

Explosion-proof Recovery Unit Safety Instructions

Please read, understand and follow the entire manual carefully before use, paying special attention to danger, warning and caution statements.

When the working medium is applicable Class A3 refrigerant, the following safety instructions must be known and complied with.

I. Safety Operation Specifications

1. Precautions before use:

Standards and categories for which this machine is designed, tested or certified:

This Recovery Unit has been tested and certified to comply with the following standards:

EN IEC 60079-0:2018, EN IEC 60079-7:2015+A1:2018, EN 60079-11:2012

EN IEC 60079-15:2019, EN ISO 80079-36:2016, EN ISO 80079-37:2016

CE II 3G Ex ec ic nC h IIA T4 Gc

CE	Denotes that this product complies with ATEX directives
	Certificate No. is CSANe 22ATEX1032X
	Specific marking for explosion protection
3	Zone 2
G	Gas
Ex	Denotes explosion protection
ec	Increased safety
ic	Intrinsic safety
nC	Sealed device
h	Constructional safety
IIA	Typical gas - R290, R600a etc.
T4	135°C
Gc	EPL - Equipment Protection Level

2. Operating conditions/Environmental requirements:

Specific operating conditions:

- Provisions should be made externally to the equipment to ensure that the circuit is limited to overvoltage category II as defined in EN 60664-1;
- In final use, the OFP port shall comply with at least Ip20;
- The maximum refrigerant recovery weight shall not exceed 80kg per cycle. After operation, stop the machine and ensure the refrigerant is cooled;
- The device shall not be placed where external conditions favor the accumulation of electrostatic charges on these surfaces. Additionally, the device may only be cleaned with a damp cloth;
- The device shall be operated keeping supply cables protected from mechanical damage. Cables shall not be subjected to tension or torsion;
- The operating location must be open and ventilated.

II. Safety Warnings

Before connecting refrigerant, always start the recovery and check the following:

- Whether the fan operates normally (observe if there is airflow discharge on the condenser side);
- Connect the exhaust port to a shut-off valve, set the Recovery Unit knob to "FAST" position, pump air - the exhaust side pressure should rise to 560psi (38.6bar) within 65 seconds, triggering the high-pressure protection switch and automatic shutdown of the Recovery Unit;
- Leak detection must be performed before recovering A2L/A2/A3 class refrigerants to ensure no significant leakage, using the following method:
 - Seal the exhaust port with a shut-off valve/ball valve while keeping the intake port open to atmosphere;
 - Turn the knob to "FAST" position, start the Recovery Unit, when the exhaust side pressure reaches 30Bar (3MPa/435psi), press "STOP" button, then turn the knob to "PURGE"(self-cleaning) position, observe the intake side pressure gauge reading; Before use, please read, understand and follow the entire manual carefully, paying special attention to danger, warning and caution statements. When the working medium is applicable Class A3 refrigerant, the following safety instructions must be known and complied with;

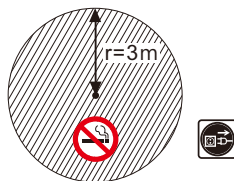
3). After standing for 3 minutes, observe the intake side pressure gauge reading again. If pressure drop $\leq 1\text{bar}/0.1\text{MPa}/14.5\text{psi}$, there is no significant leakage and normal operation may proceed.
During operation, continuously monitor for leaks using compliant leak detection equipment. If leaks are detected, stop operation immediately.

Additional Safety Instructions for refrigeration systems containing Flammable refrigerants.

Except for existing occupational hazard procedures or other regulations that may be required by local, state or federal agencies, the following are additional safety recommendations when servicing refrigeration equipment that contain Class A2L, A2 or A3 refrigerants.

The area of service should be marked as Temporary Hazardous Zone. This will be an area with a radius of 3m centered on refrigeration equipment being serviced and should have no smoking and other hazardous signs posted. Local supervisor should be notified of the zone's existence.

- Ensure the refrigeration equipment's power has been discontinued during maintenance work.
- When connecting service equipment (such as vacuum pumps, scales, recovery units) to a power source, the connection must be made outside the Temporary Hazardous Zone.
- Factory-equipped power cord of VRDDF is 3.2m, which can make sure the connection is made in the area free of ignitable concentrations. Do not change the power cord at will.



- Refrigeration equipment being serviced
-  Division (zone) 2

Applicable / Not applicable Refrigerants:

A3 Refrigerants							
Applicable	R50	R170	R290	R600	R600a	R601	R601a
	R1270	R430A	R431A	R433A	R433B	R433C	R436A
	R436B	R441a	R443A	R511A			
Not applicable	R702	R717	RE170	R1150	R429A	R432A	R435A
	R510A	R610					

Warning

Using with non-applicable A3 refrigerants may cause safety accidents and personal injury!

Do not disassemble this device when used in explosive environments.

Do not connect/disconnect while powered on.

III. Disclaimer

1. This device is only suitable for its designated usage scope and environment. Users must strictly follow the operation procedures and precautions in the manual when using this device; The company shall not be liable for any damage, misuse or accidents caused by usage beyond the device's scope or failure to follow the manual;
2. All warranty services should be performed within the warranty period; For repairs, please replace components according to the forms specified in our company's maintenance manual; The user shall bear full responsibility for accidents or device damage caused by using non-original parts, self-modifications or usage beyond scope;
3. The manufacturer shall not bear any additional costs beyond product faults, including: loss of working time, loss of refrigerant, contaminated refrigerant, and unapproved transportation or labor costs;
4. Waste disposal must strictly comply with local laws and regulations;
5. Under normal maintenance conditions, the maximum service life of this device is 8 years - use beyond this period may pose safety hazards;
6. Our company reserves the final right of interpretation of this manual's content. For any questions or need for further explanation, please contact VALUE.