

CVM Manufacturing Works produces 7 lines of smoke exhaust fans: 2 lines of roof radial fans with frontwards and backwards curved impeller blades, 2 lines of radial scroll case fans with frontwards and backwards curved impeller blades, 2 lines of axial and 1 line of wall-mounted radial fans with backwards curved impeller blades. All lines of smoke exhaust fans (radial and axial) successfully passed certification tests demonstrating fireproof during 2 hours at a temperature of 400 °C and 600 °C.

No.	Item Name	Model	Climatic Version and Installation Category	Location
1	Roof fan	ВКРН ДУ	У1	Outdoor pursuant to GOST 15150-69
2	Roof fan	ВКРВ ДУ	У1	
3	Roof fan	ВО-21-210К ДУ	У1	
4	Roof fan	ВЕРС ДУ	У1	
5	Wall-mounted fan	ВРП ДУ	У1, У2	Outdoor pursuant to GOST 15150-69 Outdoor under hood and indoor pursuant to GOST 15150-69
6	Axial fan	ВО-21-210 ДУ	У2	Outdoor under hood and indoor pursuant to GOST 15150-69
7	Radial fan	ВР-80-70 ДУ	У2	
8	Radial fan	ВР-280-46 ДУ	У2	
9	Air pressurization fan	УВОП	У2	
10	Roof air pressurization fan	КВОП	У1	Outdoor pursuant to GOST 15150-69

CVM Manufacturing Works reserves the right to change the design of ventilation equipment as a part of continuous improvement process.

Optionally, climatic versions Т (ТВ, ТМ, ТС), ХЛ (УХЛ) are available.

CVM Manufacturing Works produces the following explosion-proof items against special order:

Smoke exhaust fans ВКРН-В ДУ (VKRN-V DU), ВКРВ-В ДУ (VKRV-V DU), ВРП-В ДУ (VRP-V DU), ВР-280-46 В ДУ (VR-280-46 V DU), ВР-80-70 В ДУ (VR-80-70 V DU), ВО-21-210(К) В ДУ (VO-21-210(K) V DU).

Air pressurization fans УВОП (UVOP) (exceptions see on pp.146-148), and КВОП (KVOP) (exceptions see on pp.153-155).

(See more on page 158).

Explosion-proof feature is denoted by the character “В” (“V”) after the number.

Aerodynamic performance and noise characteristics of explosion-proof fans comply with characteristics of corresponding models with regular enclosure.

All explosion-proof fans are certified by the GOST-R and TR Certification Systems and have permission by the Federal Service for Environmental, Technological and Nuclear Supervision.

Operational Characteristics

Fans performance is defined in accordance with GOST 10921-90 with inlet chamber and fan free outlet. Characteristics are represented by the total or static fan pressure versus air flow rate curves. Dynamic pressure corresponds to flange cross-section at the fan outlet. All fan characteristics correspond to standard atmospheric pressure and air temperature of 20 °C with atmospheric density of 1.2 kg/m³. For the fan characteristics deration considering removable smoke temperature defined in the smoke exhaustion calculations, the pressure should be multiplied by the factor $K=293/(273+T)$, where T is removable smoke temperature in °C. It is well to bear in mind that power consumed by the fan changes proportionally.

Smoke exhaust fans selection software allows choosing required handled medium temperature and picking up a fan considering stated medium parameters.

Manufacturing plant recommends to blank off 3/4 of fan suction opening during fan break-in prior to mounting (installation of large-sized equipment in hard-to-reach spots), or, in case that the break-in is performed after the equipment mounting, adjust system head so that current consumption during fan break-in does not exceed 10 % of the rated current (specified on the motor rating plate). Stated conditions may be obtained by means of installation of throttling device on suction side. Break-in may be performed at the manufacturing plant.

Optionally, equipment may be completed with mounting sleeves, check valves, trays, fittings, etc. (see “Roof Fans Installation” section on page 159).

Applied electric motors

Degree of protection for the applied electric motors shall not be lower than IP54.

Note:

Read “smoke exhaustion system exhaust fans” and “smoke exhaustion system inlet fans” instead of “smoke exhaust fans” and “air pressurization fans” correspondingly (SP 7.13130.2013 clauses 3.16, 3.17).