



**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	831x920x608
Inner Dimensions, HxWxD	624x760x440
Weight Gross/Net, kg	80 / 63
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 / 90
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	198 / 189
Shelf	N/A
Cryobox "2 capacity	117
2 ml vials capacity	11.700
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	5,9
Instant Power Consumption	PD 0,370 / Stable 0,300
Heat Rejection	375
K-Value	0,2
Defrost	Manual



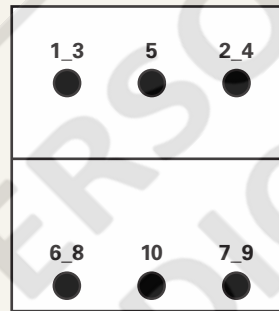
## Temperature Mapping

### Test overview

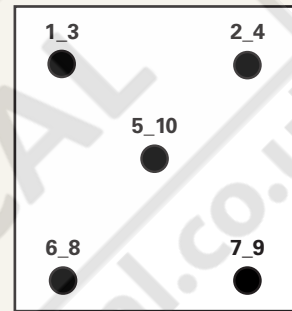
Test type	10-point test
Test environment	Controlled conditions, empty cabinet
Ambient temperature	20°C
Humidity	60%
Set-point	-82°C
Sensors used	25gr tinned brass formed as a cylinder with a diameter of 15,2mm
Installation	Appliance installed according to instruction manual conditions
Refrigerant	Nature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

### Sensor position

#### Front View



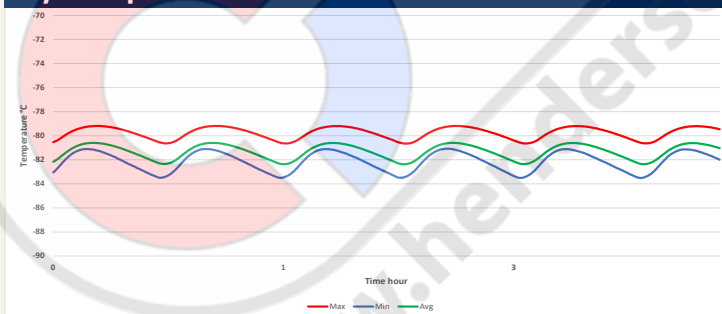
#### Top View



### Sensor temperature

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

### Cyclic operation



### Warm up & pull down



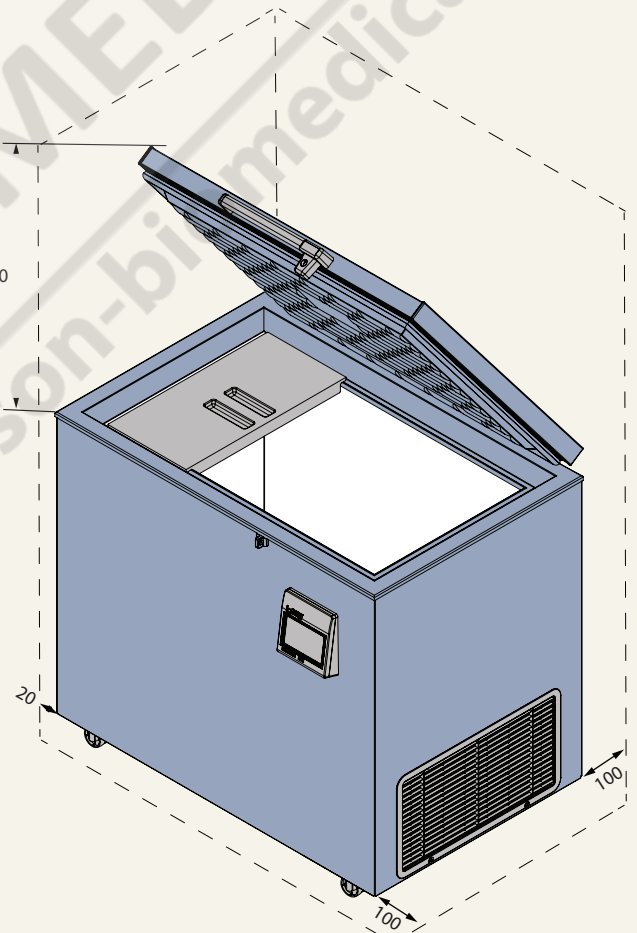
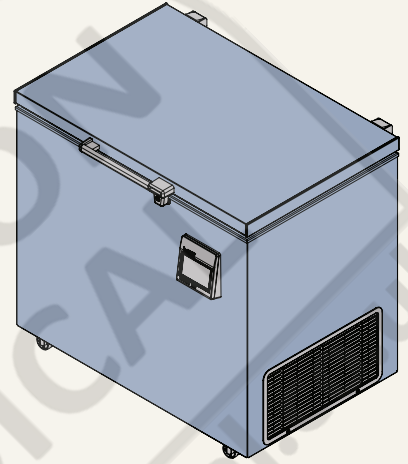
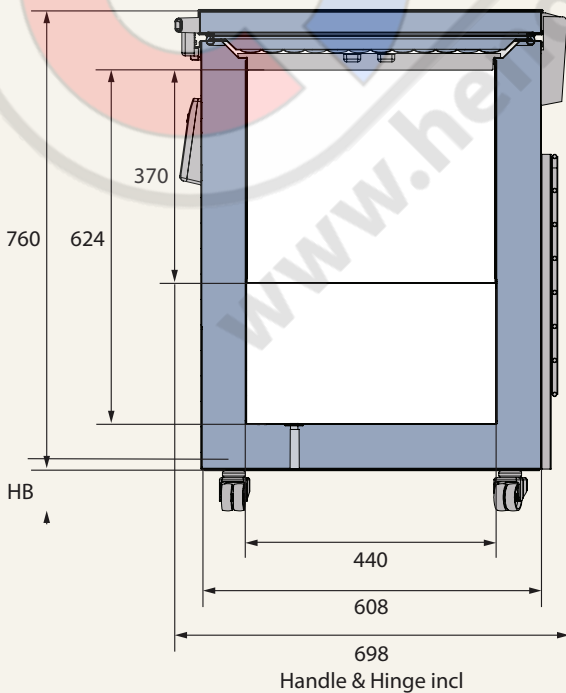
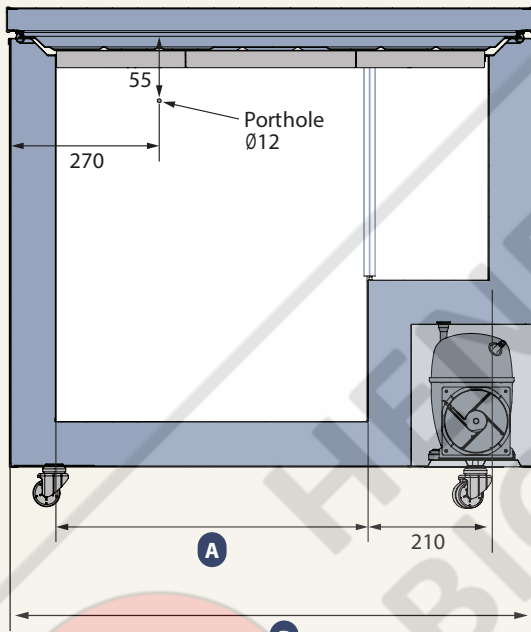
### Typical performance data

Avg. cabinet temperature	-81,3°C
Uniformity	+/- 1,2°C
Stability in avg.	0,9°C
1 min. door open recovery to -75°C avg. temperature	<1 min.
Cycle rate on/off	35 / 6 min.
Duty cycle	81,6 %
Energy consumption - Normal mode	5,99 kWh/day
Energy consumption - Energy saving mode	4,83 kWh/day
Pull down time to -75°C avg. temperature	180 min.
Hold over time from -82°C to -60°C	63 min.
Heat rejection	375 W



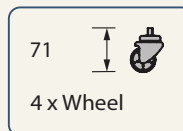
**Dimensions**

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 ajustastable when given value is xx-xx)





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