



UFO-A – devices with Venturi orifices



UFO-A-5000



UFO-A-10000



UFO-A-15000



UFO-A-20000

Purpose

In general, UFO-A filtering units are designed for cleaning the dust-laden air from contamination, formed during production processes. It is irreplaceable in capturing the dry dust particles emitted during the welding, grinding of non-sparking materials, gas- or plasma cutting of metals or other dust emitting processes, in chemical industry, pharmaceuticals, food production, plastic processing and others. Maximum temperature of the forwarded air should not exceed +60°C. The appliance is equipped with cartridge filters, collecting the dust particles on the outer filter surface. The deposited dust must be cyclically struck down by impulses of compressed air.

Structure

The system consists of one or two filtration chambers and a fan, placed above the filtration chamber.

The filtration chamber is located on a four-leg base with hopper chamber and waste container.

UFO-A-5000 and UFO-A-10000 consist of one filtration chamber and a fan of rated flow 5 000 m³/h and 10 000 m³/h respectively.

UFO-A-15000 and UFO-A-20000 consist of two filtration chambers and a fan of rated flow 15 000 m³/h and 20 000 m³/h respectively.

Each filtration chamber is divided with vertical wall into two parts:

- chamber of filters – containing self-cleaning cartridge filters – polyester fabric of filtration efficiency 99,9%,
- chamber of regenerators – with Venturi orifices, to clean the filters from the deposited dust, (by means of compressed air impulses). Filter cleaning proceeds automatically.

Outside the filtration chamber is located a compressed air tank with electro-valves, connected to the external installation of compressed air of pressure 6 – 8 bars. Above the filtration chamber is located a decompression chamber and a fan in acoustic housing. The fan cooperates with a set of silencers, in a form of a straight silencer and two damping elbows. In case when the appliance works with an open outlet, it should be equipped with air guiding set (additional equipment).

UFO-A, at the air inlet side, are equipped with connections Ø500 mm in each filtration chamber. As standard, connections are located on the right device side (when viewing at the filtration chamber side). It is possible to execute the appliance with the outlet on the left side. Additionally, to the device is connected the automation set, to supply the fan and control the pneumatic filters regeneration system.

Operational use

It is recommended to install the UFO-A inside the rooms. When they are installed outside the building (outdoor application), it is important to add a fan hood (see additional equipment) and to isolate the housing. Before the start-up, screw up the device firmly to the floor. The filtering units are designed for:

- cooperation with a system of local exhausts, i.e. extraction arms connected to the main collecting ductwork, joining them with the inlets,
- general ventilation combined with air filtration, for example functioning in the „push-pull” system.

After start-up, the automation set provides continuous work of the fan and automatic filter cleaning by cyclical compressed air impulses. The cartridge filters should be replaced for new after a period of use (approx. 1 – 2 years).

NOTE:

1. In case of application for plasma cutting, take into account that the real device capacity will be twice lower from the nominal value. For example, for UFO-A-10000 of nominal volume flow 10 000m³/h, its real capacity during plasma cutting will amount 5000 m³/h (here for extraction from one segment will be required a table of dimension 2100x500mm).
2. On Customer's request the device can be equipped with active carbon impregnated spunbond filters – for filtration of gaseous contaminations arising during the welding processes.
3. UFO filtering unit can be equipped with an inverter to control the motor. Rotational speed governor (of the motor) provides adjustment of the device capacity along with the maintained constant vacuum in the discharge installation.



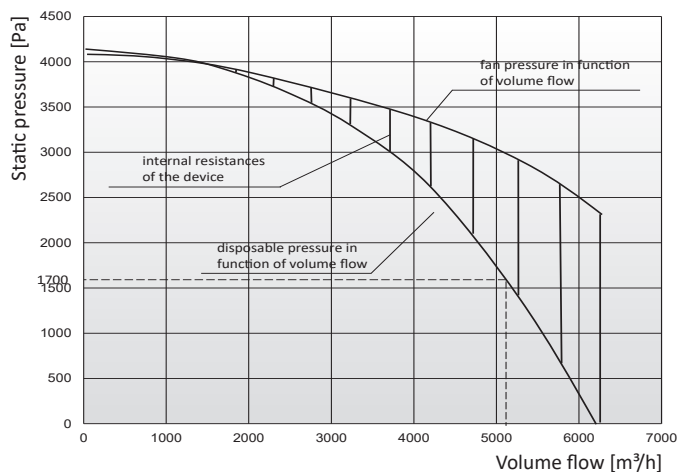
Technical data

Type	UFO-A-5000		UFO-A-10000		UFO-A-15000		UFO-A-20000	
Version	RH ¹	LH ²	RH ¹	LH ²	RH ¹	LH ²	RH ¹	LH ²
Part no.	804U17	804U22	804U18	804U23	804U14	804U24	804U13	804U25
Maximum volume flow [m ³ /h]	6300		12 000		17 000		22 000	
Maximum vacuum [Pa]	4100		5000		5100		5000	
Motor rate [kW]	5,5		11		18,5		22	
Supply voltage [V]	3x400		3x400		3x400		3x400	
Acoustic pressure level [dB(A)] ³	72		76		78		80	
Weight [kg] ⁴	610		840		1100		1300	
Diameter of inlet [mm]	500		500		2x500		2x500	
Required compressed air pressure [MPa]	0,6		0,6		0,6		0,6	
Quantity of cartridge filters	2		4		6		8	
Capacity of waste container [dm ³]	72		72		72		72	
Compressed air consumption [Nm ³ /h]	2,8		5,6		8,4		10,2	

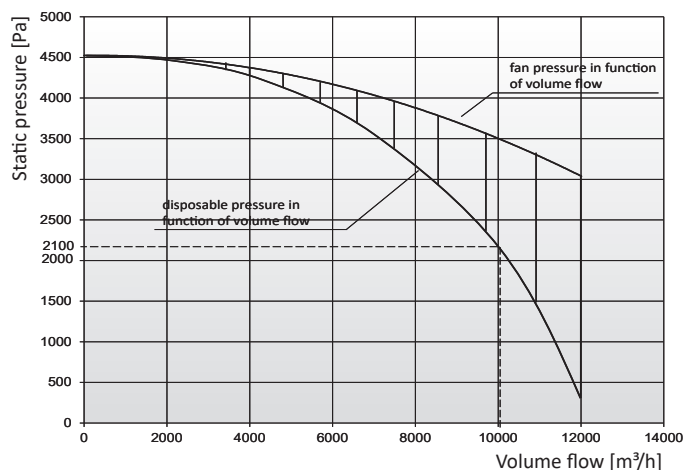
1. RH – air inlet on the right.
2. LH – air inlet on the left.
3. Acoustic pressure level has been measured at distance of 1 m (from the device) and at nominal volume flow.
4. Weight of the device without silencers.

Flow charts

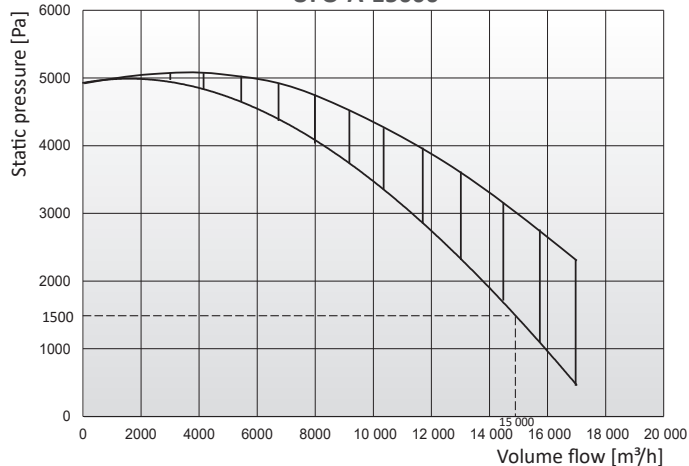
UFO-A-5000



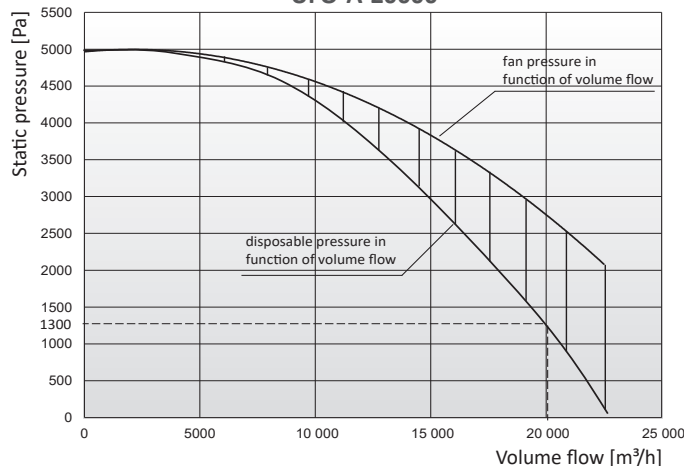
UFO-A-10000



UFO-A-15000



UFO-A-20000

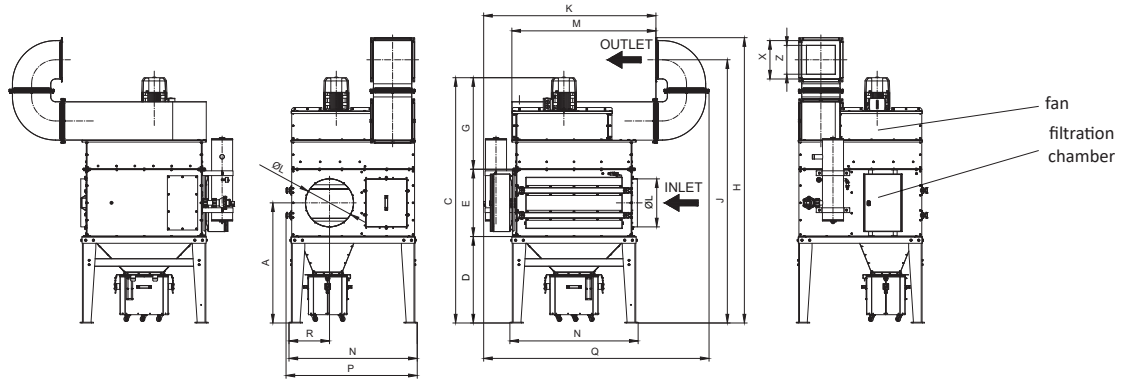


NOTE: The flow charts have been prepared for cartridge filters preliminary polluted with dusts after welding out 1500 electrodes ER24.

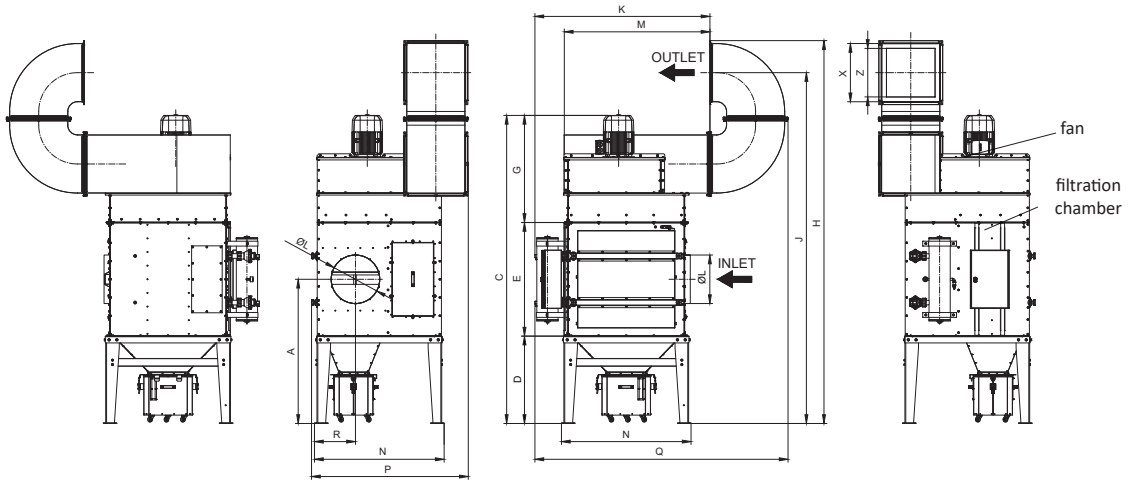


UFO-A

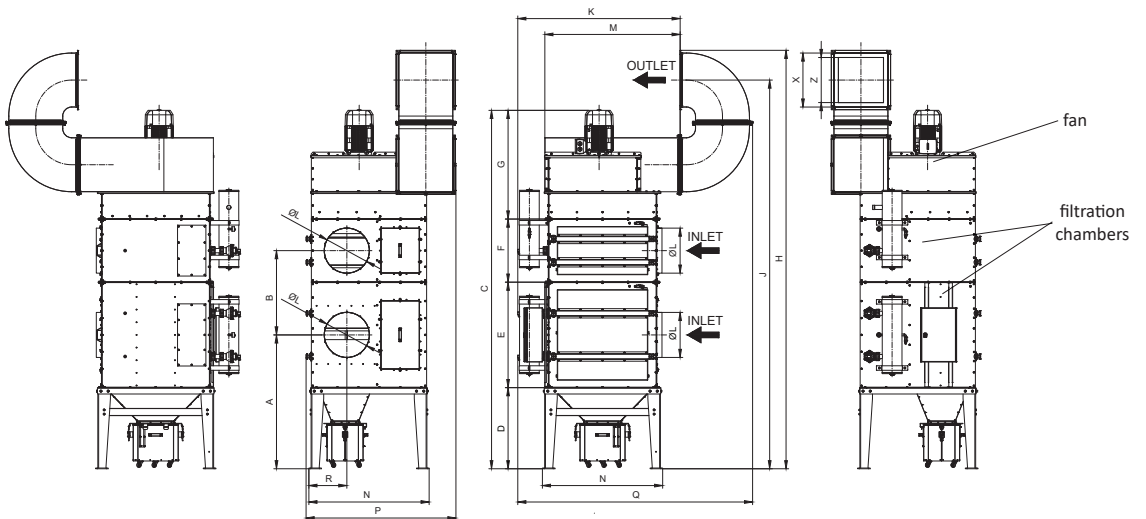
UFO-A-5000



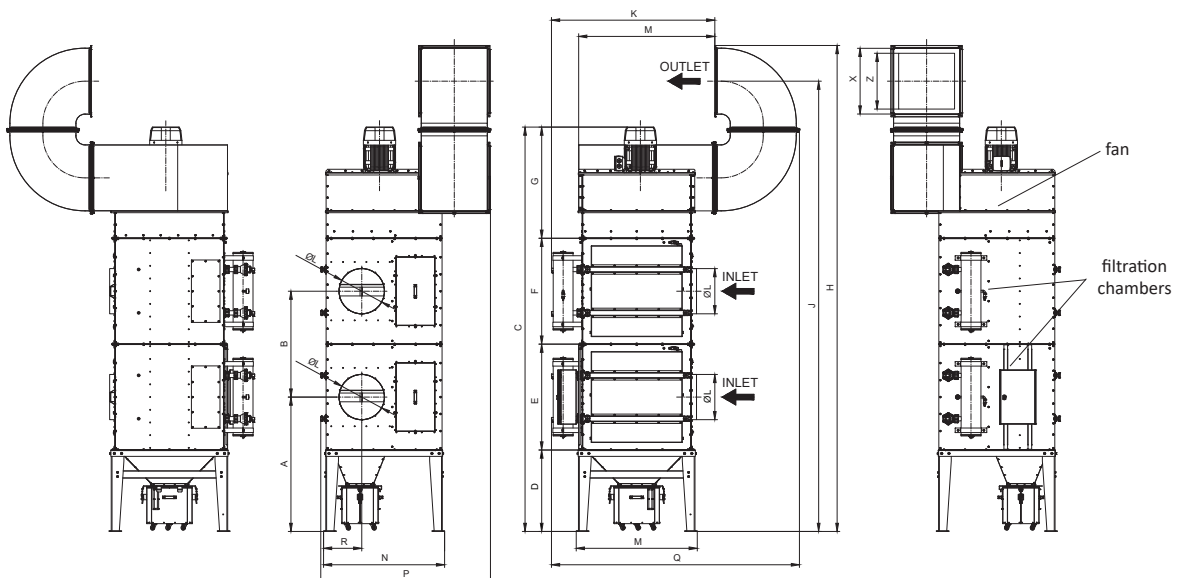
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UFO-A-15000



UFO-A-20000





Dimensions

Type	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	J [mm]	K [mm]	ØL [mm]	M [mm]	N [mm]	P [mm]	Q [mm]	R [mm]	X [mm]	Z [mm]
UFO-A-5000	1250	-	2555	900	700	-	955	2970	2740	1795	500	1500	1335	1365	2350	420	400x400	300x300
UFO-A-10000	1485	-	3175	900	1170	-	1105	3945	3615	1805		1500	1335	1615	2610	420	600x600	500x500
UFO-A-15000	1485	935	3980	900	1170	700	1205	4645	4315	1805		1500	1335	1665	2610	420	600x600	500x500
UFO-A-20000	1485	1170	4470	900	1170	1170	1230	4980	4980	1805		1500	1335	1875	2735	420	730x730	630x630

Replaceable parts

Cartridge filter

Type	Part no.	Weight [kg]	Filtration efficiency [%]
PN206638U	800F04	4,2	99,9

Additional equipment

Air guide blades

Type	Part no.	Section [mm]	Length [mm]	Remarks
KP-UFO-A-5	843K01	400x400	600	for UFO-A-5000
KP-UFO-A-10, 15	843K02	600x600	600	for UFO-A-10000, 15000
KP-UFO-A-20	843K03	730x730	600	for UFO-A-20000

Fan cover

Type	Part no.	Remarks
OW-UFO-5000	804Z01	for UFO-A-5000
OW-UFO-10 000	804Z02	for UFO-A-10000
OW-UFO-15 000	804Z03	for UFO-A-15000
OW-UFO-20 000	804Z04	for UFO-A-20000