

	PS	062	020	S1	N1	F1	M02	C130	E00	B00	Lxxx.xxx	
Precision Screw												
Screw Diameter												
062 - 0.625 inch											16M - 16 mm	
Screw Lead												
020 - 0.200 inch											10M - 10 mm	
05M - 5 mm											16M - 16 mm	
Support Configurations (see pages 65-66)												
S1 - Simple - Simple											S4 - Rigid - Simple	
S2 - Fixed (LT) - Simple											S5 - Rigid - Rigid	
S3 - Fixed (HT) - Simple											S9 - other	
Nut Type (see pages 66-68)												
N1 - NPL ball nut (RFT)											N9 - other	
N2 - NPL ball nut (LFT)												
N3 - PL ball nut (RFT)												
N4 - PL ball nut (LFT)												
Nut Flange Type (see page 68)												
F0 - none				F2 - Vertical bracket (E)				F4 - L bracket (E)				
F1 - Round flange				F3 - Vertical bracket (M)				F5 - L bracket (M)				
								F9 - other				
Motor Mount (see pages 69, 96-97)												
M00 - none											M06 - NEMA 23 (RH) wrap	
M01 - Hand crank											M07 - NEMA 23 (LH) wrap	
M02 - NEMA 23 mount (E)											M08 - NEMA 34 (RH) wrap	
M03 - NEMA 23 mount (M)											M09 - NEMA 34 (LH) wrap	
M04 - NEMA 34 mount (E)												
M05 - NEMA 34 mount (M)											M99 - other	
Coupling Type (see pages 94-95)												
C000 - none				C025 to C029 - C100				C155 to C164 - H131				
C999 - other				C048 to C055 - C125				C407 to C413 - G100				
				C130 to C134 - H100				C435 to C444 - G126				
Rotary Encoder (see page 98)												
E00 - none											E20 - 500 lines/rev	
E99 - other											E21 - 1000 lines/rev	
											E22 - 1270 lines/rev	
Power-off Brake (see page 99)												
B00 - none											B20 - 24 VDC	
B99 - other											B21 - 90 VDC	
Thread Length (see page 66)												
Lxxx.xxx - screw thread length (inches)												

Note: See page 14 for a complete description of the above part number system.

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(E) - English Interface	(M) - Metric Interface
(LFT) - Left Facing Thread	(NPL) - Non Preloaded
(LH) - Left Hand	(PL) - Preloaded
(LT) - Low Thrust	(RFT) - Right Facing Thread
(HT) - High Thrust	(RH) - Right Hand

Screw & Nut Specifications

Model Number	Nut Type	Diameter inches (mm)	Lead inches (mm)	Root Diameter inches (mm)	Ball Diameter inches (mm)	Number of Circuits	Static Load lbs (kgf)	Dynamic Load ⁽¹⁾ lbs (kgf)
PS062020 0.625 inch dia. 0.200 inch lead	<i>Non-preloaded Ball (N1/N2)</i>	0.625 (15,87)	0.200 (5,08)	0.513 (13,03)	0.125 (3,17)	1	2,700 (1224)	876 (397)
	<i>Preloaded Ball (N3/N4)</i>						2,430 (1102)	788 (357)
PS16M05M 16 mm dia. 5 mm lead	<i>Non-preloaded Ball (N1/N2)</i>	0.629 (16,00)	0.196 (5,00)	0.513 (13,03)	0.125 (3,17)	1	2,700 (1224)	876 (397)
	<i>Preloaded Ball (N3/N4)</i>						2,430 (1102)	788 (357)
PS16M10M 16 mm dia. 10 mm lead	<i>Non-preloaded Ball (N1/N2)</i>	0.629 (16,00)	0.393 (10,00)	0.503 (12,78)	0.125 (3,17)	1	2,630 (1192)	1,080 (489)
	<i>Preloaded Ball (N3/N4)</i>						2,365 (1072)	972 (440)
PS16M16M 16 mm dia. 16 mm lead	<i>Non-preloaded Ball (N1/N2)</i>	0.629 (16,00)	0.629 (16,00)	0.529 (13,44)	0.125 (3,17)	1	1,620 (734)	819 (371)
	<i>Preloaded Ball (N3/N4)</i>						1,455 (659)	737 (334)

Other Specifications

Maximum Acceleration Rate	Ball nut: 772 inches/sec ² (19,6 m/sec ²)
Maximum Speed	Ball nut: 3000 rpm
Screw Material	Right Hand Thread, Case Hardened Rc 58 Steel Precision Rolled Ball Screw
Screw Extensions	303 Woodruff Keyways on Extensions from Support Housings
Screw Maximum Length ⁽²⁾	78.74 inches (2000 mm)
Screw Weight	0.87 lbs/ft (13,0 g/cm)
Support Housings	Steel with Black Oxide Finish, 45° Chamfer x .02 inch (0,50) all Straight Edges
Support Housing Features	Base or Face Mount with Integral Seals
Nut Flanges	Steel with Black Oxide Finish
Nut Flange Features	English or Metric Load Mounting Interface

Footnotes:

- (1) Load based upon 1 million inches (25 Km) of travel life. See page 67 for further travel life ratings.
 (2) Maximum stock length (not the maximum thread length with bearing housings). See page 66 for maximum thread lengths for each configuration.

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Screw Specifications

Model Number	Nut Type	Screw Efficiency %	Lead Error inch/ft (mm/300 mm)	Backlash inches (mm)	Unidirectional Repeatability inches (mm)	Bidirectional Repeatability inches (mm)
PS062020 0.625 inch dia. 0.200 inch lead & PS16M05M 16 mm dia. 5 mm lead & PS16M10M 16 mm dia. 10 mm lead & PS16M16M 16 mm dia. 16 mm lead	<i>Non-preloaded</i> Ball (N1/N2)	90	< 0.002 (0,050)	< 0.003 (0,076)	+/- 0.0002 (0,0050)	+ 0.0002 to - 0.0032 (0,0050) (0,0813)
	<i>Preloaded</i> Ball (N3/N4)	90	< 0.002 (0,050)	0	+/- 0.0002 (0,0050)	+ 0.0002 to - 0.0002 (0,0050) (0,0050)

Assembly Specifications

Model Number	Nut Type	Breakaway Torque oz-in (N-m)				
		Simple-Simple	Fixed(LT)-Simple	Fixed(HT)-Simple	Rigid-Simple	Rigid-Rigid
PS062020 0.625 inch dia. 0.200 inch lead	<i>Non-preloaded</i> Ball (N1/N2)	< 8 (0,06)	< 10 (0,07)	< 25 (0,18)	< 25 (0,18)	< 35 (0,24)
	<i>Preloaded</i> Ball (N3/N4)	< 15 (0,10)	< 20 (0,14)	< 35 (0,24)	< 35 (0,24)	< 45 (0,32)
PS16M05M 16 mm dia. 5 mm lead	<i>Non-preloaded</i> Ball (N1/N2)	< 8 (0,06)	< 10 (0,07)	< 25 (0,18)	< 25 (0,18)	< 35 (0,24)
	<i>Preloaded</i> Ball (N3/N4)	< 15 (0,10)	< 20 (0,14)	< 35 (0,24)	< 35 (0,24)	< 45 (0,32)
PS16M10M 16 mm dia. 10 mm lead	<i>Non-preloaded</i> Ball (N1/N2)	< 10 (0,07)	< 15 (0,11)	< 30 (0,21)	< 30 (0,21)	< 40 (0,28)
	<i>Preloaded</i> Ball (N3/N4)	< 20 (0,14)	< 25 (0,18)	< 40 (0,28)	< 40 (0,28)	< 50 (0,35)
PS16M16M 16 mm dia. 16 mm lead	<i>Non-preloaded</i> Ball (N1/N2)	< 15 (0,10)	< 20 (0,14)	< 35 (0,24)	< 35 (0,24)	< 45 (0,32)
	<i>Preloaded</i> Ball (N3/N4)	< 30 (0,21)	< 35 (0,24)	< 50 (0,35)	< 50 (0,35)	< 55 (0,39)

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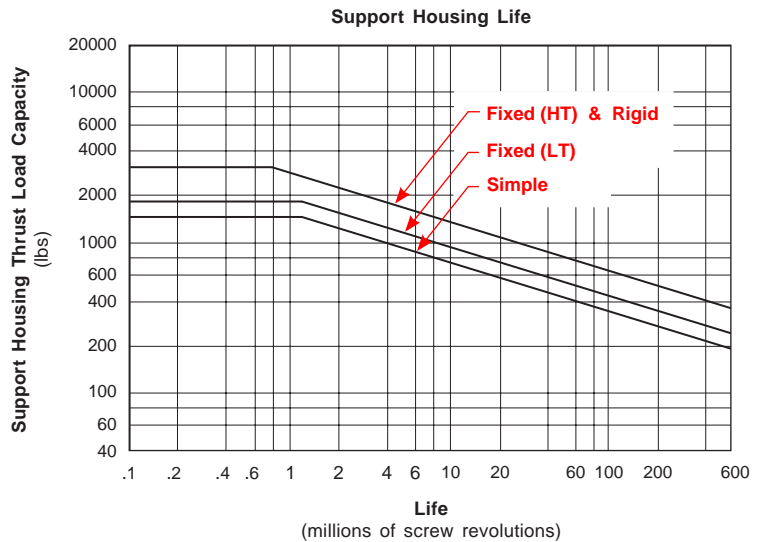
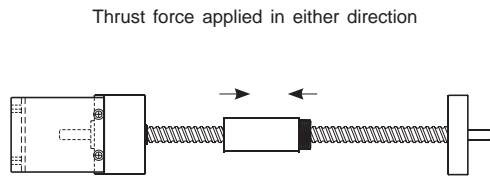
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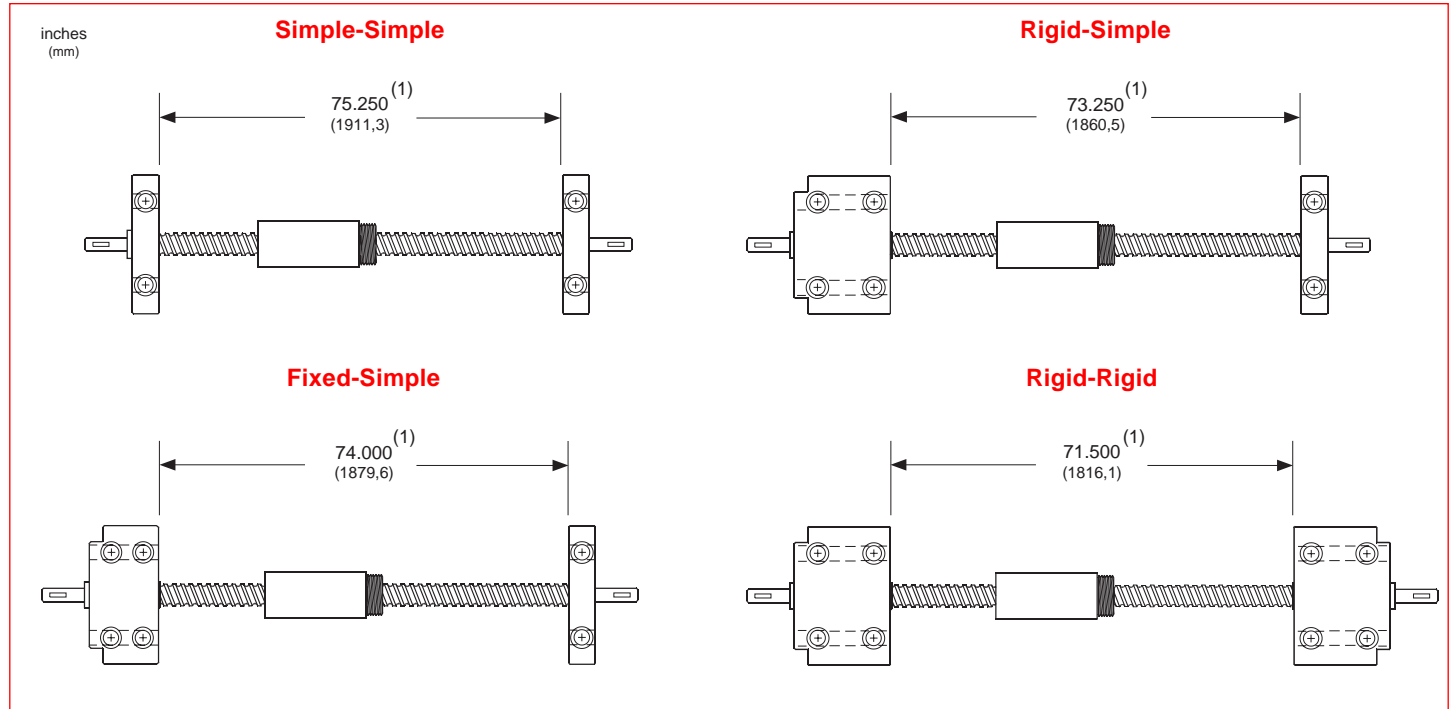
Support Housing Specifications

Support Housing Life millions of screw revolutions	Support Housing Thrust Load Capacity - (Axial)			
	Simple	Fixed (LT)	Fixed (HT)	Rigid
Static	1,370 (621)	1,725 (782)	3,105 (1408)	3,105 (1408)
1	1,370 (621)	1,725 (782)	2,875 (1304)	2,875 (1304)
2	1,215 (551)	1,530 (694)	2,195 (996)	2,195 (996)
10	710 (322)	895 (406)	1,295 (587)	1,295 (587)
50	410 (186)	525 (238)	790 (358)	790 (358)
100	330 (150)	415 (188)	630 (286)	630 (286)
500	195 (88)	240 (109)	365 (165)	365 (165)

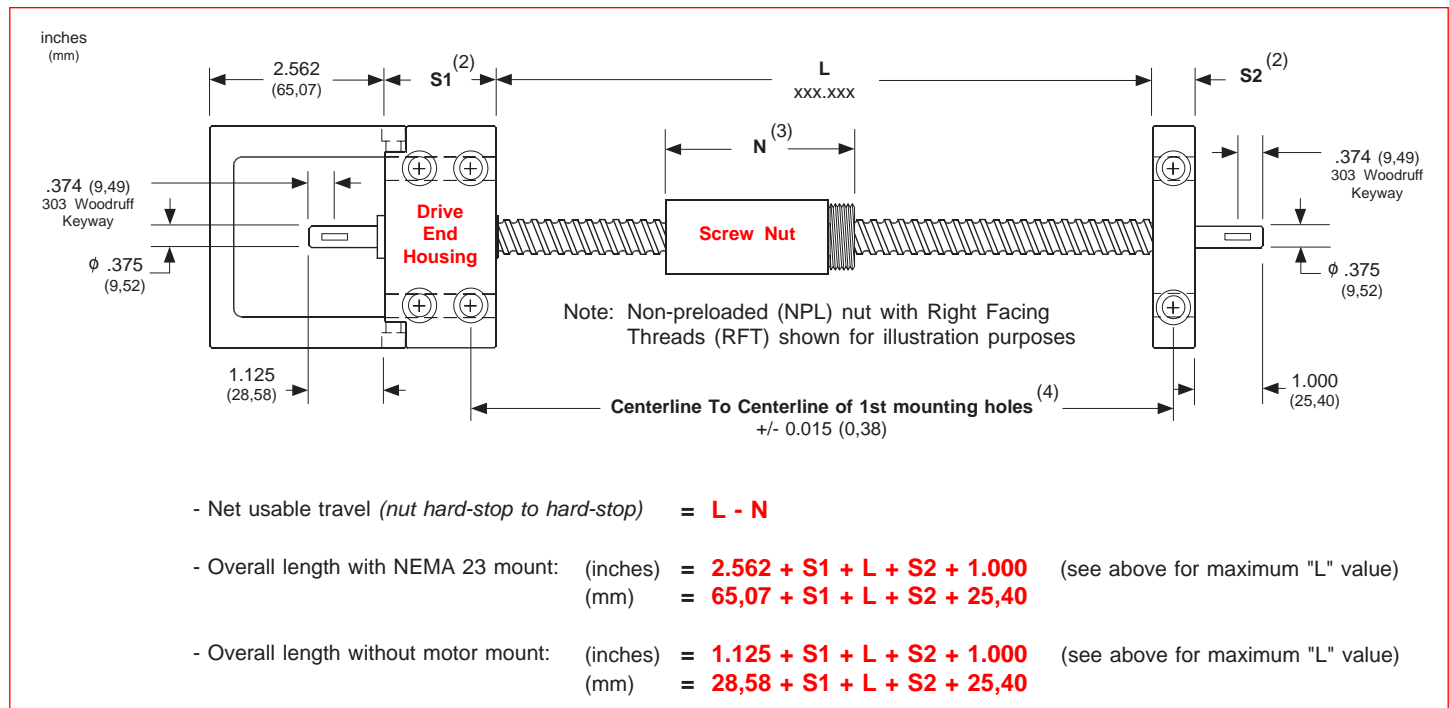


Note: Multiply screw revolutions by the screw lead in order to convert to inches (or mm) traveled by the nut.

Available Configurations



Overall Length Diagram

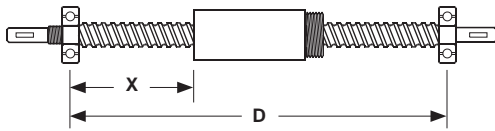


Footnotes:

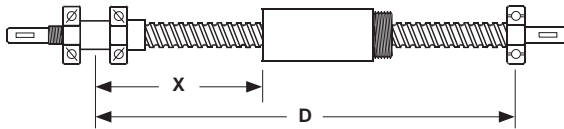
- (1) Maximum available standard screw thread length for the bearing support housing configuration shown.
- (2) Fixed-simple support configuration shown for reference. See page 69 for length values for simple, fixed, and rigid housings.
- (3) See page 68 for available nut styles. Refer to A1 & A2 values for the nut length.
- (4) Tolerance shown is for base mounted support housings. Tolerance also applies to face mounted support housings.

Performance Charts

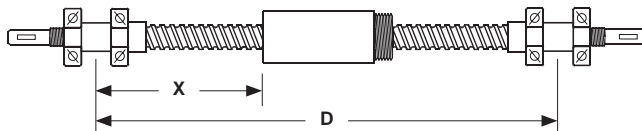
Simple-Simple



Rigid-Simple

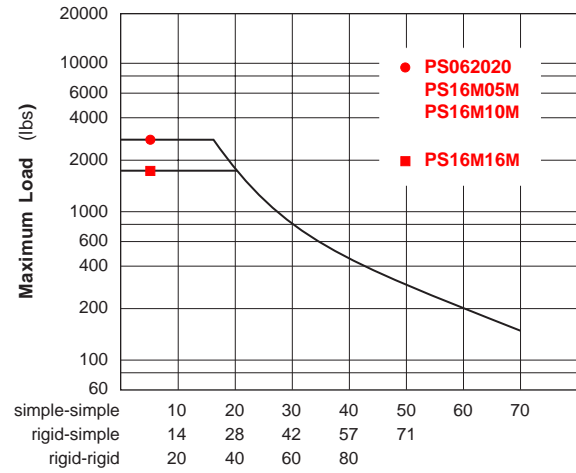


Rigid-Rigid



Maximum Compression Load ⁽¹⁾

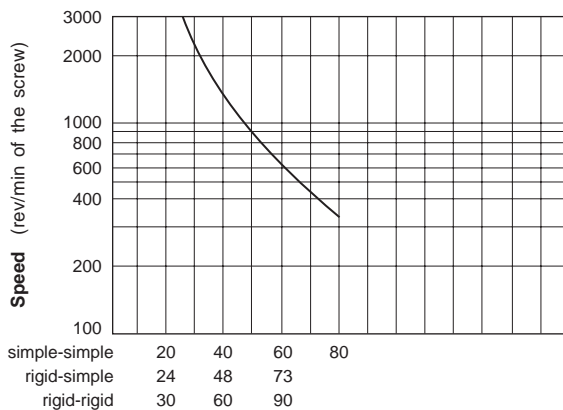
X inches (mm)	simple-simple		rigid-simple		rigid-rigid	
	lbs	(kgf)	lbs	(kgf)	lbs	(kgf)
20 (508)	1620	(735)	1620	(735)	1620	(735)
40 (1016)	450	(204)	900	(408)	1620	(735)
60 (1524)	200	(91)	400	(181)	800	(363)



Maximum "X" distance between bearing support and Load (inches)

Maximum Speed ⁽¹⁾

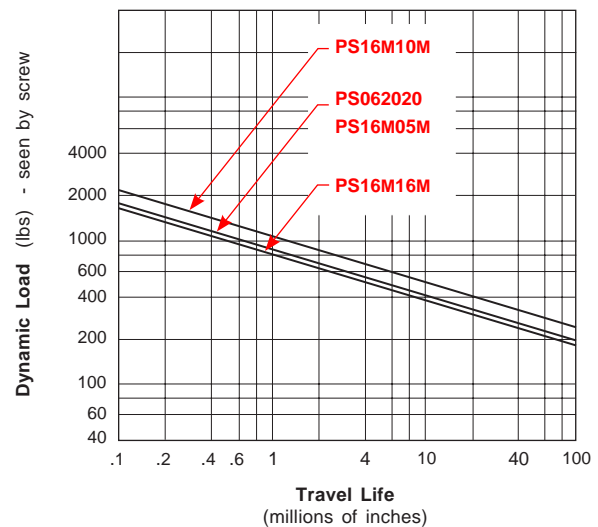
D inches (mm)	simple-simple	rigid-simple	rigid-rigid
	rpm	rpm	rpm
27 (686)	3000	3000	3000
40 (1016)	1340	1970	2990
60 (1524)	595	870	1325
70 (1778)	435	640	970



Maximum "D" distance between bearing supports (inches)

Screw Travel Life ⁽²⁾

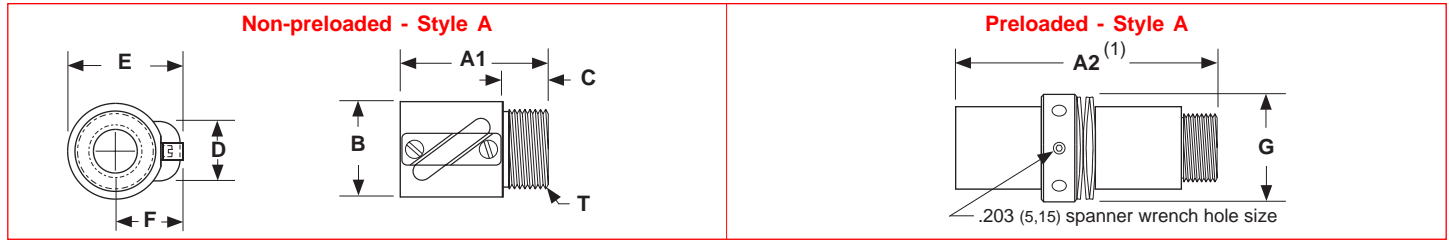
Life millions of inches (km)	062020/16M05M		16M10M		16M16M	
	lbs	(kgf)	lbs	(kgf)	lbs	(kgf)
1 (25)	876	(397)	1,080	(489)	819	(371)
2 (50)	696	(315)	858	(389)	650	(294)
50 (1270)	240	(108)	297	(134)	225	(102)
100 (2540)	190	(86)	235	(106)	179	(81)



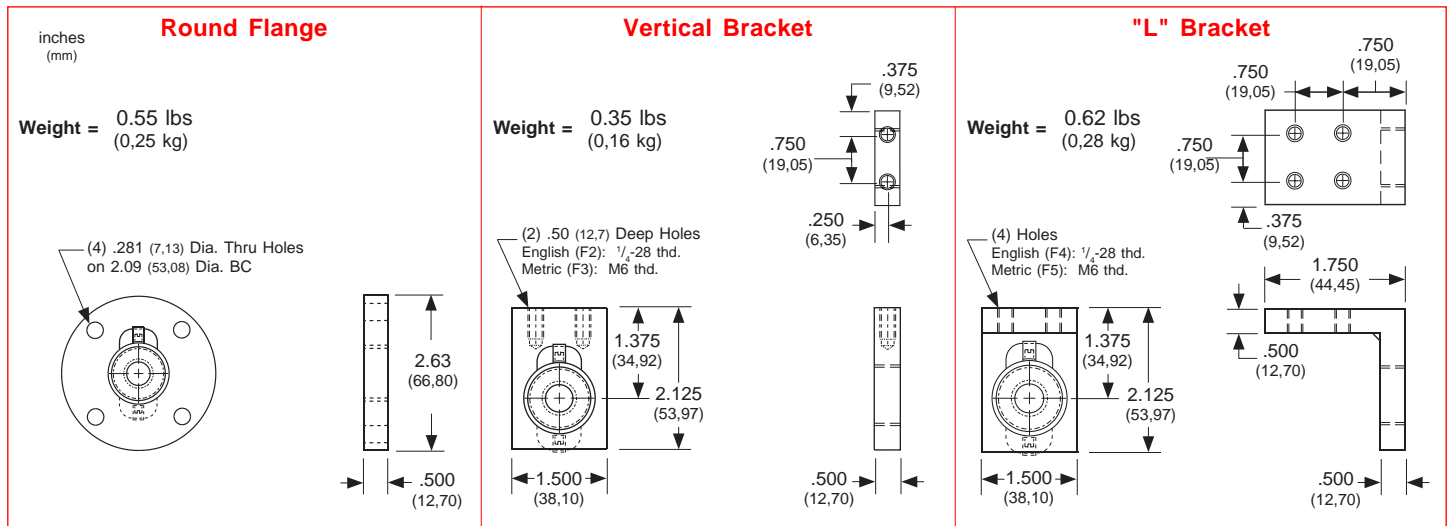
Footnotes:

- (1) Refer to the simple-simple support lengths for fixed-simple configurations. A fixed housing performs like a simple housing for critical speed and compression load specifications. Maximum speeds may not be reached using a Turcite nut due to system friction.
- (2) Multiply life value from chart (or graph) by 0.90 to obtain the life for a preloaded ball nut.

Nut Dimensions



Nut Flange Dimensions



Model Number	Nut Style	Nut Dimensions inches (mm)									Nut Weight ⁽³⁾ lbs (kg)
		A1	A2 ⁽¹⁾	B	C	D	E	F	T - "V" Threads ⁽²⁾	G	
PS062020	A	1.580 (40,13)	3.410 (86,61)	1.221 (31,01)	0.500 (12,70)	0.847 (21,51)	1.398 (35,51)	0.787 (20,00)	15/16 - 16 UN-2A (23,81 - 16 UN-2A)	1.410 (35,81)	0.24 (0,11)
PS16M05M	A	1.580 (40,13)	3.410 (86,61)	1.221 (31,01)	0.500 (12,70)	0.847 (21,51)	1.398 (35,51)	0.787 (20,00)	15/16 - 16 UN-2A (23,81 - 16 UN-2A)	1.410 (35,81)	0.24 (0,11)
PS16M10M	A	2.070 (52,59)	4.370 (111,00)	1.221 (31,01)	0.500 (12,70)	0.709 (18,01)	1.398 (35,51)	0.787 (20,00)	15/16 - 16 UN-2A (23,81 - 16 UN-2A)	1.410 (35,81)	0.33 (0,15)
PS16M16M	A	2.170 (55,12)	4.630 (117,60)	1.221 (31,01)	0.500 (12,70)	0.847 (21,51)	1.398 (35,51)	0.787 (20,00)	15/16 - 16 UN-2A (23,81 - 16 UN-2A)	1.410 (35,81)	0.30 (0,14)

Footnotes:

- (1) This is the length for a preloaded nut. Preloaded nut consists of two (2) non-preloaded nuts with a locking spanner nut, and belville springs.
- (2) All flange threads are internal (Type 2B) to match the external nut threads.
- (3) Weight of the non-preloaded nut. Multiply value by 2.1 to obtain the weight for the preloaded nut assembly.

Support Housing Dimensions

inches (mm)

.625 (15,87)

2.000 (50,80)

(4) .343 (8,71) Dia.Thru Holes

(4) 8-32 x .37 (9,39) Deep on 1.750 (44,45) BC

2.500 (63,50)

1.750 (44,45)

1.250 (31,75)

.375 (9,52)

1.625 (41,27)

3.250 (82,55)

Simple

(2) .343 (8,71) Dia. Thru Holes, .504 (12,8) Dia. C' Bored x .57 (14,47) Deep

.313 (7,95)

.625 (15,87)

.625 (15,87)

Drive End **non-Drive End**

Weight = 1.1 lbs (0,50 kg)

.625 (15,87)

2.000 (50,80)

(4) .343 (8,71) Dia.Thru Holes

(4) 8-32 x .37 (9,39) Deep on 1.750 (44,45) BC

2.500 (63,50)

1.750 (44,45)

1.250 (31,75)

.375 (9,52)

1.625 (41,27)

3.250 (82,55)

.250 (6,35)

Fixed

(4) .343 (8,71) Dia. Thru Holes, .504 (12,8) Dia. C' Bored x .57 (14,47) Deep

.750 (19,05)

.500 (12,70)

1.125 (28,57)

(2) 10-32 x .43 (10,92) Deep, both sides

.688 (17,47)

.125 (3,17)

1.750 (44,45)

Weight = 2.7 lbs (1,22 kg)

.625 (15,87)

2.000 (50,80)

(4) .343 (8,71) Dia.Thru Holes

(4) 8-32 x .37 (9,39) Deep on 1.750 (44,45) BC

2.500 (63,50)

1.750 (44,45)

1.250 (31,75)

.375 (9,52)

1.625 (41,27)

3.250 (82,55)

.250 (6,35)

Rigid

(4) .343 (8,71) Dia. Thru Holes, .504 (12,8) Dia. C' Bored x .57 (14,47) Deep

.750 (19,05)

.500 (12,70)

1.125 (28,57)

(2) 10-32 x .43 (10,92) Deep, both sides

.688 (17,47)

.125 (3,17)

2.500 (63,50)

Weight = 3.9 lbs (1,77 kg)

NEMA 23 Motor Mount

Weight = 0.9 lbs (0,41 kg)

(4) Holes on 2.625 (66,67) BC Dia. English (M02): #10-24 thd. Metric (M03): M5 thd.

1.502 (38,15) Pilot Dia. TYP

2.340 (59,44)

2.562 (65,07)

.313 (7,95)

1.437 (36,50)

2.250 (57,15)

1.125 (28,57)

(2) .221 (5,61) Dia.Thru Holes, .344 (8,73) Dia. C' Bored x .125 (3,17) Deep, both sides

NEMA 34 Motor Mount

Weight = 1.4 lbs (0,64 kg)

(4) Holes on 3.875 (98,42) BC Dia. English (M04): #10-24 thd. Metric (M05): M5 thd.

2.877 (73,07) Pilot Dia. TYP

.063 (1,60)

.500 (12,70)

2.562 (65,07)

.313 (7,95)

1.937 (49,20)

3.375 (85,72)

1.688 (42,88)

.438 (11,13)

(2) .221 (5,61) Dia.Thru Holes, .344 (8,73) Dia. C' Bored x .125 (3,17) Deep, both sides

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