

MODEL ULT25NEU

Portable Ultra-Low Temperature Storage



Industry's widest ULT
temperature range
-20°C to -86°C

Safeguards temperature-sensitive medical treatments regardless of patient location

- ✓ Lightweight, portable design makes this a perfect appliance for clinical point-of-use cold storage
- ✓ Superior Stirling engine reliability scales down to a remarkably small footprint and weight (21 kg, 46 lbs), without sacrificing performance
- ✓ Provides industry's widest ultra-low temperature range of -20°C to -86°C
- ✓ Adaptable power input provides operational flexibility between standard AC main outlets, worldwide, as well as vehicle-based 12V DC power or external battery devices
- ✓ Utilizes 100% natural refrigerants to support sustainable, environmentally-friendly operations
- ✓ Optional SenseAnywhere wireless temperature logging allows for remote monitoring via cloud-based software
- ✓ Ample storage capacity for thousands of 2mL vials within a surprising compact frame

Uniquely portable and reliable ultra-low ULT25NEU storage benefits scientists, clinicians and patients alike

- Safely preserve and deliver biologic drugs and vaccines at the point of patient care, anywhere in the world
- Easily deploy long-term storage of viable biological materials, with low power use in any form - battery, 12V vehicle power, or solar panel
- Collect temperature-sensitive samples and specimens at remote trial or field locations
- Remain confident in performance with a one-year warranty for parts and service in the U.S. and Canada

SAL-LIT-00013-B
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stirlingultracold.com

Model ULT25NEU Specifications

APPLICATION, RATING AND ELECTRIC DATA

| | |
|------------------------------|--|
| Application | Storage of general (non-flammable) laboratory materials |
| Storage Volume | 25 liters (0.9 cu.ft.) |
| Storage Capacity | 18 standard 2" boxes |
| Temperature Range | -20°C to -86°C @ 32°C (90°F) ambient, uniformity -3°C at -80°C top to bottom, adjustable in 1°C increments Presets for -86°C (default), -40°C and -20°C |
| Electric Power | 100V to 240VAC at either 50 or 60Hz or 12V DC from mobile source |
| Maximum Power (Current) | 280 watts (4 amps @120VAC, 2 amps @240VAC, 15 amps @ 12V DC) |
| Auto-Voltage Capability | 100V to 240V, 50 or 60 Hz |
| Electric Supply Rating | 15 amp or greater grounded circuit |
| Power Plugs Available | NEMA 5-15P plug requires standard NEMA 5-15R receptacle (120V); Length: 2261 mm (89 in.), or NEMA 5-15P plug requires standard NEMA 15R receptacle (120V); Length: 3048 mm (120 in.), or NEMA 6-15P plug requires standard NEMA 6-15R receptacle (240V); Length: 2997 mm (118 in.) <i>Specify when ordering</i> |
| Certification/Agency Listing | CE, cTUVus |
| Noise | Advanced noise abatement, <45 dB(A) at 1 meter |
| Indoor/Outdoor Use | Indoor use only |
| Environmental Conditions | Non-corrosive, non-flammable, non-explosive, indoor use, altitude up to 2,000m, temperature 5°C to 40°C (41°F to 104°F), maximum relative humidity 80% for temperature up to 31°C decreasing linearly to 50% at 40°C |

CONTROLLER

| | |
|-----------------------|--|
| Controller Type | Microprocessor controls |
| Security | Lockable lid |
| Warm and Cold Alarms | Setpoint \pm 10°C |
| Control Sensor | One RTD (PT100 Class A) |
| Dry Contacts | Optional |
| Internet Connectivity | Optional SenseAnywhere wireless temperature monitoring and logging |

REFRIGERATION SYSTEM

| | |
|-----------------------|---|
| Cooling Engine | Helium charged free-piston Stirling engine with continuous modulation |
| Heat Transport System | Gravity driven thermosiphon |
| Refrigerant | R-170 (Ethane) 10 - 12 grams |
| Evaporator | Cold wall (inner liner) |
| Heat Rejection | Finned heat exchanger with forced air cooling Air inlet: Right front side of unit Air outlet: Below control panel of front mechanical compartment |
| Defrost Method | Manual |

PERFORMANCE DATA

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|---|--|
| Steady State Energy Use at 25°C Ambient | 2.8 kWh/day (average power 118 watts) at -80°C (Empty Cabinet) |
| Pull-Down from 25°C Ambient | 4 hours to -80°C (Empty Cabinet) |
| Recovery from 1 minute lid opening | 20 minutes to -80°C (Empty Cabinet) |
| Warm-up Profile | 30 minutes to -60°C (Empty Cabinet) 70 minutes to -40°C (Empty Cabinet) |
| Heat Dissipation | 403 BTU/h (load to HVAC) (Empty Cabinet) |

DIMENSIONS AND CONSTRUCTION

| | |
|----------------------|---|
| Interior (L x W x D) | 332 x 221 x 340 mm / (13.1 x 8.7 x 13.4 in.) |
| Exterior (L x W x D) | 692.5 x 350 x 460 mm / (27.3 x 13.8 x 18.1 in.) |
| Net Weight, Empty | 21 kg (46 lbs.), nominal |
| Shipping (L x W x D) | 762 x 457 x 559 mm / (30 x 18 x 22 in.) |
| Shipping Weight | 24 kg (53 lbs.) |
| Insulation | High performance vacuum insulated panels and polyurethane foam |
| Gasket Heater | User programmable duty cycle |
| Options | Plastic Utility Bin, AC Power Cords, Mobile Power DC Cord, Sub-Lid, Certificate of Calibration, Temperature Mapping Validation, Remote Alarm Contacts |



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**ULT25NEU Ultra-Low
Temperature Freezer**

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STIRLING POWER