

# RT-SERIES

Gear Driven Rotary Stages



RT- rotary positioning stages series of precision, gear-drive rotary positioning stages are ideal for today's high-performance technology environment. They are found in virtually all industries where intermittent part indexing, skew adjustment or precise angular alignment is required and are well suited to holding position.

## Background

RT- rotary positioning stages series open frame, through bore, low profile rotary stages are available in a standard precision and high-performance grade. The rotary top features a precision tolerance central aperture hub supported with two large diameters, preloaded precision bearings for increased stability.

## Customize

The stage can be driven by either a servomotor or stepper motor, and the precision, pre-loaded, anti-backlash worm gear drive supports table rotation up to 45 rpm. RT series rotary tables can be mounted in any orientation, and attach readily to end-user equipment or directly to other NUTEC stages to form multi-axis positioning systems in an array of architectures.

- Low Profile Gear-drive Rotary Stage
- High Load Capacity up to 100 kg
- Integrated Precision Worm Gear Drive
- High Rotary speed to 45 RPM Resolution

## Features

NUTEC's RT-series, rotary stages offer high resolution and repeatability. These rotary stages are suitable for a wide number of uses ranging from lightweight positioning of optics to light duty machine tool applications and available with an optional sealed configuration.

## Superior Design

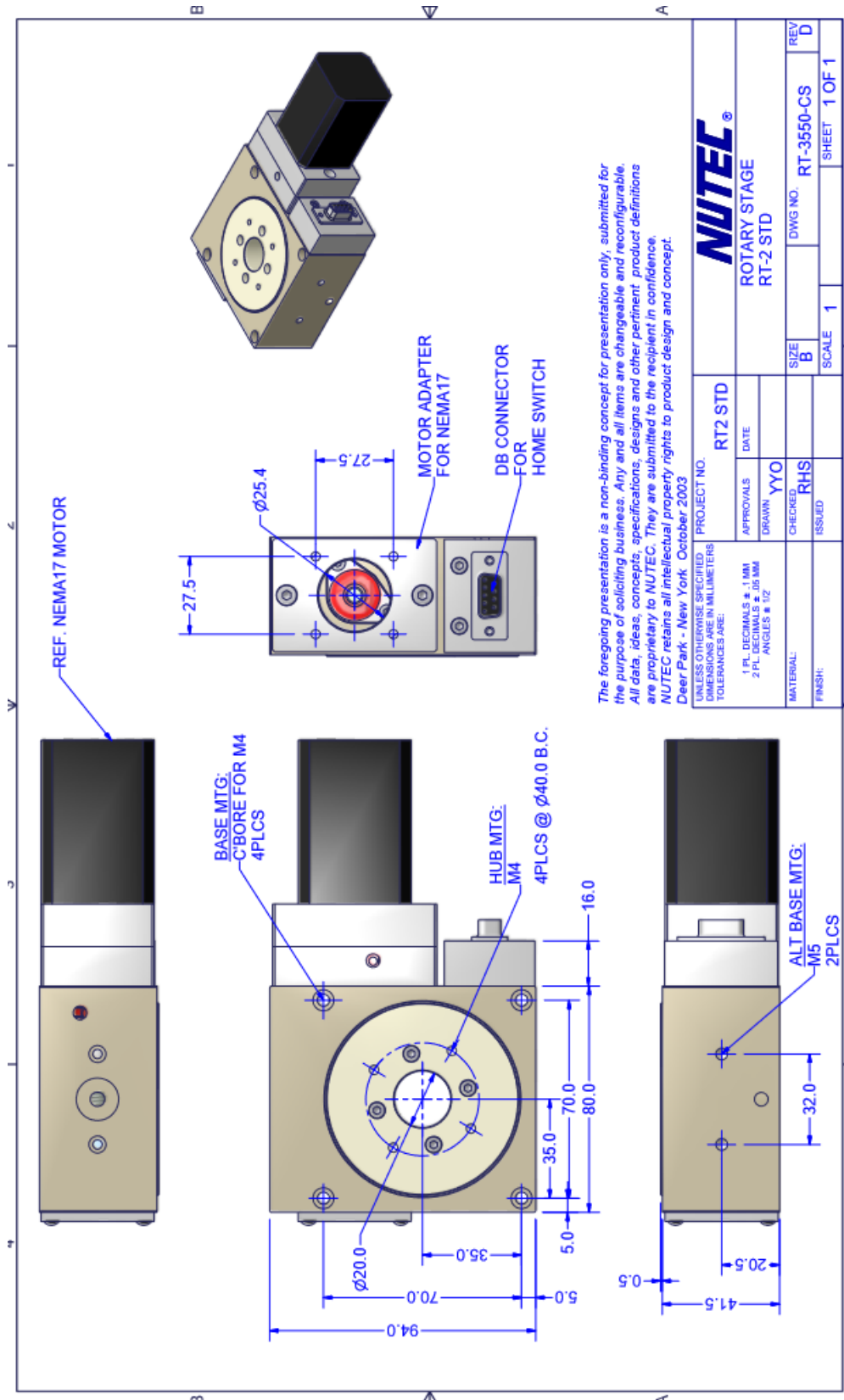
All NUTEC rotary stages are machined from aluminum alloy finished with hard coat anodize providing a light and stiff stable structure. The design optimizes stage performance by utilizing a preloading thrust bearing in combination with the main hub bearing. This design approach offers excellent stability, reduced TIR, wobble and axial stability at low cost. A gear preload system insures zero backlash in the gear train.

## RT-Series Specifications

Specifications	RT-2	RT-3	RT-5
Hub Diameter	67 mm	98 mm	136 mm
Aperture Diameter	20 mm	50 mm	50 mm
Height	41.5 mm	47.5 mm	70 mm
Payload Axial	25 kg	35 kg	50 kg
Payload Radial	15 kg	45 kg	100 kg
Motor Size	BSM 40	BSM 40 BSM 60	BSM 60
Velocity (RPM) 80:1 gear 3600 RPM drive motor	45	45	45

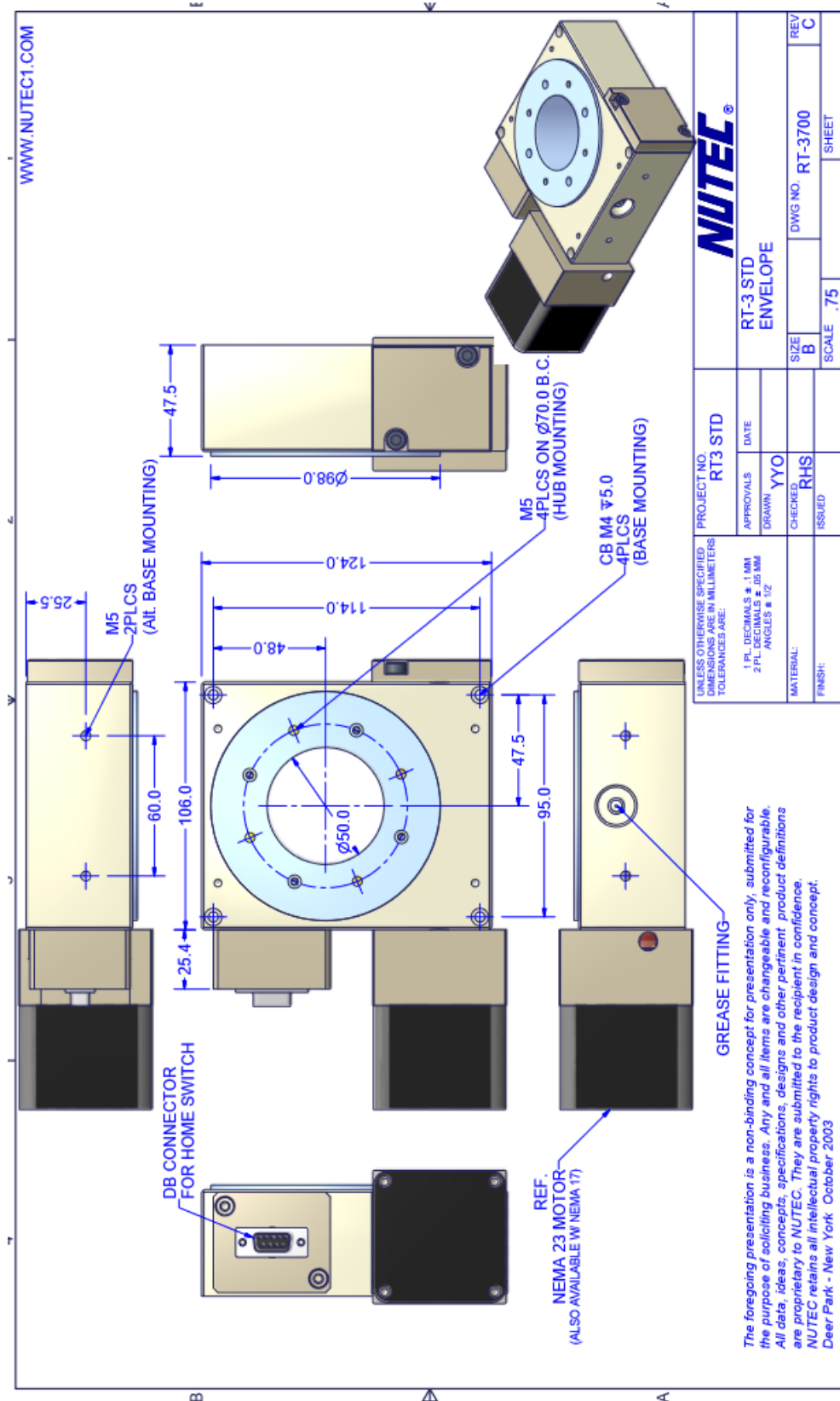
	All RT-Series
Travel	360° Continuous
Drive Elements	Heat Treated; Steel Worm; Bronze Ring Gear
Drive Type	Precision Preloaded Worm Gear
Reduction Ratio	80 to 1
Accuracy	± 2 arc minutes
Repeatability	≤ 30 arc-sec
Flatness of Rotation	≤ 20 microns
Concentricity	≤ 20 microns

RT-2 Dimensions



PROJECT NO. RT2 STD		APPROVALS		DATE	
DRAWN YYO		CHECKED RHS		ISSUED	
MATERIAL:		SIZE B		DWG NO. RT-3550-CS	
FINISH:		SCALE 1		SHEET 1 OF 1	
PROJECT NO. RT2 STD		APPROVALS		DATE	
DRAWN YYO		CHECKED RHS		ISSUED	
MATERIAL:		SIZE B		DWG NO. RT-3550-CS	
FINISH:		SCALE 1		SHEET 1 OF 1	

### RT-3 Dimensions



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RT-5 Dimensions

