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> **SPECIFICATION** UNIVERSAL PUMP-COPRESSOR STATIONS Working media - refrigerant 227ea

Universal pump-compressor stations (UPCS) are designed for pumping (charging, evacuating, recovery) clean <u>refrigerant 227ea</u> (Freon 227ea, R-227ea, Heptafluoropropane) 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 227ea:

- 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 227ea;
- Pumping (evacuating, recovery) cylinders with Freon 227ea till zero (the collection of the gas phase);
- Submission of Freon 227ea in other containers working under pressure (dosing, packaging, filling, compression);
- Useful for chromatographic columns with Freon 227ea (for gas chromatography);
- Liquefaction of Freon 227ea by pressure;
- Pumping of liquid and gas phase of Freon 227ea from any vessels, ISO-tanks;
- Refueling (reloading, recharging) the refrigeration and fire-extinguishing systems with Freon 227ea.

Main advantages of UPCS on oil-free compressor working with Freon 227ea:

- 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 227EA

