NemaTRUE™

True Planetary™ Gearheads

Ready for Immediate Delivery	
Precision	13 arc-minutes
Frame Sizes	17, 23/60mm, 34/90mm and 42/115mm
Torque Capacity	up to 180 Nm
Ratio Availability	3:1 thru 100:1
Radial load capacity	up to 3730 N
Mounting System	RediMount™

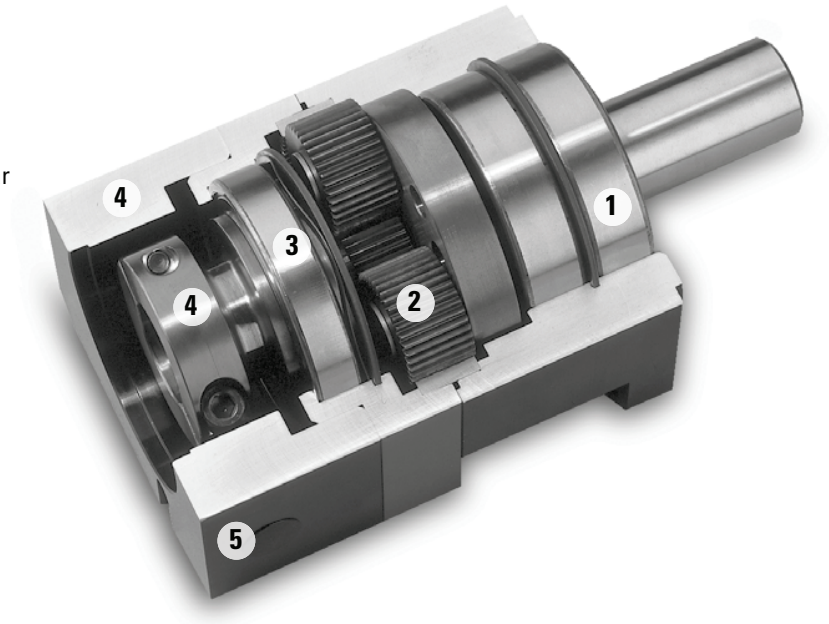
1. **Sealed deep groove ball bearings**
   provide high radial load carrying capability

2. **HRC 55-60 steel gears**
   provide superior wear resistance
   and increased backlash integrity

3. **Sealed deep groove ball bearing**
   provides precision alignment of sun gear

4. **RediMount™ system**
   provides error-free motor installation

5. **Anodized aluminum housing**
   reduces weight and prevents corrosion



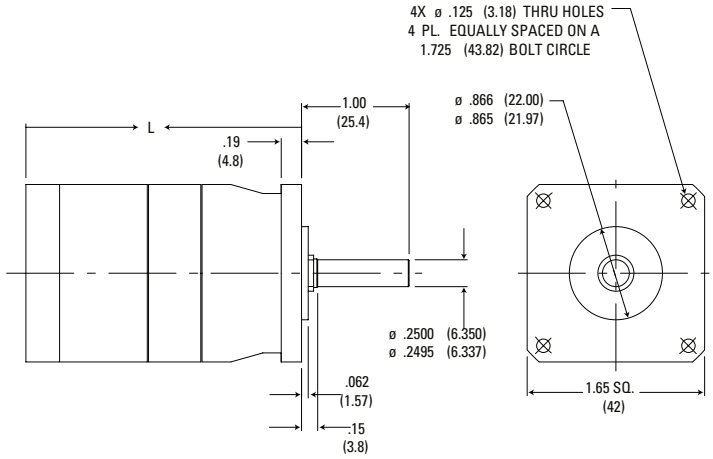
Micron True Planetary™ Gearheads shipped within 24 hours!

Need it fast? Go to the back cover of the catalog for details.

NemaTRUE™ Size 17

True Planetary™ Gearheads

English



Ratio[1]	Dimension 'L' in [mm]	Backlash [arc-min]	Weight lb [kg]	Efficiency
3:1 to 10:1	2.28 [58]	13 max	.75 [0,34]	93%
15:1 to 100:1	2.77 [71]	15 max	.95 [0,43]	88%

Dimensions are inch (mm)
Efficiency is calculated at 100% of the rated torque.
Total length may change depending on motor being used.

Performance Specifications

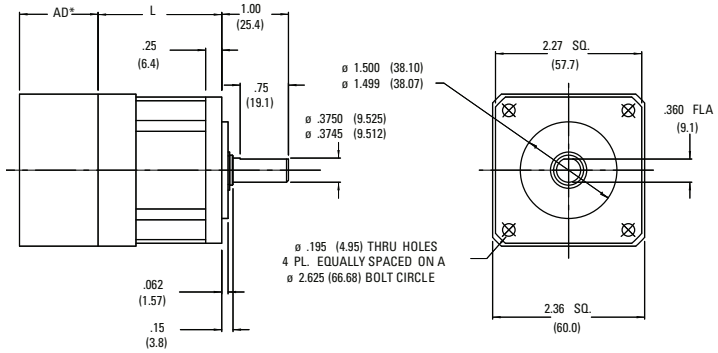
Part Number	Ratio[1]	20000 Hour Life				Tpeak in-lb [Nm]	J in-lb-sec^{2}x10^{-4} [kg-cm^2]	Torsional Stiffness in-lb/arc-min [Nm/arc-min]
		T_r (1000 rpm) in-lb [Nm]	T_r (2000 rpm) in-lb [Nm]	T_r (3000 rpm) in-lb [Nm]	T_r (4000 rpm) in-lb [Nm]			
NT17-003	3:1	41 [4,7]	34 [3,8]	29 [3,3]	27 [3,1]	170 [19,2]	0.115 [0,013]	2.36 [0,268]
NT17-005	5:1	44 [5,0]	37 [4,2]	33 [3,7]	30 [3,4]	170 [19,2]	0.040 [0,005]	2.36 [0,268]
NT17-010	10:1	30 [3,4]	28 [3,1]	25 [2,8]	23 [2,6]	170 [19,2]	0.030 [0,003]	2.36 [0,268]
NT17-015	15:1	47 [5,3]	47 [5,3]	47 [5,3]	42 [4,7]	170 [19,2]	0.037 [0,004]	2.36 [0,268]
NT17-025	25:1	78 [8,8]	58 [6,6]	53 [6,0]	48 [5,5]	170 [19,2]	0.037 [0,004]	2.36 [0,268]
NT17-030	30:1	57 [6,4]	52 [5,9]	48 [5,4]	46 [5,2]	170 [19,2]	0.026 [0,003]	2.36 [0,268]
NT17-050	50:1	91 [10,3]	78 [8,8]	65 [7,4]	60 [6,7]	170 [19,2]	0.026 [0,003]	2.36 [0,268]
NT17-100	100:1	40 [4,5]	38 [4,3]	35 [4,0]	33 [3,8]	170 [19,2]	0.026 [0,003]	2.36 [0,268]

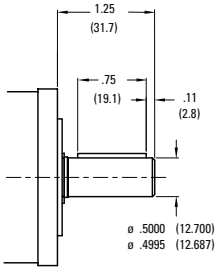
[1] Ratios are exact, higher ratios and other custom options are also available, consult factory.
T_r = Rated output torque at rated speed for specific hours of life.
T_{peak} = Allowable momentary peak torque for emergency stop or heavy shock loading.
J = Mass moment of inertia reflected to the input shaft (including pinion assembly).

NemaTRUE™ Size 23/60

English

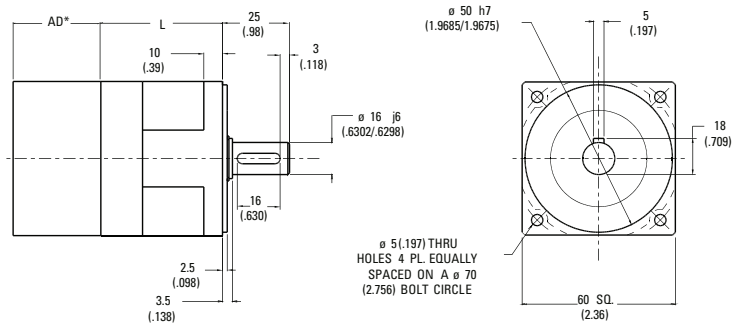
English - Dimensions are in (mm)





NemaTRUE PLUS* (NTP)
HeavyDuty Output Shaft

Metric - Dimensions are mm (in)



Ratio[1]	NT23 Dimension 'L' in [mm]	NT60 Dimension 'L' in [mm]	Backlash [arc-min]		Weight lb [kg]	Efficiency
			Precision	High Precision		
3:1 to 10:1	1.92 [48,8]	2.07 [52,6]	13 max	8 max	1.5 [0,7]	93%
15:1 to 100:1	2.61 [66,3]	2.76 [70,1]	15 max	9 max	1.9 [0,9]	88%

AD** = Adapter length
Adapter length will vary depending on motor.
Efficiency is calculated at 100% of the rated torque.

Performance Specifications

Part Number		Ratio[1]	20000 Hour Life				Tpeak in-lb [Nm]	J in-lb-sec²x10⁻⁴ [kg-cm²]	Torsional Stiffness in-lb/arc-min [Nm/arc-min]	
English	Metric		T_r (1000 rpm) in-lb [Nm]	T_r (2000 rpm) in-lb [Nm]	T_r (3000 rpm) in-lb [Nm]	T_r (4000 rpm) in-lb [Nm]			NT	NTP
NT23-003	NT60-003	3:1	98 [11,1]	80 [9,0]	70 [7,9]	65 [7,3]	150 [16,9]	0.67 [0,076]	6.3 [0,71]	15.8 [1,8]
NT23-004	NT60-004	4:1	107 [12,1]	90 [10,2]	80 [9,0]	73 [8,2]	250 [28,3]	0.22 [0,024]	6.3 [0,71]	15.8 [1,8]
NT23-005	NT60-005	5:1	105 [11,9]	88 [9,9]	78 [8,8]	71 [8,0]	250 [28,2]	0.22 [0,025]	6.3 [0,71]	15.8 [1,8]
NT23-007	NT60-007	7:1	100 [11,3]	83 [9,4]	74 [8,4]	66 [7,5]	250 [28,3]	0.22 [0,024]	6.3 [0,71]	15.8 [1,8]
NT23-010	NT60-010	10:1	163 [7,1]	58 [6,6]	54 [6,1]	52 [5,9]	250 [28,2]	0.14 [0,016]	6.3 [0,71]	15.8 [1,8]
NT23-015	NT60-015	15:1	124 [14,0]	110 [12,4]	105 [11,9]	100 [11,3]	250 [28,3]	0.21 [0,024]	6.3 [0,71]	15.8 [1,8]
NT23-020	NT60-020	20:1	180 [20,3]	147 [16,6]	130 [14,7]	120 [13,6]	275 [31,1]	0.21 [0,024]	6.3 [0,71]	15.8 [1,8]
NT23-025	NT60-025	25:1	175 [9,8]	142 [16,0]	125 [14,1]	115 [13,0]	250 [28,3]	0.21 [0,024]	6.3 [0,71]	15.8 [1,8]
NT23-030	NT60-030	30:1	207 [23,4]	182 [20,6]	157 [17,7]	147 [16,6]	275 [31,1]	0.13 [0,015]	6.3 [0,71]	15.8 [1,8]
NT23-040	NT60-040	40:1	207 [23,4]	182 [20,6]	157 [17,7]	147 [16,6]	275 [31,1]	0.13 [0,015]	6.3 [0,71]	15.8 [1,8]
NT23-050	NT60-050	50:1	202 [22,8]	175 [19,8]	152 [17,2]	142 [16,0]	275 [31,1]	0.13 [0,015]	6.3 [0,71]	15.8 [1,8]
NT23-070	NT60-070	70:1	197 [22,3]	172 [19,4]	147 [16,6]	137 [15,5]	275 [31,1]	0.13 [0,015]	6.3 [0,71]	15.8 [1,8]
NT23-100	NT60-100	100:1	85 [9,6]	79 [8,9]	74 [8,9]	73 [8,2]	275 [31,1]	0.13 [0,015]	6.3 [0,71]	15.8 [1,8]

All ratios are available to ship in 24 hours through the Gearhead Express Program.

[1] Ratios are exact, higher ratios and other custom options are also available, consult factory.

T_r = Rated output torque at rated speed for specific hours of life.

T_{peak} = Allowable momentary peak torque for emergency stop or heavy shock loading.

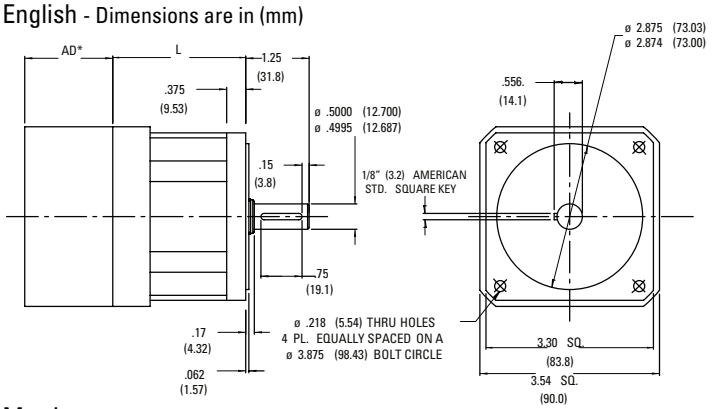
J = Mass moment of inertia reflected to the input shaft (including pinion assembly).

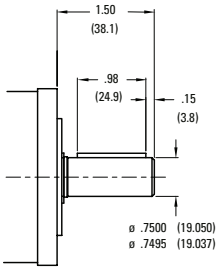
NemaTRUE™ Size 34/90

True Planetary™ Gearheads

English

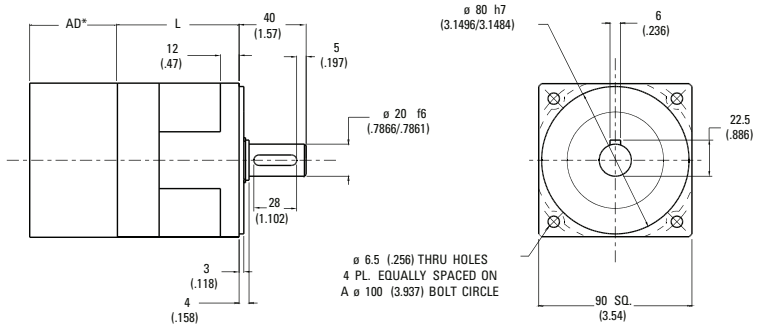
English - Dimensions are in (mm)





NemaTRUE PLUS* (NTP)
HeavyDuty Output Shaft

Metric - Dimensions are mm (in)



Ratio[1]	NT34 Dimension 'L' in [mm]	NT90 Dimension 'L' in [mm]	Backlash [arc-min]		Weight lb [kg]	Efficiency
			Precision	High Precision		
3:1 to 10:1	2.68 [68,0]	2.63 [66,8]	13 max	8 max	4.2 [1,9]	93%
15:1 to 100:1	3.53 [89,6]	3.53 [89,7]	15 max	9 max	5.6 [2,5]	88%

AD** = Adapter length
Adapter length will vary depending on motor.
Efficiency is calculated at 100% of the rated torque.

Performance Specifications

Part Number		Ratio[1]	20000 Hour Life				Tpeak in-lb [Nm]	J in-lb-sec²x10⁻⁴ [kg-cm²]	Torsional Stiffness in-lb/arc-min [Nm/arc-min]	
English	Metric		T_r (1000 rpm) in-lb [Nm]	T_r (2000 rpm) in-lb [Nm]	T_r (3000 rpm) in-lb [Nm]	T_r (4000 rpm) in-lb [Nm]			NT	NTP
NT34-003	NT90-003	3:1	360 [40,7]	320 [36,2]	295 [33,3]	270 [30,5]	510 [57,6]	3.9 [0,44]	16.8 [1,9]	48 [5,4]
NT34-004	NT90-004	4:1	515 [58,2]	425 [48,0]	380 [42,9]	350 [39,6]	700 [79,1]	1.20 [0,140]	16.8 [1,9]	48 [5,4]
NT34-005	NT90-005	5:1	490 [55,4]	400 [45,2]	355 [40,1]	325 [36,7]	700 [79,1]	1.20 [0,140]	16.8 [1,9]	48 [5,4]
NT34-007	NT90-007	7:1	470 [53,1]	380 [42,9]	335 [37,9]	305 [34,5]	700 [79,1]	1.20 [0,140]	16.8 [1,9]	48 [5,4]
NT34-010	NT90-010	10:1	238 [26,9]	212 [24,0]	200 [22,6]	192 [21,7]	700 [79,1]	0.66 [0,075]	16.8 [1,9]	48 [5,4]
NT34-015	NT90-015	15:1	454 [51,3]	416 [47,0]	391 [44,2]	373 [42,1]	850 [96,0]	1.20 [0,140]	16.8 [1,9]	48 [5,4]
NT34-020	NT90-020	20:1	677 [76,5]	620 [70,1]	587 [66,3]	551 [62,3]	850 [96,1]	1.20 [0,140]	16.8 [1,9]	48 [5,4]
NT34-025	NT90-025	25:1	652 [73,7]	595 [67,2]	562 [63,5]	526 [59,4]	850 [96,0]	1.20 [0,140]	16.8 [1,9]	48 [5,4]
NT34-030	NT90-030	30:1	500 [56,5]	454 [51,3]	432 [48,8]	416 [47,0]	850 [96,0]	0.66 [0,075]	16.8 [1,9]	48 [5,4]
NT34-040	NT90-040	40:1	770 [87,0]	702 [79,3]	668 [75,5]	620 [70,1]	850 [96,1]	0.65 [0,074]	16.8 [1,9]	48 [5,4]
NT34-050	NT90-050	50:1	720 [81,4]	652 [73,7]	618 [69,8]	595 [67,2]	850 [96,0]	0.65 [0,074]	16.8 [1,9]	48 [5,4]
NT34-070	NT90-070	70:1	770 [87,0]	702 [79,3]	668 [75,5]	620 [70,1]	850 [96,1]	0.65 [0,074]	16.8 [1,9]	48 [5,4]
NT34-100	NT90-100	100:1	325 [36,7]	295 [33,3]	280 [31,6]	270 [30,5]	700 [79,1]	0.65 [0,074]	16.8 [1,9]	48 [5,4]

All ratios are available to ship in 24 hours through the Gearhead Express Program.

[1] Ratios are exact, higher ratios and other custom options are also available, consult factory.

T_r = Rated output torque at rated speed for specific hours of life.

T_{peak} = Allowable momentary peak torque for emergency stop or heavy shock loading.

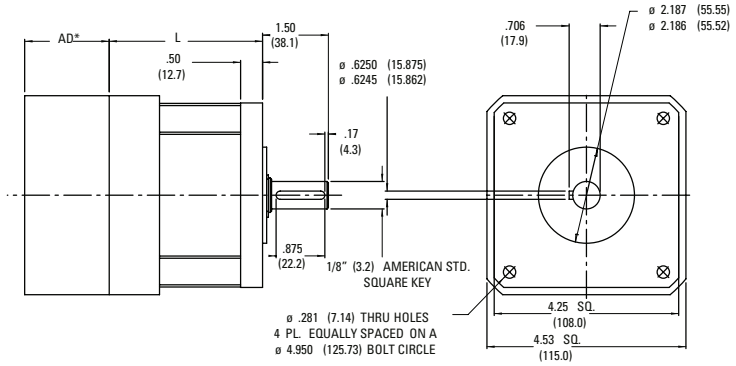
J = Mass moment of inertia reflected to the input shaft (including pinion assembly).

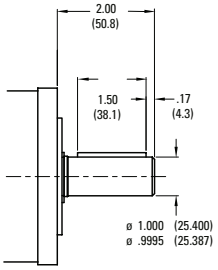
NemaTRUE™ Size 42/115

True Planetary™ Gearheads

English

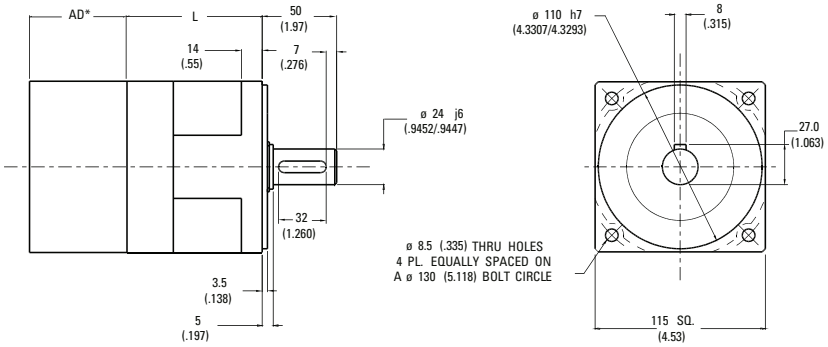
English - Dimensions are in (mm)





NemaTRUE PLUS* (NTP)
HeavyDuty Output Shaft

Metric - Dimensions are mm (in)



Ratio[1]	NT42 Dimension 'L' in [mm]	NT115 Dimension 'L' in [mm]	Backlash [arc-min]		Weight lb [kg]	Efficiency
			Precision	High Precision		
3:1 to 10:1	3.49 [88,6]	3.46 [87,9]	13 max	8 max	8.9 [4.0]	93%
15:1 to 100:1	4.72 [119,9]	4.69 [119,1]	15 max	9 max	11.7 [5.3]	88%

AD** = Adapter length
Adapter length will vary depending on motor.
Efficiency is calculated at 100% of the rated torque.

Performance Specifications

Part Number		Ratio[1]	20000 Hour Life				Tpeak in-lb [Nm]	J in-lb-sec^{2}x10^{-4} [kg-cm^2]	Torsional Stiffness in-lb/arc-min [Nm/arc-min]	
English	Metric		T_r (1000 rpm) in-lb [Nm]	T_r (2000 rpm) in-lb [Nm]	T_r (3000 rpm) in-lb [Nm]	T_r (4000 rpm) in-lb [Nm]			NT	NTP
NT42-003	NT115-003	3:1	690 [78.0]	594 [67.1]	530 [59.9]	485 [54.8]	1000 [113.0]	14 [1.6]	31 [3.5]	154 [17.4]
NT42-004	NT115-004	4:1	850 [96.1]	698 [78.9]	622 [70.3]	570 [64.4]	1000 [113.0]	3.80 [0.43]	31 [3.5]	154 [17.4]
NT42-005	NT115-005	5:1	810 [55.4]	400 [45.2]	355 [40.1]	325 [36.7]	1000 [113.0]	3.80 [0.43]	31 [3.5]	154 [17.4]
NT42-007	NT115-007	7:1	790 [89.3]	638 [72.1]	562 [63.5]	510 [57.6]	1000 [113.0]	3.80 [0.43]	31 [3.5]	154 [17.4]
NT42-010	NT115-010	10:1	460 [52.0]	412 [46.6]	388 [43.8]	370 [41.8]	1000 [113.0]	1.9 [0.21]	31 [3.5]	154 [17.4]
NT42-015	NT115-015	15:1	454 [51.3]	416 [47.0]	391 [44.2]	373 [42.1]	1600 [180.8]	3.9 [0.44]	31 [3.5]	154 [17.4]
NT42-020	NT115-020	20:1	1290 [145.8]	1090 [123.2]	985 [111.3]	905 [102.3]	1600 [180.8]	3.70 [0.42]	31 [3.5]	154 [17.4]
NT42-025	NT115-025	25:1	1250 [141.2]	1050 [118.6]	945 [106.8]	865 [97.7]	1600 [180.8]	3.70 [0.42]	31 [3.5]	154 [17.4]
NT42-030	NT115-030	30:1	972 [109.8]	878 [99.2]	842 [95.1]	805 [91.0]	1600 [180.8]	1.9 [0.21]	31 [3.5]	154 [17.4]
NT42-040	NT115-040	40:1	1435 [162.2]	1290 [145.8]	1190 [134.5]	1090 [123.2]	1600 [180.8]	1.80 [0.20]	31 [3.5]	154 [17.4]
NT42-050	NT115-050	50:1	1395 [157.6]	1250 [141.2]	1150 [118.6]	1050 [118.6]	1600 [180.8]	1.80 [0.20]	31 [3.5]	154 [17.4]
NT42-070	NT115-070	70:1	1375 [155.4]	1230 [139.0]	1130 [127.7]	1030 [116.4]	1600 [180.8]	1.80 [0.20]	31 [3.5]	154 [17.4]
NT42-100	NT115-100	100:1	630 [71.2]	575 [65.0]	540 [61.0]	522 [59.0]	1200 [135.6]	1.80 [0.20]	31 [3.5]	154 [17.4]

All ratios are available to ship in 24 hours through the Gearhead Express Program.

[1] Ratios are exact, higher ratios and other custom options are also available, consult factory.

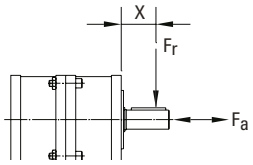
T_r = Rated output torque at rated speed for specific hours of life.

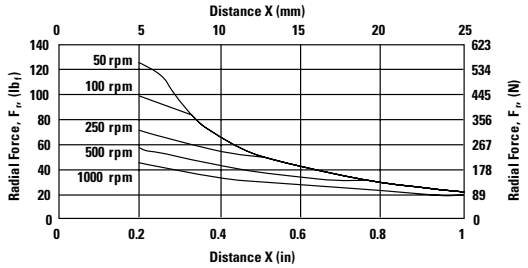
T_{peak} = Allowable momentary peak torque for emergency stop or heavy shock loading.

J = Mass moment of inertia reflected to the input shaft (including pinion assembly).

Radial and Axial Load Ratings

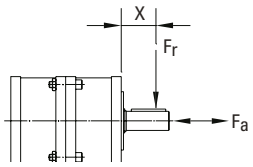
NT17

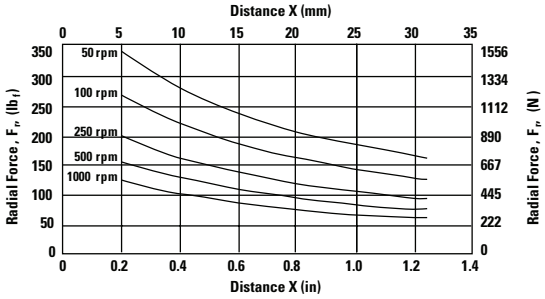




Speed rpm	Axial Load, F_a lb_f [N]
250	138 [614]

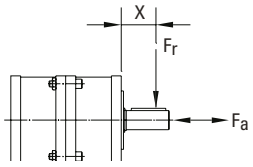
NT23, NTP23, NT60

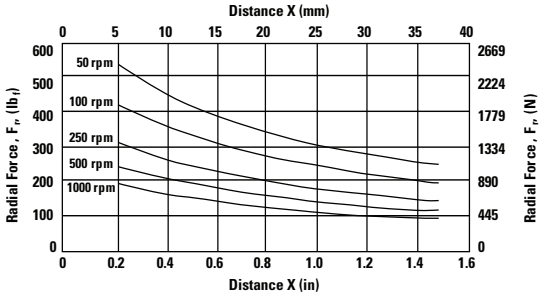




Speed rpm	Axial Load, F_a lb_f [N]
250	310 [1379]

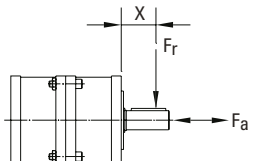
NT34, NTP34, NT90

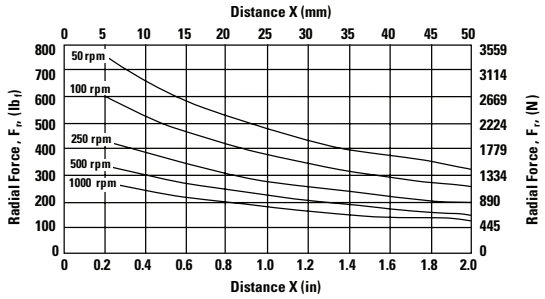




Speed rpm	Axial Load, F_a lb_f [N]
250	510 [2269]

NT42, NTP42, NT115



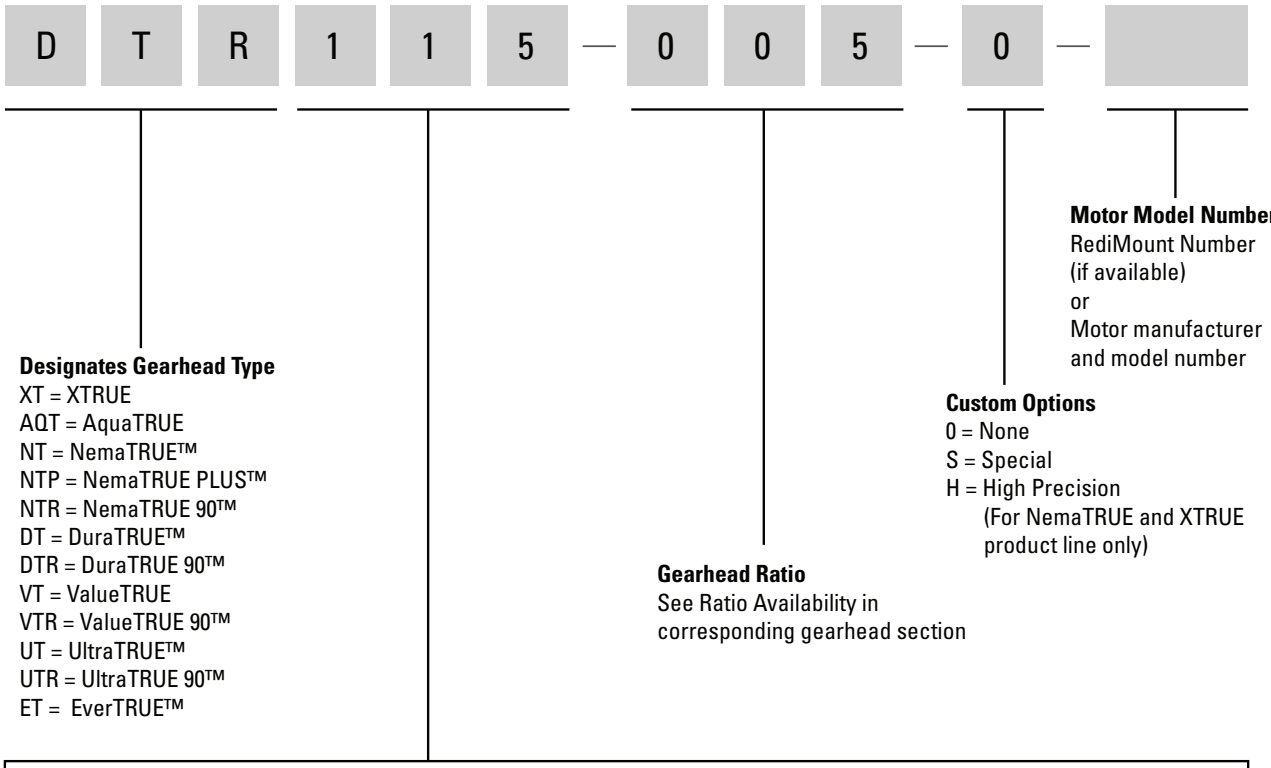


Speed rpm	Axial Load, F_a lb_f [N]
250	760 [3380]

These graphs display the allowable radial load at a given distance (X) from the mounting surface based on an L_{10} life of 10,000 hours for the mean output speed n_{mout} , as described on page 10,

Gearhead Ordering Information

Visit www.micronmotioneering.com to get your complete RediMount part number using your motor manufacturer and model number information.



GEARHEAD SIZE

XTRUE™ AquaTRUE™	NemaTRUE™ NemaTRUE PLUS™ NemaTRUE 90™	DuraTRUE™ DuraTRUE 90™ DuraTRUE™ (Hollow Shaft) DuraTRUE™ (Dual Shaft)	UltraTRUE™ UltraTRUE 90™	EverTRUE™	ValueTRUE™ ValueTRUE 90™
40 = 40mm	17 = Size 17	60 = Size 60	006 = Size 60	10 = Size 10	006 = Size 60
60 = 60mm	23 = Size 23	90 = Size 90	075 = Size 75	14 = Size 14	075 = Size 75
80 = 80mm	34 = Size 34	115 = Size 115	090 = Size 90	18 = Size 18	090 = Size 90
120 = 120mm	42 = Size 42	142 = Size 142	010 = Size 10		010 = Size 10
160 = 160mm	60 = Size 60		115 = Size 115		115 = Size 115
	90 = Size 90		014 = Size 14		014 = Size 14
	115 = Size 115		018 = Size 18		018 = Size 18
			022 = Size 22 (UltraTRUE™ only)		022 = Size 22