

ULT-Freezer Performance Data Sheet



Capacity

Storage Volume	660 L (23.3 ft ³)
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® FC660h – Air-Cooled (230 V)

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 relative humidity 80% for temperatures up to 31 °C > No mains/power supply voltage fluctuations
Electrical Rating (1 phase)	230 V/50 Hz
Current rating	6.0 A
Agency listing	<ul style="list-style-type: none"> > WEEE > RoHS > REACH > All components tested to CE specifications

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	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 (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: R290 Low Stage: R170
Condensing Method	Air-cooled
Expansion Device	Capillary tubes
Evaporator Type	Cold wall

Construction

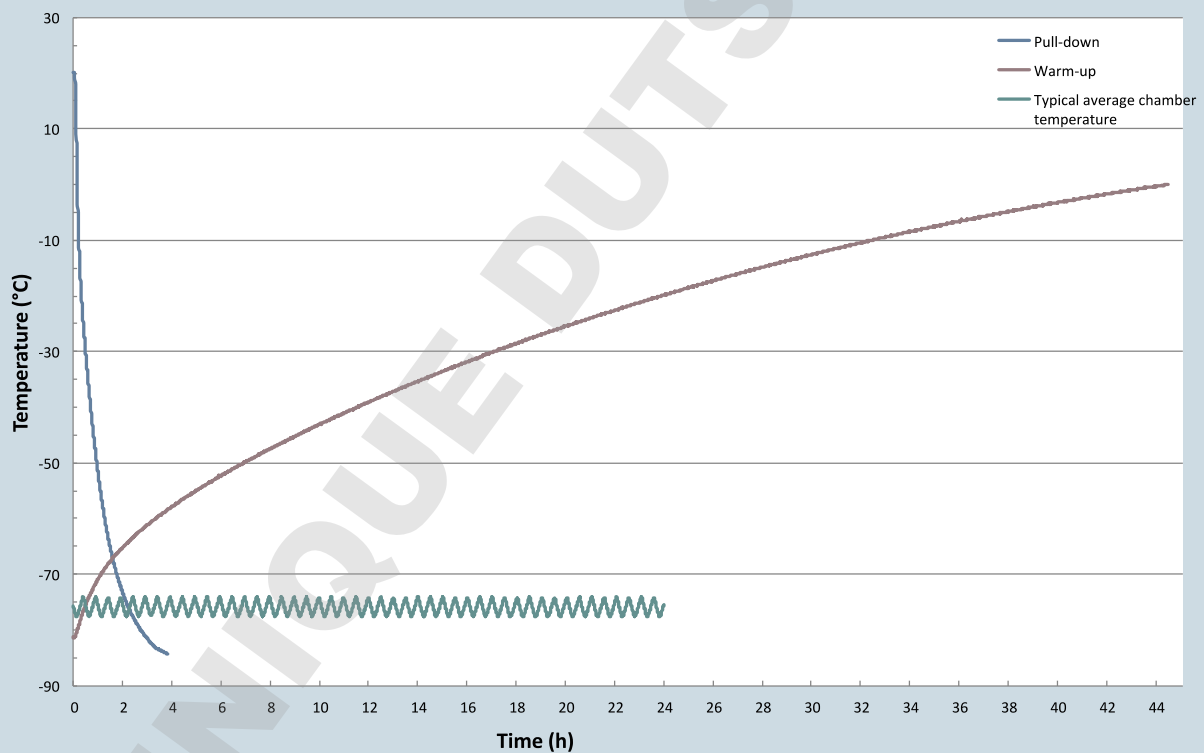
Interior	Stainless steel grade 304 2B
Exterior	Powder-coated steel
Insulation	Vacuum insulation panels and polyurethane foam
Power switch	Secured by lockable plate
Inner doors	Insulated
Casters/level legs	Standard

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

Pull down time (Freezer empty, from ambient to -80 °C)	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 ¹ (freezer set to -80 °C)	+9.3 °C /-0.3 °C			
Max. heat output (Freezer set to)	-85 °C 413 W (1410 BTU/ h)	-80 °C 338 W (1154 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			

¹Average multiple probe temperature deviation

CryoCube FC660h 230 V/50 Hz Performance Graph

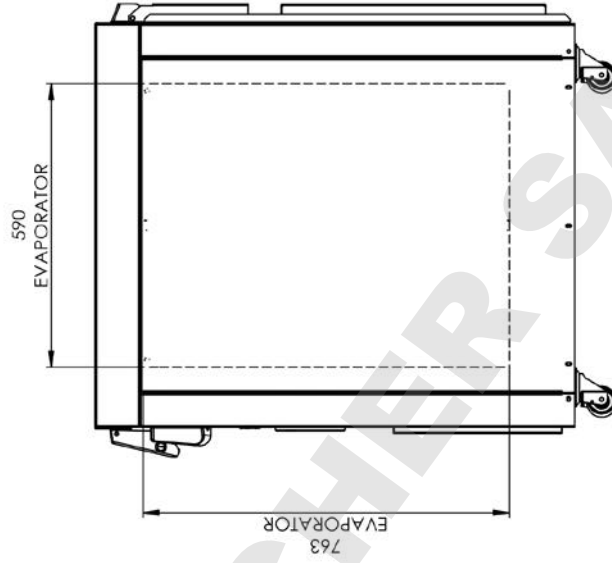
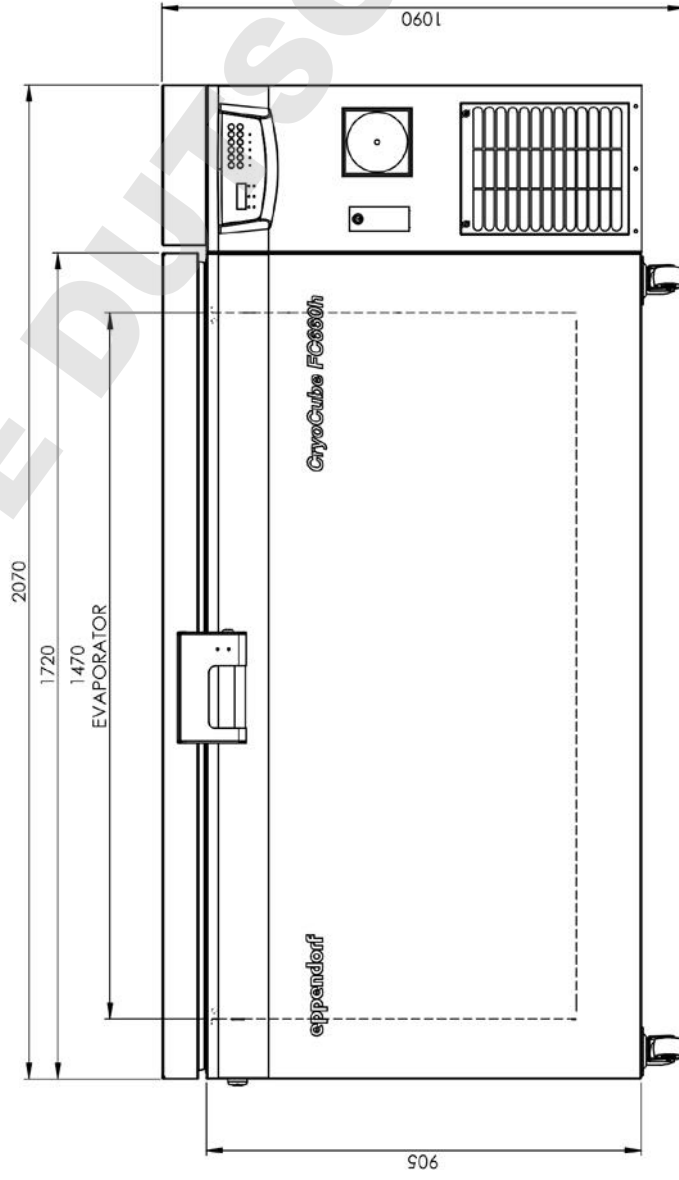
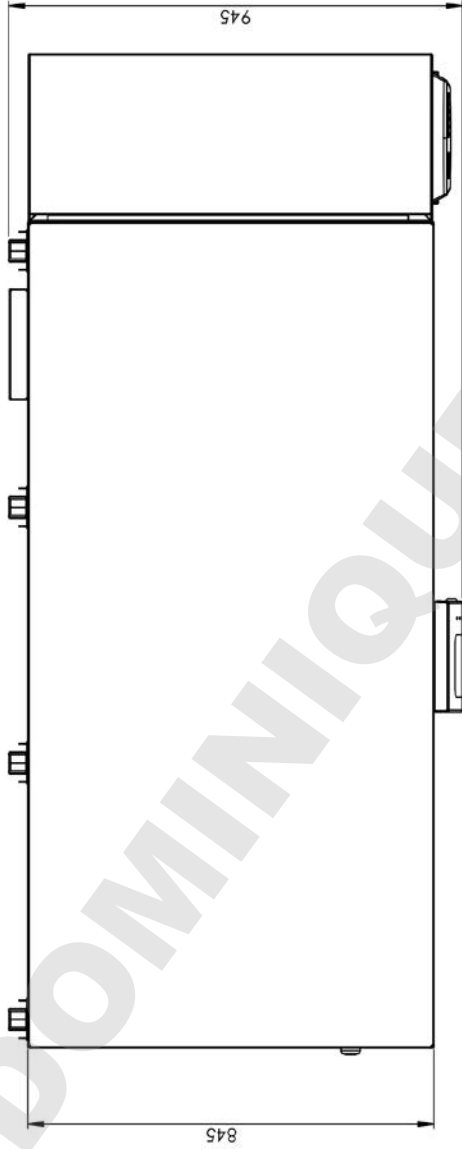


Technical specifications subject to change.

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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 1 OF 2
				HOLE	CTRS —			© 2014 Third angle projection copyright		