



ULTF-C198i

BIOMEDICAL ULT FREEZER

The chest design is an economical choice, that preserves cold well due to the horizontal lid.

-20°C
-86°C



DIMENSIONS

Outer Dimensions HxWxD, mm	831x920x608
Inner Dimensions HxWxD, mm	624x760x440
Weight Gross/Net, kg	80 / 63
Material inner cabinet	Painted Steel
Material outer cabinet	Painted Steel
Packaging weight, kg	17
Packaging dimensions HxWxD, mm	900x973x725
Insulation thickness	80
Insulation type	Polyurethane with Cyclopentane
Mobility	Standard: 4 castors with brakes
Refrigerant, Type / gram	Nature R2 / 90
Variable Speed Compressor	No
Internal Air Distribution	Static
Number of probes	1

CONTROLLER

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

STORAGE

Volume, Gross/Net, L	198 / 189
Cryobox "2 capacity	117
2 ml vials capacity	11.700
Inner lids	Yes

FEATURES

Lock	Yes
LED light	No
Battery Backup for Controller, 24h	Yes
VIP (Vacuum Insulated Panel)	No
Door frame heater	No
Porthole	Yes - Ø 12,5 mm
Dry Contact	Yes
Vacuum valve	No
Door	Solid



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Voltage/Frequency		
Voltage/Hz		230V/50Hz
Max Ambient		
°C		25°C
Max Humidity		
% rh		65%
PERFORMANCE		
All data in RT20°C		
Temperature Range		
°C		-20 to -86
Uniformity in performance - difference between top and bottom		
°C		+/- 0,9
Pull down time		
Minutes		180min to -75°C
Hold over time		
Minutes		63 min to -60°C
Noise		
dB		55
Energy Saving Mode		
kWh/24h		4,839 kWh/24h Set -70
Energy Consumption, kWh / 24h		
kWh/24h		5,994 kWh/24h Set -82
Energy year		
kWh/year		2187,8 kWh/y Set -82°C
Instant Power Consumption		
kW		PD 0,370-0,320/Stable 0,300
Heat Rejection*		
W		250
U-Value		
W/m ² K		0,2
COOLING COMPONENTS		
Refrigerant/Amount (gram)		
		Nature R 2/90gr
Number of compressors		
pcs		1
Variable speed compressor		
Yes/No		No
Internal air distribution (type of)		
		Static
Evaporator Fan		
Yes/No/Variable		No
Condenser Fan		
Yes/No/Variable		Yes
Number of probes		
pcs		1
Defrost		
Yes/No		No

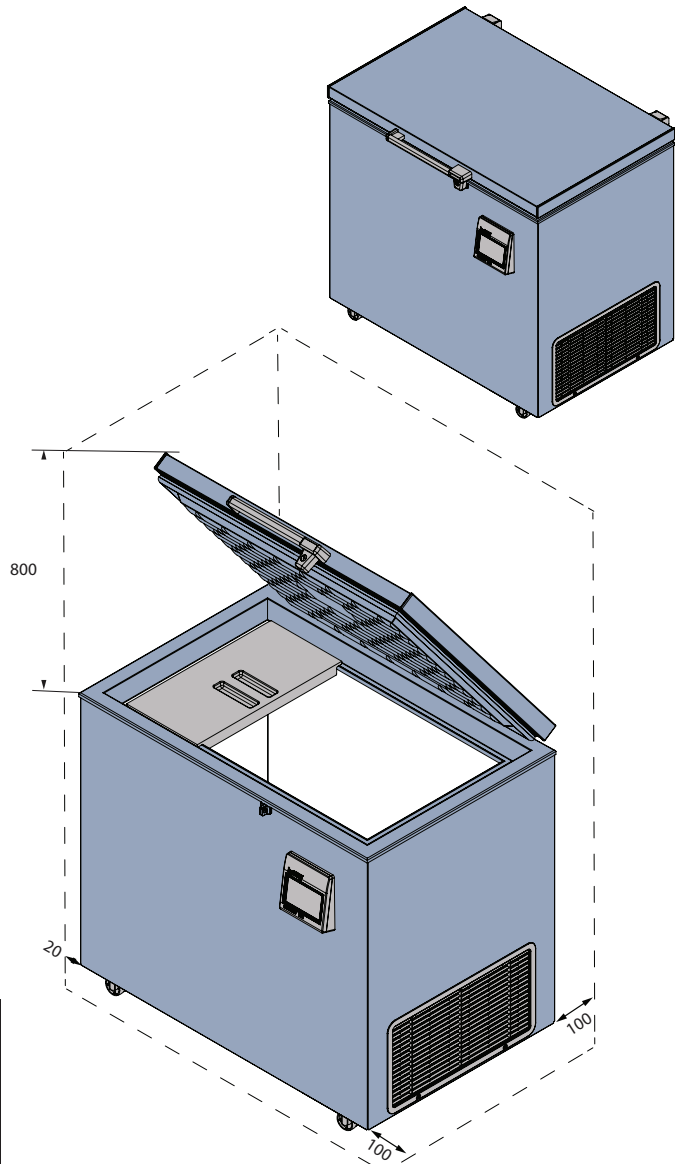
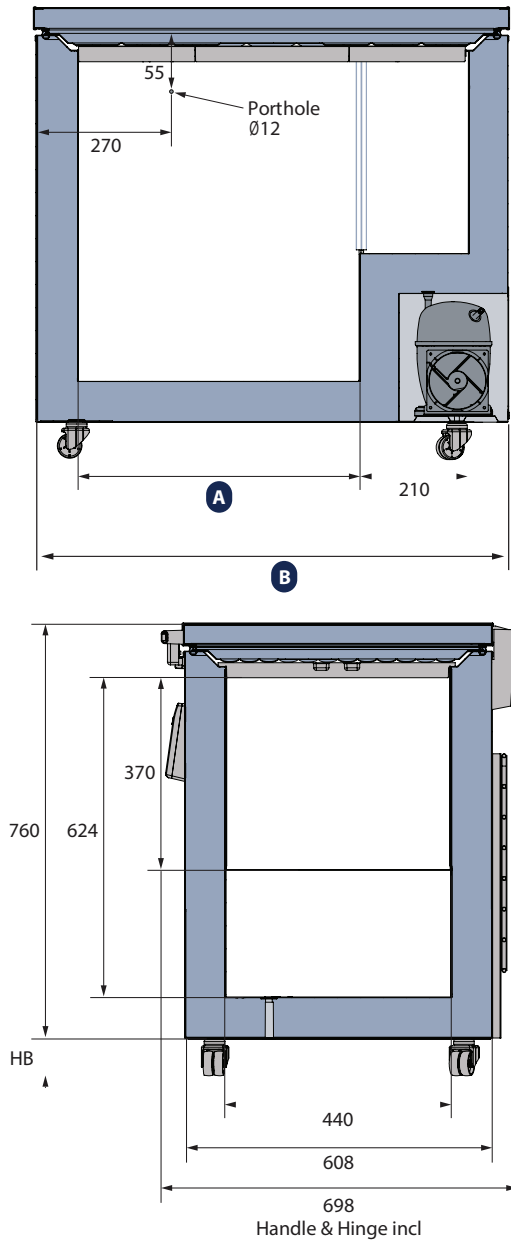
* Heat Rejection is defined as average power based on energy consumption, rounded up to nearest 50W.



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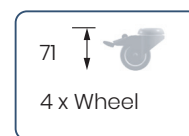
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MODEL	A	B
ULTF-C198i	550	920
ULTF-C296i	890	1260
ULTF-C383i	1190	1560

All measurements in mm.

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





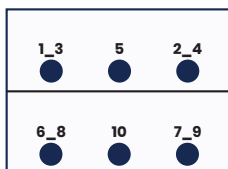
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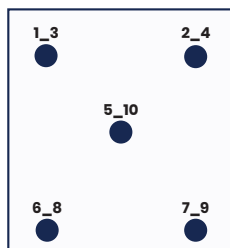
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SENSOR POSITION

FRONT VIEW



TOP VIEW



MODEL

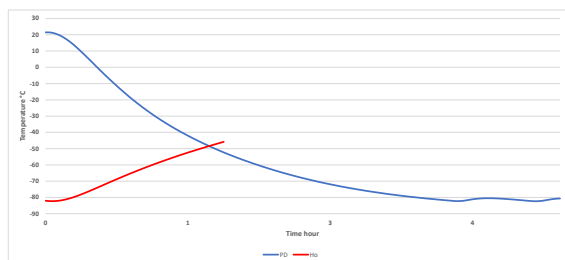
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Test type	10-point test
Test environment	Controlled conditions, empty cabinet
Ambient temperature	20°C
Humidity	60%
Set-point	-82°C
Sensor used	25gr tinned brass formed as a cylinder with a diameter of 15,2 mm
Installation	Appliance installed according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

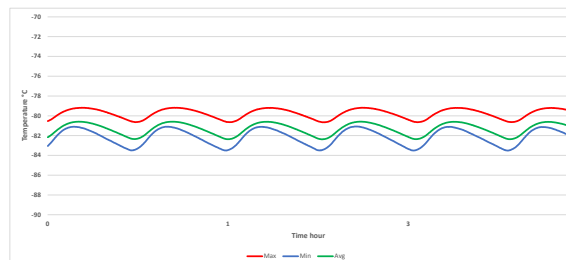
SENSOR TEMPERATURE

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

WARM UP & PULL DOWN



CYCLIC OPERATION



TYPICAL PERFORMANCE IN AMBIENT 20°C – EMPTY CABINET

Avg. cabinet temperature	-81,3°C
Peak variation from set-point	+/- 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