Biomedical

ULTF-C198i

ULTF-C198i

-20ºC to -86ºC Ultra Low temperature freezer

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

Featuring the ETR-System™ (*Extended Temperature Range*) the unit can operate within -20ºC to -86ºC, giving you flexibility to adjust the cooling to your specific needs, or to save energy reducing both operation costs & carbon emission. Our biomedical appliances offer a reliable solution for users seeking industry leading cooling performance and high operation stability.

🏅 **Complexity made simple**

🏅 **Info center**

ULTF-C198i | Gallery
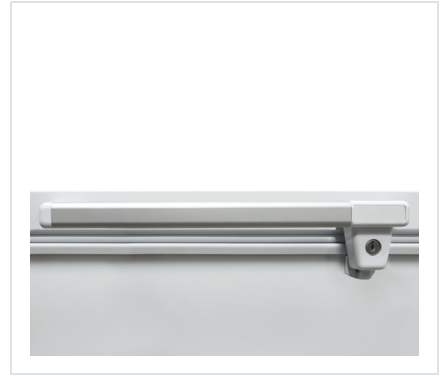
ULTF-C198i |

Construction	Value
Dimension	831x920x608 mm
Dimension inner	624x760x440 mm
Weight	80 / 63 gross/net
Package weight	18 kg
Material inner cabinet	Painted steel Kg. gross/net
Material outer cabinet	Painted steel Kg. gross/net
Insulation type	Polyurethane with cyclopentane
Insulation thickness	80 mm
Type of packaging	Wooden box with a wooden pallet
Mobility	4x casters with brakes

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Storage ULT	Value
Volume	198 / 189 Gross/net
Cryoboxes "2	117
2 ml vials	11.700

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Features	Value
Lock	✓
LED light	−
Battery backup	✓
Porthole	✓
Porthole size	12,5 mm
Dry contact	✓
Vacuum valve	−
VIP (Vacuum Insulated Panel)	−

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Alarms	Value
High / Low temperature	✓
Open door	✓
Power failure	✓
Probe failure	✓

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Test	Value
Voltage	220 V
Frequence	50 Hz
Max ambient	30 ºC
Max Humidity	65 %

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Operation	Value
Temperature range	-20 to -86 ºC
Unifromity in performance	0,9 ºC
Pull dowm time (from test condition to fabric setpoint)	180 Minutes
Hold over time (from fabric SP to critical point)	63 Minutes
Noise	55 dB
Energy 24 hours	5,9 kWh/24h
Energy year	2187 kWh/anno
Instant Power Consumption	PD 0,370 - 0,320 / Stable 0,300 kW
Heat Rejection	375 W
K-Value	0,2 W/m^2k

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Cooling components	Value
Refrigerant/amount	Nature R 2 / 90 Type & gram
Number of compressors	1
Variable speed compressor	⊖
Internal air distribution (Type)	Static
Evaporator fan	⊖
Condensor fan	✔
Number of probes	1
Defrost	⊖

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Controller	Value
Controller	i-CARE
Controller type	
USB Connection	Yes
Data connection	MODBUS
Controller abilities	Logging of data & alarms, touch screen
Controller languages	EN, DE, FR
Log numbers	More than a year
Temperature graph in controller	✔

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
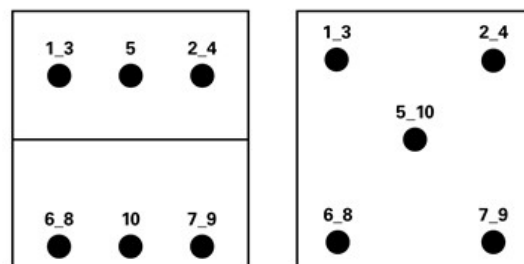
Sensor temperature

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

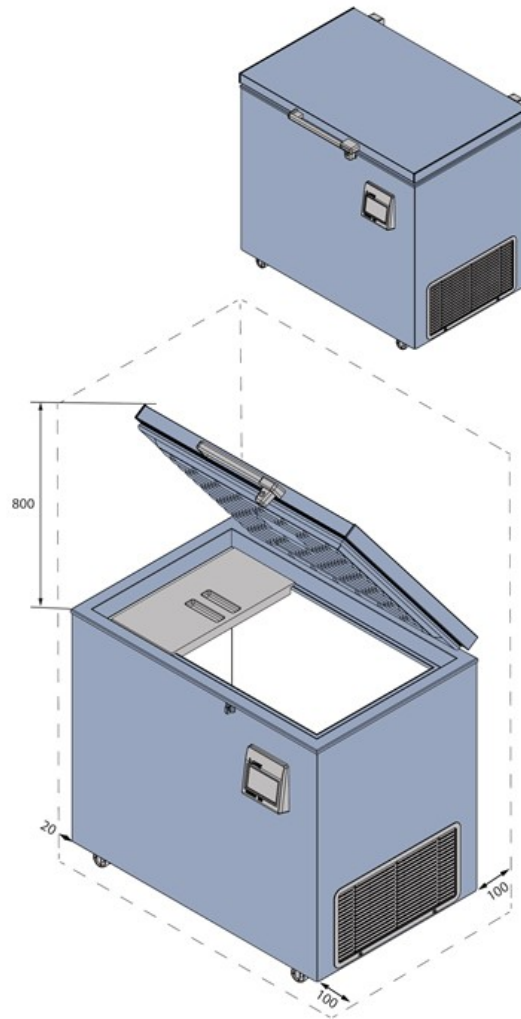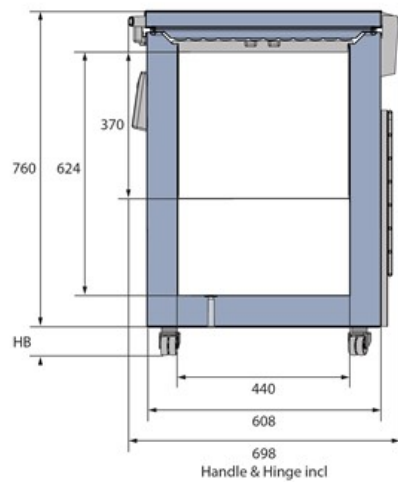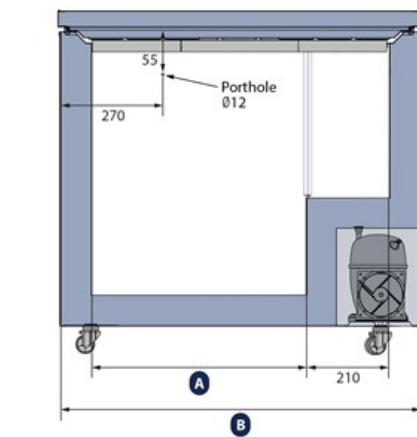## Warm up & pull down
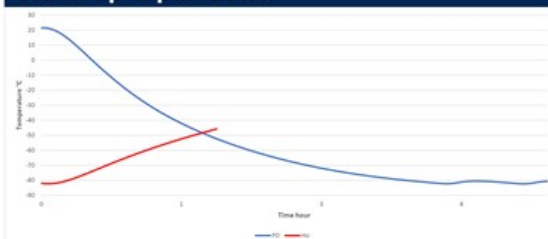
Typical performance data

Avg. cabinet temperature	-81,3°C
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	5,94 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 milimeters

55
Porthole Ø12
270
210
A
B

760
624
370
HB
440
608
698
Handle & Hinge incl

800
20
100
100

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

71
4 x Wheel