



Technical Data Sheet

Thermal Scientific Plasma Freezer

Revision-0

Thermo Fisher Scientific, Asheville, North Carolina

Specifications	Model Number	
	2330V&W Automatic Defrost Plasma Freezer	
	Application, Rating and Electrical Data	
Application	Storage of Plasma Materials	
Storage Volume	659 Liters / 23.3 Cubic Feet	
Temperature Rating	-30°C @ 32°C (90°F) Ambient	
Electrical Power	220/50/1 For "V" Models, 240/50/1 For "W" Models	
Instrument Rated Current	12.0 FLA	
Building Supply Rating	Breaker 15 Amps/230v±10 Volt while operating	
Power Plug/Power Cord Length	6-15 P/ 10 feet	
Agency Listings	CE, 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	Vapor Compression System with Automatic Defrost	
Compressor / Number	1 hp Reciprocating Compressor / 1	
Condenser Type/Number	Enhanced Finned-Tube and Forced-Air Cooled / 1	
Expansion Device	Capillary Tube	
Evaporator Type	Forced Air Evaporator Coil	
Defrost Method	Automatic Defrost	
Refrigerant Charge/Flammability	Non-Flammable, CFC/HCFC-Free Environmentally Safe Refrigerant Mixtures	
	Controller/Electrical System Configuration and Features	
Controller Level	Eye Level	
Power Switch	Keyed Off-On - Alarm	
Controller Type	Microprocessor-Based IntrLogic™ Control	
Setpoint Security / Programmable	Standard / Standard	
Compressor Safe Guard	High Pressure Cutout Switch/High Temp Cutout Switch/Current protection	
Control Sensor	Stainless Steel Shielded RTD in Air	
Remote Alarm Terminals	Standard	
Door Open, Probe Failure Alarms	Standard	
Adjustable Warm/Cold Alarms	Standard	
Power Failure Alarm	Standard	
Standard Electronic chart Recorder	Yes	
	Dimensions and Construction	
Interior Dimensions (H x D x W)	147.3 x 73.7 x 61.0 cm (58.0 x 29.0 x 24.0 in)	
Exterior Dimensions (H x D x W)	201.2 x 94.5 x 71.1 cm (79.2 x 37.2 x 28.0 in)	
Insulation	5.08 cm (2 in.) High Density HFC-blown Polyurethane Foam (R=42)	
Door Perimeter heater	Electric	
Shelves / Capacity	(7) Drawers Adjustable In 1" Increment. Max. Cap. per Shelf: 27 kg (60 lbs.)	
All-Direction Casters	Standard with Two Locking and Two Regular	
Ship Weight	Approximately 193 kg (425lbs.)	
1" Dia access port	Yes	
	Typical Performance Characteristics	
<p>23 ft³ -30 Freezer, Pull Down and Warm Up at 25 C</p>	<p>23 ft³ -30 Freezer, -30C Cycle at 25 C Ambient</p>	<p>Test Unit Series or MSO Number: 18829-CB-BB</p> <p>Avg Cabinet Temp at -30 C Cycle (C): -29.3</p> <p>PV from Setpoint (C) (including defrost)*: + 9.1 / - 3.5</p> <p>Average Uniformity (C): 2.7</p> <p>Average Stability (C): 8.0</p> <p>1-min Door Open Recovery to-30C (min): 29</p> <p>Duty Cycle at -30C Setpoint (%): 72.9%</p> <p>Cycle (on/off) rate at -30C (min): 14 / 5</p> <p>Avg. energy consumption (kW-hr/day): 16.4</p> <p>Avg. heat rejection rate (Btu/hr): 2333</p> <p>Overall Pulldown Time (to -30C) (min): 104</p> <p>Warmup Time (-30 to -10 C) (min): 162</p> <p>* PV = Peak Variation</p>
<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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