



For Information and to Order  
 Contact Us At:  
 800-574-2748 323-770-0634

sales@LRE.com Web Site: [www.LRE.com](http://www.LRE.com)

[Or Get Your Quick Quote Here](#)

## MRTP/Traditional Mechanically Refrigerated Thermal Platform Systems

Mechanically refrigerated thermal platform (MRTP) systems eliminate the need for LCO<sub>2</sub> or LN<sub>2</sub> expendable refrigerants. Thermal platforms offer the fastest, most convenient method of testing electronic components that may be heated and cooled by direct conduction. Not only do thermal plates offer much faster thermal cycling rates than environmental chambers, but cable connections, probing and tuning of the device under test is much more easily accomplished. They can be used on the floor with casters or positioned underneath a work table to save floor space.



Underbench Style



Upright Style



Underbench shown with optional dry box

Heating of the plate is provided by resistance elements and cooling by a closed-loop recirculating vapor compression mechanical refrigeration system utilizing chlorine-free zero ozone depleting refrigerant.

Several standard sizes insure quick delivery of a plate that is well suited to your test requirements. Additional standard features include precision grinding and hard plating of plate surfaces, threaded 18-8 stainless steel 1/4"-20 inserts for fixturing and a fixed set point, latching thermal overtemperature failsafe system.

Dry boxes utilizing a dry Nitrogen (GN<sub>2</sub>) or very dry air purge system allow moisture and frost free testing below dew point. Ground & plated fixturing adapter plates and our universal hold down clamping arm are quick & easy ways to attach devices to the platform.

Precision ground aluminum alloy thermal plate
Very fast heating & cooling ramp rates
RM temperature controller is standard
Three optional F4T temperature controller choices
Optional FM approved limit/alarm "product saver"
Corrosion proof 304 stainless steel chassis
2nd user device under test sensor
Ramp to set point & ramp & soak profiling feature
EIA(RS)-232/485 serial & opt. GPIB-488 interface
Surface hard plated for extremely long wear
Optional Ethernet/IP—Modbus TCP—SCPI



Optional F4T color touch panel controller



No LCO<sub>2</sub> or LN<sub>2</sub> required



## Mechanically Refrigerated Thermal Platform (MRTP) Ordering Information

### MRTP

#### Thermal Platform Size

- 1 6.75" X 6.75" (17.15 cm X 17.15 cm)
- 2 6.75" X 13.25" (17.15 cm X 33.66 cm)
- 3 6.75" X 20.00" (17.15 cm X 50.80 cm)
- 4 3.38" X 3.38" (8.58 cm X 8.58 cm)
- 5 11" X 11" (27.94 cm X 27.94 cm)
- 6 3.38" X 6.75" (8.58 cm X 17.15 cm)
- 7 10" X 15" (25.4 cm X 38.1 cm)
- 8 15" X 15" (38.1 cm X 38.1 cm)
- 9 15" X 30" (38.1 cm X 76.2 cm)
- A 14" X 18" (35.6 cm X 45.7 cm)

#### Refrigeration Plant

- 1 Single Stage (-35°C)
- 2 Dual Stage "Cascade" (-70°C)

#### Refrigeration Plant Power

- 1 115 VAC - 60 Hz – 1 phase (not available for all plate sizes)
- 2 208/240 VAC – 60 Hz – 1 phase
- 3 220/240 VAC – 50 Hz – 1 phase

#### Cabinet Configuration

- 1 Upright (39.25"/99.70cm tall not including thermal platform)
- 2 Under bench (24.5"/62.23 cm tall not including thermal platform)

#### Heat Rejection

- 1 Air-cooled condenser
- 2 Water-cooled condenser

#### Controllers

- |   |  |   |        |
|---|--|---|--------|
| 1 | RM w/Std. bus & Modbus RTU EIA-232/485               | 4 | F4T-1* |
| 2 | RM w/Std. bus & Modbus RTU EIA-232/485 & GPIB-488    | 5 | F4T-2* |
| 3 | RM w/Std. bus EIA-232/485 & Ethernet/IP - Modbus TCP | 6 | F4T-3* |

\*See the F4T Feature Matrix sheet for a list of the F4T-1, F4T-2 & F4T-3 features

#### Country

- A Continental Europe
- C Australia/New Zealand
- D United Kingdom/Ireland
- E Denmark
- F France/Belgium
- G India/South Africa
- H Israel
- I Italy
- J Japan
- K USA (North America)
- L Switzerland
- O Russia
- X China
- T Argentina

**Example: MRTP-123211F** MRTP System, 6.75" X 6.75" thermal platform, dual-stage (cascade) refrigeration plant, 220/240 VAC - 50 Hz - 1 phase facility power, under bench configuration, air-cooled condenser, RM temperature controller with Modbus RTU protocol EIA-232/485 communications, power cord & plug for France