

### **Technical Data Sheet General Purpose Freezer 400L**

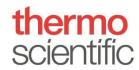
Revision-A

2	Model Number					
Specifications	TSG400FESBV					
	Application, Rating and Electrical Data					
Application	Storage of General (non-flammable) Laboratory Materials					
Storage Volume	347Liters /12.25 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 / 3 Meters (10 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 / 626W					
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	R290,120gms,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)	1405 mm x 493 mm x 500 mm (55.3" x 19.4" x 19.7")					
Exterior Dimensions (H x D x W)	1955 mm x 650 mm x 600 mm (77" x 25.6" x 23.6")					
Insulation	Polyurethane Foam 7cms (2.75") at Back & 5cms (2") in the Sides					
Door Perimeter heater	Yes					
Shelves / Load Limit	4 Shelves / 30kg (66 lbs) per Shelf					
Casters	2 Lockable Castors at the front & 2 Fixed Castors at the rear					
Non-Crated Shipping Weight	114kgs / 251.3 lbs					
11 3 3	Typical Performance Characteristics					
Set Point -20°C @ 20°C Ambient	a in the angle of angle in the					
2000	Set Point -20°C @ 20°C AmbientMINANG Test Unit Series Number or MSO Number: 20297-A-4-2					
15.00 — Pulldown — Warmup	10 Cabinet Load: Unloaded					
© 1000 N	Cabinet Load: Unloaded					
5.00 VM	Onliormity (C): 3.45					
te 000	1-min Door Opening Recovery(min): 7.97					
9 -5.00 VV	19 (AMELY 1904) AND					
-15.00	Energy Consumption (kw-hr/day): 6.99					
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 25 50 75 100 125 150 175 200 225 250 275 300 325 350 375 400 Warm Up Time to 0°C (min): 94					
Pull Down and Warm Up Time (min)	At -20C Cycle Time (min) Sound (dbA). 55.6					

Pull Down and Warm Up Time (min)

<sup>1)</sup>Performance is nominal and individual units may vary.
2)Product 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.

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#### Typical Cabinet Temperature Map Freezer 12cuft , 4 Inner-Shelves + Base, Single Outer Door

Temperatures are averages during > 20 cycles after reaching a setpoint of -20C

#### **Top View of Shelves**

REAR

FRONT

M3 M4 M5 M1 M2

M10

M13 M14 M15 M11 M12

M20 M24 M25

M23 M24 M25 M21 M22

Cabinet Average: -19.8 C
Probe Average: -17.6 C
Peak Variation: +4.1 C / -4.1 C

1: -17.9C 2: -19.2C 3: -19.4C 5: -18.6C 4: -19.8C Probe 10: -20.0C 11: -20.1C 15: -20.3C 12: -20.5C 13: -21.0C 14: -21.2C 20: -20.3C 21: -18.4C 25: -19.9C 22: -19.2C 24: -20.0C 23: -19.9C

Front View

20297-A-4-2

	M1	M2	M3	M4	M5	M10	M11	M12	M13
Avg	-17.9	-19.2	-19.4	-19.8	-18.6	-20	-20.1	-20.5	-21
Max	-16	-16.3	-16.4	-16.3	-16.1	-18.4	-18.5	-18.8	-19.1
Min	-20.1	-22.6	-23	-24.1	-21.6	-21.9	-22.1	-22.9	-23.7

		M14	M15	M20	M21	M22	M23	M24	M25
	Avg	-21.2	-20.3	-20.3	-18.4	-19.2	-19.9	-20	-19.9
Ī	Max	-19.2	-19.1	-19.1	-17	-17.7	-18.4	-18.7	-18.5
ſ	Min	-24	-22	-21.8	-19.8	-21.3	-21.8	-21.6	-21.7

## ONLY CABINET SHOWN FOR CLARITY IN TOP VIEW, TO ILLUSTRATE INTERIOR DIMENSIONS

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