

# 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	520
per Freezer	3 in (75 mm) box
	360
	4 in (100 mm) box
	280
Sample	2 in (50 mm) box
Capacity	52000
per Freezer	
Temperature Rating	-50 °C to -85 °C

## Technical Specifications: CryoCube® FC660 – Air-Cooled (208 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 2000 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)	208 V/60 Hz
Current rating	8.0 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 1470 x 590 mm (29.9 x 57.9 x 23.2 in)
External dimensions (H x W x D)	1090 x 2070 x 845 mm (42.9 x 81.5 x 33.5 in)
External packaging dimensions (H x W x D)	1345 x 2230 x 1045 mm (52.9 x 87.8 x 41.1 in)
Net weight	280 kg (617 lbs)
Shipping weight	355 kg (783 lbs)

## User Interface

Alarms	Adjustable high/low temperature, power fail, battery low, filter clean, fault
Password protection (freezer settings)	Yes
Remote alarm port	Standard
RS-485 interface	Optional
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: R404a Low stage: R508b
Condensing method	Air-cooled
Expansion device	Capillary tubes
Evaporator type	Cold wall

## Construction

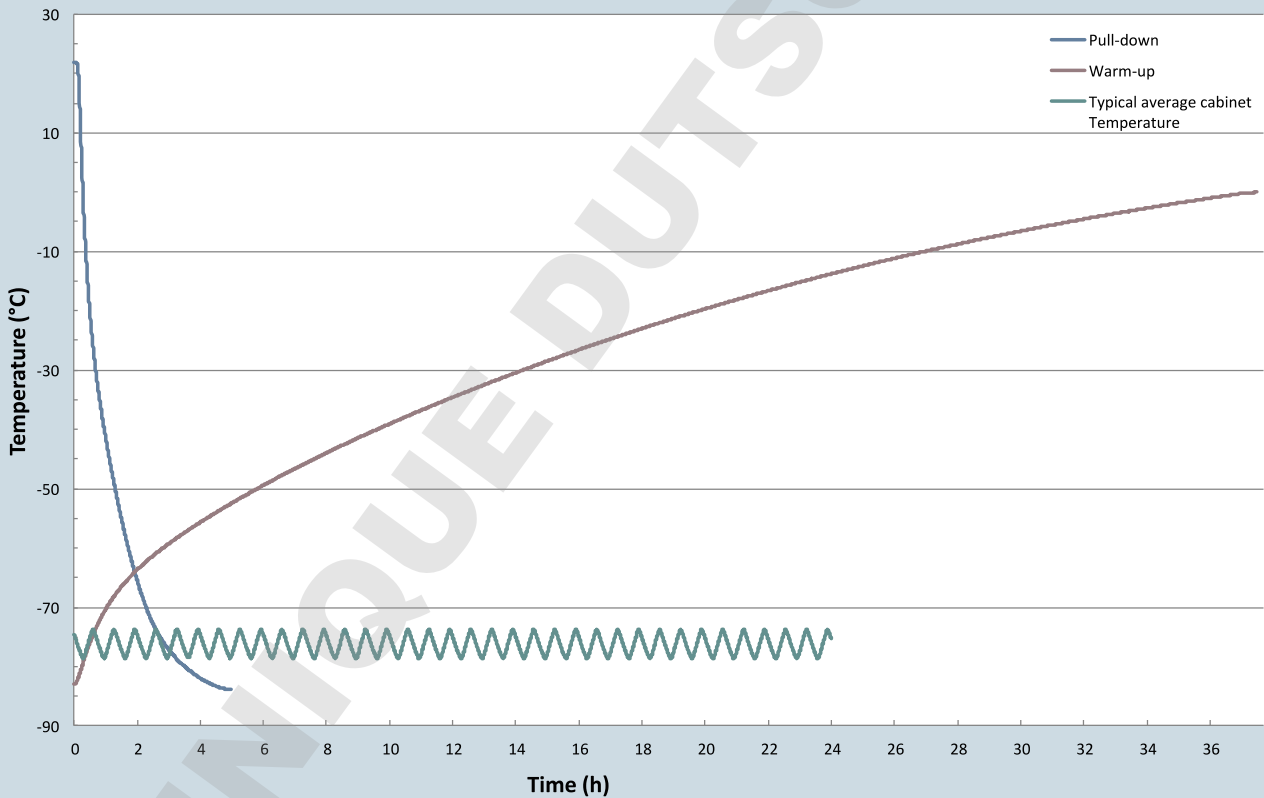
Interior	Stainless steel grade 304 2B
Exterior	Powder-coated steel
Insulation	Polyurethane foam
Power switch	Secured by lockable plate
Inner doors	Insulated
Casters/level legs	Standard

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

Pull down time (Freezer empty, from ambient to -80 °C)	3 h 30 min		
Power consumption (Freezer set to)	-85 °C 13.6 KWh/ day	-80 °C 10.9 KWh/ day	-70 °C 8.2 KWh/ day
Cabinet uniformity <sup>1</sup> (freezer set to -80 °C)	+7.9 °C / -0.0 °C		
Max. heat output (Freezer set to)	-85 °C 567 W (1935 BTU/ h)	-80 °C 454 W (1549 BTU/ h)	-70 °C 342 W (1167 BTU/ h)
Warm up time (Freezer 2/3 full, from -85 °C to 0 °C)	36 h		
Noise level (at -80 °C)	58.5 dB		
Duty cycle (on/off) (at -80 °C)	21 / 18 min		
Mains/power supply	8.0 A		

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

### CryoCube FC660 208V/60Hz performance graph

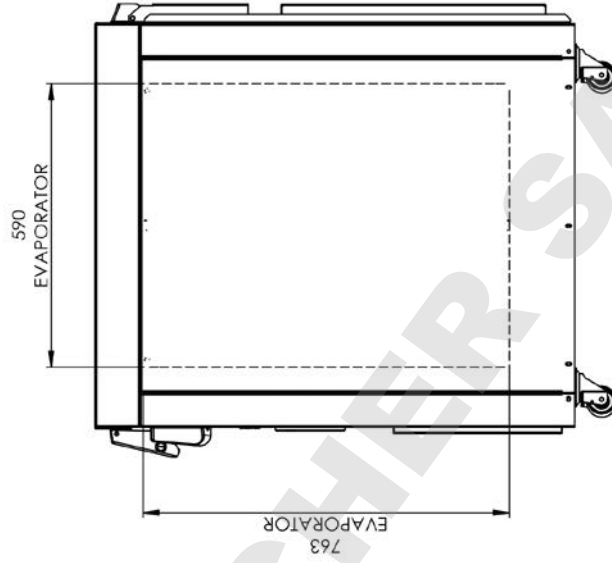
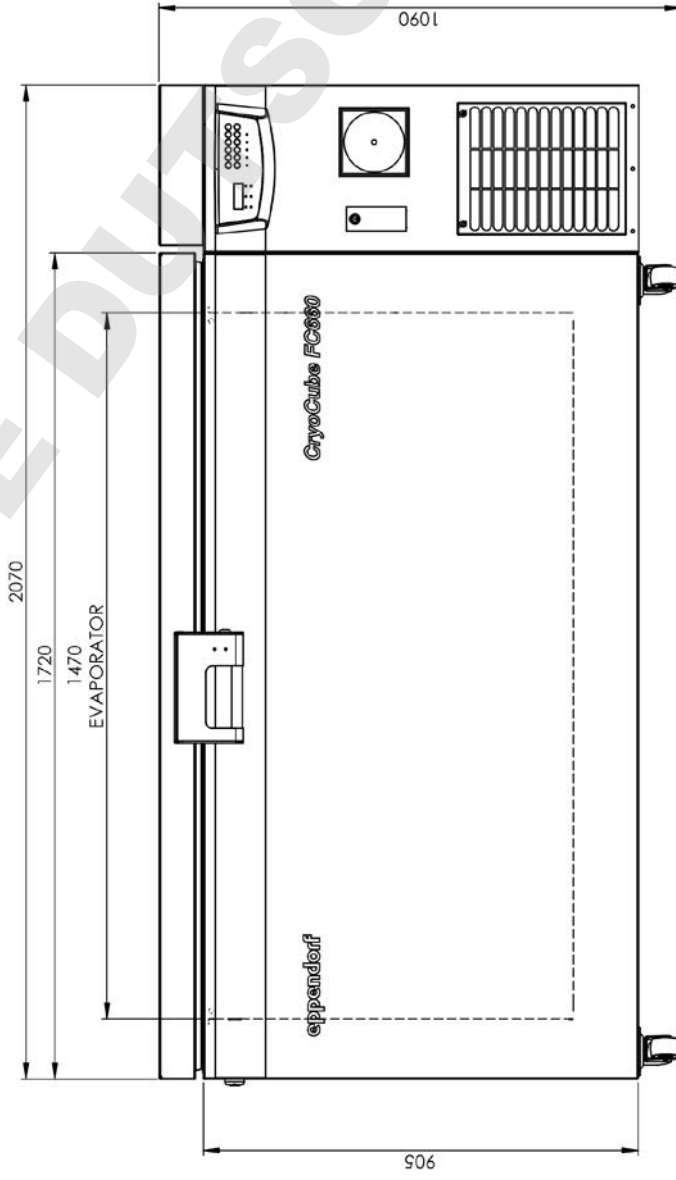
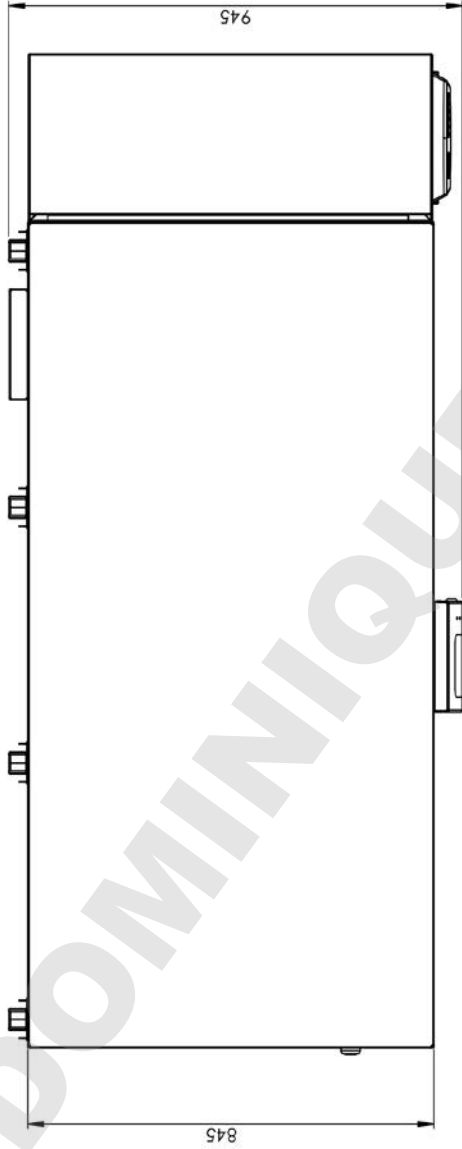


Technical specifications subject to change.

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SEE SHEET 2 FOR TRIMETRIC VIEW



DRAWN	G Mason	Scale	1:10	EPPENDORF CRYOTECH LTD		TOLLERANCES	–	MATERIAL	N/A	Title	FC660 Stealth Outline	cont
Checked	MLS	ALL DIMENSIONS IN MILLIMETRES				GEN	– ±1.0	FINISH	N/A	Drawing No	UT9250-0000-980	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												
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