

## Technical Data Sheet Thermo Scientific Revco Ultra-Low Temperature Upright Freezer

Revision-3

Thermo Fisher Scientific, Asheville, North Carolina

	Model Number	
	Thermo Scientific Revco UxF50086D	
Specifications	Application, Rating and Electrical Data	
Application		non-flammable) Laboratory Materials
Storage Volume	682 liters / 24.1 cu. ft., 500 Standard 2" Boxes	
Temperature Rating	-50°C to -85°C @ 32 °C(90°F) Ambient	
Electrical Power	208V/230V, 60 Hz, 1 Phase	
Instrument Rated Current	9.0 FLA	
Building Supply Rating	20.0A dedicated grounded circuit. Protected by circuit breaker rated for inductive loads	
Power Plug/Power Cord Length	NEMA 6-15P, 10 Feet or 3.0 Meters	
Agency Listings	UL, cUL	
Application Environment	Indoor Use Only; Non-Corrosive, Non-Flammable, Non-Explosive, Good Air Ventilation, 15C - 32C (59F - 90F)	
Cooling Water Condition	N/A	
Lifetime of Product	10 years	
	Refrigeration Configuration	
Refrigeration System		ed Two Stage Cascade System
Compressor / Number		ssor for Low Temperature Application / 2
Condenser Type/Number	Enhanced Finned-Tube and Forced-Air Cooled / 1	
Expansion Device	Capillary Tube On Both Cascade Stages	
Evaporator Type	Cold Wall With Enhanced Heat Transfer Treatment	
Defrost Method	Manual Defrost	
Refrigerant Charge/Flammability	CFC/HCFC-Free Enviromentally Safe Refrigerant Mixtures / Non-Flammable in both stages	
	Controller/Electrical System Configuration and Features	
Controller Level	Eye Level	
Power Switch	On-Off with Circuit Breaker	
Controller Type	Microprocessor Control with Touch Screen Input and Display. Includes USB System Data Retreival	
Setpoint Security	Yes	
Compressor Safe Guard	High Temperature Warning/Current and Temperature Protection/Logic Protection	
Control Sensor	Single RTD (1000 ohm Platinum RTD)	
RS232/Remote Alarm Terminals	RS485/4-20mA output	
Adjustable Warm/Cold Alarms	Fully Adjustable	
Auto-Voltage Safeguard	Buck/Boost System	
	Dimensions and Construction	
Interior Dimensions (H x D x W)	1.30 x 0.72 x 0.73 m (51.2 x 28.3 x 28.8 in.)	
Exterior Dimensions (H x D x W)	1.98 x 0.96 x 0.97 m (78.0 x 37.6 x 38.0 in.)	
Insulation	High R-value Vacuum Insulation Panels and High Density Water-Blown Polyurethane Foam	
Perimeter Heater	Silicone-Based High Performance Seal Gasket with Electrical Door Perimeter Heater	
Shelves / Capacity	3 or 4 Stainless Steel Shelves Adjustable In 1" Increments. Max. Cap. per Shelf: 91.7 kg (205 lbs.)	
All-Direction Casters	Standard with Locks	
Ship Weight	Approximately 355 kg (782 lbs.)	
Other Options	LN2 or CO2 Back Up System, HID Controlled Access, SMS Text, Chart Recorder, 4 or 5 Inner Doors	
Typical Performance Characteristics in Normal Ambient Condition		
25C Ambient (18768-H-N) ——PD ——WU	25C Ambient (18768-H-N) —Avg — Max — Min	Performance Data Summary (Typical Average Values)
30 20 20 20 20 20 20 20 20 20 2	-70 -72 -74 -74 -78 -80 -82 -84 -86 -88 -90 550 600 0 50 100 150 200 250 300 350 400	Awg. Cabinet Temp. at -80C Setpoint, High Performance (C):  Peak Variation From -80C Setpoint, High Performance (C):  +5.6 / -3.8  Peak Variation From -80C Setpoint, High Performance (C):  5.8 Stability, -80C Setpoint, High Performance (C):  1 Min. Door Open Recovery to -75C Avg. Cabinet Temp. (min):  Cycle Rate, -80C Setpoint, High Performance (on/off, min/min):  Duty Cycle, -80C Setpoint, High Performance (%):  Energy Consumption, -80C Setpoint, High Performance (kWh/day):  Heat Rejection, -80C Setpoint, High Performance (BTU/hr):  Energy Consumption, -80C Setpoint, Energy Saving (RTU/hr):  Peat Rejection, -80C Setpoint, Energy Saving (RTU/hr):  Peat Rejection, -80C Setpoint, Energy Saving (RTU/hr):  Pulldown Time to -80C Average Cabinet Temp. (hours)  Warmup Time, From Average Cabinet Temp. of -80C to -50C (min):

- 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.

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