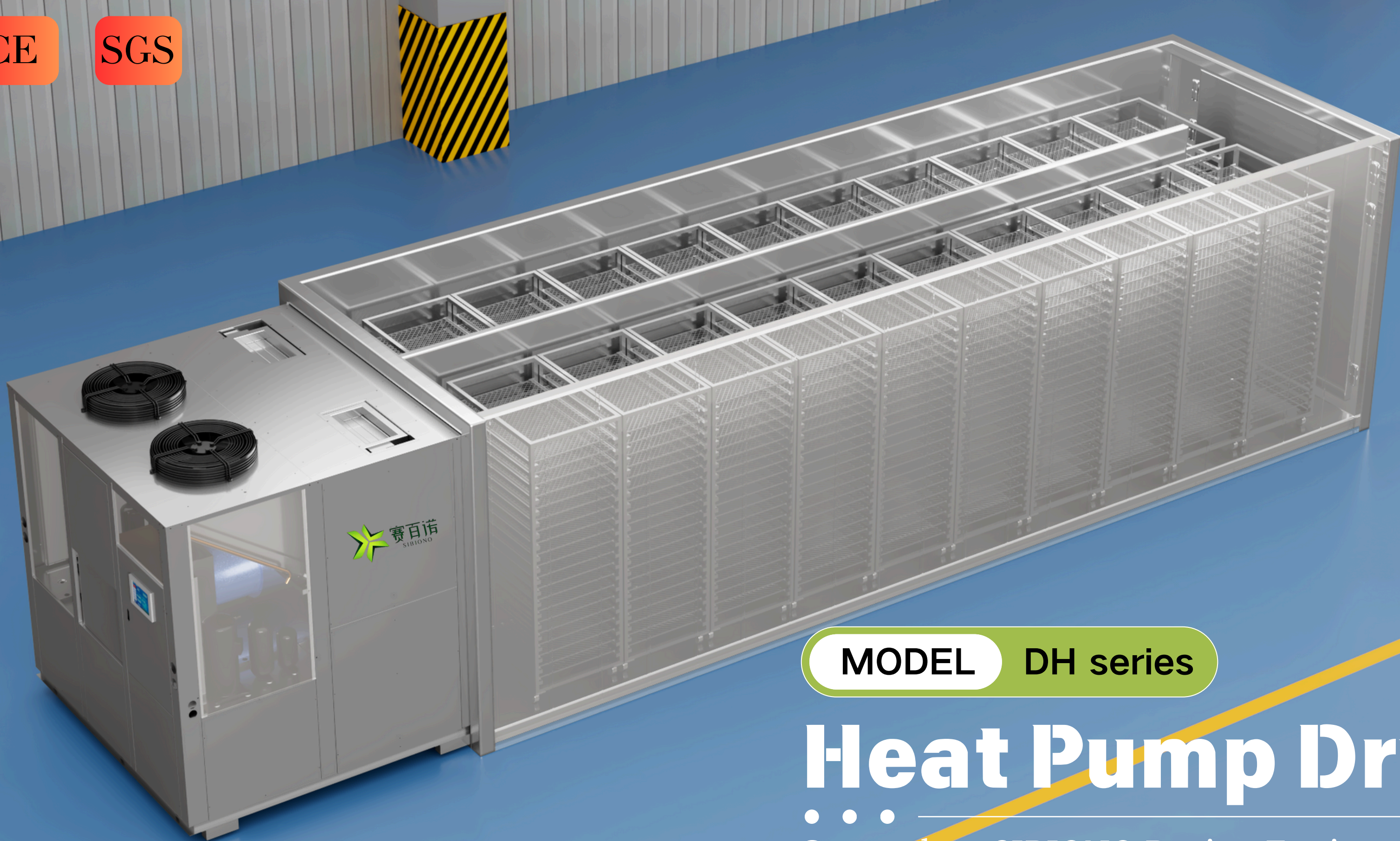


ISO

CE

SGS

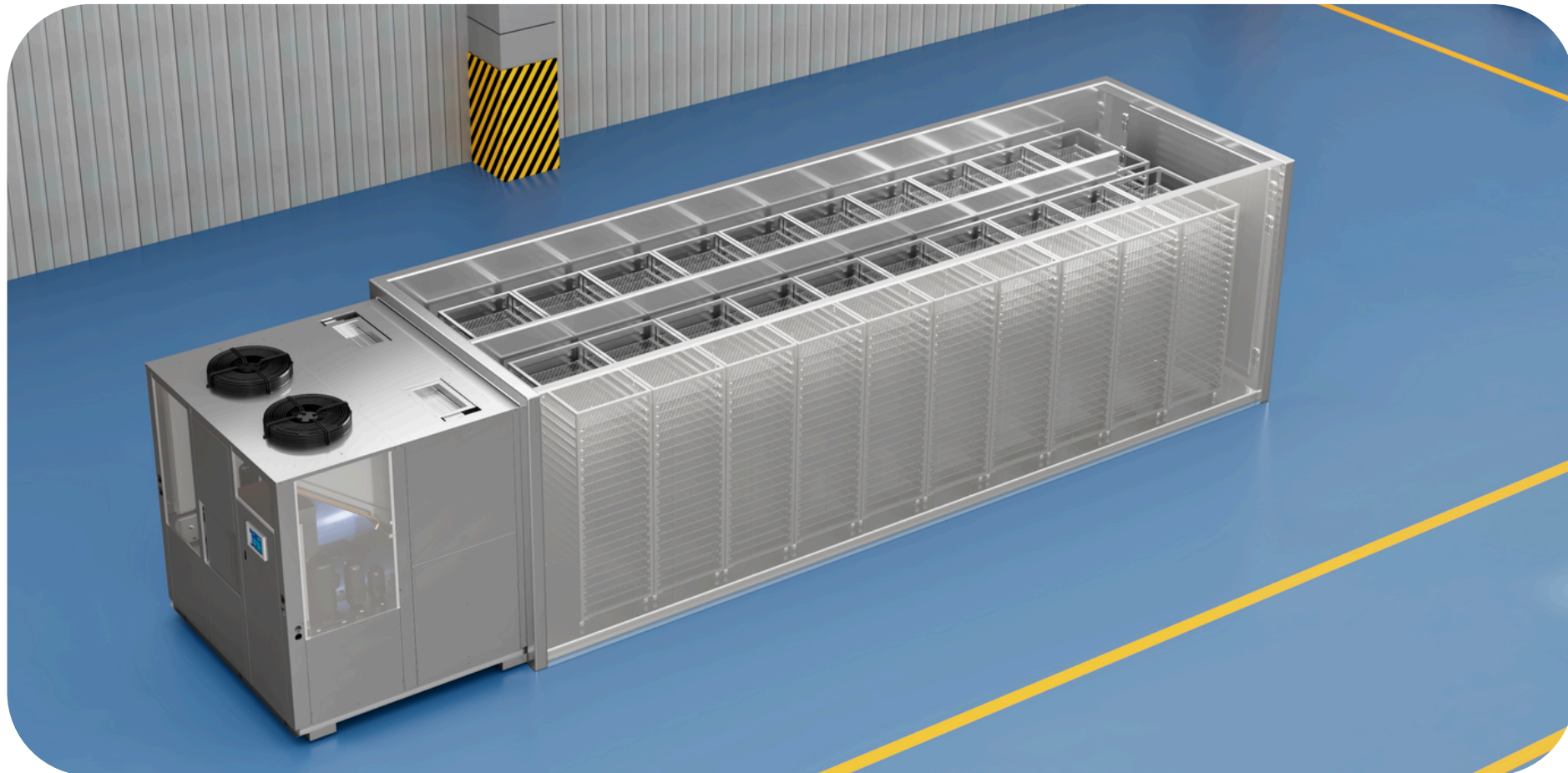
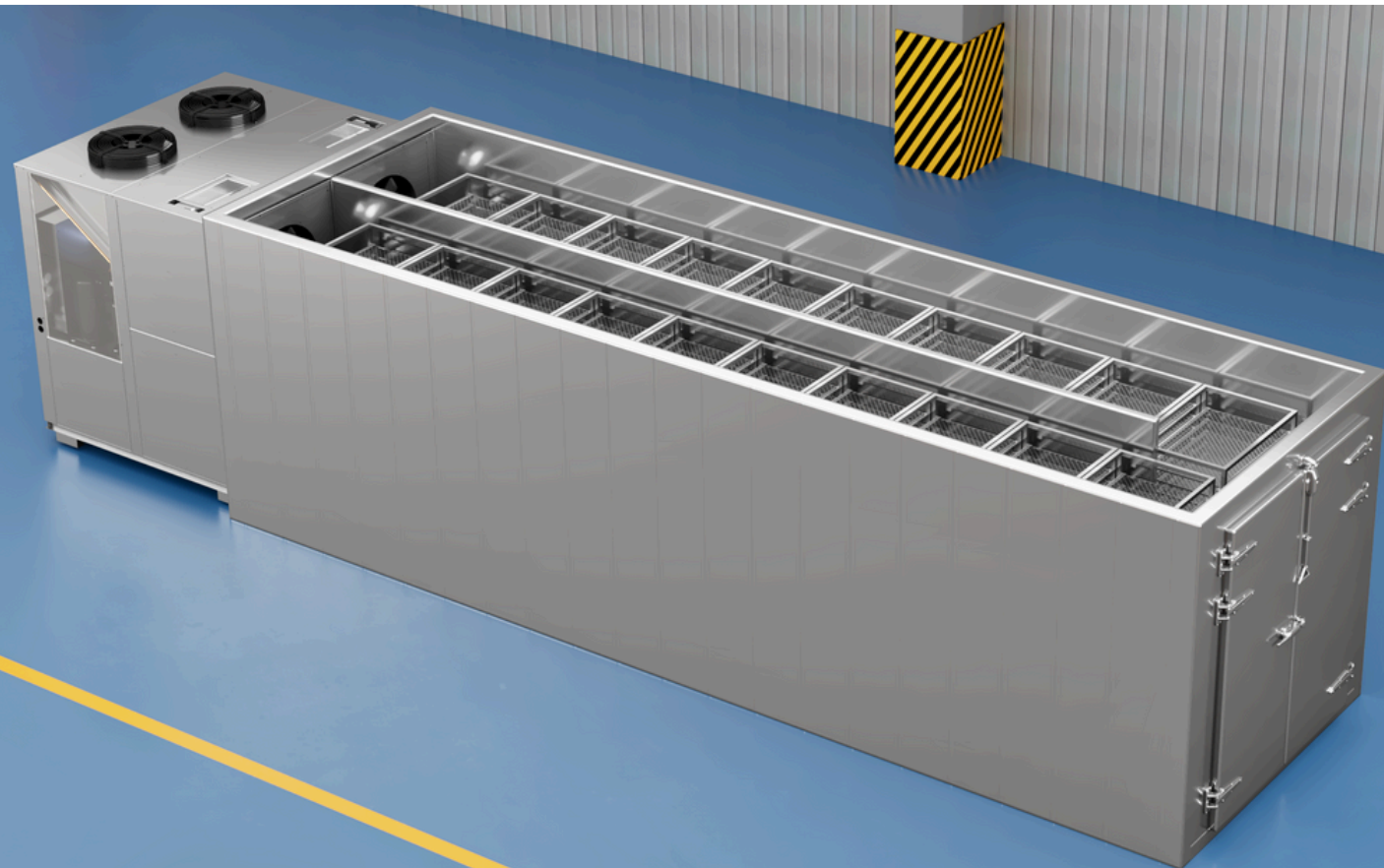
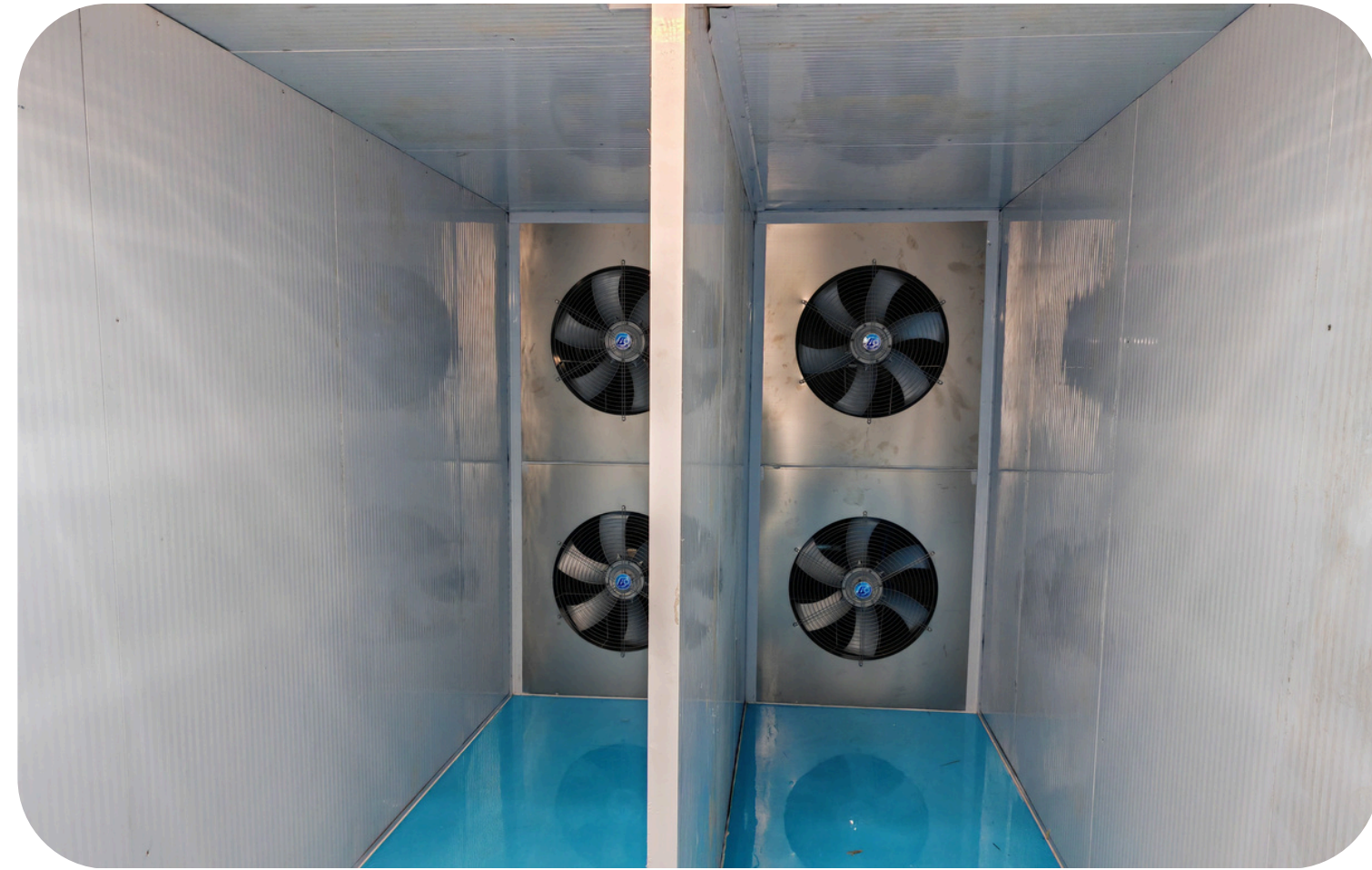
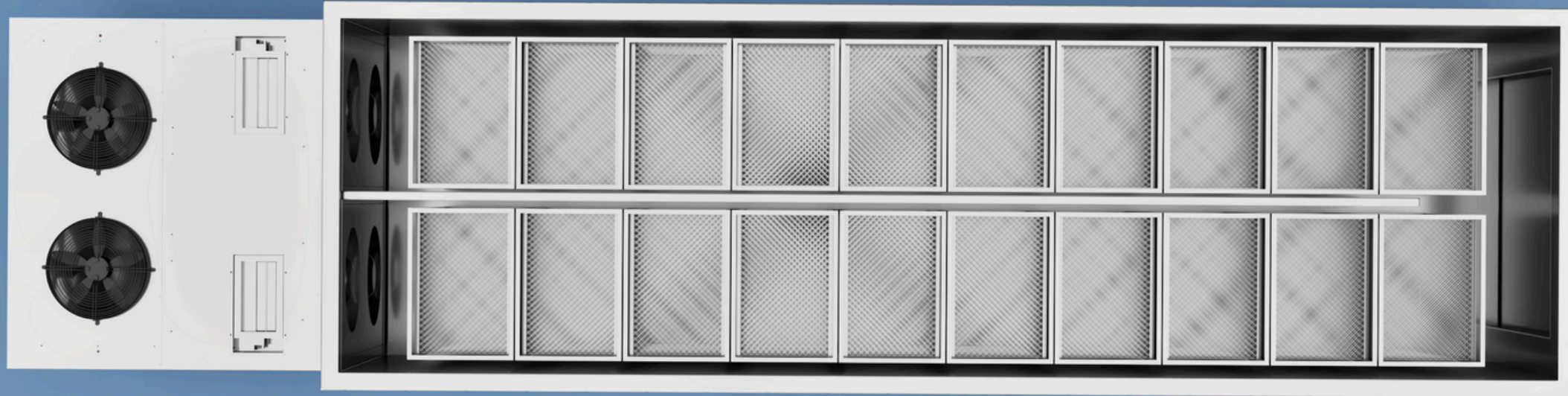


MODEL DH series

Heat Pump Dryer

Guangzhou SIBIONO Drying Equipment Co., Ltd

Installation structure diagram of DH series heat pump dryer



01

Models

Part 01:

Parameters of 4 heat pump drying machines from the DH series of the SIBIONO brand.

02

Principle

Part 02:

Working principle and drying process principle of heat pump dryers.

03

Structure

Part 03:

Components, materials, elements, control system, and remote control system of the dryer.

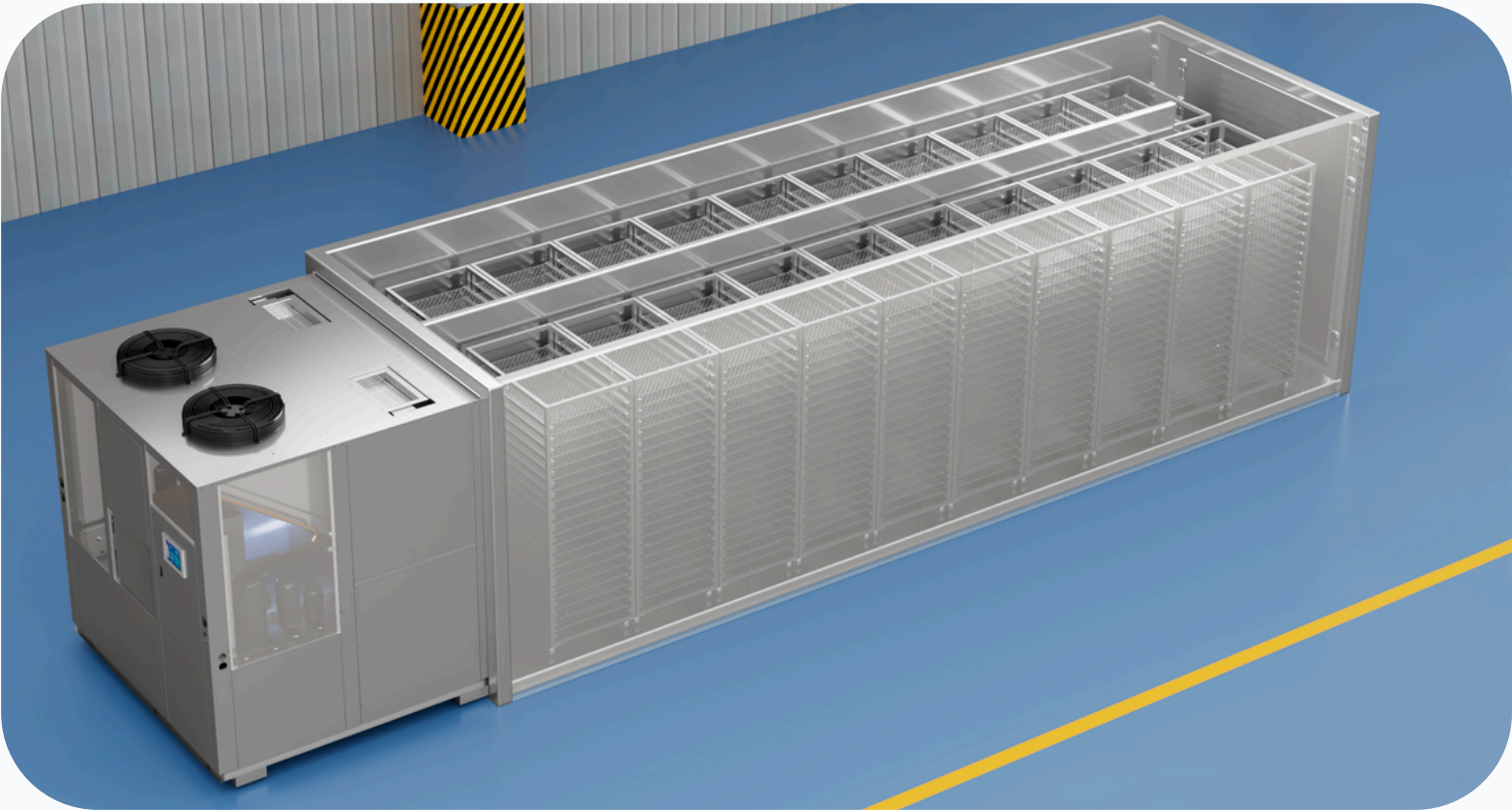
04

System

Part 04:

Functions of SIBIONO brand heat pump dryers, and compare SIBIONO brand heat pump dryers with those from other factories.

Reading Guide



Model No.	DH-K07	DH-K10	DH-K12	DH-K15
Power supply	380V-3PH 50/60HZ			
Input power(kw)	12.7	17.5	19.1	20.7
Dimension(m)	4.8*2.2*2.16	6.1*2.2*2.16	6.8*2.2*2.16	7.4*2.2*2.16
Capacity	700	1100	1300	1500
Heat pump material	SS304			
Chamber material	Surface metal SS304			
	Insulation material is polyurethane(Thk 100mm)			
Trolley material	SS304			
Qty of trolleys	8	12	14	16
Tray material	SS304			
Qty of trays	192	288	336	384
Refrigerant	R134a/4.5kg	R134a/8kg	R134a/8.4KG	R134a/9kg
Dehumidification	40L/H	55L/H	60L/H	80L/H
Hot air circulation	Regularly switch the direction of hot air circulation			
Application	Fruits / Vegetables / Pet food / Meat / Spices / Flowers / Charcoal / Fish / Shrimp / Nut / Incense / Cotton pad etc.			

First, let's take a look at the main structure

HOME

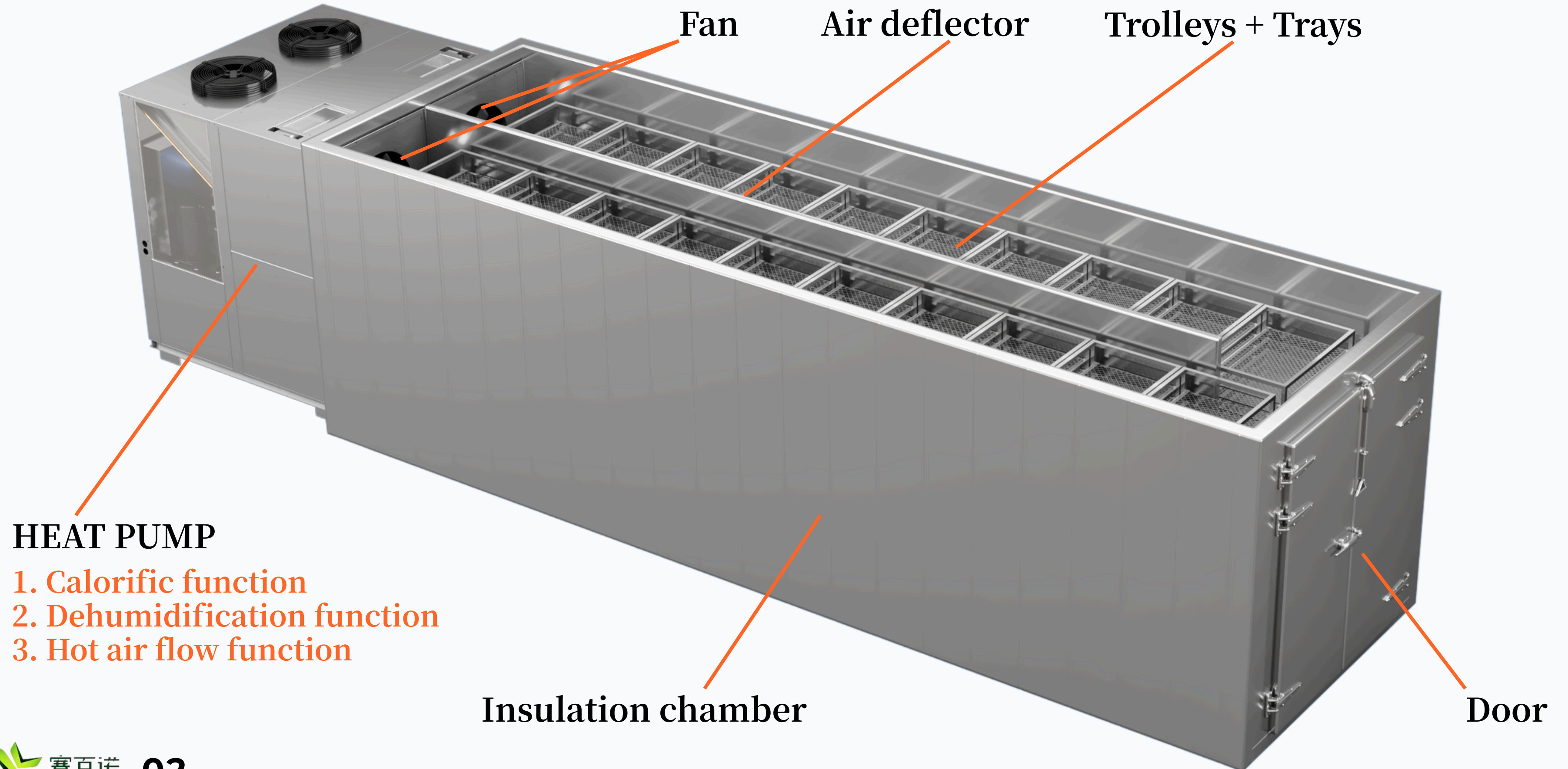
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PART 01

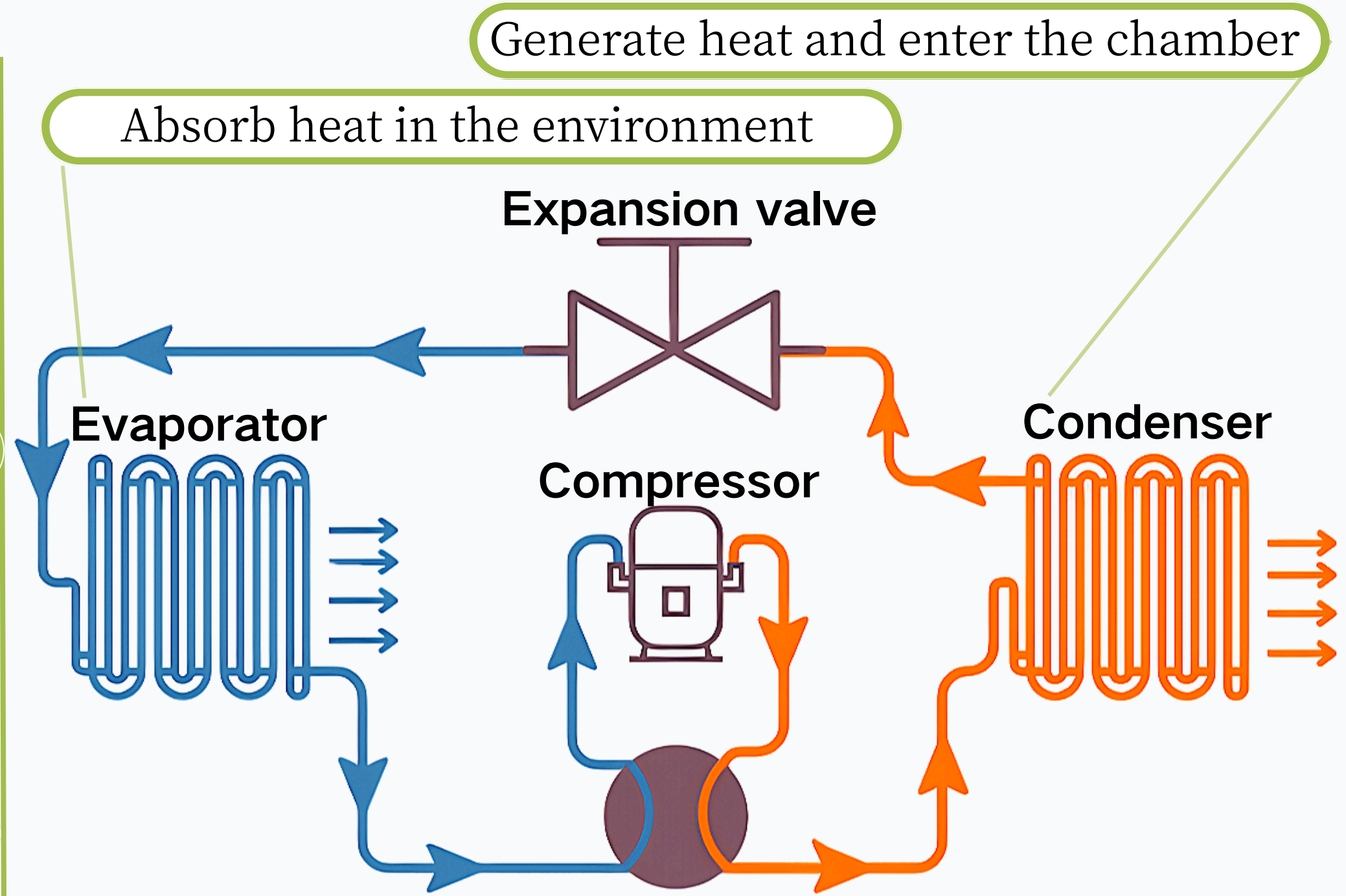
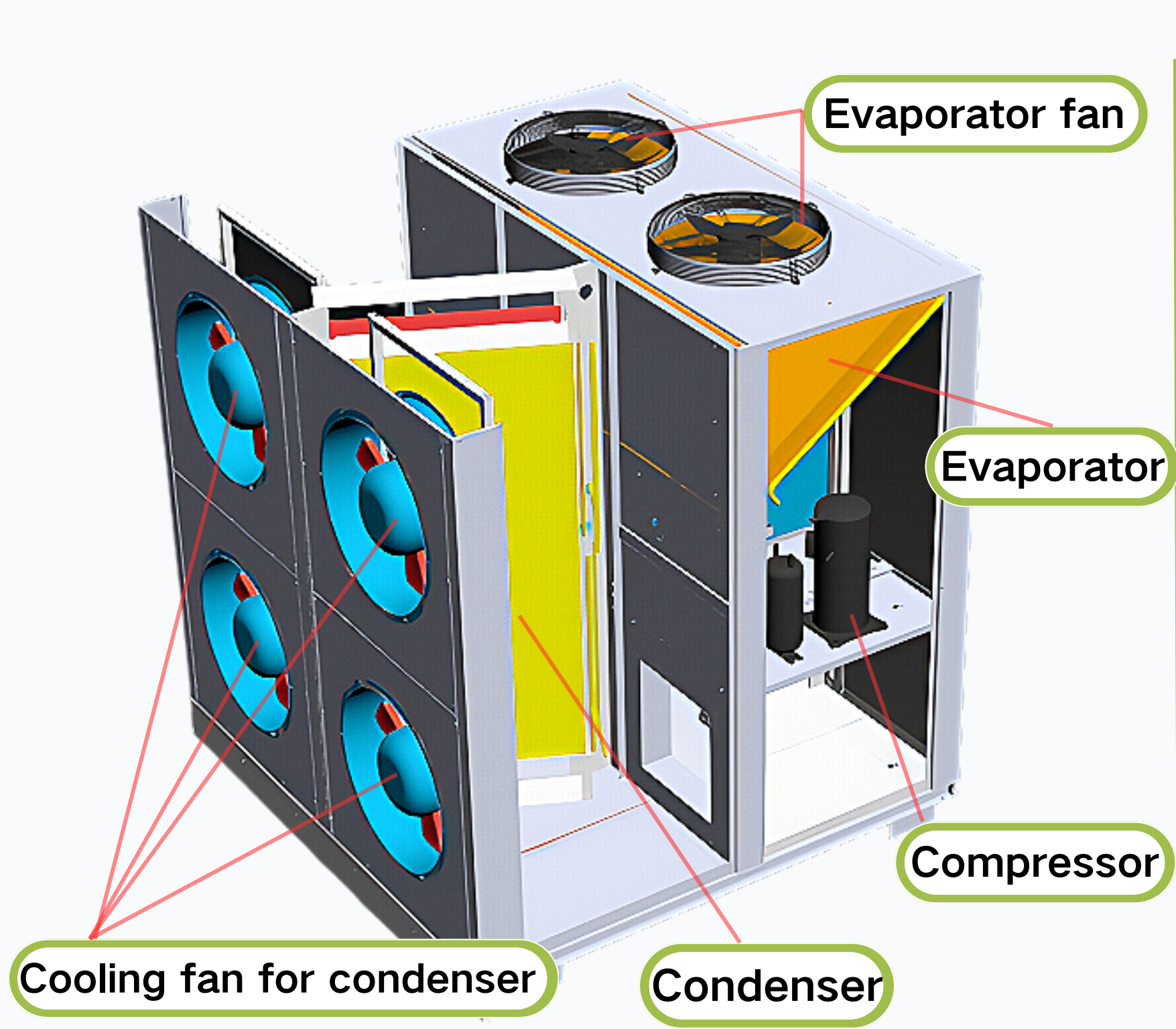
Part 02

Part 03

Part 04



Then, let's see how the heat pump heats up



The **refrigerant** absorbs heat in the **evaporator**, becomes a gaseous refrigerant, and then enters the compressor. The compressed gaseous refrigerant in the **compressor** becomes high temperature and is input into the **condenser**, **dissipating heat into the chamber**.

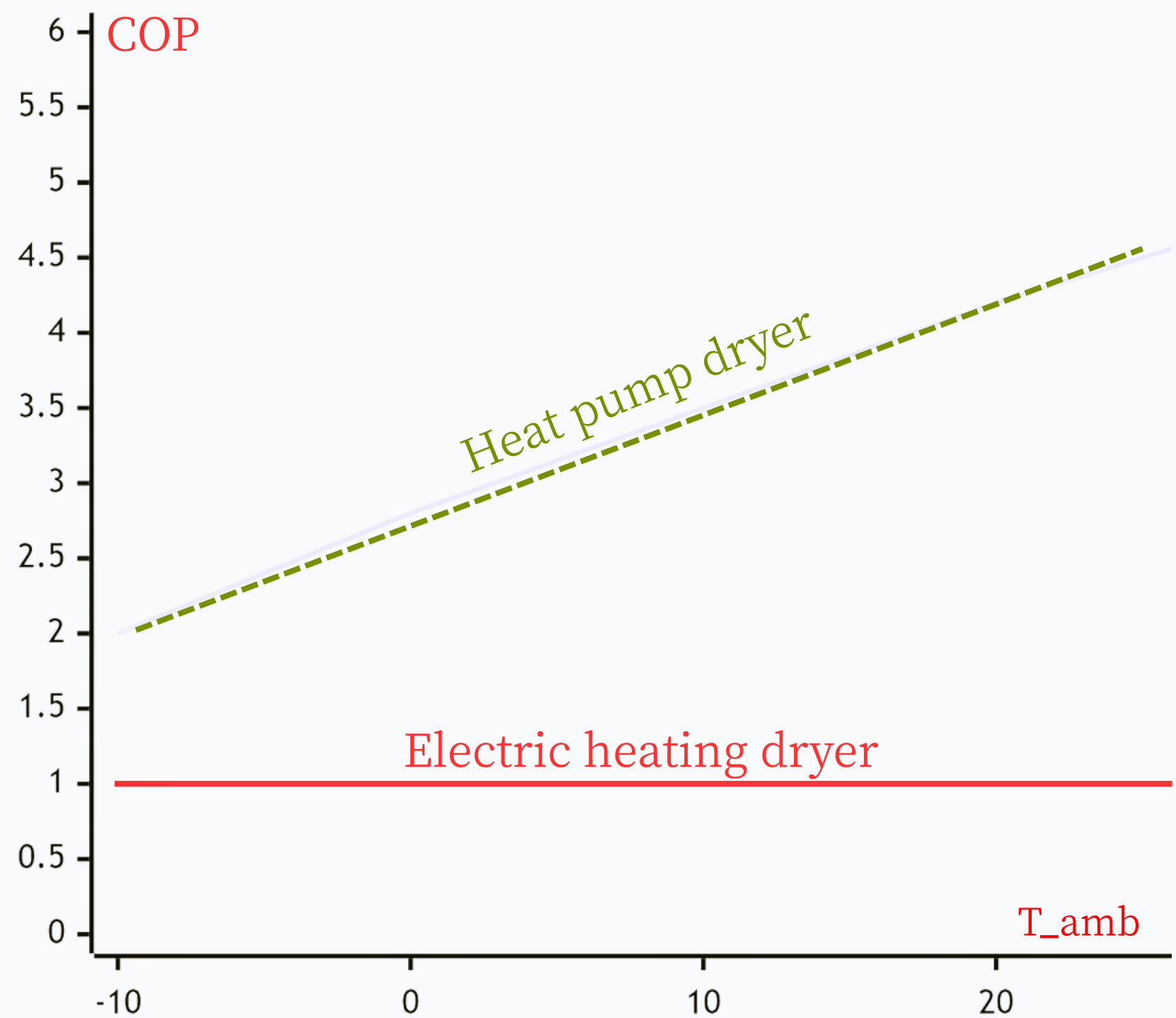
Energy Consumption for Heating 100m3 from 20°C to 75°C in 30 mins

Heating Technology	Energy Consumption	Unit
Heat Pump	0.576	kWh
Electric Heater	1.843	kWh
Natural Gas	0.203	Cubic Meters (m³)
Biomass Pellets	0.466	Kilograms (kg)

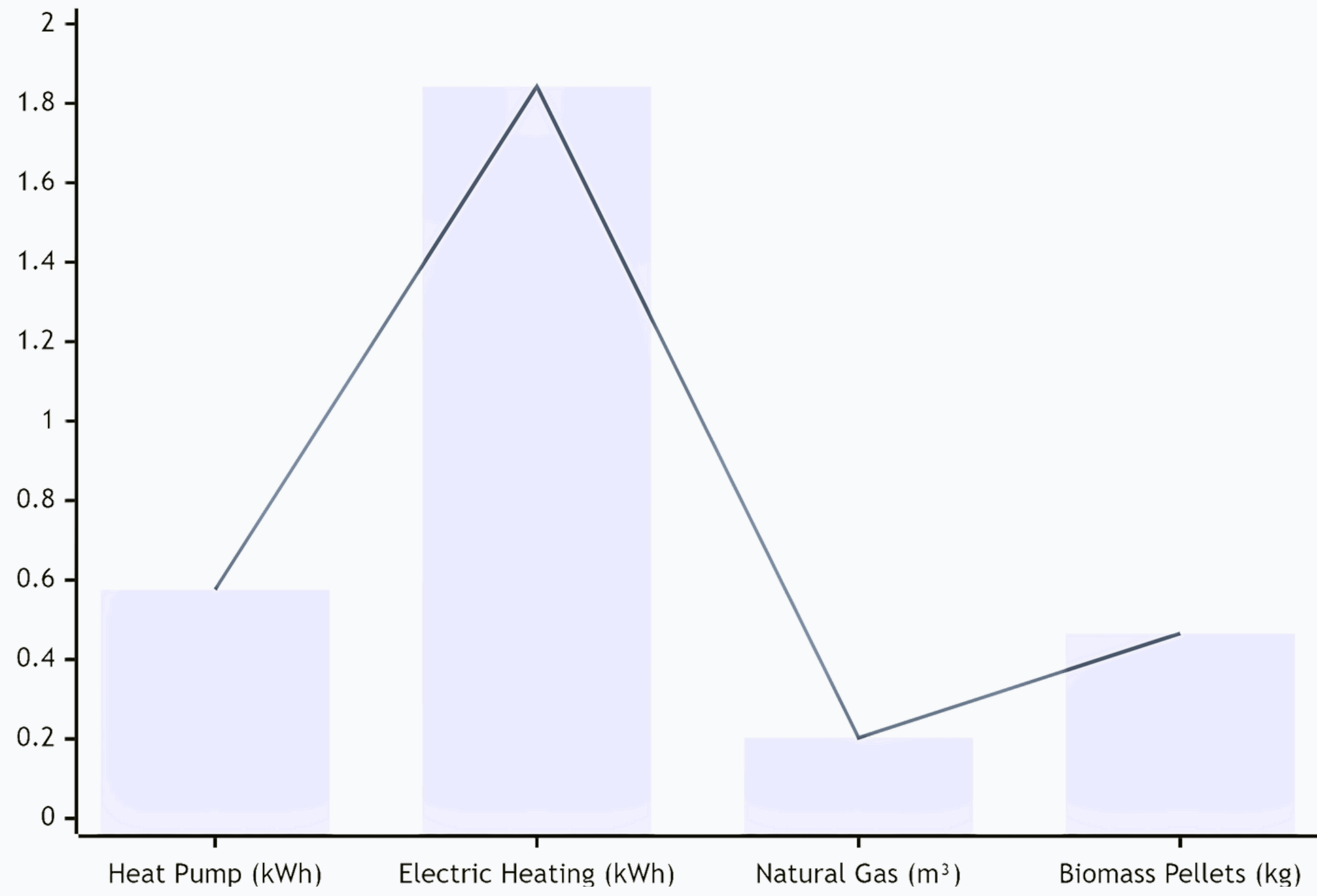
The four major advantages of heat pumps:

- 1. High heating efficiency and low drying cost;
- 2. Clean energy (electricity) that meets environmental protection requirements;
- 3. No open flame heating, high safety factor.

Energy Efficiency Ratio (COP)
Heat pump dryer VS Electric heating dryer
Condition 1 : Environmental temperature 0-20 °C



The energy cost of heating
Condition 1 : Insulated and sealed 100 cubic meter space
Condition 2 : 20 °C to 75 °C within 30 minutes



Then, how does the dryer heat the material?

HOME

CONTENTS

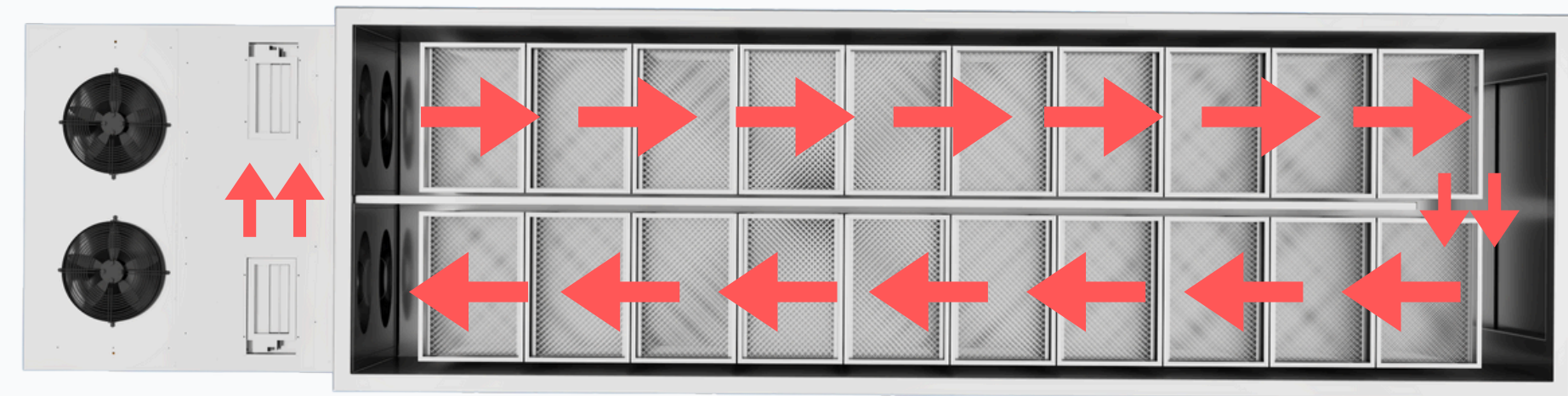
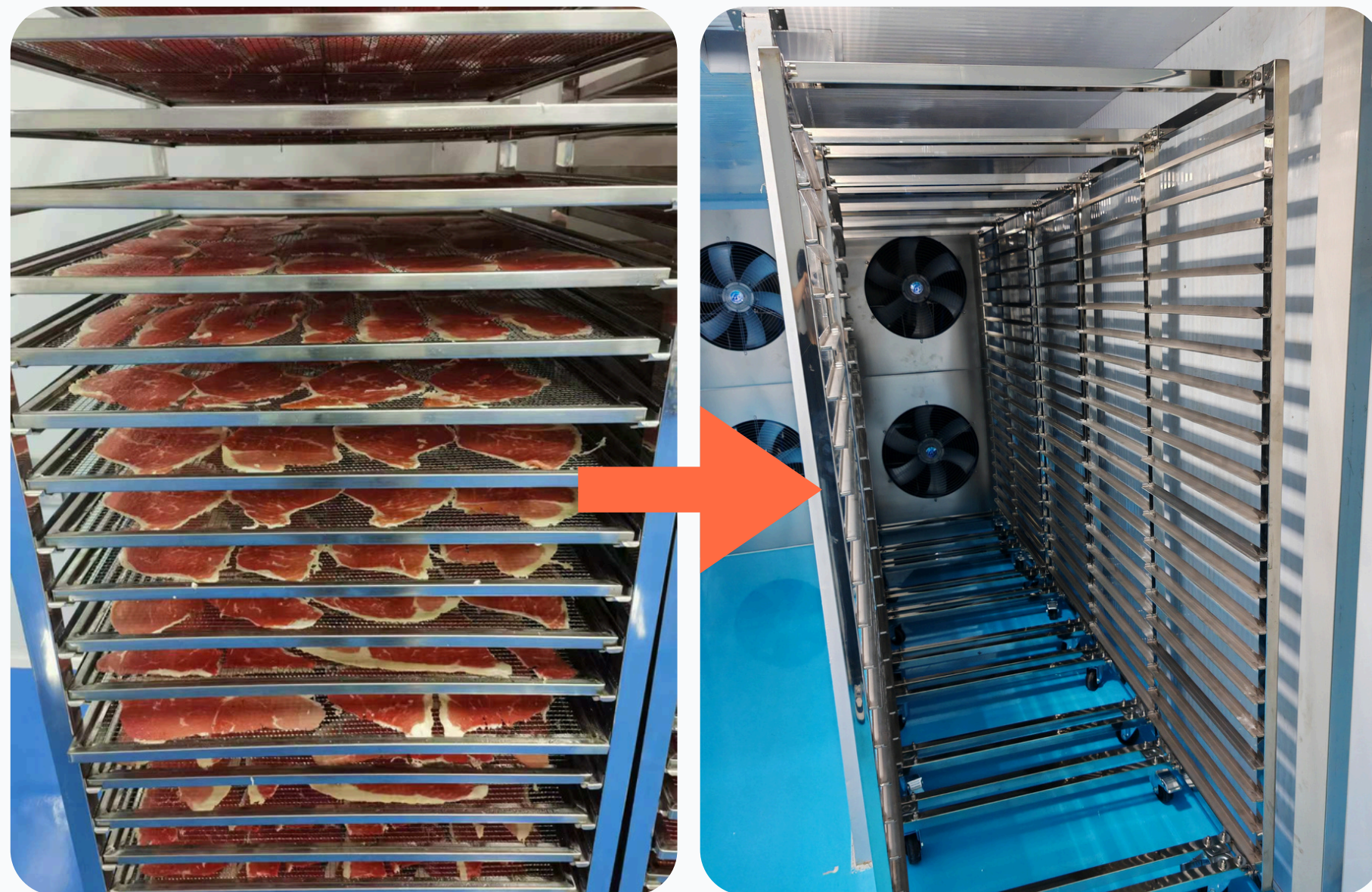
PART 01

Part 02

Part 03

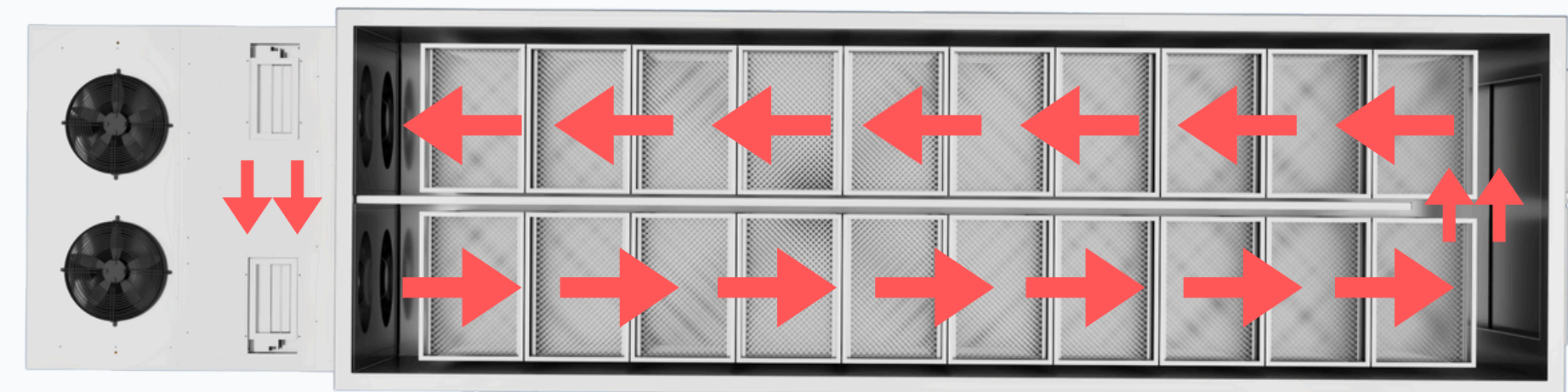
Part 04

Place the product into the dryer chamber



Hot air circulation: Clockwise state

When the **heat pump** starts to generate heat, a hot air flow is formed in the chamber through the operation of the **fan**. The products in the chamber **absorb** heat and **evaporate** **moisture** when they come into **contact** with the hot air.



Hot air circulation: Counterclockwise state

Finally, how does the dryer remove moisture?

HOME

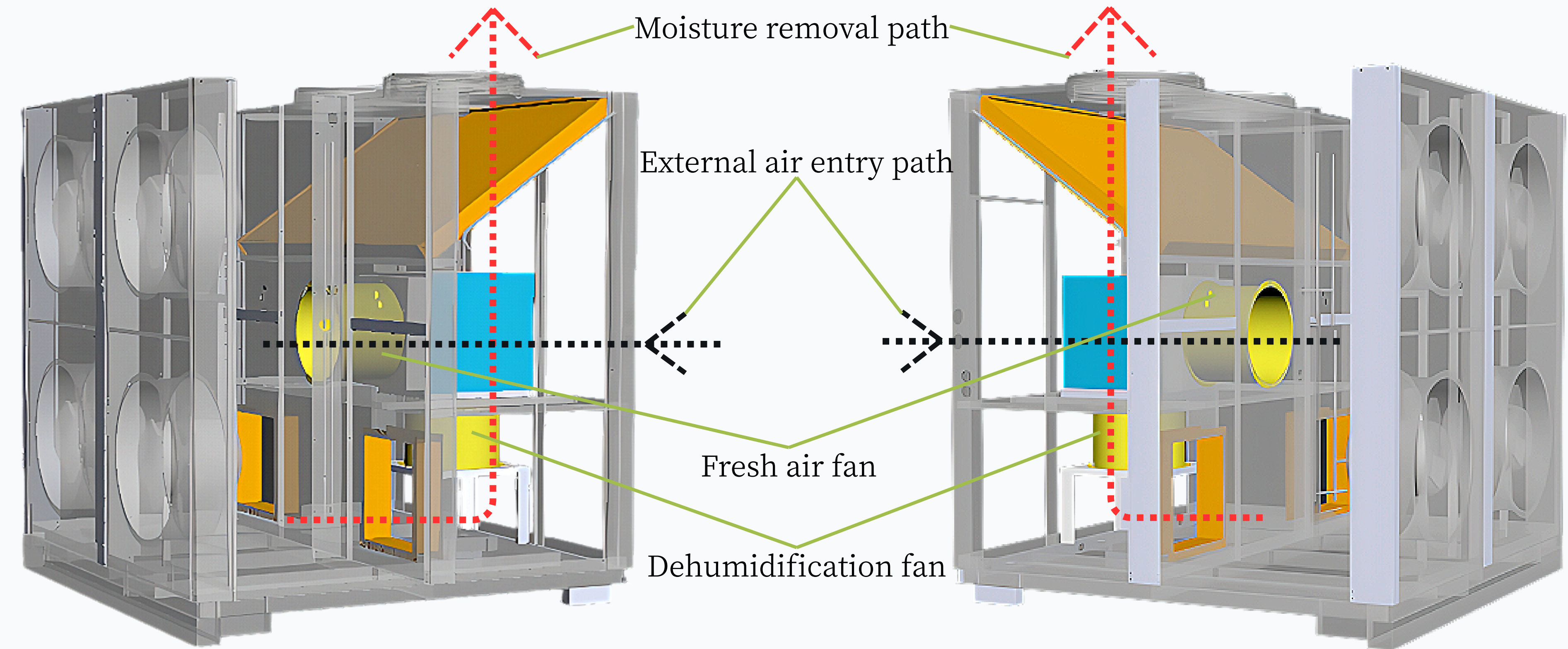
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PART 01

Part 02

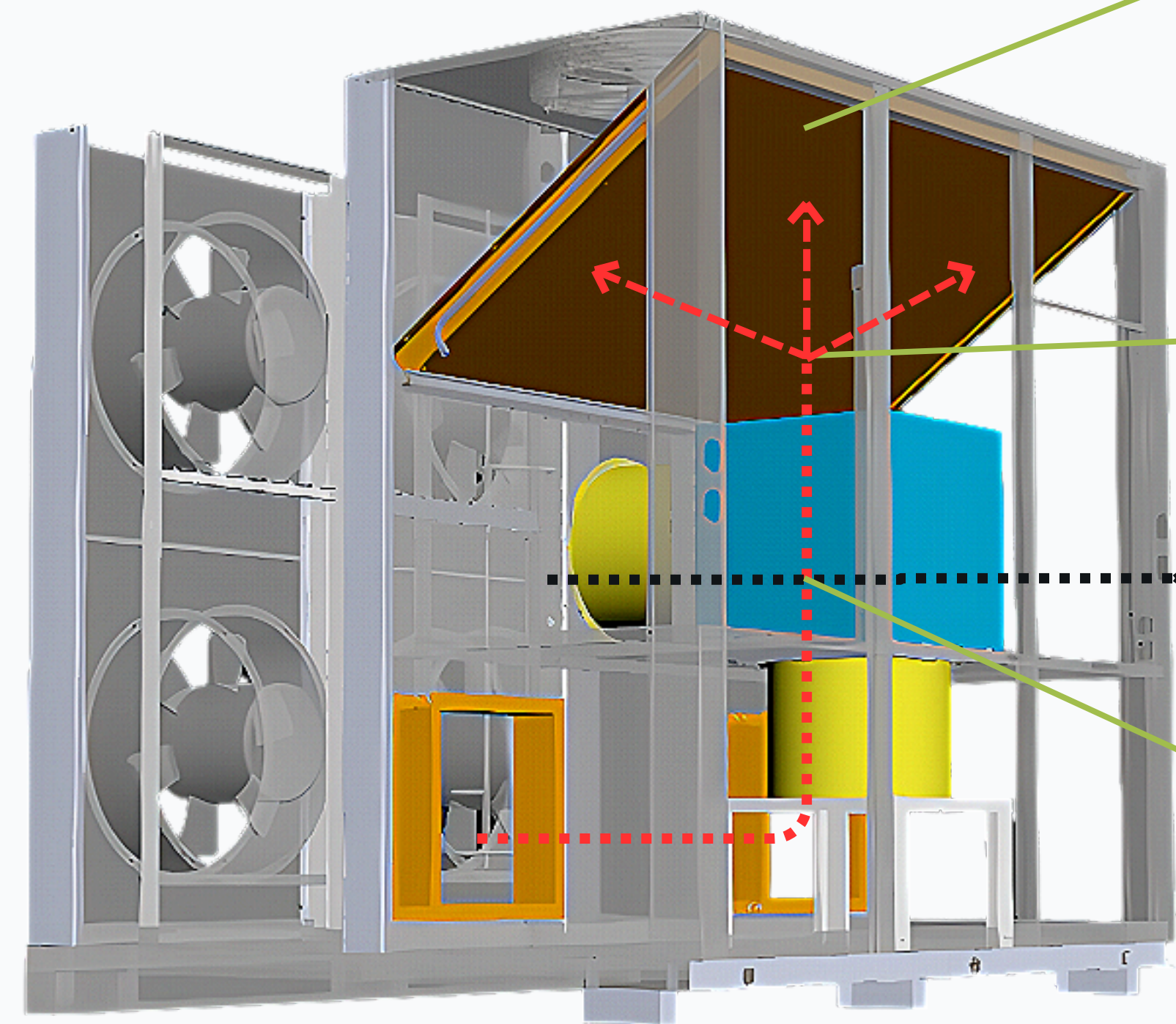
Part 03

Part 04



The dehumidification path is divided into two paths:

- ① **Clockwise delivery of hot air**: Open the dehumidification outlet in the corresponding return air area;
- ② **Transport hot air counterclockwise**: open the dehumidification outlet in the corresponding return air area;



Heat recovery: When the evaporator encounters high temperatures, the refrigerant inside the evaporator will quickly absorb heat and vaporize, thereby improving heating efficiency and energy efficiency ratio.

When the water vapor of the product is discharged outward, it will be accompanied by a **large amount of heat**. This heat will be used for heat recovery (Output to the surface of the evaporator).

Fresh air passing through the heat source area, **preheating mechanism for fresh air**

During the dehumidification process, fresh air and high-temperature steam will cross **contact** once in the **heat recovery device** to achieve two purposes:

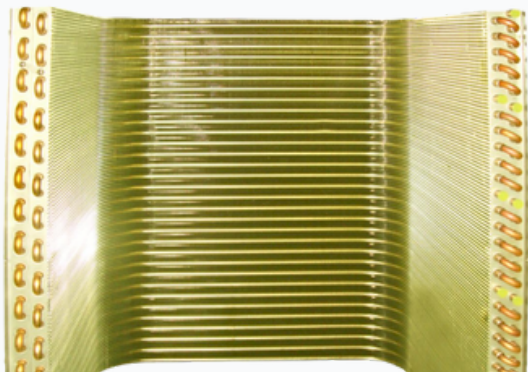
1. New air preheating mechanism and improve the temperature stability of the dryer;
2. Reduce the humidity of fresh air entering the chamber and minimize fluctuations in humidity in the dryer;

Firstly, the structure of the heat pump dryer!

Heat Pump Dryer



Components of a dryer



Evaporator and condenser
(Nano anti-corrosion)



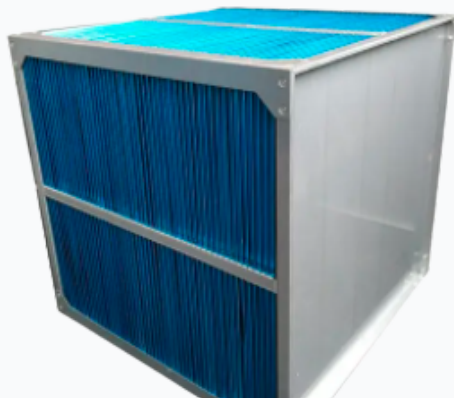
Compressor
(Emerson / Copeland)



Circulating fan
(SIBIONO)



Dehumidification fan
(SIBIONO)



Heat recovery device
(SIBIONO)



Temper & humi probe
(SIBIONO)



PLC control
(SIBIONO)

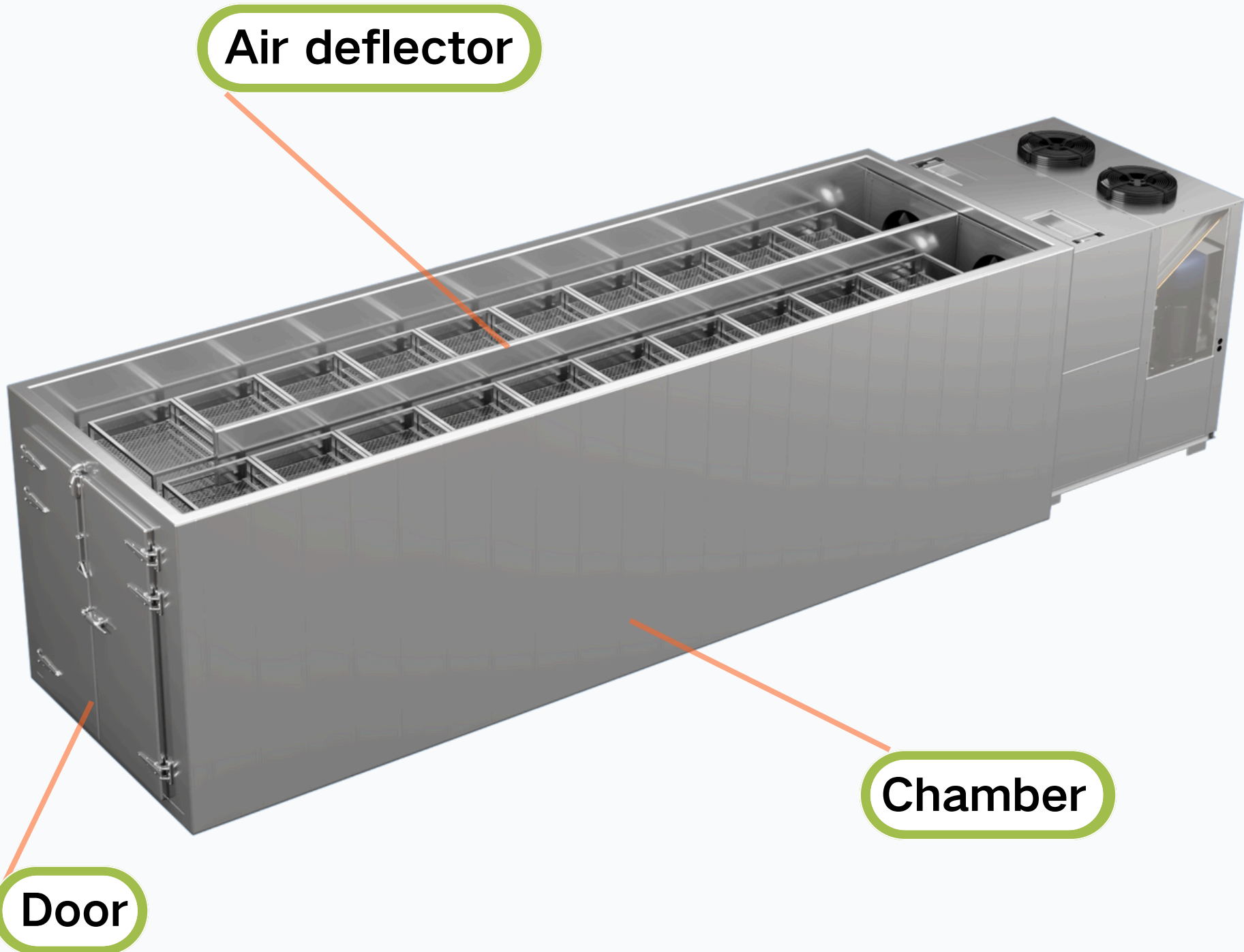
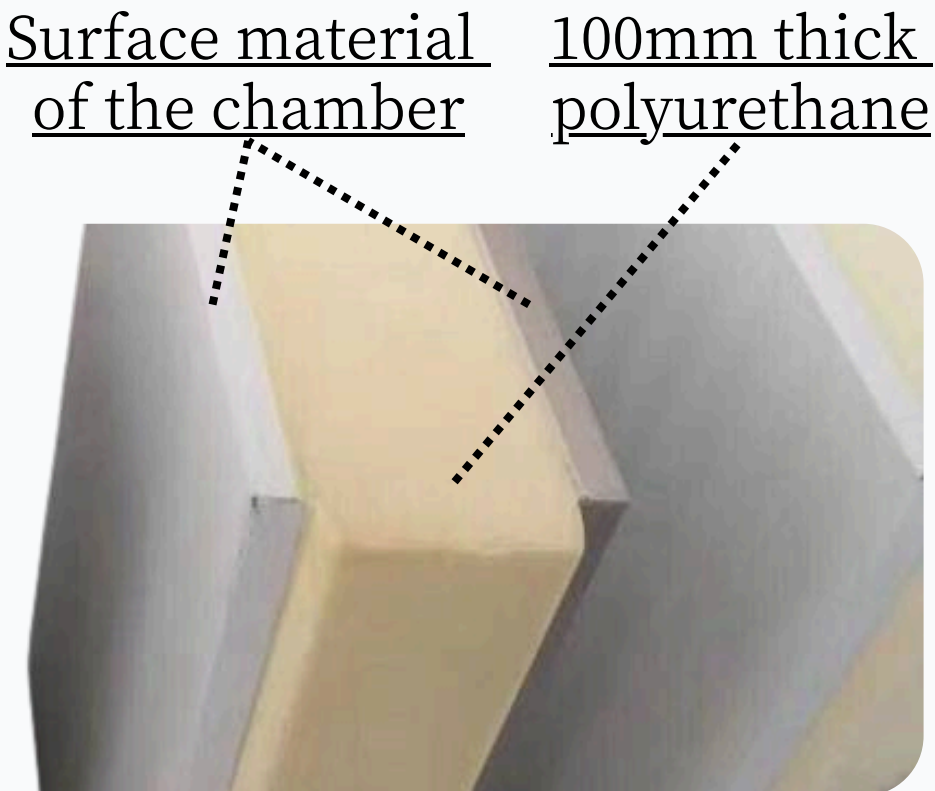


KM & TOL
(Schneider)



Expansion valve
(SANHUA)

Then, the structure of the chamber!

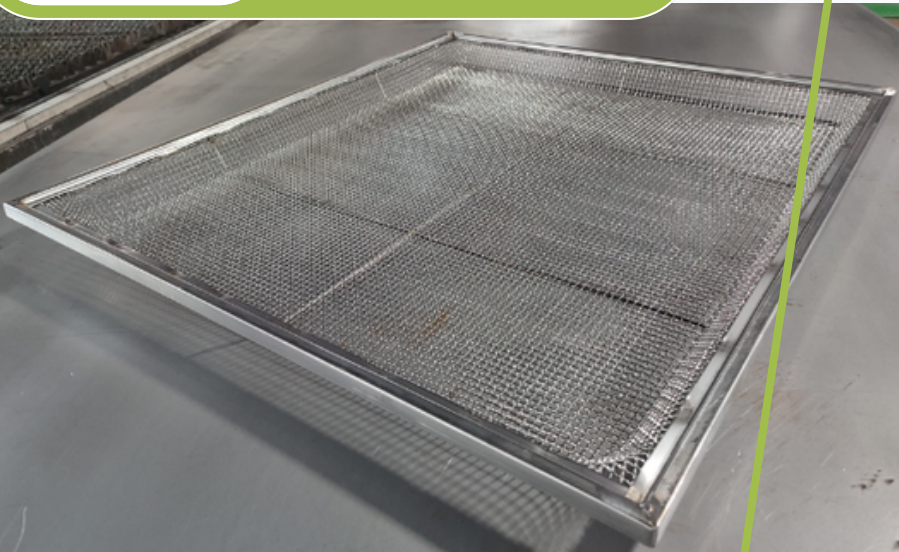


Using **100MM thick polyurethane insulation material** to construct the chamber of the dryer, the product can be dried in a sealed and insulated environment, achieving the goals of energy conservation and efficiency.

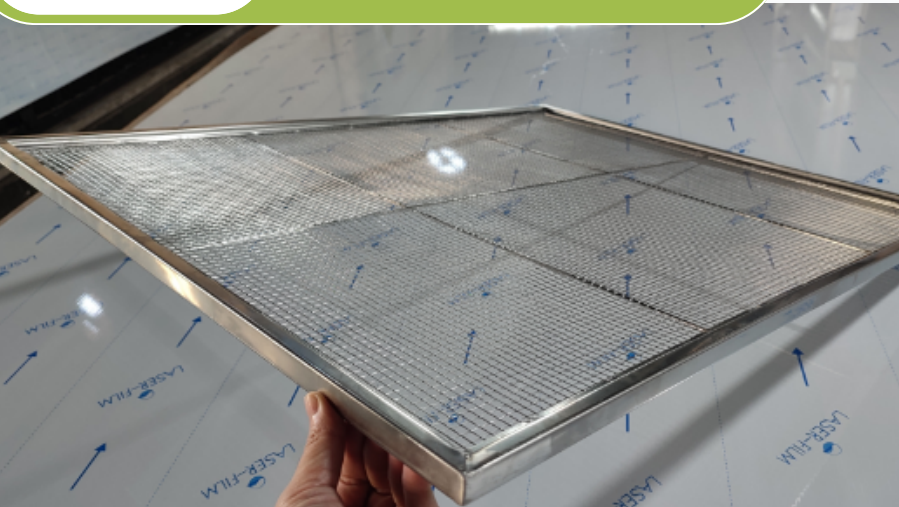
Next is the display of trolley and tray!

Material: SUS 304

Tray A 80*60*5cm



Tray B 80*60*1.5cm



Trolley 87*61*190cm



Pineapple



Tangerine



Lemon



Mango



Jerky



Loading materials

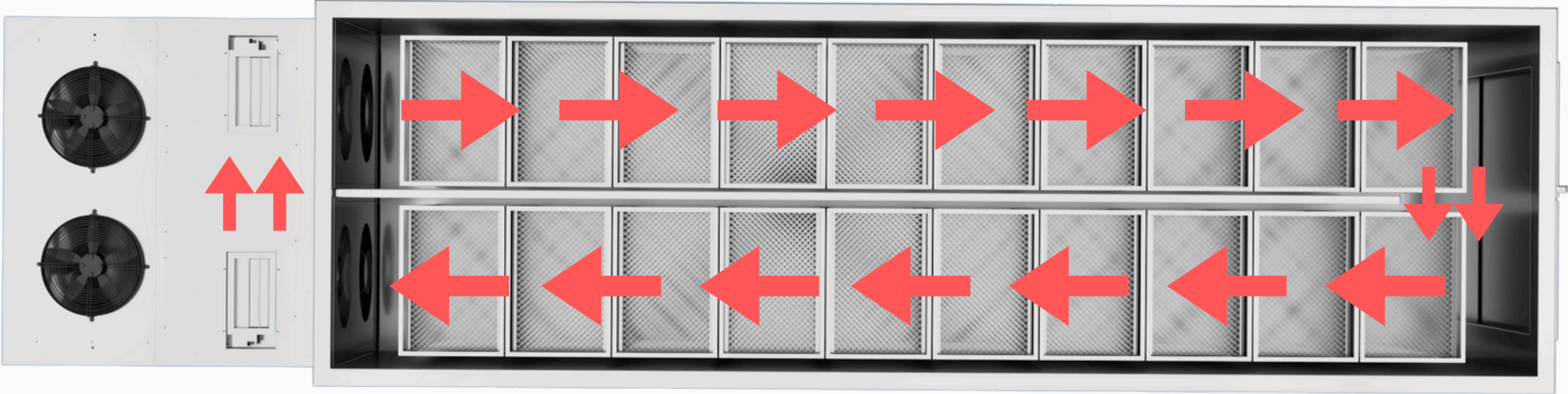


Loading materials

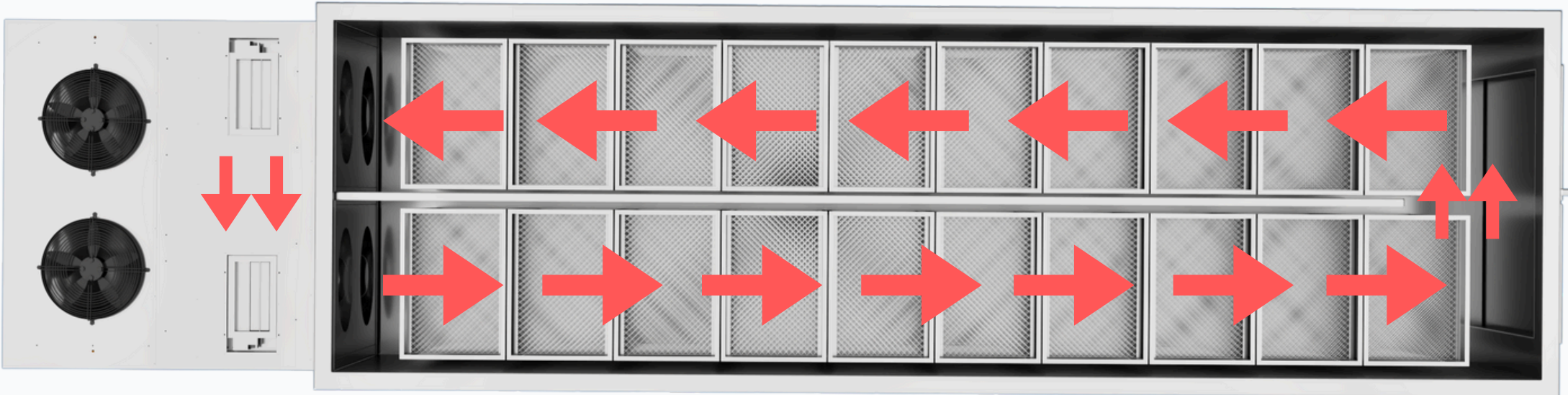


New hot air system: timed direction change!
Products absorbs heat more evenly

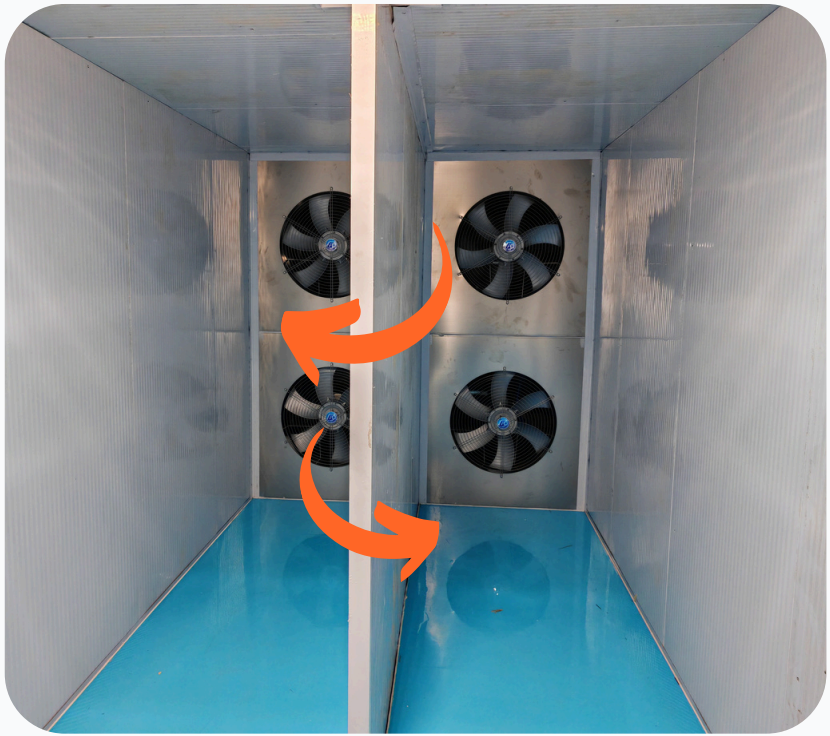
Hot air circulation: Clockwise state



Hot air circulation: Counterclockwise state



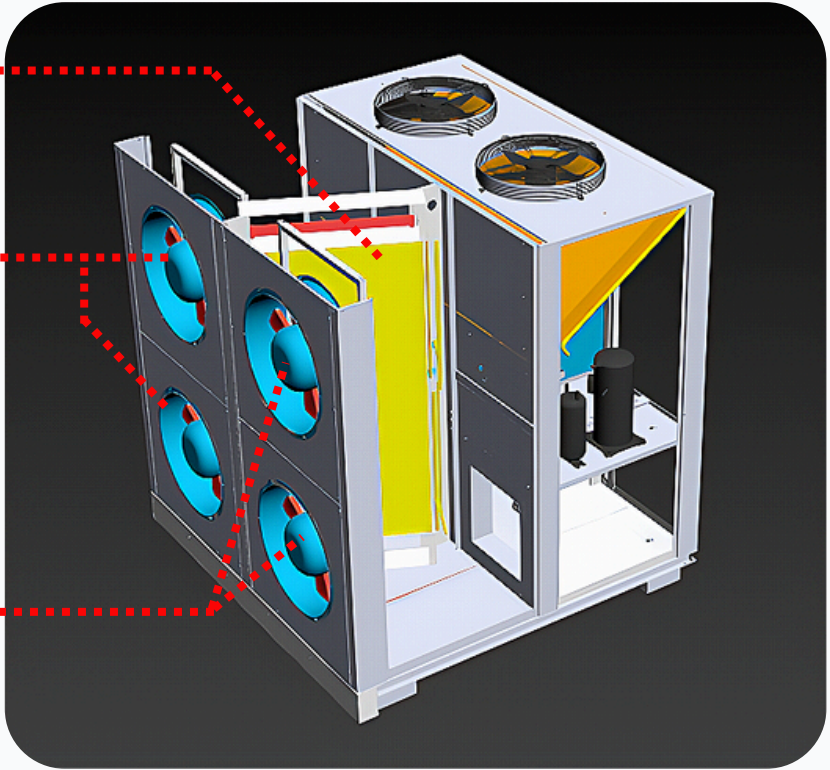
- 1. Automatic and timed switching of hot air output direction;
- 2. Bidirectional heat output reduces indoor temperature difference;
- 3. **Left** fan delivers hot air, while the **right** fan sucks back the hot air;
- 4. **Right** fan delivers hot air, while the **left** fan sucks back the hot air.



Heat pump radiator

Fan in the left area

Fan in the right area



Firstly, take a look at the control screen!

Run time statistics

Chamber temperature

Chamber humidity

Drying machine mode

Running state

Timed function status

Evaporator fan on/off

Dehumidification fan on/off

Circulation Fan on/off

assisted heating on/off

SIBIONO HEAT PUMP DRYER

Date2025-08-12

Time10:17:30

Room Temp33.1℃

Room RH66.6%

Set Temp: 45.0℃

Set RH: 50.0%

1 SC/ 10 SC

use 0 : 0

remain 1 : 30

All. 0 : 0

Mode: DeHm+Mois

Status: Mac.OFF

Timer On: Disable

Env. 33.0℃

1#CM: OFF

2#CM: OFF

Heat:OFF

Err.

Function button area

Heat Pump on/off

System setting

Dryer status

User Param setting

Fault information

component status bar

Compressor on/off

Secondly, the drying process setting table

[HOME](#)[CONTENTS](#)[Part 01](#)[Part 02](#)[PART 03](#)[Part 04](#)

The operation settings of SIBIONO heat pump dryer support up to 10 stages of operation data. After you fill in the parameters, the machine will automatically run according to these parameters:

- A. Set the running time for each stage;
- B. Temperature can be set for each stage;
- C. Humidity can be set for each stage;
- D. Dehumidification frequency for each stage;

Regarding the drying parameters, different products have different parameters. We can provide corresponding drying parameter documents for each product to help you use the machine smoothly.

[Mango Drying Datas](#)[Lemon Drying Datas](#)[Apricot Drying Datas](#)[Jerky Drying Datas](#)[Pineapple Drying Datas](#)

.....

[User Param setting](#)

Section	Temp Unit:℃	Humi RH%	Drying time set		Wet Emission time set		Work Mode	Wet Emission mode	
			Hour	Minute	ON	OFF			
1# Section	45.0	50.0	1	30	5	4	DeHm+Mois	Humi	
2# Section	45.0	50.0	1	30	5	4	DeHm+Mois	Humi	
3# Section	45.0	50.0	1	30	5	4	DeHm+Mois	Humi	
4# Section	45.0	50.0	1	30	5	4	DeHm+Mois	Humi	
5# Section	45.0	50.0	1	30	5	4	DeHm+Mois	Humi	
6# Section	45.0	50.0	1	30	5	4	DeHm+Mois	Humi	
7# Section	45.0	50.0	1	30	5	4	DeHm+Mois	Humi	
8# Section	45.0	50.0	1	30	5	4	DeHm+Mois	Humi	
9# Section	45.0	50.0	1	30	5	4	DeHm+Mois	Humi	
10# Section	45.0	50.0	1	30	5	4	DeHm+Mois	Humi	

New feature, mobile online control APP



SIBIONO dryers **all support online control**, allowing real-time monitoring of data, fault notifications, and changes to the operation data of the dryer through mobile phones.

PS: Default support for Chinese and English, **customizable language**.

► Case sharing ◀

9-year-old brand SIBIONO dryer - Rich product experience



● Please contact us for drying case ●

Fruits

Mango

Fig

Pineapple



Jerkys

Beef

Breasts

Duck breast meat



Vegetables

Edible fungi

Chili

Sweet potato



Seafoods

Small fish

Big Fish

Shrimp



Noodles

Noodle

Straight noodles

Rice noodles



Guangzhou SIBIONO Drying Equipment Co., Ltd

Contact Us

9-year-old brand SIBIONO dryer - Rich product experience



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Guangzhou SIBIONO Drying Equipment Co., Ltd