

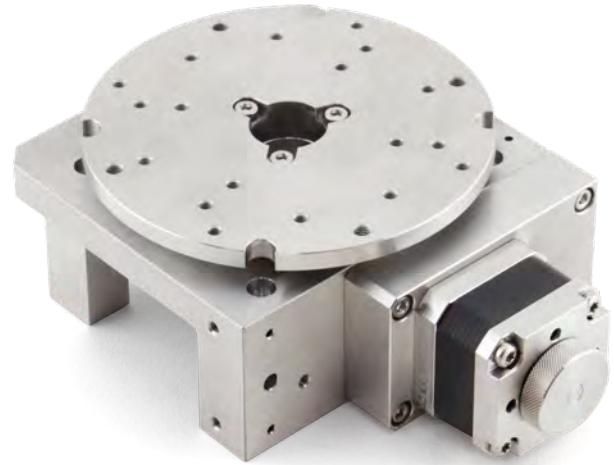


VSM17-R Rotation Stage

Modular UHV Rotation Sample Transporter

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 VSM17-R stages feature a precision cross-roller ring bearing system, providing high rotational accuracy capable of bearing loads in every direction. It has a 18 mm clear aperture, anti-backlash spur gearing and can optionally be fitted with an optical UHV compatible rotary encoder.

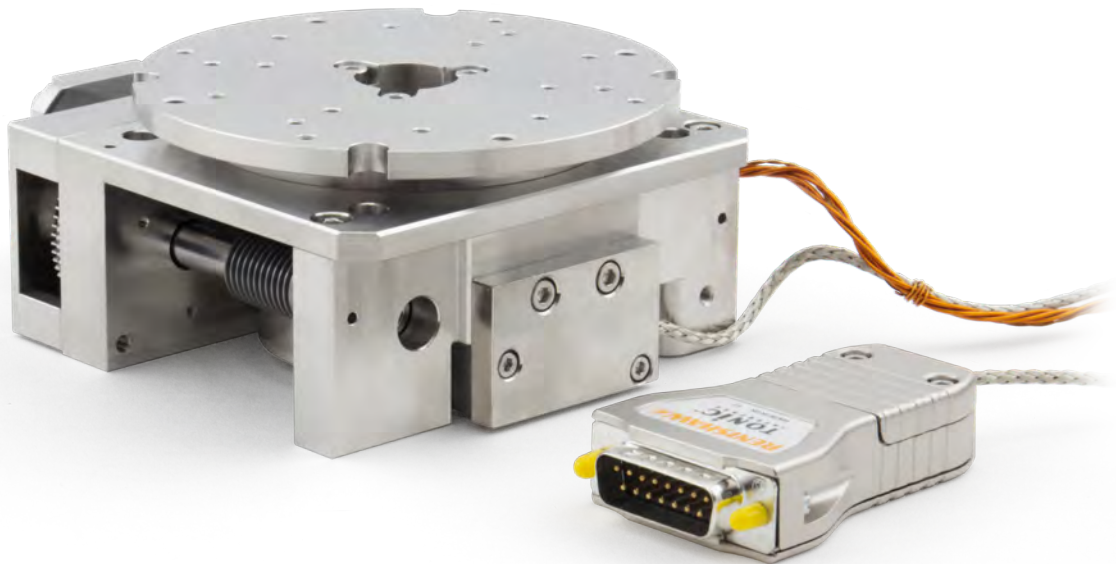


FEATURES

- 360° rotation range
- 0.1° to 0.005° resolution
- Better than resolution unidirectional repeatability
- Maximum loaded speed of up to 100 rpm
- Maximum torque of up to 8 Nm
- Suitable for use to 1×10^{-10} mBar
- Bakeable to 200 °C
- 100 kg centre load capacity
- Features AML D35.1 stepper motor
- Can optionally be fitted with a limit switch or an optical encoder
- High resolution and radiation resistant versions available
- Directly stackable for XYZ orientations
- Compatible with VSM17 modular stages
- May be customised for specific requirements
- Lubricated with NyeTorr® 6300 grease

SPECIFICATIONS

Specification	VSM17-R-3K6	VSM17-R-72K
Rotation Range	360°	360°
Resolution in Full Steps	0.1°	0.005°
Steps per Revolution	3,600	72,000
Maximum Loaded Speed	100 rpm	4 rpm
Maximum Loaded Motor Step Frequency	5 kHz	5 kHz
Gear Type	Spur	Worm and Wheel
Centred Load Capacity (Normal)	100 kg	100 kg
Maximum Torque	1 Nm	8 Nm
Detent Torque	79 mNm	N/A
Backlash (Unloaded)	Less than resolution	0.2°
Concentricity	±5 µm	±8 µm
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	1.66 kg

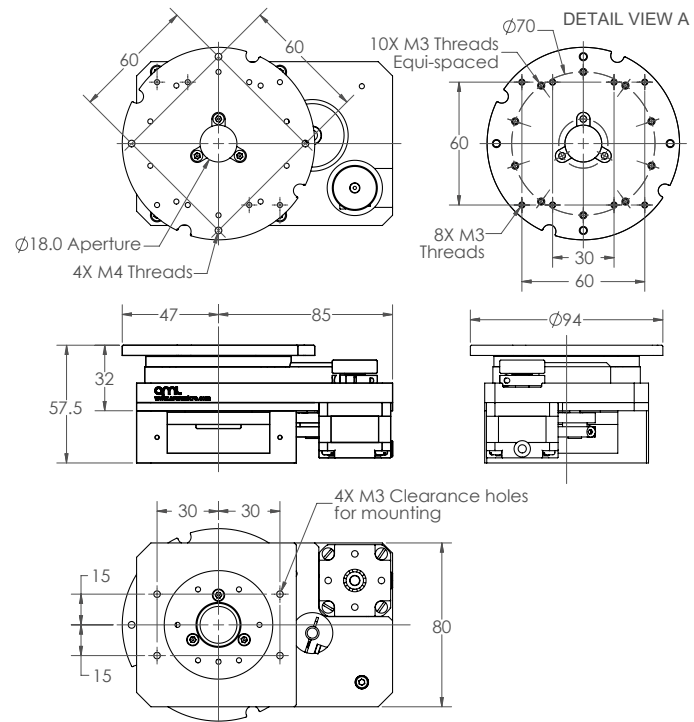


VSM17-R-72K-E:

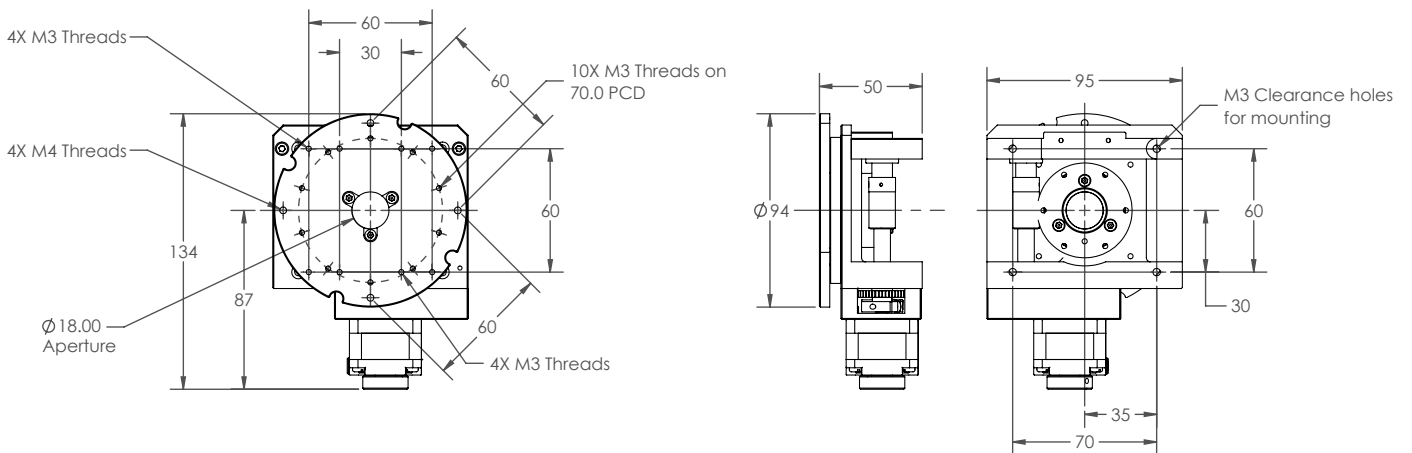
Modular UHV rotation stage with optional optical encoder.

DIMENSIONS

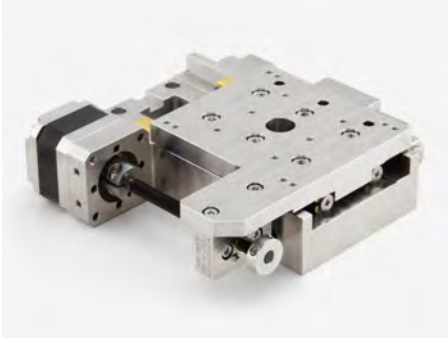
VSM17-R-3K6



VSM17-R-72K



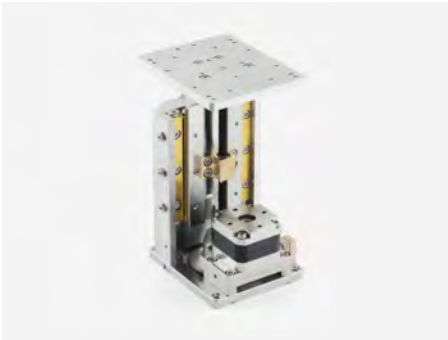
RELATED PRODUCTS



VSM17-X

High Performance, Modular UHV Compatible Stage.

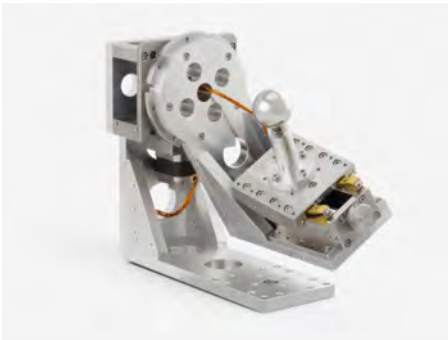
Linear translation stage suitable for use in UHV. Can support loads of up to several kilograms and travel from 25 to 200 mm. 5 µm resolution allows for precise in-vacuum motion.



VSM17-Z

High Performance, Modular UHV Stage for Z-Axis Translation.

Linear vertical translation stage suitable for use in UHV. Can support loads of up to several kilograms and travel from 50 mm. Designed specifically for Z-axis translation with its high load capacity.



VSM17-G

High Performance, Modular UHV Goniometer Stage.

Goniometer stage suitable for use in UHV. It is possible to build a Euler goniometer with a common centre of rotation.

ORDERING INFORMATION

Order Code	
VSM17-R-xxx	Rotation stage
VSM17-R-xxx-LS	Rotation stage with limit switch
VSM17-R-xxx-EA	Rotation stage with encoder (absolute)
VSM17-R-xxx-R	Rotation stage, radiation resistant



Distributors for Australia & New Zealand
MOTION TECHNOLOGIES PTY LIMITED

24/22-30 Northumberland Road
 Caringbah NSW 2229 Australia
 Phone: (02) 9524 4782

sales@motiontech.com.au
 www.motiontech.com.au

© 23/06/2023



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