

# Ultra-Low Temperature Freezer (BL-UDF528)

## Description

The **BL-UDF528 Ultra-Low Temperature (ULT) Freezer** features an advanced **two-stage cascade cooling system** using **natural hydrocarbon refrigerants R290 and R170**. This environmentally friendly cascade technology ensures stable and reliable ultra-low temperature performance.

Equipped with **dual inverter compressors**, the system intelligently balances **energy efficiency** and **rapid temperature recovery**. It provides fast pull-down to **-80 °C** and quick recovery after frequent door openings, ensuring optimal specimen protection during long-term storage.



Typical performance data is based on internal testing at a set temperature of **-80 °C** and an ambient temperature of **25 °C**.

## Key Features

- M-Cascade Technology** – Two-stage cascade cooling system
- Dual Inverter Compressors** – Enhanced energy savings and fast temperature recovery
- 10" LCD Touch Screen** – Intuitive operation and real-time monitoring
- Vacuum Insulation Panel (VIP)** – High-efficiency insulation with PU foaming
- Hydrocarbon Refrigerants (R290 & R170)** – Eco-friendly natural gases
- Low Energy Consumption** – Optimized for long-term preservation
- Comprehensive Alarm System** – Multiple visual and audible safety alerts

## Construction & Design

- Interior:** SS 304 stainless steel chamber
- Insulated Inner Doors** – Minimizes cold air loss
- Heated Vacuum Relief Port** – Smooth door operation
- Ergonomic Handle Design** – User comfort and safety
- Heavy-Duty Casters with Leveling Feet** – Easy mobility and stable placement

## Safety & Convenience

- Built-in Data Logger with USB Port** – Easy data export and compliance tracking
- Access Port** – For external temperature probes
- Circuit Breaker Protection** – Electrical safety assurance

## Specifications

<b>-86°C Ultra-low Temperature Freezer (BL-UDF528)</b>	
Model	BL-UDF528
Capacity	528L/18.7Cu.Ft.
Internal Size (W*D*H) mm/inch	585*696*1266/23.0*27.4*49.8
External Size (W*D*H) mm/inch	930*1041*1947/36.6*41.0*76.7
Package Size (W*D*H) mm/inch	1020*1166*2132/40.16*45.91*83.94
NW/GW (kgs)	260/310
Performance	
Temperature Range	-40~-86°C
Ambient Temperature	16-32°C
Cooling Performance	-86°C
Climate Class	N
Controller	Microprocessor
Display	10" HD Intelligent Touch Screen
Refrigeration	
Compressors	2pcs
Cooling Method	Direct Cooling
Defrost Mode	Manual
Refrigerants	High Stage: R290, Low Stage: R170
Insulation Thickness(mm)	D:117, L/R:130, B:130
Construction	
External Material	Cold Rolled Steel Sheet
Inner Material	Stainless Steel
Shelves	3(stainless steel)
Access Test Port	2pcs. Ø 25 mm
Casters	4+(2 balancing feet)
Data Logging/ Interval /Recording Time	USB/Record every 5 minutes / 10 years
Interface	Remote Alarm Contact, RS485
Backup Battery	Yes
Alarms	
Temperature	High/Low Temperature, High Ambient Temperature
Electrical	Power Failure, Low Battery, Battery Power Detection Failure, Overpressure Alarm
System	Sensor Error, Main Board Communication Error, Door Ajar High Temperature Level Alarm, Condenser Overheating Alarm
Accessories	
Freezer Rack Model	BL304-552B-CT
Freezer Rack/Box (Quantity)	16/400
Electrical Data	
Power Supply(V/Hz)	110-230V/50Hz~60Hz
Rated Current (A)	9.09A