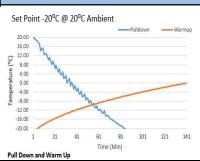
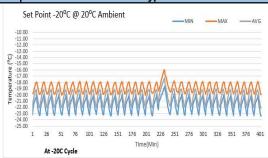


Technical Data Sheet General Purpose Freezer 1500L

Revision-A

	Model Number		
Specifications	TSG1500FESBV		
	Application, Rating and Electrical Data		
Application	Storage of General (non-flammable) Laboratory Materials		
Storage Volume	1355Liters /47.8 Cubic Feet		
Factory Set Point	-20 °C		
Set Point / Increment	-20 °C / 0.1 °C		
Electrical Power / Rated Current	230V 50 Hz 1 Phase / 1.6A		
Building Supply Rating	16A 250V		
Power Plug/Power Cord Length	16 Amp 250V / 4 Meters (13 feet)		
Agency Listings	CE		
Standards and directives	2006/42/EC, 2014/30/EU, 2014/35/EU, 2011/65/UE, 2015/863/EU & 2012/19/EU		
Electromagnetic Compatibility	Emissions (Class A), Immunity (Industrial Environment)		
Indoor/Outdoor Usage	Indoor Use Only		
Application Environment	Non-Corrosive, Non-Flammable, Non-Explosive, Good Air Ventilation		
Ambient Operating Temperature	15° C to 32° C (59° F to 90° F)		
	Refrigeration Configuration		
Refrigeration System	Vapor compression system		
Compressor / Number / Capacity	Single speed / 1 / 936W		
Condenser Type/Number	Forced-Air Cooled Finned-Tube Coil Heat Exchanger / 1		
Expansion Device	Capillary Tube		
Evaporator Type / Defrost Method	Forced Air Finned-Tube Coil Heat Exchanger / Automatic Defrost		
Refrigerant Charge / Flammability	R290,140gms,GWP:3 ODP:0 / Flammable		
	Controller/Electrical System Configuration and Features		
Controller Level	Eye Level		
Power Switch	On the Controller Main Screen		
Controller Type	Electronic Controller with LCD display		
Setpoint Security / Programmable	Yes / Yes		
Compressor Safe Guard	Overload Protection (OLP)		
Control Sensor	NTC Probe		
Connectivity / Remote OutputsTerminals	Dry Contact (NO and NC)		
Adjustable Warm / Cold Alarms	Fully Adjustable		
Power Failure Alarm	Acoustic and Visual		
Electronic Chart Recorder	Not Provided		
	Dimensions and Construction		
Interior Dimensions (H x D x W)	1510 mm x 690 mm x 1300 mm (59.4" x 27.2" x 51.2")		
Exterior Dimensions (H x D x W)	2082 mm x 837 mm x1440 mm (82" x 33" x 56.7")		
Insulation	Polyurethane Foam 7cms (2.75")		
Door Perimeter heater	Yes		
Shelves / Load Limit	8 Shelves / 30kg (66 lbs) per Shelf		
Casters	2 Lockable Castors at the front & 2 Fixed Castors at the rear		
Non-Crated Shipping Weight	220kgs / 485 lbs		
	Typical Performance Characteristics		





 Test Unit Series Number or MSO Number:
 20297-A-5-2

 Cabinet Load:
 Unloaded

 Average Cabinet Temp (C):
 -20.38

 Peak Variation from Setpoint (C):
 3.36/5.11

 Uniformity (C):
 2.72

 Stability (C):
 5.81

 1-min Door Opening Recovery(min):
 21

 Cycle on Time(%):
 44

 Cycle (on/off) Time (min):
 5/6.25

 Energy Consumption (kw-hr/day):
 11.11

 Heat Rejection Rate (btu/hr):
 1580

 Pull Down Time to setpoint (Min)
 88

 Warm Up Time to 0°C (min):
 129

 Sound (dBA):
 52.1

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.

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¹⁾Performance is nominal and individual units may vary.

²⁾Product performance will differ due to product amount, product size and operating conditions.



Typical Cabinet Temperature Map Freezer 48cuft , 4 Inner-Shelves + Base, 2 Outer Doors Temperatures are averages during > 20 cycles after reaching a setpoint of -20C

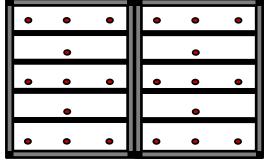
Top View of Shelves

REAR

FRONT

M3 N	M4 15	M53	M54 M55	
M1	M2	M51	M52	
М	10	1	M60	
M13	M14	M63	M64	
N	115	M65		
M11	M12	M61	M62	
М	20	1	M70	
M23	M24	M73	M74	
M	125	M75		
M21	M22	M71	M72	

Front View



20297-A-5-2

Cabinet Average: -20.4 C Probe Average: -17.7 C Peak Variation: +2.4 C / -3.4 C

	M1	M2	M3	M4	M5	M10
Avg	-20.6	-20.3	-20	-20.5	-19.8	-20.2
Max	-18.6	-18.2	-18.2	-18.2	-18	-19
Min	-22.8	-22.8	-21.8	-22.7	-21.4	-21.3

	M11	M12	M13	M14	M15	M20
Avg	-19.9	-20.2	-20.6	-20.6	-20.1	-20.1
Max	-18.6	-18.9	-19.2	-19	-19	-19
Min	-21.8	-22	-22.2	-22	-21.1	-21.2

_		M21	M22	M23	M24	M25
	Avg	-19.7	-19.1	-20.5	-21.5	-20.6
	Max	-18.3	-17.6	-19.2	-19.8	-19.1
	Min	-21.4	-20.2	-22	-23.1	-22.2

	M51	M52	M53	M54	M55	M60
Avg	-20.8	-20.5	-20.9	-20.7	-20.3	-20.8
Max	-18.3	-18	-18.6	-18.5	-18.3	-19.6
Min	-23.4	-23.1	-23	-22.7	-22.2	-22.2

	M61	M62	M63	M64	M65	M70
Avg	-21	-20.4	-21.2	-21.3	-20.9	-20.8
Max	-19.3	-18.4	-19.7	-19.8	-19.6	-19.6
Min	-23	-22.1	-22.8	-23	-22.2	-22.1

	M71	M72	M73	M74	M75
Avg	-19.2	-19.7	-21.3	-20.4	-20.7
Max	-17.8	-18.3	-19.6	-19	-19.2
Min	-20.6	-21.5	-22.9	-21.8	-22.3

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