

CMEP-OL

Oil Less Explosion Proof Recovery Pump

Operating Manual

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I. Important Safety Instructions

R600/R600a/R290 belong to flammable substance, so when they are recycled, special attention has to be paid to the following safety precautions:

1. The overfilling of recycled tanks may cause violent explosion, leading to personal injury or death.
2. Under the condition of pressure, all pipelines may contain liquid substance inside. Any contact with the liquid substance may cause harm. In the operation, put on protective garments and safety goggles and special attention has to be paid when removing the underground pipelines.
3. Don't use this unit in a small, unventilated room or stuffy environment.
4. The connection of the recovery machine and pipelines has to be reliable and tight.
5. The gas tightness inspection has to be implemented every time before the recovery machine is used.
6. It has to be checked whether the power supply connection wire is damaged or not before the recovery machine is used and if it is, it cannot be used.
7. Don't use this device to recycle the substance R600/R600a/R290 in the environment with sparks and inflammable substance.
8. Before the operation, please read the instructions carefully and relevant operating manual and comply with the safety precautions in the manual.

If having any questions before using the device, contact your equipment supplier or equipment manufacturer.

Special safety precautions

Although the design of this device satisfies the requirement of recovery the inflammable substance like R600/R600a/R290, but there are many undetermined factor in the actual working environment, so in order to enhance the operation safety, the ventilation of the surroundings must be implemented to recycle the inflammable substance like R600/R600a/R290 and when undertaking the task in a narrow and small space, extra ventilation is needed. In addition, check whether the connection of your

recovery machine and the recovery pipelines is tight and there mustn't be any leaks, which must be paid special attention to, or there will be the damager of explosion.

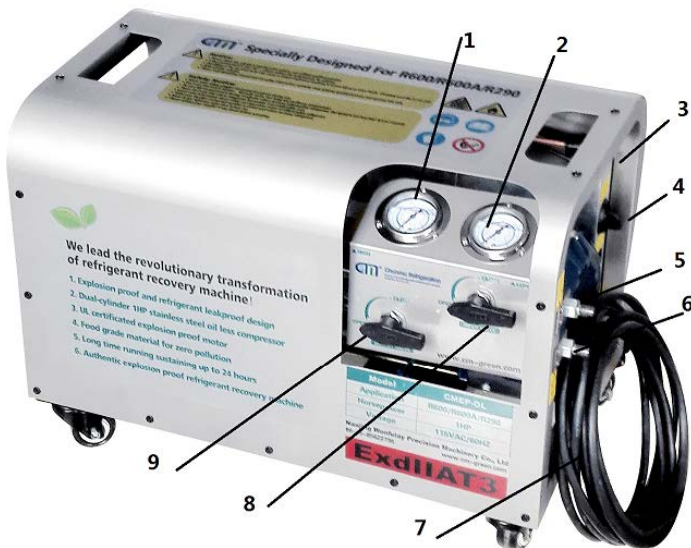
(Warning: the density of refrigerants like HC and some new refrigerant liquid is relatively low. The float switch of the traditional steel cylinders may stop working when the refrigerants in them reach 80% due to the above reason, producing no protective effect, so you need an electronic scale to monitor whether the tanks are overfilled.)

III. Technical parameters

Model	CMEP-OL
Applicable medium	R600/R600A/R290
Compressor	Oil-free lubrication
Gas displacement of the compressor	1.25CFM
Maximum recovery rate	71.6kg/h
Horsepower	1HP
Voltage	115VAC/60HZ
High voltage protection	2.5Mpa
Minimum vacuum degree	0.05inHg
Weight	43kg

III. Introduction

The CMEP-OL recovery machine was specially designed for R600/R600A/R290 and all the parts was designed according to ExdiiAT3 explosion-proof standard, including the stainless steel UL listed explosion-proof motor, stainless steel compressor, condenser, pipeline and PTFE seals .Especially the twin-cylinder high efficiency compressor make the recovery rate very fast. The UL, ETL and patent is pending



1. Outlet pressure gauge
2. Inlet pressure gauge
3. High voltage protective reset switch
4. Power switch
5. Inlet connection
6. Outlet connection
7. Power supply connection
8. Inlet valve
9. Outlet valve

IV. Recovery operation

1. Connect the pipelines according to the actual need and pump out the air in them.
2. Connect the power line of the machine and plug it in.
3. Switch on the inlet and outlet valves of the recovery machine
4. Switch on the power switch of the recovery machine and start the recovery
5. When recovering to the needed vacuum degree, switch off the recovery machine and its valves.

V. Routine maintenance

1. Check whether the power line is damaged or not every time before it is used.
2. Check whether the gas tightness of the machine is favorable every time before it is used.
3. If this device is put away and not going to be used for an extended period of time, suggest rinsing the interior pipelines of the machine with dried nitrogen.

VII. Ways to check gas tightness

1. Switch off the outlet valve of the recovery machine and fill it from the inlet valve with any of the gases R600/R600A/R290 with certain pressure and then check whether the inside of the machine is leaking.
2. Switch on the inlet and outlet valves of the recovery machine, discharge the residual gas inside the machine and start the recovery machine. After 1 minute, switch off the outlet valve and the gauge hand of the outlet pressure gauge of the recovery machine rises. When it rises to about 2.5 Mpa, the high voltage switch switches off and the machine stops. Then connect the exit and entrance with a soft pipeline and switch on the outlet valve to let air in the inlet valve after the connection. About 5 minutes later, the low pressure area and the high pressure area in the compressor of the machine are in a balance in pressure. Switch off the inlet and outlet valves and observe whether the inlet pressure gauge and outlet pressure gauge are leaking. If in a shorter time, there is a sharp drop, it means that the inside of the machine is leaking. If there is no sharp drop, it means it can be used normally without any repair. Reset the high voltage switch after the leakage checking.



VII. Troubleshooting Tips

PROBLEM	CAUSE	Handling measures
The power connecting the machine doesn't work	Power supply cord not attached or no power	Check the lines
	voltage is incorrect	Check voltage
	High pressure switch is cut.	reset
Slow recovery speed	The suction pressure is too low	Increase the suction pressure

	The discharge pressure is too high	Reduce the discharge pressure
	The connecting hose is blocked.	Check the connecting hose.
	The tightness of the compressor is unfavorable	Factory maintenance required.

VIII. Warranty

This product is warranted to be free from defects in workmanship, materials, and components for a period of two years from date of purchase. All parts and labor required to repair defective products covered under the warranty will be at no charge.

1. The limited warranty is only applicable for the original buyer.
2. The warranty applies to the product in normal usage situations only, as described in this operating manual. The product must also be serviced and maintained as specified.
3. If the product fails, it will be repaired or replaced at the option of the manufacturer.
4. The manufacturer shall not be responsible for any additional costs associated with product failure including, but not limited to, loss of work time, loss of refrigerant, and unauthorized shipping and/or labor charges.
5. All warranty service claims must be made within the specified warranty period. Proof-of-purchase date must be supplied to the manufacturer.
6. It is not within the scope of warranty if the recovery machine is used to recover non-stipulated materials.

This limited warranty does not apply if :

- The product, or product part, is broken by accident.
- The product is misused, tampered with or modified.
- The product is used for recovering any substance other than the specified refrigerant type.