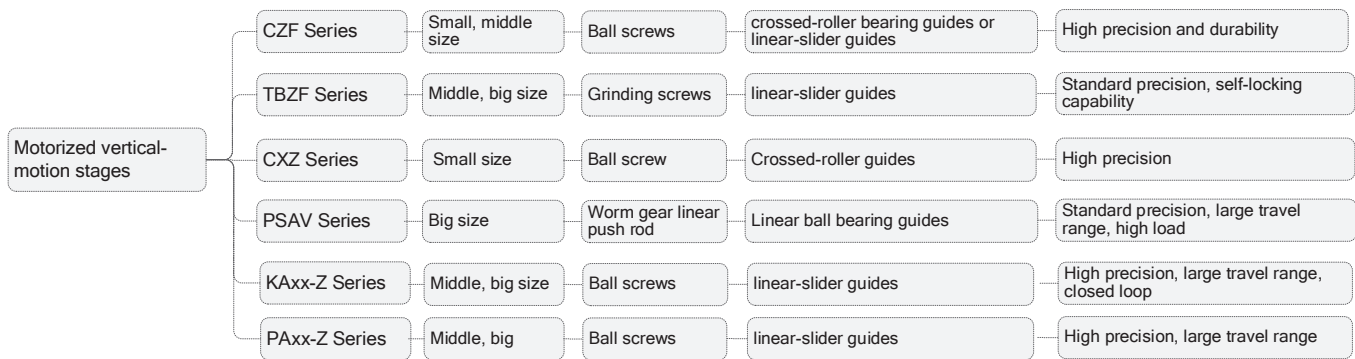
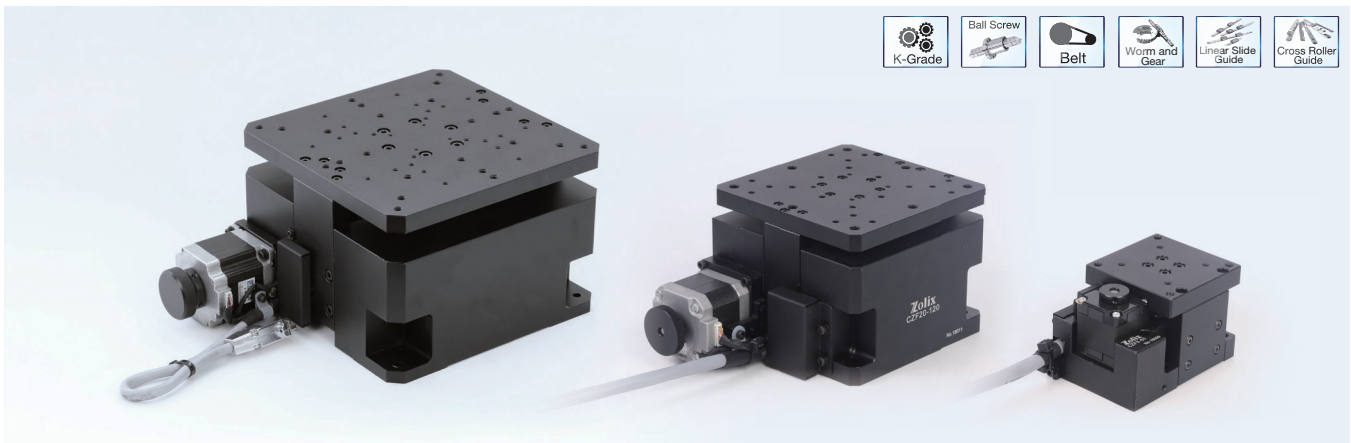


Motorized Vertical-Motion Stages



CZF Series High Precision Motorized Vertical-Motion Stages

FAstage



Description:

CZF series products are precise motorized vertical-motion stages designed and manufactured by Zolix to meet the requirements of applications with high-precision and high repeated operation rate. The materials of main body are hard black anodic-oxidation aluminum alloys which ensure higher durability and offers nice appearance. This series stages present higher motion precision which benefits from employed linear-slider(or cross-roller) guides feature high strength, high loading capacity and excellent durability. This series products are ideal for being integrated in automation equipment or instruments which have strict requirements of space, size and weight. They are also very suitable to be employed with on-site production lines which operate in a short-travel range requiring higher repetition rate.

Features:

- Ball screws with high quality stepping motors to provide higher resolution and positioning accuracy.
- High strength, heavy load capacity and high durability are offered by linear-slider or crossed-roller bearing guides.
- Fine-grinding techniques are used on the treatment of installation surface of guides to ensure high motion accuracy.
- Three sensors(two for position-limit and one for origin point) works with high flexible cable. Modular cable units make maintenance easier

Naming rules:

CZF 8-60 (-ST528)

Series code:
CZF: High precision,
Ball screws,
Linear slider guides or
crossed-roller
Bearing guides.

Travel range:
8:8mm
20:20mm
40:40mm

Motor type:
Default: two-phase stepping motors
ST528:five-phase 28 stepping motors

Dimension of table(mm):
60:60×60
120:120×120
200:200×200

Selection chart:

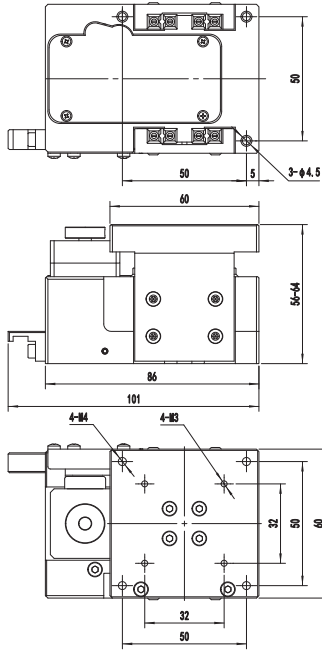
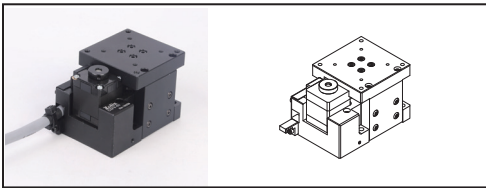
| Model | CZF8-60** | CZF20-120 | CZF40-200 | |
|----------------------------------|---|--|----------------------------------|----------------------------------|
| Mechanical specifications | Travel range(mm) | 8 | 20 | 40 |
| | Stage surface size(mm) | 60×60 | 120×120 | 200×200 |
| | Ball screws | φ 6, 1mm lead | φ 12, 5mm lead | φ 16, 10mm lead |
| | Transmission mechanism | Timing belt | worm gear and worm | |
| | Transmission ratio | 1: 1 | 80: 1 | 120: 1 |
| | Travel range with one rotation of motor(mm) | 1 | 0.0625 | ≈0.083 |
| | Material of worm gear | / | Wear-resistant tin bronze | |
| | Material and process technology of worm | / | Steel, high frequency quenched | |
| | Guide | crossed-roller bearing guides | linear-slider guides | |
| | Main body material, surface treatment | Black anodized aluminum alloy | | |
| | Shaft coupling | / | 19-5-5 | 30-6.35-6.35 |
| Weight(Kg) | 1 | 4.2 | 12.5 | |
| Accuracy specifications | Resolution(step/half-step)(μm) | 5/2.5 | ≈0.31/0.155 | ≈0.42/0.21 |
| | 8-fine-subdivision resolution(μm) | 0.625 | ≈0.039 | ≈0.052 |
| | Highest speed(mm/s)* | 5 | 0.625 | 0.833 |
| | Repositioning accuracy(μm) | ≤ ±3 | ≤ ±2 | |
| | Zero-load Backlash(μm) | / | ≤15 | ≤15 |
| | Static parallelism(mm) | ≤0.1 | ≤0.1 | ≤0.12 |
| Electrical specifications | Motor and its stepping angle(°) | Two phase 28 stepping motor, 1.8 | Two phase 42 stepping motor, 1.8 | Two phase 57 stepping motor, 1.8 |
| | Brand and model number of motor | Shinano, STP-28D1003-1504 | Shinano, SST43D2126-10 | Shinano, SST59D3206 |
| | Working current(A) | 1.5 | 1.7 | 2.8 |
| | Motor torque(N-m) | 0.0785 | 0.456 | 1.44 |
| | Brand and model of stepping driver | Moons, SR2 | | Moons, SR4 |
| | Type of plug for stage | DB9(pin) | | |
| | Type of cable for stage | High flexibility cable(Helukabel, Germany) | | |
| | Length of connection cable(m) | 0.2 | | |
| | Position-limit sensors(built-in) | 2× GP1S09xHCPI(JAPAN SHARP) | | |
| | Origin-point sensors(built-in) | 1× GP1S09xHCPI(JAPAN SHARP) | | |
| | Voltage of power supply for sensors(V) | DC5 ~ 24V±10% | | |
| | Current consumption(mA) | <60(total) | | |
| | Sensor Control output | NPN open collector output DC5 ~ 24V 8mA or less Residual voltage 0.3V or less(when load current is 2mA) | | |
| Status of output ports | Output ON when sensor is blocked | | | |
| Maximum load capacity | Horizontal direction(Kg) | 4 | 20 | 30 |

*Note: Highest speed is measured under zero-load conditions with the motor running at 600 RPM.

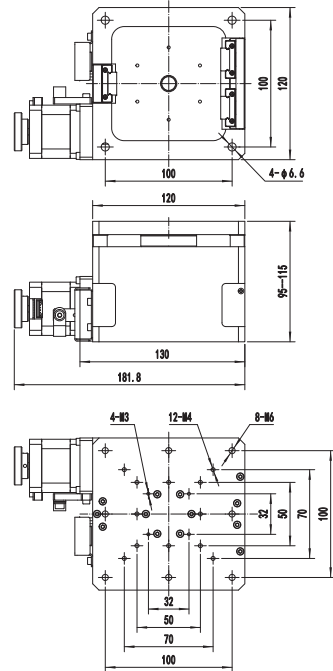
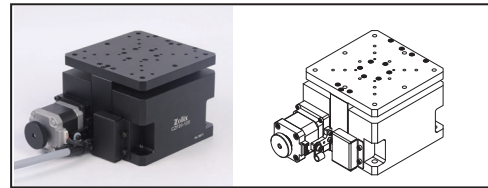
**Note: No self-locking function after power off.

Dimensions:

CZF8-60



CZF20-120



CZF40-200

