



INCH BALL SCREW JACKS TECHNICAL DATA

JACK SIZES					JACK SELECTION									
MODEL*	Capacity (tons)	Lifting Screw Dia. (in)	Screw Lead (in)	Root Dia. (in)	Gear Ratio	Turns of Worm for 1" Travel	Maximum Input Torque (in.-lb.)	Maximum Allowable Input (hp)	Maximum Worm Speed at Rated Load	Maximum Load at 1750 RPM	Torque to Raise 1 lb. (in.-lb.)	Tare Drag Torque (in.-lb.)	BackDrive Holding Torque (ft.-lb.)	Page Ref
0.5-BSJ	1/2	5/8	.200	.500	5:1	25	9.5	1/3	1800	1000	.0095	1	1.0	297
					20:1	100	4.0	1/6	1800	1000	.0040	1	.25	297
0.5HL-BSJ	1/2	5/8	.500	.500	5:1	10	24.2	1/3	868	496	.0242	1	2	297
					20:1	40	10.2	1/6	1030	588	.0102	1	1	297
1-BSJ	1	3/4	.200	.602	5:1	25	19	1/2	1660	1895	.0095	3	1.5	298
					20:1	100	9	1/4	1750	2000	.0045	3	.50	298
1HL-BSJ	1	3/4	.500	.602	5:1	10	48.2	1/2	654	747	.0241	3	3.5	299
					20:1	40	9	1/4	691	790	.0114	3	1.5	299
2-BSJ	2	1	.250	.820	6:1	24	40	2	1800	4000	.0100	4	3	300
					12:1	48	26	1 1/2	1800	4000	.0064	4	1.5	300
					24:1	96	17	1/2	1800	4000	.0043	4	1	300
2R-BSJ	2	1	.250	.820	6:1	24	40	2	1800	4000	.0100	4	3	301
					12:1	48	26	1 1/2	1800	4000	.0064	4	1.5	301
					24:1	96	17	1/2	1800	4000	.0043	4	1	301
2.5-BSJ	2 1/2	1	.250	.820	6:1	24	51	2	1800	5000	.0102	5	4	302
					12:1	48	31	1 1/2	1800	5000	.0061	5	2	302
					24:1	96	21	1/2	1500	4287	.0042	5	1.5	302
2.5HL-BSJ	2 1/2	1	1.00	.820	6:1	6	202	2	624	1783	.0404	5	14	303
					12:1	12	122	1 1/2	775	2214	.0244	5	6	303
					24:1	24	85	1/2	371	1059	.0170	5	5	303
3-BSJ	3	1 11/64	.413	.870	6:1	14.53	100	2	1260	4313	.0167	6	6	304
					24:1	58.10	42	1/2	750	2572	.0070	6	2	304

* Measurements listed are for non-keyed units. See individual jack pages for keyed jack info.

NOTES:

- 1) The recommended maximum speed is 3000 rpm provided that the recommended horsepower and temperature are not exceeded.
- 2) Input torque is shown as torque to lift one pound of load. Starting Torque is 100% greater than torque shown. For loads less than 25% of rated loads add tare drag torque.
- 3) Maximum allowable horsepower ratings are based on a 35% duty cycle. For operation at higher duty cycles or repeated use over any segment of the total travel, temperature must be monitored and remain less than 200°F.

- 4) Overload capacity of the Ball Screw Jack is as follows: 10% for dynamic loads, 30% for static loads.
- 5) All Ball Screw Jacks can backdrive and require some means of holding the load, such as a brake on the motor. The product specification pages show holding torque values. Holding torque represents the amount of input torque required to restrain the load and does not indicate recommended brake size to bring the dynamic load to a stop.

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5-BSJ	5	1 1/2	.473	1.140	6:1	12.66	183	3	1033	5904	.0183	10	14	305
					24:1	50.66	73	3/4	647	3700	.0073	10	5	305
5HL-BSJ	5	1 1/2	1.00	1.140	6:1	6	387	3	488	2792	.0387	10	30	305
					24:1	24	153	3/4	308	1765	.0153	10	10	305
10-BSJ	10	1 1/2	.473	1.140	8:1	16.88	302	5	1043	11925	.0151	20	13	306
					24:1	50.66	153	1 1/2	618	7016	.0077	20	4	306
10HL-BSJ	10	1 1/2	1.00	1.140	8:1	8	638	5	494	5645	.0319	20	26	306
					24:1	24	323	1 1/2	293	3335	.0162	20	6	306
20-BSJ	20	2 1/4	.50	1.850	8:1	16	626	7 1/2	755	17204	.0157	40	27	307
					24:1	48	314	2 1/2	501	11397	.0079	40	7	307
20HL-BSJ	20	2 1/4	1.00	1.850	8:1	8	1253	7 1/2	377	8629	.0313	40	54	307
					24:1	24	628	2 1/2	251	5737	.0157	40	13	307
30-BSJ	30	3	.66	2.480	10 ² /3:1	16.16	969	11	715	24515	.0162	60	21	308
					32:1	48.48	503	3 1/2	438	15006	.0084	60	5	308
30HL-BSJ	30	3	1.5	2.480	10 ² /3:1	7.11	2292	11	315	10794	.0367	60	67	308
					32:1	21.33	1144	3 1/2	193	6600	.0191	60	15	308
50-BSJ	50	4	1.0	3.338	10 ² /3:1	10.66	2560	16	394	22509	.0256	90	40	309
					32:1	32	1390	5	227	12954	.0139	90	10	309
75-BSJ	75	4	1.0	3.338	10 ² /3:1	10.66	3660	28	482	41328	.0244	155	110	310
					32:1	32	1680	9	338	28970	.0112	155	25	310
100-BSJ	100	4	1.0	3.338	10 ² /3:1	10.66	4880	32	413	47232	.0244	205	152	311
					32:1	32	2760	12 1/2	285	32621	.0138	205	25	311

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* Measurements listed are for non-keyed units. See individual jack pages for keyed jack info.

NOTES:

6) All units are suitable for intermittent operation providing that the housing temperature including ambient is not lower than -20°F or higher than +200°F. Factory supplied grease in standard units will operate in this range. For higher or lower operating temperature ranges consult Nook Industries.

7) Accessories such as boots, limit switches, top plates and clevises are available.

8) Catalog dimensions are representative only and are subject to change without notice. For construction, use only certified prints.

9) Units are not to be used as personnel support or movement.

10) End-of-travel stops are not provided.

* Tare drag torque need only be added if operating under 25% rated load.

$$\text{Horsepower per jack} = \frac{\text{Torque to raise one pound} \times \text{Number of pounds to be raised} \times \text{rpm}}{63,025}$$

Starting Torque is 100% greater than torque shown.