

# ULT-Freezer Performance Data Sheet



## Capacity

Storage Volume	660 L (23.3 ft <sup>3</sup> )
Racks per Freezer	40
Box	2 in (50 mm) box
Capacity	3 in (75 mm) box
per Freezer	4 in (100 mm) box
Sample	2 in (50 mm) box
Capacity	52,000
per Freezer	
Temperature Rating	-50 °C to -85 °C

## Technical Specifications: CryoCube® FC660h – Air-Cooled (230 V)

Intended Use	<ul style="list-style-type: none"> <li>&gt; Cold Storage of Standard Laboratory Materials</li> <li>&gt; Indoor use only, between 15 and 32 °C</li> <li>&gt; Altitude up to 2,000 m</li> <li>&gt; Non-Corrosive, Non-Flammable, Non-Explosive Environment</li> </ul>
Environmental conditions	<ul style="list-style-type: none"> <li>&gt; Good Air Ventilation required</li> <li>&gt; Maximum relative humidity 80% for temperatures up to 31 °C</li> <li>&gt; No mains/power supply voltage fluctuations</li> </ul>
Electrical Rating (1 phase)	230 V/50 Hz
Current rating	6.0 A
Agency listing	<ul style="list-style-type: none"> <li>&gt; WEEE</li> <li>&gt; RoHS</li> <li>&gt; REACH</li> <li>&gt; All components tested to CE specifications</li> </ul>

## Dimensions and Construction

Internal dimensions (H x W x D)	760 x 1,470 x 590 mm (29.9 x 57.9 x 23.2 in)
External dimensions (H x W x D)	1,090 x 2,070 x 945 mm (42.9 x 81.5 x 37.2 in)
External packaging dimensions (H x W x D)	1,345 x 2,230 x 1,045 mm (52.9 x 87.8 x 41.1 in)
Net weight	304 kg (670 lbs)
Shipping weight	379 kg (835 lbs)

## User Interface

Alarms	Adjustable High/Low temperature, power fail, battery low, filter clean, fault
Password Protection	Yes (freezer settings)
Remote Alarm Port	Standard
Rs-485 Interface	Optional
VisioNize®	via VisioNize® box
Lock	Standard
Temperature Control	Microprocessor
Cabinet Control Probe	PT 100

## Refrigeration System Specifications

Refrigeration System	2 stage cascade cooling system
Compressor	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

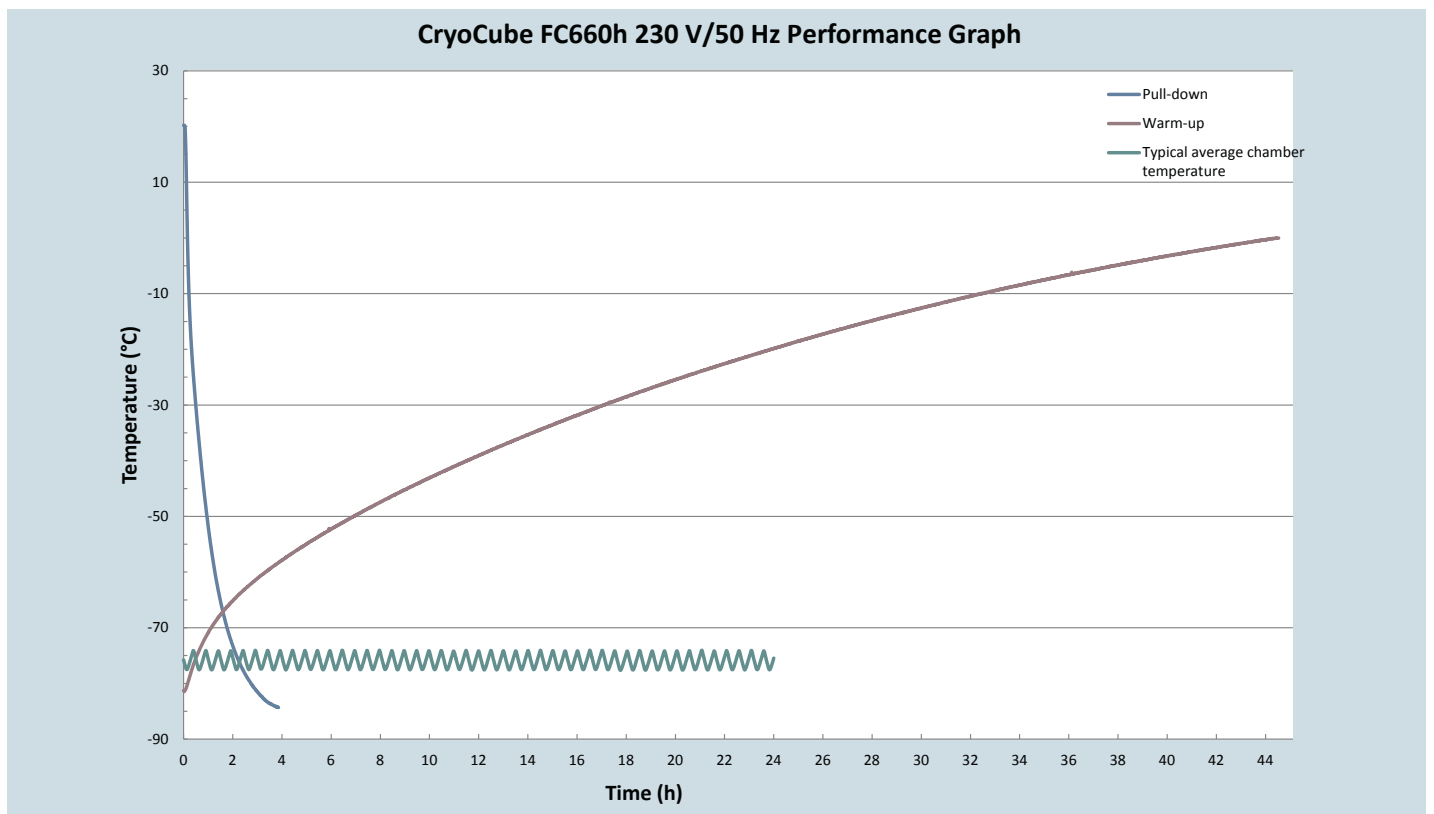
## Construction

Interior	Stainless steel grade 304 2B
Exterior	Powder-coated steel
Insulation	Vacuum insulation panels and polyurethane foam
Power switch	Secured by lockable plate
Battery switch	Secured by lockable plate
Inner doors	Insulated
Casters/level legs	Heavy duty

### Typical Performance Characteristics at 22 °C +/- 1 (Ambient Temperature)

Pull down time (Freezer empty, from ambient to -80 °C)	2 h 50 min			
Power consumption (Freezer set to)	-85 °C 9.9 KWh/ day	-80 °C 8.1 KWh/ day	-70 °C 6.0 KWh/ day	
Cabinet uniformity <sup>1</sup> (freezer set to -80 °C)	+9.3 °C /-0.3 °C			
Max. heat output (Freezer set to)	-85 °C 413 W (1,410 BTU/ h)	-80 °C 338 W (1,154 BTU/ h)	-70 °C 250 W (853 BTU/ h)	
Warm up time (Freezer 2/3 full, from -85 °c to 0 °C)	44 h			
Door open recovery (Freezer set to -80 °C)	120 s 25 min	60 s 24 min	30 s 25 min	15 s 17 min
Noise level (at -80 °C)	58.3 dB			
Duty cycle (on/off) (at -80 °C)	15 / 20 min			
Mains/power supply	6.0 A			

<sup>1</sup>Average multiple probe temperature deviation

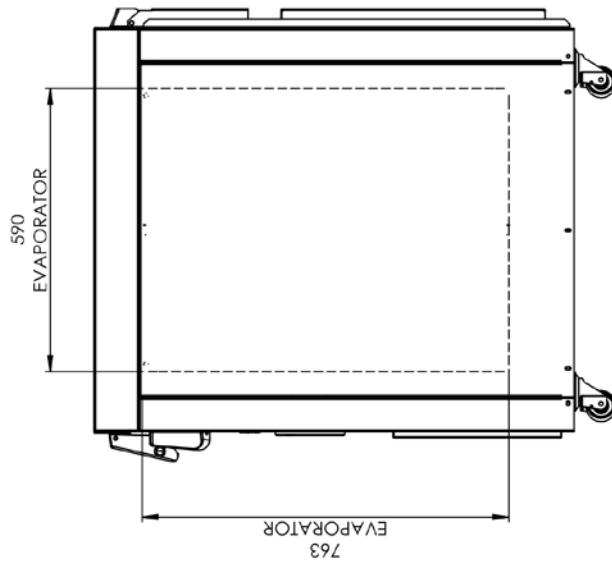
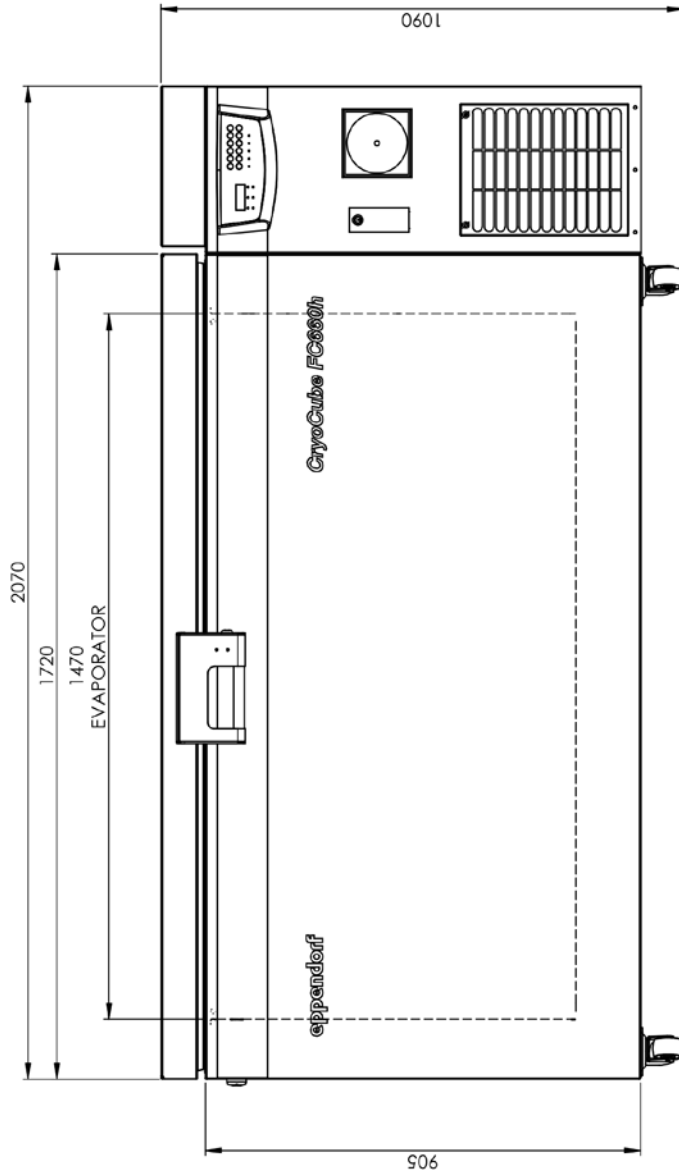
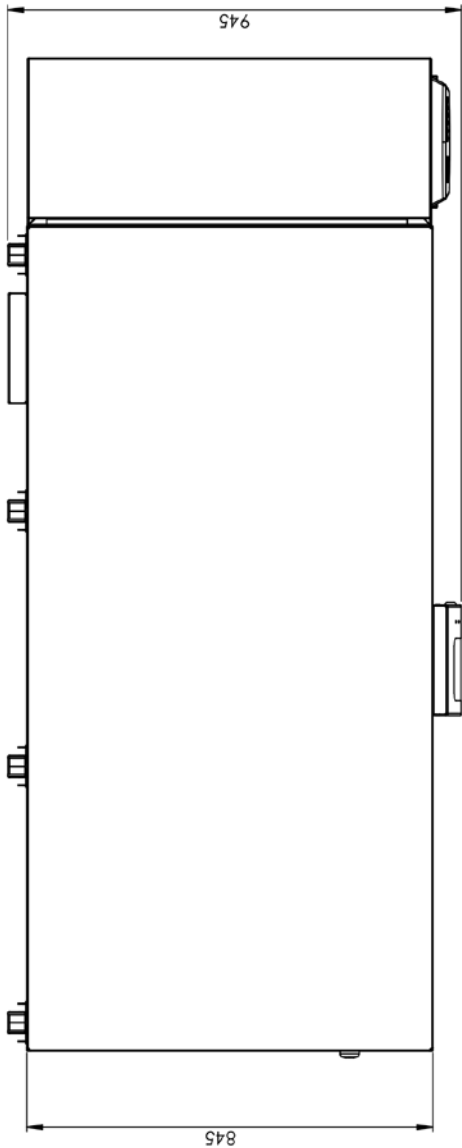


Technical specifications subject to change.

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SEE SHEET 2 FOR TRIMETRIC VIEW



DRAWN	G Mason	Scale	1:10	TOLLERANCES	-	MATERIAL	N/A	Title	FC660h Stealth Outline	cont
Checked	MLS	ALL DIMENSIONS IN MILLIMETRES		GEN	- ±1.0	FINISH	N/A	Drawing No	UT9250-0000-981	SHEET
EPPENDORF CRYOTECH Ltd owns the copyright of this drawing which is not to be copied or disclosed to a third party without written permission. copyright © 2014 Third angle projection				HOLE	CTRS -					1 OF 2