**Precision Linear Stage**

500 MM TRAVEL WITH HIGH GUIDING ACCURACY

**M-417**

- High duty cycles and velocity to 100 mm/s
- Low crosstalk, ±100 µrad over the entire travel range
- Efficient ActiveDrive DC servo motor
- Direction-sensing reference point switch

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**Precision-class linear translation stage**

Recirculating ball bearings for high guiding accuracy and load capacity. Precision ball screws with 2 mm thread pitch. Stress-relieved aluminum base for highest stability.

**Drive types and position metrology**

ActiveDrive DC motor for high velocity: The motor is controlled via PWM signals, the operating voltage is obtained with an amplifier integrated in the motor case.

**Noncontact limit switches. Noncontact direction-sensing reference point switches in the middle of the travel range. Incremental rotary encoder, mounted to motor shaft**

**Fields of application**

Precision positioning for science and industry, high duty-cycles.
**Preliminary data M-417.2PD**

**Motion and positioning**
- Travel range: 500 mm
- Integrated sensor: Rotary encoder
- Sensor resolution: 4000 cts./rev.
- Design resolution: 0.5 µm
- Min. incremental motion: 0.5 µm
- Unidirectional repeatability: 0.5 µm
- Backlash: 2 µm
- Crosstalk, angular error: ±100 µrad
- Max. velocity: 100 mm/s

**Mechanical properties**
- Thread pitch: 2 mm
- Gear ratio: –
- Max. load: 500 N
- Max. push / pull force: 200 N
- Max. lateral force: 200 N

**Drive properties**
- Motor type: DC motor with PWM control
- Operating voltage: 24 (PWM) V
- Motor power: 70 W
- Reference point and limit switches: Hall-effect

**Miscellaneous**
- Operating temperature range: -20 to 65 °C
- Material: Aluminum, steel
- Mass: 10.5 kg
- Connector: Sub-D 15-pin, 3 m cable incl.
- Recommended controller/driver: C-863 (single-axis), C-884 (up to 4 axes)

Ask about custom designs!

**M-417, dimensions in mm**

Mounting platform for M-417, removable