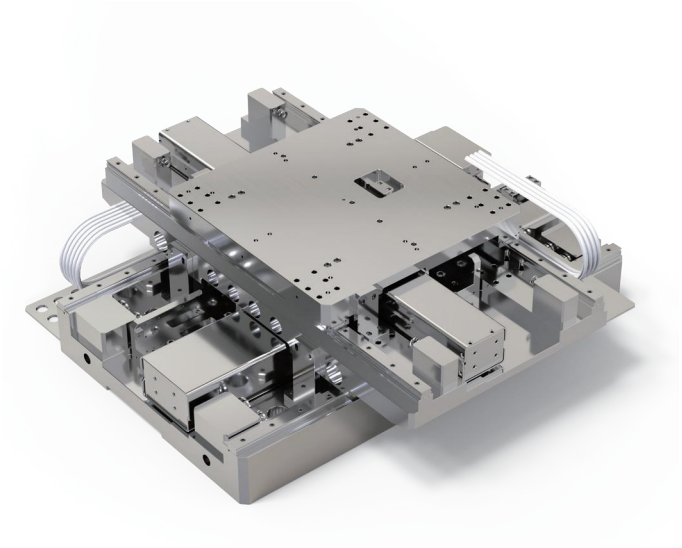
UHV XY Stage



Features

- Suitable for ultra-high vacuum environment up to 10^{-5}Pa
- Vacuum linear motor drive for low outgassing rate, low heat generation
- Unique linear motor magnetic shielding design
- Optional non-magnetic materials, with overall magnetic leakage up to nT level
- Excellent velocity and position stability

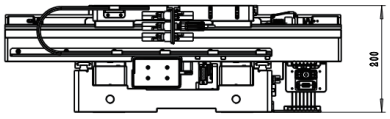
Description

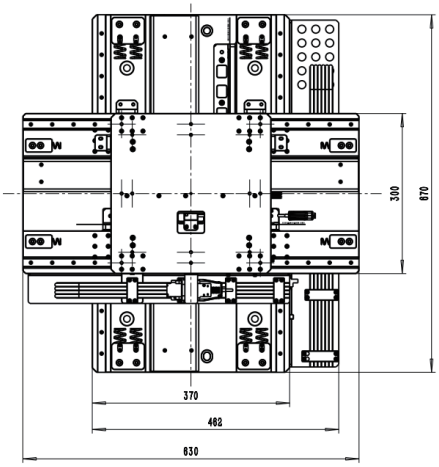
The stage is manufactured with materials that meet ultra-high vacuum standards and special processes in IS06 cleanrooms, ensuring that it can be used in ultra-high vacuum environments of 10^{-5}Pa and below. While realizing high-precision and high-stiffness XY motion, it also ensures the thermal management and magnetic shielding needs in the vacuum environment.

Applications

- Electron beam inspection
- Scanning electron microscopy
- Vacuum bonding

Interface Definition





*Interface dimensions from VLS200

Technical Specifications

	VLS200-08		VLS200-12	
Axes name	X	Y	X	Y
Travel range	300 mm	220 mm	400 mm	320mm
Max. velocity	0.35 m/s			
Max. acceleration	0.4 g			
Accuracy	±0.5 μm	±0.5 μm	±0.5 μm	±0.5 μm
Bidirectional repeatability	±0.25 μm	±0.25 μm	±0.25 μm	±0.25 μm
Position stability (3σ) *	±5 nm	±5 nm	±5 nm	±5 nm
Velocity stability*	<0.1%	<0.1%	<0.1%	<0.1%
Straightness	4 μm	4 μm	4 μm	4 μm
Pitch	<10 arcsec	<10 arcsec	<10 arcsec	<10 arcsec
Yaw	<10 arcsec	<10 arcsec	<10 arcsec	<10 arcsec
Mechanical properties				
Moving mass (without payload)	52 Kg	7 Kg	53.5 Kg	9 Kg
Max. load	13.5 Kg		13.5 Kg	
Stage mass	100 kg		145 kg	
Dimensions	670 mm×630 mm×200 mm		810 mm×714 mm×200 mm	
Material	Aluminum alloy			

*Technical data specified under non-active vibration damping environment.

Customization Information

The series is configured with options that can be selected based on the user's actual application. Options include encoders, control system, and more.

Table 1 Guide Options

-G1	Normal linear guide for UHV
-G2	Non-magnetic linear guide for UHV