CXZ10-120 Motorized Vertical Stage, 10 mm Travel, Wedge Design

Model CXZ Series · waveqvanta.com/products/cxz10-120-motorized-vertical-stage

Compact wedge-type motorized Z stage for high-frequency vertical positioning where space is limited.



The CXZ10-120 is a compact wedge-type motorized vertical stage for setups that need small dimensions and frequent operation. The aluminum alloy body has a black anodized finish for wear resistance and reduced stray light. Crossed-roller guides, a precision Φ8 × 2 ball screw and a two-phase stepping motor provide 10 mm of travel with ≤ ±2.5 µm repeatability.

Key features

- Wedge structure for high rigidity and an 8 kg load rating
- Precision Φ8 × 2 ball screw drive
- Crossed-roller guides for smooth vertical translation
- 0.25 µm resolution at 20 microsteps; repeatability ≤ ±2.5 µm, backlash ≤ 5 µm
- Black anodized aluminum body for wear resistance and low stray light
- Built-in limit (2) and origin (1) sensors; DB9 connector with 0.2 m high-flex cable

Specifications

Model	CXZ10-120
Travel Range	10 mm
Table Size	120 × 120 mm
Drive	Ball screw Φ8 × 2
Guide	Crossed-roller guides
Body	Black anodized aluminum alloy
Weight	2.6 kg
Resolution (Full / Half Step)	5 / 2.5 µm
Resolution (20 Microsteps)	0.25 µm
Max Speed	10 mm/s (zero load, motor at 600 rpm)
Repeatability	≤ ±2.5 µm
Backlash	≤ 5 µm
Static Parallelism	≤ 0.1 mm
Dynamic Straightness	≤ 30 µm
Motor	Two-phase stepping motor, 1.8° step angle
Motor Current	1.7 A
Motor Torque	456 mN·m
Connector	DB9 (pin)
Connection Cable	High-flex cable, 0.2 m
Limit Sensors	2 × built-in
Origin Sensor	1 × built-in
Sensor Supply	DC 5–24 V ±10%
Sensor Output	NPN open collector, DC 5–24 V, ≤ 8 mA; residual voltage ≤ 0.3 V at 2 mA

Output Logic	ON when sensor is blocked
Max Load (Horizontal Direction)	8 kg

Typical applications

- Compact vertical positioning in optical setups
- Automated instruments with limited installation space
- High-repetition Z adjustment in production equipment
- Sample height and focus adjustment