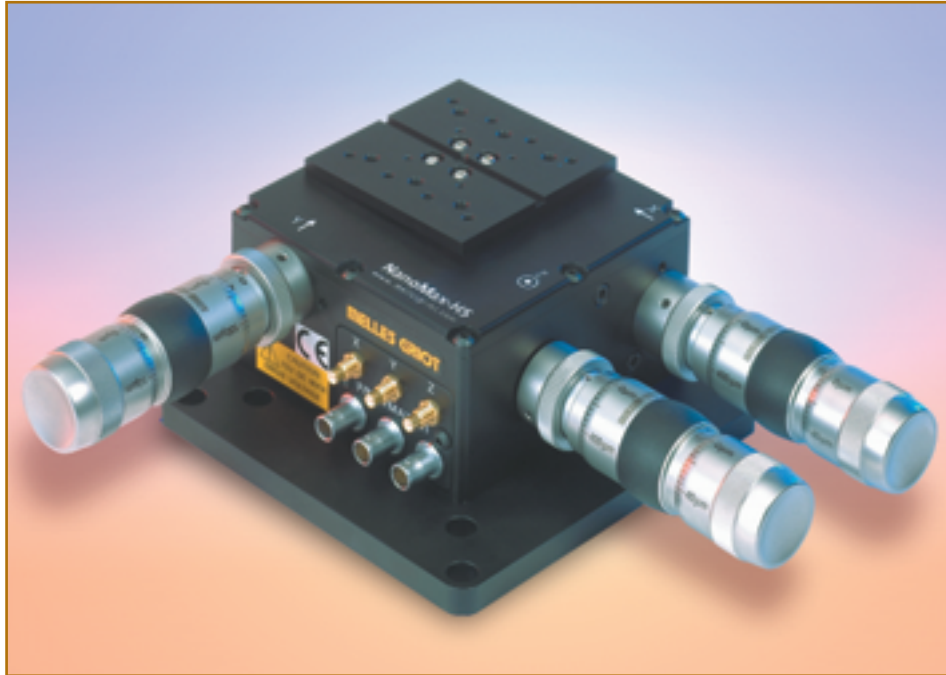


# NanoMax300-TS™

x-y-z parallel flexure stage

**17 MAX 300  
Series**



*The NanoMax-TS™ three-axis stage offers an unmatched combination of high stability and resolution from a three-axis positioner, with major improvements in performance, functionality, and robustness achieved from the patented parallel flexure design.*

*Modular actuators are easily and quickly fitted to the stage at ergonomically sited locations. Stepper motor, manual differential micrometer, manual differential, and thumbscrew drives are all available. Any combination of these drives can be used on any axis of the stage.*

*Rapid, ultra-high precision motion can be achieved by combining long-travel actuators with either internal or external piezoelectric actuators.*

## **Features**

- ▶ 75-mm optical axis height
- ▶ Open- and closed-loop piezoelectric actuators
- ▶ Modular drives
- ▶ No friction or stiction
- ▶ Ultimate stability and stiffness

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## Specifications:

### Travel:

**Fine thread:** 4 mm (x, y, z)

**Piezo actuator:** 20  $\mu\text{m}$  (x, y, z)

**RMS repeatability:** 15 nm

**Piezoelectric pushing force:** 250 N maximum

**Load capacity:** 1 kg

**Resonant frequency ( $f_0$ :  $\pm 10\%$  Hz):**

**No load:** 375 Hz

**275 g:** 200 Hz

**575 g:** 150 Hz

**Total arcuate displacement:** 80  $\mu\text{m}$

**Vacuum compatibility:**  $>10^{-4}$  Pa maximum

**Piezoelectric drive voltage:** 0–75 Vdc

**Weight:** 1 kg

**Platform size:** 60 mm  $\times$  60 mm

### Resolution:

**Fine thread:** 1  $\mu\text{m}$  (x, y, z)

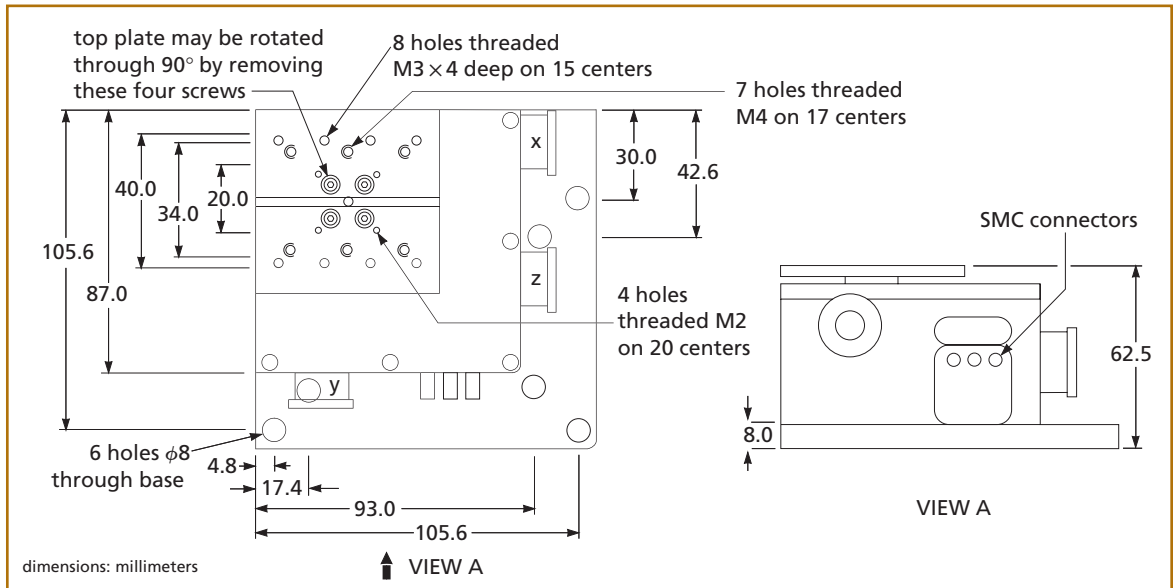
**Differential:** 50 nm (x, y, z)

**Piezo actuator:** 20 nm (x, y, z)

**Piezo actuator with feedback:** 5 nm (x, y, z)

## Ordering Information

Three-Axis Flexure Stage with Active Position Feedback on All Axes	17 MAX 301
Three-Axis Flexure Stage without Position Feedback	17 MAX 302
NanoMax 3-Axis Stage without Piezoelectric Actuators	17 MAX 303
Stepper Motor Drive Module	17 DRV 001
Differential Micrometer Drive Module	17 DRV 002
Thumbscrew Drive Module	17 DRV 004
Mounting Plate to Fix 17 MAX 300 Series Stages to 17 NST Series Long-Travel Stages (125-mm Optical Axis Height)	17 AMA 555
Spacer Block to Raise Optical-Axis Height to 125-mm	17 AMA 554



17 MAX 302 3-axis stage

# MELLES GRIOT

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