

## Technical Data Sheet

Ultra-Low Temperature Freezer Upright Model -86°C



## Model Number

i.Series® iUF118-GX

Application	n, Rating, and Electrical Data	Typical Performance Characteristics at 25°C Ambient
Application	Storage of biological samples including blood and tissue	
Storage Volume/Capacity	18 cu ft (510 liters) / 352 standard 2" (51mm) boxes	Energy Consumption (kWhr/day @ -75°C) 9.63
Temperature Range	-50°C to -86°C @ 22°C (72°F) Ambient	Heat Rejection / Emission   BTU/hr / Watts 2,311 / 677
Electrical Power	115V 60 Hz / 220-240V 50/60Hz	
Maximum Current	8.9A (115V) / 4.7A (220-240V)	Noise Emission / Sound (dB) 58
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)	Average Temperature Variance (Uniformity) (°C) -70°C to -80°C setpoint @ 25°C to 32°C ambient 8 Throughout operational/ambient range 10
Power Plug/Power Cord	NEMA 5-15 hospital-grade   115V 60Hz, 8-10 ft (2.4-3M). Inquire about other plug/cord options.	15-sec Door Opening Recovery to -79°C (min) 38.9
Certification/Agency Listing	QPS (Certified to UL and CSA Standards) FDA Class II medical device	Peak Variation (Energy Star®) (°C) 16.56
Application Environment	Indoor use only. Non-residential.	Pull down Time (to -80C) (hrs) 8.75
	Non-corrosive, non-flammable, non-explosive 15°C to 32°C (59°F to 90°F)	Warm Up Time (-80°C to -50°C) (min) 181
Ro	efrigeration System	iUF118-GX Uniformity (-80°C setpoint; 25°C ambient)
Refrigeration System	Two Stage Cascade System	· ·
Compressor/Number	1.0 HP hermetic, variable speed (VCC) / 2	-55
Condenser Type	Air-cooled fin and tube / 1	
Expansion Device	Cap tube - high and low stage	Co65 -70 -70 -75 -80
Evaporator Type	Split, cold wall	-75
Defrost Method	Manual	ğ -80
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)	-85 -90 15 16 17 18 19 20 Elapsed Time (Hrs)
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	₩ Helmer
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)	



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	Construction	Options / Accessories
Insulation	Vacuum Insulated Panels	Chart recorder & Chart paper Racks   Boxes   Divider
Door / Seal	1, solid with vacuum relief port	Leveling legs Blood storage canisters/r LN2 and CO2 backup systems Vial storage boxes/racks
Access Ports	2, external	Remote alarms Screen protectors USB flash drive Cryo gloves Temperature validation
Perimeter Heater	Hot gas loop	
Compartments / Inner Doors	5	
Casters	Swivel, locking	Extended warranty
	Dimensions	Regulatory
Interior (w x h x d) in   mm	23 x 54 x 25.3 (585 x 1373 x 643)	
Exterior (w x h x d) in   mm	28.9 x 78.2 x 35.1 (733 x 1986 x 892)	
Exterior (w x h x d) in  mm Incl. handle, casters, hinge	32.5 x 78.2 x 37.8 (826 x 1986 x 960) Fits through std 36" (914 mm) doorway	
Shelves / Capacity (w x d) in   mm	4 adj stainless steel, 22.5 x 21.8 (572 x 554) 160 lb (73kg) max cap.	-Energy 7
Net Weight / Shipping Weight	550 lb (249 kg)   645 lb (293 kg)	ENERGY STAR
	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	2797 ROHS COMPLIANT  SOINGER S
/8.2 H (1986mm)	10.1" 258mm 9.5" 241mm 9.5" 241mm 11.5" 292mm	28.9" W (733mm) 35.1" D (892mm)

Product Life Cycle - Designed to provide a 10 year service life Reli.Warranty (US/Canada) - 5 years compressor, 2 years parts and labor Warranty Outside US/Canada - Consult your local representative

Freezer performance in nominal and individual units may vary
Freezer performance may differ due to product size, amount, and operating conditions

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