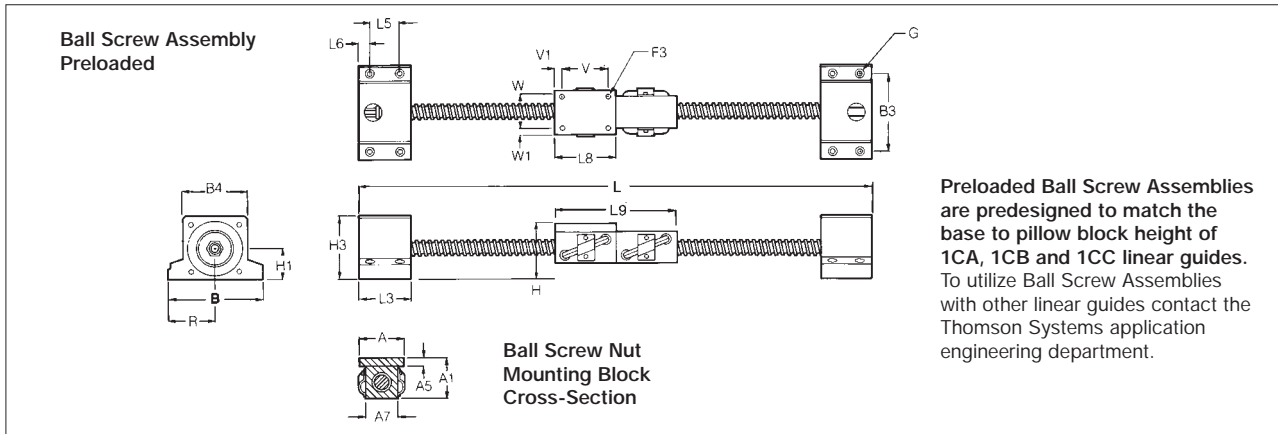
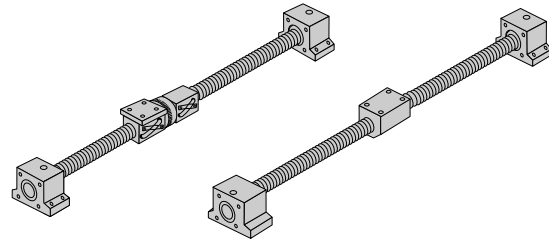


# Ball Screw Assemblies



Ball Screw Assemblies - (Preloaded)													(Dimensions in inches)	
Part Number	Ball Screw Dia. x Lead	L3	L5	L6	L8	H	H3	H1	B	B3	B4	R	G	
BSA-08-Q	.500 x .500	1.50	0.75	0.38	2.25	1.812	2.35	1.200	3.80	3.20	2.50	1.900	0.19	
BSA-12-L	.631 x 1.00	2.00	1.00	0.50		2.437	2.70	1.500	3.80	3.20	2.50	1.900	0.22	
BSA-16-H	1.00 x .250	2.20	1.20	0.50	2.40	2.937	3.45	1.750	5.00	4.20	3.50	2.500	0.28	
BSA-16-T	1.00 x 1.00													
BSA-24-I	1.50 x .250													
BSA-24-J	1.50 x 1.00	2.80	1.50	0.65	2.82	4.250	5.000	2.500	7.25	6.20	5.00	3.625	0.34	
BSA-24-Z	1.50 x 1.875													

Ball Screw Assemblies - (Preloaded)													(Dimensions in inches)	
Part Number	Ball Screw Dia. x Lead	Y	V1	W	W1	F3	L9	A	A1	A5	A7	Motor Frame Size		
BSA-08-Q	.500 x .500	1.00	0.25	0.95	0.14	#6-32		1.23	1.20	0.23	0.76	NEMA 23		
BSA-12-L	.631 x 1.00	1.93	0.25	1.33	0.18	#8-32		1.69	1.80	-	-	NEMA 23		
BSA-16-H	1.00 x .250	1.90	0.25	1.63	0.26	#10-32		2.15	2.03	0.44	2.12	NEMA 34		
BSA-16-T	1.00 x 1.00											NEMA 34		
BSA-24-I	1.50 x .250											NEMA 42		
BSA-24-J	1.50 x 1.00	2.00	0.41	2.00	0.37	1/4-20		2.75	3.25	0.63	2.25	NEMA 42		
BSA-24-Z	1.50 x 1.875											NEMA 42		

Ball Screw Assembly Standard Lengths														(Lengths in inches)			
Part No.	18	24	30	32	36	40	42	48	54	60	64	66	72	80	84	88	96
BSA-08-Q	■	■	■		■		■	■									
BSA-12-L	■	■	■		■		■	■	■	■							
BSA-16-H	■	■	■		■		■	■	■	■					■		■
BSA-16-T	■	■	■		■		■	■	■	■					■		■
BSA-24-I		■		■		■		■			■		■	■		■	■
BSA-24-J		■		■		■		■			■		■	■		■	■
BSA-24-Z		■		■		■		■			■		■	■		■	■

**Custom Lengths and Delivery Information**

Systems ordered in standard lengths are typically shipped in three to four weeks. Custom length systems are available and require four to six weeks for delivery. For special requirements, please contact the Thomson Systems application engineering department.

For Motion Control Options, refer to the Motion Control Section, see [page 381](#).  
 To determine system Torque Requirements of Ball Screw travel life refer to the Engineering Support Appendix, [page 310](#).  
 For Motor Adaptor and Motor Coupling information, see [page 288](#).

For more information, or to place an order, please contact Thomson Industries, at 1-800-554-THOMSON, Fax: 1-800-445-0329, or E-mail at [systems@thomsonmail.com](mailto:systems@thomsonmail.com).

### Ball Screw Assembly Benefits:

- Integrated ball screw, end support, motors and controllers provide complete drive capabilities.
- Designed to fit appropriately sized linear guides.
- Pre-engineered to meet your system needs.

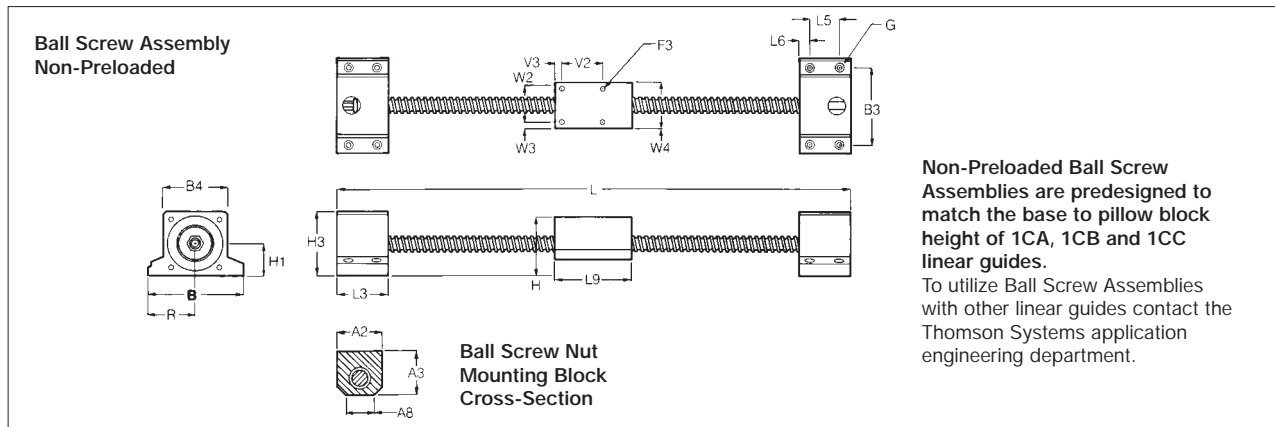
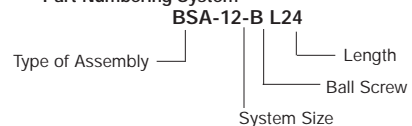
### Ball Screw Assembly Components:

- 1 Ball Screw Assembly with Ball Nut Mounting Surface (Preloaded or Non-Loaded)
- 2 Integrated End Supports with Angular Contact Bearings
- 1 Motor and Controller with integrated indexer (optional)

### Specifying a Thomson Ball Screw Assembly:

1. Determine your drive requirements (torque, speed, acceleration, etc.)
2. Select the part number of the ball screw you have chosen.
3. Place your order with your local authorized Thomson distributor.

### Part Numbering System



**Non-Preloaded Ball Screw Assemblies are predesigned to match the base to pillow block height of 1CA, 1CB and 1CC linear guides.**  
To utilize Ball Screw Assemblies with other linear guides contact the Thomson Systems application engineering department.

Ball Screw Assemblies (Non-Preloaded)												(Dimension in inches)	
Part Number	Ball Screw Dia. x Lead	L3	L5	L6	L9	H	H3	H1	B	B3	B4	R	G
BSA-08-F	.500 x .200	1.50	0.75	0.38	2.25	1.812	2.35	1.200	3.80	3.20	2.50	1.90	0.19
BSA-12-G	.750 x .200	2.00	1.00	0.50		2.437	2.70	1.500	3.80	3.20	2.50	1.90	0.22
BSA-M12-B	12mm x 5mm	1.50	0.75	0.38	2.25	1.812	2.35	1.200	3.80	3.20	2.50	1.90	0.19
BSA-M20-D	20mm x 5mm	2.00	1.00	0.50	2.46	2.437	2.70	1.500	3.80	3.20	2.50	1.90	0.22

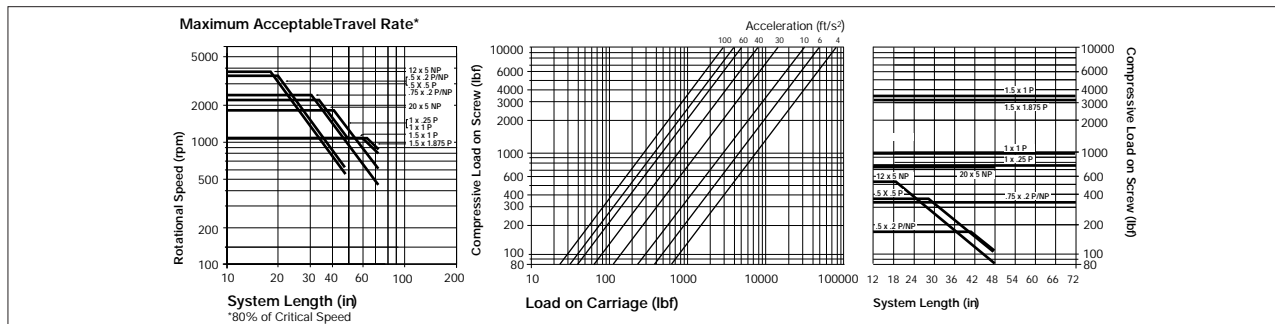
Ball Screw Assemblies (Non-Preloaded)											(Dimension in inches)	
Part Number	Ball Screw Dia. x Lead	A2	A3	A8	V2	V3	W2	W3	W4	F3		
BSA-08-F	.500 x .200	1.19	1.23	0.48	1.00	0.25	0.95	0.12	1.19	#6-32		
BSA-12-G	.750 x .200	1.69	1.80	0.72	1.93	0.25	1.33	0.18	1.69	#8-32		
BSA-M12-B	12mm x 5mm	1.19	1.23	0.48	1.00	0.25	0.95	0.12	1.19	#6-32		
BSA-M20-D	20mm x 5mm	1.69	1.80	0.72	1.93	0.25	1.33	0.18	1.69	#8-32		

The SuperSlide has a pre-designed **Maximum Acceptable Travel Rate**. Calculate maximum rotational speed (rpm) by dividing your required maximum linear speed (in/min) by the corresponding system ball screw lead (in/rev). Enter the chart with the required system length and your maximum rotational speed. Select the system with a maximum acceptable travel rate curve above the plotted line.

**Compressive load** on the ball screw is a key factor in selecting the proper System. Using maximum load and acceleration requirements, plot compressive load on the left side of the chart. Using System length and compressive load, plot the maximum allowable compressive force on the right chart. Select the System with a rated maximum compressive force above your plotted point.

If you have questions concerning your system requirements, contact the Thomson **Systems** application engineering department.

**Note:** Ball screw should never exceed recommended critical speed.



For more information, or to place an order, please contact Thomson Industries, at 1-800-554-THOMSON, Fax: 1-800-445-0329, or E-mail at [systems@thomsonmail.com](mailto:systems@thomsonmail.com).