



Technical Data Sheet Lab Grade Freezer Model: FLF105 / Undercounter

Application, Rating, and Electrical Data		
Application	Precision temperature storage for biopharmaceutical and life science research applications	
Storage Volume	5.3 cu ft (150 L)	
Temperature Range	-15° to -30°C	
Set Point	-30°C	
Electrical Power	115V 60Hz 220-240V 50/60Hz	
Maximum Current	4.1A 2.0A	
Facility Supply Rating	Branch circuit with earth ground, meeting plug/cord ratings as well as local electrical safety codes and requirements 110-120V AC: 15 A (minimum) 220-240V AC: 10 A (minimum)	
Power Plug/Power Cord Length	NEMA 5-15 hospital-grade 115V 60Hz, 8 to 10 ft (2.4-3.0m) Inquire about additional plug/cord options	
Certification/Agency Listing	QPS (Certified to UL and CSA Standards) IEC/UL61010-2-011: 2016 IEC 61010-1:2010, AMD1:2016	
Energy Star	Yes, ENERGY STAR® Certified High Performance Freezer	
ADA Compliant	Yes, fits under standard ADA compliant countertop	
Indoor/Outdoor Use	Indoor use only, non-residential	
Application Environment	Non-corrosive, non-flammable, non-explosive	
Ambient Operating Temperature	+15°C to +32°C +59°F to +90°F	

Refrigeration	
Refrigeration System	VCC compressor-based, forced-air hydrocarbon
Compressor	Hermetic, variable speed (VCC). Rated speed range: 1600-4000 rpm
Condenser Type	Air-cooled fin and tube, sealed
Expansion Device	Cap tube
Evaporator Type	Direct expansion with forced-air fin and tube
Defrost Method	Automatic
Refrigerant	R290, EPA SNAP and EU F-Gas compliant natural hydrocarbon refrigerant

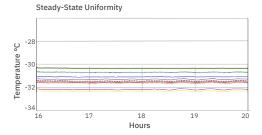
Controller / Configuration Settings		
User Interface	LED digital display, °C or °F	
Power Switch	On/Off	
Controller Type	Microprocessor with touchscreen input & display	
Security	Lockable exterior door, locking interior drawers available as accessory	
Control Sensor	RTD, stainless steel	
Communication Port	Remote alarm contacts	
Power Failure Alarm	Yes	
High/Low Alarms	Yes, fully adjustable	
Door Ajar Alarm	Yes, fully adjustable	
Condenser Temperature Alarm	Yes, fully adjustable	
Min/Max Temperature	Yes, display and reset	
Temperature Monitoring	Yes, 4oz bottle with screw cap	
Battery Back-up	Yes, 9 V non-rechargeable, lithium	

Performance Characteristics (normal operating conditions)		
Uniformity °C	+/-2.0	
Recovery to 29.5°C after 1 min door opening min	23	
Stability °C	0.1	
Energy consumption kWh/day	3.99	
Noise emission dB	46	
Heat rejection BTU/hr	1701	
Pull-down time to -30°C min	70	

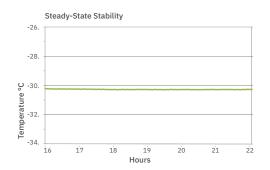
All performance data from 5 cu ft freezer, 25°C ambient, -30.0°C



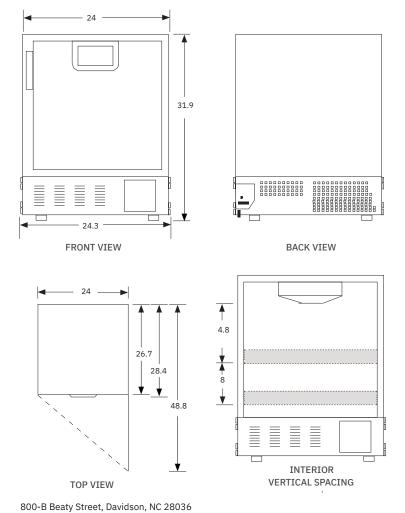
Elapsed Time (min)



-34.



Dimensions and Construct	tion
Interior (w x h x d)	19.5 x 19.9 x 22.8 in 496 x 505 x 580 mm
Exterior (w x h x d)	24 x 31.5 x 26.7 in 610 x 798 x 678 mm *Add 2.5" to the height if choosing optional casters
Overall Exterior (w x h x d)	24.3 x 31.9 x 28.4 in 617 x 809 x 721 mm *Includes leveling feet, door handle, user interface, and access panels. *The maximum height added with leveling feet at highest level or casters installed is 2" (51 mm)
Insulation	EPA SNAP and EU F-Gas compliant insulation and foaming agents
Exterior/Interior Finish	Bacteria-resistant powder-coating
Door	Solid, field-reversible
Access Port	Rear Access Port- for external monitoring probe(s) (0.75 in 19 mm diameter)
Interior Storage (w x d)	2 ventilated, powder coated shelves, adjustable 17.9 x 21.3 in 454 x 541mm, 100 lb 46 kg max capacity/shelf
Mobility	Easily movable locking casters
Net Weight	179 lb 82 kg
Shipping Weight	240 lb 110 kg
Clearance Requirements	Minimum 3" (76 mm) behind unit for for plug/cord and feature access Front ventilation eliminates the need for top or side clearance
Available Accessories	Remote alarms, remote lock adapter kit, floor and wall seismic bracket kits, stacking kit, pedestal, storage trays, locking interior drawers, certificate of calibration, temperature validation, validation guide (IQ/OQ), extended warranty
Certificate of Calibration	Yes, available as an option, generated with an ISO 17025 certified, NIST traceable thermometer
Warranty	3 years compressor, 2 years parts, 1 year labor (Outside US/Canada: Please consult with your local representative for labor warranty information.)













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