# Group of the Companies «RealSnabService» (LLC)

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## SPECIFICATION

UNIVERSAL PUMP-COPRESSOR STATIONS Working media - refrigerant 1234yf

Universal pump-compressor stations (UPCS) are designed for pumping (charging, evacuating, recovery) clean <u>refrigerant 1234yf (Freon 1234yf, R-1234yf)</u> 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 1234yf:

- ♦ 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 1234yf;
- Pumping (evacuating, recovery) cylinders with Freon 1234yf till zero (the collection of the gas phase);
- ♦ Submission of Freon 1234yf in other containers working under pressure (dosing, packaging, filling, compression);
- Useful for chromatographic columns with Freon 1234yf (for gas chromatography);
- ◆ Liquefaction of Freon 1234yf by pressure;
- ♦ Pumping of liquid and gas phase of Freon 1234yf from any vessels, ISO-tanks;
- Refueling (reloading, recharging) the refrigeration, freezing, conditioning and other systems with Freon 1234yf.

#### Main advantages of UPCS on oil-free compressor working with Freon 1234yf:

- ◆ 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 1234yf

