



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	831x1560x608
Inner Dimensions, HxWxD	624x1400x440
Weight Gross/Net, kg	112 / 86
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 / 161
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



Biomedical ULT Freezer

Complexity made simple [Info center](#)



Storage

Volume, Gross/net, L	383 / 368
Shelf	N/A
Cryobox "2 capacity	282
2 ml vials capacity	28.200
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	9,9
Instant Power Consumption	PD 0,810 / Stable 0,532
Heat Rejection	670
K-Value	0,2
Defrost	Manual



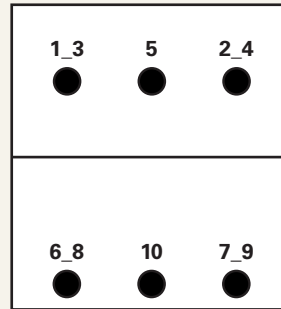
Temperature Mapping

Test overview

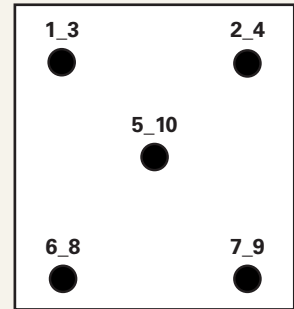
Test type	10-point test
Test environment	Controlled conditions, empty cabinet
Ambient temperature	20°C
Humidity	60%
Set-point	-82°C
Sensors used	25gr tinned brass formed as a cylinder with a diameter of 15,2mm
Installation	Appliance installed according to instruction manual conditions
Refrigerant	Nature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

Sensor position

Front View



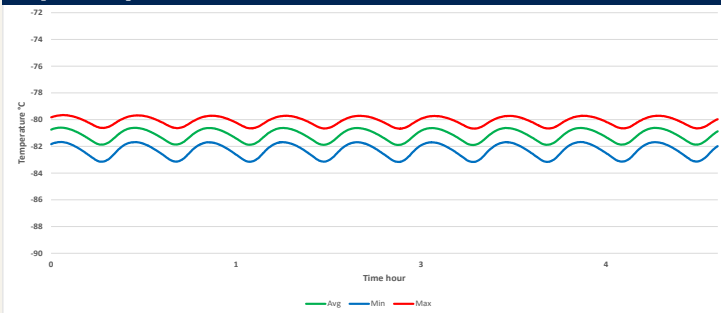
Top View



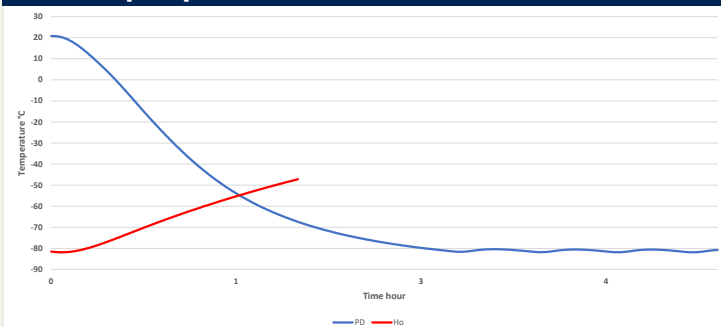
Sensor temperature

Sensor position	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
Max.	-80,9	-81,5	-81,7	-80	-80,3	-79,9	-79,7	-80,7	-81,7	-80,8
Avg.	-81,5	-82,2	-82,3	-80,8	-80,8	-80,4	-80,1	-81,2	-81,7	-80,8
Min.	-82,3	-83	-83,2	-81,6	-81,5	-81	-80,7	-81,8	-82,5	-81,6

Cyclic operation



Warm up & pull down



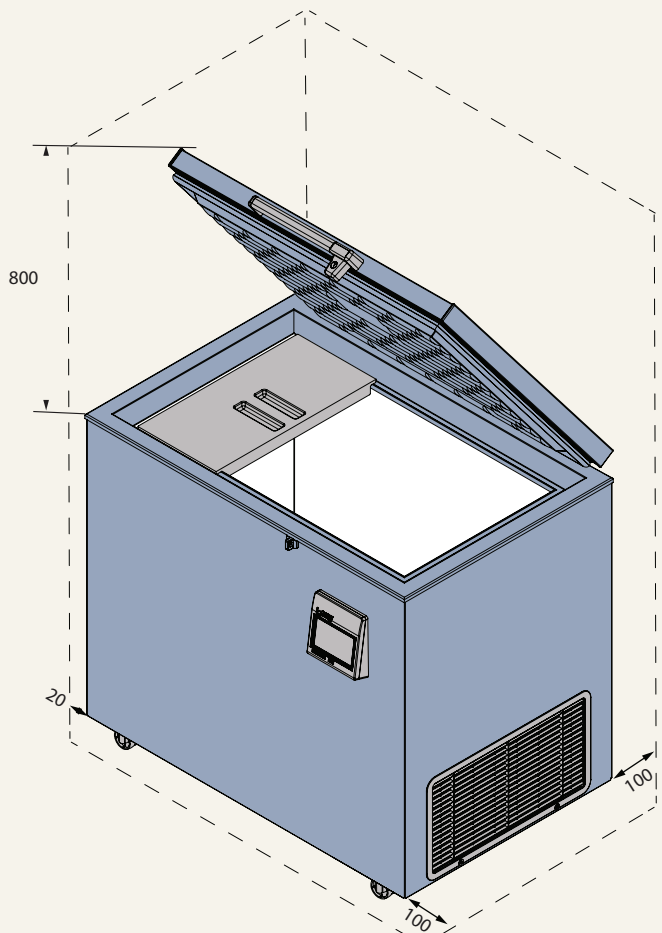
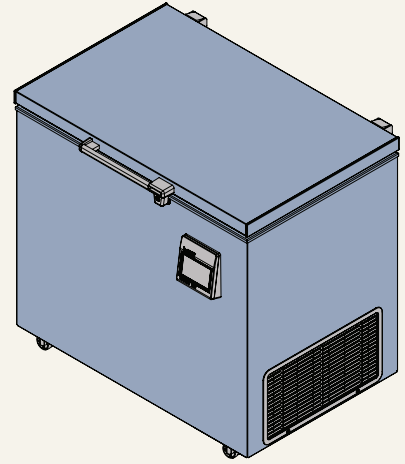
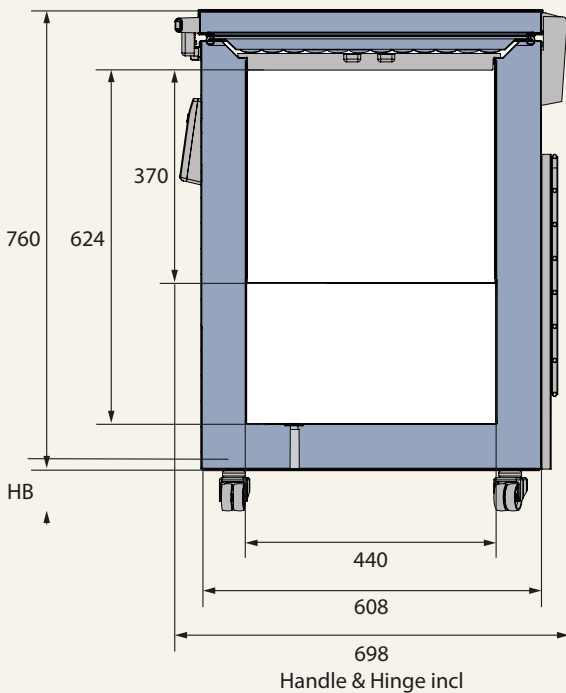
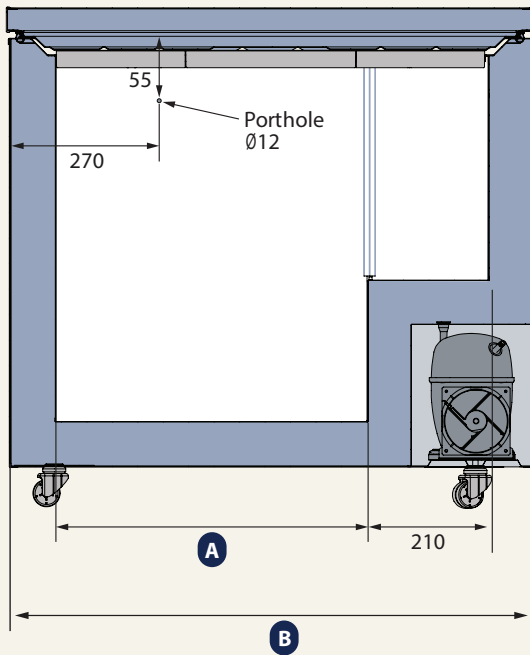
Typical performance data

Avg. cabinet temperature	-81,2°C
Peak variation from set-point	+/- 1,1°C
Stability in avg.	0,6°C
1 min. door open recovery to -75°C avg. temperature	<1 min.
Cycle rate on/off	25 / 7 min.
Duty cycle	75 %
Energy consumption - Normal mode	9,95 kWh/day
Energy consumption - Energy saving mode	7,42 kWh/day
Pull down time to -75°C avg. temperature	138 min.
Hold over time from -82°C to -60°C	69 min.
Heat rejection	670 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)

