

RSB Rotation Stage

UHV Rotation Stage

Ultra-high vacuum compatible rotation stages intended for intermittent rotation of balanced loads or as a precision gearbox.

Manufactured with UHV compatible material and construction methods and featuring a preloaded worm drive for zero backlash, continuous rotation range and AML D35.1 UHV stepper motors.

The RSB10K/20K/30K can be mounted directly on AML LTV translation stages to provide compact multi-axis positioning systems.



SPECIFICATIONS

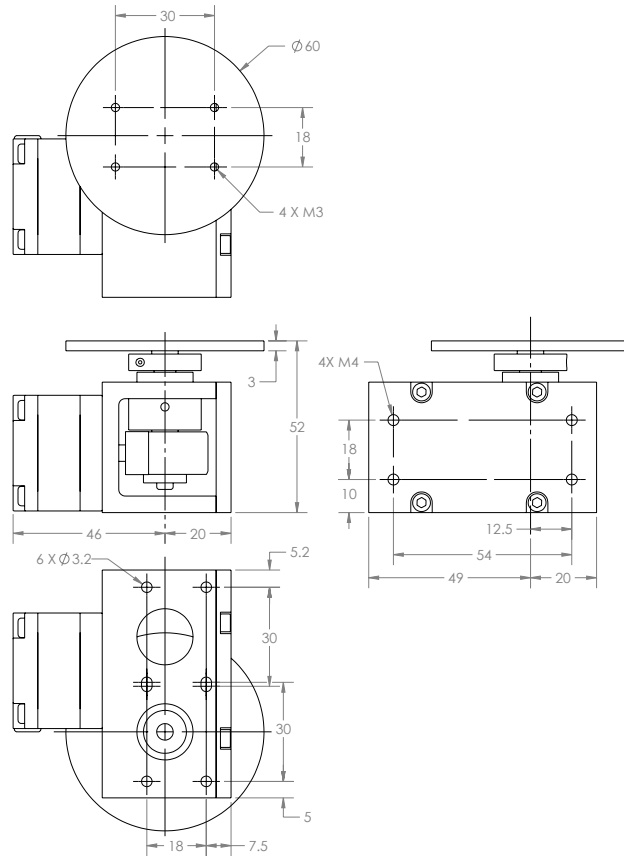
Model	RSB10K	RSB20K	RSB30K	RSB90K
Resolution range	360°			
Resolution in full steps	0.036°	0.018°	0.012°	0.004°
Steps per revolution	10,000	20,000	30,000	90,000
Maximum loaded speed	1 kHz 1 sec/rev	1 kHz 20 sec/rev	1 kHz 30 sec/rev	2 kHz 45 sec/rev
Centred load capacity (Normal)	1 kg			
Backlash (Unloaded)	Less than resolution			
Vacuum	1 x 10 ⁻¹⁰			
Maximum temperature	200 °C			
Motor	D35.1			
Mass including motor	640 g	710 g	710 g	940 g

As standard CRS rotational stages are supplied lubricated with Nyetorr® 6300 low-vapour pressure (6×10^{-12} mbar) grease. Dry lubrication with molybdenum disulfide is available as an alternative option but this will reduce the expected life of the worm wheel.

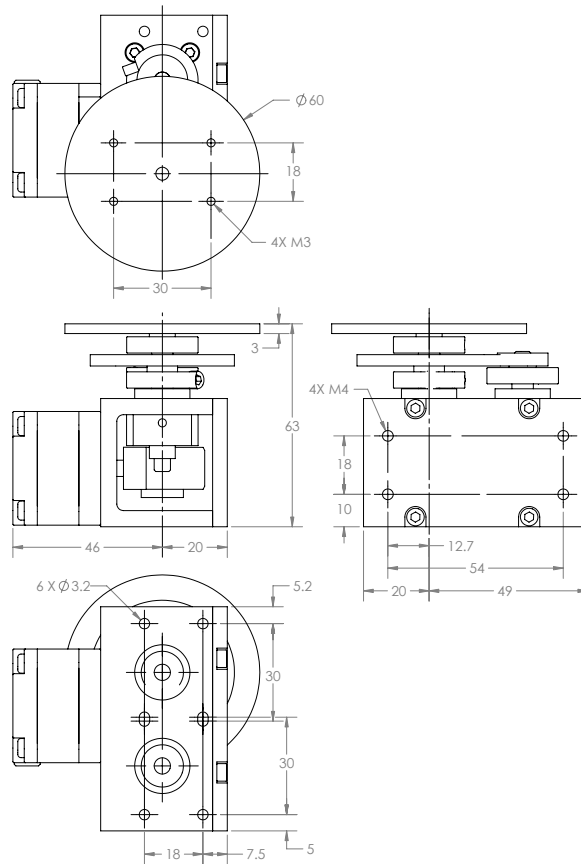


DIMENSIONS

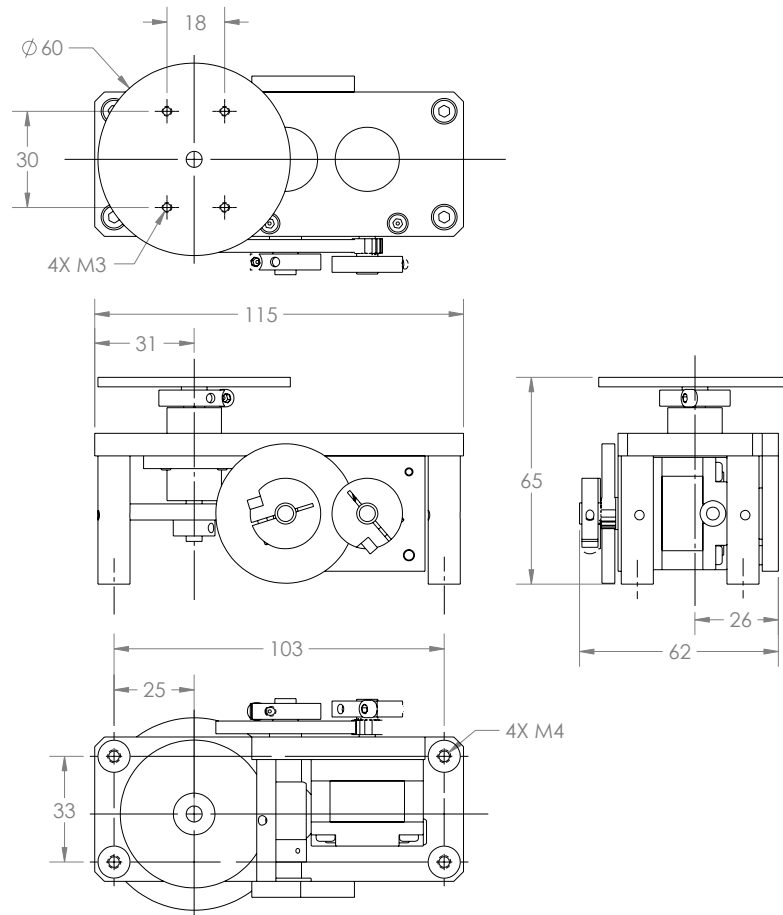
RSB10K



RSB20K / 30K



RSB90K



RSB10K



RSB20K/30K



RSB90K

ORDERING INFORMATION

Order Code	
RSB10K	0.036° Resolution Rotation stage
RSB20K	0.018° Resolution Rotation stage
RSB30K	0.012° Resolution Rotation stage
RSB90K	0.004° Resolution Rotation stage

Related Products	
SMD210	Stepper Motor Drive
MLF18F	18-way Electrical Feedthrough
MLF18NBL	3 metre lead, SMD210 to MLF18F
LTVL-xxx	Translation Stage, 5 μ m (xxx = travel in mm)

RSX Rotation Stage

UHV Rotation Stage

AML ultra high vacuum compatible rotation stages are manufactured with UHV compatible material and construction methods in an ISO 7 cleanroom and utilise AML D35.1 UHV stepper motors.

The RSX3K6 features a precision cross-roller ring bearing providing high rotational accuracy capable of bearing loads in every direction. It has a 18mm clear aperture, anti-backlash spur gearing and can optionally be fitted with an optical UHV compatible rotary encoder.

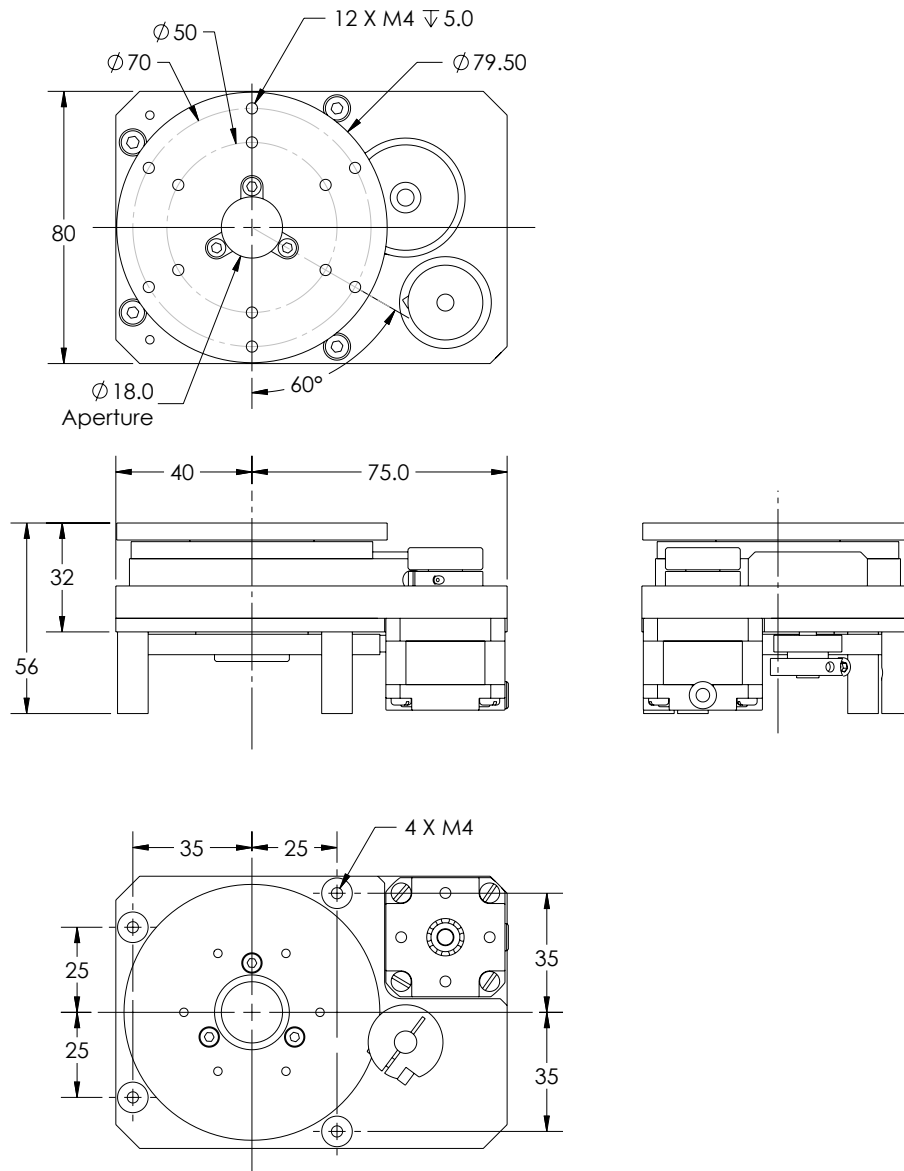


SPECIFICATIONS

Rotation range	360°
Resolution in full steps	0.1°
Steps per revolution	3,600
Maximum loaded speed	100 rpm
Maximum torque	1 N·m
Detent torque	79 mN·m
Centred load capacity (Normal)	100 kg
Backlash (Unloaded)	Less than resolution
Wobble	±4.0 µrad
Eccentricity	10.0 µm
Wobble compliance	10 µrad/N·m
Vacuum	1 x 10 ⁻¹⁰ mBar
Maximum temperature	200 °C (reduces to 120 °C when an optical encoder is fitted)
Aperture diameter	18 mm
Motor	D35.1
Mass including motor	1.7 kg

As standard RSX rotational stages are supplied lubricated with Nyetorr® 6300 low-vapour pressure (6 x 10⁻¹² mbar) grease. Dry lubrication with molybdenum disulfide is available as an alternative option but this will reduce the expected life.

DIMENSIONS



ORDERING INFORMATION

Order Code	
RSX3K6	Rotation stage 0.1° / step resolution
RSX3K6-E	RSX3K6 with optical encoder

Related Products	
SMD210	Stepper Motor Drive
MLF18F	18-way Electrical Feedthrough
MLF18NBL	3 metre lead, SMD210 to MLF18F
LTVL-xxx	Translation Stage, 5 μm (xxx = travel in mm)



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AML pursues a policy of continuous improvement and reserves the right to make detail changes to specifications without consultation. E and OE.

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