



Datasheet

Controller	
Defrost	Automatic
High/Low Temp. Alarm	Yes
Open Door Alarm	Yes
Probe Failure Alarm	Yes
Power Failure Alarm	Yes
USB Connection	Yes
Datalogging	Yes

Features	
Lock	Yes
LED Light	Yes
Battery Backup for Controller, 48h	Yes
Porthole	Yes
Dry Contact	Yes
Door	Solid
Door Features	Automatic Closure >90° Hold
Door Reversibility	Yes
No-Frost system	Yes

Construction	
Outer Dimensions, HxWxD	857x595x642
Inner Dimensions, HxWxD	481x475x495
Volume Gross/net, L	138 / 117
Weight Gross/Net, kg	59 / 48
Material Inner Cabinet	ABS
Material Outer Cabinet	Painted Steel
Insulation Thickness, mm	50
Insulation Type	Polyurethane with Cyclopentane
Refrigerant	R600a
Air Distribution	Forced Air
Mobility	Standard: Adjustable Feet Option: Castors

-5°C
-25°C



F-138

Biomedical Freezer



LOW NOISE



ENVIRONMENT FRIENDLY



USER FRIENDLY

Operation	
Temperature Range, C°	-5 to -25
Noise, dB	46
Energy Consumption 24/h, kWh	Solid: 1,2
Frequency, Hz	50
Power Supply, V	220 / 240
Instant Power Consumption	0,058
K-Value	0,59
Heat Rejection	122

Storage	
BioChill™ Shelves (Standard/max)	2 / 4
Half shelf (Standard/max)	1 / 2
Shelf material	Aluminum
Max Loading pr. Shelf, kg	20
BioChill™ Drawers Max. Fit	4
Drawer Material	Aluminum
Max Loading pr. Drawer, kg	18



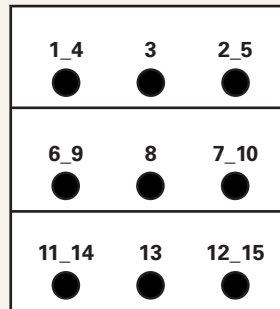
Temperature Mapping

Test overview

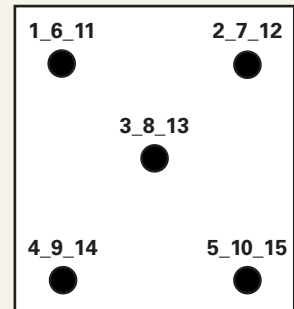
Test type	15-point test
Test environment	Controlled conditions, empty cabinet
Ambient temperature	20°C
Humidity	60%
Set-point	-25°C
Sensors used	25gr tinned brass formed as a cylinder with a diameter of 15,2mm
Installation	Appliance installed according to instruction manual conditions
Refrigerant	R600a

Sensor position

Front View



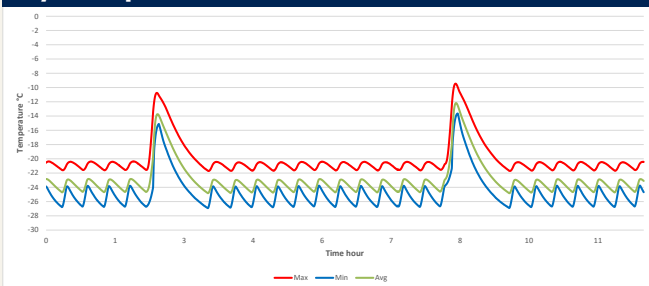
Top View



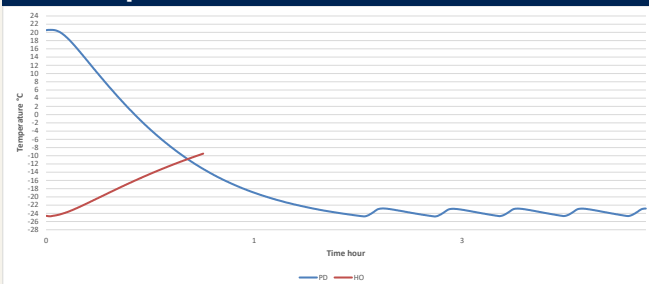
Sensor temperature

Sensor position	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15
Max.	-21,7	-22,7	-21,7	-20,1	-23	-22,4	-23	-23,6	-22,9	-23,2	-23	-23,3	-23,8	-22,7	-23,6
Avg.	-22,5	-23,5	-22,5	-21	-23,9	-23,4	-23,9	-24,3	-23,8	-23,9	-24,9	-25	-25,5	-23,9	-25
Min.	-23,4	-24,6	-23,3	-21,7	-24	-24,2	-24,7	-25,2	-25,2	-24,8	-26,3	-26,4	-26,9	-25	-26,4

Cyclic operation



Warm up & Pull down

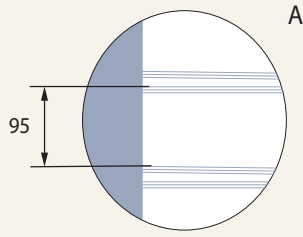
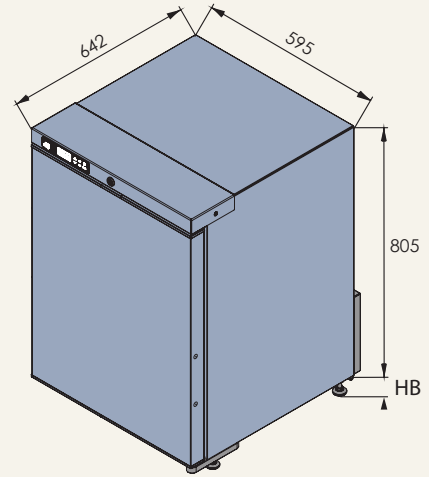
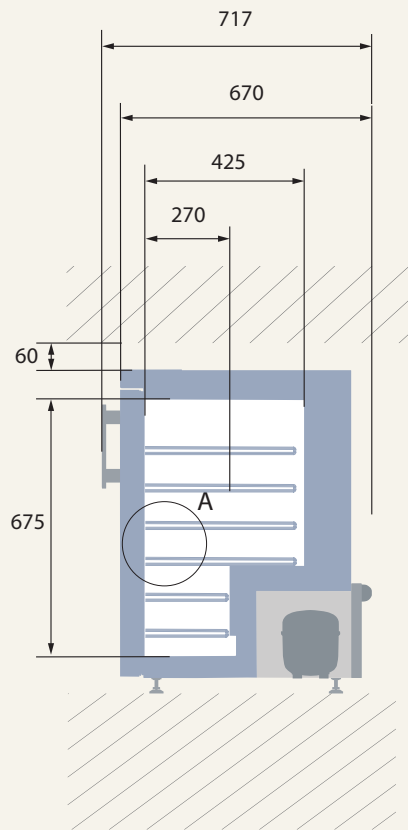
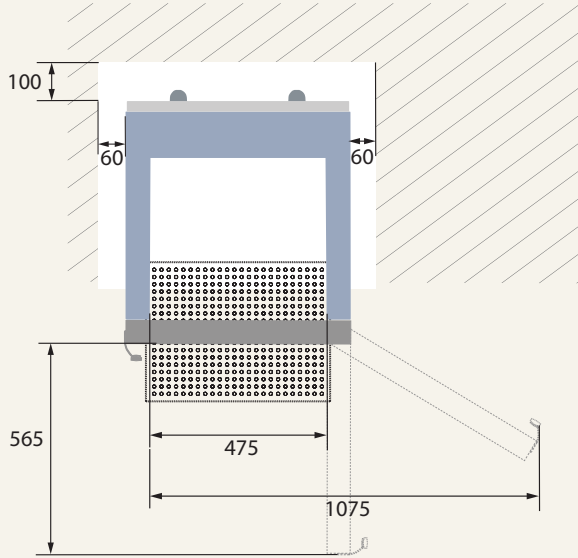


Typical Performance data

Avg. cabinet temperature	-23,8°C
Peak variation from set-point	+3,7/-3,1°C
Stability in avg.	4,5°C
1 min. door open recovery to -20°C avg. temperature	24 min.
Cycle rate on/off	20,7/4,2 min.
Duty cycle	80,9%
Energy consumption	1,28 kWh/day
Pull down time to -20°C avg. temperature	88 min.
Hold over time from -25°C to -10°C	61 min.
Sample temperature does not exceed	-15°C





Dimensions



All dimensions in milimeters

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

69 
Wheel

20-58 
Ajustable foot