

Portable ultra-low temperature freezer



Model	Stirling Ultracold ULT25NEU
Application	Storage of general (non-flammable) laboratory materials
Storage volume	25 litres
Storage capacity	18 large format racks
Temperature range	-86°C to -20°C at ambient, adjustable in 1°C increments Pre-sets for -86°C (default), -40°C and -20°C
Power	240V, AC at 50Hz or 12V DC from a mobile source
Certification	CE
Advanced noise abatement	<45dB(A) at 1 metre
Environmental conditions	Non-corrosive, non-flammable, non-explosive, indoor use, altitude up to 2000m, temperature 5°C to 40°C
Cooling engine	Helium charged free-piston Stirling engine with continuous modulation
Refrigerant	R-170 (Ethane) 10-12g
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
Security	Lockable lid
Warm and cold alarms	Setpoint +/- 10°C
Control sensor	One RTD (PT100 Class A)
Dry contacts	Optional
Internet connectivity	Optional SenseAnywhere wireless temperature monitoring
Steady state energy use at 25°C ambient	<2.8 kWh/day (average power 118 watts) at -80°C
Pull-down from 25°C ambient	4 hours at -80°C
Recovery from 1-minute lid opening	20 minutes to -80°C
Warm-up profile	30 minutes to -60°C, 70 minutes to -40°C
Heat dissipation	403 BTU/h (load to HVAC) at -80°C
Interior dimensions (mm)	332 x 221 x 340
Exterior dimensions (mm)	692.5 x 350 x 460
Net weight, empty	21kg
Insulation	High performance vacuum insulated panels and polyurethane foam