

PTS "VECTOR" COMPRESSORS AND SPECIAL EQUIPMENT



Compressors PTS "VECTOR"-105 PTS "VECTOR"-120

This is a series of compact and portable compressors which are designed to fill breathing apparatus cylinders with compressed air.

One cylinder can be filled as well.

According to GOST R 53263-2009 requirements.

Compressed air quality corresponds to EN12021.

Working pressure: 30.0 MPa.

Efficiency: 105 and 120 L/min.

Design features:

- compressor unit of three-compression stages provides continuous operation and stable service performance;
- increased volume of the unit oil sump lengthens service life of all mechanical friction pairs;
- effective cooling system prevents compressor unit overheating due to using enhanced cooling surfaces and an effective fan;

Drive: 1-phase electrical (2.2 и 3.0 kW 220V),
3-phase electrical (3.0 kW 380V),
4-stroke gasoline (5.5 kW).

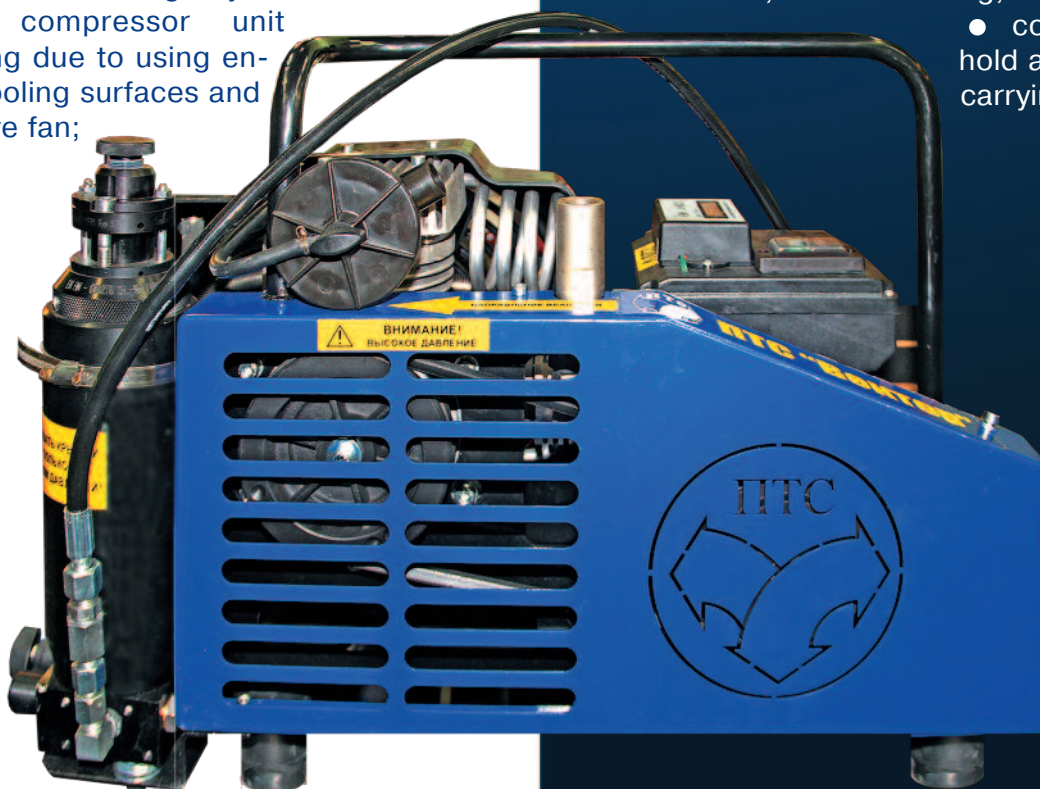
Overall dimensions (LxWxH), no more than:

- with an electric drive: 681x490x412mm
- with a gasoline drive: 800x600x400mm

Final pressure valve, MPa	33,8 ± 2
Temperature mode, °C	+5...40
Max. altitude above sea level, m	1500
Max. inclination angle, deg.	5
Compressor unit stage number	3
Filtering system	PTS-21
Condensate removal	manual
Volume of cleaned air, m ³ , no worse than	108
Electric protection class	IP 54
Motor rotation number, min ⁻¹	3000
Unit weight, kg, no more than	60
Service term, years	10

- increased resource of the filtering system
- of compressed air (up to 108 m³);
- light frame with a rigid base decreases drive vibration and provides easy access to compressor elements, when servicing;

- convenient hand-hold allows compressor carrying by one person.



Compressors PTS "VECTOR"-210 PTS "VECTOR"-265

This is a series of compact and portable compressors which are designed to fill breathing apparatus cylinders with compressed air.

According to GOST R 53263-2009 requirements.

Compressed air quantity corresponds to EN12021.

Working pressure: 30.0 MPa.

Efficiency: 210 and 265 L/min.

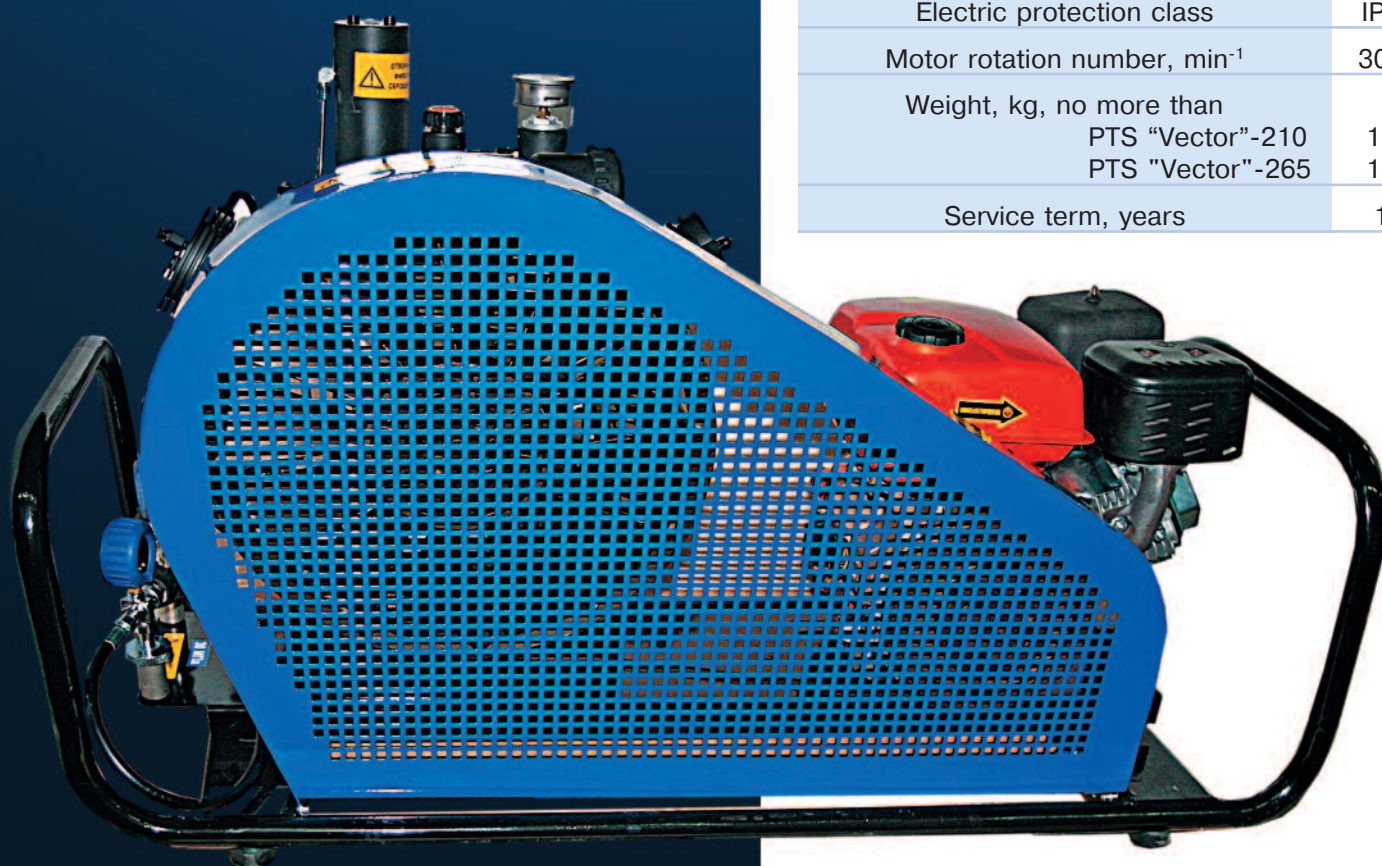
Simultaneous filling of two cylinders.

Drive: 3-phase electrical (4.0 kW),
4-stroke gasoline (5.5 kW).

Overall dimensions (LxWxH), no more than:

- with an electric drive: 1205x500x892mm
- with a gasoline drive: 1337x500x750mm

Final pressure valve, MPa	33,8 ± 2
Temperature mode, °C	+5...40
Max. altitude above sea level, m	1500
Max. inclination angle, deg.	5
Compressor unit stage number	3
Filtering system	PTS-31
Condensate removal	manual
Volume of cleaned air, m ³ , no worse than	327
Electric protection class	IP54
Motor rotation number, min ⁻¹	3000
Weight, kg, no more than	
PTS "Vector"-210	110
PTS "Vector"-265	130
Service term, years	10



Compressor PTS "VECTOR"-330

This is an immovable professional compressor unit of capacity no worse than 330 L/min:

- control systems are located on the front panel:

- working pressure - 30.0 MPa
- electric motor 380V/50Hz, 7.5 kW;
- super tough frame;
- simultaneous filling of up to 4 cylinders;
- electronic system of automatic disconnection, when pressure reaches 32.0 MPa
- double system of drying and filtering air;
- condensate automatic discharge into a tank with a filter-silencer;
- light indication of a filter-cartridge condition;
- motor overheat protection system;
- work hour counter;
- oil level indicator;
- "emergency stop" button;
- compressor protection system of incorrect electric supply connection (phase control relay)

Overall dimensions - 670x900x885mm. According to GOST R 53263-2009 requirements.

Compressed air quantity corresponds to EN12021.

Final pressure valve, MPa	33,8 ± 2
Temperature mode, °C	+5...40
Max. altitude above sea level, m	1500
Max. inclination angle, deg.	5
Compressor unit stage number	3
Filtering system	PTS-41
Condensate removal	autom.
Volume of cleaned air, n³, no worse than	850
Electric protection class	IP54
Motor rotation number, min ⁻¹	3000
Unit weight, kg, no more than	180
Service term, years	10

The compressor might be equipped with filling hoses at the request.



Portable compressor PTS "VECTOR"-330P

High-pressure compressor unit PTS "VECTOR"-330P is portable professional compressor with a productivity rate of at least 330 l / min and working pressure of 30.0 MPa; electric motor with the power of 7.5 kW, 380V / 50Hz.

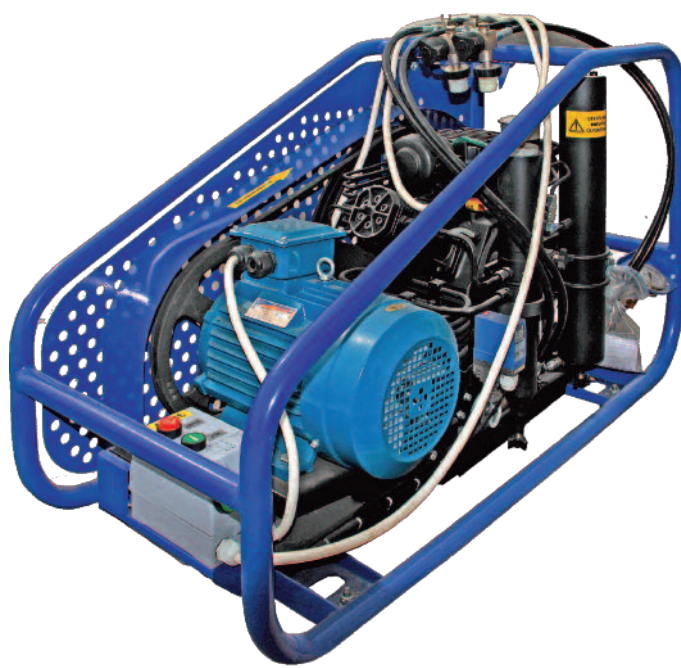
PTS "VECTOR"-330P combines three important properties:

- quality – the compressor has a large service life;
- reliability – the compressor has a heavy-duty frame for damage protection;
- usability – the compressor has easy access to elements and features mobility during transportation.

Distinctive features of the compressor unit:

- 4 cylinders simultaneous charging;
- electronic system for compressor automatic shut-down when the pressure value reached 32.5 MPa;
- possibility to preset pressure for the safety valve opening at a final pressure of 33.8 MPa;
- air drying and filtration;
- automatic belt tension;
- motor overheating protection system;
- service hour meter;
- oil level indicator;
- soft operation owing to inherent electric motor suspension;
- pressure relay shutoff button to check the safety valve triggering;
- compressor unit weight: at most 150 kg;
- dimensions: 1080 x 510 x 735 mm.

Final pressure valve, MPa	33,8 ± 2
Temperature conditions, °C	+5...40
Max. height above sea level, m	1500
Max. tilt angle, deg	5
Number of stages of the compressor unit	3
Filtering system	PTS-31
Condensate removal	manual
Clean air volume, m ³ , not less than	327
Electrical protection class	IP54
Engine speed, min ⁻¹	3000
Weight, kg, at most:	
PTS "Vector" -210	110
PTS "Vector" -265	130
Service life, years	10



Compressor PTS "VECTOR" - S-500

S Series professional stationary compressor units with the capacity of 500 dm³ / min designed for operating pressure of 45 MPa. High-pressure air compressor designed for filling the breathing apparatus cylinders with compressed air up to a pressure of 45 MPa or to 30 MPa with bypass from the receiver through a reduction gear (optional receiver up to 200 liters). The compressed air quality meets the requirements of EN12021.

The compressor unit is available both in fixed and mobile version for placement on the vehicle.

The compressor unit intended for general industrial purposes for filling cylinders with compressed air or nitrogen..



Motor drive type: three-phase asynchronous (11 kW or 15 kW).

Design features:

- electronic system automatically switches off the compressor at a pressure of 45.2 ± 0.1 MPa;
- all compression stages equipped with pressure and temperature sensors;
- removable control panel designed for filling cylinders in a convenient location, which is remote or isolated from the compressor (optional extension cable and tubes or high-pressure hoses of required length);
- the sound and light alarm warns the operator of a deviation from pressure norm and temperature of the compression stage, and will shut down the compressor in case of pressure deviation from the norm and oil level in the lubrication system;
- soft starter not only protects the motor from overloading and overheating at start, but also protects the entire power grid from power surges and phase imbalance;
- automatic condensate discharge;
- automatic control system of filter-cartridge state with the light indication brought to the front panel;
- drive belt tension system;
- motor thermal protection against overload;

Final pressure valve, MPa	46,2±0,8
Temperature conditions, °C	+5...40
Max. height above sea level, m	1500
Max. tilt angle, deg	5
Number of stages of the compressor unit	4
Condensate removal	automatic
Clean air volume, m ³ , not less than	2400
Dimensions, mm	1330x1548x800
Weight, kg, at most:	450
Service life, years	10

Compressors

PTS "VECTOR"-600

PTS "VECTOR"-700

This is series of immovable professional compressor units of capacity 600 and 700 L/min and working pressure of 30.0 MPa.

Drive type: 3-phase asynchronous with a cage rotor (15 and 18.5 kW).

According to GOST 53263-2009 requirements.

Compressed air quantity corresponds to EN12021.

Structural details:

- 5-door noise suppressing body provides an easy access to all compressor aggregates;
- electronic system of automatic disconnection, when pressure reaches 32.0 MPa
- all compression stages are equipped with pressure/temperature sensors;
- emergency light and sound signalization warns an operator about deviations from standards of pressure, temperature of compression stages, pressure/level of oil in the lubrication system, and it will switch off compressor
- compression unit is equipped with a detachable control panel, which is designed to control the unit, refill its cylinders in a convenient place distanced from the compressor (it is necessary to additionally order an extension cable and high pressure tubes of required length);
- slow starter not only protects a motor against overloads (when starting and overheating), but also it protects the entire grid against voltage surges;

- condensate automatic discharge;
- automatic system controlling a filter-cartridge condition with light indication is arranged on the frontal panel;
- system of adjusting driving belt tension;
- overall dimensions - 1595x800x1800mm.



Final pressure valve, MPa	33,8 ± 2
Temperature mode, °C	+5...40
Compressor unit stage number	4
Filtering system	PTS-81
Condensate removal	autom.
Volume of cleaned air, n³, no worse than	1700
Electric protection class	IP54
Unit weight, kg, no more than	470
Service term, years	10

Oxygen Booster Pump PTS "Vector-Oxy"

This is designed to additionally pump ultra-pure oxygen from the initial pressure of 50...150 bar to the working pressure of 220 bar.

Compressed air drive. Oxygen compression is based on the principle of pneumo-multiplier. A piston of big area and low air pressure, having transmitted force to a small area piston, creates higher pressure of oxygen. Pressure ratio is determined by ratio of piston areas.

A pump construction provides its operation on oxygen compression without using lubrication.

Bodies of the pump and pneumatic equipment are made of stainless steel.

Control is done by means of 24 V solenoid valve.

Power supply is arranged from the grid of ~220 V

Light indication of the working process.

Automatic disconnection, when oxygen final pressure is reached

Air pressure at inlet, bar	from 1 to 10
Suction pressure, min, bar	2
Suction pressure, max, bar	5
Oxygen outlet pressure, bar	220
Piston stroke frequency, min ⁻¹	110
Compression coefficient	1/90
Overall dimensions, mm	1080x830x570
Weight (no more than), kg	70
Quantity of inlets to supply oxygen	2
Quantity of cylinders filled simultaneously	4
Air consumption for 1 liter of oxygen (at suction), L	26
Time of filling one 2-liter cylinder (at pressure of supplying oxygen 150 bar and air pressure of 10 bar), no more than, min	1,5
Time of filling one 2-liter cylinder (at pressure of supplying oxygen 50 bar and air pressure of 10 bar), no more than, min	4,8



A unit for Hydraulic Testing PTS "CYCLONE" cylinders PTS "CYCLONE"- 450

The unit is designed for simultaneous testing 2-4 steel / metal-composite cylinders of 2-12 liter volume. Cylinders of bigger sizes can be tested too, but outside the box.

The unit consists of a control panel, testing box for steel cylinders and a module of cubic dilation for metal-composite cylinders.

Water circulation mode is closed one; purification is done by inbuilt filters with visual control of contamination degree.

Normal power supply, V	220
Auxiliary power supply, V	12
Max. air pressure at inlet, MPa	1,0
Max. working pressure, MPa	45,0
Max. air consumption, L/min	320
Capacity, kW, no more than	0,4





PTS "BREEZE" drying equipment

Designed to dry working clothes and equipment, special suits and outfits of fire fighters and rescuers.

It allows to quickly and nicely dry clothes by supplying preheated air through stainless steel tubes and nozzles located on hangers to an object of drying.

The main element is the unit of supplying air PTS "Breeze".

Its operation does not require additional exhaust ventilation and allows installing the unit in the room with general ventilation standard system.

The equipment is characterized by low noise level and low energy consumption: 220V - 1600 W.

All elements are made of stainless steel and might be assembled either for wall immovable application or portable application as well

