



**EZZE•MOUNT™**  
END BEARING SUPPORTS

## END MACHINING

<b>MACHINED END AND EZZE-MOUNT™ TECHNICAL INTRODUCTION</b>	<b>206-207</b>
<b>MACHINED END AND EZZE-MOUNT™ QUICK REFERENCE CHARTS</b>	<b>208-211</b>
<b>MACHINED END TECHNICAL DATA</b>	<b>212-213</b>
<b>EZZE-MOUNT™ END BEARING SUPPORTS TECHNICAL DATA</b>	<b>214-218</b>
• EZZE-MOUNT™ Introduction	214
• EZZE-MOUNT™ Universal-Mount Single and Double Bearing Support	215
• EZZE-MOUNT™ Flange-Mount Single and Double Bearing Support	216
• EZZE-MOUNT™ Universal-Mount Bearing Support with Motor Mount	217
• EZZE-MOUNT™ Flange-Mount Bearing Support without Motor Mount	218



The specifications and data in this publication are believed to be accurate and reliable. However, it is the responsibility of the product user to determine the suitability of Nook Industries products for a specific application. While defective products will be replaced without charge if promptly returned, no liability is assumed beyond such replacement.

**Machined Ends and  
EZZE•MOUNT™ End Supports**

## EZZE-MOUNT™ AND END MACHINING

### INTRODUCTION

Linear motion applications utilizing a ball screw or an acme screw require high tolerance screw end machining matched with precision bearing mounts.

Nook Industries can provide the following end machining services:

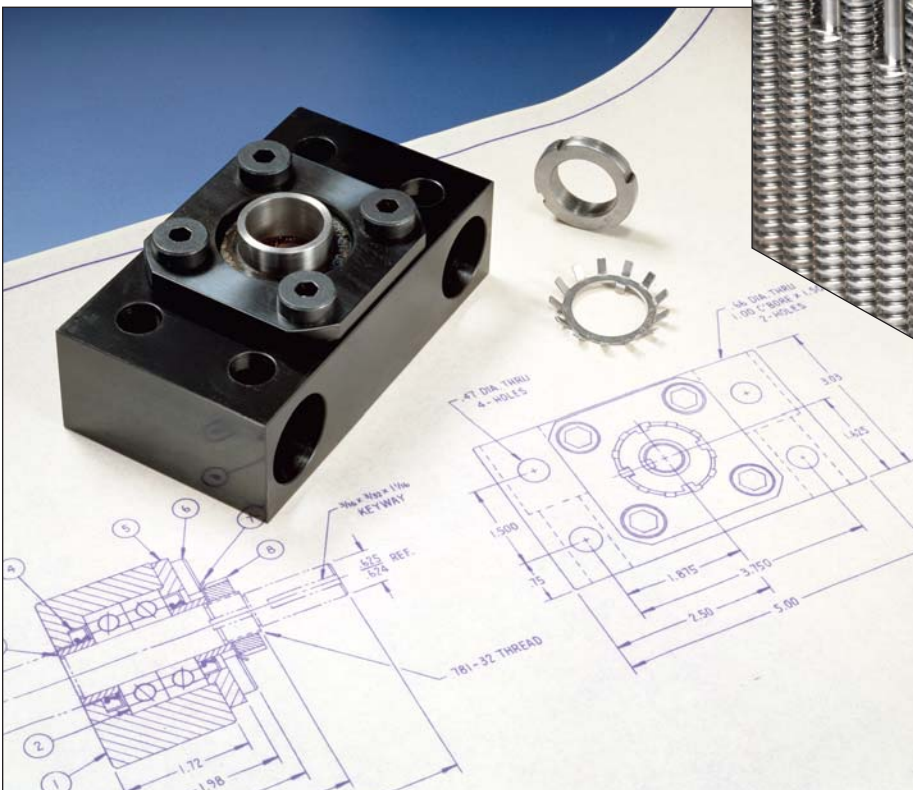
- Screws cut to precision lengths
- Annealing
- Straightening
- CNC turning and milling
- Grinding
- Assembly
- Inspection
- Specialized material handling and packaging

Bearing mounts must be designed to withstand both the radial and the thrust loads generated by the application screw assembly.

Nook Industries offers EZZE-MOUNT™ precision bearing blocks, that can be assembled to precision machined screws, providing a complete solution for most linear motion applications.

EZZE-MOUNT™ bearing mounts are available with integral motor mounts to offer complete motorized systems.

Motor mounts are available for standard (17, 23, 34, 42), as well as, IEC frames for servo and stepper motor applications.



**GLOSSARY & DEFINITIONS**

MACHINED END AND EZZE-MOUNT™ TECHNICAL INTRODUCTION

**EZZE-MOUNT™**

EZZE-MOUNT™ bearing blocks contain precision anti-friction bearings and are designed to be used with both ball screws and acme screws. Single and double bearing base mount and flange mount versions of EZZE-MOUNT™ bearing blocks are available.

**STANDARD ENDS**

For each screw size, Nook Industries has designed a family of standard machined ends applicable to a variety of bearing arrangements.

The use of standard machined end designs offer quick deliveries. See page 212-213 for details.

**LAND DIAMETER**

The land diameter is the outside diameter of the screw. The difference between the land diameter and the bearing journal is the resulting bearing shoulder.

**ROOT DIAMETER**

The diameter of the screw measured at the bottom of the thread. This diameter is used for determining journal sizes. If the bearing journal diameter is larger than the root diameter, thread tracings may be visible. Generally, these tracings do not have an effect on bearing performance.

**JOURNAL**

A smooth diameter machined on the end of screw used as a mounting surface for bearings, couplings, pulleys, gears, etc.

**STRAIGHTNESS**

Although Nook Industries PowerAc™ and PowerTrac™ screws are manufactured from straight, cylindrical material, internal stresses may cause the material to bend. When ordering random lengths or cut material without end machining, straightening is recommended. Handling or machining of screws can also cause the material to bend. Before, during and after machining, additional straightening is required.

**ANNEALING**

Annealing is a process which softens the steel to allow for easier end machining. Annealing is usually required to machine the ends of ball screws. Due to its effect on the precision lead accuracies of XPR and SGT ball screws, annealing is not recommended for these products. Acme screws typically do not require annealing before end machining.

**END FIXITY**

End fixity refers to the method by which the ends of the screw are supported. The degree of end fixity is related to the amount of restraint of the ends of the screw.

The three basic types of end fixity are:

- Free** - No support
- Simple** - Shaft restrained against radial loads
- Fixed** - Shaft rigidly restrained against radial, axial and moment loads

See pages 6-7 and 86-87 for a more detailed definition of end fixity.

**LOCKNUT THREADS**

Locknut threads are machined to allow the bearing retention on the screw shaft by means of a locknut.

The thread used on standard machined ends follows American National Form NS Class 3.

**UNDERCUTS AND RADII**

Whenever a shaft changes diameter, an undercut or a radius is machined into the transition to minimize stress concentration. Undercuts are preferred for bearing shoulders because they allow clearance for the corner of the bearing. (SEE FIG. 1)

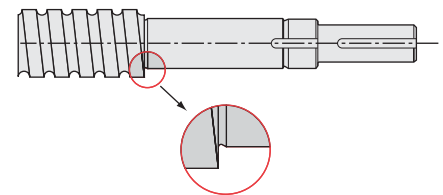


FIG. 1

**CONCENTRICITY**

Concentricity refers to multiple diameters sharing the same center. For end machining, close concentricity allows all components to rotate around the same axis resulting in smooth operation and long operating life.





**APPROVAL DRAWINGS**





If custom ends or special dimensions are desired, an approval drawing can be developed after the order is entered. These drawings will show all the critical dimensions with tolerances.

**INCH ACME SCREWS**

See PowerAc™ pages 18-38 for screw dimensions.

INCH ACME SCREW CROSS REFERENCE





NOMINAL DIA-LEAD	END CODE TYPE		EZZE-MOUNT™				Page
			UNIVERSAL		FLANGE		
			Double	Single	Double	Single	
							
1/4 - 3	3	2	—	—	—	—	18
1/4 - 4	3	2	—	—	—	—	18
1/4 - 16	3	2	—	—	—	—	18
1/4 - 20	3	2	—	—	—	—	18
5/16 - 2	5	2	—	—	—	—	19
5/16 - 4	5	2	—	—	—	—	19
3/8 - 1	6	4*	—	—	—	—	20
3/8 - 2	7	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007	20
3/8 - 4	7	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007	20
3/8 - 5	7*	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007	20
3/8 - 6	7*	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007	21
3/8 - 8	7	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007	21
3/8 - 10	7	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007	21
3/8 - 12	7*	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007	21
3/8 - 16	7	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007	21
7/16 - 2	8	4	EZM-1008	EZM-4008	EZF-1008	EZF-4008	22
7/16 - 4	8	4	EZM-1008	EZM-4008	EZF-1008	EZF-4008	22
1/2 - 1	9	6	EZM-1009	EZM-4009	EZF-1009	EZF-4009	23
1/2 - 2	10	6	EZM-3010	EZM-4010	EZF-3010	EZF-4010	23
1/2 - 4	8	4	EZM-1008	EZM-4008	EZF-1008	EZF-4008	23
1/2 - 5	9	6	EZM-1009	EZM-4009	EZF-1009	EZF-4009	23
1/2 - 10	9	6*	EZM-1009	EZM-4009	EZF-1009	EZF-4009	23
5/8 - 2 <sup>2</sup> / <sub>3</sub>	10	6	EZM-3010	EZM-4010	EZF-3010	EZF-4010	24
5/8 - 5	9	6	EZM-1009	EZM-4009	EZF-1009	EZF-4009	24
5/8 - 5(2)	12	6	EZM-3012	EZM-4012	EZF-3012	EZF-4012	24
5/8 - 8	10	6	EZM-3010	EZM-4010	EZF-3010	EZF-4010	24
5/8 - 10	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012	24
3/4 - 2	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012	25
3/4 - 3	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012	25
3/4 - 5	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012	25
3/4 - 6	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012	25

NOMINAL DIA-LEAD	END CODE TYPE		EZZE-MOUNT™				Page
			UNIVERSAL		FLANGE		
			Double	Single	Double	Single	
							
3/4 - 10	15	8	EZM-3015	EZM-4015	EZF-3015	EZF-4015	25
7/8 - 6	15	10	EZM-3015	EZM-4015	EZF-3015	EZF-4015	26
1 - 1	20	12	EZM-2020	EZM-4020	EZF-2020	EZF-4020	27
1 - 2	17	10	EZM-3017	EZM-4017	EZF-3017	EZF-4017	27
1 - 4	17	10	EZM-3017	EZM-4017	EZF-3017	EZF-4017	27
1 - 5	17	10	EZM-3017	EZM-4017	EZF-3017	EZF-4017	27
1 - 6	17	10	EZM-3017	EZM-4017	EZF-3017	EZF-4017	27
1 - 10	20	12	EZM-2020	EZM-4020	EZF-2020	EZF-4020	27
1 <sup>1</sup> / <sub>8</sub> - 5	20	12	EZM-2020	EZM-4020	EZF-2020	EZF-4020	28
1 <sup>1</sup> / <sub>4</sub> - 4	20	12	EZM-2020	EZM-4020	EZF-2020	EZF-4020	29
1 <sup>1</sup> / <sub>4</sub> - 5	25	16	EZM-3025	EZM-4025	EZF-3025	EZF-4025	29
1 <sup>1</sup> / <sub>2</sub> - 2	30	19	EZM-2030	EZM-4030	EZF-2030	EZF-4030	30
1 <sup>1</sup> / <sub>2</sub> - 2 <sup>2</sup> / <sub>3</sub>	25	16	EZM-3025	EZM-4025	EZF-3025	EZF-4025	30
1 <sup>1</sup> / <sub>2</sub> - 4	30	19	EZM-2030	EZM-4030	EZF-2030	EZF-4030	30
1 <sup>1</sup> / <sub>2</sub> - 5	30	19	EZM-2030	EZM-4030	EZF-2030	EZF-4030	30
1 <sup>1</sup> / <sub>2</sub> - 10	30	19	EZM-2030	EZM-4030	EZF-2030	EZF-4030	30
1 <sup>3</sup> / <sub>4</sub> - 4	35	19	—	—	—	—	31
2 - 2	35	19	—	—	—	—	32
2 - 4	40	22	—	—	—	—	32
2 - 5	40	28	—	—	—	—	32
2 <sup>1</sup> / <sub>4</sub> - 2	40	24	—	—	—	—	33
2 <sup>1</sup> / <sub>4</sub> - 4	45	28	EZM-3045	EZM-4045	—	—	33
2 <sup>1</sup> / <sub>2</sub> - 2	45	28	EZM-3045	EZM-4045	—	—	34
2 <sup>1</sup> / <sub>2</sub> - 3	50	32	—	—	—	—	34
2 <sup>1</sup> / <sub>2</sub> - 4	50	32	—	—	—	—	34
3 - 2	60	39	EZM-3060	EZM-4060	—	—	35
3 <sup>3</sup> / <sub>8</sub> - 1 <sup>1</sup> / <sub>2</sub>	65	39*	EZM-3060	EZM-4060	—	—	36
3 <sup>3</sup> / <sub>4</sub> - 1 <sup>1</sup> / <sub>2</sub>	75	48	—	—	—	—	37
4 <sup>1</sup> / <sub>2</sub> - 1 <sup>1</sup> / <sub>2</sub>	95	55	EZM-3080	—	—	—	37
5 - 1 <sup>1</sup> / <sub>2</sub>	105	67	—	—	—	—	38
6 - 1 <sup>1</sup> / <sub>2</sub>	—	—	—	—	—	—	38





\* Some journals may show tracings of the thread

**METRIC ISO TRAPEZOIDAL AND SPEEDY™ SCREWS**

See PowerAc™ pages 50–76 for screw dimensions.

NOMINAL DIA-LEAD	END CODE TYPE		EZZE-MOUNT™				Page
			UNIVERSAL		FLANGE		
			Double	Single	Double	Single	
							
5 x 5	3	2	—	—	—	—	50
5 x 20	5*	2	—	—	—	—	50
6 x 25	6	4*	—	—	—	—	51
7.5 x 7.5	5	2	—	—	—	—	51
8 x 10	5	2	—	—	—	—	52
8 x 30	7	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007	52
Tr 10x3(1.5)	7	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007	53
10 x 10	8	4/6	EZM-1008	EZM-4008	EZF-1008	EZF-4008	54
10 x 12 *	8	4/6	EZM-1008	EZM-4008	EZF-1008	EZF-4008	54
10 x 35	8	4/6	EZM-1008	EZM-4008	EZF-1008	EZF-4008	54
10 x 50*	8	4/6	EZM-1008	EZM-4008	EZF-1008	EZF-4008	54
11 x 40	9	6	EZM-1009	EZM-4009	EZF-1009	EZF-4009	55
11 x 60	8	4	EZM-1008	EZM-4008	EZF-1008	EZF-4008	55
11.2 x 30.5	8	4	EZM-1008	EZM-4008	EZF-1008	EZF-4008	55
Tr 12x3	7	4	—	—	—	—	56
12 x 15	8	4	EZM-1008	EZM-4008	EZF-1008	EZF-4008	57
12 x 25	8	4	EZM-1008	EZM-4008	EZF-1008	EZF-4008	57
12 x 45	10	6	EZM-3010	EZM-4010	EZF-3010	EZF-4010	57
12.8 x 35.6	9	6	EZM-1009	EZM-4009	EZF-1009	EZF-4009	57
13 x 20	9	6	EZM-1009	EZM-4009	EZF-1009	EZF-4009	58
13 x 70	9	6	EZM-1009	EZM-4009	EZF-1009	EZF-4009	58
14 x 8	9	6	EZM-1009	EZM-4009	EZF-1009	EZF-4009	59
14 x 18	10	6	EZM-3010	EZM-4010	EZF-3010	EZF-4010	59
14 x 30	9	6	EZM-1009	EZM-4009	EZF-1009	EZF-4009	59
14.3 x 40.6	10	6	EZM-3010	EZM-4010	EZF-3010	EZF-4010	59
15 x 80	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012	60
Tr 16x4	10	6	EZM-3010	EZM-4010	EZF-3010	EZF-4010	61

\* Some journals may show tracings of the thread





NOMINAL DIA-LEAD	END CODE TYPE		EZZE-MOUNT™				Page
			UNIVERSAL		FLANGE		
			Double	Single	Double	Single	
							
16 x 21	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012	62
16 x 25	10	6	EZM-3010	EZM-4010	EZF-3010	EZF-4010	62
16 x 90	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012	62
17.6 x 50.8	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012	62
18 x 16	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012	63
18 x 24	15	8/10	EZM-3015	EZM-4015	EZF-3015	EZF-4015	63
18 x 40	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012	63
18 x 100	15	8/10	EZM-3015	EZM-4015	EZF-3015	EZF-4015	63
19 x 30	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012	64
Tr 20x4	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012	65
20 x 12	15	8/10	EZM-3015	EZM-4015	EZF-3015	EZF-4015	66
20 x 45	15	8/10	EZM-3015	EZM-4015	EZF-3015	EZF-4015	66
22 x 20	17	10	EZM-3017	EZM-4017	EZF-3017	EZF-4017	67
23 x 30	17	10	EZM-3017	EZM-4017	EZF-3017	EZF-4017	68
24 x 55	17	10	EZM-3017	EZM-4017	EZF-3017	EZF-4017	68
25.7 x 76.2	20	12	EZM-2020	EZM-4020	EZF-2020	EZF-4020	69
Tr 26x6	17	10	EZM-3017	EZM-4017	EZF-3017	EZF-4017	70
26 x 24	20	12	EZM-2020	EZM-4020	EZF-2020	EZF-4020	71
26 x 60	20	12	EZM-2020	EZM-4020	EZF-2020	EZF-4020	71
30 x 28	25	16	EZM-3025	EZM-4025	EZF-3025	EZF-4025	72
30 x 50	25	16	EZM-3025	EZM-4025	EZF-3025	EZF-4025	72
30 x 70	25	16	EZM-3025	EZM-4025	EZF-3025	EZF-4025	72
34 x 80	30	19	EZM-2030	EZM-4030	EZF-2030	EZF-4030	73
36 x 200	30	19	EZM-2030	EZM-4030	EZF-2030	EZF-4030	73
Tr 40x7	30	19	EZM-2030	EZM-4030	EZF-2030	EZF-4030	74
Tr 55x12	30	19	EZM-2030	EZM-4030	EZF-2030	EZF-4030	75
Tr 65x12	45	28	EZM-3045	EZM-4045	—	—	76





METRIC TRAPEZOIDAL AND LEAD SCREW CROSS REFERENCE

**INCH SRT, XPR AND SGT BALL SCREWS**

See PowerTrac™ pages 99–143 for screw dimensions.

INCH BALL SCREW CROSS REFERENCE

NOMINAL DIA-LEAD	END CODE TYPE		EZZE-MOUNT™				Page
			UNIVERSAL		FLANGE		
			Double	Single	Double	Single	
							
0375-0125	7	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007	99
0500-0200	10	6	EZM-3010	EZM-4010	EZF-3010	EZF-4010	100
0500-0500	8	6	EZM-1008	EZM-4008	EZF-1008	EZF-4008	101
0631-0200	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012	102
0631-0500	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012	106
0750-0200	15	8	EZM-3015	EZM-4015	EZF-3015	EZF-4015	107
0750-0500	15	8	EZM-3015	EZM-4015	EZF-3015	EZF-4015	109
0875-0200	17	10	EZM-3017	EZM-4017	EZF-3017	EZF-4017	110
1000-0200	20	12	EZM-2020	EZM-4020	EZF-2020	EZF-4020	112
1000-0250	20	12	EZM-2020	EZM-4020	EZF-2020	EZF-4020	113
1000-0500	20	12	EZM-2020	EZM-4020	EZF-2020	EZF-4020	116
1000-1000	20	12	EZM-2020	EZM-4020	EZF-2020	EZF-4020	117
1150-0200	25	16	EZM-3025	EZM-4025	EZF-3025	EZF-4025	118
1171-0413	20	12	EZM-2020	EZM-4020	EZF-2020	EZF-4020	120
1250-0200	25	16	EZM-3025	EZM-4025	EZF-3025	EZF-4025	121
1250-0500	25	16	EZM-3025	EZM-4025	EZF-3025	EZF-4025	123
1500-0200	30	19	EZM-2030	EZM-4030	EZF-2030	EZF-4030	125





NOMINAL DIA-LEAD	END CODE TYPE		EZZE-MOUNT™				Page
			UNIVERSAL		FLANGE		
			Double	Single	Double	Single	
							
1500-0250	30	19	EZM-2030	EZM-4030	EZF-2030	EZF-4030	126
1500-0473	25	16	EZM-3025	EZM-4025	EZF-3025	EZF-4025	128
1500-0500 SRT	25	16	EZM-3025	EZM-4025	EZF-3025	EZF-4025	129
1500-0500 XPR	25	16	EZM-3025	EZM-4025	EZF-3025	EZF-4025	130
1500-0500 SGT	30	19	EZM-2030	EZM-4030	EZF-2030	EZF-4030	130
1500-1000	25	16	EZM-3025	EZM-4025	EZF-3025	EZF-4025	131
1500-1875	30	19	EZM-2030	EZM-4030	EZF-2030	EZF-4030	132
1750-0250	40	24	—	—	—	—	133
2000-0200	45	28	EZM-3045	EZM-4045	—	—	134
2000-0400	45*	28*	EZM-3045	EZM-4045	—	—	134
2250-0500	45	28	EZM-3045	EZM-4045	—	—	135
2250-1000	45	28	EZM-3045	EZM-4045	—	—	137
2500-0250	50	32	—	—	—	—	138
2500-0500	50	32	—	—	—	—	139
3000-0660	60	39	EZM-3060	EZM-4060	—	—	140
3000-1500	60	39	EZM-3060	EZM-4060	—	—	141
4000-1000	80	48	EZM-3080	—	—	—	142

\* Some journals may show tracings of the thread







## METRIC MRT, PMT AND CARRY™ BALL SCREWS

See PowerTrac™ pages 155-173 for screw dimensions.

NOMINAL DIA-LEAD	END CODE TYPE		EZZE-MOUNT™				Page
			UNIVERSAL		FLANGE		
			Double	Single	Double	Single	
							
6 x 1	5*	2	—	—	—	—	155
8 x 1	7*	4	EZM-1007	EZM-4007	EZF-1007	EZF-4007	156
8 x 1.5	6	4	—	—	—	—	156
8 x 2	6	4	—	—	—	—	156
8 x 2.5	6	4	—	—	—	—	156
8 x 3	6	4	—	—	—	—	156
10 x 2	8	4/6	EZM-1008	EZM-4008	EZF-1008	EZF-4008	157
10 x 3*	8	4/6	EZM-1008	EZM-4008	EZF-1008	EZF-4008	157
12 x 2	10	6	EZM-3010	EZM-4010	EZF-3010	EZF-4010	158
12 x 4	9	6	EZM-1009	EZM-4009	EZF-1009	EZF-4009	158
12 x 5	9	6	EZM-1009	EZM-4009	EZF-1009	EZF-4009	158
12.7 x 12.7	9	6	EZM-1009	EZM-4009	EZF-1009	EZF-4009	158
14 x 4	10	6	EZM-3010	EZM-4010	EZF-3010	EZF-4010	159
16x5MRT/PMT	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012	160
16 x 2	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012	162

\* Some journals may show tracings of the thread

NOMINAL DIA-LEAD	END CODE TYPE		EZZE-MOUNT™				Page
			UNIVERSAL		FLANGE		
			Double	Single	Double	Single	
							
16 x 5	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012	162
16 x 10	12	8	EZM-3012	EZM-4012	EZF-3012	EZF-4012	162
16 x 50	10	6	EZM-3012	EZM-4012	EZF-3012	EZF-4012	161
20 x 5 MRT/PMT	15	8	EZM-3015	EZM-4015	EZF-3015	EZF-4015	164
20 x 5	15	8	EZM-3015	EZM-4015	EZF-3015	EZF-4015	165
20 x 10	15	8	EZM-3015	EZM-4015	EZF-3015	EZF-4015	165
25 x 5 MRT/PMT	20	12	EZM-2020	EZM-4020	EZF-2020	EZF-4020	166
25 x 5	20	12	EZM-2020	EZM-4020	EZF-2020	EZF-4020	167
25 x 10	20	12	EZM-2020	EZM-4020	EZF-2020	EZF-4020	167
25 x 25	20	12	EZM-2020	EZM-4020	EZF-2020	EZF-4020	167
32 x 5	25	12	EZM-3025	EZM-4025	EZF-3025	EZF-4025	168
40 x 10 MRT/PMT	30	19	EZM-2030	EZM-4030	EZF-2030	EZF-4030	169
40 x 40 MRT/PMT	30	19	EZM-2030	EZM-4030	EZF-2030	EZF-4030	170
50 x 10 MRT/PMT	45	28	EZM-3045	EZM-4045	—	—	171
50 x 50 MRT/PMT	40	24	—	—	—	—	172
63 x 12 MRT/PMT	50	32	—	—	—	—	173

METRIC BALL SCREW CROSS REFERENCE

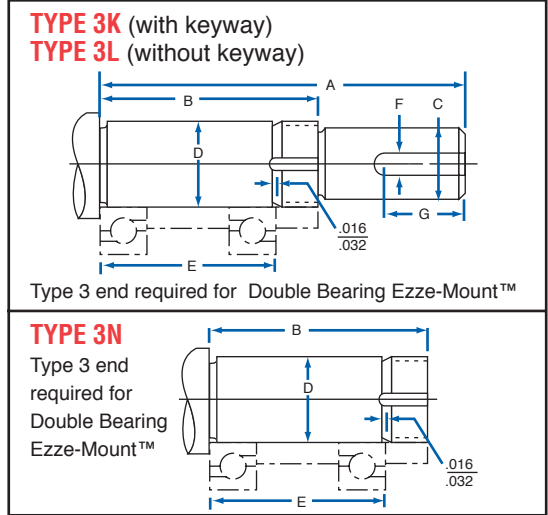
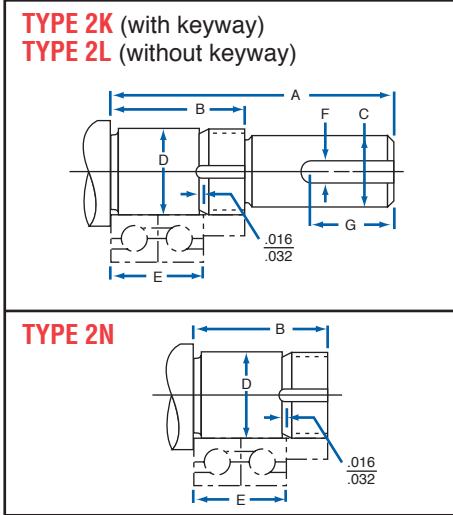
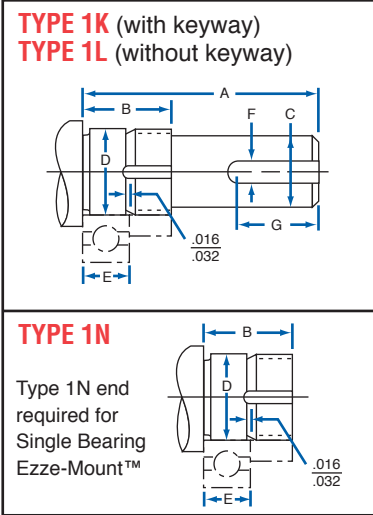


# MACHINED END DRAWINGS AND CODES

Specifying standard machined ends results in quick deliveries. The machined ends shown below represent designs that are compatible with common application requirements for either simple or fixed bearing support. Dimensional data for these four types of ends is

provided in the charts. Included in the chart are the locknut and lockwasher identification. These standard ends may be machined on any length of screw to meet your specific need.

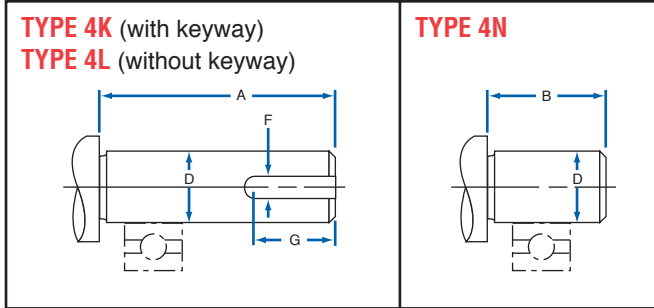
MACHINED ENDS TECHNICAL DATA



MACHINE END CODE	TYPE 1 (K, L, N) Typical Journal for Single Bearing			TYPE 2 (K, L, N) Typical Journal for Duplexed Bearings			TYPE 3 (K, L, N) Typical Journal for Multiple Sets of Duplexed Bearings			COMMON DIMENSIONS FOR TYPE 1, 2 & 3 (K, L, N)					
	A	B	E	A	B	E	A	B	E	C	D	F	G	LOCK NUT	LOCK WASHER
3	.63	.36	.156	.75	.52	.312	1.09	.83	.624	.093 / .092	.1251 / .1248	N/A	N/A	#5-40	N/A
5	.88	.55	.236	1.09	.78	.472	1.56	1.26	.944	.125 / .124	.1970 / .1967	N/A	N/A	#10-32	N/A
6	.88	.55	.236	1.09	.78	.472	1.56	1.26	.944	.125 / .124	.2363 / .2360	N/A	N/A	#10-32	N/A
7	1.12	.65	.276	1.41	.93	.552	1.94	1.48	1.104	.187 / .186	.2757 / .2754	.063	.34	1/4-20	N/A
8	1.31	.68	.276	1.56	.96	.552	2.00	1.44	1.060	.250 / .249	.3151 / .3148	.094	.46	5/16-24	N/A
9	1.38	.72	.315	1.69	1.04	.630	2.38	1.81	1.438	.250 / .249	.3544 / .3541	.094	.46	5/16-24	N/A
10	1.37	.69	.315	1.67	1.00	.630	2.50	1.81	1.438	.312 / .311	.3939 / .3936	.125	.50	N-00	W-00
12	2.11	.81	.394	2.50	1.20	.788	3.29	1.99	1.576	.406 / .405	.4726 / .4723	.125	1.00	N-01	W-01
15	2.15	.84	.433	2.59	1.27	.866	3.50	2.18	1.732	.500 / .499	.5908 / .5905	.125	1.00	N-02	W-02
17	2.23	.92	.472	2.71	1.39	.944	3.65	2.33	1.888	.500 / .499	.6695 / .6692	.125	1.00	N-03	W-03
20	2.37	1.06	.551	2.93	1.61	1.102	4.03	2.71	2.204	.625 / .624	.7877 / .7873	.188	1.00	N-04	W-04
25	2.68	1.12	.591	3.27	1.71	1.182	4.45	2.89	2.364	.750 / .749	.9846 / .9842	.188	1.00	N-05	W-05
30	2.97	1.16	.630	3.60	1.79	1.260	4.86	3.05	2.520	1.000 / .999	1.1814 / 1.1810	.250	1.25	N-06	W-06
35	3.33	1.23	.669	4.00	1.90	1.338	5.34	3.24	2.676	1.250 / 1.249	1.3784 / 1.3779	.250	1.25	N-07	W-07
40	3.65	1.46	.906	4.55	2.37	1.812	6.37	4.18	3.624	1.375 / 1.374	1.5752 / 1.5747	.313	1.50	N-08	W-08
45	3.73	1.54	.984	4.71	2.52	1.968	6.68	4.49	3.936	1.375 / 1.374	1.7721 / 1.7716	.313	1.50	N-09	W-09
50	4.56	1.68	1.063	5.62	2.75	2.126	7.75	4.87	4.252	1.750 / 1.749	1.9689 / 1.9684	.375	2.30	N-10	W-10
60	5.56	1.88	1.221	6.78	3.10	2.442	9.22	5.54	4.884	2.250 / 2.249	2.3627 / 2.3621	.500	2.75	N-12	W-12
65	6.71	1.96	1.299	7.99	3.24	2.598	10.59	5.84	5.197	2.375 / 2.374	2.5591 / 2.5585	.625	3.70	N-13	W-13
75	7.68	2.18	1.457	9.14	3.64	2.914	11.33	6.56	5.828	2.750 / 2.749	2.9533 / 2.9527	.625	3.70	AN-15	W-15
80	6.95	2.26	1.535	8.49	3.80	3.070	11.56	6.87	6.140	3.000 / 2.998	3.1501 / 3.1495	.750	3.90	AN-16	W-16
95	9.60	2.60	1.772	11.37	4.37	3.544	14.92	7.92	7.088	3.500 / 3.499	3.7402 / 3.7394	.875	6.00	AN-19	W-19
105	10.84	2.84	1.929	12.76	4.76	3.858	16.62	8.62	7.716	4.000 / 3.999	4.1345 / 4.1338	1.000	6.75	AN-21	W-21



# MACHINED END DRAWINGS AND CODES



MACHINE END CODE	TYPE 4 TYPICAL JOURNAL FOR PILLOW BLOCK				
	A	B	D	Key Width F	KEY Length G
2	.75	.25	.1251 / .1248	N/A	N/A
4	1.38	.50	.2501 / .2498	.063	.63
6	1.50	.75	.3751 / .3748	.125	.75
8	2.63	1.00	.5000 / .4995	.125	1.50
10	2.63	1.25	.6250 / .6245	.188	1.50
12	2.72	1.50	.7500 / .7495	.188	1.50
16	2.84	1.50	1.0000 / .9995	.250	1.50
19	3.25	1.78	1.1875 / 1.1870	.250	1.75
22	4.44	2.06	1.3750 / 1.3745	.313	1.87
24	4.56	2.25	1.5000 / 1.4995	.313	3.00
28	4.94	2.63	1.7500 / 1.7495	.375	3.00
32	5.19	3.50	2.0000 / 1.9995	.500	3.00
39	7.25	3.66	2.4375 / 2.4365	.625	4.69
42	7.75	3.94	2.6250 / 2.6240	.625	4.75
48	8.25	4.50	3.0000 / 2.9990	.750	4.88
55	8.50	5.16	3.4375 / 3.4365	.875	5.00
60	9.38	5.63	3.7500 / 3.7490	1.000	5.38
67	12.13	6.28	4.1875 / 4.1865	1.000	7.00

### END TYPES

- 1K, 2K, 3K and 4K are designed with a shaft extension and keyway for square keys.
- 1L, 2L, 3L and 4L are designed with a shaft extension without a keyway.
- 1N, 2N, 3N and 4N are designed to be a non-driven support end.
- Double bearing supports use a Type 3N, 3L and 3K.
- Single bearing supports use Type 1N.

Where standard ends do not satisfy the application requirements, special ends may be machined to customer specifications.

Please submit a print for a prompt and competitive quotation.

### PRECISION LOCKNUTS

Nook Industries offers precision ground locknuts for extreme applications requiring ground face and precision ground thread with extra thread engagement. These locknuts have radial thread set screws to assure secure positioning. Please request a catalog.



MACHINED ENDS TECHNICAL DATA

*EZZE-MOUNT™ Bearing Supports provide a convenient solution for mounting PowerTrac™ Ball Screws and PowerAc™ Acme Screws.*

EZZE-MOUNT™ Bearing Supports feature precision angular contact bearings sealed in a durable steel housing. These supports provide the high axial rigidity required for ball screw and acme screw applications.

EZZE-MOUNT™ Bearing Supports are designed to fit Type 3 standard ends as shown on pages 212-213. Use grade 8 hex socket-head cap screws for mounting.

Precision mounting surfaces provide easy, accurate installation. EZZE-MOUNT™ bearing supports are available in two styles to provide maximum design flexibility.

**UNIVERSAL-MOUNT**

Universal-mount bearing supports have two precision mounting surfaces. Mounting holes are pre-drilled for face or foot mounting.

**FLANGE-MOUNT**

Flange-mount bearing supports have a compact envelope and a precision pilot diameter and flange face for accurate alignment.

In addition to through-hole installation, mounting holes are sized to be tapped. Flange-Mount piloted mounting surface can be oriented toward or away from the drive end.



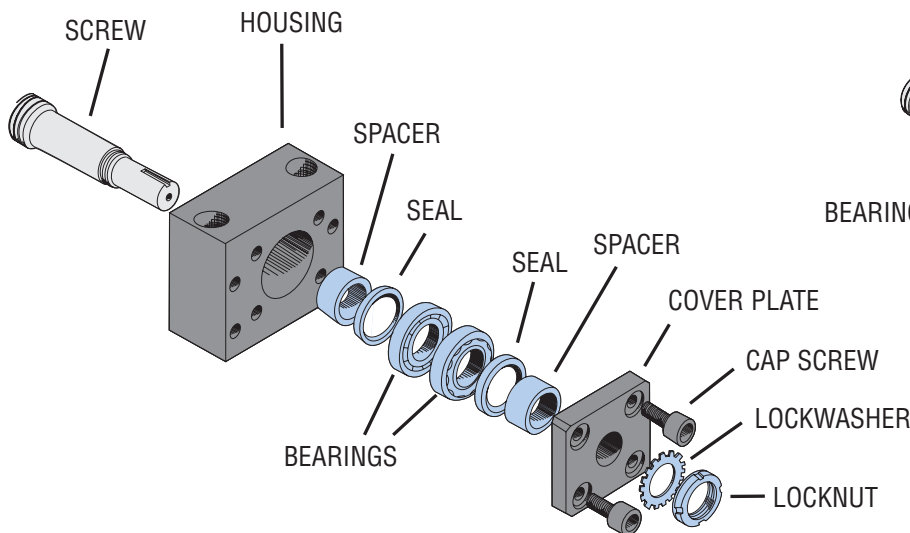
**EASY INSTALLATION** For an even quicker installation, Nook Industries can assemble EZZE-MOUNT™ Bearing Supports to your acme or ball screw.

**COMPLETE PACKAGE** An EZZE-MOUNT™ is supplied with precision angular contact bearings, spacers, replaceable seals, a locknut and a lockwasher. Units are factory lubricated for long life.

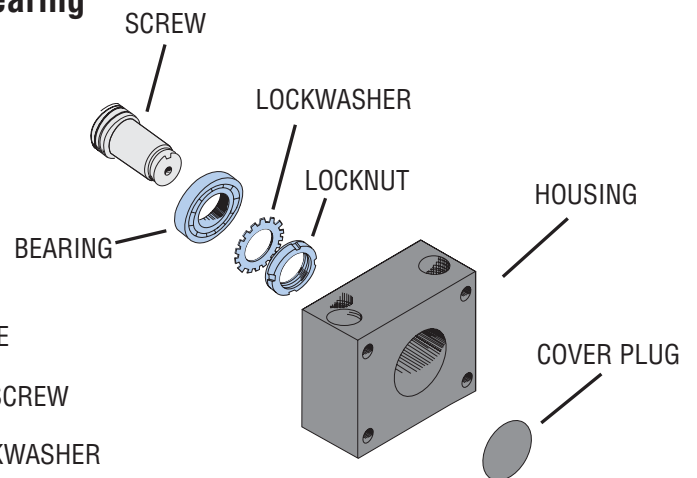
**COMPLETE ASSEMBLIES** To eliminate the cost and complexity of sub-assembly, component alignment and design configuration, Nook Industries offers acme and ball screw assemblies complete with machined ends, bearing supports, screw, nut and flange for your convenience. Bearing supports with motor adapters are also available, see page 217-218.

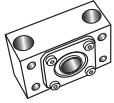
EZZE-MOUNT™ END BEARING SUPPORTS TECHNICAL DATA

**Double Bearing**

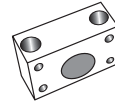


**Single Bearing**

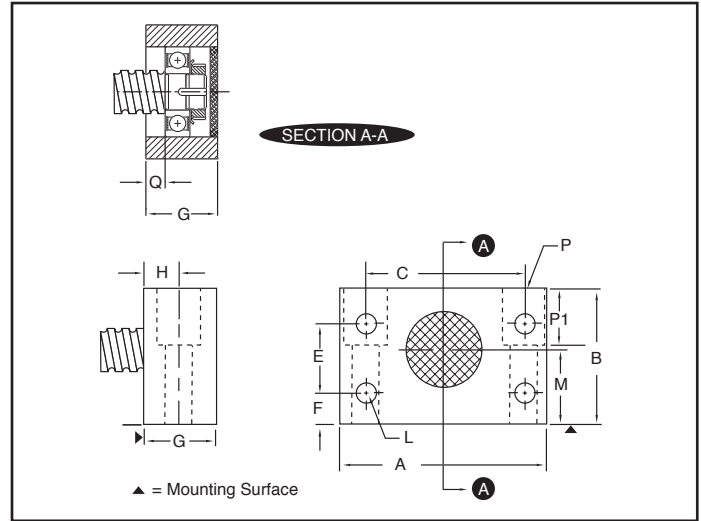
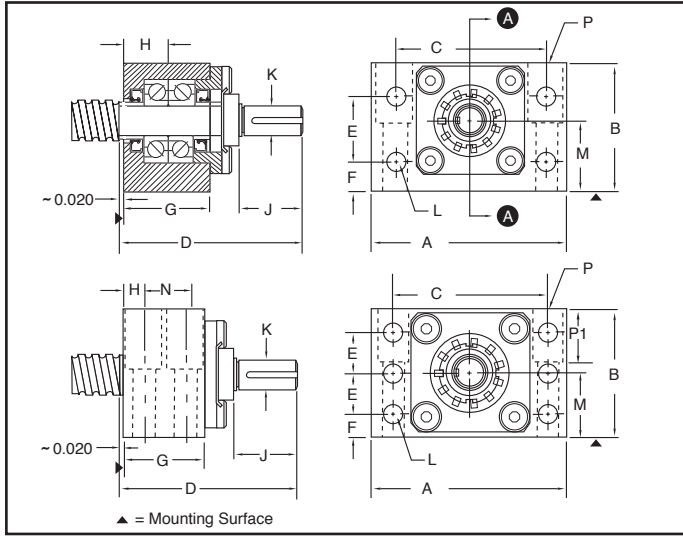




**Universal-Mount Double**  
Double Angular Contact Bearing, which should be used with Type 3 Standard Ends



**Universal-Mount Single**  
Single Radial Bearing, which should be used with Type 1 Standard Ends



When mounting Ezee-Mounts opposite to what is shown, contact Nook engineering for proper dimensions.

DOUBLE Part No.	SINGLE Part No.	A	B	C	D	E	F	G		H	J	K Shaft Dia.	L Thru (4 or 6)	M	N	P				Q	END CODE
								Single	Double							Bolt Size (2 or 4)	Thru	C'Bore	P1		
EZM-1007	EZM-4007	2.00	1.38	1.50	1.94	0.88	0.25	1.06	1.06	0.50	0.46	0.187 0.186	0.22(4)	0.687	—	¼ x 1½(2)	0.28	0.41	0.41	0.19	7
EZM-1008	EZM-4008	2.00	1.38	1.50	2.00	0.88	0.25	1.06	1.06	0.50	0.56	0.250 0.249	0.22(4)	0.687	—	¼ x 1½(2)	0.28	0.41	0.41	0.19	8
EZM-1009	EZM-4009	2.75	2.00	2.00	2.38	1.38	0.31	1.19	1.19	0.56	0.56	0.250 0.249	0.28(4)	1.000	—	⅝ x 2(2)	0.34	0.50	0.56	0.38	9
EZM-3010	EZM-4010	2.75	2.00	2.00	2.50	1.38	0.31	1.19	1.19	0.56	0.69	0.312 0.311	0.28(4)	1.000	—	⅝ x 2(2)	0.34	0.50	0.56	0.38	10
EZM-3012	EZM-4012	3.50	2.22	2.75	3.29	1.25	0.50	1.38	1.38	0.69	1.30	0.406 0.405	0.28(4)	1.187	—	⅝ x 1½(2)	0.41	0.62	1.00	0.33	12
EZM-3015	EZM-4015	3.50	2.52	2.75	3.50	1.25	0.80	1.38	1.38	0.69	1.30	0.500 0.499	0.28(4)	1.438	—	⅝ x 2½(2)	0.41	0.62	1.00	0.33	15
EZM-3017	EZM-4017	4.50	2.69	3.38	3.65	1.38	0.62	1.69	1.69	0.84	1.30	0.500 0.499	0.41(4)	1.500	—	½ x 2½(2)	0.53	0.88	1.25	0.38	17
EZM-2020	EZM-4020	5.00	3.03	3.75	4.03	1.50	0.75	1.72	1.72	0.86	1.30	0.625 0.624	0.47(4)	1.625	—	⅝ x 2½(2)	0.66	1.00	1.50	0.55	20
EZM-3025	EZM-4025	6.50	3.69	4.75	4.45	2.00	0.88	1.94	1.94	0.97	1.61	0.750 0.749	0.66(4)	1.875	—	⅝ x 3¼(2)	0.91	1.38	1.75	0.52	25
EZM-2030	EZM-4030	6.50	3.69	4.75	4.86	2.00	0.88	1.94	1.94	0.97	1.81	1.000 0.999	0.66(4)	1.875	—	⅝ x 3¼(2)	0.91	1.38	1.75	0.52	30
EZM-3045	EZM-4045	8.50	5.62	6.62	6.68	1.81	1.00	3.47	3.47	0.88	2.19	1.375 1.374	0.81(6)	2.812	1.71	1 x 5(4)	1.03	1.56	2.13	0.98	45
EZM-3060	EZM-4060	10.00	7.50	8.00	9.22	2.50	1.50	4.19	4.19	1.03	3.68	2.250 2.249	1.03(6)	4.000	2.13	1 x 5(4)	1.03	1.56	4.00	1.22	60
EZM-3080	—	12.50	8.50	10.00	11.56	2.75	1.75	—	5.13	1.219	4.69	3.000 2.998	1.28(6)	4.500	2.68	1¼ x 4¾(4)	1.28	1.94	4.75	—	80



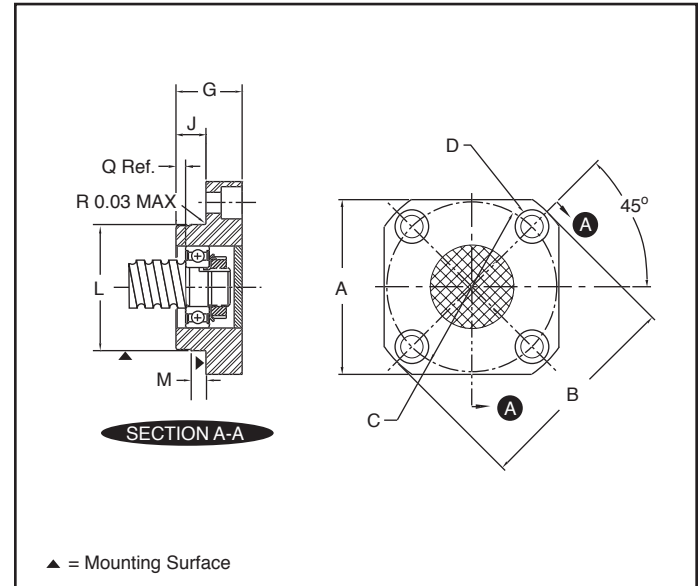
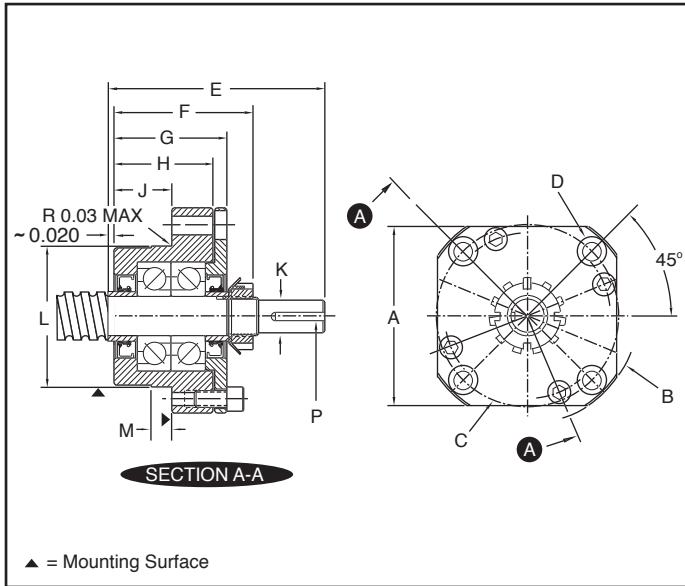
**Flange-Mount Double**

Double Angular Contact Bearing, which should be used with Type 3 Standard Ends



**Flange-Mount Single**

Single Radial Bearing, which should be used with Type 1 Standard Ends



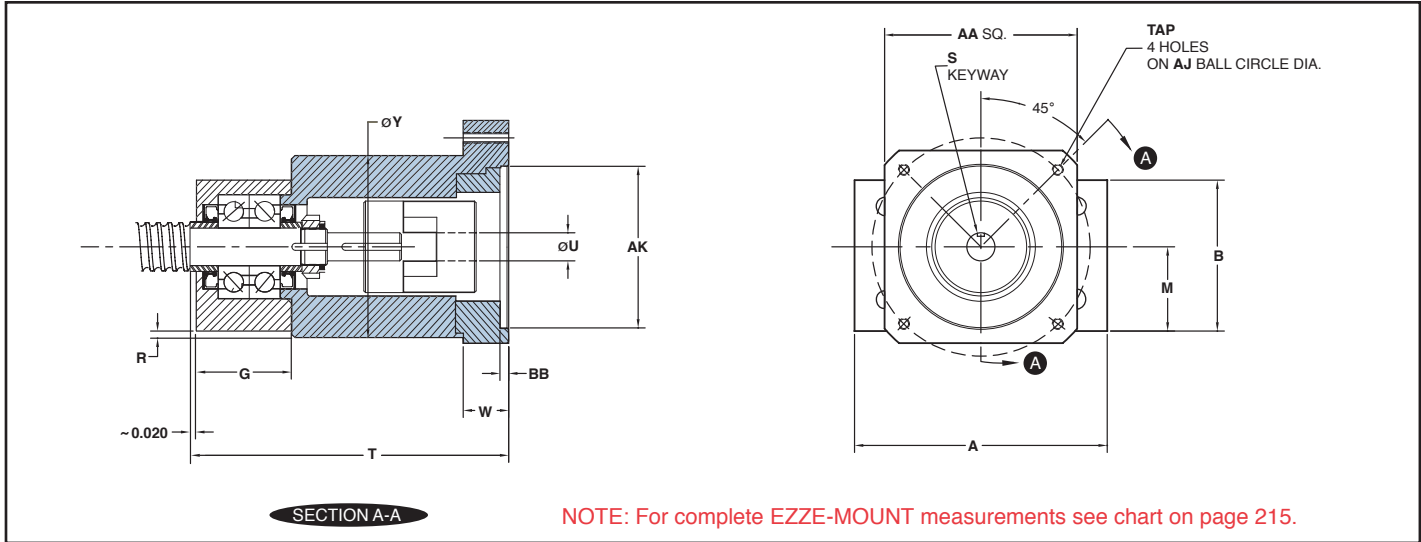
When mounting Ezze-Mounts opposite to what is shown, contact Nook engineering for proper dimensions.

EZZE-MOUNT™ END BEARING SUPPORTS TECHNICAL DATA

DOUBLE Part No.	SINGLE Part No.	A Sq.	B Dia.	C Bolt Circle	D Thru C'Bore	E	F	G		H	J		K Shaft Dia.	L	M	P	Q	MACHINED END CODE
								Single	Double		Single	Double						
EZF-1007	EZF-4007	1.88	2.44	1.875	0.266 0.44	1.94	1.44	1.00	1.06	0.82	0.40	0.50	0.187 0.186	1.3775 1.3770	0.188	0.063	0.13	7
EZF-1008	EZF-4008	1.88	2.44	1.875	0.266 0.44	2.00	1.44	1.00	1.06	0.82	0.40	0.50	0.250 0.249	1.3775 1.3770	0.188	0.094	0.13	8
EZF-1009	EZF-4009	2.00	2.60	2.000	0.266 0.44	2.38	1.81	1.00	1.33	1.09	0.44	0.71	0.250 0.249	1.4957 1.4951	0.188	0.094	0.13	9
EZF-3010	EZF-4010	2.00	2.60	2.000	0.266 0.44	2.50	1.81	1.00	1.33	1.09	0.44	0.71	0.312 0.311	1.4957 1.4951	0.190	0.125	0.13	10
EZF-3012	EZF-4012	2.50	3.17	2.500	0.266 0.44	3.29	1.99	1.15	1.57	1.38	0.55	0.75	0.406 0.405	1.8894 1.8888	0.312	0.125	0.13	12
EZF-3015	EZF-4015	2.70	3.27	2.750	0.281 0.44	3.50	2.10	1.25	1.71	1.50	0.63	0.88	0.500 0.499	2.1256 2.1250	0.312	0.125	0.20	15
EZF-3017	EZF-4017	3.38	4.03	3.250	0.344 0.53	3.65	2.33	1.32	1.93	1.63	0.63	0.94	0.500 0.499	2.5193 2.5185	0.312	0.125	0.20	17
EZF-2020	EZF-4020	3.38	4.03	3.250	0.344 0.53	4.03	2.71	1.47	1.98	1.72	0.72	1.03	0.625 0.624	2.5193 2.5185	0.312	0.188	0.20	20
EZF-3025	EZF-4025	4.38	5.31	4.250	0.531 0.81	4.45	2.89	1.67	2.36	1.94	0.76	1.19	0.750 0.749	3.1492 3.1482	0.375	0.188	0.25	25
EZF-2030	EZF-4030	4.38	5.31	4.250	0.531 0.81	4.86	3.05	1.67	2.36	1.94	0.76	1.19	1.000 0.999	3.1492 3.1482	0.375	0.250	0.25	30

## Universal-Mount with Motor Mount

Universal-Mount with motor mount includes an EZZE-MOUNT block with a motor mount for easy, accurate installation of ball screw and acme screw assemblies.



Part No.	Ref. Code	Nema Frame Ref.	AA	BB	T	U	S	Y	W	AK	AJ	TAP	R
EZM-1008-17	U1	17	1.75	0.25	3.35	0.25	0.094	1.75	0.52	.868/1.871	1.725	#8-32	0.19
EZM-1009-23	U2	23	2.50	0.19	4.10	0.50	0.125	2.50	0.38	1.503/1.506	2.625	#10-32	0.26
EZM-3010-23	U2	23	2.50	0.19	4.10	0.50	0.125	2.50	0.38	1.503/1.506	2.625	#10-32	0.26
EZM-3012-23	U2	23	2.50	0.19	4.48	0.50	0.125	2.50	0.38	1.503/1.506	2.625	#10-32	0.10
EZM-3012-34	U3	34	3.25	0.16	4.92	0.50	0.125	2.50	0.81	2.878/2.882	3.875	#10-32	0.10
EZM-3015-23	U2	23	2.50	0.19	4.69	0.50	0.125	2.50	0.38	1.503/1.506	2.625	#10-32	-
EZM-3015-34	U3	34	3.25	0.16	5.13	0.50	0.125	2.50	0.81	2.878/2.882	3.875	#10-32	0.19
EZM-3017-34	U3	34	3.25	0.16	5.56	0.50	0.125	3.12	0.81	2.878/2.882	3.875	#10-32	0.13
EZM-3017-42	U4	42	4.50	0.19	6.31	0.63	0.188	3.12	1.56	2.504/2.508	5.000	1/4"-20	0.13
EZM-2020-34	U3	34	3.25	0.16	5.96	0.50	0.125	3.44	0.81	2.878/2.882	3.875	#10-32	0.10
EZM-2020-42	U4	42	4.50	0.19	6.71	0.63	0.188	3.44	1.56	2.504/2.508	5.000	1/4"-20	0.10
EZM-3025-34	U3	34	4.00	0.16	6.44	0.50	0.125	4.38	0.81	2.878/2.882	3.875	#10-32	0.31
EZM-3025-42	U4	42	4.50	0.19	7.17	0.63	0.188	4.38	1.56	2.504/2.508	5.000	1/4"-20	0.31
EZM-2030-34	U3	34	4.00	0.16	6.97	0.50	0.125	4.38	0.81	2.878/2.882	3.875	#10-32	0.31
EZM-2030-42	U4	42	4.50	0.19	7.72	0.63	0.188	4.38	1.56	2.504/2.508	5.000	1/4"-20	0.31
EZM-2030-56	U5	56C	6.63 dia.	0.19	7.78	0.63	0.188	4.38	1.62	4.502/4.506	5.875	0.41 dia. Thru	0.31

## HOW TO ORDER EZM MOTORMOUNT

### EXAMPLE:

1000-0250 SRT RH / **U3** / 4N / 41.87 / SBN7508 / FS  
U3 → **EZM-2020-34**

### EXAMPLES OF EZM DESIGNATIONS:

U1, U2, U3 or U4 = Standard Mount available above

UX = modified, further explanation needed (ie: Special Frame)

The specifications and data in this publication are believed to be accurate and reliable. However, it is the responsibility of the product user to determine the suitability of Nook Industries products for a specific application. While defective products will be replaced without charge if promptly returned, no liability is assumed beyond such replacement.

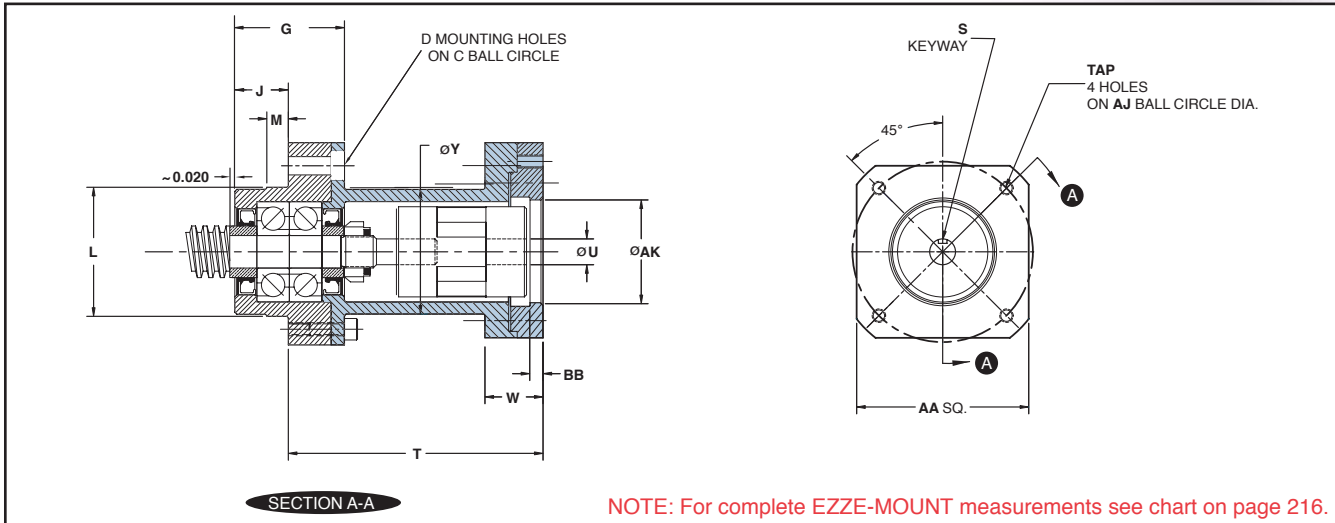


**Flange-Mount with Motor Mount**

Flange-Mount with motor mount includes an EZZE-MOUNT block with a motor mount for easy, accurate installation of ball screw and acme screw assemblies.



EZZE-MOUNT™ END BEARING SUPPORTS TECHNICAL DATA



Part No.	Ref. Code	Nema Frame Ref.	AA	BB	T	U	S	Y	W	AK	AJ	TAP
EZF-1008-17	Y1	17	1.75	0.25	2.84	0.25	0.094	2.2	0.52	.868/.871	1.725	#8-32
EZF-1009-23	Y2	23	2.50	0.19	3.41	0.50	0.125	2.1	0.88	1.503/1.506	2.625	#10-32
EZF-3010-23	Y2	23	2.50	0.19	3.41	0.50	0.125	2.1	0.88	1.503/1.506	2.625	#10-32
EZF-3012-23	Y2	23	2.50	0.19	3.70	0.50	0.125	1.81	0.88	1.503/1.506	2.625	#10-32
EZF-3012-34	Y3	34	3.25	0.16	4.14	0.50	0.125	1.81	1.31	2.878/2.882	3.875	#10-32
EZF-3015-23	Y2	23	2.50	0.19	3.84	0.50	0.125	1.98	0.88	1.503/1.506	2.625	#10-32
EZF-3015-34	Y3	34	3.25	0.16	4.28	0.50	0.125	1.98	1.31	2.878/2.882	3.875	#10-32
EZF-3017-34	Y3	34	3.25	0.16	4.62	0.50	0.125	2.25	1.67	2.878/2.882	3.875	#10-32
EZF-3017-42	Y4	42	4.50	0.19	5.37	0.63	0.188	2.25	2.41	2.504/2.508	5.000	1/4"-20
EZF-2020-34	Y3	34	3.25	0.16	4.92	0.50	0.125	2.37	1.67	2.878/2.882	3.875	#10-32
EZF-2020-42	Y4	42	4.50	0.19	5.67	0.63	0.188	2.37	2.41	2.504/2.508	5.000	1/4"-20
EZF-3025-34	Y3	34	4.00	0.16	5.24	0.50	0.125	3.00	1.67	2.878/2.882	3.875	#10-32
EZF-3025-42	Y4	42	4.50	0.19	5.98	0.63	0.188	3.00	2.41	2.504/2.508	5.000	1/4"-20
EZF-2030-34	Y3	34	4.00	0.16	5.78	0.50	0.125	3.00	1.67	2.878/2.882	3.875	#10-32
EZF-2030-42	Y4	42	4.50	0.19	6.53	0.63	0.188	3.00	2.41	2.504/2.508	5.000	1/4"-20
EZF-2030-56	Y5	56C	6.63 dia.	0.19	6.60	0.63	0.188	3.00	2.42	4.502/4.506	5.875	0.41 dia. Thru

**HOW TO ORDER EZF MOTORMOUNT**

**EXAMPLE:**

105-RA / **Y3** / 4N / 41.87 / 20105 / FS  
 **EZF-3017-34**

**EXAMPLES OF EZF DESIGNATIONS:**

Y1, Y2, Y3, Y4 = Standard Mount available above  
 YX = modified, further description needed (ie: Special Frame)