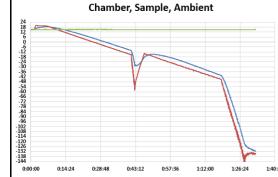


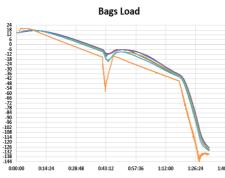
## Technical Data Sheet Controlled-Rate Freezer

Revision-A

## Thermo Fisher Scientific, Asheville, North Carolina

|                                       | Model Number / Catalog Number  |
|---------------------------------------|--|
| Specifications                        | TSCM48XV   |
|                                       | Application, Rating and Electrical Data  |
| Product                               | Thermo Scientific CryoMed Controlled-Rate Freezer General Purpose                                  |
| Application                           | Controlled Sample preparation for multiple biological sample types                                 |
| Electrical Power / Full Load Current  | 220V 50-60Hz / 7FLA  |
| Building Supply Rating                | 15A dedicated grounded non-GFCI circuit. Protected by circuit breaker rated for inductive loads    |
| Power Cord / Plug Length              | CEE (7/7) / 8Ft  |
| Minimum Air Clearance Required        | Add 2.8in. (7.1cm) to F-B for utilities and door handle  |
| Ambient Operating Conditions          | 15°C - 35°C Temperature Range, 20% - 85% RH (non condensing)                                       |
| Agency Listings                       | CE   |
| Application Environment               | Indoor use only, Non-Corrosive, Non-Flammable, Non-Explosive, Good Air Ventilation                 |
|                                       | System Configuration   |
| Cooling Method                        | LN <sub>2</sub> injection using dual solenoid valve and LN <sub>2</sub> injection ring             |
| Heating Method                        | Tubular Heater 945W, 115V  |
| Operation Temp Range                  | +50°C to -180°C  |
| Temperature Freezing Rate             | Minimum 0.1°C / minute; Maximum 99.9°C / minute (no load, T-couple in free air, center of chamber) |
| Temperature Warming Rate              | Minimum of 0.1°C / minute; Maximum of 10.0°C / minute (same conditions as above)                   |
| ·                                     | Product Attributes   |
| No. of doors / Type of door           | (1) Front access door opening left to right.   |
| Access Type / Sample Loading          | Front Loading  |
| Use Interface / Display               | Touch-Screen LCD   |
| Temperature Sensor                    | T-Type Thermocouple  |
| Companion Software                    | PC Interface Software  |
| Printer Capability                    | No Thermal Printer included  |
| Interior material                     | Stainless steel  |
| Exterior material                     | Stainless Steel powder-coat finish   |
| Freezing profiles                     | 6 Presets, up to 14 Custom profiles with User Interface  |
| Door closure mechanism                | T-handle high compression latch mechanism  |
| Insulation                            | Foamed in-place polyurethane insulation (HFC Free) and Teflon heat breaks                          |
|                                       | Dimensions and Construction  |
| Internal Chamber Capacity             | 48Liters / 1.7Cubic Feet   |
| Exterior Dimensions (W X H X D)       | 49.3 x 21.7 x 24.3in. (125.2 x 55.1 x 61cm)  |
| Interior Dimensions (W x H x D)       | 19 x 12 x 13in. (48.3 x 30.5 x 33cm)   |
| Unpacked Weight (lbs & kg)            | 191lbs / 87kg  |
| Packaged / Shipping Weight (lbs & kg) | 270lbs / 122kg   |
|                                       | Typical Performance Characteristics  |
|                                       | ., produit circumanto cindractorio   |





Graph Details:
TCO Number: 20035-A-13
Test Number: 50762
Ambient: 15C
Profile run: Preset\_3
Cabinet Loaded: Yes
Load: 250ml cryo bags filled with
DMEM media, placed in
respective size canisters.
Temp Uniformity (C): 1.1
Energy consumption: ~0.36 kWh

LN2 Consumption: ~21 liters

- 1) Performance is nominal and individual units may vary.
- 2) Freezer performance will differ due to product amount, product size and operating conditions.
- 3) Continuous product enhancements may, without notice, result in amendments or omissions to this specification. Thermo Scientific cannot accept responsibility for damage, injury, loss or expenses resulting from misapplication of the information herein.
- 4) Temperature Uniformity is calculated based on the freezing of the first bag across a grid of bags instrumented with thermocouples.
- 5) Energy consumption information is an estimate based on test data from Preset Profile 3 and should be considered as reference only.



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