

ULTF-51i

ULT TECHNICAL SPECIFICATIONS

Multi voltage.



-20°C
-86°C

DIMENSIONS

Outer Dimensions HxWxD, mm	836x699x720
Depth incl. door handle	790
Inner Dimensions HxWxD, mm	310x360x445
Weight Gross/Net, kg	108 / 82
Material inner cabinet	Stainless steel
Material outer cabinet	Painted Steel
Packaging weight, kg	26
Packaging dimensions HxWxD, mm	1050x750x850
Insulation thickness	120
Insulation type	Polyurethane with Cyclopentane
Mobility	2 x adjustable feet, 2 x castors
Refrigerant, Type / gram	Nature R 2/99gr

FEATURES

Lock	☒
LED light	☐
Battery Backup for Controller, 24h	☒
Porthole	☒
Porthole size	20 mm
Dry contact	☒
Door reversibility	☐
Vacuum valve	☒
VIP (Vacuum Insulated Panel)	☒

STORAGE

Capacity (L)	50
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ALARMS

High / Low temperature	☒
Open door	☒
Power failure	☒
Probe failure	☒

COOLING

Refrigerant	Nature R
Noise	< 48
Voltage	100-240 V
Frequency	50/60 Hz
Temperature range	-20 / -86
Ambient condition	25 °C

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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	+/- 3,7
Pull down time	Minutes	90 min. to -75°C
Hold over time	Minutes	N/A
Noise	dB	< 48
Energy Consumption, kWh / 24h	kWh/24h	4,34 kWh/24h Set -80
Energy year	kWh/year	1584kWh/y Set -80°C
Instant Power Consumption	kW	PD 0,600/Stable 0,280
Heat Rejection*	W	200
U-Value	W/m ² K	N/A
COOLING COMPONENTS		
Refrigerant/Amount (gram)		Nature R 2/99gr
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.

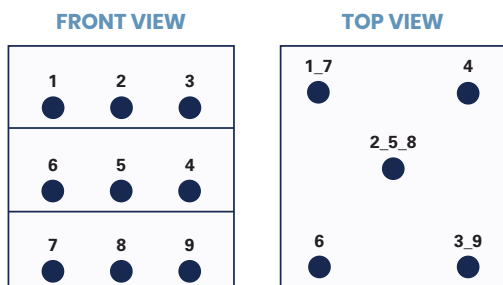
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SENSOR POSITION



MODEL

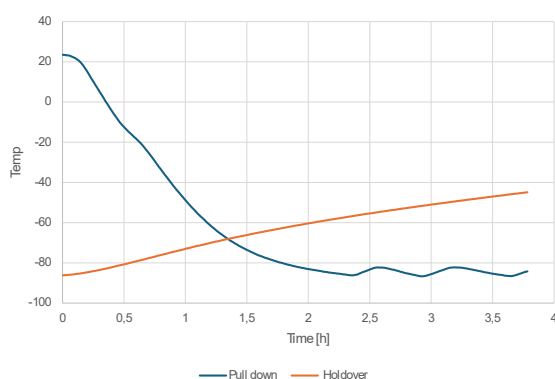
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Test type	8-point test
Test environment	Controlled conditions, empty cabinet
Ambient temperature	25°C
Humidity	60%
Set-point	-82°C
Sensor used	25gr tinned brass formed as a cylinder with a diameter of 15,2 mm
Installation	Appliance installed according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

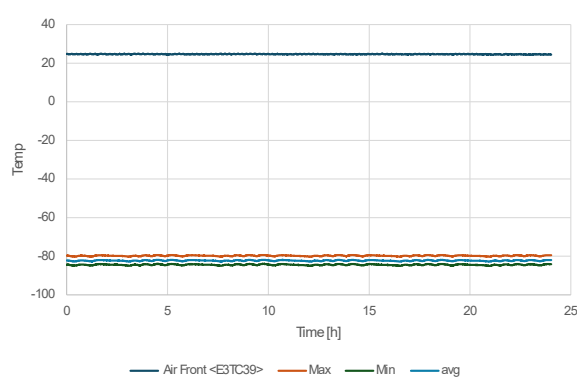
SENSOR TEMPERATURE

Sensor position	P1	P2	P3	P4	P5	P6	P7	P8	P9								
Max	-84,2	-84,8	-85,0	-82,8	-83,3	-83,4	-80,3	-80,5	-81,0								
Avg.	-83,3	-83,8	-84,0	-82,0	-82,5	-82,5	-79,4	-79,5	-80,0								
Min.	-83,7	-84,2	-84,4	-82,3	-82,8	-82,8	-79,7	-79,9	-80,4								

WARM UP & PULL DOWN



CYCLIC OPERATION



TYPICAL PERFORMANCE IN AMBIENT 25°C - EMPTY CABINET

Avg. cabinet temperature at -82°C setpoint	-82,8°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	4,35 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	200 W

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