



ULTF-91i

ULT TECHNICAL SPECIFICATIONS

Multi voltage.



DIMENSIONS	
Outer Dimensions HxWxD, mm	836x947x720
Depth incl. door handle	790
Inner Dimensions HxWxD, mm	310x640x445
Weight Gross/Net, kg	137 / 102
Material inner cabinet	Stainless steel
Material outer cabinet	Painted Steel
Packaging weight, kg	35
Packaging dimensions HxWxD, mm	1030x1040x850
Insulation thickness	120
Insulation type	Polyurethane with Cyclopentane
Mobility	3 x adjustable feet, 3 x castors
Refrigerant, Type / gram	Nature R 2/149gr
FEATURES	
Lock	<input checked="" type="checkbox"/>
LED light	<input type="checkbox"/>
Battery Backup for Controller, 24h	<input checked="" type="checkbox"/>
Porthole	<input checked="" type="checkbox"/>
Porthole size	20 mm
Dry contact	<input checked="" type="checkbox"/>
Door reversibility	<input type="checkbox"/>
Vacuum valve	<input checked="" type="checkbox"/>
VIP (Vacuum Insulated Panel)	<input checked="" type="checkbox"/>
STORAGE	
Capacity (L)	88
ALARMS	
High / Low temperature	<input checked="" type="checkbox"/>
Open door	<input checked="" type="checkbox"/>
Power failure	<input checked="" type="checkbox"/>
Probe failure	<input checked="" type="checkbox"/>
COOLING	
Refrigerant	Nature R
Noise	< 48
Voltage	100-240 V
Frequency	50/60 Hz
Temperature range	-20 / -86
Ambient condition	25 °C



BIOMEDICAL

ULTF-91i

ULT TECHNICAL SPECIFICATIONS

Multi voltage.

Voltage/Frequency		
Voltage/Hz		100-240 V, 50/60Hz
Max Ambient		
°C		32
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		+/- 2,5
Pull down time		
Minutes		103 min. to -75°C
Hold over time		
Minutes		N/A
Noise		
dB		< 48
Energy Consumption, kWh / 24h		
kWh/24h		5,22 kWh/24h set -80°C
Energy year		
kWh/year		1905kWh/y set -80°C
Instant Power Consumption		
kW		PD 0,650/Stable 0,280
Heat Rejection*		
W		250
U-Value		
W/m ² K		N/A
COOLING COMPONENTS		
Refrigerant/Amount (gram)		
		Nature R 2/149gr
Number of compressors		
pcs		1
Variable speed compressor		
Yes/No		Yes
Internal air distribution (type of)		
		Static
Evaporator Fan		
Yes/No/Variable		No
Condenser Fan		
Yes/No/Variable		Yes
Number of probes		
pcs		2
Defrost		
Yes/No		No
CONTROLLER		
Controller		
y/n/optional		Yes
Controller type		
		i-Care touch
USB Connection		
y/n		Yes
Data connection		
USB		Yes
Controller abilities		
		Logging of data & alarms
Controller languages		
		EN, DE, FR
Temperature curve in controller		
y/n		Yes

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

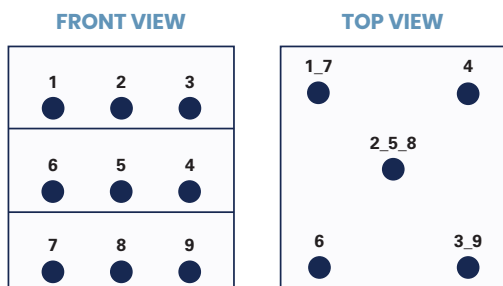


ULTF-91i

ULT TECHNICAL SPECIFICATIONS

Multi voltage.

SENSOR POSITION



MODEL

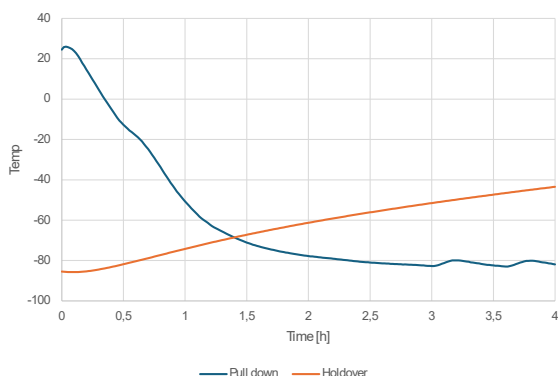
ULTF-91i

Test type	8-point test
Test environment	Controlled conditions, empty cabinet
Ambient temperature	25°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

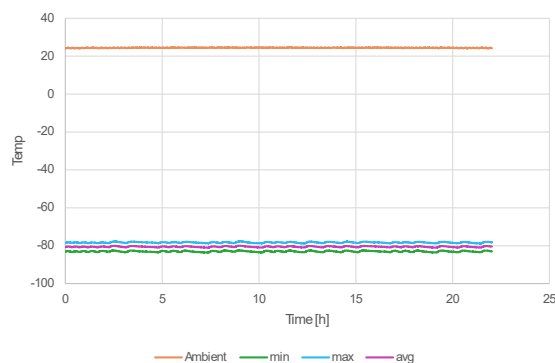
SENSOR TEMPERATURE

Sensor position	P1	P2	P3	P4	P5	P6	P7	P8	P9								
Max	-78,8	-79,6	-79,8	-80,1	-80,5	-81,0	-83,1	-83,0	-83,6								
Avg.	-77,7	-78,4	-78,7	-78,9	-79,5	-80,1	-82,1	-81,8	-82,4								
Min.	-78,3	-79,1	-79,3	-79,5	-80,0	-80,6	-82,6	-82,4	-83,0								

WARM UP & PULL DOWN



CYCLIC OPERATION



TYPICAL PERFORMANCE IN AMBIENT 25°C - EMPTY CABINET

Avg. cabinet temperature at -82°C setpoint	-81,1°C
Uniformity	+/- 2,5°C
Stability	1,1°C
1 min. door open recovery to -75°C	32 min.
Cycle rate -82°C setpoint on/off	50/5 min./min.
Duty cycle -82°C setpoint	90%
Energy consumption	5,22 kWh/day
Pull down time to -75°C avg. temperature	103 min.
Hold over time from avg. -82°C to -60°C	102 min.
Heat rejection	250 W