

# Manual Multi Axis Stage

## VL Multi-Axis & Integrated Stages

Multi-dimensional Spatial Precision Positioning & Attitude Adjustment System

- Aluminum alloy (general use) & SUS440C stainless steel (high vacuum/thermal stability) – fits teaching to demanding research.
- Monoblock 5/3-axis stages eliminate instability/cumulative errors, ensuring long-term optical path stability.



One Platform Many Possibilities

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## Overview

### Spatial Freedom, Precisely Defined

The VL-M series is a full-stack solution launched by VenusLab for complex spatial movements. From flexible modular XYZ combinations to the "five-in-one" integrated stage specially designed for spatial filters, this series covers the full size range from 25mm to 125mm. It addresses the common pain points of "shaking" and "non-orthogonality" in multi-axis setup, allowing you to experience rock-solid control whether you are performing simple sample movement or nanoscale fiber coupling.

### Applications

- Achieve micron-level alignment between the pinhole and the laser spot using a five-axis integrated stage.
- Multi-degree-of-freedom fine adjustment to optimize the coupling efficiency of laser light into optical fibers.
- The stainless steel version is used for aligning wafers or masks in semiconductor vacuum chambers.
- Precise attitude establishment of beam splitters and reflectors in complex optical paths.

## Technical Specifications

Technical Specifications Table

Model	Stage Size	Axis Configuration	Travel Range	Drive Method	Guideway Type	Material
VL-XYZ40A-M	40x40 mm	XYZ (3 Axes)	13 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy
VL-XYZ60A-M2	60x60 mm	XYZ (3 Axes)	13 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy
VL-XYZ80A-M	80x80 mm	XYZ (3 Axes)	25 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy
VL-XYZ90A-M	90x90 mm	XYZ (3 Axes)	25 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy
VL-XYZ125A-M	125x125 mm	XYZ (3 Axes)	25 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy
VL-XYZ40A-C	40x40 mm	XYZ (3 Axes)	13 mm	Center Drive (Micrometer Head)	Crossed Roller	Aluminum Alloy
VL-XYZ50A-C	50x50 mm	XYZ (3 Axes)	13 mm	Center Drive (Micrometer Head)	Crossed Roller	Aluminum Alloy
VL-XYZ60A-C	60x60 mm	XYZ (3 Axes)	13 mm	Center Drive (Micrometer Head)	Crossed Roller	Aluminum Alloy
VL-XYZ90A-C	90x90 mm	XYZ (3 Axes)	25 mm	Center Drive (Micrometer Head)	Crossed Roller	Aluminum Alloy
VL-X40A-M	40x40 mm	X (1 Axis)	13 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy
VL-X60A-M	60x60 mm	X (1 Axis)	13 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy
VL-X80A-M	80x80 mm	X (1 Axis)	25 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy
VL-X90A-M	90x90 mm	X (1 Axis)	25 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy
VL-X125A-M	125x125 mm	X (1 Axis)	25 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy

VL-X40A-C	40x40 mm	X (1 Axis)	13 mm	Center Drive (Micrometer Head)	Crossed Roller	Aluminum Alloy
VL-X60A-C	60x60 mm	X (1 Axis)	13 mm	Center Drive (Micrometer Head)	Crossed Roller	Aluminum Alloy
VL-X90A-C	90x90 mm	X (1 Axis)	25 mm	Center Drive (Micrometer Head)	Crossed Roller	Aluminum Alloy
VL-Y40A-M	40x40 mm	Y (1 Axis)	13 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy
VL-Y60A-M	60x60 mm	Y (1 Axis)	13 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy
VL-Y80A-M	80x80 mm	Y (1 Axis)	25 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy
VL-Y90A-M	90x90 mm	Y (1 Axis)	25 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy
VL-Y125A-M	125x125 mm	Y (1 Axis)	25 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy
VL-Y40A-C	40x40 mm	Y (1 Axis)	13 mm	Center Drive (Micrometer Head)	Crossed Roller	Aluminum Alloy
VL-Y60A-C	60x60 mm	Y (1 Axis)	13 mm	Center Drive (Micrometer Head)	Crossed Roller	Aluminum Alloy
VL-Y90A-C	90x90 mm	Y (1 Axis)	25 mm	Center Drive (Micrometer Head)	Crossed Roller	Aluminum Alloy
VL-Z40A-M	40x40 mm	Z (1 Axis)	10 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy
VL-Z60A-M	60x60 mm	Z (1 Axis)	10 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy
VL-Z80A-M	80x80 mm	Z (1 Axis)	10 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy
VL-Z90A-M	90x90 mm	Z (1 Axis)	10 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy
VL-Z125A-M	125x125 mm	Z (1 Axis)	10 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy
VL-Z40A-C	40x40 mm	Z (1 Axis)	13 mm	Center Drive (Micrometer Head)	Crossed Roller	Aluminum Alloy
VL-Z60A-C	60x60 mm	Z (1 Axis)	13 mm	Center Drive (Micrometer Head)	Crossed Roller	Aluminum Alloy
VL-Z90A-C	90x90 mm	Z (1 Axis)	25 mm	Center Drive (Micrometer Head)	Crossed Roller	Aluminum Alloy
VL-XY40A-M	40x40 mm	XY (2 Axes)	13 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy
VL-XY60A-M	60x60 mm	XY (2 Axes)	13 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy
VL-XY80A-M	80x80 mm	XY (2 Axes)	25 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy
VL-XY90A-M	90x90 mm	XY (2 Axes)	25 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy

VL-XY125A-M	125x125 mm	XY (2 Axes)	25 mm	Side-Mounted Differential Head	Crossed Roller	Aluminum Alloy
VL-XY40A-C	40x40 mm	XY (2 Axes)	13 mm	Center Drive (Micrometer Head)	Crossed Roller	Aluminum Alloy
VL-XY60A-C	60x60 mm	XY (2 Axes)	13 mm	Center Drive (Micrometer Head)	Crossed Roller	Aluminum Alloy

## Service & Support

We are dedicated to delivering exceptional optoelectronic solutions to every client. From precision manufacturing and secure delivery to full-lifecycle technical support, we are here to ensure a seamless and reliable experience at every step.

### 1. Warranty Policy

Quality First, Worry-Free Operation

- **Warranty Period:** We offer a **two-year** warranty service for all of our core optoelectronic products, effective from the date of shipment.
- **Coverage:** We provide free repair or replacement services for malfunctions caused by material defects or workmanship errors under normal operating conditions.
- **Rapid Response:** Upon receiving a warranty claim, we guarantee to initiate the assessment process within **24 hours** to minimize your equipment downtime.

### 2. Technical Support

Expert Team, Full-Process Guidance

- **Technical Consultation:** Our team of senior optical engineers provides **24/7 online support** to assist with installation, commissioning, optical path alignment, and parameter optimization.
- **Scheduled Maintenance:** We offer full-lifecycle maintenance recommendations, including firmware upgrades, optical component cleaning guidelines, and precision calibration services.
- **Training Services:** We provide customized remote or on-site operational and safety training to ensure your team can operate the equipment efficiently and safely.

### 3. Logistics & Delivery

Precision Packaging, Global Reach

- **Professional Packaging:** Given the fragile nature of optical instruments, we utilize industrial-grade shockproof, anti-static, and moisture-proof vacuum packaging to ensure zero damage during transit.
- **Logistics Partners:** We partner with top-tier global logistics providers (**DHL / FedEx / UPS / SF Express**) to offer reliable shipping with real-time tracking.
- **Shipping Insurance:** All shipments are fully insured to eliminate logistics risks.

### 4. Compliance & Certification

Strict Standards, Total Compliance

Quality Certification: Our manufacturing process is **ISO 9001 certified**, and our products comply with international standards such as **CE and RoHS**.

Export Compliance: "Committed to environmental responsibility, all our products comply with **RoHS 2.0** and **REACH** standards, ensuring safety and global compliance."

## Explore Series

Model	Travel Range	Load Capacity	Axis Configuration	Resolution
VL-XYZ60S-M	13 mm	10 kg (High Load)	3 Axes (XYZ)	0.01 mm
VL-5A-Int	13 mm / $\pm 5^\circ$	3 kg	5 Axes (XYZ x y z)	0.01 mm / 5'
VL-XYZ60A-M	$\pm 6.5$ mm	3 kgf (29.4N)	3 Axes (XYZ)	0.01 mm

 Get in touch with our team to explore configurations, request a quote, or learn more about customized solutions tailored to your needs.

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