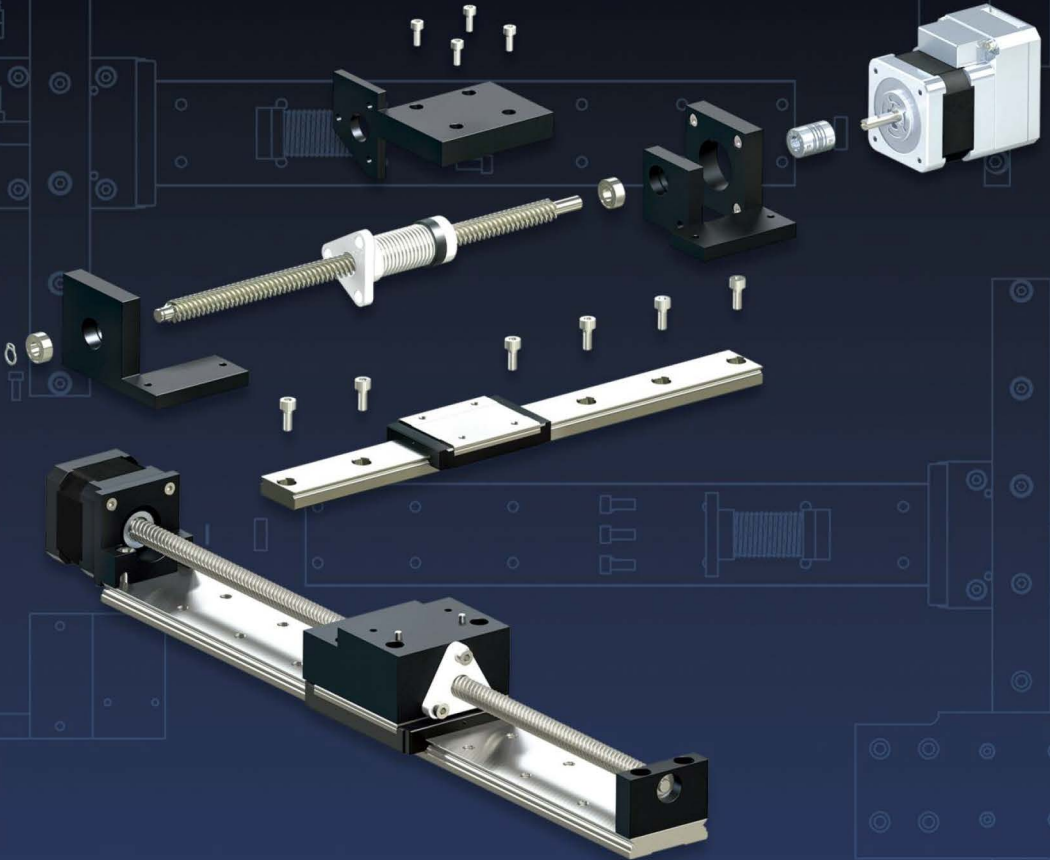




Reliance[®] Precision Limited



Precise Motion Control Solutions

Linear Guides and Slides



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Low friction linear motion

The Reliance range of precision slides and guides provides a variety of linear actuation solutions for loads up to 12,580 N and with lengths in excess of 1 metre. The range includes miniature linear guides, stroke slides, roller slides, rack driven ball slides and linear rails, together with spline shafts which provide both linear and rotary motion.

Miniature linear guides

The linear guides consist of a stainless steel rail with a unique recirculating ball design in the carriage, which delivers smooth motion, low noise and high accuracy. The guides provide high levels of stiffness to enable the carriage to operate at higher speeds and with a 45° contact angle and a gothic profile design incorporated into the carriage, resulting in an equal load capacity in all directions, they provide high load and moment capacity. With their built-in lubrication reservoirs they provide an effective, low maintenance solution, further enhanced by specially designed seals to prevent dust and foreign objects from entering the system.



Linear guides are available with 3 mm to 15 mm wide rails and lengths up to 870 mm, offered in standard sizes or custom lengths, with carriages available in a variety of widths and lengths. Options are available for both lubrication and seals, with different mounting options accommodated via tapped or counter-bored mounting holes, and options for accuracies and pre-loading of the bearings where additional stiffness and precision are required.

Reliance's cut-to-length capability means that customers can order small quantities and samples for product trials or prototyping on a reduced lead-time.

Miniature stroke slides

The miniature stroke slide offers a compact alternative to the linear guides for applications where a short stroke length is required, making it an ideal choice for a smaller space envelope. They are available in 7 mm to 12 mm wide rails and up to 100 mm length rails, providing up to 94 mm travel length. The stroke slides possess many of the same characteristics as the linear guides however there is no ball recirculation, rather the balls roll on rails resulting in smooth motion, low friction and high accuracy without vibration.



The linear guides and stroke slides are ideal for use in a linear actuation system, used in conjunction with the Cool Muscle intelligent motor and leadscrews or rack and pinions, to provide stable, accurate load movement.

Ball and crossed roller

Ball and crossed roller slides provide very low friction linear motion in a compact package, with a high load carrying capacity, long life and high accuracy. They are similar to the miniature stroke slides, but available with rails from 4 mm to 38.1 mm widths and up to 381 mm lengths. The ball slides are also



available in a rack driven configuration suitable for controlled motion with a rack and pinion drive system. Rack driven ball slides are ideal for measuring position, driving a mechanism, or both, and can be used at very high speeds and loads.



Linear rails

Linear rails offer a low cost option for systems where light loads are used. The linear rails exhibit a minimal frictional drag and long wear characteristics. They consist of a stainless steel shaft and composite polymer bushing, available with shaft diameters from approximately 6 mm to 19 mm and lengths up to 3,600 mm.

Spline shafts

Spline shafts are suited to light to moderate load applications, where low cost, low friction and long life are the primary design considerations. They provide anti-rotation for one axis motion or a drive mechanism for two axes of motion. The assembly consists of a stainless steel spline shaft treated with low friction TFE coating together with a free-running or anti-backlash composite polymer bushing. Shafts are available in diameters from 3.18 mm to 19.05 mm, with lengths up to 3,600 mm. Bushings are supplied with an integral brass collar to facilitate various mounting configurations without nut distortion. Spline shafts are offered with a wide range of options including alternative materials, end modifications, multiple bushings and bushing modifications. An anti-backlash assembly is available for applications requiring minimum torsional play.



Linear Guides and Slides

The range of slides and guides are suitable for a variety of applications including accurate XY stages, medical and laboratory automation and scientific analysis equipment.



Customised XYZ positioning table

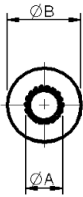


Laboratory automation assembly

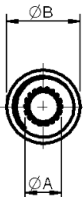
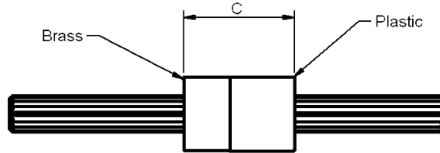


All dimensions in mm
General tolerances ± 0.13 mm
Material: See page 9-5

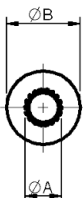
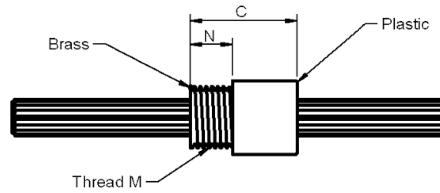
Associated Products
Leadscrews: page 7-1
Hardware: page 13-1



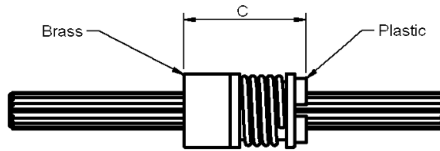
SRSSBP
(Free running)



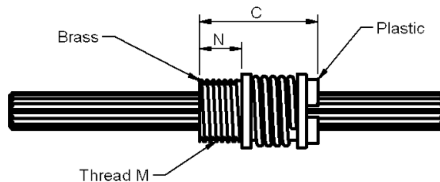
SRSSBY
(Free running)



SRSSZP
(Anti-backlash)



SRSSZY
(Anti-backlash)



Linear Guides
and Slides



Part number selection table

Example Part No:- SRSS B P 6 T 1 - 100mm

Number of bushings: 6
TFE coating (standard): T

Basic Part No.	Bushing Style	Mount	Size Code	Shaft Dia ØA** ±0.05 mm	Bushing Outside Dia ØB ±0.025 mm	Bushing Length C ±0.25 mm	Thread M* (Inch)	Thread Length N* ±0.05 mm	Max Length
SRSS	B (Free running)	P (Plain Dia)	3	3.18	9.53	12.7	3/8-24	6.35	900
			6	6.35	12.70	19.1	7/16-20	6.35	2400
	Z (Anti-backlash)	Y (Thread)	10	9.53	15.88	25.4	9/16-20	9.53	2400
			13	12.70	20.65	38.1	3/4-20	12.70	2400
			19	19.05	28.58	57.2	1-16	19.05	3600

* Only on thread mounting spline shafts.

** 3.18 mm shaft diameter only available in SRSSBP and SRSSBY styles.

Note: Due to the process of manufacture, a small number of localised hollows and hard spots may be created. This will not affect the overall function or performance.

i Product options

- Lengths up to 3,600 mm available
- Larger number of bushings
- Bush modifications
- End modifications



? Technical support

- Material:
 - Spline shaft - Stainless steel, TFE coated
 - Bushing - Graphite filled PTFE thermoplastic with brass collar
- Standard shaft straightness is 0.076 mm per 305 mm
- Typical radial clearance between shaft and bushing for free running assembly is 0.05 to 0.076 mm. Anti-backlash assemblies provide additional system stiffness
- Designed for light load applications
- Maximum twist 3°/305 mm
- Torsional clearance 3° bushing to shaft
- Product overview - see [pages 9-2 to 9-3](#)

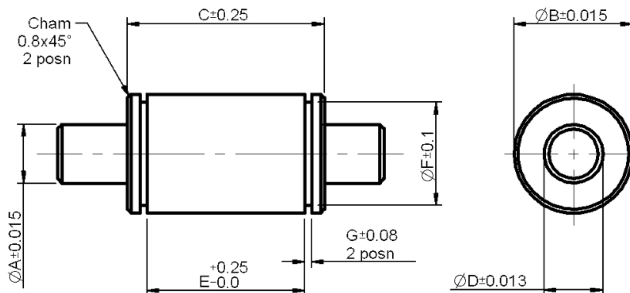
Linear Guides and Slides



All dimensions in mm
 General tolerances ± 0.13 mm
 Material: Rail - Stainless steel
 Bushing - Composite polymer

Associated Products
 Leadscrews: page 7-1
 Hardware: page 13-1

The linear rail system has been designed for light load applications where low cost, minimum frictional drag and long wear life are primary design considerations - Product overview - see [pages 9-2 to 9-3](#)



Part number selection table

Example Part No:- **RGR B P 6 T 1 - 100mm**

RGR: Basic Part No.
 B: Bushing Style
 P: Mount Style
 6: Size Code
 T: TFE coating (standard)
 1: Number of bushings
 100mm: Shaft length, (max length 3600 mm)

Basic Part No.	Bushing Style	Mount Style	Size Code	Rail Dia $\varnothing A^{**}$	Bushing OD $\varnothing B$	C	Bushing Bore Dia $\varnothing D$	Width E	Groove F	G	Radial Load Kg
RGR	B	P	6	6.279	12.70	19.43	6.311	13.59	11.43	1.02	2.3
			10	9.428	19.05	32.39	9.462	25.27	17.17	1.17	4.5
			13	12.603	25.40	42.16	12.637	33.78	22.86	1.17	6.8
			19	18.826	31.75	51.72	18.860	41.15	28.60	1.47	11.4

** Including TFE coating.

? Technical support

- The assembly consists of a centreless ground and burnished stainless steel shaft mated with a composite polymer bushing
- The material combinations have been selected so that the thermal fluctuations have minimal effect on system performance
- Standard shaft straightness is 0.05 mm per 300 mm
- Standard typical radial clearance between shaft and bearings on TFE coated assemblies is 0.025 mm
- Bushings are manufactured with standard retaining ring grooves



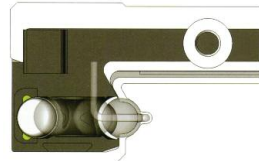


Reinforced design for high speed running

During operation, the steel balls generate an impact force on the end caps when direction of motion changes. The RMR miniature design includes an embedded plastic inverse hook that tightly secures the carriage components and absorbs these impact forces. The high speed running capability of our linear guides has increased in line with the demands of rapid motion automation.

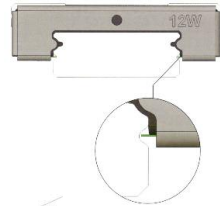
Unique ball re-circulation design

The stainless steel ball re-circulation channels are sealed by plastic end caps, resulting in low noise during operation. The design of the lubricant store, which is embedded within the re-circulation channel, reduces the frequency of lubrication.



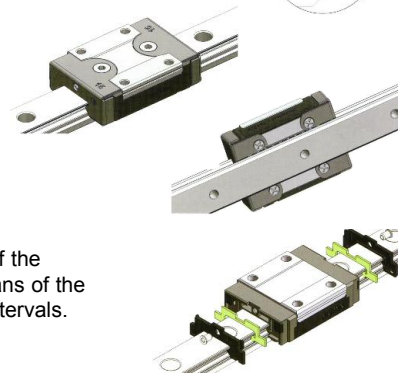
Bottom seal

The bottom seal, available on sizes 9, 12 and 15, prevents foreign objects entering the carriage assembly. The life of the carriage and rail is increased while running smoothness is uncompromised.



Stainless steel reinforcement plates

The plastic end caps are entirely encased by two stainless steel reinforced plates secured in place with stainless steel screws. The increased stiffness allows the carriage to operate at higher speeds.

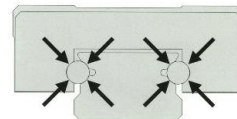


Lubrication reservoir design

Lubrication is injected via holes located at both ends of the carriage and carried efficiently to the raceways by means of the re-circulating balls, thus increasing the maintenance intervals.

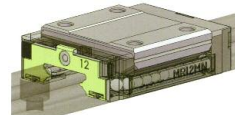
High load and moment capacity

The miniature linear guide series incorporates a gothic profile design with a 45° contact angle, providing equal load capacity in all directions. Large steel balls have been designed into limited space to provide enhanced load bearing and torsional resistance.



Dust proof design

Specially designed end seals prevent dust and foreign objects entering the system, increasing the product life. These seals are low friction and do not effect the smooth running of the linear guide.

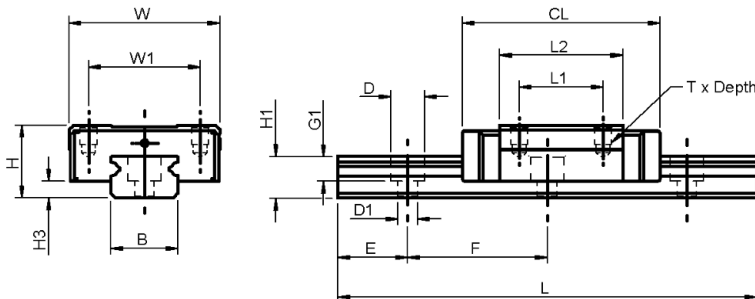


Linear Guides and Slides



All dimensions in mm
 General tolerances ± 0.13 mm
 Material: Stainless steel

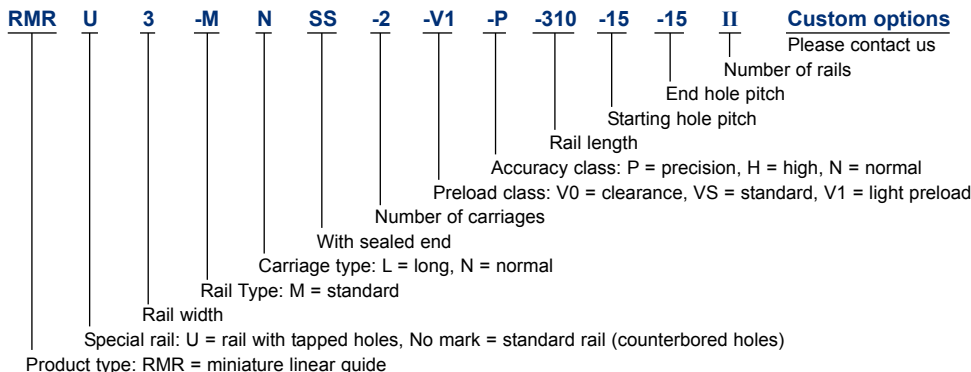
Associated Products
 Set screws: page 13-11
 Machine screws: page 13-2



Part number selection table

Basic Part Number	Max Travel	Carriage Dimensions			Max Rail Length	Load Rating				
		Height H	Width W	Length CL		Basic Dynamic Load N	Basic Static Load N	Static Moment Loads		
								To Nm	Tx Nm	Ty Nm
RMRU3-MNSS-	286.3	4	8	11.7	300	190	310	0.6	0.4	0.4
RMR5-MNSS-	981.3	6	12	16.0	1,000	335	550	1.7	1.0	1.0
RMR7-MNSS-	974.3	8	17	23.7	1,000	890	1,400	5.2	3.3	3.3
RMR9-MNSS-	967.4	10	20	30.6	1,000	1570	2,495	11.7	6.4	6.4
RMR12-MNSS-	962.6	13	27	35.4	1,000	2308	3,465	21.5	12.9	12.9
RMR15-MNSS-	955	16	32	43.0	1,000	3810	5,590	43.6	27.0	27.0
RMRU3-MLSS-	282	4	8	16.0	300	295	575	0.9	1.1	1.1
RMR5-MLSS-	976.8	6	12	19.6	1,000	470	900	2.4	2.1	2.1
RMR7-MLSS-	966.8	8	17	31.2	1,000	1,310	2,440	9.0	7.7	7.7
RMR9-MLSS-	957.1	10	20	40.9	1,000	2,135	3,880	18.2	12.4	12.4
RMR12-MLSS-	950.4	13	27	47.6	1,000	3,240	5,630	34.9	30.2	30.2
RMR15-MLSS-	938	16	32	60.0	1,000	5,350	9,080	70.0	63.3	63.3

Part number structure



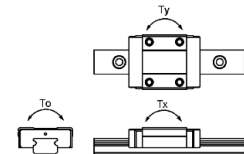


Dimensions

Basic Part Number	Rail Dimensions			Carriage Dimensions				
	Width	Height	Mounting Hole	Mounting Length	Height	Thread	Ctrs	Ctrs
	B	H1	D x D1 x G1	L2	H3	T x Depth	L1	W1
RMRU3-MNSS-	3	2.6	M1.6	6.7	1.0	M1.6 x 1.1	3.5	-
RMR5-MNSS-	5	3.5	3.5 x 2.4 x 1	10.0	1.5	M2 x 1.5	-	8
RMR7-MNSS-	7	4.7	4.2 x 2.4 x 2.3	14.3	1.5	M2 x 2.5	8	12
RMR9-MNSS-	9	5.5	6 x 3.5 x 3.5	20.5	2.2	M3 x 3.0	10	15
RMR12-MNSS-	12	7.5	6 x 3.5 x 4.5	22.0	3.0	M3 x 3.5	15	20
RMR15-MNSS-	15	9.5	6 x 3.5 x 4.5	27.0	4.0	M3 x 5.5	20	25
RMRU3-MLSS-	3	2.6	M1.6	11.0	1.0	M2 x 1.1	5.5	-
RMR5-MLSS-	5	3.5	3.5 x 2.4 x 1	13.5	1.5	M2.6 x 2.0	7	-
RMR7-MLSS-	7	4.7	4.2 x 2.4 x 2.3	21.8	1.5	M2 x 2.5	13	12
RMR9-MLSS-	9	5.5	6 x 3.5 x 3.5	30.8	2.2	M3 x 3.0	16	15
RMR12-MLSS-	12	7.5	6 x 3.5 x 4.5	34.0	3.0	M3 x 3.5	20	20
RMR15-MLSS-	15	9.5	6 x 3.5 x 4.5	44.0	4.0	M3 x 5.5	25	25

Available standard lengths (mm)

Size	3M	5M	7M	9M	12M	15M
Standard Length of One Rail (mm) L	30	40	40	55	70	70
	40	55	55	75	95	110
	50	70	70	95	120	150
		85	85	115	145	190
		100	100	135	170	230
			130	155	195	270
				175	220	310
				195	245	350
				275	270	390
				375	320	430
					370	470
					470	550
				570	670	
					870	
Pitch F	10	15	15	20	25	40
E Min	3	3	3	4	4	4
E Max	5	10	10	20	20	35



Linear Guides and Slides

i Product options

- End seal plus reinforcement plate on sizes 9, 12 and 15. Replace **-SS** with **-EE**
- End seal plus lubrication reservoir on all sizes. Replace **-SS** with **-ZZ**
- Bottom and end seals. Replace **-SS** with **-EU**
- Bottom seal, end seal and lubrication reservoir. Replace **-SS** with **-UZ**
- Customised design, including cut to length

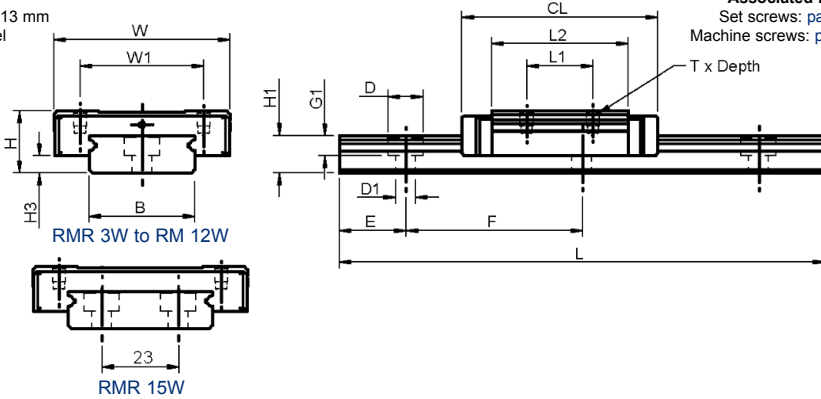
? Technical support

- Key features - see [page 9-7](#)
- Technical information - see [page T9-3](#)
- Joining guides for longer lengths - see [page T9-3](#)
- Product overview - see [pages 9-2 to 9-3](#)



All dimensions in mm
 General tolerances ± 0.13 mm
 Material: Stainless steel

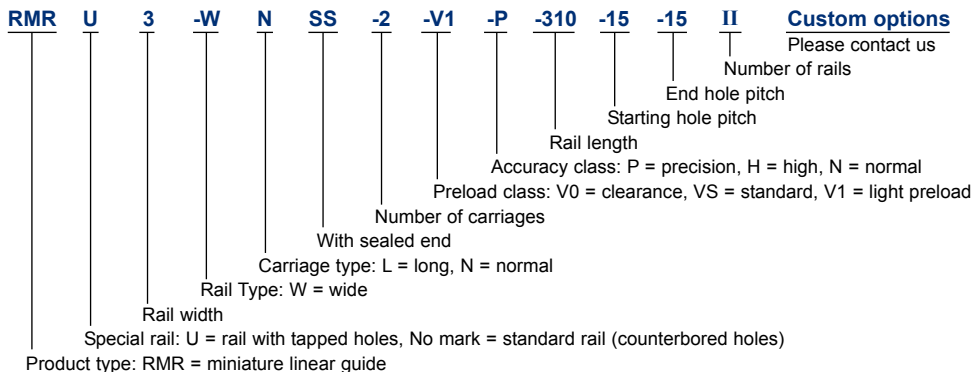
Associated Products
 Set screws: page 13-11
 Machine screws: page 13-2



Part number selection table

Basic Part Number	Max Travel	Carriage Dimensions			Max Rail Length	Load Rating				
		Height H	Width W	Length CL		Basic Dynamic Load N	Basic Static Load N	Static Moment Loads		
								To Nm	Tx Nm	Ty Nm
RMR3-WNSS-	983.0	4.5	12	15	1,000	280	530	1.6	0.9	0.9
RMR5-WNSS-	976.9	6.5	17	21.1		475	900	4.6	2.2	2.2
RMR7-WNSS-	966.4	9.0	25	31.6		1,180	2,095	15.0	7.3	7.3
RMR9-WNSS-	958.9	12.0	30	39.1		2,030	3,605	33.2	13.7	13.7
RMR12-WNSS-	953.6	14.0	40	44.4		3,065	5,200	63.7	26.3	26.3
RMR15-WNSS-	942.7	16.0	60	55.3	5,065	8,385	171.7	45.7	45.7	
RMR3-WLSS-	977.9	4.5	12	20.1	1,000	370	800	2.5	1.9	1.9
RMR5-WLSS-	970.8	6.5	17	27.2		615	1,315	6.8	4.1	4.1
RMR7-WLSS-	957.5	9.0	25	40.5		1,570	3,140	22.65	14.9	14.9
RMR9-WLSS-	947.3	12.0	30	50.7		2,550	4,990	45.9	26.7	26.7
RMR12-WLSS-	938.6	14.0	40	59.4		4,070	7,800	95.6	56.4	56.4
RMR15-WLSS-	923.6	16.0	60	74.4		6,725	12,580	257.6	93.1	93.1

Part number structure



Linear Guides and Slides

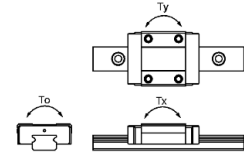


Dimensions

Basic Part Number	Rail Dimensions			Carriage Dimensions				
	Width	Height	Mounting Hole	Mounting Length	Height	Thread	Ctrs	Ctrs
	B	H1	D x D1 x G1	L2	H3	T x Depth	L1	W1
RMR3-WNSS-	6	2.7	4 x 2.4 x 1.5	10.0	1.0	M2 x 1.4	4.5	-
RMR5-WNSS-	10	4.0	5.5 x 3 x 1.6	15.1	1.5	M2.5 x 1.5	6.5	13
RMR7-WNSS-	14	5.2	6 x 3.5 x 3.5	21.2	2.0	M3 x 3	10.0	19
RMR9-WNSS-	18	7.3	6 x 3.5 x 4.5	27.9	3.4	M3 x 3	12.0	21
RMR12-WNSS-	24	8.5	8 x 4.5 x 4.5	31.0	3.9	M3 x 3.5	15.0	28
RMR15-WNSS-	42	9.5	8 x 4.5 x 4.5	38.5	4.0	M4 x 4.5	20.0	45
RMR3-WLSS-	6	2.7	4 x 2.4 x 1.5	15.1	1.0	M2 x 1.4	8.0	-
RMR5-WLSS-	10	4.0	5.5 x 3 x 1.6	21.2	1.5	M2.5 x 1.5	11.0	13
RMR7-WLSS-	14	5.2	6 x 3.5 x 3.5	30.1	2.0	M3 x 3	19.0	19
RMR9-WLSS-	18	7.3	6 x 3.5 x 4.5	39.5	3.4	M3 x 3	24.0	23
RMR12-WLSS-	24	8.5	8 x 4.5 x 4.5	46.0	3.9	M3 x 3.5	28.0	28
RMR15-WLSS-	42	9.5	8 x 4.5 x 4.5	57.6	4.0	M4 x 4.5	35.0	45

Available standard lengths

Size	3W	5W	7W	9W	12W	15W
Standard Length of One Rail (mm) L	40	50	50	50	70	110
	55	70	80	80	110	150
	70	90	110	110	150	190
		110	140	140	190	230
		130	170	170	230	270
		150	200	200	270	310
		170	260	260	310	430
			290	290	390	550
				320	470	670
					550	790
Pitch F	15	20	30	30	40	40
E Min	3	4	3	4	4	4
E Max	10	15	25	25	35	35



i Product options

- End seal plus reinforcement plate on sizes 9, 12 and 15. Replace **-SS** with **-EE**
- End seal plus lubrication reservoir on all sizes. Replace **-SS** with **-ZZ**
- Bottom and end seals. Replace **-SS** with **-EU**
- Bottom seal, end seal and lubrication reservoir. Replace **-SS** with **-UZ**
- Customised design, including cut to length

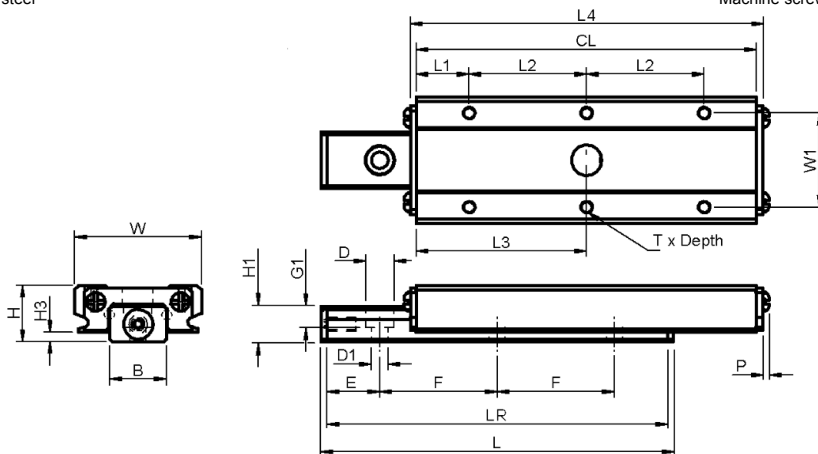
? Technical support

- Key features - see [page 9-7](#)
- Technical information - see [page T9-3](#)
- Joining guides for longer lengths - see [page T9-3](#)
- Product overview - see [pages 9-2 to 9-3](#)



All dimensions in mm
 General tolerances ± 0.13 mm
 Material: Stainless steel

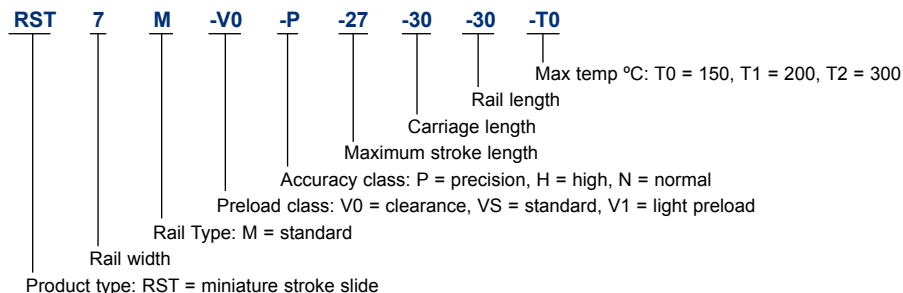
Associated Products
 Set screws: page 13-11
 Machine screws: page 13-2



Part number selection table

Basic Part Number	Max Travel	Carriage Dimensions					Load Rating				
		H	W	CL	L4	L3	Basic Dynamic Load N	Basic Static Load N	Static Moment Loads		
									To Nm	Tx Nm	Ty Nm
RST7M	27	8	17	28.0	30	14.0	910	1,580	5.9	3.4	3.4
	41			43.0	45	21.5	1,220	2,500	9.1	8.0	8.0
	55			58.0	60	29.0	1,490	3,330	12.4	14.6	14.6
RST9M	38	10	20	38.0	40	19.0	1,590	2,773	13.1	6.8	6.8
	58			58.0	60	29.0	2,080	4,170	19.7	16	16
	78			78.0	80	39.0	2,520	5,547	26.2	29.2	29.2
RST12M	44	13	27	47.4	50	23.7	2,550	4,340	27.0	16	16
	69			72.4	75	36.2	3,350	6,510	40.1	35.6	35.6
	94			97.4	100	48.7	4,050	8,670	54.0	62.8	62.8

Part number structure





Dimensions

Basic Part Number	Rail Dimensions							Carriage Dimensions					
	B	H1	Mounting Hole D x D1 x G1	LR	L	E	F	H3	L1	T x Depth	L2	W1	P
RST7M	7	4.7	4.2 x 2.4 x 2.3	28	30	6.5	7.5	1.5	6.5	M2 x 2.5	7.5	12	1
				43	45		15.0				15.0		
				58	60		22.5				22.5		
RST9M	9	5.5	6 x 3.5 x 3.5	38	40	9.0	10.0	2.2	9.0	M3 x 3.0	10.0	15	1.3
				58	60		20.0				20.0		
				78	80		30.0				30.0		
RST12M	12	7.5	6 x 3.5 x 4.5	47.4	50	11.2	12.5	3.0	11.2	M3 x 3.5	12.5	20	1.3
				72.4	75		25.0				25.0		
				97.4	100		37.5				37.5		



Linear Guides
and Slides

? Technical support

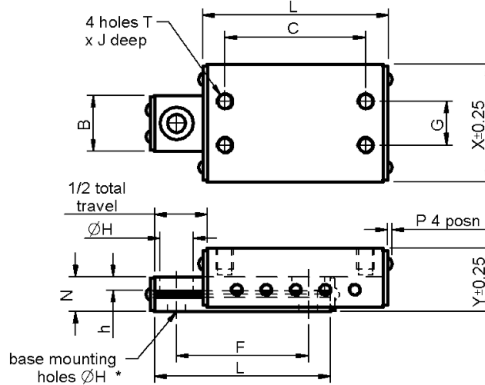
- High load and high moment capacity
- High running accuracy and smoothness
- Easy mounting
- Operating temperature of up to 150°C as standard. Higher temperatures of up to 300°C available. Note that the higher temperature options will have a lower load capacity
- Life rating calculations - see [page T9-2](#)
- Lubrication details - see [page T9-2](#)
- Product overview - see [pages 9-2 to 9-3](#)



Ball and Crossed Roller Slides

All dimensions in mm
 General tolerances $\pm 0.13\text{mm}$
 Material: See tables

Associated Products
 Leadscrews: [page 7-1](#)
 Hardware: [page 13-1](#)



Part number selection table

Ballslide Series	Dimensions					Mounting Details				
	Carriage Width X ± 0.25	Height Y ± 0.25	Screw P ± 0.25	Base Width B ± 0.25	Depth N ± 0.25	Base			Carriage	
						Hole Dia H ± 0.25	Cbore \varnothing	Cbore Depth h ± 0.25	Thread Size T	Depth J
CA	9.7	5.8	1.3	4.0	3.4	M2*	--	--	M2	2.29
DA & XDA	14.2	8.0	1.0	6.4	4.7	2.2	4.0	2.2	M2	2.54
EA & XEA	19.0	10.4	1.0	9.5	6.3	3.5	6.1	3.4	M3	3.30
MA	25.4	12.7	1.0	12.7	6.3	3.5	6.1	3.4	M4	5.33
NA & XNA	26.9	13.4	1.0	12.7	7.9	4.6	8.1	4.4	M4	4.83
SA1 & XSA1	38.0	15.8	1.3	19.0	8.6	4.6	8.1	4.4	M4	6.35
SA2 & XSA2	44.0	19.0	2.0	22.2	10.2	4.6	8.1	4.4	M4	8.13
SA3 & XSA3	66.5	25.4	2.0	38.1	15.9	5.8	10.0	5.3	M5	8.38

L, C & F dimensions, see part number on [page 9-15](#)

* For CA series slides, H holes are threaded and not counterbored.

Specifications

Feature	Ball Slide	Crossed Roller Slide (higher load capacity)
Straight line accuracy	0.0005 mm/mm	0.0001 mm/mm
Positional repeatability	0.005 mm	0.003 mm
Coefficient of friction	0.003 typical	0.003 typical
Construction	Aluminium carriage and base Hardened steel rods and balls/rollers	Stainless steel end caps
Finish: Carriage	Clear anodised	Black anodised
Base	Black anodised	Black anodised



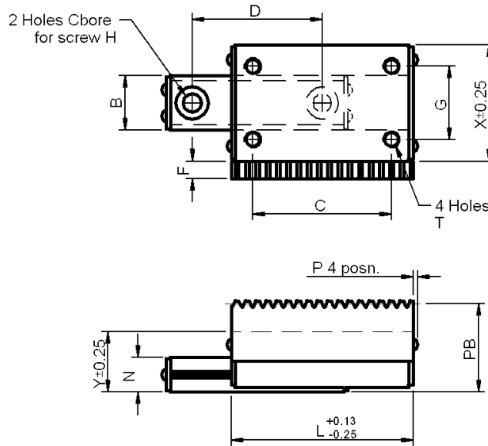
Ball and Crossed Roller Slides

Drawing dimension and mounting table

Part Number		Total Travel	Slide Length L ±0.25	Hole Centres C ±0.25	Hole Centres F ±0.25	Hole Centres G ±0.25	Dynamic Load Capacity (N)	
Ball Bearing	Crossed Roller						Ball Bearing	Crossed Roller
CA-1	--	13	19	13	10	4	6.67	--
CA-2	--	25	32	26	20		6.67	--
CA-3	--	38	44	37	30		6.67	--
DA-1	XDA-1	13	27	15	19	6	19.62	137.34
DA-2	XDA-2	25	52	41	35		39.24	245.25
DA-3	XDA-3	50	78	66	60		49.05	294.30
DA-4	--	75	103	92	86		58.86	--
DA-5	--	100	128	117	89		78.48	--
DA-6	--	127	154	142	114		78.48	--
EA-1	XEA-1	13	27	15	19	9	39.24	215.82
EA-2	XEA-2	25	52	41	35		49.05	343.35
EA-3	XEA-3	50	78	66	60		49.05	412.02
EA-4	--	75	103	92	86		58.86	--
EA-5	--	100	128	117	89		68.67	--
EA-6	--	127	154	142	114		78.48	--
MA-1	--	13	40	32	32	10	49.05	--
MA-2	--	25	65	57	57		49.05	--
MA-3	--	50	90	82	82		68.67	--
NA-1	--	19	40	32	28	10	68.67	--
NA-2	XNA-2	38	65	57	54		78.48	588.60
NA-3	XNA-3	50	90	82	79		88.29	981.00
NA-4	XNA-4	75	116	102	82		107.91	1177.21
NA-6	--	100	152	140	102		137.34	--
NA-8	--	150	203	190	127		156.96	--
NA-10	--	200	254	240	178		176.58	--
SA1-1	XSA1-1	25	51	35	37	16	68.67	578.79
SA1-2	XSA1-2	50	76	60	60		88.29	774.99
SA1-4	XSA1-4	100	152	136	100		156.96	1363.59
SA1-6	--	150	203	186	128		196.20	--
SA1-8	--	200	254	238	178		245.25	--
SA2-1	XSA2-1	25	51	35	38	20	88.29	578.79
SA2-2	XSA2-2	50	83	65	65		186.39	774.99
SA2-3	XSA2-3	75	102	85	85		235.44	774.99
SA2-4	XSA2-4	100	152	140	100		264.87	1363.59
SA2-8	--	200	254	240	178		402.21	--
SA3-1.5	XSA3-1.5	38	67	42	42	35	156.96	1167.39
SA3-2	XSA3-2	50	102	75	75		274.68	1549.98
SA3-4	XSA3-4	100	152	125	125		529.74	1942.38
SA3-6	XSA3-6	150	229	75 x2	178		667.08	3109.77
SA3-9	--	228	305	75 x3	254		824.04	--
SA3-12	--	304	381	75 x4	330		912.33	--

Linear Guides and Slides

All dimensions in mm
General tolerances ± 0.13 mm



Associated Products
Rack pinions: page 6-10
Hardware: page 13-1

Drawing dimension and mounting table

Ballslide Series	Dimensions							Mounting Details	
	Rack		Slide				Base	Carriage	
	Face Width F	Height PB	Carriage Width X	Height Y	Screw P	Base Width B	Depth N	Screw H	Thread Size T
RDA	2.50	11.629	14.22	8.13	1.0	6.35	4.75	M2	M2
REA	3.75	11.500	19.05	10.41	1.0	9.53	6.35	M3	M3
RNA	3.75	14.500	26.92	13.46	1.0	12.70	7.92	M4	M4
RSA2	7.56	20.690	44.45	19.05	2.0	22.23	10.16	M4	M4

L, C & D dimension, see part number on [page 9-17](#)

Slide specification

Straight line accuracy	0.0005 mm per mm
Positional repeatability	0.005 mm
Coefficient of friction	0.003 typical
Construction	Aluminium carriage and base Hardened steel rods and balls Steel end caps
Finish: Carriage Base	Clear anodised standard (black finish available)
	Black anodised

Rack Driven Ballslides

Part number selection table

Part Number	Ballslide Travel +1.5/-0.0	Ballslide Length L	Hole Centres C	Hole Centres D	Hole Centres G	Ballslide Load Capacity N
RDA-1	12.7	26.92	15	19		17.8
RDA-3	50.8	77.72	66	60	6.0	53.4
RDA-6	127.0	153.92	142	114		80.1
REA-1	12.7	26.92	15	19		35.6
REA-3	50.8	77.72	66	60	9.0	53.4
REA-6	127.0	153.92	142	114		80.1
RNA-3	50.8	90.42	82	79		89.0
RNA-6	101.6	152.40	140	102	10.0	133.5
RNA-10	203.2	254.00	240	178		178.0
RSA2-2	50.8	82.55	65	65		186.9
RSA2-4	101.6	152.40	140	100	20.0	267.1
RSA2-8	203.2	254.00	240	178		400.6

Rack specifications

Ballslide Series	Rack Circular Pitch	Material	Hardness	Cumulative Pitch Error per 300mm
RDA	1.0	Stainless steel	35-45 HRc	0.008mm
REA				
RNA				
RSA2	2.5			

Linear Guides and Slides













i Product options

- Product overview - see [pages 9-2 to 9-3](#)
- Imperial racks

? Technical support

- Technical information - see [page T9-1](#)



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