

# OPERATION MANUAL

**COLD TRAP BATH**

**(Model: CTB-10)**

Manual No.: JUM-5024 (Rev. 0)

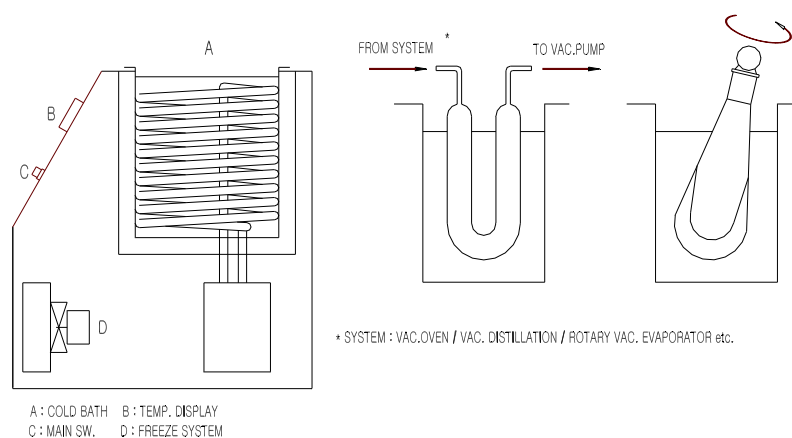


**\* Contents \***

|  |       |            |
|--|-------|------------|
| <b>1. Features and Use</b>             | ..... | <b>3</b>   |
| <b>2. Installation</b>                 | ..... | <b>4</b>   |
| <b>3. Name of the Parts</b>            | ..... | <b>4~5</b> |
| <b>4. Caution</b>                      | ..... | <b>6</b>   |
| <b>5. Operation</b>                    | ..... | <b>6</b>   |
| <b>6. Maintenance</b>                  | ..... | <b>7</b>   |
| <b>7. Causes and Repairs of Defect</b> | ..... | <b>8</b>   |
| <b>8. After-sale Service</b>           | ..... | <b>9</b>   |
| <b>9. Specifications</b>               | ..... | <b>9</b>   |

## 1. Features and Use

Cold trap bath is generally used to protect Vacuum Pump with performing Vacuum Oven or Vacuum distillation. In addition, quick-reaction interruption of enzyme reaction, quick-freezing of a sample for freeze Dryer, particular low-temperature required. This small circular bath with special freezing system is designed to be able to make temperature down to  $-40^{\circ}\text{C}$ .



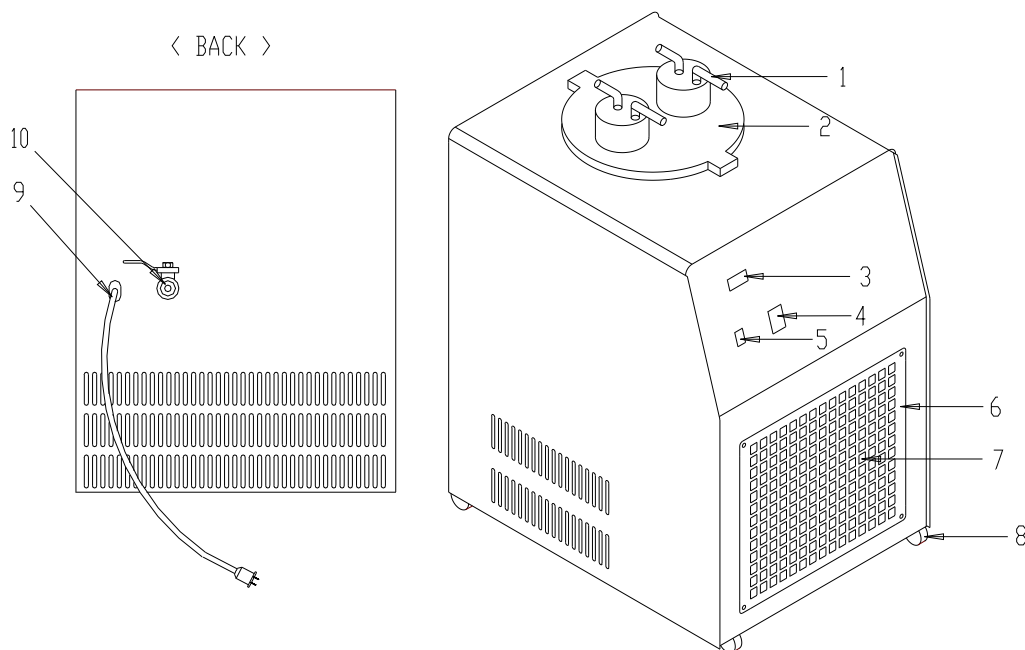
The features of unit are to maximize safety of user and unit, user's convenience. There are as follows:

- 1) Adapting both refrigerant and refreezing system of LBT-type to obtain ultra low-temperature. ( $-40^{\circ}\text{C}$ )
- 2) A ground on the body to protect a short-circuit.
- 3) Temperature display lets you know current temperature.
- 4) Minimizing the size of unit to maximize the saving of space.
- 5) A detachable cover of condenser to have condenser cleaned easily.

## 2. Installation

- 1) Do not expose the unit to a direct sunlight. In case unavoidably it is put a place which is catch a direct sunlight, please cover it with a blackout curtain.
- 2) This instrument is requested not to be used where is inclination and vibration place.
- 3) Keep away the unit from a heat source, such as a stove or a heater.
- 4) Avoid installing it near exit door or sink.

## 3. Name of the Parts



### 1) TRAP

It removes moisture. Be careful to avoid damage when installing.

**2) BATH COVER**

It prevents the volatilization of alcohol and maintains temperature at a certain degree.

**3) DIGITAL DISPLAY**

It displays a current temperature.

**4) MAIN POWER S/W**

It provides power to the product.

**5) RESOL. VALVE S/W**

In case of operating the unit without alcohol in bath, evaporator will be covered with frost. To eliminate frost in bath, press this button for 7~8 seconds.

**※WARNING : Do not operate it over 10 seconds. The unit could be damaged caused by over-load of compressor.**

**6) CONDENSER COVER**

It is a detachable cover to have condenser cleaned easily.

**7) FILTER**

It is in the condenser cover. It prevents dust through condenser cover into the unit.

**8) RUBBER FOOT**

It adapts RUBBER FEET to reduce movement of the unit.

**9) MAIN POWER CORD**

**10) DRAIN PORT**

Do not contain alcohol in bath for a long time without using it. Turn it counterclockwise to drain out alcohol in bath.

## 4. CAUTION

- 1) The unit is designed for operating for 220V, 50/60 Hz. Please, check the electricity before plugging.
- 2) Avoid putting the unit in electromagnetic circumstance if possible.
- 3) Do not pour water to external of the unit directly.
- 4) When you wash the body of the unit, do rinse it with water after washing it with neutral detergent.
- 5) Use pure alcohol to avoid attaching some residua to an Evaporator.
- 6) Do not wash it with an acid solution, Benzene, a sharp thing, a detergent, hot water. In case using mentioned stuff to wash it, it might cause a change of color or a damage of the body, especially a distortion of rubber or a plastic part.

※**Warning : Do not use a volatile solution!**

- 7) Do not put something causing a fire around the unit.
- 8) Do not touch a power cord with wet hands.

## 5. OPERATION

- 1) Turn Main Power S/W off and plug it into 220V, 50/60Hz socket.
- 2) When using alcohol, fill it up 70% of the bath. If using it in vacuum state, first drain out alcohol from the bath.
- 3) Install a trap and fixed it up.
- 4) Turn on Main Power S/W.
- 5) Experiment what you take.
- 6) After done the experiment, switch it off and take the plug out from the socket.
- 7) Completely drain out alcohol in the bath through drain port.

## 6. MAINTENANCE

### 1) How to clean the exterior;

- Turn off the power at the Main Power S/W.
- Take the plug out from the socket.
- Wash it with a moistened sponge or a soft stuff.
- Rinse it with a soaked stuff.
- Wipe water from it with a dry, soft cloth.
- Do not wash it with organic solvents.

### 2) How to clean the electric parts:

- Wipe it with a dry, soft cloth.

### 3) How to clean the condenser:

- Turn off the power at the Main Power S/W.
- Take the plug out from the socket.
- Loosen 4 bolts of cover of the condenser.
- Vacuum or clean dust of condenser over 1 time a month. If not, compressor could have a fault or the freezing efficiency of compressor could be down.

### 4) Storage:

- Turn off the power at the Main Power S/W.
- Take the plug out from the socket.
- Drain out alcohol in the bath through the Drain Port at the rear.
- Clean it with a dry, soft cloth.
- Wrap it up and put it in a well-ventilated place. (Do not expose it to direct sunlight.)

## 7. Causes and Repairs of Defect.

1) In case the unit does not start;

- Check the power supply plug is connected to the socket or not.
- Check the Main Power S/W is on or off.
- Check out a power failure.
- Just call for after-sale service with any problems.

2) In case the temperature is out of control;

- Check the electricity.
- Clean the CONDENSER.
- Just call for after-sale service with any problems.

3) In case something is wrong with compressor;

- Check the electricity. (220V, 50/60Hz)
- Check the quantity of frost around evaporator. If any, press Resol. Valve S/W button to melt.

**※WARNING : Do not operate it over 10 seconds. The unit could be damaged caused of over-load of compressor.**

- Just call for after-sale service with any problems.



## 8. AFTER-SALE SERVICE

1) After-sale service is for free in case something is wrong with products during the manufacturing process. (1 year-warranty after purchasing)

Please let us know as follows when you call for service;

- Detail information on part of default and its conditions.
- Model's name. (Ex: CTB-10)
- Serial number of the product.
- Buying day/month/year.

2) Malfunctions are to be fixed with charge in these cases notwithstanding the warranty period;

- Malfunction due to the user's mistake, improper repairs, or remodeling the part or whole unit.
- Malfunction due to the user's improper handling or carrying the unit after purchasing.
- Malfunction due to disasters such as fire, flood, or abnormal power supply.
- Malfunction due to user's not following the operation manual.

3) Contact our company or dealer for more information or questions.

## 9. SPECIFICATIONS

| Spec.             | Model                       | CTB-10                         |
|-------------------|-----------------------------|--------------------------------|
| BATH              | Size(mm)/Capacity( $\ell$ ) | 210 $\Phi$ ×204mm / 4.8 $\ell$ |
|                   | Insulation                  | Urethane Foam                  |
| TEMP.             | Range                       | Down to -40℃                   |
|                   | Refrigerator                | One step, 1/2HP                |
| EXTERNAL          | Material                    | Double Paint & Baked Spcc      |
|                   | Size(W×D×H,mm)              | 360×465×555                    |
| ELECTRIC          | Power                       | AC 220, 50/60Hz                |
| Power Consumption |                             | 4.5A Max.                      |