Selecting a Type

Types of LM Guides

THK offers a wide array of types and dimensions with LM Guides as standard so that you can select the optimal product for any application. With the unit structure of each model, you can easily obtain high running accuracy with no clearance simply by mounting the product on a plane surface with bolts. We have a proven track record and know-how in extensive applications with LM Guides.

		Туре		Specification	Load	Basic load rating (kN)	
	Classification			Table	capacity diagram	Basic dynamic load rating	Basic static load rating
			SSR-XW	▶⊠1-110		14.7 to 64.6	16.5 to 71.6
	Caged Ball LM Guide	التحتا	SSR-XV	▶⊠1-112		9.1 to 21.7	9.7 to 22.5
		<u>N</u>	SSR-XTB	▶⊠1-114		14.7 to 31.5	16.5 to 36.4
			SR-W	▶⊠1-212		13.8 to 411	20.5 to 537
			SR-M1W	▶⊠1-356		13.8 to 60.4	20.5 to 81.8
		التحتا	SR-V	▶⊠1-212	Ŧ	9.1 to 40.9	11.7 to 46.7
	Full-Complement Ball		SR-M1V	▶⊠1-356	→☆←	9.1 to 40.9	11.7 to 46.7
	EM Guides		SR-TB	▶⊠1-214	1	13.8 to 136	20.5 to 179
			SR-M1TB	▶⊠1-358		13.8 to 60.4	20.5 to 81.8
þ			SR-SB	▶⊠1-214		9.1 to 40.9	11.7 to 46.7
ial typ			SR- M1SB	▶⊠1-358		9.1 to 40.9	11.7 to 46.7
Rad			SR-MSV	▶⊠1-390		_	—
	for Special Environ- ments		SR-MSW	▶⊠1-390		_	_
			SVR-C	▶⊠1-128		48 to 260	68 to 328
		" - "	SVR-LC	▶⊠1-128		57 to 340	86 to 481
			SVR-R	▶⊠1-124		48 to 260	68 to 328
	Caged Ball LM Guides	التصتال	SVR-LR	▶⊠1-124	Ŧ	57 to 340	86 to 481
	for Machine Tools high-rigidity model for ultra-heavy loads	Ţ	SVR-CH	▶⊠1-134	→☆←	90 to 177	115 to 238
		N,	SVR-LCH	▶⊠1-134	T	108 to 214	159 to 312
			SVR-RH	▶⊠1-132		90 to 177	115 to 238
			SVR-LRH	▶⊠1-132		108 to 214	159 to 312

External dimensions (mm)				
Height	Width	Features	Major application	
24 to 48	34 to 70	Long service life, long-term maintenance-free operation Thin, compact design, large radial load capacity	 Surface grinder table Tool grinder table 	
24 to 33	34 to 48	Low dust generation, low noise, Superb in planar running accuracy acceptable running sound Superb capability of Superb high sorbing mounting error	 Electric discharge machine Printed circuit board drilling machine 	
24 to 33	52 to 73	Smooth motion in all mounting orientations Stainless steel type also available as standard	 Chip mounter High-speed transfer 	
24 to 135	34 to 250		equipmentTraveling unit of robotsMachining center	
24 to 48	34 to 70		NC latheFive axis milling machine	
24 to 48	34 to 70	Thin, compact design, large radial load capacity	 Conveyance system Mold guide of pressing machines 	
24 to 48	34 to 70	 Superb in planar running accuracy Superb capability of absorbing mounting error 	 Inspection equipment Testing machine 	
24 to 68	52 to 140	 Stainless steel type also available as standard Type M1, achieving max service temperature of 150°C, also available 	 Food-related machine Medical equipment 3D measuring instrument Packaging machine Injection molding machine Woodworking machine Ultra precision table Semiconductor/liquid crystal manufacturing equipment 	
24 to 48	52 to 100			
24 to 48	52 to 100			
24 to 48	52 to 100			
24 to 28	34 to 42	 Minimum generation of outgases (water, organic matter) Small amount of particles generated 	Photolithography machineOrganic EL display	
24 to 28	34 to 42	 Can be used at high temperature (up to 150°C) 	manufacturing machinelon implantation equipment	
31 to 75	72 to 170	 Long service life, long-term maintenance-free operation Low dust generation, low noise, acceptable running sound 	 Machining center 	
31 to 75	72 to 170	 Superbly high speed Smooth motion in all mounting orientations Ultra-heavy load capacity optimal for machine tools 	 NC lathe Grinding machine Five axis milling 	
31 to 75	50 to 126	 Thin, compact design, large radial load capacity High vibration resistance and impact resistance due to 	machine • Jig borer	
31 to 75	50 to 126	improved damping characteristicsSuperb in planar running accuracy	Drilling machineNC milling machine	
48 to 70	100 to 140	Long service life, long-term High vibration resistance maintenance-free operation and impact resistance Low dust generation, low noise, due to improved damping	 Horizontal milling machine Mold processing 	
48 to 70	100 to 140	acceptable running sound Superbly high speed Smooth motion in all mount-	 Graphite working machine 	
55 to 80	70 to 100	 ing orientations Ultra-heavy load capacity Has dimensions almost the same as that of the full-ball 	 Electric discharge machine Wire-cut electric 	
55 to 80	70 to 100	 optimal for machine tools Large radial load capacity type LM Guide model HSR, which is practically a global standard size 	discharge machine	



		Туре		Specification	Load	Basic load rating (kN)	
	Classification			Table	capacity diagram	Basic dynamic load rating	Basic static load rating
			NR-A	▶⊠1-228		33 to 479	84.6 to 1040
	Full-Complement	$\mathbb{U}^{\mathbb{V}}$	NR-LA	▶⊠1-228		44 to 599	113 to 1300
Type	Ball LM Guides	£	NR-B	▶⊠1-232	↓	33 to 479	84.6 to 1040
Radial Type	for Machine Tools high-rigidity model	10-7	NR-LB	▶⊠1-232	→Ľĭ← ↑	44 to 599	113 to 1300
	for ultra-heavy loads	I	NR-R	▶⊠1-224	•	33 to 479	84.6 to 1040
			NR-LR	▶⊠1-224		44 to 599	113 to 1300
		<u> </u>	SVS-C	▶⊠1-130		37 to 199	52 to 251
			SVS-LC	▶⊠1-130		44 to 261	66 to 368
			SVS-R	▶⊠1-126		37 to 199	52 to 251
/ type	Caged Ball LM Guides for Machine Tools high-rigidity model for ultra-heavy loads	تصال	SVS-LR	▶⊠1-126	_ ↓	44 to 261	66 to 368
4-way		Vr	SVS-CH	▶⊠1-134	→ <u>`_</u> `+	69 to 136	88 to 182
		Noi	SVS-LCH	▶⊠1-134		83 to 164	122 to 239
			SVS-RH	▶⊠1-132		69 to 136	88 to 182
		ΥG	SVS-LRH	▶⊠1-132		83 to 164	122 to 239

Selecting a Type

External dimensions (mm)				
Height	Width	Features	Major application	
31 to 105	72 to 260			
31 to 105	72 to 260			
31 to 105	72 to 260	 Ultra-heavy load capacity optimal for machine tools High vibration resistance and impact resistance due to improved damping characteristics 		
31 to 105	72 to 260	Thin, compact design, large radial load capacity Superb in planar running accuracy	 Machining center NC lathe Grinding machine Five axis milling machine Jig borer Dirlling machine NC milling machine Horizontal milling 	
31 to 105	50 to 200			
31 to 105	50 to 200			
31 to 75	72 to 170	 Long service life, long-term maintenance-free operation Low dust generation, low noise, acceptable running sound 		
31 to 75	72 to 170	Superbly high speed Smooth motion in all mounting orientations	 machine Mold processing machine 	
31 to 75	50 to 126	Ultra-heavy load capacity optimal for machine tools Low profile, compact 4-way type High vibration resistance and impact resistance due to	Graphite working machine	
 31 to 75	50 to 126	 Fight vibration resistance and impact resistance due to improved damping characteristics 	Electric discharge machine Wire-cut electric	
 48 to 70	100 to 140	Long service life, long-term maintenance-free operation Low dust generation, low High vibration resistance and impact resistance	 Wire-cut electric discharge machine 	
48 to 70	100 to 140	noise, acceptable running due to improved damping characteristics		
55 to 80	70 to 100	 Superbly high speed Smooth motion in all mounting orientations Has dimensions almost the same as that of the full-ball type LM Guide model HSR, 		
 55 to 80	70 to 100	optimal for machine tools standard size		



End bill Link		Classification	Туре		Specification	Load capacity	Basic load Basic dynamic	rating (kN) Basic static
Perform Caged Roller LM Guide- super ultra-heavy- load, high rigidity types SRG-LA, LC PB1-404 SRG-R, V PB1-410 SRG-LR, LV PB1-410 SRG-LR, LV PB1-410 SRG-LR, LV PB1-422 SRG-LR, LV PB1-422 SRG-LR, LV PB1-422 SRN-C PB1-422 SRN-LC PB1-422 SRN-LC PB1-424 SRN-LC PB1-424 SRN-LR PB1-230 NRS-LA PB1-230 NRS-LB PB1-234 MRS-R PB1-234 MRS-R PB1-234 MRS-LR PB1-234 MRS-LR PB1-236 NRS-LR PB1-236 MRS-LR PB1-98 SHS-C PB1-98 SHS-LC PB1-98				, ypc	Table			
Caged Roller LM Guide- suber ultra-heavy load, high rigidity types SRG-R, V ▶ 81-410 SRG-LR, LV ▶ 81-410 SRN-C ▶ 81-422 SRN-LC ▶ 81-422 SRN-LC ▶ 81-424 SRN-LC ▶ 81-4230 NRS-LA ▶ 81-230 NRS-LB ▶ 81-234 NRS-LR ▶ 81-226 NRS-LR ▶ 81-226 NRS-LR ▶ 81-98 34.5 to 470 79.7 to 920 25.9 to 376 59.8 to 737 34.5 to 470 79.7 to 920 <td></td> <td></td> <td></td> <td>SRG-A, C</td> <td>▶⊠1-404</td> <td></td> <td>11.3 to 131</td> <td>25.8 to 266</td>				SRG-A, C	▶⊠1-404		11.3 to 131	25.8 to 266
Caged Roller LM Guide - super ultra-heavy- load, high rigidity types SRG-LR, LV >B1-420 SR-1432 26.7 to 601 63.8 to 1170 SRN-C >B1-422 SRN-C >B1-422 SR-100 59.1 to 131 119 to 266 76 to 278 165 to 599 59.1 to 131 119 to 266 76 to 278 165 to 599 SRN-LR SRN-LR >B1-424 SRN-LR			Wrr.	SRG-LA, LC	▶⊠1-404		26.7 to 278	63.8 to 599
Alternative SRN-C Full-422 59.1 to 131 119 to 266 Super ultra-heavy- load, high rigidity types SRN-C Full-422 59.1 to 131 119 to 266 SRN-LC Full-424 SRN-LC Full-424 59.1 to 131 119 to 266 SRN-LR Full-424 SRN-LR Full-424 76 to 278 165 to 599 Full-Complement LM Guides for Machine Tools high-rigidity model for ultra-heavy loads NRS-A Full-230 76 to 276 59.8 to 737 NRS-LB NRS-LB Full-226 NRS-LB State 737 34.5 to 470 79.7 to 920 NRS-LR NRS-LR Full-226 NRS-LB Full-226 14.2 to 205 24.2 to 320 SHS-C SHS-C Full-226 14.2 to 205 24.2 to 320 25.9 to 376 59.8 to 737 SHS-LC Full-98 SHS-V Full-98 14.2 to 205 24.2 to 320 Caged Ball LM Guide - SHS-V Full-100 14.2 to 205 24.2 to 320				SRG-R, V	▶⊠1-410		11.3 to 131	25.8 to 266
Super ultra-heavy- load, high rigidity types SRN-C ▶⊠1-422 → 59.1 to 131 119 to 266 SRN-LC ▶⊠1-422 → ↑ 165 to 599 59.1 to 131 119 to 266 SRN-LC ▶⊠1-422 SRN-R ▶⊠1-422 ↑ 115 to 601 256 to 1170 SRN-LR ▶⊠1-422 NRS-A ▶⊠1-230 115 to 601 256 to 1170 Full-Complement LM Guides for Machine Tools for Machine Tools for ultra-heavy loads NRS-A ▶⊠1-234 ↓ 115 to 470 79.7 to 920 NRS-LR ▶⊠1-234 NRS-R ▶⊠1-234 ↓ ↓ 14.2 to 205 24.2 to 320 NRS-LR ▶Ш-98 SHS-C ▶Ш-98 14.2 to 205 24.2 to 320 SHS-LC ▶Ш-98 14.2 to 205 24.2 to 320 14.2 to 205 24.2 to 320			U [[]]	SRG-LR, LV	▶⊠1-410	L	26.7 to 601	63.8 to 1170
Image: style		super ultra-heavy-		SRN-C	▶⊠1-422	→ Č ←	59.1 to 131	119 to 266
Image: state			Nr.	SRN-LC	▶⊠1-422		76 to 278	165 to 599
Image: state of the s				SRN-R	▶⊠1-424		59.1 to 131	119 to 266
Image: book of the second se				SRN-LR	▶⊠1-424		76 to 278	165 to 599
Hore Full-Complement NRS-LA NRS-LA Maine 1230 Image: Stress of the stress			1 FT	SRW-LR	▶⊠1-432		115 to 601	256 to 1170
Full-Complement LM Guides for Machine Tools high-rigidity model for ultra-heavy loads NRS-B NRS-B 25.9 to 376 59.8 to 737 NRS-LB NRS-LB NRS-LB MI-226 34.5 to 470 79.7 to 920 NRS-LR NRS-LR MI-226 34.5 to 470 79.7 to 920 SHS-LR MRS-R MI-226 14.2 to 205 24.2 to 320 SHS-LC MI-98 17.2 to 253 31.9 to 408 Caged Ball LM Guide - SHS-V MI-100 38.8 to 205 24.2 to 320				NRS-A	▶⊠1-230		25.9 to 376	59.8 to 737
LM Guides for Machine Tools high-rigidity model for ultra-heavy loads NRS-B ▶⊡1-234 → 25.9 to 376 59.8 to 737 NRS-LB NRS-LB NRS-R ▶⊡1-226 → 34.5 to 470 79.7 to 920 NRS-LR NRS-LR ▶⊡1-226 34.5 to 470 79.7 to 920 SHS-LC ▶⊡1-98 14.2 to 205 24.2 to 320 Caged Ball LM Guide - SHS-V ▶⊡1-100 ↓ 14.2 to 205 24.2 to 320			l n r an r	NRS-LA	▶⊠1-230	↓	34.5 to 470	79.7 to 920
Caged Ball SHS-V ▶⊠1-98 14.2 to 205 24.2 to 320 Caged Ball SHS-V ▶⊠1-98 17.2 to 253 31.9 to 408	0	LM Guides	<u>ба</u>	NRS-B	▶⊠1-234		25.9 to 376	59.8 to 737
Caged Ball SHS-V ▶⊠1-98 14.2 to 205 24.2 to 320 Caged Ball SHS-V ▶⊠1-98 17.2 to 253 31.9 to 408	d type	for Machine Tools	וייםיטן	NRS-LB	▶⊠1-234	┝╋┟▁╜┯╸	34.5 to 470	79.7 to 920
Caged Ball LM Guide - SHS-V ▶⊠1-98 14.2 to 205 24.2 to 320 11.2 to 205 24.2 to 320 11.2 to 205 24.2 to 320 11.2 to 205 24.2 to 320	lal loa			NRS-R	▶⊠1-226		25.9 to 376	59.8 to 737
Caged Ball LM Guide - SHS-V ▶⊠1-98 14.2 to 205 24.2 to 320 11.2 to 205 24.2 to 320 11.2 to 205 24.2 to 320 11.2 to 205 24.2 to 320	iy equ			NRS-LR	▶⊠1-226		34.5 to 470	79.7 to 920
Caged Ball LM Guide - SHS-LC ▶⊠1-98 17.2 to 253 31.9 to 408	4-wa		Ū	SHS-C	▶⊠1-98		14.2 to 205	24.2 to 320
Caged Ball LM Guide -			لي المحر	SHS-LC	▶⊠1-98		17.2 to 253	31.9 to 408
		LM Guide -		SHS-V	▶⊠1-100	↓ ↓	14.2 to 205	24.2 to 320
rigidity types SHS-LV ► 17.2 to 253 31.9 to 408		heavy-load, high rigidity types		SHS-LV	▶⊠1-100	1	17.2 to 253	31.9 to 408
SHS-R ►∎1-102 14.2 to 128 24.2 to 197				SHS-R	▶⊠1-102		14.2 to 128	24.2 to 197
SHS-LR ► 1-102 36.8 to 161 64.7 to 259				SHS-LR	▶⊠1-102		36.8 to 161	64.7 to 259

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Selecting a Type

External dim	ensions (mm)	E. M. M.	Major application	
Height	Width	Features	Major application	
24 to 70	47 to 140			
30 to 120	63 to 250	 Long service life, long-term maintenance-free operation Low noise, acceptable running sound Superbly high speed 		
24 to 80	34 to 100	 Smooth motion due to prevention of rollers from skewing Ultra-heavy load capacity optimal for machine tools 		
30 to 90	44 to 126			
44 to 63	100 to 140		 Machining center NC lathe Grinding machine 	
44 to 75	100 to 170	 Long service life, long-term maintenance-free operation Low noise, acceptable running sound 	 Five axis milling machine 	
44 to 63	70 to 100	 Superbly high speed Smooth motion due to prevention of rollers from skewing 	 Jig borer Drilling machine NC milling machine 	
44 to 75	70 to 126	 Ultra-heavy load capacity optimal for machine tools Low center of gravity, ultra-high rigidity 	 Horizontal milling machine 	
70 to 150	135 to 300		 Mold processing machine Graphite working 	
31 to 105	72 to 260		 machine Electric discharge machine 	
31 to 105	72 to 260		machine • Wire-cut electric discharge machine	
31 to 105	72 to 260	 Ultra-heavy load capacity optimal for machine tools High vibration resistance and impact resistance due to 		
31 to 105	72 to 260	improved damping characteristics Low-Profile compact design, 4-way equal load		
31 to 105	50 to 200			
31 to 105	50 to 200			
24 to 90	47 to 170		 Machining center NC lathe XYZ axes of heavy cutting machine tools Grinding head feeding 	
24 to 90	47 to 170		 axis of grinding machines Components requiring a heavy moment and high accuracy 	
24 to 90	34 to 126	Long service life, long-term maintenance-free operation Low dust generation, low noise, acceptable running sound Superbly high speed Smooth motion in all mounting orientations Heavy load, high rigidity Has dimensions almost the same as that of the full-ball type LM Guide model HSR, which is practically a global standard size Superb capability of absorbing mounting error	Long service life, long-term maintenance-free operation Low dust generation, low noise, acceptable running sound Superbly high speed Smooth motion in all mounting orientations	machineGantry five axis milling machine
24 to 90	34 to 126		 Z axis of electric discharge machines Wire-cut electric discharge machine Car elevator Food-related machine 	
28 to 80	34 to 100		 Testing machine Vehicle doors Printed circuit board drilling machine ATC 	
28 to 80	34 to 100		 Construction equipment Shield machine Semiconductor/liquid crystal manufacturing equipment 	



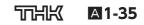
	Classification	Туре		Specification	Load	Basic load	
	Classification			Table	capacity diagram	Basic dynamic load rating	Basic static load rating
			HSR-A	▶⊠1-186		10.9 to 304	15.7 to 355
			HSR-M1A	▶⊠1-342		10.9 to 53.9	15.7 to 70.2
			HSR-LA	▶⊠1-186		23.9 to 367	35.8 to 464
		บเซิ	HSR-M1LA	▶⊠1-342		23.9 to 65	35.8 to 91.7
			HSR-CA	▶⊠1-196		19.8 to 304	27.4 to 355
			HSR-HA	▶⊠1-196		23.9 to 518	35.8 to 728
			HSR-B	▶⊠1-188		10.9 to 304	15.7 to 355
	Full-Complement		HSR-M1B	▶⊠1-344		10.9 to 53.9	15.7 to 70.2
	Ball LM Guide - heavy-load, high		HSR-LB	▶⊠1-188		23.9 to 367	35.8 to 464
	rigidity types	152	HSR-M1LB	▶⊠1-344		23.9 to 65	35.8 to 91.7
			HSR-CB	▶⊠1-198	+ + ↑	19.8 to 304	27.4 to 355
be	4-way equal load type		HSR-HB	▶⊠1-198		23.9 to 518	35.8 to 728
oad ty			HSR-R	▶⊠1-192		1.08 to 304	2.16 to 355
qual I			HSR-M1R	▶⊠1-346		10.9 to 53.9	15.7 to 70.2
vay e			HSR-LR	▶⊠1-192		23.9 to 367	35.8 to 464
4-1			HSR-M1LR	▶⊠1-346		23.9 to 65	35.8 to 91.7
			HSR-HR	▶⊠1-200		441 to 518	540 to 728
	LM Guide for Medium-to-Low Vacuum		HSR-M1VV	▶⊠1-382		10.9	15.7
	Full-ball LM Guide -	Ĩ	HSR-YR	▶⊠1-194		10.9 to 195	15.7 to 228
	side mount types	<u>r</u>	HSR-M1YR	▶⊠1-348		10.9 to 53.9	15.7 to 70.2
		Ng.	JR-A	▶⊠1-310		27.6 to 121	36.4 to 146
	Full-Complement LM Guides - special LM rail types	t <u>z</u> ili	JR-B	▶⊠1-310	→ <u></u> → <u></u> ↑	27.6 to 121	36.4 to 146
		W _T	JR-R	▶⊠1-310		27.6 to 121	36.4 to 146

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Selecting a Type

External dimensions (mm)		E. J. J.	Major application	
Height	Width	Features	Major application	
24 to 110	47 to 215			
24 to 48	47 to 100		 Machining center 	
30 to 110	63 to 215		 NC lathe XYZ axes of heavy cutting ma- 	
30 to 48	63 to 100		chine tools Grinding head feeding axis 	
30 to 110	63 to 215		of grinding machines • Components requiring a	
30 to 145	63 to 350		heavy moment and high ac- curacy	
24 to 110	47 to 215	- Llows lood high rigidity	NC milling machineHorizontal milling machine	
24 to 48	47 to 100	 Heavy load, high rigidity Practically a global standard size Superb capability of absorbing mounting error 	Gantry five axis milling ma- chine	
30 to 110	63 to 215	 Stainless steel type also available as standard Type M1, achieving max service temperature of 150°C, also available 	• Z axis of electric discharge machines	
30 to 48	63 to 100	 Type M2, with high corrosion resistance, also available (Basic dynamic load rating: 2.33 to 5.57 kN) 	Wire-cut electric discharge machine	
30 to 110	63 to 215	(Basic static load rating: 2.03 to 5.16 kN)	 Car elevator Food-related machine Testing machine Vehicle doors 	
30 to 145	63 to 350			
11 to 110	16 to 156		Printed circuit board drilling machine	
28 to 55	34 to 70		ATCConstruction equipment	
30 to 110	44 to 156		Shield machineSemiconductor/liquid crystal	
30 to 55	44 to 70		manufacturing equipment	
120 to 145	250 to 266			
28	34	 Can be used in various environments at atmospheric pressure to vacuum (10³ [Pa]) Allows baking temperature of 200°C* at a maximum If the baking temperature exceeds 100°C, multiply the basic load rating with the temperature coefficient. 	 Medical equipment Semiconductor/liquid crystal manufacturing equipment 	
28 to 90	33.5 to 124.5	 Easy mounting and reduced mounting height when using 2 units opposed to each other Superb capability of absorbing mounting error Stainless steel type also 	machine tools Z axis of woodworking machines 	
 28 to 55	33.5 to 69.5	since the side faces of the LM block have mounting holes Heavy load, high rigidity available as standard Type M1, achieving max service temperature of 150°C, also available	 Z axis of measuring instruments Components opposed to each other 	
61 to 114	70 to 140		 Automated warehouse Garage Gantry robot FMS traveling rail 	
61 to 114	70 to 140	 Since the central part of the LM rail is thinly structured, the LM Guide is capable of absorbing an error and achieving smooth motion if the parallelism between the two axes is poor Since the LM rail has a highly rigid sectional shape, it can be used as a structural member 	 Welding machine Lifter Crane 	
65 to 124	48 to 100		 Forklift Coating machine Shield machine Stage setting 	

LM Guide



				Specification	Load	Basic load rating (kN)	
	Classification	Туре		Table	capacity diagram	Basic dynamic load rating	Basic static load rating
	Caged Ball Cross LM Guide		SCR	▶⊠1-168	→ ॖ	36.8 to 253	64.7 to 408
	Full-Complement LM Guide orthogonal type		CSR	▶⊠1-296		10.9 to 100	15.7 to 135
	Caged Ball LM Guide -	1 L	SHW-CA	▶⊠1-142		4.31 to 70.2	5.66 to 91.4
ad type	wide, low center of gravity types		SHW-CR, HR	▶⊠1-144	+ <u>+</u> † +	4.31 to 70.2	5.66 to 91.4
y equal lo	Full-Complement Ball LM Guide - wide, low center of gravity types	Kai	HRW-CA	▶⊠1-242		5.53 to 80.3	9.1 to 109
4-wa		1	HRW-CR, LRM	▶⊠1-244		3.29 to 62.4	7.16 to 86.3
	Full-ball Straight - Curved Guide		HMG	▶⊠1-326	→ <u></u> ↑	2.56 to 66.2	Straight sec- tion 4.23 to 66.7 Curved sec- tion 0.44 to 36.2
	Caged Ball LM Guides Finite stroke	, ji	EPF	▶⊠1-176	→ * ↑ *	0.90 to 3.71	1.60 to 5.88
	Full-Complement	^V IL-DI	HR, HR-T	▶⊠1-264	↓ → \□ □ ← ↑	2.82 to 226	3.48 to 232
Ð	Ball LM Guide - separate types		GSR-T	▶⊠1-276	+ →=:::-	8.42 to 37	9.77 to 39.1
igns		יטיבי	GSR-V	▶⊠1-276	t	6.51 to 15.5	6.77 to 15.2
Interchangeable designs	Full-Complement Ball LM Guides - LM rail-rack intergrated type		GSR-R	▶⊠1-284	↓ +5112+- †	15.5 to 37	15.2 to 39.1

Selecting a Type

External dimensions (mm)			Major application		
Height	Width	Features	Major application		
70 to 180	88 to 226	 A compact XY structure is allowed due to an XY orthogonal, single-piece LM block Since a saddle-less structure is allowed, the machine can be lightweighted and compactly designed Long service life, long-term maintenance-free operation Low dust generation, low noise, acceptable running sound Superbly high speed 	 Low center of gravity, precision XY table NC lathe Optical measuring instrument Automatic lathe Inspection equipment Cartesian coordinate Wire-cut electric discharge machine Hollow table Printed circuit board assembler Machine tool table Electric discharge machine 		
47 to 118	38.8 to 129.8	 A compact XY structure is allowed due to an XY orthogonal, single-piece LM block Since a saddle-less structure is allowed, the machine can be lightweighted and compactly designed 	Bonding machine machining center		
12 to 50	40 to 162	 Long service life, long-term maintenance-free operation Low dust generation, low noise, acceptable running sound 	Z axis of IC printed APC circuit board drilling Semiconductor/liquid		
12 to 50	30 to 130	 Superbly high speed Smooth motion in all mounting orientations Wide, low center of gravity, space saving structure Stainless steel type also available as standard 	 machine crystal manufacturing Z axis of small electric equipment 		
17 to 60	60 to 200	 4-way equal load, thin and highly rigid Wide, low center of gravity, space action attraction 	Machining center NC lathe Robot Wire-cut electric		
12 to 50	30 to 130	 Stainless steel type also available as standard 	discharge machine		
24 to 90	47 to 170	 Freedom of design Cost reduction through simplified structure 	Large swivel base Pandulum vehicle for railroad Medical equipment Pantagraph Control unit Coptical measuring machine Tool grinder X-Ray machine Control unit Control unit		
8 to 16	17 to 32	 Caged ball effect using a cage Smooth movement with minimal rolling variation 4-groove construction in a compact body 	 Semiconductor manufacturing equipment Medical equipment Inspection equipment Industrial machinery 		
8.5 to 60	18 to 125	 Low-Profile high rigidity, space saving structure Interchangeable with Cross-Roller Guide Preload can be adjusted Stainless steel type also available as standard 	 XYZ axes of electric discharge machine Precision table XZ axes of NC lathe Assembly robot Conveyance system Machining center Wire-cut electric discharge machine Tool changer Woodworking machine 		
20 to 38	32 to 68	 LM block and LM rail are both interchangeable Preload can be adjusted 			
20 to 30	32 to 50	 Capable of absorbing vertical level error and horizontal tolerance for parallelism 	Various conveyance systems Automated warehouse Automated warehouse Suida distribution Suida distres Suida distribution Suida distribution Suida distri		
30 to 38	59.91 to 80.18	 LM rail-rack integrated design eliminates assembly and adjustment work LM rail-rack integrated design enables a space-saving structure to be achieved Capable of supporting long strokes 	ATC Car washing machine Door closing device		

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				0	Load	Basic load	rating (kN)
	Classification	Туре		Specification Table	capacity diagram	Basic dynamic load rating	Basic static load rating
			SRS-S			1.09 to 4.5	0.964 to 3.39
		l	SRS-M	▶⊠1-158		0.439 to 16.5	0.468 to 20.2
	Caged Ball		SRS-N		Ļ	0.515 to 9.71	0.586 to 8.55
	LM Guides		SRS-WS			1.38 to 6.64	1.35 to 5.94
		IG	SRS-WM	▶⊠1-160		0.584 to 9.12	0.703 to 8.55
			SRS-WN			0.746 to 12.4	0.996 to 12.1
			RSR-M	▶⊠1-254		0.18 to 8.82	0.27 to 12.7
Sec	Full-Complement		RSR-M1V	▶⊠1-366		1.47 to 8.82	2.25 to 12.7
Miniature types	Ball LM Guides		RSR-N	▶⊠1-254		0.3 to 14.2	0.44 to 20.6
iniatu			RSR-M1N	▶⊠1-366	↓ → ? ? ←	2.6 to 14.2	3.96 to 20.6
Σ	Full-Complement		RSR-WM/WV	▶⊠1-254		0.25 to 6.66	0.47 to 9.8
			RSR-M1WV	▶⊠1-368		2.45 to 6.66	3.92 to 9.8
	Ball LM Guide - wide types	الثيبي	RSR-WN	▶⊠1-254	1	0.39 to 9.91	0.75 to 14.9
			RSR-M1WN	▶⊠1-368		3.52 to 9.91	5.37 to 14.9
	Full Complement Ball LM Guide - orthogonal type	Ţ.	МХ	▶⊠1-302		0.59 to 2.04	1.1 to 3.21
Circular arc types	Full-Complement Ball LM Guides	Ĩ	HCR	▶⊠1-318	→ ٹ ←	4.7 to 141	8.53 to 215
Self-aligning types	Full-Complement Ball LM Guides	NE	NSR-TBC	▶⊠1-332	→ ← ↑	9.41 to 90.8	18.6 to 152

LM Guide

Point of Selection

Selecting a Type

External dime	ensions (mm)		Major application			
Height	Width	Features				
8 to 16	17 to 32		IC/LSI manufacturing machine Medical equipment Electronic components			
6 to 25	17 to 48	 Long service life, long-term maintenance-free operation 				
6 to 16	12 to 32	 Low dust generation, low noise, acceptable running sound Superbly high speed 	 Hard disc drive Slide unit of OA equipment of electron microscope Optical stage Stepper 			
9 to 16	25 to 60	 Superbly high speed Smooth motion in all mounting orientations Stainless steel type also available 	Wafer transfer equipment Plotting machine Feed mechanism of IC			
6.5 to 16	17 to 60	as standardLightweight and compact	Printed circuit board assembly table Inspection equipment			
4 to 25	8 to 46	 Stainless steel type also available 				
10 to 25	20 to 46	 as standard Long type with increased load capacity also offered as standard 	IC/LSI manufacturing machine			
4 to 25	8 to 46	• Type M1, achieving max service	Hard disc drive Slide unit of OA equipment Wafer transfer equipment			
10 to 25	20 to 46	available	 Printed circuit board assembly table Medical equipment 			
4.5 to 16	12 to 60	 Stainless steel type also available 	Electronic components of electron microscope Optical stage Stepper Plotting machine Feed mechanism of IC bonding machine			
12 to 16	30 to 60	 as standard Long type with increased load capacity also offered as standard 				
4.5 to 16	12 to 60	 Type M1, achieving max service temperature of 150°C, also 	Inspection equipment			
12 to 16	30 to 60	available				
10 to 14.5	15.2 to 30.2	 A compact XY structure is allowed due to an XY orthogonal, single-piece LM block Stainless steel type also available as standard 	 IC/LSI manufacturing machine Inspection equipment Slide unit of OA equipment Wafer transfer equipment Wafer transfer equipment Electronic components of electron microscope Optical stage 			
18 to 90	39 to 170	LM block placed in the loading point • Large circular motion easily achieved				
40 to 105	70 to 175		 XY axes of ordinary industrial machinery Various conveyance systems Automated warehouse Palette changer Automatic coating machine Various welding machines 			



