



## GDQH-3000C SF6 Gas Recovery Unit



### Product Description

SF6 gas recovery purification and refilling device is used to vacuum various electrical equipments, refilling electrical equipment with SF6 gas, and recover SF6 gas from the used or tested electrical appliances, purify, compress and store it in the storage tank.

The recovery unit is suitable for SF6 electrical appliances and GIS combined electrical appliances.

**The device is composed of recovery system, refilling system, vacuum system, purification system, gas storage system according to the standard of DL/T662-1999 "sulfur hexafluoride refilling and recovery device". The device has the following main applications:**

- Vacuuming and vacuum measurement of the device and electrical equipment;

- Recover gas in electrical equipment;
- Dry and purify the SF6 gas for recovery and refilling;
- Refilling for SF6 electrical appliances;
- Compress, store, and bottle the SF6 gas in the electrical appliances.

## Features

- Advanced design, complete functions, reasonable structure, simple and clear operation.
- Compression system: SF6 compressor, no leakage.
- The vacuum pumping system adopts a two-stage rotary vane vacuum pump, and an automatic oil return prevention device is provided in the system.
- The purification system uses CKD company's principle filter. The filter uses electric heating and built-in high-efficiency adsorbent. The purification effect is more significant (no need to replace adsorbents frequently).
- The three-phase power supply of the device's electrical system is automatically confirmed and automatically protected from phase failure.
- The SF6 special valve with the latest technology in the device control system.
- The storage system is configured according to the user's requirements.
- The equipment adopts mobile type, PLC automatic control, one-button operation.

## Specifications

- Type: Mobile
- Working principle:
  - a. Use compressor pressure to compress SF6 gas.
  - b. The dryer assists gas recovery and refilling.
  - c. Filled with buffer gasification when inflated (heatable).
    - Working environment temperature: -10°C (-30 optional) --- +40°C
    - Main performance and technical parameters:
      1. Device ultimate vacuum <10Pa;
      2. Device vacuum rate: 63m<sup>3</sup>/h (vacuum pump ultimate vacuum less than 0.06Pa);
      3. Device refilling initial pressure: <133Pa (user customized);
      4. Device refilling final pressure: ≤0.7MPa;

5. Device refilling rate:  $>15\text{m}^3/\text{h}$ ;
6. Device recovery initial pressure:  $\leq 0.8\text{MPa}$ ;
7. Device recovery final pressure:  $<5\text{mbar}$ ;
8. Device recovery compressor speed:  $11.6\text{m}^3/\text{h}$ ;
9. Device annual leakage rate:  $<1\%$ ;
10. Maximum design pressure of storage tank:  $5\text{Mpa}$ ;
11. Storage tank:  $300\text{L}$ ;
12. Dimensions:  $2000*1100*1700\text{mm}$ ;
13. Storage mode: steam, liquid;
14. Noise:  $\leq 75\text{dB}$  sound pressure level;
15. Dry filter regeneration method: vacuum regeneration heat activation treatment;
16. Power supply: AC three-phase  $220\text{V}/\pm 10\%$ ,  $50\text{Hz}$ ;
17. Device total power:  $<14\text{KW}$ ;
18. Device weight:  $1120\text{kg}$ ;
19. Purification: micro water  $40\text{PPm}$ , oil  $5\text{PPm}$ , dust  $\leq 0.5$  microns.

### **Device Main components and Functions**

The main functional parts of the device are oil-free compressors, vacuum pump, negative pressure vacuum pump, dry filter regenerator, heater, purifier, filter, pipes, valves, meters, electrical controls and structural components, frame panels, wheels and storage tanks and so on.

### **Main Components Parameters**

- SF6 compressor

a: Theoretical exhaust volume:  $11.6\text{m}^3/\text{h}$ ;

b: Maximum exhaust pressure:  $5\text{Mpa}$ ;

c: Minimum suction pressure:  $53\text{Kpa}$ ;

d: Maximum suction pressure:  $0.35\sim 0.8\text{Mpa}$ ;

e: Power:  $5.5\text{KW}$ ;

f: Power supply:  $380\text{V}$ ,  $50/60\text{Hz}$ ;

- Vacuum system uses two-stage rotary vane vacuum pump

a: The vacuum pump is air-cooled for long-term operation;

b: Vacuum pumping rate:  $60\text{m}^3/\text{h}$ ;

c: Ultimate vacuum: 0.1mbar;

d: Power: 3KW;

- Filtration system (purification system: USA EMERSON filter element, two-stage filtration, vacuum activated self regeneration treatment)
- ISF6 valve: SF6 special 3-365 R01 VK/F-02/20;
- Pressure gauge, vacuum gauge: (DAMASS, Germany), digital Pirani vacuum gauge;
- PLC touch screen, automatic control system;