

# Group of the Companies «RealSnabService» (LLC)

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## SPECIFICATION

### UNIVERSAL PUMP-COPRESSOR STATIONS

Working media - refrigerant 409a

Universal pump-compressor stations (UPCS) are designed for pumping (charging, evacuating, recovery) clean **refrigerant 409a (Freon 409a, R-409A, mix of R22+R124+R142b)** and are manufactured in accordance with TC 3632-012-85505701-2016 based on oil-free compressors (have passed patent protection).

#### Main characteristics of producing UPCS for working media Freon 409a:

- ◆ Pump type: piston, oil-free
- ◆ Type of compressor: piston, oil-free, single-stage
- ◆ Quantity of cylinders: two-cylinder / four-cylinder
- ◆ Discharge pressure range: 0 - 3.5 MPa (0-35 bar)
- ◆ Minimum inlet pressure: 0 bar
- ◆ Possibility of self-priming: yes
- ◆ Ability to work under excessive inlet pressure: yes
- ◆ Maximum inlet pressure: 1 MPa (10 bar)
- ◆ Drive type: electric, direct
- ◆ Ability to adjustment of the engine: Yes (depends on construction)
- ◆ Leak proof: Yes
- ◆ Power consumption: 1-3 kW
- ◆ Mains voltage required: 220/380V

#### Main spheres of application of universal pump-compressor stations:

- ◆ Charging (pumping, loading, filling) the cylinders with Freon 409a;
- ◆ Pumping (evacuating, recovery) cylinders with Freon 409a till zero (the collection of the gas phase);
- ◆ Submission of Freon 409a in other containers working under pressure (dosing, packaging, filling, compression);
- ◆ Useful for chromatographic columns with Freon 409a (for gas chromatography);
- ◆ Liquefaction of Freon 409a by pressure;
- ◆ Pumping of liquid and gas phase of Freon 409a from any vessels, ISO-tanks;
- ◆ Refueling (reloading, recharging) the refrigeration and freezing equipment and air conditioners with Freon 409a.

#### Main advantages of UPCS on oil-free compressor working with Freon 409a:

- ◆ Pumping of pure raw materials;
- ◆ Evacuation of the gas (vapor) phase, which is considered as loss (non-pumped residue);
- ◆ Collection of residues without the use of inert gases (nitrogen, other exhaust gases);
- ◆ Variability of construction (individual characteristics and needs of the consumer);
- ◆ High quality materials and components.

#### THERMODYNAMIC PROPERTIES OF FREON 409A

