Shimadzu Thermo Mechanical Analyzer TMA-60M

The Shimadzu Thermo Mechanical Analyzer TMA-60 uses a unique high precision digital displacement detector to precisely measure the dimensional change of a material as a function of load and time or temperature such as expansion and contraction caused by heating and cooling. The design provides a flexible selection of the furnace unit and cooling units. All systems use a built-in fan cooling system for tests above ambient temperatures.
Temperature range is ambient to 1000°C or from -150°C with optional LTB 60 cooling option (requires liquid nitrogen)

Included in the base instrument:

- Quartz probe for expansion, differential expansion, penetration and tension
- Illuminated LCD display for temperature and signal
- Operation panel for direct access to the built-in controller
- Remote system functions
- Self-diagnostics
- Two gas connectors
- Automatic length measurement

Specifications:

Temperature range:	-150°C to 1000°C (with LTB 60 cooling option)
Heating rate:	±0.1 to ±99.9°K/min at 0.1°K intervals
Temp reproducibility:	±0.1°K
Temperature acc.:	±0.1°K
Time to cool:	<15 min down to 60 °C
Sample size:	50 mm length
TMA range:	±20 mm
TMA noise:	<0.05 µm
TMA sensitivity:	0.01 µm
Load range:	±5 N
Load sensitivity:	0.1 mN
Frequency:	0.0001 – 0.1 Hz
Atmosphere:	inert or reactive