

# ULT-Freezer Performance Data Sheet



## Capacity

Storage volume	535 L (18.89 ft <sup>3</sup> )
Number of compartments	3
Adjustable shelves	Yes
Racks per shelf	3
Racks per freezer	12
Box capacity	50 mm (2 in) box 336
	75 mm (3 in) box 240
per freezer	100 mm (4 in) box 144
Sample capacity per freezer	50 mm (2 in) box 33,600
Temperature rating	-50 °C to -85 °C

## Technical Specifications: Innova® U535 - Air Cooled

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)	230 V/50 Hz
Current rating	5.0 A
Agency listing	<ul style="list-style-type: none"> <li>&gt; WEEE</li> <li>&gt; All components tested to CE specifications</li> </ul>

## Dimensions and Construction

Internal dimensions (H x W x D)	136.5 x 64 x 61.5 cm (53.7 x 25.2 x 24.2 in)
External dimensions* (H x W x D)	195 x 80 x 86.7 cm (76.8 x 31.5 x 34.1 in)
Interior	Stainless steel grade 304 2B
Insulation	Polyurethane foam and vacuum insulation panel
Shipping weight	298 kg (657 lbs)
Casters/level legs	Yes (Heavy duty)

\*To allow for handles and hinges, add 80 mm to width.

## User Interface

Alarms	Adjustable high/low temperature, power fail, battery low, filter clean, fault
Password protection (freezer settings)	Yes
Remote alarm port	Standard (BMS)
RS-485 interface	Optional
VisioNize®	via VisioNize box
Power switch	Secured by lockable plate
Lock	Standard
Temperature control	Microprocessor
Cabinet control probe	PT 100

## Refrigeration System Specifications

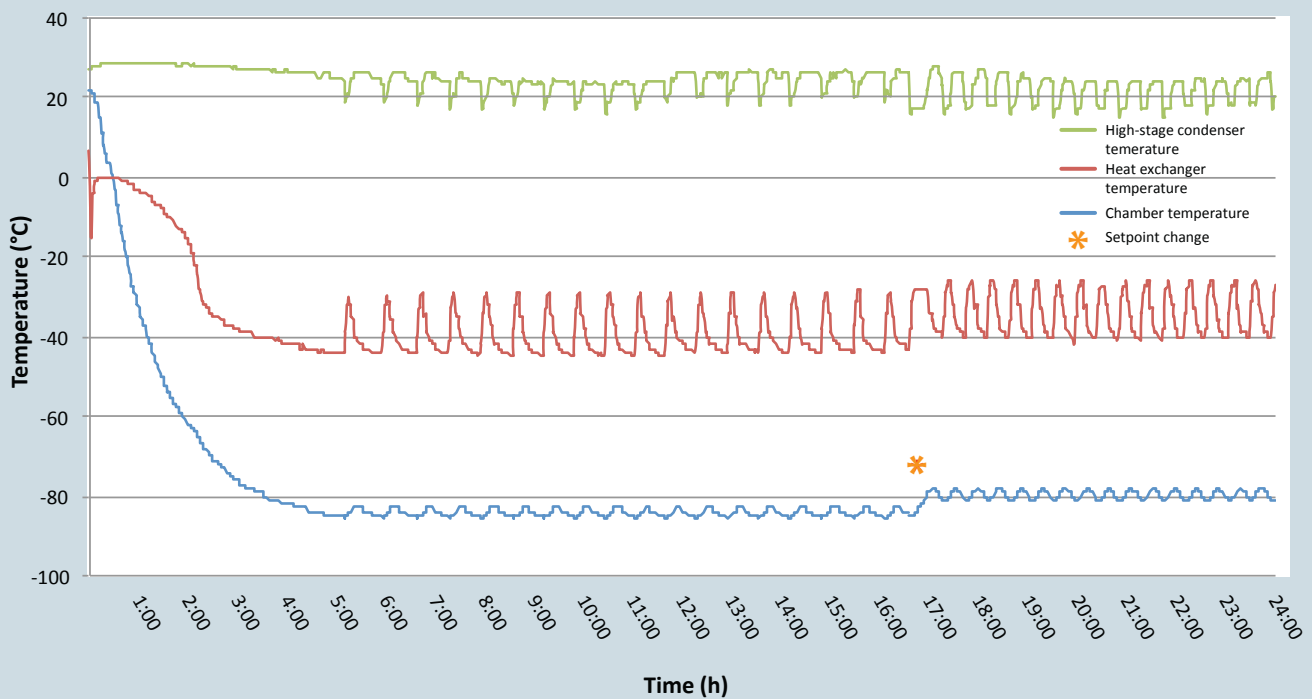
Refrigeration system	2 stage cascade cooling system
Compressors	Commercially available, heavy duty compressors
Defrost method	Manual
Refrigerant charge	High Stage: R404a Low Stage: R508b
Condensing method	Air-cooled
Expansion device	Capillary tubes
Evaporator type	Cold wall

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

Pull down time (freezer empty, from ambient to -85 °C)	5 h 20 min
Power consumption (freezer set to -80 °C)	13.2 kWh/day
Cabinet uniformity <sup>1</sup> (freezer set to -80 °C)	+6.6 °C /-0.0 °C
Heat output	550 W (1877 BTU/hr)
Warm up time (freezer 2/3 full, from -85 °C to 0 °C)	32 h 30 min
Noise level	56 dB
Mains\power supply	5.0 A

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

### Innova U535 230 V/50 Hz Performance Graph

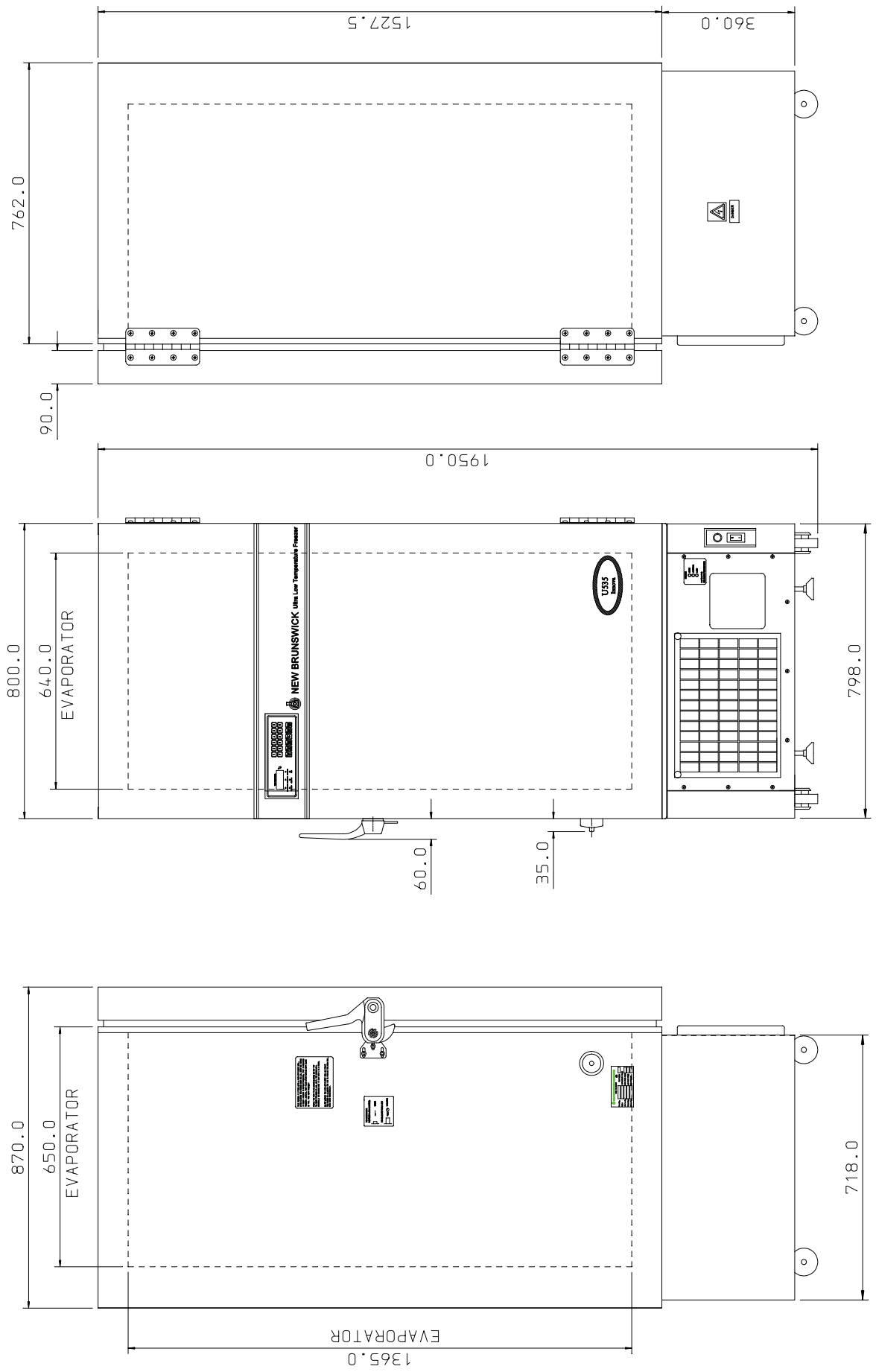


Technical specifications subject to change

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DRAWN S.R.E.	Scale	TOLERANCES -	MATERIAL	Title	cont
Checked S.C.	ALL DIMENSIONS IN MILLIMETRES	GEN -	FINISH	OUTLINE DRAWING	2
		HOLE CTRS -		INNOVA U535 FREEZER	Sheet
				Drawing No D1026	1
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