

Ball Splines



A Thomson Precision ball spline consists of mating inner and outer races containing concave axial races and a complement of bearing balls. The balls provide the only physical contact between the inner and outer races. Unlimited rolling travel is achieved by diverting the path of the balls at the extremes of the outer race into the end cap return circuit. This provides a closed loop through which the balls recirculate when the races are displaced axially relative to each other. The bearing balls resist radial displacement resulting from torque loads.

- Efficiency — coefficient of friction .007 maximum
- Hardness — minimum of RC 56 in ball race
- Lash — .005 inch maximum standard play perpendicular to rotational axis

Need a quote or have a question about an application? Contact us in North America at:

Phone: 540-633-3549

Fax: 540-639-4162

Email: thomson@danahermotion.com

Precision Rolled Ball Splines

0.375 in to 6.000 in Diameter



Inner and Outer Spline Races

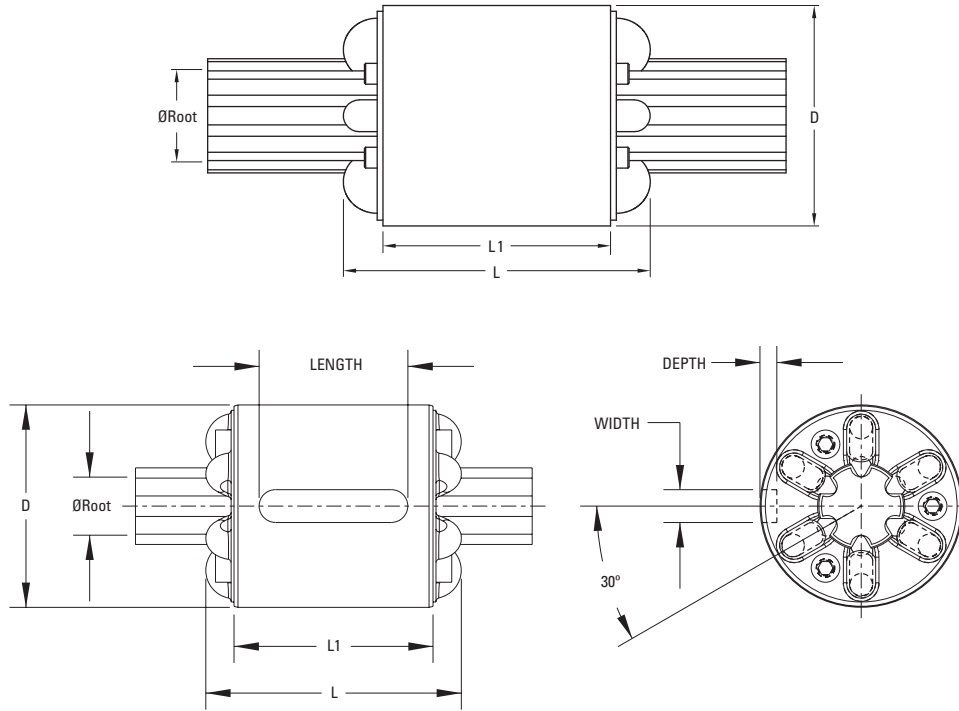
- Offers high speed, anti-friction linear motion under high torsional loads
- All units available with and without keyway
- **All sizes stocked for quick delivery**

Nominal Diameter (in.)	Active Races ⁽¹⁾⁽²⁾	Inner Race P/N	Outer Race P/N (w/o keyway)	Outer Race P/N (w/ keyway)	Performance Data				Inner Race Specifications		
					Dynamic Load Capacity (C _{am}) (in-lb)	Static Torque Capacity (C _o) (in-lb)	Max. Diametral Backlash (in.)	Max. Angular Backlash (radians)	Root Diameter (in.)	Standard Length (in.)	Inner Weight (lb/ft)
0.375	3	5707547	5706900	7828127	200	626	0.005	0.0266	0.200	24	0.02
0.625	3	5707548	5707445	7828128	585	1,770	0.005	0.0160	0.425	48	0.06
0.625	6	5707548	5708943	7828129	1,170	3,540	0.005	0.0160	0.425	48	0.06
1.000	3	5706084	5707472	7828130	1,300	3,900	0.005	0.0100	0.800	144	0.17
1.000	6	5706084	5708944	7828131	2,600	7,800	0.005	0.0100	0.800	144	0.17
1.500	3	5706388	5707528	7828132	4,200	11,588	0.005	0.0067	1.230	144	0.4
1.500	6	5706388	5708945	7828133	8,400	23,176	0.005	0.0067	1.230	144	0.4
2.000	3	5706436	5707530	7828134	8,000	20,138	0.005	0.0050	1.670	144	0.75
2.000	6	5706436	5708946	7828135	16,000	40,276	0.005	0.0050	1.670	144	0.75
2.500	3	5706484	5707532	7828136	13,500	36,625	0.005	0.0040	2.100	144	1.17
2.500	6	5706484	5708947	7828137	27,000	62,250	0.005	0.0040	2.100	144	1.17
4.062	6	5702204	5708330	7828138	57,000	140,000	0.005	0.0025	3.660	144	3.13
6.000	8	5704982	5704798	7828140	214,700	584,000	0.007	0.0023	5.470	72	7.01

(1) Dimensional information on bearing supports and standard end machining is available on page 176.

(2) Information on required lubrication is on page 243.

Precision Rolled Ball Splines



Nominal Diameter	Active Races	Outer Race Specifications					
		D (max.)	L	L1	Keyway Dimensions (Optional) (Width x Depth x Length)	Outer Weight	Ball Diameter
(in.)		(in.)	(in.)	(in.)	(in.)	(lb)	(in.)
0.375	3	1.161	1.589	1.099	0.187 x 0.093 x 1.000	0.25	0.156
0.625	3	1.531	2.035	1.505	0.250 x 0.125 x 1.125	0.37	0.187
0.625	6	1.531	2.035	1.505	0.250 x 0.125 x 1.125	0.37	0.187
1.000	3	1.906	2.598	2.068	0.250 x 0.125 x 1.625	0.92	0.187
1.000	6	1.906	2.598	2.068	0.250 x 0.125 x 1.625	0.92	0.187
1.500	3	2.693	3.719	3.005	0.250 x 0.125 x 2.000	3.33	0.250
1.500	6	2.693	3.719	3.005	0.375 x 0.187 x 2.000	3.33	0.250
2.000	3	3.427	4.022	3.130	0.250 x 0.125 x 2.500	5.42	0.312
2.000	6	3.427	4.022	3.130	0.500 x 0.219 x 2.500	5.42	0.312
2.500	3	4.170	4.426	3.380	0.250 x 0.125 x 3.000	7.50	0.375
2.500	6	4.170	4.426	3.380	0.500 x 0.250 x 3.000	7.50	0.375
4.062	6	5.6245	5.495	4.500	1.000 x 0.500 x 3.500	14.50	0.375
6.000	8	8.625	7.495	5.995	1.000 x 0.500 x 5.500	51.52	0.500

NOTES:

A large grid of graph paper, consisting of 30 columns and 40 rows of small squares, intended for taking notes.

Bearing Supports/End Machining



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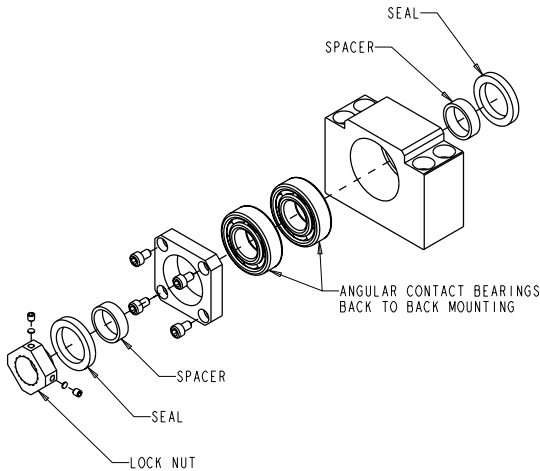
Email: thomson@danahermotion.com

Bearing Supports/End Machining Product Overview

Thomson Bearing Supports — complete package for simple mounting of Thomson ball screw and ball spline assemblies. Flange and Base mounts available with dual angular contact bearings or floating radial bearing.

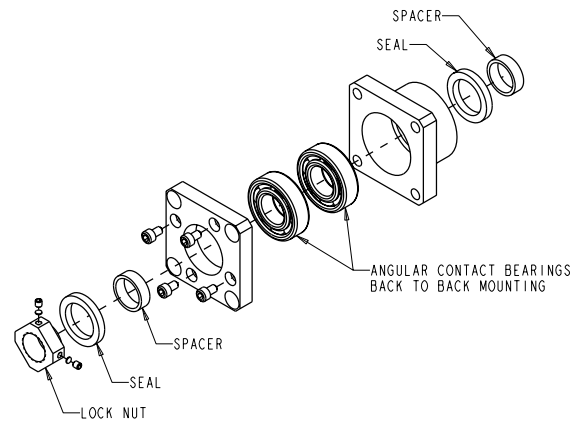
- Rugged steel construction
- Low profile, compact design
- Base or Flange mounting configurations
- Pre-assembled and ready for installation
- Available off-the-shelf

BK Bearing Support⁽¹⁾⁽²⁾



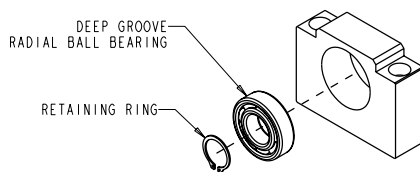
The base mounted BK Bearing Support contains an angular contact bearing pair arranged back-to-back (DB) for increased stiffness and axial load capacity. Design dimensions fit standard Type BK or BK1 end machining.

FK Bearing Support⁽¹⁾⁽²⁾



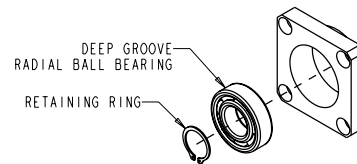
The flange mounted FK Bearing Support contains an angular contact bearing pair arranged back-to-back (DB) for increased stiffness and axial load capacity. Design dimensions fit standard Type FK or FK1 end machining.

BF Bearing Support⁽¹⁾⁽³⁾



The base mounted BF Bearing Support contains a floating radial bearing to allow axial shaft movement. Design dimensions fit standard Type BF or BF1 end machining.

FF Bearing Support⁽¹⁾⁽³⁾



The flange mounted FF Bearing Support contains a floating radial bearing to allow axial shaft movement. Design dimensions fit standard Type FF or FF1 end machining.

(1) Bearings supports are classified as "simple" for purposes of critical speed and column strength calculations.

(2) Locknut included in assembly

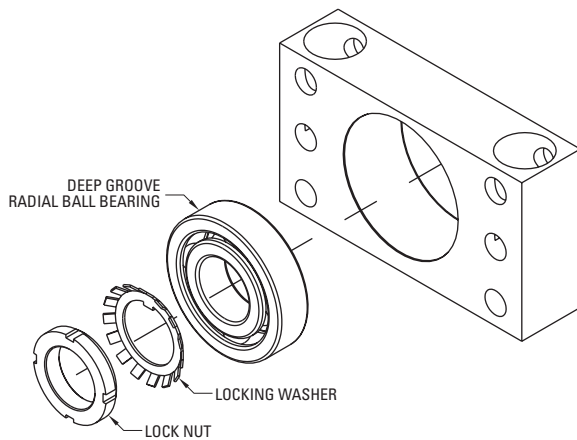
(3) Retaining ring included in assembly

Bearing Supports/End Machining Product Overview

Thomson Bearing Supports — a unitized package for simple mounting of Thomson ball screw and ball spline assemblies. Both “Floating” and “Simple” style bearing supports are available.

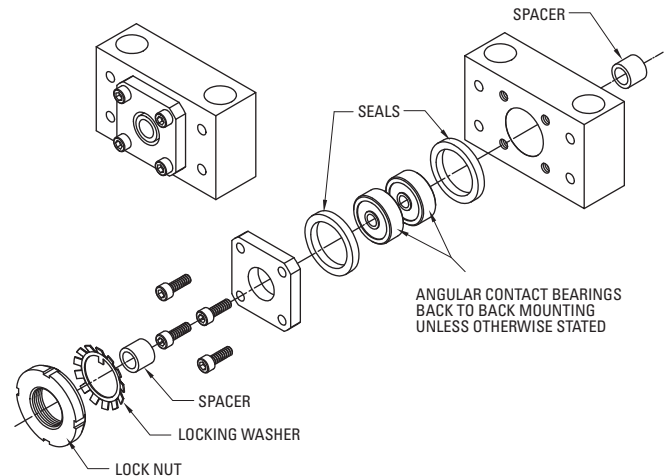
- Rugged steel construction
- Low profile, compact design
- Foot or face mounting
- Pre-assembled and ready for installation
- Available off-the-shelf for quick building convenience

QF Bearing Support⁽¹⁾⁽²⁾



The QF Bearing Support provides a single deep groove radial ball bearing. Design dimensions fit standard Type QF or QF1 end machining.

QK Bearing Support⁽¹⁾⁽²⁾



The QK Bearing Support contains high angular contact bearings arranged in a back-to-back (DB) configuration for high stiffness. Design dimensions fit standard Type QK or QK1 end machining.

(1) Both QK and QF Bearings Supports are classified as “simple” for purposes of critical speed and column strength calculations.

(2) Installation accessories (locknut and washer) included for complete assembly.

Bearing Supports/End Machining Product Overview

Inch Series Ball Screws						
Diameter x Lead	BK	BF	FK	FF	QK	QF
0.500 x 0.200	7833360	7833368	7833377	7833384	7828282	7833291
0.500 x 0.500						
0.631 x 0.200	7833361	7833369	7833378	7833385	7824154	7833256
0.631 x 1.000						
0.750 x 0.200	7833362	7833370	7833379	7833386	7824155	7833259
0.750 x 0.500						
0.875 x 0.200	7833363	7833371	7833380	7833387	7824156	7833262
1.000 x 0.200	7833364	7833372	7833381	7833388	7824157	7833265
1.000 x 0.500						
1.000 x 1.000						
1.171 x 0.413						
1.150 x 0.200	7833365	7833373	7833382	7833389	7824158	7833268
1.250 x 0.200						
1.250 x 0.250						
1.250 x 0.500						
1.500 x 0.200	7833366	7833374	7833383	7833390	7824159	7833270
1.500 x 0.250						
1.500 x 0.473	7833365	7833373	7833382	7833389	7824158	7833268
1.500 x 0.500	7833366	7833374	7833383	7833390	7824159	7833270
1.500 x 1.000	7833365	7833373	7833382	7833389	7824158	7833268
1.500 x 1.875	7833366	7833374	7833383	7833390	7824159	7833270
1.500 x 2.000						
1.750 x 0.200	7833367	7833375	-	-	7829544	7833273
2.000 x 0.200	-	-	-	-	7824160	7833276
2.000 x 0.500						
2.000 x 1.000						
2.250 x 0.500						
2.250 x 1.000						
2.500 x 0.250	-	-	-	-	7824161	7833279
2.500 x 0.500						
2.500 x 1.000						

Metric Ball Screws						
Diameter	BK	BF	FK	FF	QK	QF
12	7833391	7833398	7833405	7833411	7829546	7833292
16	7833392	7833399	7833406	7833412	7829547	7833282
20	7833393	7833400	7833407	7833413	7829548	7833283
25	7833394	7833401	7833408	7833414	7829549	7833284
32	7833395	7833402	7833409	7833415	7829550	7833285
40	7833396	7833403	7833410	7833416	7829551	7833286
50	7833397	7833404	-	-	7829552	7823287
63	-	-	-	-	7829553	7833288

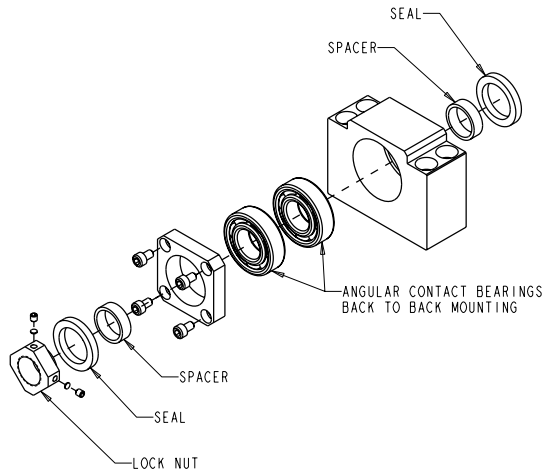
Ball Splines						
Nominal Size	BK	BF	FK	FF	QK	QF
0.625	7833360	7833368	7833377	7833384	7824154	7833256
1.000	7833364	7833372	7833381	7833388	7824157	7833265
1.500	7833365	7833373	7833382	7833389	7824158	7833268
2.000	7833367	7833375	-	-	7829554	7833273
2.500	-	-	-	-	7824161	7833279

NOTES:

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Bearing Supports/End Machining — Inch Series Ball Screws

BK Support Blocks

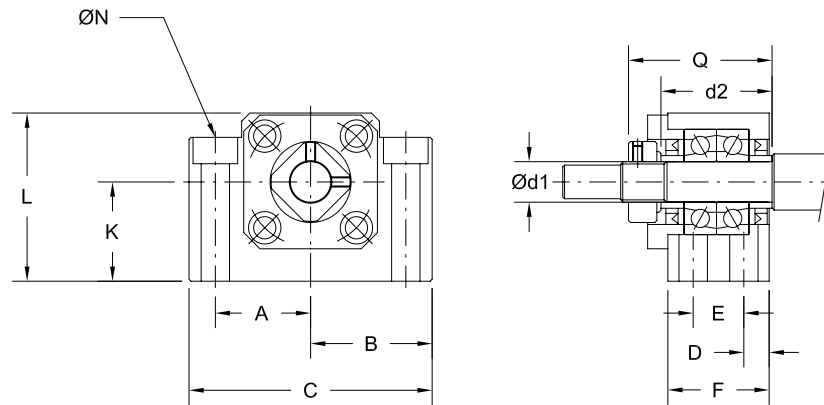


Standard P/N	Dia. x Lead (inch)	Bearing Rating				Lock Nut Type	Bearing Block Weight (lbs)
		Static Rating C_0		Dynamic Rating C_{am}			
		(lbs)	(N)	(lbs)	(N)		
7833360	0.500 x 0.200	326	1450	989	4400	RN10	0.9
7833361	0.631 x 0.200 0.631 x 1.000	627	2790	1596	7100	RN12	1.0
7833362	0.750 x 0.200 0.750 x 0.500	1057	4700	2315	10300	RN15	1.3
7833363	0.875 x 0.200	1558	6930	3192	14200	RN17	2.9
7833364	1.000 x .200 & 0.250 1.000 x 0.500 & 1.000 1.171 x 0.413	1832	8150	3215	14300	RN20	2.8
7833365	1.150 x 0.200 1.250 x 0.200 & 0.500 1.500 x 0.473 & 1.000	2113	9400	3732	16600	RN25	5.3
7833366	1.500 x 0.200 & 0.250 1.500 x 0.500 & 1.875 1.500 x 2.000	3035	13500	5170	23000	RN30	7.5
7833367	1.750 x 0.200	6789	30200	11375	50600	RN40	15.0

Note: Design dimensions fit standard Type BK and BK1 end machining. See page 156 for details.

Bearing Supports/End Machining - Inch Series Ball Screws

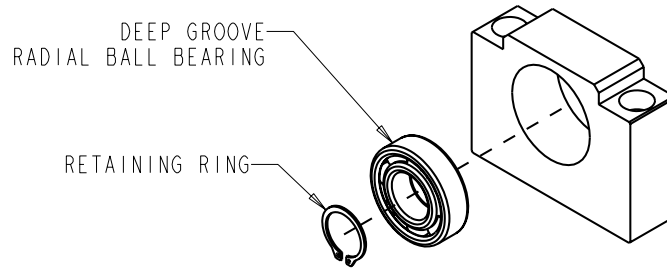
BK Bearing Support Blocks



Standard P/N	Bearing Block Dimensions (inch)											
	d1 (mm)	d2	A	B	C	D	E	F	K ±0.001	L	N	Q
7833360	10	1.063	0.906	1.181	2.362	0.236	0.512	0.984	0.866	1.535	4 Holes 0.260 dia Thru 0.425 C-Bore x 0.197 Deep	1.339
7833361	12	1.063	0.906	1.181	2.362	0.236	0.512	0.984	0.984	1.693	4 Holes 0.260 dia. Thru 0.425 C-Bore x 0.059 Deep	1.339
7833362	15	1.181	1.063	1.378	2.756	0.236	0.591	1.063	1.102	1.890	4 Holes 0.260 dia. Thru 0.433 C-Bore x 0.256 Deep	1.496
7833363	17	1.496	1.339	1.693	3.386	0.315	0.748	1.378	1.535	2.520	4 Holes 0.354 dia. Thru 0.551 C-Bore x 0.335 Deep	2.008
7833364	20	1.575	1.378	1.732	3.465	0.315	0.748	1.378	1.339	2.362	4 Holes 0.354 dia. Thru 0.551 C-Bore x 0.335 Deep	2.008
7833365	25	1.890	1.673	2.087	4.173	0.394	0.866	1.654	1.890	3.150	4 Holes 0.433 dia. Thru 0.699 C-Bore x 0.433 Deep	2.480
7833366	30	1.969	2.008	2.520	5.039	0.433	0.906	1.772	2.008	3.504	4 Holes 0.551 dia. Thru 0.787 C-Bore x 0.512 Deep	2.756
7833367	40	2.598	2.559	3.150	6.299	0.551	1.299	2.402	2.362	4.331	4 Holes 0.709 dia. Thru 1.024 C-Bore x 0.689 Deep	3.583

Bearing Supports/End Machining — Inch Series Ball Screws

BF Support Blocks

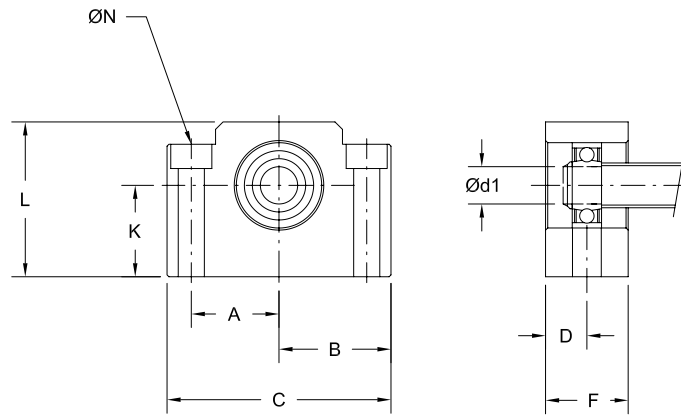


Standard P/N	Dia. x Lead (inch)	Bearing Rating				Snap Ring (DIN 471) (mm)	Bearing Block Weight (lbs)
		Static Rating C ₀		Dynamic Rating C _{am}			
		(lbs)	(N)	(lbs)	(N)		
7833368	0.500 x 0.200	366	1630	821	3650	8	0.7
7833369	0.631 x 0.200 0.631 x 1.000	674	3000	1708	7600	10	0.8
7833370	0.750 x 0.200 0.750 x 0.500	780	3470	1945	8650	15	0.9
7833371	0.875 x 0.200	1057	4700	2450	10900	17	1.7
7833372	1.000 x .200 & 0.250 1.000 x 0.500 & 1.000 1.171 x 0.413	1461	6500	3237	14400	20	1.7
7833373	1.150 x 0.200 1.250 x 0.200 & 0.500 1.500 x 0.473 & 1.000	1753	7800	3597	16000	25	3.2
7833374	1.500 x 0.200 & 0.250 1.500 x 0.500 & 1.875 1.500 x 2.000	2540	11300	4991	22200	30	4.3
7833375	1.750 x 0.200	5822	25900	11375	50600	40	7.3

Note: Design dimensions fit standard Type BF and BF1 end machining. See page 156 for details.

Bearing Supports/End Machining - Inch Series Ball Screws

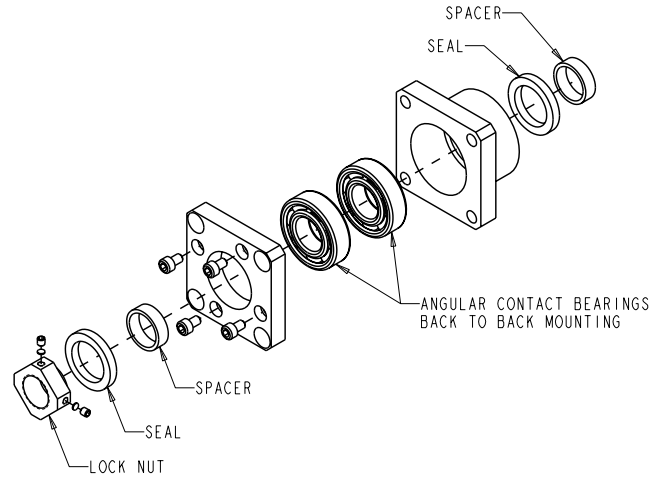
BF Bearing Support Blocks



Standard P/N	Bearing Block Dimensions (inch)								
	d1 (mm)	A	B	C	D	F	K ±0.001	L	N
7833368	8	0.906	1.181	2.362	0.394	0.787	0.866	1.535	2 Holes 0.260 dia. Thru 0.425 C-Bore x 0.197 Deep
7833369	10	0.906	1.181	2.362	0.394	0.787	0.984	1.693	2 Holes 0.260 dia. Thru 0.425 C-Bore x 0.059 Deep
7833370	15	1.063	1.378	2.756	0.394	0.787	1.102	1.890	2 Holes 0.260 dia. Thru 0.433 C-Bore x 0.256 Deep
7833371	17	1.339	1.693	3.386	0.453	0.906	1.535	2.520	2 Holes 0.354 dia. Thru 0.551 C-Bore x 0.335 Deep
7833372	20	1.378	1.732	3.465	0.512	1.024	1.339	2.362	2 Holes 0.354 dia. Thru 0.551 C-Bore x 0.335 Deep
7833373	25	1.673	2.087	4.173	0.591	1.181	1.890	3.150	2 Holes 0.433 dia. Thru 0.699 C-Bore x 0.433 Deep
7833374	30	2.008	2.520	5.039	0.630	1.260	2.008	3.504	2 Holes 0.551 dia. Thru 0.787 C-Bore x 0.512 Deep
7833375	40	2.559	3.150	6.299	0.728	1.457	2.362	4.331	2 Holes 0.709 dia. Thru 1.024 C-Bore x 0.689 Deep

Bearing Supports/End Machining — Inch Series Ball Screws

FK Support Blocks

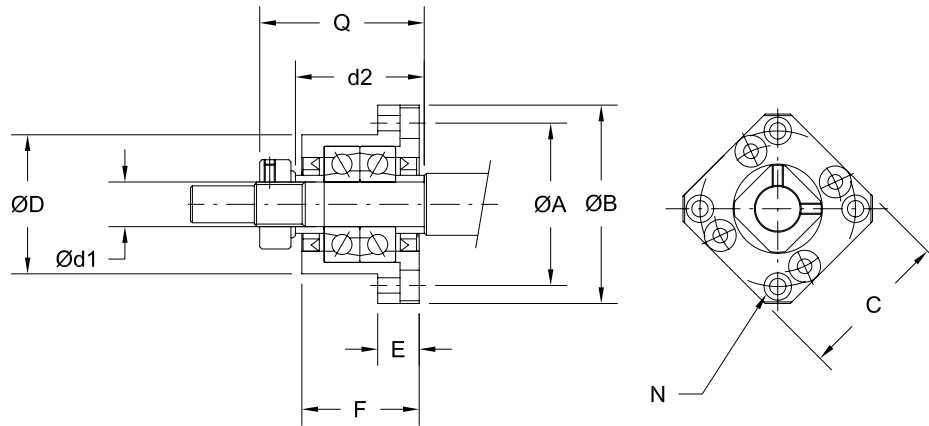


Standard P/N	Dia.x Lead (inch)	Bearing Rating				Lock Nut Type	Bearing Block Weight (lbs)
		Static Rating C ₀		Dynamic Rating C _{am}			
		(lbs)	(N)	(lbs)	(N)		
7833377	0.500 x 0.200	326	1450	989	4400	RN10	0.6
7833378	0.631 x 0.200 0.631 x 1.000	627	2790	1596	7100	RN12	0.6
7833379	0.750 x 0.200 0.750 x 0.500	1057	4700	2315	10300	RN15	0.9
7833380	0.875 x 0.200	1558	6930	3192	14200	RN17	1.9
7833381	1.000 x .200 & 0.250 1.000 x 0.500 & 1.000 1.171 x 0.413	1832	8150	3215	14300	RN20	2.5
7833382	1.150 x 0.200 1.250 x 0.200 & 0.500 1.500 x 0.473 & 1.000	2113	9400	3732	16600	RN25	3.5
7833383	1.500 x 0.200 & 0.250 1.500 x 0.500 & 1.875 1.500 x 2.000	3035	13500	5170	23000	RN30	5.2

Note: Design dimensions fit standard Type FK and FK1 end machining. See page 157 for details.

Bearing Supports/End Machining - Inch Series Ball Screws

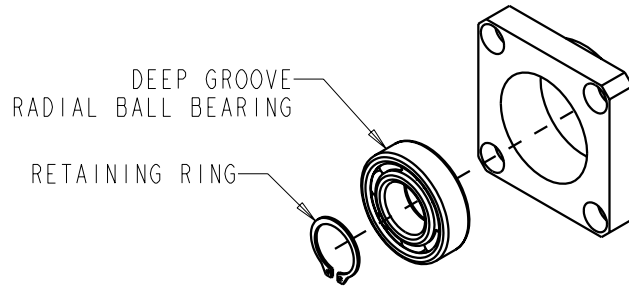
FK Bearing Support Blocks



Standard P/N	Bearing Block Dimensions (inch)									
	d1 (mm)	d2	A	B	C	D	E	F	N	Q
7833377	10	1.063	1.654	2.047	1.654	1.3382 1.3376	0.394	1.063	4 Holes 0.177 dia Thru 0.315 C-Bore x 0.157 Deep	1.299
7833378	12	1.063	1.732	2.1126	1.732	1.4170 1.4163	0.394	1.063	4 Holes 0.177 dia. Thru 0.315 C-Bore x 0.157 Deep	1.299
7833379	15	1.496	1.969	2.480	2.047	1.5744 1.5738	0.591	1.260	4 Holes 0.217 dia. Thru 0.374 C-Bore x 0.236 Deep	1.575
7833380	17	1.732	2.441	3.031	2.402	1.9681 1.9675	0.866	1.772	4 Holes 0.260 dia. Thru 0.433 C-Bore x 0.394 Deep	2.244
7833381	20	1.969	2.756	3.346	2.677	2.2437 2.2430	0.866	2.047	4 Holes 0.260 dia. Thru 0.433 C-Bore x 0.394 Deep	2.598
7833382	25	2.362	3.150	3.858	3.110	2.4799 2.4792	1.063	2.244	4 Holes 0.354 dia. Thru 0.591 C-Bore x 0.512 Deep	2.913
7833383	30	1.969	3.740	4.606	3.661	2.9524 2.9516	1.181	2.441	4 Holes 0.433 dia. Thru 0.689 C-Bore x 0.591 Deep	3.150

Bearing Supports/End Machining — Inch Series Ball Screws

FF Support Blocks

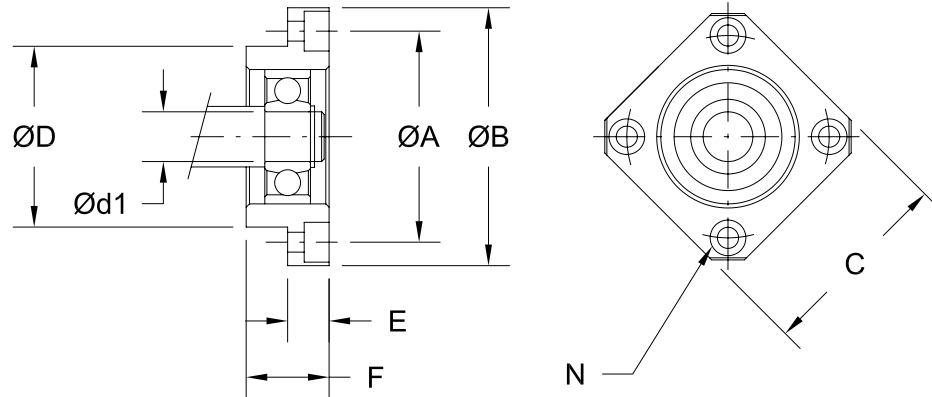


Standard P/N	Dia.x Lead (inch)	Bearing Rating				Snap Ring (DIN 471) (mm)	Bearing Block Weight (lbs)
		Static Rating C ₀		Dynamic Rating C _{am}			
		(lbs)	(N)	(lbs)	(N)		
7833384	0.500 x 0.200	366	1630	821	3650	10	0.2
7833385	0.631 x 0.200 0.631 x 1.000	674	3000	1708	7600	12	0.3
7833386	0.750 x 0.200 0.750 x 0.500	780	3470	1945	8650	15	0.5
7833387	0.875 x 0.200	1057	4700	2450	10900	17	0.8
7833388	1.000 x .200 & 0.250 1.000 x 0.500 & 1.000 1.171 x 0.413	1461	6500	3237	14400	20	1.0
7833389	1.150 x 0.200 1.250 x 0.200 & 0.500 1.500 x 0.473 & 1.000	1753	7800	3597	16000	25	1.5
7833390	1.500 x 0.200 & 0.250 1.500 x 0.500 & 1.875 1.500 x 2.000	2540	11300	4991	22200	30	2.3

Note: Design dimensions fit standard Type FF and FF1 end machining. See page 157 for details.

Bearing Supports/End Machining - Inch Series Ball Screws

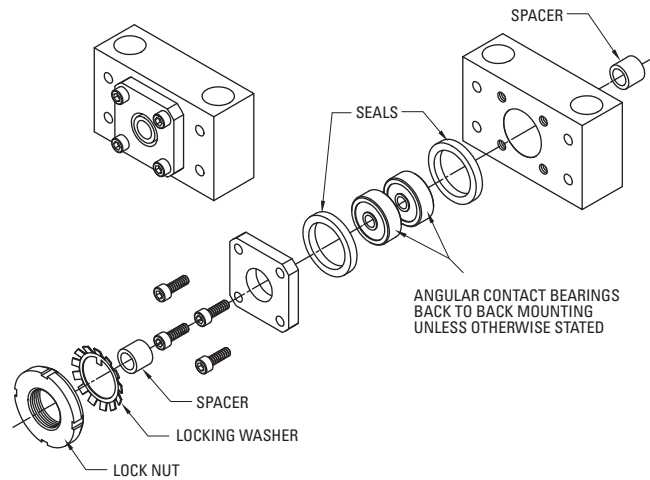
FF Bearing Support Blocks



Standard P/N	Bearing Block Dimensions (inch)							
	d1 (mm)	A	B	C	D	E	F	N
7833384	8	1.378	1.693	1.378	1.1021 1.1016	0.276	0.472	4 Holes 0.134 dia Thru 0.256 C-Bore x 0.157 Deep
7833385	10	1.654	2.047	1.654	1.3382 1.3376	0.276	0.591	4 Holes 0.177 dia. Thru 0.315 C-Bore x 0.157 Deep
7833386	15	1.969	2.480	2.047	1.5744 1.5738	0.354	0.669	4 Holes 0.217 dia. Thru 0.374 C-Bore x 0.217 Deep
7833387	17	2.441	3.031	2.402	1.9681 1.9675	0.433	0.787	4 Holes 0.260 dia. Thru 0.433 C-Bore x 0.256 Deep
7833388	20	2.756	3.346	2.677	2.2437 2.2430	0.433	0.787	4 Holes 0.260 dia. Thru 0.433 C-Bore x 0.256 Deep
7833389	25	3.150	3.858	3.110	2.4799 2.4792	0.551	0.945	4 Holes 0.354 dia. Thru 0.551 C-Bore x 0.335 Deep
7833390	30	3.740	4.606	3.661	2.9524 2.9516	0.709	1.063	4 Holes 0.433 dia. Thru 0.669 C-Bore x 0.433 Deep

Bearing Supports/End Machining — Inch Series Ball Screws

QK Bearing Support Blocks



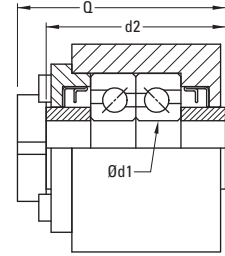
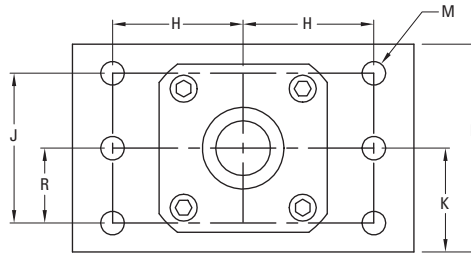
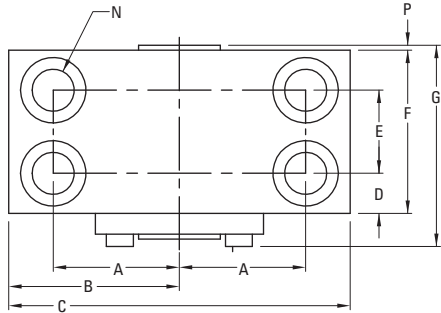
Standard P/N	Dia. x Lead (inch)	Bearing Rating				Lock Nut Type	Bearing Block Weight (lbs)
		Static Rating C_0		Dynamic Rating C_{am}			
		(lbs)	(N)	(lbs)	(N)		
7828282 ⁽¹⁾	0.500 x 0.200 0.500 x 0.500	440	1960	1030	4550	5/16-24	2.0
7824154	0.631 x 0.200 0.631 x 1.000	630	2790	1600	7100	N-01	1.5
7824155	0.750 x 0.200 0.750 x 0.500	1060	4700	2320	10300	N-02	3.5
7824156	0.875 x 0.200	1560	6930	3200	14200	N-03	3.5
7824157	1.000 x 0.200 1.000 x 0.250 1.000 x 0.500 1.000 x 1.000 1.171 x 0.413	1838	8150	3225	14300	N-04	5.5
7824158	1.150 x 0.200 1.250 x 0.200 & 0.500 1.500 x 0.473 1.500 x 1.000	2120	9400	3750	16600	N-05	9.5
7824159	1.500 x 0.200 1.500 x 0.250 1.500 x 0.500 1.500 x 1.875 1.500 x 2.000	3050	13500	5200	23000	N-06	11.5
7829554	1.750 x 0.200	6800	30200	11400	50600	N-08	21.5
7824160	2.000 x 0.200 & 0.500 & 1.000 2.250 x 0.500 2.250 x 1.000	9000	39900	15000	66600	N-09	35.0
7824161	2.500 x 0.250 2.500 x 0.500 2.500 x 1.000	10800	47900	17300	76800	N-10	39.0

(1) Deep groove radial bearing.

Note: Design dimensions fit standard Type QK or QK1 end machining. See page 158 for details.

Bearing Supports/End Machining - Inch Series Ball Screws

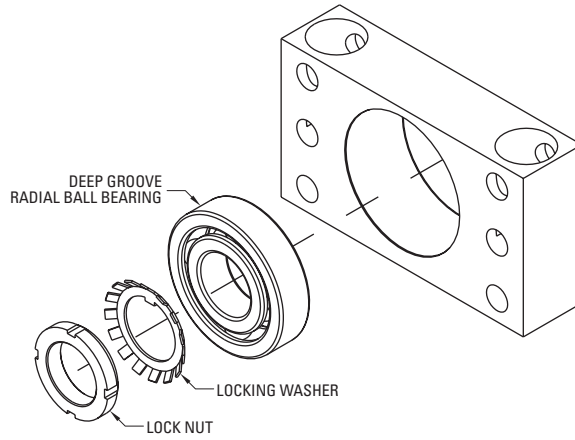
QK Bearing Support Blocks



Standard P/N	Bearing Block Dimensions (inch)																
	d1 (mm)	d2	A & H	B	C	D	E	F	G	J	K	L	M	N	P	Q	R
7828282	9	1.44	1.000	1.38	2.75	0.63	—	1.19	1.4	1.375	1.000	2.00	4 Holes 0.281 dia.	2 Holes 0.281 dia. Thru 0.50 C-Bore x 0.56 DP	—	1.8	0.688
7824154	12	1.26	1.125	1.50	3.00	0.67	—	1.34	1.7	1.125	1.000	1.88	4 Holes 0.281 dia.	2 Holes 0.406 dia. Thru 0.625 C-Bore x 0.875 DP	0.02	1.6	0.625
7824155	15	1.73	1.250	1.75	3.50	0.75	—	1.50	1.9	1.375	1.125	2.13	4 Holes 0.281 dia.	2 Holes 0.406 dia. Thru 0.625 C-Bore x 1.00 DP	0.02	2.1	0.750
7824156	17	1.89	1.437	2.00	4.00	0.83	—	1.66	2.0	1.375	1.25	2.38	4 Holes 0.406 dia.	2 Holes 0.531 dia. Thru 0.812 C-Bore x 1.125 DP	0.02	2.3	0.750
7824157	20	2.20	1.625	2.25	4.50	0.94	—	1.87	2.4	1.750	1.438	2.75	4 Holes 0.469 dia.	2 Holes 0.656 dia. Thru 1.00 C-Bore x 1.312 DP	0.04	2.7	0.938
7824158	25	2.36	2.125	3.00	6.00	0.97	—	1.94	2.6	2.000	1.750	3.38	4 Holes 0.656 dia.	2 Holes 0.906 dia. Thru 1.375 C-Bore x 2.00 DP	0.03	2.9	1.000
7824159	30	2.52	2.375	3.25	6.50	1.03	—	2.06	2.7	2.000	1.875	3.63	4 Holes 0.656 dia.	2 Holes 0.906 dia. Thru 1.375 C-Bore x 2.062 DP	0.05	3.0	1.000
7829554	40	3.62	2.937	3.75	7.50	0.76	1.63	3.15	3.8	3.000	2.250	4.25	6 Holes 0.656 dia.	4 Holes 0.906 dia. Thru 1.375 C-Bore x 2.25 DP	0.05	4.2	1.500
7824160	45	3.94	3.313	4.25	8.50	0.87	1.72	3.47	4.2	3.625	2.813	5.63	6 Holes 0.812 dia.	4 Holes 1.031 dia. Thr 1.625 C-Bore x 3.500 DP	0.05	4.5	1.813
7824161	50	4.25	3.563	4.50	9.00	0.92	1.72	3.56	4.5	3.625	2.813	5.63	6 Holes 0.812 dia.	4 Holes 1.031 dia. Thru 1.625 C-Bore x 3.500 DP	0.05	4.9	1.813

Bearing Supports/End Machining — Inch Series Ball Screws

QF Support Blocks

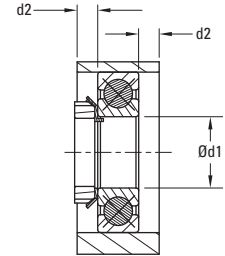
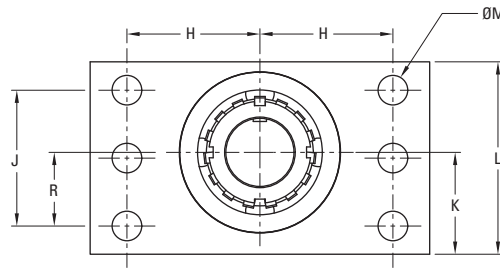
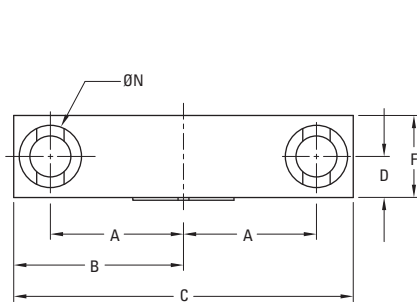


Standard P/N	Dia. x Lead (inch)	Bearing Rating				Lock Nut Type	Bearing Block Weight (lbs)
		Static Rating C_0		Dynamic Rating C_{am}			
		(lbs)	(N)	(lbs)	(N)		
7833291	0.500 x 0.200	440	1960	1030	4550	5/16-24	0.8
7833256	0.631 x 0.200 0.631 x 1.000	674	3000	1708	7600	N-01	1.3
7833259	0.750 x 0.200 0.750 x 0.500	780	3470	1945	8650	N-02	1.6
7833262	0.875 x 0.200	1057	4700	2450	10900	N-03	2.3
7833265	1.000 x 0.200 & 0.250 1.000 x 0.500 & 1.000 1.171 x 0.413	1461	6500	3237	14400	N-04	5.8
7833268	1.150 x 0.200 1.250 x 0.200 & 0.500 1.500 x 0.473 & 1.000	1753	7800	3597	16000	N-05	6.8
7833270	1.500 x 0.200 & 0.250 1.500 x 0.500 & 1.875	2540	11300	4991	22200	N-06	8.7
7833273	1.750 x 0.200	5822	25900	11375	50600	N-08	9.7
7833276	2.000 x 0.200 & 0.500 & 1.000 2.250 x 0.500 & 1.000	7081	31500	13376	59500	N-09	16.2
7833279	2.500 x 0.250 & 0.500	8475	37700	15579	69300	N-10	18.5

Note: Design dimensions fit standard Type QF or QF1 end machining. See page 158 for details.

Bearing Supports/End Machining — Inch Series Ball Screws

QF Support Blocks



Standard P/N	Bearing Block Dimensions (inch)													
	d1 (mm)	d2	A & H	B	C	D	F	J	K	L	M	N	Q	R
7833291	9.0	0.118	1.000	1.380	2.750	0.276	0.551	1.375	1.000	2.000	4 Holes 0.281 dia.	2 Holes 0.281 dia. Thru 0.50 C-Bore x 0.56 DP	0.757	0.688
7833256	12.0	0.197	1.125	1.500	3.000	0.394	0.787	1.125	1.000	1.875	4 Holes 0.281 dia.	2 Holes 0.406 dia. Thru 0.625 C-Bore x 0.875 DP	0.960	0.625
7833259	15.0	0.217	1.250	1.750	3.500	0.433	0.866	1.375	1.125	2.125	4 Holes 0.281 dia.	2 Holes 0.406 dia. Thru 0.625 C-Bore x 0.875 DP	1.019	0.750
7833262	17.0	0.236	1.437	2.000	4.000	0.473	0.945	1.375	1.250	2.375	4 Holes 0.406 dia.	2 Holes 0.531 dia. Thru 0.812 C-Bore x 1.125 DP	1.109	0.750
7833265	20.0	0.276	1.625	2.250	4.500	0.551	1.102	1.750	1.438	2.750	4 Holes 0.469 dia.	2 Holes 0.656 dia. Thru 1.000 C-Bore x 1.312 DP	1.258	0.938
7833268	25.0	0.531	2.125	3.000	6.000	0.827	1.654	2.000	1.750	3.375	4 Holes 0.656 dia.	2 Holes 0.906 dia. Thru 1.375 C-Bore x 2.000 DP	1.654	1.000
7833270	30.0	0.512	2.375	3.250	6.500	0.827	1.654	2.000	1.875	3.625	4 Holes 0.656 dia.	2 Holes 0.906 dia. Thru 1.375 C-Bore x 2.062 DP	1.654	1.000
7833273	40.0	0.453	2.937	3.750	7.500	0.906	1.811	3.000	2.250	4.250	6 Holes 0.656 dia.	2 Holes 0.906 dia. Thru 1.375 C-Bore x 2.250 DP	1.869	1.625
7833276	45.0	0.492	3.313	4.250	8.500	0.985	1.969	3.625	2.813	5.625	6 Holes 0.812 dia.	2 Holes 1.031 dia. Thru 1.625 C-Bore x 3.500 DP	1.987	1.813
7833279	50.0	0.531	3.563	4.500	9.000	1.063	2.126	3.625	2.813	5.625	6 Holes 0.812 dia.	2 Holes 1.031 dia. Thru 1.625 C-Bore x 3.500 DP	2.167	1.813

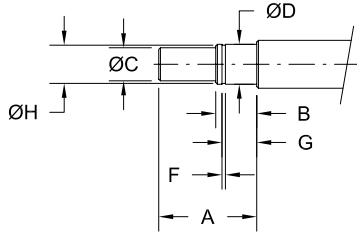
BEARING SUPPORTS/
END MACHINING

Bearing Supports/End Machining — Inch Series Ball Screws

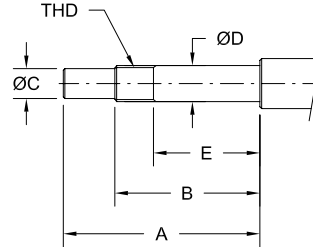
Standard End Machining

The typical ends shown below can be machined on all ball screws. Specific dimensional data is provided in the table.

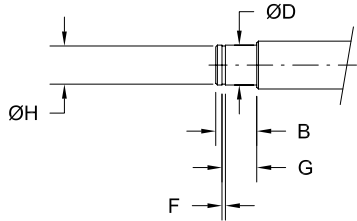
TYPE BF, REQUIRED FOR BF SUPPORT



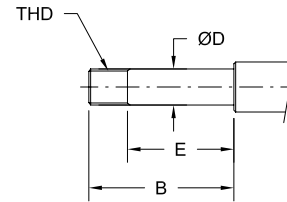
TYPE BK, REQUIRED FOR BK SUPPORT



TYPE BF1, REQUIRED FOR BF SUPPORT



TYPE BK1, REQUIRED FOR BK SUPPORT



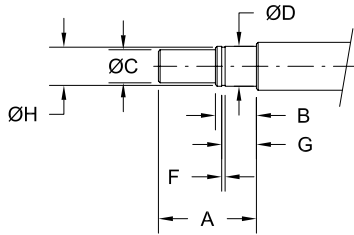
Screw Size Diameter x Lead (inch)	Type BF / BF1 (inch)									Type BK / BK1 (inch)							
	Standard P/N	A	B	C h7	D	F +0.006/ -0.000	G +0.008/ -0.000	H +0.000/ -0.008	Bearing Trade No.	Standard P/N	A	B	C h7	D	E	THD	Bearing Trade No.
0.500 x 0.200	7833368	0.984	0.394	0.2362 0.2357	0.3148 0.3145	0.035	0.311	0.299	608	7833360	2.008	1.417	0.3150 0.3144	0.3935 0.3932	0.787	M10x1	7000
0.631 x 0.200 0.631 x 1.000	7833369	1.024	0.433	0.3150 0.3144	0.3935 0.3932	0.045	0.360	0.378	6000	7833361	2.008	1.417	0.3937 0.3931	0.4722 0.4720	0.866	M12x1	7001
0.750 x 0.200 0.750 x 0.500	7833370	1.299	0.512	0.4724 0.4717	0.5904 0.5900	0.045	0.400	0.563	6002	7833362	2.362	1.575	0.4724 0.4717	0.5904 0.5900	1.102	M15x1	7002
0.875 x 0.200	7833371	1.535	0.630	0.5906 0.5898	0.6691 0.6687	0.045	0.518	0.638	6203	7833363	2.992	2.087	0.5906 0.5898	0.6691 0.6687	1.417	M17x1	7203
1.000 x .200/0.250 1.000 x 0.500/1.000 1.171 x 0.413	7833372	1.614	0.630	0.6693 0.6686	0.7872 0.7869	0.053	0.526	0.748	6004	7833364	3.071	2.087	0.6693 0.6686	0.7872 0.7869	1.496	M20x1	7004
1.150 x 0.200 1.250 x 0.200/0.500 1.500 x 0.473/1.000	7833373	1.969	0.787	0.7874 0.7866	0.9841 0.9837	0.053	0.644	0.941	6205	7833365	3.740	2.559	0.7874 0.7866	0.9841 0.9837	1.850	M25x1.5	7205
1.500 x 0.200/0.250 1.500 x 0.500/1.875 1.500 x 2.000	7833374	2.323	0.827	0.9843 0.9834	1.1809 1.1805	0.069	0.699	1.126	6206	7833366	4.331	2.835	0.9843 0.9834	1.1809 1.1805	1.850	M30x1.5	7206
1.750 x 0.200	7833375	2.974	0.906	1.3780 1.3771	1.5746 1.5742	0.077	0.785	1.496	6208	7833367	5.630	3.661	1.3780 1.3771	1.5746 1.5742	2.283	M40x1.5	7208

Bearing Supports/End Machining — Inch Series Ball Screws

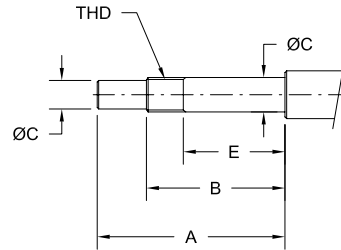
Standard End Machining

The typical ends shown below can be machined on all ball screws. Specific dimensional data is provided in the table.

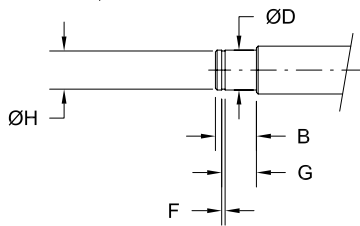
TYPE FF, REQUIRED FOR FF SUPPORT



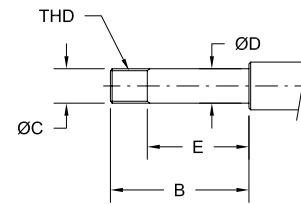
TYPE FK, REQUIRED FOR FK SUPPORT



TYPE FF1, REQUIRED FOR FF SUPPORT



TYPE FK1, REQUIRED FOR FK SUPPORT

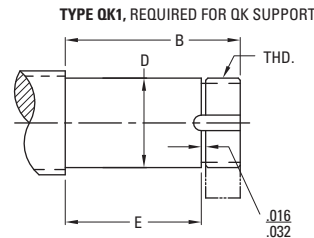
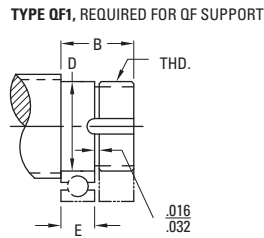
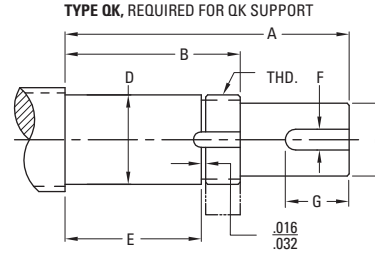
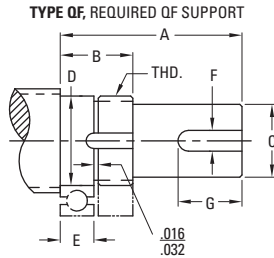


Screw Size	Type FF/FF1 (inch)										Type FK/FK1 (inch)							
	Standard P/N	A	B	C h7	D	F +0.005/ -0.000	G +0.008/ -0.000	H +0.000/ -0.008	Snap Ring (DIN471) (mm)	Bearing Trade No.	Standard P/N	A	B	C h7	D	E	THD	Bearing Trade No.
0.500 x 0.200	7833384	0.984	0.394	0.2362 0.2357	0.3148 0.3145	0.035	0.311	0.299	8	608	7833377	2.008	1.417	0.3150 0.3144	0.3935 0.3932	0.984	M10x1	7000
0.631 x 0.200 0.631 x 1.000	7833385	1.024	0.433	0.3150 0.3144	0.3935 0.3932	0.045	0.360	0.378	10	6000	7833378	2.008	1.417	0.3937 0.3931	0.4722 0.4720	0.984	M12x1	7001
0.750 x 0.200 0.750 x 0.500	7833386	1.299	0.512	0.4724 0.4717	0.5904 0.5900	0.045	0.400	0.563	15	6002	7833379	2.638	1.850	0.4724 0.4717	0.5904 0.5900	1.339	M15x1	7002
0.875 x 0.200	7833387	1.535	0.630	0.5906 0.5898	0.6691 0.6687	0.045	0.518	0.638	17	6203	7833380	3.189	2.283	0.5906 0.5898	0.6691 0.6687	1.693	M17x1	7203
1.000 x 0.200 / 0.250 1.000 x 0.500 / 1.000 1.171 x 0.413	7833388	1.614	0.630	0.6693 0.6686	0.7872 0.7869	0.053	0.526	0.748	20	6004	7833381	3.425	2.441	0.6693 0.6686	0.7872 0.7869	1.772	M20x1	7204
1.150 x 0.200 1.250 x 0.200 / 0.500 1.500 x 0.473 / 1.000	7833389	1.969	0.787	0.7874 0.7866	0.9841 0.9837	0.053	0.644	0.941	25	6205	7833382	4.173	2.992	0.7874 0.7866	0.9841 0.9837	2.205	M25x1.5	7205
1.500 x 0.200 / 0.250 1.500 x 0.500 / 1.875 1.500 x 2.000	7833390	2.323	0.827	0.9843 0.9834	1.1809 1.1805	0.069	0.699	1.126	30	6206	7833383	4.331	2.835	0.9843 0.9834	1.1809 1.1805	1.850	M30x1.5	7206

Bearing Supports/End Machining — Inch Series Ball Screws

Standard End Machining

The typical ends shown below can be machined on all ball screws. Specific dimensional data is provided in the table.



Screw Size	Type QF/QF1 (inch)			Type QK/QK1 (inch)			Common Dimensions							
	Standard P/N	A	B	E	Standard P/N	A	B	E	C	D ⁽¹⁾	F	G	THD	Bearing Trade No.
0.500 x 0.200	7833291	1.970	0.720	0.291	7828282	2.874	1.812	1.398	0.2500 0.2490	0.3544 0.3541	0.092	1.000	5/16-24	629
0.631 x 0.200 0.631 x 1.000	7833256	2.110	0.810	0.394	7824154	3.292	1.992	1.576	0.4060 0.4050	0.4726 0.4723	0.125	1.250	N-01	7201
0.750 x 0.200 0.750 x 0.500	7833259	1.870	0.870	0.433	7824155	3.180	2.180	1.732	0.5000 0.4990	0.5908 0.5905	0.125	0.875	N-02	7202
0.875 x 0.200	7833262	2.233	0.918	0.472	7824156	3.649	2.334	1.888	0.5620 0.5610	0.6695 0.6692	0.125	1.250	N-03	7203
1.000 x 0.200 /0.250 1.000 x 0.500/1.000 1.171 x 0.413	7833265	2.375	1.060	0.551	7824157	4.028	2.713	2.204	0.6250 0.6240	0.7877 0.7873	0.188	1.250	N-04	7204
1.150 x 0.200 1.250 x 0.200/0.500 1.500 x 0.473/1.000	7833268	2.680	1.120	0.591	7824158	4.453	2.893	2.364	0.7500 0.7490	0.9846 0.9842	0.188	1.250	N-05	7205
1.500 x 0.200/0.250 1.500 x 0.500/1.875 1.500 x 2.000	7833270	2.970	1.160	0.630	7824159	4.860	3.050	2.520	1.0000 0.9990	1.1814 1.1810	0.250	1.250	N-06	7206
1.750 x 0.200	7833273	3.650	1.460	0.906	7829554	6.368	4.178	3.624	1.3750 1.3740	1.5752 1.5747	0.313	1.875	N-08	7308
2.000 x 0.200 /0.500/1.000 2.250 x 0.500 2.250 x 1.000	7833276	3.730	1.540	0.984	7824160	6.682	4.492	3.936	1.3750 1.3740	1.7721 1.7716	0.313	1.875	N-09	7309
2.500 x 0.250 2.500 x 0.500 2.500 x 1.000	7833279	4.560	1.680	1.063	7824161	7.749	4.872	4.252	1.7500 1.7490	1.9689 1.9684	0.375	2.750	N-10	7310

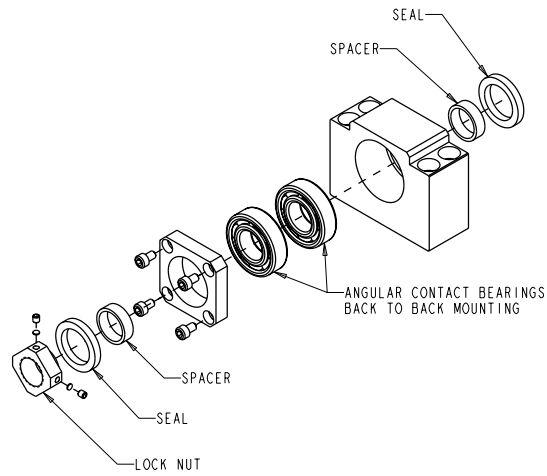
(1) Dimensioned for press fit of bearing on bearing journal.

NOTES:

A large grid area for taking notes, consisting of a uniform grid of small squares. The grid is empty and occupies most of the page below the 'NOTES:' header.

Bearing Supports/End Machining — Metric Series Ball Screws

BK Support Blocks

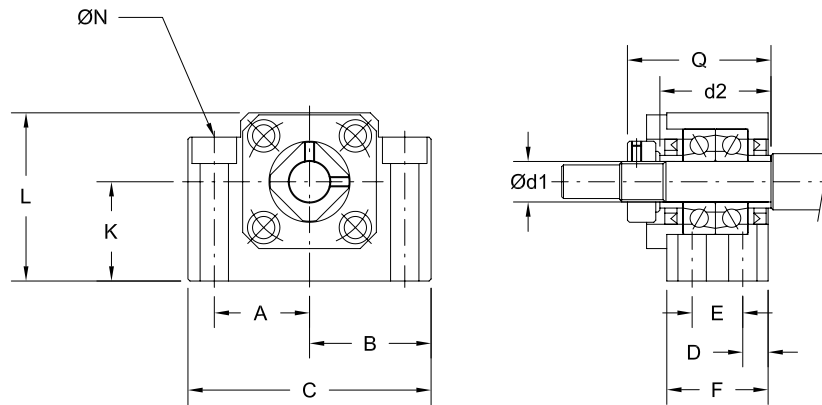


Standard P/N	Dia.x Lead (inch)	Bearing Rating				Lock Nut Type	Bearing Block Weight (kg)
		Static Rating C ₀		Dynamic Rating C _{am}			
		(lbs)	(N)	(lbs)	(N)		
7833391	12	326	1450	989	4400	RN10	0.4
7833392	16	627	2790	1596	7100	RN12	0.5
7833393	20	1057	4700	2315	10300	RN15	0.6
7833394	25	1832	8150	3215	14300	RN20	1.3
7833395	32	2113	9400	3732	16600	RN25	2.4
7833396	40	3035	13500	5170	23000	RN30	3.4
7833397	50	6789	30200	11375	50600	RN40	6.8

Note: Design dimensions fit standard Type BK and BK1 end machining. See page 172 for details.

Bearing Supports/End Machining - Metric Series Ball Screws

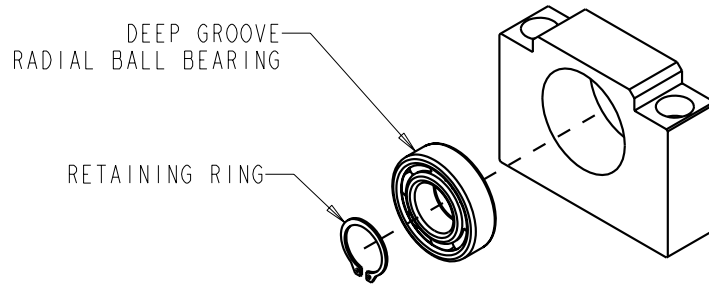
BK Bearing Support Blocks



Standard P/N	Bearing Block Dimensions (mm)											
	d1	d2	A	B	C	D	E	F	K ±0.02	L	N	Q
7833391	10	27.0	23.0	30.0	60.0	6.0	13.0	25.0	22.00	39.0	4 Holes 6.6 dia Thru 10.8 C-Bore x 5.0 Deep	34.0
7833392	12	27.0	23.0	30.0	60.0	6.0	13.0	25.0	25.00	43.0	4 Holes 6.6 dia. Thru 10.8 C-Bore x 1.5 Deep	34.0
7833393	15	30.0	27.0	35.0	70.0	6.0	15.0	27.0	28.00	48.0	4 Holes 6.6 dia. Thru 11.0 C-Bore x 6.5 Deep	38.0
7833394	20	40.0	35.0	44.0	88.0	8.0	19.0	35.0	34.00	60.0	4 Holes 9.0 dia. Thru 14.0 C-Bore x 8.5 Deep	51.0
7833395	25	48.0	42.5	53.0	106.0	10.0	22.0	42.0	48.00	80.0	4 Holes 11.0 dia. Thru 17.0 C-Bore x 11.0 Deep	63.0
7833396	30	50.0	51.0	64.0	128.0	11.0	23.0	45.0	51.00	89.0	4 Holes 14.0 dia. Thru 20.0 C-Bore x 13.0 Deep	70.0
7833397	40	66.0	65.0	80.0	160.0	14.0	33.0	61.0	60.00	110.0	4 Holes 18.0 dia. Thru 26.0 C-Bore x 17.5 Deep	91.0

Bearing Supports/End Machining — Metric Series Ball Screws

BF Support Blocks

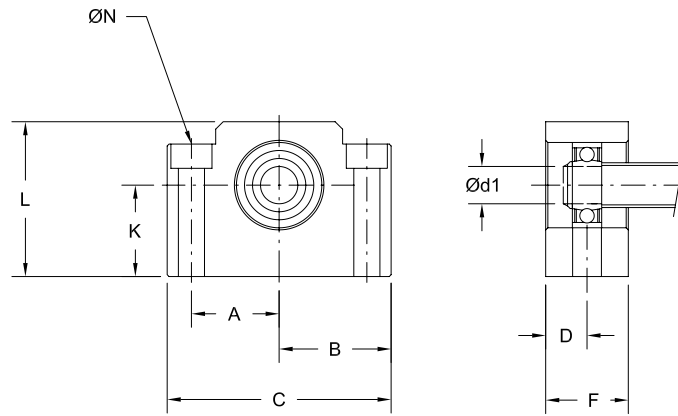


Standard P/N	Dia.x Lead (mm)	Bearing Rating				Snap Ring (DIN 471) (mm)	Bearing Block Weight (mm)
		Static Rating C ₀		Dynamic Rating C _{am}			
		(lbs)	(N)	(lbs)	(N)		
7833398	12	366	1630	821	3650	8	0.3
7833399	16	674	3000	1708	7600	10	0.4
7833400	20	780	3470	1945	8650	15	0.4
7833401	25	1461	6500	3237	14400	20	0.8
7833402	32	1753	7800	3597	16000	25	1.5
7833403	40	2540	11300	4991	22200	30	2.0
7833404	50	5822	25900	11375	50600	40	3.3

Note: Design dimensions fit standard Type BF and BF1 end machining. See page 172 for details.

Bearing Supports/End Machining - Metric Series Ball Screws

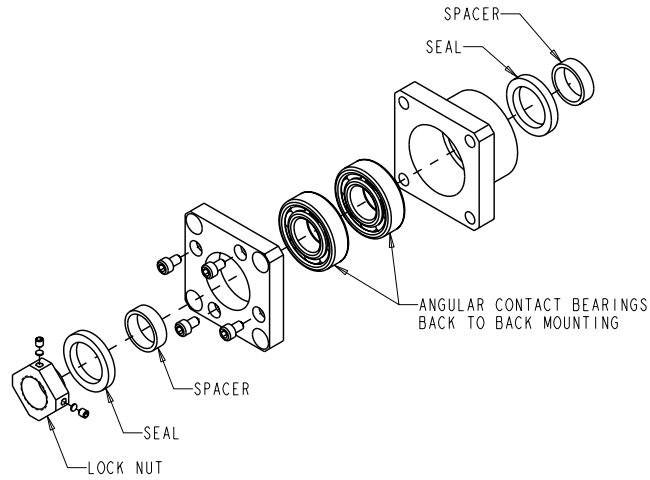
BF Bearing Support Blocks



Standard P/N	Bearing Block Dimensions (mm)								
	d1 (mm)	A	B	C	D	F	K ±0.02	L	N
7833398	8	23.0	30.0	60.0	10.0	20.0	22.00	39.0	2 Holes 6.6 dia Thru 10.8 C-Bore x 5.0 Deep
7833399	10	23.0	30.0	60.0	10.0	20.0	25.00	43.0	2 Holes 6.6 dia. Thru 10.8 C-Bore x 1.5 Deep
7833400	15	27.0	35.0	70.0	10.0	20.0	28.00	48.0	2 Holes 6.6 dia. Thru 11.0 C-Bore x 6.5 Deep
7833401	20	35.0	44.0	88.0	13.0	26.0	34.00	60.0	2 Holes 9.0 dia. Thru 14.0 C-Bore x 8.5 Deep
7833402	25	42.5	53.0	106.0	15.0	30.0	48.00	80.0	2 Holes 11.0 dia. Thru 17.0 C-Bore x 11.0 Deep
7833403	30	51.0	64.0	128.0	16.0	32.0	51.00	89.0	2 Holes 14.0 dia. Thru 20.0 C-Bore x 13.0 Deep
7833404	40	65.0	80.0	160.0	18.5	37.0	60.00	110.0	2 Holes 18.0 dia. Thru 26.0 C-Bore x 17.5 Deep

Bearing Supports/End Machining — Metric Series Ball Screws

FK Support Blocks

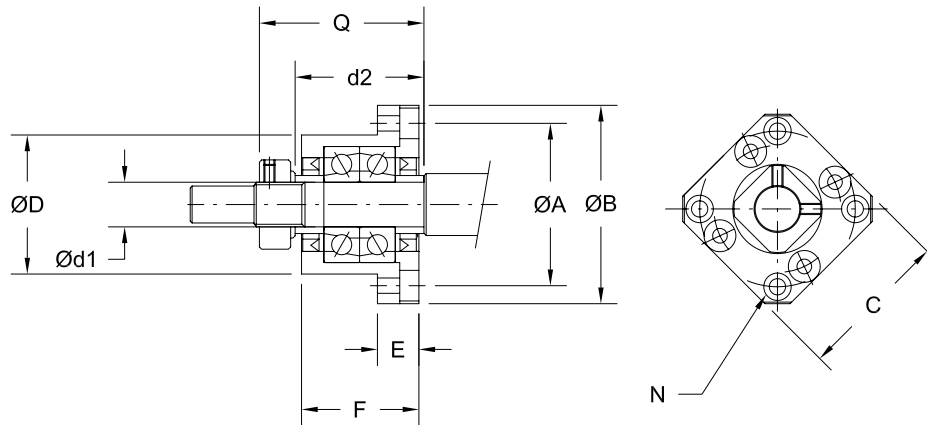


Standard P/N	Dia. x Lead (mm)	Bearing Rating				Lock Nut Type	Bearing Block Weight (kg)
		Static Rating C ₀		Dynamic Rating C _{am}			
		(lbs)	(N)	(lbs)	(N)		
7833405	12	326	1450	989	4400	RN10	0.3
7833406	16	627	2790	1596	7100	RN12	0.3
7833407	20	1057	4700	2315	10300	RN15	0.4
7833408	25	1832	8150	3215	14300	RN20	1.2
7833409	32	2113	9400	3732	16600	RN25	1.6
7833410	40	3035	13500	5170	23000	RN30	2.4

Note: Design dimensions fit standard Type FK and FK1 end machining. See page 173 for details.

Bearing Supports/End Machining - Metric Series Ball Screws

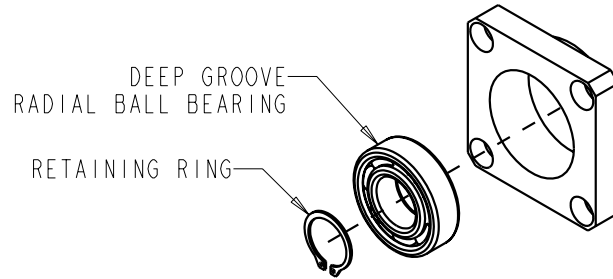
FK Bearing Support Blocks



Standard P/N	Bearing Block Dimensions (mm)									
	d1	d2	A	B	C	D _{g6}	E	F	N	Q
7833405	10	27.0	42.0	52.0	42.0	34.0	10.0	27.0	4 Holes 4.5 dia Thru 8.0 C-Bore x 4.0 Deep	33.0
7833406	12	27.0	44.0	54.0	44.0	36.0	10.0	27.0	4 Holes 4.5 dia. Thru 8.0 C-Bore x 4.0 Deep	33.0
7833407	15	38.0	50.0	63.0	52.0	40.0	15.0	32.0	4 Holes 5.5 dia. Thru 9.5 C-Bore x 6.0 Deep	40.0
7833408	20	50.0	70.0	85.0	68.0	57.0	22.0	52.0	4 Holes 6.6 dia. Thru 11.0 C-Bore x 10.0 Deep	66.0
7833409	25	60.0	80.0	98.0	79.0	63.0	27.0	57.0	4 Holes 9.0 dia. Thru 15.0 C-Bore x 13.0 Deep	74.0
7833410	30	50.0	95.0	117.0	93.0	75.0	30.0	62.0	4 Holes 11.0 dia. Thru 17.5 C-Bore x 15.0 Deep	80.0

Bearing Supports/End Machining — Metric Series Ball Screws

FF Support Blocks

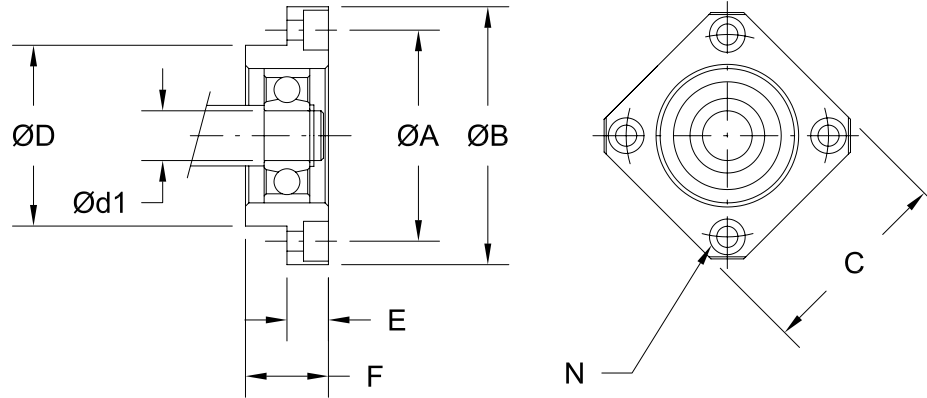


Standard P/N	Dia.x Lead (mm)	Bearing Rating				Snap Ring (DIN 471) (mm)	Bearing Block Weight (kg)
		Static Rating C ₀		Dynamic Rating C _{am}			
		(lbs)	(N)	(lbs)	(N)		
7833411	12	366	1630	821	3650	8	0.1
7833412	16	674	3000	1708	7600	10	0.2
7833413	20	780	3470	1945	8650	15	0.2
7833414	25	1461	6500	3237	14400	20	0.5
7833415	32	1753	7800	3597	16000	25	0.7
7833416	40	2540	11300	4991	22200	30	1.1

Note: Design dimensions fit standard Type FF and FF1 end machining. See page 173 for details.

Bearing Supports/End Machining - Metric Series Ball Screws

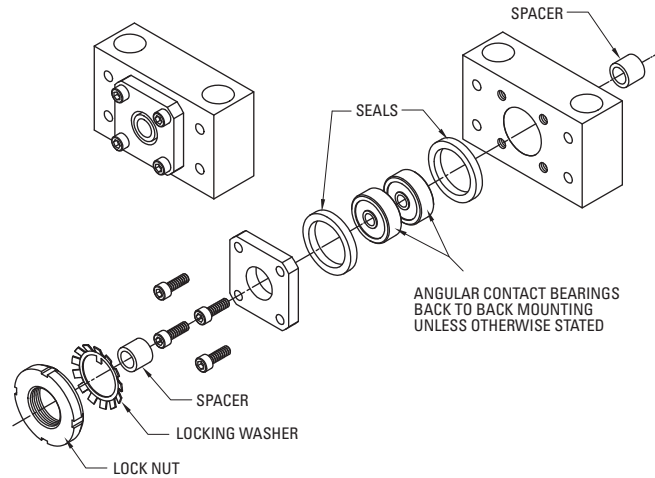
FF Bearing Support Blocks



Standard P/N	Bearing Block Dimensions (mm)							
	d1	A	B	C	D g6	E	F	N
7833411	8	35.0	43.0	35.0	28.0	7.0	12.0	4 Holes 3.4 dia Thru 6.5 C-Bore x 4.0 Deep
7833412	10	42.0	52.0	42.0	34.0	7.0	15.0	4 Holes 4.5 dia. Thru 8.0 C-Bore x 4.0 Deep
7833413	15	50.0	63.0	52.0	40.0	9.0	17.0	4 Holes 5.5 dia. Thru 9.5 C-Bore x 5.5 Deep
7833414	20	70.0	85.0	68.0	57.0	11.0	20.0	4 Holes 6.6 dia. Thru 11.0 C-Bore x 6.5 Deep
7833415	25	80.0	98.0	79.0	63.0	14.0	24.0	4 Holes 9.0 dia. Thru 14.0 C-Bore x 8.5 Deep
7833416	30	95.0	117.0	93.0	75.0	18.0	27.0	4 Holes 11.0 dia. Thru 17.0 C-Bore x 11.0 Deep

Bearing Supports/End Machining — Metric Series Ball Screws

QK Bearing Support Blocks



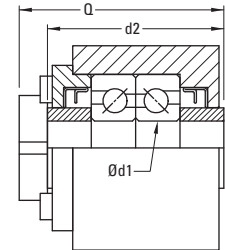
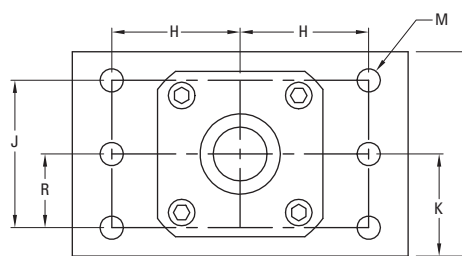
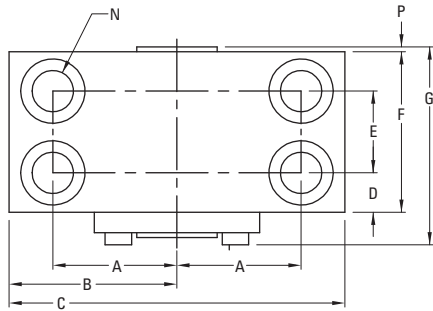
Standard P/N	Dia. (mm)	Bearing Rating				Lock Nut Type	Bearing Block Weight lbs (kg)
		Static Rating C_0		Dynamic Rating C_{am}			
		(lbs)	(N)	(lbs)	(N)		
7829546 ⁽¹⁾	12	440	1960	1030	4550	M8-1.25	2 (.9)
7829547	16	630	2790	1600	7100	KM-01	1.5 (.7)
7829548	20	1060	4700	2320	10300	KM-02	3.5 (1.6)
7829549	25	1838	8150	3225	14300	KM-03	5.5 (2.5)
7829550	32	2120	9400	3750	16600	KM-05	9.5 (4.3)
7829551	40	3050	13500	5200	23000	KM-06	11.5 (5.2)
7829552	50	6800	30200	11400	50600	KM-08	21.5 (9.8)
7829553	63	10800	47900	17300	76800	KM-10	39 (17.7)

(1) Deep groove radial bearing.

Note: Design dimensions fit standard Type QK and QK1 end machining. See page 174 for details.

Bearing Supports/End Machining — Metric Series Ball Screws

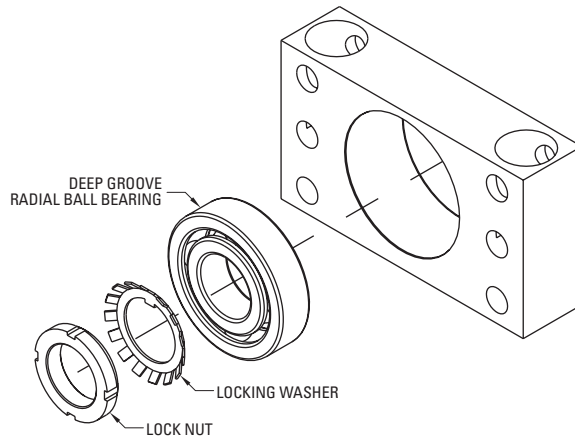
QK Support Blocks



Standard P/N	Bearing Block Dimensions (mm)																
	d1	d2	A & H	B	C	D	E	F	G	J	K	L	M	N	P	Q	R
7829546	9	37	25.40	35	70	16.0	—	30.23	35	35	25.40	50.80	4 Holes 7.13 dia.	2 Holes 7.13 dia. Thru 12.7 C-Bore x 14.22 DP	—	46.20	17.46
7829547	12	32	28.58	38	76	17.0	—	34.00	43	29	25.40	47.75	4 Holes 7.13 dia.	2 Holes 10.31 dia. Thru 15.88 C-Bore x 22.23 DP	0.51	40.64	15.88
7829548	15	44	31.75	45	89	19.0	—	38.00	47	35	28.58	54.10	4 Holes 7.13 dia.	2 Holes 10.31 dia. Thru 15.88 C-Bore x 25.4 DP	0.51	53.34	19.05
7829549	20	56	41.28	57	114	24.0	—	48.00	60	44	36.53	69.85	4 Holes 11.91 dia.	2 Holes 16.66 dia. Thru 25.4 C-Bore x 33.33 DP	1.00	68.58	23.83
7829550	25	60	53.98	76	152	24.5	—	49.00	65	51	44.45	85.85	4 Holes 16.66 dia.	2 Holes 23.01 dia. Thru 34.93 C-Bore x 50.80 DP	0.76	73.66	25.40
7829551	30	64	60.33	83	165	26.0	—	52.00	68	51	47.63	92.20	4 Holes 16.66 dia.	2 Holes 23.01 dia. Thru 34.93 C-Bore x 52.38 DP	1.14	76.20	25.40
7829552	40	92	74.60	96	192	19.2	41.50	80.00	96	76	57.15	107.95	6 Holes 16.66 dia.	4 Holes 23.01 dia. Thru 34.93 C-Bore x 57.15 DP	1.27	106.68	38.10
7829553	50	108	90.51	115	230	23.5	43.75	90.75	113	92	71.45	143.00	4 Holes 20.63 dia.	4 Holes 26.19 dia. Thru 41.28 C-Bore x 88.90 DP	2.29	124.46	46.05

Bearing Supports/End Machining — Metric Series Ball Screws

QF Support Blocks

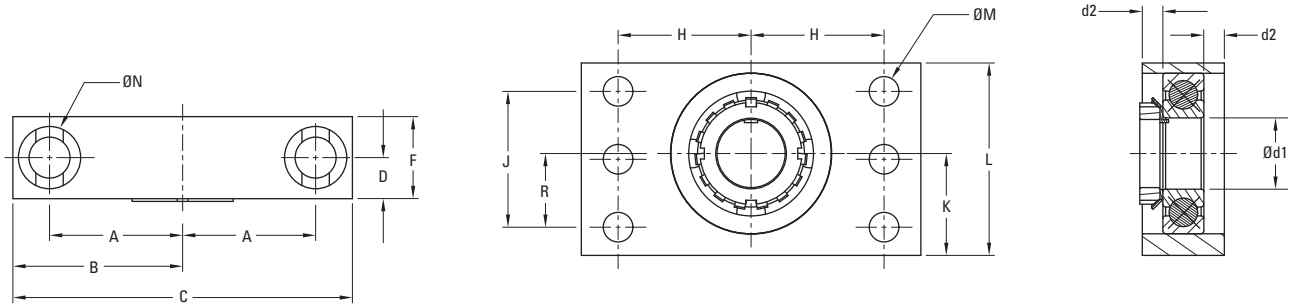


Standard P/N	Dia. x Lead (mm)	Bearing Rating				Lock Nut Type	Bearing Block Weight lbs (kg)
		Static Rating C ₀		Dynamic Rating C _{am}			
		(lbs)	(N)	(lbs)	(N)		
7833292	12 x 10	440	1960	1030	4550	M8-1.25	0.36 (0.16)
7833282	16 x 5 & 10 & 16	674	3000	1708	7600	KM-01	0.59 (0.27)
7833283	20 x 5 & 10 & 20	780	3470	1945	8650	KM-02	0.73 (0.33)
7833284	25 x 5 & 10 & 25	1461	6500	3237	14400	KM-04	2.63 (1.19)
7833285	32 x 5 & 10 & 32	1753	7800	3597	16000	KM-05	3.08 (1.40)
7833286	40 x 5 & 10 & 20 40 x 32 & 40 & 50	2540	11300	4991	22200	KM-06	3.95 (1.79)
7833287	50 x 10 & 50	5822	25900	11375	50600	KM-08	4.40 (2.00)
7833288	63 x 10 & 20	7081	31500	13376	59500	KM-10	8.39 (3.81)

Note: Design dimensions fit standard Type QF and QF1 end machining. See page 174 for details.

Bearing Supports/End Machining — Metric Series Ball Screws

QF Support Blocks



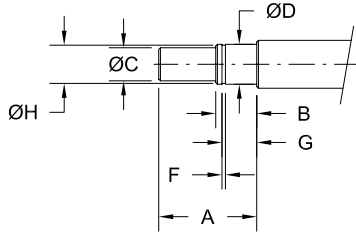
Standard P/N	Bearing Block Dimensions (mm)													
	d1	d2	A & H	B	C	D	F	J	K	L	M	N	Q	R
7833292	9.0	3.0	25.4	35.0	70.0	7.0	14.0	34.9	25.4	50.8	4 Holes 7.1 dia.	2 Holes 7.1 dia. Thru 12.7 C-Bore x 14.3 DP	18.5	17.5
7833282	12.0	5.0	28.6	38.0	76.0	10.0	20.0	28.6	25.4	47.6	4 Holes 7.1 dia.	2 Holes 10.3 dia. Thru 15.9 C-Bore x 22.2 DP	20.0	15.9
7833283	15.0	5.5	31.8	45.0	89.0	11.0	22.0	34.9	28.6	54.0	4 Holes 7.1 dia.	2 Holes 10.3 dia. Thru 15.9 C-Bore x 22.2 DP	22.0	19.1
7833284	20.0	7.0	41.3	57.0	114.0	14.0	28.0	44.5	36.5	69.9	4 Holes 11.9 dia.	2 Holes 16.7 dia. Thru 25.4 C-Bore x 33.3 DP	28.0	23.8
7833285	25.0	13.5	54.0	76.0	152.0	21.0	42.0	50.8	44.5	85.7	4 Holes 16.7 dia.	2 Holes 23.0 dia. Thru 34.9 C-Bore x 50.8 DP	42.0	25.4
7833286	30.0	13.0	60.3	83.0	165.0	21.0	42.0	50.8	47.6	92.1	4 Holes 16.7 dia.	2 Holes 23.0 dia. Thru 34.9 C-Bore x 52.4 DP	42.0	25.4
7833287	40.0	11.5	74.6	96.0	192.0	23.0	46.0	76.2	57.2	108.0	6 Holes 16.7 dia.	2 Holes 23.0 dia. Thru 34.9 C-Bore x 57.2 DP	46.0	41.3
7833288	50.0	13.5	90.5	115.0	230.0	27.0	54.0	92.1	71.4	142.9	6 Holes 20.6 dia.	2 Holes 26.2 dia. Thru 41.3 C-Bore x 88.9 DP	54.0	46.0

Bearing Supports/End Machining — Metric Series Ball Screws

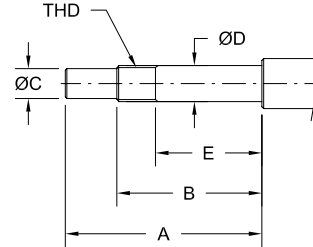
Standard End Machining

The typical ends shown below can be machined on all ball screws. Specific dimensional data is provided in the table.

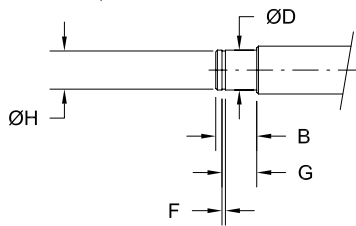
TYPE BF, REQUIRED FOR BF SUPPORT



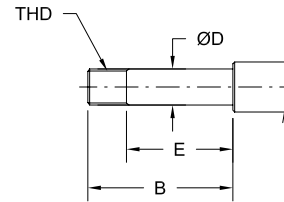
TYPE BK, REQUIRED FOR BK SUPPORT



TYPE BF1, REQUIRED FOR BF SUPPORT



TYPE BK1, REQUIRED FOR BK SUPPORT



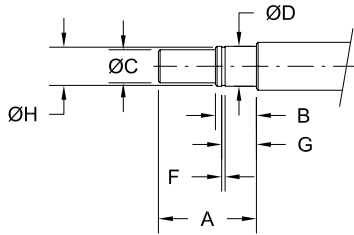
Screw Size	Type BF/ BF1 (mm)										Type BK/ BK1 (mm)							
	Diameter (mm)	Standard P/N	A	B	C _{h7}	D	F _{+0.14/-0.00}	G _{+0.2/-0.0}	H _{+0.0/-0.2}	Snap Ring (DIN 471) (mm)	Bearing Trade No.	Standard P/N	A	B	C _{h7}	D	E	THD
12	7833398	25.0	10.0	6.0	7.995 7.988	0.90	7.90	7.60	8	608	7833391	51.0	36.0	8.0	9.995 9.988	20.0	M10x1	7000
16	7833399	26.0	11.0	8.0	9.995 9.988	1.15	9.15	9.60	10	6000	7833392	51.0	36.0	10.0	11.995 11.988	22.0	M12x1	7001
20	7833400	33.0	13.0	12.0	14.995 14.986	1.15	10.15	14.30	15	6002	7833393	60.0	40.0	12.0	14.995 14.986	28.0	M15x1	7002
25	7833401	41.0	16.0	17.0	19.995 19.986	1.35	13.35	19.00	20	6004	7833394	78.0	53.0	17.0	19.995 19.986	38.0	M20x1	7004
32	7833402	50.0	20.0	20.0	24.995 24.986	1.35	16.35	23.90	25	6205	7833395	95.0	65.0	20.0	24.995 24.986	47.0	M25x1.5	7205
40	7833403	59.0	21.0	25.0	29.995 29.985	1.75	17.75	28.60	30	6206	7833396	110.0	72.0	25.0	29.995 29.985	47.0	M30x1.5	7206
50	7833404	73.0	23.0	35.0	39.995 39.985	1.95	19.95	38.00	40	6208	7833397	143.0	93.0	35.0	39.995 39.985	58.0	M40x1.5	7208

Bearing Supports/End Machining — Metric Series Ball Screws

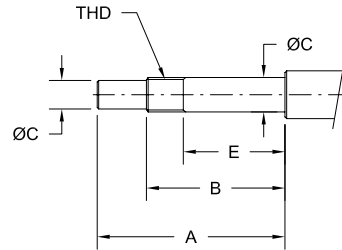
Standard End Machining

The typical ends shown below can be machined on all ball screws. Specific dimensional data is provided in the table.

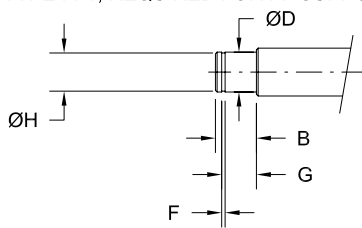
TYPE FF, REQUIRED FOR FF SUPPORT



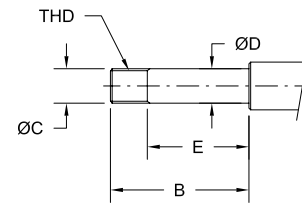
TYPE FK, REQUIRED FOR FK SUPPORT



TYPE FF1, REQUIRED FOR FF SUPPORT



TYPE FK1, REQUIRED FOR FK SUPPORT

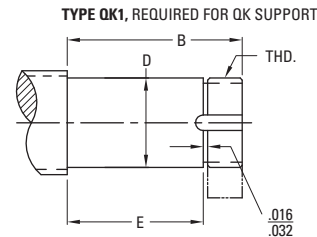
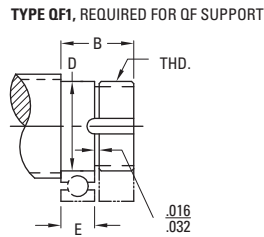
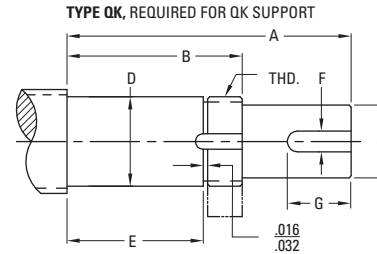
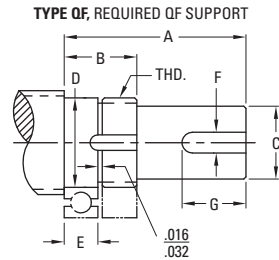


Screw Size		Type FF/ FF1 (mm)									Type FK/ FK1 (mm)							
Diameter (mm)	Standard P/N	A	B	C _{h7}	D	F _{+0.14/-0.00}	G _{+0.2/-0.0}	H _{+0.0/-0.2}	Snap Ring (DIN 471) (mm)	Bearing Trade No.	Standard P/N	A	B	C _{h7}	D	E	THD	Bearing Trade No.
12	7833411	25.0	10.0	6.0	7.995 7.988	0.90	7.90	7.60	8	608	7833405	51.0	36.0	8.0	9.995 9.988	25.0	M10x1	7000
16	7833412	26.0	11.0	8.0	9.995 9.988	1.15	9.15	9.60	10	6000	7833406	51.0	36.0	10.0	11.995 11.988	25.0	M12x1	7001
20	7833413	33.0	13.0	12.0	14.995 14.986	1.15	10.15	14.30	15	6002	7833407	67.0	47.0	12.0	14.995 14.986	34.0	M15x1	7002
25	7833414	41.0	16.0	17.0	19.995 19.986	1.35	13.35	19.00	20	6004	7833408	87.0	62.0	17.0	19.995 19.986	45.0	M20x1	7204
32	7833415	50.0	20.0	20.0	24.995 24.986	1.35	16.35	23.90	25	6205	7833409	106.0	76.0	20.0	24.995 24.986	56.0	M25x1.5	7205
40	7833416	59.0	21.0	25.0	29.995 29.985	1.75	17.75	28.60	30	6206	7833410	110.0	72.0	25.0	29.995 29.985	47.0	M30x1.5	7206

Bearing Supports/End Machining — Metric Series Ball Screws

Standard End Machining

The typical ends shown below can be machined on all ball screws. Specific dimensional data is provided in the table.



Screw Size	Type QF/ QF1 (mm)			Type QK/ QK1 (mm)			Common Dimensions						
	Standard P/N	A	B	E	Standard P/N	A	B	E	C	D ⁽¹⁾	F	G	THD
12	7833292	46.0	19.0	7.4	7829546	73.0	46.0	35.5	6.000/5.987	9.001/8.994	—	—	M8-1.25
16	7833282	54.0	21.0	10.0	7829547	84.0	51.0	40.0	10.000/9.987	12.006/11.999	3.0	30.0	KM-01
20	7833283	47.0	22.0	11.0	7829548	80.0	55.0	44.0	12.000/11.984	15.006/14.999	4.0	22.0	KM-02
25	7833284	61.0	27.0	14.0	7829549	103.0	69.0	56.0	16.000/15.984	20.007/19.997	5.0	30.0	KM-04
32	7833285	68.0	29.0	15.0	7829550	113.0	74.0	60.0	20.000/19.980	25.008/24.996	5.0	32.0	KM-05
40	7833286	76.0	30.0	16.0	7829551	124.0	78.0	64.0	25.000/24.980	30.007/29.997	8.0	34.0	KM-06
50	7833287	95.0	40.0	23.0	7829552	164.0	109.0	92.0	32.000/31.976	40.010/39.997	8.0	47.0	KM-08
63	7833288	116.0	43.0	27.0	7829553	197.0	124.0	108.0	40.000/39.977	50.010/49.997	10.0	65.0	KM-10

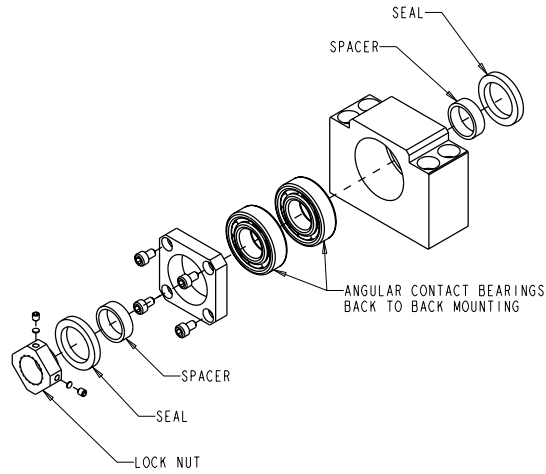
(1) Dimensioned for press fit of bearing on bearing journal.

NOTES:

A large grid area for taking notes, consisting of a uniform grid of small squares. The grid is empty and occupies most of the page below the 'NOTES:' header.

Bearing Supports/End Machining — Ball Splines

BK Support Blocks

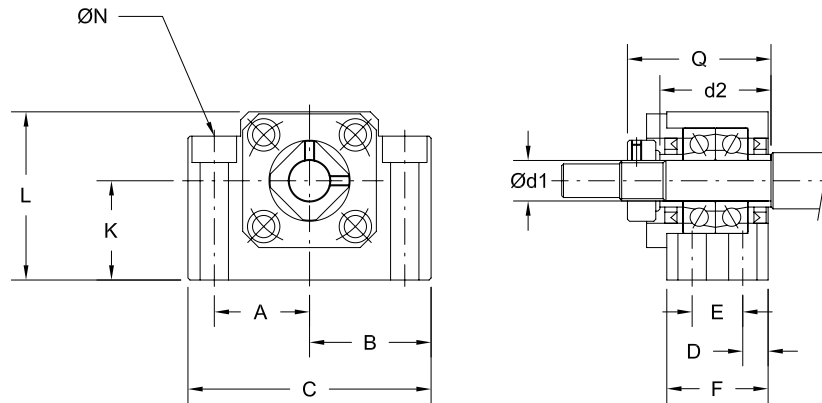


Standard P/N	Spline Size (inch)	Bearing Rating				Lock Nut Type	Bearing Block Weight (lbs)
		Static Rating C_0		Dynamic Rating C_{am}			
		(lbs)	(N)	(lbs)	(N)		
7833360	0.625	326	1450	989	4400	RN10	0.9
7833364	1.000	1832	8150	3215	14300	RN20	2.8
7833365	1.500	2113	9400	3732	16600	RN25	5.3
7833367	2.00	6789	30200	11375	50600	RN40	15.0

Note: Design dimensions fit standard Type BK and BK1 end machining. See page 188 for details.

Bearing Supports/End Machining — Ball Splines

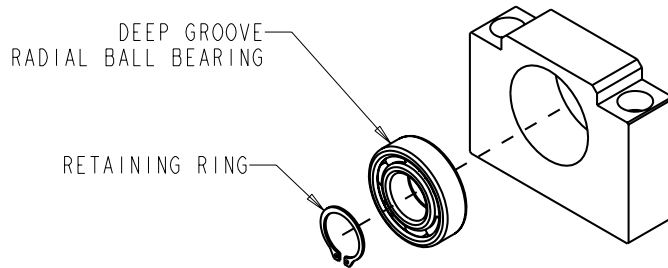
BK Bearing Support Blocks



Standard P/N	Bearing Block Dimensions (inch)											
	d1 (mm)	d2	A	B	C	D	E	F	K ± 0.001	L	N	Q
7833360	10	1.063	0.906	1.181	2.362	0.236	0.512	0.984	0.866	1.535	4 Holes 0.260 dia Thru 0.425 C-Bore x 0.197 Deep	1.339
7833364	20	1.575	1.378	1.732	3.465	0.315	0.748	1.378	1.339	2.362	4 Holes 0.354 dia. Thru 0.551 C-Bore x 0.335 Deep	2.008
7833365	25	1.890	1.673	2.087	4.173	0.394	0.866	1.654	1.890	3.150	4 Holes 0.433 dia. Thru 0.699 C-Bore x 0.433 Deep	2.480
7833367	40	2.598	2.559	3.150	6.299	0.551	1.299	2.402	2.362	4.331	4 Holes 0.709 dia. Thru 1.024 C-Bore x 0.689 Deep	3.583

Bearing Supports/End Machining — Ball Splines

BF Support Blocks

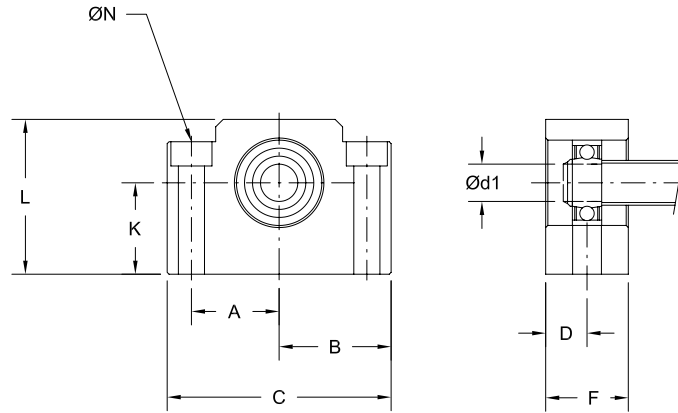


Standard P/N	Spline Size (inch)	Bearing Rating				Snap Ring (DIN 471) (mm)	Bearing Block Weight (lbs)
		Static Rating C_0		Dynamic Rating C_{am}			
		(lbs)	(N)	(lbs)	(N)		
7833368	0.625	366	1630	821	3650	8	0.7
7833372	1.000	1461	6500	3237	14400	20	1.7
7833373	1.500	1753	7800	3597	16000	25	3.2
7833375	2.00	5822	25900	11375	50600	40	7.3

Note: Design dimensions fit standard Type BF and BF1 end machining. See page 188 for details.

Bearing Supports/End Machining — Ball Splines

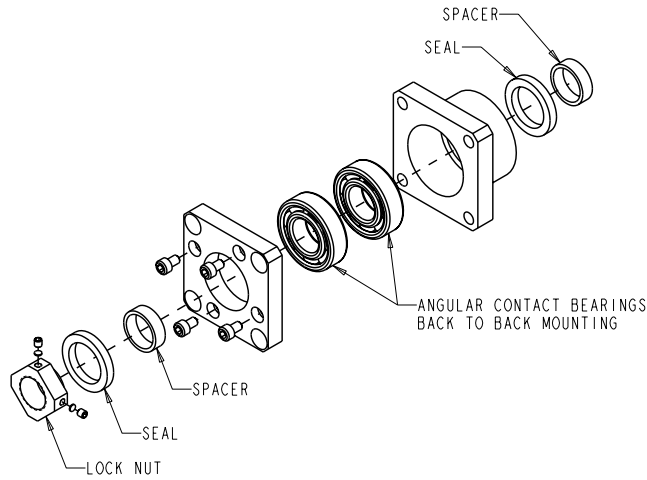
BF Bearing Support Blocks



Standard P/N	Bearing Block Dimensions (inch)								
	d1 (mm)	A	B	C	D	F	K ±0.001	L	N
7833368	8	0.906	1.181	2.362	0.394	0.787	0.866	1.535	2 Holes 0.260 dia Thru 0.425 C-Bore x 0.197 Deep
7833372	20	1.378	1.732	3.465	0.512	1.024	1.339	2.362	2 Holes 0.354 dia. Thru 0.551 C-Bore x 0.335 Deep
7833373	25	1.673	2.087	4.173	0.591	1.181	1.890	3.150	2 Holes 0.433 dia. Thru 0.699 C-Bore x 0.433 Deep
7833375	40	2.559	3.150	6.299	0.728	1.457	2.362	4.331	2 Holes 0.709 dia. Thru 1.024 C-Bore x 0.689 Deep

Bearing Supports/End Machining — Ball Splines

FK Support Blocks

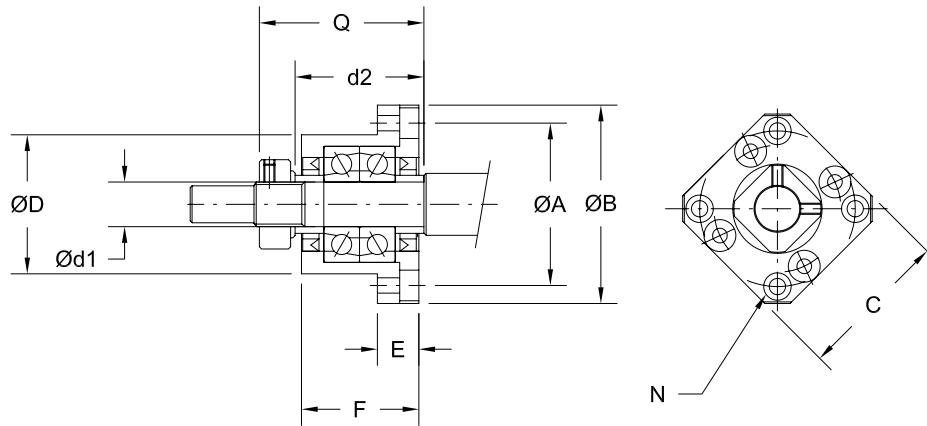


Standard P/N	Spline (inch)	Bearing Rating				Lock Nut Type	Bearing Block Weight (lbs)
		Static Rating C_0		Dynamic Rating C_{am}			
		(lbs)	(N)	(lbs)	(N)		
7833377	0.625	326	1450	989	4400	RN10	0.6
7833381	1.000	1832	8150	3215	14300	RN20	2.5
7833382	1.500	2113	9400	3732	16600	RN25	3.5

Note: Design dimensions fit standard Type FK and FK1 end machining. See page 189 for details.

Bearing Supports/End Machining — Ball Splines

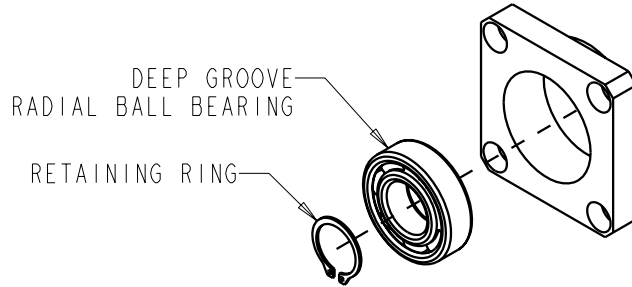
FK Bearing Support Blocks



Standard P/N	Bearing Block Dimensions (inch)									
	d1 (mm)	d2	A	B	C	D	E	F	N	Q
7833360	10	1.063	1.654	2.047	1.654	1.3382 1.3376	0.394	1.063	4 Holes 0.177 dia Thru 0.315 C-Bore x 0.157 Deep	1.299
7833364	20	1.969	2.756	3.346	2.677	2.2437 2.2430	0.866	2.047	4 Holes 0.260 dia. Thru 0.433 C-Bore x 0.394 Deep	2.598
7833365	25	2.362	3.150	3.858	3.110	2.4799 2.4792	1.063	2.244	4 Holes 0.354 dia. Thru 0.591 C-Bore x 0.512 Deep	2.913

Bearing Supports/End Machining — Ball Splines

FF Support Blocks

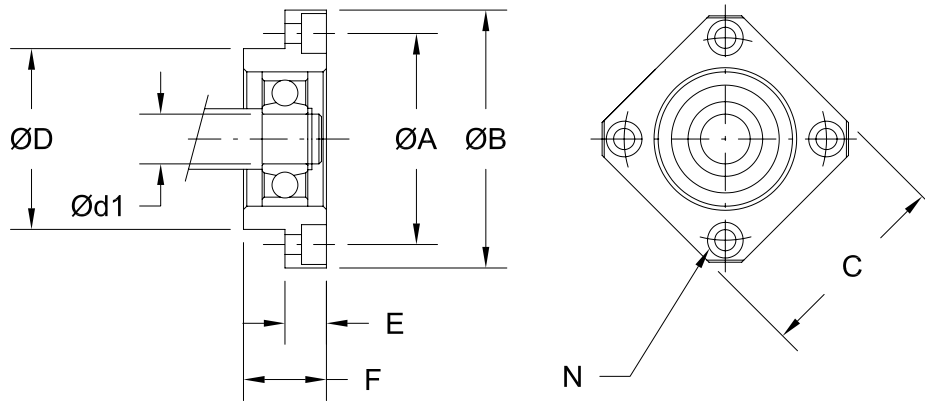


Standard P/N	Spline Size (inch)	Bearing Rating				Snap Ring (DIN 471) (mm)	Bearing Block Weight (lbs)
		Static Rating C_0		Dynamic Rating C_{am}			
		(lbs)	(N)	(lbs)	(N)		
7833384	0.625	366	1630	821	3650	10	0.2
7833388	1.000	1461	6500	3237	14400	20	1.0
7833389	1.500	1753	7800	3597	16000	25	1.5

Note: Design dimensions fit standard Type FF and FF1 end machining. See page 189 for details.

Bearing Supports/End Machining — Ball Splines

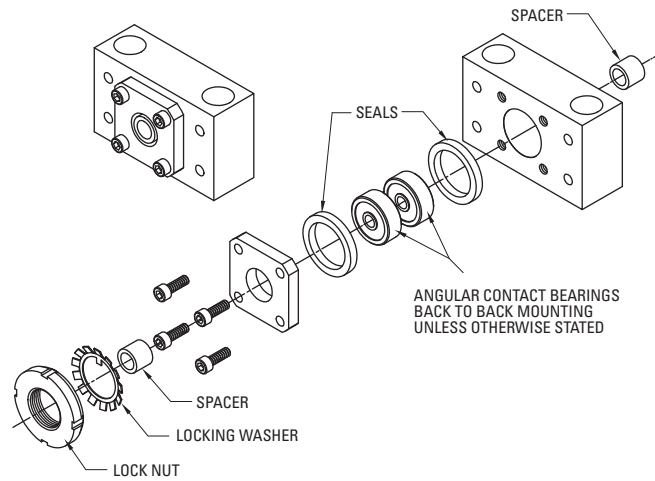
FF Bearing Support Blocks



Standard P/N	Bearing Block Dimensions (inch)							
	d1 (mm)	A	B	C	D	E	F	N
7833368	8	1.378	1.693	1.378	1.1021 1.1016	0.276	0.472	4 Holes 0.134 dia Thru 0.256 C-Bore x 0.157 Deep
7833372	20	2.756	3.346	2.677	2.2437 2.2430	0.433	0.787	4 Holes 0.260 dia. Thru 0.433 C-Bore x 0.256 Deep
7833373	25	3.150	3.858	3.110	2.4799 2.4792	0.551	0.945	4 Holes 0.354 dia. Thru 0.551 C-Bore x 0.335 Deep

Bearing Supports/End Machining — Ball Splines

QK Bearing Support Blocks



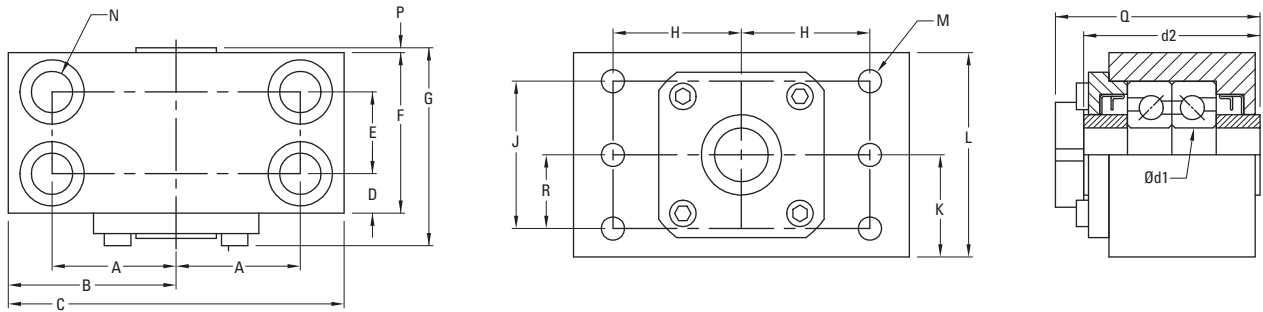
Standard P/N	Spline Size (inch)	Bearing Rating				Lock Nut Type	Bearing Block Weight (lbs)
		Static Rating C_0		Dynamic Rating C_{am}			
		(lbs)	(N)	(lbs)	(N)		
7828282 ⁽¹⁾	0.625	440	1960	1030	4550	5/16-24	2.0
7824157	1.000	1838	8150	3225	14300	N-04	5.5
7824158	1.500	2120	9400	3750	16600	N-05	9.5
7829554	2.000	6800	30200	11400	50600	N-08	21.5
7824161	2.500	10800	47900	17300	76800	N-10	39

(1) Deep groove radial bearing.

Note: Design dimensions fit standard Type QK and QK1 end machining. See page 190 for details.

Bearing Supports/End Machining — Ball Splines

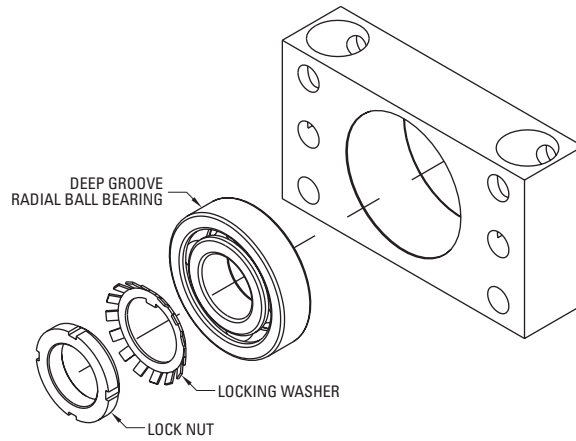
QK Bearing Support Blocks



Standard P/N	Bearing Block Dimensions (inch)																
	d1 (mm)	d2	A & H	B	C	D	E	F	G	J	K	L	M	N	P	Q	R
7828282	9	1.44	1.000	1.38	2.75	0.63	—	1.19	1.4	1.375	1.000	2.00	4 Holes 0.281 dia.	2 Holes 0.281 dia. Thru 0.50 C-Bore x 0.56 DP	—	1.8	0.688
7824157	20	2.2	1.625	2.25	4.50	0.83	—	1.87	2.4	1.750	1.438	2.75	4 Holes 0.469 dia.	2 Holes 0.656 dia. Thru 1.00 C-Bore x 0.312 DP	0.04	2.7	0.938
7824158	25	2.36	2.125	3.00	6.00	0.94	—	1.94	2.6	2.000	1.750	3.38	4 Holes 0.656 dia.	2 Holes 0.906 dia. Thru 1.375 C-Bore x 2.00 DP	0.03	2.9	1.000
7829554	40	3.62	2.937	3.75	7.50	0.76	1.63	3.15	3.8	3.000	2.250	4.25	6 Holes 0.656 dia.	4 Holes 0.906 dia. Thru 1.375 C-Bore x 2.25 DP	0.05	4.2	1.500
7824161	50	4.25	3.563	4.50	9.00	0.92	1.72	3.56	4.5	3.625	2.813	5.63	6 Holes 0.812 dia.	4 Holes 1.031 dia. Thru 1.625 C-Bore x 3.500 DP	0.05	4.9	1.813

Bearing Supports/End Machining — Ball Splines

QF Support Blocks

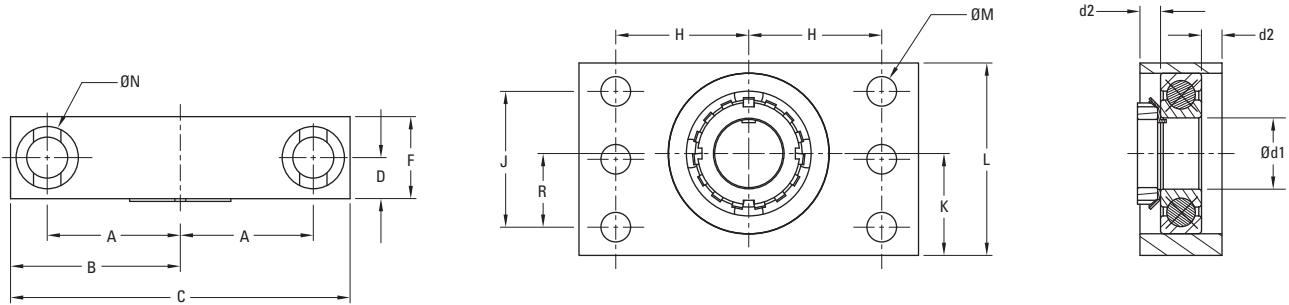


Standard P/N	Spline Size (inch)	Bearing Rating				Lock Nut Type	Bearing Block Weight (lbs)
		Static Rating C_0		Dynamic Rating C_{am}			
		(lbs)	(N)	(lbs)	(N)		
7833291	0.625	440	1960	1030	4550	5/16-24	0.8
7833265	1.000	1461	6500	3237	14400	N-04	5.8
7833268	1.500	1753	7800	3597	16000	N-05	6.8
7833273	2.000	5822	25900	11375	50600	N-08	9.7
7833279	2.500	8475	37700	15579	69300	N-10	18.5

Note: Design dimensions fit standard Type QF and QF1 end machining. See page 190 for details.

Bearing Supports/End Machining — Ball Splines

QF Support Blocks



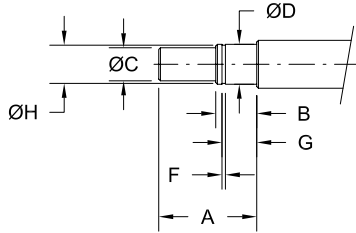
Standard P/N	Bearing Block Dimensions (inch)													
	d1 (mm)	d2	A & H	B	C	D	F	J	K	L	M	N	Q	R
7833291	9.0	0.118	1.000	1.380	2.750	0.276	0.551	1.375	1.000	2.000	4 Holes 0.281 dia.	2 Holes 0.281 dia. Thru 0.500 C-Bore x 0.562 DP	0.757	0.688
7833265	20.0	0.276	1.625	2.250	4.500	0.551	1.102	1.750	1.438	2.750	4 Holes 0.469 dia.	2 Holes 0.656 dia. Thru 1.000 C-Bore x 1.312 DP	1.258	0.938
7833268	25.0	0.531	2.125	3.000	6.000	0.827	1.654	2.000	1.750	3.375	4 Holes 0.656 dia.	2 Holes 0.906 dia. Thru 1.375 C-Bore x 2.000 DP	1.654	1.000
7833273	40.0	0.453	2.937	3.750	7.500	0.906	1.811	3.000	2.250	4.250	6 Holes 0.656 dia.	2 Holes 0.906 dia. Thru 1.375 C-Bore x 2.250 DP	1.869	1.625
7833279	50.0	0.531	3.563	4.500	9.000	1.063	2.126	3.625	2.813	5.625	6 Holes 0.812 dia.	2 Holes 1.031 dia. Thru 1.625 C-Bore x 3.500 DP	2.167	1.813

Bearing Supports/End Machining — Ball Splines

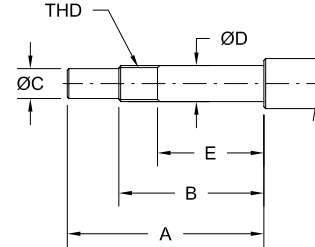
Standard End Machining

The typical ends shown below can be machined on all ball screws. Specific dimensional data is provided in the table.

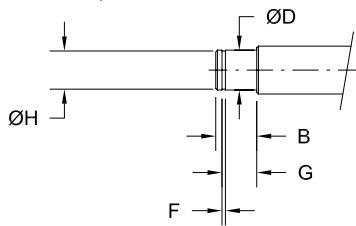
TYPE BF, REQUIRED FOR BF SUPPORT



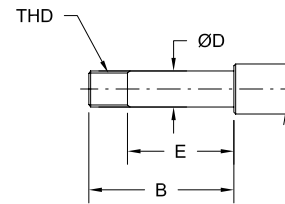
TYPE BK, REQUIRED FOR BK SUPPORT



TYPE BF1, REQUIRED FOR BF SUPPORT



TYPE BK1, REQUIRED FOR BK SUPPORT



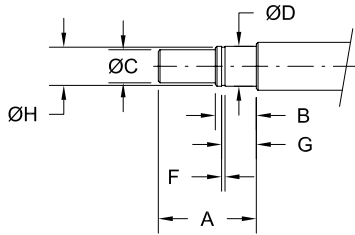
Spline Size Nominal Diameter	Type BF/BF1 (inch)										Type BK/BK1 (inch)							
	Standard P/N	A	B	C h7	D	F <small>+0.006/ -0.000</small>	G <small>+0.008/ -0.000</small>	H <small>+0.000/ -0.008</small>	Snap Ring (DIN 471) (mm)	Bearing Trade No.	Standard P/N	A	B	C h7	D	E	THD	Bearing Trade No.
0.625	7833368	0.984	0.394	0.2362 0.2357	0.3148 0.3145	0.035	0.311	0.299	8	608	7833360	2.008	1.417	0.3150 0.3144	0.3935 0.3932	0.787	M10x1	7000
1.000	7833372	1.614	0.630	0.6693 0.6686	0.7872 0.7869	0.053	0.526	0.748	20	6004	7833364	3.071	2.087	0.6693 0.6686	0.7872 0.7869	1.496	M20x1	7004
1.500	7833373	1.969	0.787	0.7874 0.7866	0.9841 0.9837	0.053	0.644	0.941	25	6205	7833365	3.740	2.559	0.7874 0.7866	0.9841 0.9837	1.850	M25x1.5	7205
2.000	7833375	2.874	0.906	1.3780 1.3771	1.5746 1.5742	0.077	0.785	1.496	40	6208	7833367	5.630	3.661	1.3780 1.3771	1.5746 1.5742	2.283	M40x1.5	7208

Bearing Supports/End Machining — Ball Splines

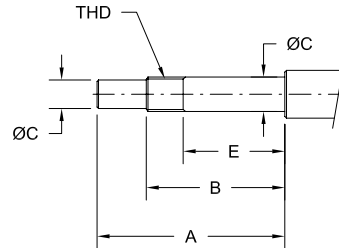
Standard End Machining

The typical ends shown below can be machined on all ball screws. Specific dimensional data is provided in the table.

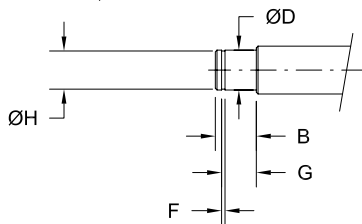
TYPE FF, REQUIRED FOR FF SUPPORT



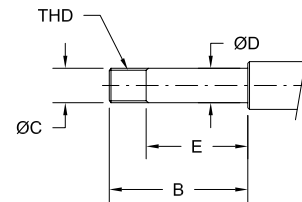
TYPE FK, REQUIRED FOR FK SUPPORT



TYPE FF1, REQUIRED FOR FF SUPPORT



TYPE FK1, REQUIRED FOR FK SUPPORT

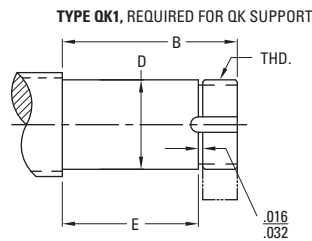
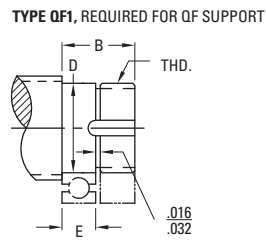
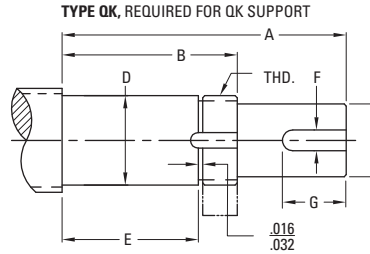
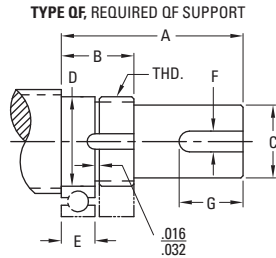


Spline Size Nominal Diameter	Type FF/FF1 (inch)										Type FK/FK1 (inch)							
	Standard P/N	A	B	C h7	D	F +0.006/ -0.000	G +0.008/ -0.000	H +0.000/ -0.008	Snap Ring (DIN 471) (mm)	Bearing Trade No.	Standard P/N	A	B	C h7	D	E	THD	Bearing Trade No.
0.625	7833384	0.984	0.394	0.2362 0.2357	0.3148 0.3145	0.035	0.311	0.299	8	608	7833377	2.008	1.417	0.3150 0.3144	0.3935 0.3932	0.984	M10x1	7000
1.000	7833388	1.614	0.630	0.6693 0.6686	0.7872 0.7869	0.053	0.526	0.748	20	6004	7833381	3.425	2.441	0.6693 0.6686	0.7872 0.7869	1.772	M20x1	7004
1.500	7833389	1.969	0.787	0.7874 0.7866	0.9841 0.9837	0.053	0.644	0.941	25	6205	7833382	4.173	2.992	0.7874 0.7866	0.9841 0.9837	2.205	M25x1.5	7205

Bearing Supports/End Machining — Ball Splines

Standard End Machining

The typical ends shown below can be machined on all ball splines. Specific dimensional data is provided in the table.



Spline Size (inch)	Type QF/QF1					Type QK/QK1					Common Dimensions				
	Standard P/N	A	B	E	Bearing Trade No.	Standard P/N	A	B	E	Bearing Trade No.	C	D ⁽¹⁾	F	G	THD
0.625	7833291	1.970	0.720	0.291	629	7828282	2.874	1.812	1.398	629	0.2500 0.2490	0.3544 0.3541	.092	1.000	5/16-24
1.000	7833265	2.375	1.060	0.551	6204	7824157	4.028	2.713	2.204	7204	0.6250 0.6240	0.7877 0.7873	.118	1.25	N-04
1.500	7833270	2.970	1.160	0.630	620	7824159	4.860	3.050	2.520	7206	1.0000 0.9990	1.1814 1.1810	.250	1.250	N-06
2.000	7833273	3.650	1.460	0.906	6308	7829554	6.368	4.178	3.624	7308	1.3750 1.3740	1.5752 1.5747	.313	1.875	N-08
2.500	7833279	4.560	1.680	1.063	6310	7824161	7.749	4.872	4.252	7310	1.7500 1.7490	1.9689 1.9684	.375	2.750	N-10

(1) Dimensioned for press fit of bearing on bearing journal.