

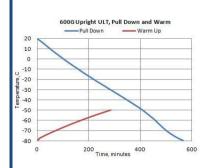
Technical Data Sheet

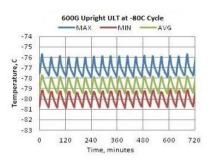
THERMO SCIENTIFIC Ultra-Low Temperature Upright Freezer

MODEL RELEASE - 71

Thermo Fisher Scientific, Asheville, North Carolina

Model Number		
Specifications	Thermo Scientific TSX600G	
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Application	Storage of General (non-flammable) Laboratory Materials	
Storage Volume	815 liters / 28.8 cu. ft., 600 Standard 2" Boxes	
Temperature Rating	-50°C to -86°C	
Electrical Power	100V, 50/60 Hz, 1 Phase	
Instrument Rated Current	9.5 AMP	
Building Supply Rating	15.0A dedicated grounded circuit. Protected by circuit breaker rated for inductive loads	
Power Plug/Power Cord Length	JIS 8303 plug / IEC Cord, 2.5 Meters (8.2 Feet)	
Agency Listings	UL, cUL,CE	
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	Industrial-Rated Two Stage Cascade System	
Compressor / Number	Hermetic Compressor for Ultra Low Back Pressure Application / 2	
Compressor Capacity*	525W (max). VCC	
Condenser Type/Number	Enhanced Micro-Channel and Forced-Air Cooled	
Expansion Device	Capillary Tube	
Evaporator Type	Cold Wall With Enhanced Heat Transfer Treatment	
Defrost Method	Manual Defrost	
Refrigerant Charge/Flammability	R290 in 1st Stage / R170+R290 Mix in 2nd Stage / Flammable	
Controller/Electrical System Configuration and Features		
Controller Level	Тор	
Power Switch	On-Off with Circuit Breaker	
Controller Type	Microprocessor Control with Touch Screen Input and Display. Includes USB System Data Retrieval	
Setpoint Security	Yes	
Compressor Safe Guard	High Temp Cutout Switch/Current protection/Logic protection	
Control Sensor	Single RTD (1000 ohm Platinum RTD)	
Remote Alarm Terminals	RS485/4-20mA output	
Adjustable Warm/Cold Alarms	Fully Adjustable	
Auto-Voltage Safeguard	Auto-Voltage Safeguard Buck/Boost System	
	Dimensions and Construction	
Interior Dimensions (H x D x W)	1300 H x 686 D x 874 W mm (51.2 H x 27 D x 34.4 W in.)	
Exterior Dimensions (H x D x W)	1981 H x 960 D x 1102 W mm (78 H x 37.8 D x 43.4 W in.)	
Shipping Dimensions	2111 H x 1086 D x 1206 W mm (83.12 H x 42.75 D x 47.48 W in)	
Insulation	High R-value Vacuum Insulation Panels and High Density Water-Blown Polyurethane Foam	
Door Seal	Silicone-Based High Performance Seal Gasket with Electrical Door Perimeter Heater	
Shelves / Capacity	3 Stainless Steel Shelves Adjustable In 25mm (1in) Increments. Max. Cap. per Shelf: 110 kg (245 lbs.)	
All-Direction Casters	Standard with Locks	
Shipping Weight	Approximately 401 kg / 884 lbs.	
Other Options	LN2 or CO2 Back Up System, HID Controlled Access, SMS Text, Chart Recorder	
Typical Performance Characteristics in 20 ° C Ambient		





Test Unit Series Number or MSO Number:	19513-BA-T1
Average Cabinet Temp at-80C Cycle (C):	-78.7
Peak Variation from Setpoint, High Performance (C):	+4.4 / -0.9
PeakVariation from Setpoint, Standard Mode (C):	+6.6/+1.3
Avg Uniformity at -80C, High Performance:	3
AvgStabilityat -80C, HighPerformance:	2
1-min Door Opening Recovery to -75C (min):	27
Duty Cycle at -80C, High Performance (%):	76
Cycle (on/off) rate at -80C, High Performance (min):	28 / 9
Energy Consumption, High Performance (kw-hr/day):	11.1
Heat Rejection Rate, High Performance (btu/hr):	1582
Energy Consumption, Standard Mode (kw-hr/day):	9.5
Heat Rejection Rate, Standard Mode (btu/hr):	1350
Pull Down Time (to -80C) (hrs):	9.6
Warm Up Time (-80C to -50C) (min):	295
Sound (dBA):	46.9

- Performance is nominal and individual units may vary.
- Freezer performance will differ due to product amount, product size and operating conditions.
 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.
- * Manufacturer measured compressor capacity taken at standard -35°C/40°C (Evap/Cond) condition.
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