

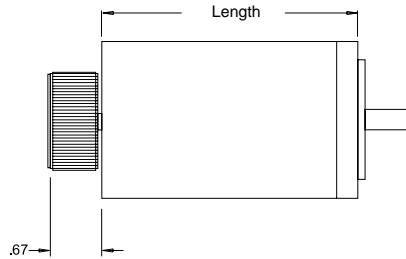
# Rotary Stepping Motors (Cont.d)

All other motors listed have leads exiting the motor barrel on the outer diameter and may be wired to a connector if specified.

The rotor inertias of our stepping motors are provided to assist in calculating achievable motor (and load) acceleration. As mentioned, all of our stepping motors are double shafted, and include knobs for manual positioning. This knob is 1.2" in diameter x 0.62" long, and has a rotary inertia of  $6.3 \times 10^{-6}$  kg-m<sup>2</sup>. In applications where maximum acceleration is required the knob can be removed, providing a modest increment in achievable acceleration.

The accompanying table lists the most popular stepping motors, together with their key parameters. Footnotes indicate the standard motors shipped with our positioning tables; the

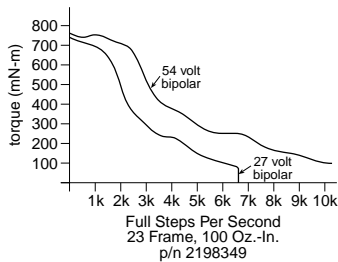
remaining motors are optionally available when higher torque or resolution is required. Motors are normally available from stock. In addition to incorporation into our positioning tables, our stepping motors are available for uncommitted use in positioning or motion control applications; use the provided part numbers when ordering motors separately. Speed-torque curves for our three standard motors also follow.



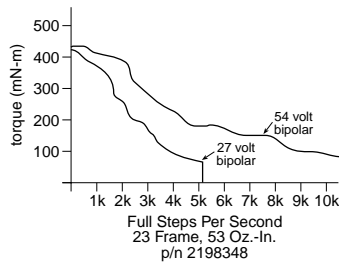
Rotary Stepping Motors									
Part Number	Frame Size	Steps	Torque	Voltage	Current	Inductance (millihenries)	Rotor Inertia	Length (inches)	Face-Wired Connector
		Per Rev.	oz-in (N-m)	(volts)	Per Phase (amps)		oz-in <sup>2</sup> (kg-m <sup>2</sup> )		
2198366	17	400	23 (0.16)	4.0	1.2	3.1	0.190 (3x10 <sup>-6</sup> )	1.85	NO
2198377 <sup>1</sup>	17	200	36 (0.25)	6.0	0.8	6.5	0.300 (5x10 <sup>-6</sup> )	1.54	NO
2198376 <sup>2</sup>	17	200	44 (0.31)	4.0	1.2	2.0	0.370 (7x10 <sup>-6</sup> )	1.85	NO
2198352	23	400	80 (0.57)	6.0	1.2	8.8	0.740 (14x10 <sup>-6</sup> )	2.13	NO
2198364	23	400	118 (0.84)	5.4	1.5	6.5	1.090 (20x10 <sup>-6</sup> )	2.99	NO
2198348 <sup>3</sup>	23	200	53 (0.38)	5.0	1.0	10.0	0.620 (11x10 <sup>-6</sup> )	2.00	YES
2198349 <sup>4</sup>	23	200	100 (0.71)	4.7	1.6	5.7	1.280 (23x10 <sup>-6</sup> )	3.25	YES
2198350	23	200	150 (1.06)	3.4	2.9	2.9	1.740 (32x10 <sup>-6</sup> )	4.00	YES

<sup>1</sup>Standard on X-Theta  
<sup>2</sup>Standard on Mini XYR, XYMR, OFS, RM and RMS  
<sup>3</sup>Standard on XY, XYR, TM, TMS, LM, FM, XM, ZE, Z-Theta, RT and RTR  
<sup>4</sup>Standard on XYL, Ballscrew XYR, OFL, HM and HMS

23 Frame, 100 oz. in.



23 Frame, 53 oz. in.



17 Frame, 44 oz. in.

