



medical
systems



Variable Speed Ultra-Low Freezers

U401V | U501V | U701V



INTENSIVE USE RELIABLE ENERGY EFFICIENT

Variable Speed Ultra-Low Temperature Freezer for the safe storage of specimens, samples, pharmaceuticals, blood and blood components at temperatures ranging from -86°C to -20°C.

Variable Speed Ultra-Low Freezers

Operating temperature range: -86°C to -20°C

Durable Design

- Stainless steel construction with an external antibacterial coating that ensures durability and hygiene
- Ergonomic door handle for seamless operations and durability
- Sturdy door hinges ensure a secure seal, preventing frost buildup
- Designed for tropical climates with ambient temperatures reaching as high as +43°C

Advanced Insulation Technology

- Innovative vacuum valves in the door permit faster openings
- Improved long-lasting VIP panels reduce temperature fluctuations
- Magnetic gasketed inner doors provide superior cabinet insulation

Reliable & Green Refrigeration System

- Bottom-mounted refrigeration system offers easy access and an optimised storage space
- Uses green refrigerants with zero Ozone Depletion Potential (ODP)
- Unique evaporator technology ensures an even cold air distribution and eliminates oil clogging

Innovative Electronics

- 7" full touchscreen display with digital control and functionalities
- Access control using NFC card and password protection
- Advanced alarm system with audio and visual alarms
- Easy data export using a USB/SD card
- Bi-frequency operation (50/60 Hz)



Versatile Modularity

- Optimised cryobox storage capacity
- Large choice of racks offering modularity for every need

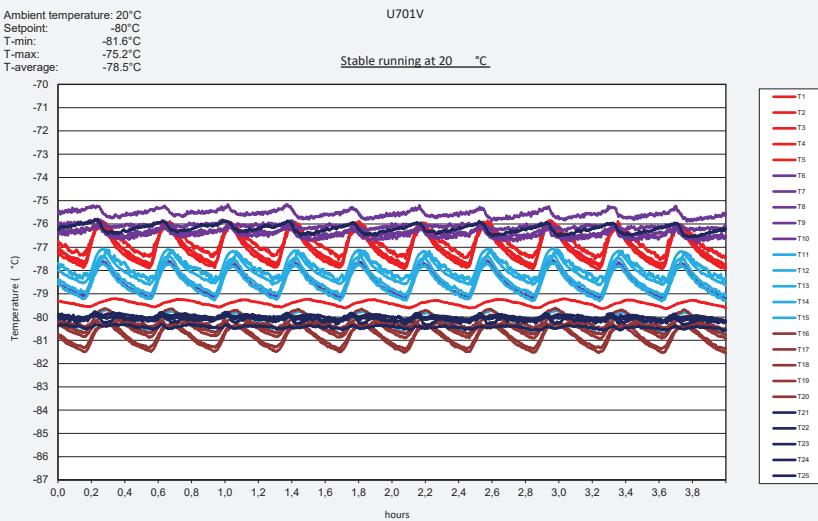
KEY PRODUCT FEATURES

The Variable Speed Ultra-Low Freezer delivers, with its innovative technology, Superior Temperature Uniformity and Door Opening Recovery with Low Energy Consumption even during intensive use.

CASE STUDY: U701V

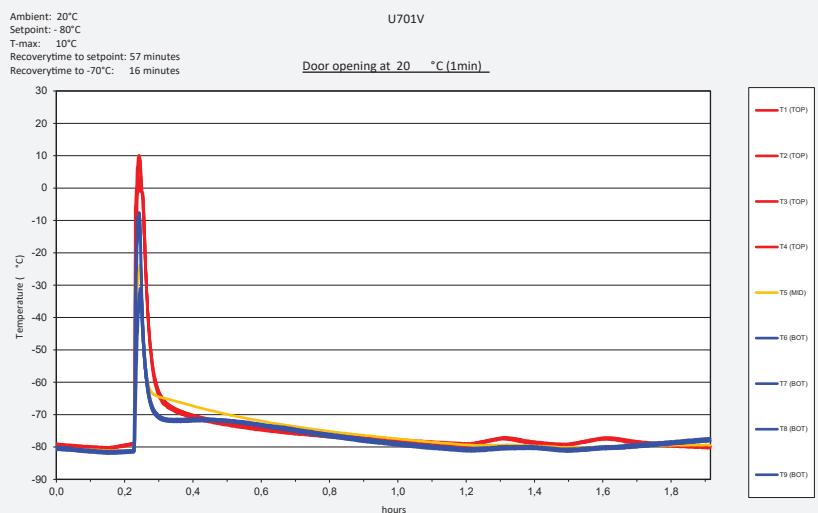
Temperature Uniformity & Stability

Superior temperature uniformity ensures even temperatures throughout the cabinet, maintaining sample integrity.



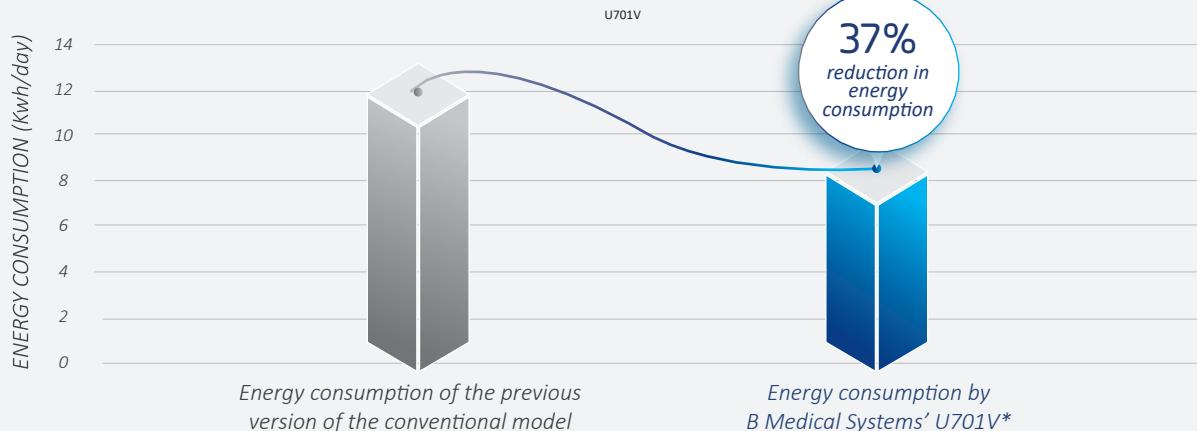
Door Opening Recovery

Rapid return to the set temperature even during intensive use, ensuring sample protection.



Energy Efficiency

High energy efficiency irrespective of the usage pattern, enabling operational efficiency.



*Measured at 20°C ambient temperature with a set point of -80°C

TECHNICAL DATA

Key Specifications

| | U401V | U501V | U701V |
|--|--|---|--|
| <i>Gross / Net volume (L)</i> | 477/454 L | 633/602 L | 790/751 L |
| <i>Set temperature (preset)</i> | | -80°C | |
| <i>Temperature range</i> | | -86°C to -20°C | |
| <i>Preset cold / warm alarm limit</i> | | -85°C -75°C | |
| <i>Climate class (ambient temperature range)</i> | | SN/T (+10°C to +43°C) | |
| <i>Defrosting technique</i> | | Manual | |
| <i>Refrigerant type</i> | | R290 / R170 | |
| <i>External dimensions H x W x D (mm)</i> | 1988 x 699 x 1039 mm | 1988 x 845 x 1039 mm | 1988 x 992 x 1039 mm |
| <i>Inner dimensions H x W x D (mm)</i> | 1375 x 447 x 738 mm | 1375 x 593 x 738 mm | 1375 x 740 x 738 mm |
| <i>Net weight (kg)</i> | 262 kg | 285 kg | 305 kg |
| <i>Supply voltage (V)</i> | | 220V - 240V | |
| <i>Frequency (Hz)</i> | | 50Hz - 60Hz | |
| <i>Power (W)</i> | | 2000W | |
| <i>Energy consumption (kWh/24h)¹</i> | 6.7 kWh/24h for -80°C 5.5 kWh/24h for -70°C | 7.1 kWh/24h for -80°C 6.0 kWh/24h for -70°C | 7.5 kWh/24h for -80°C 6.3 kWh/24h for -70°C |
| <i>Hold over time (-80°C to -60°C)¹</i> | 1.82 h | 1.37 h | 2.2 h |
| <i>Heat ejection (Kcal/h)</i> | 291.6 Kcal/h | 297.7 Kcal/h | 309.54 Kcal/h |
| <i>Warranty</i> | | 5 years 7 years on compressor | |
| <i>VHP Sterilization - Optional</i> | | Compatible with Vaporized Hydrogen Peroxide (VHP) decontamination systems | |
| <i>Medical Device Regulation</i> | | MDR (EU) 2017/745, Class IIa | |

1. Tested at 20°C ambient temperature

SAVING LIVES THROUGH RELIABLE AND INNOVATIVE TECHNOLOGY

B Medical Systems S.à r.l

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