# TempIn™
## preserving life

## Ultra Low Temperature Deep Freezer

## TI- HL- 398- CE

# Features

### Targeted Refrigeration
- The new generation of ultra-low temperature refrigeration system can ensure fast refrigeration.

### Five Magic Weapons for Energy Saving
- Imported high-efficiency compressor + separated evaporator + composite heat exchanger +

optimized fractional condensation & separation system + high-efficiency thermal insulation
system can save energy and reduce power consumption of the freezer by 40%.

### Low Noise Design
- Low-noise direct cooling circuit + suspension frame & sound absorbing compartment & Low-noise fan can reduce noise generated by the entire freezer to the largest extent.

-86℃ Ultra-low Temperature Freezer

### Three-dimensional Thermal Insulation

- The six sides of the cabinet are made from high-efficiency VIP vacuum thermal insulation plate, and the thermal insulation design of the inner door made from foaming material and the outer
door system was awarded with multiple patents, which
can improve the thermal insulation performance of the freezer.

### Optional Accessories(WiFi/Bluetooth printer/Magnetic lock/Swipe card/Fingerprint)

- Connect WiFi to upload data to the cloud space, monitor the device, check the status of the freezer faster, and ensure the safety of the samples;
- Optional Bluetooth printer, real-time export temperature data, temperature graph, setting operation and other data, to understand the freezer operating status;
- Optional functions such as card unlocking, fingerprint unlocking, and facial recognition unlocking are available to facilitate
- quick access to samples.

# Scope of Application

Suitable for use in blood banks, hospitals, health and diseasep revention systems, research institutions, colleges & universities, the
electronic industry, biological engineering, laboratories in colleges & universities, military enterprises, deep-sea fishing companies, etc.

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## 7" HD Intelligent Screen Control System

· 7-inch HD intelligent display touch screen, user-friendly interface and more accurate temperature control, with Bluetooth, WiFi and other functions, more convenient operation and more comprehensive functions;

· Can add multiple user accounts to log in and record usage/operation records;

· The high-precision microcomputer control system and platinum resistor sensors enable users to set temperature inside the cabinet within a range from -40 to -86℃ ;

· Optional functions such as card unlocking, fingerprint unlocking, and facial recognition unlocking are available to facilitate quick access to samples.



## Security System

· The perfect audible & visual alarm system : high and low temperature ,sensor failure ,power failure ,low battery ,door ajar ,main board communication error etc;

· Equipped with alarm self-recovery function, it reminds users of unhandled alarm problems in freezer many times;

· The compressor start delay and stopping interval protection can ensure reliable operation;

· Both the touch screen controller and key-board controller have password protection which can prevent any adjustment of operation without permission .



## Refrigeration System

· The imported high-efficiency compressor and EBM fan are energy-saving and highly efficient;

· The large finned condenser with a space between fins≤2mm, providing effective heat dissipation.

· DW-HL398 with twin- compressor, if one is damaged, the other one could keep the temperature at -70℃ stably;



VIP PLUS



## Supplies for Cryopreservation
Freezer racks/boxes for cryopreservation are optional.

## Remote alarm contact, RS485
Equipped with RS485 and remote alarm interface to realize remote observation of freezer operation status, real-time reception of product operation information, and ensure the storage safety of samples.



## Data Storage

The temperature data recorded by the system can be exported, the operating data of the system settings, the alarm data, and the temperature data can be recorded in 2 minutes, which can effectively record the running status of the product for you for a long time.
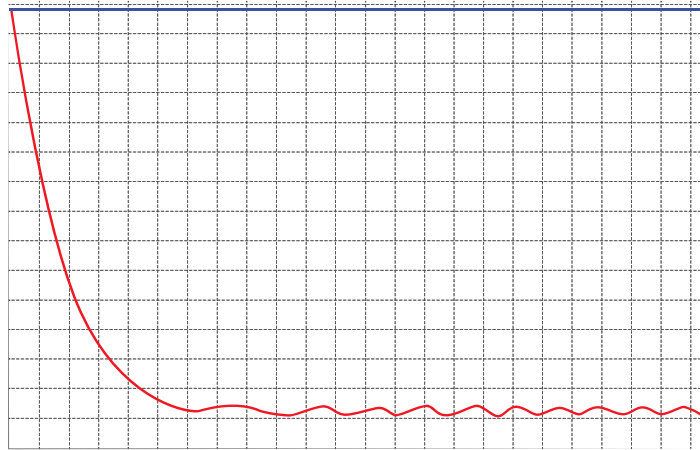


## Thermal Insulation System

· The two-layer heat insulating foamed door with inner and outer door seal and the insulation design of the outer door system with multiple patents can prevent loss of refrigerating capacity in an effective way;

· The six sides of the cabinet are made from high-performance VIP vacuum insulation material, improving thermal insulation performance to a large extent.
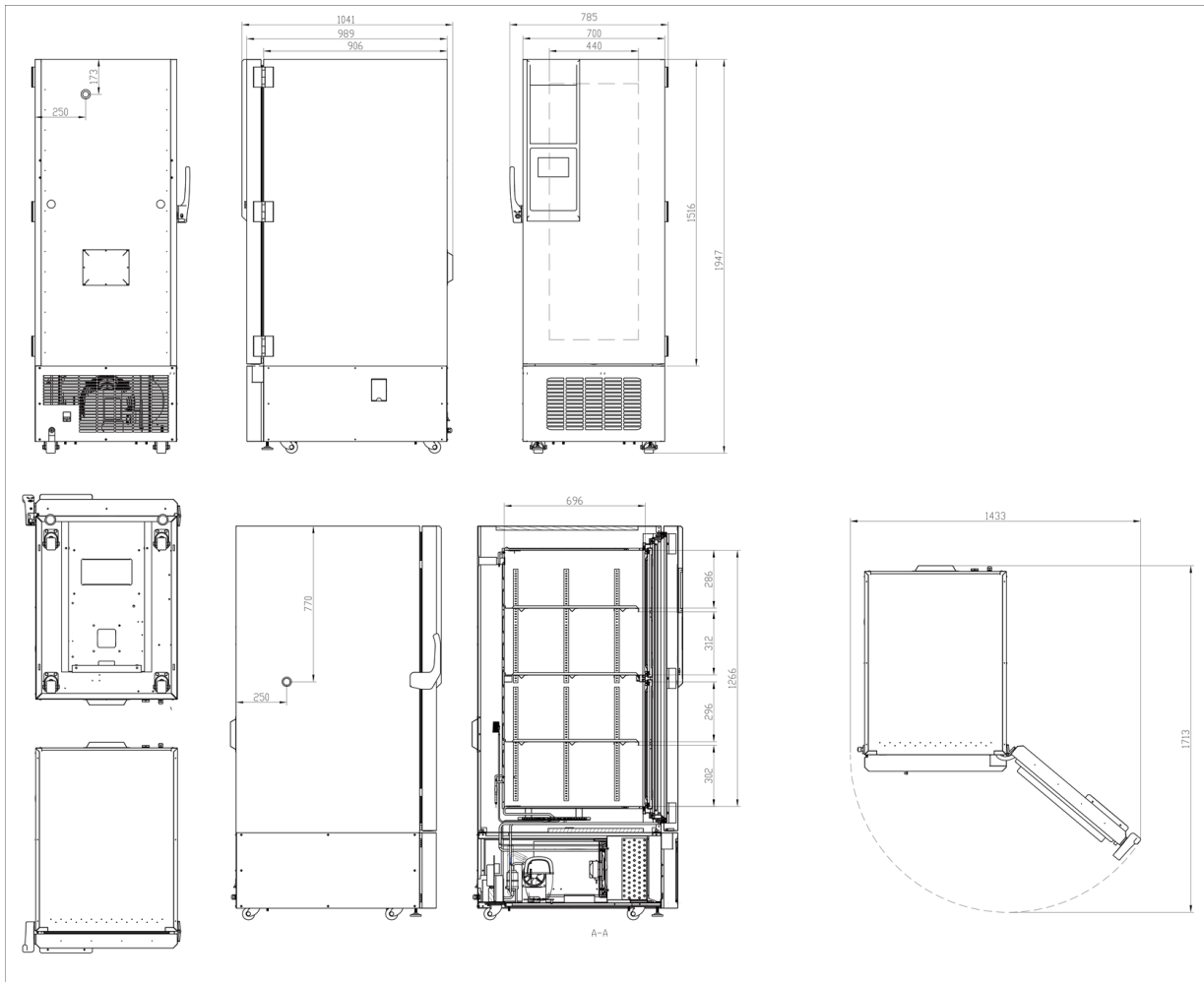


## Human-oriented

· The new designed assisting handle and vacuum release port let the freezer be operated single-handed to open and close the outer door ;

· The newly added file box makes recording easier and more convenient.

· The liner made from Galvanized steel sheet/ Stainless steel for medical use is low- temperature tolerant and corrosion-resistant, which has a long service life and is easy to clean;

· The universal casters and leveling feet design are more convenient for movement and fixation.


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# Performance Data / Cooling Curve



# External Dimension

# ⊙ Specifications

## -86°C Ultra-low Temperature Freezer

| Model | TI- HL- 398 - CE |
|---|---|
| Cabinet type | Upright |
| Capacity (L) | 398 |
| Internal size(W*D*H)mm | 440*696*1266 |
| External size(W*D*H)mm | 785*1041*1947 |
| Package size(W*D*H)mm | 890*1165*2158 |
| NW/GW(Kgs) | 247/325 |

### Performance

| | |
|---|---|
| Temperature range | -40~-86°C |
| Ambient temperature | 16~32°C |
| Cooling performance | -86°C |
| Climate class | N |
| Controller | Microprocessor |
| Display | HD intelligent touch screen |

### Refrigeration

| | |
|---|---|
| Compressor | 2pcs |
| Cooling method | Direct cooling |
| Defrost mode | Manual |
| Refrigerant | HC |
| Insulation thickness (mm) | 130 |

### Construction

| | |
|---|---|
| External material | Cold rolled steel |
| Inner material | Stainless steel |
| Shelves | 3(stainless steel) |
| Door lock with key | Yes |
| Padlock | Yes |
| Access test port | 2pcs. Ø 25 mm |
| Casters | 4+(2 leveling feet) |
| Data logging/Interval/Memory capacity | USB/Record every 5 minutes/10 years |
| Backup battery | Yes |
| WIFI | Yes |

### Alarm

| | |
|---|---|
| Temperature | High/Low temperature, High ambient temperature |
| Electrical | Power failure, Low battery |
| System | Sensor failure, Main board communication error, Condenser overheating alarm, Door ajar |

### Electrical

| | |
|---|---|
| Power supply(V/HZ) | 220-240~/50 |
| Rated current(A) | 8.69 |

### Accessories

| | |
|---|---|
| Standard | Remote alarm contact，RS485 |
| Options | Chart recorder, $CO_2$ backup system |

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