**Technical Data Sheet**

**Forma Ultra-Low Temperature Upright Freezer**  
**MODEL RELEASE - 21**  
Thermo Fisher Scientific, Asheville, North Carolina

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### Specifications

<table>
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<th>Model Number</th>
<th>7240D</th>
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#### Application, Rating and Electrical Data

**Application**  
Storage of General (non-flammable) Laboratory Materials

**Temperature Rating**  
-10°C to -40°C

**Electrical Power**  
208-230V 60 Hz, 1 Phase

**Instrument Rated Current**  
6.5 AMP

**Building Supply Rating**  
8.0A dedicated grounded circuit. Protected by circuit breaker rated for inductive loads

**Power Plug/Power Cord Length**  
NEMA 6-15P for D / IEC Cords, 3.048 Meters (10 Feet)

**Agency Listings**  
UL, cUL, FDA

**Indoor/Outdoor Usage**  
Indoor Use Only

**Application Environment**  
Non-Corrosive, Non-Flammable, Non-Explosive, Good Air Ventilation, 15° C - 32° C (59° F - 90° F)

#### Refrigeration Configuration

**Refrigeration System**  
Industrial-Rated one-stage System

**Compressor / Number**  
Hermetic Compressor for Low Temperature Application / 1

**Condenser Type/Number**  
Enhanced Finned-Tube and Forced-Air Cooled / 1

**Expansion Device**  
Capillary Tube

**Evaporator Type**  
Cold Wall With Enhanced Heat Transfer Treatment

**Defrost Method**  
Manual Defrost

**Refrigerant Charge/Flammability**  
R404A / Non-Flammable

#### Controller/Electrical System Configuration and Features

**Controller Level**  
Top

**Power Switch**  
On-Off with Circuit Breaker

**Controller Type**  
Microprocess Control

**Setpoint Security**  
NO

**Compressor Safe Guard**  
High Pressure Cutout Switch/High Temp Cutout Switch/Current protection/Logic protection

**Control Sensor**  
Single RTD (1000 ohm Platinum RTD)

**Remote Alarm Terminals**  
RS485, 4-20mA, Dry Contacts

**Adjustable Warm/Cold Alarms**  
Fully Adjustable

**Auto-Voltage Safeguard**  
Buck/Boost System

#### Dimensions and Construction

**Interior Dimensions (H x D x W)**  
1308 H x 492 D x 586 W mm (51.5 H x 19.4 D x 23.1 W in.)

**Exterior Dimensions (H x D x W)**  
1978 H x 802 D x 912 W mm (77.9 H x 31.6 D x 35.9 W in.)

**Shipping Dimensions**  
2096 H x 978 D x 1026 W mm (82.5 H x 38.5 D x 40.4 W in)

**Insulation**  
High Density Polyurethane Foam, R-30 (ft2·°F·hr/Btu)

**Door Seal**  
Silicone-Based High Performance Seal Gasket

**Shelves / Capacity**  
3 Stainless Steel Shelves Adjustable in 25 mm (1 in) Increment; Maximum Capacity/Shelf: 45.4 kg (100 Lbs.)

**All-Direction Casters**  
Standard with Locks

**Unit Weight**  
Approximately 326 kg / 720 lbs.

**Other Options**  
Electronic Recorder and CO2 or LN2 Back-Up System or Datalogger

#### Typical Performance Characteristics in 20 °C Ambient

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.

*Manufacturer measured compressor capacity taken at standard -23°C/49°F (Evap/Cond) condition.

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Typical Cabinet Temperature Map
ULT-40 13 cuft Unit, 3 Inner-Shelves + Base, Single Outer Door

Temperatures are averages during > 12 hours of cycle after reaching setpoint of -40 C

Top View of Shelves

REAR
MA5  MA4
MA3  MA2
FRONT
MA1  MA0
MA10
MA13  MA14
MA11  MA12
MA19
MA16  MA17

Cabinet Average: -39.5 C
Probe Average: -39.8 C
Peak Variation: +3.4 C / -2.5 C

Front View

1: -37.9 C  5: -38.3 C  10: -39.4 C
3: -38.3 C  4: -38.3 C  11: -39.9 C  15: -40.1 C
12: -39.9 C  14: -40.1 C  16: -40.2 C  20: -40.6 C
17: -40.3 C  18: -40.3 C

MA1  MA15
MA2  MA16
MA3  MA17
MA4  MA18
MA5  MA19
MA10  MA20
MA11

°C  MA1   MA2   MA3   MA4   MA5   MA10  MA11  MA12  MA13
Avg -37.9 -38.1 -38.3 -38.3 -38.3 -38.4 -39.9 -39.9 -40.1
Max -36.6 -36.8 -37.0 -37.0 -36.9 -36.4 -39.0 -39.0 -39.0

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<tr>
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<th>MA14</th>
<th>MA15</th>
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<th>MA20</th>
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<tbody>
<tr>
<td>Avg</td>
<td>-40.1</td>
<td>-40.1</td>
<td>-40.2</td>
<td>-40.3</td>
<td>-40.4</td>
<td>-40.4</td>
<td>-40.8</td>
</tr>
<tr>
<td>Min</td>
<td>-41.5</td>
<td>-41.4</td>
<td>-41.9</td>
<td>-42.1</td>
<td>-42.0</td>
<td>-42.1</td>
<td>-42.5</td>
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NOTE: DUAL DIMENSION IS INCH OVER METRIC

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