

105 Litre Compact Ultra-Low Temperature (ULT) Freezer

Product Code: STIRSUI05UE

The Stirling Ultracold SUI05UE undercounter ultra-low temperature (ULT) freezer is ideal for bench-side personal storage or for use in areas where larger-volume ULTs are not suitable. This space-saving freezer delivers full-performance ULT storage for benchtop, stacked or undercounter configurations. Boasting the widest temperature range in the industry, the SUI05UE undercounter ULT lab freezer is perfect for warming up samples and biologics in stages. It's the ideal solution to optimize your laboratory floor plan, offering:



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)	105
Operating Temperature (°C)	-20 to -86
External Dimensions; W x D x H (mm)	864 x 711 x 686
Internal Dimensions; W x D x H (mm)	533 x 432 x 457
Weight (Kg)	100
Insulation	High performance vacuum insulated panels and polyurethane foam using Ecomate® environmentally friendly, SNAP-compliant blowing agent
Doors	Outer 1 / Inner 3
Shelving	x1 (fixed / removable)
Compartments	72 x 2" Boxes
Noise (dBA)	< 48
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) 30 - 33 grams
Evaporator	Cold wall (inner liner)
Heat Rejection	Finned heat exchanger with forced air cooling
Defrost Method	Manual
Interface	Graphical 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	One RTD (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 Ethernet connection transmitting in BACnet™ or MQTT protocols
Steady State Energy Use	< 4 kWh/day at -80°C
Pull-Down from 25°C Ambient	9 hours 40 -80°C (Empty Cabinet)
Recovery from Door Opening	40 minutes to -80°C
Warm-up Profile	2 hours to -60°C at -80°C (Empty Cabinet) 5.2 hours to -40°C at -80°C (Empty Cabinet)
Heat Dissipation	563 BTU/h (load to HVAC) at -80°C (Empty Cab
Electric Power	120-240VAC at 50/60Hz
Maximum Power (Current)	300 watts (1.5 amps @240V), nominal

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