

## SRA Screw Rail® Linear Actuators

- Coaxial Screw and Rail Guides
- Recommended anywhere low drag and minimal free play is required

Traditionally, linear motion has required separate components to handle drive, support and guidance. The compact Screw Rail combines all functions in a single, coaxial component. By eliminating the need for external rail-to-screw alignment, the Screw Rail simplifies the design, manufacture and assembly of motion systems. The coaxial design saves as much as 80% of the space used by a two-rail system and is generally less expensive than the equivalent components purchased separately. An added benefit is the ability to get three-dimensional motion from a single Screw Rail.



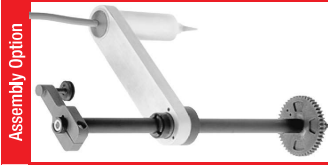
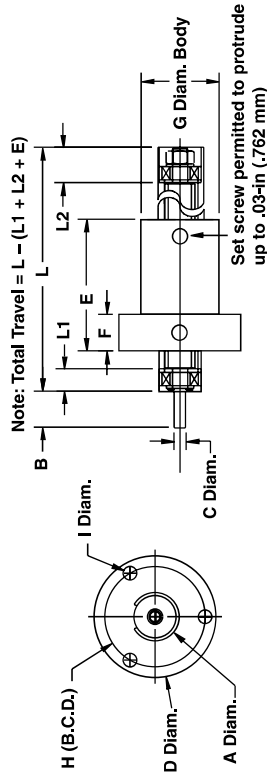
SRA Standard Screw Rail Linear Actuator

### Identifying SRA Screw Rail Part Numbers when Ordering

SR	A	03	K	A	0100	XXX
Prefix SR = Screw Rail	Nut Style A = Free-wheeling	Nominal Rail Diam. 03 = 3/8-in (10 mm) 04* = 1/2-in (13 mm) 06* = 3/4-in (19 mm) 08* = 1-in (25 mm)	Coating S = Uncoated K = Kerfite®	Drive / Mounting A = None	Nominal Thread Lead Code 0050 = .05-in (1.27) SRA03, SRA04 0100 = .100-in (2.54) SRA03, SRA06, SRA08 0200 = .200-in (5.08) SRA06, SRA08 0250 = .250-in (6.35) SRA03, SRA04 0375 = .375-in (9.53) SRA03 0500 = .500-in (12.70) SRA04, SRA06, SRA08 1000 = 1.00-in (25.4) SRA04, SRA06, SRA08	Unique Identifier Suffix used to identify specific motors or a proprietary suffix assigned to a specific customer application. The identifier can apply to either a standard or custom part.

NOTE: Bashes must be included in Part Number (→) as shown above. For assistance call our Engineering Team at 803.213.6200. Right-hand and left-hand assemblies available. \*End supports available, see page 2.

### Dimensional Drawings



When mounted vertically, the Screw Rail can be used to simultaneously lift and rotate (Z-theta motion). With one motor driving the screw and a second rotating the rail, a compact, self-supporting pick and place mechanism can be created.

Part No.	A Diam.	B	C Diam.	D Diam.	E	F	G Diam.	H (B.C.D.)	I	L1	L2
SRA03	.3647/367	.38	.1245/1250	.98	1.0	.28	.562	.76	.094	.37	.38
	9.24/9.32	9.56	3.16/3.18	24.9	25.4	7.2	14.3	19.1	2.39	9.4	9.66
SRA04	.4897/492	0.62	.1870/1875	1.25	1.4	.38	.750	1.03	0.140	0.26	0.36
	12.42/12.5	15.75	4.75/4.76	31.8	36	9.5	19.1	26.2	3.56	6.6	9.1
SRA06	.7397/742	0.75	.2490/2495	1.75	2.0	.50	1.120	1.48	0.173	0.38	0.70
	18.77/18.85	19.05	6.33/6.34	44.5	51	12.7	28.4	37.6	4.39	9.7	17.8
SRA08	.9897/992	0.75	.2490/2495	2.23	2.5	.63	1.495	1.92	0.200	0.48	0.77
	25.12/25.2	19.05	6.33/6.34	56.6	64	15.9	38.0	48.8	5.08	12.2	19.6

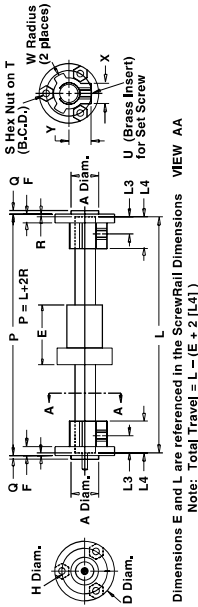
Metric available as requested.

Part No.	Inch Lead*		Thread Lead Code	Nominal Rail Diam.		Nominal Screw Diam.	Max Drag Torque	Life @ 1/4 Design Load X 10 <sup>6</sup> (Non-Arc-Backlash)	Torque-to-Move Lead	Design Load	Screw Inertia per Unit Length	Equivalent Diam**
	inch	mm		inch	mm							
SRA03	.050	1.27	0050	3/8	10	5	1.5	0.014	0.5	0.007	1.5	0.014
	.100	2.54	0100	3/8	10	5	2.0	0.018	1.0	0.016	2.0	0.018
	.250	6.35	0250	3/8	10	5	2.5	0.020	1.25	0.019	2.0	0.020
SRA04	.050	1.27	0050	1/2	13	6	2.0	0.015	0.5	0.007	2.0	0.015
	.375	9.53	0375	1/2	13	6	3.0	0.025	2.0	0.030	2.0	0.030
	.500	12.7	0500	1/2	13	6	3.0	0.020	1.5	0.023	2.0	0.023
SRA06	.100	2.54	0100	3/4	19	10	4.0	0.030	2.0	0.039	4.0	0.030
	.200	5.08	0200	3/4	19	10	5.0	0.040	2.0	0.039	5.0	0.040
	.500	12.7	0500	3/4	19	10	6.0	0.045	2.5	0.039	5.0	0.045
SRA08	.100	2.54	0100	1	25	13	4.0	0.030	1.0	0.016	4.0	0.030
	.200	5.08	0200	1	25	13	5.0	0.040	1.5	0.023	4.0	0.040
	.500	12.7	0500	1	25	13	6.0	0.045	2.5	0.039	4.0	0.045
	1.00	25.40	1000				8.0	0.080	4.5	0.070		

\*Screw Rail stiffness may be modeled using Classical Beam Deflection Theory with equivalent stainless steel beam of diameter given.  
\*\*Other leads available as custom orders.

## Screw Rail® End Supports

- Optional accessory providing convenience of simple and compact mounting
- End Supports slide over the outside diameter of each rail end and "key" off the slot in the Screw Rail Kerite® composite polymer End Supports come standard with three hex nuts that are captured in the flange for easy assembly. Also supplied with a brass threaded insert and a set screw to fasten to the outside diameter of the rail.



SR	04	ES	Z00
Prefix SR = Screw Rail	Nominal Size Diameter 04 = 1/2-in (13 mm) 06 = 3/4-in (19 mm) 08 = 1-in (25 mm)	Accessory ES = End Support	Identifier Z00 = Standard

NOTE: Bashes must be included in Part Number (→) as shown above. For assistance call our Engineering Team at 803.213.6200.

Part No.	A Diam.	D	F	H Diam.	L3	L4	Q	R	S	T	U	W Diam.	X	Y
SRA04	.624/626 (15.85/15.90)	1.35 (34.3)	0.200 (5.08)	0.150 (3.81)	0.060 (1.52)	0.080 (2.03)	0.060 (1.52)	0.103 (26.2)	#6-32	1.03 (26.2)	#6-32	0.47 (12.0)	0.460 (11.68)	0.500 (12.70)
SRA06	.749/751 (19.03/19.08)	1.60 (40.6)	0.250 (6.35)	0.173 (4.39)	0.063 (1.53)	0.090 (22.86)	0.100 (2.54)	0.151 (38.3)	#8-32	1.51 (38.3)	#10-32	0.60 (15.3)	0.594 (15.09)	0.645 (16.38)
SRA08	.989/1.001 (25.38/25.43)	2.20 (55.9)	0.375 (9.53)	0.200 (5.08)	0.092 (23.37)	0.125 (31.75)	0.200 (50.8)	1.82 (46.2)	#10-32	1.82 (46.2)	#10-32	0.82 (20.9)	0.800 (20.32)	0.820 (20.83)

\*Metric carriage hole sizes available: M3, M4, M5, M6.