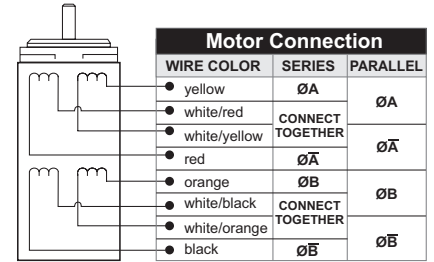


# IOS SIZE 23

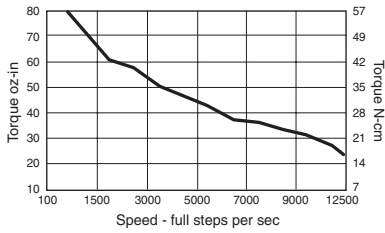
## 1.8° HYBRID IOS STEPPING MOTOR



Part Number	Holding Torque oz-in (N-cm)	Phase Current Amps		Number of Leads	Phase Resistance ohms		Phase Inductance mH		Detent Torque oz-in (N-cm)	Rotor Inertia oz-in-sec <sup>2</sup> (kg-cm <sup>2</sup> )	Length inches (mm)	Weight oz (g)
		Series	Parallel		Series	Parallel						
M3-2220-IOS	80 (56.5)	3.0	6.0	8	2.0	0.5	3.2	0.80	7.0 (4.94)	0.01 (7.2)	2.18 (55.4)	40 (1114)

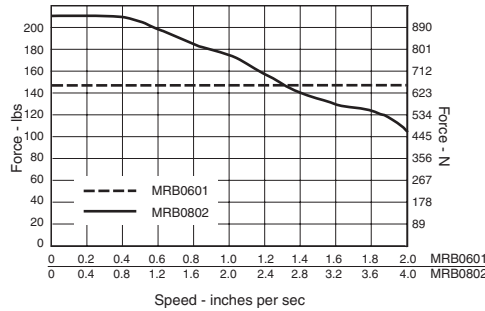
### TORQUE-SPEED CURVES

Parallel: 6 Amps RMS, 75 VDC



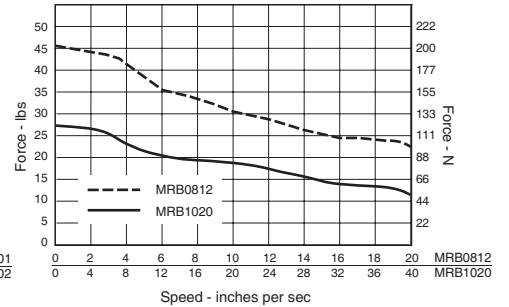
### FORCE-SPEED CURVES

Parallel: 6 Amps RMS, 75 VDC



Ball Screw # / Pitch	0601 / 1mm	0802 / 2mm
Inches (mm)	0.000197 (0.005)	0.000394 (0.01)
Travel/Full Step	0.0008 (0.02)	0.002 (0.05)
Max. Screw Deflection	0.002 (0.05)	0.008 (0.2)
Load Limit	149 lbf (663 N)	210 lbf (934 N)

Parallel: 6 Amps RMS, 75 VDC



Ball Screw # / Pitch	0812 / 12mm	1020 / 20mm
Inches (mm)	0.00236 (0.06)	0.00394 (0.1)
Travel/Full Step	0.0008 (0.02)	0.008 (0.2)
Max. Screw Deflection	0.002 (0.05)	0.008 (0.2)
Load Limit	149 lbf (663 N)	210 lbf (934 N)

### ORDER INFORMATION

Name	Part Number
Motor .....	M3-2220-IOS
Motor w/ Encoder .....	M3-2220-E[X] <sup>1</sup> [X] <sup>2</sup>
1 mm Pitch Ball Screw .....	0601 *
2 mm Pitch Ball Screw .....	0802 *
12 mm Pitch Ball Screw .....	0812
20 mm Pitch Ball Screw .....	1020 *

<sup>1</sup> Replace X with S for single-end output encoder or D for differential output encoder.  
<sup>2</sup> Replace X with encoder line count: 100, 200, 250, 400, 500 or 1000. Encoder kit available.  
 \* Adapter plate required.

### MECHANICAL SPECIFICATIONS

Dimensions in Inches (mm)

