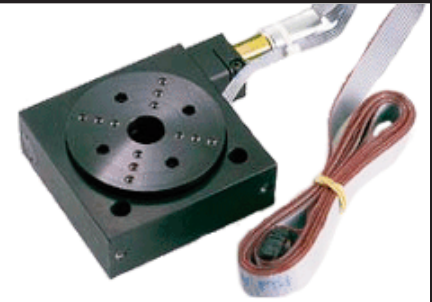


MM-4M-R

Rotary Motorized
MicroMini™ Stages
(For heavier loads)



Specifications:

Repeatability:	±30 arc-second
Homing Repeatability:	±30 arc-second
Accuracy (linearity):	±2 arc-minute, full travel
Max Travel Rate¹:	96.63 degree/second, with 14:1 gearhead
Encoder Conversion(resolution):	16.3091 arc-second/count, with 14:1 gearhead
(See also MM-4M Resolution Sheet)	
¹ Max travel rate calculated with a maximum motor armature speed of 20,000 RPM	
Load Capacity:	10 lbs (4.5 kg)
Bearing Runout at Table:	±2.5µm
Standard Gearhead:	14:1
Gearhead Options:	14:1, 43:1, 66:1, 134:1, 159:1, 246:1, 415:1, 592:1, 989:1, 1,526:1, 2,608:1, 4,365:1 and 5,647:1
Worm Ratio:	90:1
Motor:	13mm diameter, 6-12 VDC servo, brush type
Bearings:	Pre-loaded duplex angular contact
Base Material & Finish:	Aluminum, black anodized
Vacuum compatibility:	10 ⁻³ Torr standard, higher per request
Table Diameter:	2.38 inch (60.45mm)

Special features:

- Ultra-low axial/angular runout
- Multi-faceted connection interface
- Anti-backlash worm drive system
- Black anodized finish

Travel Ranges and Dimensions:

Model No.	Travel Range	Stage Body (L x W x H)	Weight
MM-4M-R (with 14:1 gearhead)	Unlimited	133.4 x 73.15 x 28.58 (mm) 5.25 x 2.880 x 1.125 (inch)	0.512 kg 1.12 lb

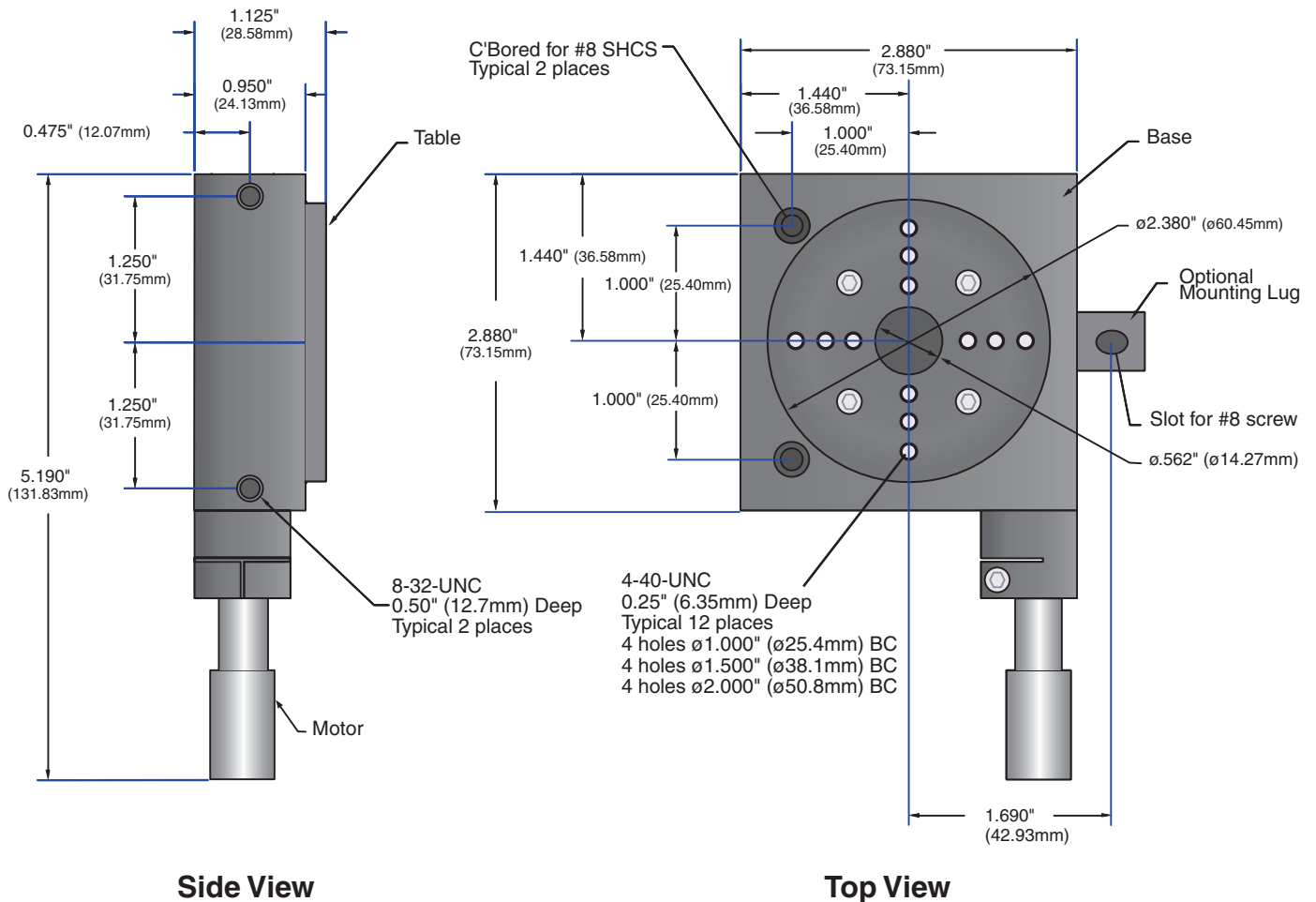
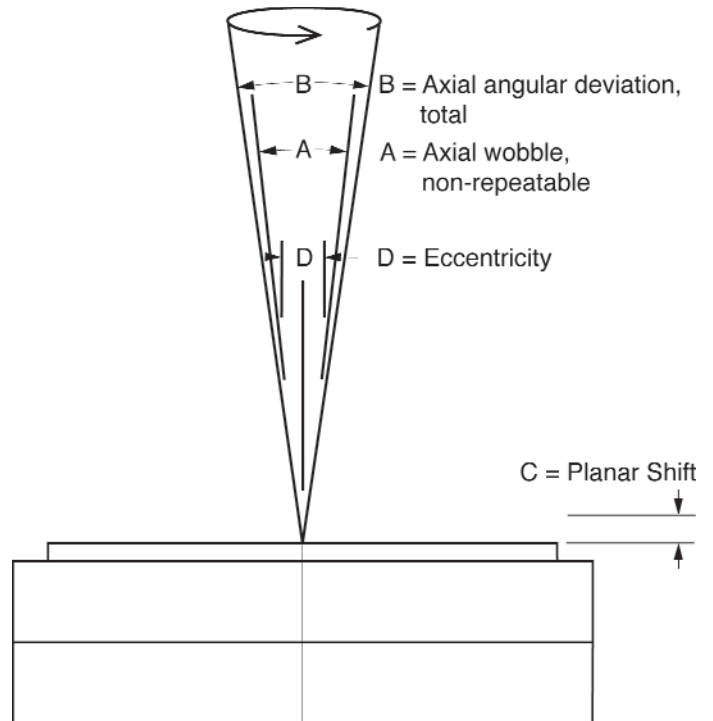
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MM-4M-R Rotary Stage

Dimensional Data

Description	MM-4M-R
A. Axial wobble, (axial angular repeatability)	30 arc-second
B. Axial angular deviation, Total	30 arc-second
C. Planar shift, Total	0.6 μm (0.000024 inch)
D. Eccentricity (runout)	2.5 μm (0.000098 inch)
Direct Top Load, maximum:	4.5 kg (10 lbs)
Moment load maximum:	57 N-cm (80 ounce-inch)

Note: The above specifications apply to horizontal mounting (load vertical).
 For vertical mounting (load horizontal), the top load and moment load values are 1/2 the above.
 Specifications apply to internal bearing. Rotary table is not aligned perfectly with bearing. Mounting of customer components will require adjustments to align with bearing.



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