

780 Litre Upright Ultra-Low Temperature (ULT) Freezer

Product Code: STIRSU780XLE

The Stirling Ultracold is the most reliable and energy-efficient upright ultra-low temperature (ULT) freezers available (Compared to other compressor-based ULT's).

Some traditional compressor based units do fail, putting your valuable samples at risk. However the SU780XLE uses Stirling engine technology, which outlasts such compressors and is guaranteed to keep your samples safer and for longer.

Features

- $\pm 1^{\circ}\text{C}$ Steady-state temperature variation over time
- Faster initial pull-down, ambient to -80°C , <6.5 hours
- Fastest door opening temperature recovery, 35 minutes to -80°C
(when tested using the ENERGY STAR® Final Test Method door opening procedure)
- Connectivity available to BMS/BAS or 3rd-party monitoring system
- Real-time temperature display
- Largest storage capacity per sq. ft. of floor space
- Plugs into any outlet
- 70-75% less energy than standard compressor-based systems



Specifications

Technical Data	
Volume (Litres)	780
Operating Temperature (°C)	-20 to -86
External Dimensions; W x D x H (mm)	1994 x 870 x 915
Internal Dimensions; W x D x H (mm)	1542 x 705 x 740
Weight (Kg)	284
Insulation	High performance vacuum insulated panels and polyurethane foam using Ecomate® environmentally friendly, SNAP-compliant blowing agent
Doors	Outer 1 / Inner 3
Shelving	x2 (adjustable)
Compartments	600 x 2" Boxes (Optional 700 Box system available)
Noise (dBA)	< 45
Ambient Operating Temperature (°C)	+5 to +35
Cooling Engine	Helium charged free-piston Stirling engine with continuous modulation
Heat Transport System	Gravity driven thermosiphon
Refrigerant	R-170 (Ethane) 90 grams
Evaporator	Cold wall (inner liner)
Heat Rejection	Finned heat exchanger with forced air cooling
Defrost Method	Manual
Interface	Graphic user interface with touchscreen controls
Controller Type	Microprocessor with touchscreen input and display
Security	Lockable door, optional PIN requirement built in
Warm and Cold Alarms	Fully adjustable
Control Sensor	Two RTD's (PT100 Class A)
Event Log	All alarms, door openings
Dry Contacts	Normally closed, normally open, common; activated by power outage or any alarm condition
Temperature Log	30 days available graphically
Battery Back-up	12-hour control battery back-up for touchscreen
Internet Connectivity	Optional "Sense Anywhere" wireless temperature monitoring and logging
Steady State Energy Use	6.67 kWh/day at -75°C (Weighted Average)
Pull-Down from 25°C Ambient	6.5 hours at -80°C (Empty Cabinet)
Recovery from Door Opening	35 minutes at -80°C
Warm-up Profile	2.5 hours to -60°C at -80°C (Empty Cabinet) 6.5 hours to -40°C at -80°C (Empty Cabinet)
Heat Dissipation	981 BTU/h (load to HVAC) at -80°C (Empty Cab
Electric Power	120-240VAC at 50/60Hz
Maximum Power (Current)	1200 watts (5 amps @240V), nominal

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