



THERMAL SPECIMEN DEMAGNETIZER



Model TD-48

High-Capacity Dual-Chamber Thermal Demagnetizer for Geological Samples

- 96 Sample Capacity, (48 heating, 48 cooling)
- 3-Layer Seamless Magnetic Shield
- Separate Heating and Cooling Chambers
- 3 Zone Oven for Uniform Temperature
- 25 to 800°C Range

The Model TD48 Thermal Demagnetizer features a large internal diameter oven and three-row sample boat for heating up to 48 one-inch diameter or one-inch cubic geological samples in a single batch. The oven and adjacent fan-assisted cooling zone are housed in a three layer seamless magnetic shield which permits cooling of one batch while a second batch is heating. The cooling chamber has two additional shields which limit the maximum internal field to less than 10nT with the instrument oriented perpendicular to the earth's field. The oven has three independently controlled zones - a large sample zone and two small trimmer end zones - which minimize temperature gradients across the sample zone while keeping overall oven length to a minimum. The system was designed for long service life by incorporating features into the oven and sample boat that protect the internal oven wall from damage.

Optional Field Coil and Controlled Atmosphere Chamber

A controlled field coil, which surrounds the entire oven and cooling section, is available. This coil will produce an axial field of approximately 1 Gauss per ampere of applied current with a maximum capacity of 8 Gauss. We also offer a controlled atmosphere chamber which can be used with inert gas or as a vacuum chamber in order to minimize chemical alteration of samples during heating.

SPECIFICATIONS

Absolute Temp. Accuracy at thermocouple:	1°C
Max. Temp. Gradient:	10°C Total Over 16" Sample Region of Oven Chamber with Full Sample Load. 3°C Attainable with Partial Sample Load
DC Field in Heating Chamber:	Less than 25 nT (Gammas), When System is Oriented in East-West Direction
DC Field in Cooling Chamber:	Less Than 10 nT (Gammas), 2-5 nT Typical
Heating Time:	48 Specimens From 25°C to 600°C in 45 Minutes
Cooling Time:	48 Specimens From 600°C to 40°C in 25 Minutes
Power Requirements:	115 VAC, 30 AMPS (Model TD-48) or 230VAC, 15 AMPS, with supplied step-down transformer (Model TD-48EU)
Dimensions & Weight:	Oven Unit - 72" (183 cm) L x 13" (33 cm) W x 13" (33 cm) H; ≈190 lb Control Unit - 19" (48 cm) W x 15" (38 cm) D x 7" (18 cm) H: ≈25 lb