

Technical Data Sheet

Ultra-Low Temperature Freezer Upright Model -86°C



Model Number

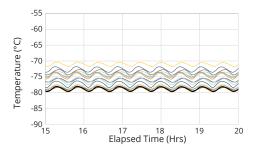
i.Series® iUF118-GX

Application	, Rating, and Electrical Data	
Application	Storage of biological samples including blood and tissue	
Storage Volume/Capacity	18 cu ft (510 liters) / 352 standard 2" (51mm) boxes	
Temperature Range	-50°C to -86°C @ 22°C (72°F) Ambient	
Electrical Power	115V 60 Hz / 220-240V 50/60Hz	
Maximum Current	8.9A (115V) / 4.7A (220-240V)	
Building Supply Rating	Grounded outlet on a dedicated circuit, meeting plug/cord ratings and electrical safety codes/req. 115V AC: 15 A (min) 220-240V AC: 10 A (min)	
Power Plug/Power Cord	NEMA 5-15 hospital-grade 115V 60Hz, 8-10 ft (2.4-3M). Inquire about other plug/cord options.	
Certification/Agency Listing	QPS (Certified to UL and CSA Standards) FDA Class II medical device	
Application Environment	Indoor use only. Non-residential.	
	Non-corrosive, non-flammable, non-explosive 15°C to 32°C (59°F to 90°F)	
Re	frigeration System	
Refrigeration System	Two Stage Cascade System	
Compressor/Number	1.0 HP hermetic, variable speed (VCC) / 2	
Condenser Type	Air-cooled fin and tube / 1	
Expansion Device	Cap tube - high and low stage	
Evaporator Type	Split, cold wall	
Defrost Method	Manual	
Refrigerant (Low/High Stage)	EU F-Gas and EPA SNAP compliant natural hydrocarbon refrigerants High Stage: R290 (propane) Low Stage: R170 (ethane) and R290 (propane)	
Environmental Impact	R170 GWP: 5.5 / ODP 0 R290 GWP: 3.3 / ODP 0	
	Controller	
Interface	i.C3®, eye-level, color touchscreen	
Power Switch	On/Off with circuit breakers	
Controller Type	Microprocessor with touchscreen input and display. Includes USB hub for data retrieval	
Security	Lockable door, PIN access control, password setpoints, padlock hasp	
Compressor Safeguard	High ambient temperature warning, compressor and condenser over-temperature alarms	
Control Sensor	RTD (stainless steel) (1 ea)	
Communication Ports	USB, Remote alarm contacts, RJ45 (Ethernet). API available for Ethernet connectivity development	
Warm/Cold Alarms	Fully adjustable	
Logs	Event log (inc alarms and door openings), temperature log, access log, download via USB	
Battery Backup	20 hour display and alarm bettery back-up for i.C3® touchscreen (12V, lead acid battery)	

Typical Performance Characteristics at 25°C Ambient				
Energy Consumption (kWhr/day @ -75°C)	9.63			
Heat Rejection / Emission BTU/hr / Watts	2,311 / 677			
Noise Emission / Sound (dB)	58			
Average Temperature Variance (Uniformity) (°C) -70°C to -80°C setpoint @ 25°C to 32°C ambient Throughout operational/ambient range	8 10			
15-sec Door Opening Recovery to -79°C (min)	38.9			
Peak Variation (Energy Star®) (°C)	16.56			
Pull down Time (to -80C) (hrs)	8.75			
Warm Up Time (-80°C to -50°C) (min)	181			

Typical Performance Characteristics at 25°C Ambi

iUF118-GX Uniformity (-80°C setpoint; 25°C ambient)







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	Construction	Optio	ns / Accessories
nsulation	Vacuum Insulated Panels	Chart Recorder Racks Boxes Dividers Chart Paper Blood storage canisters/racks LN2 and CO2 backup systems Vial storage boxes/racks	
oor / Seal	1, solid with vacuum relief port		
ccess Ports	2, external	Remote alarms Screen protectors	Tube and microplate racks
erimeter Heater	Hot gas loop	USB flash drive	
ompartments / Inner Doors	5	Cryo gloves Temperature validation	
asters / Legs	Swivel, locking / leveling legs	Extended warranty	
	Dimensions		Regulatory
nterior (w x h x d) in mm	23 x 54 x 25.3 (585 x 1373 x 643)		
xterior (w x h x d) in mm	28.9 x 78.2 x 35.1 (733 x 1986 x 892)		
xterior (w x h x d) in mm ncl. handle, casters, hinge	32.5 x 78.2 x 37.8 (826 x 1986 x 960) Fits through std 36" (914 mm) doorway		
helves / Capacity (w x d)) mm	4 adj stainless steel, 22.5 x 21.8 (572 x 554) 160 lb (73kg) max cap.	-energy Z	
et Weight / Shipping Weight	550 lb (249 kg) 645 lb (293 kg)	ENERGY STAR	
learance Requirements	Allow 4" (102mm) behind unit Allow 8" (203mm) above unit Side clearance may be needed: - Allow 5" between left cabinet wall and facility wall for key lock access - Allow 7" between cabinet walls of adjacent freezers for unobstructed door swing	CE RoHS 2797 COMPLIANT	bol 13485 Webca Doubles Cerview 5'' (826mm)
	10.1" 258mm 9.5" 241mm 9.5" 241mm 11.5" 292mm 11.9" 304mm		'W (733mm) 35.1" D (892mm) 500000000000000000000000000000000000
/arranty Outside US/Canada - C	ars compressor, 2 years parts and labor ionsult your local representative		
reezer performance in nominal reezer performance may differ	due to product size, amount, and operating condition	ons	
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