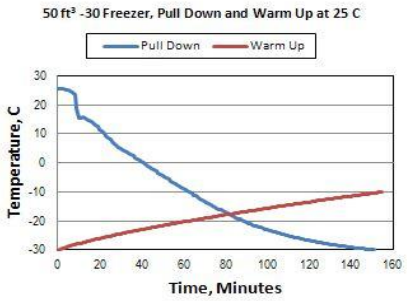
Technical Data Sheet

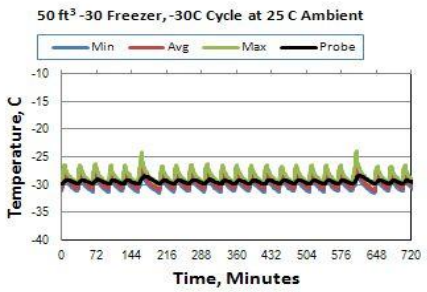
Thermal Scientific Plasma Freezer

Revision-0

Thermo Fisher Scientific, Asheville, North Carolina

Specifications	Model Number
	5030V&W Automatic Defrost Plasma Freezer
Application, Rating and Electrical Data	
Application	Storage of Plasma Materials
Storage Volume	1447 Liters / 51.1 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 Enviromentally 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 133.4 cm (58.0 x 29.0 x 52.5 in)
Exterior Dimensions (H x D x W)	201.2 x 94.5 x 143.5 cm (79.2 x 37.2 x 56.5 in)
Insulation	5.08 cm (2 in.) High Density HFC-blown Polyurethane Foam (R=42)
Door Perimeter heater	Electric
Shelves / Capacity	(14) 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 295 kg (650 lbs.)
1" Dia access port	Yes
Typical Performance Characteristics	





Test Unit Series or MSO Number:	18829-CB-BD
Avg Cabinet Temp at -30 C Cycle (C):	-29.5
PV from Setpoint (C) (including defrost)*:	+ 6.1 / - 1.6
Average Uniformity (C):	1.6
Average Stability (C):	5.4
1-min Door Open Recovery to-30C (min)	40
Duty Cycle at -30C Setpoint (%):	83.9%
Cycle (on/off) rate at -30C (min):	27 / 5
Avg. energy consumption (kW-hr/day):	23.3
Avg. heat rejection rate (Btu/hr):	3311
Overall Pulldown Time (to -30C) (min):	151
Warmup Time (-30 to -10 C) (min):	155
* PV = Peak Variation	

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 ommisions to this specification. Thermo Scientific cannot accept responsibility for damage, injury, loss or expenses resulting from misapplication of the information herein.