

Manual Translation Stage

Venus Vega™ Manual Stages

Modular Precision Positioning System

- Cross-Roller: High load, zero wear, and straightness better than 3µm.
- Modular: X/Z/XY axes can be stacked arbitrarily, and the handwheel position can be flexibly selected



One Platform Many Possibilities

Contact Us sales@venuslabtech.com

Get a Quote



Get Expert Advice
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Overview

Modular Precision. Effortless Control

The Venus Vega™ series is the cornerstone for laboratory optical path construction. It adopts a high-rigidity black anodized aluminum body and precision crossed roller guides, ensuring high load capacity and smooth movement in a compact volume. Whether it is for micro fiber coupling or general optical path adjustment, Vega™ can provide a silky-smooth feel and sub-micron level positioning stability.

Applications

- Fiber Coupling: Precise coupling between optical fibers and waveguide chips.
- Beam Alignment: Adjustment of the center of laser beam expanders and spatial filters.
- Interferometry: Precise displacement of beam splitters and mirrors in interferometers.
- Microscopy: Sample positioning and focusing in microscopic imaging.

Technical Specifications

Table 1: Venus Vega™ Series (Standard Aluminum)

Description: Precision manual translation stages made of black anodized aluminum with cross-roller bearings. Ideal for general laboratory use.

VenusLab SKU	Product Name	Table Size	Axis	Travel Range	Drive Options (Variants)
VL-MTS-25-X	Venus Vega™ Micro Linear Stage	25 x 25 mm	X (Linear)	± 3.2 mm	Center / Left / Right
VL-MTS-25-Z	Venus Vega™ Micro Vertical Stage	25 x 25 mm	Z (Vertical)	± 3.2 mm	Center / Left / Right
VL-MTS-30-X	Venus Vega™ Compact Linear Stage	30 x 30 mm	X (Linear)	± 3.2 mm	Center / Left / Right
VL-MTS-30-Z	Venus Vega™ Compact Vertical Stage	30 x 30 mm	Z (Vertical)	± 3.2 mm	Center / Left / Right
VL-MTS-40-X	Venus Vega™ Linear Stage	40 x 40 mm	X (Linear)	± 6.5 mm	Center / Left / Right
VL-MTS-40-Z	Venus Vega™ Vertical Stage	40 x 40 mm	Z (Vertical)	± 6.5 mm	Center / Left / Right
VL-MTS-40-XY	Venus Vega™ Integral XY Stage	40 x 40 mm	XY (2-Axis)	± 6.5 mm	Center / Left / Right
VL-MTS-50-X	Venus Vega™ Linear Stage	50 x 50 mm	X (Linear)	± 6.5 mm	Center / Left / Right
VL-MTS-50-Z	Venus Vega™ Vertical Stage	50 x 50 mm	Z (Vertical)	± 6.5 mm	Center / Left / Right
VL-MTS-50-XY	Venus Vega™ Integral XY Stage	50 x 50 mm	XY (2-Axis)	± 6.5 mm	Center / Left / Right
VL-MTS-60-X	Venus Vega™ Industry Standard Stage	60 x 60 mm	X (Linear)	± 6.5 mm	Center / Left / Right
VL-MTS-60-Z	Venus Vega™ Standard Z-Stage	60 x 60 mm	Z (Vertical)	± 6.5 mm	Center / Left / Right
VL-MTS-60-XY	Venus Vega™ Integral XY Stage	60 x 60 mm	XY (2-Axis)	± 6.5 mm	Center / Left / Right
VL-MTS-60-X-L25	Venus Vega™ Long Travel Stage	60 x 60 mm	X (Linear)	± 12.5 mm	Center / Left / Right
VL-MTS-65-X	Venus Vega™ Linear Stage	65 x 65 mm	X (Linear)	± 12.5 mm	Center / Left / Right
VL-MTS-70-X	Venus Vega™ Linear Stage	70 x 70 mm	X (Linear)	± 12.5 mm	Center / Left / Right
VL-MTS-70-Z	Venus Vega™ Vertical Stage	70 x 70 mm	Z (Vertical)	± 12.5 mm	Center / Left / Right
VL-MTS-80-X	Venus Vega™ Large Format Stage	80 x 80 mm	X (Linear)	± 12.5 mm	Center / Left / Right
VL-MTS-80-Z	Venus Vega™ Large Z-Stage	80 x 80 mm	Z (Vertical)	± 12.5 mm	Center / Left / Right
VL-MTS-80-XY	Venus Vega™ Large XY Stage	80 x 80 mm	XY (2-Axis)	± 12.5 mm	Center / Left / Right
VL-MTS-90-X	Venus Vega™ Large Format Stage	90 x 90 mm	X (Linear)	± 12.5 mm	Center / Left / Right
VL-MTS-90-Z	Venus Vega™ Large Z-Stage	90 x 90 mm	Z (Vertical)	± 12.5 mm	Center / Left / Right
VL-MTS-90-XY	Venus Vega™ Large XY Stage	90 x 90 mm	XY (2-Axis)	± 12.5 mm	Center / Left / Right
VL-MTS-100-X	Venus Vega™ High Load Stage	100 x 100 mm	X (Linear)	± 12.5 mm	Center / Left / Right
VL-MTS-100-Z	Venus Vega™ High Load Z-Stage	100 x 100 mm	Z (Vertical)	± 12.5 mm	Center / Left / Right
VL-MTS-100-XY	Venus Vega™ High Load XY Stage	100 x 100 mm	XY (2-Axis)	± 12.5 mm	Center / Left / Right
VL-MTS-120-X	Venus Vega™ High Load Stage	120 x 120 mm	X (Linear)	± 12.5 mm	Center / Left / Right
VL-MTS-120-XY	Venus Vega™ High Load XY Stage	120 x 120 mm	XY (2-Axis)	± 12.5 mm	Center / Left / Right
VL-MTS-125-X	Venus Vega™ High Load Stage	125 x 125 mm	X (Linear)	± 25.0 mm	Center / Left / Right
VL-MTS-125-Z	Venus Vega™ High Load Z-Stage	125 x 125 mm	Z (Vertical)	± 25.0 mm	Center / Left / Right
VL-MTS-125-XY	Venus Vega™ High Load XY Stage	125 x 125 mm	XY (2-Axis)	± 25.0 mm	Center / Left / Right
VL-MTS-160-X	Venus Vega™ Heavy Duty Stage	160 x 160 mm	X (Linear)	± 25.0 mm	Left / Right
VL-MTS-160-Z	Venus Vega™ Heavy Duty Z-Stage	160 x 160 mm	Z (Vertical)	± 25.0 mm	Left / Right
VL-MTS-200-X	Venus Vega™ Max Load Stage	200 x 200 mm	X (Linear)	± 25.0 mm	Left / Right
VL-MTS-200-Z	Venus Vega™ Max Load Z-Stage	200 x 200 mm	Z (Vertical)	± 25.0 mm	Left / Right

Table 2: Venus Sirius™ Series (Stainless Steel)

Description: High-stability manual stages made of stainless steel. Features an ultra-slim profile and low thermal expansion.

Suitable for vacuum applications.

VenusLab SKU	Product Name	Table Size	Axis	Material	Drive Configuration
VL-ST5-25-X	Sirius™ Stainless Micro Stage	25 × 25 mm	X (Linear)	Stainless Steel	Left / Right Hand
VL-ST5-25-Z	Sirius™ Stainless Z-Stage	25 × 25 mm	Z (Vertical)	Stainless Steel	Center / Right Hand
VL-ST5-25-V	Sirius™ Vertical Stage (Slim)	25 × 25 mm	V (Side Vert.)	Stainless Steel	Side Drive
VL-ST5-25-XZ	Sirius™ Stainless XZ System	25 × 25 mm	XZ (2-Axis)	Stainless Steel	Pre-assembled
VL-ST5-25-XYZ	Sirius™ Stainless XYZ System	25 × 25 mm	XYZ (3-Axis)	Stainless Steel	Pre-assembled
VL-ST5-40-Z	Sirius™ Stainless Z-Stage	40 × 40 mm	Z (Vertical)	Stainless Steel	Left / Right Hand
VL-ST5-40-V	Sirius™ Vertical Stage (Slim)	40 × 40 mm	V (Side Vert.)	Stainless Steel	Side Drive
VL-ST5-40-XZ	Sirius™ Stainless XZ System	40 × 40 mm	XZ (2-Axis)	Stainless Steel	Pre-assembled
VL-ST5-40-XYZ	Sirius™ Stainless XYZ System	40 × 40 mm	XYZ (3-Axis)	Stainless Steel	Pre-assembled
VL-ST5-60-X	Sirius™ Stainless Standard Stage	60 × 60 mm	X (Linear)	Stainless Steel	Left / Right Hand
VL-ST5-60-Z	Sirius™ Stainless Z-Stage	60 × 60 mm	Z (Vertical)	Stainless Steel	Left / Right Hand
VL-ST5-60-V	Sirius™ Vertical Stage (Slim)	60 × 60 mm	V (Side Vert.)	Stainless Steel	Side Drive
VL-ST5-60-XZ	Sirius™ Stainless XZ System	60 × 60 mm	XZ (2-Axis)	Stainless Steel	Pre-assembled
VL-ST5-60-XYZ	Sirius™ Stainless XYZ System	60 × 60 mm	XYZ (3-Axis)	Stainless Steel	Pre-assembled

Mechanical Dimensions

Table 3: Venus Lyra™ Series (Rectangular & Rails)

Description: Long-travel rectangular stages and dovetail optical rails for extended range applications.

VenusLab SKU	Product Name	Table Size	Axis	Configuration	Key Feature
VL-LTS-2542-X	Lyra™ Rectangular Stage	25 × 42 mm	X (Linear)	Single Axis	Compact Rectangular
VL-LTS-2542-Z	Lyra™ Rectangular Z-Stage	25 × 42 mm	Z (Vertical)	Single Axis	Compact Rectangular
VL-LTS-2542-V	Lyra™ Vertical Stage	25 × 42 mm	V (Side Vert.)	Single Axis	Compact Rectangular
VL-LTS-2542-XZ	Lyra™ Rectangular XZ System	25 × 42 mm	XZ (2-Axis)	Dual Axis	Pre-assembled
VL-LTS-2542-XYZ	Lyra™ Rectangular XYZ System	25 × 42 mm	XYZ (3-Axis)	Multi Axis	Pre-assembled
VL-LTS-4040-X	Lyra™ Variant Stage	40 × 40 mm	X (Linear)	Single Axis	Special Mounting Holes
VL-LTS-4060-X	Lyra™ Rectangular Stage	40 × 60 mm	X (Linear)	Single Axis	Rectangular Format
VL-LTS-4060-Z	Lyra™ Rectangular Z-Stage	40 × 60 mm	Z (Vertical)	Single Axis	Rectangular Format
VL-LTS-4060-XZ	Lyra™ Rectangular XZ System	40 × 60 mm	XZ (2-Axis)	Dual Axis	Pre-assembled
VL-LTS-4060-XYZ	Lyra™ Rectangular XYZ System	40 × 60 mm	XYZ (3-Axis)	Multi Axis	Pre-assembled
VL-LTS-4090-X	Lyra™ Long Travel Stage	40 × 90 mm	X (Linear)	Single Axis	Extended Travel

VL-LTS-4090-Z	Lyra™ Long Travel Z-Stage	40 x 90 mm	Z (Vertical)	Single Axis	Extended Travel
VL-LTS-4090-XZ	Lyra™ Long Travel XZ System	40 x 90 mm	XZ (2-Axis)	Dual Axis	Pre-assembled
VL-LTS-4090-XYZ	Lyra™ Long Travel XYZ System	40 x 90 mm	XYZ (3-Axis)	Multi Axis	Pre-assembled
VL-LTS-Rail-16-70	Lyra™ Dovetail Rail Stage	16mm Rail	X (Slider)	70mm Travel	Rapid Positioning
VL-LTS-Rail-20-100	Lyra™ Dovetail Rail Stage	20mm Rail	X (Slider)	100mm Travel	Rapid Positioning

Venus Vega™ Manual Stages: Product Selection Guide

VenusLab SKU	Product Name	Table Size	Axis	Material	Drive Configuration
VL-MP-XY60A-L	Vega™ Pro Aluminum XY Stage	60 x 60 mm	XY (2-Axis)	Aluminum Alloy	Micrometer (Left Hand)
VL-MP-XY60A-C	Vega™ Pro Aluminum XY Stage	60 x 60 mm	XY (2-Axis)	Aluminum Alloy	Micrometer (Center)
VL-MP-XY60A-R	Vega™ Pro Aluminum XY Stage	60 x 60 mm	XY (2-Axis)	Aluminum Alloy	Micrometer (Right Hand)
VL-MP-X100A-C	Vega™ Pro Aluminum Linear Stage	100 x 100 mm	X (Linear)	Aluminum Alloy	Micrometer (Center)
VL-MP-X100A-S	Vega™ Pro Aluminum Linear Stage	100 x 100 mm	X (Linear)	Aluminum Alloy	Micrometer (Side Drive)
VL-MP-X40S	Vega™ Pro Stainless Linear Stage	40 x 40 mm	X (Linear)	Stainless Steel	Micrometer Head
VL-MP-X60S	Vega™ Pro Stainless Linear Stage	60 x 60 mm	X (Linear)	Stainless Steel	Micrometer Head
VL-MP-XY40S	Vega™ Pro Stainless XY Stage	40 x 40 mm	XY (2-Axis)	Stainless Steel	Micrometer Head
VL-MP-XY60S	Vega™ Pro Stainless XY Stage	60 x 60 mm	XY (2-Axis)	Stainless Steel	Micrometer Head
VL-MP-XY40S-T	Vega™ Pro Stainless XY Stage (Slim)	40 x 40 mm	XY (2-Axis)	Stainless Steel	Micrometer (Side Drive)
VL-MP-XY60S-T	Vega™ Pro Stainless XY Stage (Slim)	60 x 60 mm	XY (2-Axis)	Stainless Steel	Micrometer (Side Drive)
VL-MP-Z25S-L	Vega™ Pro Stainless Z-Lift Stage	25 x 25 mm	Z (Vertical)	Stainless Steel	Screw / Wedge
VL-MP-Z40S-L	Vega™ Pro Stainless Z-Lift Stage	40 x 40 mm	Z (Vertical)	Stainless Steel	Screw / Wedge
VL-MP-Z60S-L	Vega™ Pro Stainless Z-Lift Stage	60 x 60 mm	Z (Vertical)	Stainless Steel	Screw / Wedge
VL-MD-X60A-C	Vega™ Digi Precision Stage	60 x 60 mm	X (Linear)	Aluminum Alloy	Digital Micrometer
VL-MD-X90-L	Vega™ Digi Linear Guide Stage	90 x 90 mm	X (Linear)	Aluminum Alloy	Digital Display
VL-ME-X34-W	Vega™ Eco Wire Guide Stage	34 x 34 mm	X (Linear)	Aluminum Alloy	Feed Screw
VL-ME-X40-D	Vega™ Eco Dovetail Stage	40 x 40 mm	X (Linear)	Aluminum Alloy	Lead Screw (Center)
VL-ME-X100-D	Vega™ Eco Dovetail Stage	100 x 60 mm	X (Linear)	Aluminum Alloy	Lead Screw (Center)
VL-ME-XY200A	Vega™ Eco Large Travel Stage	200 x 200 mm	XY (2-Axis)	Aluminum Alloy	Lead Screw
VL-MQ-X50-R	Vega™ Quick Rack & Pinion Stage	70 x 35 mm	X (Linear)	Aluminum Alloy	Rack & Pinion
VL-MQ-X75-R	Vega™ Quick Rack & Pinion Stage	110 x 65 mm	X (Linear)	Aluminum Alloy	Rack & Pinion
VL-MQ-XL40-R	Vega™ Quick Rack & Pinion Stage	40 x 60 mm	X (Linear)	Aluminum Alloy	Rack & Pinion
VL-MQ-Z40-R	Vega™ Quick Z-Axis Rack Stage	40 x 40 mm	Z (Vertical)	Aluminum Alloy	Rack & Pinion

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	Self Weight	Resolution
VL-MTS-25-X	± 3.2 mm	2 kg	0.06 kg	10 μm
VL-MTS-60-X	± 6.5 mm	10 kg	0.23 kg	10 μm
VL-STS-60-X	± 6.5 mm	10 kg	0.55 kg	10 μm
VL-MD-X60A-25-C	25 mm	15 kg	0.5 kg	0.001 mm
VL-MQ-XL-Rack+	120 mm	4 kg	0.34 kg	10 μm (0.01mm)
VV-MP-Z60S-Lift	±6.5 mm	49 N (5 kgf)	0.58 kg	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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