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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)
GS062020 0.625 inch dia. 0.200 inch lead	Preloaded Ball (N3/N4)	0.625 (15,87)	0.200 (5,08)	0.513 (13,03)	0.125 (3,17)	1	3,080 (1397)	987 (447)
GS16M05M 16 mm dia. 5 mm lead	Preloaded Ball (N3/N4)	0.629 (16,00)	0.196 (5,00)	0.513 (13,03)	0.125 (3,17)	1	3,080 (1397)	987 (447)
GS16M16M 16 mm dia. 16 mm lead	Preloaded Ball (N3/N4)	0.629 (16,00)	0.629 (16,00)	0.529 (13,44)	0.125 (3,17)	1	1,800 (816)	910 (412)

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 Ground Ball Screw
Screw Extensions	303 Woodruff Keyways on Both Extensions from Support Housings
Screw Maximum Length ⁽²⁾	45.27 inches (1150 mm)
Screw Weight	0.87 lbs/ft (13,0 g/cm)
Support Housings	Aluminum with Black Anodized Finish or Steel with Black Oxide Finish 45° Chamfer x .02 inch (0,50) all Straight Edges Base or Face Mount with Integral Seals
Nut Flanges	Steel with Black Oxide Finish English or Metric Load Mounting Interface

Footnotes:

- (1) Load based upon 1 million inches (25 Km) of travel life. See page 83 for further travel life ratings.
 (2) Maximum stock length (not the maximum thread length with bearing housings). See page 82 for maximum thread lengths for each configuration.

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)
GS062020 0.625 inch dia. 0.200 inch lead & GS16M05M 16 mm dia. 5 mm lead & GS16M16M 16 mm dia. 16 mm lead	<i>Preloaded Ball (N3/N4)</i>	90	< 0.0005 (0,012)	0	+/- 0.0001 (0,0025)	+ 0.0001 to - 0.0001 (0,0025) (0,0025)

Assembly Specifications

Model Number	Nut Type	Breakaway Torque oz-in (N-m)				
		Simple-Simple	Fixed(LT)-Simple	Fixed(HT)-Simple	Rigid-Simple	Rigid-Rigid
GS062020 0.625 inch dia. 0.200 inch lead	<i>Preloaded Ball (N3/N4)</i>	< 15 (0,11)	< 20 (0,14)	< 30 (0,21)	< 30 (0,21)	< 40 (0,28)
GS16M05M 16 mm dia. 5 mm lead	<i>Preloaded Ball (N3/N4)</i>	< 15 (0,11)	< 20 (0,14)	< 30 (0,21)	< 30 (0,21)	< 40 (0,28)
GS16M16M 16 mm dia. 16 mm lead	<i>Preloaded Ball (N3/N4)</i>	< 25 (0,18)	< 35 (0,24)	< 45 (0,32)	< 45 (0,32)	< 55 (0,39)

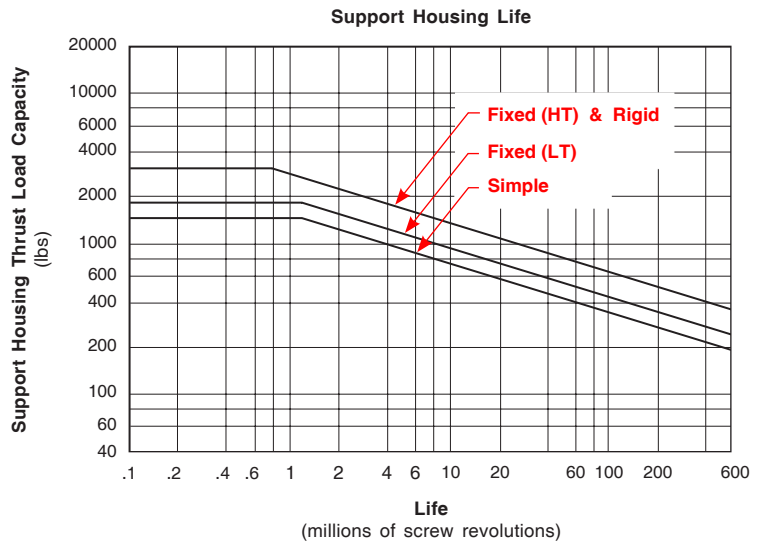
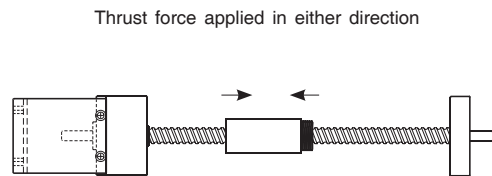
Internal Order Code

Model Number	Internal Order Code & Support Configuration	Maximum Thread Length "L" inches (mm)	Model Number	Internal Order Code & Support Configuration	Maximum Thread Length "L" inches (mm)	Model Number	Internal Order Code & Support Configuration	Maximum Thread Length "L" inches (mm)
GS062020 0.625 inch dia. 0.200 inch lead & GS16M05M 16 mm dia. 5 mm lead & GS16M16M 16 mm dia. 16 mm lead	-1-S1	18.250 (463,6)	GS062020 0.625 inch dia. 0.200 inch lead	-2-S1	41.500 (1054,1)	GS16M05M 16 mm dia. 5 mm lead & GS16M16M 16 mm dia. 16 mm lead	-2-S1	37.500 (952,5)
	-1-S2	18.250 (463,6)		-2-S2	41.500 (1054,1)		-2-S2	37.500 (952,5)
	-1-S3	18.250 (463,6)		-2-S3	41.500 (1054,1)		-2-S3	37.500 (952,5)
	-1-S4	18.250 (463,6)		-2-S4	41.500 (1054,1)		-2-S4	37.500 (952,5)
	-1-S5	16.500 (419,1)		-2-S5	39.750 (1009,6)		-2-S5	35.800 (909,3)

Specifications subject to change without notice

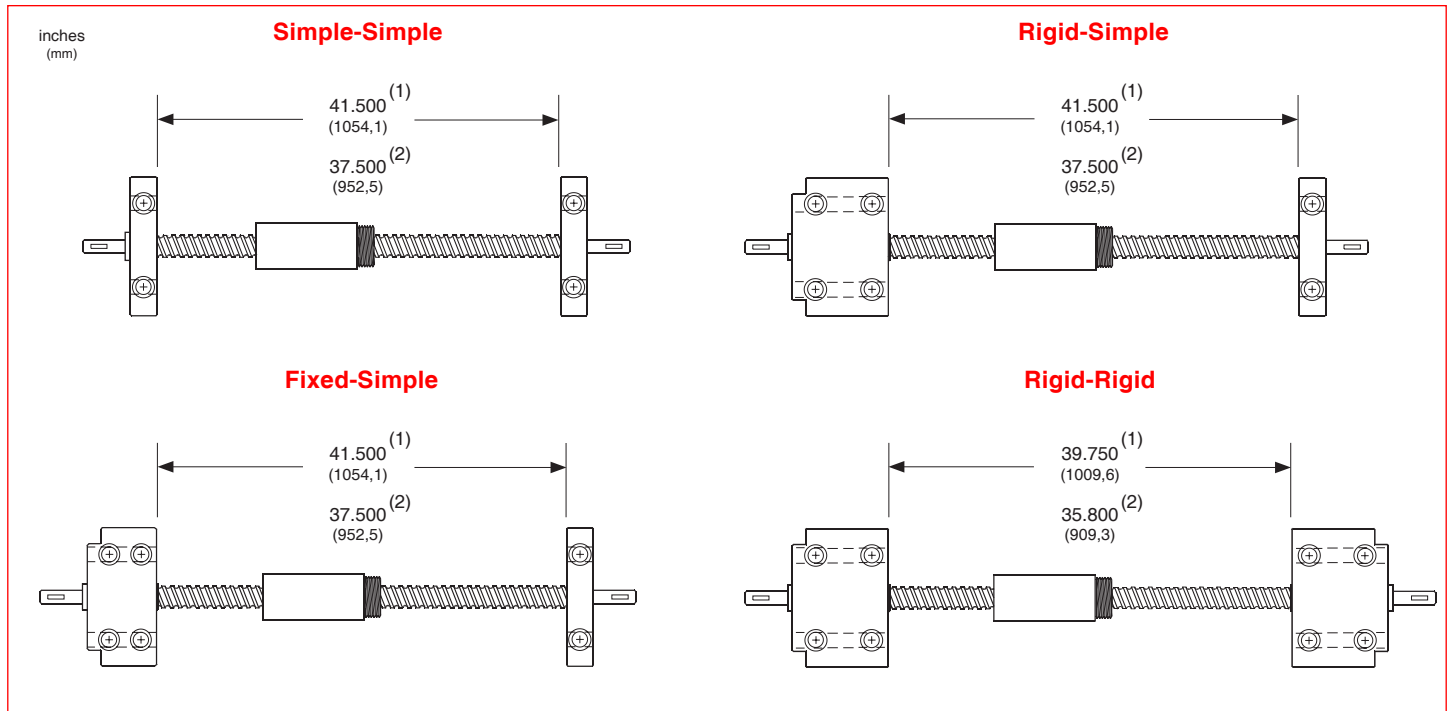
Support Housing Specifications

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 (166)	365 (166)

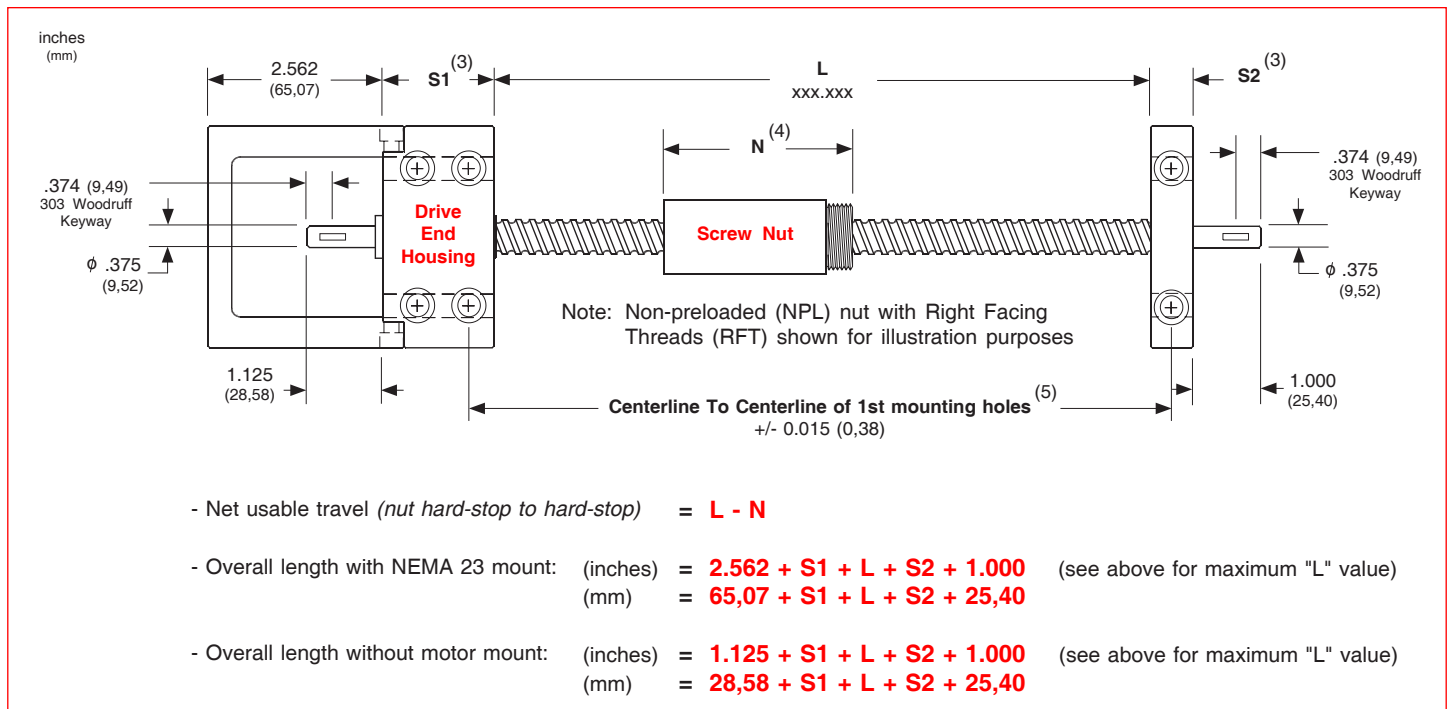


Note: Multiply screw revolutions by the screw lead in order to convert to inches (or mm) traveled by the nut.

Available Configurations



Overall Length Diagram

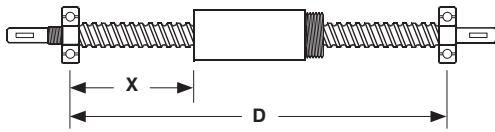


Footnotes:

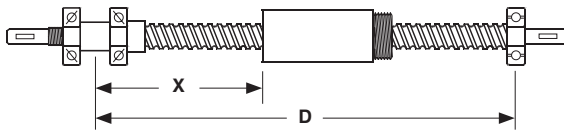
- (1) Maximum available standard screw thread length (GS062020 series) for the bearing support housing configuration shown.
- (2) Maximum available standard screw thread length (GS16M05M & GS16M16M series) for the bearing support housing configuration shown.
- (3) Fixed-simple support configuration shown for reference. See page 85 for length values for simple, fixed, and rigid housings.
- (4) See page 84 for available nut styles. Refer to A1 & A2 values for the nut length.
- (5) Tolerance shown is for base mounted support housings. Tolerance also applies to face mounted support housings.

Performance Charts

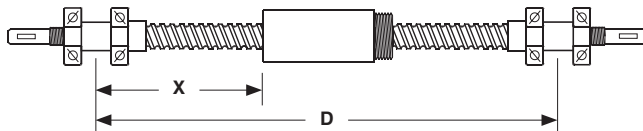
Simple-Simple



Rigid-Simple

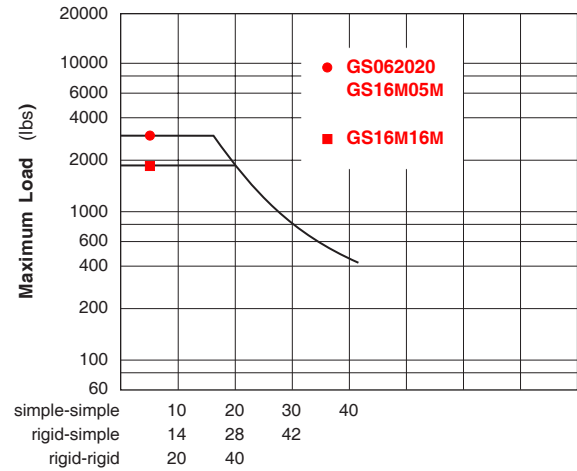


Rigid-Rigid



Maximum Compression Load ⁽¹⁾

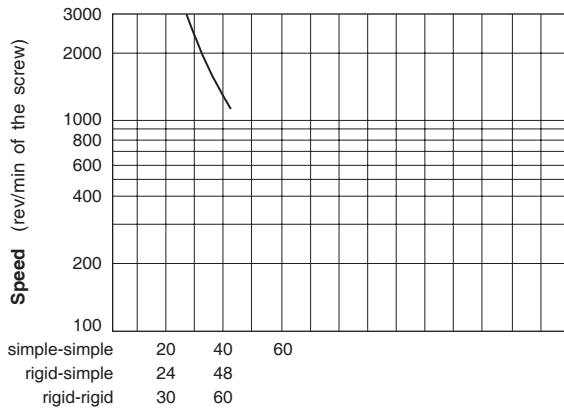
X inches (mm)	simple-simple		rigid-simple		rigid-rigid	
	lbs	(kgf)	lbs	(kgf)	lbs	(kgf)
20 (508)	1800	(816)	1800	(816)	1800	(816)
30 (1016)	800	(363)	1600	(726)	1800	(816)
40 (1524)	450	(204)	900	(408)	1800	(816)



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

Maximum Speed ⁽¹⁾

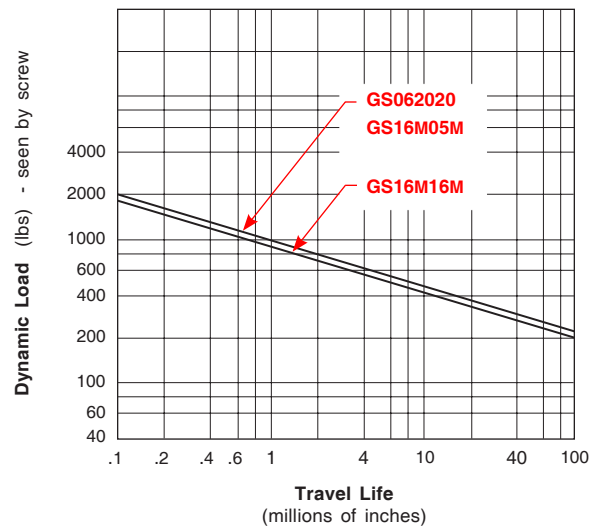
D inches (mm)	simple-simple		rigid-simple		rigid-rigid	
	rpm	rpm	rpm	rpm	rpm	rpm
27 (686)	3000	3000	3000	3000	3000	3000
30 (762)	2405	3000	3000	3000	3000	3000
35 (889)	1765	2600	2600	3000	3000	3000
40 (1016)	1350	1985	1985	3000	3000	3000



Maximum "D" distance between bearing supports (inches)

Screw Travel Life

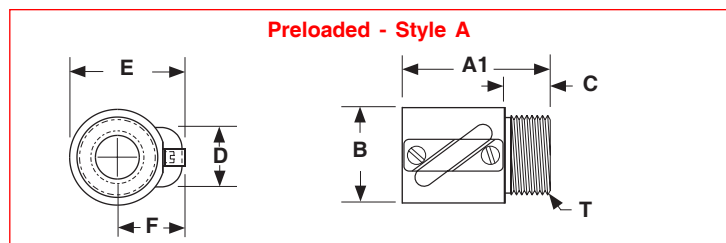
Life millions of inches (km)	062020/16M05M		16M16M	
	lbs	(kgf)	lbs	(kgf)
1 (25)	987	(447)	910	(412)
2 (50)	785	(356)	720	(326)
50 (1270)	270	(122)	243	(110)
100 (2540)	216	(97)	199	(90)



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.

Nut Dimensions



Nut Flange Dimensions

inches (mm)	Round Flange	Vertical Bracket	"L" Bracket
Material: Steel Weight: 0.55 lbs (0,25 kg)	Material: Steel Weight: 0.35 lbs (0,16 kg)	Material: Steel Weight: 0.62 lbs (0,28 kg)	
(4) .281 (7,13) Dia. Thru Holes on 2.09 (53,08) Dia. BC	(2) .50 (12,7) Deep Holes English (F2): 1/4"-28 thd. Metric (F3): M6 thd.	(4) Holes English (F4): 1/4"-28 thd. Metric (F5): M6 thd.	

Model Number	Nut Style	Nut Dimensions inches (mm)							Nut Weight lbs (kg)
		A1 ⁽¹⁾	B	C	D	E	F	T - "V" Threads ⁽²⁾	
GS062020	A	2.090 (53,09)	1.221 (31,00)	0.500 (12,70)	0.847 (21,51)	1.398 (35,51)	0.788 (20,02)	15/16 - 16 UN-2A (23,81 - 16 UN-2A)	0.24 (0,11)
GS16M05M	A	2.090 (53,09)	1.221 (31,00)	0.500 (12,70)	0.847 (21,51)	1.398 (35,51)	0.788 (20,02)	15/16 - 16 UN-2A (23,81 - 16 UN-2A)	0.24 (0,11)
GS16M16M	A	1.890 (48,00)	1.221 (31,00)	0.500 (12,70)	0.847 (21,51)	1.398 (35,51)	0.788 (20,02)	15/16 - 16 UN-2A (23,81 - 16 UN-2A)	0.30 (0,14)

Footnotes:

- (1) The preload is achieved internal to the nut. Thus, the GS series preloaded nut is matched to the screw thread.
- (2) All flange threads are internal (Type 2B) to match the external nut threads.

Support Housing Dimensions

Simple

(4) .343 (8,71) Dia.Thru Holes
 (4) 8-32 x .37 (9,39) Deep on 1.750 (44,45) BC
 303 Woodruff Keyways on Both Extensions

Weight (each)
Aluminum: 0.4 lbs (0,18 kg)
Steel: 1.1 lbs (0,50 kg)

Drive End **non-Drive End**

Fixed

(4) .343 (8,71) Dia.Thru Holes
 (4) 8-32 x .37 (9,39) Deep on 1.750 (44,45) BC
 303 Woodruff Keyways on Both Extensions

Weight (each)
Aluminum: 1.0 lbs (0,45 kg)
Steel: 2.8 lbs (1,27 kg)

Drive End

Rigid

(4) .343 (8,71) Dia.Thru Holes
 (4) 8-32 x .37 (9,39) Deep on 1.750 (44,45) BC
 303 Woodruff Keyways on Both Extensions

Weight (each)
Aluminum: 1.5 lbs (0,68 kg)
Steel: 4.2 lbs (1,91 kg)

Drive End

NEMA 23 Motor Mount

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

NEMA 34 Motor Mount

Material: Aluminum
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

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

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