



**Datasheet**

Features	
Lock	Yes
LED Light	Yes
Battery Backup for Controller, 48h	Yes
VIP (Vacuum Insulated Panel)	Yes
Perimeter Heater	Electric
Porthole	Yes - Ø 20mm
Dry Contact	Yes
Vacuum Valve	Yes
Door	Solid
Door Reversibility	No

Construction	
Outer Dimensions, HxWxD	631x630x675
Inner Dimensions, HxWxD	433x439x271
Weight Gross/Net, kg	70 / 59
Material Inner Cabinet	Stainless Steel
Material Outer Cabinet	Painted Steel
Insulation Thickness, mm	80
Insulation Type	Polyurethane with Cyclopentane
Air Distribution	N/A
Mobility	Standard: Adjustable Feet Option: Castors
Refrigerant, Type / gram	Nature R2 / 96
Variable Speed Compressor	Yes - Adaptive Cooling Technology
Internal Air Distribution	Static
Number of Probes	2

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	Yes
Probe Failure Alarm	Yes
Power Failure Alarm	Yes



**Biomedical ULT Freezer**

Adaptive Cooling Technology™

Info center



Complexity made simple

Storage	
Volume, Gross/net, L	37 / 37
Shelf	1 / 1
Cryobox "2 capacity	33
2 ml vials capacity	3.300
Inner lids	No

Performance & Operation	
Temperature Range, C°	-20 to -86
Voltage, V	110 / 220
Frequence, Hz	50 / 60
Max Ambient, °C	43
Max Humidity, °C	65
Noise, dB	46
Energy Consumption, kWh / 24h	3,2
Instant Power Consumption	PD 0,550 / Stable 0,030
Heat Rejection	306
K-Value	0,19
Defrost	Manual



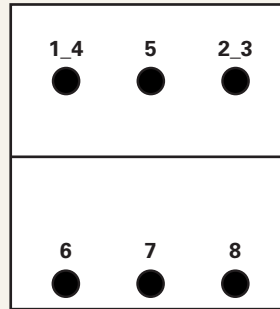
## Temperature Mapping

### Test overview

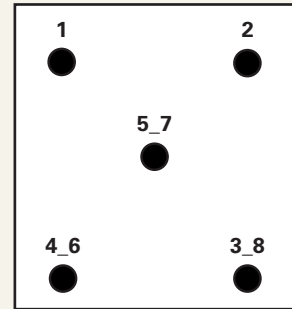
Test type	8-point test
Test environment	Controlled conditions, empty cabinet
Ambient temperature	20°C
Humidity	60%
Set-point	-82°C
Sensors used	25gr tinned brass formed as a cylinder with a diameter of 15,2mm
Installation	Appliance installed according to instruction manual conditions
Refrigerant	Nature R 2

### Sensor position

#### Front View



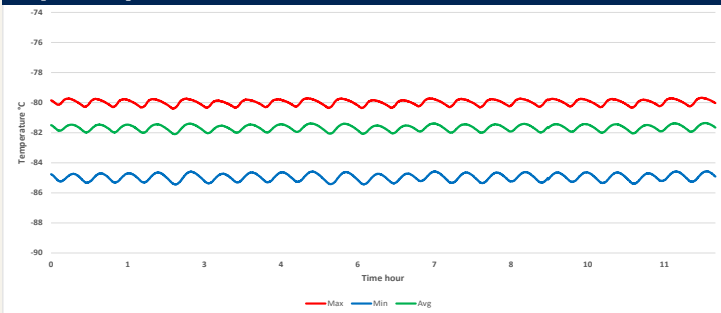
#### Top View



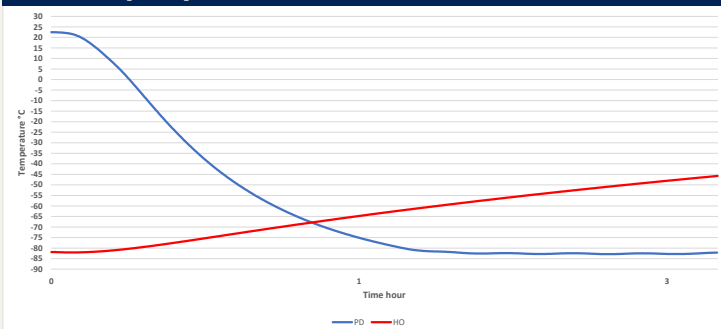
### Sensor temperature

Sensor position	P1	P2	P3	P4	P5	P6	P7	P8
Max.	-79,7	-80,2	-80,1	-79,9	-80	-83,1	-83,1	-84,6
Avg.	-80	-80,5	-80,4	-80,2	-80,3	-83,5	-83,6	-85
Min.	-80,4	-81	-80,8	-80,5	-80,7	-84,1	-84,1	-85,4

### Cyclic operation



### Warm up & pull down

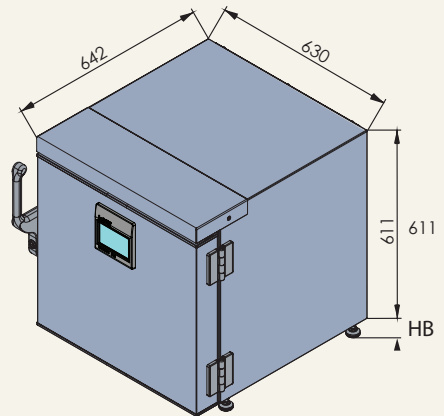
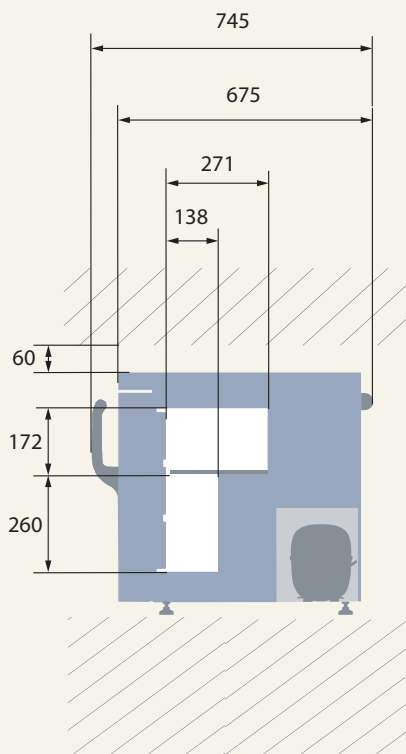
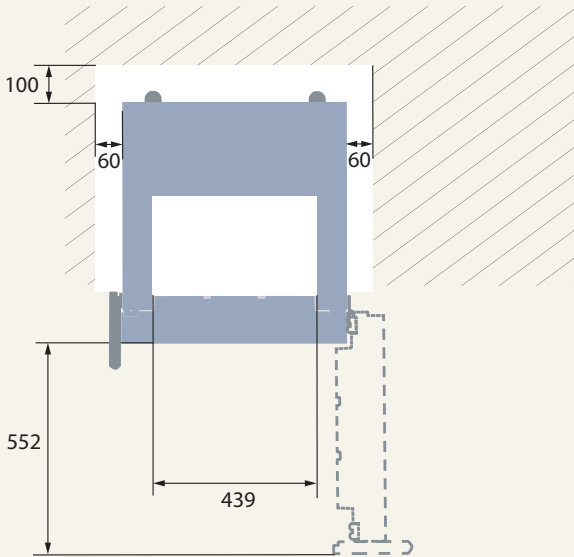


### Typical performance data

Avg. cabinet temperature	-81,7°C
Uniformity	+/- 2,5°C
Stability in avg.	0,5°C
1 min. door open recovery to -75°C avg. temperature	20 min.
Cycle rate on/off	25,7 / 6,7 min.
Duty cycle	78,7%
Energy consumption - Normal mode	3,25 kWh/day
Energy consumption - Energy saving mode	2,92 kWh/day
Pull down time to -75°C avg. temperature	84 min.
Hold over time from -82°C to -60°C	105 min.
Heat rejection	306 W



## Dimensions



All dimensions in milimeters

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

