

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.





Depth incl. door handle Holght + feet/castors Siner Dimensions HxWxD, mm Siner Dimensions HxWxD, mm Sight Cross/Net, kg Sight Cross/Net, kg Sight Cross/Net, kg Material inner cabinet Stainless Stee Material outer cabinet Packaging weight, kg Packaging weight, kg Packaging dimensions HxWxD, mm Sinesulation thickness Sinesulation type Pelyurethane with Cyclopentam Mobility Pelyurethane with Cyclopentam Nature R 2/10eg CONTROLLER Controller language No Language - only 3 digit USB Connection Yee High/Low temp. Alarm Yee Open door alarm Probe failure alarm Yee Prover failure alarm Yee STORAGE Volume, Gross/Net, L Shelves Cryoboxes '2 FEATURES Lock Battery Backup For Controller Yes - 24 Porthole Castors Open Core - Scores Core		
Depth incl. door handle 69 Holght * feat/castors 808 + 22-2 Inner Dimensions HxWxD, mm 675x430x42 Weight Koross/Net, kg 87 / 6 Material inner cabinet Stainless Stee Material outer cabinet Pointed Stee Packaging weight, kg Pointed Stee Packaging dimensions HxWxD, mm 100x800x75 Insulation thickness 8 Insulation type Polyurethane with Cyclopentan Mobility 4 x adjustable fee Refrigerant, Type / gram Noture R 2/100g CONTROLLER Controller language No Language - only 3 digit USB Connection You Depart of the controller and	DIMENSIONS	
Height + feet/castors Inner Dimonsions HxWxD, mm 675x430x42 Weight Gross/Net, kg Moterial inner cabinet Material inner cabinet Material inner cabinet Material inner cabinet Pointed Stee Packaging weight, kg Packaging dimensions HxWxD, mm 100x800x75 Reakaging dimensions distance HxXxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	Outer Dimensions HxWxD, mm	808x595x585
Inner Dimensione HxWxD, mm Weight Gross/Net, kg Weight Gross/Net, kg Raterial inner cabinet Material outer cabinet Packaging weight, kg Packaging dimensions HxWxD, mm Insulation thickness Insulation thickness Insulation type Polyurethane with Cyclopetature Mobility A x adjustable fee Refrigerant, Type / gram Noture R 2/100g CONTROLLER Controller language No Language - only 3 digit Yee Datalogging No Language - only 3 digit Yee Datalogging Yee High/Low temp. Alarm Yee Power failure alarm Yee STORAGE Volume, Gross/Net, L Shelves FEATURES Lock LED light Yee Battery Backup For Controller Pyes - 24 Porthole Porthole Gasters Oper door Oper door Ontroller Yee Castors Oper Oper Controller Yee Castors Oper Oper Controller Yee Castors Oper Oper Controller Yee Castors Oper Oper Operation New Yee Castors Oper Operation Oper Operation Oper Operation Oper Operation	Depth incl. door handle	695
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Material outer cabinet Packaging weight, kg Packaging dimensions HXWXD, mm II00x800X75 Insulation thickness Insulation type Polyurethone with Cyclopentan Mobility A x adjustable for Refrigerant, Type / gram Noture R 2/108g CONTROLLER Controller language No Language—only 3 digit USB Connection Ye Right/Low temp. Alarm Ye Open door alarm Ye Open door alarm Ye Probe failure alarm Ye Probe failure alarm Ye STORAGE Volume, Gross/Net, L Shelves Cryoboxes "2 FEATURES Lock LED light Settery Backup For Controller Power failure down Probe failur	Weight Gross/Net, kg	87 / 6
Packaging weight, kg Packaging dimensions HXWXD, mm 100x800x75 Insulation thickness 8 Insulation type Polyurethane with Cyclopentan Mobility A x adjustable fee Refrigerant, Type / gram Nature R 2/109g CONTROLLER Controller language No Language - only 3 digit USB Connection Ye Datalogging High/Low temp. Alarm Ye Open door alarm Ye Probe failure alarm Ye Probe failure alarm Ye STORAGE Volume, Gross/Net, L Shelves Cryoboxes "2 FEATURES Lock Ye Battery Backup For Controller Statery Backup For Controller Proportion Proportio	Material inner cabinet	Stainless Stee
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CONTROLLER Controller language No Language - only 3 digit USB Connection Ye Datalogging Ye High/Low temp. Alarm Ye Open door alarm Ye Probe failure alarm Ye Power failure alarm Ye STORAGE Volume, Gross/Net, L 92 / 9 Shelves Cryoboxes '2 6 FEATURES Lock Ye Battery Backup For Controller Yes - 24 Porthole Yes - 24 Porthole Yes - 24 Castors Optionate Castors Optionate Door Vesculative Yes Voluve (Vey (Vacuum panel) Yes Yes Vey (Vacuum panel)	Mobility	4 x adjustable fee
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Probe failure alarm Power	High/Low temp. Alarm	Ye
Power failure alarm STORAGE Volume, Gross/Net, L 92 / 9 Shelves Cryoboxes "2 FEATURES Lock LED light Settery Backup For Controller Porthole Pry contact Castors Door Controller Poor Poor Solid Door reversibility Vacuum valve VIP (Vacuum panel)	Open door alarm	Yes
STORAGE Volume, Gross/Net, L Shelves Cryoboxes "2 FEATURES Lock LED light Sattery Backup For Controller Porthole Pry contact Castors Door Door Door Door reversibility Vecuum panel) Yes 92 /9 92 /9 92 /9 68 FEATURES FEATURES A Perthole Yes - 24 Yes - 24	Probe failure alarm	Yes
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Shelves Cryoboxes "2 6 FEATURES Lock LED light Settery Backup For Controller Porthole Porthole Pry contact Castors Options Door Door Solin Door reversibility Vecuum valve VIP (Vacuum panel)	STORAGE	
Cryoboxes "2 FEATURES Lock LED light Battery Backup For Controller Porthole Porthole Castors Costors Door Door Door Door reversibility Vacuum valve VIP (Vacuum panel)	Volume, Gross/Net, L	92 / 93
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Lock LED light Battery Backup For Controller Porthole Castors Door Door Door reversibility Vacuum valve VIP (Vacuum panel)	Cryoboxes "2	63
LED light Battery Backup For Controller Porthole Pry contact Castors Door Door Door reversibility Vacuum valve VIP (Vacuum panel)	FEATURES	
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Battery Backup For Controller Porthole Dry contact Castors Door Door Door reversibility Vacuum valve VIP (Vacuum panel)	LED light	Ye
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Castors Options Door Solie Door reversibility Vacuum valve VIP (Vacuum panel)	Porthole	Yes - Ø 14,5mn
DoorSolidDoor reversibilityNVacuum valveYeVIP (Vacuum panel)Ye	Dry contact	Ye
Door reversibility Vacuum valve VIP (Vacuum panel) Note	Castors	Optiono
Vacuum valve Ye VIP (Vacuum panel) Ye	Door	Solid
VIP (Vacuum panel)	Door reversibility	No
·	Vacuum valve	Ye
Door frame heater Hot gas loo	VIP (Vacuum panel)	Yes
	Door frame heater	Hot gas loop



BIOMEDICAL ideal for places where space is limited.

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

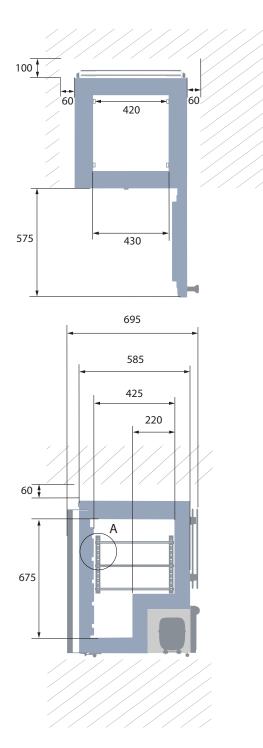
^{*} Heat Rejection is defined as average power based on energy consumption, rounded up to nearest 50W.

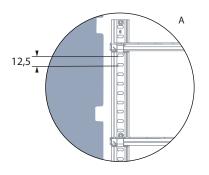
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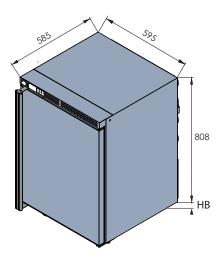


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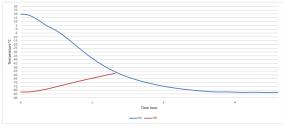


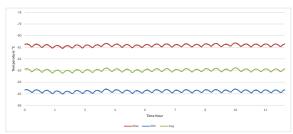
All measurements in mm.

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

22-27 **Adjustable foot**

SENSOR POSITION VTS 098 MODEL Test type 8-point test **FRONT VIEW TOP VIEW Test environment** Controlled conditions, 1_6_11 2_7_12 empty cabinet 3 2_5 1_4 **Ambient temperature** 20°C Humidity 3_8_13 6_9 8 7_10 Set-point -82°C 25gr tinned brass formed as a Sensor used cylinder with a diameter of 15,2 5_10_15 4 9 14 11_14 13 12_15 Installation Appliance installed according to instruction manual conditions Nature R Refrigerant **SENSOR TEMPERATURE** Sensor P1 **P2** Р3 **P4** Р5 P6 **P7** Р8 Р9 P10 P11 P12 P13 P14 P15 position -80,9 -81,2 -81,1 -80,9 -80,6 -84,6 -84,2 -83,5 -83,4 -83,6 -83,4 -83,8 -83,8 -83,6 Max -83.2 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.	.5₀C
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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