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## POC 40-60 JET - Cartridge Air Filtration System

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***Industrial air filtering units POC 40 and POC 60 are designed for industrial heavy around-the-clock use with very simple and economical maintains.***



***Industrial Air Filtering units POC 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, toner dust, mist and vapor collection, industrial grinding operations, fiberglass sanding & deburring, CNC milling, EDM milling, powder mixing and much more.***

### **POC 40-60 JET consists of three basic components:**

- *Stand (with discharge hopper and container for collected dust)*
- *Filtration chamber with cartridges filters and automatic reverse pulse cleaning system*
- *Fan chamber*

The equipment consists of stand, rectangular discharge hopper and container for collected dust. The container is fixed to the discharge hopper by the means of 4 quick couplings. In terms of easy handling the discharge hopper is equipped with handles and with castor wheels.

The filtration chamber in POC 40/60 JET includes 4/6 pieces of filtration cartridges. The air flushing chamber shall assure pulse cleaning of the filtration chambers. In the sidewalls of the chamber the containers of the filter cleaning system are installed and equipped with pulse valves. The valves are operated by electric pulses based on defined pressure drop or based on time to be set on the control unit of the extractor. The air for filter cleaning is guided to the jets which alternately flush the individual filtration cartridges.

In the fan chamber the radial middle-pressure extracting fan is installed. As a fan drive an asynchronous, single speed, flanged electric motor is used. The fan determines the technical parameters of the extractor. The fan chamber is lined with some sound-insulation mass and in its front side a removable cover is installed to enable easy inspection of the fan. If the extractor is running, the cover of the fan chamber must be closed!!!

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## **Cartridge extractor - automatic reverse pulse cleaning**

*The equipment is controlled by an electronic control unit which assures fusing and operation of the extracting fan as well as cleaning of the filtering cartridges in accordance with parameters set. The control unit is installed into the case of the equipment.*

**Function:** *Polluted air supplied via extracting pipeline goes through the filtering chamber equipped with cartridge filters which shall capture the entrained dirt. After it the air mass is forced through the air flushing chamber and the fan chamber to the pressure output. In course of the operation an automatic cleaning of the filtering cartridges via back-flushing is executed following the parameters set.*

*In most cases it is possible to discharge the filtered air back into the space extracted. If some higher cleaning quality of the extracted air mass is required, the extractor POC 40/60 - JET may be additionally provided with II-nd step filtration chamber and with filters for the required filtration class.*

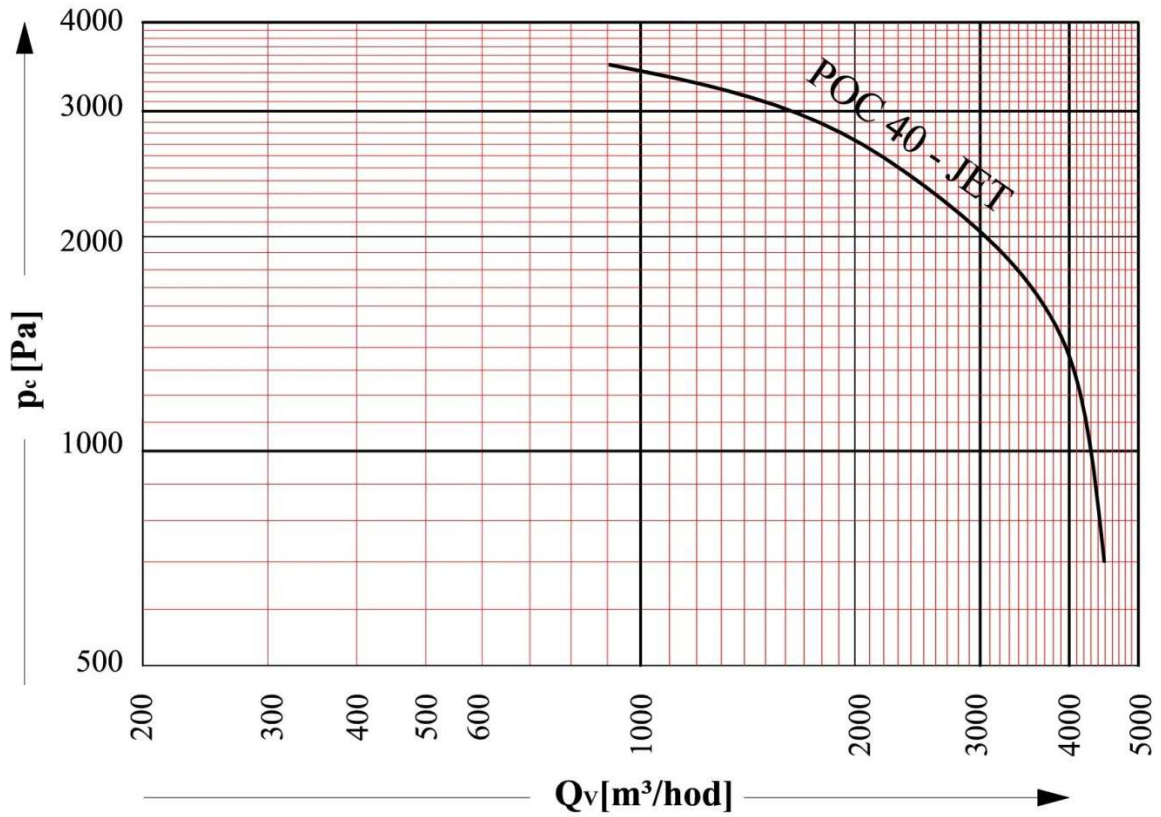
**Use:** *In most cases the extractors are installed indoors. If the extractor shall be installed outdoors, some protection of pressure air tailing filters against freezing must be assured. The extractors POC 40 – JET are intended for extracting and filtering of metallic and non-metallic dusts, small particles and aerosols. They are appropriate as extractors for welding operations, laser cutting of plastics, plasma cutting, for extracting of graphite, toners, asbestos, sugar, tobacco, milk powder, etc.*

*We recommend you to consult the use of the extractors POC 40-JET with the equipment manufacturer to determine the optimal filtering cartridges.*

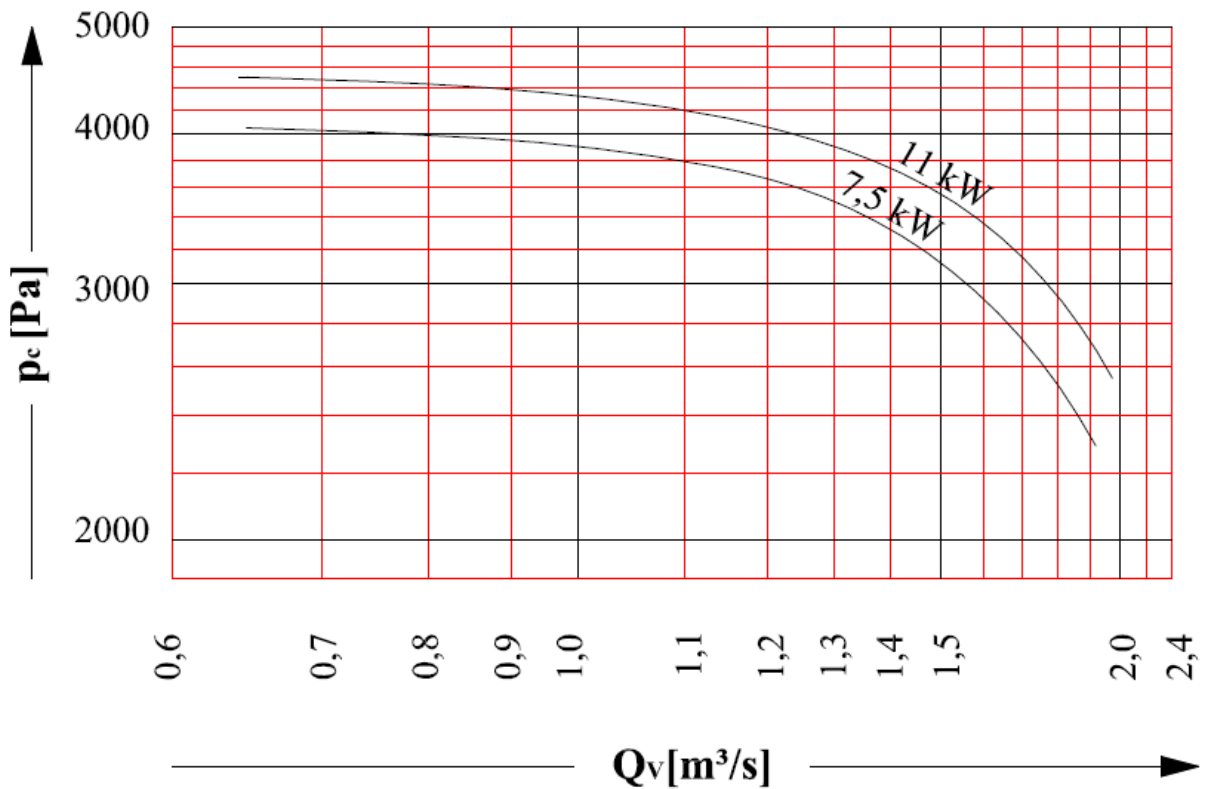
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## Technical

Characteristics of fan (4 kW) of the extractor POC 40 – JET



Characteristics of fan (11/7,5 kW) of the extractor POC 60 – JET



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## **5. SPARE PARTS**

*The following table presents an overview of the spare parts which may be delivered following a customer order. These parts are not (except of spare filtering cartridges) delivered as standard but only in case of failure, damage or loss. As for normal operation these spare parts are not considered as necessary.*

<b>STAND</b>	Container for collected dust, rubber sealing for the container, quick couplings and castor wheels
<b>FILTERING CHAMBER</b>	Filtering cartridge, cartridge fixing element, diffuser, auxiliary powder for cartridges, rubber sealing below the removable cover of the filtering chamber.
<b>AIR FLUSHING CHAMBER</b>	Air container for the filter cleaning system, pulse valves, air filter, rubber sealing below the removable cover of the air flushing chamber, control unit
<b>FAN CHAMBER</b>	Electric motor, fan impeller

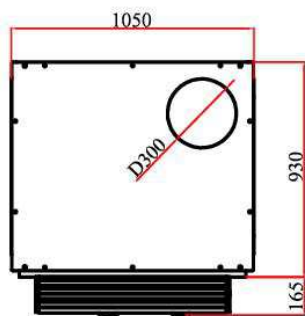
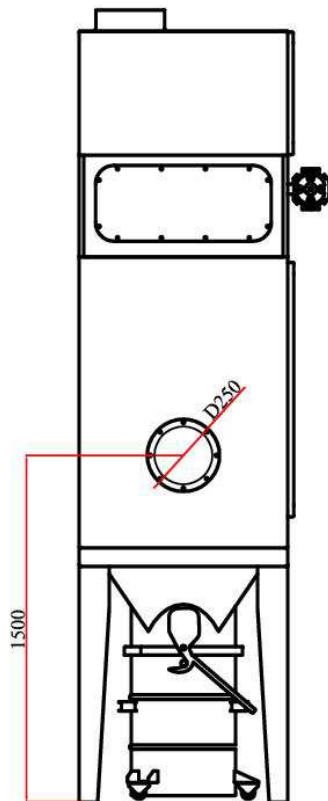
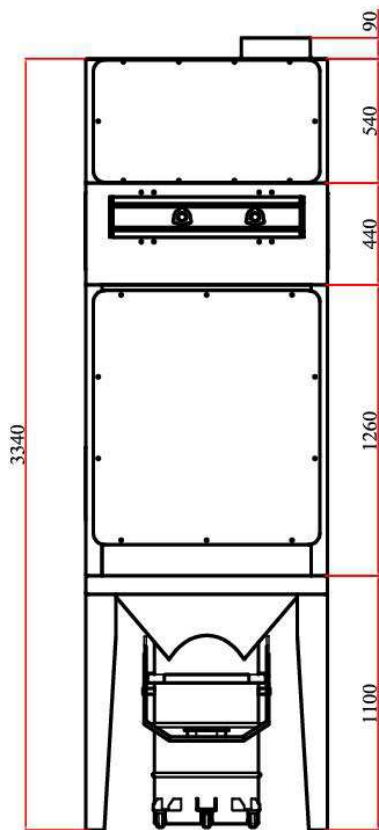
## **ACCESSORIES**

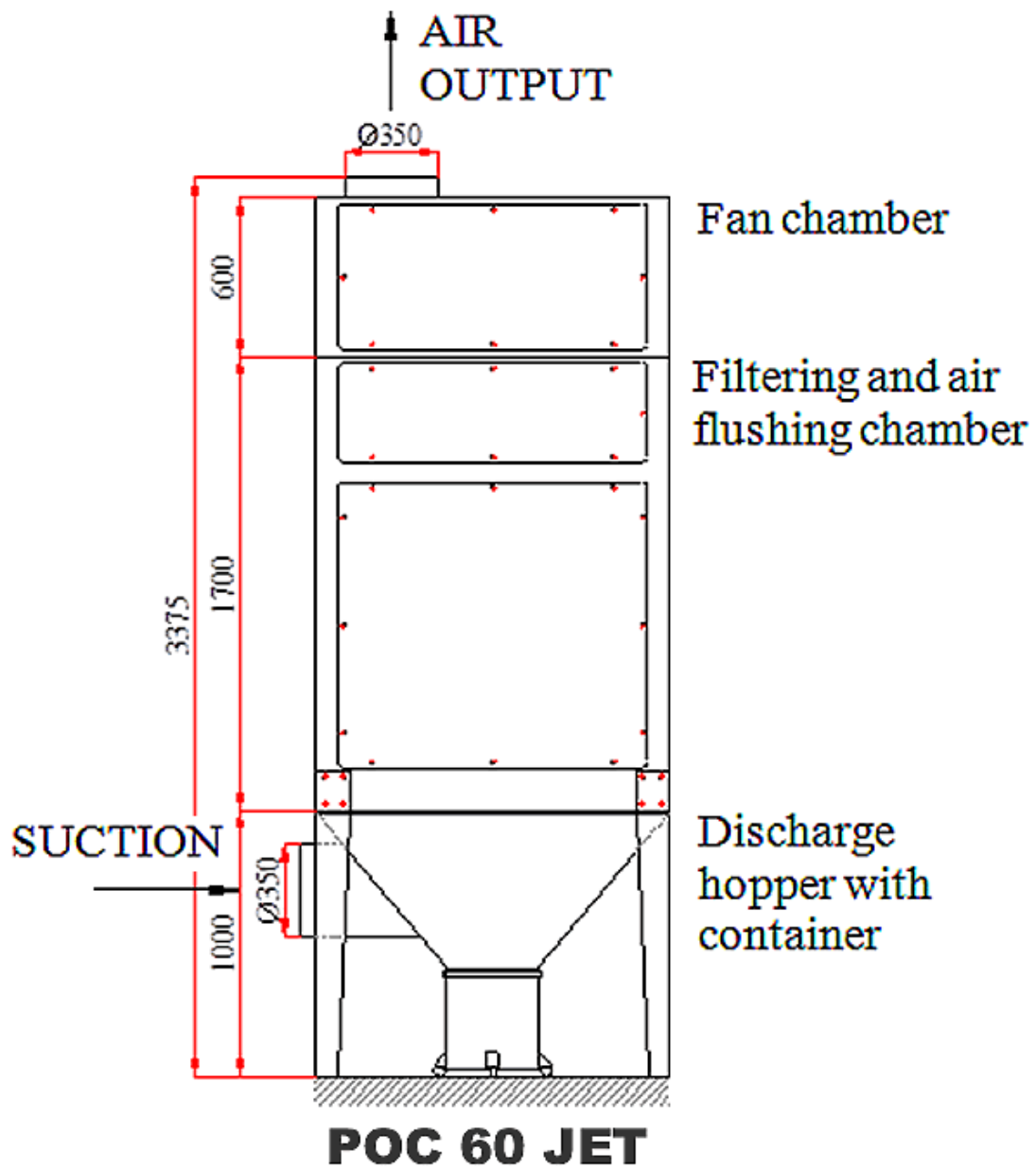
*Upon customer request the II-nd step filtering cabinet may be delivered for the extractor POC 40/60 – JET. It is possible to deliver various transition and pipeline components following the customer specification.*

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## Basic dimensions

# POC 40-JET





## **Technical data of the extractors POC 40/60 - JET**

Type of extractor		POC 40 – JET	POC 60 – JET
Recommended air volume flow rate	$Q_v$ ( m <sup>3</sup> /h )	4.000	6.000
Overall suction pressure of the extractor	$p_c$ ( Pa )	1500	2700 / 3200
Supply voltage		3 x 400/230 V, 50 Hz	3 x 400/230 V, 50 Hz
Input power of the electric motor	P ( kW )	4	7,5 / 11
Revolutions of the electric motor	n ( revolutions/ minute )	2960	2955
Initial pressure drop	$\Delta p$ ( Pa )	~350	~350
Operating pressure drop	$\Delta p$ ( Pa )	about 1500*	about 1500*
Main dimensions	Floor plan	A x B ( mm )	1050 x 930
	Height	L ( mm )	3340
	Suction opening	$D_1$ ( mm )	250
	Outlet opening	$D_2$ ( mm )	300
Quantity of filtering cartridges	(pieces)	4	6
Overall filtering surface	S ( m <sup>2</sup> )	72	114
Filtering class in accordance with the EN 1822 standard		E10	E10
Weight	m ( kg )	~590	~670
Volume of air containers for cleaning of filters	V ( dm <sup>3</sup> )	21 l	27l

\*The operation pressure drop depends on the kind of the dust to be collected.

### **INSTALLATION**

*The filters shall be installed in accordance with a technical project or with project instructions which must comply with applicable safety regulations, standards and manufacturer instructions.*

*The cartridge extractor POC 40 - JET shall be put into vertical position onto some rigid horizontal floor. The extractor does not need any anchoring.*



*The designed suction airline shall be connected to the suction opening flange. The extracting air pipeline may be connected to the pressure output.*

*The electric connection of the extractor POC 40 - JET must implement only authorised electrician in accordance with the ordinance No. 50/87 Coll. The electric installation consists of the main electric supply to be connected to the terminal box of the control unit (provided the manufacturer has installed the control unit into the equipment cabinet). If the control unit is delivered separately, the control unit shall be connected to the extractor in compliance with the wiring scheme which is included in each delivery.*

*If the extractor is delivered without the control unit, it must be connected in compliance with applicable standards and regulations following the Operating Manual of the fan.*

*Furthermore, the supply of the pressure air for cleaning the filtering cartridges must be assured. The supply shall be implemented as pressure hose 3/8" (inner diameter of 9 mm) connected to the socket of the regulation filter. The hoses shall be secured by a tightening belt.*

*After installation of air pipelines, after connection of mains in compliance with instructions indicated above and after proper closing of individual chambers and after securing of the discharging hopper by the means of fixing elements the extractor is ready for operation.*

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## **OPERATION AND MAINTENANCE**

*The control unit assures automatic air flushing of the cartridges in accordance with default values set by the manufacturers. The air flushing of the cartridge filters may be started also manually – beyond the cycle set – by the means of the button "OFUK (air flushing)".*

*The air flushing parameters may be re-programmed. The procedure how the parameters may be changed is described in the Operating Manual of the control unit which is included in each delivery.*

*The equipment operators must – at regular time intervals to be determined depending on particular operating conditions – take care for discharge of the container of the extractor. The container shall be discharged only if the equipment is switched OFF. The*

*fixing couplings shall be released by pulling them upwards. Then the container may be removed and emptied. After it the container shall be put back and tightly fixed by the quick couplings. Now the equipment is ready for operation again.*

*Disposal of collected waste shall be executed depending on its character and always in compliance with applicable hygienic and safety standards.*

*At regular time intervals, after about 1500 operating hours, the technical status of the extractor shall be inspected in accordance with following instructions:*

- !! The technical status of the extractor shall be inspected always and only when the equipment is switched OFF!!*
- The electric installation must be inspected only by qualified and authorized electrician following the applicable regulations and safety standards.*
- Inspection of the status of the cartridge filters and of the air flushing system shall be executed after dismantle of the front covers of the particular chambers.*
- Check completeness and clogging of the filters as well as tightness of the equipment casing. The electrical inspections and revisions must be executed in compliance with applicable standards.*
- The fan shall be inspected in accordance with instructions indicated in the Operating Manual for the fan.*
- The executed inspections and revisions shall be document in writing.*
- In course of re-installation of the chamber front covers their proper sealing must be assured.*

*Some types of new filtering cartridges require initial powdering with a special powder which will enable air flushing of trapped dust particles later on. This initial powder is included in delivery of spare cartridges together with relevant instructions how to use it.*

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## **WARRANTY PERIOD, COMPLAINT PROCEDURE**

*As for delivery of extractors the warranty period of 24 months is provided as standard. This warranty applies to functionality and quality of products. The warranty period starts since the day of removal/delivery of the goods. The warranty applies to manufacturing defects ONLY. It shall not apply to defects caused by improper installation and/or improper use. Each complaint must be enforced in writing and it shall be addressed to the supplier or to the equipment manufacturer. The complaint may be accepted only if the equipment has been installed and used in compliance with instructions indicated in this document.*



*More detailed information can be obtained at:*

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