



- Speed of the output shaft (after gearbox) = (Motor Speed)/(Gear Ratio)
- Torque of the output shaft (after gearbox) = (Motor Torque) X (Gear Ratio)
- Rotor Inertia of the output (shaft after gearbox) = (Rotor Motor Inertia) X (Gear Ratio)<sup>2</sup>
- Create a complete Model Number by selecting a motor from Table 1 and a Gearbox from Table 2.

## 17YPG001S-LW4-R3.7

Table 1	Output Shaft of Motor Before Gearbox									
Model #	NEMA Size	Bipolar Torque (oz-in)	Bipolar Current (A)	Bipolar Voltage (V)	Bipolar Resistance (ohm)	Bipolar Inductance (mH)	Rotor Inertia (oz-in-sec <sup>2</sup> )	# of Lead Wires	Weight (lbs)	L2 Length (inch)
17YPG001S-LW4	17	24	0.40	9.6	24	30	0.00028	4	0.33	1.024
17YPG101S-LW4	17	28	0.28	12.04	43	49	0.00054	4	0.44	1.34
17YPG102S-LW4	17	28	0.71	4.5	6.4	10.7	0.00054	4	0.44	1.34
17YPG201S-LW4	17	50	0.28	16	56	90	0.00076	4	0.62	1.57
17YPG202S-LW4	17	50	0.85	5.61	6.6	10	0.00076	4	0.62	1.57
17YPG301S-LW4	17	61	0.28	19.32	69	103	0.00096	4	0.77	1.89
17YPG302S-LW4	17	61	0.85	5.61	6.6	11	0.00096	4	0.77	1.89
17YPG402S-LW4	17	111	0.85	10.2	12	29	0.00144	4	1.10	2.36

Table 2	Output Shaft of Gearbox													
Gearbox Ratio	R3.7	R5.2	R14	R19	R27	R51	R71	R100	R139	R189	R264	R369	R516	R720
Exact Reduction Ratio	3.71	5.18	13.76	19.22	26.83	51.06	71.30	99.55	138.99	189.45	264.52	369.32	515.66	719.98
Rated Torque (oz-in)	42	42	139	139	139	278	278	278	278	417	417	417	417	417
Max Torque (oz-in)	139	139	417	417	417	833	833	833	833	1250	1250	1250	1250	1250
Efficiency (%)	90	90	81	81	81	73	73	73	73	66	66	66	66	66
L1 Length (inch)	1.22	1.22	1.56	1.56	1.56	1.97	1.97	1.97	1.97	2.24	2.24	2.24	2.24	2.24
Weight (lbs)	0.42	0.42	0.46	0.46	0.46	0.63	0.63	0.63	0.63	0.69	0.69	0.69	0.69	0.69

*Notes: Custom leadwires, cables, connectors, and windings are available upon request.*

Housing Material:	Metal	Radial Play at Shaft:	0.04 mm
Bearing at Output:	Ball Bearing	Thrust Play at Shaft:	0.3 mm
Radial Load:	11.02 lbs	Backlash, at No-Load:	3°
Shaft Axial Load:	7.72 lbs	Shaft Press Fit Force, Max:	33.07 lbs
Gearbox Shaft Diameter:	8 mm		

SPECIFICATIONS