

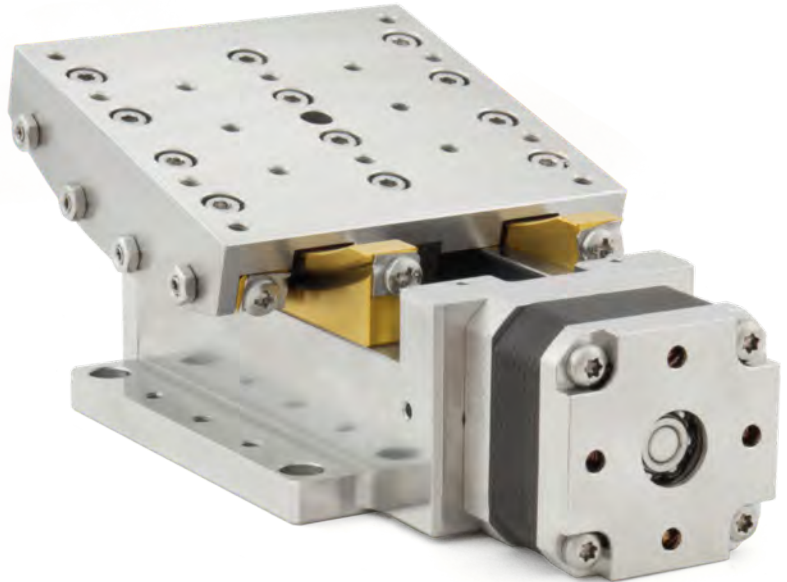
# VSM17-G-070 Goniometer Stage

## Modular UHV Goniometer Stage

AML ultra high vacuum compatible goniometer stage with  $\pm 15^\circ$  travel, provides rotation on a transverse axis above the table.

Can be used standalone or as part of a complex motion system when combined with other VSM17 modular stages. It is possible to build a Euler goniometer with a common centre of rotation when combined with a VSM17-G-114.

The VSM17-G features rigid construction to allow for high load capacity whilst maintaining smooth motion through the full range of travel. They are manufactured with UHV compatible material and construction methods and utilise AML UHV stepper motors.



## FEATURES

- $\pm 15^\circ$  travel
- 0.005° resolution in full steps
- Rotation centre to table 70 mm
- Suitable for use to  $1 \times 10^{-10}$  mBar
- Bakeable to 200 °C
- 40 kg centred load capacity
- Features AML D35.1 stepper motor
- Can optionally be fitted with limit switches
- High torque and radiation resistant versions available
- Compatible with most VSM17 modular stages
- May be customised for specific requirements

## 北京润诚时代科技有限公司



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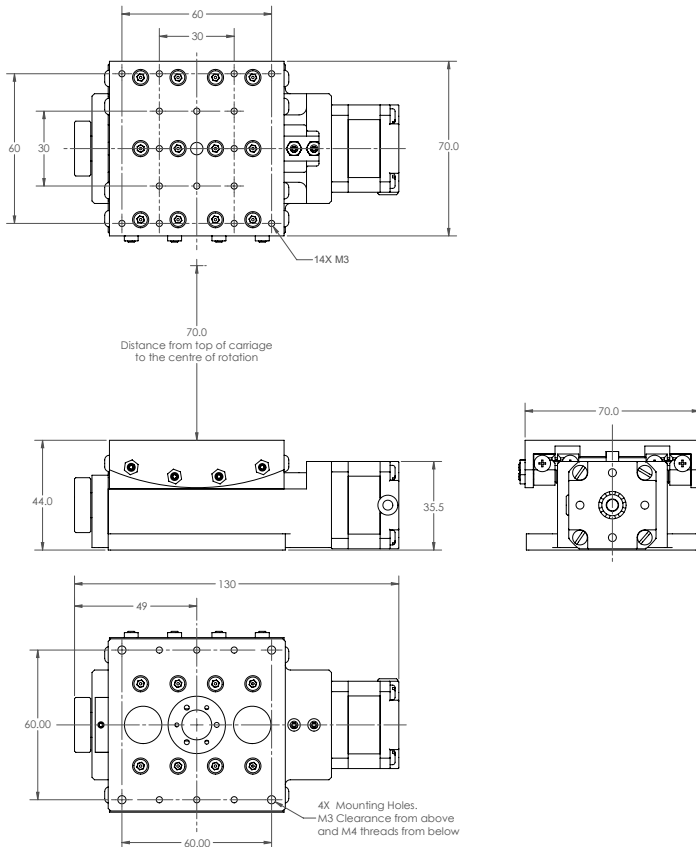
## SPECIFICATIONS

Specification	VSM17-G-070
Travel	±15°
Resolution in Full Steps	0.005°
Work Distance (Rotation Centre to Table)	70 mm
Maximum Loaded Speed	25 °/s
Table Size	70 x 70 mm
Maximum Torque	5 Nm
Bi-Directional Repeatability	±110 µrad
Centred Load Capacity (Normal)	40 kg
Transversal Compliance	30 µrad/Nm
Vacuum	1 x 10 <sup>-10</sup> mBar
Maximum Temperature	200 °C
Motor	D35.1
Mass Including Motor	1.38 kg
Cable Length	1.5 m

## NOTES

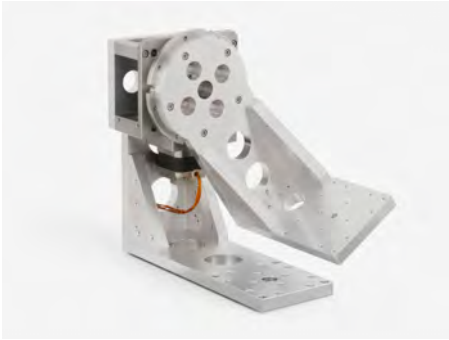
**LUBRICATION:** Running surfaces are dissimilar materials or dry lubricated with molybdenum disulfide. Leadscrews are lubricated with Nyetorr® 6300 UHV grease. Dry lubrication can be specified.

## DIMENSIONS



## RELATED PRODUCTS

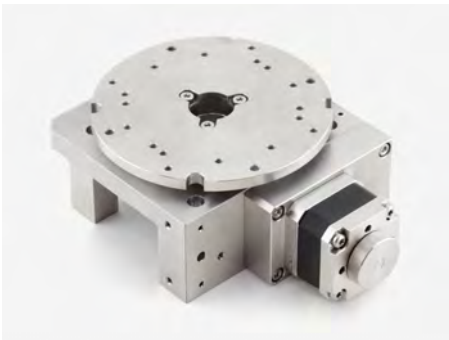
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VSM17-G-114

High Performance, Modular UHV Compatible Goniometer Stage.

Provides a second rotation with the same pivot point. 0.005° resolution with ±180° rotation.



VSM17-R

High Performance, Modular UHV Rotation Stage.

Rotation stage suitable for use in UHV. Can support loads of up to 100 kilograms. Resolutions from 0.1° to 0.005° with 360° of continuous rotation.



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.

## ORDERING INFORMATION

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Order Code	
VSM17-G-070	0.005° resolution
VSM17-G-070-LS	With 2 x limit switches
VSM17-G-070-HT	High torque (20 Nm, fitted with D42.1 motor)
VSM17-G-070-R	Radiation resistant

### 北京润诚时代科技有限公司

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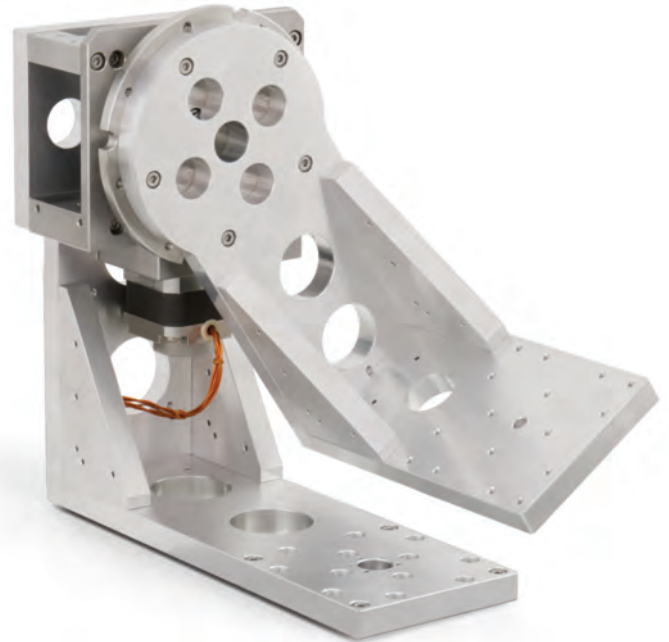
# VSM17-G-114 Goniometer Stage

## Modular UHV Goniometer Stage

AML ultra high vacuum compatible goniometer stage with  $\pm 180^\circ$  travel, provides rotation on a transverse axis above the table.

Can be used standalone or as part of a complex motion system when combined with other VSM17 modular stages. It is possible to build a Euler goniometer with a common centre of rotation when combined with a VSM17-G-070.

The VSM17-G features rigid construction to allow for high load capacity whilst maintaining smooth motion through the full range of travel. They are manufactured with UHV compatible material and construction methods and utilise AML UHV stepper motors.



## FEATURES

- $\pm 180^\circ$  travel
- $0.005^\circ$  resolution in full steps
- Rotational centre to table 114 mm
- Suitable for use to  $1 \times 10^{-10}$  mBar
- Bakeable to  $200^\circ\text{C}$
- 20 kg centred load capacity
- Features AML D35.1 stepper motor
- Can optionally be fitted with limit switches or encoders
- Radiation resistant versions available
- Compatible with most VSM17 modular stages
- May be customised for specific requirements

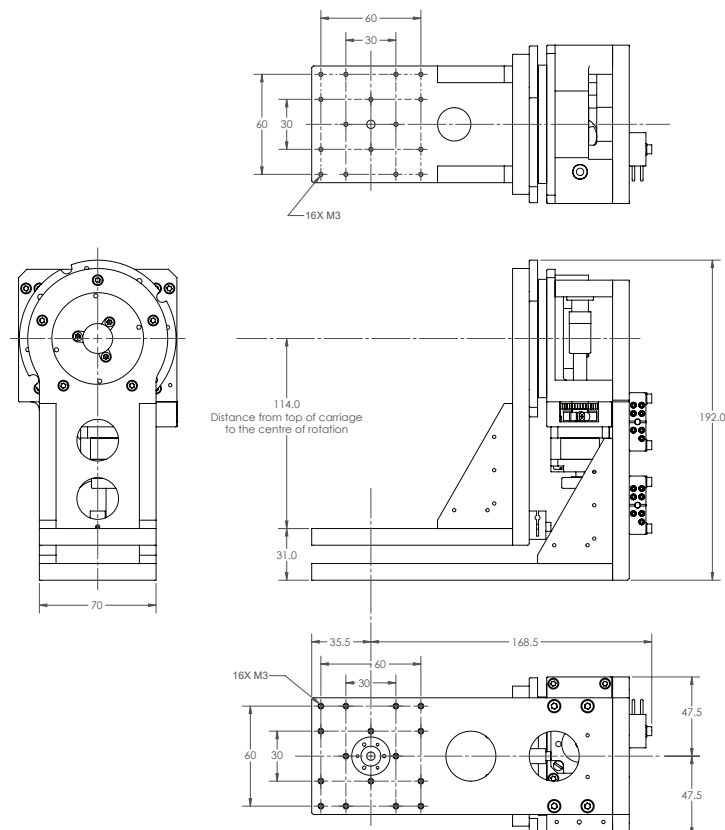
## SPECIFICATIONS

Specification	VSM17-G-114
Travel	±180°
Resolution in Full Steps	0.005°
Rotation Axis Height Above Table	114 mm
Maximum Speed	4 rpm
Maximum Torque	8 Nm
Bi-directional Repeatability	47 µrad
Backlash	0.12°
Centred Load Capacity	20 kg
Stepper Motor	AML D35.1
Cable Length	1.5 m
Vacuum	1 x 10 <sup>-10</sup> mBar
Maximum Operating Temperature	190 °C (reduces to 120 °C when an optical encoder is fitted)
Maximum Bake Temperature	200 °C (reduces to 120 °C when an optical encoder is fitted)
Mass Including Motor	2.5 kg

## NOTES

**LUBRICATION:** Running surfaces are dissimilar materials or dry lubricated with molybdenum disulfide. Leadscrews are lubricated with Nyetorr® 6300 UHV grease. Dry lubrication can be specified.

## DIMENSIONS



## RELATED PRODUCTS

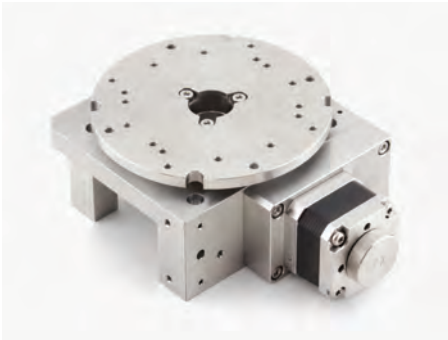
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VSM17-G-070

High Performance, Modular UHV Compatible Goniometer Stage.

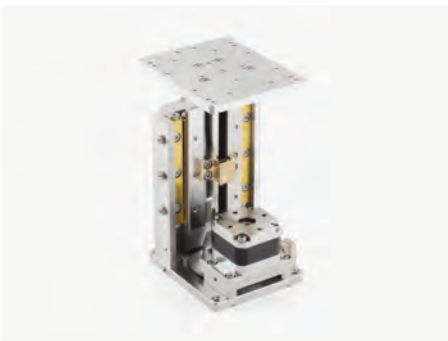
Provides a second rotation with the same pivot point. 0.005° resolution with ±15° rotation



VSM17-R

High Performance, Modular UHV Rotation Stage.

Rotation stage suitable for use in UHV. Can support loads of up to 100 kilograms. Resolutions from 0.1° to 0.005° with 360° of continuous rotation.



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.

## ORDERING INFORMATION

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Order Code	
VSM17-G-114	0.005° resolution
VSM17-G-114-LS	With limit switch
VSM17-G-114-E	With encoder
VSM17-G-114-R	Radiation resistant

## 北京润诚时代科技有限公司



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