



Technical Data Sheet Thermal Scientific Plasma Freezer

Revision-0

Thermo Fisher Scientific, Asheville, North Carolina

| Specifications | Model Number | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|---------------------------------|-------------|--------------------------------------|-------|--|---------------|-------------------------|-----|------------------------|-----|---------------------------------------|----|----------------------------------|-------|------------------------------------|-------|--------------------------------------|------|------------------------------------|------|--|----|-----------------------------------|-----|-----------------------|--|
| | 3030V&W Automatic Defrost Plasma Freezer | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Application, Rating and Electrical Data | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Application | Storage of Plasma Materials | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Storage Volume | 826 Liters / 29.2 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 76.2 cm (58.0 x 29.0 x 30.0 in) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Exterior Dimensions (H x D x W) | 201.2 x 94.5 x 86.4 cm (79.2 x 37.2 x 34.0 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 263 kg (580 lbs.) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1" Dia access port | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Typical Performance Characteristics | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p style="font-size: small;">30 ft³ -30 Freezer, Pull Down and Warm Up at 25°C</p> | <p style="font-size: small;">30 ft³ -30 Freezer, -30C Cycle at 25°C Ambient</p> | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: x-small;">Test Unit Series or MSO Number:</td> <td style="font-size: x-small;">18829-CB-BC</td> </tr> <tr> <td style="font-size: x-small;">Avg Cabinet Temp at -30 C Cycle (C):</td> <td style="font-size: x-small;">-28.4</td> </tr> <tr> <td style="font-size: x-small;">PV from Setpoint (C) (including defrost)*:</td> <td style="font-size: x-small;">+ 7.1 / - 3.6</td> </tr> <tr> <td style="font-size: x-small;">Average Uniformity (C):</td> <td style="font-size: x-small;">3.2</td> </tr> <tr> <td style="font-size: x-small;">Average Stability (C):</td> <td style="font-size: x-small;">6.5</td> </tr> <tr> <td style="font-size: x-small;">1-min Door Open Recovery to-30C (min)</td> <td style="font-size: x-small;">18</td> </tr> <tr> <td style="font-size: x-small;">Duty Cycle at -30C Setpoint (%):</td> <td style="font-size: x-small;">60.7%</td> </tr> <tr> <td style="font-size: x-small;">Cycle (on/off) rate at -30C (min):</td> <td style="font-size: x-small;">9 / 6</td> </tr> <tr> <td style="font-size: x-small;">Avg. energy consumption (kW-hr/day):</td> <td style="font-size: x-small;">15.7</td> </tr> <tr> <td style="font-size: x-small;">Avg. heat rejection rate (Btu/hr):</td> <td style="font-size: x-small;">2228</td> </tr> <tr> <td style="font-size: x-small;">Overall Pulldown Time (to -30C) (min):</td> <td style="font-size: x-small;">86</td> </tr> <tr> <td style="font-size: x-small;">Warmup Time (-30 to -10 C) (min):</td> <td style="font-size: x-small;">163</td> </tr> <tr> <td style="font-size: x-small;">* PV = Peak Variation</td> <td></td> </tr> </table> | Test Unit Series or MSO Number: | 18829-CB-BC | Avg Cabinet Temp at -30 C Cycle (C): | -28.4 | PV from Setpoint (C) (including defrost)*: | + 7.1 / - 3.6 | Average Uniformity (C): | 3.2 | Average Stability (C): | 6.5 | 1-min Door Open Recovery to-30C (min) | 18 | Duty Cycle at -30C Setpoint (%): | 60.7% | Cycle (on/off) rate at -30C (min): | 9 / 6 | Avg. energy consumption (kW-hr/day): | 15.7 | Avg. heat rejection rate (Btu/hr): | 2228 | Overall Pulldown Time (to -30C) (min): | 86 | Warmup Time (-30 to -10 C) (min): | 163 | * PV = Peak Variation | |
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| <p>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.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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