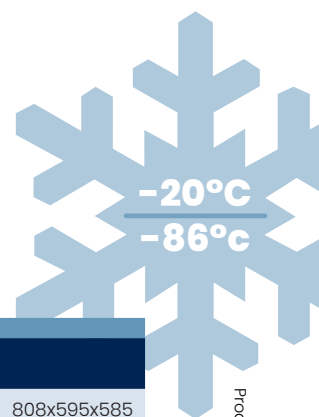


VTS 098

BIOMEDICAL ULT FREEZER

With a compact design, this undercounter fits perfectly beneath your workbench, providing a storage solution that is ideal for places where space is limited.



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DIMENSIONS

Outer Dimensions HxWxD, mm	808x595x585
Depth incl. door handle	695
Height + feet/castors	808 + 22-27
Inner Dimensions HxWxD, mm	675x430x425
Weight Gross/Net, kg	87 / 61
Material inner cabinet	Stainless Steel
Material outer cabinet	Painted Steel
Packaging weight, kg	26
Packaging dimensions HxWxD, mm	1100x800x750
Insulation thickness	80
Insulation type	Polyurethane with Cyclopentane
Mobility	4 x adjustable feet
Refrigerant, Type / gram	Nature R 2/109gr

CONTROLLER

Controller language	No Language – only 3 digits
USB Connection	Yes
Datalogging	Yes
High/Low temp. Alarm	Yes
Open door alarm	Yes
Probe failure alarm	Yes
Power failure alarm	Yes

STORAGE

Volume, Gross/Net, L	92 / 92
Shelves	3
Cryoboxes “2	63

FEATURES

Lock	Yes
LED light	Yes
Battery Backup For Controller	Yes – 24h
Porthole	Yes – Ø 14,5mm
Dry contact	Yes
Castors	Optional
Door	Solid
Door reversibility	No
Vacuum valve	Yes
VIP (Vacuum panel)	Yes
Door frame heater	Hot gas loop

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SPECIFICATIONS		
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	+/- 2,0
Pull down time	Minutes	168 min to -75°C
Hold over time	Minutes	102 min to -60°C
Noise	dB	54
Energy Saving Mode	kWh/24h	NA
Energy Consumption, kWh / 24h	kWh/24h	6,562 kWh/24h Set -82
Energy year	kWh/year	2395,13kWh/y Set -82°C
Instant Power Consumption	kW	PD 0,750-0,4/Stable 0,330
Heat Rejection*	W	300
U-Value	W/m ² K	0,18
COOLING COMPONENTS		
Refrigerant/Amount (gram)		Nature R 2/109gr
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

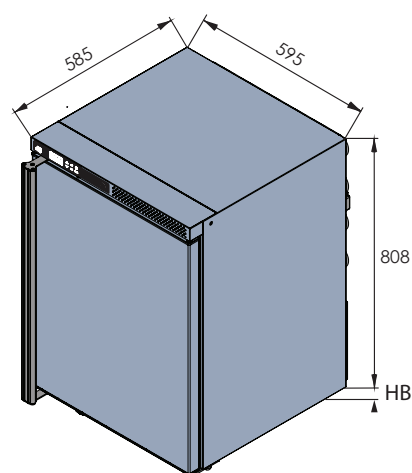
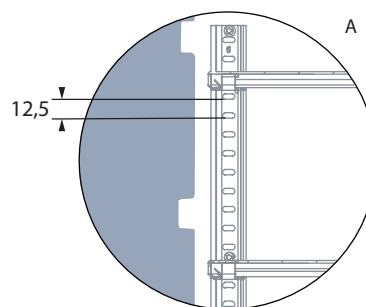
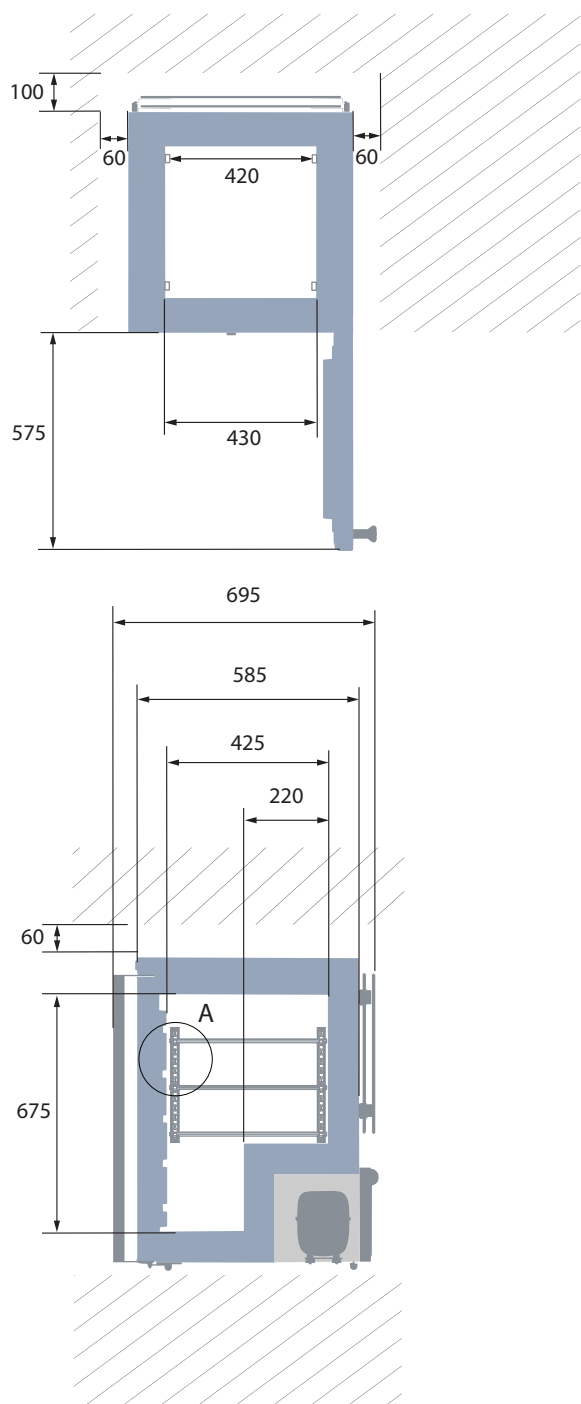
* Heat Rejection is defined as average power based on energy consumption, rounded up to nearest 50W.

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All measurements in mm.

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

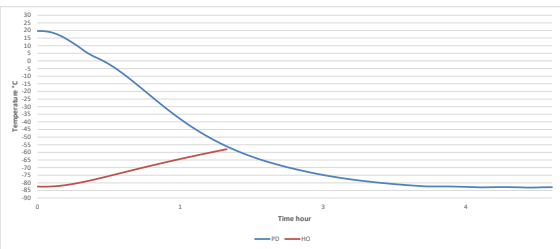
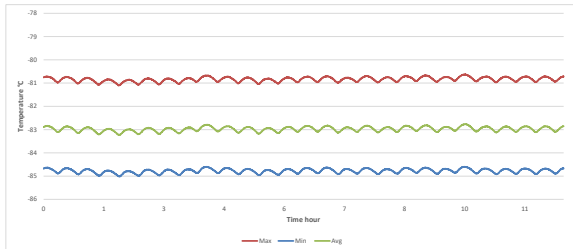
22-27 
Adjustable foot

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VTs 098

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SENSOR POSITION								MODEL								VTS 098															
FRONT VIEW 1_4 3 2_5 6_9 8 7_10 11_14 13 12_15 TOP VIEW 1_6_11 2_7_12 3_8_13 4_9_14 5_10_15								<table><tr><td>Test type</td><td>8-point test</td></tr><tr><td>Test environment</td><td>Controlled conditions, empty cabinet</td></tr><tr><td>Ambient temperature</td><td>20°C</td></tr><tr><td>Humidity</td><td>60%</td></tr><tr><td>Set-point</td><td>-82°C</td></tr><tr><td>Sensor used</td><td>25gr tinned brass formed as a cylinder with a diameter of 15,2 mm</td></tr><tr><td>Installation</td><td>Appliance installed according to instruction manual conditions</td></tr><tr><td>Refrigerant</td><td>Nature R</td></tr></table>								Test type	8-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
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SENSOR TEMPERATURE																															
Sensor position	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15																
Max	-80,9	-81,2	-81,1	-80,9	-80,6	-84,6	-84,2	-83,5	-83,4	-83,2	-83,6	-83,4	-83,8	-83,8	-83,6																
Avg.	-81,1	-81,4	-81,3	-81,2	-80,8	-84,8	-84,4	-83,7	-83,6	-83,4	-83,8	-83,6	-84,1	-84,1	-83,9																
Min.	-81,3	-81,6	-81,6	-81,4	-81,1	-85	-84,6	-83,9	-83,9	-83,6	-84,1	-83,8	-84,4	-84,4	-84,1																
WARM UP & PULL DOWN								CYCLIC OPERATION																							
																															
TYPICAL PERFORMANCE IN AMBIENT 20°C – EMPTY CABINET																															
Avg. cabinet temperature								-83°C																							
Peak variation from set-point								+1,7/-2,6°C																							
Stability in avg.								±0,2°C																							
1 min. door open recovery to -75°C avg. temperature								32 min.																							
Cycle rate on/off								22,7/4,7 min.																							
Duty cycle								82,4%																							
Energy consumption								6,56 kWh/day																							
Pull down time to -75°C avg. temperature								168 min.																							
Hold over time from -82°C to -60°C								102 min.																							
Sample temperature does not exceed								-70°C																							

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