

1500°C High Temperature Extensometer with Adjustable Gauge-Lengths

PMA-12

The PMA Series of extensometers represents the high-end-solution of high temperature extensometers. Available are units to be used in combination with high temperature furnace, inductive heating system or high temperature inert gas / vacuum systems.

The PMA-12 extensometers are designed to be used with high temperature furnaces for application at temperatures up to 1500°C in air with automatic recognition of feeler contact with specimen.

This unique extensometer is available in two versions:

- Manual actuated version
- Motorized version

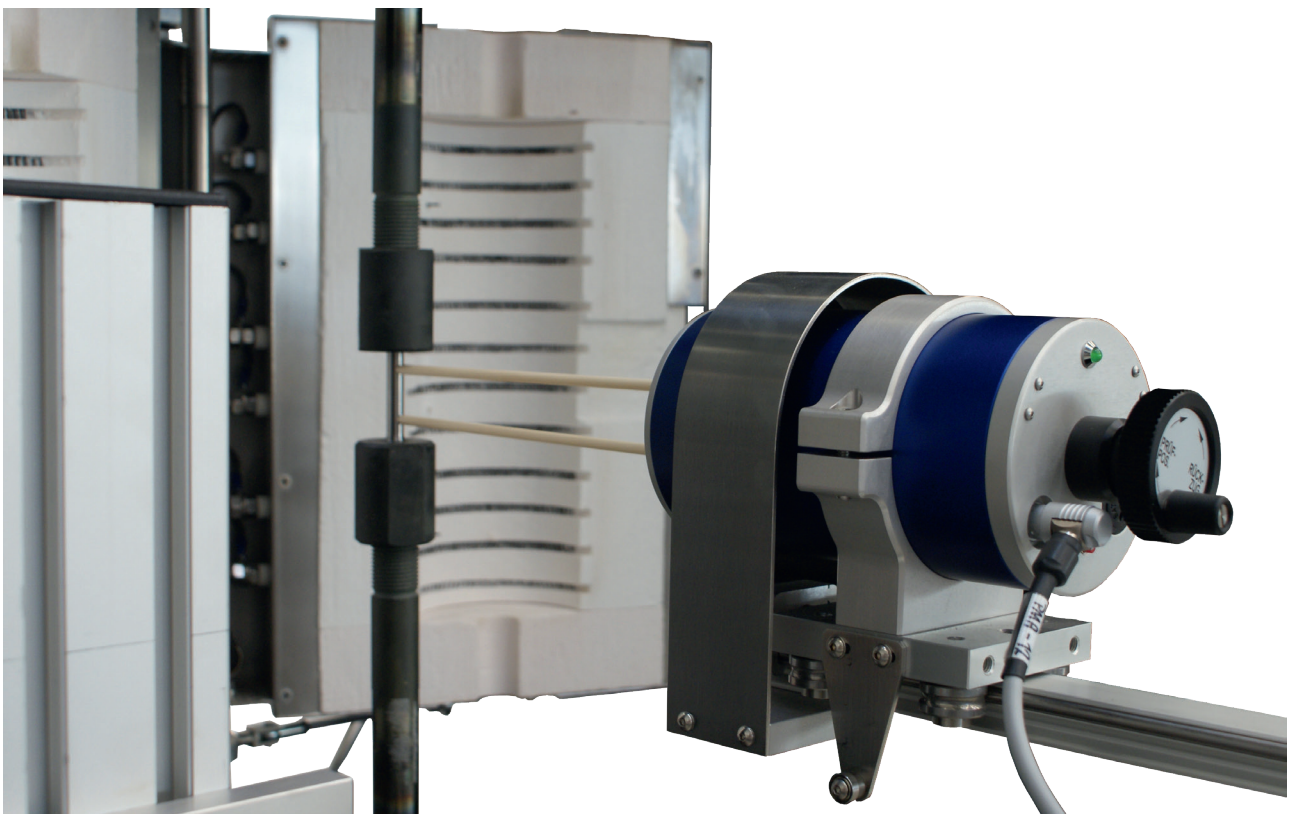
The application range of both units includes:

- Tensile tests on metal
- Compression test on metal
- Compression test on ceramic materials and refractory
- Low cycle application up to 0.5 Hz

PMA-12/1 Manual Actuated Version

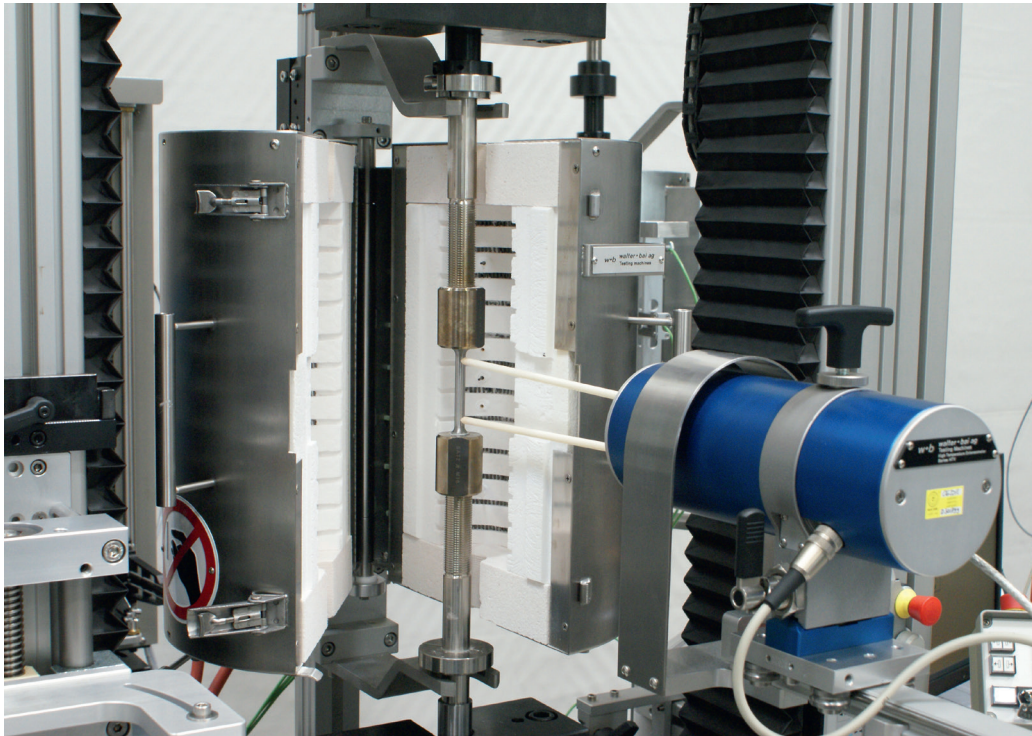
The unit features a plug-in module for stylus approach control to the surface of the specimen with automatic recognition of contact with the specimen and with automatic stopping when adequate contact force has been generated at the specimen (module installed to the temperature controller's electrical cabinet).

The sensor arms (at right angles to the specimen's lengthwise axis), set at L0, are hanging freely. An inner centring device serves to ensure the set distance of the sensor arms in relation to one another when the adjustment wheel is turned until the mechanics moves to the rear stop. As soon as the sensor arms contact the surface by further turning the adjustment wheel, the L0 fixing is automatically released, and the measurement system is released mechanically. This extensometer possesses a measuring travel of ± 10 mm and adjustable gage length L0 from 6 to 50 mm.



PMA-12/2 Motorized Version

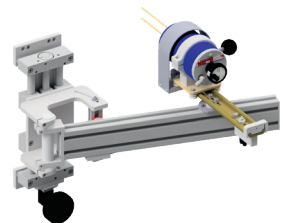
The unit features a plug-in module for stylus approach control to the surface of the specimen with automatic recognition of contact with the specimen and with automatic stopping when adequate contact force has been generated at the specimen (module installed to the temperature controller's electrical cabinet). This extensometer possesses a measuring travel of ± 10 mm and adjustable gage length L0 from 6 to 50 mm.



Extensometer Bracket (Support)

The extensometer bracket is fixed on the Testing Machine. It allows to set the horizontal height through a hand-wheel in the range of 100 mm. The extensometer with its swivel-sledge and linear-shifting unit can be swivelled into the working position where it will lock. On the linear-shifting unit, the extensometer can be moved straight to its set end position where it also lock-in. From there the stylus approach can start.

When the extensometer is not used the unit can be swivelled out of the operator zone.



Technical Data

| Type | | PMA12/1 | PMA12/2 |
|--|---------------|---------------------------------|-------------------------------|
| Temperature Range | °C | 1500 | 1500 |
| Gauge Length | mm | 6 to 50 | 6 to 50 |
| Stylus (Feeler) Approach | | Manual through adjustment wheel | Motorized |
| Measuring Range | mm | ± 10 Optional ± 15 | ± 10 Optional ± 15 |
| Measuring Accuracy | ISO 9513 | Grade 0.5 | Grade 0.5 |
| Measuring Resolution | μm | 0.1 | 0.1 |
| Max. Test Frequency (Amplitude Dependent) | Hz | 0.5 | 0.5 |
| Measuring Principle | V | Inductive (LVDT) | Inductive (LVDT) |
| Supply Voltage | kHz | 5 | 5 |
| Carrier Frequency | °C | 10 in 1 k Ω | 10 in 1 k Ω |
| Max. Environmental Temperature | N | 80 | 80 |
| Contact Force | | 0 to 3 | 0 to 3 |
| Sensor Arm materials | | AL203 or SiC | AL203 or SiC |