

# Linear Guides for Medium Load

## Normal Clearance

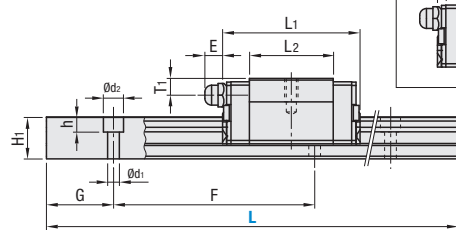
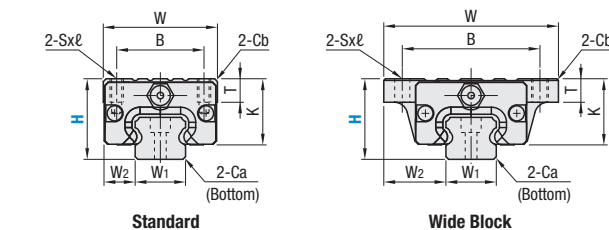
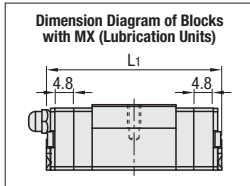
**Linear Guides for Medium Load Normal Clearance**

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

**RoHS10**

	Type				MX (Lubrication Units)	L Dimensions	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 58 HRC min.
	SVRL	SVRLJ	SV2RL	SV2RLJ		Configurable	
Wide Block Tapped Hole	SVW	—	SV2W	—		Selectable	
	SVWL	—	SV2WL	—		Configurable	
	SVWT	—	SV2WT	—		Selectable	
	SVWTL	—	SV2WTL	—		Configurable	

Heat Resistant Temperature: -20~80°C



Ⓢ For L Dimension Configurable Type, G dimensions differ from those shown in the table below. For details, see P.608.

### Precautions for Use

- Ⓢ Blocks are equipped with retainers (wire) to prevent balls from derailing. For blocks P.602.
- Ⓢ 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.
- Ⓢ Running parallelism is the value measured after the rail is mounted (it is not the value measured before the rails are fastened with screws).

### 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 P.604.

	Part Number		H	L	Block Dimensions										Guide Rail Dimensions										
	Type	MX			W	L <sub>1</sub>		B	S x ℓ	L <sub>2</sub>	K	T	Cb	Grease Fitting			H <sub>1</sub>	W <sub>1</sub>	W <sub>2</sub>	Ca	Counterbored Holes d <sub>1</sub> x d <sub>2</sub> x h	F	G		
						Mounting Holes	E							T <sub>1</sub>											
Standard	1 Block SVR	2 Blocks SV2R	Blank: None	24	100-1480 (160)	34	41	50.6	26	M4 x 7	25	20	7	0.85	M5 x P0.8	6	5	12.5	15	9.5	0.5	3.5 x 6 x 4.5	60	20	
	SVRL			SV2RL	28	160-1960 (220)	42	47	56.6	32	M5 x 8	27.6	22.5	7.5	1	M6 x P0.75	13	6	15.5	20	11	0.6	6 x 9.5 x 8.5	60	20
	SVRJ			SV2RJ	33	—	48	59	68.6	35	M6 x 9	37	26.5	8	1	M6 x P0.75	13	6.8	18	23	12.5	0.8	7 x 11 x 9	60	20
Wide Block	1 Block SVW	2 Blocks SV2W	-MX: Provided	24	100-1480 (160)	52	41	50.6	41	4.5 (M5)	25	20	7	0.5	M5 x P0.8	6	5	12.5	15	18.5	0.5	3.5 x 6 x 4.5	60	20	
	SVWL			SV2WL	28	160-1960 (220)	59	47	56.6	49	5.5 (M6)	27.6	22.5	9	1	M6 x P0.75	13	6	15.5	20	19.5	0.6	6 x 9.5 x 8.5	60	20
	SVWT			SV2WT	33	—	73	59	68.6	60	7 (M8)	37	26.5	10	1	M6 x P0.75	13	6.8	18	23	25	0.8	7 x 11 x 9	60	20

Ⓢ L Dimension: Dimensions in ( ) are for the minimum rail length of the 2-Block Type. Ⓢ S x ℓ Dimensions: Dimensions in ( ) are for Wide Block Tapped Hole Type.

**Part Number Example**

Part Number - L

SVR28 - 880  
SVR-MX28 - 880 (With Lubrication Units)  
RVR28 - 880 (Low Temperature Black Chrome Plating)  
SVR28L - 880 (L Type Greased)  
SVR28G - 880 (G Type Greased)

Low Temperature Black Chrome Plating and various Grease types available as alternative (Except Blocks with Lubrication Units).

# Linear Guides for Medium Load

## Normal Clearance, continued

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

SVR28 - 880 - TMC

Ⓢ Express Service is not available.

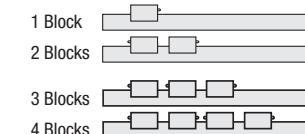
Alterations	Code	Specifications								
TMS: Tapped Hole Machining + 2 Stopper Plates TMC: Tapped Hole Machining Only	TMS TMC	Adds tapped holes on both rail ends to avoid block fall-off.  M3 x P0.5 Depth 5 Tapped Hole Stopper Plates Details P.685.								
Rail Ends Cut	Left End Cut LLC Right End Cut RLC	Cuts rail ends. Ordering Code: LLC <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> Rail is cut with the product ID facing out (datum on other side).	H	L Cut	N	24	10	10	28	33
H	L Cut	N								
24	10	10								
28										
33										
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. Ⓢ Must be ordered in multiples of 2. Ⓢ 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								

### Selectable Shortest Rail Length

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

### Position of Grease Fitting

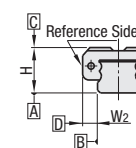
(Reference plane on the front side)



### Preload & Accuracy Standards

**Normal Clearance Type**

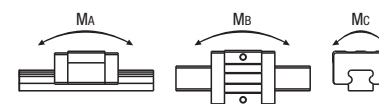
Radial Clearance (µm)	
H24	-4+2
H28	-5+2
H33	-6+3



Dimension Precision (µm)	Standard Grade	High Grade
	Height H Tolerance	±100
Pair Variation of Height H	20	15
Width W <sub>2</sub> Tolerance	±100	±20
Pair Variation of Width W <sub>2</sub>	H24, 28	15
	H33	
Running Parallelism of Plane C against Plane A	Refer to P.602	
Running Parallelism of Plane D against Plane B	Refer to P.602	

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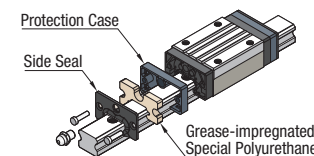
H	Basic Load Rating		Allowable Static Moment		Mass		
	C (Dynamic) kN	Co (Static) kN	MA, Mb N·m	Mc N·m	Block kg		Guide Rails kg/m
					Standard	Wide	
24	5.0	8.23	33	57	0.15	0.20	1.5
28	7.2	12.1	58	135	0.20	0.25	2.4
33	11.7	19.6	109	225	0.30	0.40	3.4



### Options for Linear Guide

Linear Guide Clamps	Rail Height Adjusting Blocks
Block Derailment Prevention Parts / Cover Caps	Block / Rail Fixing Parts
Stopper Bolts 	Rail Push Plates 
Block Stopper Plates 	Linear Locks 
Rail Mounting Hole Caps 	Linear Guide Lock Units 

### Lubrication Units MX



Blocks with Lubrication Units MX provide long term maintenance-free operation. Reduces maintenance cost. Most suitable where the design does not allow access for additional lubrication. For details, see P.599.