



Technical Data Sheet

High Performance Plasma Freezer

Revision-0

Thermo Fisher Scientific, Asheville, North Carolina

Specifications	Catalog number
	TSX3030LY
	Model Number
	TSX3030LY
	Application, Rating and Electrical Data
Application	Plasma Freezer
Storage Volume	827 Liters / 29.2 Cubic Feet
Factory Set Point	-30°C
Set Point Range/Adjustable Increment	-35°C to -15°C / 0.1°C
Electrical Power / Rated Current	115V 60 Hz 1 Phase / 10.0A
Building Supply Rating	15A dedicated grounded non-GFCI circuit. Protected by circuit breaker rated for inductive loads
Power Plug/Power Cord Length	15 Amp (NEMA 5-15P) / 3.048 Meters (10 feet)
Agency Listings	CE, UL, cUL, FDA
Indoor/Outdoor Usage	Indoor Use Only
Application Environment	Non-Corrosive, Non-Flammable, Non-Explosive, Good Air Ventilation
Ambient Operating Temperature	15° C - 32° C (60° F - 90° F)
	Refrigeration Configuration
Refrigeration System	Vapor compression system
Compressor / Number / Capacity	Hermetic Variable Capacity Compressor / 1 / 672W
Condenser Type/Number	Enhanced Finned-Tube and Forced-Air Cooled / 1
Expansion Device	Capillary Tube
Evaporator Type / Defrost Method	Forced Air Evaporator Coil / Automatic Defrost
Refrigerant Charge / Flammability	R290, 130gms, GWP:3 ODP:0 / Flammable
	Controller/Electrical System Configuration and Features
Controller Level	Eye Level
Power Switch	Keyed Off-On - Alarm
Controller Type	IntrLogic Control System: Digital display, Graphic thermometer, Automatic defrost system
Setpoint Security / Programmable	Yes / Yes
Compressor Safe Guard	Current protection
Control Sensor	Single RTD (1000 ohm shielded Platinum RTD)
Connectivity / Remote Outputs	Standard
Adjustable Warm / Cold Alarms	Fully Adjustable
Power Failure Alarm	Standard
Electronic Chart Recorder	Standard
	Dimensions and Construction
Interior Dimensions (D x W x H)	72.3 cm x 76.2 cm x 147.3 cm (28.5" x 30.0" x 58.0")
Exterior Dimensions (D x W x H)	96.2 cm x 86.4 cm x 199.4 cm (37.9" x 34.0" x 78.5")
Insulation	5.08 cm (2.0") High-Density Water-Blown Polyurethane Foam
Door Perimeter heater	Yes
Shelves / Load Limit	(7) Drawers Adjustable In 1" Increments. Max. Cap. per Drawer: 27 kg (60 lbs.)
All-Direction Casters	Standard with Locks
Shipping Weight	252 kg / 556 lb

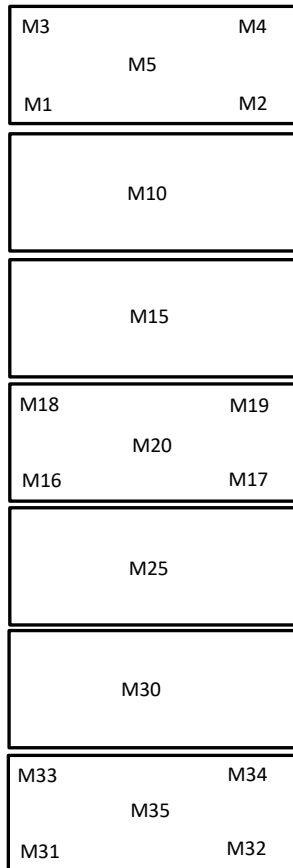
Typical Performance Characteristics		
<p>30 cuft Upright Freezer, Pull Down and Warm Up</p>	<p>30 cuft Upright Freezer at -30C Cycle</p>	<p>Test Unit Series Number or MSO Number: 19758-B-6-3</p> <p>Cabinet Load: Unloaded</p> <p>Average Cabinet Temp at -30C Cycle (C): -30.2</p> <p>Peak Variation from Setpoint (C): +6.2 / -1.8</p> <p>Uniformity (C): 1.3</p> <p>Stability (C): 5.2</p> <p>1-min Door Opening Recovery to -30C (min): 15</p> <p>Duty Cycle at -30C (%): 77</p> <p>Cycle (on/off) rate at -30C (min): 14 / 4</p> <p>Energy Consumption (kw-hr/day): 9.0</p> <p>Heat Rejection Rate (btu/hr): 1284</p> <p>Pull Down Time (to -30C) (min): 146</p> <p>Warm Up Time (-30C to -10C) (min): 186</p> <p>Sound (dBA): 52</p>

- 1) 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 omissions to this specification. Thermo Scientific cannot accept responsibility for damage, injury, loss or expenses resulting from misapplication of the information herein.

Typical Cabinet Temperature Map
Freezer 30cuft , 7 Drawers, Single Outer Door

Temperatures are averages during > 20 cycles after reaching a setpoint of -30C

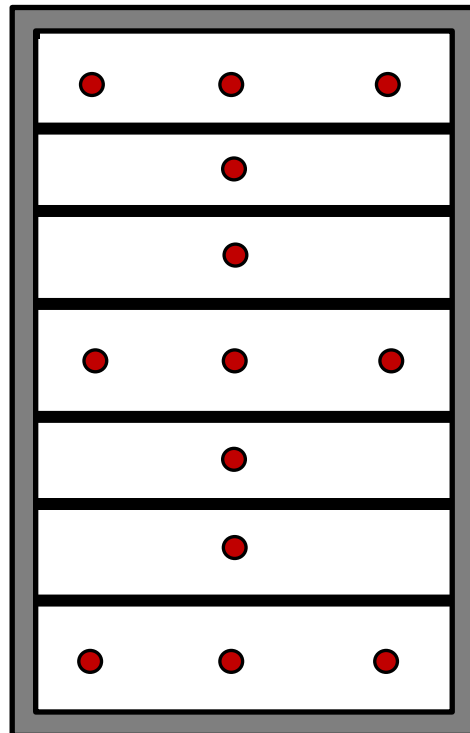
Top View of Shelves



REAR

FRONT

Front View

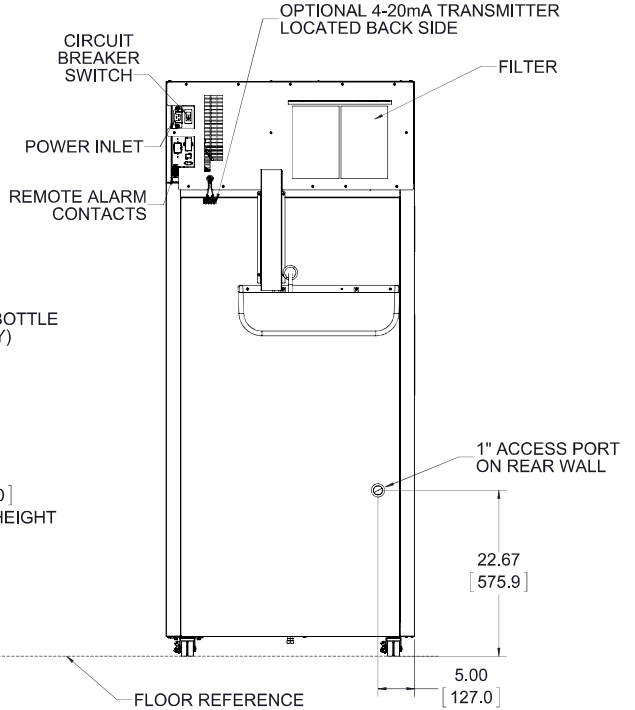
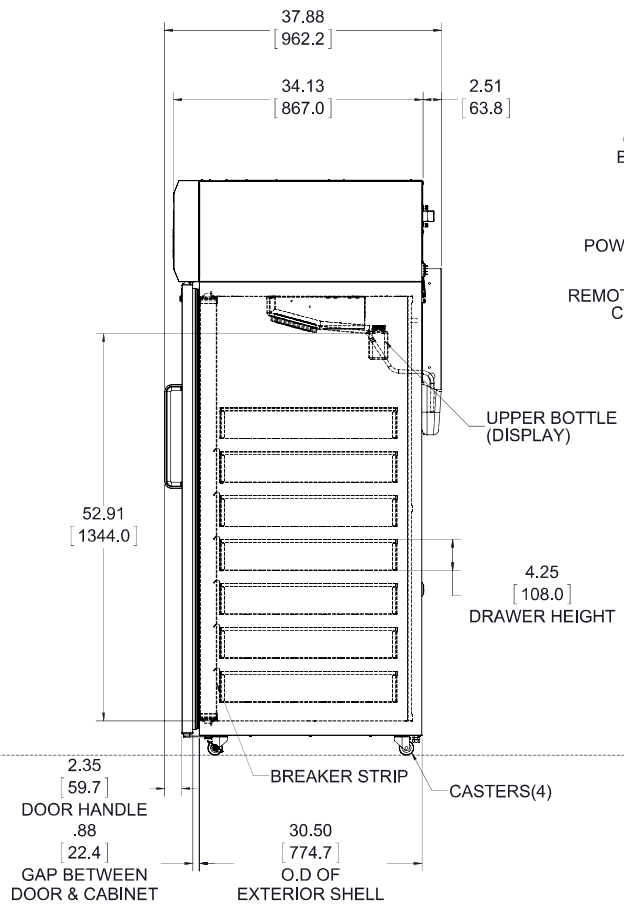
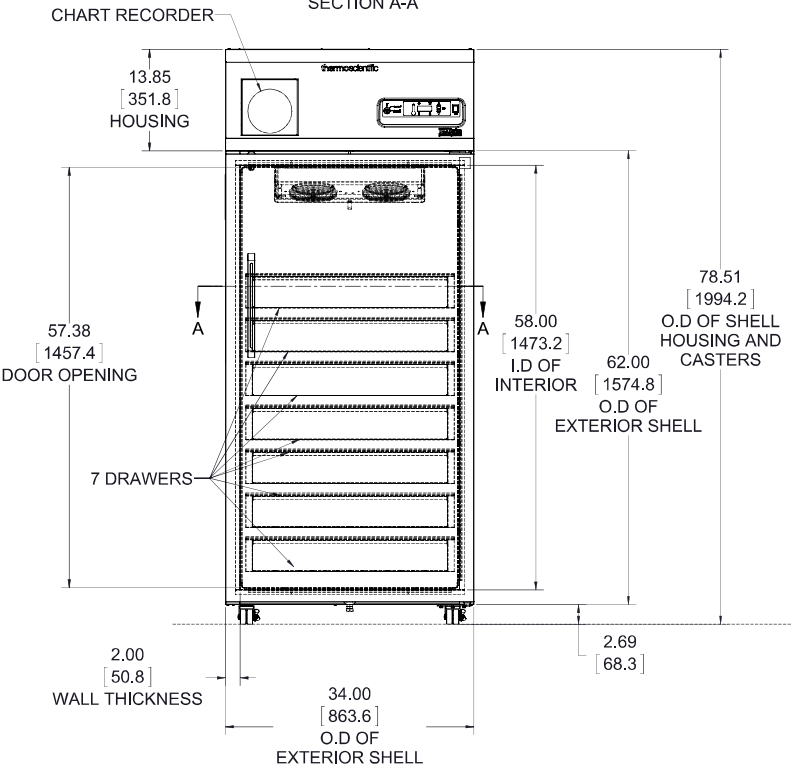
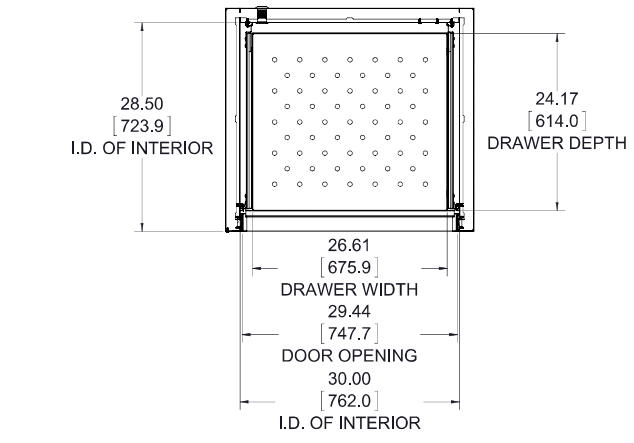


19758-B-6-3

	M1	M2	M3	M4	M5
Avg	-30.1	-30	-30.2	-30.2	-30.2
Max	-24.5	-24.3	-23.8	-24.6	-24
Min	-31.3	-31.2	-31.8	-31.6	-31.7
	M10	M15			
Avg	-30.2	-30.2			
Max	-26.8	-26.8			
Min	-30.8	-30.9			
	M16	M17	M18	M19	M20
Avg	-30.1	-30.3	-30.1	-30.4	-30.3
Max	-27.4	-27.3	-26.3	-26.7	-26.3
Min	-30.8	-30.9	-30.9	-31.2	-31.1
	M25	M30			
Avg	-30.1	-30.2			
Max	-27	-26.1			
Min	-30.8	-31			
	M31	M32	M33	M34	M35
Avg	-29.7	-30.1	-30.1	-30.2	-30
Max	-26.5	-26.4	-25.5	-25.7	-26.1
Min	-30.5	-30.9	-31	-31.2	-30.7

Cabinet Average: -30.2 C
Probe Average: -29.2 C
Peak Variation: +6.2 C / -1.8 C

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



30 cu. ft. Plasma Freezer
7 Drawers
Single Outer Door
Top Mount Controls

NOTE: DUAL DIMENSION IS INCHES OVER MILLIMETERS
DO NOT USE FOR ENGINEERING PURPOSES. SUBJECT TO CHANGE WITHOUT NOTICE.