

# ULT-Freezer Performance Data Sheet



## Capacity

Storage volume	535 L
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	50 mm (2 in) box 33,600 75 mm (3 in) box 24,000
per freezer	100 mm (4 in) box 14,400
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
External dimensions* (H x W x D)	195 x 80 x 86.7 cm
Interior	Stainless steel grade 304 2B
Insulation	Polyurethane foam
Shipping weight	298 kg
Casters/level legs	Yes

## 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
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

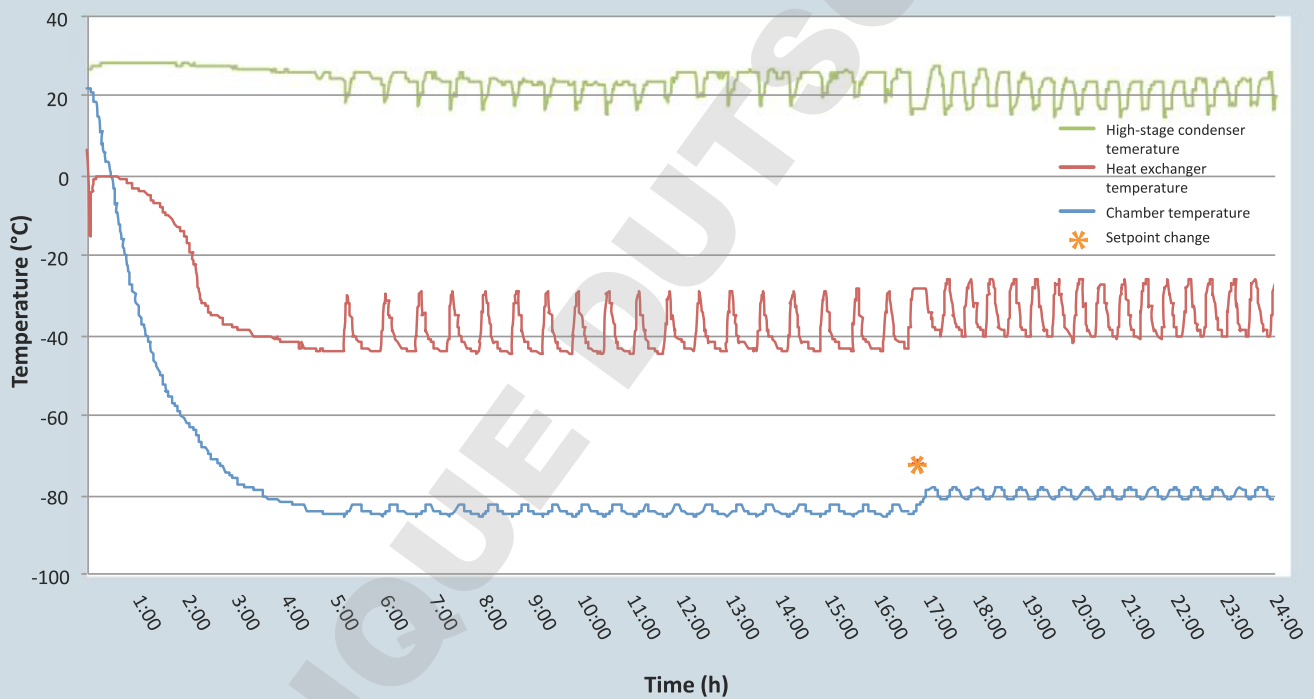
\*To allow for handles and hinges, add 80 mm to width.

## 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



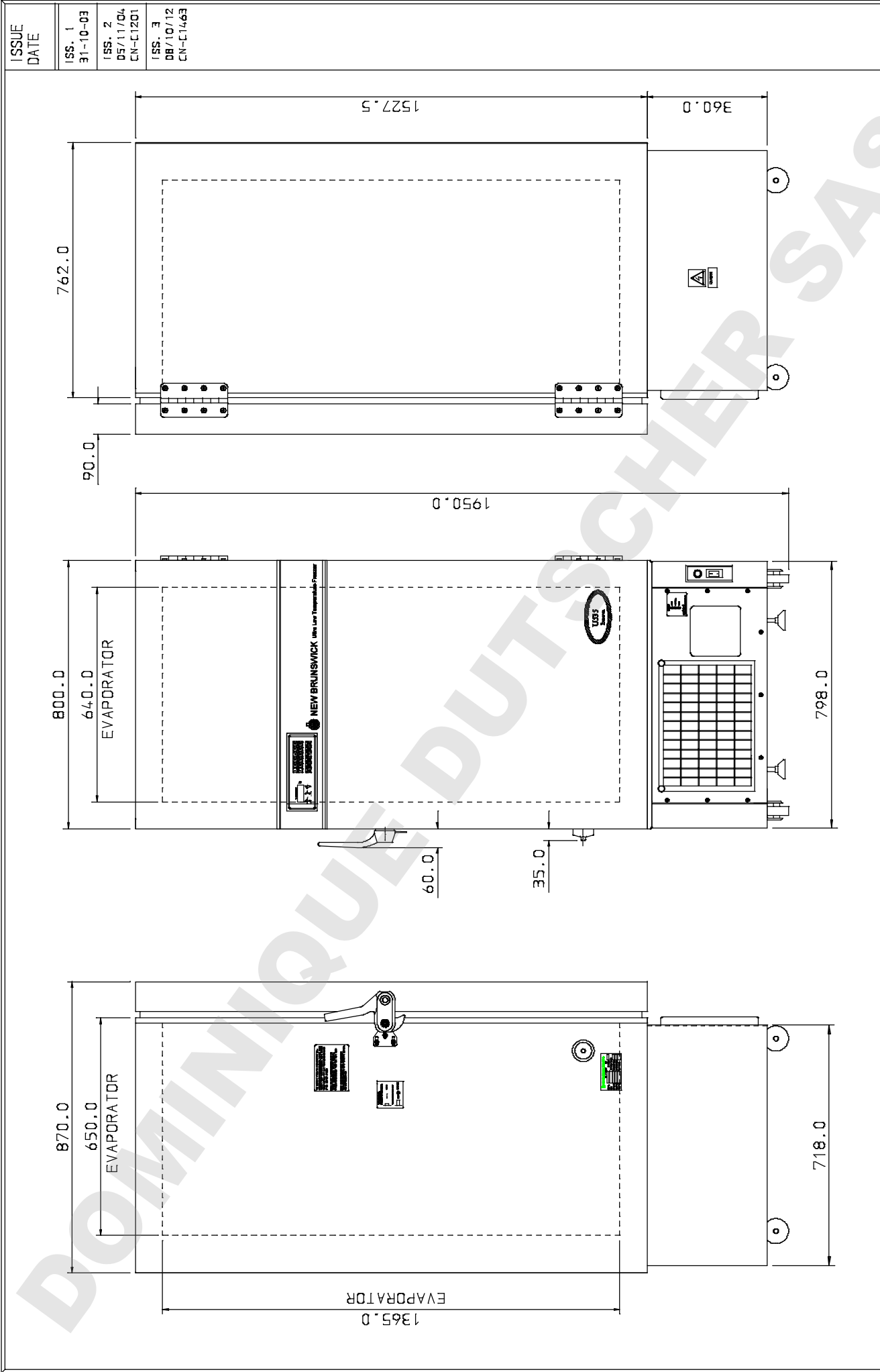
Technical specifications subject to change

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