



BIOMEDICAL

F-138i

BIOMEDICAL FREEZER

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



| DIMENSIONS | |
|------------------------------------|---|
| Outer Dimensions HxWxD, mm | 825x595x642 |
| Inner Dimensions HxWxD, mm | 676x475x495 |
| Weight Gross/Net, kg | 60 / 49 |
| Material inner cabinet | ABS |
| Material outer cabinet | Painted Steel |
| Packaging weight, kg | - |
| Packaging dimensions HxWxD, mm | - |
| Insulation thickness | 50 |
| Insulation type | Polyurethane with Cyclopentane |
| Air distribution | Dynamic |
| Mobility | Standard: Adjustable Feet - Option: Castors |
| Refrigerant, Type / gram | R600a / 43 |
| Variable Speed Compressor | Yes - Adaptive Cooling Technology |
| Number of probes | 2 |
| CONTROLLER | |
| Controller | i-Care, Touch screen |
| Controller language | EN, DE, FR |
| USB Connection | Yes |
| Logging | Data, Alarms & Events |
| Temperature graph | Yes |
| High/Low temp. Alarm | Yes |
| Open door alarm | Yes |
| Probe failure alarm | Yes |
| Power failure alarm | Yes |
| STORAGE | |
| Volume, Gross/Net, L | 138 / 117 |
| Shelves, Full/Half | 2 / 1 |
| Shelf material | Perforated Alu |
| FEATURES | |
| Lock | Yes |
| LED light | Yes |
| Battery Backup for Controller, 24h | Yes |
| No-Frost System™ | Yes |
| Perimeter Heater | Hot gas |
| Porthole | Yes - Ø 20 mm |
| Dry Contact | Yes |
| Door | Standard: Solid |
| Door Features | Automatic: Closure < 90° - Hold Closure > 90° |
| Door Reversibility | Yes |



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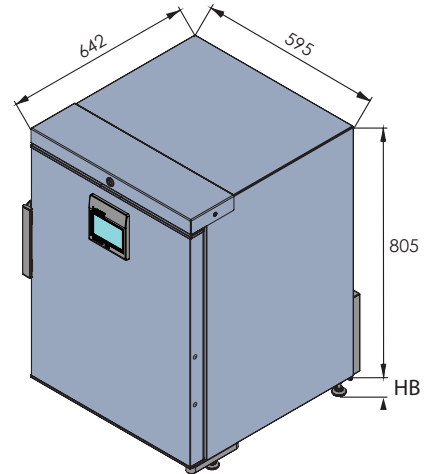
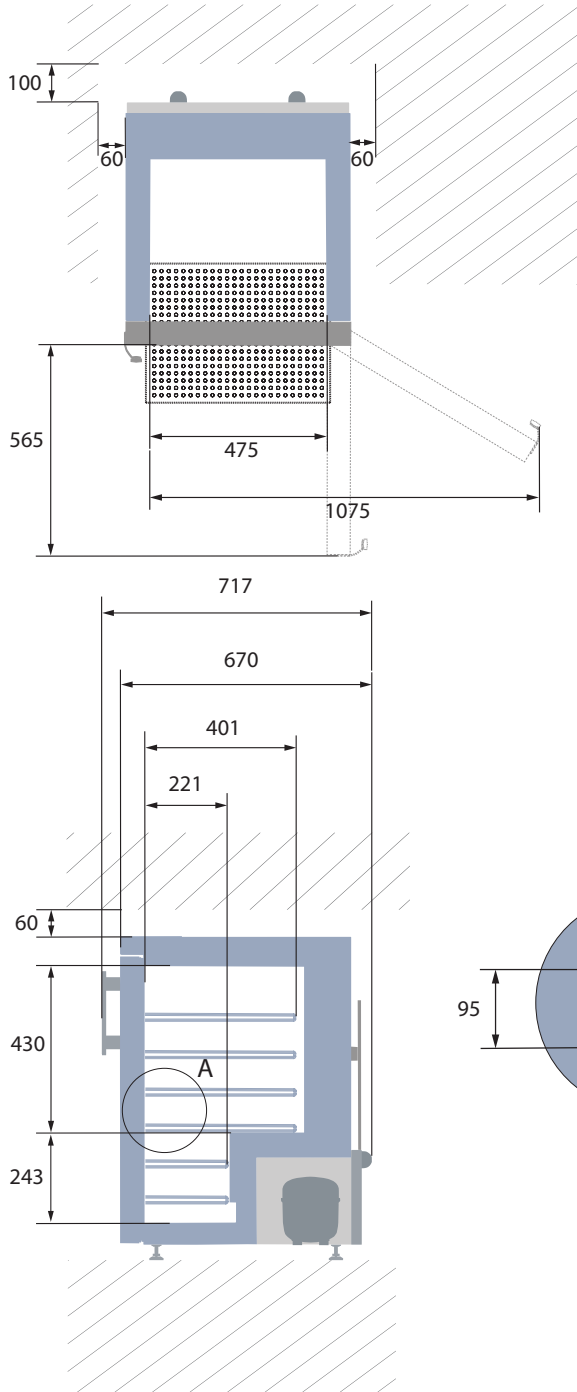
| | | |
|--|--------------------|-----------------------|
| Voltage/Frequency | Voltage/Hz | 230V/50-60Hz |
| Max Ambient | °C | 35°C |
| Max Humidity | % rh | 65% |
| PERFORMANCE | | |
| All data in RT20°C | | |
| Temperature Range | °C | -5 to -25 |
| Uniformity in performance - difference between top and bottom | °C | +/- 1.4 |
| Pull down time | Minutes | 70 min to -20°C |
| Hold over time | Minutes | 61 min to -10°C |
| Noise | dB | 45 |
| Energy Saving Mode | kWh/24h | 1,147 kWh/24h Set -20 |
| Energy Consumption, kWh / 24h | kWh/24h | 1,419 kWh/24h Set -25 |
| Energy year | kWh/year | 518 kWh/y Set -25° |
| Instant Power Consumption | kW | PD 0,120/Stable 0,052 |
| Heat Rejection | W | 120 |
| U-Value | W/m ² K | 0.59 |
| COOLING COMPONENTS | | |
| Refrigerant/Amount (gram) | | R600a/43gr |
| Number of compressors | pcs | 1 |
| Variable speed compressor | Yes/No | Yes |
| Internal air distribution (type of) | | Dual Air Stream |
| Evaporator Fan | Yes/No/Variable | Yes |
| Condenser Fan | Yes/No/Variable | No |
| Number of probes | pcs | 2 |
| Defrost | Yes/No | Yes - automatic |
| FEATURES | | |
| Safety thermostat | y/n/optional | No |
| Lock | y/n | Yes |
| LED light | y/n | Yes |
| Battery Back Up For Controller | y/n/optional | Yes - 24h |
| Porthole | y/n - Ømm | Yes - Ø 20mm |
| Dry contact | y/n | Yes |
| Castors | y/n/optional | Optional |
| Door | glass/solid | Solid |
| Door closure | y/n/optional | Yes |
| Door reversibility | y/n | Yes |
| Automatic Hold 90°C | y/n | Yes |
| Vacuum valve | y/n | Yes |
| VIP (Vacum panel) | y/n | No |
| Perimeter heater | | Hot gas loop |



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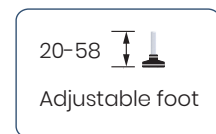
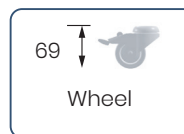
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All measurements in mm.

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



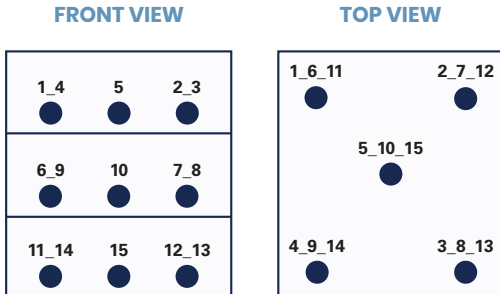


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SENSOR POSITION



MODEL

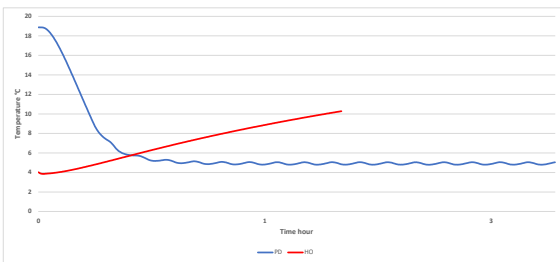
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| | |
|----------------------------|---|
| Test type | 15-point test |
| Test environment | Controlled conditions, empty cabinet |
| Ambient temperature | 20°C |
| Humidity | 60% |
| Set-point | -25°C |
| Sensor used | 25gr tinned brass formed as a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

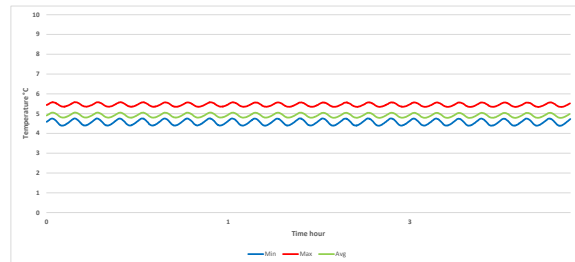
SENSOR TEMPERATURE

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

WARM UP & PULL DOWN



CYCLIC OPERATION



TYPICAL PERFORMANCE IN AMBIENT 20°C – EMPTY CABINET

| | |
|--|---------------|
| Avg. cabinet temperature | -24,4°C |
| Uniformity | +/- 1,4°C |
| Stability in avg. | 0,3°C |
| 1 min. door open recovery to -20°C avg. temperature | 11 min. |
| Cycle rate on/off | 29 / 2 min. |
| Duty cycle | 92,6% |
| Energy consumption - Normal mode | 1,419 kWh/day |
| Energy consumption - Energy saving mode (-20) | 1,147 kWh/day |
| Pull down time to -20°C avg. temperature | 70 min. |
| Hold over time from -25°C to -10°C | 61 min. |
| Sample temperature does not exceed | -15°C |
| Heat rejection | 120 |