



Datasheet

Features

| | |
|------------------------------------|----------------|
| Lock | Yes |
| LED Light | No |
| Battery Backup for Controller, 48h | Yes |
| VIP (Vacuum Insulated Panel) | No |
| Perimeter Heater | No |
| Porthole | Yes - Ø 12,5mm |
| Dry Contact | Yes |
| Vacuum Valve | No |
| Door | Solid |
| Door Reversibility | N/A |

Construction

| | |
|---------------------------|---------------------------------|
| Outer Dimensions, HxWxD | 831x1260x608 |
| Inner Dimensions, HxWxD | 624x1100x440 |
| Weight Gross/Net, kg | 100 / 78 |
| Material Inner Cabinet | Painted Steel |
| Material Outer Cabinet | Painted Steel |
| Insulation Thickness, mm | 80 |
| Insulation Type | Polyurethane with Cyclopentane |
| Air Distribution | N/A |
| Mobility | Standard: 4xCasters with brakes |
| Refrigerant, Type / gram | Nature R2 / 143 |
| Variable Speed Compressor | No |
| Internal Air Distribution | Static |
| Number of Probes | 1 |

Controller & Alarms

| | |
|----------------------|-----------------------|
| Controller | i-Care, Touch screen |
| Controller language | EN, DE, FR |
| USB Connection | Yes |
| Logging | Data, Alarms & Events |
| Temperature Graph | Yes |
| High/Low Temp. Alarm | Yes |
| Open Door Alarm | No |
| Probe Failure Alarm | Yes |
| Power Failure Alarm | Yes |

-20°C
-86°C




ULTF-C296i

Biomedical ULT Freezer

Complexity made simple [Info center](#)



Storage

| | |
|----------------------|-----------|
| Volume, Gross/net, L | 296 / 284 |
| Shelf | N/A |
| Cryobox "2 capacity | 216 |
| 2 ml vials capacity | 21.600 |
| Inner lids | Yes |

Performance & Operation

| | |
|-------------------------------|-------------------------|
| Temperature Range, C° | -20 to -86 |
| Voltage, V | 220 |
| Frequence, Hz | 50 |
| Max Ambient, °C | 25 |
| Max Humidity, °C | 65 |
| Noise, dB | 55 |
| Energy Consumption, kWh / 24h | 9,8 |
| Instant Power Consumption | PD 0,710 / Stable 0,520 |
| Heat Rejection | 642 |
| K-Value | 0,2 |
| Defrost | Manual |



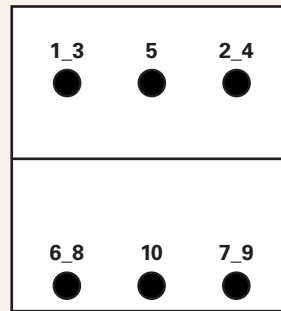
Temperature Mapping

Test overview

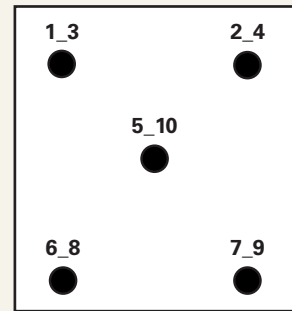
| | |
|---------------------|--|
| Test type | 10-point test |
| Test environment | Controlled conditions, empty cabinet |
| Ambient temperature | 20°C |
| Humidity | 60% |
| Set-point | -82°C |
| Sensors used | 25gr tinned brass formed as a cylinder with a diameter of 15,2mm |
| Installation | Appliance installed according to instruction manual conditions |
| Refrigerant | Nature R 2 |

Sensor position

Front View



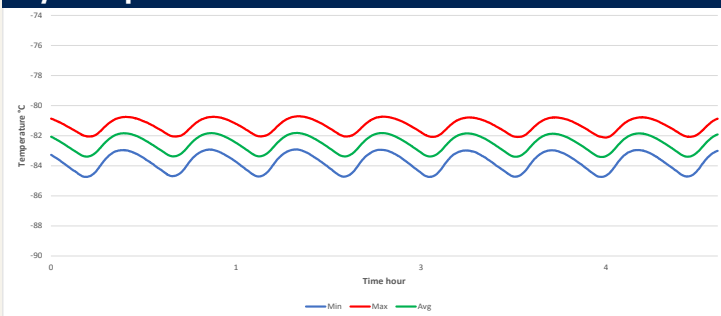
Top View



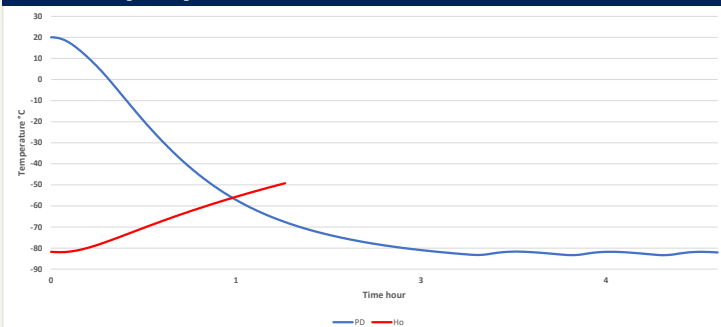
Sensor temperature

| Sensor position | P1 | P2 | P3 | P4 | P5 | P6 | P7 | P8 | P9 | P10 |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Max. | -81,5 | -82,7 | -82,9 | -82,3 | -82,1 | -80,7 | -81,6 | -80,9 | -82 | -81,3 |
| Avg. | -82,4 | -83,5 | -83,8 | -83,2 | -82,7 | -81,4 | -82,2 | -81,5 | -82,7 | -82,1 |
| Min. | -83,3 | -84,5 | -84,7 | -84,2 | -83,5 | -82,1 | -82,9 | -82,3 | -83,6 | -83 |

Cyclic operation



Warm up & pull down



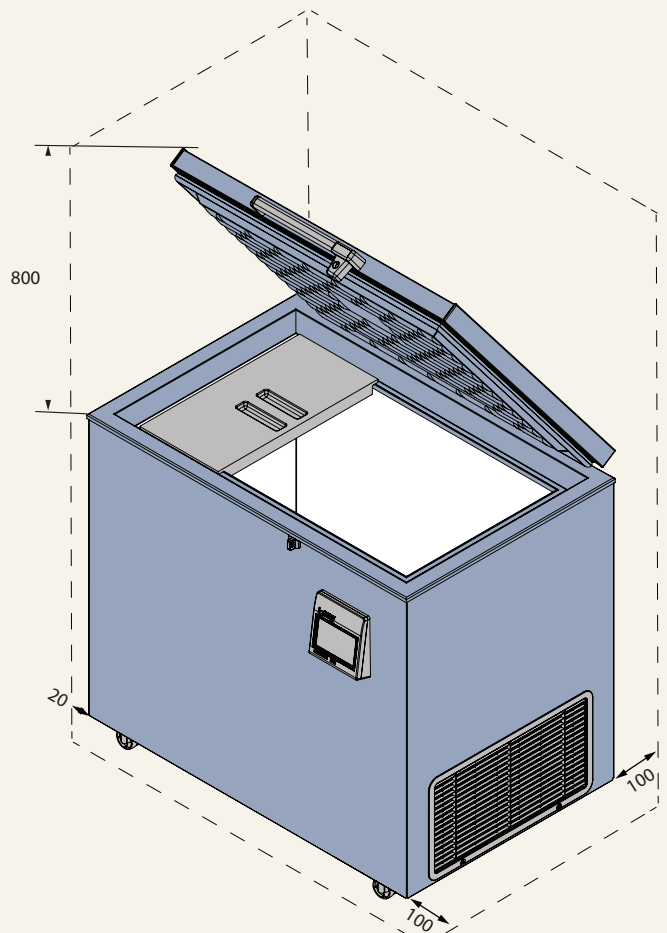
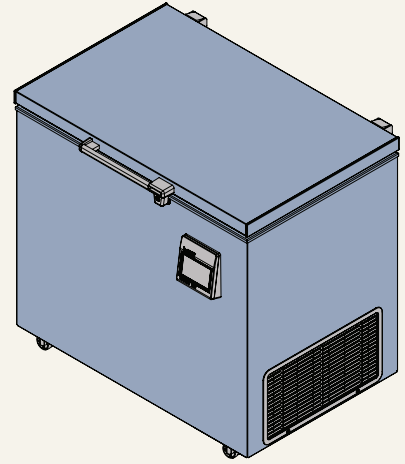
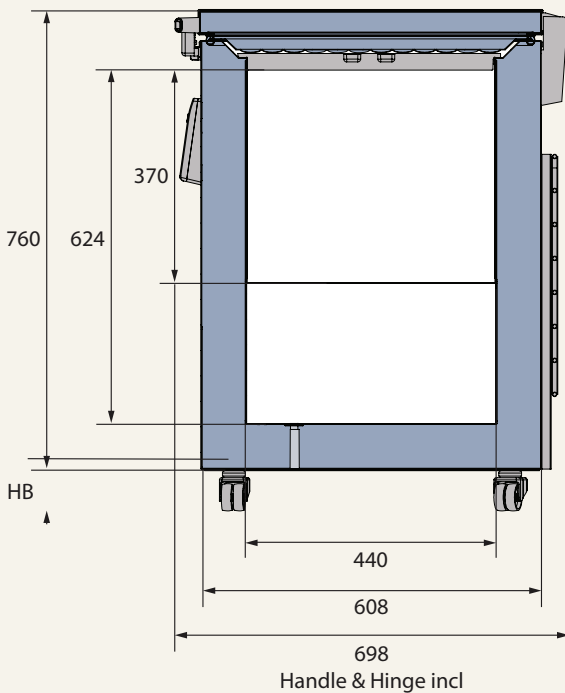
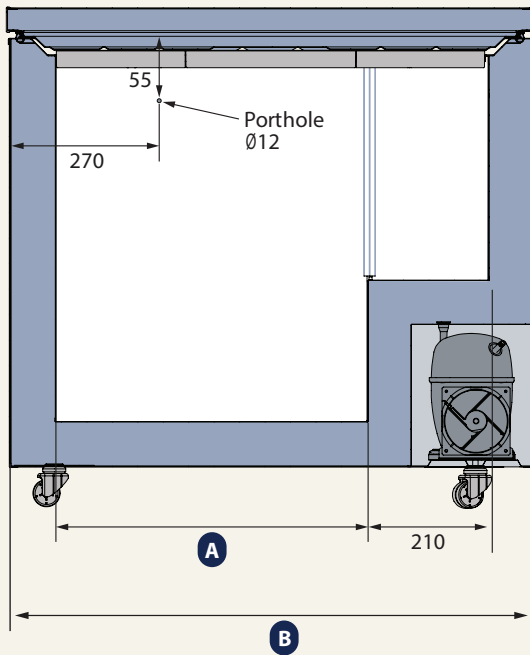
Typical performance data

| | |
|---|--------------|
| Avg. cabinet temperature | -82,5°C |
| Peak variation from set-point | +/- 1,2°C |
| Stability in avg. | 0,8°C |
| 1 min. door open recovery to -75°C avg. temperature | <1 min. |
| Cycle rate on/off | 30 / 7 min. |
| Duty cycle | 77,3 % |
| Energy consumption - Normal mode | 9,85 kWh/day |
| Energy consumption - Energy saving mode | 7,04 kWh/day |
| Pull down time to -75°C avg. temperature | 130 min. |
| Hold over time from -82°C to -60°C | 72 min. |
| Heat rejection | 642 W |



Dimensions

| Model | A | B |
|------------|------|------|
| ULTF-C198i | 550 | 920 |
| ULTF-C296i | 890 | 1260 |
| ULTF-C383i | 1190 | 1560 |



All dimensions in millimeter

HB: Height of base (HB is ajustable when given value is xx-xx)

