Stepper-Motor Drives

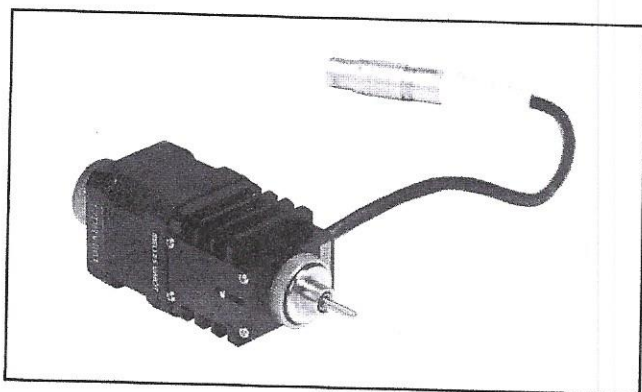## QuickInstall Stepper-Motor Drive

The 17 DRV 001 QuickInstall stepper-motor drive is one of a series of precision actuators which are easy to install and remove without tools. A captive retaining ring and a precision mounting surface allow the drive to be secured to mating interfaces such as those on the 17 MAX 300 and 600 flexure stages. Details of the interface are shown in the accompanying technical note. The 17 DRV 001 stands apart from other stepper-motor drives because of its 20-kg load capacity and 50-nm resolution. The 17 BSC-series of stepper motor controllers can be used to operate this stepper-motor drive (go to pages 29.14-29.15).

- 8 mm of travel with 50-nm resolution
- Interchangeable with QuickInstall thumbscrew, differential, and piezoelectric actuators
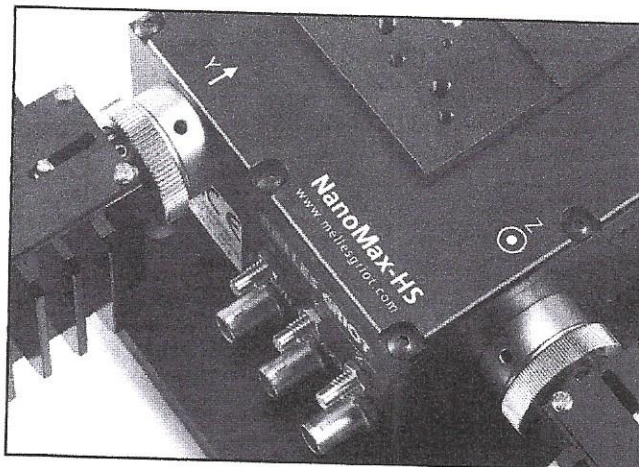- High load capacity up to 20 kg (44 lb)

SPECIFICATIONS:
QuickInstall STEPPER-MOTOR DRIVE

Maximum Speed: 4 mm/second
Bidirectional Repeatability: 2 μm
Resolution: 50 nm
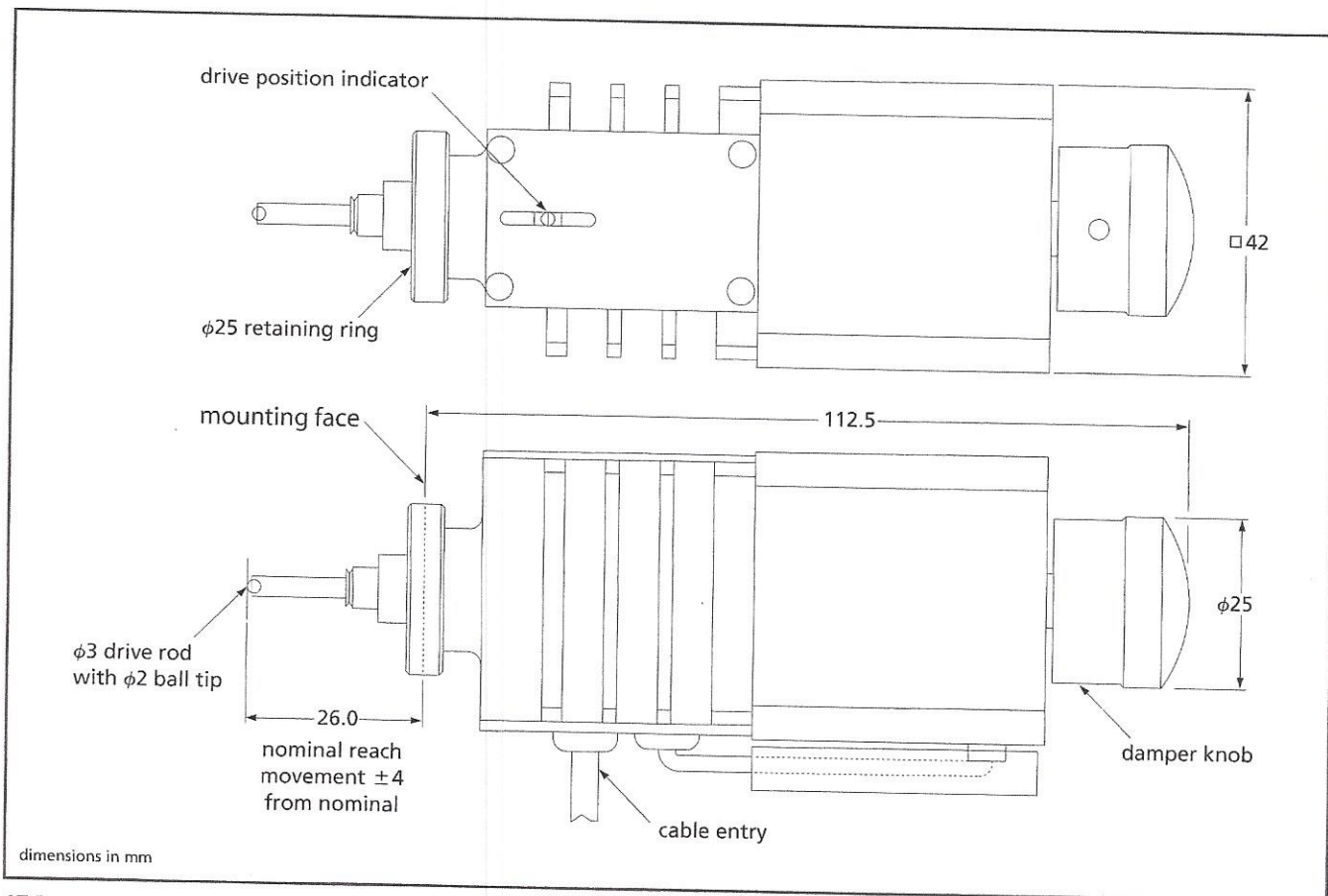Travel: 8 mm
Load Capacity: 20 kg (44 lb)

The QuickInstall stepper-motor drive is made to mount directly to the 17 MAX-series flexure stages.

17 DRV 001 stepper-motor drive

QuickInstall Stepper-Motor Drive

	PRODUCT NUMBER
QuickInstall Stepper-Motor Drive	17 DRV 001

drive position indicator

φ25 retaining ring

mounting face

112.5

□42

φ3 drive rod
with φ2 ball tip

26.0

nominal reach
movement ±4
from nominal

cable entry

φ25

damper knob

dimensions in mm

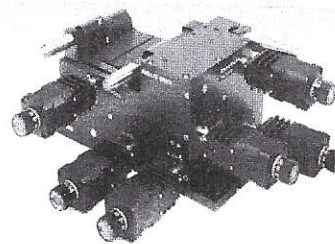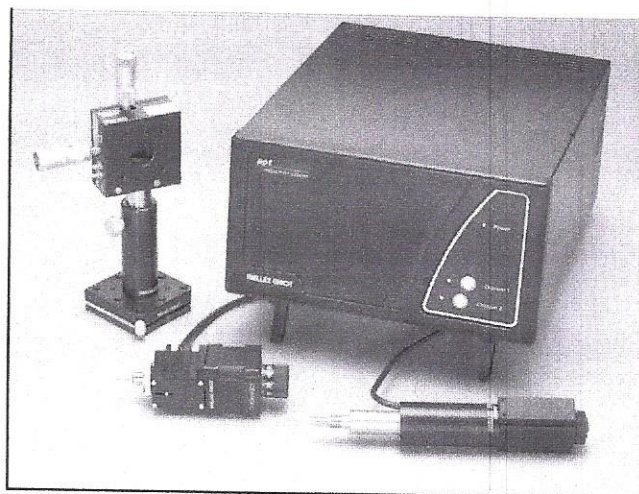**17 DRV 001 Quickinstall stepper-motor drive**

Do you need . . .

FLEXURE STAGES

The 17 DRV 001 stepper-motor drive is designed for use with the
17 MAX 300 or 17 MAX 600 flexure stages.

- 50-nm resolution
- 4-mm travel in all axes
- Speeds up to 4 mm/sec

Precision Positioning Stages

High Resolution Positioning Stages

Actuators and Controllers

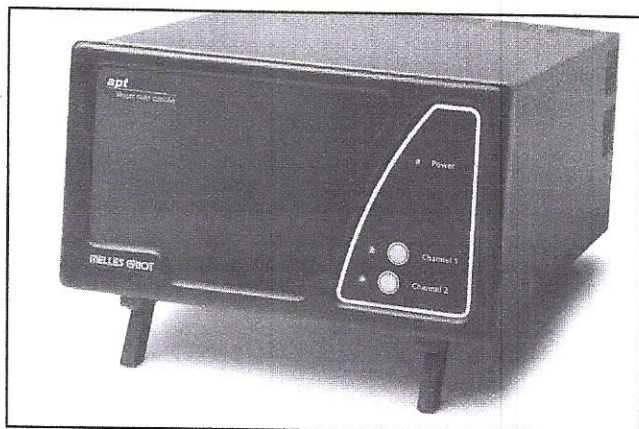**Fiber Alignment Accessories**

Motion Controllers

USB Stepper-Motor Controllers

This USB stepper-motor controller is exceptionally easy to set up and run. It uses the latest high-speed digital signal processing technology and low-noise analog electronics to drive up to two axes of motion. Connecting one or more units via a standard USB hub can drive additional axes.

These 17 BSC-series controllers use an intuitive graphical user interface, which provides access to all motion-control features and self-diagnostics. Advanced software functions include both internal and external triggering, as well as automatic positioning-error compensation. Custom programming can be implemented via Visual Basic® which resides in Microsoft Excel®. All user inputs and outputs are digitally and optically isolated for nongalvanic connection.

A key feature of this controller is its open architecture, both in terms of its software and hardware. This means it can be upgraded in the future to meet changing requirements and that it can be used with encoded hardware.

- Bipolar synchronous control
- Dynamic step-resolution control
- Optically isolated input/output
- 25,600 microsteps maximum per revolution
- Includes software with ActiveX® programmable interface

SPECIFICATIONS:
USB STEPPER-MOTOR CONTROLLERS

Input/Output
   Motor Output Connector: 26-pin female D-type
   Command Signal Connector: 25-pin female D-Type
   Feedback: 0–10 Vdc
   Analog Inputs (two BNC): 0–10 Vdc (TTL)
   Galvanic Isolated I/O: 0–5 Vdc (TTL)
Stepping
   Cardinal Steps: 200
   Microsteps: 25,600 max
Output Power
   Average: 25 W
   Peak: 75 W
Power Input
   Voltage: 85–264 Vac
   Frequency: 47–63 Hz
   Power: 200 W
   Fuse: 3 A
Dimensions: 245 × 130 × 330 mm (9.6 × 5.1 × 13 in.)
Weight: 6 kg (13 lb)
Computer Interface and Software:
   USB Interface
   ActiveX® function library
   ActiveX® virtual-panel control

17 BSC 002 two-channel stepper-motor controller

USB Stepper-Motor Controllers

Description	PRODUCT NUMBER
1-Axis Benchtop Stepper-Motor Controller	17 BSC 001
2-Axis Benchtop Stepper-Motor Controller	17 BSC 002
Spare Stepper-Motor Drive Cable (1.5 m)	17 PAA 610
Spare Stepper-Motor Drive Cable (3 m)	17 PAA 611
Spare Stepper-Motor Drive Cable: Male D-Type to Female LEMO converter (3 m)	17 PAA 620
Spare Stepper-Motor Drive Cable: Female D-Type to Male LEMO converter (3 m)	17 PAA 621

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ActiveX® is a registered trademark of Microsoft Corporation.

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