

RAPTOR SS™

Precision Planetary Gearhead



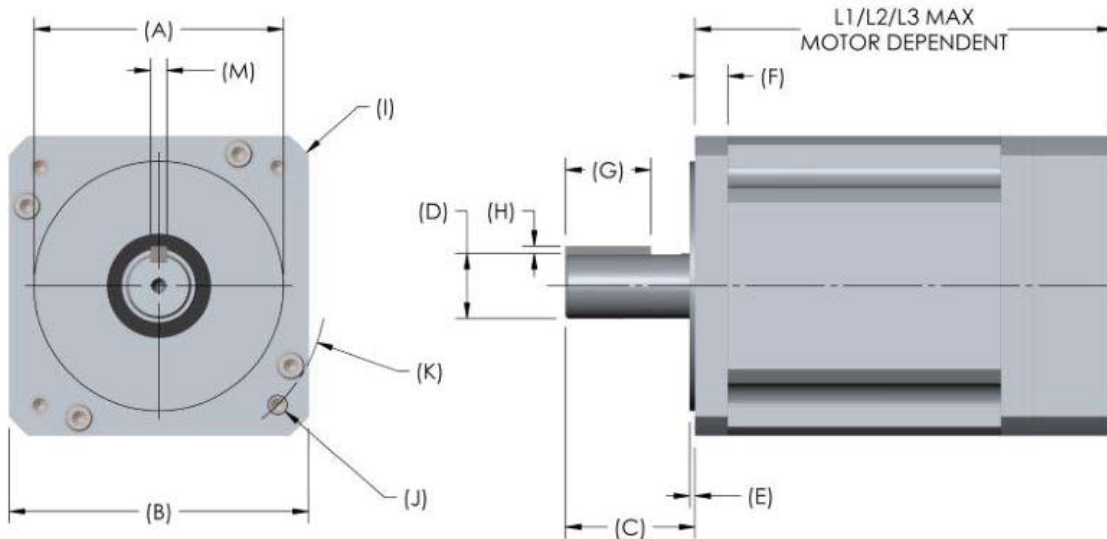
Design Features

- Stainless steel construction
- Wash-down ready
- Improved design for stiffness and loading
- High torque gear geometry
- Advanced materials and heat treatments
- IP65 sealed
- Mounting in any direction
- Captive input pinion
- Simplified quick installation
- NEMA and metric configurations standard
- Available with white epoxy coating and / or food grade grease for food related applications

Performance Specifications

023RTX (NEMA) / 060RTX (METRIC)				034RTX (NEMA) / 090RTX (METRIC)			
	T _{NOM} (1)	T _{MAX ACCEL}	T _{E-STOP} (2)	T _{NOM} (1)	T _{MAX ACCEL}	T _{E-STOP} (2)	
Ratio	In-lbs (Nm)	In-lbs (Nm)	In-lbs (Nm)	In-lbs (Nm)	In-lbs (Nm)	In-lbs (Nm)	
1 STAGE	4:1	395 (45)	468 (53)	947 (107)	1452 (164)	1829 (207)	3473 (392)
	5:1	340 (38)	400 (45)	926 (105)	1274 (144)	1605 (181)	3316 (375)
	7:1	231 (26)	280 (32)	861 (97)	863 (98)	1088 (123)	2821 (319)
	10:1	150 (17)	190 (22)	720 (81)	559 (63)	704 (80)	2456 (277)
2 STAGE	16:1	395 (45)	468 (53)	947 (107)	1452 (164)	1829 (207)	3473 (392)
	20:1	395 (45)	468 (53)	947 (107)	1452 (164)	1829 (207)	3473 (392)
	25:1	340 (38)	400 (45)	926 (105)	1274 (144)	1605 (181)	3316 (375)
	28:1	395 (45)	468 (53)	947 (107)	1452 (164)	1829 (207)	3473 (392)
	35:1	340 (38)	400 (45)	926 (105)	1274 (144)	1605 (181)	3316 (375)
	40:1	395 (45)	468 (53)	947 (107)	1452 (164)	1829 (207)	3473 (392)
	50:1	340 (38)	400 (45)	926 (105)	1274 (144)	1605 (181)	3316 (375)
	70:1	265 (30)	320 (36)	861 (97)	993 (112)	1251 (141)	2821 (319)
100:1	175 (20)	221 (25)	720 (81)	642 (73)	810 (92)	2456 (277)	
3 STAGE (5)	160:1	395 (45)	468 (53)	947 (107)	1452 (164)	1829 (207)	3473 (392)
	280:1	395 (45)	468 (53)	947 (107)	1452 (164)	1829 (207)	3473 (392)
	400:1	395 (45)	468 (53)	947 (107)	1452 (164)	1829 (207)	3473 (392)
	500:1	340 (38)	400 (45)	926 (105)	1274 (144)	1605 (181)	3316 (375)
	700:1	265 (30)	320 (36)	861 (97)	993 (112)	1251 (141)	2821 (319)
Torsional Stiffness (3)	15 in-lbs/arc-min			70 in-lbs/arc-min			
Gearbox Weight (lbs)	1 stage 4.2 lbs / 2 stage 4.8 lbs / 3 stage 5.6 lbs			1 stage 12.2 lbs / 2 stage 15.6 lbs / 3 stage 18.9 lbs			
Input Speed	6500 RPM Maximum						
Backlash (arc-min)	4 (1 stage), 6 (2 stage), 8 (3 stage)						
IP Rating	IP65						
Service Life	>15,000 HOURS						
Efficiency (4)	1 stage >95% / 2 stage >90% / 3 stage >85%						
Operating Temperature	-40°F to +250°F						

1. All torque ratings are based upon 3,000 RPM nominal input speed, and 15,000 hours minimum service life.
2. E-STOP torque rating is limited to 1,000 occurrences.
3. Torsional stiffness rating varies by type and ratio. Specified rating based on Metric, 5:1 ratio.
4. Efficiency rated at 3,000 RPM input speed, at nominal rated torque.
5. Other ratios available.



Gearhead Dimensions

Dimension	Code	023RTX		060RTX		034RTX		090RTX	
		Inch	(mm)	Metric	(in)	Inch	(mm)	Metric	(in)
Pilot Diameter (+.000/-0.002 in)	A	1.500	(38)	50	(1.969)	2.875	(73)	80	(3.150)
Square Flange	B	2.25	(57)	60	(2.36)	3.450	(87)	90	(3.540)
Shaft Length	C	1.25	(32)	30	(1.18)	1.500	(38)	40	(1.57)
Shaft Diameter (+.0000/-0.0005 in)	D	0.500	(12.7)	16	(0.6299)	0.750	(19)	22	(0.8661)
Pilot Length	E	0.062	(2)	3	(0.118)	0.062	(2)	3	(0.118)
Flange Thickness	F	0.250	(6.4)	6.4	(0.250)	0.375	(9.5)	9.5	(0.375)
Key Length	G	0.75	(19)	20	(0.790)	0.980	(25)	25	(0.980)
Key Height	H	0.047	(1.2)	2	(0.079)	0.081	(2.06)	2.5	(0.098)
Key Width (3)	M	0.125	(3.18)	5	(0.1969)	0.188	(5)	6	(0.2362)
Housing Diameter	I	2.95	(75)	80	(3.15)	4.58	(116)	116	(4.58)
Bolt Hole Diameter	J	0.205	(5.2)	5.6	(0.220)	0.220	(5.6)	6.6	(0.260)
Bolt Circle Diameter	K	2.625	(67)	70	(2.756)	3.875	(98)	100	(3.937)
Gearhead Length (1)	L1	3.39	(86)	86	(3.39)	4.82	(122)	122	(4.82)
	L2	4.28	(109)	108	(4.28)	6.23	(158)	158	(6.23)
	L3	5.17	(131)	131	(5.17)	7.63	(193)	194	(7.63)

Moment of Inertia Table⁽²⁾ (oz-in-sec²)

Ratio	023RTX	060RTX	034RTX	090RTX
4:1	1.861E-03	1.868E-03	1.295E-02	1.297E-02
5:1	1.676E-03	1.680E-03	1.119E-02	1.121E-02
7:1	1.536E-03	1.538E-03	9.808E-03	9.816E-03
10:1	1.464E-03	1.465E-03	9.111E-03	9.115E-03
16:1	1.702E-03	1.702E-03	1.200E-02	1.200E-02
20:1	1.574E-03	1.575E-03	1.059E-02	1.059E-02
25:1	1.567E-03	1.567E-03	1.051E-02	1.052E-02
28:1	1.484E-03	1.485E-03	9.498E-03	9.498E-03
35:1	1.481E-03	1.481E-03	9.462E-03	9.462E-03
40:1	1.439E-03	1.439E-03	8.944E-03	8.944E-03
50:1	1.437E-03	1.437E-03	8.926E-03	8.926E-03
70:1	1.436E-03	1.436E-03	8.912E-03	8.912E-03
100:1	1.435E-03	1.435E-03	8.920E-03	8.920E-03
160:1	1.437E-03	1.437E-03	8.934E-03	8.934E-03
280:1	1.435E-03	1.435E-03	8.909E-03	8.909E-03
400:1	1.435E-03	1.435E-03	8.919E-03	8.919E-03
500:1	1.435E-03	1.435E-03	8.919E-03	8.919E-03
700:1	1.435E-03	1.435E-03	8.918E-03	8.918E-03

(1) Gearhead Length based on NEMA motor mounting.

(2) Gearhead inertia values shown include pinion, clamp and sleeve, and are for standard NEMA mounting.

(3) Key Width tolerance for English keys is: +.001 / -.000 in.
Key Width tolerance for Metric keys is: +.000 / -.0012 in.

• All specifications are subject to change without prior notice.



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