

-86°C Portable Ultra Low Freezer

Grau Series



This is a low-temperature mobile refrigerator produced by the company for the civil and medical markets. It is a mobile refrigerator with precise constant temperature that can change the temperature at will, and it is suitable for the distribution needs of vaccine and high-end biomedical users.

It can be directly use on 110V~240V electric power, or by battery power work. The battery can be customized according to customer's requirements. The time can be customized according to costumers' requirements.



Technical Specifications

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 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, 60 Hz
Electric Supply Rating	15 amp or greater grounded circuit
Noise	Advanced noise abatement, <45 dB(A) at 1 meter
Controller Type	Microprocessor controls
Security	Lockable lid
Warm and Cold Alarms	Set point \pm 10°C
Control Sensor	One RTD (PT100 Class A)
Cooling Engine	Helium charged free-piston engine with continuous modulation
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
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)
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