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# Stirling SU780XLE

780 Litre Upright Ultra-Low Temperature Freezer

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.

## Top features

**Minimize maintenance for -80°C ultra-low freezer**
using Stirling engine technology. Stirling engine technology means fewer components, resulting in less risk of failure — and consequently, lower risk to samples.

**Save valuable lab space with the SU780XLE ultra-low freezer.**
It boasts the largest cubic ft/m storage capacity per square foot/meter of floor space, enabling you to store more samples using less space.

**Energy-saving: Use up to 70% less energy. Improve your laboratory sustainability.**
with one of the top ENERGY STAR® ratings. The SU780XLE ultra-low temperature freezer is one of the most environmentally sustainable upright ULTs.

**Integrate smarter lab connectivity and remote freezer monitoring.**
The SU780XLE upright ultra-low freezer is also available with SenseAnywhere cloud-based remote monitoring of sample conditions in your freezer fleet from any browser (optional extra).

**± 1°C Steady-state temperature variation over time**

**Connectivity available to BMS/BAS or 3rd-party monitoring system**

**Real-time temperature display**

**Plugs into any outlet**

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# Stirling SU780XLE Technical Specifications

| Model | Stirling SU780XLE |
|---|---|
| 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 (Optioal 700 box system avaliable) |
| Noise (dBA) | <45 |
| Ambient Operating Temperature (°C) | +5 to +35 |
| Cooling Engine | Helium charged free-piston Stirling engine with continuous modulation |
| 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 |
| 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 |
| 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 |
| Temperature Log | 30 days available graphically |
| Warm-up Profile | 2.5 hours to -60°C at -80°C (Empty Cabinet)<br>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 |

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