
POC 20/30 JET - Cartridge Air Filtration System

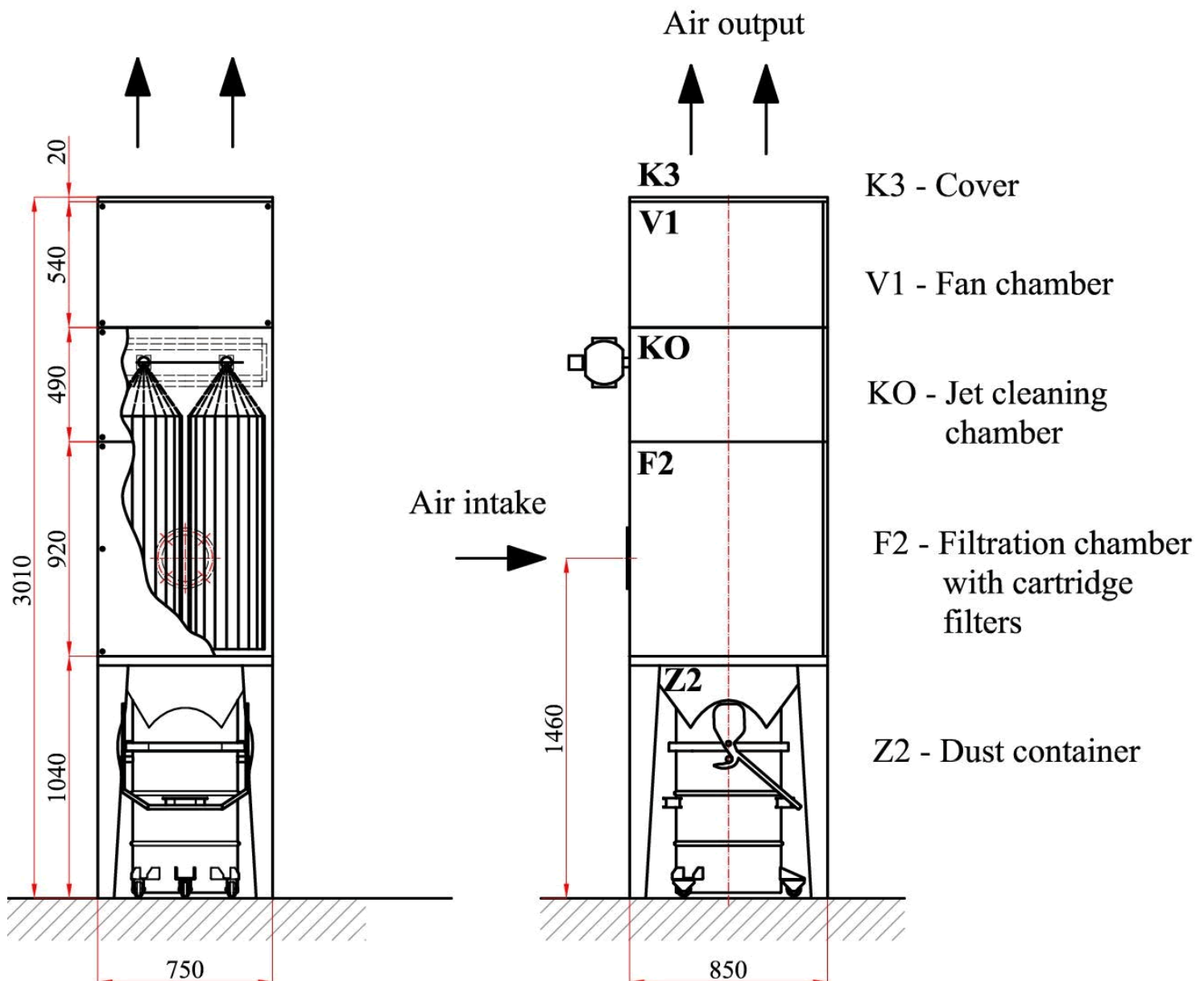
Industrial air filtering units POC 14/20/30 are designed for industrial heavy around-the-clock use with very simple and economical maintains.



Industrial Air Filtering units POC 20/30 JET are intended to filter both metallic and non-metallic dust particles and aerosols, also welding operations, surface grinding and metal cutting, dust generating processes, mist and vapor collection, industrial grinding operations, fiberglass sanding & deburring, CNC milling, EDM milling, powder mixing and much more.

POC 20/30 JET consists of three basic components:

- *Dust container (metallic rack with dust reservoir)*
- *Filtration chamber with cartridge filters*
- *Jet cleaning chamber*
- *Fan chamber with a cover*



Dust container consists of the pedestal and cylindric dust reservoir that is firmly fastened. Manipulation with the container is facilitated by its 2 handles and 3 wheels.

The filtration chamber is equipped with 2 cartridge filters that can vary according to the required type of retained dust. Please contact us to consult the best filter type corresponding to your needs prior to placing the order.

The jet cleaning chamber enables an effective pulse cleaning of the filters. At the rear part of the chamber (at the inlet side) there is a compressed air reservoir with the pulse valves. These are set off by electric impulse regulated by the preset pressure loss detection or based on the time settings. The compressed air is successively cleaning all the filter cartridges via the pulse valves.

The fan chamber is fitted with a radial mid-pressure electric fan that is propelled by an asynchronous flange-mounted constant speed electromotor. The type of it determines technical parameters of the exhauster. The fan chamber is upholstered with a noise suppressant insulation and the front opening fitted with a removable cover for easy inspections. The outlet of filtered air is conducted through an exhalation grill or via an adaptor that enables the connection into the discharge pipe.

Controlling is conducted by an electronic control unit which is optionally fitted on the outside wall of the exhauster or delivered separately.

FUNCTION

Polluted air that is fed into the exhauster via an air duct or special exhaustion arm is first led through the filtration cartridges that retain pollutant parts and then travels out over the fan chamber (either back into the room or out of the building via the piping system). The cartridge cleaning process is automatic and is dependent on the preset pressure loss values and time settings.

APPLICATION

Basic models of exhausters POC 20/30 JET are designed for non explosive environments. However, there are optional adaptations for higher explosion risk environments available upon request. Basic working temperatures of filtered air fall into -20 - +60 °C range. The temperature of inlet air should not exceed 90 °C.

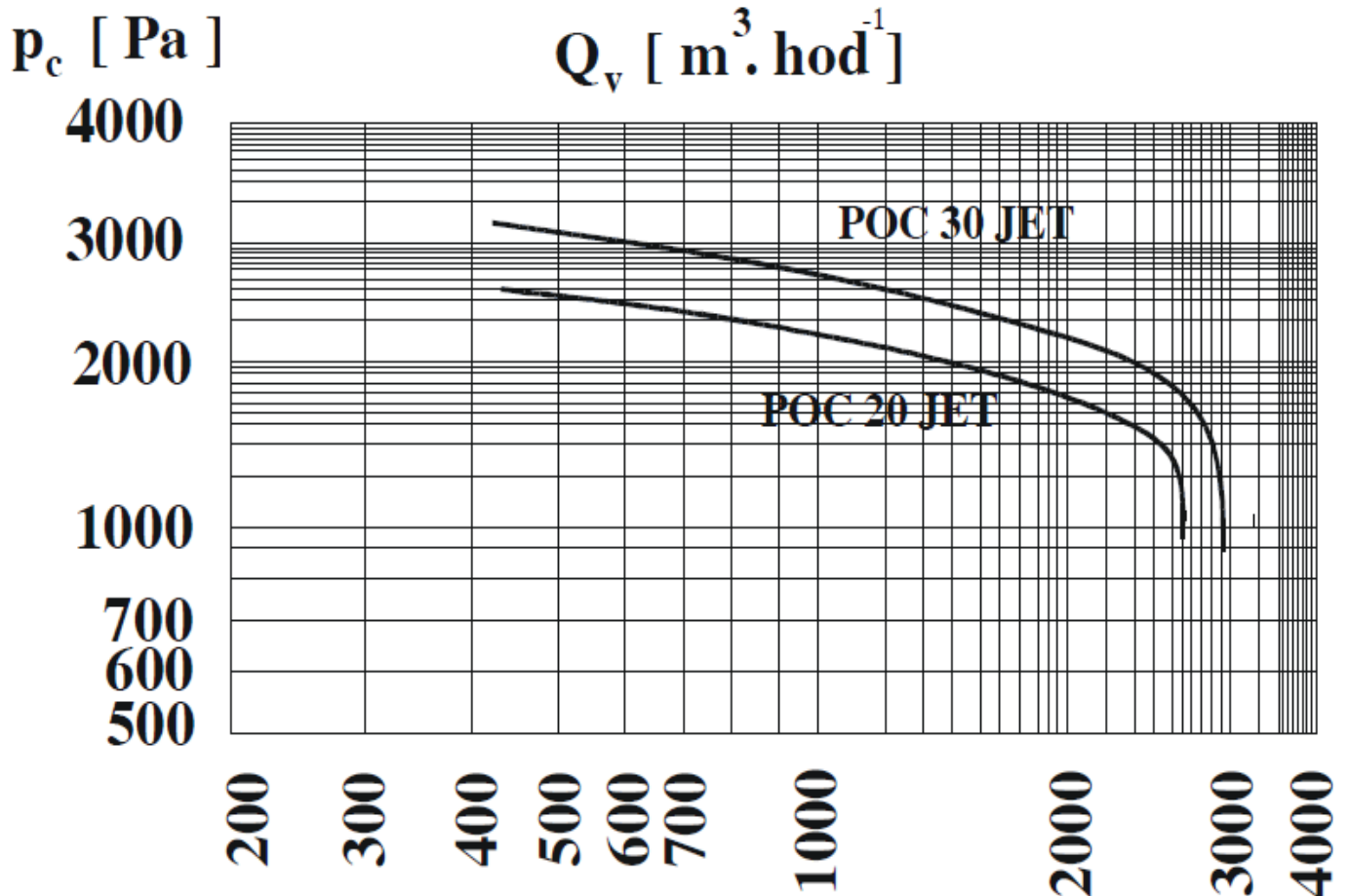
The exhausters are supposed to be placed inside the buildings or at sheltered places protected from climatic influences.

Technical parameters of POC 20/30 – JET units

Type of unit			POC-20 JET 2 filter cartridges	POC-30 JET 2 filter cartridges	POC-30 JET 4 filter cartridges	POC-30 JET 9 filter cartridge
Type of exhauster	Q_v (m ³ /h)		2 000	3 000	3 000	3 000
Total suction pressure	p_c (Pa)		1 550	1 750	1 750	1 750
Electro motor	<i>voltage</i>	U (V)	3x400/230 V	3x400/230 V	3x400/230 V	3x400/230 V
	<i>frequency</i>	f (Hz)	50 Hz	50 Hz	50 Hz	50 Hz
	<i>input</i>	P (kW)	2, 2	3	3	3
	<i>revs</i>	n (RPM)	2 865	2 895	2 895	2 895
	<i>fusion</i>	I (A)	4, 7	6,1	6, 1	6, 1
	<i>shield.</i>		IP 54	IP 54	IP 54	IP 54
Acoustic performance	L (dB/A/)		65	68	68	68
Main dimensions	<i>Width</i>	A (mm)	750	750	1 500	750
	<i>Depth</i>	B (mm)	850	850	850	850
	<i>Height</i>	L (mm)	2 920	2 960	3 170	2 960
Weight	m (kg)		230	230	380	240
Number of Cartridges			2	2	4	9
Total filtration surface	S (m ²)		30	30	60	40
Compressed air reservoir	V (m ³)		14 l	14 l	28 l	14 l

TECHNICAL DATA

Characteristics of POC 20/30 JET exhausters in basic state (with no additional piping fitted)



DELIVERY, TRANSPORTATION AND STORAGE

The exhausters are delivered in non-returnable packaging and completely assembled. Transportation takes place in horizontal position (laid down) and in sheltered vehicles. The storage requires dry sheltered place away from direct climatic influences.

INSTALLATION

Installation of the exhauster should be conducted according to the technical proposals or project dispositions that are compliant with all safety and other standards and with manufacturer's instructions.

The exhauster has to be installed in vertical position on the firm plain level surface. There is no necessity to anchor it.

Projected inlet piping should be connected by the flange collar with rubber sealing using the welded M8 bolts secured with the nuts.

Electrical installation of the appliance can be only carried out by an authorized person. The object of the installation is to feed the electric power supply into terminal plate of the main control unit (in case the

unit is already fitted onto the unit wall). For separately supplied control units please use the diagram on Fig.3 (enclosed with each delivery) to connect correctly the control unit to the exhauster.

To ensure the influx of compressed air into the jet cleaning system you need to connect the 3/8" delivery hose (inner diameter 9mm) to the collar of regulatory filter and secure it by strap.

After the exhauster is installed, the following step is to check a proper direction of the fan propeller spin. This is conducted automatically by the control unit. First set the FA1 breaker to the ON position and push the START button. If the phases were connected incorrectly, the HL1 indicator would blink in which case you must switch the unit off by the START/STOP button and return the FA1 breaker to the OFF position before swapping both phases of the mains. After restarting the HL1 indicator would stay permanently alight.

After installation of all air ducts, connecting the power mains, proper closure of all front covers and after securing the container by its buckles the exhauster is ready for operation.

SERVICING AND MAINTENANCE

The appliance is set into operation by the properly connected control unit.

FA 1 breaker (main switch) and FA 2 switch must be in the ON position. The unit is in operation after pressing the START/STOP button (HL1 indicator is alight).

The control unit automatically ensures also the jet cleaning of cartridges in accordance to the preset values from manufacturer. Beside the regular programmed cleaning cycle it is possible to precede the jet cleaning pulse manually by pressing the "OFUK" (blow) button.

It is also possible to alternate the parameters for regular cleaning cycle. The procedure for such changes is described in the control unit service manual that is included with each exhauster delivery.

The exhauster is switched off by pressing the START/STOP button again (HL1 indicator goes off).

The maintenance service staff must regularly check and discharge the pollutant container according to specific conditions of the particular plant. The container discharge must be done when the unit is turned off. All 4 clamps can be released by pulling its levers downward. The unit is ready for further operation after the empty container is tightly repositioned and all 4 buckles closed.

Detained pollutant should be disposed according to its character and in line with all hygienic regulations.

The overall technical checks are to be pursued in regular cycles (approximately after each 1500 operational hours) adhering to following rules:

!! The technical checks are only carried out when the unit is not in operation!!

- The electro installation checks can only be done by an authorized person.
- The state of filter cartridges is to be checked after removal of the front cover panels that are attached by 4 M8 bolts with semispherical head and inner hexagonal of 5mm diameter.
- The integrity of filter cartridges and a quality of the sealing adhesion are a subject of regular checks as well as are the revisions of the electro circuits.
- All conducted checks should produce proper written records.
- Make sure the rubber seals are properly seated.. after repositioning the front covers..
- Should any irreparable damage occurs, please contact the us for consulting.

In some filter types it is necessary to proceed dusting after the new cartridge is installed. This ensures a proper function of the jet cleaning process. The powder for such treatment is included with each new filter cartridge delivery together with detailed instructions for its use.



More detailed information can be obtained at:

VZDUCHOTECHNIK s.r.o., Tovární ul. 548, 463 31 Chrastava, Czech Republic

el: +420-(0)48-5143114, fax: +420-(0)48-5143103,

vzduchotechnik@vzduchotechnik.cz www.vzduchotechnik.com