

INSTRUCTIONS

Refrigerant recovery machine (includingR32,1234YF)



CHARACTER • PROTECT • DILIGENTLY

DIRECTORY

1. Safety Instructions	1
2. Operation specifications	3
3. Technical parameters	5
4. Structure breakdown diagram	6
5. Operation panel introduction	7
6. Refrigerant (gas liquid)	7
7. The system self-cleaning mode operation	9
8. The system push-pull mode operation	10
9. Common faults and measures	12

SAFETY INSTRUCTIONS

1. Use Instructions

- In order to ensure the long-term stable operation of the product, please read this manual carefully before your operation, overhaul or maintenance, in order to fully understand the safety issues and the use of the operation and other related matters needing attention.

- Please carefully check whether the received products are consistent with the ordered products, whether the accessories, operation instructions, etc., are complete, and whether there is any damage during transportation. If you find the above situation, please contact our Marketing Department or local dealers in time.

- Read this manual carefully and take proper operations to ensure the safety of operation and the service life of the equipment.

2. Safety Mark



WARNINGS

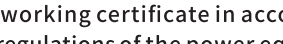
Indicates a high risk of injury or death if used incorrectly.



ATTENTION

Indicates that if used incorrectly, it may cause damage to the device, preventing it from operating properly or degrading its performance.

3. Precautions



WARNINGS

- This equipment must be operated by qualified operators who are familiar with air conditioning and refrigeration systems!

- Before starting the equipment, it must ensure reliable and effective grounding!

- When using cable, cable must have grounding wire, and reliable and effective grounding!

- The power connection must be correctly operated by a person with an electrician's working certificate in accordance with the technical standards and wiring regulations of the power equipment!

- When checking and maintaining the equipment, the power supply must be cut off before operation!

1

SAFETY INSTRUCTIONS

- If the power supply equipped by our company is damaged, we must choose the power cable with ground wire or purchased from our company to replace it!
- After abnormal shutdown, please be sure to turn off the power switch before any operation!
- Please consider the current capacity of your power supply, watt-hour meter, wire and socket before powering on!
- Only certified and reusable refrigerant tanks with a minimum nominal pressure of 45bar shall be used; The refrigerant tank should not recover refrigerant in excess, not more than 80% of its maximum capacity, in order to preserve space to prevent the explosion that may be caused by increased pressure!

- When recovering refrigerant, refrigerant tanks must be electronically monitored to prevent overcharging!
- Wear protective gloves and goggles during operation to prevent the refrigerant from coming into contact with your skin or eyes and damaging your health.
- The use place of this equipment must be well ventilated!

- This device should not be used in areas with liquid spills or near open containers containing flammable liquids!



PAY ATTENTION

- The power supply used must be consistent with the power supply identified by this product!

- The length of the cable should not exceed 8 meters (diameter of the cable should not be less than 1.5mm²). And the cable should not be coiled up when in use, otherwise the voltage will drop and damage the compressor!

- The intake pressure of this equipment (indicated by the low pressure meter) shall not exceed 26bar!

- Please place the device horizontally when working! If tilted placement, the work may cause vibration of the compressor, increase the noise, and even accelerate the wear of parts.

- Do not expose the device to sunlight or rain!

- The air vents of the front and rear bases of this equipment can not have obstacles to ventilation!

- If the overload protector of this device pops out during use, it will be reset manually after 5 minutes of natural cooling!

2

OPERATING SPECIFICATION

1. do not mix different types of refrigerant in the same recovery tank -- the mixed refrigerant will not be separated and used.

2. Before recovering refrigerant from the empty refrigerant storage tank, the empty tank must be vacuumed to -75 CMHG (-29.6inHg) to remove all kinds of non-condensing gases. The empty refrigerant tank has been filled with dry nitrogen before leaving the factory, and it should also be pumped out before the first use.

3. the equipment is not in use when the knob is in the "0" position, the intake and exhaust joint must be screwed on the protective cap, to avoid the air and air moisture into the service life, thus affecting the recovery effect.

4. The filter dryer must be correctly connected at the input of the equipment, and it is required to be replaced frequently. In order to ensure the normal operation of the equipment, please use the filter dryer designated by the company. High quality filter dryer will improve the recovery system and machine life.

5. Special care should be taken when recovering refrigerant from a burned out system. Two filters must be used.

6. When the equipment is not used for a long time, it is recommended to thoroughly evacuate and purify with dry nitrogen.

7. It is recommended to use a hose with a cut-off valve as far as possible to avoid refrigerant loss in the pipe. When connected, the end of the stop valve is close to the device.

8. A. The equipment is equipped with a high voltage protection switch with automatic reset. When the internal pressure of the system exceeds the rated disconnect pressure of the high voltage switch (see technical reference), the compressor will automatically stop. The high pressure protection switch will automatically recover and the compressor will restart only when the pressure inside the equipment is reduced and the high pressure gauge indicates a value below 30bar.

3

OPERATING SPECIFICATION

b. After high-voltage protection, the device can be started only after the cause is identified and the problem is removed.

Causes of high pressure protection and methods of elimination:

① If the input valve of the refrigerant tank is not opened, open the valve;

② The hose connecting the equipment and the refrigerant tank is blocked. First close the valve of the equipment and the refrigerant tank, and then replace the hose;

③ As the temperature of the refrigerant tank increases, the pressure increases, and the pressure and temperature will decrease after the refrigerant tank cools naturally;

9. In order to achieve the maximum recovery rate, it is recommended that you use a hose with an internal diameter greater than 4mm and the length should not exceed 1.8m. Too thin or too long a hose will greatly reduce the recovery rate.

10. When recovering a large amount of liquid refrigerant, the "push and pull mode" is recommended.

11. After recovery, ensure that there is no refrigerant in the equipment. Please carefully read the "self-cleaning" operation process in this instruction manual.

12. The air inlet of this equipment is equipped with a filter screen. After each use, please clean the filter screen and keep it clean.

13. If it is difficult to start, you can turn the knob to the "Start" position and then start the device.

14. The low pressure meter of the equipment indicates the pressure of the air inlet of the compressor in the recovery machine; The high pressure gauge indicates the pressure of the outlet.

15. After using the equipment, please turn the knob to "0" position.

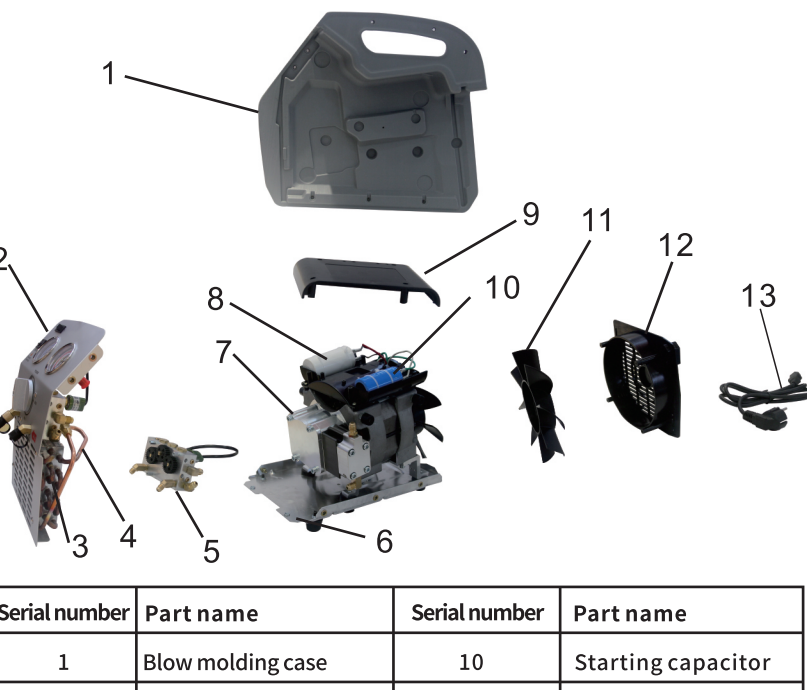
4

TECHNICAL PARAMETER

Type No.	TX14.060
Applicable refrigeration tool	Class III: R-12, R-134a, R-401C, R-406A, R-500, 1234YF.
	Class IV: R-22, R-401A, R-401B, R-402B, R-407C, R-407D, R-408A, R-409A, R-411A, R-411B, R-412A, R-502, R-509.
	Class V: R-402A, R-404A, R-407A, R-407B, R-410A, R-507, R-32.
electricity Source	220V/50Hz
electricity machine	3/4 HPAC Level 4
electricity machine	1450 RPM
current flow	4A
compressor	Air cooled piston without oil lubrication
High voltage protection	38.5bar/3850kpa(558psi) according to model
gas State	vapour 0.25
recovery rate State	liquid 1.8
(kg/min)	push-pull mode 6.0
Operating temperature	0°C-45°C
Overall dimension	460mm(长)x250mm(宽)x360mm(高)
net heavy	14kg

5

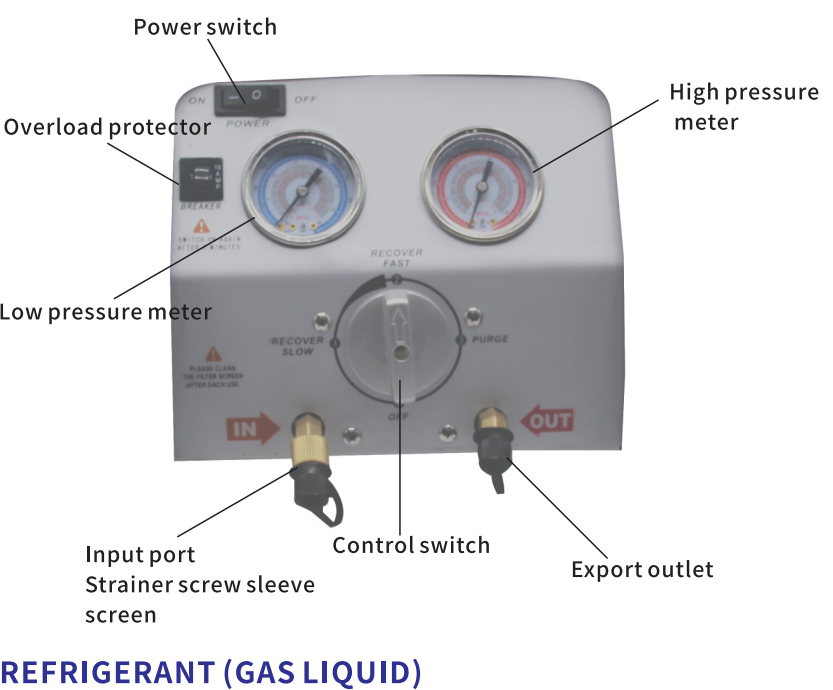
STRUCTURE ANALYSIS DIAGRAM



Serial number	Part name	Serial number	Part name
1	Blow molding case	10	Starting capacitor
2	Front frame	11	fan
3	Air cooled condenser	12	Air hood
4	Copper pipe	13	Power cord
5	Control valve		
6	Bottom plate		
7	Oil-free compressor		
8	Operating capacitance		
9	Junction box		

6

OPERATION PANEL INTRODUCTION



REFRIGERANT (GAS LIQUID) RECOVERY MODE OPERATION

1. Rotate to the Start position.

2. Connect the hose properly and securely (refer to the connection diagram).

3. Connect the power supply (ensure that the power supply is consistent with that on the product nameplate).

a. Turn on the power switch to On to start the device.

4. Open the valve of the refrigerant tank. Down, high pressure meter reading

5. Open the liquid port valve on the manifold gauge group.

6. Slowly turn the knob to "2" to speed up recovery.

7

REFRIGERANT (GAS-LIQUID) RECOVERY MODE OPERATION



ATTENTION

① If the compressor is in the "2" position, turn it to the "start" position slowly, and the low pressure gauge will drop until it stops hitting. But do not make the pressure value drop to 0, when it drops to 0, the air inlet does not pump.

② If you start again after the power failure or start difficulties, turn the knob to the "start" position, then turn on the power and press the start button.

③ If you turn the knob to "1" position to run, you can carry out more stable liquid recovery, but the recovery speed is slow.

7. When the liquid recovery is finished, turn the knob to "2" position, which can improve the speed of gas recovery.

8. Let the equipment run to the required vacuum level, then the recovery can be finished and the self-cleaning can be started.



8

SYSTEM SELF-CLEANING MODE OPERATION

1. Do not turn off the power, turn the knob to the "3" position, and start self-cleaning.

2. Let the equipment run to the required vacuum level, and the self-cleaning is finished.

① Close the valve of refrigerant storage tank.

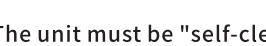
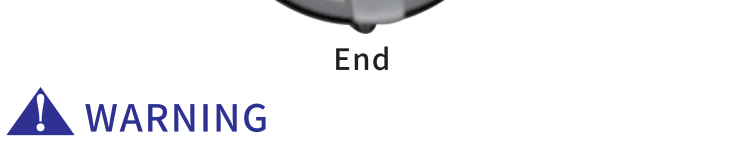
② Close the shut-off valve of the gas outlet connection hose.

③ Close the liquid and gas valves of the manifold gauge set.

④ Close the valve of the refrigeration unit connected to the manifold gauge set.

⑤ Turn off the power and remove all external piping.

⑥ Finally screw the protective caps on the input valve and output valve connectors of this unit.



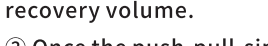
WARNING

The unit must be "self-cleaned" after each use; residual liquid refrigerant in the condenser may expand and cause damage to the components, which is hazardous to the environment.

9

SYSTEM OPERATION IN PUSH-PULL MODE

Push-pull mode is recommended when recovering liquid refrigerants over 10 kg.



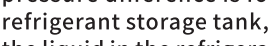
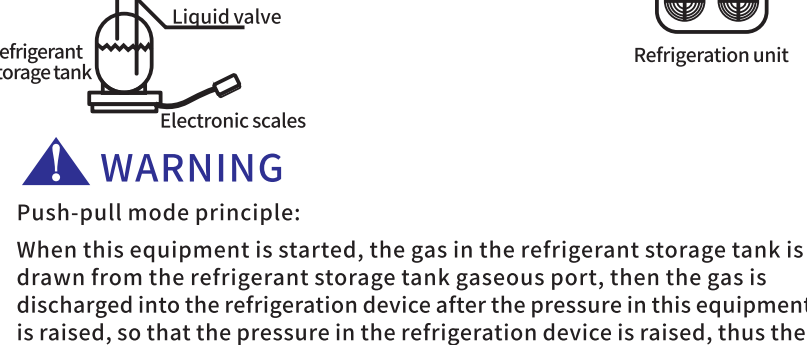
WARNING

① This operation process must be monitored with an electronic scale for the recovery volume.

② Once the push-pull siphoning process has started, it will continue even after the automatic shutdown, when the valve of the refrigerant tank must be closed immediately to avoid overcharging.

1. Turn to the "start" position.

2. Connect the hoses to make sure the connection is correct and secure (please refer to the connection diagram).



WARNING

Push-pull mode principle:

When this equipment is started, the gas in the refrigerant storage tank is drawn from the refrigerant storage tank gaseous port, then the gas is discharged into the refrigeration device after the pressure in this equipment is raised, so that the pressure in the refrigeration device is raised, thus the pressure difference is formed between the refrigeration device and the refrigerant storage tank, and under the action of the pressure difference, the liquid in the refrigeration device flows into the refrigerant storage tank through the pipe.

10

SYSTEM PUSH-PULL MODE OPERATION

4. Open the gas valve and liquid valve of the refrigerant storage tank.

5. Turn the knob to the "2" position to start the push-pull mode recovery.

6. When the value displayed on the electronic scale remains unchanged or changes slowly, it means that the liquid inside the refrigeration unit has been recovered and will be recovered in the gaseous state. (At this time, we have to reconnect the pipeline, according to the recovery self-cleaning operation steps for gaseous recovery self-cleaning).

7. Close the gaseous valve of the refrigerant storage tank first, and then turn off the power.

8. After closing all the valves, remove all the external piping, reconnect the piping according to the operation procedure of refrigerant recovery, and then carry out gaseous recovery.

9. Self-cleaning.



TIPS

When the value displayed by the electronic scale reaches 80% of the refrigerant capacity, the power supply of this equipment should be cut off immediately and the gaseous and liquid valve of the refrigerant storage tank should be closed.

11

COMMON FAULTS AND MEASURES

Problem	Cause	Solution
Fan does not respond	Mechanical damage	1. Replace parts 2. Send back to factory for repair.
Compressor does not respond when the power switch is pressed	1. High voltage switch disconnected. 2. Faulty wiring in equipment.	1. Release system force 2. a. Professional inspection b. Send back to factory for repair
Compressor can not start (in blocking state)	1. External pressure is too high. 2. Motor or other parts are damaged.	1. When the state recovery is in place, turn the knob to restart. When the gas recovery, turn the knob to the "3" position to restart 2. a. Replace components b. Send back to the factory for repair
The compressor stops after running for a period of time	1. Improper operation causes the high pressure switch to break. For example: not open the output valve, refrigerant storage tank valve, etc. 2. Motor thermal protector disconnection. 3. Overload protector disconnected.	1. Please read the manual carefully and operate strictly according to it. 2. Stop for a while, the motor will restart automatically. 3. Allow the overload protector to cool down for 5 minutes and then reset it.
recovery rate too slow	1. Refrigerant tank pressure is too high. 2. Compressor piston ring damage.	1. Cooling the refrigerant tank to lower the temperature will cause the pressure to drop. 2. a. Replace components b. Send back to factory for repair.
The equipment cannot be vacuumed	1. Loose piping connection. 2. Leakage of equipment.	1. Tighten the pipe connection. 2. a. Replace components b. Send back to factory for repair.

12