



RSRA - ScrewRail® Actuator Assembly

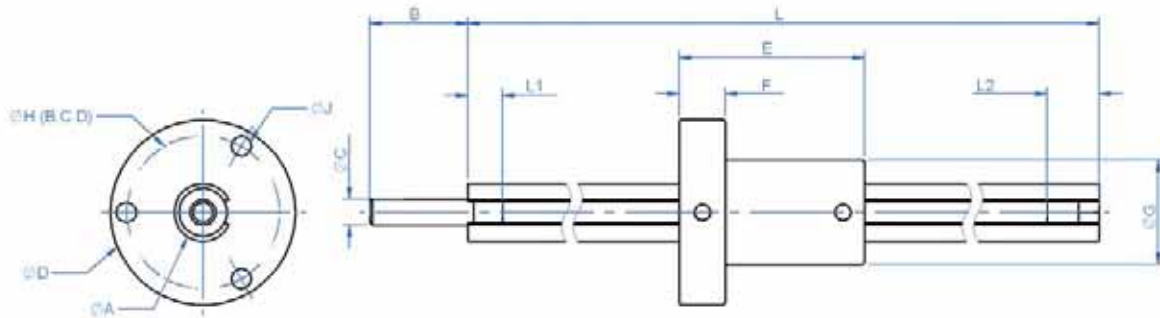
Accurate positioning and long life in a compact assembly

Product Description:

- The ScrewRail® Linear Actuator consists of a precision rolled leadscrew, supported by sealed bearings within a steel guide rail.
- Compact space saving profile, combining both drive and support functions in a single, co-axial component.
- A standard nut for general applications where anti-backlash is not required.
- Eliminates the need for external rail-to-screw alignment, simplifying the design, manufacture and assembly of motion systems.
- Ability to get three-dimensional motion from a single ScrewRail® when mounted vertically.
- Self-lubricating nut/bushing materials ensure long life without maintenance.
- The RSRA is recommended anywhere low drag and minimal free play is required.

Dimensional Tolerances

< L4	± 0.1
4 < L ≤ 16	± 0.15
16 < L ≤ 63	± 0.2
63 < L ≤ 250	± 0.3



Technical Specification:

$$\text{Total Travel} = L - (L1 + L2 + E)$$

Series	ØA mm	B mm	ØC mm	ØD mm	E mm	F mm	ØG Max mm	ØH (B.C.D) mm	ØJ mm	L1 mm	L2 mm
RSRA5	9.30/9.33	9.65	3.16/3.18	24.9	25.4	7.2	14	19.05	2.39	6.86	9.66
RSRA6	12.47/12.5	15.75	4.75/4.76	31.8	36	9.5	19	26.2	3.56	6.6	9.1
RSRA10	18.82/18.85	19.05	6.33/6.34	44.5	51	12.7	28	37.6	4.39	9.7	17.8
RSRA13	25.17/25.2	19.05	6.33/6.34	56.7	64	15.9	38	48.8	5.08	12.2	19.6

Tel : +44 (0) 1484 601002
www.rpmechatronics.co.uk

Fax : +44 (0) 1484 601061
sales@rpmechatronics.co.uk

Standard Product Sizes:

	Series																								
	RSRA5				RSRA6				RSRA10						RSRA13										
	#Length L mm																								
Lead mm	254	305	381	457	102	152	203	254	305	381	457	152	203	254	305	381	457	610	914	254	305	381	457	610	914
1.27					★	★	★	★																	
2.54												★	★	★	★	★						★			
5.08													★	★	★	★						★			
6.35							★	★	★	★															
12.70								★	★	★	★		★	★	★	★		★				★		★	★
25.40								★	★	★	★				★	★	★	★	★			★		★	★

*Length tolerance ±1mm

★Indicates standard available lengths

Product Performance:

Basic Part Number	Nominal Rail Diameter mm	Nominal Screw Diameter mm	Lead mm	Max. Drag Torque Nm	Life @ 1/4 Design Load x 10 ⁶ (Non Anti-backlash) cm	Torque to Move Load x 10 ⁶ Nm/Kg	Design Load Kg	Screw Inertia Kgm ² /m	Equiv. Diameter *
RSRA5-0050	9.52	4.76	1.27	0.014	250 - 380	0.007	5	0.4 x 10 ⁻⁶	7.6
RSRA5-0100			2.54	0.018		0.016			
RSRA5-0250			6.35	0.020		0.019			
RSRA6-0050	12.70	6.35	1.27	0.015	380 - 500	0.007	10	1.3 x 10 ⁻⁶	9.9
RSRA6-0250			6.35	0.020		0.023			
RSRA6-0500			12.70	0.030		0.039			
RSRA6-1000			25.40	0.040		0.070			
RSRA10-0100	19.05	9.52	2.54	0.020	450 - 710	0.016	20	6.5 x 10 ⁻⁶	15.2
RSRA10-0200			5.08	0.030		0.023			
RSRA10-0500			12.70	0.040		0.039			
RSRA10-1000			25.40	0.045		0.070			
RSRA13-0100	25.40	12.70	2.54	0.030	710 - 810	0.016	45	20 x 10 ⁻⁶	20.5
RSRA13-0200			5.08	0.040		0.023			
RSRA13-0500			12.70	0.045		0.039			
RSRA13-1000			25.40	0.060		0.070			

* ScrewRail® stiffness may be modelled using Classical Beam Deflection Theory with equivalent solid stainless steel beam of diameter given.

Basic Part Numbering:

RSRA6-1000-305MM

ScrewRail® and Series Designator

RSRA5 series = 5mm screw
 RSRA6 series = 6mm screw
 RSRA10 series = 10mm screw
 RSRA13 series = 13mm screw

Lead

Screw Length
(Dimension "L")

Non-standard options, please enquire:

- End support modifications.
- Higher accuracy leadscrew, Left Hand (LH) or Left/Right (L/R) threads.
- Alternative ScrewRail® lengths available.
- Other leads available as custom orders.

Full technical information available on request



Rowley Mills, Penistone Road, Lepton, Huddersfield, HD8 0LE, England.
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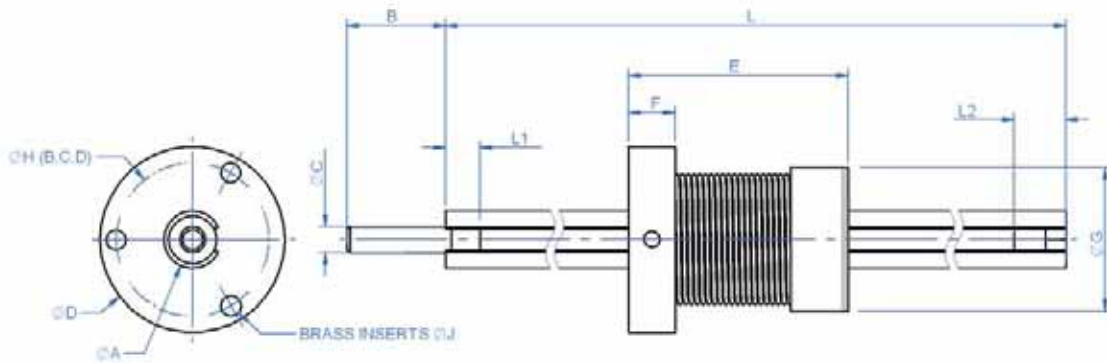
RSRZ - Anti-backlash ScrewRail® Actuator Assembly

Accurate positioning and long life in a compact assembly

Product Description:

- The ScrewRail® Linear Actuator consists of a precision rolled leadscrew, supported by sealed bearings within a steel guide rail.
- Compact space saving profile, combining both drive and support functions in a single, co-axial component.
- An anti-backlash nut, with axial take-up mechanism, provides continuous self-adjusting anti-backlash compensation.
- Eliminates the need for external rail-to-screw alignment, simplifying the design, manufacture and assembly of motion systems.
- Ability to get three-dimensional motion from a single ScrewRail® when mounted vertically.
- Self-lubricating nut/bushing materials ensure long life without maintenance.
- The RSRZ is recommended anywhere low drag and minimal free play is required.

Dimensional Tolerances	
< L4	± 0.1
4 < L ≤ 16	± 0.15
16 < L ≤ 63	± 0.2
63 < L ≤ 250	± 0.3



Technical Specification:

$$\text{Total Travel} = L - (L1 + L2 + E)$$

Size	ØA mm	B mm	ØC mm	ØD mm	E mm	F mm	ØG mm	ØH (B.C.D) mm	ØJ Brass Inserts mm	L1 mm	L2 mm
RSRZ5	9.30/9.32	9.65	3.16/3.18	24.9	27.94	7.2	19.1	19.05	2-56 UNF	6.86	9.66
RSRZ6	12.47/12.5	15.75	4.75/4.76	33.3	36	9.5	24.7	26.2	6-32 UNF	6.6	9.1
RSRZ10	18.82/18.85	19.05	6.33/6.34	46.0	51	12.7	35.1	37.6	10-32 UNF	9.7	17.8
RSRZ13	25.17/25.2	19.05	6.33/6.34	58.4	64	15.9	43.7	48.8	10-32 UNF	12.2	19.6

Standard Product Sizes:

Lead	Series																										
	RSRZ5				RSRZ6				RSRZ10								RSRZ13										
	#Length L mm																										
	254	305	381	457	102	152	203	254	305	381	457	152	203	254	305	381	457	533	610	914	254	305	381	457	610	914	
1.27					★	★	★	★																			
2.54												★	★	★	★	★							★				
5.08													★	★	★	★							★				
6.35							★	★	★	★																	
12.70								★	★	★	★		★	★	★	★		★	★				★		★	★	
25.40								★	★	★	★					★	★	★	★	★			★		★	★	★

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Product Performance:

Basic Part Number	Nominal Rail Diameter mm	Nominal Screw Diameter mm	Lead mm	Max. Drag Torque mm	Life @ 1/4 Design Load x 10 ⁶ (Non Anti-backlash) cm	Torque to Move Load x 10 ⁶ Nm/Kg	Design Load Kg	Screw Inertia Kgm ² /m	Equiv. Diameter *
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RSRZ6-0050	12.70	6.35	1.27	0.020	190 - 250	0.007	10	1.3 x 10 ⁻⁶	9.9
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RSRZ6-0500			12.70	0.040		0.039			
RSRZ6-1000			25.40	0.045		0.070			
RSRZ10-0100	19.05	9.52	2.54	0.045	230 - 350	0.016	20	6.5 x 10 ⁻⁶	15.2
RSRZ10-0200			5.08	0.047		0.023			
RSRZ10-0500			12.70	0.050		0.039			
RSRZ10-1000			25.40	0.053		0.070			
RSRZ13-0100	25.40	12.70	2.54	0.057	350 - 410	0.016	45	20x10 ⁻⁶	20.5
RSRZ13-0200			5.08	0.060		0.023			
RSRZ13-0500			12.70	0.064		0.039			
RSRZ13-1000			25.40	0.067		0.070			

* ScrewRail® stiffness may be modelled using Classical Beam Deflection Theory with equivalent solid stainless steel beam of diameter given.

Basic Part Numbering:

RSRZ6-1000-305MM

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