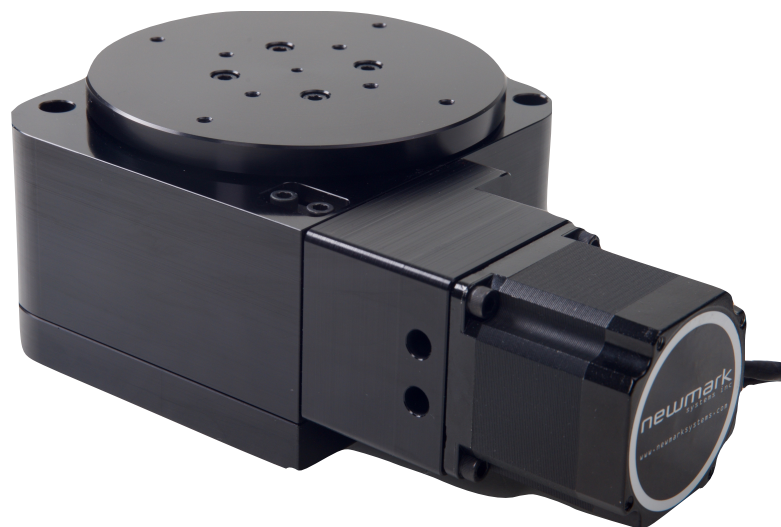


# RM-5 DE SERIES ROTARY STAGE

## FEATURES

- Direct Read Encoder
- High Resolution
- Size 23 motor



**The RM-5 DE Series rotary stage utilizes a direct read angular encoder for increased accuracy over the standard RM-5 rotary stage.**

The design takes advantage of a single preloaded crossed roller bearing for the table movement. This design approach eliminates the use of a dual bearing configuration thus improving on axial runout and wobble. This rotary table utilizes a worm gear drive with available gear ratios of 72:1 and 36:1. The worm gear is preload to minimize the backlash in the gear train.

The RM-5 DE is equipped with direct-read high accuracy optical angular encoder mounted to the rotating output spindle. The angular encoders provide a reference mark with a repeatability of +/- 1 encoder count.

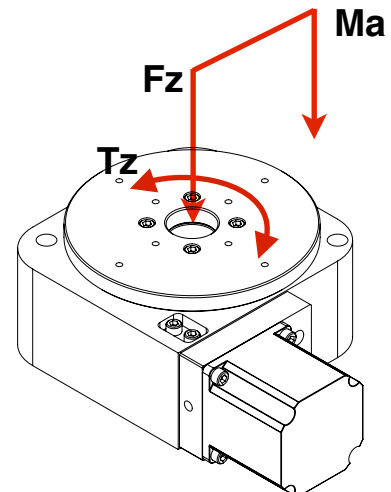


## Specifications

Motor Resolution	0.36 arc-sec (Stepper Motor 72:1), 0.72 arc-sec (Stepper Motor 36:1)
Encoder Resolution	0.79 arc-sec
Max. Speed	Stepper Motor: 25°/sec (72:1 gear ratio), 50°/sec (36:1 gear ratio)
Repeatability	2 arc-sec
Max Payload Weight	45.4kg (100lbs)
Travel Range	360° Continuous
Encoder	Direct read optical encoder mounted to main spindle
Origin	Encoder Reference Mark
Gear Ratio	72:1 or 36:1
Stage Weight	5.3 kg (11.75 lbs)
Material	Aluminum Alloy Construction, 303 Stainless Steel Spindle
Finish	Black Anodize

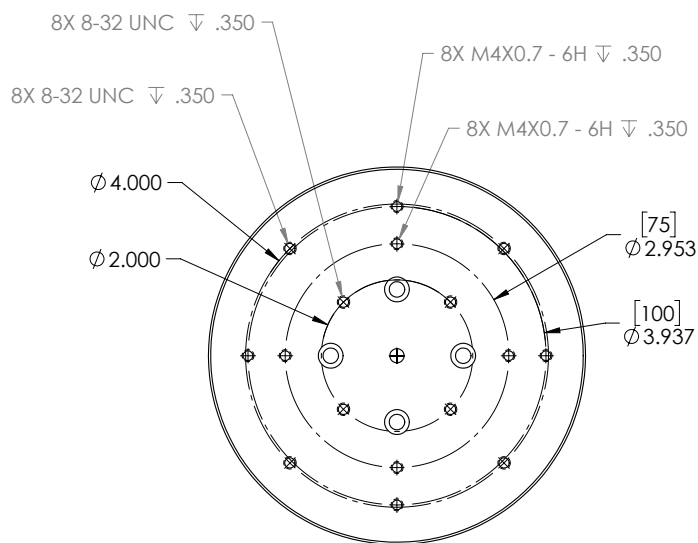
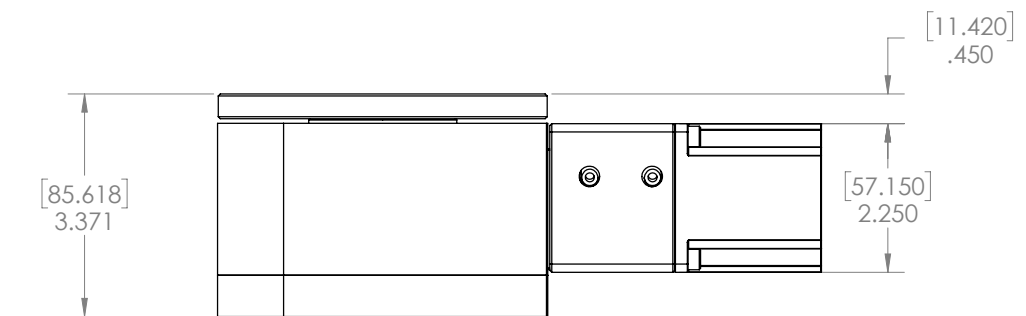
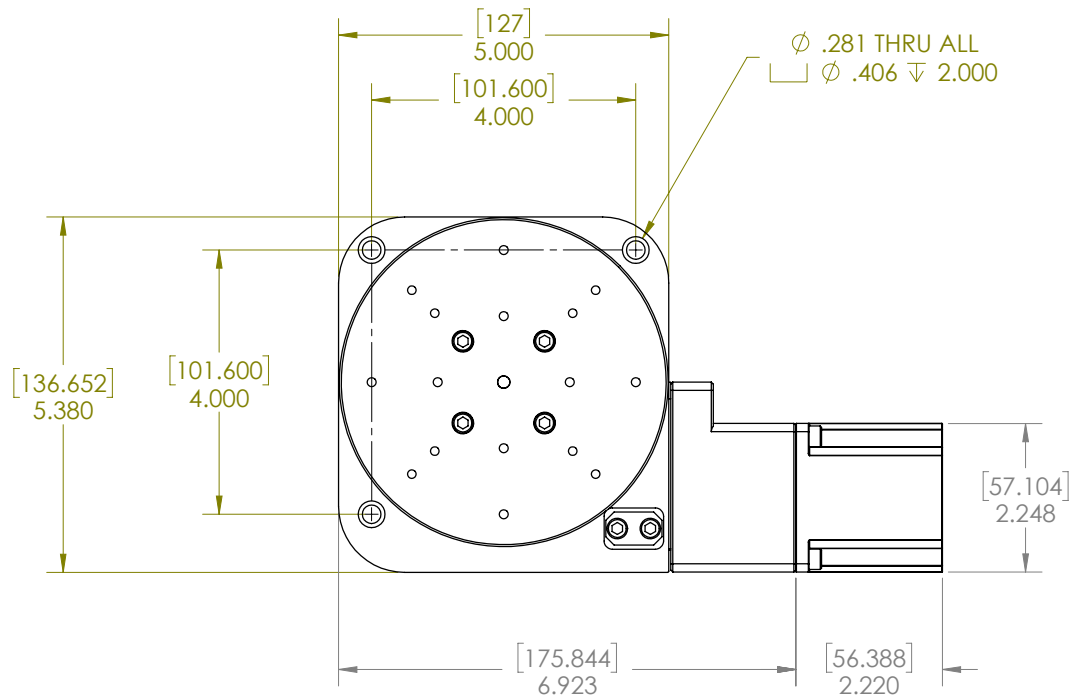
## Load Characteristics

Normal Load (Fz)	45.4 kg (100 lbs)
Moment Load (Ma)	29.3 Nm (21.6 lb-ft)
Max. Torque (Tz)	12.5 Nm (9.2 lb-ft)



# Dimensions

## RM-5 DE Rotary Stage



# Pin Assignment

## Motor

DB-9 Male	Description
1.	Phase A
2.	Phase A'
3.	Phase B
4.	Phase B'

## Motor Specifications

Step Size: 1.8°/step

Amps/Phase: 2.8

Resistance: 0.9 Ohm/Phase

Inductance: 2.5 mH/Phase

## Signals (Encoder Option)

HD-15 Female	Description
1.	N.C.
2.	N.C.
3.	N.C.
4.	Encoder Ground
5.	+5V Encoder Power
6.	Ch. A
7.	Ch. A-
8.	Ch. B
9.	Ch. B-
10.	Index +
11.	Index -

## Ordering Information

### Part Numbers Configuration

RM-5D-X-DE

┆  
Gear Ratio

#### Gear Ratio Options

D 36:1 Gear Ratio  
Blank 72:1 Gear Ratio

### Motion Controllers

The following Newmark Systems, Inc. controllers are compatible with the RM-5 Stage.

[NCS-A1 Series](#) | [NSC-G Series](#)