

Content

# OPERATION MANUAL



**HUAXIAN**

[www.huaxianfresh.com](http://www.huaxianfresh.com)

# 1 Introduction

## 1.1 General description

A vacuum cooling machine works by rapid evaporation of water from certain vegetables or other products under very low atmospheric pressures inside a vacuum chamber. Energy in the form of heat is required to change water from a liquid to a vapor state as in the boiling of water. At reduced atmospheric pressure in a vacuum chamber water boils at a lower than normal temperature.

Vacuum cooling machines are widely used in the field of produce preservation, food processing, chemical industry and research, etc.

## 1.2 General machine specification

Production date:	Dec.,2021
Model:	HXV-4P
Serial number:	HX211102N18
Processing capacity:	2000~2500/CYCLE
Produce to be cooled:	Leafy vegetables

This manual and a log book are provided with the machine. Please make sure that you always read it before any operation.

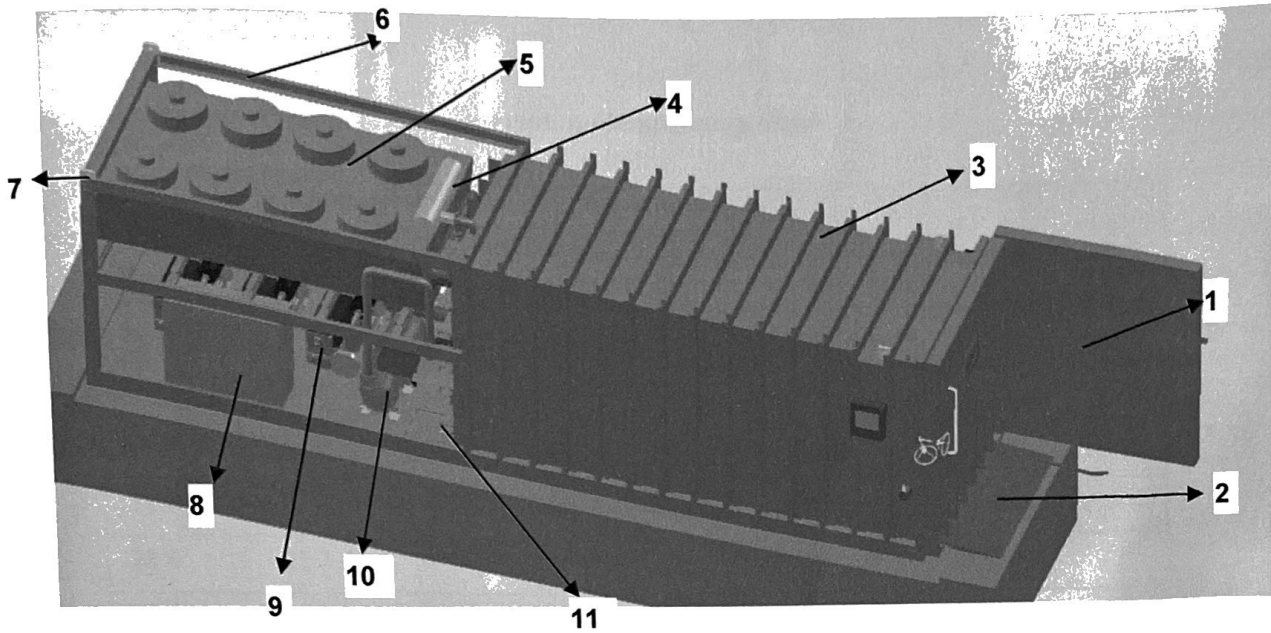
## 1.3 Production & service information

The HUAXIAN Vacuum Coolers are produced at HUAXIAN China according to specifications defined by HUAXIAN.

Contact details of HUAXIAN you find in the header of the manual. On the website you can find the actual data (if changed) and the details of your local service partner.

If in doubt about the safe and correcting working of the vacuum cooler, always directly contact your local service partner or HUAXIAN. Do NOT use the machine if you are not sure it can operate safely.

## 5 Description of the machine



Part No.	Part/component	Part No.	Part/component
1	Hinge door	7	Hanging spot
2	Manual ramp	8	Electricity cabinet
3	Vacuum chamber	9	Vacuum pump
4	Muffler	10	Compressor
5	Air condenser	11	Drainage valve
6	Frame		

### 6.3 Start-up & touch screen operation

Electrify the machine by connection the air switch in electricity cabinet.

The touch screen will be also electrified automatically and turned to 'start-up screen'.

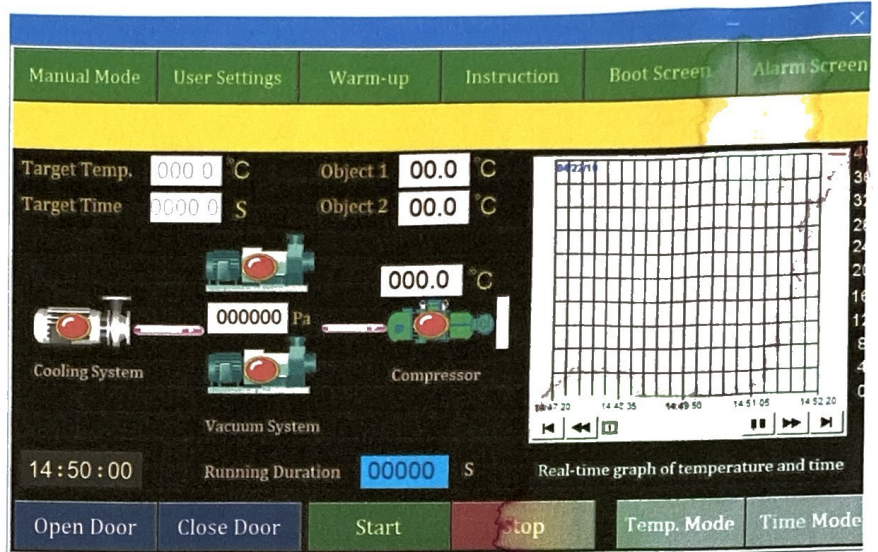
Choose language and enter into 'manual control mode' screen.

Press 'Door Left' on touch screen to open the door, and press 'Door move forward' to connect ramp to chamber door.

Load produce by forklifts. Note: the amount should achieve minimum quantity regulated in parameter table.

Press 'Door retreat' to disconnect ramp from chamber door.

Press 'Door right' to close the door to ultimate position.



Press 'Clamping' on touch screen to clamp the door to chamber by air cylinders.

Press 'Cooling pump' to start the condenser.

After 5 seconds, press 'vacuum pump 1' to start vacuum pump 1.

After 2 seconds, press 'vacuum pump 2' to start vacuum pump 2.

After 2 seconds, press 'Compressor' to start compressor.

Till now, the starting work is finished and the vacuum pumps and compressor are working. Pressure and temperature change as following table shows.

Content \ Item	Inside pressure	Object temperature	Cold media temperature
Time			
0-5 minutes	↘	→	→
5-10 minutes	↘	↘	↘
After 10 minutes	→	↘	Fluctuation

## 6.4 Start-up & touch screen in automatic mode

Electrify the machine by connecting the air switch in electricity cabinet.

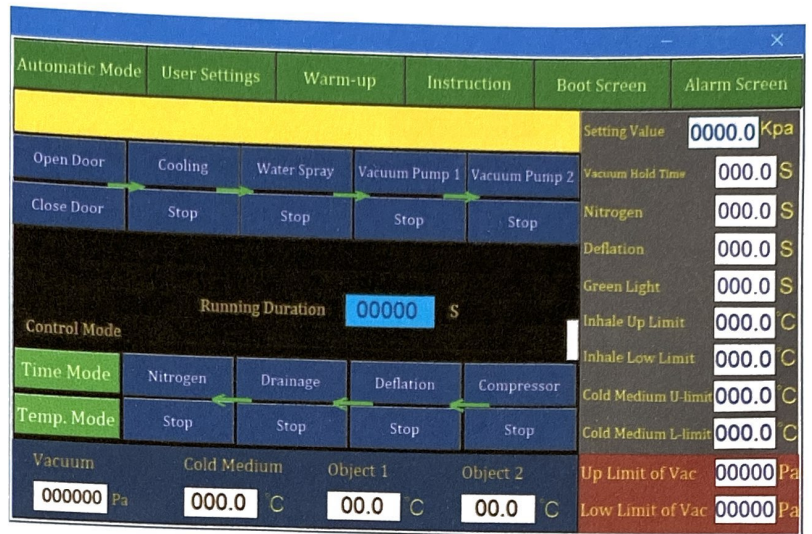
The touch screen will be also electrified automatically and turned to 'start-up screen'.

Choose language and enter into 'manual control mode' screen.

Press 'Automatic screen' to turn to Automatic screen

Press 'Door Left' on touch screen to open the door, and press 'Door move forward' to connect ramp to chamber door.

Load produce by forklifts. Note: the amount should achieve minimum quantity regulated in parameter table.



Press 'Door retreat' to disconnect ramp from chamber door.

Press 'Door right' to close the door to ultimate position.

Press 'Start' to automatically start the cooling processing by orderly running cooling pump, vacuum pump 1, vacuum pump 2, compressor.

## 6.5 Normal stop & subsequent operation

When object temperature reaches set value, the machine will stop automatically including vacuum pumps and compressor.

After machine stop, press 'Deflation' to recover the pressure of chamber. Deflation depends on air flow hole on chamber, normally within 20 seconds.

After deflation, press 'Door left' to open the door to ultimate position. At the same time, press 'Drainage' to drain condensed water.

Press 'Door move forward' to connect ramp to chamber door.

Load produce out of chamber by forklifts.

## 9 Troubleshooting

Failure symptom	Main reason	Elimination method
No reduction of goods temperature	a.Vacuum degree not low enough. b.Temperature controller broken. c.Temperature control probe broken. d.Refrigeration unit broken.	a.Chamber door not close well,adjust door gap. b.Fix or replace. c.Fix or replace. d.Fix refrigeration unit
Compressor not start	a.Power cut,low pressure or circuit failure. b.Start-up elements not contact well. c.Temperature controler not work. d.Pressure controller maladjustment or failure.	a.Check circuit b.Fix or replace. c.Fix or replace. d.Fix or replace.
Sudden stop during running	a.Low inhaling pressure,low pressure relay act and cut power. b.High discharge pressure,high pressure relay act and cut power. c.Motor overheat,heat relay act and cut power.	a.Dredge pipes if jam and supplement refrigerations. b.Check amount of cooling water(air),press high pressure reset button. c.Pressure too low,cold load too big.
Big compressor noise	a.Machine base loose. b.Fluid attack. c.Compression component worn	a.Tight b.Switch smaller fluid-providing valve c.Replace
Pointer of compressor pressure gage jitter	a.Air in system. b.Pointer of gage loose. c.Big opening degree of gage valve.	a.Discharg air b.Replace c.Proper adjust
Hissing from expansion valve when work	a.Lack of refrigerants. b.Fluid not over-cooling,so excessive resistance of fluid pipe.	a.Complement b.Check reason and make the fluid super-cooling
Alarm from heat relay of vacuum pump	a.Over-load on vacuum pump	a.Recover switch of heat relay. b.Fix of replace
Alarm from heat relay of cooling pump	a.Over-load on cooling water pump	a.Recover switch of heat relay. b.Replace cooling water pump
Vacuum degree couldn't lowered	a.Vacuum pump not work. b.No good seal. c.Viscosity of vacuum machine oil lower.	a.Cut off main power of vacuum pump. b.Check gas sealing. c.Replace vacuum machine oil.
Alarm from heat relay of refrigeration	a.Over-load on water pump of refrigerants	a.Recover switch of heat relay. b.Replace water pump of refrigerants
Refrigerants flow alarm	a.Switch of refrigerants flow broken. b.Lack of refrigerants. c.Refrigerants pump failure.	a.Replace switch of refrigerants flow. b.Complement refrigerants. c.Check refrigerants pump
Low-pressure protection alarm	a.Low-pressure protection of refrigeration unit.	a.Reset the switch of high-low pressure protection after refrigeration unit stop. b.Check whether lack of refrigerants
High-pressure protection alarm	a.High-pressure protection of refrigeration unit	a.Reset the switch of high-low pressure protection after refrigeration unit stop. b.Check whether cooling water cycle. c.Check whether lack of refrigerants

# CERTIFICATION

Product Name: Vegetables Vacuum Cooler

Model No.: HXV-4P

Production Standards: Factory standard, European Union's CE standard

Inspection Date: 2021/12/10

Test Result:

1. The appearance of the machine is intact and the parts are not damaged.
2. The machine is working normally in all parameters.

This product is qualified according to the delivery inspection.

Stamp:

Date:



**DONGGUAN HUAXIAN LTD.**