



Technical Data Sheet

Thermo Scientific Cryogenic Chest Freezer

Revision-11

Thermo Fisher Scientific, Asheville, North Carolina

Model Number																										
ULT7150M																										
Application, Rating and Electrical Data																										
Application	Storage of General (non-flammable) Laboratory Materials																									
Storage Volume	193 liters / 6.8 Cubic Feet																									
Temperature Rating	-120°C to -150°C																									
Electrical Power	380V 50 Hz 3-Phase																									
Instrument Rated Current	11.0 FLA																									
Building Supply Rating	Breaker 15 Amps/ 380V±10 Volt while operating																									
Power Plug/Power Cord Length	No Standard Cord Prepared; Hard Wire Required																									
Agency Listings	N/A																									
Application Environment	Indoor Use Only; Non-Corrosive, Non-Flammable, Non-Explosive, Good Air Ventilation: 15C - 25C (60F - 77F).																									
Condenser Cooling Condition	Room Air, Air into Condenser: 15C - 25C (60F - 77F)																									
Refrigeration Configuration																										
Refrigeration System	Industrial-Rated Auto-Cascade System																									
Compressor / Number	3.5 HP Scroll Compressor / 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	CFC/HCFC-Free Environmentally Safe Refrigerant Mixtures / Non-Flammable																									
Controller/Electrical System Configuration and Features																										
Controller Level	Top																									
Power Switch	Keyed On-Off																									
Controller Type	Microprocess Control																									
Setpoint Security	Yes																									
Compressor Safe Guard	Yes																									
Control Sensor	Single RTD																									
RS232/Remote Alarm Terminals	RS232/Remote Alarm Terminals																									
Adjustable Warm/Cold Alarms	Standard Audible																									
Auto-Voltage Safeguard	12 VAC Auto Boost																									
Dimensions and Construction																										
Interior Dimensions (H x D x W)	674 H X 483 D X 597 W mm (26.5 H X 19.0 D X 23.5 W in.)																									
Exterior Dimensions (H x D x W)	1086 H X 737 D X 1474 W mm (42.75 H X 29.0 D X 58.0 W in.)																									
Insulation	127 mm (5.0") High Density HFC-blown Polyurethane Foam in cabinet/51 mm (2.0") in lid																									
Perimeter Heater	Silicone-Based High Performance Seal Gasket																									
Shelves / Capacity	N/A																									
All-Direction Casters	Standard with Locks																									
Ship Weight	Approximately 374 Kg / 825 lbs.																									
Other Options	Electronic Recorder and LN2 Back-Up System																									
Typical Performance Characteristics in Normal Working Condition																										
<p>7 ft³ Auto-Cascade ULT, Pull Down & Warm Up at 20C</p>	<p>7 ft³ Auto-Cascade ULT, -150C Cycles at 20C</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Test Unit Series or MSO Number:</td> <td>18871-P-J</td> </tr> <tr> <td>Avg Cabinet Temp at -150 C Cycle (C):</td> <td>-147.4</td> </tr> <tr> <td>Peak Variation from Setpoint (C):</td> <td>+ 8.7 / - 1.1</td> </tr> <tr> <td>Warmest Temp at Delog (C):</td> <td>-140.1</td> </tr> <tr> <td>Average Uniformity (C):</td> <td>3.6</td> </tr> <tr> <td>Average Stability (C):</td> <td>6.3</td> </tr> <tr> <td>Duty Cycle at -150C Setpoint (%):</td> <td>100.0%</td> </tr> <tr> <td>Cycle (on/off) rate at -150C (min):</td> <td>24 / 0</td> </tr> <tr> <td>Avg. energy consumption (kW-hr/day):</td> <td>80.6</td> </tr> <tr> <td>Avg. heat rejection rate (Btu/hr):</td> <td>11475</td> </tr> <tr> <td>Overall Pulldown Time (to -150C) (hrs):</td> <td>5.2</td> </tr> <tr> <td>Warmup Time (-150 to -70 C) (hrs):</td> <td>4.9</td> </tr> </table>	Test Unit Series or MSO Number:	18871-P-J	Avg Cabinet Temp at -150 C Cycle (C):	-147.4	Peak Variation from Setpoint (C):	+ 8.7 / - 1.1	Warmest Temp at Delog (C):	-140.1	Average Uniformity (C):	3.6	Average Stability (C):	6.3	Duty Cycle at -150C Setpoint (%):	100.0%	Cycle (on/off) rate at -150C (min):	24 / 0	Avg. energy consumption (kW-hr/day):	80.6	Avg. heat rejection rate (Btu/hr):	11475	Overall Pulldown Time (to -150C) (hrs):	5.2	Warmup Time (-150 to -70 C) (hrs):	4.9
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<p>1) Performance is nominal and individual units may vary.</p> <p>2) Freezer performance will differ due to product amount, product size and operating conditions.</p> <p>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.</p>																										

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