

ULT-Freezer Performance Data Sheet



Capacity

Storage volume class	570 L (20.1 ft ³)						
Number of compartments	5						
Adjustable shelves	Yes						
Racks per shelf	5 (Max. load per shelf: 65 kg/ 143.3 lbs)						
Racks per freezer	25						
Box capacity per freezer	<table border="0"> <tr> <td>50 mm (2 in) box</td> <td>400</td> </tr> <tr> <td>75 mm (3 in) box</td> <td>200</td> </tr> <tr> <td>100 mm (4 in) box</td> <td>200</td> </tr> </table>	50 mm (2 in) box	400	75 mm (3 in) box	200	100 mm (4 in) box	200
50 mm (2 in) box	400						
75 mm (3 in) box	200						
100 mm (4 in) box	200						
Sample capacity	40,000						

Compartment Dimensions

Compartment number	Dimensions (H x W x D)
1 (Top)	237 x 725 x 569 mm
2	237 x 725 x 569 mm
3	237 x 725 x 569 mm
4	237 x 725 x 569 mm
5 (Bottom)	237 x 725 x 569 mm

Technical Specifications: CryoCube® F570h – Air-Cooled

Intended use	<ul style="list-style-type: none"> > Cold storage of standard laboratory materials > Indoor use only, between 15 and 32 °C > Altitude up to 2000 m > Non-corrosive, non-flammable, non-explosive environment
Environmental conditions	<ul style="list-style-type: none"> > Good air ventilation required > Maximum ambient temperature 32 °C > Maximum ambient humidity 80 % relative humidity, non-condensing > No mains/power supply voltage fluctuations
Temperature rating	-50 °C to -86 °C
Electrical rating (1 phase)	230 V/50 Hz
Current rating	7.0 A
Conformity	<ul style="list-style-type: none"> > WEEE > All components tested to CE specifications > RoHS > REACH

Dimensions

Internal dimensions (H x W x D)	1,265 x 765 x 575 mm (49.8 x 30.1 x 22.6 in)
External dimensions (H x W x D)	1,950 x 1103 x 898 mm (76.8 x 43.4 x 35.4 in)
External packaging dimensions (H x W x D):	2,200 x 1,220 x 1,050 mm (86.6 x 48.0 x 41.3 in)
Net weight	341 kg (752 lbs)
Shipping weight	388 kg (855 lbs)
Air cargo	No

User Interface

Alarms	Adjustable high/low temperature, power fail, battery low, filter clean, fault
Password protection	Yes (freezer settings)
Remote alarm port	Standard (BMS)
RS-485 interface	Optional
Ethernet interface	No
VisioNize®	via VisioNize® box
Lock	Standard (integrated and padlock option)
Temperature control	Microprocessor
Cabinet control probe	PT 100

Refrigeration System Specifications

Refrigeration system	2 stage cascade cooling system
Compressors	Commercially available, heavy duty compressors
Defrost method	Manual
Refrigerant charge	High stage: R290 Low stage: R170
Condensing method	Air-cooled
Expansion device	Capillary tubes
Evaporator type	Cold wall

Construction

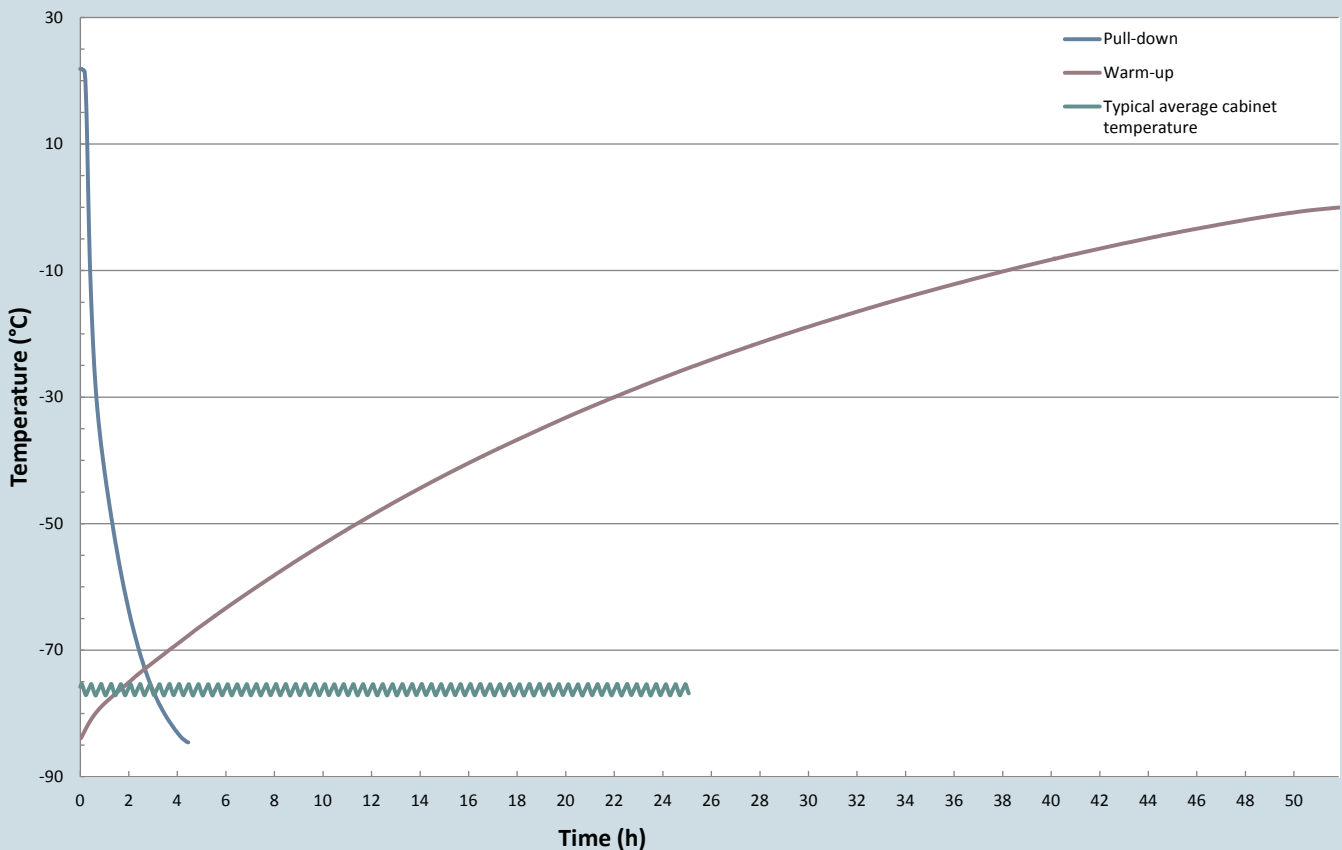
Interior	Stainless steel grade 304 2B
Exterior	Powder-coated steel
Insulation	Polyurethane foam and vacuum insulation panel
Power switch	Secured by lockable plate
Battery switch	Secured by lockable plate
Inner doors	Insulated, 5 inner doors
Castors/level legs	Heavy duty
Main door sealing	Flat, flexible

Typical Performance Characteristics

Testing conditions	> External test house > 24 h run > 3 units tested in parallel > Ambient temperature: 20 °C (+/- 1 °C)			
Pull down time (freezer empty, from ambient to -80 °C)	3 h 30 min			
Power consumption (freezer set to)	-70 °C	-80 °C	-85 °C	
	4.9 KWh/day 0.244 KWh/ft ³	7.4 KWh/day 0.368 KWh/ft ³	9.3 KWh/day 0.463 KWh/ft ³	
Cabinet uniformity ¹ (freezer set to -80 °C)	+5.7 °C/-0.0 °C			
Heat output (freezer set to)	-70 °C	-80 °C	-85 °C	
	204 W (694 BTU/ h)	308 W (1,048 BTU/ h)	388 W (1,320 BTU/ h)	
Warm up time (freezer 2/3 full)	From -85 °C to -50 °C		From -85 °C to 0 °C	
	11 h		54 h	
Noise level (at -80 °C)	57.7 dB			
Door open recovery (freezer set to -80 °C)	15 s	30 s	60 s	120 s
	14 min	19 min	27 min	45 min
Duty cycle (on/off)	14/17 min			

¹Average multiple probe temperature deviation

CryoCube F570h 230 V/50 Hz Performance Graph



Technical specifications subject to change

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