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REFRIGERANT RECOVERY MACHINE OPERATING MANUAL RR250

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REFRIGERANT RECOVERY MACHINE OPERATING MANUAL

NEED HELP? CONTACT US!

Have product questions? Need technical support? Please feel free to contact us:

CustomerService@vevor.com

This is the original instruction, please read all manual instructions carefully before operating. VEVOR reserves clear interpretation of our user manual. The appearance of the product shall be subject to the product you received. Please forgive us that we won't inform you again if there are any technology or software updates on our product.

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GENERAL SAFETY

USE INFORMATION

- In order to prolong the usage of the recovery unit, please read the operating manual carefully before using, which can help you to fully understand the safety, specification as well as operating procedure of the recovery unit.
- Please check the product received is same as you ordered and also the accessories operating manual is attached. Please check the product to see if there is any damage during transportation. Contact the local distributor if the above problem is found.
- Please read the operating manual carefully and use the unit according to the product operating procedures.

SAFETY INDICATION

⚠ Warning

Indicates procedures that must be strictly observed to prevent hazards to persons.

⚠ Notice

Indicates procedures must be strictly observed to prevent damage or destruction of the unit.

MATTERS NEEDING ATTENTION

⚠ Warning

- Only a qualified technician can operate this recovery unit.
- Before starting the equipment, make sure that it is well grounded.
- While using electrical wire, the wire must be well connected and grounded.
- Only a qualified electrician can do the wire connection according to the technical standard and circuit diagram.
- Be sure the power is off before examining or repairing the recovery unit.
- If the original power supply cord is damaged, choose carefully for the replacement one, or you may directly buy from us.
- When the unit breaks down, be sure the power is off before you do any operation.

- Please take the power supply and the capacity of your ammeter and electrical wire.
- Only authorized refillable refrigerant tanks can be used. It requires the use of recovery tanks with a minimum working pressure of 45 bar(652.6 psi). Do not overfill the recovery tank, maximum at 80% capacity to make sure that there is enough space for liquid expansion. Overfilling of the tank may cause a violent explosion.
- Always wear safety goggles and protective gloves while working with refrigerants to protect your skin and eye from hurting by refrigerant gases or liquid.
- Do not use this equipment near flammable liquid or gasoline.
- An electric scale is needed to prevent overfilling.
- Be sure that the place where you are working is thoroughly ventilated.

⚠ Notice

- Be sure the unit is working under the right power supply.
- When using an extension cord it should be a minimum of 2.0mm2 AWG and no longer than 7.5 m, otherwise, it may cause the voltage drop and damage the compressor.
- The input pressure of the unit should not exceed 26 bar(377. 1psi).
- The unit needs to be laid horizontally, otherwise, it will lead to unexpected vibration, noise, or even abrasion.
- Do not expose the equipment to sun or rain.
- The ventilation opening of the unit must not be blocked.
- If the overload protector pops, reposition it after 5 minutes.
- If this equipment is equipped with an oil separator device only during the vapor recovery process it will purification and recycling of the refrigerants. When the recovery vapor is over 8 kg, it needs to release the oil of the oil separator device. (While releasing oil, the internal system must be without pressure).

OPERATION MANUAL

1. Do not mix different refrigerants together in one tank, or they could not be separated or used.
2. Before recovering the refrigerant, the tank should achieve the vacuum level: -75cmHg(29.6psi), which is for purging non-condensable gases. Each tank was full of nitrogen when it was manufactured in the factory, thus the nitrogen should be evacuated before the first use.

3. The switch should be at the “0” Position before operation. All the valves must be closed, the input and output fittings should be covered with protective caps when the unit is not in operation. The air moisture is harmful to the recovery result and will shorten the life span of the unit.
4. A filter drier should always be used and should be replaced frequently. And each type of refrigerant must have its own filter. For the sake of ensuring the normal operation of the unit, please use the filter specified by our company. A high-quality filter drier will bring high-quality services.
5. Special caution is needed when recovering from a burnt system, and two dry filters is needed.
6. a. The unit has an Internal High-Pressure Shut-off switch. If the pressure inside the system is above-rated shut-off pressure (see specification), the compressor will automatically shut off To restart the compressor, please lower the internal pressure (The output gauge indicates lower than 30 bar 1435.1 PSI), then turn on the power to restart the compressor.
   b. When high pressure protection is initiated, please find out the cause and deal with it before restarting the unit. Cause of High Pressure Protection and Trouble Shooting:
   ① The input valve of the refrigerant tank is closed - opening the valve will help solve the problem.
   ② The connecting hose between the recovery unit and refrigerant tankis stuck - close all the valves and replace the connecting hose.
   ③ The temperature of the refrigerant tank is too high, the pressure is too high - give it some time to cool down and the pressure will come back to normal.
7. In order to gain maximum recovery speed, a hose with an inner diameter bigger than 4mm is recommended and the hose should better be shorterthan1 .5m.
8. While recovering large amounts of liquid, use the Push/Pull Mode.
9. After recovering, make sure there is no refrigerant left in the unit. Read the Purge Operation carefully. Liquid refrigerant remaining in the unit may be expanded and destroy the components.
10. If the unit is to be stored or not used for any length of time, we recommend that it be completely evacuated from any residual refrigerant and purged with dry nitrogen.
11. A connection hose with a check valve is recommended, it can prevent refrigerant loss.

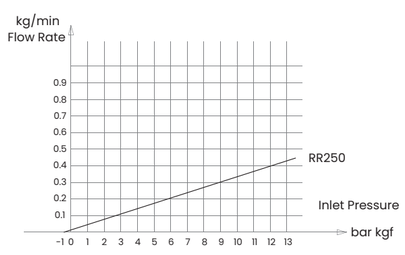
12. The intake port is equipped with a filter screen, please wash it frequently to keep it clean.
13. The Low Pressure Gauge shows the pressure of the intake port of the compressor and the High Pressure Gauge shows the pressure of the outlet port of the recovery unit.
14. After using, please turn the knob to the "0" position.

SPECIFICATION

	RR250	RR250
Refrigerants	Category III: R12, R134a, R401C, R406A, R500 Category IV: R22,R401A,R401B,R402B,R407C,R407D, R408A,R409A,R411A,R411B,R412A,R502,R509 Category V: R402A,R404A,R407A,R407B,R410A,R507	
Power	220-240 VAC 50-60Hz, 110-120VAC 60Hz,	
Motor	3/4HP, Single cylinder system	
Motor Speed	1450RPM @ 50Hz / 1750RPM @ 60Hz	
Maximal Current Draw	110V, 8A	220V, 4A
Compressor	Oil-less, Air-cooled, Piston	
High Pressure Shut-off	38.5bar/3850kPa(558psi)	
Operating Temperature	0°C ~40°C/32°F~104°F	
Dimensions	400mmx250mmx360mm	
Net Weight	13.5 KG	13.5 KG

RR250

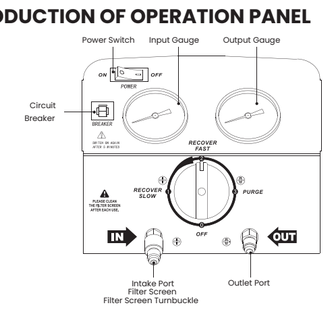
Refrigerants	R134a	R22	R410A
Liquid	1.60kg/min	1.80kg/min	2.20kg/min
Push/Pull	4.60kg/min	5.60kg/min	6.30kg/min



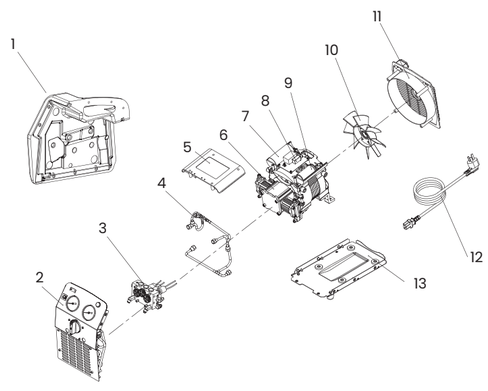
⚠ Notice

The flow rate of vapor is direct proportion to inlet pressure.

INTRODUCTION OF OPERATION PANEL

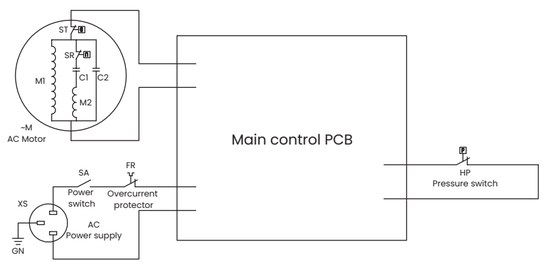


PARTS DIAGRAM



NO.	Component	NO.	Component
1	Cover	9	Starting Capacitor
2	Front Panel	10	Fan
3	Control Panel	11	Fan Cover
4	Copper Pipes	12	Power Supply Cord
5	Junction Box Cover	13	Base
6	Compressor		
7	Running Capacitor		
8	Circuit Board		

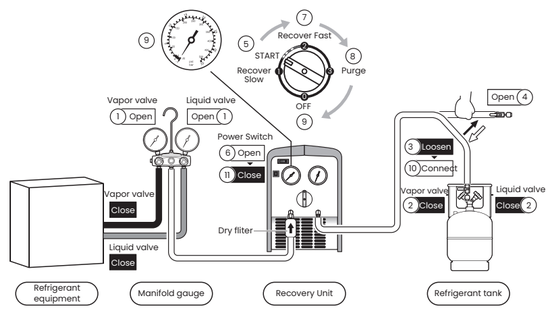
WIRING DIAGRAM



NO.	Graphics Code	Component
1	XS	Power Outlet
2	SA	Power Switches
3	FR	Overload Protection Device
4	~M	Compressor Motor
5	SR	Centrifugal Switch
6	C1	Start Capacitor
7	C2	Running Capacitor
8	ST	Motor Thermal Protectors
9	HP	High Pressure Switch

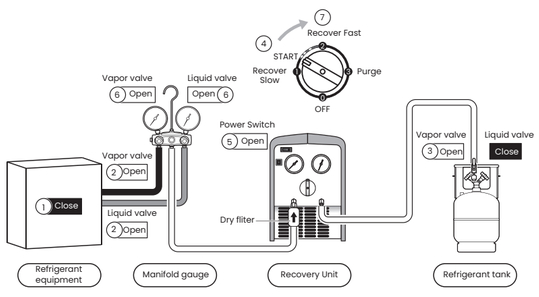
OPERATING INSTRUCTION

1). REFRIGERANT PIPES' EXHAUST



Ready for operation
※Connect the pipes correctly and firmly.
(Please refer to the connection diagram)
1. Open the vapor and liquid valves of manifold gauge.
2. Close the vapor and liquid valves of tank.
3. Loosen the connecting pipes of refrigerant tank.
4. Open the check valve of pipes.
Start operation
5. Turn the switch to position "START".
6. Turn on the power switch.
7. Turn the switch to position "2" and start exhausting the air from inside the pipes.
8. While the input gauge gets to -1 bar ,turn the switch to position"3" to start self-purge.
9. While the input gauge gets to -1 bar again, turn the switch to position"0" to finish self-purge.
10. Connect the pipes to the refrigerant tank.
Finish operation
11. Turn off the power switch.

2). RECOVERY MODE



Ready for operation
※Connect the pipes correctly and firmly.
(Please refer to the connection diagram)
※Make sure all valves are closed.
1. Switch off the power of refrigerant equipment.
2. Open the vapor and liquid valves of refrigerant equipment.
3. Open the vapor valve of the refrigerant tank.
Start operation
4. Turn the switch to the position "START".
5. Turn on the power switch.
6. a.Open the liquid valve for liquid recovery. b.Open the vapor valve for vapor recovery.
7. Turn the switch slowly to position "2" for faster recovery.
※There is no need to turn off the power and it can do the self-purge work directly.

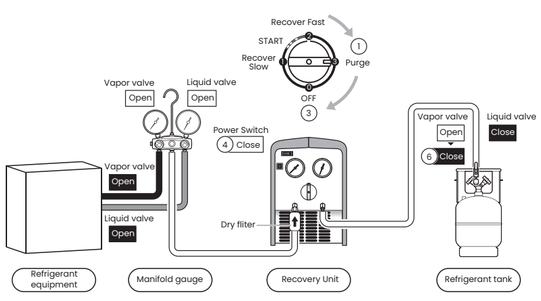
⚠ Notice

① If compressor impact occurs at position "2", turn the switch to position "START" until the impact stops.
② If the recovery restarts after interruption of power or is difficult to start,
a. Turn the switch to position "START", turn on the power switch, for liquid recovery.
b. Turn the switch to position "3", turn on the power switch.

⚠ Notice

① Turning the switch to position "1" gets a stable recovery of liquid with low speed of 1 Kg/Min.
② If compressor impact occurs at the position "1" turn the switch slowly to position "START" until the impact stops. Make sure the pressure is not at 0, because it doesn't work at 0.

3). SELF-PURGE MODE

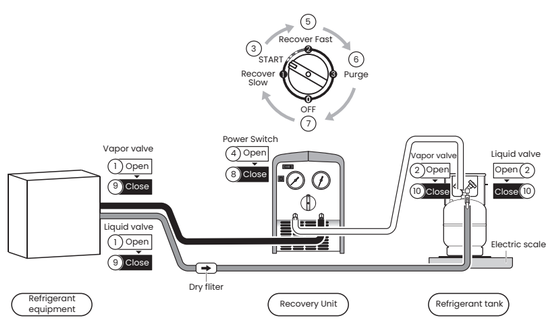


⚠ Notice

The unit must be purged after each use; The liquid refrigerant remaining may expand and damage the components and pollute the environment.

Ready for operation
1. Turn the switch to position "3 "to start the purge.
2. When the self-purging is finished, the unit gets the needed vacuum.
Finish operation
3. Turn the switch to position "0".
4. Turn off the power switch.
5. Close the check valve of the pipes.
6. Turn off the vapor valve of the refrigerant tank.

4). LIQUID PUSH/PULL MODE



⚠ Notice

An electric scale is needed to monitor the recovery process to prevent overfilling.

Ready for operation
※Connect the pipes correctly and firmly. (Please refer to the connection diagram)
※Make sure all valves are closed.
Start operation
1. Open the vapor and liquid valves of refrigerant equipment.
2. Open the vapor and liquid valves of the refrigerant tank.
3. Turn the switch to position "START".
4. Turn on the power switch.
5. Turn the switch to position"2" to start push/pull mode.
※When the display of the electric scale remains unchanged or changes very slowly, it means the liquid recovery is finished, and it is time for vapor recovery.
6. Turn the switch to position "PURGE" and follow self-purge mode to purge the gas refrigerant.
7. Turn the switch to position "OFF".
8. Turn off the power switch.
9. Close the vapor and liquid valves of refrigerant equipment.
10. Close the vapor and liquid valves of the refrigerant tank.
11. Connect the pipes again and recover the vapor of refrigerant equipment according to recovery mode.
Finish operation

TROUBLESHOOTING

FAULT	CAUSE	SOLUTION
FAN no response	Mechanical damage	1. Replace the fan 2. Factory service required
Compressor not start (Jammed)	1. External pressure is too high	1. a. When recovering the liquid, turn the knob to "START" position, then restart b. When recovering the vapor, turn the knob to "PURGE"/"3" position, then restart
	2. Motor failure or other components damaged	2. a. Replace the components b. Factory service is needed
Compressor start but stops within a few minutes	1. High pressure shut off due to the wrong operation, such as: The outlet valve is not open, refrigerant tank valve is not open	1. Read carefully the Operation Manual and follow the instructions while operating
	2. Motor thermal protector shuts off	2. The compressor will restart automatically after a few minutes
	3. Circuit breaker shuts off	3. Cooling the circuit breaker down and press "circuit breaker" to restart after 5 minutes
Low recovery speed	1. The pressure of the refrigerant tank is too high	1. Cool the tank down can help bringing down the pressure
	2. Piston ring of the compressor is damaged	2. a. Replace the components b. Factory service required
Unit doesn't pull out a vacuum	1. Connecting hoses are loose	1. Tighten the hose connections
	2. Leakage in the unit	2. a. Replace the components b. Factory service required

This product is subject to the provision of European Directive 2012/19/EC.
The symbol showing a wheelie bin crossed through indicates that the product requires separate refuse collection in the European Union. This applies to the product and all accessories marked with this symbol.
Products marked as such may not be discarded with normal domestic waste, but must be taken to a collection point for recycling electrical and electronic devices.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1)This device may not cause harmful interference, and (2)this device must accept any interference received, including interference that may cause undesired operation.

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