~1000						
			321~345					271~310					160~280						
346~370				311~350				281~340											
371~395				351~390				341~400											
Page P533, 539		396~420		16		391~430		33		401~460									
		421~445				431~470				461~520									
		446~470				471~510				521~580									
		70~150				511~550				581~640									
		151~190				551~590				641~700									
		191~230				591~630				701~760									
		231~270				631~670				761~820									
		271~310								821~880									
		311~350								881~940									
		351~390								941~1000									

⚠ Not applicable to HG.5.



# Miniature Linear Guides

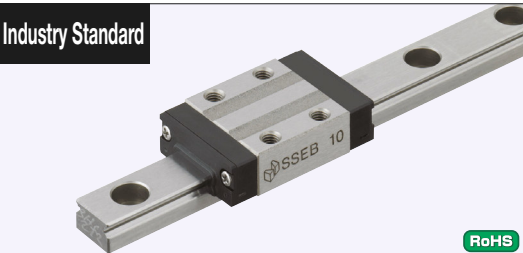
## Standard Blocks, Light Preload / Slight Clearance

= For customers using industry standard products =

frame-surrounded products are compliant with the industry standard specifications (Stainless Steel, Light Preload, High Grade Type). Select the block from this spec.

**Similar Products Comparison Points** | The most basic type among all the industry standard specifications. Select from Light Preload Types with superior precision and rigidity.

### Industry Standard

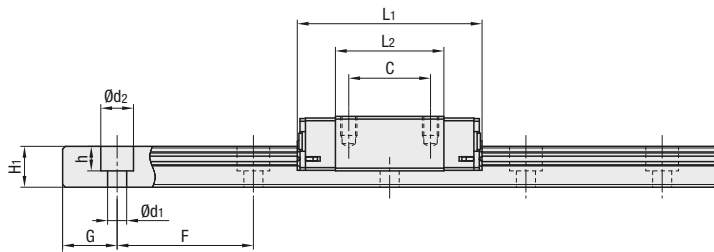
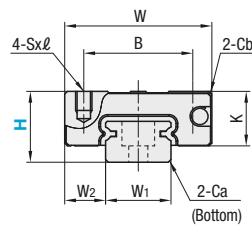
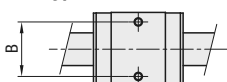


Material Hardness	Type			L Dimension	Number of Blocks
	Light Preload		Slight Clearance		
	High Grade	Precision Grade	Standard Grade		
Stainless Steel 56HRC~	SSEB	SSEBV	SSEBZ	Selectable	1
	SSE2B	SSE2BV	SSE2BZ	Selectable	2
	SSEBL	SSEBLV	SSEBLZ	Configurable	1
	SSE2BL	SSE2BLV	SSE2BLZ	Configurable	2
Carbon Steel 58HRC~	SEB	SEBV	SEBZ	Selectable	1
	SE2B	SE2BV	SE2BZ	Selectable	2
	SEBL	SEBLV	SEBLZ	Configurable	1
	SE2BL	SE2BLV	SE2BLZ	Configurable	2

Heat Resistant Temperature: -20 ~ 80°C  
H6 is for stainless steel only.  
H6 has no standard grade / precision grade.

- This Type has the same fitting dimensions as the other company products, and thus, can be substituted for them.
- Blocks and rails are not sold as separate items. This Type has guaranteed radial clearances and accuracies as sets of blocks and rails.

### H6 Type



For L Configurable, G dimensions differ from those shown in the table below. For details, see P531.

### Precautions for Use

- Blocks are equipped with retainers (wire) to prevent balls from falling off. For how to handle the blocks, see P525.
- Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
- Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
- Rails cannot be connected end to end.
- The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
- Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

### Accessory

- H6 comes with Number 0, Class 1 Phillips button head screws (M2x6).
- H8 comes with cap screws (M2x6).

### Others

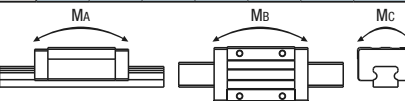
- Filled with Lithium soap based grease (Multemp Grease PS2 by Kyodo Yushi Co., Ltd.).
- For operating life calculation, see P527.
- For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/ta\\_soft.html](http://download.misumi.jp/mol/ta_soft.html).

Part Number		H	L	Block Dimension				Guide Rail Dimension										
Type				W	L1	B	C	Sxℓ	L2	K	Cb	W1	W2	H1	Ca	Counterbored Hole d1xd2xh	F	G
Stainless Steel		6	25~100 (70)	12	17.4	8	-	M2x1.5	9.7	4.5	0.3	5	3.5	4	0.3	2.4x3.5x1	15	5
Industry Standard Specifications		8	40~130 (70)	17	23.6	12	8	M2x2.5	13.6	6.5	0.3	7	5	4.7	0.3	2.4x4.2x2.3	15	5
SSEB SSE2B SSEBL SSE2BL	SSEBV SSE2BV SSEBLV SSE2BLV	10	35~275 (75)	20	30	15	10	M3x3	19	7.8	0.3	9	5.5	5.5	0.3	3.5x6x3.5	20	7.5
Carbon Steel		13	45~470 (95)	27	33.9	20	15	M3x3.5	19.9	10	0.5	12	7.5	7.5	0.5	3.5x6x4.5	25	10
SEB SE2B SEBL SE2BL	SEBV SE2BV SEBLV SE2BLV	16	70~670 (110)	32	42.4	25	20	M3x4	27.4	12	0.5	15	8.5	9.5	0.5	3.5x6x4.5	40	15
		20	100~700 (160)	40	50	30	25	M4x6	34.6	15	0.5	20	10	11	0.5	6x9.5x5.5	60	20

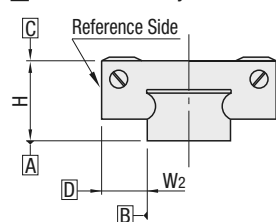
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Unit: μm

H	Basic Load Rating/Allowable Static Moment					Mass	
	C (Dynamic) Co (Static)	MA N·m	Mb N·m	Mc N·m	Block kg	Guide Rail kg/m	
6	0.3	0.6	0.8	0.8	1.5	0.004	0.13
8	0.9	1.5	4.1	4.1	5.2	0.01	0.19
10	1.5	2.5	5.1	5.1	10.2	0.02	0.31
13	2.2	3.3	8.8	9.5	16.1	0.04	0.61
16	3.6	5.4	21.6	23.4	39.6	0.06	1.02
20	5.2	8.5	48.4	48.4	86.4	0.12	1.65



### Preload and Accuracy Standards



Specifications	Light Preload, High Grade	Light Preload, Precision Grade	Slight Clearance, Standard Grade
Radial Clearance	-3~0		0~+15
Height H Tolerance	±20	±10	±20
Pair Variation of Height H	15	7	40
Width W2 Tolerance	±25	±15	±25
Pair Variation of Width W2	20	10	40
Running Parallelism of Plane C against Plane A	See P525		
Running Parallelism of Plane D against Plane A	See P525		

Slight Clearance Type has clearance (Gap) between rails and blocks.  
If precision / rigidity is required, select Light Preload Type.

H	L	Unit Price							
		Stainless Steel				Carbon Steel			
		SSEB	SSE2B	SSEBZ	SSE2BZ	SEB	SE2B	SEBZ	SE2BZ
6	25	-	-	-	-	-	-	-	-
	40	-	-	-	-	-	-	-	-
	55	-	-	-	-	-	-	-	-
	70	-	-	-	-	-	-	-	-
	85	-	-	-	-	-	-	-	-
	100	-	-	-	-	-	-	-	-
8	40	-	-	-	-	-	-	-	-
	55	-	-	-	-	-	-	-	-
	70	-	-	-	-	-	-	-	-
	85	-	-	-	-	-	-	-	-
	100	-	-	-	-	-	-	-	-
	115	-	-	-	-	-	-	-	-
10	130	-	-	-	-	-	-	-	-
	35	-	-	-	-	-	-	-	-
	55	-	-	-	-	-	-	-	-
	75	-	-	-	-	-	-	-	-
	95	-	-	-	-	-	-	-	-
	115	-	-	-	-	-	-	-	-
13	135	-	-	-	-	-	-	-	-
	155	-	-	-	-	-	-	-	-
	175	-	-	-	-	-	-	-	-
	195	-	-	-	-	-	-	-	-
	215	-	-	-	-	-	-	-	-
	235	-	-	-	-	-	-	-	-
16	255	-	-	-	-	-	-	-	-
	275	-	-	-	-	-	-	-	-
	45	-	-	-	-	-	-	-	-
	70	-	-	-	-	-	-	-	-
	95	-	-	-	-	-	-	-	-
	120	-	-	-	-	-	-	-	-
20	145	-	-	-	-	-	-	-	-
	170	-	-	-	-	-	-	-	-
	195	-	-	-	-	-	-	-	-
	220	-	-	-	-	-	-	-	-
	245	-	-	-	-	-	-	-	-
	270	-	-	-	-	-	-	-	-
20	295	-	-	-	-	-	-	-	-
	320	-	-	-	-	-	-	-	-
	345	-	-	-	-	-	-	-	-
	370	-	-	-	-	-	-	-	-
	395	-	-	-	-	-	-	-	-
	420	-	-	-	-	-	-	-	-
20	445	-	-	-	-	-	-	-	-
	470	-	-	-	-	-	-	-	-
	70	-	-	-	-	-	-	-	-
	110	-	-	-	-	-	-	-	-
	150	-	-	-	-	-	-	-	-
	190	-	-	-	-	-	-	-	-
20	230	-	-	-	-	-	-	-	-
	270	-	-	-	-	-	-	-	-
	310	-	-	-	-	-	-	-	-
	350	-	-	-	-	-	-	-	-
	390	-	-	-	-	-	-	-	-
	430	-	-	-	-	-	-	-	-
20	470	-	-	-	-	-	-	-	-
	510	-	-	-	-	-	-	-	-
	550	-	-	-	-	-	-	-	-
	590	-	-	-	-	-	-	-	-
	630	-	-	-	-	-	-	-	-
	670	-	-	-	-	-	-	-	-
20	100	-	-	-	-	-	-	-	-
	160	-	-	-	-	-	-	-	-
	220	-	-	-	-	-	-	-	-
	280	-	-	-	-	-	-	-	-
	340	-	-	-	-	-	-	-	-
	400	-	-	-	-	-	-	-	-
20	460	-	-	-	-	-	-	-	-
	520	-	-	-	-	-	-	-	-
	580	-	-	-	-	-	-	-	-
	640	-	-	-	-	-	-	-	-
	700	-	-	-	-	-	-	-	-
	700	-	-	-	-	-	-	-	-

### L Dimension Configurable Type (1mm Increment)

H	Unit Price			
	Stainless Steel		Carbon Steel	
	SSEBL	SSE2BL	SEBL	SE2BL
6	SEBLZ	SE2BLZ	-	-
8				
10				
13				
16				
20				



Ordering  
Example

Part Number - L

SSEB10 - 275

RSEB10 - 75

SSEB10L - 75

SSEB10G - 75

(LTBC Plating)  
(L Type Greased)  
(G Type Greased)

LTBC Plating and various Grease types available as alternative.

P531



Alterations

Part Number - L

SSEB16 - 430

(MC, RLC, LLC, WC, B3, B4)

RLC

Alterations	Code	Spec.	
Tapped Hole	MC	Changes the rail mounting holes from counterbored holes to tapped holes.	H 6 MC 6 M2.6 8 M3 10 M4 13 M5 16 M5 20 M6
Rail End Cut	LLC	Cuts rail ends.	Ordering Code LLC
Left End Cut	LLC	LLC	H L Cut N 10 2.5 5 13 5 5 16 10 5
Right End Cut	RLC	LLC	5
Parallel Use of 2 Rails	WC	Pair variation of Height H between 2 rails is set within 15μm. Rails are shipped in pairs. Specify the actual rail quantity (even number) to order, not "pairs". Applicable to High Grade Type only. Not applicable to low temperature chrome plated products.	
3-Block Specifications	B3	Add 2 blocks to 1-block product to ship as 3-block separate item. There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SSEB10-255-B3	
4-Block Specifications	B4	Add 3 blocks to 1-block product to ship as 4-block separate item. There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SEB16-670-B4	

### Additional Block Price (Same Price for High/Standard Grade)

H	B3: Price Adder		B4: Price Adder	
	Stainless Steel	Carbon Steel	Stainless Steel	Carbon Steel
*6	-	-	-	-
8	-	-	-	-
10	-	-	-	-
13	-	-	-	-
16	-	-	-	-
20	-	-	-	-

\* H6 B3 (3 blocks) is applicable to High Grade Type only

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.







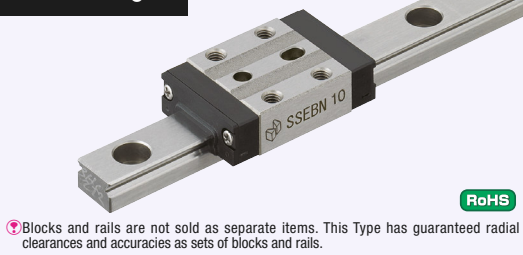
# Miniature Linear Guides

## Standard Blocks with Dowel Holes, Light Preload / Slight Clearance

= For customers selecting MISUMI original specifications =  
frame-surrounded products are compliant with the standard specifications  
(Stainless Steel, Light Preload, High Grade Type).  
Select the block from this spec.

Similar Products Comparison Points | MISUMI original specifications with dowel holes. Requires less time for assembly and has better repeatability.

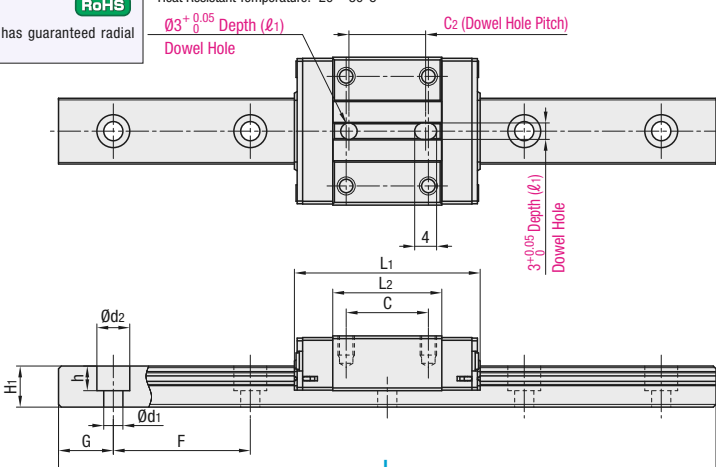
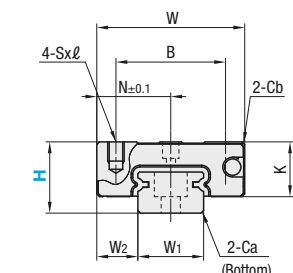
### MISUMI Original



Material	Hardness	Type		L Dimension	Number of Blocks
		Light Preload High Grade	Slight Clearance Standard Grade		
Standard Materials	Stainless Steel 56HRC~	SSEBN	SSEBNZ	Selectable	1
		SSE2BN	SSE2BNZ		2
		SSEBNL	SSEBNLZ	Configurable	1
		SSE2BNL	SSE2BNLZ		2
		SEBN	SEBNZ	Selectable	1
Carbon Steel 58HRC~		SE2BN	SE2BNZ		2
		SEBNL	SEBNLZ	Configurable	1
		SE2BNL	SE2BNLZ		2

Heat Resistant Temperature: -20 ~ 80°C

Ø3<sup>+0.05</sup><sub>0</sub> Depth (L1)  
Dowel Hole  
C2 (Dowel Hole Pitch)  
3<sup>+0.05</sup><sub>0</sub> Depth (L1)  
Dowel Hole



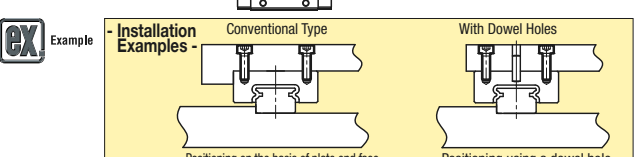
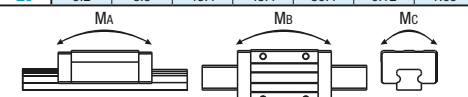
For L Configurable, G dimensions differ from those shown in the table below. For details, see P531.

- Precautions for Use
  - Blocks are equipped with retainers (wire) to prevent balls from falling off.
  - For how to handle the blocks, see P525.
  - Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
  - Straight grooves are provided on datum planes.
  - Be sure to match the datum lines when using.
  - Rails cannot be connected end to end.
  - The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
  - Minor bending of the rail will be adjusted after being mounted and will not affect the performance.
- Accessory
  - H8 comes with cap screws (M2x6).
- Others
  - Filled with Lithium soap based grease (Multemp Grease PS2 by Kyodo Yushi Co., Ltd.).
  - For operating life calculation, see P527.
  - For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/ta\\_soft.html](http://download.misumi.jp/mol/ta_soft.html).

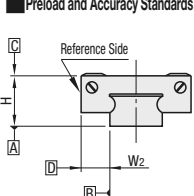
Part Number		H	L	Block Dimension								Dowel Hole Dimensions				Guide Rail Dimension							
Type				W	L <sub>1</sub>	B	C	Sxℓ	L <sub>2</sub>	K	Cb	N	C <sub>2</sub>	(ℓ <sub>1</sub> )	W <sub>1</sub>	W <sub>2</sub>	H <sub>1</sub>	Ca	Counterbored Hole d <sub>1</sub> x d <sub>2</sub> x h	F	G		
⚠ Dimensions in ( ) are for 2-Block Type. Stainless Steel			8	40~130 (70)	17	23.6	12	8	M2x2.5	13.6	6.5	0.3	8.5	8	2	7	5	4.7	0.3	2.4x4.2x2.3	15	5	
Standard Specifications SSEBN SSE2BN SSEBNL SSE2BNL			SSEBNZ SSE2BNZ SSEBNLZ SSE2BNLZ	10	35~275 (95)	20	30	15	10	M3x3	19	7.8	0.3	10	10	2.5	9	5.5	5.5	0.3	3.5x6x3.5	20	7
				13	45~470 (120)	27	33.9	20	15	M3x3.5	19.9	10	0.5	13.5	14	3	12	7.5	7.5	0.5	3.5x6x4.5	25	1
				16	70~670 (150)	32	42.4	25	20	M3x4	27.4	12	0.5	16	20	4	15	8.5	9.5	0.5	3.5x6x4.5	40	1
				20	100~700 (160)	40	50	30	25	M4x6	34.6	15	0.5	20	25	4	20	10	11	0.5	6x9.5x5.5	60	2
Carbon Steel SEBN SE2BN SEBNL SE2BNL			SEBNZ SE2BNZ SEBNLZ SE2BNLZ																				

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H	Basic Load Rating/Allowable Static Moment		Mass	
	C (Dynamic) kN	Co (Static) kN	MA N-m	MB N-m
8	0.9	1.5	4.1	5.2
10	1.5	2.5	5.1	10.2
13	2.2	3.3	8.8	16.1
16	3.6	5.4	21.6	39.6
20	5.2	8.5	48.4	86.4



### Preload and Accuracy Standards



Specifications		Light Preload, High Grade	Slight Clearance, Standard Grade
Radial Clearance		-3~0	0~+15
Height H Tolerance		±20	±20
Pair Variation of Height H		15	40
Width W2 Tolerance		±25	±25
Pair Variation of Width W2		20	40
Running Parallelism of Plane C against Plane A		See P525	
Running Parallelism of Plane D against Plane A		See P525	

Slight Clearance Type has clearance (Gap) between rails and blocks. If precision / rigidity is required, select Light Preload Type.

H	L	Unit Price							
		Stainless Steel				Carbon Steel			
		High Grade	Standard Grade	High Grade	Standard Grade	High Grade	Standard Grade	High Grade	Standard Grade
8	40	SSEBN	SSE2BN	SSEBNZ	SSE2BNZ	SEBN	SE2BN	SEBNZ	SE2BNZ
	55	-	-	-	-	-	-	-	-
	70	-	-	-	-	-	-	-	-
	85	-	-	-	-	-	-	-	-
	100	-	-	-	-	-	-	-	-
	115	-	-	-	-	-	-	-	-
	130	-	-	-	-	-	-	-	-
	145	-	-	-	-	-	-	-	-
	160	-	-	-	-	-	-	-	-
	175	-	-	-	-	-	-	-	-
10	190	-	-	-	-	-	-	-	-
	205	-	-	-	-	-	-	-	-
	220	-	-	-	-	-	-	-	-
	235	-	-	-	-	-	-	-	-
	250	-	-	-	-	-	-	-	-
	265	-	-	-	-	-	-	-	-
	280	-	-	-	-	-	-	-	-
	295	-	-	-	-	-	-	-	-
	310	-	-	-	-	-	-	-	-
	325	-	-	-	-	-	-	-	-
13	340	-	-	-	-	-	-	-	-
	355	-	-	-	-	-	-	-	-
	370	-	-	-	-	-	-	-	-
	385	-	-	-	-	-	-	-	-
	400	-	-	-	-	-	-	-	-
	415	-	-	-	-	-	-	-	-
	430	-	-	-	-	-	-	-	-
	445	-	-	-	-	-	-	-	-
	460	-	-	-	-	-	-	-	-
	475	-	-	-	-	-	-	-	-
16	490	-	-	-	-	-	-	-	-
	505	-	-	-	-	-	-	-	-
	520	-	-	-	-	-	-	-	-
	535	-	-	-	-	-	-	-	-
	550	-	-	-	-	-	-	-	-
	565	-	-	-	-	-	-	-	-
	580	-	-	-	-	-	-	-	-
	595	-	-	-	-	-	-	-	-
	610	-	-	-	-	-	-	-	-
	625	-	-	-	-	-	-	-	-
20	640	-	-	-	-	-	-	-	-
	655	-	-	-	-	-	-	-	-
	670	-	-	-	-	-	-	-	-
	685	-	-	-	-	-	-	-	-
	700	-	-	-	-	-	-	-	-
	715	-	-	-	-	-	-	-	-
	730	-	-	-	-	-	-	-	-
	745	-	-	-	-	-	-	-	-
	760	-	-	-	-	-	-	-	-
	775	-	-	-	-	-	-	-	-

### L Dimension Configurable Type (1mm Increment)

H	L	Unit Price							
		Stainless Steel				Carbon Steel			
		High Grade	Standard Grade	High Grade	Standard Grade	High Grade	Standard Grade	High Grade	Standard Grade
8	40	SSEBNL	SSE2BNL	SSEBNLZ	SSE2BNLZ	SEBNL	SE2BNL	SEBNLZ	SE2BNLZ
	55	-	-	-	-	-	-	-	-
	70	-	-	-	-	-	-	-	-
	85	-	-	-	-	-	-	-	-
	100	-	-	-	-	-	-	-	-
10	115	-	-	-	-	-	-	-	-
	130	-	-	-	-	-	-	-	-
	145	-	-	-	-	-	-	-	-
	160	-	-	-	-	-	-	-	-
	175	-	-	-	-	-	-	-	-
13	190	-	-	-	-	-	-	-	-
	205	-	-	-	-	-	-	-	-
	220	-	-	-	-	-	-	-	-
	235	-	-	-	-	-	-	-	-
	250	-	-	-	-	-	-	-	-
16	265	-	-	-	-	-	-	-	-
	280	-	-	-	-	-	-	-	-
	295	-	-	-	-	-	-	-	-
	310	-	-	-	-	-	-	-	-
	325	-	-	-	-	-	-	-	-
20	340	-	-	-	-	-	-	-	-
	355	-	-	-	-	-	-	-	-
	370	-	-	-	-	-	-	-	-
	385	-	-	-	-	-	-	-	-
	400	-	-	-	-	-	-	-	-

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.



Part Number - L  
SSEBN10 - 275  
SSE2BNL10L - 100 (L Type Greased)  
SSE2BNL10G - 100 (G Type Greased)  
Alternative grease types available.  
P531



Part Number - L - (MC, RLC, LLC, B3, B4)  
SSEBN16 - 430 - MC

Alterations	Code	Spec.
Tapped Hole	MC	Changes the rail mounting holes from counterbored holes to tapped holes. H MC 8 M3 10 M4 13 M5 16 M5 20 M6
Rail End Cut	LLC	Cuts rail ends. Ordering Code LLC H L Cut N 10 2.5 5 13 5 5 16 10 5 Applicable to Selectable Type only. Overall length will be shorter by cutting. Not applicable to H8, 20 Not applicable to L35 of H10 and L45 of H13.
3-Block Specifications	B3	Add 2 blocks to 1-block product to ship as 3-block separate item. There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SSEBNL10-200-B3
4-Block Specifications	B4	Add 3 blocks to 1-block product to ship as 4-block separate item. There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SEBNL16-600-B4

Additional Block Price (Same Price for High/Standard Grade)				Selectable Shortest Rail Length for B3/B4			
H	B3: Price Adder	Carbon Steel	B4: Price Adder	Carbon Steel	H	B3 (3-block)	B4 (4-block)
8					8	85	115
10					10	115	155
13					13	145	170
16					16	190	230
20					20	220	280

### Options for Linear Guide

Position Retaining Parts	Block / Rail Fixing Parts




# Miniature Linear Guides

## Long Blocks, Light Preload

= For customers using industry standard products =  
frame-surrounded products are compliant with the industry standard specifications  
(Stainless Steel, Light Preload, High Grade Type). Select the block from this spec.

Similar Products Comparison Points | The industry standard Long Block Type. Select from Light Preload Types with superior precision and rigidity.

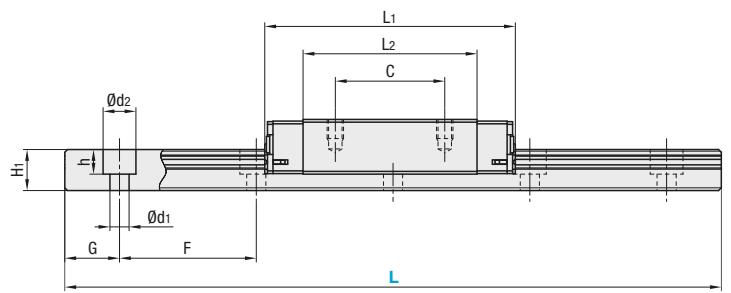
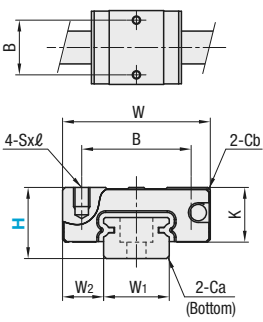
Industry Standard



RoHS

This Type has the same fitting dimensions as the other company products, and thus, can be substituted for them.  
Blocks and rails are not sold as separate items. This Type has guaranteed radial clearances and accuracies as sets of blocks and rails.

H6 Type



For L Configurable, G dimensions differ from those shown in the table below. For details, see P.531.

- Precautions for Use

  - Blocks are equipped with retainers (wire) to prevent balls from falling off. For how to handle the blocks, see P.525.
  - Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
  - Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
  - Rails cannot be connected end to end.
  - The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane). Minor bending of the rail will be adjusted after being mounted and will not affect the performance.
- Accessory

  - H6 comes with Number 0, Class 1 Phillips button head screws (M2x6).
  - H8 comes with cap screws (M2x6).
- Others

  - Filled with Lithium soap based grease (Multemp Grease PS2 by Kyodo Yushi Co., Ltd.).
  - For operating life calculation, see P.527.
  - For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

Part Number			H	L	Block Dimension							Guide Rail Dimension							
Type					W	L <sub>1</sub>	B	C	Sxℓ	L <sub>2</sub>	K	Cb	W <sub>1</sub>	W <sub>2</sub>	H <sub>1</sub>	Ca	Counterbored Hole d1xℓ2xh	F	G
📏 Dimensions in ( ) are for 2-Block Type.			6	40~100 (70)	12	21	8	-	M2x1.5	13.3	4.5	0.3	5	3.5	4	0.3	2.4x3.5x1	15	5
Stainless Steel <div>Industry Standard Specification</div> <div>SSELB SSEL2B SSELBL SSEL2BL</div>	SSELBV	SSELBZ	8	40~130 (85)	17	32	12	13	M2x2.5	22	6.5	0.3	7	5	4.7	0.3	2.4x4.2x2.3	15	5
	SSEL2BV	SSEL2BZ	10	55~275 (95)	20	40	15	16	M3x3	29	7.8	0.3	9	5.5	5.5	0.3	3.5x6x3.5	20	7.5
	SSELBLV	SSELBLZ																	
	SSEL2BLV	SSEL2BLZ	13	70~470 (120)	27	45.8	20	20	M3x3.5	31.8	10	0.5	12	7.5	7.5	0.5	3.5x6x4.5	25	10
Carbon Steel <div>SELB SEL2B SELBL SEL2BL</div>	SELBV	SELBZ	16	110~670 (150)	32	58.3	25	25	M3x4	43.3	12	0.5	15	8.5	9.5	0.5	3.5x6x4.5	40	15
	SEL2BV	SEL2BZ	20	160~700 (220)	40	67.7	30	30	M4x6	52.3	15	0.5	20	10	11	0.5	6x9.5x5.5	60	20

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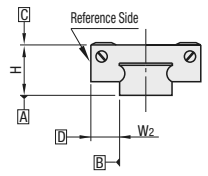
H	Basic Load Rating/Allowable Static Moment					Mass	
	C (Dynamic) kN	Co (Static) kN	MA N-m	MB N-m	MC N-m	Block kg	Guide Rail kg/m
6	0.6	1.0	1.8	1.8	2.3	0.005	0.13
8	1.6	2.4	7.5	7.5	9.0	0.016	0.19
10	2.2	3.7	12.3	12.3	13.0	0.03	0.31
13	3.5	5.3	24.5	26.4	32.3	0.06	0.61
16	5.8	8.7	57.8	62.6	67.6	0.10	1.02
20	7.2	13.5	80.7	80.7	138.2	0.18	1.65

MA

MB

MC

Preload and Accuracy Standards



Specifications	Light Preload, High Grade	Light Preload, Precision Grade	Slight Clearance Standard Grade
Radial Clearance	-3~0	0~+15	0~+15
Height H Tolerance	±20	±10	±20
Pair Variation of Height H	15	7	40
Width W2 Tolerance	±25	±15	±25
Pair Variation of Width W2	20	10	40
Running Parallelism of Plane C against Plane A	See P.525		
Running Parallelism of Plane D against Plane A	See P.525		

Slight Clearance Type has clearance (Gap) between rails and blocks. If precision / rigidity is required, select Light Preload Type.

H	L	Unit Price							
		Stainless Steel				Carbon Steel			
		SSELB	SSEL2B	SSELBZ	SSEL2BZ	SELB	SEL2B	SELBZ	SEL2BZ
6	40	-	-	-	-	-	-	-	-
	55	-	-	-	-	-	-	-	-
	70	-	-	-	-	-	-	-	-
	85	-	-	-	-	-	-	-	-
	100	-	-	-	-	-	-	-	-
8	40	-	-	-	-	-	-	-	-
	55	-	-	-	-	-	-	-	-
	70	-	-	-	-	-	-	-	-
	85	-	-	-	-	-	-	-	-
	100	-	-	-	-	-	-	-	-
10	115	-	-	-	-	-	-	-	-
	130	-	-	-	-	-	-	-	-
	155	-	-	-	-	-	-	-	-
	175	-	-	-	-	-	-	-	-
	195	-	-	-	-	-	-	-	-
13	215	-	-	-	-	-	-	-	-
	235	-	-	-	-	-	-	-	-
	255	-	-	-	-	-	-	-	-
	275	-	-	-	-	-	-	-	-
	295	-	-	-	-	-	-	-	-
16	310	-	-	-	-	-	-	-	-
	330	-	-	-	-	-	-	-	-
	350	-	-	-	-	-	-	-	-
	370	-	-	-	-	-	-	-	-
	395	-	-	-	-	-	-	-	-
20	420	-	-	-	-	-	-	-	-
	445	-	-	-	-	-	-	-	-
	470	-	-	-	-	-	-	-	-
	510	-	-	-	-	-	-	-	-
	550	-	-	-	-	-	-	-	-
24	590	-	-	-	-	-	-	-	-
	630	-	-	-	-	-	-	-	-
	670	-	-	-	-	-	-	-	-
	710	-	-	-	-	-	-	-	-
	750	-	-	-	-	-	-	-	-

L Dimension Configurable Type (1mm Increment)				
H	Unit Price			
	Stainless Steel		Carbon Steel	
	SSELBL	SSEL2BL	SELBL	SEL2BL
6	SSELBLZ	SSEL2BLZ	SELBLZ	SEL2BLZ
8				
10				
13				
16				
20				

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.

Ordering Example

Part Number

-

L

SSELB10

-

275

RSELB10

-

75

SSELB10L

-

75

SSELB10G

-

75

LTBC Plating and various Grease types available as alternative.

P.531

Alterations

Part Number

-

L

MC

-

450

MC

Alterations	Code	Spec.			
Tapped Hole	MC	Changes the rail mounting holes from counterbored holes to tapped holes.	H	MC	H
			6	M2.6	13
			8	M3	16
			10	M4	20
Rail End Cut:	LLC	Cuts rail ends. Ordering Code LLC	H	L	N
			10	2.5	5
			13	5	5
			16	10	5
Parallel Use of 2 Rails	WC	Pair variation of Height H between 2 rails is set within 15µm. Rails are shipped in pairs. Specify the actual rail quantity (even number) to order, not "pairs". Applicable to High Grade Type only. Not applicable to low temperature chrome plated products.			
3-Block Specifications	B3	Add 2 blocks to 1-block product to ship as 3-block separate item. There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SSELB10-215-B3			
4-Block Specifications	B4	Add 3 blocks to 1-block product to ship as 4-block separate item. There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SSELB13-220-B4			

Additional Block Price (Same Price for High/Standard Grade)				Selectable Shortest Rail Length for B3/B4			
H	B3: Price Adder		B4: Price Adder		H	B3 (3-block)	B4 (4-block)
	Stainless Steel	Carbon Steel	Stainless Steel	Carbon Steel			
8					6	85	-
10					8	115	-
13					10	155	195
16					13	170	220
20					16	230	270
					20	280	340

⚠ Not applicable to H6.

Options for Linear Guide

Position Retaining Parts

Block / Rail Fixing Parts

Rail Push Plates

Linear Lock

Rail Height Adjusting Blocks

Linear Guide Lock Units

Block Derailment Prevention Parts

Stopper Bolts







# Miniature Linear Guides

## Long Blocks with Dowel Holes, Light Preload

= For customers selecting MISUMI original specifications =

frame-surrounded products are compliant with the standard specifications (Stainless Steel, Light Preload, High Grade Type).  
Select the block from this spec.

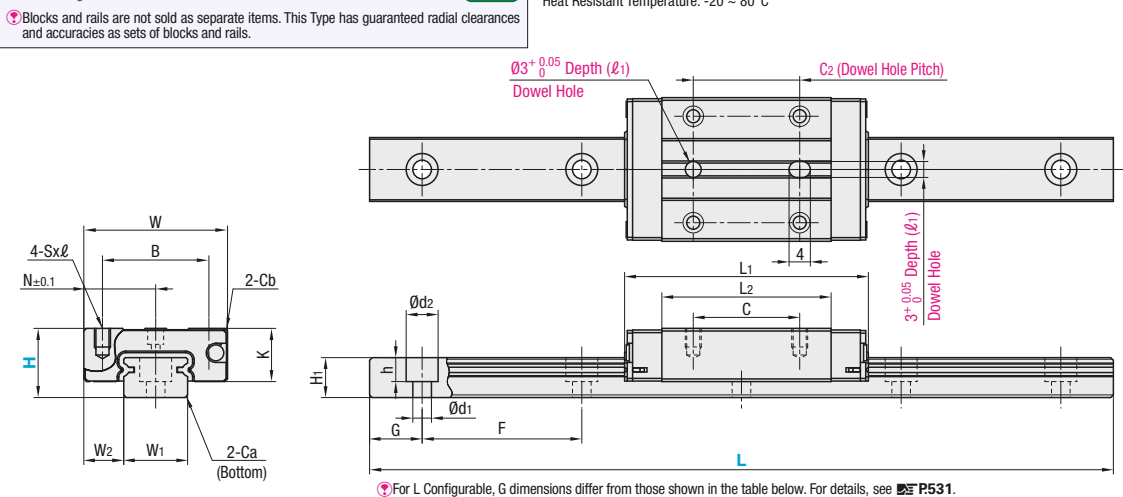
Similar Products Comparison Points | MISUMI original specifications with dowel holes.  
Requires less time for assembly and has better repeatability.

### MISUMI Original



Material Hardness	Type	L Dimension	Number of Blocks
Standard Materials	Stainless Steel 56HRC~	Selectable	1
	SSELBN	2	2
	SSEL2BN	1	1
	SSELBNL	2	2
Carbon Steel 58HRC~	SELBN	Selectable	1
	SEL2BN	2	2
	SELBNL	1	1
	SEL2BNL	2	2

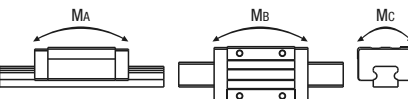
Heat Resistant Temperature: -20 ~ 80°C



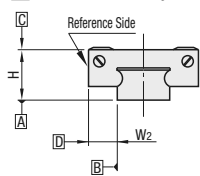
- Precautions for Use
  - Blocks are equipped with retainers (wire) to prevent balls from falling off. For how to handle the blocks, see P525.
  - Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
  - Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
  - Rails cannot be connected end to end.
  - The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
  - Minor bending of the rail will be adjusted after being mounted and will not affect the performance.
- Accessories
  - H8 comes with cap screws (M2x6).
- Others
  - Filled with Lithium soap based grease (Multemp Grease PS2 by Kyodo Yushi Co., Ltd.).
  - For operating life calculation, see P527.
  - For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

Part Number		Block Dimension																Dowel Hole Dimensions				Guide Rail Dimension							
Type	H	L	W	L1	B	C	Sxℓ	L2	K	Cb	N	C2	(ℓ1)	W1	W2	H1	Ca	Counterbored Hole d1xd2xh	F	G									
Stainless Steel Standard Specifications SSELBN SSEL2BN SSELBNL SSEL2BNL	Carbon Steel SELBN SEL2BN SELBNL SEL2BNL	8	40~130 (100)	17	32	12	13	M2x2.5	22	6.5	0.3	8.5	13	2	7	5	4.7	0.3	2.4x4.2x2.3	15	5								
		10	55~275 (115)	20	40	15	16	M3x3	29	7.8	0.3	10	16	2.5	9	5.5	5.5	0.3	3.5x6x3.5	20	7.5								
		13	70~470 (120)	27	45.8	20	20	M3x3.5	31.8	10	0.5	13.5	20	3	12	7.5	7.5	0.5	3.5x6x4.5	25	10								
		16	110~670 (150)	32	58.3	25	25	M3x4	43.3	12	0.5	16	25	4	15	8.5	9.5	0.5	3.5x6x4.5	40	15								
		20	160~700 (220)	40	67.7	30	30	M4x6	52.3	15	0.5	20	30	4	20	10	11	0.5	6x9.5x5.5	60	20								

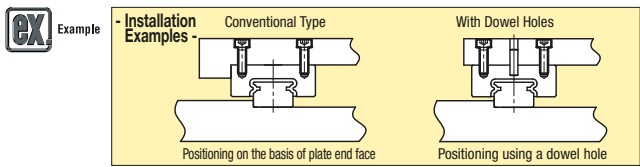
H	Basic Load Rating/Allowable Static Moment		Mass	
	C (Dynamic) kN	Co (Static) kN	MA N-m	MB N-m
8	1.6	2.4	7.5	7.5
10	2.2	3.7	12.3	12.3
13	3.5	5.3	24.5	26.4
16	5.8	8.7	57.8	62.6
20	7.2	13.5	80.7	138.2



### Preload and Accuracy Standards



Specifications		Unit: µm
Radial Clearance	-3~0	
Height H Tolerance	±20	
Pair Variation of Height H	15	
Width W2 Tolerance	±25	
Pair Variation of Width W2	20	
Running Parallelism of Plane C against Plane A	See P525	
Running Parallelism of Plane D against Plane A	See P525	



H	L	Unit Price			
		Stainless Steel		Carbon Steel	
8	40	SSELBN	SSEL2BN	SELBN	SEL2BN
	55	-	-	-	-
	70	-	-	-	-
	85	-	-	-	-
	100	-	-	-	-
	115	-	-	-	-
	130	-	-	-	-
	145	-	-	-	-
	160	-	-	-	-
	175	-	-	-	-
10	190	-	-	-	-
	205	-	-	-	-
	220	-	-	-	-
	235	-	-	-	-
	250	-	-	-	-
	265	-	-	-	-
	280	-	-	-	-
	295	-	-	-	-
	310	-	-	-	-
	325	-	-	-	-
13	340	-	-	-	-
	355	-	-	-	-
	370	-	-	-	-
	385	-	-	-	-
	400	-	-	-	-
	415	-	-	-	-
	430	-	-	-	-
	445	-	-	-	-
	460	-	-	-	-
	475	-	-	-	-
16	490	-	-	-	-
	505	-	-	-	-
	520	-	-	-	-
	535	-	-	-	-
	550	-	-	-	-
	565	-	-	-	-
	580	-	-	-	-
	595	-	-	-	-
	610	-	-	-	-
	625	-	-	-	-
20	640	-	-	-	-
	655	-	-	-	-
	670	-	-	-	-
	685	-	-	-	-
	700	-	-	-	-
	715	-	-	-	-
	730	-	-	-	-
	745	-	-	-	-
	760	-	-	-	-
	775	-	-	-	-

### L Dimension Configurable Type (1mm Increment)

H	Unit Price			
	Stainless Steel		Carbon Steel	
8	SSELBNL	SSEL2BNL	SELBNL	SEL2BNL
10	-	-	-	-
13	-	-	-	-
16	-	-	-	-
20	-	-	-	-

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.



Ordering Example

Part Number - L  
SSELBN10 - 275  
SSELBN10L - 75 (L Type Greased)  
SSELBN10G - 75 (G Type Greased)  
Alternative grease types available.  
P531



Alterations

Part Number - L - (MC, RLC, LLC, B3, B4)  
SSEL2BN16 - 430 - MC - RLC

Alterations	Code	Spec.
Tapped Hole	MC	Changes the rail mounting holes from counterbored holes to tapped holes. H MC 8 M3 10 M4 13 M5 16 M5 20 M6
Rail End Cut	Left End Cut LLC Right End Cut RLC	Cuts rail ends. Ordering Code LLC H L Cut N 10 2.5 5 13 5 5 16 10 5 Applicable to Selectable Type only. Overall length will be shorter by cutting. Not applicable to H8/20
3-Block Specifications	B3	Add 2 blocks to 1-block product to ship as 3-block separate item. There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SELBN10-195-B3
4-Block Specifications	B4	Add 3 blocks to 1-block product to ship as 4-block separate item. There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SELBN16-510-B4

### Additional Block Price

H	B3: Price Adder		B4: Price Adder	
	Stainless Steel	Carbon Steel	Stainless Steel	Carbon Steel
8	-	-	-	-
10	-	-	-	-
13	-	-	-	-
16	-	-	-	-
20	-	-	-	-

### Selectable Shortest Rail Length for B3/B4

H	B3 (3-block)	B4 (4-block)
8	115	-
10	155	195
13	170	220
16	230	270
20	280	340

Not applicable to H8 B4 (4 blocks)

### Options for Linear Guide

Position Retaining Parts	Block / Rail Fixing Parts
Rail Push Plates P607	Linear Lock P612
Rail Height Adjusting Blocks P609	Linear Guide Lock Units P613
Block Derailment Prevention Parts Stopper Bolts P612	Linear Guide Lock Units P614



# Miniature Linear Guides

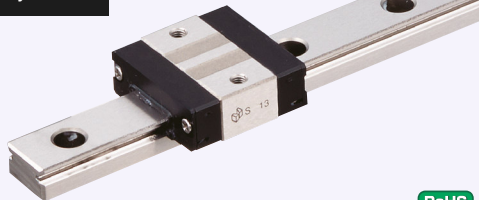
## Short Blocks, Light Preload / Slight Clearance

= For customers using industry standard products =

frame-surrounded products are compliant with the industry standard specifications (Stainless Steel, Light Preload, High Grade Type). Select the block from this spec.

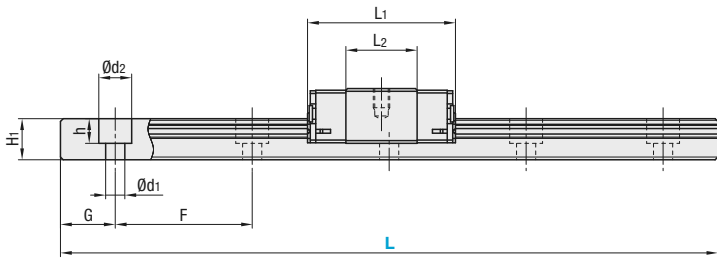
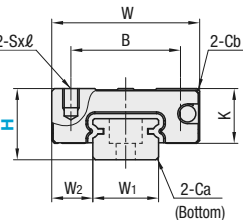
**Features:** Short Block Type of industry-standard spec. **20% more compact** than standard blocks.

### Industry Standard



RoHS

- This Type has the same fitting dimensions as the other company products, and thus, can be substituted for them.
- Blocks and rails are not sold as separate items. This Type has guaranteed radial clearances and accuracies as sets of blocks and rails.



For L Configurable, G dimensions differ from those shown in the table below. For details, see P531

### Precautions for Use

- Blocks are equipped with retainers (wire) to prevent balls from falling off. For how to handle the blocks, see P525.
- Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations. Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
- Rails cannot be connected end to end.
- The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
- Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

### Accessory

- H8 comes with cap screws (M2x6).

### Others

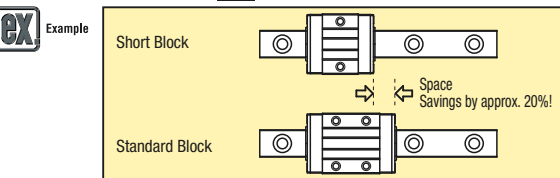
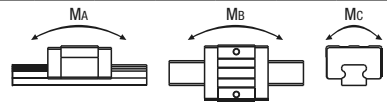
- Filled with Lithium soap based grease (Multemp Grease PS2 by Kyodo Yushi Co., Ltd.).
- For operating life calculation, see P527.
- For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

Part Number		H	L	Block Dimension						Guide Rail Dimension								
Type				W	L <sub>1</sub>	B	Sxℓ	L <sub>2</sub>	K	Cb	W <sub>1</sub>	W <sub>2</sub>	H <sub>1</sub>	Ca	Counterbored Hole d <sub>1</sub> x d <sub>2</sub> x h	F	G	
📏Dimensions in ( ) are for 2-Block Type.																		
Stainless Steel		8	40~130 (55)	17	19.6	12	M2x2.5	9.6	6.5	0.3	7	5	4.7	0.3	2.4x4.2x2.3	15	5	
Industry Standard Specifications																		
SSEBS			10	35~275 (75)	20	22.9	15	M3x3	11.9	7.8	0.3	9	5.5	5.5	0.3	3.5x6x3.5	20	7.5
SSE2BS																		
SSEBSL																		
SSE2BSL																		
Carbon Steel		13	45~470 (95)	27	27	20	M3x3.5	13	10	0.5	12	7.5	7.5	0.5	3.5x6x4.5	25	10	
SEBS																		
SE2BS			16	70~670 (110)	32	32.7	25	M3x4	17.7	12	0.5	15	8.5	9.5	0.5	3.5x6x4.5	40	15
SEBSL																		
SE2BSL																		
SE2BSL																		

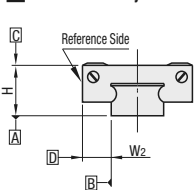
kgf=Nx0.101972

Unit: μm

Basic Load Rating		Allowable Static Moment		Mass	
H	C (Dynamic) kN	Co (Static) kN	MA N-m	MB N-m	MC N-m
8	0.79	1.27	1.9	1.6	4.6
10	1.16	1.68	3.1	2.6	7.9
13	1.63	2.38	5.2	4.4	14.8
16	3.08	4.23	12.3	10.3	32.6



### Preload and Accuracy Standards



Specifications	Light Preload, High Grade	Slight Clearance, Standard Grade
Radial Clearance	-3~0	0~+15
Height H Tolerance	±20	±20
Pair Variation of Height H	15	40
Width W2 Tolerance	±25	±25
Pair Variation of Width W2	20	40
Running Parallelism of Plane C against Plane A	See P525	
Running Parallelism of Plane D against Plane A	See P525	

Slight Clearance Type has clearance (Gap) between rails and blocks. If precision / rigidity is required, select Light Preload Type.

H	L	Unit Price							
		Stainless Steel				Carbon Steel			
		High Grade	Standard Grade	High Grade	Standard Grade	High Grade	Standard Grade	High Grade	Standard Grade
8	40	SSEBS	SSE2BS	SSEBSZ	SSE2BSZ	SEBS	SE2BS	SEBSZ	SE2BSZ
	55	-	-	-	-	-	-	-	-
	70	-	-	-	-	-	-	-	-
	85	-	-	-	-	-	-	-	-
	100	-	-	-	-	-	-	-	-
	115	-	-	-	-	-	-	-	-
	130	-	-	-	-	-	-	-	-
	35	-	-	-	-	-	-	-	-
	55	-	-	-	-	-	-	-	-
	75	-	-	-	-	-	-	-	-
10	95	-	-	-	-	-	-	-	-
	115	-	-	-	-	-	-	-	-
	135	-	-	-	-	-	-	-	-
	155	-	-	-	-	-	-	-	-
	175	-	-	-	-	-	-	-	-
	195	-	-	-	-	-	-	-	-
	215	-	-	-	-	-	-	-	-
	235	-	-	-	-	-	-	-	-
	255	-	-	-	-	-	-	-	-
	275	-	-	-	-	-	-	-	-
13	45	-	-	-	-	-	-	-	-
	70	-	-	-	-	-	-	-	-
	95	-	-	-	-	-	-	-	-
	120	-	-	-	-	-	-	-	-
	145	-	-	-	-	-	-	-	-
	170	-	-	-	-	-	-	-	-
	195	-	-	-	-	-	-	-	-
	220	-	-	-	-	-	-	-	-
	245	-	-	-	-	-	-	-	-
	270	-	-	-	-	-	-	-	-
16	295	-	-	-	-	-	-	-	-
	320	-	-	-	-	-	-	-	-
	345	-	-	-	-	-	-	-	-
	370	-	-	-	-	-	-	-	-
	395	-	-	-	-	-	-	-	-
	420	-	-	-	-	-	-	-	-
	445	-	-	-	-	-	-	-	-
	470	-	-	-	-	-	-	-	-
	70	-	-	-	-	-	-	-	-
	110	-	-	-	-	-	-	-	-

### L Dimension Configurable Type (1mm Increment)

H		Unit Price							
		Stainless Steel				Carbon Steel			
		High Grade	Standard Grade	High Grade	Standard Grade	High Grade	Standard Grade	High Grade	Standard Grade
8		SSEBSL	SSE2BSL	SSEBSLZ	SSE2BSLZ	SEBSL	SE2BSL	SEBSLZ	SE2BSLZ
10									
13									
16									

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.



Ordering Example  
Part Number - L  
SSE2BS10 - 275  
SSE2BS10L - 175 (L Type Greased)  
SSE2BS10G - 175 (G Type Greased)  
Alternative grease types available. P531



Alterations  
Part Number - L - (MC, RLC, LLC, B3, B4)  
SSE2BSL16 - 450 - MC

Alterations	Code	Spec.
Tapped Hole	MC	Changes the rail mounting holes from counterbored holes to tapped holes. H MC 8 M3 10 M4 13 16 M5
Rail End Cut	Left End Cut LLC Right End Cut RLC	Cuts rail ends. Ordering Code LLC H L Cut N 10 2.5 5 13 5 5 16 10 Applicable to Selectable Type only. Overall length will be shorter by cutting. Not applicable to H8. Not applicable to L35 of H10 and L45 of H13.
3-Block Specifications	B3	Add 2 blocks to 1-block product to ship as 3-block separate item. There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SSEBS10-120-B3
4-Block Specifications	B4	Add 3 blocks to 1-block product to ship as 4-block separate item. There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SSEBS16-190-B4

### Additional Block Price (Same Price for High/Standard Grade)

H	B3: Price Adder	B4: Price Adder
8	Stainless Steel Carbon Steel	Stainless Steel Carbon Steel
10		
13		
16		

### Selectable Shortest Rail Length for B3/B4

H	B3 (3-block)	B4 (4-block)
8	85	100
10	95	135
13	120	145
16	150	190

### Options for Linear Guide

Position Retaining Parts	Block / Rail Fixing Parts
Rail Push Plates P607	Rail Push Plates P612
Rail Height Adjusting Blocks P609	Linear Lock P613
Block Derailment Prevention Parts Stopper Bolts P612	Linear Guide Lock Units P614



# Miniature Linear Guides

## Short Blocks with Dowel Holes, Light Preload

= For customers selecting MISUMI original specifications =

frame-surrounded products are compliant with the standard specifications (Stainless Steel, Light Preload, High Grade Type). Select the block from this spec.

■ **Features:** MISUMI original specifications with dowel holes. Requires less time for assembly and has better repeatability.

### MISUMI Original



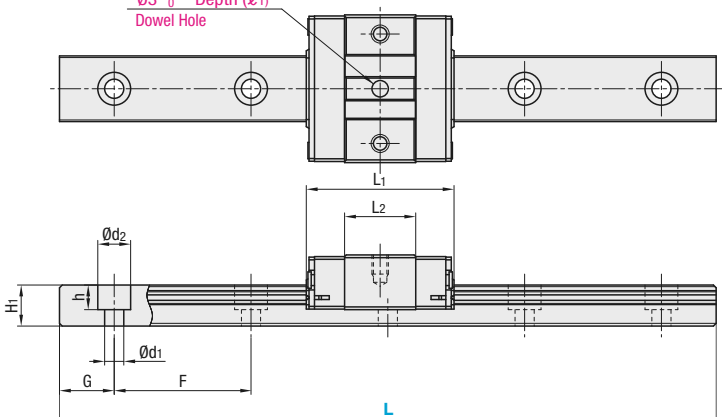
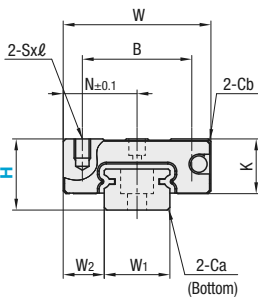
RoHS

⚠ Blocks and rails are not sold as separate items. This Type has guaranteed radial clearances and accuracies as sets of blocks and rails.

M	H	Material	Hardness	Type	High Grade	L	Dimension	Number of Blocks
Standard Materials	Stainless Steel	56HRC~		SSEBSN		Selectable		1
				SSE2BSN				2
				SSEBSNL		Configurable		1
				SSE2BSNL				2
				SEBSN		Selectable		1
Carbon Steel	58HRC~			SE2BSN				2
				SEBSNL		Configurable		1
				SE2BSNL				2

Heat Resistant Temperature: -20 ~ 80°C

Ø3<sup>+0.05</sup><sub>0</sub> Depth (ℓ<sub>1</sub>)  
Dowel Hole



⚠ For L Configurable, G dimensions differ from those shown in the table below. For details, see P.531.

#### ■ Precautions for Use

- ⚠ Blocks are equipped with retainers (wire) to prevent balls from falling off. For how to handle the blocks, see P.525.
- ⚠ Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
- ⚠ Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
- ⚠ Rails cannot be connected end to end.
- ⚠ The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
- Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

#### ■ Accessory

- H8 comes with cap screws (M2x6).

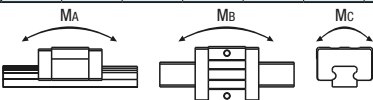
#### ■ Others

- Filled with Lithium soap based grease (Mullemp Grease PS2 by Kyodo Yushi Co., Ltd.).
- For operating life calculation, see P.527.
- For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

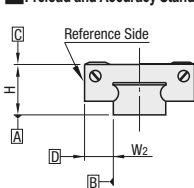
Part Number		H	L	Block Dimension				Dowel Hole Dimensions		Guide Rail Dimension									
Type				W	L <sub>1</sub>	B	Sxℓ	L <sub>2</sub>	K	Cb	N	(ℓ <sub>1</sub> )	W <sub>1</sub>	W <sub>2</sub>	H <sub>1</sub>	Ca	Counterbored Hole d1xd2xh	F	G
Stainless Steel	Standard Specifications	8	40~130 (55)	17	19.6	12	M2x2.5	9.6	6.5	0.3	8.5	2	7	5	4.7	0.3	2.4x4.2x2.3	15	5
	SSEBSN	10	35~275 (75)	20	22.9	15	M3x3	11.9	7.8	0.3	10	2.5	9	5.5	5.5	0.3	3.5x6x3.5	20	7.5
	SSE2BSN	13	45~470 (95)	27	27	20	M3x3.5	13	10	0.5	13.5	3	12	7.5	7.5	0.5	3.5x6x4.5	25	10
	SSEBSNL	16	70~670 (110)	32	32.7	25	M3x4	17.7	12	0.5	16	4	15	8.5	9.5	0.5	3.5x6x4.5	40	15
Carbon Steel	SEBSN	8																	
	SE2BSN	10																	
	SEBSNL	13																	
	SE2BSNL	16																	

kgf=Nx0.101972

Basic Load Rating/Allowable Static Moment								Mass	
H	C (Dynamic) kN	Co (Static) kN	MA N·m	MB N·m	MC N·m	Block kg	Guide Rail kg/m		
8	0.79	1.27	1.9	1.6	4.6	0.008	0.19		
10	1.16	1.68	3.1	2.6	7.9	0.015	0.31		
13	1.63	2.38	5.2	4.4	14.8	0.025	0.61		
16	3.08	4.23	12.3	10.3	32.6	0.05	1.02		



#### ■ Preload and Accuracy Standards

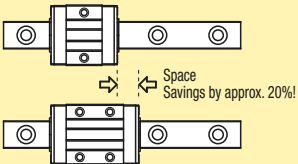


Specifications		Unit: µm
Radial Clearance		-3~0
Height H Tolerance		±20
Pair Variation of Height H		15
Width W <sub>2</sub> Tolerance		±25
Pair Variation of Width W <sub>2</sub>		20
Running Parallelism of Plane C against Plane A		See P.525
Running Parallelism of Plane D against Plane A		See P.525



Example

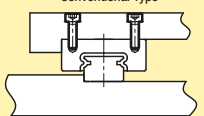
Short Block



Standard Block

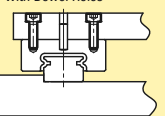
#### - Installation Examples -

Conventional Type



Positioning on the basis of plate end face

With Dowel Holes



Positioning using a dowel hole

H	L	Unit Price			
		Stainless Steel		Carbon Steel	
8	40	SSEBSN	SSE2BSN	SEBSN	SE2BSN
	55				
	70				
	85				
	100				
	115				
	130				
	145				
10	35				
	55				
	75				
	95				
	115				
	135				
	155				
	175				
13	195				
	215				
	235				
	255				
	275				
	45				
	70				
	95				
16	120				
	145				
	170				
	195				
	220				
	245				
	270				
	295				
	320				
	345				
	370				
	395				
	420				
	445				
	470				
	70				
	110				
	150				
	190				
	230				
	270				
	310				
	350				
	390				
	430				
	470				
	510				
	550				
	590				
	630				
	670				

#### ■ L Dimension Configurable Type (1mm Increment)

H	Unit Price			
	Stainless Steel		Carbon Steel	
8	SSEBSNL	SSE2BSNL	SEBSNL	SE2BSNL
10				
13				
16				

⚠ For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.



Ordering Example

Part Number - L  
SSE2BSN10 - 275  
SSE2BSN10L - 175 (L Type Greased)  
SSE2BSN10G - 175 (G Type Greased)  
Alternative grease types available.  
P.531



Alterations

Part Number - L - (MC, RLC, LLC, B3, B4)  
SSE2BSN16 - 430 - MC

Alterations	Code	Spec.
Tapped Hole	MC	Changes the rail mounting holes from counterbored holes to tapped holes. H MC 8 M3 10 M4 13 M5 16 M5
Rail End Cut	LLC	Cuts rail ends. Ordering Code LLC H L Cut N 10 2.5 5 13 5 16 10 ⚠ Applicable to Selectable Type only. ⚠ Overall length will be shorter by cutting. ⚠ Not applicable to H8. ⚠ Not applicable to L35 of H10 and L45 of H13.
3-Block Specifications	B3	Add 2 blocks to 1-block product to ship as 3-block separate item. ⚠ There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SEBSN10-135-B3
4-Block Specifications	B4	Add 3 blocks to 1-block product to ship as 4-block separate item. ⚠ There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SEBSN16-670-B4

#### ■ Additional Block Price

H	B3: Price Adder		B4: Price Adder	
	Stainless Steel	Carbon Steel	Stainless Steel	Carbon Steel
8				
10				
13				
16				

#### ■ Selectable Shortest Rail Length for B3/B4

H	B3 (3-block)	B4 (4-block)
8	85	100
10	95	135
13	120	145
16	150	190

#### ■ Options for Linear Guide

Position Retaining Parts	Block / Rail Fixing Parts
Rail Push Plates P.607	Rail Push Plates P.612
Rail Height Adjusting Blocks P.609	Linear Lock P.613
Block Derailment Prevention Parts Stopper Bolts P.612	Linear Guide Lock Units P.614



# Miniature Linear Guides

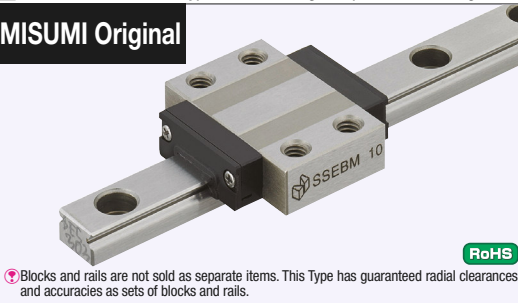
## Wide Standard Blocks, Light Preload / Slight Clearance

= For customers selecting MISUMI original specifications =

frame-surrounded products are compliant with the standard specifications (Stainless Steel, Light Preload, High Grade Type). Select the block from this spec.

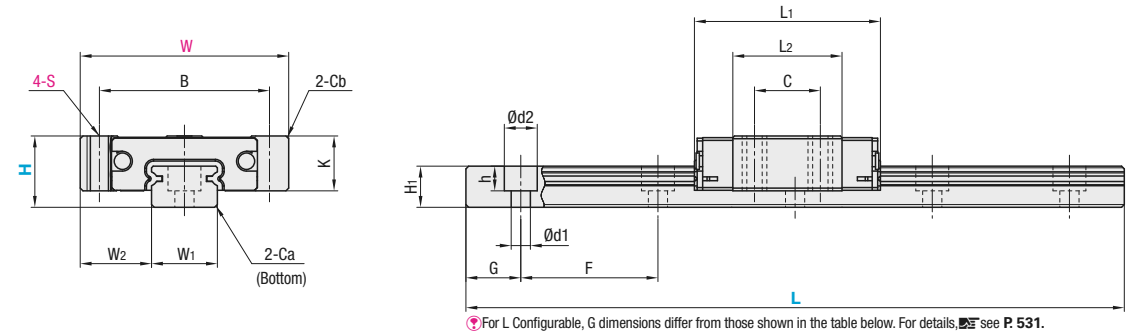
**Features:** Wide Block Type of MISUMI original specifications. Larger screw size has enhanced fastening strength compared to standard products.

### MISUMI Original



Material Hardness	Type		L Dimension	Number of Blocks
	Light Preload High Grade	Slight Clearance Standard Grade		
Standard Materials	Stainless Steel 56HRC~	SSEBM	Selectable	1
		SSE2BMZ		2
		SSE2BML	Configurable	1
		SSE2BMLZ		2
	Carbon Steel 58HRC~	SEBM	Selectable	1
		SE2BMZ		2
		SEBML	Configurable	1
		SE2BMLZ		2

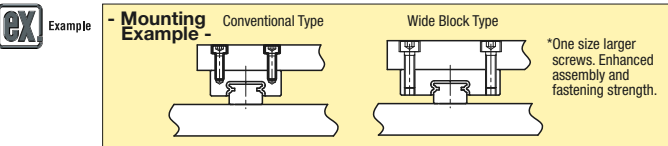
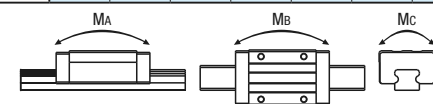
Heat Resistant Temperature: -20 ~ 80°C



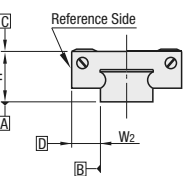
- Precautions for Use
  - Blocks are equipped with retainers (wire) to prevent balls from falling off. For how to handle the blocks, see P. 525.
  - Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
  - Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
  - Rails cannot be connected end to end.
  - The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
  - Minor bending of the rail will be adjusted after being mounted and will not affect the performance.
- Accessory
  - H8 comes with cap screws (M2x6).
- Others
  - Filled with Lithium soap based grease (Mullemp Grease PS2 by Kyodo Yushi Co., Ltd.).
  - For operating life calculation, see P. 527.
  - For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

Part Number		H	L	Block Dimension								Guide Rail Dimension						
Type				W	L <sub>1</sub>	B	C	S	L <sub>2</sub>	K	Cb	W <sub>1</sub>	W <sub>2</sub>	H <sub>1</sub>	Ca	Counterbored Hole d <sub>1</sub> x d <sub>2</sub> x h	F	G
⚠Dimensions in ( ) are for 2-Block Type.		8	40~130 (70)	24	23.6	19	8	M3	13.6	6.5	0.3	7	8.5	4.7	0.3	2.4x4.2x2.3	15	5
Stainless Steel		8	40~130 (70)	24	23.6	19	8	M3	13.6	6.5	0.3	7	8.5	4.7	0.3	2.4x4.2x2.3	15	5
Standard Specifications																		
SSEBM																		
SSE2BM																		
SSEBML		10	35~275 (95)	31	30	24	10	M4	19	7.8	0.3	9	11	5.5	0.3	3.5x6x3.5	20	7.5
SSE2BML		13	45~470 (120)	38	33.9	31	12	M4	19.9	10	0.5	12	13	7.5	0.5	3.5x6x4.5	25	10
Carbon Steel		16	70~670 (150)	44	42.4	36	16	M4	27.4	12	0.5	15	14.5	9.5	0.5	3.5x6x4.5	40	15
SEBM																		
SE2BM																		
SEBML		20	100~700 (160)	54	50	46	25	M5	34.6	15	0.5	20	17	11	0.5	6x9.5x5.5	60	20
SE2BML																		
SEBMZ																		
SE2BMZ																		
SEBMLZ																		
SE2BMLZ																		

H	Basic Load Rating		Allowable Static Moment		Mass	
	C (Dynamic) kN	Co (Static) kN	MA N·m	MB N·m	MC N·m	Block kg
8	0.9	1.5	4.1	4.1	5.2	0.015
10	1.5	2.5	5.1	5.1	10.2	0.03
13	2.2	3.3	8.8	9.5	16.1	0.05
16	3.6	5.4	21.6	23.4	39.6	0.09
20	5.2	8.5	48.4	48.4	86.4	0.17



### Preload and Accuracy Standards



Specifications		Light Preload, High Grade	Slight Clearance, Standard Grade
Radial Clearance		-3~0	0~+15
Height H Tolerance		±20	±20
Pair Variation of Height H		15	40
Width W2 Tolerance		±25	±25
Pair Variation of Width W2		20	40
Running Parallelism of Plane C against Plane A		See P. 525	
Running Parallelism of Plane D against Plane A			

Slight Clearance Type has clearance (Gap) between rails and blocks. If precision / rigidity is required, select Light Preload Type.

H	L	Unit Price							
		Stainless Steel				Carbon Steel			
		High Grade	Standard Grade	High Grade	Standard Grade	High Grade	Standard Grade	High Grade	Standard Grade
8	40	SSEBM	SSE2BM	SSEBMZ	SSE2BMZ	SEBM	SE2BM	SEBMZ	SE2BMZ
	55	-	-	-	-	-	-	-	-
	70	-	-	-	-	-	-	-	-
	85	-	-	-	-	-	-	-	-
	100	-	-	-	-	-	-	-	-
	115	-	-	-	-	-	-	-	-
	130	-	-	-	-	-	-	-	-
	150	-	-	-	-	-	-	-	-
	170	-	-	-	-	-	-	-	-
	195	-	-	-	-	-	-	-	-
10	35	-	-	-	-	-	-	-	-
	55	-	-	-	-	-	-	-	-
	75	-	-	-	-	-	-	-	-
	95	-	-	-	-	-	-	-	-
	115	-	-	-	-	-	-	-	-
	135	-	-	-	-	-	-	-	-
	155	-	-	-	-	-	-	-	-
	175	-	-	-	-	-	-	-	-
	195	-	-	-	-	-	-	-	-
	215	-	-	-	-	-	-	-	-
13	235	-	-	-	-	-	-	-	-
	255	-	-	-	-	-	-	-	-
	275	-	-	-	-	-	-	-	-
	45	-	-	-	-	-	-	-	-
	70	-	-	-	-	-	-	-	-
	95	-	-	-	-	-	-	-	-
	120	-	-	-	-	-	-	-	-
	145	-	-	-	-	-	-	-	-
	170	-	-	-	-	-	-	-	-
	195	-	-	-	-	-	-	-	-
16	220	-	-	-	-	-	-	-	-
	245	-	-	-	-	-	-	-	-
	270	-	-	-	-	-	-	-	-
	295	-	-	-	-	-	-	-	-
	320	-	-	-	-	-	-	-	-
	345	-	-	-	-	-	-	-	-
	370	-	-	-	-	-	-	-	-
	395	-	-	-	-	-	-	-	-
	420	-	-	-	-	-	-	-	-
	445	-	-	-	-	-	-	-	-
20	470	-	-	-	-	-	-	-	-
	70	-	-	-	-	-	-	-	-
	110	-	-	-	-	-	-	-	-
	150	-	-	-	-	-	-	-	-
	190	-	-	-	-	-	-	-	-
	230	-	-	-	-	-	-	-	-
	270	-	-	-	-	-	-	-	-
	310	-	-	-	-	-	-	-	-
	350	-	-	-	-	-	-	-	-
	390	-	-	-	-	-	-	-	-
20	430	-	-	-	-	-	-	-	-
	470	-	-	-	-	-	-	-	-
	510	-	-	-	-	-	-	-	-
	550	-	-	-	-	-	-	-	-
	590	-	-	-	-	-	-	-	-
	630	-	-	-	-	-	-	-	-
	670	-	-	-	-	-	-	-	-
	100	-	-	-	-	-	-	-	-
	160	-	-	-	-	-	-	-	-
	220	-	-	-	-	-	-	-	-
20	280	-	-	-	-	-	-	-	-
	340	-	-	-	-	-	-	-	-
	400	-	-	-	-	-	-	-	-
	460	-	-	-	-	-	-	-	-
	520	-	-	-	-	-	-	-	-
	580	-	-	-	-	-	-	-	-
	640	-	-	-	-	-	-	-	-
	700	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-

### L Dimension Configurable Type (1mm Increment)

H	Unit Price							
	Stainless Steel				Carbon Steel			
	High Grade	Standard Grade	High Grade	Standard Grade	High Grade	Standard Grade	High Grade	Standard Grade
8	SSEBML	SSE2BML	SSEBMLZ	SSE2BMLZ	SEBML	SE2BML	SEBMLZ	SE2BMLZ
10	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.



Part Number - L  
SSEBM10 - 275 (L Type Greased)  
SSEBM10L - 75 (G Type Greased)  
SSEBM10G - 75 (G Type Greased)  
Alternative grease types available.  
P. 531



Part Number - L - (MC, RLC, LLC, B3, B4)  
SSE2BM16 - 430 - MC

Alterations	Code	Spec.
Tapped Hole	MC	Changes the rail mounting holes from counterbored holes to tapped holes.
Rail End Cut	Left End Cut LLC	Cuts rail ends. Ordering Code LLC
	Right End Cut RLC	Cuts rail ends. Ordering Code RLC
3-Block Specifications	B3	Add 2 blocks to 1-block product to ship as 3-block separate item. There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SSEBM10-275-B3
4-Block Specifications	B4	Add 3 blocks to 1-block product to ship as 4-block separate item. There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SSEBM13-275-B4

Additional Block Price (Same Price for High/Standard Grade)				Selectable Shortest Rail Length for B3/B4		
H	B3: Price Adder Stainless Steel	Carbon Steel	B4: Price Adder Stainless Steel	Carbon Steel	H	B3 (3-block)
8					8	100
10					10	115
13					13	145
16					16	230
20					20	270

Options for Linear Guide	
Position Retaining Parts	Block / Rail Fixing Parts
Rail Height Adjusting Blocks	Rail Push Plates
Block Derailment Prevention Parts	Linear Lock
Stopper Bolts	Linear Guide Lock Units



# Miniature Linear Guides

## Wide Long Blocks, Light Preload

= For customers selecting MISUMI original specifications =

frame-surrounded products are compliant with the standard specifications (Stainless Steel, Light Preload, High Grade Type). Select the block from this spec.

**Features:** Wide Block Type of MISUMI original specifications. Larger screw size has enhanced fastening strength compared to standard products.

### MISUMI Original

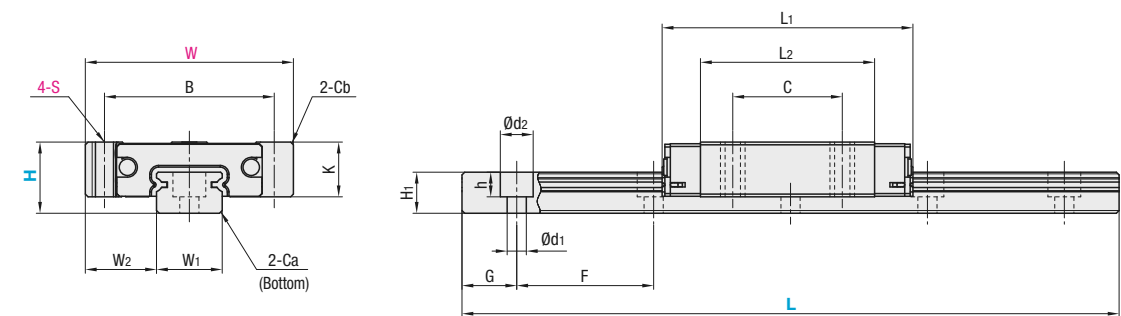


RoHS

Blocks and rails are not sold as separate items. This Type has guaranteed radial clearances and accuracies as sets of blocks and rails.

Material Hardness	Type Light Preload High Grade Set	L Dimension	Number of Blocks
Stainless Steel 56HRC~	SSELBM	Selectable	1
	SSEL2BM	Selectable	2
	SSELBML	Configurable	1
	SSEL2BML	Configurable	2
	SELBM	Selectable	1
Carbon Steel 58HRC~	SEL2BM	Selectable	2
	SELBML	Configurable	1
	SEL2BML	Configurable	2

Heat Resistant Temperature: -20 ~ 80°C



For L Configurable, G dimensions differ from those shown in the table below. For details, see P.531.

#### Precautions for Use

- Blocks are equipped with retainers (wire) to prevent balls from falling off. For how to handle the blocks, see P.525.
- Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
- Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
- Rails cannot be connected end to end.
- The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
- Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

#### Accessory

- H8 comes with cap screws (M2x6).

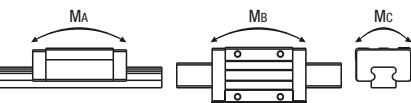
#### Others

- Filled with Lithium soap based grease (Multemp Grease PS2 by Kyodo Yushi Co., Ltd.).
- For operating life calculation, see P.527.
- For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

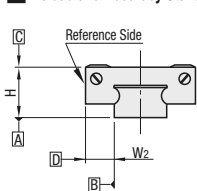
Part Number		L	Block Dimension									Guide Rail Dimension						
Type	H		W	L <sub>1</sub>	B	C	S	L <sub>2</sub>	K	Cb	W <sub>1</sub>	W <sub>2</sub>	H <sub>1</sub>	Ca	Counterbored Hole d <sub>1</sub> x d <sub>2</sub> x h	F	G	
🌀 Dimensions in ( ) are for 2-Block Type.		8	40~130 (100)	24	32	19	13	M3	22	6.5	0.3	7	8.5	4.7	0.3	2.4x4.2x2.3	15	5
Stainless Steel Standard Specifications SSELBM SSEL2BM SSELBML SSEL2BML	Carbon Steel	10	55~275 (115)	31	40	24	16	M4	29	7.8	0.3	9	11	5.5	0.3	3.5x6x3.5	20	7.5
		13	70~470 (120)	38	45.8	31	20	M4	31.8	10	0.5	12	13	7.5	0.5	3.5x6x4.5	25	10
		16	110~670 (150)	44	58.3	36	25	M4	43.3	12	0.5	15	14.5	9.5	0.5	3.5x6x4.5	40	15
		20	160~700 (220)	54	67.7	46	30	M5	52.3	15	0.5	20	17	11	0.5	6x9.5x5.5	60	20

kgf=Nx0.101972

H	Basic Load Rating/Allowable Static Moment					Mass	
	C (Dynamic) kN	Co (Static) kN	MA N-m	MB N-m	MC N-m	Block kg	Guide Rail kg/m
8	1.6	2.4	7.5	7.5	9.0	0.016	0.19
10	2.2	3.7	12.3	12.3	13.0	0.03	0.31
13	3.5	5.3	24.5	26.4	32.3	0.06	0.61
16	5.8	8.7	57.8	62.6	67.6	0.10	1.02
20	7.2	13.5	80.7	80.7	138.2	0.18	1.65

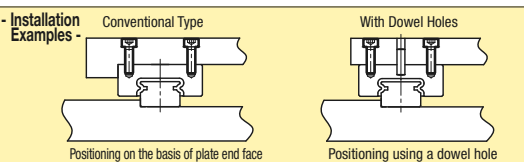


#### Preload and Accuracy Standards



Example

#### Installation Examples



H	L	Unit Price			
		Stainless Steel		Carbon Steel	
		SSELBM	SSEL2BM	SELBM	SEL2BM
8	40	-	-	-	-
	55	-	-	-	-
	70	-	-	-	-
	85	-	-	-	-
	100	-	-	-	-
	115	-	-	-	-
	130	-	-	-	-
	145	-	-	-	-
	160	-	-	-	-
	175	-	-	-	-
10	190	-	-	-	-
	205	-	-	-	-
	220	-	-	-	-
	235	-	-	-	-
	250	-	-	-	-
	265	-	-	-	-
	280	-	-	-	-
	295	-	-	-	-
	310	-	-	-	-
	325	-	-	-	-
13	340	-	-	-	-
	355	-	-	-	-
	370	-	-	-	-
	385	-	-	-	-
	400	-	-	-	-
	415	-	-	-	-
	430	-	-	-	-
	445	-	-	-	-
	460	-	-	-	-
	475	-	-	-	-
16	490	-	-	-	-
	505	-	-	-	-
	520	-	-	-	-
	535	-	-	-	-
	550	-	-	-	-
	565	-	-	-	-
	580	-	-	-	-
	595	-	-	-	-
	610	-	-	-	-
	625	-	-	-	-
20	640	-	-	-	-
	655	-	-	-	-
	670	-	-	-	-
	685	-	-	-	-
	700	-	-	-	-
	715	-	-	-	-
	730	-	-	-	-
	745	-	-	-	-
	760	-	-	-	-
	775	-	-	-	-

#### L Dimension Configurable Type (1mm Increment)

H	Unit Price			
	Stainless Steel		Carbon Steel	
	SSELBML	SSEL2BML	SELBML	SEL2BML
8	-	-	-	-
10	-	-	-	-
13	-	-	-	-
16	-	-	-	-
20	-	-	-	-

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.



Ordering Example

Part Number - L

SSELBM10 - 275  
SSELBM10L - 75 (L Type Greased)  
SSELBM10G - 75 (G Type Greased)  
Alternative grease types available.  
P.531



Alterations

Part Number - L - (MC, RLC, LLC, B3, B4)

SSEL2BM16 - 430 - MC - RLC

Alterations	Code	Spec.
Tapped Hole	MC	Changes the rail mounting holes from counterbored holes to tapped holes. H MC 8 M3 10 M4 13 M5 16 M5 20 M6
Rail End Cut	LLC	Cuts rail ends. Ordering Code LLC H L Cut N 10 2.5 5 13 5 5 16 10 5
Rail is cut with the product ID facing out (datum on other side).	RLC	Applicable to Selectable Type only. Overall length will be shorter by cutting. Not applicable to H8/20
3-Block Specifications	B3	Add 2 blocks to 1-block product to ship as 3-block separate item. There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SELBM8-130-B3
4-Block Specifications	B4	Add 3 blocks to 1-block product to ship as 4-block separate item. There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SSELBML16-630-B4

#### Additional Block Price

H	B3: Price Adder		B4: Price Adder	
	Stainless Steel	Carbon Steel	Stainless Steel	Carbon Steel
8	-	-	-	-
10	-	-	-	-
13	-	-	-	-
16	-	-	-	-
20	-	-	-	-

#### Selectable Shortest Rail Length for B3/B4

H	B3 (3-block)	B4 (4-block)
8	115	-
10	155	195
13	170	220
16	230	270
20	280	340

#### Options for Linear Guide

Position Retaining Parts	Block / Rail Fixing Parts
Rail Push Plates P607	Rail Push Plates P612
Rail Height Adjusting Blocks P609	Linear Lock P613
Block Derailment Prevention Parts Stopper Bolts P612	Linear Guide Lock Units P614



# Miniature Linear Guides

## Extra Long Blocks, Light Preload / Slight Clearance

= For customers selecting MISUMI original specifications =

frame-surrounded products are compliant with the standard specifications (Stainless Steel, Light Preload, High Grade Type). Select the block from this spec.

■Features: Extra Long Block Type of MISUMI original standards. Higher load ratings and allowable moments than Long Block Type.

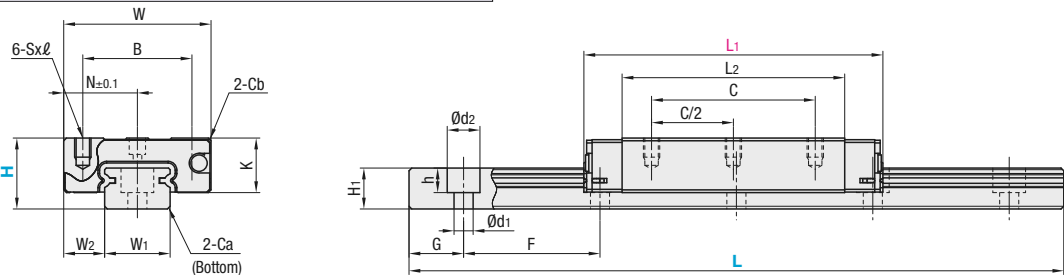
### MISUMI Original



Material Hardness	Type		L Dimension
	Light Preload High Grade	Slight Clearance Standard Grade	
Standard Materials	Stainless Steel 56HRC~	SSECBL	Selectable
		SSECBLZ	Configurable
Carbon Steel 58HRC~	SECB	SECBZ	Selectable
	SECBZ	SECBZL	Configurable

Heat Resistant Temperature: -20 ~ 80°C

Blocks and rails are not sold as separate items. This Type has guaranteed radial clearances and accuracies as sets of blocks and rails.



For L Configurable, G dimensions differ from those shown in the table below. For details, see P.531.

#### Precautions for Use

- Blocks are equipped with retainers (wire) to prevent balls from falling off. For how to handle the blocks, see P.525.
- Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
- Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
- Rails cannot be connected end to end.
- The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
- Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

#### Accessory

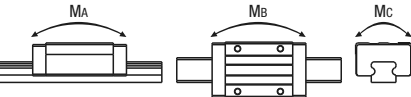
- H8 comes with cap screws (M2x6).

#### Others

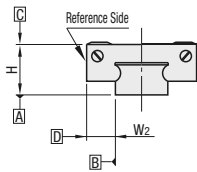
- Filled with Lithium soap based grease (Multemp Grease PS2 by Kyodo Yushi Co., Ltd.).
- For Operating Life Calculation, see P.527
- For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

Part Number		H	L	Block Dimension				Dowel Hole Dimension				Guide Rail Dimension									
Type				W	L1	B	C	Sxℓ	L2	K	Cb	N	C2	(ℓ1)	W1	W2	H1	Ca	Counterbored Hole d1xd2xh	F	G
Stainless Steel		8	40~130	17	37.5	12	20	M2x2.5	27.5	6.5	0.3	8.5	20	2	7	5	4.7	0.3	2.4x4.2x2.3	15	5
Standard Specifications SSECBL SSECBLZ	SSECBLZ SSECBLZ	10	55~275	20	49.6	15	26	M3x3	38.6	7.8	0.3	10	26	2.5	9	5.5	5.5	0.3	3.5x6x3.5	20	7.5
Carbon Steel		13	70~470	27	54.8	20	30	M3x3.5	40.8	10	0.5	13.5	30	3	12	7.5	7.5	0.5	3.5x6x4.5	25	10
SECB SECBZ SECBZL	SECBZ SECBZL	16	110~670	32	70.3	25	40	M3x4	55.3	12	0.5	16	40	4	15	8.5	9.5	0.5	3.5x6x4.5	40	15

H	Basic Load Rating/Allowable Static Moment					Mass	
	C (Dynamic) kN	Co (Static) kN	MA N · m	MB N · m	MC N · m	Block kg	Guide Rail kg/m
8	1.5	3.3	10.1	10.1	12.4	0.02	0.19
10	2.5	5.0	18.8	18.8	23.7	0.04	0.31
13	3.6	7.6	34.0	34.0	47.3	0.07	0.61
16	6.9	13.5	80.7	80.7	104.3	0.12	1.02



#### Preload and Accuracy Standards



Specifications	Light Preload, High Grade	Slight Clearance, Standard Grade
Radial Clearance	-3~0	0~+15
Height H Tolerance	±20	±20
Pair Variation of Height H	15	40
Width W2 Tolerance	±25	±25
Pair Variation of Width W2	20	40
Running Parallelism of Plane C against Plane A	See P.525	
Running Parallelism of Plane D against Plane A		

Slight Clearance Type has clearance (Gap) between rails and blocks.  
If precision / rigidity is required, select Light Preload Type.

#### Table of Comparison with Standard Blocks

- Shorter block length than Standard Type 2-Block.
- Basic load rating C (dynamic) is enhanced up to 192% compared to 1 Block Type. H dimension can be reduced by using a long block.
- Basic load rating C (static) is equivalent or higher compared to 1 Block/2 Block Type. 2 Block Type can make guide block length more compact.

H	Block O.A.L. (L1)					Basic Load Rating C (Dynamic) kN					Basic Load Rating Co (Dynamic) kN				
	Extra Long 1 Block					Extra Long 1 Block					Extra Long 1 Block				
	Standard 1 Block	Standard 2 Block	Compared to Standard 1 Block	Compared to Standard 2 Block	Compared to Standard 1 Block	Standard 1 Block	Standard 2 Block	Compared to Standard 1 Block	Compared to Standard 2 Block	Compared to Standard 1 Block	Standard 1 Block	Standard 2 Block	Compared to Standard 1 Block	Compared to Standard 2 Block	Compared to Standard 1 Block
8	23.6	47.2	37.5	+13.9	-9.7	0.9	1.8	1.5	167%	83%	1.5	3	3.3	220%	110%
10	30	60	49.6	+19.6	-10.4	1.5	3	2.5	167%	83%	2.5	5	5	200%	100%
13	33.9	67.8	54.8	+20.9	-13	2.2	4.4	3.6	164%	82%	3.3	6.6	7.6	230%	115%
16	42.4	84.8	70.3	+27.9	-14.5	3.6	7.2	6.9	192%	96%	5.4	10.8	13.5	250%	125%

H	Selectable L	Unit Price			
		Stainless Steel		Carbon Steel	
8	40	SSECBL	SSECBLZ	SECB	SECBZ
	55				
	70				
	85				
	100				
	115				
	130				
	155				
	175				
	195				
10	215				
	235				
	255				
	275				
	70				
	95				
	120				
	145				
	170				
	195				
13	220				
	245				
	270				
	295				
	320				
	345				
	370				
	395				
	420				
	445				
16	470				
	110				
	150				
	190				
	230				
	270				
	310				
	350				
	390				
	430				
16	470				
	510				
	550				
	590				
	630				
	670				

#### L Dimension Configurable Type (1mm Increment)

H	Unit Price			
	Stainless Steel		Carbon Steel	
8	SSECBL	SSECBLZ	SECB	SECBZ
10				
13				
16				

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.



Ordering  
Example

Part Number - L

SSECBL10 - 275

SSECBL10L - 75 (L Type Greased)

SSECBL10G - 75 (G Type Greased)

Alternative grease types available

P.531



Alterations

Part Number - L - (MC, RLC, LLC)

SSECBL16 - 430 - MC - RLC

Alterations	Code	Spec.
Tapped Hole	MC	Changes the rail mounting holes from counterbored holes to tapped holes. H MC 8 M3 10 M4 13 M4 16 M5
Rail End Cut	LLC	Cuts rail ends. Ordering Code LLC H L Cut N 10 2.5 5 13 5 5 16 10 5
Left End Cut	LLC	Applicable to Selectable Type only. Overall length will be shorter by cutting. Not applicable to H8.
Right End Cut	RLC	

#### Options for Linear Guide

Position Retaining Parts	Block / Rail Fixing Parts
P.607	P.612
P.609	P.613
P.612	P.614



# Miniature Linear Guides - Wide Rails -

## Standard Blocks, Light Preload / Slight Clearance

= For customers using industry standard products =

frame-surrounded products are compliant with the industry standard specifications (Stainless Steel, Light Preload, High Grade Type). Select the block from this spec.

Similar Products Comparison Points | The industry standard Wide Rails, Standard Blocks. Select from Light Preload Types with superior precision and rigidity.

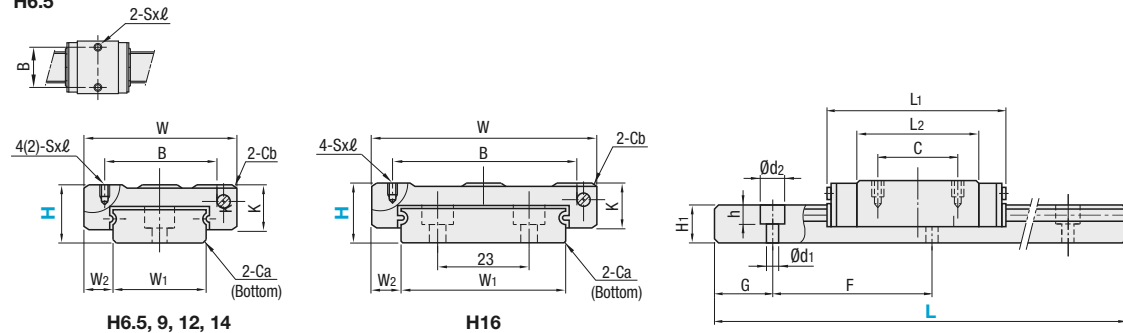
### Industry Standard



Material Hardness	Type			L Dimension	Number of Blocks
	Light Preload		Slight Clearance		
	High Grade	Precision Grade	Standard Grade		
Stainless Steel 56HRC~	SSEBW	SSEBWV	SSEBWZ	Selectable	1
	SSE2BW	SSE2BWV	SSE2BWZ		2
	SSEBWL	SSEBWL	SSEBWLZ	Configurable	1
	SSE2BWL	SSE2BWL	SSE2BWLZ		2
	SEBW	SEBWV	SEBWZ	Selectable	1
Carbon Steel 58HRC~	SE2BW	SE2BWV	SE2BWZ	Selectable	2
	SEBWL	SEBWL	SEBWLZ	Configurable	1
	SE2BWL	SE2BWL	SE2BWLZ	Configurable	2

Heat Resistant Temperature: -20 ~ 80°C  
H6.5 is for stainless steel only.  
H6.5 has no precision grade.

### H6.5



The number in ( ) is the Number of tapped holes for H6.5.

- Precautions for Use**

  - Blocks are equipped with retainers (wire) to prevent balls from falling off. For how to handle the blocks, see P. 525.
  - Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
  - Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
  - Rails cannot be connected end to end.
  - The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
  - Minor bending of the rail will be adjusted after being mounted and will not affect the performance.
- Accessories**

  - H6.5 comes with Number 0, Class 1 Phillips button head screws (M2.5x7).

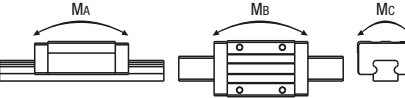
**Others**

  - Filled with Lithium soap based grease (Multemp Grease PS2 by Kyodo Yushi Co., Ltd.).
  - For operating life calculation, see P. 527.
  - For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

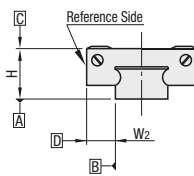
Part Number			H	L	Block Dimension							Guide Rail Dimension						
Type					W	L <sub>1</sub>	B	C	Sxℓ	L <sub>2</sub>	K	Cb	W <sub>1</sub>	W <sub>2</sub>	H <sub>1</sub>	Ca	Counterbored Hole d1xd2xh	F
<div>📏Dimensions in ( ) are for 2-Block Type.</div> <div>Stainless Steel</div> <div>Industry Standard Specifications</div> <div>SSEBW SSE2BW SSEBWL SSE2BWL</div> <div>Carbon Steel</div> <div>SEBW SE2BW SEBWL SE2BWL</div>			6.5	50~130 (70)	17	21	13	-	M2.5x1.5	13.3	5	0.3	10	3.5	4	0.3	3x5x1.6	20
			9	50~290 (110)	25	31.1	18	12	M2.6x2.5	20.1	7	0.3	14	5.5	5.2	0.5	3.5x6x3.2	30
			12	50~290 (110)	30	38	21	12	M2.6x3	27	9	0.3	18	6	7.5	0.5	3.5x6x4.5	30
			14	70~470 (150)	40	44.3	28	15	M3x3.5	30.1	11	0.5	24	8	8	0.5	4.5x8x4.5	40
			16	70~670 (190)	60	55	45	20	M4x4.5	40	13	0.5	42	9	9.5	0.5	4.5x8x4.5	40

kgf=Nx0.101972

H	Basic Load Rating/Allowable Static Moment			Mass		
	C (Dynamic) kN	Co (Static) kN	MA N·m	Me N·m	Mc N·m	Block kg Guide Rail kg/m
6.5	0.5	0.9	2.0	2.0	4.0	0.006 0.28
9	1.4	2.2	7.8	7.8	15.5	0.02 0.50
12	2.3	3.7	13.7	16.3	30.4	0.04 0.96
14	3.5	5.3	20.6	22.3	52.1	0.08 1.40
16	5.8	8.5	40.2	43.6	148	0.15 2.95



### Preload and Accuracy Standards



Specifications	Light Preload, High Grade	Light Preload, Precision Grade	Slight Clearance, Standard Grade
Radial Clearance	-3~0	0~+15	0~+15
Height H Tolerance	±20	±10	±20
Pair Variation of Height H	15	7	40
Width W2 Tolerance	±25	±15	±25
Pair Variation of Width W2	20	10	40
Running Parallelism of Plane C against Plane A	See P. 525		
Running Parallelism of Plane D against Plane A			

Slight Clearance Type has clearance (Gap) between rails and blocks.  
If precision / rigidity is required, select Light Preload Type.

H	L	Unit Price							
		Stainless Steel				Carbon Steel			
		SSEBW	SSE2BW	SSEBWZ	SSE2BWZ	SEBW	SE2BW	SEBWZ	SE2BWZ
6.5	50	-	-	-	-	-	-	-	-
	70	-	-	-	-	-	-	-	-
	90	-	-	-	-	-	-	-	-
	110	-	-	-	-	-	-	-	-
	130	-	-	-	-	-	-	-	-
9	50	-	-	-	-	-	-	-	-
	80	-	-	-	-	-	-	-	-
	110	-	-	-	-	-	-	-	-
	140	-	-	-	-	-	-	-	-
	170	-	-	-	-	-	-	-	-
12	200	-	-	-	-	-	-	-	-
	230	-	-	-	-	-	-	-	-
	260	-	-	-	-	-	-	-	-
	290	-	-	-	-	-	-	-	-
14	50	-	-	-	-	-	-	-	-
	80	-	-	-	-	-	-	-	-
	110	-	-	-	-	-	-	-	-
	140	-	-	-	-	-	-	-	-
	170	-	-	-	-	-	-	-	-
16	200	-	-	-	-	-	-	-	-
	230	-	-	-	-	-	-	-	-
	260	-	-	-	-	-	-	-	-
	290	-	-	-	-	-	-	-	-
	310	-	-	-	-	-	-	-	-
	350	-	-	-	-	-	-	-	-
	390	-	-	-	-	-	-	-	-
	430	-	-	-	-	-	-	-	-
	470	-	-	-	-	-	-	-	-
	510	-	-	-	-	-	-	-	-
	550	-	-	-	-	-	-	-	-
	590	-	-	-	-	-	-	-	-
	630	-	-	-	-	-	-	-	-
	670	-	-	-	-	-	-	-	-

### L Dimension Configurable Type (1mm Increment)

H	Unit Price			
	Stainless Steel		Carbon Steel	
	SSEBWL SSE2BWL	SSE2BWLZ	SEBWL SE2BWL	SE2BWLZ
6.5	-	-	-	-
9	-	-	-	-
12	-	-	-	-
14	-	-	-	-
16	-	-	-	-

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.

Ordering Example  
Part Number - L  
SSEBW12 - 200 (LTBC Plating)  
RSEBW12 - 200 (L Type Greased)  
SSEBW12L - 200 (G Type Greased)  
SSEBW12G - 200  
LTBC Plating and various Grease types available as alternative.  
P531

Alterations  
Part Number - L - (MC, RLC, LLC, WC, B3, B4)  
SSE2BWL16 - 450 - MC

Alterations	Code	Spec.
Tapped Hole	MC	Changes the rail mounting holes from counterbored holes to tapped holes. H MC 6.5 M3 9 M4 12 M5 14 M5 16 M5
Rail End Cut	Left End Cut LLC Right End Cut RLC	Cuts rail ends. Ordering Code LLC H L Cut N 9 5 12 5 14 5 16 10 Rail is cut with the product ID facing out (datum on other side). Applicable to Selectable Type only. Overall length will be shorter by cutting. Not applicable to H6.5. Not applicable to L dimension 70 or less.
Parallel Use of 2 Rails	WC	Pair variation of Height H between 2 rails is set within 15µm. Rails are shipped in pairs. Specify the actual rail quantity (even number) to order, not "pairs". Applicable to High Grade Type only. Not applicable to low temperature chrome plated products.
3-Block Specifications	B3	Add 2 blocks to 1-block product to ship as 3-block separate item. There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SEBW9-260-B3
4-Block Specifications	B4	Add 3 blocks to 1-block product to ship as 4-block separate item. There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SEBWL14-465-B4

Additional Block Price (Same Price for Standard/Same Grade) Selectable Shortest Rail Length for B3/B4

H	B3: Price Adder		B4: Price Adder		H	B3 (3-block)	B4 (4-block)
	Stainless Steel	Carbon Steel	Stainless Steel	Carbon Steel			
6.5	-	-	-	-	6	90	110
9	-	-	-	-	9	140	170
12	-	-	-	-	12	140	220
14	-	-	-	-	14	190	230
16	-	-	-	-	16	230	270

### Options for Linear Guide

Position Retaining Parts	Block / Rail Fixing Parts
Block Derailment Prevention Parts Stopper Bolts	Rail Push Plates Linear Lock Linear Guide Lock Units
P607	P612
P612	P613
	P614







# Miniature Linear Guides - Wide Rails

## Standard Blocks with Dowel Holes, Light Preload

= For customers selecting MISUMI original specifications =

frame-surrounded products are compliant with the standard specifications (Stainless Steel, Light Preload, High Grade Type).  
Select the block from this spec.

Similar Products Comparison Points | MISUMI original specifications with dowel holes. Requires less time for assembly and has better repeatability.

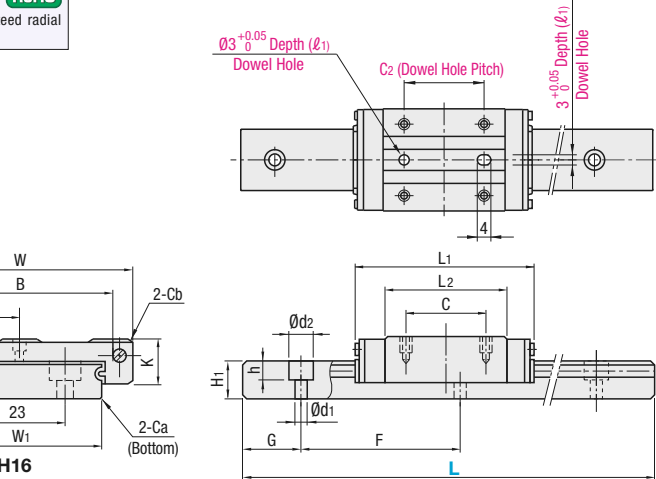
### MISUMI Original



Material Hardness	Type	L Dimension	Number of Blocks
Standard Materials Stainless Steel 56HRC~	Light Preload		
	High Grade		
	SSEBWN	Selectable	1
	SSE2BWN		2
	SSEBWNL	Configurable	1
Carbon Steel 58HRC~	SSE2BWNL		2
	SEBWN	Selectable	1
	SE2BWN		2
	SEBWNL	Configurable	1
	SE2BWNL		2

Heat Resistant Temperature: -20 ~ 80°C

Blocks and rails are not sold as separate items. This Type has guaranteed radial clearances and accuracies as sets of blocks and rails.



For L Configurable, G dimensions differ from those shown in the table below. For details, see P. 531.

- Precautions for Use**

  - Blocks are equipped with retainers (wire) to prevent balls from falling off.
  - For how to handle the blocks, see P. 525.
  - Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
  - Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
  - Rails cannot be connected end to end.
  - The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane). Minor bending of the rail will be adjusted after being mounted and will not affect the performance.
- Others**

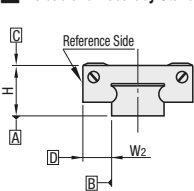
  - Filled with Lithium soap based grease (Mullemp Grease PS2 by Kyodo Yushi Co., Ltd.).
  - For operating life calculation, see P. 527.
  - For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

Part Number		L	Block Dimension								Dowel Hole Dimensions			Guide Rail Dimension							
Type	H		W	L <sub>1</sub>	B	C	Sxℓ	L <sub>2</sub>	K	Cb	N	C <sub>2</sub>	(ℓ <sub>1</sub> )	W <sub>1</sub>	W <sub>2</sub>	H <sub>1</sub>	Ca	Counterbored Hole d <sub>1</sub> x d <sub>2</sub> x h	F	G	
<div>⚠Dimensions in ( ) are for 2-Block Type.</div> <div>Stainless Steel Standard Specifications SSEBWN SSE2BWN SSEBWNL SSE2BWNL</div> <div>Carbon Steel SEBWN SE2BWN SEBWNL SE2BWNL</div>	9	50~290 (110)	25	31.1	18	12	M2.6x2.5	20.1	7	0.3	12.5	12	2.5	14	5.5	5.2	0.5	3.5x6x3.2	30	10	
	12	50~290 (110)	30	38	21	12	M2.6x3	27	9	0.3	15	12	2.5	18	6	7.5	0.5	3.5x6x4.5	30	10	
	14	70~470 (150)	40	44.3	28	15	M3x3.5	30.1	11	0.5	20	15	3.5	24	8	8	0.5	4.5x8x4.5	40	15	
	16	70~670 (190)	60	55	45	20	M4x4.5	40	13	0.5	30	20	4	42	9	9.5	0.5	4.5x8x4.5	40	15	

kgf=Nx0.101972

H	Basic Load Rating		Allowable Static Moment			Mass	
	C (Dynamic) kN	Co (Static) kN	MA N·m	MB N·m	MC N·m	Block kg	Guide Rail kg/m
9	1.4	2.2	7.8	7.8	15.5	0.02	0.50
12	2.3	3.7	13.7	16.3	30.4	0.04	0.96
14	3.5	5.3	20.6	22.3	52.1	0.08	1.40
16	5.8	8.5	40.2	43.6	148	0.15	2.95

### Preload and Accuracy Standards



Specifications		Unit: μm
Radial Clearance	-3~0	
Height H Tolerance	±20	
Pair Variation of Height H	15	
Width W <sub>2</sub> Tolerance	±25	
Pair Variation of Width W <sub>2</sub>	20	
Running Parallelism of Plane C against Plane A	See P. 525	
Running Parallelism of Plane D against Plane A		

H	L	Unit Price			
		Stainless Steel		Carbon Steel	
9	50	SSEBWN	SSE2BWN	SEBWN	SE2BWN
	80				
	110				
	140				
	170				
	200				
	230				
	260				
	290				
	320				
12	50				
	80				
	110				
	140				
	170				
	200				
	230				
	260				
	290				
	320				
14	70				
	110				
	150				
	190				
	230				
	270				
	310				
	350				
	390				
	430				
16	470				
	510				
	550				
	590				
	630				
	670				

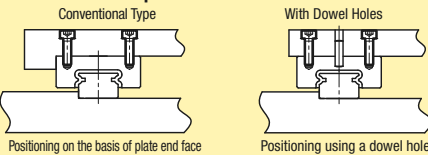
### L Dimension Configurable Type (1mm Increment)

H	Unit Price			
	Stainless Steel		Carbon Steel	
9	SSEBWNL	SSE2BWNL	SEBWNL	SE2BWNL
12				
14				
16				

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.



### Installation Examples -



Ordering Example  
Part Number - L  
SSEBWN12 - 200 (L Type Greased)  
SSEBWN12L - 200 (L Type Greased)  
SSEBWN12G - 200 (G Type Greased)  
Alternative grease types available.  
P531



Alterations  
Part Number - L - (MC, RLC, LLC, B3, B4)  
SSE2BWNL16 - 450 - MC

Alterations	Code	Spec.
Tapped Hole	MC	Changes the rail mounting holes from counterbored holes to tapped holes. H MC 9 M4 12 M4 14 M5 16 M5
Rail End Cut	Left End Cut LLC Right End Cut RLC	Cuts rail ends. Ordering Code LLC H L Cut N 9 5 12 5 14 10 16 10 Rail is cut with the product ID facing out (datum on other side). Applicable to Selectable Type only. Overall length will be shorter by cutting. Not applicable to L dimension 70 or less.
3-Block Specifications	B3	Add 2 blocks to 1-block product to ship as 3-block separate item. There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SEBWN9-200-B3
4-Block Specifications	B4	Add 3 blocks to 1-block product to ship as 4-block separate item. There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SEBWN14-420-B4

### Additional Block Price

H	B3: Price Adder		B4: Price Adder	
	Stainless Steel	Carbon Steel	Stainless Steel	Carbon Steel
9				
12				
14				
16				

### Selectable Shortest Rail Length for B3/B4

H	B3 (3-block)	B4 (4-block)
9	140	170
12	140	200
14	190	230
16	230	270

### Options for Linear Guide

Position Retaining Parts	Block / Rail Fixing Parts
Stopper Bolts	Rail Push Plates P612
	Linear Lock P607
	Block Derailment Prevention Parts P613
	Linear Guide Lock Units P614



# Miniature Linear Guides - Wide Rails

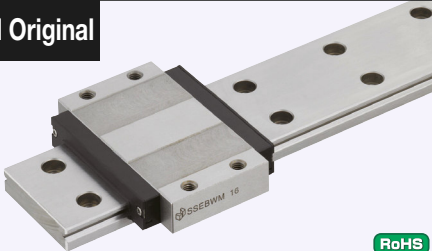
## Wide Standard Blocks, Light Preload / Slight Clearance

= For customers selecting MISUMI original specifications =

frame-surrounded products are compliant with the standard specifications (Stainless Steel, Light Preload, High Grade Type).  
Select the block from this spec.

■ **Features:** Wide Block Type of MISUMI original specifications. Larger screw size has enhanced fastening strength compared to standard products.

### MISUMI Original

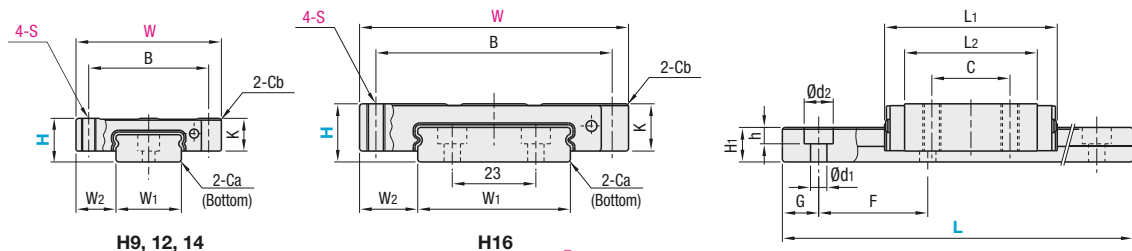


RoHS

Blocks and rails are not sold as separate items. This Type has guaranteed radial clearances and accuracies as sets of blocks and rails.

Material Hardness	Type		L Dimension	Number of Blocks
	Light Preload High Grade	Slight Clearance Standard Grade		
Standard Materials Stainless Steel 56HRC~	SSEBWM	SSEBWMZ	Selectable	1
	SSE2BWM	SSE2BWMZ	Selectable	2
	SSEBWMML	SSEBWMMLZ	Configurable	1
	SSE2BWMML	SSE2BWMMLZ	Configurable	2
Carbon Steel 58HRC~	SEBWM	SEBWMZ	Selectable	1
	SE2BWM	SE2BWMZ	Selectable	2
	SEBWMML	SEBWMMLZ	Configurable	1
	SE2BWMML	SE2BWMMLZ	Configurable	2

Heat Resistant Temperature: -20 ~ 80°C



For L Configurable, G dimensions differ from those shown in the table below. For details, see P. 531.

#### Precautions for Use

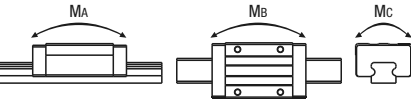
- Blocks are equipped with retainers (wire) to prevent balls from falling off.
- For how to handle the blocks, see P. 525.
- Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
- Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
- Rails cannot be connected end to end.
- The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane). Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

#### Others

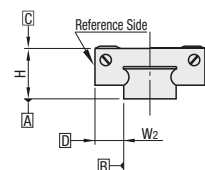
- Filled with Lithium soap based grease (Multemp Grease PS2 by Kyodo Yushi Co., Ltd.).
- For operating life calculation, see P. 527.
- For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

Part Number		H	L	Block Dimension							Guide Rail Dimension								
Type				W	L <sub>1</sub>	B	C	S	L <sub>2</sub>	K	Cb	W <sub>1</sub>	W <sub>2</sub>	H <sub>1</sub>	Ca	Counterbored Hole d <sub>1</sub> x d <sub>2</sub> x h	F	G	
⚠ Dimensions in ( ) are for 2-Block Type.		9	50~290 (110)	36	31.1	29	12	M4	20.1	7	0.3	14	11	5.2	0.5	3.5x6x3.2	30	10	
Stainless Steel		12	50~290 (110)	40	38	33	12	M4	27	9	0.3	18	11	7.5	0.5	3.5x6x4.5	30	10	
Standard Specifications																			
SSEBWM	SSEBWMZ																		
SSE2BWM	SSE2BWMZ																		
SSEBWML	SSEBWMMLZ	14	70~470 (150)	51	44.3	44	15	M4	30.1	11	0.5	24	13.5	8	0.5	4.5x8x4.5	40	15	
SSE2BWMML	SSE2BWMMLZ																		
Carbon Steel																			
SEBWM	SEBWMZ																		
SE2BWM	SE2BWMZ	16	70~670 (190)	74	55	65	20	M5	40	13	0.5	42	16	9.5	0.5	4.5x8x4.5	40	15	
SEBWML	SEBWMMLZ																		
SE2BWMML	SE2BWMMLZ																		

Basic Load Rating/Allowable Static Moment		Mass	
H	C (Dynamic) / Co (Static)	MA	MA
9	1.4	2.2	7.8
12	2.3	3.7	13.7
14	3.5	5.3	20.6
16	5.8	8.5	40.2



#### Preload and Accuracy Standards



Specifications	Light Preload, High Grade	Slight Clearance, Standard Grade
Radial Clearance	-3~0	0~+15
Height H Tolerance	±20	±20
Pair Variation of Height H	15	40
Width W2 Tolerance	±25	±25
Pair Variation of Width W2	20	40
Running Parallelism of Plane C against Plane A	See P. 525	
Running Parallelism of Plane D against Plane A		

Slight Clearance Type has clearance (Gap) between rails and blocks.  
If precision / rigidity is required, select Light Preload Type.

H	L	Unit Price							
		Stainless Steel				Carbon Steel			
		SSEBWM	SSE2BWM	SSEBWMZ	SSE2BWMZ	SEBWM	SE2BWM	SEBWMZ	SE2BWMZ
9	50	-	-	-	-	-	-	-	-
	80	-	-	-	-	-	-	-	-
	110	-	-	-	-	-	-	-	-
	140	-	-	-	-	-	-	-	-
	170	-	-	-	-	-	-	-	-
	200	-	-	-	-	-	-	-	-
	230	-	-	-	-	-	-	-	-
	260	-	-	-	-	-	-	-	-
	290	-	-	-	-	-	-	-	-
	70	-	-	-	-	-	-	-	-
12	50	-	-	-	-	-	-	-	-
	80	-	-	-	-	-	-	-	-
	110	-	-	-	-	-	-	-	-
	140	-	-	-	-	-	-	-	-
	170	-	-	-	-	-	-	-	-
	200	-	-	-	-	-	-	-	-
	230	-	-	-	-	-	-	-	-
	260	-	-	-	-	-	-	-	-
	290	-	-	-	-	-	-	-	-
	70	-	-	-	-	-	-	-	-
14	50	-	-	-	-	-	-	-	-
	80	-	-	-	-	-	-	-	-
	110	-	-	-	-	-	-	-	-
	140	-	-	-	-	-	-	-	-
	170	-	-	-	-	-	-	-	-
	200	-	-	-	-	-	-	-	-
	230	-	-	-	-	-	-	-	-
	260	-	-	-	-	-	-	-	-
	290	-	-	-	-	-	-	-	-
	70	-	-	-	-	-	-	-	-
16	50	-	-	-	-	-	-	-	-
	80	-	-	-	-	-	-	-	-
	110	-	-	-	-	-	-	-	-
	140	-	-	-	-	-	-	-	-
	170	-	-	-	-	-	-	-	-
	200	-	-	-	-	-	-	-	-
	230	-	-	-	-	-	-	-	-
	260	-	-	-	-	-	-	-	-
	290	-	-	-	-	-	-	-	-
	70	-	-	-	-	-	-	-	-

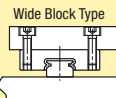
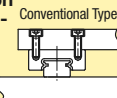
#### L Dimension Configurable Type (1mm Increment)

H	Unit Price							
	Stainless Steel				Carbon Steel			
	SSEBWM	SSE2BWM	SSEBWMZ	SSE2BWMZ	SEBWM	SE2BWM	SEBWMZ	SE2BWMZ
9	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.



#### Installation Examples



\* One size larger screws. Enhanced assembly and fastening strength.



Ordering Example

Part Number - L  
SSEBWM12 - 200  
SSEBWM12L - 200 (L Type Greased)  
SSEBWM12G - 200 (G Type Greased)  
Alternative grease types available.  
P. 531



Alterations

Part Number - L - (MC, RLC, LLC, B3, B4)  
SSE2BWM16 - 450 - MC

Alterations	Code	Spec.
Tapped Hole	MC	Changes the rail mounting holes from counterbored holes to tapped holes. H MC 9 M4 12 M4 14 M5 16 M5
Rail End Cut	LLC	Cuts rail ends. Ordering Code LLC H L Cut N 9 5 10 12 5 10 14 5 10 16 5 10 Rail is cut with the product ID facing out (datum on other side).
3-Block Specifications	B3	Add 2 blocks to 1-block product to ship as 3-block separate item. There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SSEBWM9-290-B3
4-Block Specifications	B4	Add 3 blocks to 1-block product to ship as 4-block separate item. There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SSEBWM12-290-B4

#### Additional Block Price (Same Price for High/Standard Grade)

H	B3: Price Adder	B4: Price Adder
9	140	170
12	140	200
14	190	230
16	230	270

#### Selectable Shortest Rail Length for B3/B4

H	B3 (3-block)	B4 (4-block)
9	140	170
12	140	200
14	190	230
16	230	270

#### Options for Linear Guide

Position Retaining Parts	Block / Rail Fixing Parts
Stopper Bolts	Rail Push Plates
	Linear Lock
	Linear Guide Lock Units



# Miniature Linear Guides - Wide Rails

## Long Blocks, Light Preload

= For customers using industry standard products =

frame-surrounded products are compliant with the industry standard specifications (Stainless Steel, Light Preload, High Grade Type). Select the block from this spec.

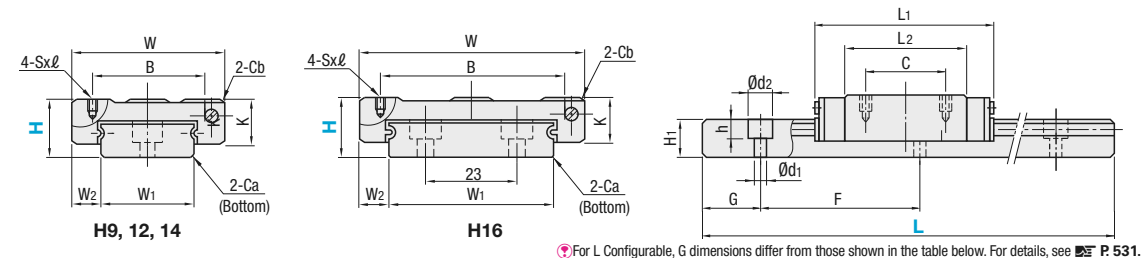
**Features:** Wide Rail, Long Block Type of industry standard specifications. Higher load ratings and allowable moments than standard blocks.

### Industry Standard



RoHS

- This Type has the same fitting dimensions as the other company products, and thus, can be substituted for them.
- Blocks and rails are not sold as separate items. This Type has guaranteed radial clearances and accuracies as sets of blocks and rails.



For L Configurable, G dimensions differ from those shown in the table below. For details, see P.531.

#### Precautions for Use

- Blocks are equipped with retainers (wire) to prevent balls from falling off. For how to handle the blocks, see P.525.
- Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
- Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
- Rails cannot be connected end to end.
- The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
- Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

#### Others

- Filled with Lithium soap based grease (Multemp Grease PS2 by Kyodo Yushi Co., Ltd.).
- For operating life calculation, see P.527.
- For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

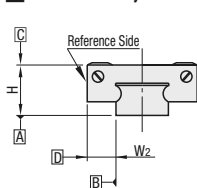
Part Number		H	L	Block Dimension						Guide Rail Dimension									
Type				W	L <sub>1</sub>	B	C	Sxℓ	L <sub>2</sub>	K	Cb	W <sub>1</sub>	W <sub>2</sub>	H <sub>1</sub>	Ca	Counterbored Hole d1xd2xh	F	G	
Stainless Steel	Industry Standard Specifications	9	80~290 (110)	25	43.5	19	19	M3x3	32.5	7	0.3	14	5.5	5.2	0.5	3.5x6x3.2	30	10	
				30	51.6	23	24	M3x3	40.6	9	0.3	18	6	7.5	0.5	3.5x6x4.5	30	10	
		12	80~290 (110)	40	61.6	28	28	M3x3.5	47.4	11	0.5	24	8	8	0.5	4.5x8x4.5	40	15	
				60	74.9	45	35	M4x4.5	59.9	13	0.5	42	9	9.5	0.5	4.5x8x4.5	40	15	
Carbon Steel	Industry Standard Specifications	14	110~470 (150)	40	61.6	28	28	M3x3.5	47.4	11	0.5	24	8	8	0.5	4.5x8x4.5	40	15	
				60	74.9	45	35	M4x4.5	59.9	13	0.5	42	9	9.5	0.5	4.5x8x4.5	40	15	
		16	110~670 (190)	40	61.6	28	28	M3x3.5	47.4	11	0.5	24	8	8	0.5	4.5x8x4.5	40	15	
				60	74.9	45	35	M4x4.5	59.9	13	0.5	42	9	9.5	0.5	4.5x8x4.5	40	15	

kgf=Nx0.101972

Unit: μm

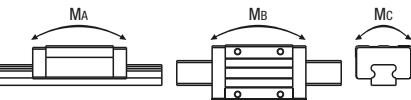
H	Basic Load Rating/Allowable Static Moment				Mass	
	C (Dynamic) kN	Co (Static) kN	MA N·m	Mb N·m	Mc N·m	Block kg / Guide Rail kg/m
9	1.7	4.0	12.1	12.1	28.8	0.035 0.50
12	2.6	5.3	20.2	20.2	49.5	0.06 0.96
14	3.9	8.5	38.6	38.6	104.6	0.12 1.40
16	7.2	14.3	86.0	86.0	305.2	0.23 2.95

#### Preload and Accuracy Standards



Specifications	Light Preload, High Grade	Light Preload, Precision Grade	Slight Clearance, Standard Grade
Radial Clearance	-3~0	0~+15	0~+15
Height H Tolerance	±20	±10	±20
Pair Variation of Height H	15	7	40
Width W <sub>2</sub> Tolerance	±25	±15	±25
Pair Variation of Width W <sub>2</sub>	20	10	40
Running Parallelism of Plane C against Plane A	See P. 525		
Running Parallelism of Plane D against Plane A			

- Slight Clearance Type has clearance (Gap) between rails and blocks. If precision / rigidity is required, select Light Preload Type.



H	L	Unit Price							
		Stainless Steel				Carbon Steel			
		SSELBW	SSEL2BW	SSELBWZ	SSEL2BWZ	SELBW	SEL2BW	SELBWZ	SEL2BWZ
9	80	-	-	-	-	-	-	-	-
	110	-	-	-	-	-	-	-	-
	140	-	-	-	-	-	-	-	-
	170	-	-	-	-	-	-	-	-
	200	-	-	-	-	-	-	-	-
	230	-	-	-	-	-	-	-	-
	260	-	-	-	-	-	-	-	-
12	290	-	-	-	-	-	-	-	-
	80	-	-	-	-	-	-	-	-
	110	-	-	-	-	-	-	-	-
	140	-	-	-	-	-	-	-	-
	170	-	-	-	-	-	-	-	-
	200	-	-	-	-	-	-	-	-
	230	-	-	-	-	-	-	-	-
14	260	-	-	-	-	-	-	-	-
	290	-	-	-	-	-	-	-	-
	110	-	-	-	-	-	-	-	-
	150	-	-	-	-	-	-	-	-
	190	-	-	-	-	-	-	-	-
	230	-	-	-	-	-	-	-	-
	270	-	-	-	-	-	-	-	-
16	310	-	-	-	-	-	-	-	-
	350	-	-	-	-	-	-	-	-
	390	-	-	-	-	-	-	-	-
	430	-	-	-	-	-	-	-	-
	470	-	-	-	-	-	-	-	-
	510	-	-	-	-	-	-	-	-
	550	-	-	-	-	-	-	-	-
18	590	-	-	-	-	-	-	-	-
	630	-	-	-	-	-	-	-	-
	670	-	-	-	-	-	-	-	-

#### L Dimension Configurable Type (1mm Increment)

H	Unit Price			
	Stainless Steel		Carbon Steel	
	SSELBWL	SSEL2BWL	SELBWL	SEL2BWL
	SSELBWLZ	SSEL2BWLZ	SELBWLZ	SEL2BWLZ
9	-	-	-	-
12	-	-	-	-
14	-	-	-	-
16	-	-	-	-

- For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.

#### Options for Linear Guide

Position Retaining Parts		Block / Rail Fixing Parts	
P607		Rail Push Plates	
Block Derailment Prevention Parts		Linear Lock	
Stopper Bolts		Linear Guide Lock Units	
P612		P613	
		P614	



Ordering Example

Part Number - L

- SSELBW12 - 200 (LTBC Plating)
- RSELBW12 - 200 (L Type Greased)
- SSELBW12L - 200 (G Type Greased)
- SSELBW12G - 200

LTBC Plating and various Grease types available as alternative.

P531



Alterations

Part Number - L - (MC, RLC, LLC, WC, B3, B4)

SSEL2BWL16 - 450 - MC

Alterations	Code	Spec.
Tapped Hole	MC	Changes the rail mounting holes from counterbored holes to tapped holes.
Rail End Cut	Left End Cut LLC	Cuts rail ends. (Ordering Code) LLC
	Right End Cut RLC	
Parallel Use of 2 Rails	WC	Pair variation of Height H between 2 rails is set within 15μm. Rails are shipped in pairs. Specify the actual rail quantity (even number) to order, not "pairs".
3-Block Specifications	B3	Add 2 blocks to 1-block product to ship as 3-block separate item. There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SELBW12-260-B3
4-Block Specifications	B4	Add 3 blocks to 1-block product to ship as 4-block separate item. There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SSELBW9-290-B4

#### Additional Block Price (Same Price for High/Standard Grade)

H	B3: Price Adder	B4: Price Adder	H	B3 (3-block)	B4 (4-block)
9	Stainless Steel	Carbon Steel	9	170	200
12			12	200	260
14			14	230	310
16			16	270	350

Unit price for Precision Type is the above price x1.2. (Round to the nearest Ten JPY)



# Miniature Linear Guides - Wide Rails

## Long Blocks with Dowel Holes, Light Preload

= For customers selecting MISUMI original specifications =

frame-surrounded products are compliant with the standard specifications (Stainless Steel, Light Preload, High Grade Type). Select the block from this spec.

■ **Features:** MISUMI original specifications with dowel holes. Requires less time for assembly and has better repeatability.

**MISUMI Original**

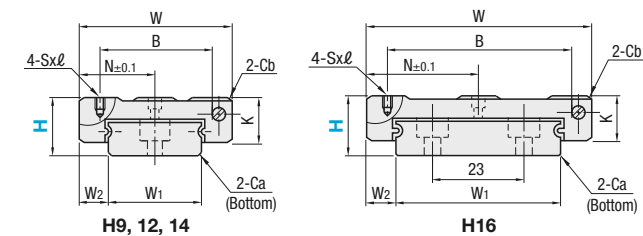
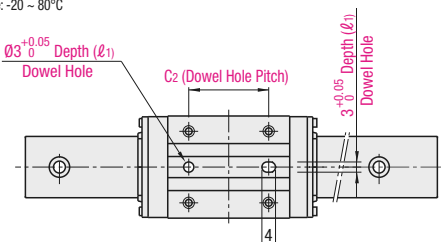


Material Hardness	Type Light Preload High Grade	L Dimension	Number of Blocks
Standard Materials	Stainless Steel 56HRC~	SSELBWN	Selectable
		SSEL2BWN	2
		SSELBWNL	1
		SSEL2BWNL	2
	Carbon Steel 58HRC~	SELBWN	Selectable
		SEL2BWN	2
		SELBWNL	1
		SEL2BWNL	2

Heat Resistant Temperature: -20 ~ 80°C

⚠ Blocks and rails are not sold as separate items. This Type has guaranteed radial clearances and accuracies as sets of blocks and rails.

RoHS



⚠ For L Configurable, G dimensions differ from those shown in the table below. For details, see P.531.

### ■ Precautions for Use

- ⚠ Blocks are equipped with retainers (wire) to prevent balls from falling off. For how to handle the blocks, see P.525.
- ⚠ Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
- ⚠ Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
- ⚠ Rails cannot be connected end to end.
- ⚠ The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on

the rail and pushing it onto the datum plane).

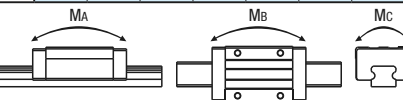
Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

### ■ Others

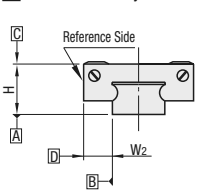
- Filled with Lithium soap based grease (Muitemp Grease PS2 by Kyodo Yushi Co., Ltd.).
- For operating life calculation, see P.527.
- For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

Part Number		L	Block Dimension								Dowel Hole Dimensions			Guide Rail Dimension							
Type	H		W	L <sub>1</sub>	B	C	Sxℓ	L <sub>2</sub>	K	Cb	N	C <sub>2</sub>	(ℓ <sub>1</sub> )	W <sub>1</sub>	W <sub>2</sub>	H <sub>1</sub>	Ca	Counterbored Hole d1xd2xh	F	G	
🌀Dimensions in ( ) are for 2-Block Type.		9	80~290 (110)	25	43.5	19	19	M3x3	32.5	7	0.3	12.5	19	2.5	14	5.5	5.2	0.5	3.5x6x3.2	30	10
Stainless Steel Standard Specifications SSELBWN SSEL2BWN SSELBWNL SSEL2BWNL	Carbon Steel SELBWN SEL2BWN SELBWNL SEL2BWNL	12	80~290 (110)	30	51.6	23	24	M3x3	40.6	9	0.3	15	24	2.5	18	6	7.5	0.5	3.5x6x4.5	30	10
		14	110~470 (150)	40	61.6	28	28	M3x3.5	47.4	11	0.5	20	28	3.5	24	8	8	0.5	4.5x8x4.5	40	15
		16	110~670 (190)	60	74.9	45	35	M4x4.5	59.9	13	0.5	30	35	4	42	9	9.5	0.5	4.5x8x4.5	40	15

H	Basic Load Rating		Allowable Static Moment		Mass	
	C (Dynamic) kN	Co (Static) kN	MA N-m	MB N-m	MC N-m	Block kg
9	1.7	4.0	12.1	12.1	28.8	0.035
12	2.6	5.3	20.2	20.2	49.5	0.06
14	3.9	8.5	38.6	38.6	104.6	0.12
16	7.2	14.3	86.0	86.0	305.2	0.23



### ■ Preload and Accuracy Standards



Specifications		Unit: μm
Radial Clearance		-3~0
Height H Tolerance		±20
Pair Variation of Height H		15
Width W2 Tolerance		±25
Pair Variation of Width W2		20
Running Parallelism of Plane C against Plane A		See P.525
Running Parallelism of Plane D against Plane A		

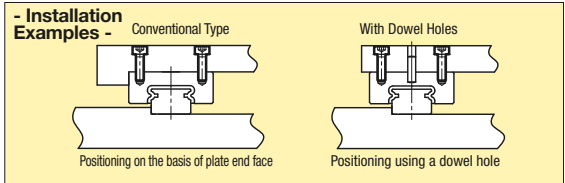
H	L	Unit Price			
		Stainless Steel		Carbon Steel	
9	80	SSELBWN	SSEL2BWN	SELBWN	SEL2BWN
	110		-		-
	140				
	170				
	200				
	230				
	260				
	290				
	320				
	350				
12	80		-		-
	110				
	140				
	170				
	200				
	230				
	260				
	290				
	320				
	350				
14	110		-		-
	150				
	190				
	230				
	270				
	310				
	350				
	390				
	430				
	470				
16	110		-		-
	150		-		-
	190				
	230				
	270				
	310				
	350				
	390				
	430				
	470				
	510				
	550				
	590				
	630				
	670				

### ■ L Dimension Configurable Type (1mm Increment)

H	Unit Price			
	Stainless Steel		Carbon Steel	
9	SSELBWNL	SSEL2BWNL	SELBWNL	SEL2BWNL
12				
14				
16				

⚠ For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.

Example



Ordering Example

Part Number - L  
SSELBWN12L - 200  
SSELBWN12L - 200 (L Type Greased)  
SSELBWN12G - 200 (G Type Greased)  
Alternative grease types available.  
P.531



Alterations

Part Number - L - (MC, RLC, LLC, B3, B4)  
SSEL2BWNL16 - 450 - MC

Alterations	Code	Spec.
Tapped Hole	MC	Changes the rail mounting holes from counterbored holes to tapped holes. H MC 9 12 M4 14 16 M5
Rail End Cut	LLC	Cuts rail ends. Ordering Code: LLC H L Cut N 9 5 5 12 14 10 14 16 ⚠ Applicable to Selectable Type only. ⚠ Overall length will be shorter by cutting.
3-Block Specifications	B3	Add 2 blocks to 1-block product to ship as 3-block separate item. ⚠ There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SSELBWN9-230-B3
4-Block Specifications	B4	Add 3 blocks to 1-block product to ship as 4-block separate item. ⚠ There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SELBWN14-430-B4

### ■ Additional Block Price

H	B3: Price Adder		B4: Price Adder	
	Stainless Steel	Carbon Steel	Stainless Steel	Carbon Steel
9				
12				
14				
16				

### ■ Selectable Shortest Rail Length for B3/B4

H	B3 (3-block)		B4 (4-block)	
	Stainless Steel	Carbon Steel	Stainless Steel	Carbon Steel
9	170	200		
12	200	260		
14	230	310		
16	270	350		

### ■ Options for Linear Guide

Position Retaining Parts	Block / Rail Fixing Parts
 P607	 P612
 P613	 P614
 P612	



# Miniature Linear Guides - Wide Rails

## Wide Long Blocks, Light Preload

= For customers selecting MISUMI original specifications =

frame-surrounded products are compliant with the standard specifications (Stainless Steel, Light Preload, High Grade Type).  
Select the block from this spec.

■ **Features:** **Wide Block** Type of MISUMI original specifications. Larger screw size has enhanced fastening strength compared to standard products.

### MISUMI Original

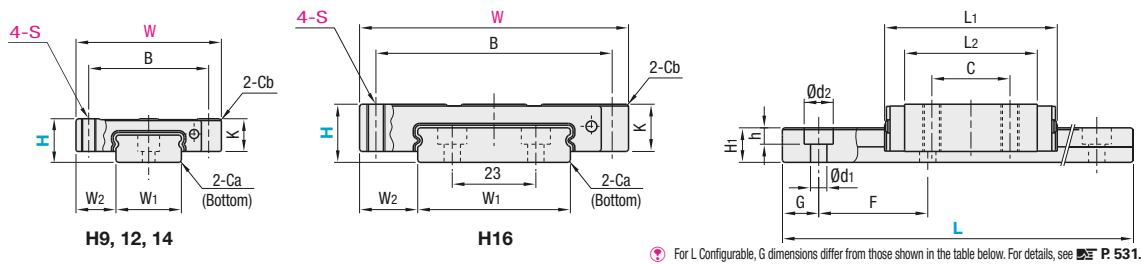


RoHS

Blocks and rails are not sold as separate items. This Type has guaranteed radial clearances and accuracies as sets of blocks and rails.

Material Hardness	Type Light Preload High Grade	L Dimension	Number of Blocks
Standard Materials Stainless Steel 56HRC~	SSELBWM	Selectable	1
	SSEL2BWM	Selectable	2
	SSELBWML	Configurable	1
	SSEL2BWML	Configurable	2
Carbon Steel 58HRC~	SELBWM	Selectable	1
	SEL2BWM	Selectable	2
	SELBWML	Configurable	1
	SEL2BWML	Configurable	2

Heat Resistant Temperature: -20 ~ 80°C



For L Configurable, G dimensions differ from those shown in the table below. For details, see P.531.

- **Precautions for Use**
- Blocks are equipped with retainers (wire) to prevent balls from falling off. For how to handle the blocks, see P.525.
  - Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
  - Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
  - Rails cannot be connected end to end.
  - The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
  - Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

- **Others**
- Filled with Lithium soap based grease (Mullemp Grease PS2 by Kyodo Yushi Co., Ltd.).
  - For Operating Life Calculation, see P.527.
  - For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

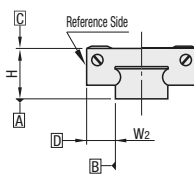
Part Number		L	Block Dimension								Guide Rail Dimension							
Type	H		W	L <sub>1</sub>	B	C	S	L <sub>2</sub>	K	Cb	W <sub>1</sub>	W <sub>2</sub>	H <sub>1</sub>	Ca	Counterbored Hole	F	G	
			d1xd2xh															
🌀Dimensions in ( ) are for 2-Block Type.		9	80~290 (110)	36	43.5	29	19	M4	32.5	7	0.3	14	11	5.2	0.5	3.5x6x3.2	30	10
<div>Stainless Steel Standard Specifications SSELBWM SSEL2BWM SSELBWML SSEL2BWML</div> <div>Carbon Steel SELBWM SEL2BWM SELBWML SEL2BWML</div>	12	80~290 (110)	40	51.6	33	24	M4	40.6	9	0.3	18	11	7.5	0.5	3.5x6x4.5	30	10	
	14	110~470 (150)	51	61.6	44	28	M4	47.4	11	0.5	24	13.5	8	0.5	4.5x8x4.5	40	15	
	16	110~670 (190)	74	74.9	65	35	M5	59.9	13	0.5	42	16	9.5	0.5	4.5x8x4.5	40	15	

kgf=Nx0.101972

H	Basic Load Rating/Allowable Static Moment		Mass		
	C (Dynamic) kN	Co (Static) kN	MA N · m	MB N · m	MC N · m
9	1.7	4.0	12.1	28.8	0.05
12	2.6	5.3	20.2	49.5	0.09
14	3.9	8.5	38.6	104.6	0.16
16	7.2	14.3	86.0	305.2	0.3

MA MB MC

### Preload and Accuracy Standards



Unit: μm

Specifications	Light Preload, High Grade
Radial Clearance	-3~0
Height H Tolerance	±20
Pair Variation of Height H	15
Width W <sub>2</sub> Tolerance	±25
Pair Variation of Width W <sub>2</sub>	20
Running Parallelism of Plane C against Plane A	See P.525
Running Parallelism of Plane D against Plane A	See P.525

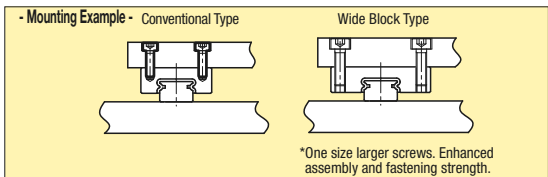
H	Selectable L	Unit Price			
		Stainless Steel		Carbon Steel	
9	80	SSELBWM	SSEL2BWM	SELBWM	SEL2BWM
	110		-		-
	140				
	170				
	200				
	230				
	260				
	290				
12	80		-		-
	110				
	140				
	170				
	200				
	230				
	260				
	290				
14	110		-		-
	150				
	190				
	230				
	270				
	310				
	350				
	390				
16	430				
	470				
	110		-		-
	150		-		-
	190				
	230				
	270				
	310				
	350				
	390				
	430				
	470				
	510				
	550				
	590				
	630				
	670				

### L Dimension Configurable Type (1mm Increment)

H	Unit Price			
	Stainless Steel		Carbon Steel	
9	SSELBWML	SSEL2BWML	SELBWML	SEL2BWML
12				
14				
16				

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.

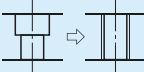
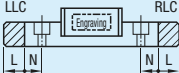
### Example



Ordering Example  
Part Number - L  
SSELBWM12 - 200  
SSELBWM12L - 200 (L Type Greased)  
SSELBWM12G - 200 (G Type Greased)  
Alternative grease types available  
P.531



Alterations  
Part Number - L - (MC, RLC, LLC)  
SSEL2BWML16 - 450 - MC

Alterations	Code	Spec.															
<p>Tapped Hole</p> 	MC	<p>Changes the rail mounting holes from counterbored holes to tapped holes.</p> <table border="1"><tr><td>H</td><td>MC</td></tr><tr><td>9</td><td>M4</td></tr><tr><td>12</td><td></td></tr><tr><td>14</td><td>M5</td></tr><tr><td>16</td><td></td></tr></table>	H	MC	9	M4	12		14	M5	16						
H	MC																
9	M4																
12																	
14	M5																
16																	
<p>Rail End Cut</p> 	<p>Left End Cut</p> <p>LLC</p> <p>Right End Cut</p> <p>RLC</p>	<p>Cuts rail ends.</p> <p>Ordering Code: LLC</p> <table border="1"><tr><td>H</td><td>L Cut</td><td>N</td></tr><tr><td>9</td><td></td><td></td></tr><tr><td>12</td><td>5</td><td>5</td></tr><tr><td>14</td><td></td><td></td></tr><tr><td>16</td><td></td><td>10</td></tr></table> <p>⚠ Applicable to Selectable Type only. ⚠ Overall length will be shorter by cutting.</p>	H	L Cut	N	9			12	5	5	14			16		10
H	L Cut	N															
9																	
12	5	5															
14																	
16		10															

### Options for Linear Guide

Position Retaining Parts	Block / Rail Fixing Parts
	■ Rail Push Plates 
	■ Linear Locks 
	■ Block Derailment Prevention Parts 
	■ Stopper Bolts 
	■ Linear Guide Lock Units 



# Linear Guides for Medium Load

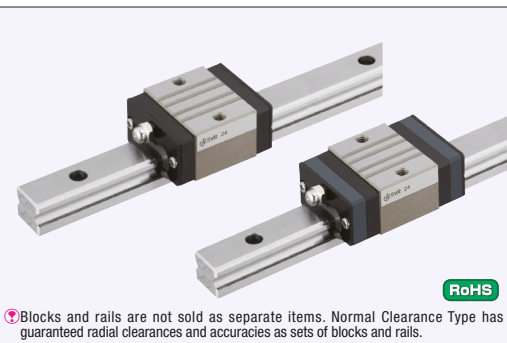
## Normal Clearance

= For customers using industry standard products =

Frame-surrounded products are compliant with the industry standard specifications (Standard Block Type).  
Select the block from this spec.

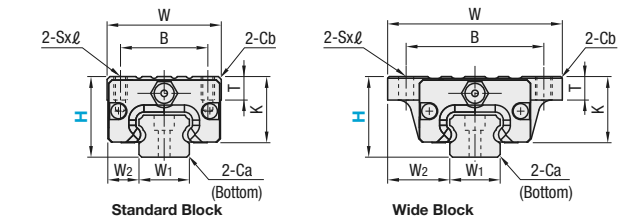
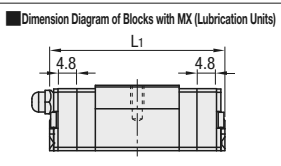
Similar Products Comparison Points | Select this product for high precision positioning, heavy load, and high frequency drive application.

Lubrication Units **MX**  
Provides long term maintenance-free operation.



		Type				MX (Lubrication Units)	L Dimension	Material Hardness
		1 block		2 blocks				
		Standard Grade	High Grade	Standard Grade	High Grade			
Block	Standard	SVR	SVRJ	SV2R	SV2RJ	Blank: None -MX: Provided	Selectable	Carbon Steel 58HRC~
		SVRL	SVRLJ	SV2RL	SV2RLJ		Configurable	
Wide Block	Through Hole	SVW	-	SV2W	-		Selectable	
		SVWL	-	SV2WL	-		Configurable	
		SVWT	-	SV2WT	-		Selectable	
		SVWTL	-	SV2WTL	-		Configurable	

Heat Resistant Temperature: -20 ~ 80°C



For L Configurable, G dimensions differ from those shown in the table below. For details, see P.531.

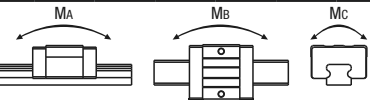
- Precautions for Use
- Blocks are equipped with retainers to prevent balls from falling off. For how to handle the blocks, see P.525.
  - Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
  - Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
  - Rails cannot be connected end to end.
  - The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
  - Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

- Others
- Filled with Lithium soap based grease (Alvania Grease S2 by Showa Shell Sekiyu K.K.).
  - Grease Fittings: Straight Type for H24 and Angled Type for H28 and H33.
  - Grease Fitting is screw-in type, and thus, can be repositioned.
  - For Operating Life Calculation, see P.527.
  - For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

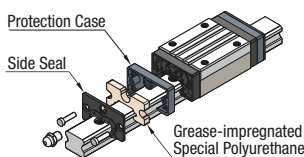
Part Number				L	Block Dimension												Guide Rail Dimension								
Type	MX	H	W		L <sub>1</sub>		B	Sxℓ	L <sub>2</sub>	K	T	Cb	Grease Fitting			H <sub>1</sub>	W <sub>1</sub>	W <sub>2</sub>	Ca	Counterbored Hole d1xd2xh	F	G			
					Standard	MX							E	T <sub>1</sub>											
Standard Block	(1 block) SVR SVRL SVRJ SVRLJ	Blank: None -MX: Provided	24	100~1480 (160)	34	41	50.6	26	M4x7	25	20	7	0.85	M5xP0.8	6	5	12.5	15	9.5	0.5	3.5x6x4.5	60	20		
	28		160~1960 (220)	42	47	56.6	32	M5x8	27.6	22.5	7.5	1	M6xP0.75	13	6	15.5	20	11	0.6	6x9.5x8.5	60	20			
	33		160~1960 (220)	48	59	68.6	35	M6x9	37	26.5	8	1	M6xP0.75	13	6.8	18	23	12.5	0.8	7x11x9	60	20			
	24		100~1480 (160)	52	41	50.6	41	4.5 (M5)	25	20	7	0.5	M5xP0.8	6	5	12.5	15	18.5	0.5	3.5x6x4.5	60	20			
Wide Block	(1 block) SVW SVWL SVWT SVWTL	Blank: None -MX: Provided	28	160~1960 (220)	59	47	56.6	49	5.5 (M6)	27.6	22.5	9	1	M6xP0.75	13	6	15.5	20	19.5	0.6	6x9.5x8.5	60	20		
	33		160~1960 (220)	73	59	68.6	60	7 (M8)	37	26.5	10	1	M6xP0.75	13	6.8	18	23	25	0.8	7x11x9	60	20			

L Dimension: Dimensions in ( ) are for 2-Block Type.  
Sxℓ Dimensions: Dimensions in ( ) are for Wide Block Tapped Hole.

H	Basic Load Rating/Allowable Static Moment		Mass			
	C (Dynamic) kN	Co (Static) kN	Ma, Ms N · m	Mc N · m	Block kg	Guide Rail kg/m
24	5.0	8.23	33	57	0.15	0.20
28	7.2	12.1	58	135	0.20	0.25
33	11.7	19.6	109	225	0.30	0.40

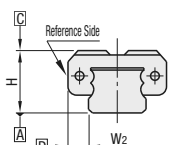


Lubrication Units **MX**



Advantages of Lubrication Unit MX: Provides long term maintenance-free operation. Reduces maintenance cost. Most suitable where the design does not allow lubrication. For details, see P.530.

Preload and Accuracy Standards



Normal Clearance Type

Radial Clearance (μm)	Dimensional Accuracy (μm)	Standard Grade	High Grade
H24	-4~+2	±100	±40
H28	-5~+2	20	15
H33	-6~+3	±100	±20
	Pair Variation of Height H	H24, 28	20
	Pair Variation of Width W2	H33	30
	Pair Variation of Width W2	H24, 28	20
	Pair Variation of Width W2	H33	30
	Running Parallelism of Plane C against Plane A		
	Running Parallelism of Plane D against Plane B		
		See P.525	

\*High Grade Types are not available.  
\*LTBC Plating products are available in an L dimension of up to 1000.

H	Selectable L	Unit Price					
		1 block	1 block	1 block	2 blocks	2 blocks	2 blocks
24	100	SVR	SVW	SVWT	SV2R	SV2W	SV2WT
	160						
	220						
	280						
	340						
	400						
	460						
	520						
	580						
	640						
	700						
	760						
	820						
	880						
	940						
	1000						
28	*1120						
	*1240						
	*1360						
	*1480						
	160						
	220						
	280						
	340						
	400						
	460						
	520						
	580						
	640						
	700						
	760						
	820						
33	880						
	940						
	1000						
	*1120						
	*1240						
	*1360						
	*1480						
	*1600						
	*1720						
	*1840						
	*1960						
	160						
	220						
	280						
	340						
	400						
	460						
	520						
	580						
	640						
	700						
	760						
	820						
	880						
	940						
	1000						
	*1120						
	*1240						
	*1360						
	*1480						
	*1600						
	*1720						
	*1840						
	*1960						

L Dimension Configurable Type (1mm Increment)

H	Unit Price					
	1 block	1 block	1 block	2 blocks	2 blocks	2 blocks
24	SVRL	SVWL	SVWT	SV2RL	SV2WL	SV2WTL
28						
33						

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.

MX (Lubrication Unit) Unit Price

H	Unit Price	
	1 block	2 blocks
24		
28		
33		

Price of Guide Rails with MX (Lubrication Unit) = Linear Guide Unit Price + MX Unit Price



Part Number	-	L	
SVR28	-	880	(With Lubrication Units)
SVR-MX	-	880	(LTBC Plating)
RVR	-	880	(L Type Greased)
RVR28	-	880	(G Type Greased)
SVR28L	-	880	
SVR28G	-	880	

LTBC Plating and various Grease types available as alternative. (Except products with Lubrication Units) P.532



Part Number	-	L	-	(TMS, TMC-etc.)
SVR28	-	880	-	TMC

Alterations	Code	Spec.
TMS: Tapped Hole Machining + 2 Stopper Plates	TMS TMC	Adds tapped holes on both rail ends to avoid block fall-off. H24 H28, 33
TMC: Tapped Hole Machining only		
Block Stopper Plate		M3xP0.5 Depth 5 Tapped Hole For Stopper Plates Details, see P.612.
LLC	Left End Cut LLC	Cuts rail ends. Ordering Code: LLC
RLC	Right End Cut RLC	Cuts rail ends. Ordering Code: RLC
Rail is cut with the product ID facing out (datum on other side).		Overall length will be shorter by cutting. Not applicable to H dimension 24 of L dimension 100.
Parallel Use of 2 Rails	WC	For standard grade, pair variation of Height H between 2 rails is set within 20μm. Two rails are shipped as a pair. Specify the actual rail quantity (even number) to order, not 'pairs'. Not applicable to High Grade Type. Not applicable to low temperature chrome plated products.
3-Block Specifications	B3	Add 2 blocks to 1-Block product to ship as 3-Block separate item. Selection Example: SVR24-400-B3
4-Block Specifications	B4	Add 3 blocks to 1-Block product to ship as 4-Block separate item. Selection Example: SVR24-400-B4

Additional Block Price

H	B3:1Code				B4:1Code			
	Standard	Wide	Standard MX	Wide MX	Standard	Wide	Standard MX	Wide MX
24								
28								
33								

Position of Grease Fitting (Reference plane on the front side)

1 block	2 blocks	3 blocks	4 blocks

Selectable Shortest Rail Length for B3 / B4

H	B3 (3-Block)	B4 (4-Block)
24	280	340
28	340	400
33	340	400

Options for Linear Guide

Linear Guide Clamps	Rail Height Adjusting Blocks
P608	P609, 610
Block Derailment Prevention Parts / Dust Resistant Parts	Block / Rail Fixing Parts
Stopper Bolts	Linear Guide Rail Push Plates
P612	P612
Block Stopper Plates	Linear Locks
P612	P613
Rail Mounting Hole Caps	Linear Guide Lock Units
P612	P614



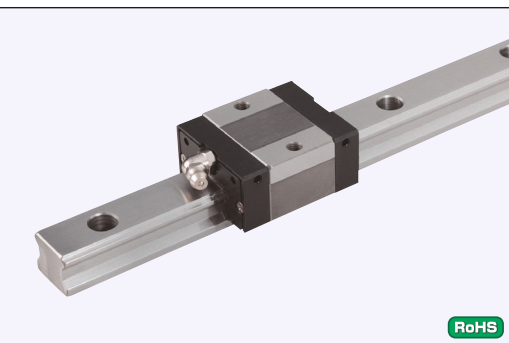
# Linear Guides for Medium Load

## Normal Clearance



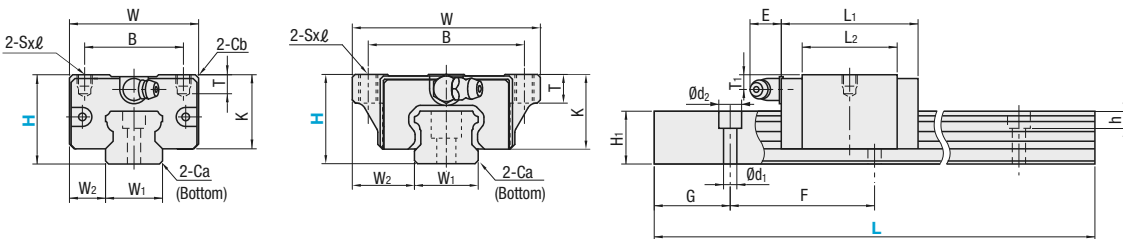
### Similar Products Comparison Points

Select C-VALUE Products for medium-accuracy positioning, medium/low load, and medium-to-low frequency drive applications. When you consider using C-VALUE Products, select an appropriate model after comparing the specifications with those of the existing products. **P569, P573**



RoHS

The mounting dimensions are same for the existing and C-VALUE Products.



For L Configurable, G dimensions differ from those shown in the table below. For details, see **P. 531**.

### Precautions for Use

- This product is All Ball Type. Blocks are equipped with retainers to prevent balls from derailing. For how to handle the blocks, see **P. 525**.
- Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
- Thick grooves are provided on the datum planes of blocks and rails. Be sure to match the datum planes when using.
- Rails cannot be connected end to end.
- Running parallelism is the value measured after the rail is mounted. (It is not the value measured before the rails are fastened with screws.)
- The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
- Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

### Others

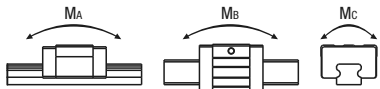
- Filled with Lithium soap based grease (Alvania Grease S2 by Showa Shell Sekiyu K.K.).
- Grease Fittings: Straight Type for H24 and Angled Type for H28 and H33.
- Grease Fitting is screw-in type, and thus, can be repositioned.
- For installation and maintenance of Linear Guides, see **P. 529**.

H	Type	H	L	Block Dimension										Guide Rail Dimension								
				W	L <sub>1</sub>	B	Sxℓ	L <sub>2</sub>	K	T	Cb	Grease Fitting			H <sub>1</sub>	W <sub>1</sub>	W <sub>2</sub>	Ca	Counterbored Hole	F	G	
												Mounting Hole	E	T <sub>1</sub>					d <sub>1</sub> x d <sub>2</sub> x h			
Standard Block	(1 block) C-SVR	(2 blocks) C-SV2R	24	100~1480 (160)	34	39.3	26	M4x5	22.9	20.8	6.2	0.5	M4x0.7	6	5.5	13	15	9.5	0.5	4.5x7.5x6	60	20
	C-SVRL	C-SV2RL	28	160~1960 (220)	42	47.8	32	M5x5	27.8	23.4	7.2	0.5	M6x1	12	4.5	16.5	20	11	0.5	6x9.5x8.5	60	20
			33	160~1960 (220)	48	56.2	35	M6x6	35.2	27.2	8.15	1	M6x1	12	4.5	20	23	12.5	0.9	7x11x9	60	20
Wide Block	(1 block) C-SVWT	(2 blocks) C-SV2WT	24	100~1480 (160)	52	39.3	41	M5x7	22.9	20.8	7	-	M4x0.7	7	5.5	13	15	18.5	0.5	4.5x7.5x6	60	20
	C-SVWTL	C-SV2WTL	28	160~1960 (220)	59	47.8	49	M6x9	27.8	23.4	9	-	M6x1	14	4.5	16.5	20	19.5	0.5	6x9.5x8.5	60	20

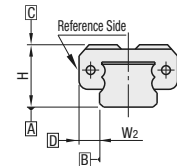
### Allowable Load

kgf=N×0.10972

H	Basic Load Rating		Allowable Static Moment			Mass		
	C (Dynamic) kN	Co kN	MA N·m	MB N·m	MC N·m	Block kg	Guide Rail kg/m	
24	3.2	5.2	13.3	13.3	40.8	0.07	0.098	1.32
28	4.7	7.1	18.6	18.6	75.2	0.11	0.15	2.28
33	6.9	10.6	38.0	38.0	129.7	0.18	0.26	3.17



### Preload and Accuracy Standards



### Interchangeable, Light Preload Type

Radial Clearance (μm)	
H24	-4~+4
H28	-5~+5
H33	-6~+6
Dimensional Accuracy (μm)	
Height H Tolerance	±120
Variation of Height H	40
Width W <sub>2</sub> Tolerance	±120
Variation of Width W <sub>2</sub>	40
Running Parallelism of Plane C against Plane A	See
Running Parallelism of Plane D against Plane B	<b>P. 525</b>

Similar Product Page **P569**



Ordering Example

Part Number	-	L
C-SVR28	-	880
C-SVWT28	-	880



Alterations

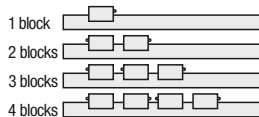
Part Number	-	L	-	(B3)
C-SVR28	-	640	-	B3

Alterations	Code	Spec.
3-Block Specifications	B3	Add 2 blocks to 1-block product to ship as 3-block separate item. Selection Example: C-SVR24-400-B3
4-Block Specifications	B4	Add 3 blocks to 1-block product to ship as 4-block separate item. Selection Example: C-SVR24-400-B4

### Additional Block Price

H	B3: Price Adder		B4: Price Adder	
	C-SVR	C-SVWT	C-SVR	C-SVWT
24				
28				
33		-		-

### Position of Grease Fitting (Reference plane on the front side)



### Selectable Shortest Rail Length for B3/B4

H	B3 (3-block)	B4 (4-block)
24	340	400
28	400	460
33	400	520
42	440	520

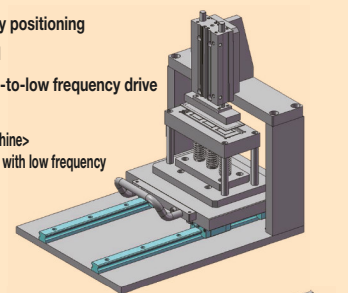


Example

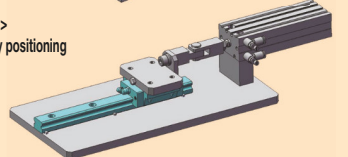
### C-VALUE Products - App. Example

- Medium-accuracy positioning
- Medium/low load
- Used for medium-to-low frequency drive

<Manual Press Fitting Machine>  
Used for manual operation with low frequency



<Air Cylinder Drive Section>  
Used for medium-accuracy positioning



For calculation of L Dimension Configurable Type (10mm Increment), add the amount shown on the left to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.

H	L	Unit Price			
		1 block		2 blocks	
		C-SVR	C-SVWT	C-SV2R	C-SV2WT
24	100			-	-
	160				
	220				
	280				
	340				
	400				
	460				
	520				
	580				
	640				
	700				
	760				
	820				
	880				
	940				
	1000				
28	1060				
	1120				
	1180				
	1240				
	1300				
	1360				
	1420				
	1480				
	1540				
	1600				
	1660				
	1720				
	1780				
	1840				
	1900				
	1960				
33	160		-	-	-
	220		-	-	-
	280		-	-	-
	340		-	-	-
	400		-	-	-
	460		-	-	-
	520		-	-	-
	580		-	-	-
	640		-	-	-
	700		-	-	-
	760		-	-	-
	820		-	-	-
	880		-	-	-
	940		-	-	-
	1000		-	-	-
	1060		-	-	-
	1120		-	-	-
	1180		-	-	-
	1240		-	-	-
	1300		-	-	-
	1360		-	-	-
	1420		-	-	-
	1480		-	-	-
	1540		-	-	-
	1600		-	-	-
	1660		-	-	-
	1720		-	-	-
	1780		-	-	-
	1840		-	-	-
	1900		-	-	-
	1960		-	-	-
<b>L Dimension Configurable Type (10mm Increment)</b>					
H	Unit Price				
	C-SVRL	C-SVWTL	C-SV2RL	C-SV2WTL	
24					
28					
33					



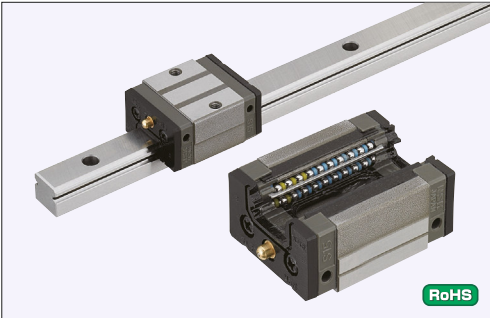
# Linear Guides for Medium Load

With Plastic Retainers, Interchangeable, Light Preload

= For customers using industry standard products =

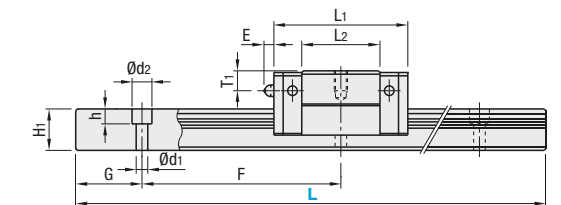
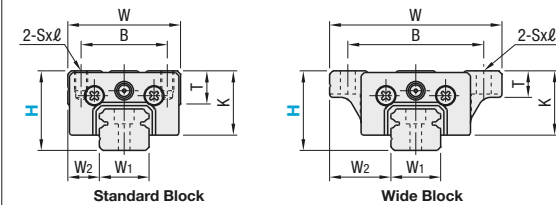
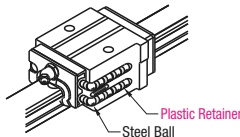
Frame-surrounded products are compliant with the industry standard specifications (Standard Block Type).  
Select the block from this spec.

■ **Features:** Linear Guides with Plastic Retainers prevent contact between balls and result in low noise levels under high-speed operation.



	Type		Block	Rail	L Dimension	Material Hardness
	1 block	2 blocks				
Standard	SVRZ	SV2RZ	SVRB	SRZL	Selectable	Carbon Steel 58HRC~
	SVRLZ	SV2RLZ		SRZLF	Configurable	
Wide Block Through Hole	SVWZ	SV2WZ	SVWB	SRZL	Selectable	
	SVWLZ	SV2WLZ		SRZLF	Configurable	
Wide Block Tapped Hole	SVWTZ	SV2WTZ	SVWTB	SRZL	Selectable	
	SVWTLZ	SV2WTLZ		SRZLF	Configurable	

Heat Resistant Temperature: 0 ~ 50°C



For L Configurable, G dimensions differ from those shown in the table below. For details, see P531.

- **Precautions for Use**
- Blocks are equipped with retainers to prevent balls from falling off. For how to handle the blocks, see P525.
  - For Interchangeable, Light Preload Type, rails and blocks can be interchanged.
  - Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
  - Rails cannot be connected end to end.
  - The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
  - Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

- **Others**
- Filled with Lithium soap based grease (Alvania Grease S2 by Showa Shell Sekiyu K.K.).
  - Grease Fittings: Straight Type for H24 and Angled Type for H28, H33 and H42.
  - Grease Fitting is screw-in type, and thus, can be repositioned.
  - For Operating Life Calculation, see P527.
  - For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

	Part Number		H	L	Block Dimension						Guide Rail Dimension					
	1 block	2 blocks			W	L <sub>1</sub>	B	Sxℓ	L <sub>2</sub>	K	T	H <sub>1</sub>	W <sub>1</sub>	W <sub>2</sub>	F	G
Standard Block	SVRZ	SV2RZ	24	100~1480 (160)	34	40.4	26	M4x6	23.6	19	10	Ø3	3	6	12.5	15
	SVRLZ	SV2RLZ	28	160~1960 (220)	42	47.2	32	M5x7	30	22	12	M6xP0.75	11	5.5	15.5	20
	SVRB	SRZL	33	160~1960 (220)	48	59.6	35	M6x9	38	26	12	M6xP0.75	11	7	18	23
		SRZLF	42	200~1960 (280)	60	67.4	40	M8x12	42	33	13	M6xP0.75	11	8	23	28
Wide Block	SVWZ	SV2WZ	24	100~1480 (160)	52	40.4	41	4.5 (M5)	23.6	19	8	Ø3	3	6	12.5	15
	SVWLZ	SV2WLZ	28	160~1960 (220)	59	47.2	49	5.5 (M6)	30	22	10	M6xP0.75	11	5.5	15.5	20
	SVWTZ	SV2WTZ	33	160~1960 (220)	73	59.6	60	7 (M8)	38	26	11	M6xP0.75	11	7	18	23
	SVWTLZ	SV2WTLZ	42	200~1960 (280)	90	67.4	72	9 (M10)	42	33	11	M6xP0.75	11	8	23	28
	SVWB	SRZL														
	SVWTB	SRZLF														

L Dimension: Dimensions in ( ) are for 2-Block Type.  
Sxℓ Dimensions: Dimensions in ( ) are for Wide Block Tapped Hole.

kgf=Nx0.101972

H	Basic Load Rating		Allowable Static Moment			Mass		
	C (Dynamic) kN	Co (Static) kN	MA N·m	MB N·m	MC N·m	Block kg Standard	Guide Rail kg/m	Wide
24	4.9	7.8	21	18	39	0.14	0.17	1.4
28	7.25	11.8	40	34	80	0.19	0.24	2.3
33	12.7	20.8	96	81	164	0.34	0.44	3.1
42	18.7	29.6	153	128	282	0.58	0.76	4.8

MA MB MC

■ **Preload and Accuracy Standards** Interchangeable, Light Preload Type

Radial Clearance (µm)	
H24, 28	-4~0
H33, 42	-5~0

Dimensional Accuracy (µm)		Interchangeable
Height H Tolerance	±20	
Pair Variation of Height H	15	
Width W <sub>2</sub> Tolerance	±30	
Pair Variation of Width W <sub>2</sub>	25	
Running Parallelism of Plane C against Plane A	See P525	
Running Parallelism of Plane D against Plane B		

H	Selectable L	Unit Price										
		1 block			2 blocks			Rail	Block			
		SVRZ	SVWZ	SVWTZ	SV2RZ	SV2WZ	SV2WTZ	SRZL	SVRB	SVWB	SVWTB	
24	100				-	-	-					
	160											
	220											
	280											
	340											
	400											
	460											
	520											
	580											
	640											
	700											
	760											
	820											
	880											
	940											
28	1000											
	1060											
	1120											
	1180											
	1240											
	1300											
	1360											
	1420											
	1480											
	1540											
	1600											
	1660											
	1720											
	1780											
	1840											
33	1900											
	1960											
	160				-	-	-					
	220											
	280											
	340											
	400											
	460											
	520											
	580											
	640											
	700											
	760											
	820											
	42	880										
940												
1000												
1060												
1120												
1180												
1240												
1300												
1360												
1420												
1480												
1540												
1600												
1660												
1720												

■ **L Dimension Configurable Type (1mm Increment)**

H	Unit Price						
	1 block			2 blocks			Rails
24	SVRLZ	SVWLZ	SVWTLZ	SV2RLZ	SV2WLZ	SV2WTLZ	SRZLF
28							
33							
42							

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.

Part Number - L  
SVRZ28 - 820

Alterations Part Number - L - (RLC, LLC~etc.)  
SVRZ28 - 640 - RLC

Alterations	Code	Spec.
LLC	Left End Cut LLC	Cuts rail ends. Ordering Code: LLC H L Cut N 24 10 10 28 10 10 33 10 10 42 10 10
RLC	Right End Cut RLC	Applicable to Selectable Type only. Overall length will be shorter by cutting.
3-Block Specifications	B3	Add 2 blocks to 1-Block product to ship as 3-Block separate item. Selection Example: SVRZ24-400-B3
4-Block Specifications	B4	Add 3 blocks to 1-Block product to ship as 4-Block separate item. Selection Example: SVRZ24-400-B4

■ **Additional Block Price**

H	B3:1Code			B4:1Code		
	Standard	Wide Through Holes	Wide Tapped Holes	Standard	Wide Through Holes	Wide Tapped Holes
24						
28						
33						
42						

■ **Position of Grease Fitting (Reference plane on the front side)**

1 block	2 blocks	3 blocks	4 blocks

■ **Options for Linear Guide**

Linear Guide Clamps		Rail Height Adjusting Blocks	
P608		P609, 610	
Block Derailment Prevention Parts / Dust Resistant Parts		Block / Rail Fixing Parts	
■ <b>Stopper Bolts</b>		■ <b>Rail Push Plates</b>	
P612		P612	
■ <b>Block Stopper Plates</b>		■ <b>Linear Locks</b>	
P612		P613	
■ <b>Rail Mounting Hole Caps</b>		■ <b>Linear Guide Lock Units</b>	
P612		P614	



# Linear Guides for Heavy Load

## Normal Clearance

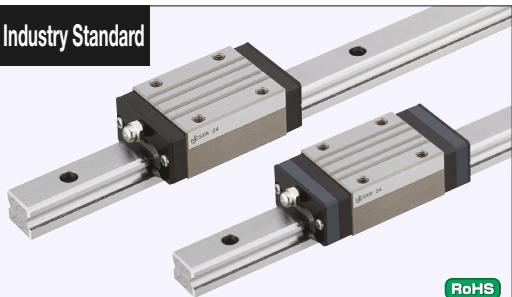
= For customers using industry standard products =

Frame-surrounded products are compliant with the industry standard specifications (Standard Block Type).  
Select the block from this spec.

Similar Products Comparison Points | Select this product for high precision positioning, heavy load, and high frequency drive application.

Lubrication Units **MX**  
Provides long term maintenance-free operation.

**Industry Standard**



RoHS

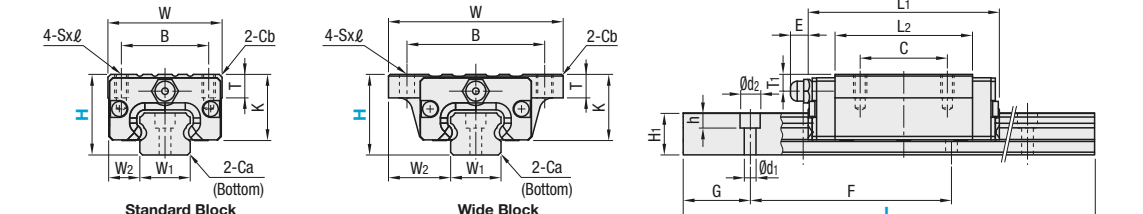
Blocks and rails are not sold as separate items. Normal Clearance Type has guaranteed radial clearances and accuracies as sets of blocks and rails.

**Type**

	Type				MX (Lubrication Units)	L Dimension	Material Hardness
	1 block		2 blocks				
	Standard Grade	High Grade	Standard Grade	High Grade			
Standard Block	SXR	SXRJ	SX2R	SX2RJ	Blank: None -MX: Provided	Selectable	Carbon Steel 58HRC~
	SXRL	SXRLJ	SX2RL	SX2RLJ		Configurable	
	SXW		SX2W			Selectable	
	SXWL		SX2WL			Configurable	
	SXWT		SX2WT			Selectable	
Wide Block	SXWTL		SX2WTL			Configurable	

Heat Resistant Temperature: -20 ~ 80°C

**Dimension Diagram of Blocks with MX (Lubrication Units)**



For L Configurable, G dimensions differ from those shown in the table below. For details, see **P531**.

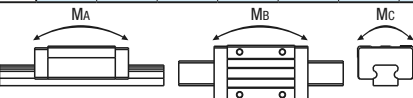
- Precautions for Use**
- Blocks are equipped with retainers to prevent balls from falling off. For how to handle the blocks, see **P525**.
  - Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
  - Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
  - Rails cannot be connected end to end.
  - The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
  - Minor bending of the rail will be adjusted after being mounted and will not affect the performance.
- Others**
- Filled with Lithium soap based grease (Alvania Grease S2 by Showa Shell Sekiyu K.K.).
  - Grease Fittings: Straight Type for H24 and Angled Type for H28 and H33.
  - Grease Fitting is screw-in type, and thus, can be repositioned.
  - For Operating Life Calculation, see **P527**.
  - For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

Part Number				H	L	Block Dimension										Guide Rail Dimension								
Type	MX	W	L <sub>1</sub>			B	C	Sxℓ	L <sub>2</sub>	K	T	Cb	Grease Fitting			H <sub>1</sub>	W <sub>1</sub>	W <sub>2</sub>	Ca	Counterbored Hole		F	G	
			Standard										MX	Mounting Hole	E					T <sub>1</sub>	d1xd2xh			
Standard Block	(1 block)	Blank: None -MX: Provided	24	100~1480 (160)	34	57	66.6	26	26	M4x7	41	20	7	0.85	M5xP0.8	6	5	12.5	15	9.5	0.5	3.5x6x4.5	60	20
	(2 blocks)		28	160~1960 (220)	42	67	76.6	32	32	M5x8	47.6	22.5	7.5	1	M6xP0.75	13	6	15.5	20	11	0.6	6x9.5x8.5	60	20
	SXR		33	160~1960 (220)	48	83	92.6	35	35	M6x9	61	26.5	8	1	M6xP0.75	13	6.8	18	23	12.5	0.8	7x11x9	60	20
	SXRJ																							
Wide Block	(1 block)	Blank: None -MX: Provided	24	100~1480 (160)	52	57	66.6	41	26	4.5 (M5)	41	20	7	0.5	M5xP0.8	6	5	12.5	15	18.5	0.5	3.5x6x4.5	60	20
	(2 blocks)		28	160~1960 (220)	59	67	76.6	49	32	5.5 (M6)	47.6	22.5	9	1	M6xP0.75	13	6	15.5	20	19.5	0.6	6x9.5x8.5	60	20
	SXW		33	160~1960 (220)	73	83	92.6	60	35	7 (M8)	61	26.5	10	1	M6xP0.75	13	6.8	18	23	25	0.8	7x11x9	60	20
	SXWL																							
	SXWT																							
	SXWTL																							

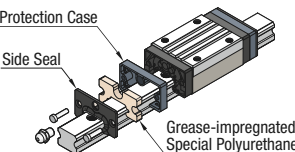
L Dimension: Dimensions in ( ) are for 2-Block Type.  
Sxℓ Dimensions: Dimensions in ( ) are for Wide Block Tapped Hole.

kgf=Nx0.101972

H	Basic Load Rating		Allowable Static Moment		Mass		
	C (Dynamic)	Co (Static)	MA, Ms	N · m	Mc	N · m	Block kg
24	8.6	14.2	69	98	0.20	0.25	1.5
28	12.5	21.3	155	232	0.30	0.35	2.4
33	20.2	34.5	275	393	0.45	0.60	3.4

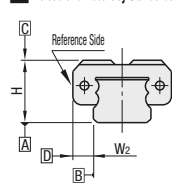


Lubrication Units **MX**



Advantages of Lubrication Unit MX: Provides long term maintenance-free operation. Reduces maintenance cost. Most suitable where the design does not allow lubrication. For details, see **P530**.

Preload and Accuracy Standards



Normal Clearance Type

Radial Clearance (μm)	Dimensional Accuracy (μm)	Standard Grade	High Grade
H24 -4~+2	Height H Tolerance	±100	±40
H28 -5~+2	Pair Variation of Height H	20	15
H33 -6~+3	Width W <sub>2</sub> Tolerance	±100	±20
	Pair Variation of Width W <sub>2</sub>	H24, 28 20 H33 30	15
	Running Parallelism of Plane C against Plane A		
	Running Parallelism of Plane D against Plane B		
		See <b>P525</b>	

\*High Grade Types are not available.  
LTBC Plating products are available in an L dimension of up to 1000.

H	Selectable L	Unit Price					
		1 block			2 blocks		
		SXR	SXW	SXWT	SX2R	SX2W	SX2WT
24	100						
	160						
	220						
	280						
	340						
	400						
	460						
	520						
	580						
	640						
	700						
	760						
	820						
	880						
	940						
28	1000						
	*1120						
	*1240						
	*1360						
	*1480						
	160						
	220						
	280						
	340						
	400						
	460						
	520						
	580						
	640						
	700						
33	760						
	820						
	880						
	940						
	1000						
	1120						
	1240						
	*1360						
	*1480						
	*1600						
	*1720						
	*1840						
	*1960						
	160						
	220						
	280						

L Dimension Configurable Type (1mm Increment)

H	Unit Price					
	1 block			2 blocks		
	SXRL	SXWL	SXWTL	SX2RL	SX2WL	SX2WTL
24						
28						
33						

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.

MX (Lubrication Unit) Unit Price

H	Unit Price	
	1 block	2 blocks
24		
28		
33		

Price of Guide Rails with MX (Lubrication Unit) = Linear Guide Unit Price + MX Unit Price

Ordering Example	Part Number	-	L
	SXP28	-	880
	SXR-MX28	-	880
	SRXR28	-	880
	SXRL28L	-	880
	SXRL28G	-	880
(With Lubrication Units) (LTBC Plating) (L Type Greased) (G Type Greased) LTBC Plating and various Grease types available as alternative (Except Blocks with Lubrication Units) <b>P532</b>			

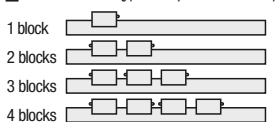
Alterations	Part Number	-	L	-	(TMS, TMC-etc.)
	SXR33	-	880	-	TMC

Alterations	Code	Spec.
TMS: Tapped Hole Machining + 2 Stopper Plates	TMS TMC	Adds tapped holes on both rail ends to avoid block fall-off.
TMC: Tapped Hole Machining only		H24 H28, 33
Block Stopper Plate		M3xP0.5 Depth 5 Tapped Hole For Stopper Plates Details, see <b>P612</b> .
Left End Cut LLC	Left End Cut LLC	Cuts rail ends. Ordering Code: LLC
Right End Cut RLC	Right End Cut RLC	Cuts rail ends. Ordering Code: RLC
Parallel Use of 2 Rails	WC	Pair variation of Height H between 2 rails is set within 20μm. Two rails are shipped as a pair. Specify the actual rail quantity (even number) to order, not "pairs". Not applicable to High Grade Type. Not applicable to low temperature chrome plated products.
3-Block Specifications	B3	Add 2 blocks to 1-Block product to ship as 3-Block separate item. Selection Example: SXR24-400-B3 Not applicable to High Grade Type.
4-Block Specifications	B4	Add 3 blocks to 1-Block product to ship as 4-Block separate item. Selection Example: SXR24-400-B4 Not applicable to High Grade Type.

Additional Block Price

H	B3:1Code				B4:1Code			
	Standard	Wide	Standard MX	Wide MX	Standard	Wide	Standard MX	Wide MX
24								
28								
33								

Position of Grease Fitting (Reference plane on the front side)



Selectable Shortest Rail Length for B3/B4

H	B3 (3-Block)	B4 (4-Block)
24	340	400
28	400	460
33	400	520

Options for Linear Guide

Linear Guide Clamps	Rail Height Adjusting Blocks
P608	P609, 610
Block Derailment Prevention Parts / Dust Resistant Parts	
Stopper Bolts	Block / Rail Fixing Parts
P612	P612
Block Stopper Plates	Linear Locks
P612	P613
Rail Mounting Hole Caps	Linear Guide Lock Units
P612	P614



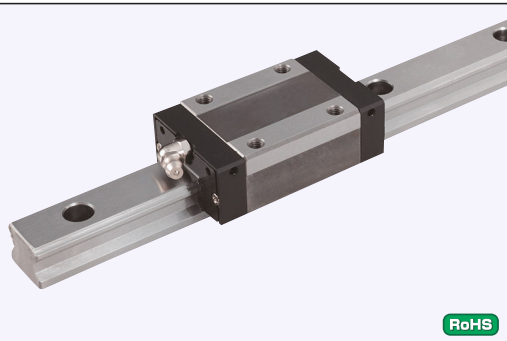
# Linear Guides for Heavy Load

## Normal Clearance



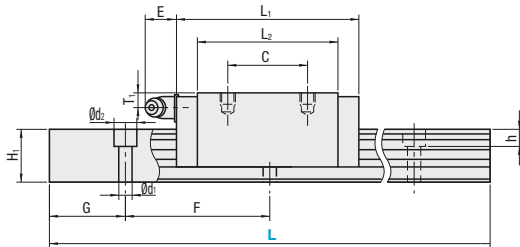
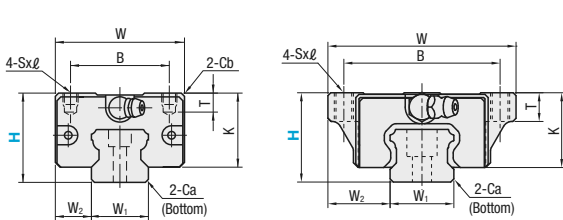
### Similar Products Comparison Points

Select C-VALUE Products for medium-accuracy positioning, medium/low load, and medium-to-low frequency drive applications.  
When you consider using C-VALUE Products, select an appropriate model after comparing the specifications with those of the existing products. **P575, P579**



RoHS

The mounting dimensions are same for the existing and C-VALUE Products.



For L Configurable, G dimensions differ from those shown in the table below. For details, see **P. 531**.

### Precautions for Use

- This product is All Ball Type. Blocks are equipped with retainers to prevent balls from derailing. For how to handle the blocks, see **P. 525**.
- Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
- Thick grooves are provided on the datum planes of blocks and rails. Be sure to match the datum planes when using.
- Rails cannot be connected end to end.
- The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
- Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

### Others

- Filled with Lithium soap based grease (Alvania Grease S2 by Showa Shell Sekiyu K.K.).
- Grease Fittings: Straight Type for H24 and Angled Type for H28 and H33.
- Grease Fitting is screw-in type, and thus, can be repositioned.
- For installation and maintenance of Linear Guides, see **P. 529**.

H	Type	H	L	Block Dimension												Guide Rail Dimension							
				W	L <sub>1</sub>	B	C	Sxℓ	L <sub>2</sub>	K	T	Cb	Grease Fitting			H <sub>1</sub>	W <sub>1</sub>	W <sub>2</sub>	Ca	Counterbored Hole d <sub>1</sub> x d <sub>2</sub> x h	F	G	
													Mounting Hole	E	T <sub>1</sub>								
Standard	(1 block) C-SXR C-SXRL (2 blocks) C-SX2R C-SX2RL	24	100~1480 (160)	34	55.9	26	26	M4x5	39.5	20.8	6.2	0.5	M4x0.7	7	5.5	13	15	9.5	0.5	4.5x7.5x6	60	20	
		28	160~1960 (220)	42	66.7	32	32	M5x5	46.7	23.4	7.2	0.5	M6x1	14	4.5	16.5	20	11	0.5	6x9.5x8.5	60	20	
		33	160~1960 (220)	48	80	35	35	M6x6	59	27.2	8.15	1	M6x1	14	4.5	20	23	12.5	0.9	7x11x9	60	20	
Wide Block	(1 block) C-SXWT C-SXWTL (2 blocks) C-SX2WT C-SX2WTL	24	100~1480 (160)	52	55.9	41	26	M5x7	39.5	20.8	7	-	M4x0.7	7	5.5	13	15	18.5	0.5	4.5x7.5x6	60	20	
		28	160~1960 (220)	59	66.7	49	32	M6x9	46.7	23.4	9	-	M6x1	14	4.5	16.5	20	19.5	0.5	6x9.5x8.5	60	20	
		33	160~1960 (220)	73	80	60	35	M8x10	59	27.2	10	-	M6x1	14	4.5	20	23	25	0.9	7x11x9	60	20	

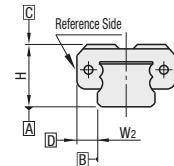
L Dimension: Dimensions in ( ) are for 2-Block Type.

### Allowable Load

kgf=N×0.10972

H	Basic Load Rating		Allowable Static Moment			Mass		
	C (Dynamic) kN	Co kN	MA N·m	MB N·m	MC N·m	Block		Guide Rail kg/m
						Standard	Wide	
24	4.9	9.7	48.4	48.4	75.7	0.13	0.17	1.32
28	7.7	14.1	81.9	81.9	150.4	0.18	0.24	2.28
33	10.6	19.7	141.2	141.2	240.8	0.3	0.44	3.17

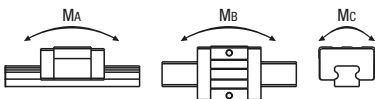
### Preload and Accuracy Standards



### Interchangeable, Light Preload Type

Radial Clearance (μm)	
H24	-4~+4
H28	-5~+5
H33	-6~+6

Dimensional Accuracy (μm)	
Height H Tolerance	±120
Variation of Height H	40
Width W <sub>2</sub> Tolerance	±120
Variation of Width W <sub>2</sub>	40
Running Parallelism of Plane C against Plane A	See
Running Parallelism of Plane D against Plane B	<b>P. 525</b>



### Similar Product Page

P575



Ordering  
Example

Part Number	-	L
C-SXR28	-	880
C-SXWT28	-	880



Alterations

Part Number (Type, H)	-	L	-	(B3)
C-SXR28	-	640	-	B3

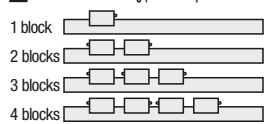
Alterations	Code	Spec.
3-Block Specifications	B3	Add 2 blocks to 1-block product to ship as 3-block separate item. Selection Example: C-SXR24-400-B3
4-Block Specifications	B4	Add 3 blocks to 1-block product to ship as 4-block separate item. Selection Example: C-SXR24-400-B4

### L Dimension Configurable Type (10mm Increment)

H	Unit Price			
	1 block		2 blocks	
	C-SXRL	C-SXWTL	C-SX2RL	C-SX2WTL
24				
28				
33				

For calculation of L Dimension Configurable Type (10mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.

### Position of Grease Fitting (Reference plane on the front side)



### Selectable Shortest Rail Length for B3/B4

H	B3 (3-block)	B4 (4-block)
24	340	400
28	400	460
33	440	520

### Additional Block Price

H	Unit Price			
	B3: Price Adder		B4: Price Adder	
	C-SXR	C-SXWT	C-SXR	C-SXWT
24				
28				
33				



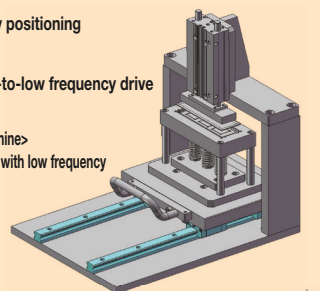
Example

### C-VALUE Products - App. Example

- Medium-accuracy positioning
- Medium/low load
- Used for medium-to-low frequency drive

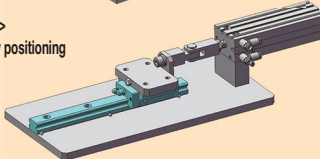
### <Manual Press Fitting Machine>

Used for manual operation with low frequency



### <Air Cylinder Drive Section>

Used for medium-accuracy positioning





# Linear Guides for Heavy Load

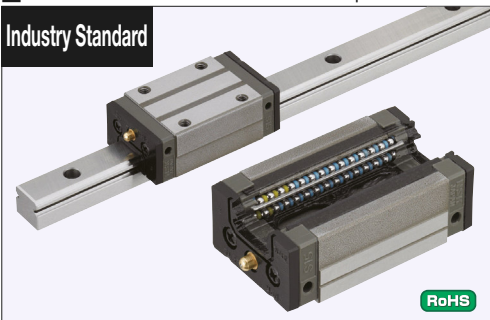
## With Plastic Retainers, Interchangeable, Light Preload

= For customers using industry standard products =

Frame-surrounded products are compliant with the industry standard specifications (Standard Block Type).  
Select the block from this spec.

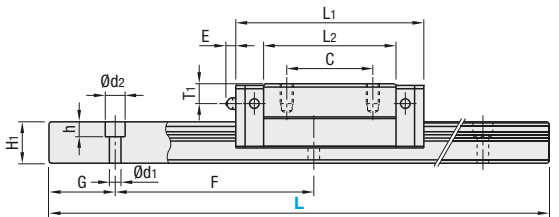
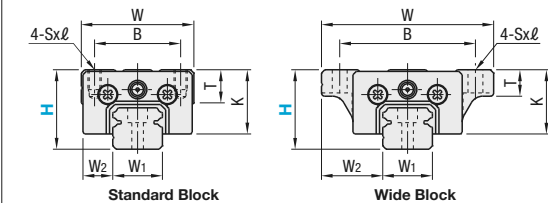
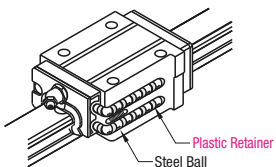
■ **Features:** Linear Guides with Plastic Retainers prevent contact between balls and result in low noise levels under high-speed operation.

### Industry Standard



	Type		Block	Rail	L Dimension	Material Hardness
	1 block	2 blocks				
Standard	SXRZ	SX2RZ	SXRZ	SRZL	Selectable	Carbon Steel 58HRC~
	SXRLZ	SX2RLZ		SRZLF	Configurable	
	SXWZ	SX2WZ		SRZL	Selectable	
Wide Block Through Hole	SXWLZ	SX2WLZ	SXWB	SRZLF	Configurable	
Wide Block Tapped Hole	SXWTZ	SX2WTZ	SXWTB	SRZL	Selectable	
	SXWTLZ	SX2WTLZ		SRZLF	Configurable	

Heat Resistant Temperature: 0 ~ 50°C



For L Configurable, G dimensions differ from those shown in the table below. For details, see P531.

### Precautions for Use

- Blocks are equipped with retainers to prevent balls from falling off. For how to handle the blocks, see P525.
- For Interchangeable, Light Preload Type, rails and blocks can be interchanged.
- Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
- Rails cannot be connected end to end.
- The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).  
Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

### Others

- Filled with Lithium soap based grease (Alvania Grease S2 by Showa Shell Sekiyu K.K.).
- Grease Fittings: Straight Type for H24 and Angled Type for H28, H33 and H42.
- Grease Fitting is screw-in type, and thus, can be repositioned.
- For Operating Life Calculation, see P527.
- For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

	Part Number		H	L	Block Dimension										Guide Rail Dimension						
	Type				W	L <sub>1</sub>	B	C	Sxℓ	L <sub>2</sub>	K	T	Grease Fitting			H <sub>1</sub>	W <sub>1</sub>	W <sub>2</sub>	Counterbored Hole d1xd2xh	F	G
	1 block	2 blocks											Mounting Hole	E	T <sub>1</sub>						
Standard Block	SXRZ SXRLZ	SX2RZ SX2RLZ	24	100~1480 (160)	34	56.8	26	26	M4x6	40	19.4	10	Ø3	3	6	12.5	15	9.5	3.5x6x4.5	60	20
	(Block) SXRZB	(Rail) SRZL SRZLF	28	160~1960 (220)	42	65.2	32	32	M5x7	48	22	12	M6xP0.75	11	5.5	15.5	20	11	6x9.5x8.5	60	20
			33	160~1960 (220)	48	81.6	35	35	M6x9	60	26	12	M6xP0.75	11	7	18	23	12.5	7x11x9	60	20
			42	200~1960 (280)	60	96.4	40	40	M8x12	71	33	13	M6xP0.75	11	8	23	28	16	7x11x9	80	20
Wide Block	SXWZ SXWLZ SXWTZ SXWTLZ	SX2WZ SX2WLZ SX2WTZ SX2WTLZ	24	100~1480 (160)	52	56.8	41	26	4.5 (M5)	40	19.4	8	Ø3	3	6	12.5	15	18.5	3.5x6x4.5	60	20
	(Block) SXWZB SXWZLF	(Rail) SRZL SRZLF	28	160~1960 (220)	59	65.2	49	32	5.5 (M6)	48	22	10	M6xP0.75	11	5.5	15.5	20	19.5	6x9.5x8.5	60	20
			33	160~1960 (220)	73	81.6	60	35	7 (M8)	60	26	11	M6xP0.75	11	7	18	23	25	7x11x9	60	20
			42	200~1960 (280)	90	96.4	72	40	9 (M10)	71	33	11	M6xP0.75	11	8	23	28	31	7x11x9	80	20

L Dimension: Dimensions in ( ) are for 2-Block Type.

Sxℓ Dimensions: Dimensions in ( ) are for Wide Block Tapped Hole.

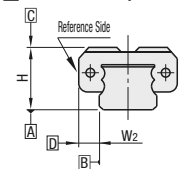
H	Basic Load Rating		Allowable Static Moment			Mass		
	C (Dynamic) kN	Co (Static) kN	MA N · m	Ms N · m	Mc N · m	Block kg Standard	Wide	Guide Rail kg/m
24	7.9	15.6	74	62	78	0.2	0.26	1.4
28	11.1	21.8	124	104	149	0.28	0.35	2.3
33	17.9	33.5	242	203	266	0.51	0.66	3.1
42	27.3	50.5	415	350	480	0.85	1.20	4.8

MA

Mb

Mc

### Preload and Accuracy Standards



### Interchangeable, Light Preload Type

Radial Clearance (µm)	
H24, 28	-4~0
H33, 42	-5~0

Dimensional Accuracy (µm)		Interchangeable
Height H Tolerance	±20	
Pair Variation of Height H	15	
Width W2 Tolerance	±30	
Pair Variation of Width W2	25	
Running Parallelism of Plane C against Plane A	See	
Running Parallelism of Plane D against Plane B	P525	

H	Selectable L	Unit Price										Rail	Block	Block	Block
		1 block	2 blocks	2 blocks	2 blocks	2 blocks	2 blocks	2 blocks	2 blocks	2 blocks	2 blocks				
24	100	SXRZ	SXWZ	SXWTZ	SX2RZ	SX2WZ	SX2WTZ	SRZL	SXRZ	SXWB	SXWTB				
	160														
	220														
	280														
	340														
	400														
	460														
	520														
	580														
	640														
	700														
	760														
	820														
	880														
	940														
	1000														
28	1060														
	1120														
	1180														
	1240														
	1300														
	1360														
	1420														
	1480														
	160														
	220														
	280														
	340														
	400														
	460														
	520														
	580														
33	640														
	700														
	760														
	820														
	880														
	940														
	1000														
	1060														
	1120														
	1180														
	1240														
	1300														
	1360														
	1420														
	1480														
	1540														
42	1600														
	1660														
	1720														
	1780														
	1840														
	1900														
	1960														
	200														
	280														
	360														
	440														
	520														
	600														
	680														
	760														
	840														
42	920														
	1000														
	1080														
	1160														
	1240														
	1320														
	1400														
	1480														
	1560														
	1640														
	1720														
	1800														
	1880														
	1960														

### L Dimension Configurable Type (1mm Increment)

H	Unit Price		Rails	Rails
	1 block	2 blocks		
24	SXRLZ	SXWTLZ	SX2RLZ	SX2WTLZ
28				
33				
42				

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.

Part Number - L  
SXRZ28 - 1840

Alterations Part Number - L - (RLC, LLC~etc.)  
SXRZ28 - 640 - RLC

Alterations	Code	Spec.
Rail End Cut LLC	Left End Cut LLC	Cuts rail ends. (Enter Code) LLC H L Cut N 24 10 10 28 33 42
Rail is cut with the product ID facing out (datum on other side).	Right End Cut RLC	Applicable to Selectable Type only. Overall length will be shorter by cutting.
3-Block Specifications	B3	Add 2 blocks to 1-Block product to ship as 3-Block separate item. Selection Example: SXRZ24-400-B3
4-Block Specifications	B4	Add 3 blocks to 1-Block product to ship as 4-Block separate item. Selection Example: SXRZ24-400-B4

### Additional Block Price

H	B3:1Code			B4:1Code		
	Standard	Wide Through Holes	Wide Tapped Holes	Standard	Wide Through Holes	Wide Tapped Holes
24						
28						
33						
42						



# Linear Guides for Super Heavy Load

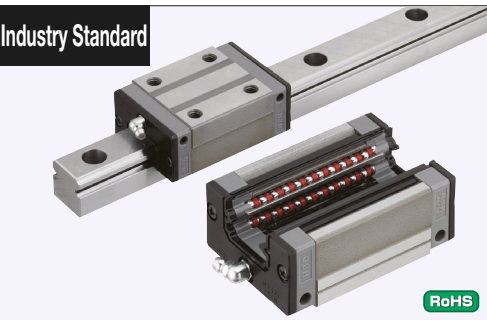
## With Plastic Retainers, Interchangeable, Light Preload

= For customers using industry standard products =

Frame-surrounded products are compliant with the industry standard specifications (Standard Block Type).  
Select the block from this spec.

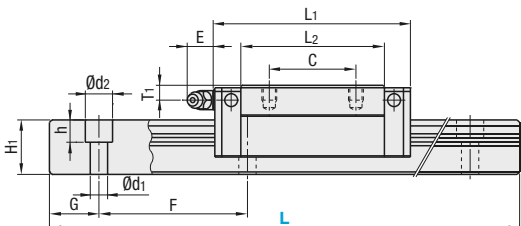
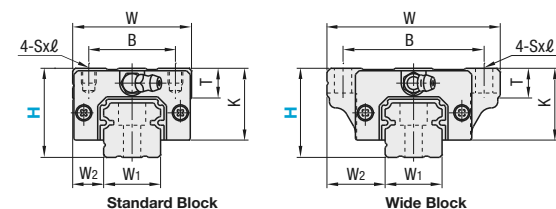
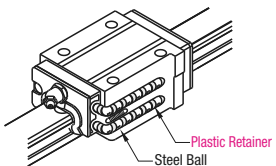
Similar Products Comparison Points | Select this product for high precision positioning, heavy load, and high frequency drive application.

### Industry Standard



	Type		Block	Rail	L Dimension	Material Hardness
	1 block	2 blocks				
Standard	SHRZ	SH2RZ	SHRB	SHZL	Selectable	Carbon Steel 58HRC~
	SHRLZ	SH2RLZ		SHZLF	Configurable	
Wide Block Through Hole	SHWZ	SH2WZ	SHWB	SHZL	Selectable	
	SHWLZ	SH2WLZ		SHZLF	Configurable	
Wide Block Tapped Hole	SHWTZ	SH2WTZ	SHWPB	SHZL	Selectable	
	SHWTLZ	SH2WTLZ		SHZLF	Configurable	

Heat Resistant Temperature: 0 ~ 50°C



For L Configurable, G dimensions differ from those shown in the table below. For details, see P531.

#### Precautions for Use

- Blocks are equipped with retainers to prevent balls from falling off. For how to handle the blocks, see P525.
- For Interchangeable, Light Preload Type, rails and blocks can be interchanged.
- Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
- Rails cannot be connected end to end.
- The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
- Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

#### Others

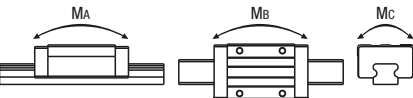
- Filled with Lithium soap based grease (Alvania Grease S2 by Showa Shell Sekiyu K.K.).
- Angled Grease Fitting Type
- Grease Fitting is screw-in type, and thus, can be repositioned.
- For Operating Life Calculation, see P527
- For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

	Part Number		H	L	Block Dimension										Guide Rail Dimension							
	Type				W	L <sub>1</sub>	B	C	Sxℓ	L <sub>2</sub>	K	T	Grease Fitting			H <sub>1</sub>	W <sub>1</sub>	W <sub>2</sub>	Counterbored Hole d <sub>1</sub> x d <sub>2</sub> x h	F	G	
	1 block	2 blocks											Mounting Hole	E	T <sub>1</sub>							
Standard Block	SHRZ	SH2RZ	30	220~1960	44	69.8	32	36	M5x6	50	25	12	M6xP0.75	11	5	18	20	12	6x9.5x8.5	60	20	
	SHRLZ	SH2RLZ	36	220~1960	48	79	35	35	M6x6	58	29	12	M6xP0.75	11	6	22	23	12.5	7x11x9	60	20	
	(Block) SHRB	(Rail) SHZL SHZLF	42	280~1960	60	85.6	40	40	M8x8	59	33	14	M6xP0.75	11	7	26	28	16	9x14x12	80	20	
	Wide Block	SHWZ	SH2WZ	30	220~1960	63	69.8	53	40	6 (M6)	50	25	10	M6xP0.75	11	5	18	20	21.5	6x9.5x8.5	60	20
SHWLZ		SH2WLZ	36	220~1960	70	79	57	45	7 (M8)	58	29	11	M6xP0.75	11	6	22	23	23.5	7x11x9	60	20	
SHWTZ		SH2WTZ	42	280~1960	90	98.6	72	52	9 (M10)	72	33	11	M6xP0.75	11	7	26	28	31	9x14x12	80	20	
(Block) SHWB SHWPB		(Rail) SHZL SHZLF	42	280~1960	90	98.6	72	52	9 (M10)	72	33	11	M6xP0.75	11	7	26	28	31	9x14x12	80	20	

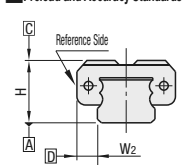
Sxℓ Dimensions: Dimensions in ( ) are for Wide Block Tapped Hole.

H	Basic Load Rating		Allowable Static Moment			Mass	
	C (Dynamic) kN	Co (Static) kN	MA N · m	Mb N · m	Mc N · m	Block kg	Guide Rail kg/m
30	16.3	29.6	167	141	199	0.33	0.45
36	22.4	37.5	246	207	295	0.46	0.63
42	31.0	51.5	356	305	490	0.69	1.20

Values in ( ) are for Wide Block (Through Holes and Tapped Holes) Type.



#### Preload and Accuracy Standards



#### Interchangeable, Light Preload Type

Radial Clearance (μm)	
H30, 36	-5~0
H42	-7~0
Dimensional Accuracy (μm)	
Height H Tolerance	±20
Pair Variation of Height H	15
Width W2 Tolerance	±30
Pair Variation of Width W2	25
Running Parallelism of Plane C against Plane A	See P525
Running Parallelism of Plane D against Plane B	See P525

H	Selectable L	Unit Price									
		1 block			2 blocks			Rail	Block		
		SHRZ	SHWZ	SHWTZ	SH2RZ	SH2WZ	SH2WTZ	SHZL	SHRB	SHWB	SHWPB
30	220										
	280										
	340										
	400										
	460										
	520										
	580										
	640										
	700										
	760										
36	820										
	880										
	940										
	1000										
	1060										
	1120										
	1180										
	1240										
	1300										
	1360										
42	1420										
	1480										
	1540										
	1600										
	1660										
	1720										
	1780										
	1840										
	1900										
	1960										

#### L Dimension Configurable Type (1mm Increment)

H	Unit Price						
	1 block			2 blocks			Rails
	SHRLZ	SHWLZ	SHWTLZ	SH2RLZ	SH2WLZ	SH2WTLZ	SHZLF
30							
36							
42							

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.

Part Number - L  
SHRZ30 - 820

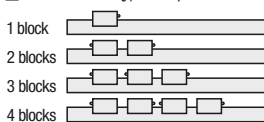
Alterations Part Number - L - (RLC, LLC~etc.)  
SHRZ30 - 820 - RLC

Alterations	Code	Spec.
Rail End Cut LLC	Left End Cut LLC	Cuts rail ends. Ordering Code: LLC H L Cut N 30 10 10 36 10 10 42 10 10
Rail is cut with the product ID facing out (datum on other side).	Right End Cut RLC	Applicable to Selectable Type only. Overall length will be shorter by cutting.
3-Block Specifications	B3	Add 2 blocks to 1-Block product to ship as 3-Block separate item. Selection Example: SHRZ30-400-B3
4-Block Specifications	B4	Add 3 blocks to 1-Block product to ship as 4-Block separate item. Selection Example: SHRZ30-400-B4

#### Additional Block Price

H	B3:1Code			B4:1Code		
	Standard	Wide Through Holes	Wide Tapped Holes	Standard	Wide Through Holes	Wide Tapped Holes
30						
36						
42						

#### Position of Grease Fitting (Reference plane on the front side)



#### Selectable Shortest Rail Length for B3/B4

H	B3 (3-Block)	B4 (4-Block)
30	340	400
36	400	460
42	400	520

#### Options for Linear Guide

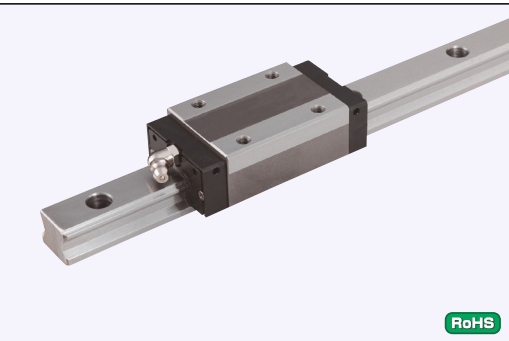
Linear Guide Clamps		Rail Height Adjusting Blocks	
Block Derailment Prevention Parts / Dust Resistant Parts		Block / Rail Fixing Parts	
Stopper Bolts P612		Rail Push Plates P612	
Block Stopper Plates P612		Linear Locks P613	
Rail Mounting Hole Caps P612		Linear Guide Lock Units P614	



# Linear Guides for Super Heavy Load

## Normal Clearance

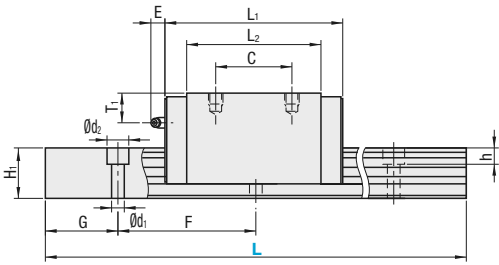
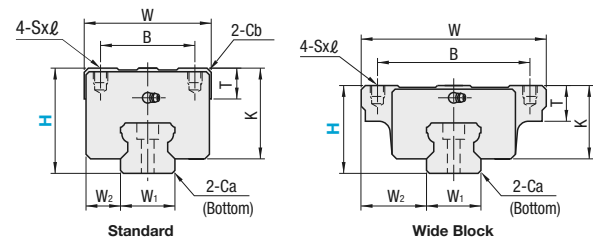
**Similar Products Comparison Points** | Select C-VALUE Products for medium-accuracy positioning, medium/low load, and medium-to-low frequency drive applications. When you consider using C-VALUE Products, select an appropriate model after comparing the specifications with those of the existing products. **P581**



	Type		L Dimension	Material Hardness
	1 block	2 blocks		
Standard Block	C-SHR	C-SH2R	Selectable	Rails / Blocks: Carbon Steel 58~62HRC
	C-SHRL	C-SH2RL	Configurable	
	C-SHWT	C-SH2WT	Selectable	
	C-SHWTL	C-SH2WTL	Configurable	

Heat Resistant Temperature: -20 ~ 80°C

The mounting dimensions are same for the existing and C-VALUE Products.



For L Configurable, G dimensions differ from those shown in the table below. For details, see **P 531**.

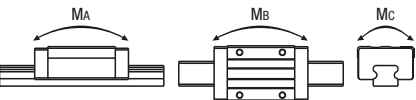
- Precautions for Use**
  - This product is All Ball Type. Blocks are equipped with retainers to prevent balls from derailing. For how to handle the blocks, see **P 525**.
  - Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
  - Thick grooves are provided on the datum planes of blocks and rails. Be sure to match the datum planes when using.
  - Rails cannot be connected end to end.
  - The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
  - Minor bending of the rail will be adjusted after being mounted and will not affect the performance.
- Others**
  - Filled with Lithium soap based grease (Alvania Grease S2 by Showa Shell Sekiyu K.K.).
  - Grease Fittings: Straight Type for H24 and H28 and Angled Type for H30, H36, H40, H42 and H45.
  - Grease Fitting is screw-in type, and thus, can be repositioned.
  - For installation and maintenance of Linear Guides, see **P 529**.

Part Number		H	L	Block Dimension												Guide Rail Dimension								
				TYPE		W	L <sub>1</sub>	B	C	Sxℓ	L <sub>2</sub>	K	T	Cb	Grease Fitting			H <sub>1</sub>	W <sub>1</sub>	W <sub>2</sub>	Ca	Counterbored Hole d1xd2xh	F	G
				1 block	2 blocks										Mounting Hole	E	T <sub>1</sub>							
Standard	C-SHR C-SHRL	C-SH2R C-SH2RL	28	220~1960	34	55.9	26	26	M4x5	39.5	24.8	10.2	0.5	M4x0.7	7	9.5	13	15	9.5	0.5	4.5x7.5x6	60	20	
			30	220~1960	44	74	32	36	M5x5	54	25.4	8.2	0.5	M6x1	14	6.5	16.5	20	12	0.5	6x9.5x8.5	60	20	
			40	220~1960	48	80	35	35	M6x6.5	59	34.2	12.15	1.0	M6x1	14	11.5	20	23	12.5	0.9	7x11x9	60	20	
			45	280~1960	60	95.3	40	40	M8x10	69.3	38	11	1.0	M6x1	14	11	23	28	16	1.0	9x14x12	80	20	
Wide Block	C-SHWT C-SHWTL	C-SH2WT C-SH2WTL	24	220~1960	47	55.9	38	30	M5x8	39.5	20.8	8	–	M4x0.7	7	5.5	13	15	16	0.5	4.5x7.5x6	60	20	
			30	220~1960	63	74	53	40	M6x10	54	25.4	10	–	M6x1	14	6.5	16.5	20	21.5	0.5	6x9.5x8.5	60	20	
			36	220~1960	70	80	57	45	M8x12	59	30.2	12	–	M6x1	14	7.5	20	23	23.5	0.9	7x11x9	60	20	
			42	280~1960	90	95.3	72	52	M10x15	69.3	35	15	–	M6x1	14	8	23	28	31	1.0	9x14x12	80	20	

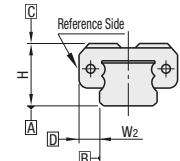
### Allowable Load

kgf=N×0.10972

H	Basic Load Rating		Allowable Static Moment			Mass		
	C (Dynamic) kN	C0 kN	MA N·m	MB N·m	MC N·m	Block kg		Guide Rail kg/m
24 28	5.1	10.2	54.2	54.2	79.9	0.20	0.20	1.32
30	8.6	16.8	117.3	117.3	178.6	0.29	0.40	2.28
36 40	11.0	20.8	158.3	158.3	254.0	0.55	0.62	3.17
42 45	16.0	29.4	263.4	263.4	432.5	0.85	1.42	4.54



### Preload and Accuracy Standards



### Interchangeable, Light Preload Type

Radial Clearance (μm)	
H24 H28	-4~+4
H30	-5~+5
H36 H40	-6~+6
H42 H45	-7~+7
Dimensional Accuracy (μm)	
Height H Tolerance	±120
Variation of Height H	40
Width W <sub>2</sub> Tolerance	±120
Variation of Width W <sub>2</sub>	40
Running Parallelism of Plane C against Plane A	See
Running Parallelism of Plane D against Plane B	<b>P 525</b>

Similar Product Page **P581**

**Ordering Example** Part Number - L  
C-SHR28 - 880  
C-SHWT24 - 880

**Alterations** Part Number - L - (B3)  
C-SHR30 - 820 - B3

Alterations	Code	Spec.
3-Block Specifications	B3	Add 2 blocks to 1-block product to ship as 3-block separate item. Selection Example: C-SHR30-400-B3
4-Block Specifications	B4	Add 3 blocks to 1-block product to ship as 4-block separate item. Selection Example: C-SHR30-400-B4

### L Dimension Configurable Type (10mm Increment)

H	Unit Price			
	1 block C-SHRL	2 blocks C-SHWTL	2 blocks C-SH2RL	2 blocks C-SH2WTL
24	-	-	-	-
28	-	-	-	-
30	-	-	-	-
36	-	-	-	-
40	-	-	-	-
42	-	-	-	-
45	-	-	-	-

For calculation of L Dimension Configurable Type (10mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.

Position of Grease Fitting (Reference plane on the front side)		Selectable Shortest Rail Length for B3/B4		
1 block		H	B3 (3-block)	B4 (4-block)
2 blocks		24, 28	340	400
3 blocks		30	400	460
4 blocks		36, 40	400	520
		42, 45	440	520

### Additional Block Price

H	Unit Price			
	B3		B4	
	C-SHR	C-SHWT	C-SHR	C-SHWT
24	-	-	-	-
28	-	-	-	-
30	-	-	-	-
36	-	-	-	-
40	-	-	-	-
42	-	-	-	-
45	-	-	-	-



# Linear Guides for Extra Super Heavy Load

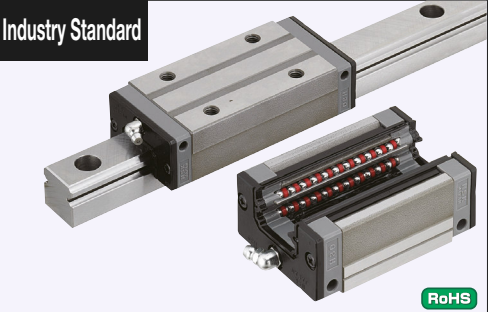
With Plastic Retainers, Interchangeable, Light Preload

= For customers using industry standard products =

Frame-surrounded products are compliant with the industry standard specifications (Standard Block Type).  
Select the block from this spec.

Similar Products Comparison Points | Select this product for high precision positioning, heavy load, and high frequency drive application.

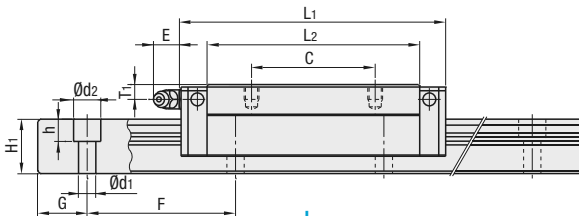
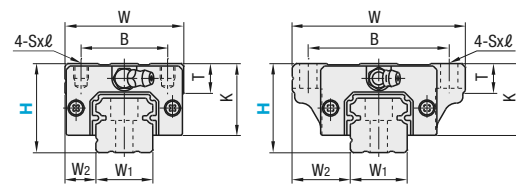
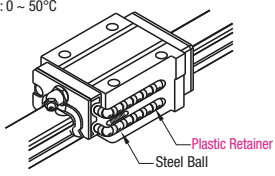
Industry Standard



RoHS

	Type		Block	Rail	L Dimension	Material Hardness
	1 block	2 blocks				
Standard	SERZ	SE2RZ	SERB	SHZL	Selectable	Carbon Steel 58HRC ~
	SERLZ	SE2RLZ		SHZLF	Configurable	
Wide Block Through Hole	SEWZ	SE2WZ	SEWB	SHZL	Selectable	
	SEWLZ	SE2WLZ		SHZLF	Configurable	
Wide Block Tapped Hole	SEWTZ	SE2WTZ	SEWTB	SHZL	Selectable	
	SEWTLZ	SE2WTLZ		SHZLF	Configurable	

Heat Resistant Temperature: 0 ~ 50°C



For L Configurable, G dimensions differ from those shown in the table below. For details, see P531.

- Precautions for Use**

  - Blocks are equipped with retainers to prevent balls from falling off. For how to handle the blocks, see P525.
  - For Interchangeable, Light Preload Type, rails and blocks can be interchanged.
  - Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
  - Rails cannot be connected end to end.
  - The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
  - Minor bending of the rail will be adjusted after being mounted and will not affect the performance.
- Others**

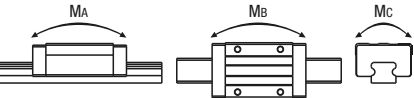
  - Filled with Lithium soap based grease (Alvania Grease S2 by Showa Shell Sekiyu K.K.).
  - Angled Grease Fitting Type
  - Grease Fitting is screw-in type, and thus, can be repositioned.
  - For Operating Life Calculation, see P527
  - For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

Part Number				L	Block Dimension										Guide Rail Dimension							
Type		H	W		L <sub>1</sub>	B	C	Sxℓ	L <sub>2</sub>	K	T	Grease Fitting			H <sub>1</sub>	W <sub>1</sub>	W <sub>2</sub>	Counterbored Hole d1xd2xh	F	G		
1 block	2 blocks											Mounting Hole	E	T <sub>1</sub>								
Standard Block	SERZ SERLZ	SE2RZ SE2RLZ	30	220~1960	44	91.8	32	50	M5x6	72	25	12	M6xP0.75	11	5	18	20	12	6x9.5x8.5	60	20	
	(Block) SERB	(Rail) SHZL SHZLF	36	220~1960	48	107	35	50	M6x6	86	29	12	M6xP0.75	11	6	22	23	12.5	7x11x9	60	20	
			42	280~1960	60	124.6	40	60	M8x8	98	33	14	M6xP0.75	11	7	26	28	16	9x14x12	80	20	
Wide Block	SEWZ SEWLZ SEWTZ SEWTLZ	SE2WZ SE2WLZ SE2WTZ SE2WTLZ	30	220~1960	63	91.8	53	40	6(M6)	72	25	10	M6xP0.75	11	5	18	20	21.5	6x9.5x8.5	60	20	
	(Block)	(Rail)	36	220~1960	70	107	57	45	7(M8)	86	29	11	M6xP0.75	11	6	22	23	23.5	7x11x9	60	20	
	SEWB SEWTB	SHZL SHZLF	42	280~1960	90	124.6	72	52	9(M10)	98	33	11	M6xP0.75	11	7	26	28	31	9x14x12	80	20	

Sxℓ Dimensions: Dimensions in ( ) are for Wide Block Tapped Hole.

kgf=Nx0.101972

H	Basic Load Rating		Allowable Static Moment			Mass		
	C (Dynamic) kN	Co (Static) kN	MA N·m	Ms N·m	Mc N·m	Block kg	Guide Rail kg/m	
30	21.6	44.5	360	305	298	0.48	0.65	2.6
36	32	62.5	615	515	490	0.69	0.93	3.6
42	46	91.5	1060	885	870	1.16	1.60	5.2



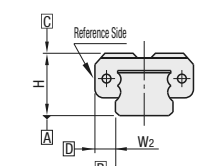
Preload and Accuracy Standards Interchangeable, Light Preload Type

Radial Clearance (μm)

H30, 36	-5~0
H42	-7~0

Dimensional Accuracy (μm) Interchangeable

Height H Tolerance	±20
Pair Variation of Height H	15
Width W <sub>2</sub> Tolerance	±30
Pair Variation of Width W <sub>2</sub>	25
Running Parallelism of Plane C against Plane A	See
Running Parallelism of Plane D against Plane B	P525



H	Selectable L	Unit Price								
		1 block			2 blocks			Rail	Block	
		SERZ	SEWZ	SEWTZ	SE2RZ	SE2WZ	SE2WTZ	SHZL	SERB	SEWB
30	220									
	280									
	340									
	400									
	460									
	520									
	580									
	640									
	700									
	760									
	820									
	880									
	940									
	1000									
	1060									
	1120									
	1180									
	1240									
36	1300									
	1360									
	1420									
	1480									
	1540									
	1600									
	1660									
	1720									
	1780									
	1840									
	1900									
	1960									
	220									
	280									
	340									
	400									
	460									
	520									
42	580									
	640									
	700									
	760									
	820									
	880									
	940									
	1000									
	1060									
	1120									
	1180									
	1240									
	1300									
	1360									
	1420									
	1480									
	1540									
	1600									

**L Dimension Configurable Type (1mm Increment)**

H	Unit Price						
	1 block			2 blocks			Rails
	SERLZ	SEWLZ	SEWTLZ	SE2RLZ	SE2WLZ	SE2WTLZ	SHZLF
30							
36							
42							

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.

Ordering Example

Part Number - L

SERZ30 - 1840

Alterations

Part Number - L - (RLC, LLC...etc.)

SERZ30 - 1840 - RLC

Alterations	Code	Spec.
Rail End Cut LLC Rail is cut with the product ID facing out (datum on other side).	Left End Cut LLC Right End Cut RLC	Cuts rail ends. Ordering Code LLC H L Cut N 30 36 42 10 10 Applicable to Selectable Type only. Overall length will be shorter by cutting.
3-Block Specifications	B3	Add 2 blocks to 1-Block product to ship as 3-Block separate item. Selection Example: SERZ30-400-B3
4-Block Specifications	B4	Add 3 blocks to 1-Block product to ship as 4-Block separate item. Selection Example: SERZ30-400-B4

**Additional Block Price**

H	B3:1Code			B4:1Code		
	Standard	Wide Through Holes	Wide Tapped Holes	Standard	Wide Through Holes	Wide Tapped Holes
30						
36						
42						

**Position of Grease Fitting (Reference plane on the front side)**

1 block  
2 blocks  
3 blocks  
4 blocks

**Selectable Shortest Rail Length for B3/B4**

H	B3 (3-Block)	B4 (4-Block)
30	400	460
36	460	520
42	460	600

**Options for Linear Guide**

Linear Guide Clamps	Rail Height Adjusting Blocks



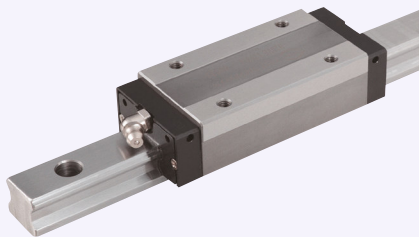
# Linear Guides for Extra Super Heavy Load

## Normal Clearance



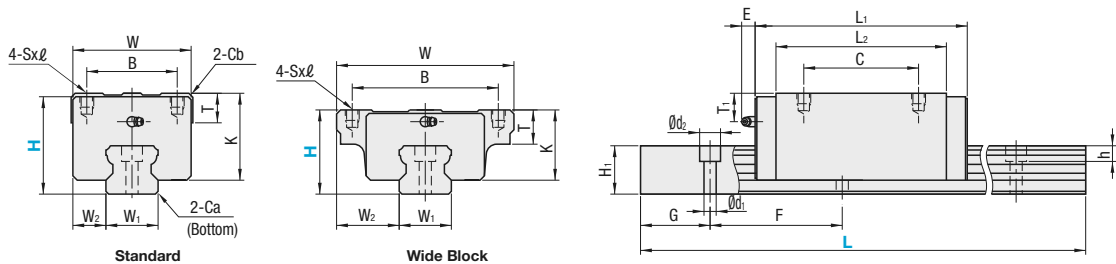
### Similar Products Comparison Points

Select C-VALUE Products for medium-accuracy positioning, medium/low load, and medium-to-low frequency drive applications. When you consider using C-VALUE Products, select an appropriate model after comparing the specifications with those of the existing products. **P585**



RoHS

The mounting dimensions are same for the existing and C-VALUE Products.



For L Configurable, G dimensions differ from those shown in the table below. For details, see **P 531**.

### Precautions for Use

- This product is All Ball Type. Blocks are equipped with retainers to prevent balls from derailing. For how to handle the blocks, see **P 525**.
- For interchangeable, Light Preload Type, rails and blocks can be interchanged.
- Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
- Rails cannot be connected end to end.
- The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
- Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

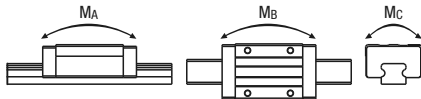
### Others

- Filled with Lithium soap based grease (Alvania Grease S2 by Showa Shell Sekiyu K.K.).
- Grease Fittings: Straight Type for H24 and Angled Type for products whose H is other than 24.
- Grease Fitting is screw-in type, and thus, can be repositioned.
- For installation and maintenance of Linear Guides, see **P 529**.

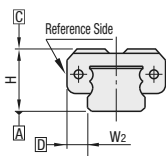
	Part Number		H	L	Block Dimension												Guide Rail Dimension								
	Type				W	L <sub>1</sub>	B	C	Sxℓ	L <sub>2</sub>	K	T	Cb	Grease Fitting			H <sub>1</sub>	W <sub>1</sub>	W <sub>2</sub>	Ca	Counterbored Hole d1xd2xh	F	G		
	1 block	2 blocks												Mounting Hole	E	T <sub>1</sub>									
Standard	C-SER C-SERL	C-SE2R C-SE2RL	30	220~1960	44	98	32	50	M5x5	78	25.4	8.2	0.5	M4x0.7	14	6.5	16.5	20	12	0.5	6x9.5x8.5	60	20		
			40	220~1960	48	109	35	50	M6x6.5	88	34.2	12.15	1.0	M6x1	14	11.5	20	23	12.5	0.9	7x11x9	60	20		
			45	280~1960	60	131	40	60	M8x10	105	38	11	1.0	M6x1	14	11	23	28	16	1.0	9x14x12	80	20		
Wide Block	C-SEWT C-SEWTL	C-SE2WT C-SE2WTL	30	220~1960	63	98	53	40	M6x10	78	25.4	10	—	M6x1	14	6.5	16.5	20	21.5	0.5	6x9.5x8.5	60	20		
			36	220~1960	70	109	57	45	M8x12	88	30.2	12	—	M6x1	14	7.5	20	23	23.5	0.9	7x11x9	60	20		
			42	280~1960	90	131	72	52	M10x15	105	35	15	—	M6x1	14	8	23	28	31	1.0	9x14x12	80	20		

kgf=N×0.10972

H	Basic Load Rating		Allowable Static Moment			Mass		
	C (Dynamic) kN	Co kN	MA N·m	MB N·m	MC N·m	Block kg	Guide Rail kg/m	
30	11.3	24.8	260.7	260.7	263.3	0.38	0.53	2.28
36 40	14.8	31.9	380.2	380.2	388.9	0.68	0.78	3.17
42 45	21.8	45.7	654.1	654.1	672.9	1.12	1.77	4.54



### Preload and Accuracy Standards



### Interchangeable, Light Preload Type

Radial Clearance (μm)	
H24 H30	-5~+5
H36 H40	-6~+6
H42 H45	-7~+7

Dimensional Accuracy (μm)	
Height H Tolerance	±120
Variation of Height H	40
Width W <sub>2</sub> Tolerance	±120
Variation of Width W <sub>2</sub>	40
Running Parallelism of Plane C against Plane A	See
Running Parallelism of Plane D against Plane B	<b>P 525</b>

Similar Product Page **P585**



Ordering  
Example

Part Number	-	L
C-SER30	-	880
C-SEWT30	-	880



Alterations

Part Number	-	L	-	(B3)
C-SER30	-	1840	-	B3

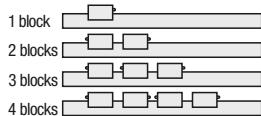
Alterations	Code	Spec.
3-Block Specifications	B3	Add 2 blocks to 1-block product to ship as 3-block separate item. Selection Example: C-SER30-400-B3
4-Block Specifications	B4	Add 3 blocks to 1-block product to ship as 4-block separate item. Selection Example: C-SER30-400-B4

### L Dimension Configurable Type (10mm Increment)

H	Unit Price			
	1 block		2 blocks	
	C-SERL	C-SEWTL	C-SE2RL	C-SE2WTL
30				
36	-		-	
40		-		-
42	-		-	
45		-		-

For calculation of L Dimension Configurable Type (10mm increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.

### Position of Grease Fitting (Reference plane on the front side)



### Selectable Shortest Rail Length for B3/B4

H	B3 (3-block)	B4 (4-block)
30	400	460
36, 40	460	580
42, 45	520	600

### Additional Block Price

H	Unit Price			
	B3		B4	
	C-SER	C-SEWT	C-SER	C-SEWT
30				
36	-		-	
40		-		-
42	-		-	
45		-		-

	L	Unit Price			
		1 block		2 blocks	
		C-SER	C-SEWT	C-SE2R	C-SE2WT
30	220				
	280				
	340				
	400				
	460				
	520				
	580				
	640				
	700				
	760				
	820				
	880				
	940				
	1000				
	1060				
	1120				
	1180				
	1240				
	1300				
	1360				
36 (C-SEWT) 40 (C-SER)	1420				
	1480				
	1540				
	1600				
	1660				
	1720				
	1780				
	1840				
	1900				
	1960				
	2020				
	2080				
	2140				
	2200				
	2260				
	2320				
	2380				
	2440				
	2500				
42 (C-SEWT) 45 (C-SER)	2560				
	2620				
	2680				
	2740				
	2800				
	2860				
	2920				
	2980				
	3040				
	3100				
	3160				
	3220				
	3280				
	3340				
	3400				
	3460				
	3520				
	3580				
	3640				
	3700				



# Linear Guides for Medium/Heavy Load - Stainless Steel

## Normal Clearance

= For customers using industry standard products =

Frame-surrounded products are compliant with the industry standard specifications (Standard Block Type).  
Select the block from this spec.

**Features:** Linear Guides for Medium and Heavy Load excellent in corrosion resistance.



### Industry Standard



Blocks and rails are not sold as separate items. Normal Clearance Type has guaranteed radial clearances and accuracies as sets of blocks and rails.

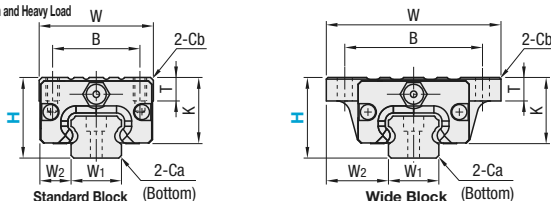
RoHS

**Lubrication Units MX**  
Provides long term maintenance-free operation.

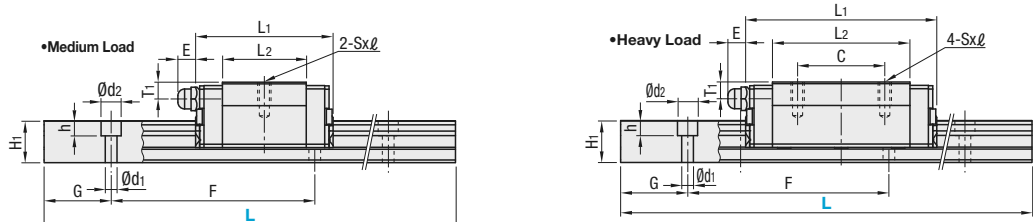
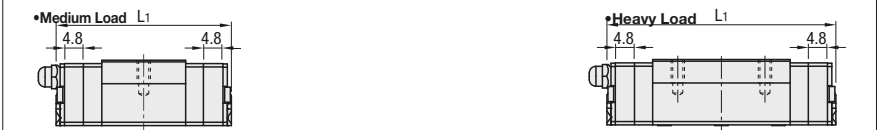
Type		MX (Lubrication Units)	L Dimension	Number of Blocks	 Material  Hardness	
Medium Load	Heavy Load					
Standard Block	SSVR	SSXR	Blank: None -MX: Provided	Selectable	1	Stainless Steel 56HRC~
	SSV2R	SSX2R		2		
	SSVRL	SSXRL		1		
	SSV2RL	SSX2RL		2		
	SSVW	SSXW		Selectable	1	
	SSV2W	SSX2W		2		
	SSVWL	SSXWL		1		
	SSV2WL	SSX2WL		2		

Heat Resistant Temperature: -20 ~ 80°C

Medium and Heavy Load



Dimension Diagram of Blocks with MX (Lubrication Units)



For L Configurable, G dimensions differ from those shown in the table below. For details, see P531.

### Precautions for Use

- Blocks are equipped with retainers to prevent balls from falling off. For how to handle the blocks, see P525.
- Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
- Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
- Rails cannot be connected end to end.
- The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
- Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

### Others

- Filled with Lithium soap based grease (Alvania Grease S2 by Showa Shell Sekiyu K.K.).
- Grease Fittings: Straight Type for H24 and Angled Type for H28 and H33.
- Grease Fitting is screw-in type, and thus, can be repositioned.
- For Operating Life Calculation, see P527.
- For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

Part Number				L	Block Dimension												Guide Rail Dimension									
Type	MX	H	W		L1		B	C	SxL	L2	K	T	Cb	Grease Fitting		H1	W1	W2	Ca	Counterbored Hole d1xd2	F	G				
					Standard	MX								E	T1											
Medium Load	(1 block) SSVR	(2 blocks) SSV2R	Blank: None -MX: Provided	24	100~700 (160)	34 (52)	41	50.6	26 (41)	-	M4x7 (4.5)	25	20	7 (7)	0.85	M5xP0.8	6	5	12.5	15	9.5 (18.5)	0.5	3.5x6x4.5	60	20	
	SSVRL	SSV2RL		28	160~700 (220)	42 (59)	47	56.6	32 (49)	-	M5x8 (5.5)	27.6	22.5	7.5 (9)	1	M6xP0.75	13	6	15.5	20	11 (19.5)	0.6	6x9.5x8.5	60	20	
	SSVW	SSV2W		33	160~700 (220)	48 (73)	59	68.6	35 (60)	-	M6x9 (7)	37	26.5	8 (10)	1	M6xP0.75	13	6.8	18	23	12.5 (25)	0.8	7x11x9	60	20	
	SSVWL	SSV2WL			(1 block) SSXR	(2 blocks) SSX2R	24	100~700 (220)	34 (52)	57	66.6	26 (41)	26	M4x7 (4.5)	41	20	7 (7)	0.5	M5xP0.8	6	5	12.5	15	9.5 (18.5)	0.5	3.5x6x4.5
Heavy Load	SSXRL	SSX2RL		28	160~700 (220)	42 (59)	67	76.6	32 (49)	32	M5x8 (5.5)	47.6	22.5	7.5 (9)	1	M6xP0.75	13	6	15.5	20	11 (19.5)	0.6	6x9.5x8.5	60	20	
	SSXW	SSX2W		33	160~700 (280)	48 (73)	83	92.6	35 (60)	35	M6x9 (7)	61	26.5	8 (10)	1	M6xP0.75	13	6.8	18	23	12.5 (25)	0.8	7x11x9	60	20	
	SSXWL	SSX2WL																								

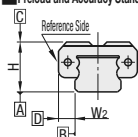
L Dimension: Dimensions in ( ) are for 2-Block Type.

Sx Dimensions: Dimensions in ( ) are for Wide Block Type.

kgf=Nx0.101972

Block	H	Basic Load Rating/Allowable Static Moment				Mass	
		C (Dynamic) kN	Co (Static) kN	MA, Mb N · m	Mc N · m	Block kg	Guide Rail kg/m
Medium Load	24	5.0	8.23	33	57	0.15	0.20
	28	7.2	12.1	58	135	0.20	0.25
	33	11.7	19.6	109	225	0.30	0.40
Heavy Load	24	8.6	14.2	69	98	0.20	0.25
	28	12.5	21.3	155	232	0.30	0.35
	33	20.2	34.5	275	393	0.45	0.60

### Preload and Accuracy Standards

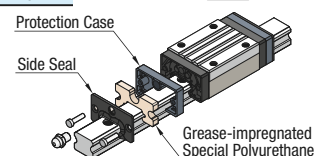


### Normal Clearance Type

Radial Clearance (μm)	Standard Grade
H24	-4~+2
H28	-5~+2
H33	-6~+3

Dimensional Accuracy (μm)		Standard Grade
Height H Tolerance		±100
Pair Variation of Height H		20
Width W2 Tolerance		±100
Pair Variation of Width W2		H24, 28 H33
Running Parallelism of Plane C against Plane A		See P525
Running Parallelism of Plane D against Plane B		See P525

### Lubrication Units MX



Advantages of Lubrication Unit MX: Provides long term maintenance-free operation. Reduces maintenance cost. Most suitable where the design does not allow lubrication. For details, see P530.



Ordering Example

Part Number - L

SSXR28 - 575  
SSXR28L - 575  
SSXR28G - 575

(With Lubrication Units)  
(LBC Plating)  
(L Type Greased)  
(G Type Greased)

LTBC Plating and various Grease types available as alternative (Except Blocks with Lubrication Units) P532



Alterations

Part Number - L - (RLC, LLC etc.)

SSXR33 - 520 - RLC

Alterations	Code	Spec.
Rail End Cut LLC Rail is cut with the product ID facing out (datum on other side).	Left End Cut LLC	Cuts rail ends. Ordering Code LLC H L Cut N 24 10 10 28 33
	Right End Cut RLC	Applicable to Selectable Type only. Overall length will be shorter by cutting. Not applicable to Heavy Load Type with H dimension 24 of L dimension 100.
Parallel Use of 2 Rails	WC	Pair variation of Height H between 2 rails is set within 20μm. Two rails are shipped as a pair. Specify the actual rail quantity (even number) to order, not "pairs". Not applicable to High Grade Type. Not applicable to low temperature chrome plated products.
3-Block Specifications	B3	Add 2 blocks to 1-Block product to ship as 3-Block separate item. Selection Example: SSVR24-400-B3
4-Block Specifications	B4	Add 3 blocks to 1-Block product to ship as 4-Block separate item. Selection Example: SSVR24-400-B4

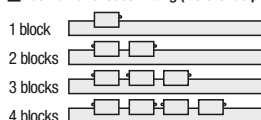
### Medium Load

H	B3:1Code				B4:1Code			
	Standard	Wide	Standard MX	Wide MX	Standard	Wide	Standard MX	Wide MX
24								
28								
33								

### Heavy Load

H	B3:1Code				B4:1Code			
	Standard	Wide	Standard MX	Wide MX	Standard	Wide	Standard MX	Wide MX
24								
28								
33								

### Position of Grease Fitting (Reference plane on the front side)



### Selectable Shortest Rail Length for B3/B4

H	Medium Load		Heavy Load	
	B3 (3-Block)	B4 (4-Block)	B3 (3-Block)	B4 (4-Block)
24	280	340	340	400
28	340	400	400	460
33	340	400	400	520

### L Dimension Configurable Type (1mm Increment)

H	Unit Price			
	Medium Load		Heavy Load	
24	1 block	2 blocks	1 block	2 blocks
	SSVRL	SSVWL	SSV2RL	SSV2WL
	SSXR	SSXW	SSX2RL	SSX2WL
28				
33				

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.

### MX (Lubrication Unit) Unit Price

H	Unit Price	
	1 block	2 blocks
24		
28		
33		

Price of Guide Rails with MX (Lubrication Unit) = Linear Guide Unit Price + MX Unit Price

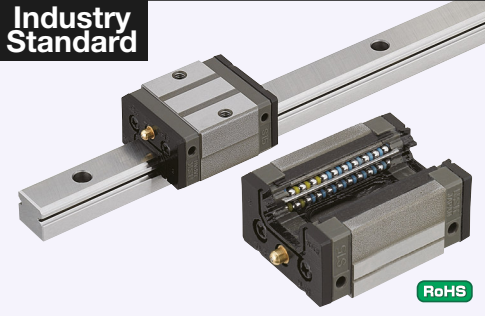


# Linear Guides for Medium Load - Stainless Steel

## With Plastic Retainers, Interchangeable, Light Preload

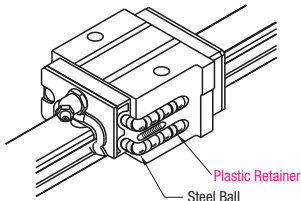
**Features:** Linear Guides with Plastic Retainers prevent contact between balls and result in low noise levels under high-speed operation.

**Industry Standard**

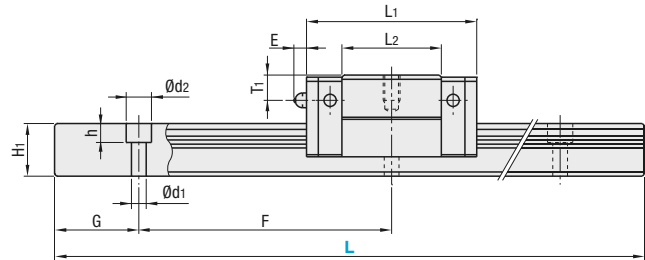
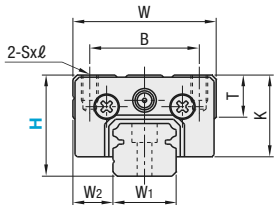


Material Hardness	Type		Block	Rail	L Dimension
	1 block	2 blocks			
Stainless Steel (EN 1.4125 Equiv.) 57HRC~	SSVRZ	SSV2RZ	SSVRB	SSRZL	Selectable
	SSVRLZ	SSV2RLZ		SSRZLF	Configurable

Heat Resistant Temperature: 0 ~ 50°C



Plastic Retainer  
Steel Ball



For L Configurable, G dimensions differ from those shown in the table below. For details, see P. 531.

- Precautions for Use**
- Blocks are equipped with retainers to prevent balls from falling off. For how to handle the blocks, see P. 525.
  - For interchangeable, Light Preload Type, rails and blocks can be interchanged.
  - Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
  - Rails cannot be connected end to end.
  - The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
  - Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

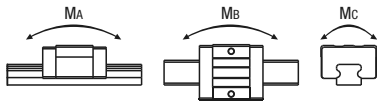
- Others**
- Filled with Lithium soap based grease (Alvania Grease S2 by Showa Shell Sekiyu K.K.).
  - Grease Fittings: Straight Type for H24 and Angled Type for H28 and H33.
  - Grease Fitting is screw-in type, and thus, can be repositioned.
  - For Operating Life Calculation, see P. 527.
  - For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

Part Number		H	L	Block Dimension										Guide Rail Dimension					
Type				W	L <sub>1</sub>	B	Sxℓ	L <sub>2</sub>	K	T	Grease Fitting			H <sub>1</sub>	W <sub>1</sub>	W <sub>2</sub>	Counterbored Hole d1xd2xh	F	G
1 block	2 blocks										Mounting Hole	E	T <sub>1</sub>						
SSVRZ	SSV2RZ	24	100~1480 (160)	34	40.4	26	M4x6	23.6	19.4	10	Ø3	3	6	12.5	15	9.5	3.5x6x4.5	60	20
SSVRLZ	SSV2RLZ			42	47.2	32	M5x7	30	22	12	M6xP0.75	11	5.5	15.5	20	11	6x9.5x8.5	60	20
(Block)	(Rail)			48	59.6	35	M6x9	38	26	12	M6xP0.75	11	7	18	23	12.5	7x11x9	60	20
SSVRB	SSRZL	33	160~1480 (220)																
	SSRZLF																		

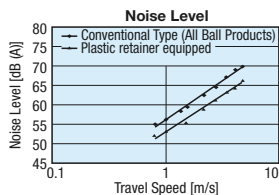
L Dimension: Dimensions in ( ) are for 2-Block Type.

kgf=Nx0.101972

H	Basic Load Rating		Allowable Static Moment			Mass		
	C (Dynamic) kN	Co (Static) kN	MA N·m	MB N·m	MC N·m	Block kg	Guide Rail kg/m	
24	4.9	7.8	21	18	39	0.14	1.4	
28	7.25	11.8	40	34	80	0.19	2.3	
33	12.7	20.8	96	81	164	0.34	3.1	

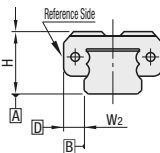


**Features of Plastic Retainers:** Low noise levels and improved sound quality



- Lack of mutual contact between balls results in low noise levels and improved sound quality.
- Since there is no mutual contact abrasion between the balls, particle generation is less than those of conventional products.

**Preload and Accuracy Standards**



**Interchangeable, Light Preload Type**

**Radial Clearance (μm)**

H24, 28	-4~0
H33	-5~0

Dimensional Accuracy (μm)	Interchangeable
Height H Tolerance	±20
Pair Variation of Height H	15
Width W2 Tolerance	±30
Pair Variation of Width W2	25
Running Parallelism of Plane C against Plane A	
Running Parallelism of Plane D against Plane B	

See P. 525

H	Selectable L	Unit Price			
		Set SSVRZ	SSV2RZ	Rail SSRZL	Block SSVRB
24	100		-		
	160				
	220				
	280				
	340				
	400				
	460				
	520				
	580				
	640				
	700				
	760				
	820				
	880				
	940				
	1000				
28	1060				
	1120				
	1180				
	1240				
	1300				
	1360				
	1420				
	1480				
	160		-		
	220				
	280				
	340				
	400				
	460				
	520				
	580				
33	640				
	700				
	760				
	820				
	880				
	940				
	1000				
	1060				
	1120				
	1180				
	1240				
	1300				
	1360				
	1420				
	1480				
	160		-		
	220				
	280				
	340				
	400				
	460				
	520				
	580				
	640				
	700				
	760				
	820				
	880				
	940				
	1000				
	1060				
	1120				
	1180				
	1240				
	1300				
	1360				
	1420				
	1480				

**L Dimension Configurable Type (1mm Increment)**

H	Unit Price		
	Set SSVRLZ	SSV2RLZ	Rails SSRZLF
24			
28			
33			

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.



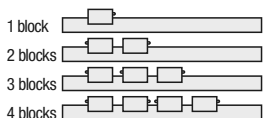
Ordering Example  
Part Number - L  
SSVRZ28 - 640



Alterations  
Part Number - L - (RLC, LLC...etc.)  
SSVRZ28 - 640 - RLC

Alterations	Code	Spec.
Rail End Cut LLC RLC Rail is cut with the product ID facing out (datum on other side).	Left End Cut LLC	Cuts rail ends. Ordering Code LLC H L Cut N 24 10 10 28 10 10 33 10 10
	Right End Cut RLC	Applicable to Selectable Type only. Overall length will be shorter by cutting.
3-Block Specifications	B3	Add 2 blocks to 1-Block product to ship as 3-Block separate item. Selection Example: SSVRZ24-400-B3
4-Block Specifications	B4	Add 3 blocks to 1-Block product to ship as 4-Block separate item. Selection Example: SSVRZ24-400-B4

Position of Grease Fitting (Reference plane on the front side)



**Additional Block Price**

H	1Code	
	B3	B4
24		
28		
33		

**Selectable Shortest Rail Length for B3/B4**

H	B3 (3-Block)	B4 (4-Block)
24	280	340
28	340	400
33	340	400

**Options for Linear Guide**

Linear Guide Clamps	Rail Height Adjusting Blocks
P608	P609, 610
Block Derailment Prevention Parts / Dust Resistant Parts	Block / Rail Fixing Parts
Stopper Bolts P612	Rail Push Plates P612
Block Stopper Plates P612	Linear Locks P613
Rail Mounting Hole Caps P612	Linear Guide Lock Units P614

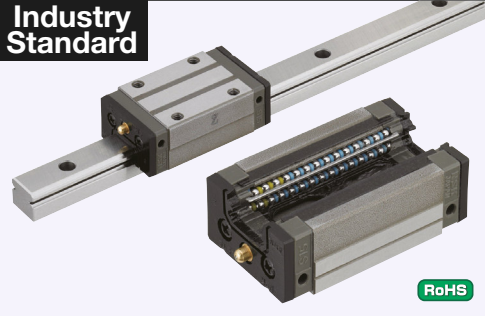


# Linear Guides for Heavy Load - Stainless Steel

## With Plastic Retainers, Interchangeable, Light Preload

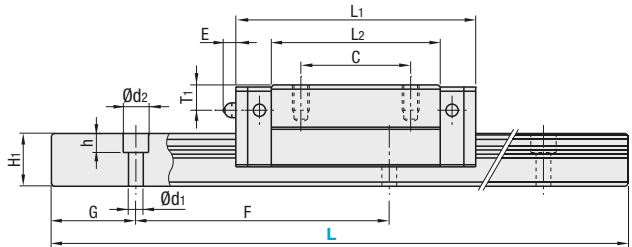
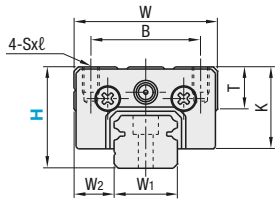
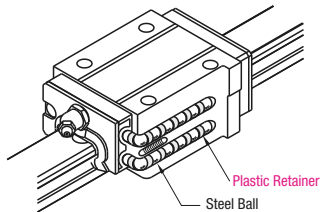
**Features:** Linear Guides with Plastic Retainers prevent contact between balls and result in low noise levels under high-speed operation.

**Industry Standard**



Material Hardness	Type		Block	Rail	L Dimension
	1 block	2 blocks			
Stainless Steel (EN 1.4125 Equiv.) 57HRC~	SSXRZ	SSX2RZ	SSXRB	SSRZL	Selectable
	SSXRLZ	SSX2RLZ		SSRZLF	Configurable

Heat Resistant Temperature: 0 ~ 50°C



For L Configurable, G dimensions differ from those shown in the table below. For details, see P.531.

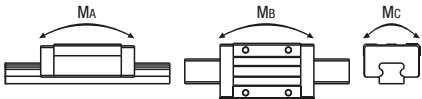
- Precautions for Use
- Blocks are equipped with retainers to prevent balls from falling off. For how to handle the blocks, see P.525.
- For Interchangeable, Light Preload Type, rails and blocks can be interchanged.
- Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
- Rails cannot be connected end to end.
- The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
- Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

- Others
- Filled with Lithium soap based grease (Alvania Grease S2 by Showa Shell Sekiyu K.K.).
- Grease Fittings: Straight Type for H24 and Angled Type for H28 and H33.
- Grease Fitting is screw-in type, and thus, can be repositioned.
- For Operating Life Calculation, see P.527
- For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

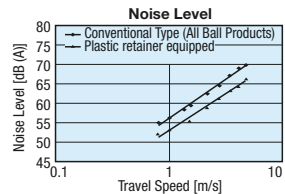
Part Number			L	Block Dimension										Guide Rail Dimension								
Type		H		W	L <sub>1</sub>	B	C	Sxℓ	L <sub>2</sub>	K	T	Grease Fitting			H <sub>1</sub>	W <sub>1</sub>	W <sub>2</sub>	Counterbored Hole d <sub>1</sub> x d <sub>2</sub> x h	F	G		
1 block	2 blocks											Mounting Hole	E	T <sub>1</sub>								
(Block) SSXRB	(Rail) SSRZL SSRZLF	SSXRZ SSXRLZ	SSX2RZ SSX2RLZ	24	100~1480 (160)	34	56.8	26	26	M4x6	40	19.4	10	Ø3	3	6	12.5	15	9.5	3.5x6x4.5	60	20
		28	160~1480 (220)	42	65.2	32	32	M5x7	48	22	12	M6xP0.75	11	5.5	15.5	20	11	6x9.5x8.5	60	20		
		33	160~1480 (220)	48	81.6	35	35	M6x9	60	26	12	M6xP0.75	11	7	18	23	12.5	7x11x9	60	20		

L Dimension: Dimensions in ( ) are for 2-Block Type.

H	Basic Load Rating		Allowable Static Moment			Mass	
	C (Dynamic) kN	Co (Static) kN	MA N·m	Mb N·m	Mc N·m	Block kg	Guide Rail kg/m
24	7.9	15.6	74	62	78	0.20	1.4
28	11.1	21.8	124	104	149	0.28	2.3
33	17.9	33.5	242	203	266	0.51	3.1

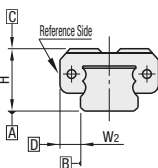


**Features of Plastic Retainers:** Low noise levels and improved sound quality



- Lack of mutual contact between balls results in low noise levels and improved sound quality.
- Since there is no mutual contact abrasion between the balls, particle generation is less than those of conventional products.

**Preload and Accuracy Standards**



Interchangeable, Light Preload Type

Radial Clearance (μm)	
H24, 28	-4~0
H33	-5~0

Dimensional Accuracy (μm)	
Height H Tolerance	±20
Pair Variation of Height H	15
Width W <sub>2</sub> Tolerance	±30
Pair Variation of Width W <sub>2</sub>	25
Running Parallelism of Plane C against Plane A	
Running Parallelism of Plane D against Plane B	

See P.525

H	Selectable L	Unit Price			
		Set SSXRZ	SSX2RZ	Rail SSRZL	Block SSXRB
24	100		-		
	160				
	220				
	280				
	340				
	400				
	460				
	520				
	580				
	640				
	700				
	760				
	820				
	880				
	940				
	1000				
28	1060				
	1120				
	1180				
	1240				
	1300				
	1360				
	1420				
	1480				
	160		-		
	220				
	280				
	340				
	400				
	460				
	520				
	580				
33	640				
	700				
	760				
	820				
	880				
	940				
	1000				
	1060				
	1120				
	1180				
	1240				
	1300				
	1360				
	1420				
	1480				
	160		-		
	220				
	280				
	340				
	400				
	460				
	520				
	580				
	640				
	700				
	760				
	820				
	880				
	940				
	1000				
	1060				
	1120				
	1180				
	1240				
	1300				
	1360				
	1420				
	1480				

L Dimension Configurable Type (1mm Increment)

H	Unit Price		
	Set SSXRLZ	SSX2RLZ	Rails SSRZLF
24			
28			
33			

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.



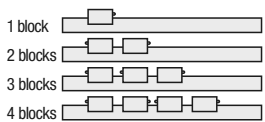
Ordering Example  
Part Number - L  
SSXRZ28 - 640



Alterations  
Part Number - L - (RLC, LLC...etc.)  
SSXRZ28 - 640 - RLC

Alterations	Code	Spec.
Rail End Cut LLC Rail is cut with the product ID facing out (datum on other side).	Left End Cut LLC	Cuts rail ends. Ordering Code LLC H L Cut N 24 10 10 28 33 Applicable to Selectable Type only. Overall length will be shorter by cutting.
	Right End Cut RLC	
3-Block Specifications	B3	Add 2 blocks to 1-Block product to ship as 3-Block separate item. Selection Example: SSXRZ24-400-B3
4-Block Specifications	B4	Add 3 Blocks to 1-Block product to ship as 4-Block separate item. Selection Example: SSXRZ24-400-B4

Position of Grease Fitting (Reference plane on the front side)



Additional Block Price

H	1Code	
	B3	B4
24		
28		
33		
Selectable Shortest Rail Length for B3/B4		
H	B3 (3-Block)	B4 (4-Block)
24	340	400
28	400	460
33	400	520

Options for Linear Guide

Linear Guide Clamps		Rail Height Adjusting Blocks	
P608		P609, 610	
Block Derailment Prevention Parts / Dust Resistant Parts		Block / Rail Fixing Parts	
Stopper Bolts P612		Rail Push Plates P612	
Block Stopper Plates P612		Linear Locks P613	
Rail Mounting Hole Caps P612		Linear Guide Lock Units P614	

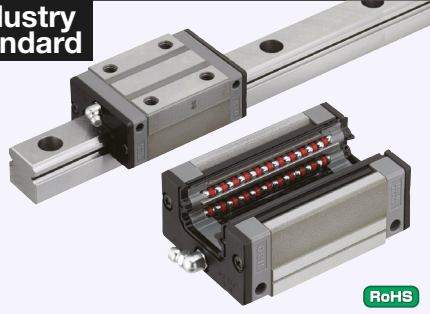


# Linear Guides for Super Heavy Load - Stainless Steel

## With Plastic Retainers, Interchangeable, Light Preload

**Features:** Linear Guides with Plastic Retainers prevent contact between balls and result in low noise levels under high-speed operation.

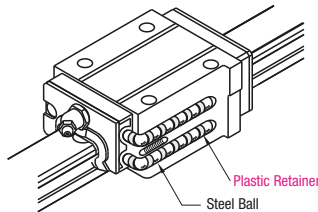
**Industry Standard**



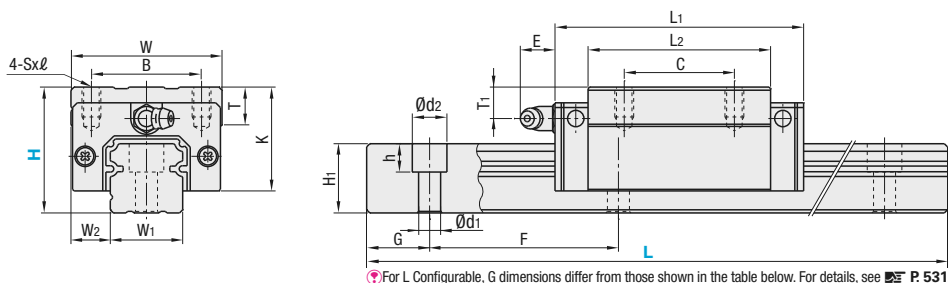
RoHS

Material Hardness	Type		Block	Rail	L Dimension
	1 block	2 blocks			
Stainless Steel (EN 1.4125 Equiv.) 57HRC~	SSHRZ	SSH2RZ	SSHRB	SSHZL	Selectable
	SSHRLZ	SSH2RLZ		SSHZLF	Configurable

Heat Resistant Temperature: 0 ~ 50°C



Plastic Retainer  
Steel Ball



For L Configurable, G dimensions differ from those shown in the table below. For details, see P. 531.

- Precautions for Use**
- Blocks are equipped with retainers to prevent balls from falling off. For how to handle the blocks, see P. 525.
  - For Interchangeable, Light Preload Type, rails and blocks can be interchanged.
  - Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
  - Rails cannot be connected end to end.
  - The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
  - Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

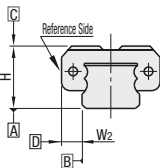
- Others**
- Filled with Lithium soap based grease (Alvania Grease S2 by Showa Shell Sekiyu K.K.).
  - Angled Grease Fitting Type
  - Grease Fitting is screw-in type, and thus, can be repositioned.
  - For Operating Life Calculation, see P. 527
  - For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

Part Number		H	L	Block Dimension										Guide Rail Dimension						
Type				W	L <sub>1</sub>	B	C	Sxℓ	L <sub>2</sub>	K	T	Grease Fitting			H <sub>1</sub>	W <sub>1</sub>	W <sub>2</sub>	Counterbored Hole d <sub>1</sub> x d <sub>2</sub> x h	F	G
1 block	2 blocks											Mounting Hole	E	T <sub>1</sub>						
SSHRZ	SSH2RZ	30	220~1480	44	69.8	32	36	M5x6	50	25	12	M6xP0.75	11	5	18	20	12	6x9.5x8.5	60	20
SSHRLZ	SSH2RLZ																			
(Block)	(Rail)	40	220~1480	48	79	35	35	M6x9	58	33	12	M6xP0.75	11	10	22	23	12.5	7x11x9	60	20
SSHRB	SSHZL																			
	SSHZLF																			

H	Basic Load Rating		Allowable Static Moment		Mass		
	C (Dynamic) kN	Co (Static) kN	MA N·m	MB N·m	MC N·m	Block kg	Guide Rail kg/m
30	16.3	29.6	167	141	199	0.33	2.6
40	22.4	37.5	246	207	295	0.55	3.6

kgf=Nx0.101972

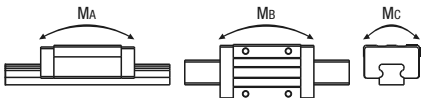
### Preload and Accuracy Standards



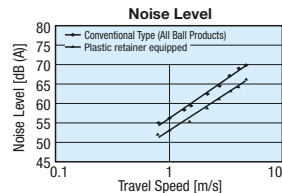
### Interchangeable, Light Preload Type

Radial Clearance (μm)	
H30, 40	-5~0

Dimensional Accuracy (μm)	
Height H Tolerance	±20
Pair Variation of Height H	15
Width W <sub>2</sub> Tolerance	±30
Pair Variation of Width W <sub>2</sub>	25
Running Parallelism of Plane C against Plane A	
Running Parallelism of Plane D against Plane B	
See P. 525	



### Features of Plastic Retainers: Low noise levels and improved sound quality



- Lack of mutual contact between balls results in low noise levels and improved sound quality.
- Since there is no mutual contact abrasion between the balls, particle generation is less than those of conventional products.

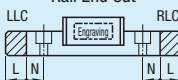


Ordering Example  
Part Number - L  
SSHRZ30 - 640

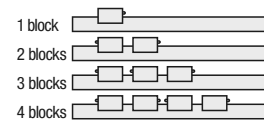


Alterations  
Part Number - L - (RLC, LLC...etc.)  
SSHRZ30 - 640 - RLC

H	Selectable L	Unit Price			
		Set		Rail	Block
		SSHRZ	SSH2RZ	SSHZL	SSHRB
30	220				
	280				
	340				
	400				
	460				
	520				
	580				
	640				
	700				
	760				
	820				
	880				
	940				
	1000				
	1060				
40	1120				
	1180				
	1240				
	1300				
	1360				
	1420				
	1480				
	220				
	280				
	340				
	400				
	460				
	520				
	580				
	640				
	700				
	760				
	820				
	880				
	940				
	1000				
	1060				
	1120				
	1180				
	1240				
	1300				
	1360				
	1420				
	1480				

Alterations	Code	Spec.							
<div><div><div>LLC</div><div></div><div>RLC</div></div><p>Rail is cut with the product ID facing out (datum on other side).</p></div> <div>Left End Cut LLC</div> <div>Cuts rail ends. Ordering Code LLC<table><tr><td>H</td><td>L Cut</td><td>N</td></tr><tr><td>30</td><td>10</td><td>10</td></tr><tr><td>40</td><td></td><td></td></tr></table></div> <div>Right End Cut RLC</div> <div>Applicable to Selectable Type only. Overall length will be shorter by cutting.</div>	H	L Cut	N	30	10	10	40		
H	L Cut	N							
30	10	10							
40									
3-Block Specifications	B3	Adds 1 block to 2-Block product to ship as 3-Block separate item. Selection Example: SSHRZ30-400-B3							
4-Block Specifications	B4	Adds 2 blocks to 2-Block product to ship as 4-Block separate item. Selection Example: SSHRZ30-400-B4							

### Position of Grease Fitting (Reference plane on the front side)



### Additional Block Price

H	1Code	
	B3	B4
30		
40		
Selectable Shortest Rail Length for B3/B4		
H	B3 (3-Block)	B4 (4-Block)
30	340	400
40	400	460

### Options for Linear Guide

Linear Guide Clamps		Rail Height Adjusting Blocks	
P608		P609, 610	
Block Derailment Prevention Parts / Dust Resistant Parts		Block / Rail Fixing Parts	
<b>Stopper Bolts</b> 		<b>Rail Push Plates</b> 	
P612		P612	
<b>Block Stopper Plates</b> 		<b>Linear Locks</b> 	
P612		P613	
<b>Rail Mounting Hole Caps</b> 		<b>Linear Guide Lock Units</b> 	
P612		P614	

### L Dimension Configurable Type (1mm Increment)

H	Unit Price		
	Set		Rails
	SSHRLZ	SSH2RLZ	SSHZLF
30			
40			

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.



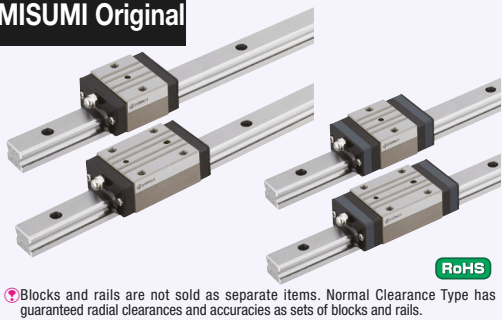
# Linear Guides for Medium/Heavy Load

With Dowel Holes, Normal Clearance

■ Features: MISUMI original specifications with dowel holes. Requires less time for assembly and has better repeatability.

Lubrication Unit **MX**  
Provides long term maintenance-free operation.

MISUMI Original

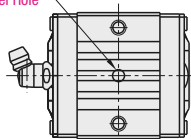


	Type		MX (Lubrication Units)	L Dimension	Number of Blocks	Material (Hardness)
	Medium Load	Heavy Load				
Block Standard	SVRN	SXRN	Blank: None -MX: Provided	Selectable	1	Carbon Steel 58HRC~
	SV2RN	SX2RN		Configurable	2	
	SVRNL	SXRNL			1	
	SV2RNL	SX2RNL			2	

Heat Resistant Temperature: -20 ~ 80°C

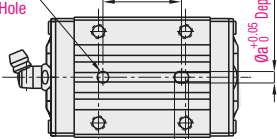
• Medium Load

$\phi a \pm 0.05$  Depth ( $\ell_1$ )  
Dowel Hole



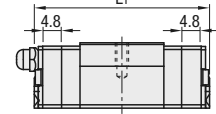
• Heavy Load

$\phi a \pm 0.05$  Depth ( $\ell_1$ )  
Dowel Hole

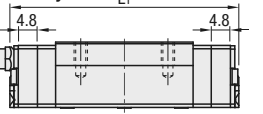


■ Dimension Diagram of Blocks with MX (Lubrication Units)

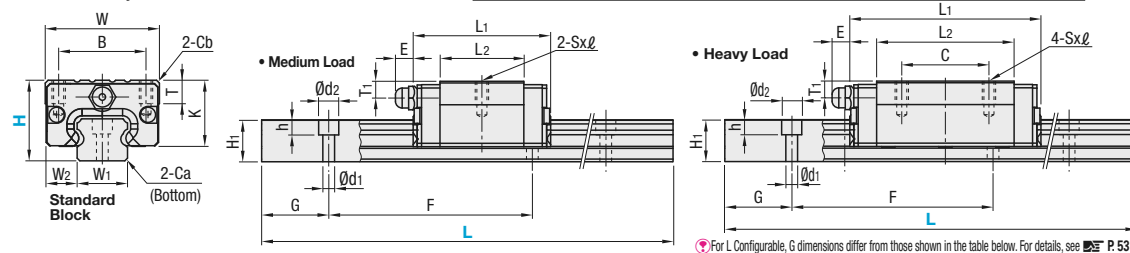
• Medium Load



• Heavy Load



Medium and Heavy Load



■ Precautions for Use

- Blocks are equipped with retainers to prevent balls from falling off.
- For how to handle the blocks, see **P. 525**.
- Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
- Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
- Rails cannot be connected end to end.
- The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
- Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

■ Others

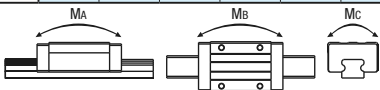
- Filled with Lithium soap based grease (Alvania Grease S2 by Showa Shell Sekiyu K.K.).
- Grease Fittings: Straight Type for H24 and Angled Type for H28 and H33.
- Grease Fitting is screw-in type, and thus, can be repositioned.
- For operating life calculation, see **P. 527**.
- For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

Part Number				H	L	Block Dimension																Guide Rail Dimension									
Type		MX					W	L <sub>1</sub>		B	C	S × L	L <sub>2</sub>	K	T	Cb	Grease Fitting		Dowel Hole Dimensions					H <sub>1</sub>	W <sub>1</sub>	W <sub>2</sub>	Ca	Counterbored Hole d × d × z × h	F		
								Std.	MX								E	T <sub>1</sub>	N	Øa	F	P	Ø <sub>1</sub>								
Medium Load	(1 block) SVRN	(2 blocks) SV2RN	Blank: None - MX: With MX	24	100~1480 (160)	34	41	50.6	26	-	M4x7	25	20	7	0.85	M5xP0.8	6	5	17	3	-	-	4	12.5	15	9.5	0.5	3.5x6x4.5	60	20	
				28	160~1960 (220)	42	47	56.6	32	-	M5x7.5	27.6	22.5	7.5	1	M6xP0.75	13	6	21	4	-	-	5	15.5	20	11	0.6	6x9.5x8.5	60	20	
				33	160~1960 (220)	48	59	68.6	35	-	M6x9	37	26.5	8	1	M6xP0.75	13	6.8	24	4	-	-	5	18	23	12.5	0.8	7x11x9	60	20	
Heavy Load	(1 block) SXRNL	(2 blocks) SX2RN		24	100~1480 (220)	34	57	66.6	26	26	M4x7	41	20	7	0.85	M5xP0.8	6	5	17	3	4	24	4	12.5	15	9.5	0.5	3.5x6x4.5	60	20	
				28	160~1960 (220)	42	67	76.6	32	32	M5x7.5	47.6	22.5	7.5	1	M6xP0.75	13	6	21	4	5	28	5	15.5	20	11	0.6	6x9.5x8.5	60	20	
				33	160~1960 (280)	48	83	92.6	35	35	M6x9	61	26.5	8	1	M6xP0.75	13	6.8	24	4	5	35	5	18	23	12.5	0.8	7x11x9	60	20	

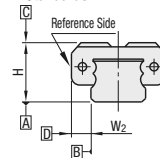
⚠ L Dimension: Dimensions in ( ) are for 2-Block Type.

kgf=N×0.101972

Block	H	Basic Load Rating		Allowable Static Moment		Mass	
		C (Dynamic) kN	Co (Static) kN	MA, Ms N·m	Mc N·m	Block kg	Guide Rail kg/m
Medium Load	24	5.0	8.23	33	57	0.15	1.5
	28	7.2	12.1	58	135	0.20	2.4
	33	11.7	19.6	109	225	0.30	3.4
Heavy Load	24	8.6	14.2	69	98	0.20	1.5
	28	12.5	21.3	155	232	0.30	2.4
	33	20.2	34.5	275	393	0.45	3.4



■ Preload and Accuracy Standards



Normal Clearance Type

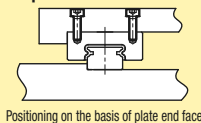
Radial Clearance (μm)	Standard Grade
H24	-4~+2
H28	-5~+2
H33	-6~+3

Dimensional Accuracy (μm)	Standard Grade
Height H Tolerance	±100
Pair Variation of Height H	20
Width W2 Tolerance	±100
Pair Variation of Width W2	H24, 28: 20 H33: 30
Running Parallelism of Plane C against Plane A	See P525
Running Parallelism of Plane D against Plane B	See P525

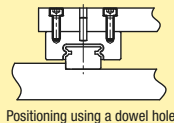


- Installation Examples -

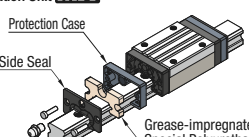
Conventional Type



With Dowel Holes



■ Lubrication Unit **MX**



■ Advantages of Lubrication Unit MX:  
Provides long term maintenance-free operation. Reduces maintenance cost.  
Most suitable where the design does not allow lubrication.  
For details, see **P. 530**.

⚠\* marked sizes are not available for Low Temperature Black Chrome Plated Type.

H	L	Unit Price			
		1 block SVRN	2 blocks SV2RN	1 block SXRNL	2 blocks SX2RNL
24	100				
	160				
	220				
	280				
	340				
	400				
	460				
	520				
	580				
	640				
	700				
	760				
	820				
	880				
	940				
	1000				
28	*1120				
	*1240				
	*1360				
	*1480				
	160				
	220				
	280				
	340				
	400				
	460				
	520				
	580				
	640				
	700				
	760				
	820				
33	880				
	940				
	1000				
	*1120				
	*1240				
	*1360				
	*1480				
	*1600				
	*1720				
	*1840				
	*1960				
	160				
	220				
	280				
	340				
	400				
	460				
	520				
	580				
	640				
	700				
	760				
	820				
	880				
	940				
	1000				
	*1120				
	*1240				
	*1360				
	*1480				
	*1600				
	*1720				
	*1840				
	*1960				

■ L Dimension Configurable Type (1mm Increment)

H	Unit Price			
	1 block SVRNL	2 blocks SV2RNL	1 block SXRNL	2 blocks SX2RNL
24				
28				
33				

⚠ For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.

■ MX (Lubrication Unit) Unit Price

H	Unit Price	
	1 block	2 blocks
24		
28		
33		

⚠ Price of Guide Rail with MX (Lubrication Unit) = Linear Guide Unit Price + MX Unit Price



Ordering Example

Part Number - L

SVRN28	-	880	(With Lubrication Units)
SVRN-MX28	-	880	(LTBC Plating)
SVRN28	-	880	(L Type Greased)
SVRN28L	-	880	(G Type Greased)
SVRN28G	-	880	

LTBC Plating and various Grease types available as alternative (Except Blocks with Lubrication Units).

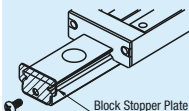
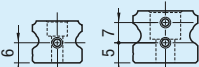

☞ P.532



Alterations

Part Number - L - (TMS, TMC, LLC, RLC, B3, B4)

SVRN28	-	880	-	TMC
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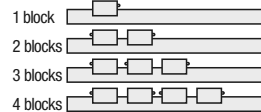
Alterations	Code	Spec.							
<p>TMS: Tapped Hole Machining + 2 Stopper Plates</p> <p>TMC: Tapped Hole Machining only</p> 	<p><b>TMS</b></p> <p><b>TMC</b></p>	<p>Adds tapped holes on both rail ends to avoid block fall-off.</p> <p>H24                      H28, 33</p>  <p>M3×P0.5 Depth 5 Tapped Hole For Stopper Plates Details, see <b>P.612</b>.</p> <p>🚫 Applicable to Carbon Steel Type only.</p>							
<p>Rail End Cut</p>  <p>LLC                      RLC</p> <p>Rail is cut with the product ID facing out (datum on other side).</p>	<p>Left End Cut</p> <p><b>LLC</b></p> <table border="1"><thead><tr><th>H</th><th>L Cut</th><th>N</th></tr></thead><tbody><tr><td>24</td><td rowspan="3">10</td><td rowspan="3">10</td></tr><tr><td>28</td></tr><tr><td>33</td></tr></tbody></table> <p>Right End Cut</p> <p><b>RLC</b></p> <p>🚫 Applicable to Selectable Type only.</p> <p>🚫 Overall length will be shorter by cutting.</p> <p>🚫 Not applicable to H dimension 24 of L dimension 100.</p>	H	L Cut	N	24	10	10	28	33
H	L Cut	N							
24	10	10							
28									
33									
<p>3-Block Specifications</p>	<p><b>B3</b></p>	<p>Add 2 blocks to 1-block product to ship as 3-block separate item.</p> <p>Selection Example: SXRN24-400-B3</p>							
<p>4-Block Specifications</p>	<p><b>B4</b></p>	<p>Add 3 blocks to 1-block product to ship as 4-block separate item.</p> <p>Selection Example: SXRN24-400-B4</p>							

■ Medium Load

H	B3: Price Adder		B4: Price Adder	
	Standard	Standard MX	Standard	Standard MX
24				
28				
33				

■ Heavy Load

H	B3: Price Adder		B4: Price Adder	
	Standard	Standard MX	Standard	Standard MX
24				
28				
33				



■ Selectable Shortest Rail Length for B3/B4

H	Medium Load		Heavy Load	
	B3 (3-block)	B4 (4-block)	B3 (3-block)	B4 (4-block)
24	280	340	340	400
28	340	400	400	460
33	340	400	400	520

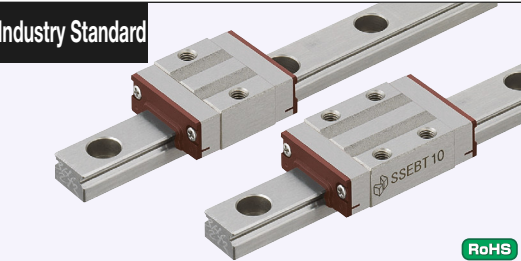



# Miniature Linear Guides - Heat Resistant

Short / Standard / Long Blocks, Light Preload

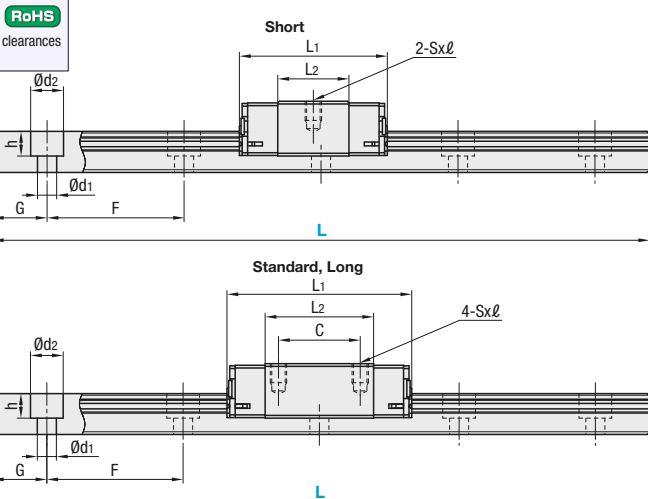
■ **Features:** Usable at up to 150°C of operating temperature since heat resistant parts and grease are employed.

Industry Standard



 Material Hardness	Type			L Dimension	Number of Blocks
	Light Preload				
	High Grade				
	Short	Standard	Long		
Stainless Steel 56HRC~	<a href="#">SSEBST</a>	<a href="#">SSEBT</a>	<a href="#">SSELBT</a>	Selectable	1
	<a href="#">SSE2BST</a>	<a href="#">SSE2BT</a>	<a href="#">SSEL2BT</a>		2
	<a href="#">SSEBSLT</a>	<a href="#">SSEBLT</a>	<a href="#">SSELBLT</a>	Configurable	1
	<a href="#">SSE2BSLT</a>	<a href="#">SSE2BLT</a>	<a href="#">SSEL2BLT</a>		2

Heat Resistant Temperature: -20 ~ 150°C



For L Configurable, G dimensions differ from those shown in the table below. For details, see P. 531.

## Precautions for Use

- Blocks are equipped with retainers (wire) to prevent balls from falling off. For how to handle the blocks, see P. 525.
- Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
- Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
- Rails cannot be connected end to end.
- The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane). Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

## Accessory

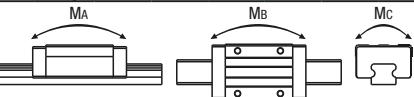
- H8 comes with cap screws (M2x6).

## Others

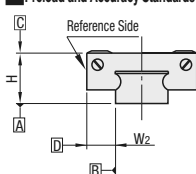
- Filled with heat resistant grease (Du Pont KRYTOX GPL225).
- Stainless steel and fluoro-rubber are used for return caps and seals respectively.
- For operating life calculation, see P. 527.
- For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

Part Number		H	L	Block Type	Block Dimension							Guide Rail Dimension							
Type					W	L <sub>1</sub>	B	C	S×ℓ	L <sub>2</sub>	K	Cb	H <sub>1</sub>	W <sub>1</sub>	W <sub>2</sub>	Ca	Counterbored Hole d1xd2xh	F	G
❖Dimensions in ( ) are for 2-Block Type.	8	40~130 (70)	Short	17	19.6	12	-	M2x2.5	9.6	6.5	0.3	4.7	7	5	0.3	2.4x4.2x2.3	15	5	
			Standard						13.6										
			Long						22										
Short (1 block) SSEBST SSEBSLT	(2 blocks) SSE2BST SSE2BSLT	35~275 (95)	Short	20	22.9	-	M3x3	11.9	7.8	0.3	5.5	9	5.5	0.3	3.5x6x3.5	20	7.5		
			Standard					19											
			Long					29											
Standard (1 block) SSEBT SSEBLT	(2 blocks) SSE2BT SSE2BLT	45~470 (120)	Short	27	27	-	M3x3.5	13	10	0.5	7.5	12	7.5	0.5	3.5x6x4.5	25	10		
			Standard					19.9											
			Long					31.8											
Long (1 block) SSELBT SSELBLT	(2 blocks) SSEL2BT SSEL2BLT	70~670 (150)	Short	32	32.7	-	M3x4	17.7	12	0.5	9.5	15	8.5	0.5	3.5x6x4.5	40	15		
			Standard					27.4											
			Long					43.3											

H	Block Type	Basic Load Rating		Allowable Static Moment			Mass	
		C (Dynamic) kN	Co (Static) kN	MA N-m	MB N-m	MC N-m	Block kg	Guide Rail kg/m
8	Short	0.79	1.27	1.9	1.6	4.6	0.008	0.19
	Standard	0.9	1.5	4.1	4.1	5.2	0.01	
	Long	1.6	2.4	7.5	7.5	9	0.02	
10	Short	1.16	1.68	3.1	2.6	7.9	0.015	0.31
	Standard	1.5	2.5	5.1	5.1	10.2	0.02	
	Long	2.2	3.7	12.3	12.3	13	0.03	
13	Short	1.63	2.38	5.2	4.4	14.8	0.025	0.61
	Standard	2.2	3.3	8.8	9.5	16.1	0.04	
	Long	3.5	5.3	24.5	26.4	32.3	0.06	
16	Short	3.08	4.23	12.3	10.3	32.6	0.05	1.02
	Standard	3.6	5.4	21.6	23.4	39.6	0.06	
	Long	5.8	8.7	57.8	62.6	67.6	0.1	



## Preload and Accuracy Standards



Specifications		Unit: μm
Radial Clearance		-3~0
Height H Tolerance		±20
Pair Variation of Height H		15
Width W2 Tolerance		±25
Pair Variation of Width W2		20
Running Parallelism of Plane C against Plane A		See P. 525
Running Parallelism of Plane D against Plane A		

H	L	Unit Price					
		Short		Standard		Long	
		SSEBST	SSE2BST	SSEBT	SSE2BT	SSELBT	SSEL2BT
8	40	-	-	-	-	-	-
	55	-	-	-	-	-	-
	70	-	-	-	-	-	-
	85	-	-	-	-	-	-
	100	-	-	-	-	-	-
	115	-	-	-	-	-	-
	130	-	-	-	-	-	-
	35	-	-	-	-	-	-
	55	-	-	-	-	-	-
	75	-	-	-	-	-	-
10	95	-	-	-	-	-	-
	115	-	-	-	-	-	-
	135	-	-	-	-	-	-
	155	-	-	-	-	-	-
	175	-	-	-	-	-	-
	195	-	-	-	-	-	-
	215	-	-	-	-	-	-
	235	-	-	-	-	-	-
	255	-	-	-	-	-	-
	275	-	-	-	-	-	-
13	45	-	-	-	-	-	-
	70	-	-	-	-	-	-
	95	-	-	-	-	-	-
	120	-	-	-	-	-	-
	145	-	-	-	-	-	-
	170	-	-	-	-	-	-
	195	-	-	-	-	-	-
	220	-	-	-	-	-	-
	245	-	-	-	-	-	-
	270	-	-	-	-	-	-
16	295	-	-	-	-	-	-
	320	-	-	-	-	-	-
	345	-	-	-	-	-	-
	370	-	-	-	-	-	-
	395	-	-	-	-	-	-
	420	-	-	-	-	-	-
	445	-	-	-	-	-	-
	470	-	-	-	-	-	-
	70	-	-	-	-	-	-
	110	-	-	-	-	-	-
16	150	-	-	-	-	-	-
	190	-	-	-	-	-	-
	230	-	-	-	-	-	-
	270	-	-	-	-	-	-
	310	-	-	-	-	-	-
	350	-	-	-	-	-	-
	390	-	-	-	-	-	-
	430	-	-	-	-	-	-
	470	-	-	-	-	-	-
	510	-	-	-	-	-	-
16	550	-	-	-	-	-	-
	590	-	-	-	-	-	-
	630	-	-	-	-	-	-
	670	-	-	-	-	-	-

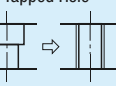
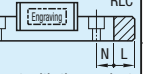
## L Dimension Configurable Type (1mm Increment)

H	Unit Price					
	Short		Standard		Long	
	SSEBSLT	SSE2BSLT	SSEBLT	SSE2BLT	SSELBLT	SSEL2BLT
8						
10						
13						
16						

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.

Ordering Example  
Part Number - L  
SSEBT10 - 195

Alterations  
Part Number - L - (MC, RLC, LLC, B3, B4)  
SSEBT16 - 450 - MC

Alterations	Code	Spec.												
<p>Tapped Hole</p> 	<p>MC</p>	<p>Changes the rail mounting holes from counterbored holes to tapped holes.</p> <table><tr><td>H</td><td>MC</td></tr><tr><td>8</td><td>M3</td></tr><tr><td>10</td><td></td></tr><tr><td>13</td><td>M4</td></tr><tr><td>16</td><td>M5</td></tr></table>	H	MC	8	M3	10		13	M4	16	M5		
H	MC													
8	M3													
10														
13	M4													
16	M5													
<p>Rail End Cut</p> 	<p>Left End Cut LLC</p> <p>Right End Cut RLC</p>	<p>Cuts rail ends. Ordering Code LLC</p> <table><tr><td>H</td><td>L Cut</td><td>N</td></tr><tr><td>10</td><td>2.5</td><td></td></tr><tr><td>13</td><td>5</td><td>5</td></tr><tr><td>16</td><td>10</td><td></td></tr></table> <p>⚠ Applicable to Selectable Type only. ⚠ Overall length will be shorter by cutting. ⚠ Not applicable to H8. ⚠ Not applicable to L35 of H10 and L45 of H13.</p>	H	L Cut	N	10	2.5		13	5	5	16	10	
H	L Cut	N												
10	2.5													
13	5	5												
16	10													
<p>3-Block Specifications</p>	<p>B3</p>	<p>Add 2 blocks to 1-block product to ship as 3-block separate item. ⚠ There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SSEBST10-95-B3</p>												
<p>4-Block Specifications</p>	<p>B4</p>	<p>Add 3 blocks to 1-block product to ship as 4-block separate item. ⚠ There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SSELBT16-550-B4</p>												

## Additional Block Price

H	Block	B3: Price Adder	B4: Price Adder
8	Short		
	Standard	-	-
	Long	-	-
10	Short		
	Standard		
	Long		
13	Short		
	Standard		
	Long		
16	Short		
	Standard		
	Long		

## Selectable Shortest Rail Length for B3/B4

H	Block	B3 (3-block)	B4 (4-block)
8	Short	85	100
	Standard	85	115
	Long	-	-
10	Short	95	115
	Standard	115	155
	Long	155	195
13	Short	120	145
	Standard	145	170
	Long	170	220
16	Short	150	190
	Standard	190	230
	Long	230	270

## Options for Linear Guide

Position Retaining Parts	Block / Rail Fixing Parts
Rail Push Plates	Linear Lock
Rail Height Adjusting Blocks	Linear Guide Lock Units
Block Derailment Prevention Parts	Stopper Bolts



# Miniature Linear Guides - Dust Resistant

## Standard Blocks, Light Preload

■ **Features:** **Dust Resistant** Heavy Load Linear Guide usable where dust and machining chips exist.

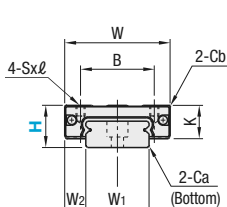
Industry Standard



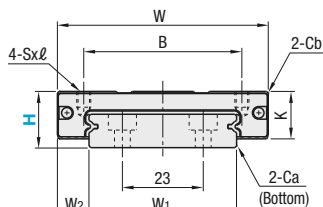
RoHS

❗ Blocks and rails are not sold as separate items. Light Preload Type has guaranteed radial clearances and accuracies as sets of blocks and rails.

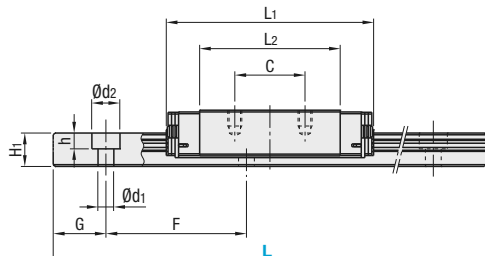
- ❗ Intrusion of foreign substances into the blocks can be prevented by enhanced sealing effects with two-ply side seal and under seals.
- ❗ Can be used where dust and machining chips exist.
- ❗ Do not use in areas with high temperature dusts such as weld spatter.



Standard Rail H13/16/20  
Wide Rail H14



Wide Rail H16



❗ For L Configurable, G dimensions differ from those shown in the table below. For details, see **P. 531**.

- Precautions for Use
- ❗ Blocks are equipped with retainers (wire) to prevent balls from falling off. For how to handle the blocks, see **P. 525**.
  - ❗ Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
  - ❗ Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
  - ❗ Rails cannot be connected end to end.
  - ❗ The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
  - ❗ Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

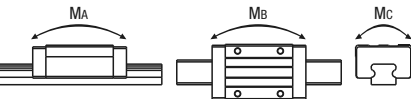
- Others
- ❗ Filled with Lithium soap based grease (Multemp Grease PS2 by Kyodo Yushi Co., Ltd.).
  - ❗ For operating life calculation, see **P. 527**.
  - ❗ For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

	Part Number		H	L	Block Dimension					Guide Rail Dimension									
	Type				W	L <sub>1</sub>	B	C	Sxℓ	L <sub>2</sub>	K	Cb	H <sub>1</sub>	W <sub>1</sub>	W <sub>2</sub>	Ca	Counterbored Hole d1xd2xh	F	G
Standard Rail	(1 block) SEBD SEBDL	(2 blocks) SE2BD SE2BDL	13	45~470 (120)	27	36.9	20	15	M3x3.5	19.9	11	0.5	7.5	12	7.5	0.5	3.5x6x4.5	25	10
			16	70~670 (150)	32	45.4	25	20	M3x4	27.4	13	0.5	9.5	15	8.5	0.5	3.5x6x4.5	40	15
			20	100~700 (160)	40	53	30	25	M4x6	34.6	16	0.5	11	20	10	0.5	6x9.5x5.5	60	20
Wide Rail	(1 block) SEBWD SEBWDL	(2 blocks) SE2BWD SE2BWDL	14	70~470 (150)	40	47.3	28	15	M3x3.5	30.1	12	0.5	8	24	8	0.5	4.5x8x4.5	40	15
			16	70~670 (190)	60	58	45	20	M4x4.5	40	14	0.5	9.5	42	9	0.5	4.5x8x4.5	40	15

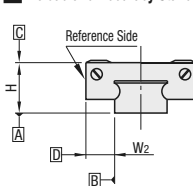
❗ Dimensions in ( ) are for 2-Block Type.

kgf=N×0.101972

H		Basic Load Rating		Allowable Static Moment			Mass	
		C (Dynamic) kN	Co (Static) kN	MA N-m	MB N-m	MC N-m	Block kg	Guide Rail kg/m
Standard Rail	13	2.2	3.3	8.8	9.5	16.1	0.045	0.61
	16	3.6	5.4	21.6	23.4	39.6	0.065	1.02
	20	5.2	8.5	48.4	48.4	86.4	0.13	1.65
Wide Rail	14	3.5	5.3	20.6	22.3	52.1	0.085	1.40
	16	5.8	8.5	40.2	43.6	148	0.16	2.95



■ Preload and Accuracy Standards



Specifications		Unit: μm
Radial Clearance	-3~0	
Height H Tolerance	±20	
Pair Variation of Height H	15	
Width W <sub>2</sub> Tolerance	±25	
Pair Variation of Width W <sub>2</sub>	20	
Running Parallelism of Plane C against Plane A	See P. 525	
Running Parallelism of Plane D against Plane A	See P. 525	

■ Seal Resistance (N)

Rail Width	Height (H)	Standard	Dust Resistant
Standard	13	0.7	1.0
	16	0.8	1.1
	20	1.2	1.5
	14	1.0	1.3
Wide	16	1.2	1.5

❗ Data above are reference values.

### Standard Rail

H	L	Unit Price	
		1 block SEBD	2 blocks SE2BD
13	45	-	-
	70	-	-
	95	-	-
	120	-	-
	145	-	-
	170	-	-
	195	-	-
	220	-	-
	245	-	-
	270	-	-
	295	-	-
	320	-	-
	345	-	-
	370	-	-
	395	-	-
	420	-	-
16	445	-	-
	470	-	-
	70	-	-
	110	-	-
	150	-	-
	190	-	-
	230	-	-
	270	-	-
	310	-	-
	350	-	-
	390	-	-
	430	-	-
	470	-	-
	510	-	-
	550	-	-
	590	-	-
20	630	-	-
	670	-	-
	100	-	-
	160	-	-
	220	-	-
	280	-	-
	340	-	-
	400	-	-
	460	-	-
	520	-	-
	580	-	-
	640	-	-
	700	-	-

### L Dimension Configurable Type (1mm Increment)

H	Unit Price			
	Standard Rail		Wide Rail	
	1 block SEBDL	2 blocks SE2BDL	1 block SEBWL	2 blocks SE2BWL
13-14				
16				
20			-	-

❗ For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.

### Wide Rail

H	L	Unit Price	
		1 block SEBWD	2 blocks SE2BWD
14	70	-	-
	110	-	-
	150	-	-
	190	-	-
	230	-	-
	270	-	-
	310	-	-
	350	-	-
	390	-	-
	430	-	-
	470	-	-
	70	-	-
	110	-	-
	150	-	-
	190	-	-
	230	-	-
16	270	-	-
	310	-	-
	350	-	-
	390	-	-
	430	-	-
	470	-	-
	510	-	-
	550	-	-
	590	-	-
	630	-	-
	670	-	-



Ordering Example  
Part Number - L  
SEBD13 - 220



Alterations  
Part Number - L - (RLC, LLC, B3, B4)  
SEBWD14 - 350 - RLC

Alterations	Code	Spec.
Rail End Cut	Left End Cut LLC	Cuts rail ends. Ordering Code LLC Standard Rail Wide Rail
	Right End Cut RLC	Rail is cut with the product ID facing out (datum on other side). ❗ Applicable to Selectable Type only. ❗ Overall length will be shorter by cutting. ❗ Not applicable to L45 of H13.
3-Block Specifications	B3	Add 2 blocks to 1-block product to ship as 3-block separate item. ❗ There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SEBD13-270-B3
4-Block Specifications	B4	Add 3 blocks to 1-block product to ship as 4-block separate item. ❗ There are restrictions for the L dimension length. See "Selectable Shortest Rail Length" for details. Selection Example: SEBWD14-430-B4

### Additional Block Price

H	Rail	B3: Price Adder	B4: Price Adder
13	Standard	-	-
	Wide	-	-
14	Standard	-	-
	Wide	-	-
16	Standard	-	-
	Wide	-	-
20	Standard	-	-
	Wide	-	-

### Selectable Shortest Rail Length for B3/B4

H	Block	B3 (3-block)	B4 (4-block)
13	Standard	145	195
	Wide	-	-
14	Standard	-	-
	Wide	190	230
16	Standard	190	230
	Wide	230	270
20	Standard	220	280
	Wide	-	-

### Options for Linear Guide

Position Retaining Parts	Block / Rail Fixing Parts
Rail Height Adjusting Blocks P607	Rail Push Plates P612
Block Derailment Prevention Parts Stopper Bolts P609	Linear Lock P613
	Linear Guide Lock Units P614



# Linear Guides for Medium Load - Dust Resistant

## With Double Seals / Metal Scrapers, Normal Clearance

= For customers using industry standard products =

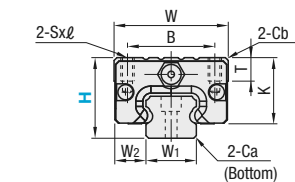
Frame-surrounded products are compliant with the industry standard specifications (Standard Block Type).  
Select the block from this spec.

**Features:** **Dust Resistant** Heavy Load Linear Guide usable where dust and machining chips exist.

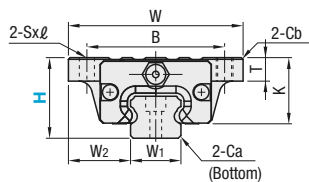
**Industry Standard**



Blocks and rails are not sold as separate items. Normal Clearance Type has guaranteed radial clearances and accuracies as sets of blocks and rails.

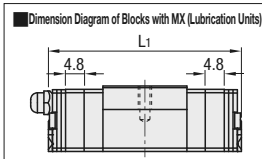


Standard Block



Wide Block

Heat Resistant Temperature: -20 ~ 80°C



For L Configurable, G dimensions differ from those shown in the table below. For details, see P.531.

- Precautions for Use**
- Blocks are equipped with retainers to prevent balls from falling off. For how to handle the blocks, see P.525.
  - Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
  - Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
  - Rails cannot be connected end to end.
  - The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
  - Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

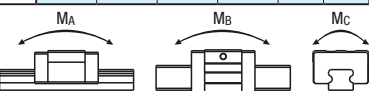
- Others**
- Filled with Lithium soap based grease (Alvania Grease S2 by Showa Shell Sekiyu K.K.).
  - Grease Fittings: Straight Type for H24 and Angled Type for H28 and H33.
  - Grease Fitting is screw-in type, and thus, can be repositioned.
  - For Operating Life Calculation, see P.527.
  - For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

	Part Number		MX	H	L	Block Dimension										Guide Rail Dimension									
	Type					W	L <sub>1</sub>		B	Sxℓ	L <sub>2</sub>	K	T	Cb	Grease Fitting			H <sub>1</sub>	W <sub>1</sub>	W <sub>2</sub>	Ca	Counterbored Hole d1xd2xh	F	G	
							Standard	MX							Mounting Hole	E	T <sub>1</sub>								
Standard Block	(1 block)	(2 blocks)	Blank: None -MX: Provided	24	160 ~1480	34	46 (42.6)	55.6 (52.2)	26	M4x7	25	20	7	0.85	M5xP0.8	6	5	12.5	15	9.5	0.5	3.5x6x4.5	60	20	
	SVRD SVRK SVRDL SVRKL	SV2RD SV2RK SV2RDL SV2RKL		28	220 ~1960	42	53.4 (49)	63 (58.6)	32	M5x8	27.6	22.5	7.5	1	M6xP0.75	13	6	15.5	20	11	0.6	6x9.5x8.5	60	20	
				33	220 ~1960	48	66 (61.4)	75.6 (71)	35	M6x9	37	26.5	8	1	M6xP0.75	13	6.8	18	23	12.5	0.8	7x11x9	60	20	
				24	160 ~1480	52	46 (42.6)	55.6 (52.2)	41	4.5	25	20	7	0.5	M5xP0.8	6	5	12.5	15	18.5	0.5	3.5x6x4.5	60	20	
Wide Block	(1 block)	(2 blocks)		28	220 ~1960	59	53.4 (49)	63 (58.6)	49	5.5	27.6	22.5	9	1	M6xP0.75	13	6	15.5	20	19.5	0.6	6x9.5x8.5	60	20	
	SVWD SVWK SVWDL SVWKL	SV2WD SV2WK SV2WDL SV2WKL		33	220 ~1960	73	66 (61.4)	75.6 (71)	60	7	37	26.5	10	1	M6xP0.75	13	6.8	18	23	25	0.8	7x11x9	60	20	

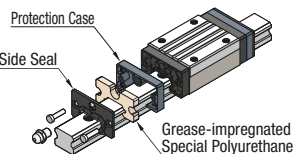
Dimensions in ( ) are for Metal Scraper Type.

kgf=Nx0.101972

H	Basic Load Rating		Allowable Static Moment		Mass				
	C (Dynamic) kN	Co (Static) kN	MA, Mb N·m	Mc N·m	Block kg				Guide Rail kg/m
					Double-Sealed		With Metal Scrapers		
					Standard	Wide	Standard	Wide	
24	5.0	8.23	33	57	0.16	0.21	0.16	0.21	1.5
28	7.2	12.1	58	135	0.22	0.27	0.22	0.27	2.4
33	11.7	19.6	109	225	0.33	0.43	0.34	0.44	3.4

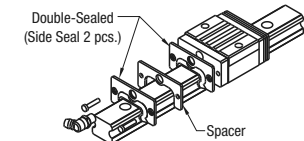


**Lubrication Units MX**



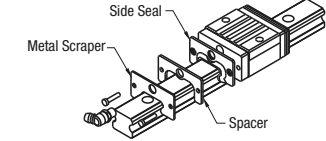
Advantages of Lubrication Unit MX: Provides long term maintenance-free operation. Reduces maintenance cost. Most suitable where the design does not allow lubrication. For details, see P.530.

**Double-Sealed**



The double seal scheme with two layers of side seals enhances the sealing effect and prevents intrusion of foreign substances into the block. Can be used where dust and machining chips exist. Sliding resistance of Double-Sealed Type is higher than that of Standard Type.

**With Metal Scrapers**

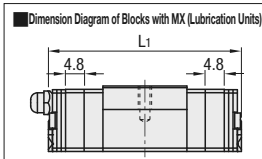


Larger foreign substances adhered to the rail can be removed by attaching metal scrapers on the external side of the side seals. Can be used in areas with high temperature dusts such as weld spatter.

**Lubrication Units MX**  
Provides long term maintenance-free operation.

	Type		MX (Lubrication Units)	L Dimension	Number of Blocks	Material Hardness
	Double-Sealed	With Metal Scrapers				
Standard Block	SVRD	SVRK	Blank: None -MX: Provided	Selectable	1	Carbon Steel 58HRC~
	SV2RD	SV2RK		2	2	
	SVRDL	SVRKL		Configurable	1	
	SV2RDL	SV2RKL		2	2	
Wide Block	SVWD	SVWK		Selectable	1	
	SV2WD	SV2WK		2	2	
	SVWDL	SVWKL		Configurable	1	
	SV2WDL	SV2WKL		2	2	

Heat Resistant Temperature: -20 ~ 80°C



H	Selectable L	Unit Price							
		1 block				2 blocks			
		SVRD	SVRK	SVWD	SVWK	SV2RD	SV2RK	SV2WD	SV2WK
24	160								
	220								
	280								
	340								
	400								
	460								
	520								
	580								
	640								
	700								
	760								
	820								
	880								
	940								
	1000								
	1120								
28	1240								
	1360								
	1480								
	1600								
	1720								
	1840								
	1960								
	220								
	280								
	340								
	400								
	460								
	520								
	580								
	640								
	700								
33	760								
	820								
	880								
	940								
	1000								
	1120								
	1240								
	1360								
	1480								
	1600								
	1720								
	1840								
	1960								
	220								
	280								
	340								
	400								

**L Dimension Configurable Type (1mm Increment)**

H	Unit Price							
	1 block				2 blocks			
	SVRDL	SVRKL	SVWDL	SVWKL	SV2RDL	SV2RKL	SV2WDL	SV2WKL
24								
28								
33								

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.



Ordering Example

Part Number - L  
SVRD28 - 880 (With Lubrication Units)  
SVRD-MX28 - 880 (L Type Greased)  
SVRD28L - 880 (L Type Greased)  
SVRD28G - 880 (G Type Greased)  
Alternative grease types available (Except Blocks with Lubrication Units)  
P.532



Alterations

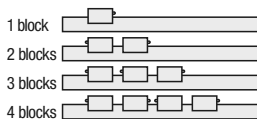
Part Number - L - (TMS, TMC, RLC, LLC...etc.)  
SVRD28 - 880 - TMC

Alterations	Code	Spec.
TMS: Tapped Hole Machining + 2 Stopper Plates TMC: Tapped Hole Machining only 	TMS TMC	Adds tapped holes on both rail ends to avoid block fall-off. H24 H28, 33 M3xP0.5 Depth 5 Tapped Hole For Stopper Plates Details, see P.621.
LLC: Rail End Cut RLC: Right End Cut 	Left End Cut LLC Right End Cut RLC	Cuts rail ends. Ordering Code LLC H L Cut N 24 10 10 28 10 10 33 10 10 Applicable to Selectable Type only. Overall length will be shorter by cutting.
Parallel Use of 2 Rails	WC	Pair variation of Height H between 2 rails is set within 20µm. Two rails are shipped as a pair. Specify the actual rail quantity (even number) to order, not "pairs". Not applicable to High Grade Type. Not applicable to low temperature chrome plated products.
3-Block Specifications	B3	Add 2 blocks to 1-Block product to ship as 3-Block separate item. Selection Example: SVRD24-400-B3
4-Block Specifications	B4	Add 3 blocks to 1-Block product to ship as 4-Block separate item. Selection Example: SVRD24-400-B4

**Additional Block Price**

H	B3: 1Code				B4: 1Code			
	Double-Sealed	With Metal Scrapers	Double-Sealed	With Metal Scrapers	Double-Sealed	With Metal Scrapers	Double-Sealed	With Metal Scrapers
24								
28								
33								

**Position of Grease Fitting (Reference plane on the front side)**



**Selectable Shortest Rail Length for B3/B4**

H	B3 (3-Block)	B4 (4-Block)
24	280	340
28	340	400
33	340	400

**MX (Lubrication Unit) Unit Price**

H	Unit Price	
	1 block	2 blocks
24		
28		
33		

Price of Guide Rails with MX (Lubrication Unit) = Linear Guide Unit Price + MX Unit Price



# Linear Guides for Heavy Load - Dust Resistant

## With Double Seals / Metal Scrapers, Normal Clearance

= For customers using industry standard products =

Frame-surrounded products are compliant with the industry standard specifications (Standard Block Type).  
Select the block from this spec.

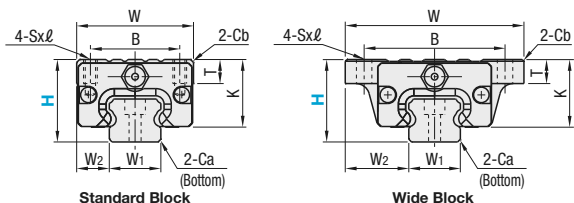
**Features:** **Dust Resistant** Heavy Load Linear Guide usable where dust and machining chips exist.

### Industry Standard



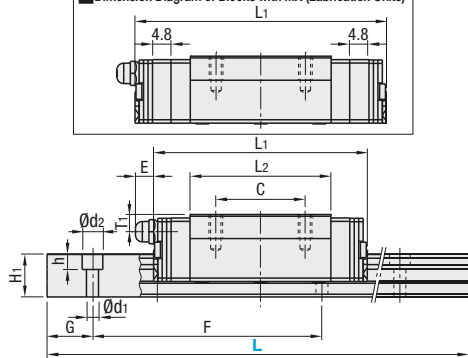
RoHS

Blocks and rails are not sold as separate items. Normal Clearance Type has guaranteed radial clearances and accuracies as sets of blocks and rails.



Heat Resistant Temperature: -20 ~ 80°C

Dimension Diagram of Blocks with MX (Lubrication Units)



For L Configurable, G dimensions differ from those shown in the table below. For details, see P. 531.

#### Precautions for Use

- Blocks are equipped with retainers to prevent balls from falling off. For how to handle the blocks, see P. 525.
- Radial clearances and accuracies are not guaranteed if the blocks and rails are interchanged from the original set combinations.
- Straight grooves are provided on datum planes. Be sure to match the datum lines when using.
- Rails cannot be connected end to end.
- The accuracy of Linear Guides is guaranteed after mounting the rail (after fastening screws on the rail and pushing it onto the datum plane).
- Minor bending of the rail will be adjusted after being mounted and will not affect the performance.

#### Others

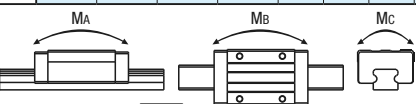
- Filled with Lithium soap based grease (Alvania Grease S2 by Showa Shell Sekiyu K.K.).
- Grease Fittings: Straight Type for H24 and Angled Type for H28 and H33.
- Grease Fitting is screw-in type, and thus, can be repositioned.
- For Operating Life Calculation, see P. 527.
- For operating life calculations, use our free calculation software from [http://download.misumi.jp/mol/fa\\_soft.html](http://download.misumi.jp/mol/fa_soft.html).

Part Number				H	L	Block Dimension												Guide Rail Dimension								
Type	MX	W	L <sub>1</sub>			B	C	S×ℓ	L <sub>2</sub>	K	T	Cb	Grease Fitting			H <sub>1</sub>	W <sub>1</sub>	W <sub>2</sub>	Ca	Counterbored Hole d <sub>1</sub> ×d <sub>2</sub> ×h	F	G				
			Standard										MX	Mounting Hole	E								T <sub>1</sub>			
Standard Block	(1 block)	(2 blocks)	Blank: None -MX: Provided	24	160(220) ~1480	34	62 (58.6)	71.6 (68.2)	26	26	M4x7	41	20	7	0.85	M5xP0.8	6	5	12.5	15	9.5	0.5	3.5x6x4.5	60	20	
	SXRD	SX2RD		28	220 ~1960	42	73.4 (69)	83 (78.6)	32	32	M5x8	47.6	22.5	7.5	1	M6xP0.75	13	6	15.5	20	11	0.6	6x9.5x8.5	60	20	
	SXRK	SX2RK		33	220(280) ~1960	48	90 (85.4)	99.6 (95)	35	35	M6x9	61	26.5	8	1	M6xP0.75	13	6.8	18	23	12.5	0.8	7x11x9	60	20	
	SXRD	SX2RD																								
SXRL	SX2RL	SXRL		SX2RL																						
Wide Block	(1 block)	(2 blocks)		24	160(220) ~1480	52	62 (58.6)	71.6 (68.2)	41	26	4.5	41	20	7	0.5	M5xP0.8	6	5	12.5	15	18.5	0.5	3.5x6x4.5	60	20	
	SXWD	SX2WD		28	220 ~1960	59	73.4 (69)	83 (78.6)	49	32	5.5	47.6	22.5	9	1	M6xP0.75	13	6	15.5	20	19.5	0.6	6x9.5x8.5	60	20	
	SXWK	SX2WK		33	220(280) ~1960	73	90 (85.4)	99.6 (95)	60	35	7	61	26.5	10	1	M6xP0.75	13	6.8	18	23	25	0.8	7x11x9	60	20	
	SXWDL	SX2WDL																								
SXWKL	SX2WKL																									

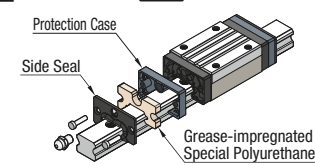
L Dimension: Dimensions in ( ) are for 2-Block Type.  
L1 Dimension: Dimensions in ( ) are for Metal Scraper Type.

kgf=Nx0.101972

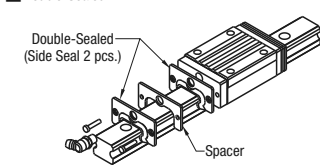
H	Basic Load Rating/Allowable Static Moment		Mass				Block kg				Guide Rail kg/m
	C (Dynamic) kN	Co (Static) kN	MA, MB N·m	MC N·m	Double-Sealed	With Metal Scrapers	Standard	Wide	Standard	Wide	
	24	28	33	24			0.21	0.26	0.21	0.26	1.5
24	8.6	14.2	69	98	0.21	0.26	0.21	0.26	0.21	0.26	1.5
28	12.5	21.3	155	232	0.32	0.37	0.32	0.37	0.32	0.37	2.4
33	20.2	34.5	275	393	0.48	0.63	0.49	0.64	0.49	0.64	3.4



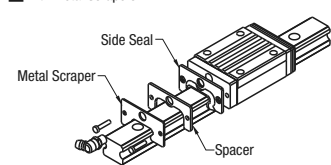
#### Lubrication Units MX



#### Double-Sealed



#### With Metal Scrapers



Advantages of Lubrication Unit MX: Provides long term maintenance-free operation. Reduces maintenance cost. Most suitable where the design does not allow lubrication. For details, see P. 530.

- The double seal scheme with two layers of side seals enhances the sealing effect and prevents intrusion of foreign substances into the block.
- Can be used where dust and machining chips exist.
- Sliding resistance of Double-Sealed Type is higher than that of Standard Type.

- Larger foreign substances adhered to the rail can be removed by attaching metal scrapers on the external side of the side seals.
- Can be used in areas with high temperature dusts such as weld spatter.

H	Selectable L	Unit Price							
		1 block				2 blocks			
		SXRD	SXRK	SXWD	SXWK	SX2RD	SX2RK	SX2WD	SX2WK
24	160								
	220								
	280								
	340								
	400								
	460								
	520								
	580								
	640								
	700								
	760								
	820								
	880								
	940								
	1000								
	1120								
	1240								
	1360								
	1480								
	1600								
	1720								
	1840								
	1960								
28	220								
	280								
	340								
	400								
	460								
	520								
	580								
	640								
	700								
	760								
	820								
	880								
	940								
	1000								
	1120								
	1240								
	1360								
	1480								
	1600								
	1720								
	1840								
	1960								
33	220								
	280								
	340								
	400								
	460								
	520								
	580								
	640								
	700								
	760								
	820								
	880								
	940								
	1000								
	1120								
	1240								
	1360								
	1480								
	1600								
	1720								
	1840								
	1960								

#### L Dimension Configurable Type (1mm Increment)

H	Selectable L	Unit Price							
		1 block				2 blocks			
		SXRD	SXRK	SXWD	SXWK	SX2RD	SX2RK	SX2WD	SX2WK
24	160								
28	220								
33	280								

For calculation of L Dimension Configurable Type (1mm Increment), add the above amount to the unit price of the Selectable Type longer than, and closest to this L Dimension Configurable Type.



Ordering Example

Part Number - L  
SXRD28 - 880  
SXRD-MX28 - 880 (With Lubrication Units)  
SXRD28L - 880 (L Type Greased)  
SXRD28G - 880 (G Type Greased)  
Alternative grease types available (Except Blocks with Lubrication Units)  
P.531



Alterations

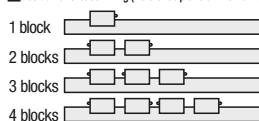
Part Number - L - (TMS, TMC, RLC, LLC...etc.)  
SXRD33 - 880 - TMC

Alterations	Code	Spec.
TMS: Tapped Hole Machining + 2 Stopper Plates TMC: Tapped Hole Machining only Block Stopper Plate	TMS TMC	Adds tapped holes on both rail ends to avoid block fall-off. H24 H28, 33 M3xP0.5 Depth 5 Tapped Hole For Stopper Plates Details, see P. 612.
Rail End Cut LLC Right End Cut RLC	Left End Cut LLC Right End Cut RLC	Cuts rail ends. Ordering Code: LLC H L Cut N 24 10 10 28 10 10 33 10 10 Applicable to Selectable Type only. Overall length will be shorter by cutting.
Parallel Use of 2 Rails	WC	Pair variation of Height H between 2 rails is set within 20µm. Two rails are shipped as a pair. Specify the actual rail quantity (even number) to order, not "pairs". Not applicable to High Grade Type. Not applicable to low temperature chrome plated products.
3-Block Specifications	B3	Add 2 blocks to 1-Block product to ship as 3-Block separate item. Selection Example: SXRD24-400-B3
4-Block Specifications	B4	Add 3 blocks to 1-Block product to ship as 4-Block separate item. Selection Example: SXRD24-400-B4

#### Additional Block Price

H	B3: 1Code				B4: 1Code			
	Double-Sealed	With Metal Scrapers	Double-Sealed	With Metal Scrapers	Double-Sealed	With Metal Scrapers	Double-Sealed	With Metal Scrapers
24								
28								
33								

#### Position of Grease Fitting (Reference plane on the front side)



#### Selectable Shortest Rail Length for B3/B4

H	B3 (3-Block)	B4 (4-Block)
24	340	400
28	400	460
33	400	520

#### MX (Lubrication Unit) Unit Price

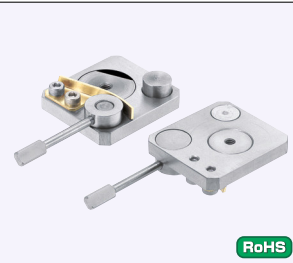
H	Unit Price	
	1 block	2 blocks
24		
28		
33		

Price of Guide Rails with MX (Lubrication Unit) = Linear Guide Unit Price + MX Unit Price



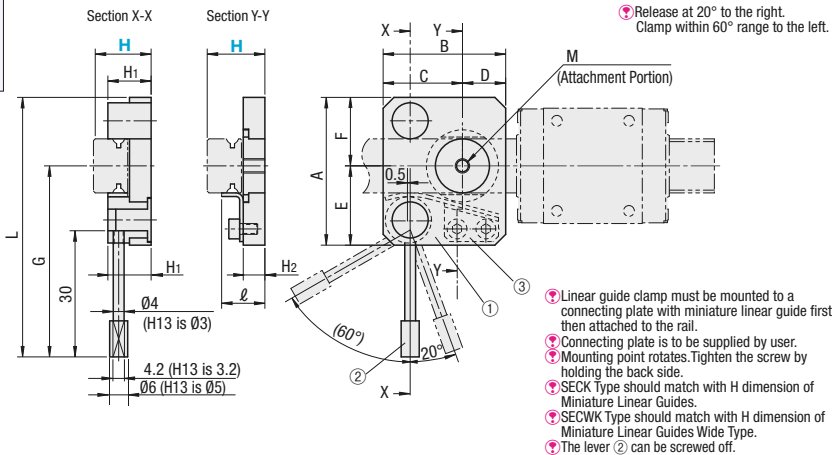
# Linear Guide Clamps

For Miniature Linear Guides



Type	Part	Material
SECK SECWK	① Main Body	EN 1.4301 Equiv.
	② Lever	EN 1.4301 Equiv.
	③ Contacts	EN CW505L Equiv.

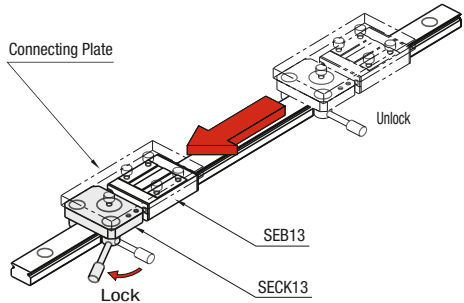
■ **Tightening Force and Retaining Force**  
40 N or More (Lever End)  
Retaining Force (Reference) 70-105 N



Part Number		A	B	C	D	E	F	M	H <sub>1</sub>	H <sub>2</sub>	ℓ	L	G	Retaining Force (Reference)	Unit Price
Type	H														
SECK	13	38	34	22	12	20.5	17.5	M4	10	5	10	64	46.5	70N	
	16	41	34	22	12	22	19		12	6	12	67	48	95N	
SECWK	14	50	34	22	12	26.5	23.5	M5	11	5	11	76	52.5	75N	
	16	68	34	20.5	13.5	35.5	32.5		13	6	13	94	61.5	105N	

Ordering Example  
Part Number  
SECK13

ex Example



## ■ Characteristics of Linear Guide Clamp

Linear guide blocks can be locked at arbitrary positions by rotating a lever. Convenient when simple position retaining utility is needed.

\*When using the Linear Guide Clamps in inclined or vertical applications, provide external means to prevent the slider from falling.

# Linear Guide Clamps

For Medium/Heavy Load Linear Guides

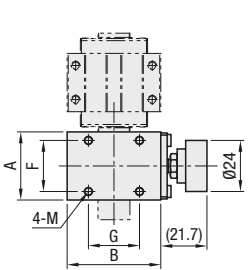
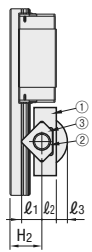


Type	Part	Material	Surface Treatment
SVCN SVCK	① Main Body	EN 1.1191 Equiv.	Electroless Nickel Plating
	② Right and Left Hand Thread	EN 1.7220 Equiv.	Black Oxide Coating
	③ Contacts	EN 1.1191 Equiv.	-

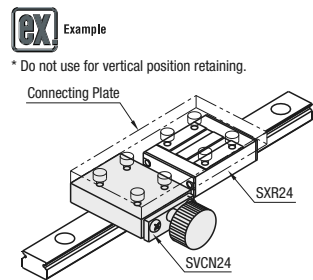
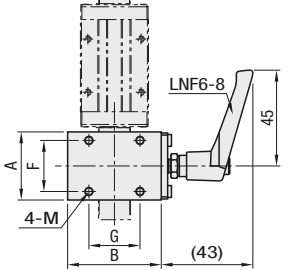
■ **Tightening Torque and Retaining Force**  
• Knob Type: 0.7 N·m  
Retaining Force (Reference) 100 N  
• Clamp Lever Type: 2.5 N·m  
Retaining Force (Reference) 400 N

④ Opening Ranges of Contacts  
H24...10~22mm    H36...17~36mm  
H28...14~28mm    H42...21~56mm  
H30...15~30mm    H42G...21~56mm  
H33...16~40mm

## ■ Fitting Dimensions Knob Type SVCN



## ■ Fitting Dimensions Clamp Lever Type SVCK



① Linear guide clamp must be mounted to a connecting plate with linear guide first, then attached to the rail.

② Connecting plate is to be supplied by user.

③ Match with the H dimension of Medium/Heavy Load Linear Guides.

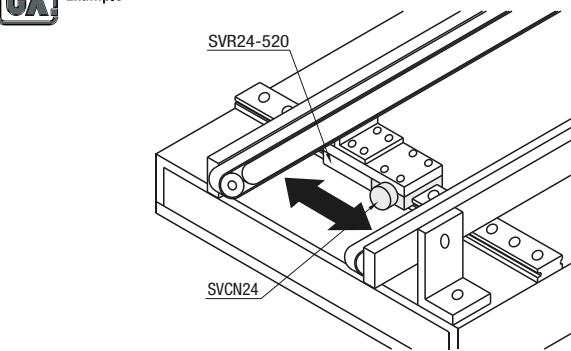
④ For KNB6, see P.1165.

⑤ For LNF6-8, see P.1145.

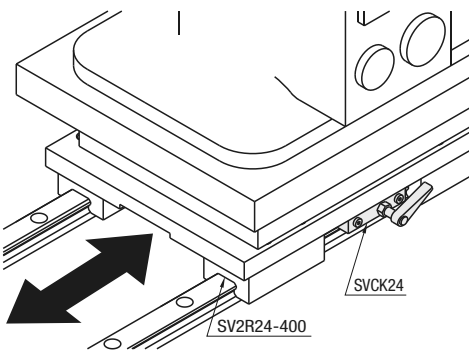
Part Number		A	B	F	G	E	T	H <sub>1</sub>	H <sub>2</sub>	ℓ <sub>1</sub>	ℓ <sub>2</sub>	ℓ <sub>3</sub>	M (Coarse)	Unit Price	
Type	H													SVCN	SVCK
SVCN SVCK	24	32	44	24	24	10	10.5	16.3	17.2	9.5	6.8	5.2	M4		
	28	35	50	25	25	10	11.5	17.3	20.2	9.5	7.8	4.2	M5		
	30	38	54	28	28	11	11.0	18.3	22.7	11.0	7.3	4.7	M5		
	33	38	62	26	26	10	14.0	19.8	22.7	9.5	10.3	1.7	M6		
	36	42	60	30	30	11	13.0	20.3	26.7	11.0	9.3	2.7	M6		
	42	46	80	32	32	11	18.0	25.3	27.7	11.0	14.3	-	M8		

Ordering Example  
Part Number  
SVCN24

## ■ Conveyor Pitch Change



## ■ Positioning of Robots etc.





# Height Adjusting Blocks for Linear Guides

## Economy Type

■ Up to 50% more economical without width tolerance of the High Precision Type (P. 610). Height accuracy and parallelism after installation are the same as those of High Precision Type.

RoHS

Example

Linear Guide

Height Adjusting Blocks for Linear Guides

⚠ Bending might occur due to the product characteristics. Fix the block by using all the mounting holes.

\* Set of Gang Machined 2 pcs.

⚠ Set of gang machined 2 pcs. are simultaneously milled with less than 0.01mm or less differences of T dimension. Height accuracy after screw connecting the base plate is guaranteed.

Type		Material	Surface Treatment
1 pc.	Set of Gang Machined 2 pcs*		
LGBE	LG2BE	Steel for General Structure	Electroless Nickel Plating
ALGBE	ALG2BE	A5000 Aluminum Alloy	Clear Anodize

Part Number		L Dimension Selection	T 1mm Increment	C	N	P	N <sub>1</sub>	P <sub>1</sub>	S Through + Counterbored Hole			
Type	(Linear Guide H Dimension) No.								Tapped Hole M	d	G	h
(1 pc.) LGBE ALGBE  (Set of Gang Machined 2 pcs.) LG2BE ALG2BE	24	160 220 280 340 400 460 520	10~60	16					M3	5.5	9.5	6 (T≤20) T-14 (T>20)
	28	220 280 340 400 460 520	15~60	22	20	60	50	60	M5	6.5	11	7 (T≤25) T-18 (T>25)
	33	220 280 340 400 460 520	20~60	25					M6	9	14	9 (T≤30) T-21 (T>30)

⚠ When T=15 or less, the pilot holes M3 and M5 for tapping go through.  
⚠ When T=20, the pilot holes M6 for tapping go through.

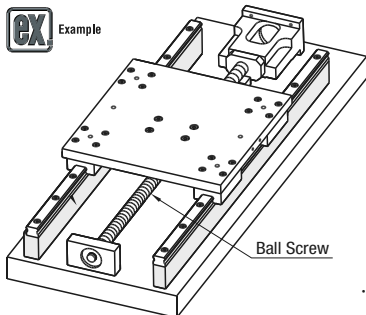
Ordering Example	Part Number	-	L	-	T
	LGBE24	-	400	-	30
	ALG2BE28	-	520	-	32

### Price List

Type	No.	L	Unit Price			
			LGBE		ALGBE	
			T30 or Less	T31 or 60	T30 or Less	T31 or 60
(1 pc.) LGBE ALGBE  (Set of Gang Machined 2 pcs.) LG2BE (LGBE+LGBE) ALG2BE (ALGBE+ALGBE)	24	160				
		220				
		280				
		340				
		400				
		460				
	28	220				
		280				
		340				
		400				
		460				
		520				
	33	220				
		280				
		340				
		400				
		460				
		520				

### Number of Holes

No.	L	M Number of Holes	S Number of Holes
24	160	3	2
	220	4	3
	280	5	4
	340	6	5
	400	7	6
	460	8	7
28	220	4	3
	280	5	4
	340	6	5
	400	7	6
	460	8	7
	520	9	8
33	220	4	3
	280	5	4
	340	6	5
	400	7	6
	460	8	7
	520	9	8



\*For raising the linear guide height to mount ball screws etc.

# Height Adjusting Blocks for Linear Guides

## High Precision Type

■ Height Adjusting Blocks available for Medium/Heavy Load Linear Guides. Set of gang machined 2 pcs. is finished with less than ±0.01 mm differences between 2 blocks.

RoHS

Datum Side

Free Side

⚠ Set of gang machined 2 pcs. are simultaneously milled with less than 0.01mm or less differences of T dimension. Height accuracy after screw connecting the base plate is guaranteed.

1 pc.		Type / Shape			Material	Surface Treatment
Datum Side	Free Side	Datum Side + Datum Side	Datum Side + Free Side	Free Side + Free Side		
BETA	BETE	BE2KK (BETA+BETA)	BE2KF (BETA+BETE)	BE2FF (BETE+BETE)	EN 1.1191 Equiv.	Electroless Nickel Plating
ABETA	ABETE	ABE2KK (ABETA+ABETA)	ABE2KF (ABETA+ABETE)	ABE2FF (ABETE+ABETE)	A5000 Aluminum Alloy	Clear Anodize

Part Number		L Dimension Selection	T 1mm Increment	C	K	Q	N	P	N <sub>1</sub>	P <sub>1</sub>	S Through + Counterbored Hole			
Type	(Linear Guide H Dimension) No.										Tapped Hole M	d	G	h
(1 pc.) BETA ABETA  (Set of Gang Machined 2 pcs.) BE2KK (Datum Side + Datum Side) BE2KF (Datum Side + Free Side) ABE2KK (Free Side + Free Side) ABE2KF (Free Side + Free Side) ABE2FF (Free Side + Free Side)	24	160 220 280 340 400 460 520 580 640 700 760 820 880 940	10~60	15							M3	5.5	9.5	6 (T≤20) T-14 (T>20)
	28	220 280 340 400 460 520 580 640 700 760 820 880 940	15~60	20							M5	6.5	11	7 (T≤25) T-18 (T>25)
	33	220 280 340 400 460 520 580 640 700 760 820 880 940	20~60	23	3	3	20				M6	9	14	9 (T≤30) T-21 (T>30)
	42	280 360 440 520 600 680 760 840 920		28				80	60	80	M6	11	17.5	11 (T≤35) T-24 (T>35)

⚠ When T=15 or less, the pilot holes M3 and M5 for tapping go through.  
⚠ When T=20, the pilot holes M6 for tapping go through.

Ordering Example	Part Number	-	L	-	T
	BETA24	-	400	-	32
	BE2KF24	-	700	-	30

### Price List

Type	No.	L	Unit Price								Ganged Machining Charge	No.	L	M Number of Holes	S Number of Holes
			BETA		ABETA		BETE		ABETE						
			T30 or Less	T31 or 60	T30 or Less	T31 or 60	T30 or Less	T31 or 60	T30 or Less	T31 or 60					
(1 pc.)  BETA ABETA BETE ABETE	24	160									24	160	3	2	
		220										220	4	3	
		280										280	5	4	
		340										340	6	5	
		400										400	7	6	
		460										460	8	7	
		520										520	9	8	
		580										580	10	9	
		640										640	11	10	
		700										700	12	11	
		760										760	13	12	
		820										820	14	13	
(Set of Gang Machined 2 pcs.)  BE2KK (BETA+BETA + Ganged Machining Charge)  ABE2KK (ABETA+ABETA + Ganged Machining Charge)  BE2KF (BETA+BETE + Ganged Machining Charge)  ABE2KF (ABETA+ABETE + Ganged Machining Charge)  BE2FF (BETE+BETE + Ganged Machining Charge)  ABE2FF (ABETE+ABETE + Ganged Machining Charge)	28	880									28	880	15	14	
		940											940	16	15
		220											220	4	3
		280											280	5	4
		340											340	6	5
		400											400	7	6
		460											460	8	7
		520											520	9	8
		580											580	10	9
		640											640	11	10
		700											700	12	11
		760											760	13	12
	33	820									33	820	14	13	
		880										880	15	14	
		940										940	16	15	
		220											220	4	3
		280											280	5	4
		340											340	6	5
		400											400	7	6
		460											460	8	7
		520											520	9	8
		580											580	10	9
		640											640	11	10
		700											700	12	11
	42	760									42	760	13	12	
		820										820	14	13	
		880										880	15	14	
		940										940	16	15	
		280											280	4	3
		360											360	5	4
		440											440	6	5
		520											520	7	6
		600											600	8	7
		680											680	9	8
		760											760	10	9
		840											840	11	10
920										920	12	11			

Price Calculation Example for Set of Gang Machined 2 pcs.  
For BE2KF24-700-30,  
(BETA24-700-30) + (BETA24-700-30) + (Ganged Machining Charge)







# Height Adjusting Blocks for Miniature Linear Guides

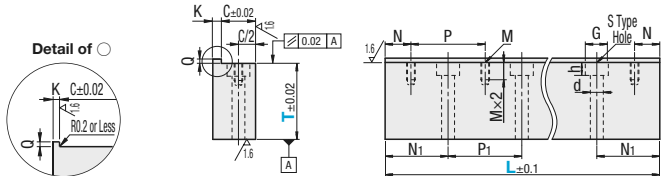
## Standard Rail Type

■ Blocks for Miniature Linear Guides. Width/Height tolerance and parallelism are guaranteed.

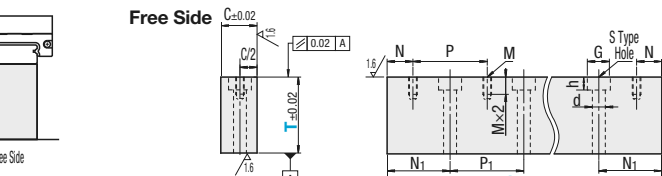


Type		Material	Surface Treatment
Datum Side	Free Side		
GETA	GETE	EN 1.1191 Equiv.	Electroless Nickel Plating
AGETA	AGETE	A5000 Aluminum Alloy	Clear Anodize

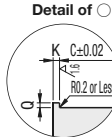
**Datum Side**



**Free Side**



**Detail of**



Part Number		L Selection										1mm T Increment		S								
Type	(Slide Guide H Dimension) No.													Through + Counterbored Hole								
GETA AGETA GETE AGETE	8	40	55	70	85	100	115	130				10-60		7	2	1	5	15	12.5	15	M2	3.5
	10	55	75	95	115	135	155	175	195					9	3	1.5	7.5	20	17.5	20	M3	4.5
	13	70	95	120	145	170	195	220	245					12	3	2	10	25	22.5	25	M3	4.5
	16	110	150	190	230	270	310	350	390					15	3	3	15	40	35	40	M3	5.5
	20	160	220	280	340	400	460							20	3	4	20	60	50	60	M5	6.5

When T≤Mx4, the pilot holes for tapping go through.

**Ordering Example**

Part Number - L - T

GETA10 - 115 - 20

### Price List

No.	L	Unit Price							
		GETA	AGETA	GETE	AGETE	GETA	AGETA	GETE	AGETE
8	40								
	55								
	70								
	85								
	100								
	115								
	130								
	145								
	160								
	175								
10	190								
	205								
	220								
	235								
	250								
	265								
	280								
	295								
	310								
	325								
13	340								
	355								
	370								
	385								
	400								
	415								
	430								
	445								
	460								
	475								
16	490								
	505								
	520								
	535								
	550								
	565								
	580								
	595								
	610								
	625								
20	640								
	655								
	670								
	685								
	700								
	715								
	730								
	745								
	760								
	775								

### Number of Holes

No.	L	Number of Holes	
		M	S
8	40	3	2
	55	4	3
	70	5	4
	85	6	5
	100	7	6
	115	8	7
	130	9	8
	145	10	9
	160	11	10
	175	12	11
10	190	13	12
	205	14	13
	220	15	14
	235	16	15
	250	17	16
	265	18	17
	280	19	18
	295	20	19
	310	21	20
	325	22	21
13	340	23	22
	355	24	23
	370	25	24
	385	26	25
	400	27	26
	415	28	27
	430	29	28
	445	30	29
	460	31	30
	475	32	31
16	490	33	32
	505	34	33
	520	35	34
	535	36	35
	550	37	36
	565	38	37
	580	39	38
	595	40	39
	610	41	40
	625	42	41
20	640	43	42
	655	44	43
	670	45	44
	685	46	45
	700	47	46
	715	48	47
	730	49	48
	745	50	49
	760	51	50
	775	52	51



### Applicable Linear Guides

P533-P554 Compatible with Miniature Linear Guides L Selectable Types.

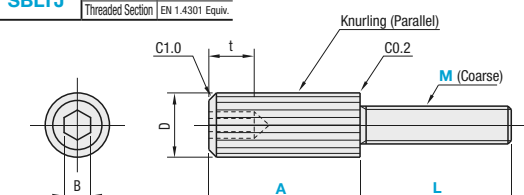
- H13 is not applicable to L420 or more.
- H16 is not applicable to L510 or more.
- H20 is not applicable to L520 or more.

# Linear Guide Stopper Bolts / Linear Guide Block Stopper Plates

## Rail Mounting Hole Caps / Rail Push Plates



Type	Material
SBLT	EN 1.4305 Equiv.
SBLTJ	Knurled Head Urethane (Shore A80)
SBLTJ	Threaded Section EN 1.4301 Equiv.



Knurling (Parallel)

C1.0

t

C0.2

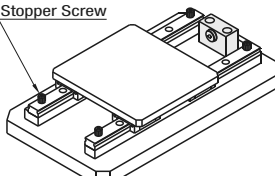
M (Coarse)

A

L

B

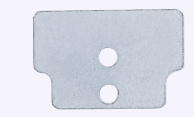

D



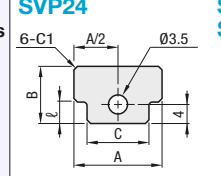
Stopper Screw

Part Number		SBLT		SBLTJ		Unit Price		Unit Price	
Type	M (Coarse)	L	A	D	B	t	1 ~ 9 pc(s)	10 ~ 30 pc(s)	1 ~ 9 pc(s)
SBLT SBLTJ	3	8	10	12	6	8	10	5.5	2.5
	4	10	8	7	3	2	3.5	2.5	
	5	16	18	8.5	4	2.5	4	3	
	6	18	20	10	5	3	5	3.5	

For orders larger than indicated quantity, please request a quotation.



**SVP24**



6-C1

A/2

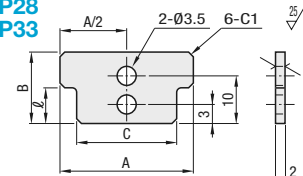
Ø3.5

B

C

A

**SVP28 SVP33**



A/2

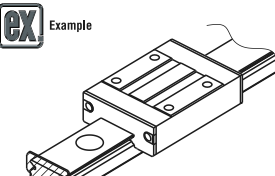
2-Ø3.5

6-C1

B

C



A



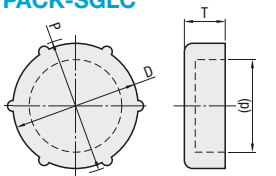
Block Stopper Plate

Part Number		SVP		Unit Price		Unit Price	
Type	No.	A	B	C	ℓ	1 ~ 9 pc(s)	10 ~ 100 pcs.
SVP	24	19	12	14	4.5		
	28	26	15	19	6		
	33	29	19	22	7		

For orders larger than indicated quantity, please request a quotation.



**PACK-SGLC**





T

D

Material: Polyacetal (Black)

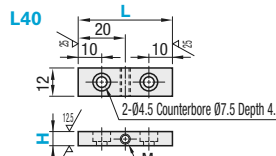


Slide Guide Mounting Hole Cap



Type	Part	Material	Surface Treatment
SGU	① Main Body	EN 1.1191 Equiv.	Electroless Nickel Plating
	② Screw	EN 1.4301 Equiv.	-

**L40**



20

10

10

12

2-Ø4.5 Counterbore Ø7.5 Depth 4.2

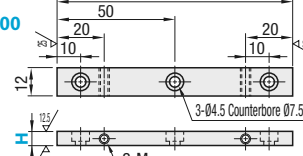
H

12.5

12.5

M

**L100**



50

20

10

10

12

3-Ø4.5 Counterbore Ø7.5 Depth 4.2

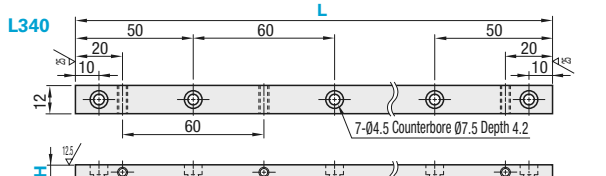
H

12.5

12.5

2-M

**L340**



50

60

50

20

10

12

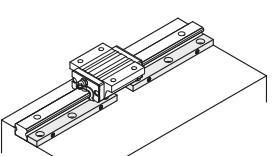
7-Ø4.5 Counterbore Ø7.5 Depth 4.2

H

12.5

12.5

6-M



The product prevents the rails from being agitated by shocks and vibrations.

• Installed in parallel with linear guide rails and can be used to press the rails against datum shoulders or pins with included set screws.

• Applicable to H28, H33, H36 and H42 Linear Guides.


Part Number		L Selection		Tapped Hole M		Included Screw Size		Unit Price	
Type	H							1 ~ 9 pc(s)	10 ~ 15 pcs.
SGU	5	40		3		M3-12			
		100				M3-12			
		340				M3-12			
	6	40		4		M4-12			
		100				M4-12			
		340				M4-12			

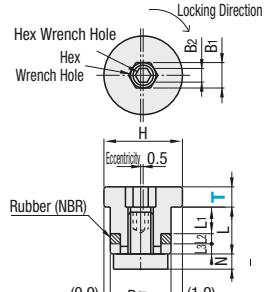
For orders larger than indicated quantity, please request a quotation.



# Linear Locks / Simplified Linear Locks

These linear locks press the rail strongly onto the datum plane to correct bending and avoid misalignment by external force. See below for application examples and mounting dimensions.

**Linear Locks**  
  
RoHS



Hex Wrench Hole  
Hex Wrench Hole  
Locking Direction  
Rubber (NBR)  
(0.9) D17 (1.9)

Type	Material	Surface Treatment
LLT	EN 1.1191 Equiv.	Electroless Nickel Plating
LLTR	Thermal Refined	LYBC Plating
LLTS	EN 1.4031 Equiv.	-

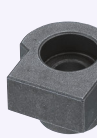
<How to Mount>  
After turning B1 clockwise, turn B2 (inner screw) clockwise.

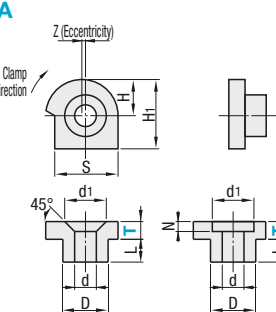
Applicable Linear Guides (Recommendation)									
Type	H	T1.4	T1.8	T3.5	T5				
Miniature Standard Rail (C-VALUE included)	6	-	-	-	-				
	8	-	-	-	-				
	10	-	-	-	-				
	13	-	-	-	-				
	16	-	-	-	-				
	20	-	-	-	-				
Miniature Wide Rail (C-VALUE included)	6.5	-	-	-	-				
	9	-	-	-	-				
	12	-	-	-	-				
	14	-	-	-	-				
	16	-	-	-	-				
	24	-	-	-	-				
Medium/Heavy Load	28	-	-	-	-				
	30	-	-	-	-				
	33	-	-	-	-				
	36	-	-	-	-				
	42	-	-	-	-				
	45	-	-	-	-				

Type	H	T1.4	T1.8	T3.5	T5
C-VALUE Medium/Heavy Load	24	-	-	-	-
	28	-	-	-	-
	30	-	-	-	-
	33	-	-	-	-
	42	-	-	-	-
	45	-	-	-	-

Part Number		H	D17	L	N	L1	L2	L3	B1	B2	Mounting Hole Dimension			Recommendation	Recommendation	Mass (g)	LLT	LLTR	LLTS	
Type	T										D1	F(min)	W	Tightening Torque N·cm	Clamp Power KN		Unit Price <small>(1 ~ 9 pcs.)</small>	Unit Price <small>10 ~ 200 pcs.</small>	Unit Price <small>(1 ~ 9 pcs.)</small>	Unit Price <small>10 ~ 50 pcs.</small>
LLT LLTR LLTS	1.4	12.8	10	- 0.013 - 0.028	8	2.5	5	1.4	1.6	5	2.5	10	11	6.5	90	1.8	7			
	120														2.5	7				
	190														3.9	8				
	5	14.8	12	- 0.034 - 0.034	9	6	12	12	7.5	270	5.5	14								

For orders larger than indicated quantity, please request a quotation.

**Simplified Linear Locks**  
  
RoHS




Z (Eccentricity)  
Clamp Rotating Direction  
45°  
d1  
D  
LLTA1, 2  
LLTA3, 5, 7

Applicable Linear Guides (Recommendation)									
Type	H	T1	T2	T3	T5	T7			
Miniature Standard Rail (C-VALUE included)	6	-	-	-	-	-			
	8	-	-	-	-	-			
	10	-	-	-	-	-			
	13	-	-	-	-	-			
	16	-	-	-	-	-			
	20	-	-	-	-	-			
Miniature Wide Rail (C-VALUE included)	6.5	-	-	-	-	-			
	9	-	-	-	-	-			
	12	-	-	-	-	-			
	14	-	-	-	-	-			
	16	-	-	-	-	-			
	24	-	-	-	-	-			
Medium/Heavy Load	28	-	-	-	-	-			
	30	-	-	-	-	-			
	33	-	-	-	-	-			
	36	-	-	-	-	-			
	42	-	-	-	-	-			
	45	-	-	-	-	-			

Type	H	T1	T2	T3	T5	T7
C-VALUE Medium/Heavy Load	24	-	-	-	-	-
	28	-	-	-	-	-
	30	-	-	-	-	-
	33	-	-	-	-	-
	42	-	-	-	-	-
	45	-	-	-	-	-

Part Number	Type	T	L	D -0.01 -0.06	H	H1	S	Z	d	d1	N	Mounting Hole Dimension	Mass	Mounting Screw	Recommendation	Unit Price	Volume Discount Rate
Type	T											D1 W F M	(g)		Clamp Power KN	1 ~ 9 pcs.	10 ~ 150 pcs.
LLTA	1	2.8	5	4	8	7	0.4	2.4	4.6	-	5	4 3 M2 5	0.6	Phillips Flat Head Screws M2x8	1		
	2												1				
	3	3.8	7	6	12	11	0.5	3.4	6.2	2	7	6 4 M3 6	3	Hex Socket Low Head Cap Screw M3x10	2.4		
	5	4.8	9	7	14	13	0.5	4.5	8	3	9	7 5 M4 6	6	Hex Socket Low Head Cap Screw M4x12	3.8		
	7	5.8	11	8	18	14	0.5	5.5	9.5	4	11	8 6 M5 8	13	Hex Socket Low Head Cap Screw M5x16	5.8		

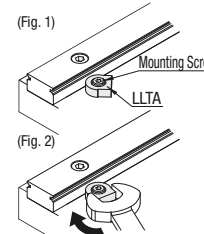
For orders larger than indicated quantity, please request a quotation.




Ordering Example

Part Number
LLT5 LLTA7

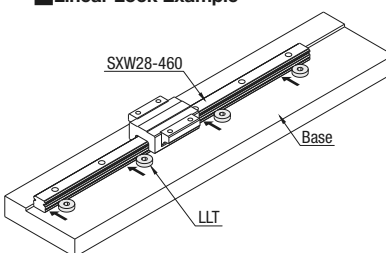
**LLTA (Simplified Linear Locks) Mounting Procedures**  
(1) Drill holes for mounting linear locks on the base (Refer to Mounting Hole Dimensions).  
(2) Temporarily tighten the rail screws.  
(3) Insert the mounting screws in LLTA and temporarily tighten (Fig. 1).  
(4) Turn the LLTA shoulder clockwise with a wrench and press the rail onto the datum plane (Fig. 2).  
(5) Fully tighten the rail screws.  
(6) Fully tighten the LLTA mounting screws.



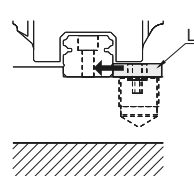
(Fig. 1)  
(Fig. 2)



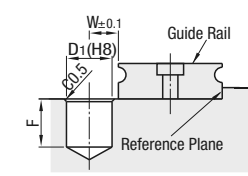
Example

**Linear Lock Example**  


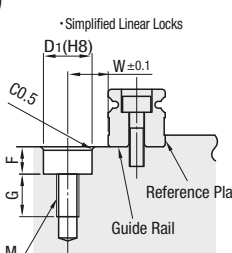
SXW28-460  
Base  
LLT

**Enlarged View**  


LLT

**Mounting Hole Dimensions (Reference)**  
• Linear Locks  


W±0.1  
D1(H8)  
Guide Rail  
Reference Plane


**Simplified Linear Locks**  
• Linear Locks  


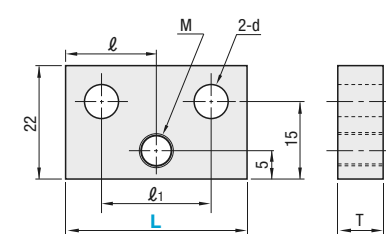
D1(H8)  
W±0.1  
C0.5  
Guide Rail  
Reference Plane

Press the rail onto the datum plane by turning the linear locks.

# Linear Guide Lock Plates / Linear Guide Lock Units / Linear Guide Taper Locks

This plate secures the table and the datum plane of blocks to avoid misalignment from external force.

**Linear Guide Lock Plates**  
  
RoHS




22  
2-d  
L  
L1  
5  
15  
T

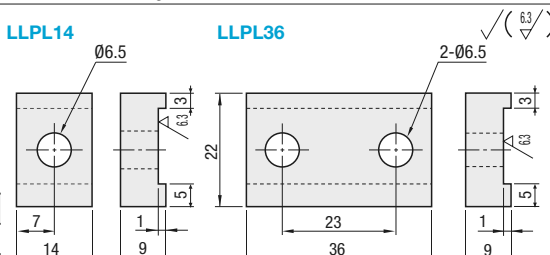
Type	Material	Surface Treatment
LLPU	EN 1.1191 Equiv.	Electroless Nickel Plating

Part Number	Type	L	T	ℓ	ℓ1	d	M	Unit Price 1 ~ 9 pcs.	Volume Discount Rate 10 ~ 50 pcs.	51 ~
LLPU	23	6	11.5	11	5.5					To Be Quoted on WOS
	28		14.0	15						
	33		16.5	20	6.5	5				
	43	9	21.5	30						

Part Number	Type	L	T	ℓ	ℓ1	d	M	Unit Price 1 ~ 9 pcs.	Volume Discount Rate 10 ~ 50 pcs.	51 ~
LLPU	23	6	11.5	11	5.5					To Be Quoted on WOS
	28		14.0	15						
	33		16.5	20	6.5	5				
	43	9	21.5	30						

This plate secures the rail and the pedestal to avoid misalignment from external force.

**Linear Guide Lock Plates**  
  
RoHS

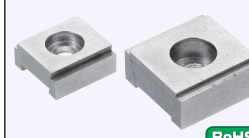


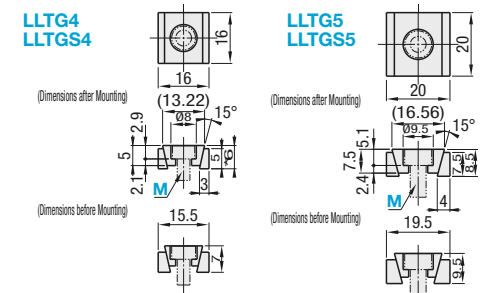
LLPL14  
06.5  
22  
7  
14  
1  
5  
9  
LLPL36  
2-06.5  
23  
36  
1  
5  
9

Type	Material	Surface Treatment
LLPL	EN 1.1191 Equiv.	Electroless Nickel Plating

Part Number	Type	Nominal	Unit Price 1 ~ 9 pcs.	Volume Discount Rate 10 ~ 150 pcs.	151 ~
LLPL	14				To Be Quoted on WOS
	36				

Part Number	Type	Nominal	Unit Price 1 ~ 9 pcs.	Volume Discount Rate 10 ~ 150 pcs.	151 ~
LLPL	14				To Be Quoted on WOS
	36				

**Linear Guide Lock Units**  
  
RoHS



LLTG4 LLTGS4  
16  
16  
13.22  
15°  
2.9  
5  
2.1  
15.5  
(Dimensions after Mounting)  
(Dimensions before Mounting)  
LLTG5 LLTGS5  
20  
16.56  
15°  
7.5  
5.1  
2.4  
4  
19.5  
(Dimensions after Mounting)  
(Dimensions before Mounting)

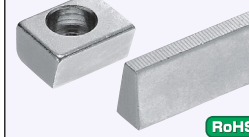
Type	Material	Surface Treatment
LLTG LLTGS	EN 1.1191 (cold drawn) Equiv.	Electroless Nickel Plating
LLTG LLTGS	EN 1.4301 Equiv.	-

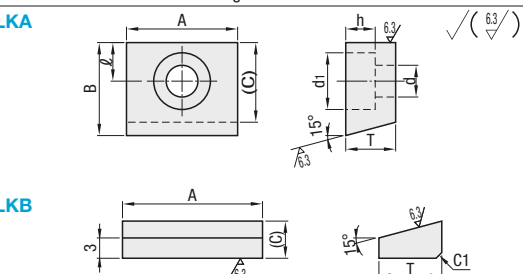
\*6 is the dimension when using low head cap screw.  
The dimension is 7.1 when using a standard hex socket head cap screw.

Part Number	Type	M	(Recommendation) Tightening Torque (N·m)	Rail Clamp Force (kN)	LLTG Unit Price 1 ~ 9 pcs.	Volume Discount Rate 10 ~ 100 pcs.	LLTGS Unit Price 1 ~ 9 pcs.	Volume Discount Rate 10 ~ 50 pcs.
LLTG LLTGS	4	2	3.2					
	5	8	9					

LLTG components are held together by elastic adhesive. Install as shipped.

By strongly pressing the rails or blocks on datum surfaces to avoid misalignment from external force.


**Linear Guide Taper Locks**  
  
RoHS



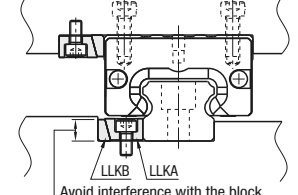
LLKA  
A  
B  
C  
h  
d1  
15°  
6.3  
LLKB  
A  
B  
C  
h  
d1  
15°  
6.3  
C1

Type	Material	Surface Treatment
LLKA LLKB	EN 1.1191 Equiv.	Electroless Nickel Plating

Part Number	Type	No.	A	B	T	(C)	ℓ	d	d1	h	Unit Price 1 ~ 9 pcs.	Volume Discount Rate 10 ~ 100 pcs.	101 ~
LLKA	5	20	16	9	13.6	7	5.5	9.5	5.5				To Be Quoted on WOS
	6	22	18	11	15.1	7.5	6.5	11	6.5				
LLKB	5	20	-	9	5.41	-	-	-	-				To Be Quoted on WOS
	6	22	-	11	5.95	-	-	-	-				



Example



LLKB LLKA  
Avoid interference with the block.

Part Number
LLPU23 LLTG4 LLKA6