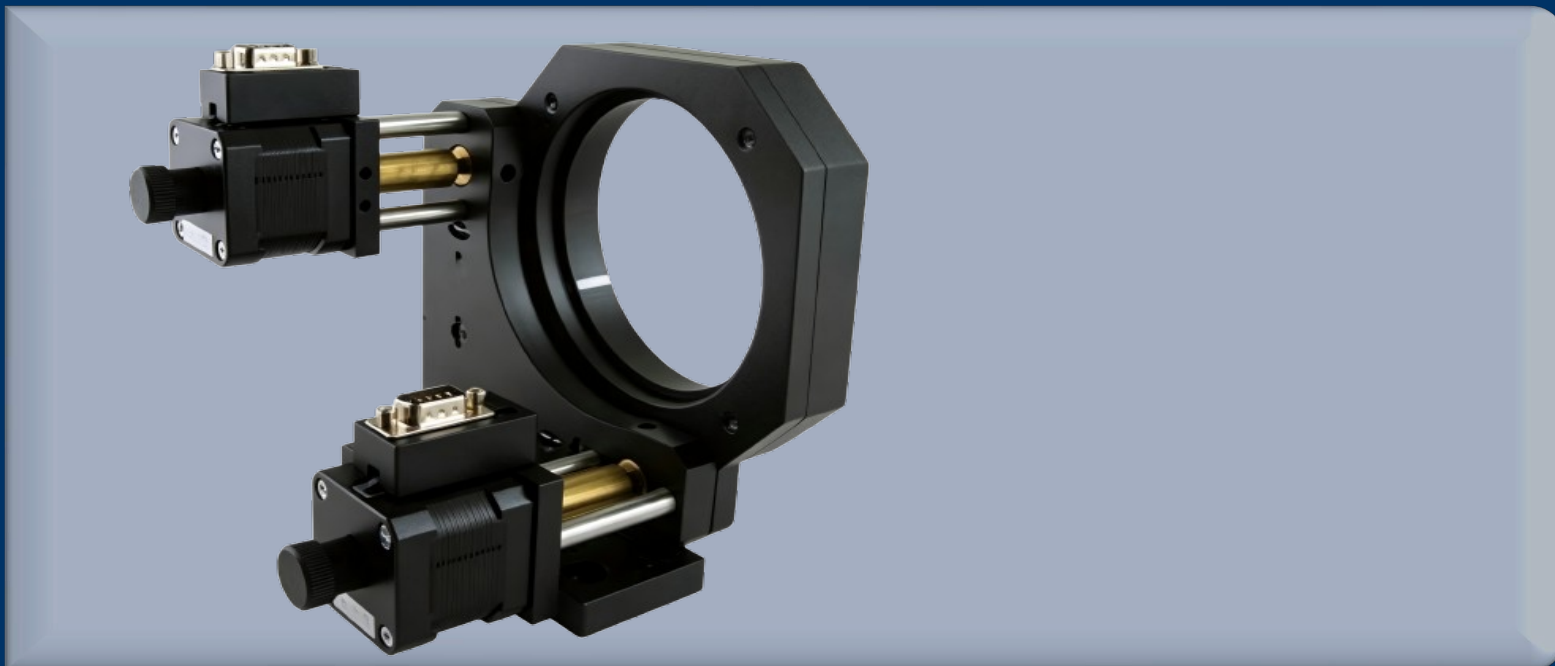


# Optical Mounts

## VL-Electric Mirror Mount

### Intelligent Beam Alignment Solution

- High-res stepper + precision screw:  $<0.002^\circ$  angular resolution for accurate optimal light capture.
- Vibration-free; ideal for remote operation in enclosed, vacuum or hazardous optical environments.



## One Platform Many Possibilities

Contact Us [sales@venuslabtech.com](mailto:sales@venuslabtech.com)

Get a Quote



Get Expert Advice  
+658099 5547 ( WhatsApp )



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[www.venuslabtech.com](http://www.venuslabtech.com)

## Overview

### Precision Beam Steering at Your Command

The Venus Apex™ series endows optical frames with a "smart brain". Based on the classic kinematic structure, it integrates precision electric actuators, enabling extremely delicate independent control of  $\theta_x$  (pitch) and  $\theta_y$  (yaw). From 1-inch standard lenses to 4-inch large-aperture components, Apex™ can provide smooth, backlash-free automated angle control, making it an ideal upgrade option for building modern automated laboratories.

### Applications

- Precise alignment and mode optimization of laser resonators.
- Constructing an automatic beam stabilization system with PSD/quadrant detectors.
- Optical path adjustment in closed chassis, vacuum chambers, or radiation environments.
- Beam scanning and switching in automated optical inspection equipment.

## Selection Chart

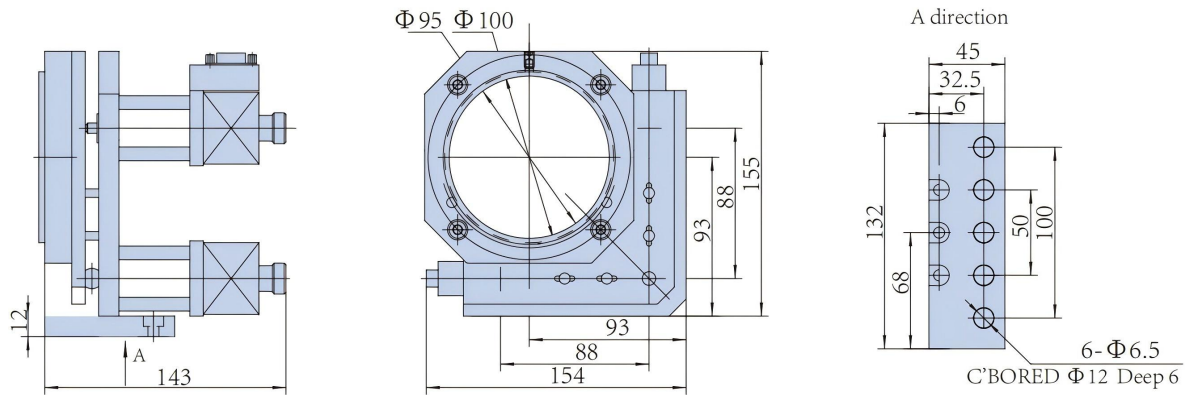
### Venus Apex™ Motorized Mirror Mounts

VenusLab SKU	Optic Size	Axis	Tilt Range	Resolution	Feature
VL-EMM-G-25	25.4 mm	x, y	±2 °	0.002°	High Precision, Compact
VL-EMM-G-50	50 mm	x, y	±2 °	0.002°	Standard Mid-Size
VL-EMM-G-100-A	100 mm	x, y	±3 °	0.001°	Large Format, High Load
VL-EMM-G-100-B	100 mm	x, y	±3 °	0.001°	Structure Variant
VL-EMM-K-20	20 mm	x, y	±4 °	0.002°	Multi-Size Series
VL-EMM-K-25	25.4 mm	x, y	±4 °	0.002°	Hero Model, Industry Std
VL-EMM-K-30	30 mm	x, y	±4 °	0.002°	Multi-Size Series
VL-EMM-K-38	38.1 mm	x, y	±4 °	0.002°	Multi-Size Series
VL-EMM-K-40	40 mm	x, y	±4 °	0.002°	Multi-Size Series
VL-EMM-K-50	50.8 mm	x, y	±4 °	0.002°	Large Aperture

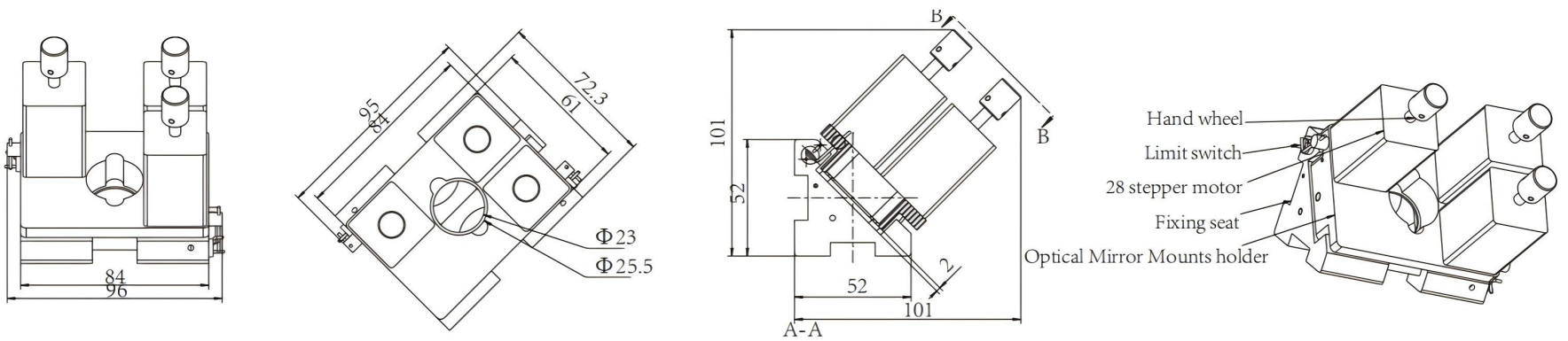
VenusLab SKU	Size / Travel	Range	Resolution / Precision	Drive Mechanism & Key Features
VL-NA-STD	Travel: 12.7 mm	N/A	Step: < 30 nm	Rated load 2.0kg / 20N, power-off position holding
VL-NA-VAC	Travel: 12.7 mm	N/A	Step: < 30 nm	Vacuum compatible, lifespan > 1×10 <sup>9</sup> steps
VL-IC-4CH	Dimensions: 130 × 100 × 30 mm	N/A	Drive Freq: 2 kHz	4-channel independent control, USB 2.0 communication
VL-PM-12	12.7 mm	2-Axis (X/Y)	0.25 mm fine thread	Self-locking closed retaining ring, 6061-T6 aluminum alloy
VL-PM-25	25.4 mm	±2 (Piezo) / ±4 (Mech)	Adj. Precision: 0.25 mm /rev	Piezo-driven, max speed 1 rad
VL-PM-50	50.8 mm	±3	N/A	6061-T6 aluminum alloy
VL-PM-SM2	SM2 thread through-hole	N/A	N/A	Black anodized surface treatment
VL-PRM-25	25.4 mm	360° Continuous	Angular Res: 0.2 mrad	Stainless steel, zero backlash, 1-2 RPM
VL-OM-25	25.4 mm	±7	Sensitivity: 3.8 arc sec	100 TPI screws, 4 sets of reinforced springs
VL-OM-30	30 mm	±7	Sensitivity: 3.8 arc sec	100 TPI screws with brass sleeves
VL-OM-50	50 mm	±7	Sensitivity: 3.8 arc sec	100 TPI screws with brass sleeves
VL-OM-60	60 mm	±7	Sensitivity: 3.8 arc sec	100 TPI screws with brass sleeves
VL-OM-70	70 mm	±7	Sensitivity: 3.8 arc sec	100 TPI screws with brass sleeves
VL-GM-25	25.4 mm	±5	Sensitivity: 3.8 arc sec	Coplanar adj. (no beam shift), thickened plates
VL-GM-50	50 mm	±5	Sensitivity: 3.8 arc sec	Coplanar adj. (no beam shift), thickened plates

## Structural Diagram

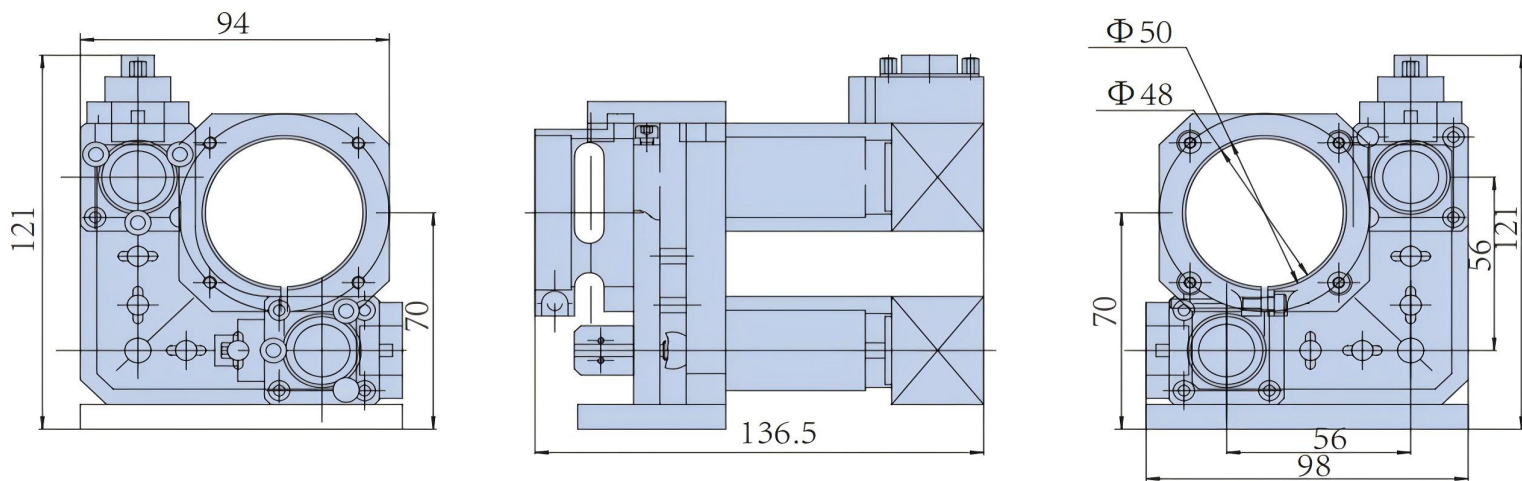
VL-EMM-G-100-A



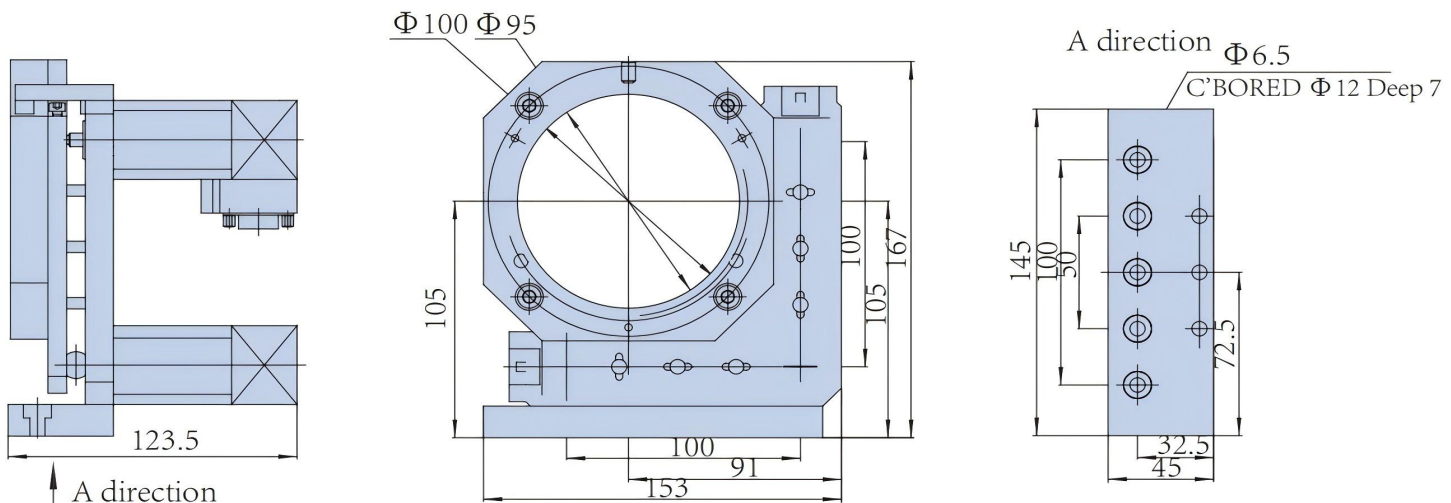
VL-EMM-G-25



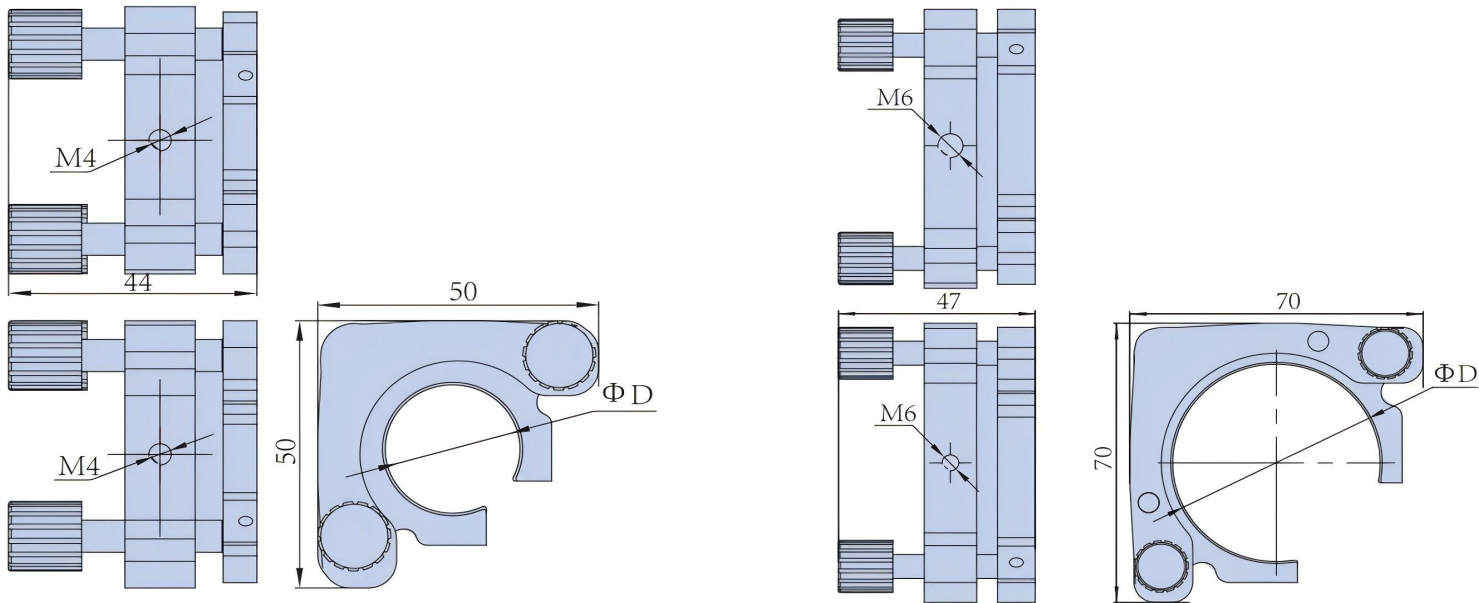
VL-EMM-G-50



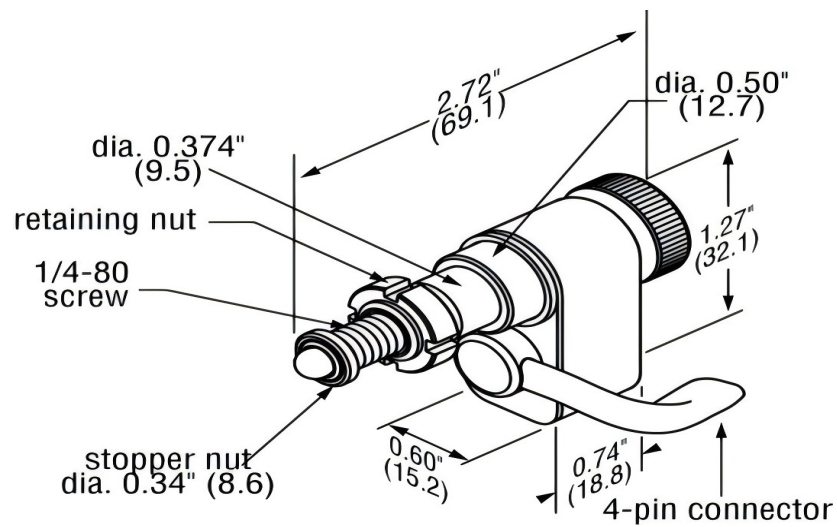
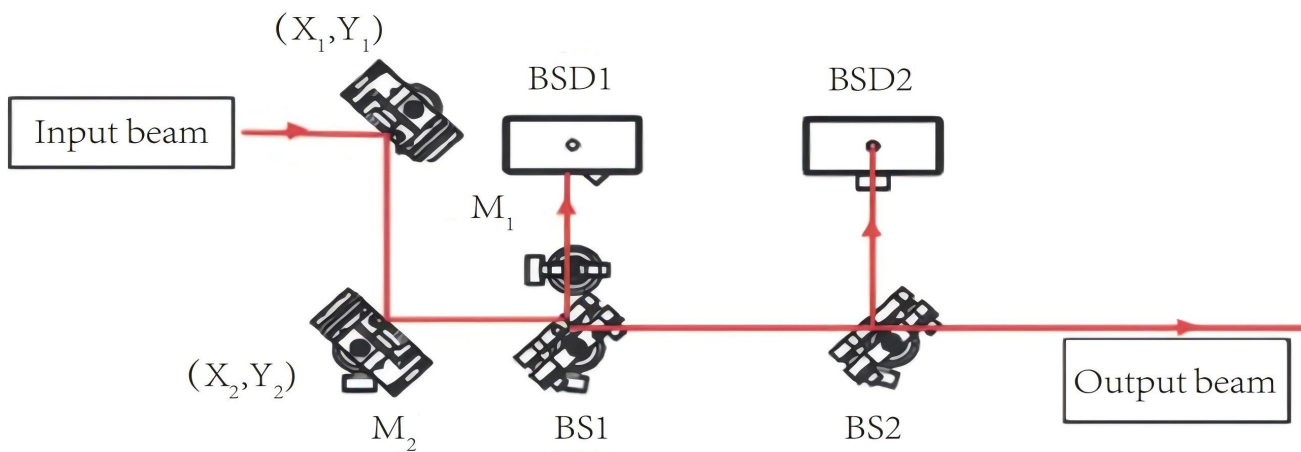
VL-EMM-G-100-B



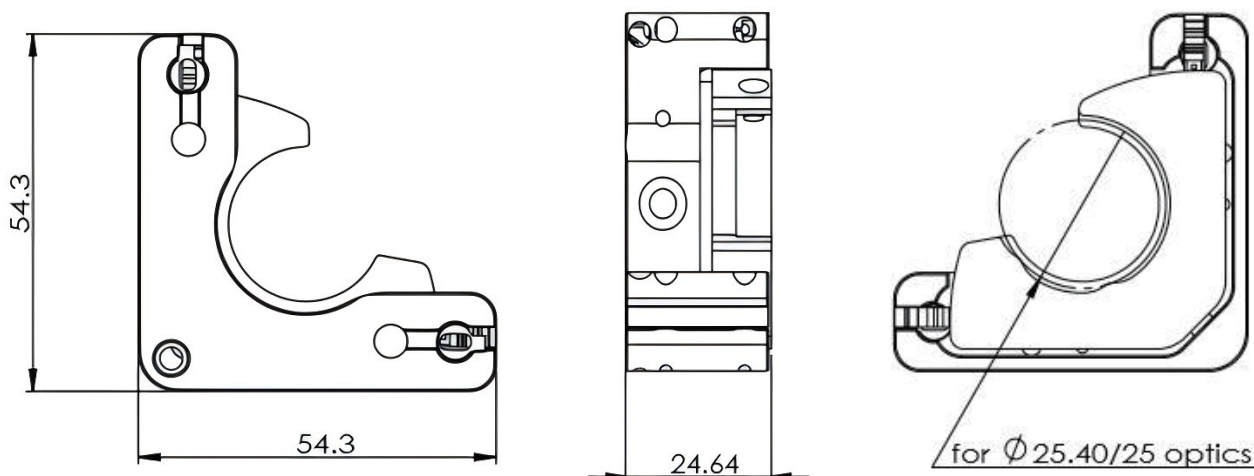
VL-Electric Mirror Mount K ( VL-EMM-K-20, VL-EMM-K-25, VL-EMM-K-30, VL-EMM-K-38, VL-EMM-K-40, VL-EMM-K-50 )



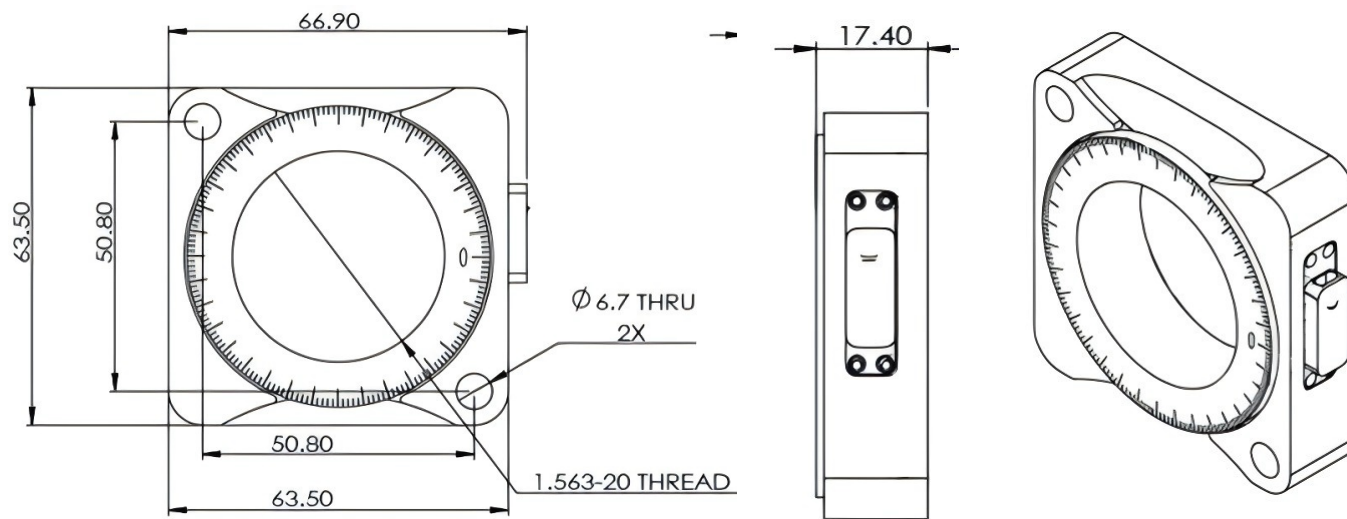
VL-NA-STD, VL-NA-VAC



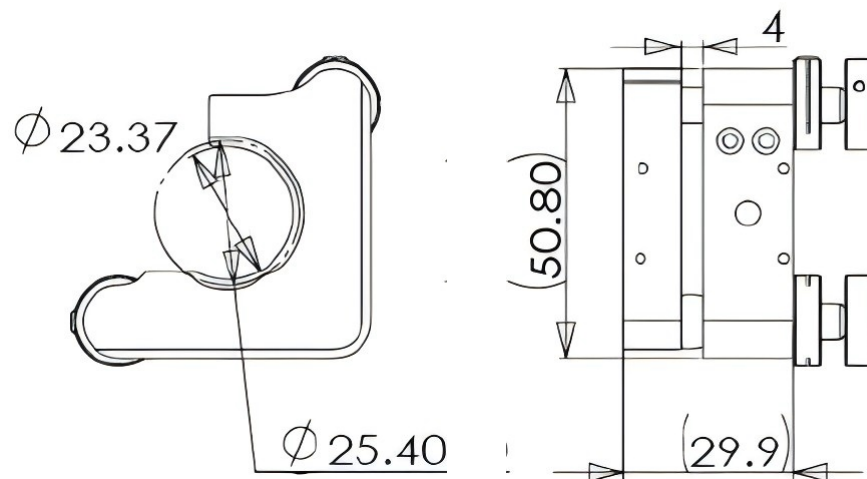
VL-PM-25



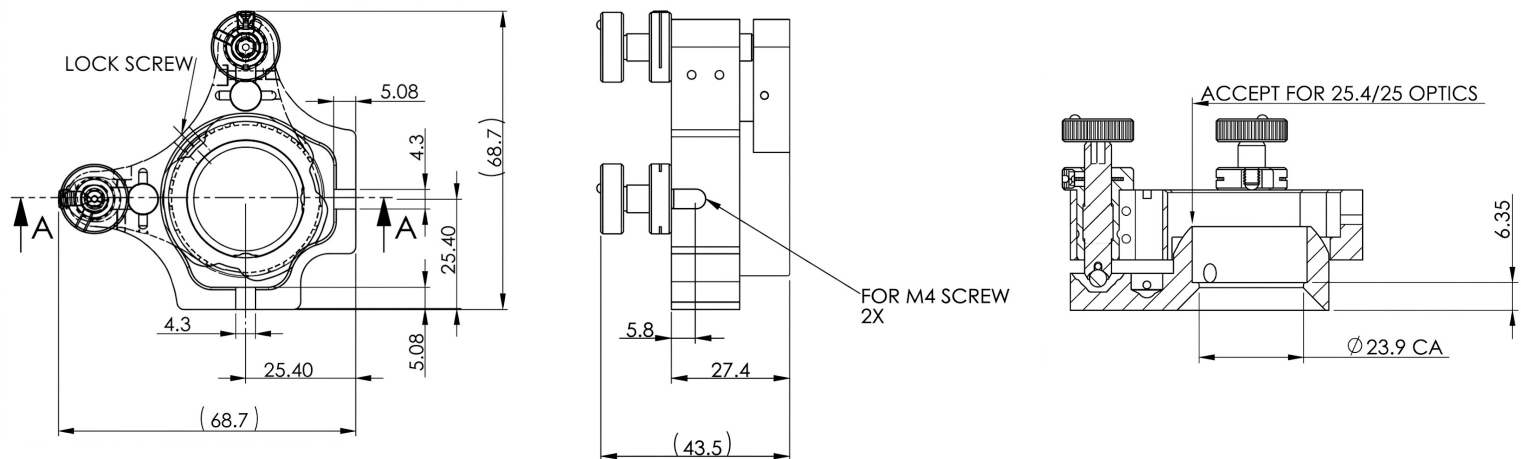
## VL-PRM-25



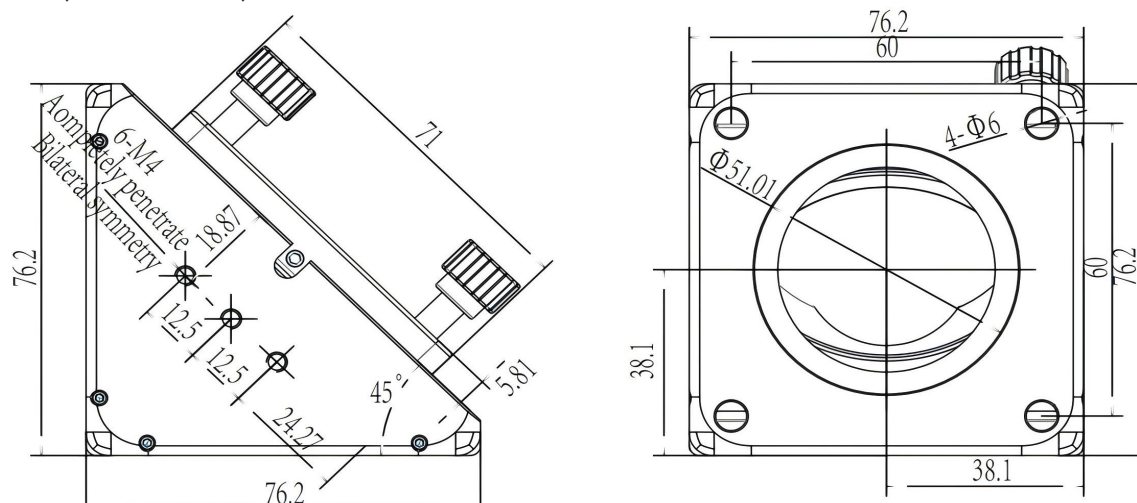
## VL-OM-25, VL-OM-30, VL-OM-50, VL-OM-60, VL-OM-70

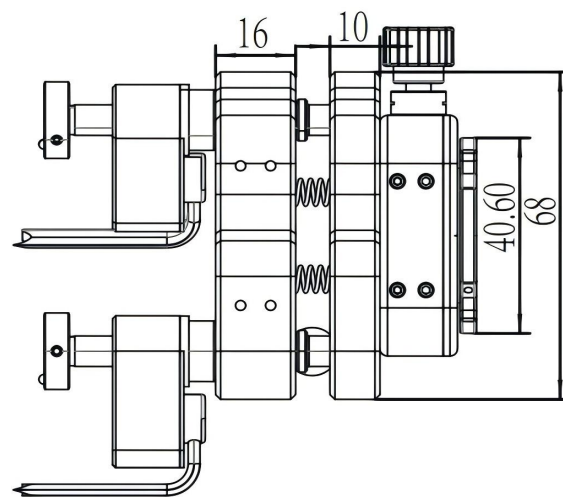
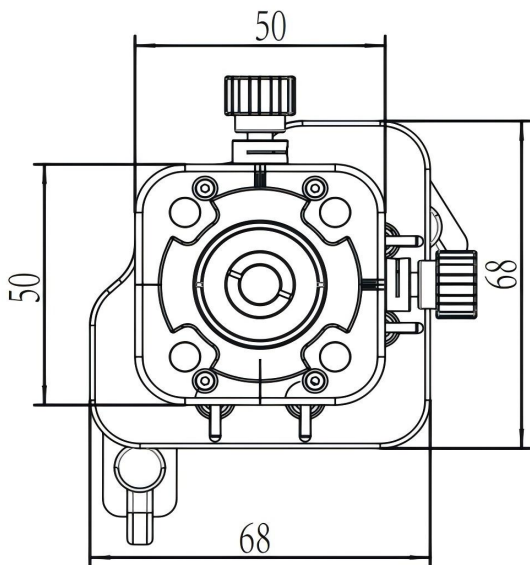
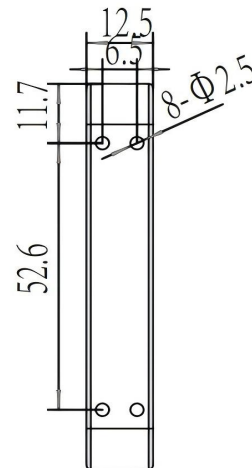
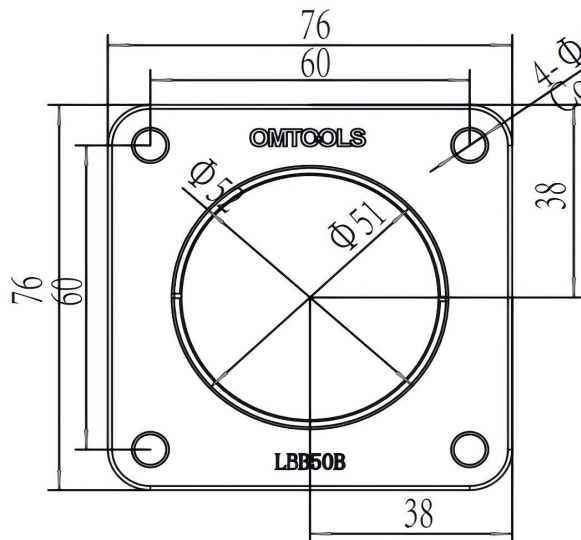
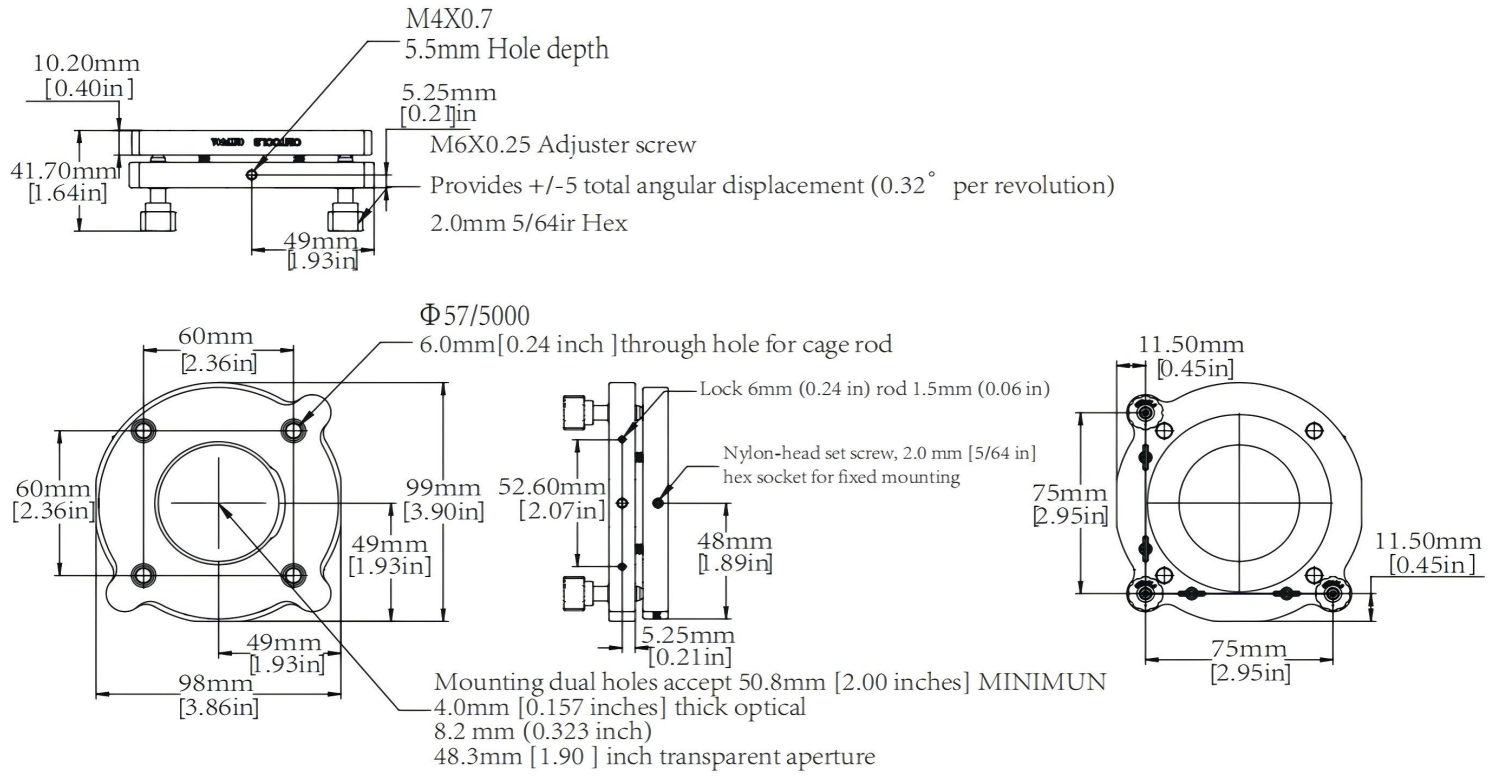


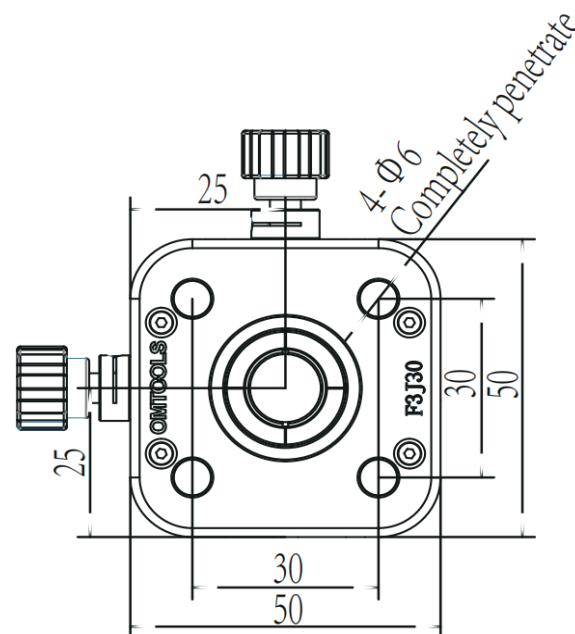
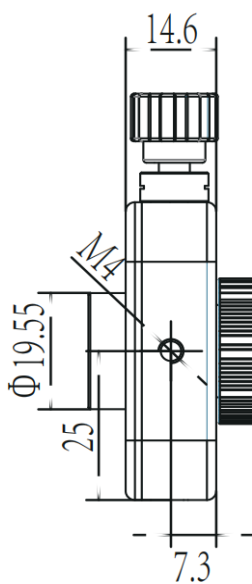
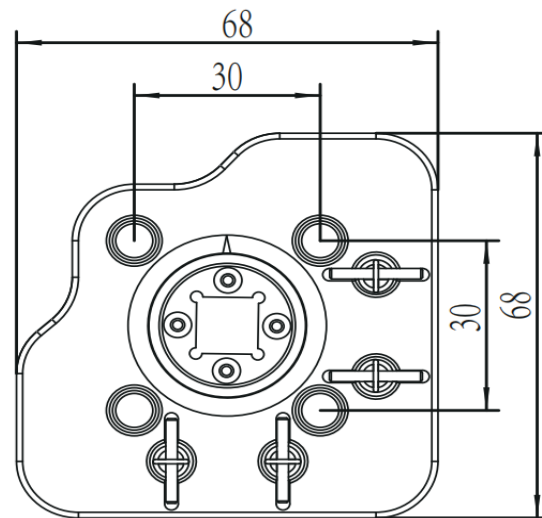
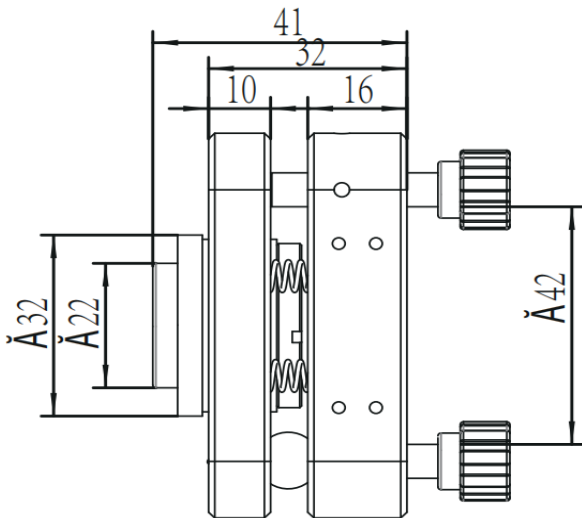
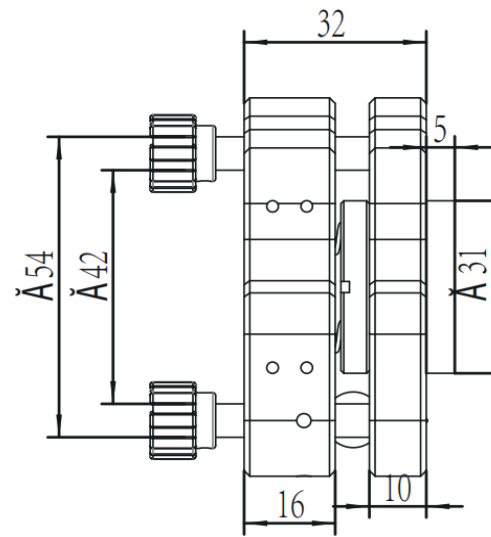
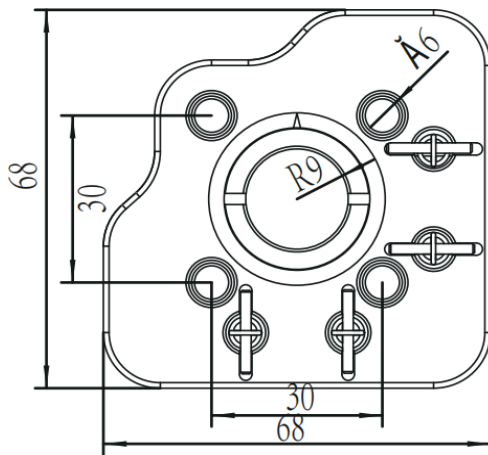
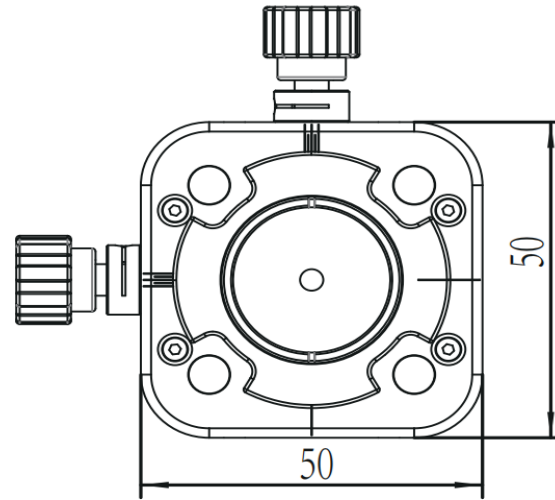
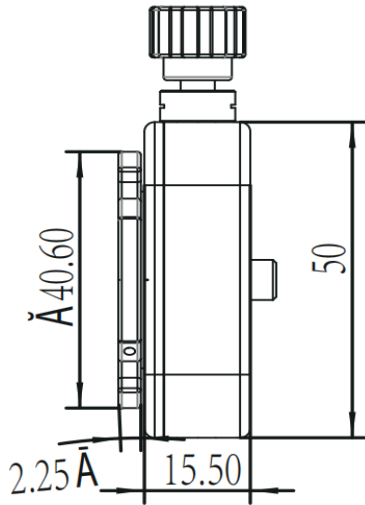
## VL-GM-25, VL-GM-50



## VL-PM-12, VL-PM-25, VL-PM-50, VL-PM-SM2







## 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/ilt Range	Tilt Range	Mechanism	Resolution	Optic Size
VL-EMM-G-25	± 2°	Precision Screw	0.002°	Ø 25.4 mm (1")
VL-EMM-G-100-A	±3°	Heavy Duty Drive	0.001°	Ø 100 mm (4")
VL-EMM-K-25	±4°	Kinematic Screw	0.002°	Ø 25.4 mm (1")

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

Let us help you move science forward—faster and smarter.

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