

SLIT LAMP Z STEPPER

HIGH-PRECISION VERTICAL ADJUSTMENT COMPONENT • TECHNICAL SPECIFICATION

Unmatched Precision and Reliability: Engineered to provide micrometer-grade accuracy, this premium Z stepper mechanism allows seamless vertical positioning adjustments for standard slit lamp bases. Constructed from hard-anodized aluminum alloy and stainless steel, it guarantees extreme durability and smooth manual operation within intensive clinical environments.

CORE FUNCTIONAL OVERVIEW

The Slit Lamp Z Stepper serves as the foundational positional component integrated directly onto ophthalmic slit lamp bases. It features a mechanical stepper alignment driven by an ergonomic knurled grip rotation system. This allows precise vertical adjustments for optimized alignment during comprehensive anterior and posterior segment microscopy. Designed with universal mounting compatibility, it interfaces effortlessly with standard base diameters up to approximately 8 cm.

COMPONENT MATERIAL & MECHANICAL SPECIFICATIONS

Equipment Type	Z Stepper for Slit Lamp Microscope
Material Composition	Premium Aluminum Alloy & Stainless Steel Base Components
Surface Finish / Treatment	Smooth Anodized Coating with Satin / Polished Accents
Movement Precision	Micrometer Grade Precision for micro-fine vertical positioning
Mounting Compatibility	Universal interface; fits standard bases up to approx. Ø 8 cm
Physical Dimensions (L x W x H)	Approximately 19 x 8 x 6 Centimeters (cm)
Net Weight	Approx. 350 Grams (g)
Adjustment Handle Type	Knurled textured grip for slip-resistant manual rotation
Operational Environment	Clinical Consultation Rooms, Ophthalmic Diagnostics, and Hospitals
Sterilization Compatibility	Yes (Compatible with standard surface disinfection and sanitation protocols)
Instrument Properties	Reusable, Non-Portable, Non-Rechargeable, Fixed Mechanical Frame
Manufacturing Structure	OEM / ODM Support Available

ASSOCIATED SYSTEM SPECIFICATIONS (SUPPORTED SLIT LAMP HOST)

This Z Stepper is mechanically optimized to work alongside high-performance Galilean microscope systems displaying the following operating characteristics:

Microscope Architecture	Galilean Type Host Systems
Optical Magnification Steps	3-Step Rotating Barrel (10X, 16X, 25X)
Standard Eyepiece Package	Wide Field 12.5X (Supports alternative 15X options)
Interpupillary Distance (IPD)	Adjustable range between 48.5 mm and 80.0 mm
Dioptric Correction Range	± 6 D
Slit Apertures & Controls	Ø 0.2, 5, 8, 10, 12 mm & Infinitely Variable Wedge Diaphragm (0-14 mm continuous)
Slit Rotation Sweep	0° to 180° continuous positioning
Diagnostic Filters Built-in	Cobalt Blue, Red-Free (Green), Heat-Absorbing Modules
Host System Base Weight	Accommodates heavy-duty systems up to 25.0 Kg

KEY PERFORMANCE FEATURES

- **Corrosion Resistant:** The specialized anodized coat protects parts from rusting in demanding clinical conditions.
- **Universal Framework:** Pre-drilled and sized to sit cleanly on standard medical mounts without extensive customization.
- **Low Maintenance:** Extremely easy to sanitize, requiring no intense grease packs or deep mechanical teardowns.
- **Ergonomic Knurling:** Ensures stable tactical response for clinicians during high-magnification targeting.

STANDARD SYSTEM ACCESSORIES

When ordered as part of a fully integrated base assembly kit, the standard packaging includes:

- 15X Matched Eyepiece Sets
- Impact-Resistant Plastic Breath Shield
- Anti-Static Protective Dust Cover
- Ophthalmic Target Testing Rod
- Replacement High-Capacity Fuses

FREQUENTLY ASKED QUESTIONS (FAQ)

Q: How do I install the slit lamp Z stepper onto my existing slit lamp base?

A: The Z stepper features a universal mounting design, making it compatible with most standard slit lamp bases of approximately 8 cm diameter. Simply align the stepper with your base platform, secure it tightly according to your device's mounting points, and verify smooth vertical movement before diagnostic use.

Q: What specific benefits does the micrometer-grade precision provide during ophthalmic diagnostics?

A: Micrometer-grade precision enables extraordinarily fine, incremental vertical adjustments. This is crucial for keeping the slit lamp accurately focused during highly detailed eye examinations. It prevents visual drift, optimizes image clarity, and enhances overall workflow efficiency for the clinician.

Q: When should the Z stepper be cleaned, and what is the recommended sanitization process?

A: It is advisable to clean the Z stepper regularly, preferably after each clinical shift or patient session. Use a soft lint-free cloth moistened with a gentle, non-corrosive medical disinfectant. Ensure all surfaces are fully dry before operation. Its smooth anodized finish allows for swift maintenance.

Q: How does the corrosion-resistant finish enhance the lifespan of the Z stepper?

A: The satin/polished anodized treatment acts as a robust protective layer against oxidized pitting and rust, even in humid environments or when exposed to regular chemical wipe-downs. This preserves the internal mechanical mesh and maintains a professional appearance over years of use.

Q: What are the primary usage guidelines for optimizing height adjustment?

A: To adjust the vertical height of the slit lamp microscope, simply rotate the knurled metal handle manually. The internal structural stepper system converts this rotation into smooth vertical elevation, ensuring stable and controlled instrument tracking.