

SHUTTLE^{°C} Model ULT-25NE

Portable Ultra-Low Temperature Freezer

Ideal for Clinical Trials



The Industry's Best Performance

- ✓ Lowest Energy Consumption, <2.8 kWh/day @ -80°C
- ✓ Lowest Shipping Costs
- ✓ Easily Maneuverable
- ✓ Smallest Footprint, in a Class by Itself
- ✓ Plugs into Any Outlet
- ✓ 12V DC Power Supply
- ✓ Wide Temperature Range, -86°C to -20°C

Shuttle™ ULT-25NE Portable Freezer, .9 cu.ft. (25 liters).
A one year warranty for parts and labor is standard worldwide.

The benefits of Stirling Ultracold freezers reach all levels of the clinical trial.

- Lightest overall weight, lowest shipping costs, easy to handle
- Can plug into any outlet, eliminating the cost of converting an outlet to 240V
- Smallest footprint in its class, giving the investigator more options for placement within the site
- Plug the Shuttle into a mobile power supply to transport samples between different site locations
- 100% Natural refrigerants



STIRLING
ULTRACOLD

Shuttle™ Model ULT-25NE 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	-86°C to -20°C @ 32°C (90°F) ambient, uniformity $\pm 3^\circ\text{C}$ at -80°C top to bottom, adjustable in 1°C increments Presets for -86°C (default), -40°C and -20°C
Electric Power	120V or 240V, AC; 60Hz or 50Hz; or 12V DC from mobile source
Maximum Power (Current)	280 watts (4 amps @120V, 2 amps @240V)
Auto-Voltage Capability	100V to 240V, 50 or 60 Hz
Electric Supply Rating	15 amp or greater grounded circuit
Power Plugs Available Separately	NEMA 5-15P plug requires standard NEMA 5-15R receptacle (120V); Length: 2987 mm (72 in.) or NEMA 6-15P plug requires standard NEMA 6-15R receptacle (240V); Length: 2987 mm (72 in.) <i>Others available upon request. Specify when ordering</i>
Certification/Agency Listing	CE
Noise	Advanced noise abatement, <45 dB(A) at 1 meter
Indoor/Outdoor Use	Indoor use only
Application Environment	Non-corrosive, non-flammable, non-explosive
Ambient Operating Temperature	+5°C to +35°C (41°F to 95°F)

Controller

Controller Type	Microprocessor controls
Security	Lockable lid
Warm and Cold Alarms	Setpoint $\pm 10^\circ\text{C}$
Control Sensor	One RTD (PT100 Class A)
Dry Contacts	Optional

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 on front of mechanical compartment
Defrost Method	Manual

Performance Data, Empty Cabinet

Steady State Energy Use	2.8 kWh/day (average power 118 watts) at -80°C
Heat Dissipation	403 BTU/h (load to HVAC) at -80°C Setpoint
Pull-Down from 25°C Ambient	4 hours to -80°C setpoint
Recovery from 1 minute lid opening	20 minutes to -80°C 30 minutes to -60°C 70 minutes to -40°C 130 minutes to -20°C
Warm-Up Profile, -80°C	

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 Dimensions (L x W x D)	787.4 x 482.6 x 584.2 mm (31 x 19 x 23 in.)
Shipping Weight	26.3 kg (58 lbs.), nominal
Insulation	High performance vacuum insulated panels and polyurethane foam using environmentally friendly CO ₂ blowing agent
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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