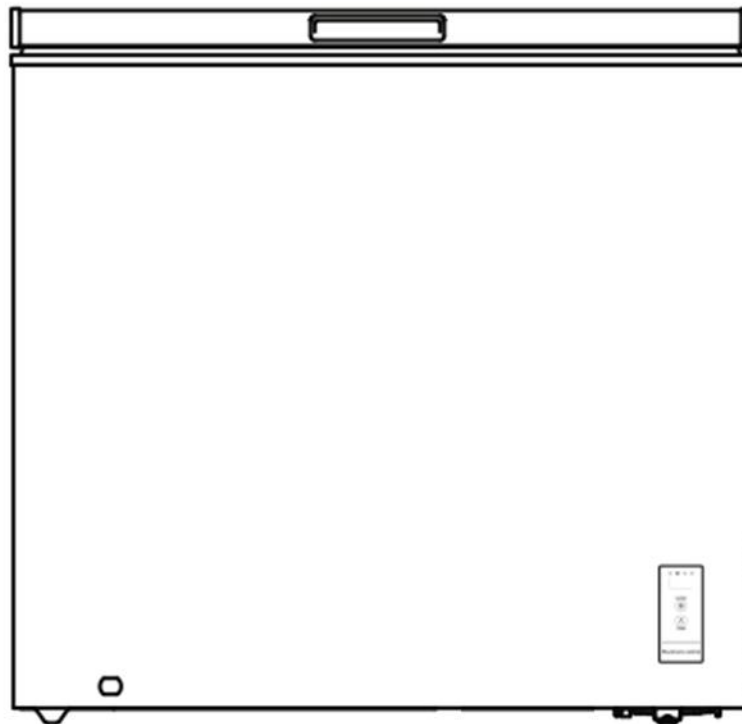


# Service Manual

## CHEST FREEZER SERIES

Applicable Models	Model Code	Applicable Models
HS-384CEN	CE-BD295E-JT	22032010004821




The picture in this service manual is only for reference, and specific appearance and configuration are subject to the real product. This manual mainly teaches the method, the specific work skill needs engineer to accumulate through the daily work.



## **WARNING**

### **Important Safety Notice**

There are special components used in this equipment which are important for safety. These parts are marked by  in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.



## **WARNING**

### **Important Safety Notice**

The Maintenance Manual is only for the use of maintenance personnel with certain experience and background in electrical, electronic and mechanical field.

Any attempt to repair main devices may lead to personal injury and property loss.

Manufacturers or distributors are not responsible for the content of the Manual and interpretation thereof.



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**1. Significant update notes (None)**

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## 2. Safety Warning Code

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### 2.1 Warning for operation safety

#### Important Safety Instructions

	<b>CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN</b>	
	This symbol indicates that dangerous voltage constituting a risk of electric shock is present within your freezer.	
	This symbol indicates that there are important operating and maintenance instructions in the literature accompanying your freezer.	

#### WARNING

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this appliance near water.
- 6) Clean only with a damp cloth.
- 7) Do not block any ventilation openings.
- 8) Install in accordance with the manufacturer's instructions.
- 9) Do not install near any heat sources, such as radiators, heat registers, stoves, or other apparatus that produce heat.
- 10) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 11) Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the appliance.
- 12) Do not attempt to modify or extend the power cord of this appliance.
- 13) Unplug this appliance during lightning storms or when it will not be used for long periods of time.
- 14) Make sure that the available AC power matches the voltage requirements of this appliance.

## CONNECTING ELECTRICITY

**WARNING****Electrical Shock Hazard.**

Plug into a grounded 3-prong outlet.  
Do not remove the ground prong.  
Do not use an adapter.

Failure to follow these instructions can result in death, fire, or electrical shock.

**WARNING****Electric Shock Hazard**

**Failure to follow these instructions can result in electric shock, fire, or death.**

- 1) **WARNING**—Keep ventilation openings, in both the freezer and the built-in structure, clear of obstruction.
- 2) **WARNING**—Do not touch the interior of the freezer with wet hands. This could result in frost bite.
- 3) **WARNING**—Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.
- 4) **WARNING**—Do not damage the refrigerant circuit.
- 5) **WARNING**—Do not damage the refrigerant tubing when handling, moving, or using the freezer.
- 6) **WARNING—DANGER**—Never allow children to play with, operate, or crawl inside the freezer. Risk of child entrapment. Before you throw away your old freezer:
  - 6-1) Take off the doors
  - 6-2) Leave the shelves in place so that children may not easily climb inside
- 7) Unplug the freezer before carrying out user maintenance on it.
- 8) This freezer can be used by children age eight years and older and persons with reduced physical or mental capabilities or lack of experience and knowledge if they are given supervision or instruction concerning the use of the freezer in a safe way and understand the hazards involved. Children should not play with the freezer. Cleaning and maintenance should not be performed by children without supervision.
- 9) If a component part is damaged, it must be replaced by the manufacturer, its service agent, or similar qualified persons in order to avoid a hazard.
- 10) Please dispose of the freezer according to local regulations as the freezer contains flammable gas and refrigerant.
- 11) Follow local regulations regarding disposal of the freezer due to flammable refrigerant and gas. All refrigeration products contain refrigerants, which under the guidelines of federal law must be removed before disposal. It is the consumer's responsibility to comply with federal and local regulations when disposing of this product.
- 12) This freezer is intended to be used in household and similar environments.

**13)** Do not store or use gasoline or any flammable liquids inside or in the vicinity of this freezer.

**14)** Do not use extension cords or ungrounded (two-prong) adapters with this freezer. If the power cord is too short, have a qualified electrician install an outlet near the freezer. Use of an extension cord can negatively affect the freezer's performance.

### Grounding requirement

This freezer must be grounded. This freezer is equipped with a cord having a grounding wire with a grounding plug. The plug must be inserted into an outlet that is properly installed and grounded.

Improper use of the grounding plug can result in a risk of electric shock. Consult a qualified electrician or service person if the grounding instructions are not completely understood, or if doubt exists as to whether the freezer is properly grounded.

### 2.2 Safety instruction for refrigerant



**WARNING**



**Explosion Hazard.**

Keep flammable materials and vapors, such as gasoline, away from freezer. Failure to do so can result in fire, explosion, or death.



### **Safety instruction for refrigerant**

DANGER—Risk of Fire or Explosion. Flammable Refrigerant Used. To Be Repaired Only By Trained Service Personnel. Do Not Use Mechanical Devices. Do Not Puncture Refrigerant Tubing. CAUTION—Risk of Fire or Explosion. Flammable Refrigerant Used. Consult Repair Manual/Owner's Guide Before Attempting To Service This Product. All Safety Precautions Must be Followed. CAUTION—Risk of Fire or Explosion. Dispose of Properly In Accordance With Federal Or Local Regulations. Flammable Refrigerant Used. CAUTION—Risk of Fire or Explosion Due To Puncture Of Refrigerant Tubing; Follow Handling Instructions Carefully. Flammable Refrigerant Used.

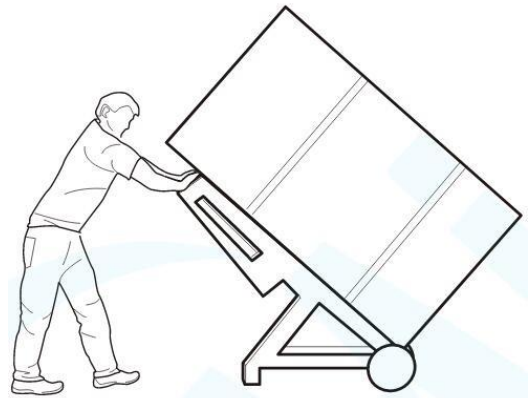


### 3. Transport

#### 3.1 Handling

##### Handling

- 1) Protect the refrigerator in moving it, Same as shown as left photo, please move it by handcart with cushion
- 2) Remove all packing materials and bottom cushion, then move into house for placement
- 3) After moving it to appropriate location, wait for 2 hours before power on.



## 4. Installation and commissioning

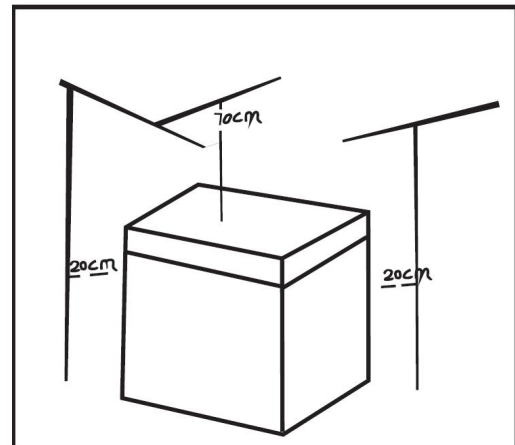
### 4.1 Door Disassembly and Assembly

The refrigerator door needs to be dismantled if it cannot enter the room in the whole.

### 4.2 Installation location

#### Installation location

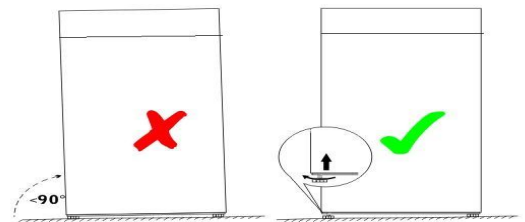
Location that is easy for ventilation shall be chosen to facilitate heat dissipation, enhance its performance and reduce the energy consumption. The side of the box is at least 20cm away from the wall surface, and the top surface is at least 70cm away.



### 4.3 Leveling of the refrigerator

#### Leveling of the refrigerator

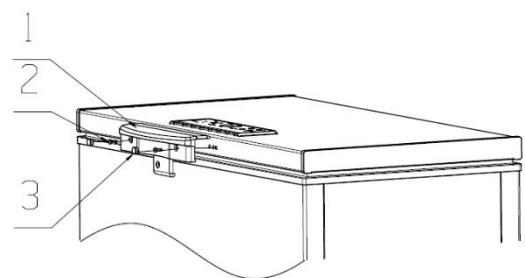
If the refrigerator cannot be placed steadily, adjust the footing to level it.



### 4.4 Installation of handle

#### Installation of handle

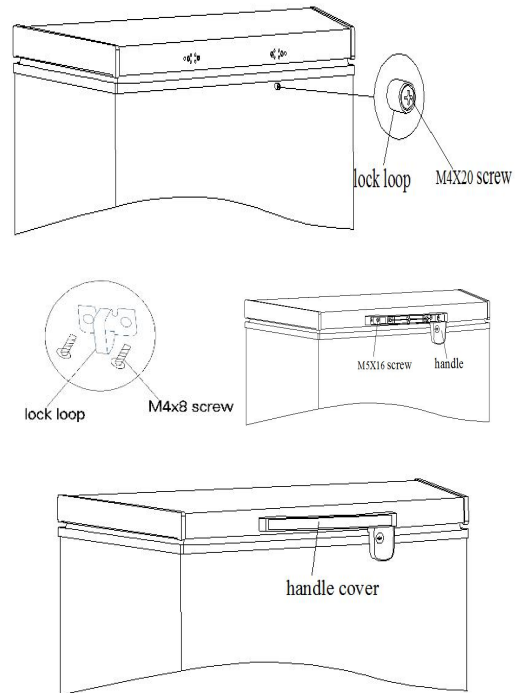
- 1- Handle
- 2- M5\*14 screw(two)
- 3- Screw hole cover (two)
- 1) The handle is inserted below the display control board of door, aligning with the screw hole.
- 2) Fixing the handle by using the screw.
- 3) Assemble the screw hole cover onto the screw hole.



1. Fix the lock loop to its mounting hole near the frame in the front side plate of the box with a M4x20 or M4x8 screw. Pay attention to the direction of the lock loop with its countersunk side facing outwards.

2. Hold the handle with the left hand, and aim its mounting hole at the mounting hole of the door. Insert the key into the keyhole with the right hand, and then turn the key clockwise to drive the rotation of the lock hook. Meanwhile, adjust the position of the handle from side to side in a proper manner to ensure the lock hook can hook the lock loop in locked state. Afterwards, fix the handle to the door with four M5X16 screws.

3. Install the handle cover



#### 4.5 Installation of door lock

##### Installation of door lock

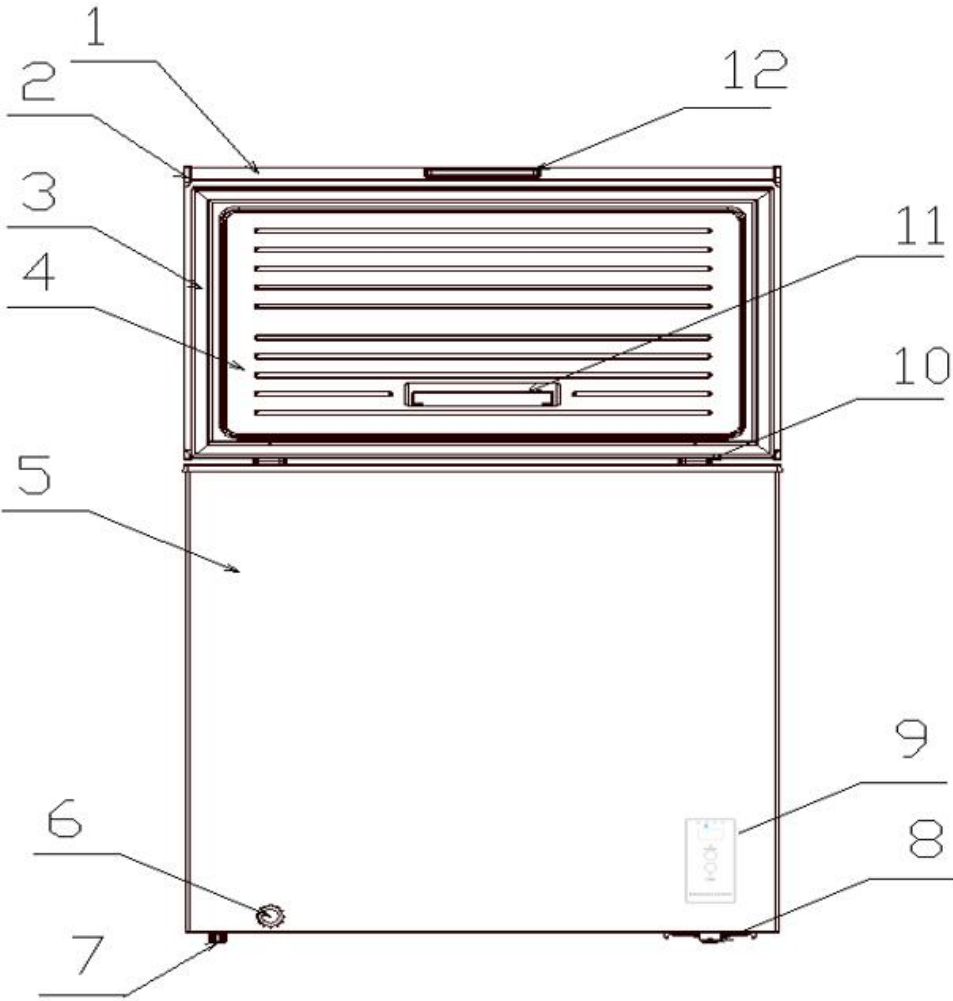
Installation of door lock

With the door handle together

5. Product configuration and dimension

5.1 Main parts and their names

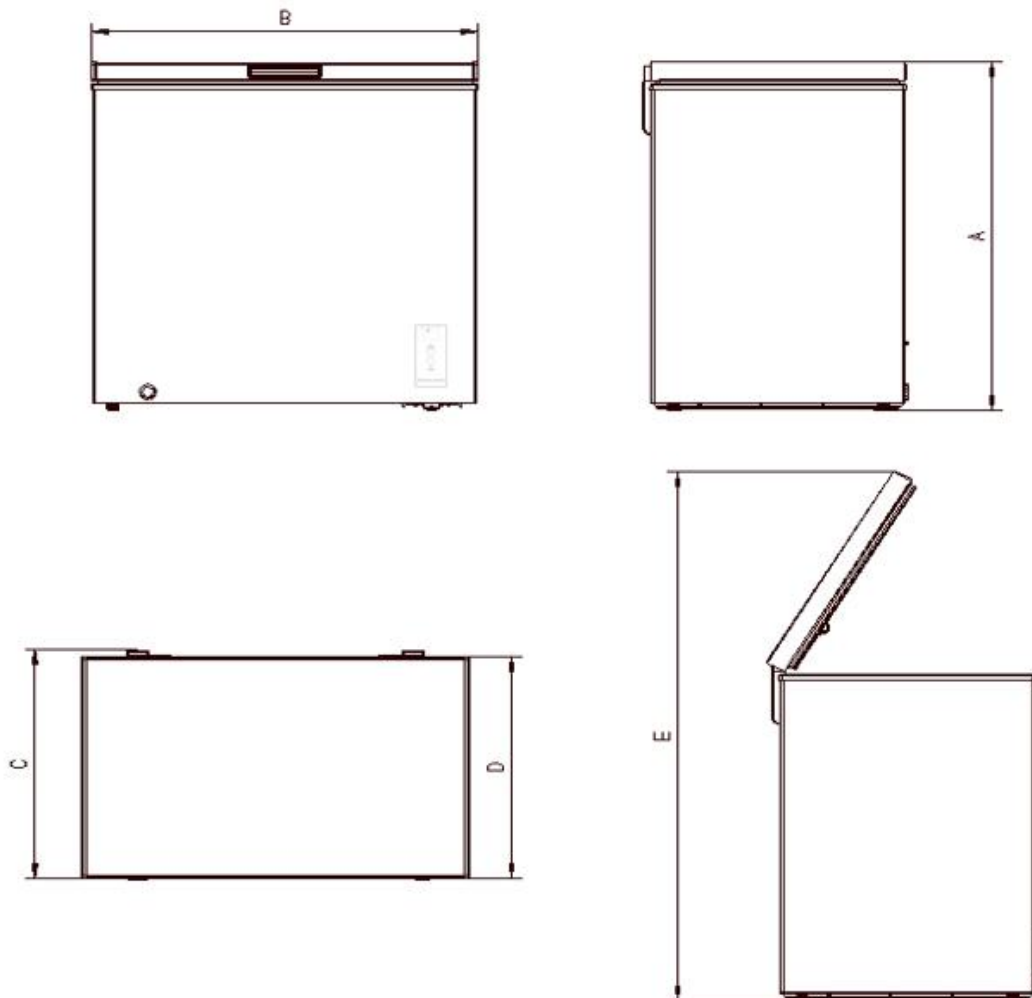
(The picture is only for reference, and specific appearance and configuration are subject to the real product)



Freezer chamber	Refrigerator chamber
<div>❶ Door shell</div> <div>❷ The door end cover</div> <div>❸ Door gasket</div> <div>❹ Door liner</div> <div>❺ Cabinet assembly</div> <div>❻ Drain-pipe cover</div>	<div>❷ Levelling feet</div> <div>❸ Compressor mounting panel</div> <div>❹ Temperature-control panel</div> <div>❺ Hinge</div> <div>❻ Lamp cover</div> <div>❼ Door handle</div>

**5.2 External dimension**

Description	Code	Size (mm)
Height to Top of Case	A	850
Width	B	1115
Depth/Hinge	C	670
Depth	D	645
Height (Door open)	E	1550

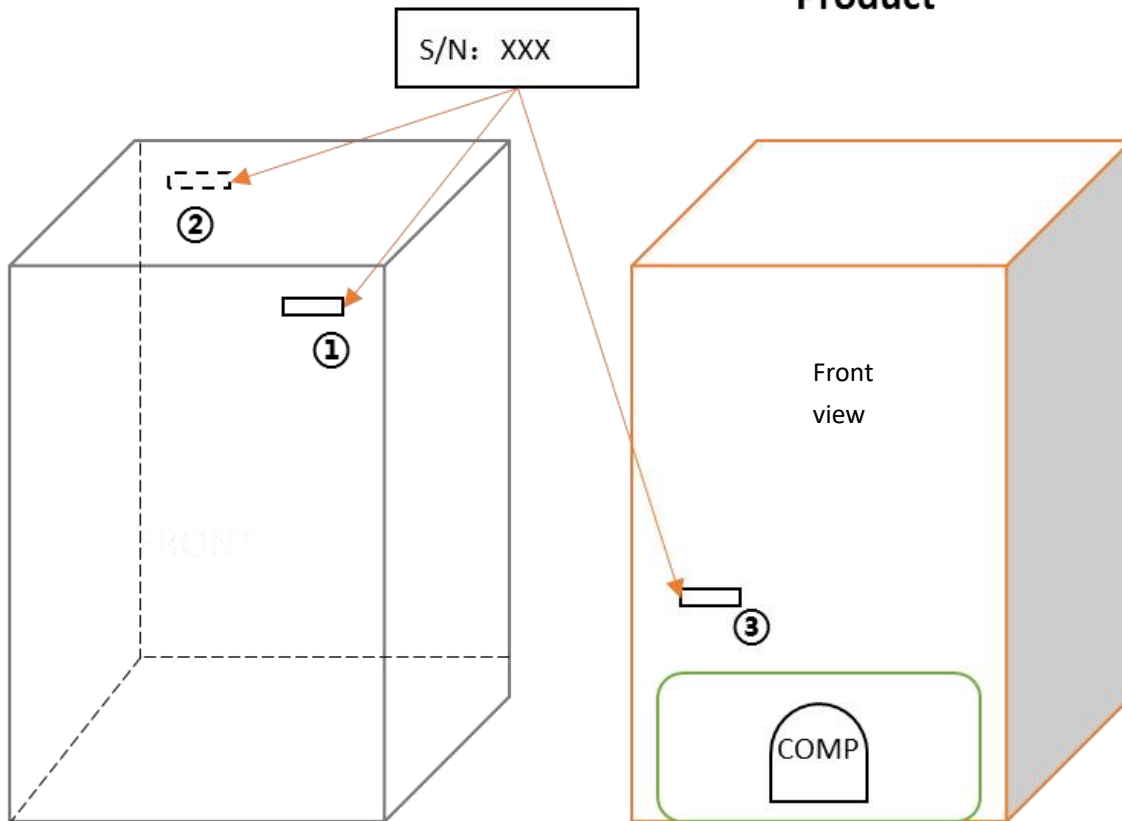


(The picture is only for reference)

### 5.3 Location of S/N

#### Carton Box

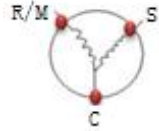
#### Product



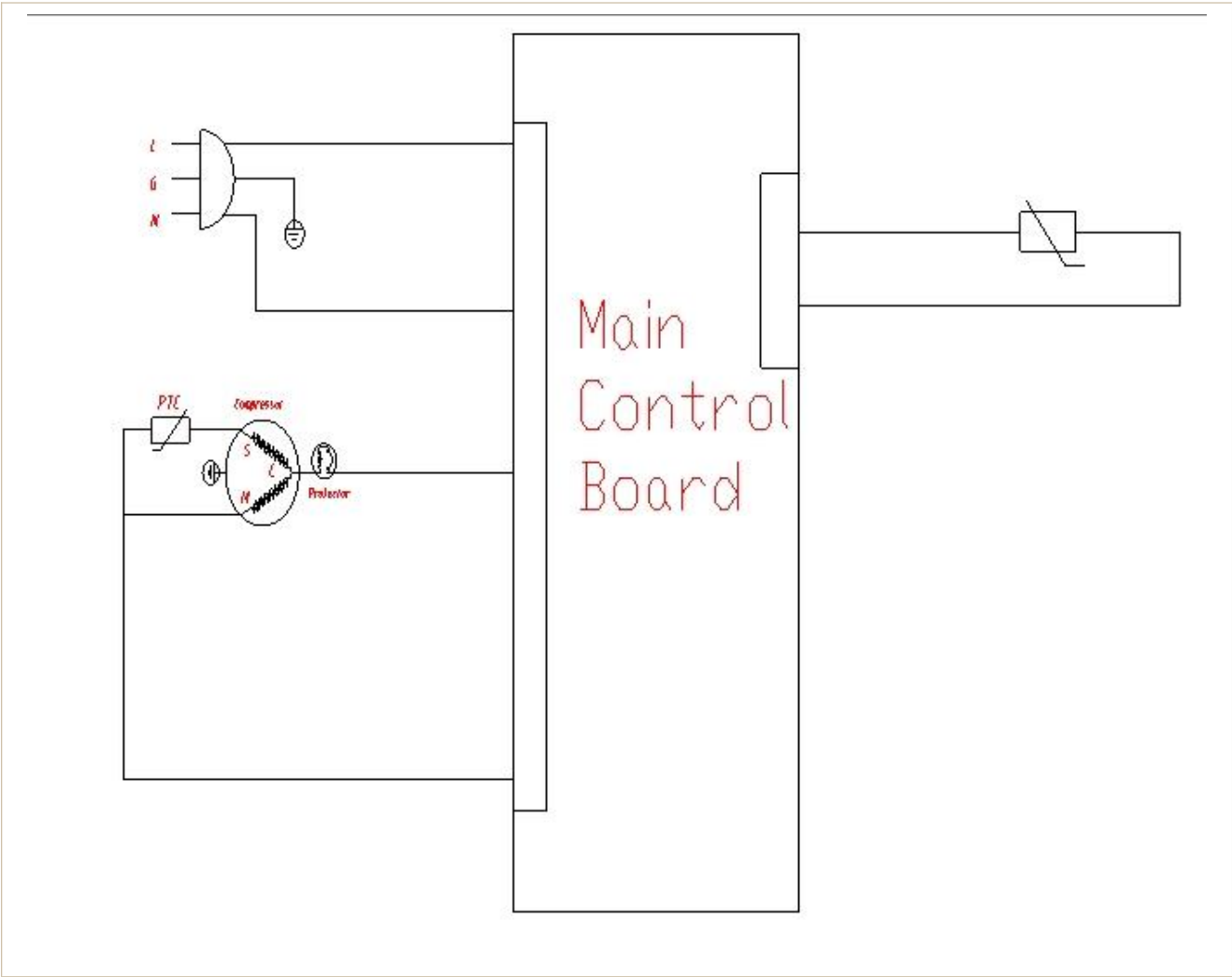
Some products also have S/N on the lower part of the right side of the Cabinet.

## 6. Product specification

### 6.1 Electrical parameters

Product Name	CE-BD295E-ST
Applicable Models	HS-384CEN
Item	Specification
Refrigerant	R600a
Compressor	PZ75H1W
Starter(PTC)	TY-QZ-003 / QPE2-A15MD3
OLP	3TM149TF2/DRB16T61A1
Variable frequency driver board	None
Capacitor	3.0μF/450V
Winding resistance of compressor wiring terminal	$R_{mc}: 25.82 \pm 7\% \Omega$ $R_{sc}: 20.62 \pm 7\% \Omega$ $R_{ms} = R_{mc} + R_{sc}$
Winding resistance picture	
The input power of compressor	72.1W
Lights inside the refrigerator	
Door lamp	/
Indicator lamp	Have
Switch of the refrigerator door	<input checked="" type="checkbox"/> Mechanical switch <input type="checkbox"/> Magnetism control switch

6.2 Circuit diagram



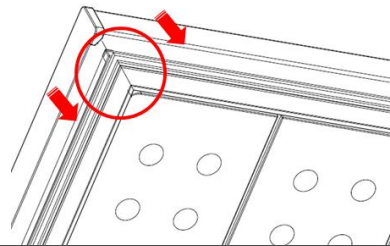


## 8. Dismantling of parts

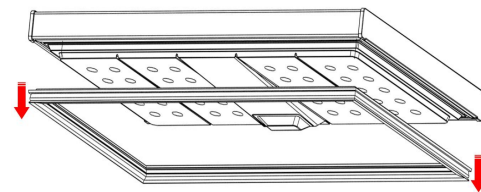
### 8.1 Parts on the door

#### Door seal

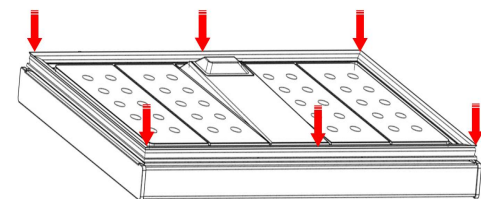
1) Pull the door seal from the corner



2) Take efforts until door seal totally detaches from door inner liner groove, remove the door seal



3) Fixing the four corners and pressing smoothly.

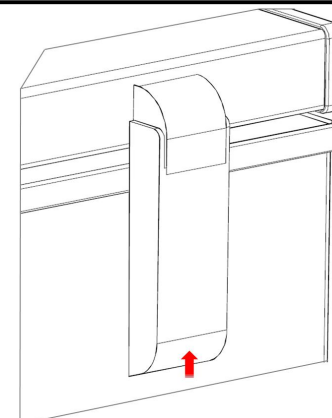


#### The hinge cover

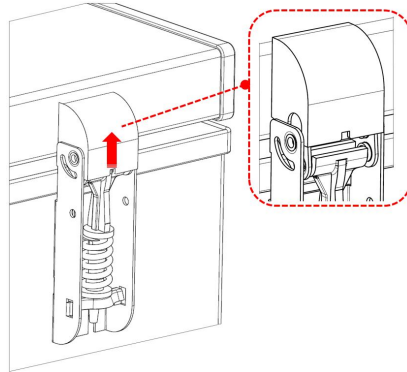
##### The hinge cover teardown

1) Push the hinge cover from the bottom to the top and appear displacement for the hinge cover.

Note: ❶ represents the upper hinge cover, and ❷ represents the lower hinge cover.



2) Open the slanted upward of hinge cover to a certain angle by a screwdriver and remove the hinge cover. Wear safety gloves for fear of cutting the hand.



#### The hinge cover install

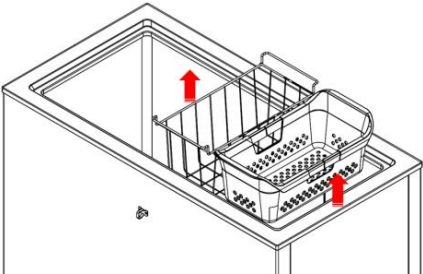
1) When the door is closed, open the lower hinge cover along the side wall to a suitable angle and push forwards into the side wall of the hinge until the hinge cover boss completely falls into the hinge hole.



2) Hold the side of upper hinge cover with both hands, align the opening with the side wall of the hinge, and push down until the hinge cover protrusion completely falls into the hinge hole. Then the upper and lower hinge covers are all in place.




8.2 Parts inside the refrigerator

<b>Basket</b>	
Open the door and upwardly lift the basket Note: There are plastic baskets and wire baskets, and the basket we offer you is subject to the real product you received.	
<b>Inside water pipe cover</b>	
Counterclockwise to remove the pipe cover	