KLIMAWENT

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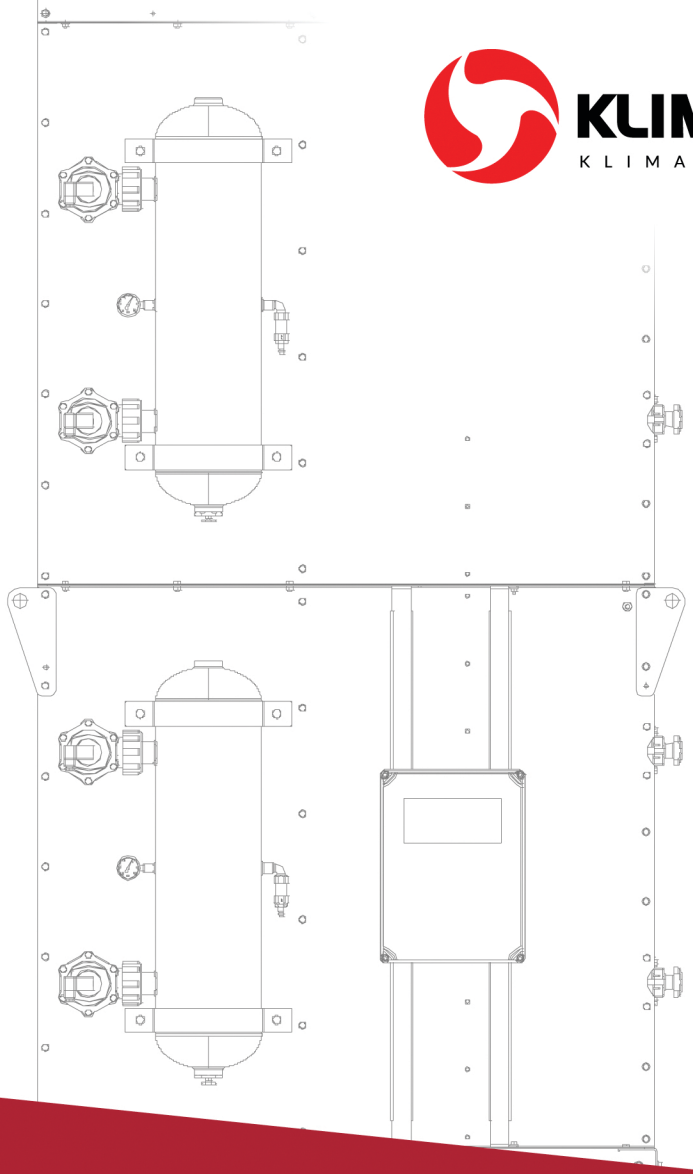

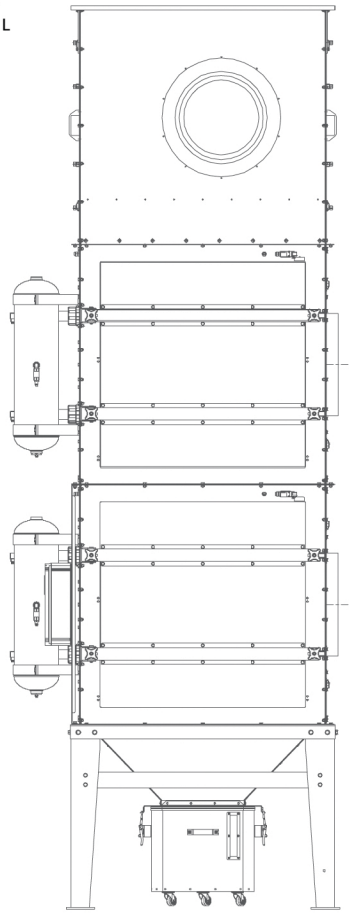

PRODUCT

catalogue

Quality Policy of KLIMAWENT S.A.

We are an enterprise producing and selling ventilation appliances.
We are obliged to meet the requirements according to ISO 9001:2015 Standard
and the Quality Manual and to keep improving our Management System.

Our target is to become the leader on the market of ventilation devices, dedicated to Customers expecting clean air in the room. To reach this goal, we intend to present a complex range of high quality ventilation appliances, based on our own design solutions.

We aspire to produce devices with lower level of acoustic pressure (noise), compared with other manufacturers.

Our mission is to provide good quality air in the rooms of the people every day stay.

We are conscious that the air quality in the close human surrounding have significant influence on their health, therefore we deliver devices, providing pure air in all kinds of rooms. They improve the quality of air we breathe every day.
Therefore we do our best, our products feature many properties distinguishing them within the range of competitive producers.

Our products are:

efficient,

silent in operation,

friendly to the environment,

energetically effective,

attractive in design.

Dear Sirs,

Clean air is the basis for health, welfare and for the effective everyday functioning. The assurance for this is really clean air in the buildings where we spend most of our lives.

Unfortunately, the air quality has a lot to be desired. The avoidance of thermal loss or lack of natural gravitational ventilation, entails that we all suffer from poor health caused by the contaminated air and diseases are a global problem and it is getting worse, up to an alarming degree.

KLIMAWENT S.A. is a company that from the beginning of activity, i.e. from above a quarter of century, concentrates on obtaining the highest quality of air in enterprises, buildings of public utility as well as in private houses.

Best parameters of our appliances, their quality, durability and reliability and also satisfaction of our Customers are incentive for our development, research within the new market areas. Additionally, important is introduction of innovative solutions as well as conquering new pathways.

Within our assortment are above 120 types of products, among them air cleaners, fans, local exhausts, vehicle exhaust extractors, filtering units as well as highly specialised systems to treat unpleasant technological processes.

All of them are continuously submit to tests and research in our Research and Development Laboratory. Our technological potential is based on numerically controlled machining. Thus we have unlimited possibilities in meeting our Customers' requests.

Aspiration of KLIMAWENT is continuous development in the field of advanced technology, investment in newest systems, research and also rationalisation and improvement of manufacturing processes and management.

We employ specialists of highest competences, people with passion and discovery courage.As most important, our priority is the unceasing development.

The manufactured appliances are able to operate in various types of production enterprises and areas of public utility in whole Poland. Over many years we conquest the markets in other countries successfully – the range of our assortment is expanding within the world map and there our devices care for peoples' health and life. We are sure, this aspect provides us with power for activity in numerous new spheres.

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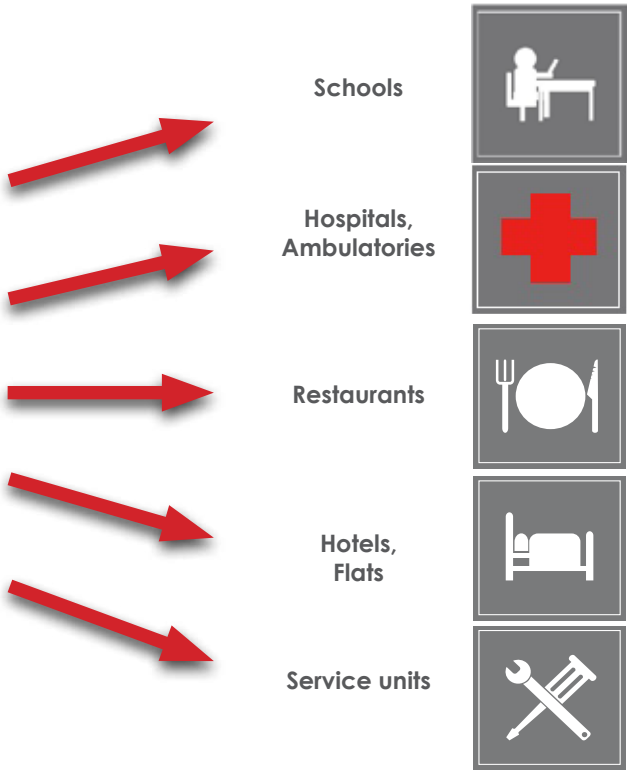
ozonator

KILLVIR – Ozonator



Application

Ozonators are designed for ozone production and they are irreplaceable in cleaning and refreshing the air in the rooms and are applied for disinfection of rooms in hospitals, ambulatories, flats. Generally, they have the ability to control viruses, bacteria, fungi within the buildings and to deactivate bacteria by far more efficiently than the hitherto used chlorine. Ozone is of unstable properties, and its half-life is approx. half an hour, that means, its concentration after approximately one hour is 25% of its original value.

Structure

The appliance consists of subsequent elements:

- stainless steel housing,
- ozone generator – 1 or 2 pieces (depending on the type),
- fan – 1 or 2 pieces (depending on the type),
- power supply unit with a set of switches.

Operational Use

Put the ozonator in the room in such a location that provides the best circulation of the air expelled by the fan (fans) installed in one of the device housing walls. Do not place the ozonator with its outlet directed too close the wall or other obstacles in the room, e.g. furniture, doors, etc. First put the ozonator in the requested place, plug into the 230V socket and press the button SUPPLY, and subsequently select the work time within the range from 1 up to 99 minutes. Ozonator activates directly after the button START is pressed.

CAUTION: WHILE THE OZONATOR IS IN OPERATION ANY PEOPLE SHOULD NOT BE PRESENT IN THE ROOM.

Device function is indicated by the red lamp that goes off after 30 minutes after the ozonation is completed. At the same, this is a warning that any people must not enter the ozonated room because of the high ozone concentration that is still remaining in the room. After the lamp goes off it is possible to safely enter the room and switch off the appliance.

Technical Data

Type	KILLVIR 48/S	KILLVIR 15/S
Part No.	800Z03	800G03
Power of the ozonator [W]	250	150
Supply voltage	230 V, 50 Hz	230 V, 50 Hz
Amount of the produced ozone [g/h]	48	15
Control mode	manually	manually
Supply gas	ambient air	ambient air
Ozone distribution in the room	2 fans of volume flow 350 m^3/h each	1 fan of volume flow 350 m^3/h
Noise level [dB(A)]	60	58
Dimensions [mm]	600 x 390 x 250 mm	470 x 390 x 250 mm
Weight [kg]	8,2	6,1

tobacco smoke absorber

SMOKE ABSORBER –
tobacco smoke absorber

Arrangement example of the SMOKE ABSORBER in a special space within a building

Purpose

SMOKE ABSORBER is an innovative solution of a tobacco smoke absorber, designed for installing in a specially arranged room for smokers, providing sufficient space for 20 people enjoying smoking without harm to environment. The efficiency of the SMOKE ABSORBER and its design along with the stylish and modern décor, make an ideal equipment of companies, universities, hotels, gastronomy- and entertainment facilities and service spaces for travellers. The system does not need to be integrated within the ventilation system of the building.

Structure

SMOKE ABSORBER consists of two segments:

- filtration chamber, covered by a vertical perforated suction wall, extracting the tobacco smoke,
- fan chamber, topped with a wooden surface with three ashtrays (self-extinguishing the cigarettebutts).

The filtration chamber includes high-efficiency dust-stop filters HEPA, class H13, capturing the tar particles at 99,95% efficiency and cassettes with granulated active carbon absorbing the gas contamination (nicotine, carbon monoxide and others).

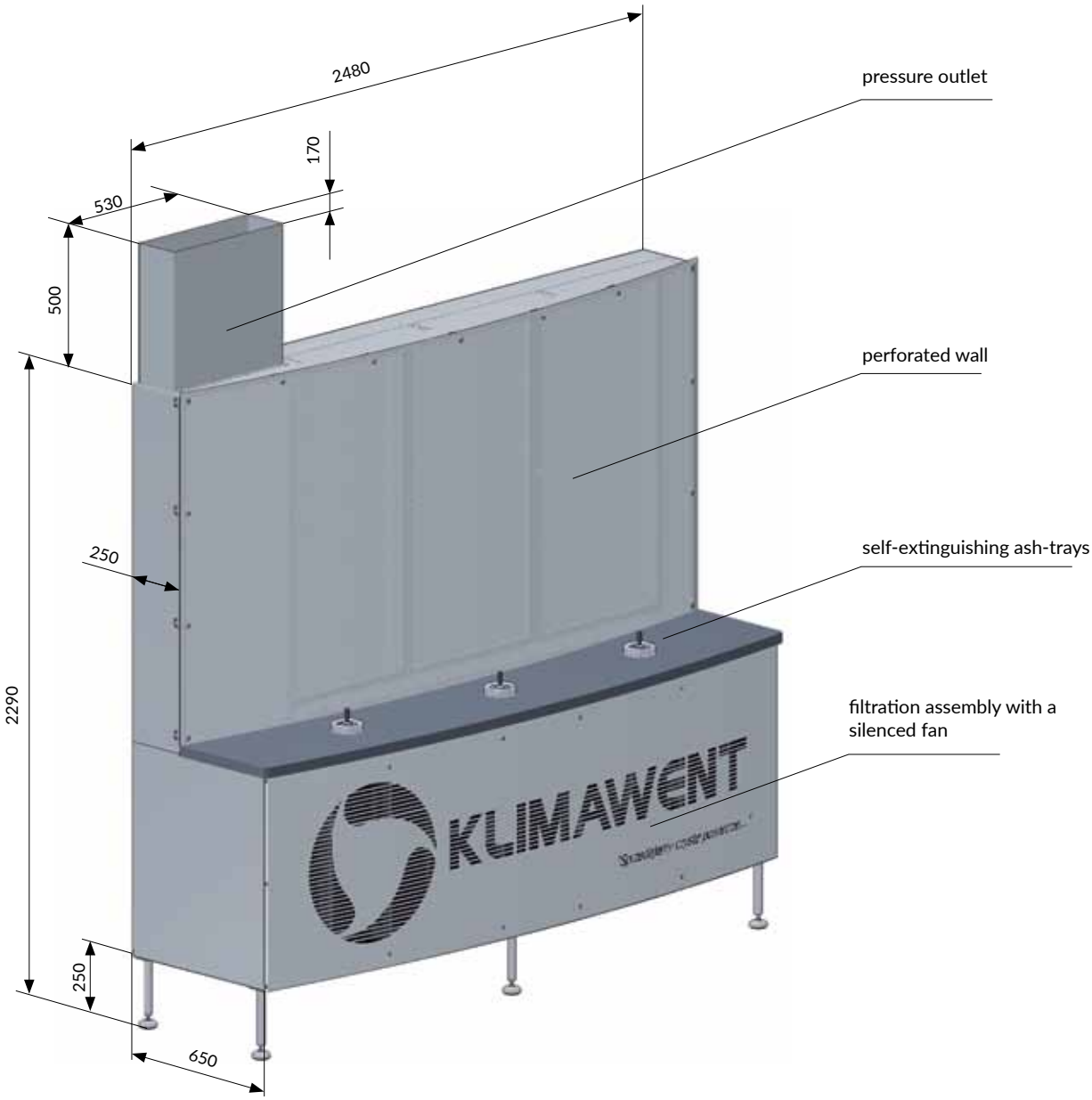
Operational use

In the course of operational use of the SMOKE ABSORBER, it is important to replace periodically the filter cartridges. Replacement time (in average conditions) is approximately 1 year.

Technical data

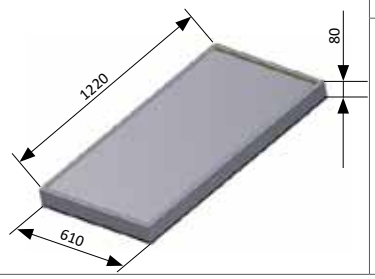
Type	Part no.	Volume flow [m³/h]	Supply voltage	Fan motor rate [W]	Acoustic pressure level [dB(A)] from a distance of 1 m	Weight of the active carbon [kg]	Weight of the device [kg]
SMOKE ABSORBER SA-1	800O79	2100	230 V/50 Hz	550	52	35	430

1. On demand of Customer we offer annual service consisting in technical survey and replacement of the filters.
2. SMOKE ABSORBER meets the requirement of the regulation of health protection against the effects of smoking of cigarettes and tobacco products of 8th of April, 2010.



Replaceable parts

High-efficiency filter



Type	Part no.	Filtration efficiency	Remarks
FA-SMOKE ABSORBER	838F85	99,95%	Class of the filter – H13. Quantity of filters – 3 pc in one appliance.

Granulated active carbon

Type	Part no.	Weight [kg]	Remarks
ORGANOSORB 10CO 4x8	874W04	35	For replacement we deliver the carbon in bulk in 25 kg bags.

SMOKING BOX –
cabin for smokers

Purpose

SMOKING BOX is a space in a form of a cabin for smokers, providing them hygienic conditions and comfort. Additionally, non-smoking people are protected from passive smoking working in the same room.

SMOKING BOX provides efficient protection of non-smoking people in companies, universities, hotels, gastronomic-entertainment premises, facilities for tourists and other spaces. Inside is sufficient space for 4 or 8 people. As the cabin is independent of the ventilation system of the building, it can stand in any optional place.

Structure

The cabin for smokers – SMOKING BOX consists of a glass cabin made of aluminium profiles. The walls and swinging door of toughened glass ensure safety, sufficient isolation from the surrounding and also gives aesthetic features. In the upper part of the SMOKING BOX is located a PD-1 smoke absorber with a very silent fan.

The PD-1 smoke absorber consists of:

- HEPA dust-stop high-efficiency filter – class H13 – capturing the tar substances at efficiency of 99,95%,
- filter of granulated active carbon – absorbing the noxious gaseous contaminations (nicotine, carbon monoxide, etc.).

The air is drawn into the SMOKING BOX through the slots between the structural elements. After filtering within the PD-1 filtration assembly (in the upper part) the air is expelled outside.

There are two device versions: SMOKING BOX and SMOKING BOX-2-DUAL, varying in size. The volume of the SMOKING BOX is 4 m^3, and of SMOKING BOX-2-DUAL – 8 m^3. The fan volume flow is 480 and 960 m^3/h respectively, which provides 120 air changes an hour. SMOKING BOX-2-DUAL is equipped with two fans.

Inside the cabin is placed a self-extinguishing ashtray. The cabin is equipped with lighting in its ceiling – operated automatically by means of a motion sensor.

The cabin construction is dismantlable, therefore it is easy to transport and to displace it to another place of use.

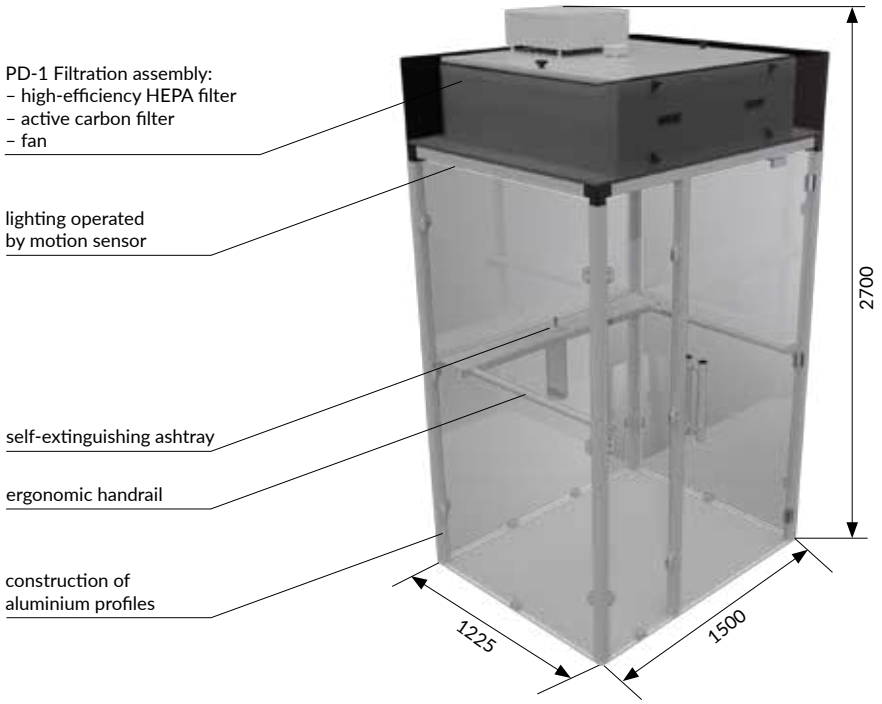
Operational use

In the course of use, periodically replace the filters. Replacement time (in average conditions) is approx. 1 year.

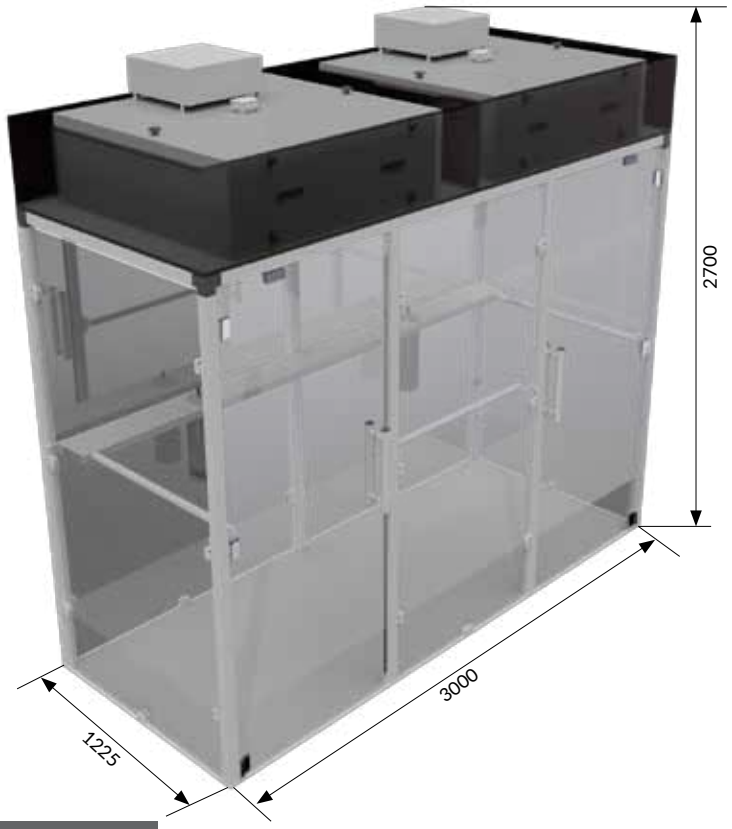
Technical data

Type	Part no.	Volume flow [m^3/h]	Supply voltage	Fan motor rate [W]	Acoustic pressure level [dB(A)] from a distance of 1 m:	Weight of the active carbon [kg]	Weight of the device [kg]
SMOKING BOX	800O78	480	230 V/50 Hz	124	59	20	400
SMOKING BOX-2-DUAL	800O69	960	230 V/50 Hz	248	59	40	710

1. On demand of Customer we offer annual service consisting in technical survey and replacement of the filters.
2. PD-1 smoke absorber carries HYGIENIC CERTIFICATE No. HK/B/0777/01/2013 issued by National Institute of Hygiene.
3. SMOKE ABSORBER meets the requirement of the regulation of health protection against the effects of smoking of cigarettes and tobacco products of 8th of April, 2010.



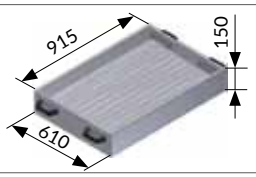
SMOKING BOX



SMOKING BOX-2-DUAL

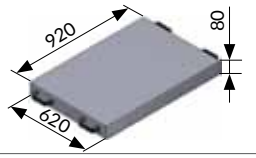
Replaceable parts

High-efficiency filter



Type	Part no.	Filtration efficiency	Remarks
FA-SMOKING BOX	838F46	99,95%	Filter class – H13.

Carbon filter



Type	Part no.	Weight of the active carbon [kg]
FW-SMOKING BOX	838F45	20

radial fans

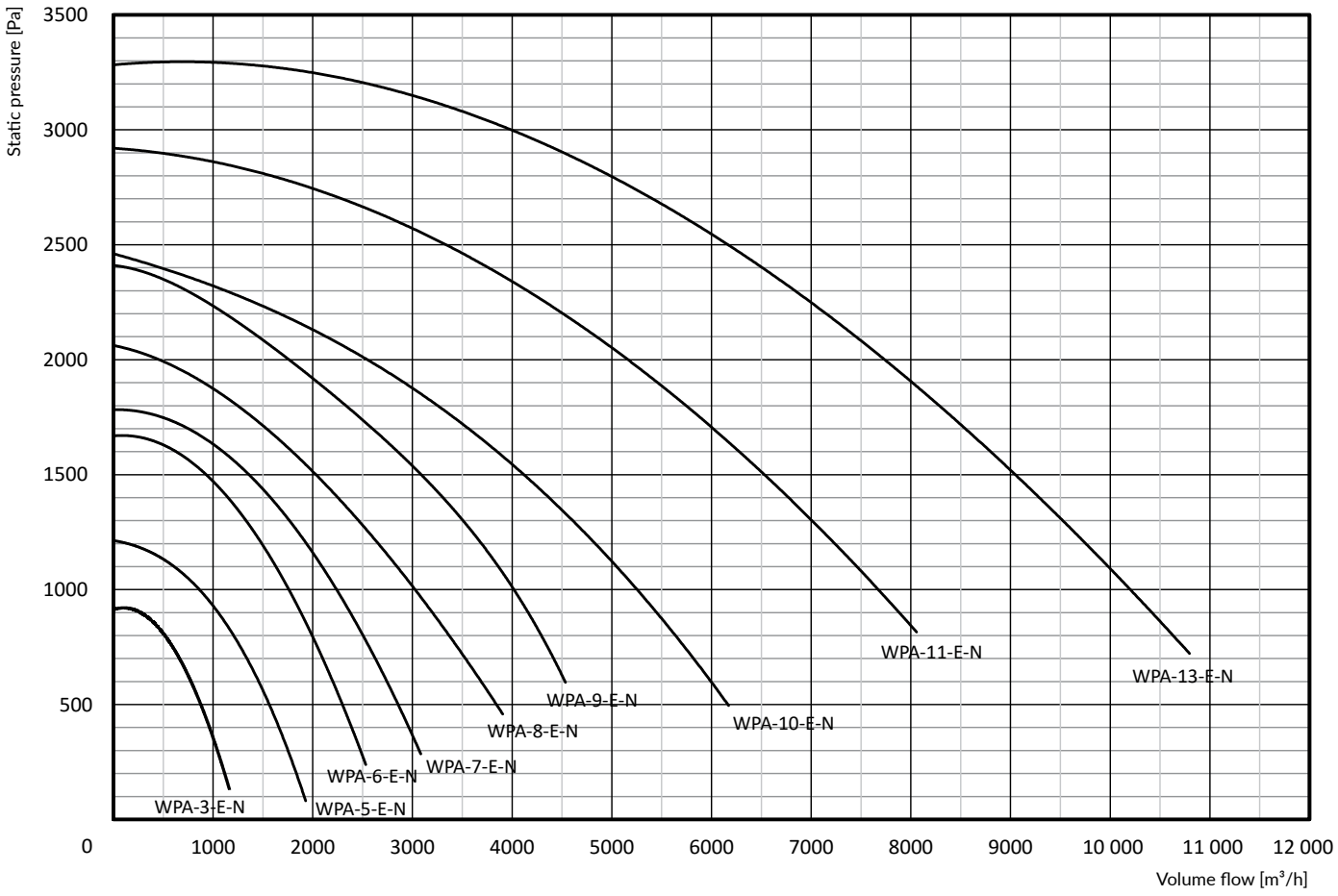
WPA-E-N – stand fan

Purpose

Commonly, these fans have been designed for local ventilation. They are installed on wall brackets inside the buildings (indoor application). As they can overcome significant air flow resistances, they are particularly efficient within the systems of local exhausts. The appliances meet the requirements of the ErP 2009/125/EC Directive.

Structure

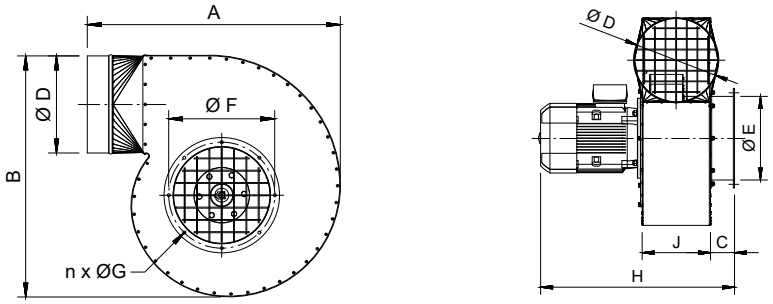
The fan consists of a spiral steel housing, motor. The aluminium radial impeller is directly installed at the motor shaft. The impeller blades cross-section reminds the profile of an aircraft wing, providing low acoustic pressure level. The fan inlet is equipped with a flange to install it on wall bracket or, directly on a filtering unit. The outlet is ended with a round ferrule to fasten safely a spiral-seam conduit (rigid duct) or to make flexible connections. For safety reason, the inlet and outlet are equipped with a protective grill. It is recommended to install a TK silencer at the fan inlet and outlet (for details see catalogue card INSTALLATION ELEMENTS). On demand of Customer, we deliver safety switches to cut off the power supply during the servicing and installing activities (see catalogue card ELECTRICAL ACCESSORIES).



Technical data

Type	Part no.	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:		Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
						1 m	5 m			
WPA-3-E-1-N	804W00	3000	230	0,25	54	78/70*	64/56*	1160	940	12
WPA-3-E-3-N	804W14	3000	3x400	0,25	54	78/70*	64/56*	1160	940	12
WPA-5-E-1-N	804W01	3000	230	0,37	54	76/67*	62/53*	1900	1250	16,5
WPA-5-E-3-N	804W02	3000	3x400	0,37	54	76/67*	62/53*	1900	1250	16,5
WPA-6-E-1-N	804W03	3000	230	0,75	54	83/75*	69/61*	2500	1700	21
WPA-6-E-3-N	804W04	3000	3x400	0,75	54	83/75*	69/61*	2500	1700	21
WPA-7-E-1-N	804W05	3000	230	1,1	54	86/74*	72/60*	3100	1800	23
WPA-7-E-3-N	804W06	3000	3x400	1,1	54	86/74*	72/60*	3100	1800	23
WPA-8-E-3-N	804W07	3000	3x400	1,5	54	88/78*	74/64*	3900	2050	29
WPA-9-E-3-N	804W08	3000	3x400	2,2	54	91/82*	77/68*	4500	2400	36
WPA-10-E-3-N	804W09	3000	3x400	3,0	54	91/87*	77/67*	6200	2450	50
WPA-11-E-3-N	804W12	3000	3x400	5,5	54	97/88*	83/74*	8050	2950	64
WPA-13-E-3-N	804W13	3000	3x400	7,5	54	99/90*	85/76*	10800	3300	85

* Measurement has been carried out with the additional TK L = 500 mm silencer installed at the fan inlet and outlet (for WPA-3-E-N apply TK L = 370 mm silencer).
1. Maximum temperature of the conveyed air is +60°C. Maximum temperature within the work area +40°C.
2. Maximum dustiness of the conveyed air should not exceed 0,3 g/m³.



Dimensions

Type	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	n [pc.]	G [mm]	H [mm]	J [mm]
WPA-3-E-1-N	415	385	50	125	125	155	6	7,0	370	130
WPA-3-E-3-N										
WPA-5-E-1-N	485	480	60	160	160	194	6	7,0	420	140
WPA-5-E-3-N										
WPA-6-E-1-N	500	505	60	160	160	194	6	7,0	445	140
WPA-6-E-3-N										
WPA-7-E-1-N	550	520	60	200	160	194	6	7,0	460	155
WPA-7-E-3-N										
WPA-8-E-3-N	570	550	60	200	200	224 234 246	8 6 8	9,0 7,0 9,0	490	155
WPA-9-E-3-N	615	615	60	200	200	224 234 246	8 6 8	9,0 7,0 9,0	510	155
WPA-10-E-3-N	655	625	80	250	250	274	8	9,0	670	232
WPA-11-E-3-N	675	645	80	250	250	274	8	9,0	680	232
WPA-13-E-3-N	805	780	90	315	315	344	8	9,0	735	258

WPA-S-N – stationary fan

Purpose

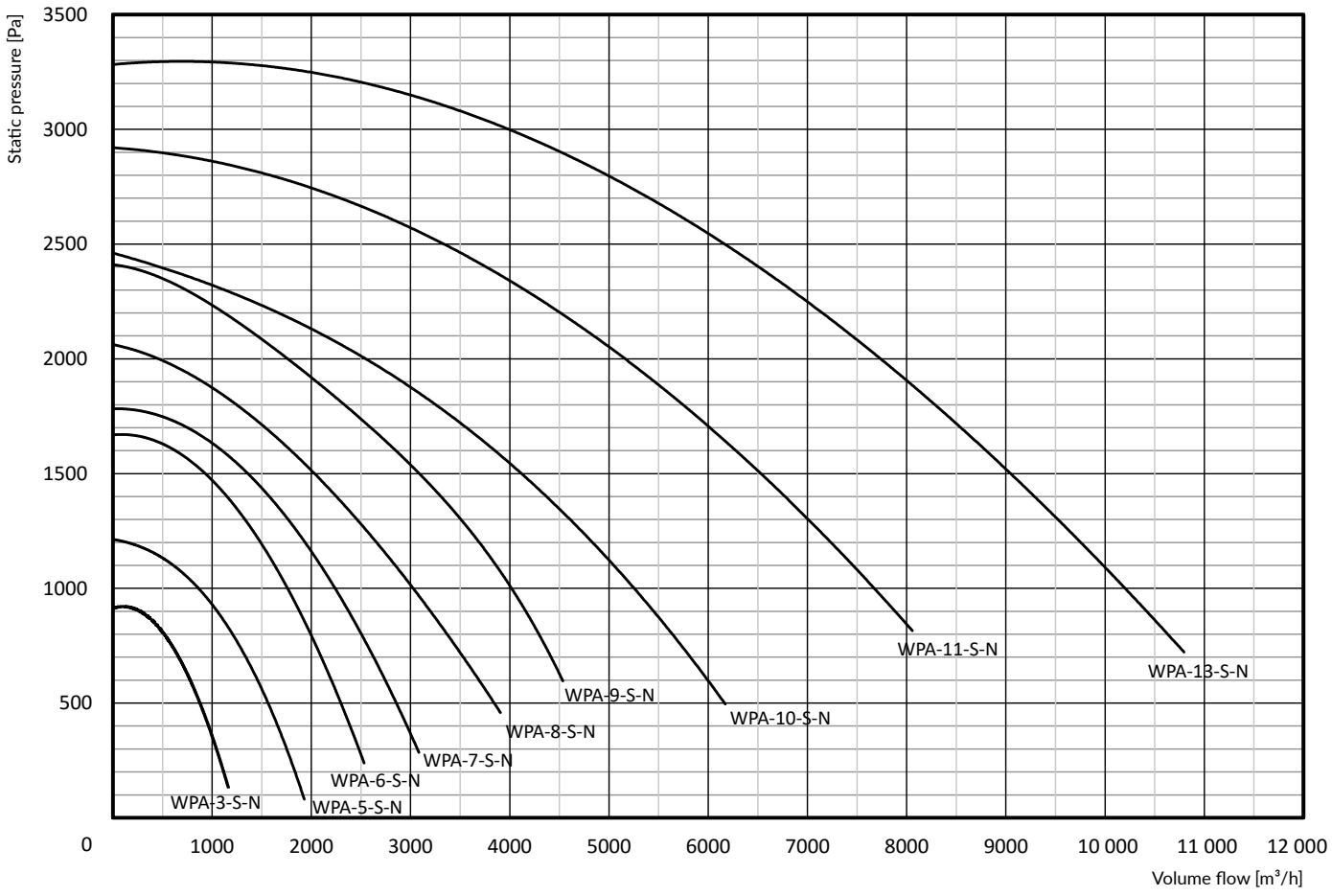
Principally, designed for air-supply- or extraction ventilation of rooms and workplaces, are recommended especially for use with system of local exhausts. They can be installed stationary in a ventilation rooms or other technical rooms. They meet the requirements of the ErP 2009/125/EC Directive.

Structure

The fan consists of a steel spiral housing, and a motor. Its aluminium radial impeller is directly installed on the motor shaft (direct drive). The cross-section of the impeller blades reminds the profile of an aircraft wing, providing low acoustic pressure level of the fan. Outlet connection is adapted for attachment of round-section flexible connectors, whereas the inlet can be equipped with a connection ferrule. For safety reasons, the inlet and outlet are equipped with protective grill. On demand of Customer, the fan can be delivered with another location of the outlet ferrule. The fan motor is screwed to the S-WPAN base which is placed on a VF-WPAN vibro-absorbing frame, to avoid vibration transmission to the floor.

On demand of Customer, we deliver safety switches to cut off the power supply during the servicing and installing activities (see catalogue card ELECTRICAL ACCESSORIES).

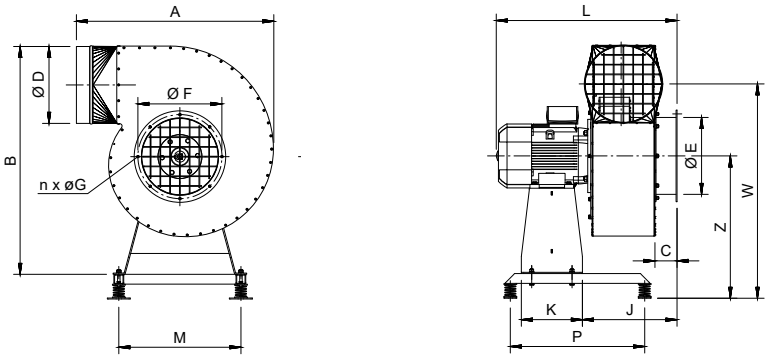
Note: As additional accessory, we offer connectors to attach a flexible hose to the fan inlet (see catalogue card INSTALLATION ELEMENTS).



Technical data

Type	Part no.	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:		Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
						1 m	5 m			
WPA-3-S-1-N	801W01	3000	230	0,25	54	78/70*	64/56*	1160	940	22
WPA-3-S-3-N	801W13	3000	3x400	0,25	54	78/70*	64/56*	1160	940	22
WPA-5-S-1-N	801W02	3000	230	0,37	54	76/67*	62/53*	1900	1250	27
WPA-5-S-3-N	801W03	3000	3x400	0,37	54	76/67*	62/53*	1900	1250	27
WPA-6-S-1-N	801W04	3000	230	0,75	54	83/75*	69/61*	2500	1700	32
WPA-6-S-3-N	801W05	3000	3x400	0,75	54	83/75*	69/61*	2500	1700	32
WPA-7-S-1-N	801W06	3000	230	1,1	54	86/74*	72/60*	3100	1800	34
WPA-7-S-3-N	801W07	3000	3x400	1,1	54	86/74*	72/60*	3100	1800	34
WPA-8-S-3-N	801W08	3000	3x400	1,5	54	88/78*	74/64*	3900	2050	44
WPA-9-S-3-N	801W09	3000	3x400	2,2	54	91/82*	77/68*	4500	2400	52
WPA-10-S-3-N	801W10	3000	3x400	3,0	54	91/87*	77/67*	6200	2450	65,5
WPA-11-S-3-N	801W11	3000	3x400	5,5	54	97/88*	83/74*	8050	2950	82
WPA-13-S-3-N	801W12	3000	3x400	7,5	54	99/90*	85/76*	10 800	3300	104

* Measurement has been carried out with the additional TK L = 500 mm silencer installed at the fan inlet and outlet (for WPA-3-S-N apply TK L = 370 mm silencer).
1. Maximum temperature of the conveyed air is +60°C. Maximum temperature within the work area +40°C.
2. Maximum dustiness of the conveyed air should not exceed 0,3 g/m³.



Dimensions

Type	A [mm]	B [mm]	C [mm]	W [mm]	Z [mm]	D [mm]	E [mm]	F [mm]	n [pc.]	G [mm]	M [mm]	P [mm]	K [mm]	J [mm]	L [mm]
WPA-3-S-1-N	415	515	50	550	400	125	125	155	6	7,0	345	400	200	170	370
WPA-3-S-3-N															
WPA-5-S-1-N	485	575	60	590	400	160	160	194	6	7,0	345	400	200	195	420
WPA-5-S-3-N															
WPA-6-S-1-N	500	600	60	620	410	160	160	194	6	7,0	345	400	200	205	445
WPA-6-S-3-N															
WPA-7-S-1-N	550	605	60	605	410	200	160	194	6	7,0	345	400	200	220	460
WPA-7-S-3-N															
WPA-8-S-3-N	570	685	60	685	480	200	200	224 234 246	8 6 8	9,0 7,0 9,0	425	450	220	215	490
WPA-9-S-3-N	615	730	60	725	480	200	200	224 234 246	8 6 8	9,0 7,0 9,0	425	450	220	215	510
WPA-10-S-3-N	655	810	80	780	550	250	250	274	8	9,0	500	550	250	325	650
WPA-11-S-3-N	675	830	80	805	565	250	250	274	8	9,0	500	550	250	335	665
WPA-13-S-3-N	805	940	90	880	585	315	315	344	8	9,0	500	550	250	390	735

WPA-14-S-N – stationary fan

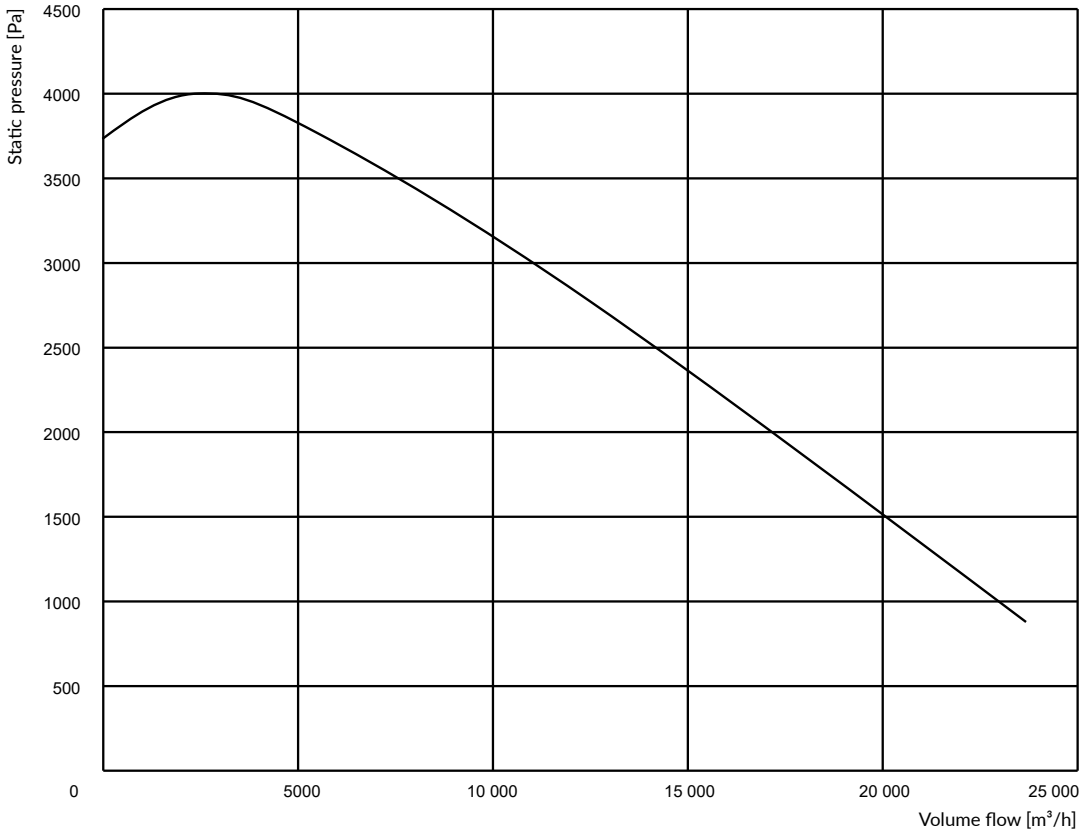
Purpose

WPA-14-S-N is designed for air-supply- or extraction ventilation of rooms and workplaces, is recommended especially for use with system of local exhausts. The fan can be installed stationary in a ventilation rooms or other technical rooms. Do not use the fan for conveying the media of aggressive properties or substances causing explosion hazard. The construction meets the requirements of the ErP 2009/125/EC Directive.

Structure

The fan consists of a steel spiral housing and a motor. Its radial impeller is directly installed on the motor shaft (direct drive). The cross-section of the impeller blades reminds the profile of an aircraft wing, providing low acoustic pressure level of the fan. Outlet connection is adapted for attachment of round-section flexible connectors, whereas the inlet can be equipped with a connection ferrule. For safety reasons, the inlet and outlet are equipped with protective grill. On demand of Customer, the fan can be delivered with another location of the outlet ferrule. The fan motor is screwed to the base which is placed on a vibro-absorbing frame, to avoid vibration transmission to the floor.

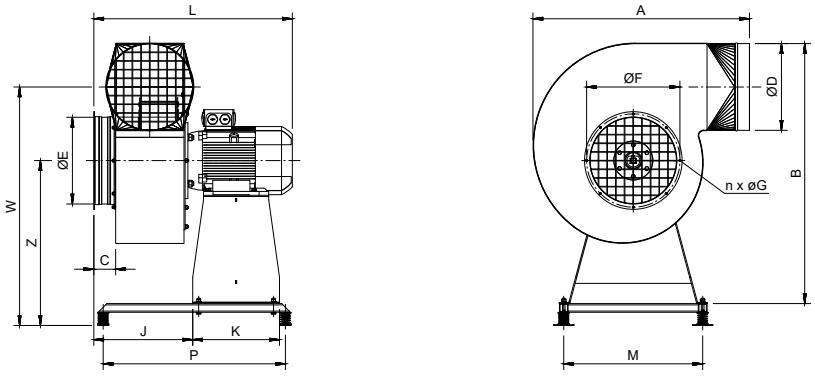
On demand of Customer, we deliver safety switches to cut off the power supply during the servicing and installing activities (see catalogue card ELECTRICAL ACCESSORIES).



Technical data

Type	Part no.	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:		Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
						1 m	5 m			
WPA-14-S-3-N	804W15	3000	3x400	15	54	100	91	23 100	4000	182

1. Maximum temperature of the conveyed air is +60°C. Maximum temperature within the work area +40°C.
2. Maximum dustiness of the conveyed air should not exceed 0,3 g/m³.



Dimensions

Type	A [mm]	B [mm]	C [mm]	W [mm]	Z [mm]	D [mm]	E [mm]	F [mm]	n [pc.]	G [mm]	M [mm]	P [mm]	K [mm]	J [mm]	L [mm]
WPA-14-S-3-N	1000	1200	100	1100	760	400	400	430	8	10	640	840	400	455	915

WPA-P-N – portable fan

Portable fan working with a magnetic hood during the welding process

Portable fan applied for drying a humid wall

Purpose

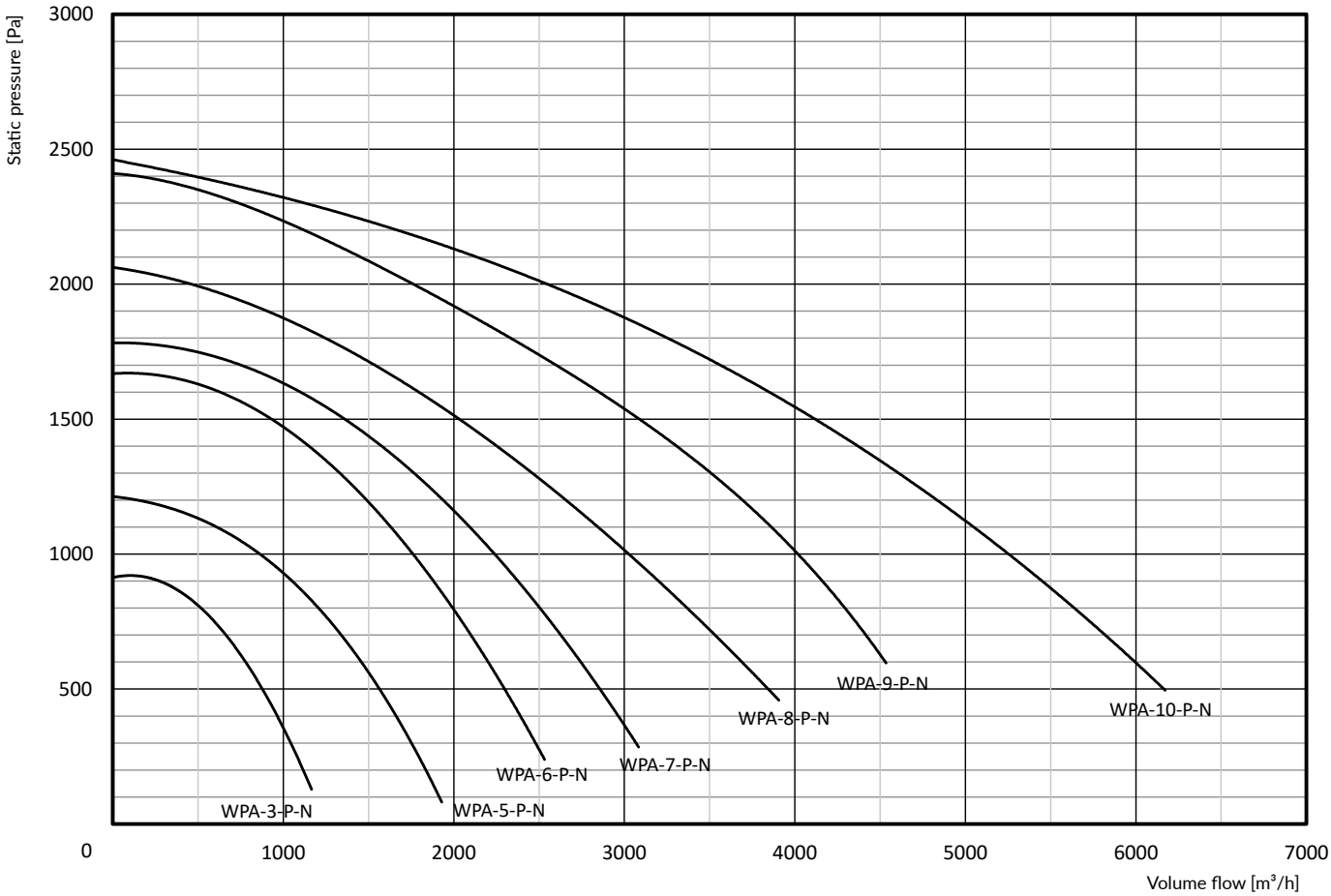
Principally, portable radial fans are meant for use in air-supply- or extraction ventilation systems of rooms and workplaces. They can be applied, both for general ventilation and local exhausts (technological extraction). Additionally, WPA-P-N fans can be applied for drying the humid rooms by forcing the multiple air exchanges. They meet the requirements of the ErP 2009/125/EC Directive.

Structure

The fan consists of a steel spiral housing, a motor and a base framework. Its aluminium radial impeller is directly installed on the motor shaft (direct drive). The cross-section of the impeller blades reminds the profile of an aircraft wing, providing low acoustic pressure level of the fan. For safety reasons, the inlet and outlet are equipped with protective grill and are adapted for fastening the flexible hoses (by means of hose clamps). As standard, the fans are equipped with motor starters. Each fan is supplied with a five-metre-long cable with a plug.

Operational Use

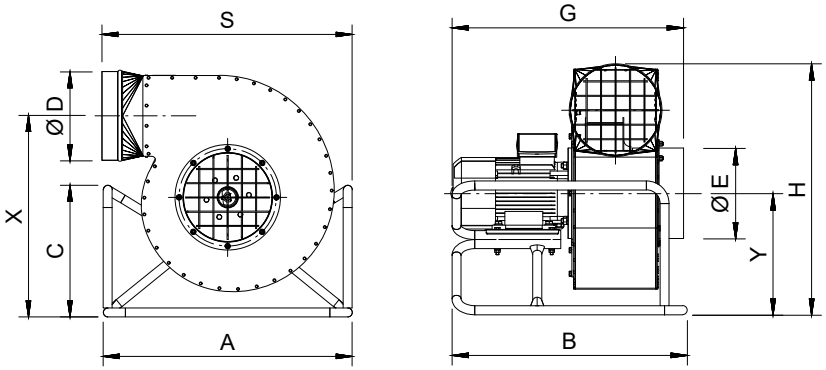
In case of local extraction ventilation, it is important to fasten a flexible hose (of appropriate diameter) to the fan inlet. Additionally, the hose must have a suitable suction nozzle attached at its end. Example of application of a magnetic hood is illustrated in a photograph. In case of general ventilation, it is important to supply a hose into the ventilated room, whereby the hose must be connected to the suction ferrule or outlet ferrule of the fan.



Technical data

Type	Part no.	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:		Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
						1 m	5 m			
WPA-3-P-1-N	805W10	3000	230	0,25	54	78	64	1160	940	12
WPA-3-P-3-N	805W21	3000	3x400	0,25	54	78	64	1160	940	12
WPA-5-P-1-N	805W11	3000	230	0,37	54	76	62	1900	1250	18
WPA-5-P-3-N	805W12	3000	3x400	0,37	54	76	62	1900	1250	18
WPA-6-P-1-N	805W13	3000	230	0,75	54	83	69	2500	1700	24
WPA-6-P-3-N	805W14	3000	3x400	0,75	54	83	69	2500	1700	24
WPA-7-P-1-N	805W15	3000	230	1,1	54	86	72	3100	1800	26
WPA-7-P-3-N	805W16	3000	3x400	1,1	54	86	72	3100	1800	26
WPA-8-P-3-N	805W17	3000	3x400	1,5	54	88	74	3900	2050	35
WPA-9-P-3-N	805W18	3000	3x400	2,2	54	91	77	4500	2400	44
WPA-10-P-3-N	805W20	3000	3x400	3,0	54	91	77	6200	2450	55

1. Maximum temperature of the conveyed air is +60°C. Maximum temperature within the work area +40°C.
2. Maximum dustiness of the conveyed air should not exceed 0,3 g/m³.



Dimensions

Type	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	S [mm]²	G[mm]²	X [mm]	Y [mm]	H [mm]²
WPA-3-P-1-N	465	425	–[1]	125	125	455	420	360	205	425
WPA-3-P-3-N										
WPA-5-P-1-N	475	440	–[1]	160	160	465	440	425	235	500
WPA-5-P-3-N										
WPA-6-P-1-N	475	440	–[1]	160	160	500	450	450	245	525
WPA-6-P-3-N										
WPA-7-P-1-N	615	515	355	200	160	615	515	480	285	585
WPA-7-P-3-N										
WPA-8-P-3-N	615	515	355	200	200	625	515	500	300	605
WPA-9-P-3-N	670	565	415	200	200	670	565	560	320	665
WPA-10-P-3-N	700	650	370	250	250	705	650	565	335	695

1. The construction of the framework does not feature an arm element branching upwards.
2. Dimension between the terminal points of the device.

Magnetic hoods

Type	Part no.	Diameter [mm]
SM-125	818S01	125
SM-160	818S02	160
SM-200	818S03	200

Magnetic holder of the hose

Type	Part no.	Diameter [mm]
PSM-125	818P01	125
PSM-160	818P02	160
PSM-200	818P03	200

Suction stand

Type	Part no.	Inlet diameter [mm]	Connection diameter [mm]
S-152	818S04	200	152

See section VENTILATION ACCESSORIES

flexible hose ST/MP

FAST-P – transport fan

Purpose

Transport radial fans are applied for air-supply- or extraction ventilation of rooms and workplaces. Both, they can be used for general ventilation and local extraction, within this for conveying small size wood chips and dusts arising during technological processing of such materials as wood, paper, leather, fabric, plastic. In these applications FAST-P serves as a transport fan. Additionally, FAST-P can be applied for drying the humid rooms by forcing multiple air changes and by directing the outlet air stream directly onto the humid wall. The construction meets the requirements of the ErP 2009/125/EC Directive.

Structure

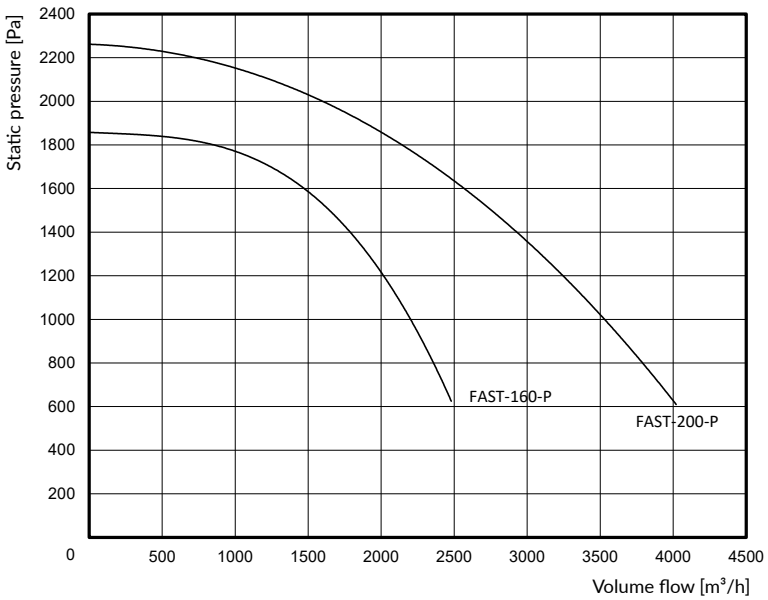
The fan is driven directly. Hosing and impeller are made of aluminium cast. The impeller is directly mounted on the motor shaft (direct drive). The fan is placed on a steel pipe frame, so it is easy to displace and put it stably at the requested place of operation. Inlet and outlet are adapted to connect hoses by clamps. On the top of the motor is placed a motor switch with short-circuit- and overload protection. Each fan is equipped with a five-metre-long power supply cable with a plug.

Operational use

In case when the portable fan is applied for local extraction, fasten a hose of suitable diameter at the fan inlet. Additionally, the hose must have a suitable suction nozzle attached at its end.

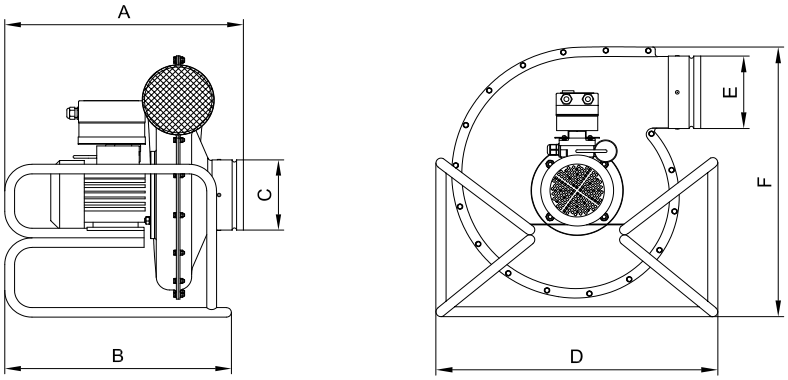
In case of applying the fan for air-supply ventilation, lead the hose (connected with outlet of the fan) into the ventilated room.

In applications for humid rooms – simply, put the fan inside the room and to direct the fan outlet towards the humid wall, while the suction hose leads outdoors. The fan can work also outside the building, but it is necessary to protect it from atmospheric factors – in this application the hose is forwarding the air into the room.



Technical data

Type	Part no.	Synchronous rotation [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:		Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
						1 m	5 m			
FAST-160-P	805W86	3000	230	0,75	54	87,5	78	2500	1800	27
FAST-200-P	805W87	3000	230	1,5	54	92	86,5	4000	2300	32



Dimensions

Type	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]
FAST-160-P	533	556	160	667	160	620
FAST-200-P	573	650	200	700	200	676

radial fans in sound-absorbing box

WPA-BOX – fan chamber

Fan chamber with a silencer and air discharge at the outlet

Fan chamber with silencers at the inlet and outlet

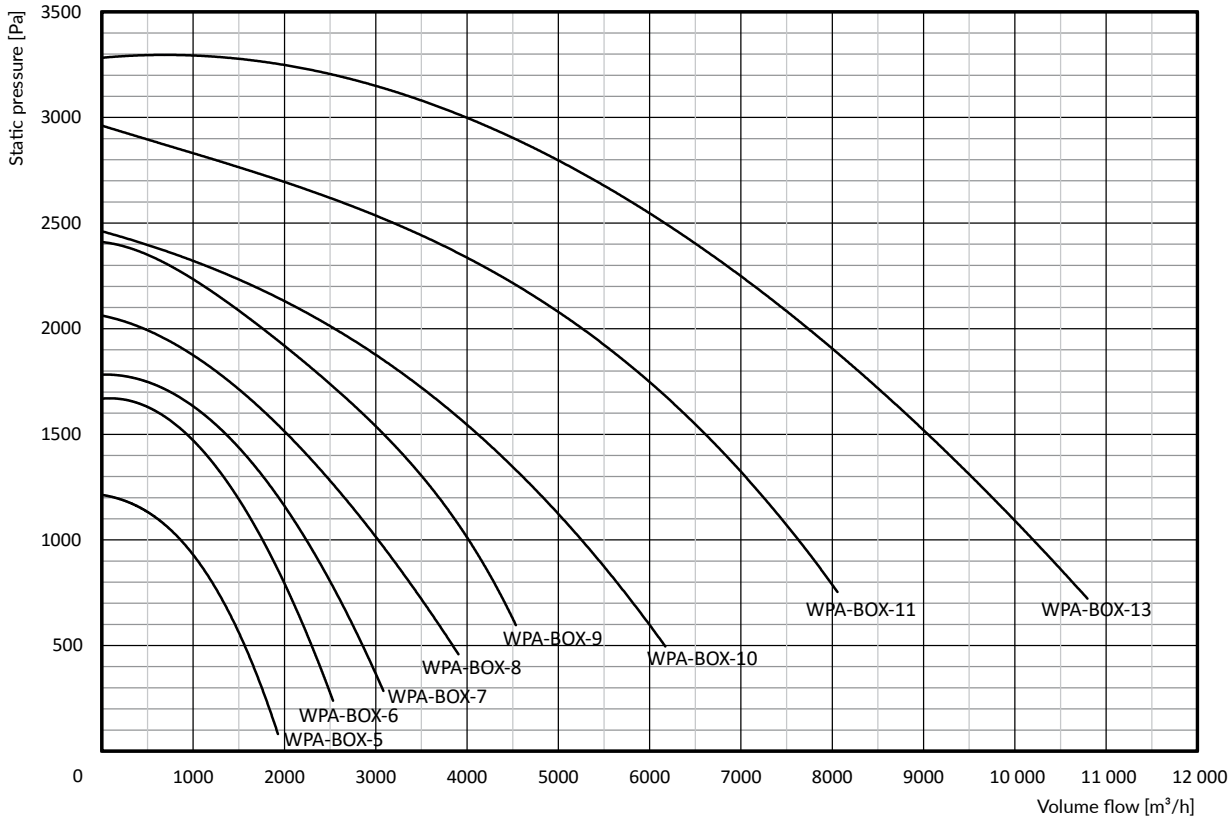
Purpose

WPA-BOX fan chambers are meant for use within the installations of mechanical air-supply ventilation or extraction installations of rooms and workplaces, where particularly silent work is required. Chambers can be applied with filtering units. They are designed for application inside the buildings. The fans applied in the chambers meet the requirements of ErP 2009/125/EC Directive.

Structure

The chambers are constructed of aluminium profile frame. Within the frames are installed panels with sound-absorbing pads. Inside the chamber is located a fan. The fan consists of a steel spiral housing and a motor. The aluminium radial impeller is directly installed on the motor shaft, whereby the impeller blades cross-section is similar to the aircraft wing profile, providing low acoustic pressure level.

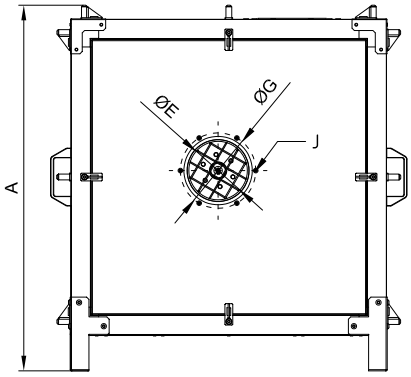
For safety reason, the inlet and outlet are equipped with protective grills. The fan motor is mounted on a base which is placed on a vibro-absorbing frame, to avoid vibration transmission to the floor. As option, the chamber inlet (and/or chamber outlet) can be fitted with a sound damping set, to reduce further the noise. On demand of Customer, we deliver safety switches to disconnect the supply during the installing and servicing activities (see catalogue card ELECTRICAL ACCESSORIES).

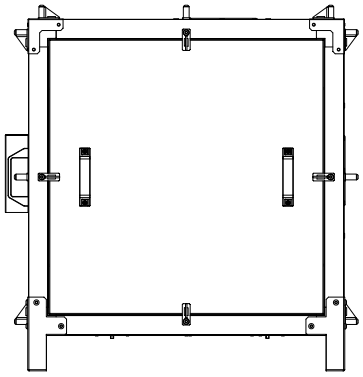


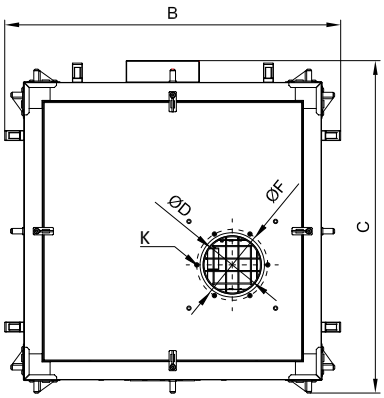
Technical data

Type	Part no.	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of*:		Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
						1 m	5 m			
WPA-BOX-5-1	814K31	3000	230	0,55	54	54	40	1900	1250	130
WPA-BOX-5-3	814K32	3000	3x400	0,55	54	54	40	1900	1250	130
WPA-BOX-6-1	814K33	3000	230	0,75	54	61	47	2500	1700	135
WPA-BOX-6-3	814K34	3000	3x400	0,75	54	61	47	2500	1700	135
WPA-BOX-7-1	814K35	3000	230	1,1	54	64	50	3100	1800	137
WPA-BOX-7-3	814K36	3000	3x400	1,1	54	64	50	3100	1800	137
WPA-BOX-8-3	814K37	3000	3x400	1,5	54	66	52	3900	2050	196
WPA-BOX-9-3	814K38	3000	3x400	2,2	54	69	55	4500	2400	204
WPA-BOX-10-3	814K39	3000	3x400	3,0	54	69	55	6200	2450	282
WPA-BOX-11-3	814K40	3000	3x400	5,5	54	75	61	8050	2950	298
WPA-BOX-13-3	814K41	3000	3x400	7,5	54	77	63	10 800	3300	318

* Acoustic pressure level of the housing was measured in the installation with silencers type T-WPA-BOX at the inlet and outlet of the fan chamber.
1. Maximum temperature of the conveyed air is +60°C. Maximum temperature in the work area +40°C.
2. Maximum dustiness of the conveyed air should not exceed 0,3 g/m³.







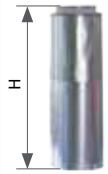
Top view of the chamber

Dimensions

Type	A [mm]	B [mm]	C [mm]	Diameters of connections		Pitch diameter of the connection holes		K [mm]	J [mm]
				ØD [mm]	ØE [mm]	ØF [mm]	ØG [mm]		
WPA-BOX-5	941	918	908	160	160	194	194	M6	M6
WPA-BOX-6	941	918	908	160	160	194	194	M6	M6
WPA-BOX-7	941	918	908	200	200	224	224	M8	M6
WPA-BOX-8	1121	1098	1108	200	200	224	224	M8	M8
WPA-BOX-9	1121	1098	1108	200	200	224	224	M8	M8
WPA-BOX-10	1329	1336	1336	250	250	274	274	M8	M8
WPA-BOX-11	1329	1336	1336	250	250	274	274	M8	M8
WPA-BOX-13	1329	1336	1336	315	315	344	344	M8	M8

Additional accessories

Silencer



Type	Part no.	Inlet [mm]	Outlet [mm]	Height H [mm]	Cooperating fan chambers	Remarks
T-200 WPA-BOX	830T26	160	200	1250	5, 6	The set consists of: reducer, silencer, silencer bracket. Install the set on the inlet ferrule or on the outlet of the WPA-BOX fan chamber.
T-250 WPA-BOX	830T27	200	250	1250	7, 8, 9	
T-315 WPA-BOX	830T28	250	315	1250	10, 11	
T-400 WPA-BOX	830T29	315	400	1300	13	

Air discharge

Type	Part no.	Diameter inlet/outlet/height [mm]	Weight [kg]
E-200	842W37	200/200/500	6
E-250	842W38	250/250/600	10
E-315	842W39	315/315/700	14
E-400	842W40	400/400/900	18

WPA-BOX-14 – fan chamber

Fan chamber with a silencer and air discharge at the outlet

Fan chamber with silencers at the inlet and outlet

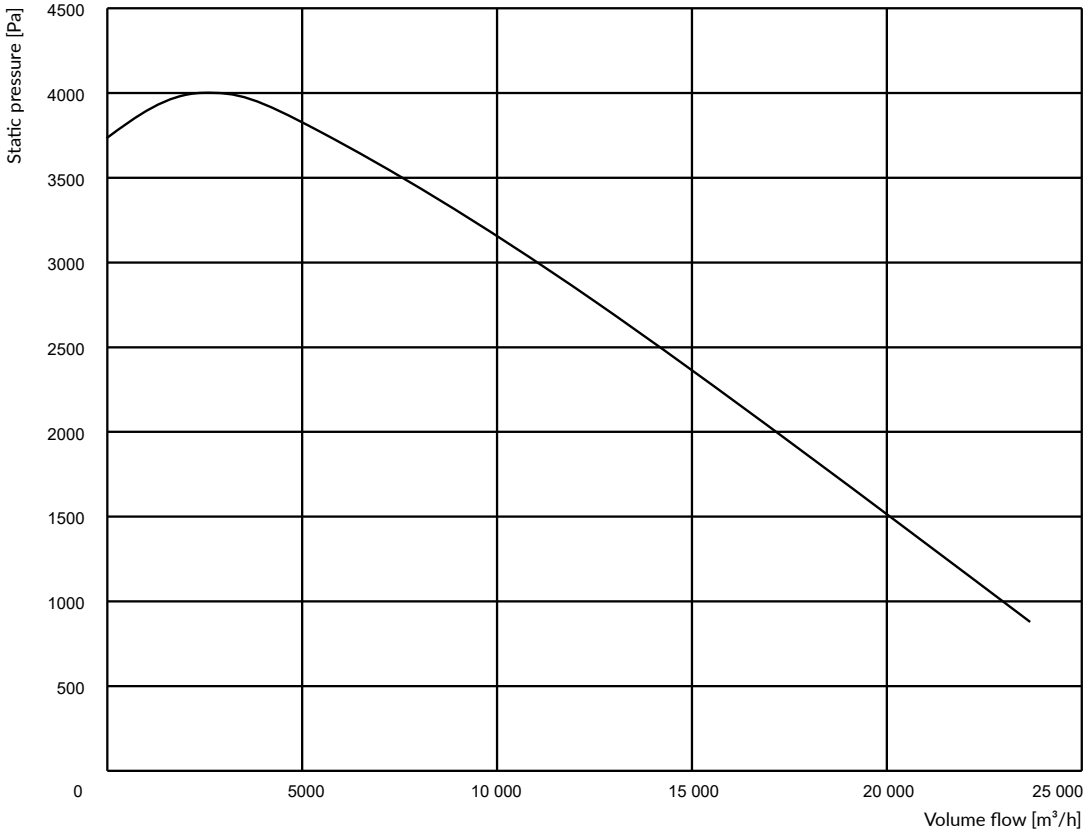
Purpose

WPA-BOX fan chamber has been developed for use within installations of mechanical air-supply ventilation of rooms and workplaces, with silent work-environment requirements. The chamber can work with a filtering unit. The appliance is designed for installations inside the buildings. The fans applied inside the chamber meets the requirements of ErP 2009/125/EC Directive.

Structure

The chamber is constructed of an aluminium profile frame. Within the frames are installed panels with sound-absorbing pads. Inside the chamber is located a fan. The fan consists of a steel spiral housing and a motor. The radial impeller is directly installed on the motor shaft, whereby the impeller blades cross-section is similar to the aircraft wing profile, providing low acoustic pressure level.

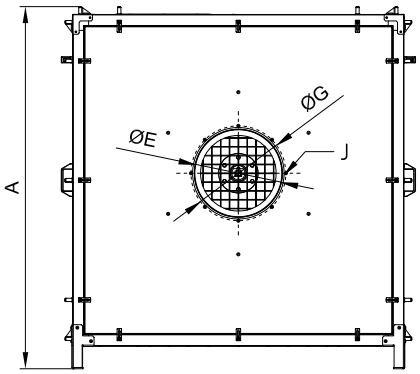
For safety reason, the inlet and outlet are equipped with protective grills. The fan motor is mounted on a base which is placed on a vibro-absorbing frame, to avoid vibration transmission to the floor. As option, the chamber inlet (and/or chamber outlet) can be fitted with an additional sound absorbing set, to reduce further the noise. On demand of Customer, we deliver safety switches to disconnect the power supply during installing and servicing (see catalogue card ELECTRICAL ACCESSORIES).

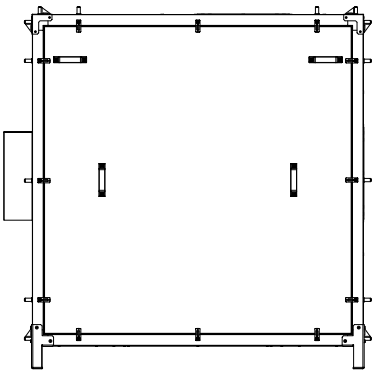


Technical data

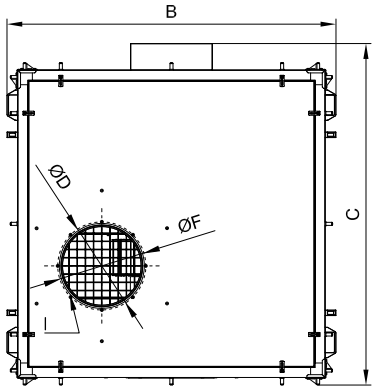
Type	Part no.	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of*:		Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
						1 m	5 m			
WPA-BOX-14	814K49	3000	3x400	15	54	80	71	23 100	4000	530

* Acoustic pressure level of the housing was measured in the installation with silencers type T-WPA-BOX at the inlet and outlet of the fan chamber.
1. Maximum temperature of the conveyed air is +60°C. Maximum temperature in the work area +40°C.
2. Maximum dustiness of the conveyed air should not exceed 0,3 g/m³.





Top view of the chamber

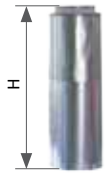


Dimensions

Type	A [mm]	B [mm]	C [mm]	Diameters of connections		Pitch diameter of the connection holes		K [mm]	J [mm]
				ØD [mm]	ØE [mm]	ØF [mm]	ØG [mm]		
WPA-BOX-14	1641	1605	1666	400	400	430	430	M8	M8

Additional accessories

Silencer



Type	Part no.	Inlet [mm]	Outlet [mm]	Height H [mm]	Cooperating fan chambers	Remarks
T-500-WPA-BOX	830T37	400	500	1300	WPA-BOX-14	The set consists of: reducer, silencer, silencer bracket. Install the set on the inlet ferrule or on the outlet of the WPA-BOX fan chamber.

Air discharge

Type	Part no.	Diameter inlet/outlet/height [mm]	Weight [kg]
E-500	842W41	500/500/1100	24

axial fans

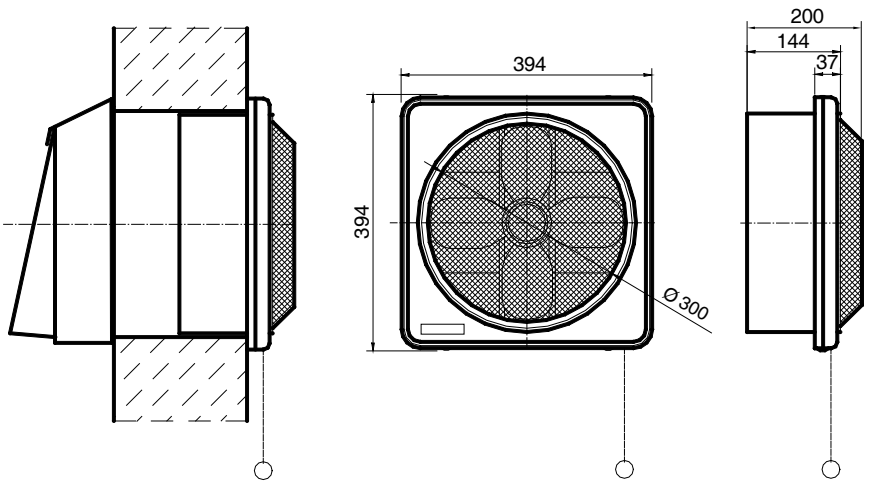
WW-302-KL – extraction wall fan

Purpose

WW-302-KL fan is meant for general ventilation of production halls, workshops, shops and storehouses. They are installed directly in the wall openings and windows.

Structure

The fan consists of a square steel sheet housing, with centrally located motor. The impeller is directly installed at the motor shaft. The fan inlet is shielded with a wire mesh. The back of the fan is made of a self-swinging shutter. Standard equipment of the fan is the swinging guard, protecting the fan from atmospheric factors, wind and directing the air outlet stream downwards. The fan is equipped with a pull rope ON/OFF switch. The appliance can work in vertical position only.



Technical data

Type	Part no.	Diameter [mm]	Supply voltage [V]	Synchronous rotations [1/m]	Motor rate [W]	Nominal volume flow [m³/h]	Acoustic pressure level [dB(A)] from a distance of 4 m	Ingress protection IP	Weight [kg]
WW-302-KL	806W01	300	230	1100	42	960	50	42	4,5

1. Maximum temperature of the forwarded air is +60°C. Maximum temperature within the work area +40°C.
2. The fans can be applied for conveying the dry air of maximum dustiness 0,3 g/m³.

PODRYW-N – portable fan

Example of application for drying the humid rooms

Purpose

PODRYW-N type fans are meant for:

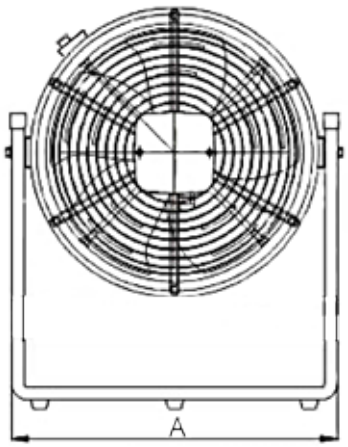
- easy access aeration for rooms and workplaces,
- air supply onto the people being in the increased temperature environment in order to improve their thermal comfort,
- blowing the air onto warm objects, elements to cool them down,
- blowing the air towards the objects being filmed or photographed (to make an air movement imitation, to create wind – for advertising),
- drying down humid rooms.

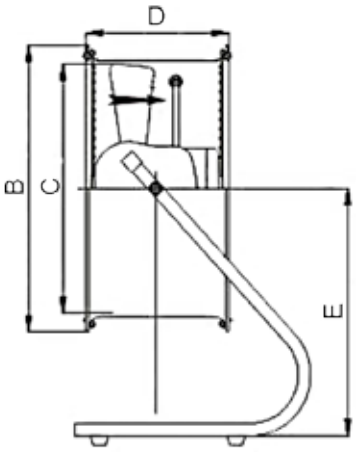
The fans can be applied in various areas: production halls, TV studios, advertising ateliers, household management buildings, spare rooms, store houses etc.

Structure

PODRYW-N fans are constructed on the basis of an axial fan, mounted rotarywise to the baseframe. Therefore, the fan can be turned around the horizontal axis by a requested angle. Due to the rotation-speed governor, it is possible to change the volume flow efficiency of the fan. The fan is equipped with a power supply cable of length 1,5 m, ended with a plug.

Low noise and insignificant power consumption, provide continuous work of the fan, without inconvenience to environment.





Dimensions

Type	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]
PODRYW-500-N	620	Ø565	Ø500	230	467

Technical data

Type	Part no.	Volume flow [m³/h]	Supply voltage [V]	Nominal rotations [1/min]	Motor rate [W]	Admissible temperature in the work area [°C]	Acoustic pressure level [dB(A)] from a distance of*:		Weight [kg]
							1 m	5 m	
PODRYW-500-N	807W44	8850	230	1390	370	40	68	55	17

low-pressure roof fans for general ventilation

SMART-SN

Application

SMART-SN fans have been engineered for general ventilation of buildings for conveying the dry air of maximum temperature +60°C and dustiness not exceeding 0,3 g/ m^3, without viscous impurities, aggressive compounds and without substances creating explosion hazard. SMART-SN family of fans, as a series of eight sizes, of motor rates ranging from 0,37 kW up to 5,5 kW provide maximum flow efficiency 36 000 m^3/h. The appliances meet the requirements of the ErP 2009/125/EC Directive.

Structure

SMART-SN line features an original construction of steel elements, providing a skeleton. The lower part is constructed of an openwork protective circumferential surface around, whereas the top section is shielded with a plastic hood. Inside is located a motor with a statically and dynamically balanced radial impeller. The fan has to be installed on a roof base.

Acoustics

Low noise level is the most crucial criterion of the designing process of the SMART-SN family of fans, as a most important target of the Quality Policy of KLIMAWENT. Due to this, in the course of constructional activity, several impellers, varying in shape, size, blade quantity and their inclination,

have been designed, prepared and submit to our Research and Development Laboratory tests. As a result, the impeller of the lowest acoustic pressure level and optimum flow performances has been finally selected.

Moreover, as a complementary assortment are:

- TPD-N and TPDC-N sound absorbing roof bases – to install the fan on them. The application reduces the noise getting into the room – by 12 up to 18 Db(A),
- TK silencers (see catalogue card INSTALLATION ELEMENTS) – suspended underneath the sound absorbing roof bases, inside the process room.

Flow efficiency adjustment

On demand, we offer inverters meant for adjustment of the motor rotational speed (for details see section ELECTRICAL ACCESSORIES).

Installing

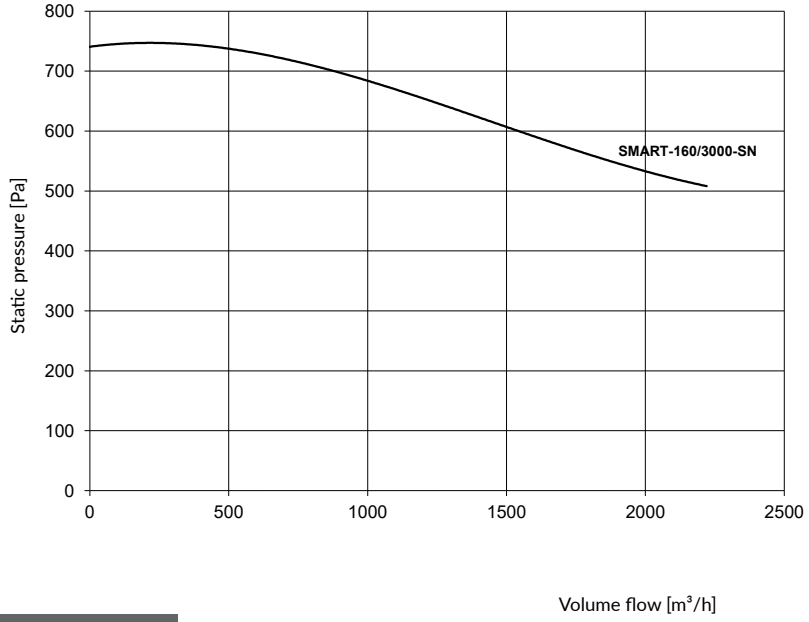
It is recommended to install the fans on sound absorbing roof bases. Our roof base series is compatible with the types of fans. The construction is of zinc-coated sheet. The internal surface is padded with sound absorbing material.

We offer two sorts of sound absorbing roof bases, varying in the mounting solution:

- TPD-N base – mounted directly on the roof. For convenient installing on the roofs of various inclination angles (0° up to 18°), there are introduced special support profiles of rotary properties, located on the opposite walls of the roof base, for levelling the mounting flange of the fan.
- TPDC-N base – installed directly on a roof pedestal of the ventilation discharge duct; simply, the mounting flange of the roof base has to be screwed up to the roof pedestal.

On demand, we deliver safety switches to cut off the power supply, during the installing, assembling and servicing (for details see catalogue cards ELECTRICAL ACCESSORIES).

SMART-160-SN

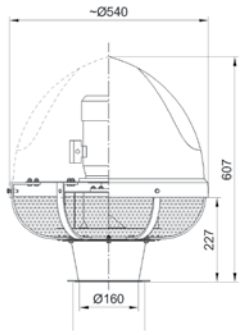


Technical data

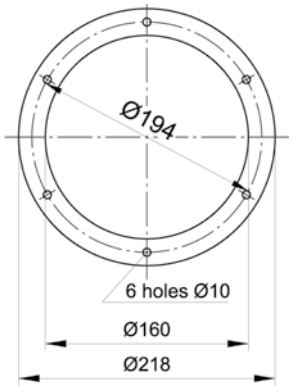
Type	Part no.	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection of the motor IP	Acoustic pressure level [dB(A)] from a distance of:					Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
						outlet				inlet			
						1 m	5 m	10 m	15 m	1 m			
SMART-160/3000-SN	812W60	3000	3x400	0,55	54	79	70	62	59	71	2300	740	16
Roof base TPD-160-N	843P40	–	–	–	–	–	–	–	–	–	–	–	28
Roof base TPDC-160-N	843P50	–	–	–	–	–	–	–	–	–	–	–	30

Dimensions

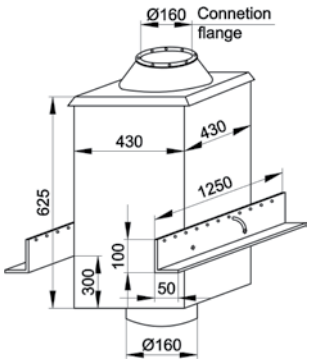
Roof fan
SMART-160/3000-SN



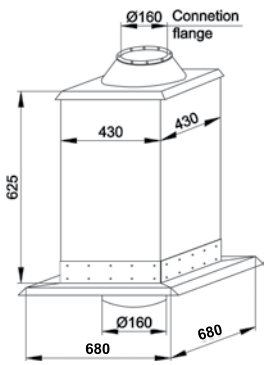
Connection flange



Sound absorbing roof base
TPD-160-N

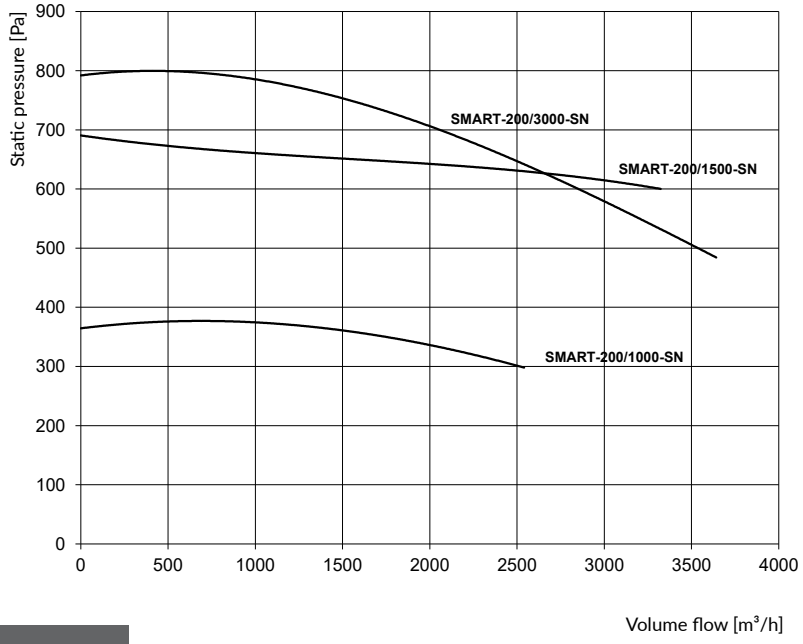


Sound absorbing roof base
TPDC-160-N



NOTE:
The above mentioned values of the acoustic pressure level are specified for fans mounted on the sound absorbing roof base TPD-N or TPDC-N.
To reduce more the noise level, it is possible to apply a TK silencer suspended under the TPD-N or TPDC-N roof base.

SMART-200-SN

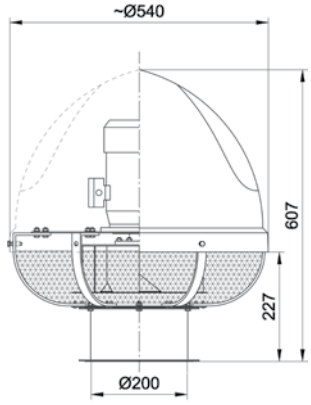


Technical data

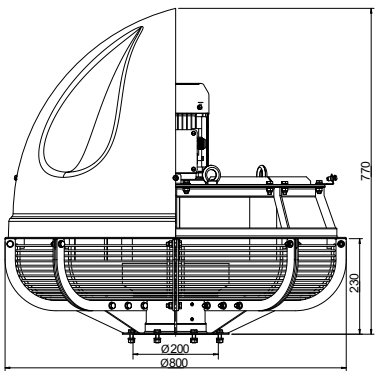
Type	Part no.	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection of the motor IP	Acoustic pressure level [dB(A)] from a distance of:					Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
						outlet				inlet			
						1 m	5 m	10 m	15 m	1 m			
SMART-200/3000-SN	813W33	3000	3x400	0,55	54	79	69	62	59	71	3550	800	16
SMART-200/1500-SN	813W32	1500	3x400	0,55	54	74	64	57	54	60	3300	690	57
SMART-200/1000-SN	813W31	1000	3x400	0,37	54	67	56	50	46	51	2540	370	58
Roof base TPD-200-N	843P41	–	–	–	–	–	–	–	–	–	–	–	28
Roof base TPDC-200-N	843P51	–	–	–	–	–	–	–	–	–	–	–	30

Dimensions

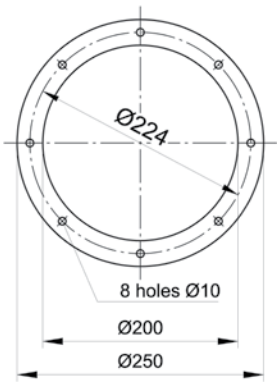
Roof fan
SMART-200/3000-SN



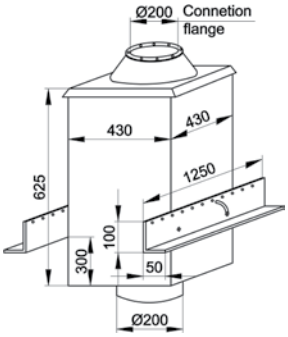
Roof fans
SMART-200/1500-SN,
SMART-200/1000-SN



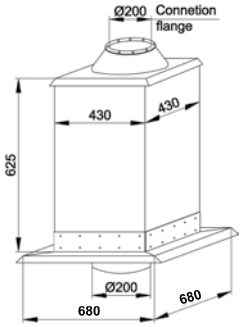
Connection flange



Sound absorbing roof base
TPD-200-N

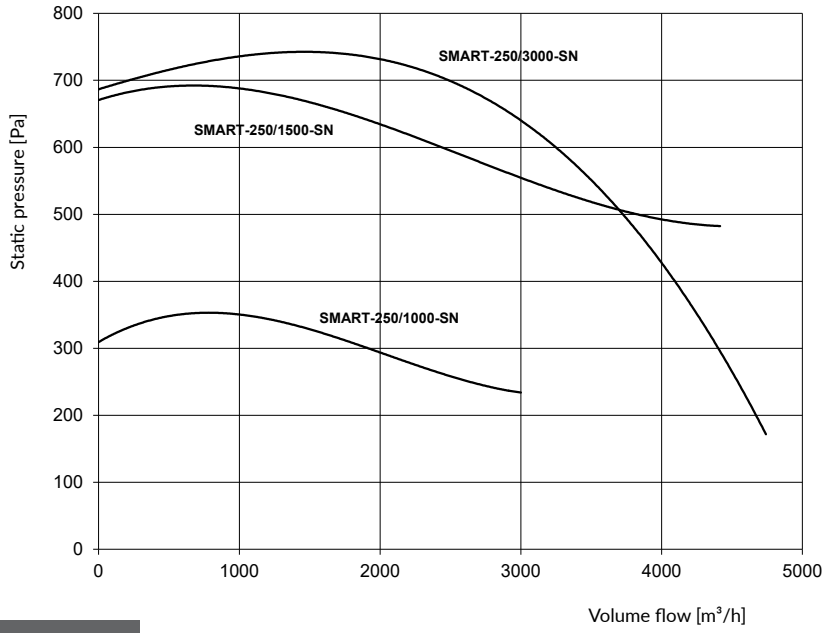


Sound absorbing roof base
TPDC-200-N



NOTE:
The above mentioned values of the acoustic pressure level are specified for fans mounted on the sound absorbing roof base TPD-N or TPDC-N.
To reduce more the noise level, it is possible to apply a TK silencer suspended under the TPD-N or TPDC-N roof base.

SMART-250-SN

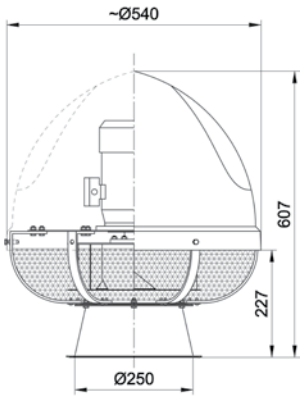


Technical data

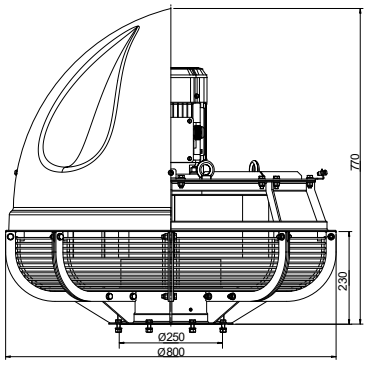
Type	Part no.	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection of the motor IP	Acoustic pressure level [dB(A)] from a distance of:					Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
						outlet				inlet			
						1 m	5 m	10 m	15 m	1 m			
SMART-250/3000-SN	813W36	3000	3x400	0,55	54	80	70	63	60	74	4750	735	20
SMART-250/1500-SN	813W35	1500	3x400	1,1	54	75	66	58	55	65	4600	690	64
SMART-250/1000-SN	813W34	1000	3x400	0,37	54	65	56	48	44	53	3000	350	57
Roof base TPD-250-N	843P42	–	–	–	–	–	–	–	–	–	–	–	41
Roof base TPDC-250-N	843P52	–	–	–	–	–	–	–	–	–	–	–	46

Dimensions

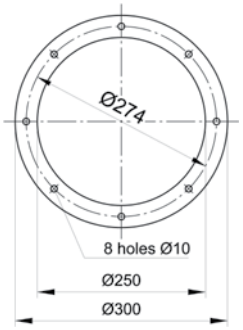
Roof fan SMART-250/3000-SN



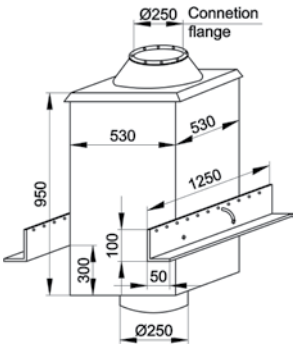
Roof fans SMART-250/1500-SN, SMART-250/1000-SN



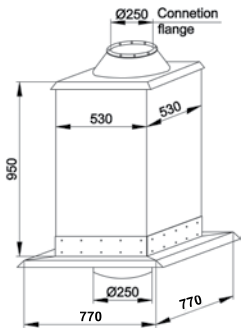
Connection flange



Sound absorbing roof base TPD-250-N

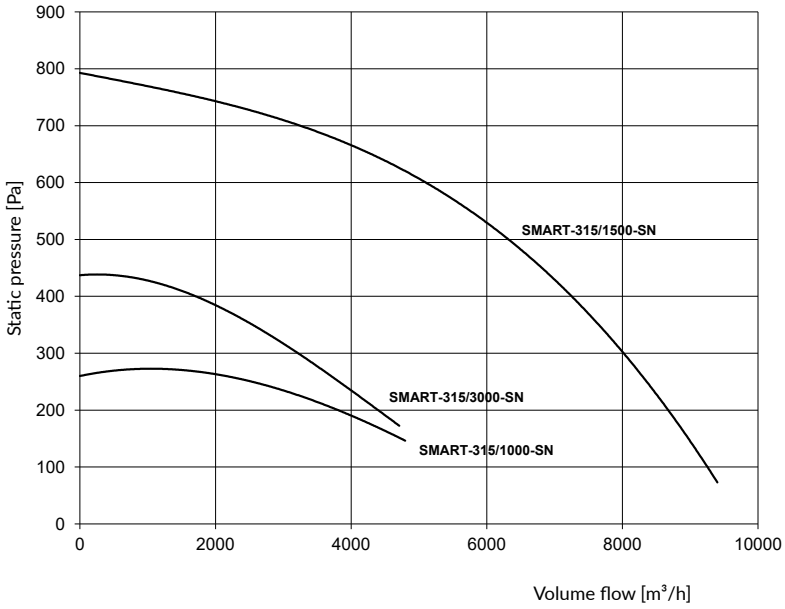


Sound absorbing roof base TPDC-250-N



NOTE:
The above mentioned values of the acoustic pressure level are specified for fans mounted on the sound absorbing roof base TPD-N or TPDC-N.
To reduce more the noise level, it is possible to apply a TK silencer suspended under the TPD-N or TPDC-N roof base.

SMART-315-SN

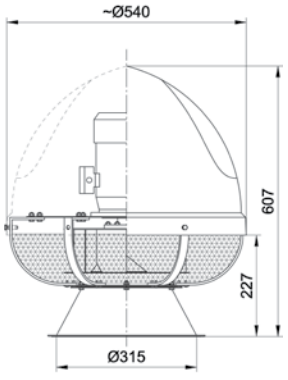


Technical data

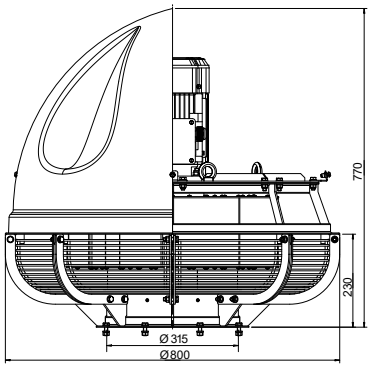
Type	Part no.	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection of the motor IP	Acoustic pressure level [dB(A)] from a distance of:					Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
						outlet				inlet			
						1 m	5 m	10 m	15 m	1 m			
SMART-315/3000-SN	813W40	3000	3x400	0,37	54	80	70	63	60	74	4710	440	16
SMART-315/1500-SN	813W39	1500	3x400	1,5	54	80	70	63	60	70	9400	790	66
SMART-315/1000-SN	813W38	1000	3x400	0,55	54	68	59	51	48	59	4800	260	56
Roof base TPD-315-N	843P43	–	–	–	–	–	–	–	–	–	–	–	41
Roof base TPDC-315-N	843P53	–	–	–	–	–	–	–	–	–	–	–	46

Dimensions

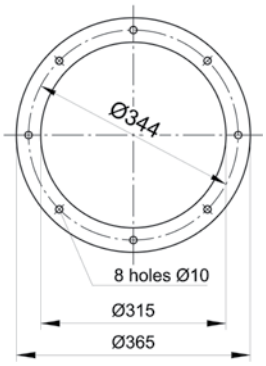
Roof fan
SMART-315/3000-SN



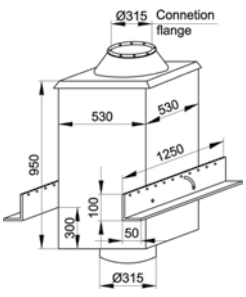
Roof fans
SMART-315/1500-SN,
SMART-315/1000-SN



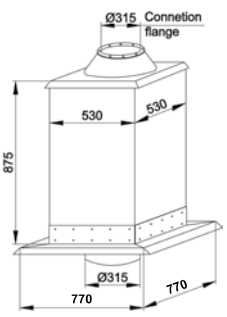
Connection flange



Sound absorbing roof base
TPD-315-N

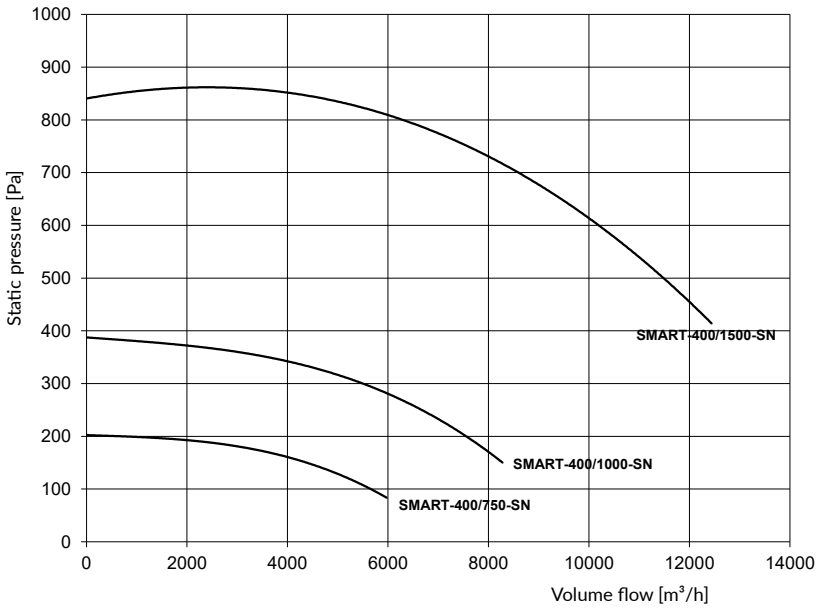


Sound absorbing roof base
TPDC-315-N



NOTE:
The above mentioned values of the acoustic pressure level are specified for fans mounted on the sound absorbing roof base TPD-N or TPDC-N.
To reduce more the noise level, it is possible to apply a TK silencer suspended under the TPD-N or TPDC-N roof base.

SMART-400-SN

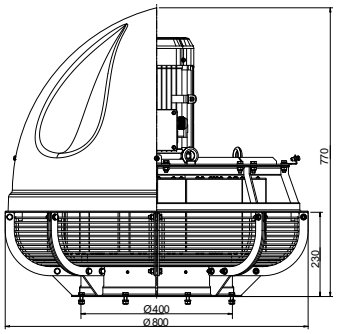


Technical data

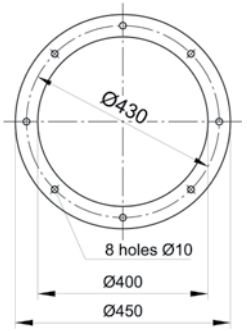
Type	Part no.	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection of the motor IP	Acoustic pressure level [dB(A)] from a distance of:					Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
						outlet				inlet			
						1 m	5 m	10 m	15 m	1 m			
SMART-400/1500-SN	813W41	1500	3x400	2,2	54	85	75	68	64	72	12 500	860	75
SMART-400/1000-SN	813W42	1000	3x400	0,75	54	73	62	56	52	62	8300	380	64
SMART-400/750-SN	813W43	750	3x400	0,37	54	63	55	46	43	53	6000	200	62
Roof base TPD-400-N	843P44	–	–	–	–	–	–	–	–	–	–	–	75
Roof base TPDC-400-N	843P54	–	–	–	–	–	–	–	–	–	–	–	84

Dimensions

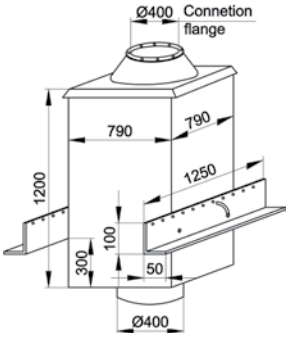
Roof fans SMART-400/1500-SN, SMART-400/1000-SN, SMART-400/750-SN



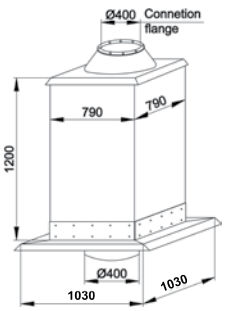
Connection flange



Sound absorbing roof base TPD-400-N

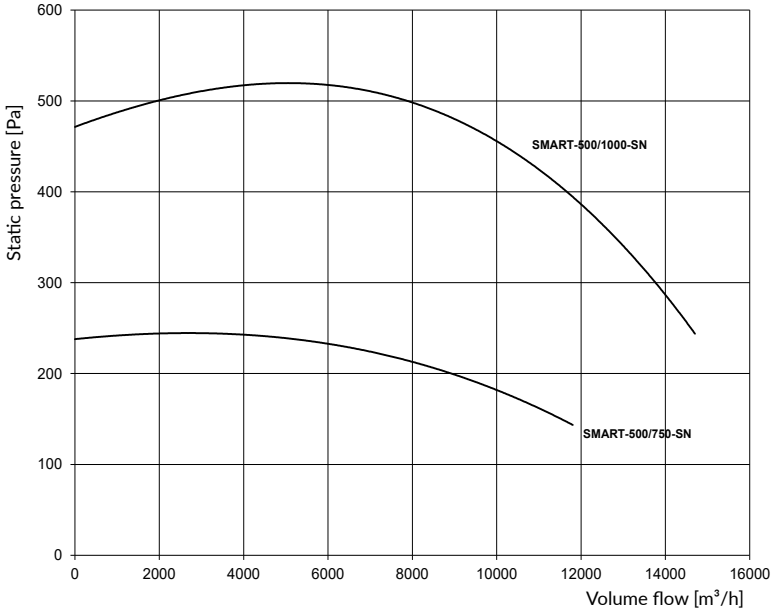


Sound absorbing roof base TPDC-400-N



NOTE:
The above mentioned values of the acoustic pressure level are specified for fans mounted on the sound absorbing roof base TPD-N or TPDC-N.
To reduce more the noise level, it is possible to apply a TK silencer suspended under the TPD-N or TPDC-N roof base.

SMART-500-SN

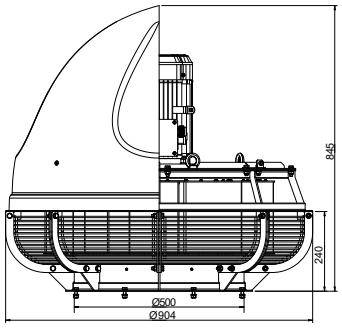


Technical data

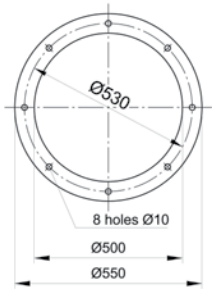
Type	Part no.	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection of the motor IP	Acoustic pressure level [dB(A)] from a distance of:					Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
						outlet				inlet			
						1 m	5 m	10 m	15 m	1 m			
SMART-500/1000-SN	813W44	1000	3x400	1,5	54	78	68	61	58	69	15 000	520	89
SMART-500/750-SN	813W45	750	3x400	1,1	54	69	59	52	49	61	11 800	240	81
Roof base TPD-500-N	843P45	–	–	–	–	–	–	–	–	–	–	–	75
Roof base TPDC-500-N	843P55	–	–	–	–	–	–	–	–	–	–	–	84

Dimensions

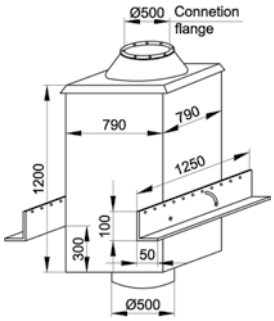
Roof fans SMART-500/1000-SN, SMART-500/750-SN



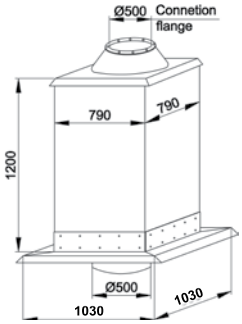
Connection flange



Sound absorbing roof base TPD-500-N

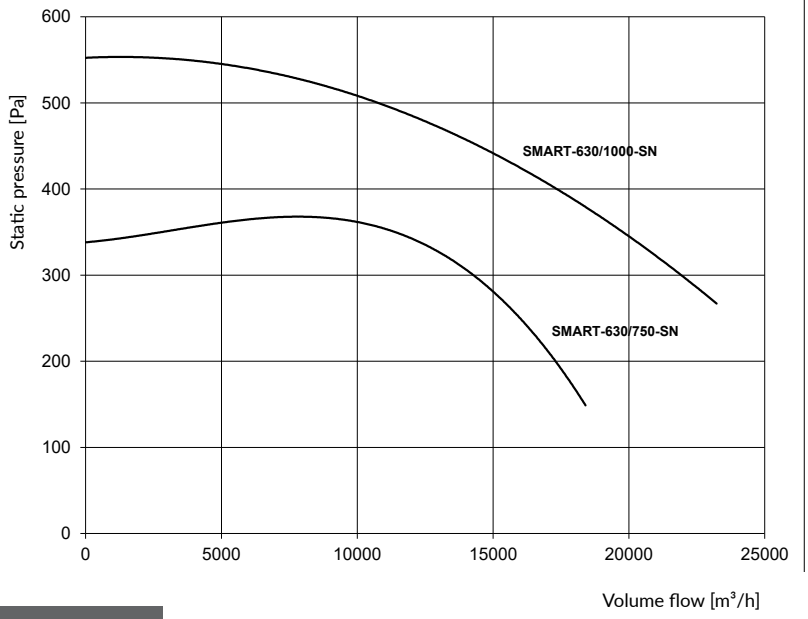


Sound absorbing roof base TPDC-500-N



NOTE:
The above mentioned values of the acoustic pressure level are specified for fans mounted on the sound absorbing roof base TPD-N or TPDC-N.
To reduce more the noise level, it is possible to apply a TK silencer suspended under the TPD-N or TPDC-N roof base.

SMART-630-SN

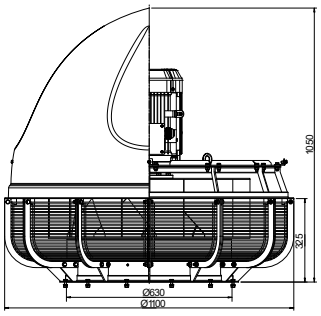


Technical data

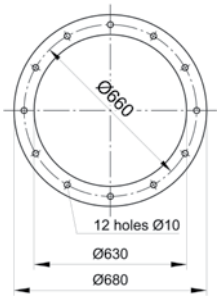
Type	Part no.	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection of the motor IP	Acoustic pressure level [dB(A)] from a distance of:					Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
						outlet				inlet			
						1 m	5 m	10 m	15 m	1 m			
SMART-630/1000-SN	813W46	1000	3x400	3,0	54	84	74	67	64	77	23 300	540	150
SMART-630/750-SN	813W47	750	3x400	1,5	54	77	67	60	56	70	18 500	350	135
Roof base TPD-630-N	843P46	–	–	–	–	–	–	–	–	–	–	–	88
Roof base TPDC-630-N	843P56	–	–	–	–	–	–	–	–	–	–	–	100

Dimensions

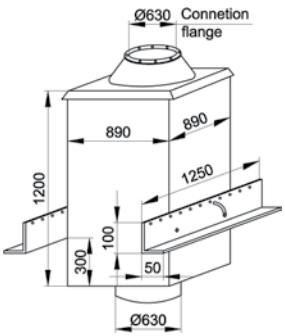
Roof fans SMART-630/1000-SN, SMART-630/750-SN



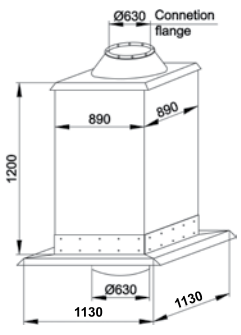
Connection flange



Sound absorbing roof base TPD-630-N

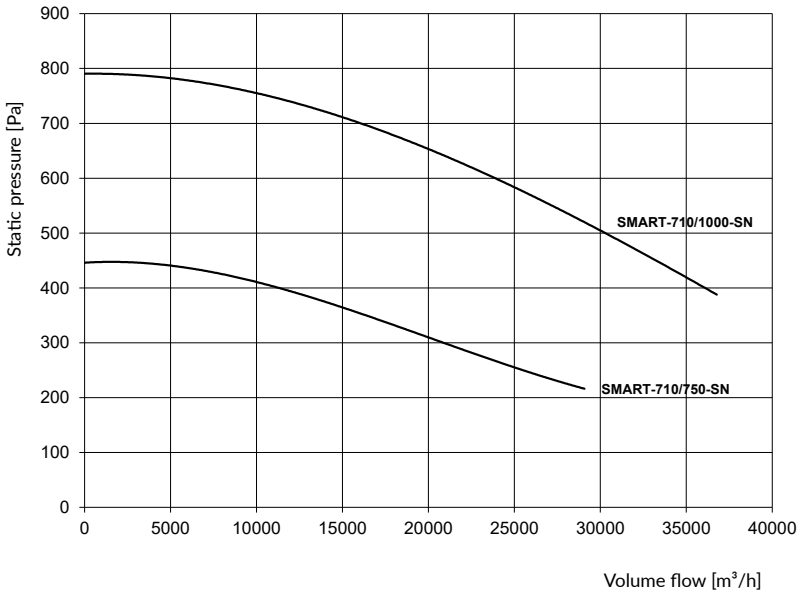


Sound absorbing roof base TPDC-630-N



NOTE:
The above mentioned values of the acoustic pressure level are specified for fans mounted on the sound absorbing roof base TPD-N or TPDC-N.
To reduce more the noise level, it is possible to apply a TK silencer suspended under the TPD-N or TPDC-N roof base.

SMART-710-SN

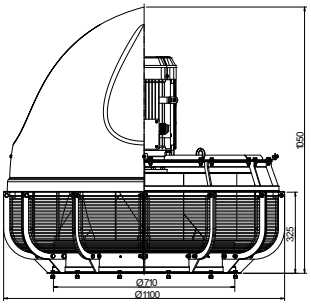


Technical data

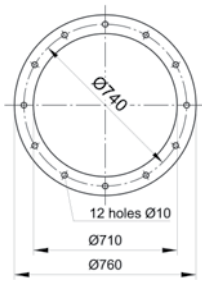
Type	Part no.	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection of the motor IP	Acoustic pressure level [dB(A)] from a distance of:					Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
						outlet				inlet			
						1 m	5 m	10 m	15 m	1 m			
SMART-710/1000-SN	813W48	1000	3x400	5,5	54	87	77	70	66	78	36 000	790	175
SMART-710/750-SN	813W49	750	3x400	2,2	54	81	71	64	61	71	29 000	450	152
Roof base TPD-710-N	843P47	–	–	–	–	–	–	–	–	–	–	–	88
Roof base TPDC-710-N	843P57	–	–	–	–	–	–	–	–	–	–	–	100

Dimensions

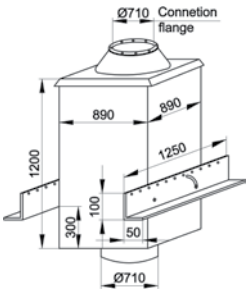
Roof fans SMART-710/1000-SN, SMART-710/750-SN



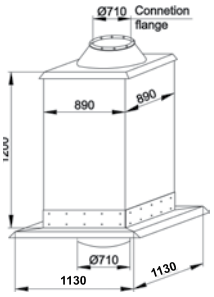
Connection flange



Sound absorbing roof base TPD-710-N



Sound absorbing roof base TPDC-710-N



NOTE:
The above mentioned values of the acoustic pressure level are specified for fans mounted on the sound absorbing roof base TPD-N or TPDC-N.
To reduce more the noise level, it is possible to apply a TK silencer suspended under the TPD-N or TPDC-N roof base.

SMART-EC – roof fan

SMART-EC-1300

SMART-EC-3000

Application

SMART-EC fans have been developed for general ventilation of buildings and are meant for forwarding the dry air of maximum temperature +60°C and dustiness not exceeding 0,3 g/m³, without viscous, aggressive impurities or substances that could cause explosion hazard. The SMART-EC family of fans, as a series of four sizes of motor rates, ranging from 0,275 kW up to 1 kW and maximum volume flow 6200 m³/h. The appliances meet the requirements of the ErP 2009/125/EC Directive. SMART-EC fans are equipped with high-tech electronic commutator motors EC. Their advantage is easy and full range step-less speed adjustment along with high work efficiency.

Structure

SMART-EC series of fans, feature a construction of bent steel profiles, providing a skeleton of streamline- and, at the same, very robust properties. Inside is located a motor with a radial impeller. Lower skeleton is of wire net circumference, as openwork structure through which the air is discharged. Whereas, the upper part of the fan is shielded by a plastic hood. The fan has to be installed on a roof base.

Capacity adjustment

EC electronic commutator motor features a built-in controller and thermal protection. The motor is integrated with the impeller. They are adapted to a step-less speed governing, within the wide operational range of the fan. Rotation applying comes from the connected external controller, using the analogue signal 0-10V (see catalogue card ELECTRICAL ACCESSORIES).

Installing

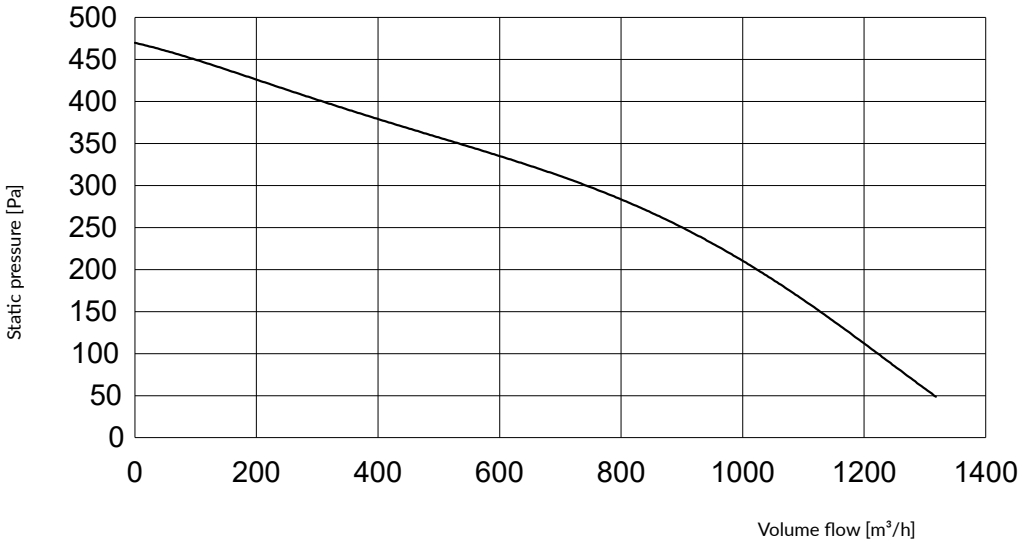
It is recommended to install the SMART-EC fans on sound-absorbing roof bases. A series of bases is adapted to the family of fans. The roof bases are of zinc-coated sheet. Internal surfaces of the base are cladded with sound-absorbing lining.

We offer two sorts of sound-absorbing roof bases, varying in the way of installing on the roof:

- TPD-N sound absorbing roof base – are mounted directly on the roof surface. To make installing easy, there are two fastened special (placed rotatably on opposite sides) support profiles – providing levelling of the fan connection flange. These bases are adapted for roofs of slope angle from 0° up to 18°.
- TPDC-N sound absorbing roof base – are installed directly to the pedestal of the ventilation outlet duct. The fan flange has to be screwed to the pedestal.

On demand of Customer, we deliver safety switches do cut off the supply during the installing and maintenance (see catalogue card ELECTRICAL ACCESSORIES).

SMART-EC-1300

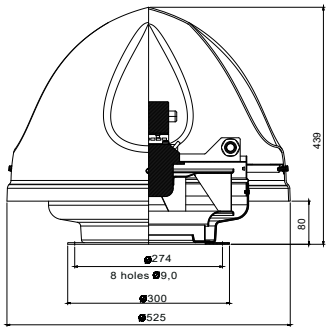


Technical Data

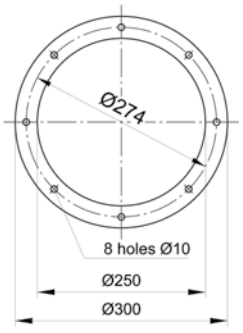
Type	Part No	Synchronous rotations [1/min]	Supply voltage [V/Hz]	Motor rate [W]	Ingress protection IP	Acoustic pressure level [dB(A)]					Max. volume flow [m³/h]	Max. vacuum [Pa]	Weight [kg]
						outlet				inlet			
						1 m	5 m	10 m	15 m	1 m			
SMART-EC-1300	812W80	1925	230/50	275	44	65	51	45	41	65	1300	470	12,3
Roof base TPD-250-N	843P42	–	–	–	–	–	–	–	–	–	–	–	41
Roof base TPDC-250-N	843P52	–	–	–	–	–	–	–	–	–	–	–	46

Dimensions

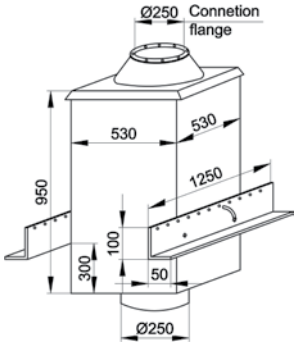
Roof fan
SMART-EC-1300



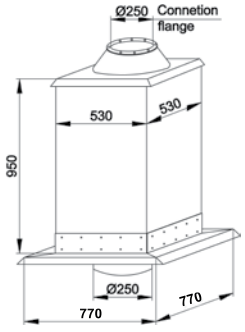
Connection flange



Sound absorbing roof base
TPD-250-N

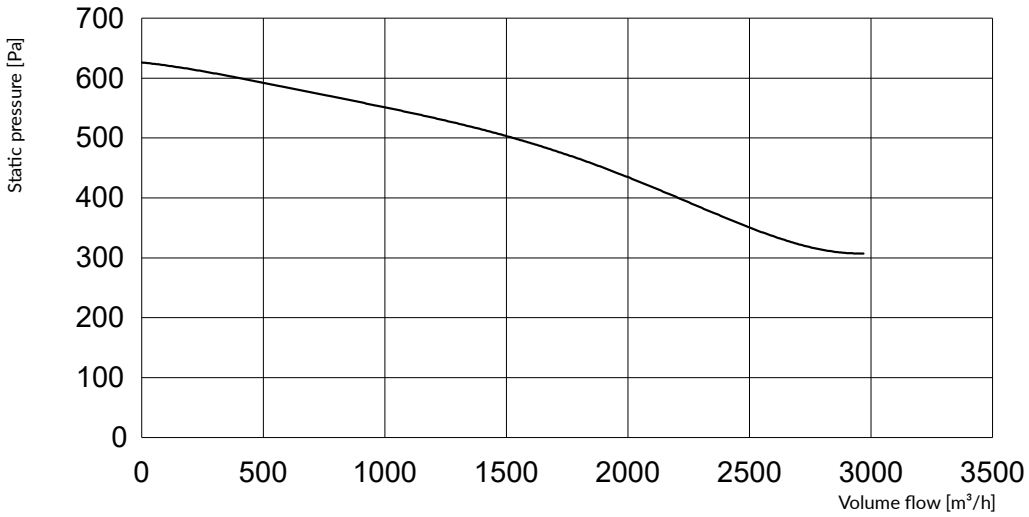


Sound absorbing roof base
TPDC-250-N



NOTE:
The values of the acoustic pressure level have been taken for fans installed on a BII roof bases.
To reduce more the noise level, it is possible to apply a TPD-N, TPDC-N sound-absorbing roof bases or TK silencers.

SMART-EC-3000

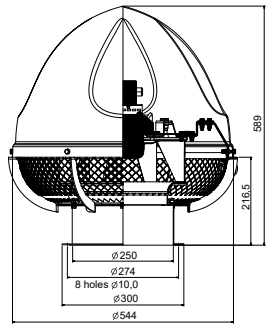


Technical Data

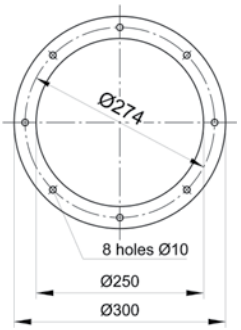
Type	Part No	Synchronous rotations [1/min]	Supply voltage [V/Hz]	Motor rate [W]	Ingress protection IP	Acoustic pressure level [dB(A)]					Max. volume flow [m³/h]	Max. vacuum [Pa]	Weight [kg]
						outlet				inlet			
						1 m	5 m	10 m	15 m	1 m			
SMART-EC-3000	812W81	2200	230/50	320	44	72	58	52	48	69	3000	625	19,7
Roof base TPD-250-N	843P42	–	–	–	–	–	–	–	–	–	–	–	41
Roof base TPDC-250-N	843P52	–	–	–	–	–	–	–	–	–	–	–	46

Dimensions

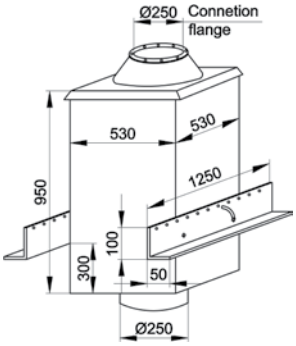
Roof fan
SMART-EC-3000



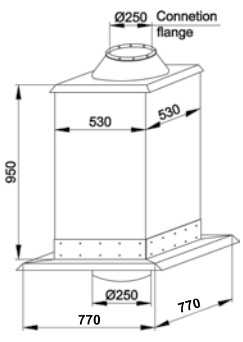
Connection flange



Sound absorbing roof base
TPD-250-N

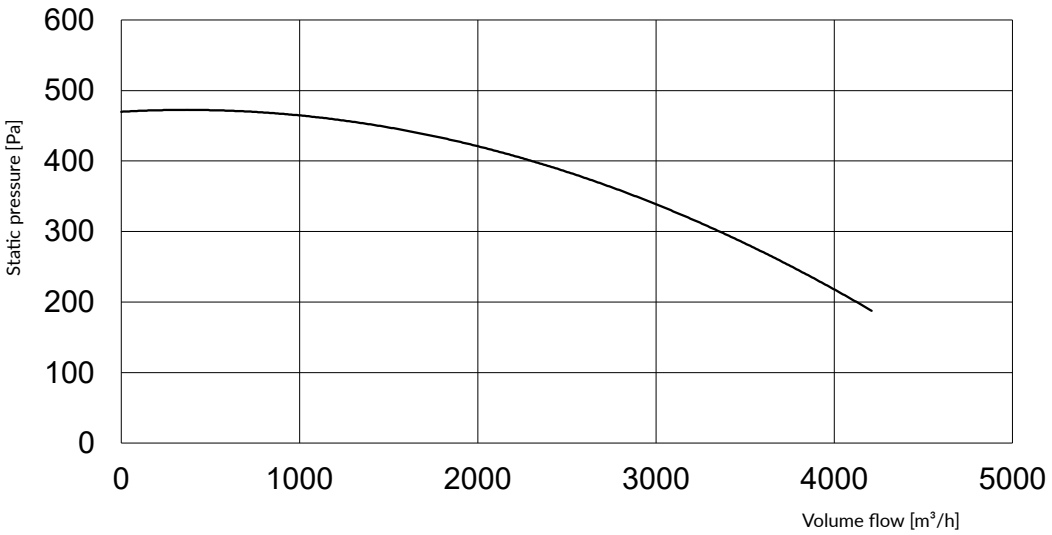


Sound absorbing roof base
TPDC-250-N



NOTE:
The values of the acoustic pressure level have been taken for fans installed on a BII roof bases.
To reduce more the noise level, it is possible to apply a TPD-N, TPDC-N sound-absorbing roof bases or TK silencers.

SMART-EC-4000

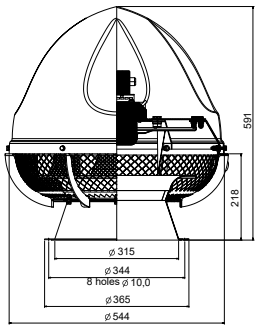


Technical Data

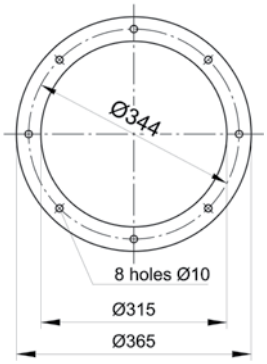
Type	Part No	Synchronous rotations [1/min]	Supply voltage [V/Hz]	Motor rate [W]	Ingress protection IP	Acoustic pressure level [dB(A)]					Max.volume flow [m³/h]	Max. vacuum [Pa]	Weight [kg]
						outlet				inlet			
						1 m	5 m	10 m	15 m	1 m			
SMART-EC-4000	812W82	1450	230/50	330	44	70	56	50	45	65	4200	480	22,4
Roof base TPD-315-N	843P43	–	–	–	–	–	–	–	–	–	–	–	41
Roof base TPDC-315-N	843P53	–	–	–	–	–	–	–	–	–	–	–	46

Dimensions

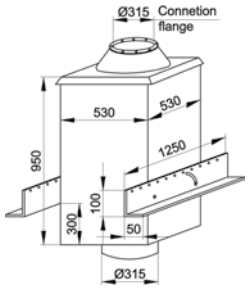
Roof fan SMART-EC-4000



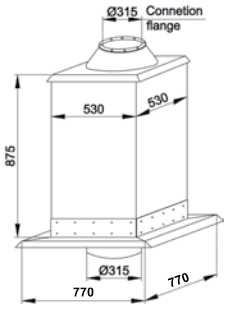
Connection flange



Sound absorbing roof base TPD-315-N

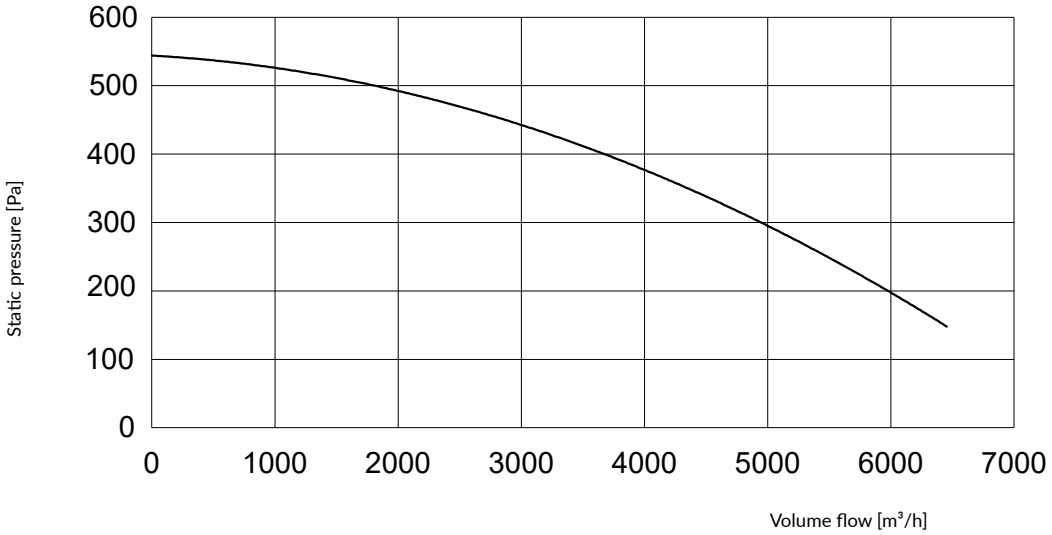


Sound absorbing roof base TPDC-315-N



NOTE:
The values of the acoustic pressure level have been taken for fans installed on a BII roof bases.
To reduce more the noise level, it is possible to apply a TPD-N, TPDC-N sound-absorbing roof bases or TK silencers.

SMART-EC-6200

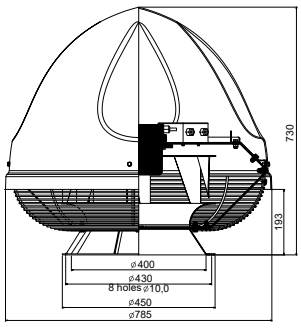


Technical Data

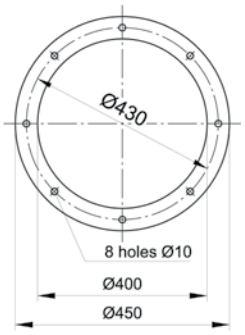
Type	Part No	Synchronous rotations [1/min]	Supply voltage [V/Hz]	Motor rate [W]	Ingress protection IP	Acoustic pressure level [dB(A)]					Max. volume flow [m³/h]	Max. vacuum [Pa]	Weight [kg]
						outlet				inlet			
						1 m	5 m	10 m	15 m	1 m			
SMART-EC-6200	812W83	1450	3x400/50	1000	44	74	60	54	50	72	6450	540	47,6
Roof base TPD-400-N	843P44	–	–	–	–	–	–	–	–	–	–	–	75
Roof base TPDC-400-N	843P54	–	–	–	–	–	–	–	–	–	–	–	84

Dimensions

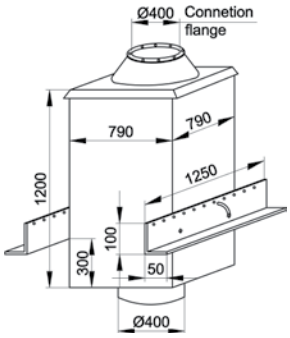
Roof fan SMART-EC-6200



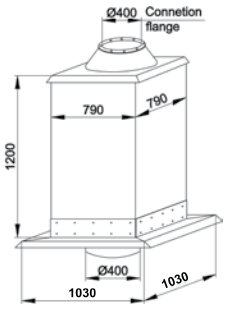
Connection flange



Sound absorbing roof base TPD-400-N



Sound absorbing roof base TPDC-400-N



NOTE:
The values of the acoustic pressure level have been taken for fans installed on a BII roof bases.
To reduce more the noise level, it is possible to apply a TPD-N, TPDC-N sound-absorbing roof bases or TK silencers.

medium-pressure roof fans for general ventilation

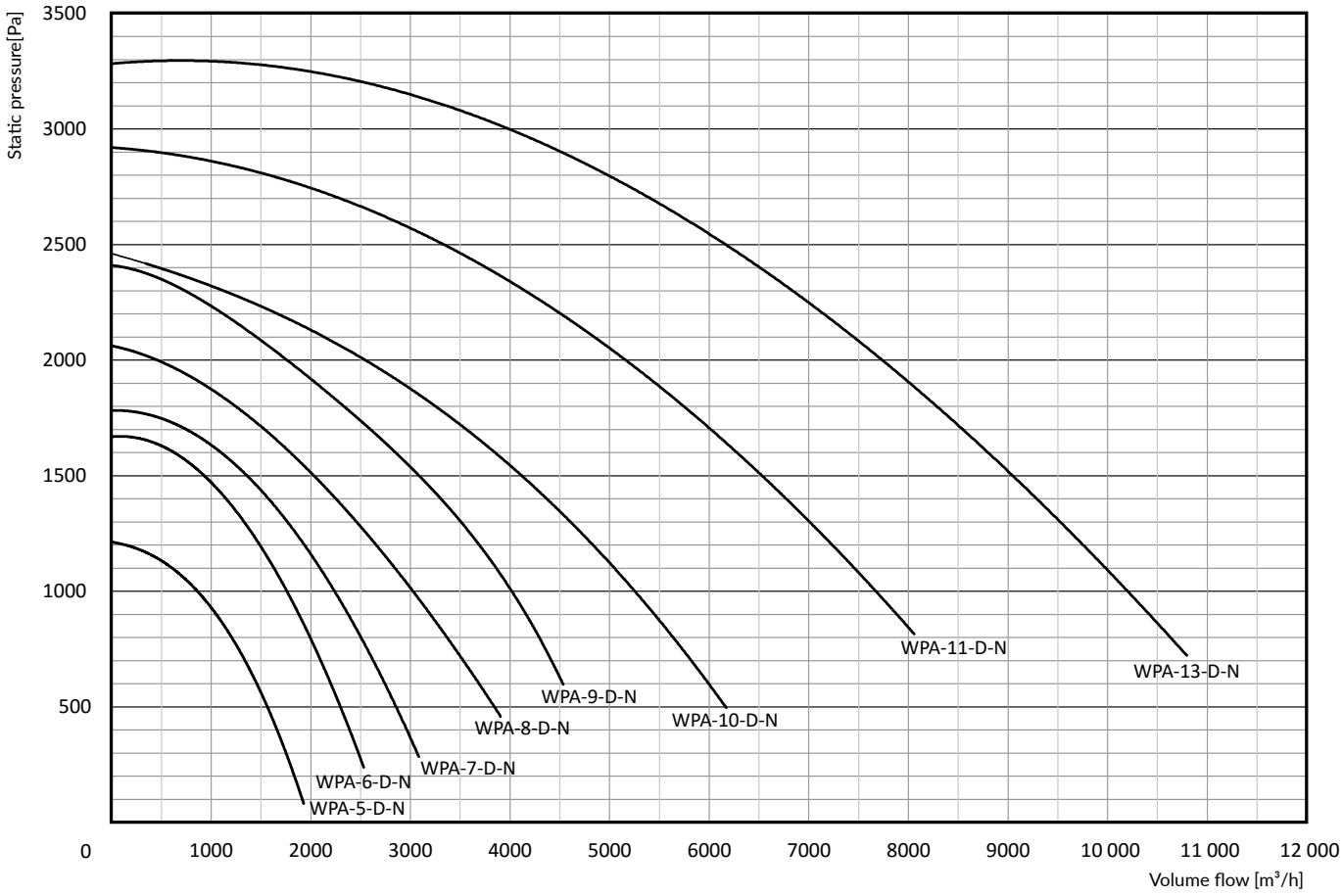
WPA-D-N – fan with horizontal outlet

Purpose

First of all, those fans are designed for local ventilation. They are installed outside the buildings (outdoor application), on roof bases or on wall brackets. As they can overcome significant air flow resistances, they are particularly efficient within installations of local exhausts. The fans meet the requirements of the ErP 2009/125/EC Directive.

Structure

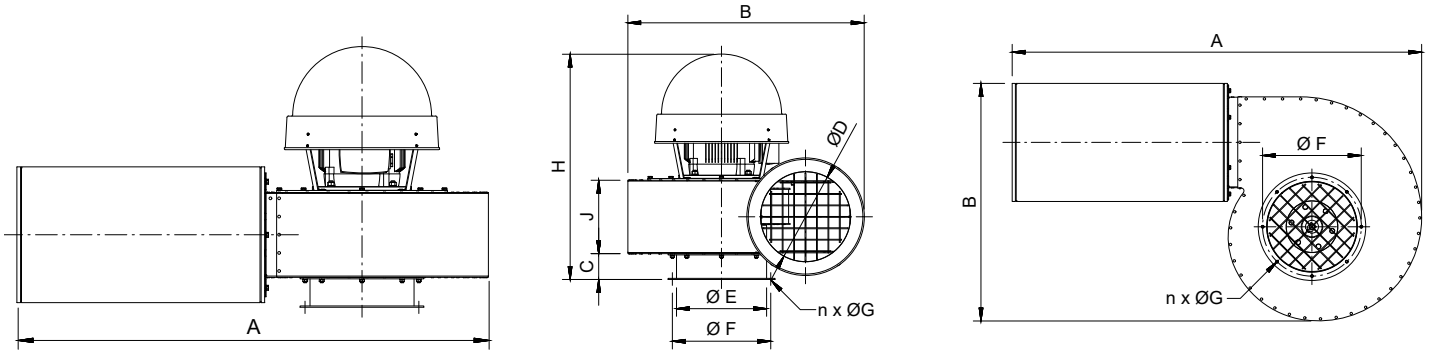
The fan consists of a spiral steel housing, motor and a plastic hood. The aluminium radial impeller is directly installed at the motor shaft. Impeller blades cross-section reminds the profile of an aircraft wing, providing low acoustic pressure level. The fan inlet is equipped with a flange to install it on a roof base or on wall bracket. Typical feature of the fan is a silencer fastened at the fan outlet of its spiral housing, directed horizontally. For safety reason, the inlet and outlet are equipped with a protective grill. It is recommended to install a TK silencer at the fan inlet (for details see acoustic data in the table). On demand of Customer, we deliver safety switches to cut off the power supply during the servicing and installing activities (see catalogue card ELECTRICAL ACCESSORIES).



Technical data

Type	Part no.	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:		Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
						1 m	5 m			
WPA-5-D-1-N	807W11	3000	230	0,37	54	73/67*	59/53*	1900	1250	23
WPA-5-D-3-N	807W12	3000	3x400	0,37	54	73/67*	59/53*	1900	1250	23
WPA-6-D-1-N	807W13	3000	230	0,75	54	78/75*	64/61*	2500	1700	28
WPA-6-D-3-N	807W14	3000	3x400	0,75	54	78/75*	64/61*	2500	1700	28
WPA-7-D-1-N	807W15	3000	230	1,1	54	81/74*	67/60*	3100	1800	30
WPA-7-D-3-N	807W16	3000	3x400	1,1	54	81/74*	67/60*	3100	1800	30
WPA-8-D-3-N	807W17	3000	3x400	1,5	54	82/78*	68/64*	3900	2050	36
WPA-9-D-3-N	807W18	3000	3x400	2,2	54	86/82*	72/68*	4500	2400	45
WPA-10-D-3-N	807W19	3000	3x400	3,0	54	87/81*	73/67*	6200	2450	58
WPA-11-D-3-N	807W20	3000	3x400	5,5	54	91/88*	77/74*	8050	2950	77
WPA-13-D-3-N	807W22	3000	3x400	7,5	54	95/90*	81/76*	10800	3300	98

* Measurements have been carried out with the additional TK L = 500 mm silencer installed at the fan inlet.
1. Maximum temperature of the conveyed air is +60°C. Maximum temperature within the work area +40°C.
2. Maximum dustiness of the conveyed air should not exceed 0,3 g/m³.



Top view of the fan

Dimensions

Type	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	n [pc.]	G [mm]	H [mm]	J [mm]
WPA-5-D-1-N	905	525	60	160	160	194	6	7,0	495	140
WPA-5-D-3-N										
WPA-6-D-1-N	915	550	60	160	160	194	6	7,0	495	140
WPA-6-D-3-N										
WPA-7-D-1-N	965	570	60	200	160	194	6	7,0	535	155
WPA-7-D-3-N										
WPA-8-D-3-N	990	600	60	200	200	224 234 246	8 6 8	9,0 7,0 9,0	540	155
WPA-9-D-3-N	1030	665	60	200	200	224 234 246	8 6 8	9,0 7,0 9,0	620	155
WPA-10-D-3-N	1045	675	80	250	250	274	8	9,0	700	232
WPA-11-D-3-N	1065	695	80	250	250	274	8	9,0	750	232
WPA-13-D-3-N	1430	830	90	315	315	344	8	9,0	790	258

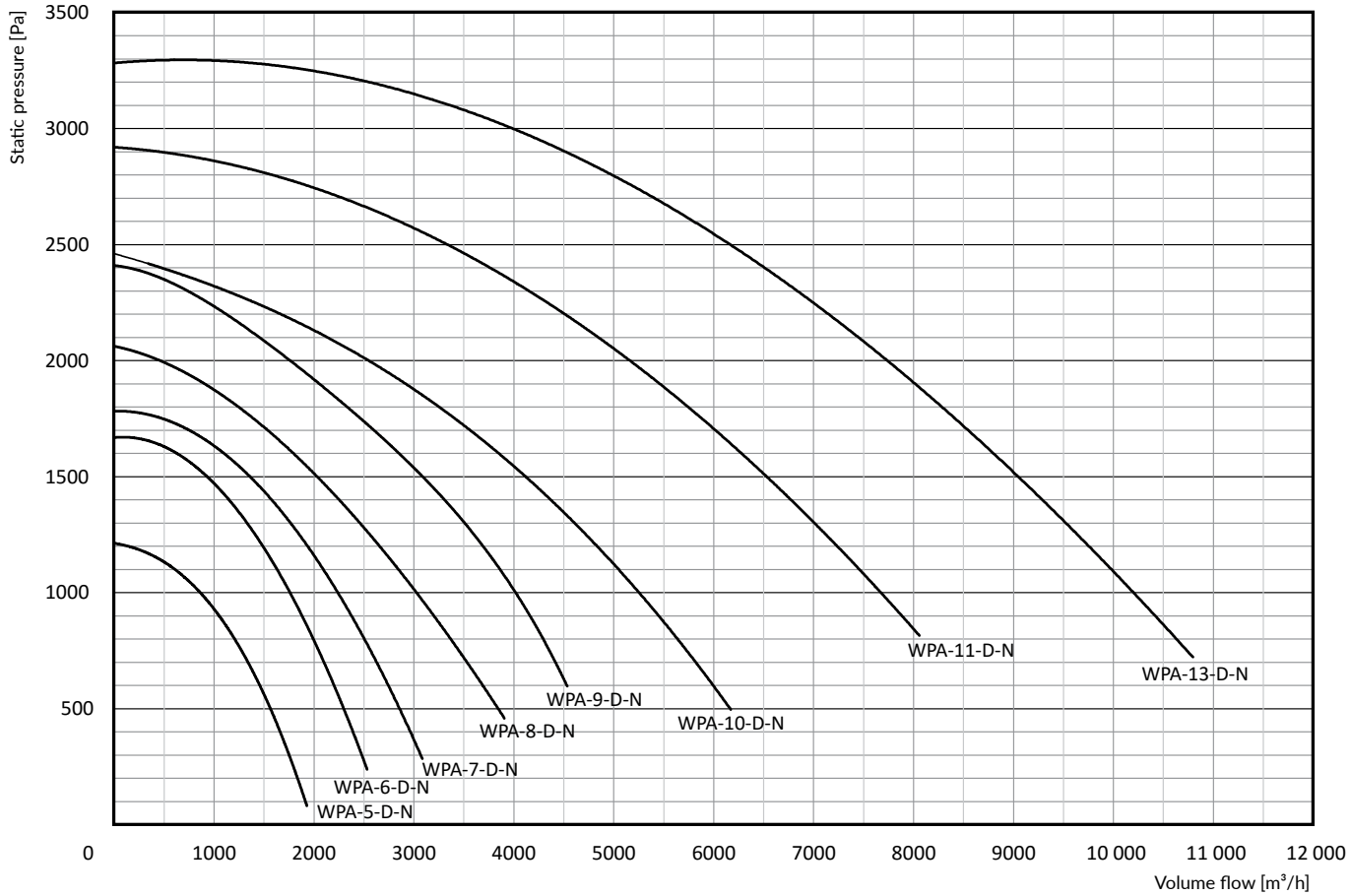
WPA-D-N – fan with vertical outlet

Purpose

WPA-D-N fans are generally designed for local ventilation. They are installed outside the buildings (outdoor application), on roof bases or on wall brackets. As they can overcome significant air flow resistances, they are particularly efficient within installations of local exhausts. They meet the requirements of the ErP 2009/125/EC Directive.

Structure

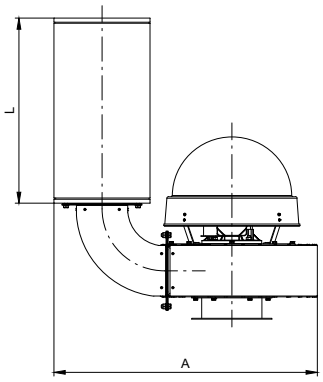
The fan consists of a spiral steel housing, motor and a plastic hood. The radial aluminium impeller is directly installed at the motor shaft. Impeller blades cross-section reminds the profile of an aircraft wing, providing low acoustic pressure level. The fan inlet is equipped with a flange to install it on a roof base or on wall bracket. Typical feature of the fan is a silencer fastened at the fan outlet of its spiral housing, directed vertically and connected through a KL-WPA elbow. For safety reason, the inlet and outlet are equipped with a protective grill. It is recommended to install a TK silencer at the fan inlet (for details see acoustic data in the table). On demand of Customer, we deliver safety switches to disconnect the power supply during the servicing and installing activities (see catalogue card ELECTRICAL ACCESSORIES).

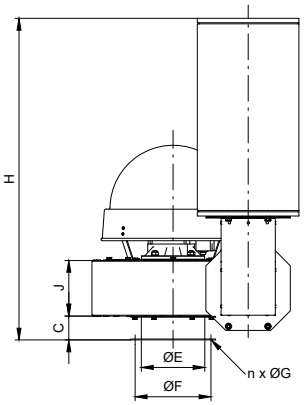


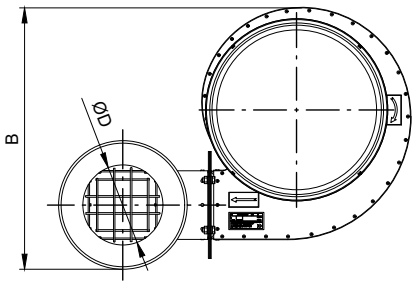
Technical data

Type	Part no.	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:		Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
						1 m	5 m			
WPA-5-D-1-N KL-160-WPA	807W11 829K14	3000 –	230 –	0,37 –	54 –	73/67* –	59/53* –	1900 –	1250 –	23 1,8
WPA-5-D-3-N KL-160-WPA	807W12 829K14	3000 –	3x400 –	0,37 –	54 –	73/67* –	59/53* –	1900 –	1250 –	23 1,8
WPA-6-D-1-N KL-160-WPA	807W13 829K14	3000 –	230 –	0,75 –	54 –	78/75* –	64/61* –	2500 –	1700 –	28 1,8
WPA-6-D-3-N KL-160-WPA	807W14 829K14	3000 –	3x400 –	0,75 –	54 –	78/75* –	64/61* –	2500 –	1700 –	28 1,8
WPA-7-D-1-N KL-200-WPA	807W15 829K15	3000 –	230 –	1,1 –	54 –	81/74* –	67/60* –	3100 –	1800 –	30 2,4
WPA-7-D-3-N KL-200-WPA	807W16 829K15	3000 –	3x400 –	1,1 –	54 –	81/74* –	67/60* –	3100 –	1800 –	30 2,4
WPA-8-D-3-N KL-200-WPA	807W17 829K15	3000 –	3x400 –	1,5 –	54 –	82/78* –	68/64* –	3900 –	2050 –	36 2,4
WPA-9-D-3-N KL-200-WPA	807W18 829K15	3000 –	3x400 –	2,2 –	54 –	86/82* –	72/68* –	4500 –	2400 –	44 2,4
WPA-10-D-3-N KL-250-WPA	807W19 829K16	3000 –	3x400 –	3,0 –	54 –	87/81* –	73/67* –	6200 –	2450 –	58 7,5
WPA-11-D-3-N KL-250-WPA	807W20 829K16	3000 –	3x400 –	5,5 –	54 –	91/88* –	77/74* –	8050 –	2950 –	77 7,5
WPA-13-D-3-N KL-315-WPA	807W22 829K17	3000 –	3x400 –	7,5 –	54 –	95/90* –	81/76* –	10 800 –	3300 –	98 12,6

* Measurements have been carried out with the additional TK L = 500 mm silencer installed at the fan inlet.
1. Maximum temperature of the conveyed air is +60°C. Maximum temperature within the work area +40°C.
2. Maximum dustiness of the conveyed air should not exceed 0,3 g/m³.
3. KL-WPA – is a type of an elbow connecting the silencer with the fan.







Top view of the fan

Dimensions

Type	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	n [pc.]	G [mm]	H [mm]	J [mm]	L [mm]
WPA-5-D-1-N	705	525	60	160	160	194	6	7,0	815	140	500
WPA-5-D-3-N											
WPA-6-D-1-N	715	550	60	160	160	194	6	7,0	815	140	500
WPA-6-D-3-N											
WPA-7-D-1-N	815	570	60	200	160	194	6	7,0	840	155	500
WPA-7-D-3-N											
WPA-8-D-3-N	840	600	60	200	200	224 234 246	8 6 8	9,0 7,0 9,0	840	155	500
WPA-9-D-3-N	880	665	60	200	200	224 234 246	8 6 8	9,0 7,0 9,0	840	155	500
WPA-10-D-3-N	960	675	80	250	250	274	8	9,0	940	232	500
WPA-11-D-3-N	980	695	80	250	250	274	8	9,0	940	232	500
WPA-13-D-3-N	1225	830	90	315	315	344	8	9,0	1300	258	500

high-pressure fans

DOG-1 – portable blower

Drying the firehoses

Drying the humid walls

Fresh air supply
during the rescue actions

Purpose

Subsequent applications of DOG-1 blower:

- local drying the walls in humid rooms,
- drying the inner surface of the firehoses at fire departments,
- supplying fresh air during the rescue actions to places without ventilation; Fresh air can be conveyed within a distance even of several dozen metres; The device can deliver the necessary air for even 10 people.

Lightweight structure and quick-connectors for hose attachment make the blower very easy in use.

Structure

The blower consists of a housing and a high-pressure turbine. The housing is equipped with a handle to carry the device from one place to another. On the upper housing surface is located a motor switch to operate the turbine. The appliance is equipped with a standard quick-connector to attach the hoses. The outlet air is automatically warmed up by 30°C.

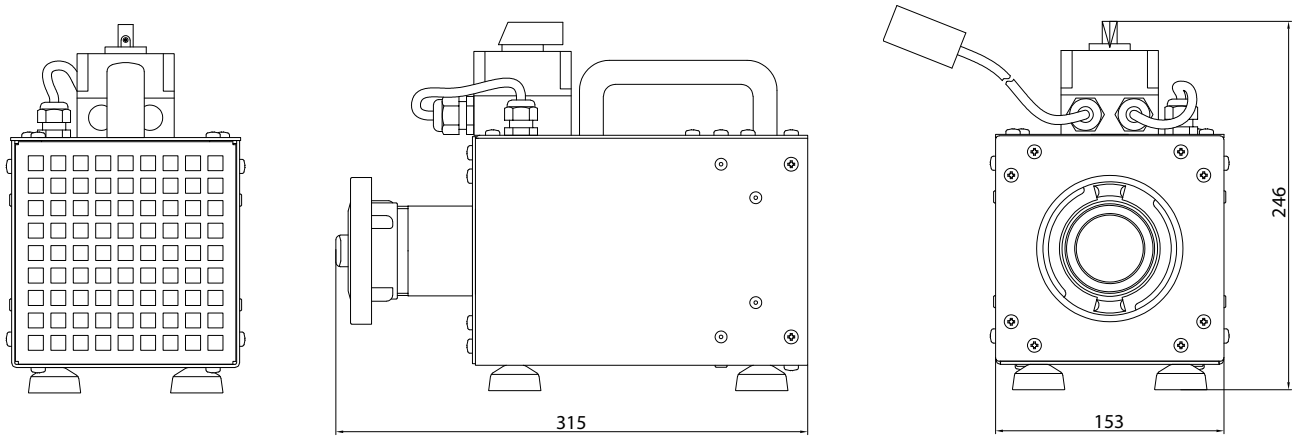
The blower is equipped with a five-metre-long power supply cable, ended with a plug.

Operational use

In application of room drying, put the blower outlet in distance of approx. twenty centimetres from the humid wall and, (depending on the drying progress), change the blower position. It is recommended that there is fresh air access to the dried room. Provided that, there is applied a flexible hose fastened through a quick-connector at the device outlet, the blower can be placed in another room or outside the building. The hose tip can precisely remove humidity, even from the most inaccessible places. In larger rooms, it is recommended to apply several blowers, whereby each of them is directing the air towards another wall. For firehose drying, connect it through a quick-connector. If the DOG-1 blower is used for air supplying to disastrously cut-off people (during the rescue action), connect through a quick-connector the firehose or a flexible hose and place its outlet in a place allowing a free air access.

Technical data

Type	Part no.	Volume flow [m³/h]	Supply voltage [V]	Motor rate of the turbine [kW]	Maximum pressure [Pa]	Acoustic pressure level [dB(A)] from a distance of:		Weight [kg]
						1 m	5 m	
DOG-1	843W27	225	230	1,6	30 000	81	78	7



Additional equipment

Hose

Type	Part no.	Weight [kg/m]	Remarks
PCV FLEX-44	421P35	0,36	Flexible extraction hose. Standard length: 15 m. Technical Data – see card VENTILATION ACCESSORIES.

Connection

Type	Part no.	Weight [kg]	Remarks
KR-DOG	830Z22	0,6	To connect the PVC FLEX-44 hose with the DOG-1 blower.

Drying of the hard-to-reach places through a hose

WW – side-duct blower

WW-3000

WW-7500

Application

WW side-duct blowers are meant for conveying the air in condotions where high pressure or vacuum is required. They are applied in industrial vacuum cleaners, high-vacuum filtering units, for aeration of water reservoirs (sewage treatment plants) or attraction elements to the swimming pools, i. e. air geysers. Additionally, WW side-duct blowers find interest in pneumatic mail, pneumatic transport, graphics machines, electroplating plants. They can also be applied for oilfree-transporting of the non-aggressive-, and non-explosive gases.

Structure

The fan consists of a housing, cast aluminium radial impeller, two silencers and a motor. The impeller is directly installed at motor shaft journal, whereas the silencers are fastened at the inlet- and outlet fitting pieces. The appliance is adapted for operation both, in horizontal and vertical position.

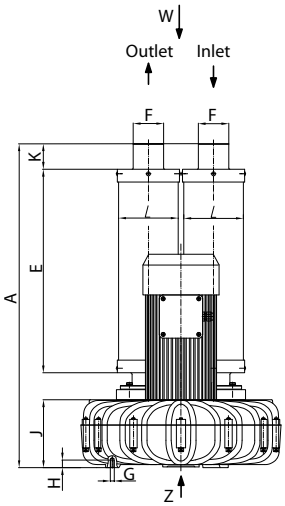
Operational conditions:

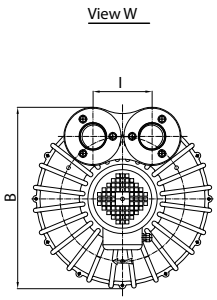
- admissible temperature of the forwarded air +40°C,
- the blower should not convey the viscous impurities, creating explosion hazard, or of dustiness exceeding 0,3 g/m^3.

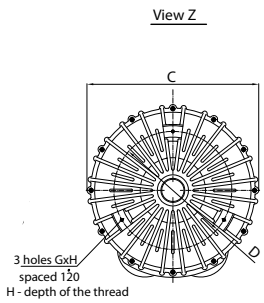
Technical Data

Type	Part No.	Maximum volume flow [m^3/h]	Supply voltage [V]	Synchronous rotations [1/min]	Motor rate [kW]	Acoustic pressure level [dB(A)]	Ingress protection IP	Weight [kg]
WW-3000	843W65	300	3x400	3000	3,0	81	54	39
WW-7500	843W66	600	3x400	3000	7,5	87	54	74

Example of application of the blower for the „air geyser”





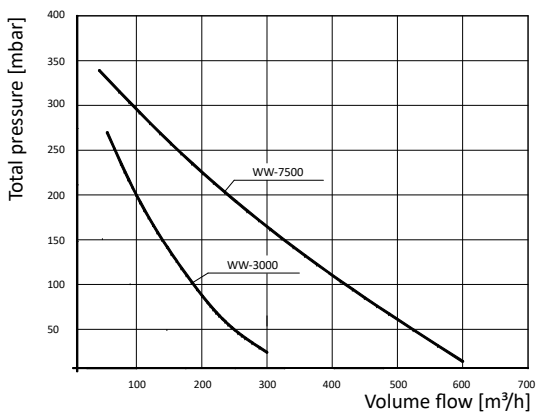


Dimensions

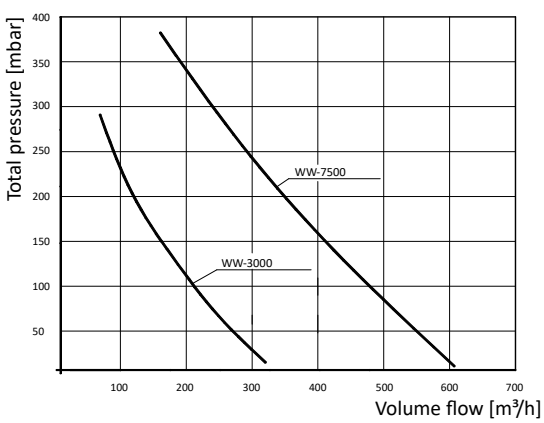
Type	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]
WW-3000	637	393	393	270	400	60	M8	18	128	132	50	110
WW-7500	670	482	482	350	400	60	M8	20	144	160	50	110

Flow Charts

suction



air supply



chemically resistant fans

KLIMAWENT S.A. produces wide range of chemically resistant fans, designed for conveying the air contaminated with chemically aggressive agents. This resistance has been obtained due to appropriate construction and application of special materials for manufacturing. Usefulness of the subsequent types of fans for extraction of the air contaminated with following chemical substances is represented in the Tables below.

Table of chemical resistance of the fans SPARK-CHEM/Ex

Medium	Concentration	Temperature [°C]	1.4301
Seawater	–	20	+P
Chlorinated water	1 g/l	20	+
	1 mg/l	20	++
Ammonia	–	boiling point	++
Sodium hydroxide	20%	50	++
	20%	100	++
	40%	100	+
Phosphoric acid	20%	boiling point	++
	40%	boiling point	++
	80%	95	–
Nitric acid	30%	boiling point	++
	50%	boiling point	+
	65%	80	++
	65%	boiling point	+
Hydrochloric acid	0,50%	20	+P
	0,50%	boiling point	–
	1%	20	+P
Sulphuric acid	1%	100	–
	5%	20	+
Citric acid	25%	boiling point	–
	50%	20	++
Lactic acid	10%	10–100	+
	50%	20–80	+
	50%	boiling point	–

Medium	Concentration	Temperature [°C]	1.4301
Formic acid	5–10%	20	++
	10%	80	–
	50%	24–40	+
	50%	boiling point	–
Acetic acid	1%	boiling point	++
	10%	boiling point	+
	20%	boiling point	–
	100%	boiling point	–
Sodium chloride	3%	20–60	+P

Corrosion rate [mm/year]	Resistance
++	total
+	partial
–	not resistant
S – risk of stress corrosion P – risk of pitting corrosion	

Table of chemical resistance of the fans SMART-CHEM, BOX-CHEM and WPA-CHEM

Medium	Concentration	40°C	60°C
Acetone	10%	– –	– –
Pure amyl alcohol (pentanol)		+ +	O
Ethyl alcohol (ethanol)	10%	+ +	+
Non-fermentative isopropyl alcohol	70–99%	+	
Methyl alcohol (methanol)	96%	+ +	–
Methyl alcohol, aqueous solution	100%	+ +	+
Ammonia, aqueous solution	50%	+ +	+
Potassium nitrate, aqueous solution	saturated	+ +	+ +
Sodium nitrate, aqueous solution	saturated	+ +	+ +
Calcium nitrate, aqueous solution	saturated	+ +	+ +
Benzene	100%	– –	– –
Painter's naphtha, mineral spirit		+ +	+
Liquid butane	100%	+ +	
n-butanol (butyl alcohol)	100%	+ +	O
Liquid chlorine	100%	– –	
Dry gaseous chlorine	100%	– –	
Potassium chlorate	7,3%	+ +	O
Sodium chlorate, aqueous solution	25%	+ +	+ +
Ammonium chloride, aqueous solution	all	+ +	+ +
Zinc chloride		+ +	+ +
Ethylene chloride	100%	– –	– –
Methylene chloride	100%	– –	– –
Potassium chloride, aqueous solution	saturated	+ +	+ +
Sodium chloride (domestic salt), aqueous solution	saturated	+ +	+ +
Sodium chloride, aqueous solution	5%	+ +	+ +
Chlorobenzene	100%	– –	– –
Cadmium cyanide		+	+
Copper cyanide		+	+
Potassium cyanide		+	+
Mercuric cyanide		+	+
Sodium cyanide		+	+
Silver cyanide		+	+
Cyclohexane	100%	+ +	O
Cyclohexanol	100%	+ +	–
Cyclohexanon	100%	– –	– –
Carbon tetrachloride	100%	– –	– –
1,4-dioxane	100%	– –	– –
Carbon disulphide	100%	– –	– –
Sulphur dioxide	saturated	+ +	+ +
Ethyl ether	100%	– –	
Petroleum ether	100%	+ +	+
2-ethylhexanol	100%	+ +	+
Phenol, aqueous solution	approx. 9%	O	– –
Formaldehyde, aqueous solution	40%	+ +	
Formalin	10%	+ +	
Ammonium phosphate	all	+ +	+ +
Glycerine	100%	+ +	+ +
Glycerine, aqueous solution	high	+	+
Glycol	100%	+ +	+ +
Heptane	100%	+ +	O
Isopropanol	100%	+ +	
Chromium bath, technical		+ +	O

Medium	Concentration	40°C	60°C
Methyl-ethyl ketone	100%	– –	– –
Cresols	100%	– –	– –
Accumulator acid (H_2SO_4)		+ +	+ +
Nitric acid	10%	+ +	+ +
	50%	+ +	+
Boric acid	100%	+ +	+ +
Hydrocyanic acid		+	
Citric acid	saturated	+ +	+ +
Hydrofluoric acid	8–50%	+	– –
Phosphoric acid	85%	+ +	+ +
	50%	+ +	+ +
Lactic acid, aqueous solution	90%	+ +	+ +
	10%	+ +	+ +
Formic acid	98%	+	
	50%	+ +	O
	10%	+ +	+
Acetic acid, glacial	100%	O	– –
Acetic acid, aqueous solution	50%	+ +	–
Oleic acid	100%	+ +	O
Sulphuric acid	3–50%	+	+
Sulphuric acid	96%	O	– –
	50%	+ +	+ +
	10%	+ +	+ +
Hydrochloric acid	35%	+ +	+
Stearic acid	100%	+ +	+
Oxalic acid	saturated	+ +	+ +
Acidic sodium carbonate, aqueous solution	saturated	+ +	+ +
Acidic sodium sulphate, aqueous solution	saturated	+ +	+ +
Nail lacquer		O	
Lysol		–	– –
White liquor (12,5% of active chlorine)		+ +	O
Potash lye	50%	+ +	+ +
	10%	+ +	+ +
Potassium permanganate, aqueous solution	saturated	+ +	+
Hydrogen peroxide	30%	+ +	
Naphthalene	100%	O	– –
Nitrobenzene	25%	+ +	+ +
	100%	– –	– –
Table vinegar		+ +	+ +
Butyl acetate	100%	– –	– –
Ethyl acetate	100%	– –	– –
2-butoxetyl acetate		+	
Edible vegetable oil		+ +	+ +
Edible animal oil		+ +	+ +
Coconut oil		+ +	+ +
Linseed oil		+ +	+ +
Olive oil		+ +	+ +
Paraffin oil	100%	+ +	+ +
Soybean oil		+ +	+ +
Turpentine oil		+ +	O
Transformer oil		+ +	

Medium	Concentration	40°C	60°C
Mineral oils (without aromatic hydrocarbons)		+ +	+
Furnace oils		+ +	O
Silicone oils		+ +	
Engine oils, car oils		+ +	+
Pine oil	100%	+ +	
Vapours of ethoxyl amines		– –	– –
Vapours of chlorides		+	
Vapours of ferrous chloride $FeCL_2$	20%	+	
Vapours of acetic acid		+ +	
Vapours of hydrochloric acid	30%	+	
Vapours of oxy-oxygen fatty alcohols		+	
Vapours of orange oils		– –	– –
Vapours of poly-glycols		+	
Vapours of ammonia soda (soda ash) and of caustic soda		+ +	
Vapours of tio-urea		+	
Vapours of aliphatic hydrocarbons		+	
Gaseous ozone		+ +	
Automotive fuel			
Normal petrol		+ +	+
Petrol Super		–	– –
Diesel oil		+ +	+
Paraffin	100%	+ +	– –
Beer		+ +	+ +
Brake fluid		+ +	+ +
Anti-freeze fluid (glyco-diethylene)		+ +	+ +
Sodium hypochlorite, aqueous solution	5%	+ +	
Liquid propane	100%	+ +	
Cresol solution		–	– –
Soap solution	saturated	+ +	+ +
Mercury	100%	+ +	+ +
Rum	40%	+ +	+ +
Potassium sulphate, aqueous solution	saturated	+ +	+ +
Sodium sulphate, aqueous solution	saturated	+ +	+ +
Sodium sulphide, aqueous solution	saturated	+ +	+ +

Medium	Concentration	40°C	60°C
Sodium sulphite, aqueous solution	saturated	+ +	+ +
Hydrogen sulphide	saturated	+ +	+ +
Pitch (tar)		+ +	+ +
Lemon juice		+ +	+ +
Brine	concentrated	+ +	+ +
Dry salt		+ +	+ +
Agent for dish washing, liquid		+ +	+ +
Tetra-chloracetate	100%	– –	– –
Tetra-chlorethylene (per-chlorethylene)	100%	– –	– –
Tetra-hydrofurane	100%	– –	– –
Sodium tio-sulphate	saturated	+ +	+ +
Toluene	100	– –	– –
Chlorinated lime		+	
Potassium carbonate, aqueous solution	saturated	+ +	
Sodium carbonate, aqueous solution	saturated	+ +	+ +
Water	100%	+ +	+ +
Chlorinated water	saturated	+	
Aqua regia (nitrohydrochloric acid)		+	
Seawater		+ +	+ +
Sodium hydroxide	50%	+	+
Sodium hydroxide (aggressive soda)	100%	+ +	+ +

+ +	resistant
+	conditioned resistant with the occurrence hazard of tensioning stress cracks
O	conditioned resistant
–	low resistant
– –	not resistant

SMART-CHEM – roof fan

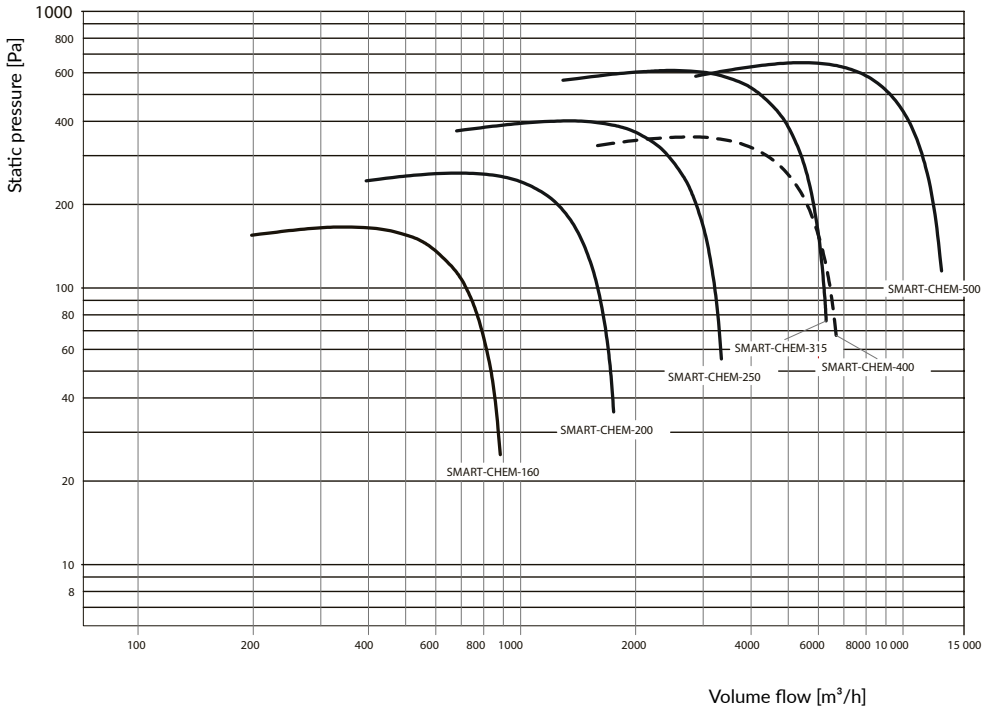
Purpose

SMART-CHEM fans have been developed for conveying the air, polluted with chemically aggressive media (see table on pages 59–60) of maximum dustiness concentration up to 0,3 g/m³ and maximum temperature +40°C. The fan cannot transport explosive mixtures. Their application range is general ventilation of rooms and they are applied in ventilation systems in industry, agriculture, building construction, as well as in buildings of public services as: laboratories, store houses, hospitals, schools, canteens, swimming pools, sewage treatment plants etc. Within the SMART-CHEM series, there are six sizes of motor rates: from 0,12 kW up to 1,5 kW and of maximum volume flow 12 400 m³/h. The fans meet the requirements of the ErP 2009/125/EC Directive.

Structure

Construction: a base, supporting plate and spacing sleeves of non-plasticised polyvinylchloride. To the supporting plate is fastened a motor with radial impeller on its shaft. The impeller is a welded construction of non-plasticised polyvinylchloride.Additionally, the protective hood and the flange (as a mounting to the roof base) are also of non-plasticised polyvinylchloride. The fan outlet is shielded with a surrounding grill.

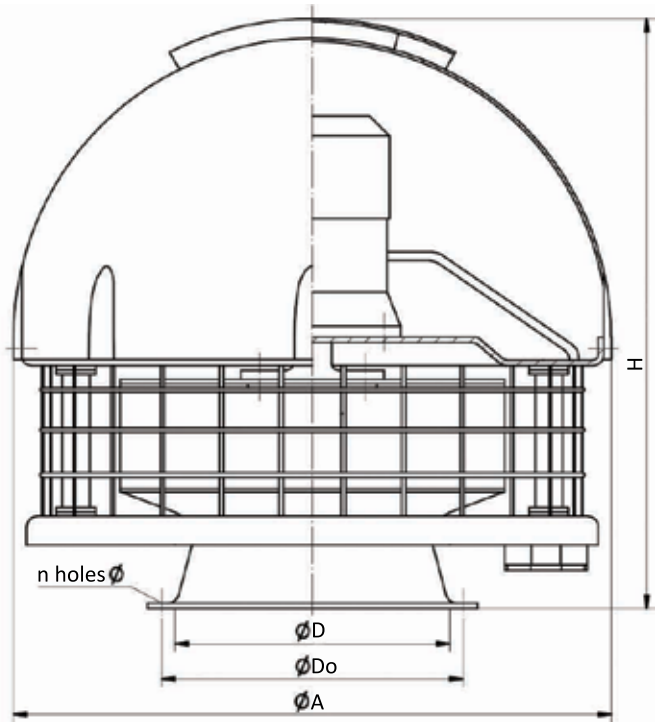
On demand of Customer, we deliver safety switches to cut off the power supply during the installation activity and servicing (see catalogue card ELECTRICAL ACCESSORIES).



Technical data

Type[1]	Part no.	Synchronous rotations [1/min]	Supply voltage[2] [V]	Motor rate [kW]	Ingress protection IP	Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Acoustic pressure level [dB(A)] from a distance of:		Weight [kg]
								1 m	5 m	
SMART-CHEM-160/1500	802W00	1500	3x400	0,12	54	880	160	59	50	9,2
SMART-CHEM-200/1500	802W01	1500	3x400	0,18	54	1650	250	66	57	10,8
SMART-CHEM-250/1500	802W02	1500	3x400	0,37	54	3300	380	72	63	14,1
SMART-CHEM-315/1500	802W03	1500	3x400	0,75	54	6250	580	75	66	22,8
SMART-CHEM-400/1000	802W04	1000	3x400	0,55	54	6600	330	70	61	33
SMART-CHEM-500/1000	802W05	1000	3x400	1,5	54	12 400	590	76	67	70

1. On demand we offer fans of maximum temperature of the conveyed medium +60°C.
2. On demand we offer fans of supply voltage 230 V.



Dimensions

Type	D [mm]	Do [mm]	A [mm]	H [mm]	n [mm]	Ø [mm]
SMART-CHEM-160/1500	160	184	418	421	8	7
SMART-CHEM-200/1500	200	224	476	460	8	7
SMART-CHEM-250/1500	250	274	548	506	8	7
SMART-CHEM-315/1500	315	339	660	615	8	7
SMART-CHEM-400/1000	400	432	802	667	12	10
SMART-CHEM-500/1000	500	573	976	837	16	15

SPARK-CHEM/Ex –
explosion proof roof fan

II 2 G c Ex e II T3

Purpose

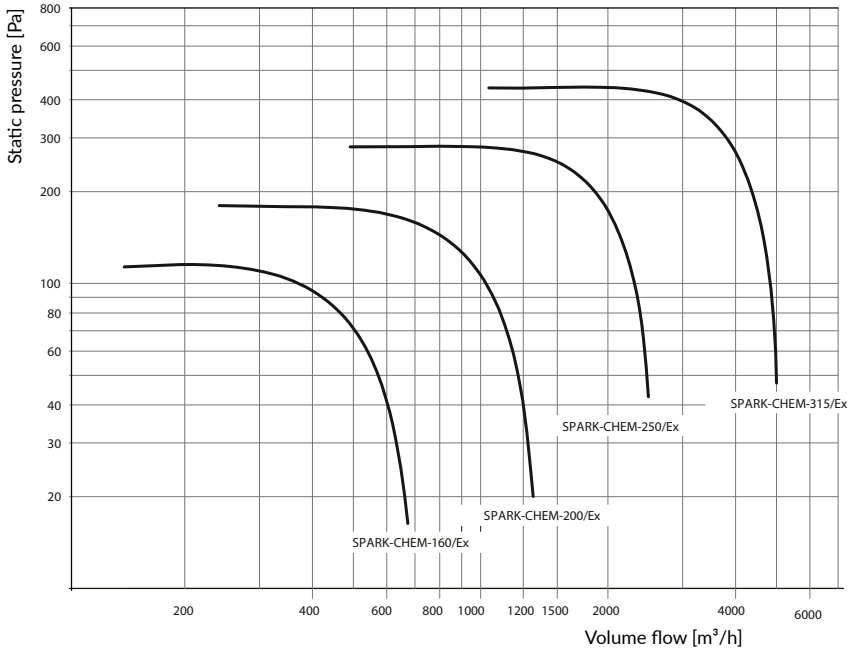
SPARK-CHEM/Ex fans have been developed for application in areas of explosion risk, where explosive atmosphere (i.e. mixture of flammable compounds in the form of gases and vapours with the air) is likely to occur. Additionally, the forwarded air can be polluted with chemically aggressive factors (see Table on page 58) of maximum dustiness concentration up to 0,3 g/m³. The SPARK-CHEM/Ex series of fans consists of four sizes of motor rates, ranging from 0,12 kW up to 0,75 kW and of maximum volume flow 5000 m³/h. The fans meet the requirements of the ErP 2009/125/EC Directive.

Structure

The fan consists of a base, supporting plate and spacing sleeves of antistatic plastic (PEEL). To the supporting plate is fastened an Ex motor with a radial impeller on its shaft. The impeller is of stainless steel acid-proof welded technology. Additionally, the protective hood and the flange (as a mounting to the roof base) are also of antistatic plastic (PEEL). The fan outlet is protected with a surrounding grill.

On demand of Customer, we deliver isolating switches to cut off the power supply during the installation activity and servicing (see catalogue card ELECTRICAL ACCESSORIES).

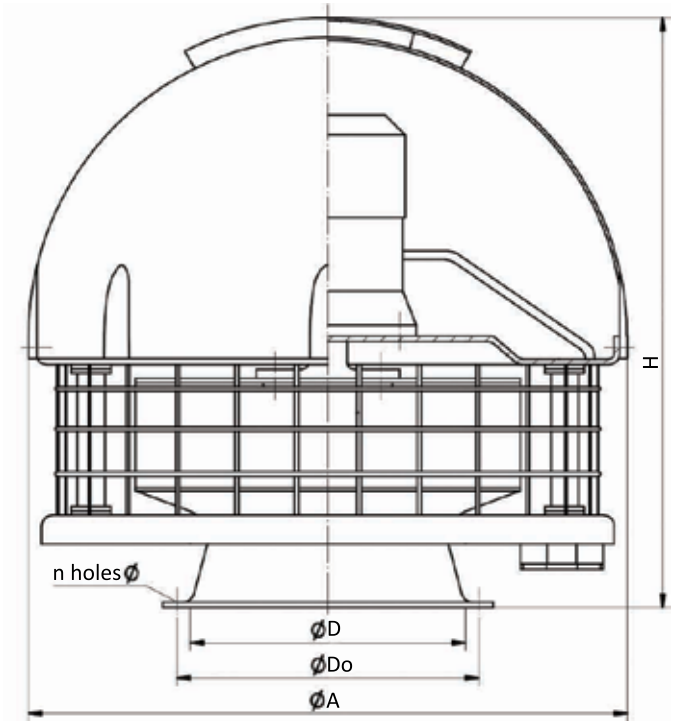
Flow Charts



Technical data

Type[1]	Part no.	Marking	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Acoustic pressure level [dB(A)] from a distance of:		Weight [kg]
									1 m	5 m	
SPARK-CHEM-160/1500/Ex	808W18	II 2 G c Ex e II T3	1500	3x400	0,12	56	670	110	57	48	10,6
SPARK-CHEM-200/1500/Ex	808W19	II 2 G c Ex e II T3	1500	3x400	0,18	56	1330	180	59	50	14,2
SPARK-CHEM-250/1500/Ex	808W20	II 2 G c Ex e II T3	1500	3x400	0,37	56	2500	280	66	57	18,3
SPARK-CHEM-315/1500/Ex	808W21	II 2 G c Ex e II T3	1500	3x400	0,75	56	5000	440	69	60	27

1. On demand we offer fans of maximum temperature of the conveyed medium +60°C.



Dimensions

Type	D [mm]	Do [mm]	A [mm]	H [mm]	n [mm]	Ø [mm]
SPARK-CHEM-160/1500/Ex	160	184	420	429	8	7
SPARK-CHEM-200/1500/Ex	200	224	476	471	8	7
SPARK-CHEM-250/1500/Ex	250	274	550	523	8	7
SPARK-CHEM-315/1500/Ex	315	339	660	622	8	7

WPA-CHEM – radial fan

Purpose

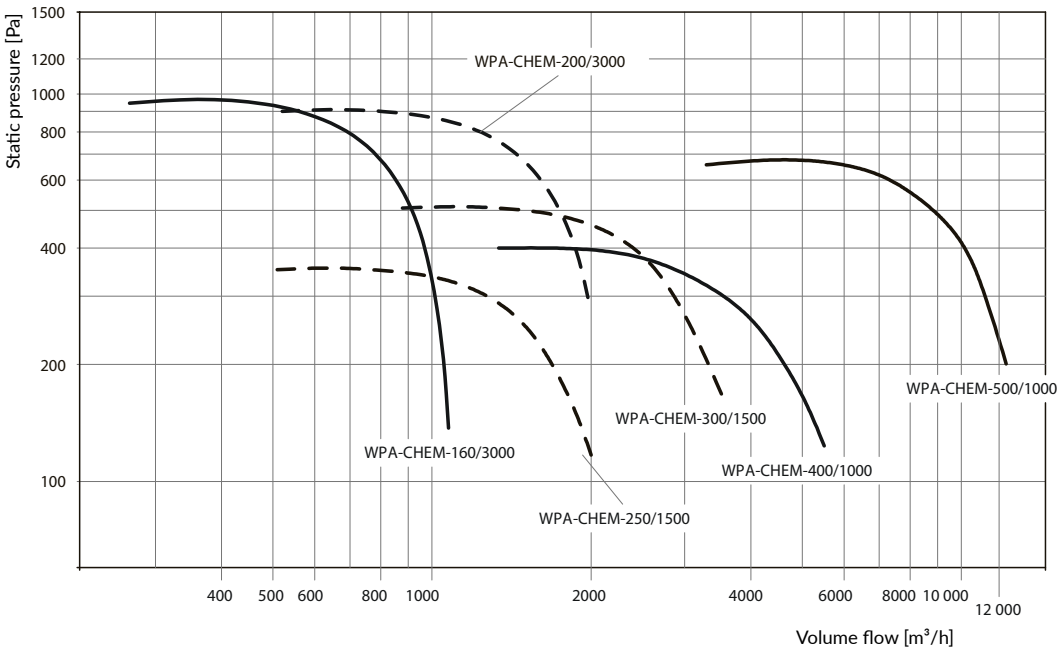
Radial fans, type WPA-CHEM are adapted for conveying the clean air or the air polluted with chemically aggressive media (see tables on pages 59–60) of maximum dustiness concentration up to 0,3 g/m³ and temperature +40°C. The fans can be applied in ventilation systems (air supply and extraction) in industry, agriculture, building construction, chemical industry, as well as in buildings of public services as: laboratories, store houses, hospitals, schools, canteens, swimming pools, sewage treatment plants etc. The fans carry the certificate of the National Institute of Public Health of National Institute of Hygiene. The fans meet the requirements of the ErP 2009/125/EC Directive.

Structure

The appliance consists of a spiral housing of non-plasticised polyvinyl chloride and a motor. The radial impeller (also of non-plasticised polyvinyl chloride) is directly fastened at the motor shaft. The fan motor is mounted on a steel angle bar base. Between the base and motor are placed special rubber washers to reduce vibrations transmitted onto the base and building elements. Within the lower parts of the base, there are mounting holes.

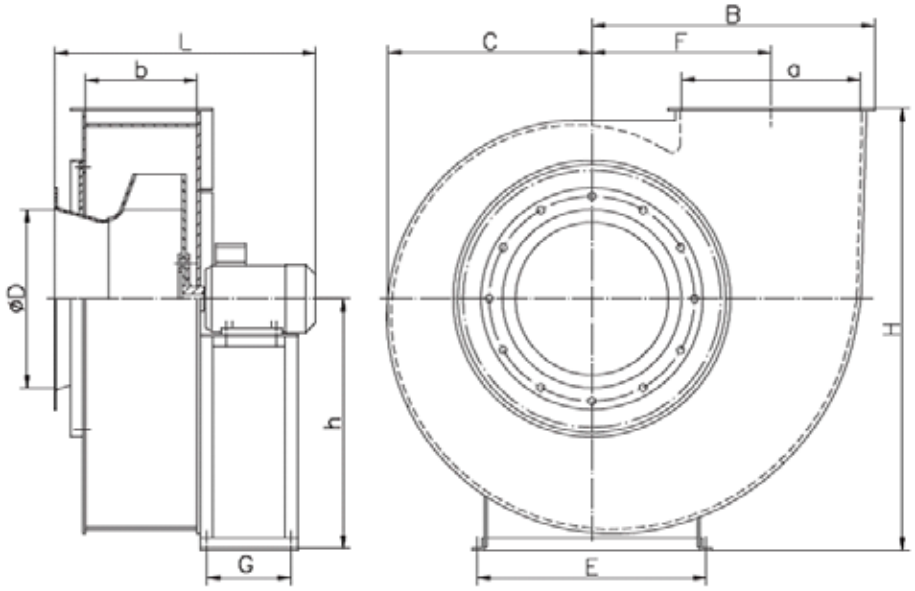
For safety reasons, the fan inlet and outlet are equipped with protective grills, fastened depending on the purpose of use, work mode. The fans are delivered in outlet location RD 0 (see scheme).

On demand of Customer, we deliver fans of another outlet placement.



Technical data

Type	Part no.	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Acoustic pressure level [dB(A)] from a distance of:		Weight [kg]
								1 m	5 m	
WPA-CHEM-160/3000	802W06	3000	3x400	0,37	55	1100	950	71	62	14
WPA-CHEM-200/3000	802W07	3000	3x400	0,55	55	2000	900	72	63	25
WPA-CHEM-250/1500	802W08	1500	3x400	0,25	55	2000	350	64	56	30
WPA-CHEM-300/1500	802W09	1500	3x400	0,55	55	3500	530	68	59	36
WPA-CHEM-400/1000	802W10	1000	3x400	0,55	55	5500	400	68	59	60
WPA-CHEM-500/1000	802W11	1000	3x400	2,2	55	12 200	720	75	66	107

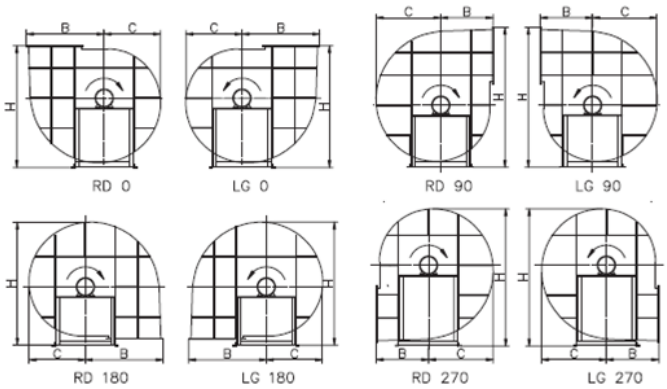


Dimensions*

Type	D [mm]	a [mm]	b [mm]	h/RD 0 [mm]	F [mm]	C [mm]	G [mm]	E [mm]	L [mm]	H [mm]	B [mm]
WPA-CHEM-160/3000	160	162	118	263	188	202	150	218	385	501	310
WPA-CHEM-200/3000	200	237	133	326	224	240	370	278	510	568	381
WPA-CHEM-250/1500	250	297	166	398	280	297	405	308	545	698	473
WPA-CHEM-300/1500	300	356	199	482	336	358	440	414	620	848	557
WPA-CHEM-400/1000	400	474	265	617	447	470	580	514	680	1080	728
WPA-CHEM-500/1000	500	500	315	715	500	570	640	640	730	1235	788

* The above mentioned dimensions are referring to the fans of outlet placement RD 0.

Location of outlet



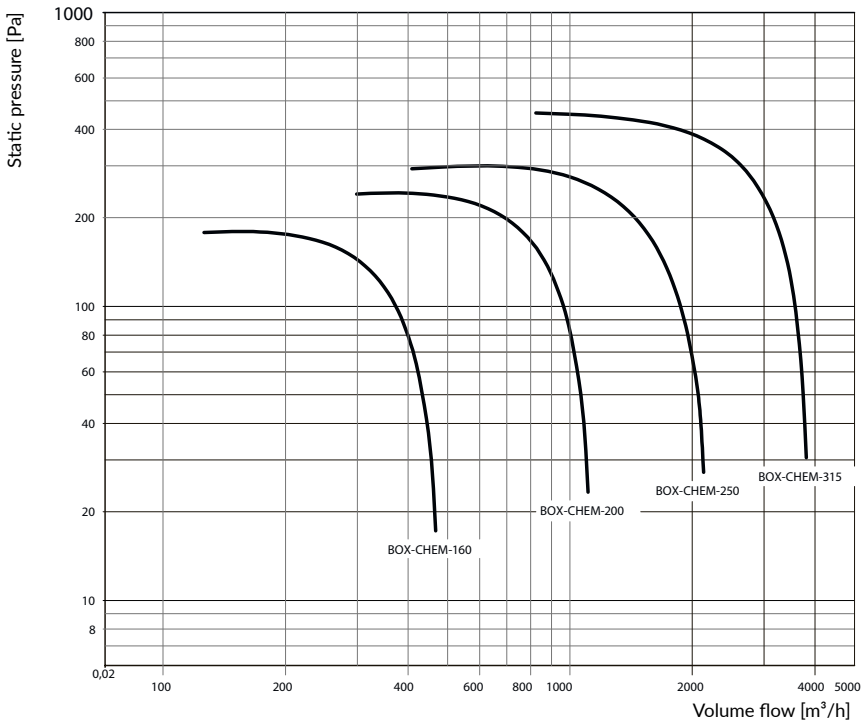
BOX-CHEM – duct fan

Purpose

Generally, radial fans, type BOX-CHEM are designed for conveying the clean air or the air polluted with chemically aggressive media (see tables on pages 59–60) of maximum dustiness concentration up to 0,3 g/m³ and temperature +40°C. The fans are applied within ventilation systems in various fields in industry, especially in buildings for ventilation of rooms, store houses and various types of halls. Due to their construction, they can be installed directly between square-cross-section ventilation ducts, not changing the medium flow direction. The fans meet the requirements of the ErP 2009/125/EC Directive.

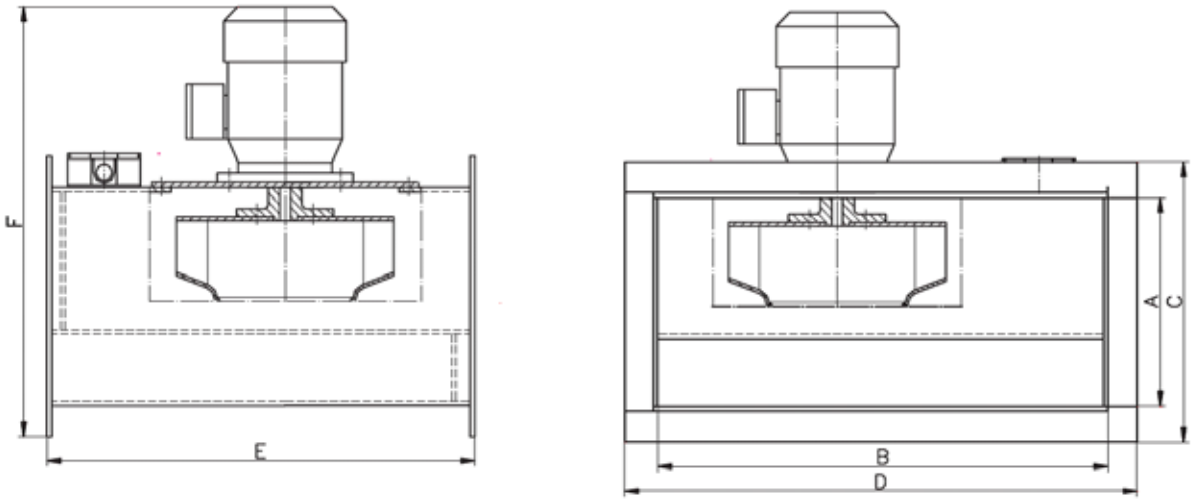
Structure

The box-shape fan housing consists of non-plasticised polyvinyl chloride plates. The conveyed medium is drawn in, at one housing side, through the inlet duct of the housing. Subsequently, the air stream flows through the inlet confusor onto the impeller, then to the spiral housing and directly to the outlet duct (of the housing) afterwards. The fan motor is fixed (through a flange) on the supporting plate of non-plasticised polyvinyl chloride and further to the housing. The conveyed medium do not contact the motor. The impeller is also of non-plasticised polyvinyl chloride. The fan inlet and outlet, are equipped with square flanges, to install the fan between the square section ventilation ducts.



Technical data

Type	Part no.	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Acoustic pressure level [dB(A)] from a distance of:		Weight [kg]
								1 m	5 m	
BOX-CHEM-160/1500	802W12	1500	230	0,12	55	460	170	56	48	13,2
BOX-CHEM-200/1500	802W13	1500	230	0,18	55	1150	230	62	35	22
BOX-CHEM-250/1500	802W14	1500	230	0,25	55	2100	300	65	57	26
BOX-CHEM-315/1500	802W15	1500	230	0,75	55	3820	460	70	62	40



Dimensions

Type	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]
BOX-CHEM-160/1500	228	460	298	530	441	458
BOX-CHEM-200/1500	265	577	335	647	545	495
BOX-CHEM-250/1500	350	721	420	791	665	583
BOX-CHEM-315/1500	448	819	530	900	800	733

KLIMAWENT S.A. produces a large range of explosion proof fans, designed for operation in areas of explosion hazard, where explosion atmosphere can occur as a mixture of flammable substance in a form of gas, vapour and fume with the air, where after the ignition the explosion expands within the whole non-burnt mixture.

Our fans meet the requirements of 94/9/EC Directive of 23 March, 1994 (from 20 April, 2016 2014/34/EC Directive).

The offered explosion proof fans cannot be applied for conveying the air containing:

- viscous contamination, that could build up on the devices,
- aggressive contamination, that would have destructive effect on the devices.

Explosion proof fans, manufactured by KLIMAWENT S.A. are safe and shall not be a source of ignition of the explosive atmosphere, provided that they are applied in places for which they are designed and constructed.

Duties and the activity of User (Employer) are specified in the 1999/92/EC (ATEX 137) Directive, called also ATEX USERS, on minimum requirements of safety of labour in places where explosive atmosphere is likely to occur (Regulation of Minister of Economy of 8 July. 2010).

Classification of areas of explosion risk has to be carried out by User, with reference to the technological process creating such risks, at the User's place.

Here are applicable subsequent standards:

- PN-EN 1127-1: Explosive atmospheres. Explosion prevention and protection. Basic concepts and methodology,
- PN-EN 60079-10-1: Explosive atmospheres. Classification of areas. Explosive gas atmospheres,
- PN-EN 60079-10-2: Explosive atmospheres. Classification of areas. Explosive dust atmospheres.

Workplaces, where explosive atmosphere is likely to occur, should be classified according to the division into hazard areas and in accordance with the above mentioned Directive.

Selection of fans for workplaces, where explosive atmosphere is likely to occur, has to be executed according to categories that are suitable for explosion risk areas.

Example of classification of the existing gases

Explosiveness group		Temperature class			
		T1	T2	T3	T4
I (methane)		methane			
II	IIA (propane)	acetone, methyl alcohol, ammonia, methyl chloride, vinyl chloride, chlorobenzene, ethane, o-xylene, acetic acid, ethyl acetate, methyl acetate, propane, toluene, carbon oxide	ethyl alcohol, propyl alcohol, petrol, n-butane, ethyl chloride, n-propyl acetate	petrol, diesel, aircraft fuel, n-pentane, n-hexane, n-heptane, n-octane, n-dectane, furnace oil	acetic aldehyde, ethyl ether
	IIB (ethylene)	hydrogen cyanide, ethylene, technical propylene, city gas	butadiene, di-methyl ether, ethylbenzene, ethylene, ethylene oxide	acrolein, hydrogen sulphide	1,4-dioxan, ethyl ether, acetic aldehyde
	IIC (hydrogen)	hydrogen	acetylene	hydrazine	

KLIMAWENT S.A. produces fans designed for application in areas of hazard of gas atmosphere explosion, as well as fan chambers designed for work in areas of hazard of gas- and dust atmosphere explosion.

Marking of fans*

Fans for work in gas atmosphere

II 2 G c Ex e II T3

1 2 3 4 5 6 7 8 9

Fans for work in gas- or dust atmosphere

II 3 G/D c Ex e II T4

1 2 3 4 5 6 7 8 9

1. Means explosive proof feature of the device.

2. „II" – II Group of the device – The appliance is intended for use in zones of explosion risk, but in places other than underground mining industry plants, exposed to methane explosion (firedamp) or carbon dust explosion.

3. „2" – Category 2 – Includes devices designed and constructed in such way that the devices are operated according to operational parameters, established by manufacturer, and providing high level of protection. Devices of this Category are intended for use in places, where explosive atmosphere, caused by gas, vapour, mist or dust-air mixture, is sporadically possible to occur. The devices can work in the zone 1 or 2 (21 or 22). They are equipped with explosion protection measures, therefore providing the required level of protection, even in case of frequent interferences or damages that are taken into account.

3. „3" – Category 3 – Includes devices designed and constructed in such way that the devices are operated according to operational parameters, established by manufacturer, and providing moderate level of protection.Devices of this Category are intended for use in places, where explosive atmosphere, caused by gas, vapour, mist or dust-air mixture, is unlikely to occur, and when occurs – the atmosphere appears for sporadically and for a short period of time. The devices can work in the zone 2 (22). They are equipped with explosion protection measures, and provide the required level of protection, under normal operating conditions.

4. „G" – Designed for use in atmosphere of hazard of gas-, vapour-, mist explosion.

4. „G/D" – Designed for use in atmosphere of hazard of gas-, vapour-, mist or dust mixture explosion.

5. „c" – Marking for constructional safety of the device.

6. „Ex" – Marking for electrical appliance constructed and tested according to European Standards.

7. „e" – Type of construction (motor) – reinforced structure.

8. „II" – Subgroup of explosiveness – (IIA, IIB, IIC): recalling of the whole Group (without A, B, C) means that the fans can be used for all Subgroups of explosiveness.

9. „T3" – Temperature class of the device (T3 is +200°C) indicates the highest possible temperature of the device surface (the device can work in classes T2 and T1).

9. „T4" – Temperature class of the device (T4 is +135°C) indicates the highest possible temperature of the device surface (the device can work in classes T3, T2 and T1).

*NOTE: This marking takes into account the characteristics of the fan and the electrical motor.

low-pressure explosion proof fans for general ventilation

SPARK-S/Ex – roof fan

II 2 G c Ex e II T3

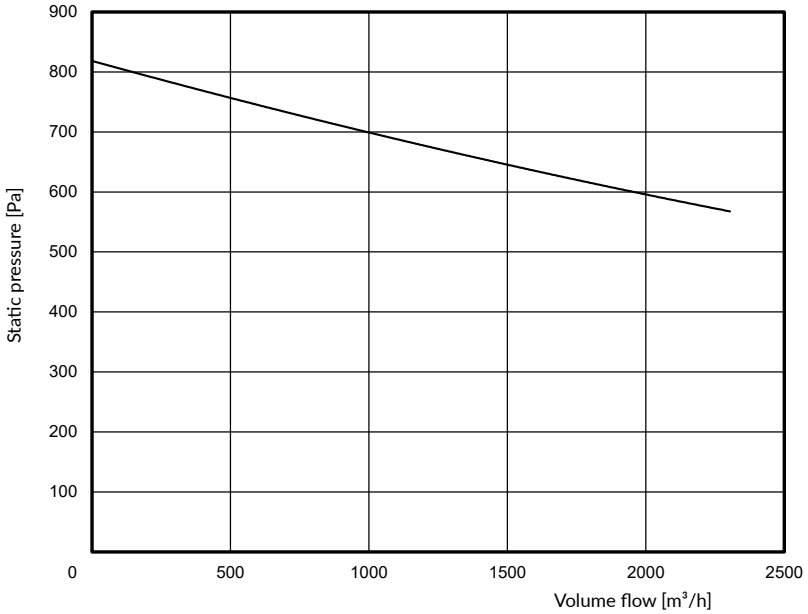
Purpose

SPARK-S/Ex fans have been developed for application in the areas of explosion risk, where explosive atmosphere (i.e. mixture of flammable compounds in the form of gas and vapour with the air) can occur. Application: dry air, of dustiness not exceeding 0,3 m^3, without viscous, aggressive impurities. SPARK-S/Ex series of fans consists counts eight sizes of motor rates ranging from 0,37 kW up to 7,5 kW and of maximum volume flow 27 500 m^3/h.

Structure

As unique solution among the existing examples on the market, SPARK-S/Ex fans features the original construction of bent steel profiles, providing a skeleton of aerodynamic, and at the same, very robust properties. Structure: a motor with a radial impeller inside. Whereby, the impeller blades cross-section is inspired by the aircraft wing profile. The impeller is statically and dynamically balanced, according to ISO 14694:2003+AMD1:2010, carrying the class G 2,5. The circumferential surface around the lower skeleton constitutes an openwork structure through which the air is discharged. Whereby, the upper part of the fan is shielded by an antistatic plastic hood. The fan has to be mounted on a roof base. It is recommended to apply a sound absorbing roof base type TPD-N or TPDC-N of adequate size adapted to the given fan.

SPARK-S-160/Ex

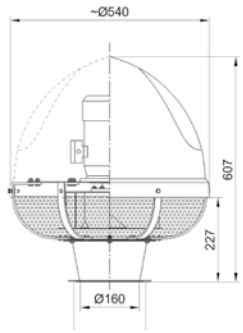


Technical data

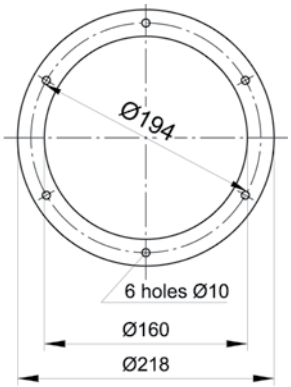
Type	Part no.	Marking	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:					Max. volume flow [m³/h]	Max. vacuum [Pa]	Weight [kg]
							outlet				inlet			
							1m	5m	10m	15m	1m			
SPARK-S-160/3000/Ex	808W71	II2GcExeIIT3	3000	3x400	0,55	54	79	70	62	59	71	2300	820	19
Roof baseTPD-160-N	843P40	–	–	–	–	–	–	–	–	–	–	–	–	28
Roof baseTPDC-160-N	843P50	–	–	–	–	–	–	–	–	–	–	–	–	30

Dimensions

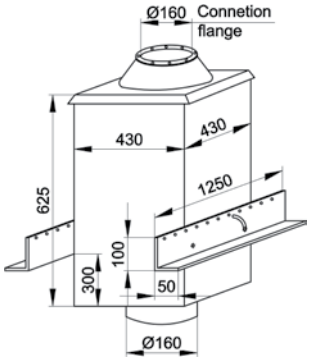
Roof fan
SPARK-S-160/3000/Ex



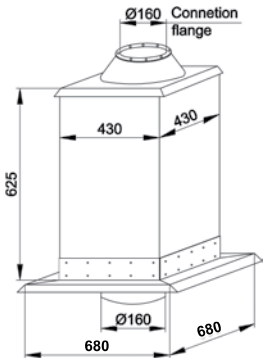
Connection flange



Sound absorbing roof base
TPD-160-N

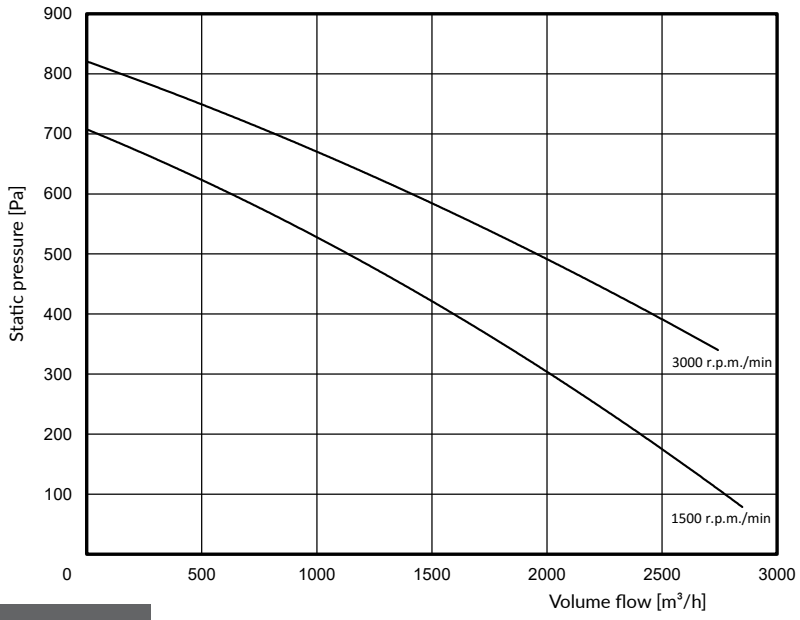


Sound absorbing roof base
TPDC-160-N



NOTE:
The above mentioned values of the acoustic pressure level are specified for fans mounted on the sound absorbing roof base TPD-N or TPDC-N.
To reduce more the noise level, it is possible to apply a TK silencer suspended under the TPD-N or TPDC-N roof base.

SPARK-S-200/Ex

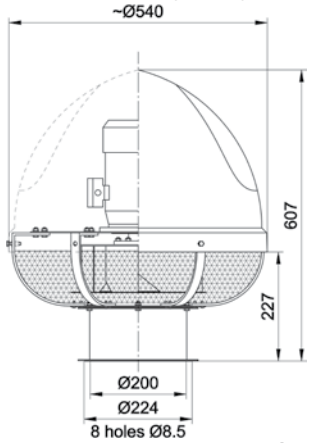


Technical data

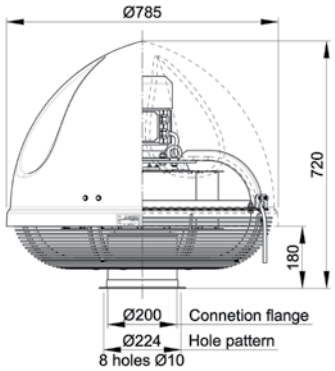
Type	Part no.	Marking	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:					Max. volume flow [m³/h]	Max. vacuum [Pa]	Weight [kg]
							outlet				inlet			
							1m	5m	10m	15m	1m			
SPARK-S-200/3000/Ex	808W72	II2GcExeIIT3	3000	3x400	0,55	54	79	69	62	59	71	2700	820	20
SPARK-S-200/1500/Ex	808W73	II2GcExeIIT3	1500	3x400	0,55	54	74	64	57	54	60	2800	730	39
Roof base TPD-200-N	843P41	–	–	–	–	–	–	–	–	–	–	–	–	28
Roof baseTPDC-200-N	843P51	–	–	–	–	–	–	–	–	–	–	–	–	30

Dimensions

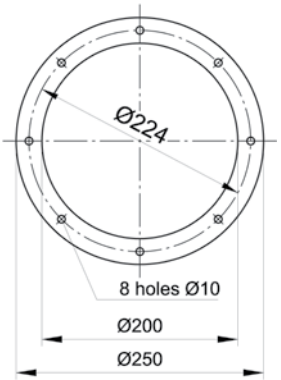
Roof fan SPARK-S-200/3000/Ex



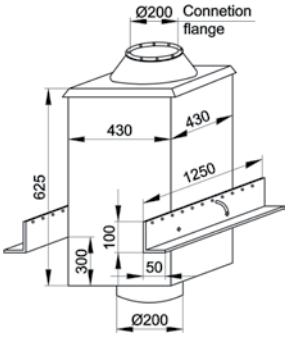
Roof fan SPARK-S-200/1500/Ex



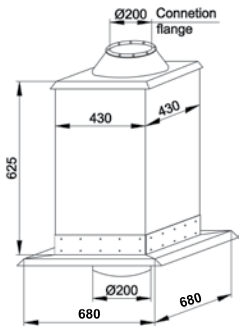
Connection flange



Sound absorbing roof base TPD-200-N

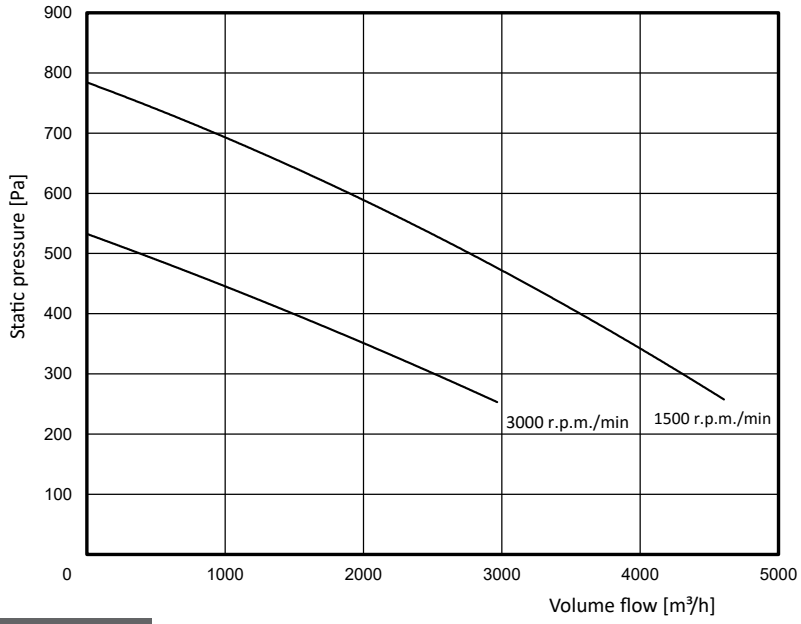


Sound absorbing roof base TPDC-200-N



NOTE:
The above mentioned values of the acoustic pressure level are specified for fans mounted on the sound absorbing roof base TPD-N or TPDC-N.
To reduce more the noise level, it is possible to apply a TK silencer suspended under the TPD-N or TPDC-N roof base.

SPARK-S-250/Ex

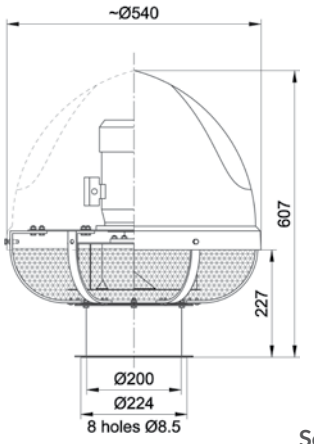


Technical data

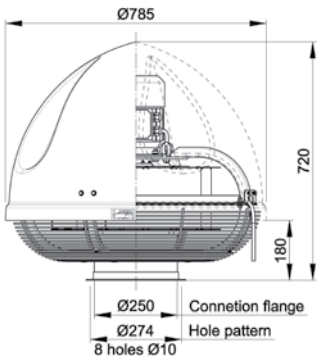
Type	Part no.	Marking	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:					Max. volume flow [m³/h]	Max. vacuum [Pa]	Weight [kg]
							outlet				inlet			
							1m	5m	10m	15m	1m			
SPARK-S-250/3000/Ex	808W74	II2GcExeIIT3	3000	3x400	0,55	54	80	70	63	60	74	3000	540	20
SPARK-S-250/1500/Ex	808W75	II2GcExeIIT3	1500	3x400	1,1	54	75	66	58	55	65	4600	800	45
Roof base TPD-250-N	843P42	–	–	–	–	–	–	–	–	–	–	–	–	41
Roof baseTPDC-250-N	843P52	–	–	–	–	–	–	–	–	–	–	–	–	46

Dimensions

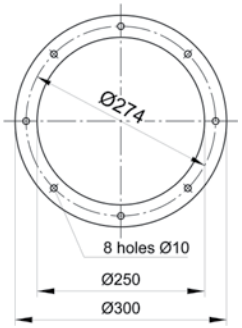
Roof fan SPARK-S-250/3000/Ex



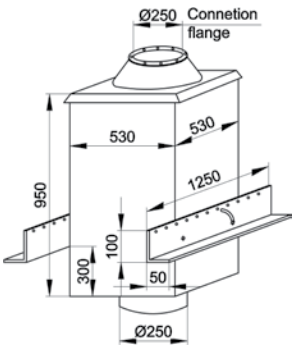
Roof fan SPARK-S-250/1500/Ex



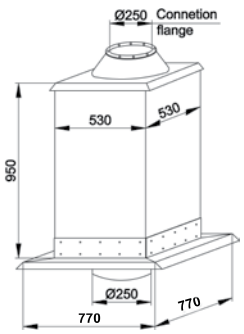
Connection flange



Sound absorbing roof base TPD-250-N

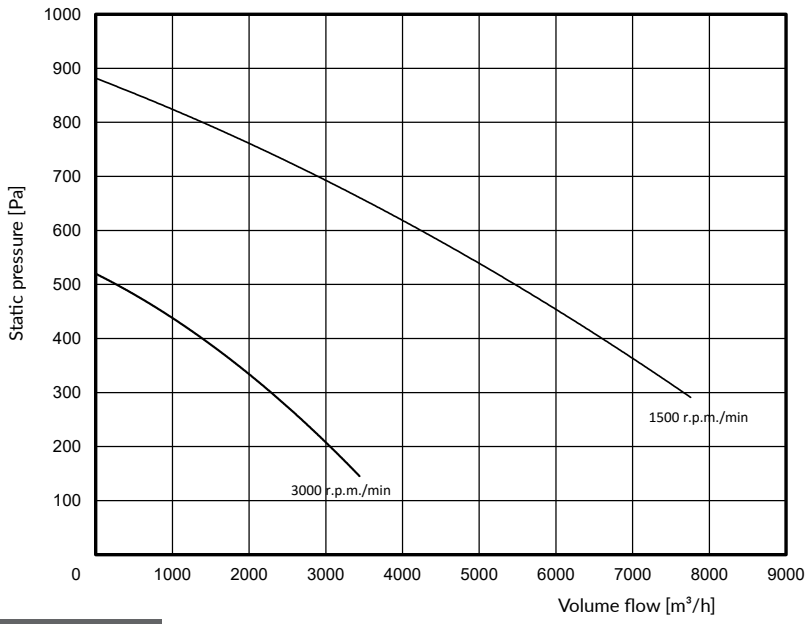


Sound absorbing roof base TPDC-250-N



NOTE:
The above mentioned values of the acoustic pressure level are specified for fans mounted on the sound absorbing roof base TPD-N or TPDC-N.
To reduce more the noise level, it is possible to apply a TK silencer suspended under the TPD-N or TPDC-N roof base.

SPARK-S-315/Ex

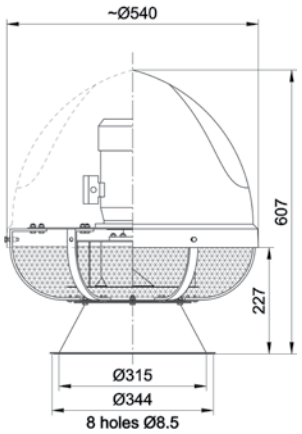


Technical data

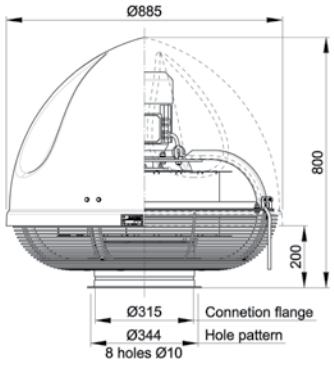
Type	Part no.	Marking	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:					Max. volume flow [m³/h]	Max. vacuum [Pa]	Weight [kg]
							outlet				inlet			
							1m	5m	10m	15m	1m			
SPARK-S-315/3000/Ex	808W76	II2GcExeIIT3	3000	3x400	0,55	54	80	70	63	60	74	3400	540	21
SPARK-S-315/1500/Ex	808W77	II2GcExeIIT3	1500	3x400	1,5	54	80	70	63	60	70	7800	900	61
Roof baseTPD-315-N	843P43	–	–	–	–	–	–	–	–	–	–	–	–	41
Roof baseTPDC-315-N	843P53	–	–	–	–	–	–	–	–	–	–	–	–	46

Dimensions

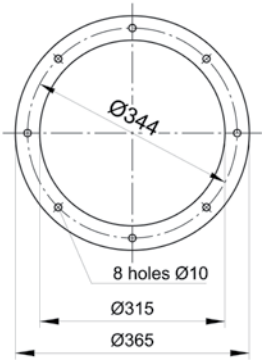
Roof fan SPARK-S-315/3000/Ex



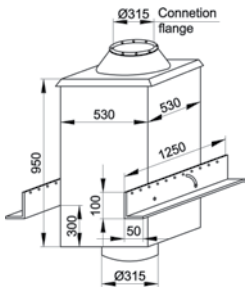
Roof fan SPARK-S-315/1500/Ex



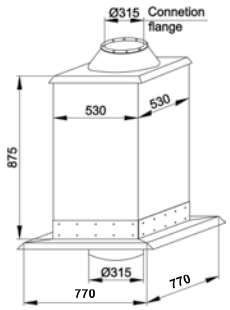
Connection flange



Sound absorbing roof base TPD-315-N

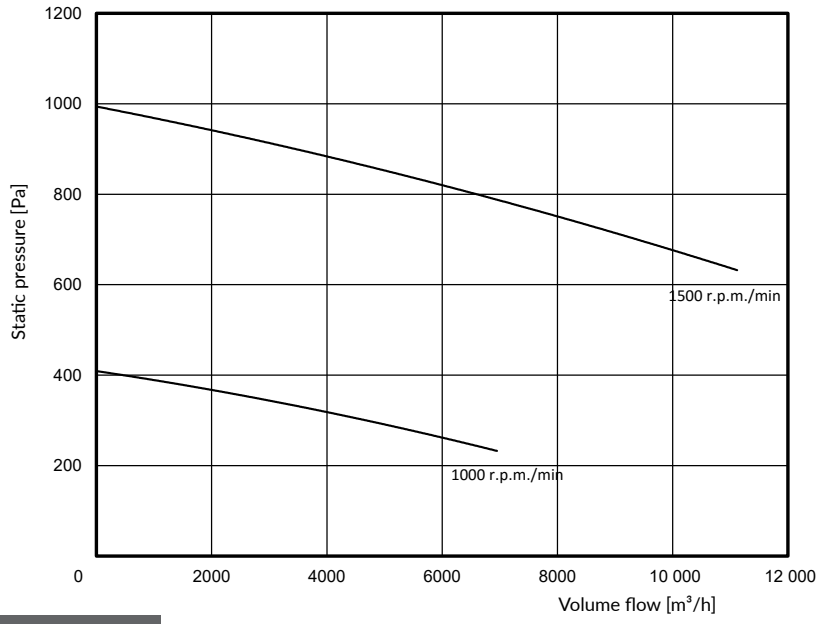


Sound absorbing roof base TPDC-315-N



NOTE:
The above mentioned values of the acoustic pressure level are specified for fans mounted on the sound absorbing roof base TPD-N or TPDC-N.
To reduce more the noise level, it is possible to apply a TK silencer suspended under the TPD-N or TPDC-N roof base.

SPARK-S-400/Ex

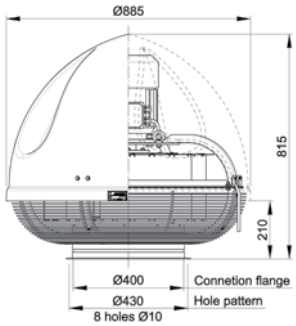


Technical data

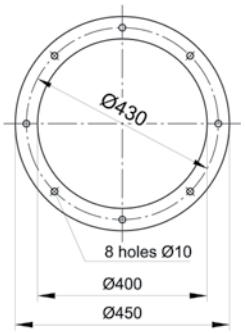
Type	Part no.	Marking	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:					Max. volume flow [m³/h]	Max. vacuum [Pa]	Weight [kg]
							outlet				inlet			
							1m	5m	10m	15m	1m			
SPARK-S-400/1500/Ex	808W78	II2GcExeIIT3	1500	3x400	3	54	85	75	68	64	72	11 100	1000	72
SPARK-S-400/1000/Ex	808W79	II2GcExeIIT3	1000	3x400	0,75	54	73	62	56	52	62	7000	410	62
Roof base TPD-400-N	843P44	–	–	–	–	–	–	–	–	–	–	–	–	75
Roof baseTPDC-400-N	843P54	–	–	–	–	–	–	–	–	–	–	–	–	84

Dimensions

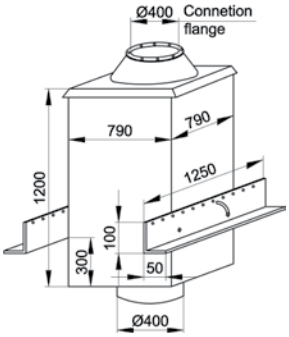
Roof fan
SPARK-S-400/1500/Ex,
SPARK-S-400/1000/Ex



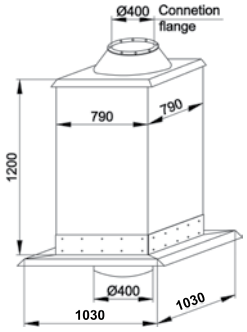
Connection flange



Sound absorbing roof base
TPD-400-N

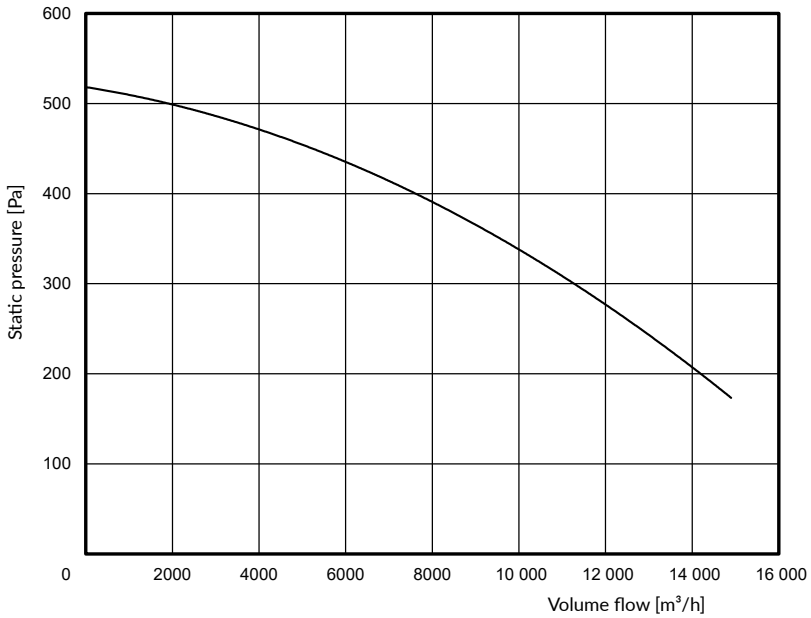


Sound absorbing roof base
TPDC-400-N



NOTE:
The above mentioned values of the acoustic pressure level are specified for fans mounted on the sound absorbing roof base TPD-N or TPDC-N.
To reduce more the noise level, it is possible to apply a TK silencer suspended under the TPD-N or TPDC-N roof base.

SPARK-S-500/Ex

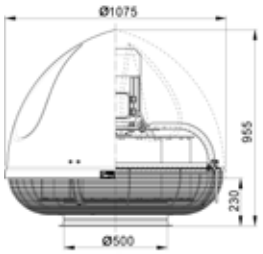


Technical data

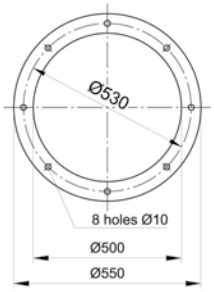
Type	Part no.	Marking	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:					Max. volume flow [m³/h]	Max. vacuum [Pa]	Weight [kg]
							outlet				inlet			
							1m	5m	10m	15m	1m			
SPARK-S-500/1000/Ex	808W80	II2GcExeIIT3	1000	3x400	2,2	54	78	68	61	58	69	15 000	540	104
Roof baseTPD-500-N	843P45	–	–	–	–	–	–	–	–	–	–	–	–	75
Roof baseTPDC-500-N	843P55	–	–	–	–	–	–	–	–	–	–	–	–	84

Dimensions

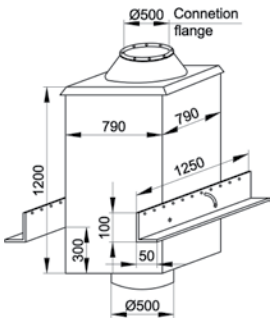
Roof fan
SPARK-S-500/1000/Ex



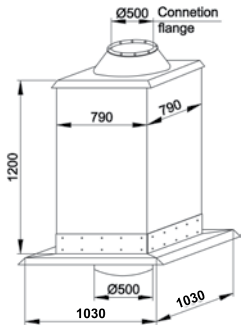
Connection flange



Sound absorbing roof base
TPD-500-N

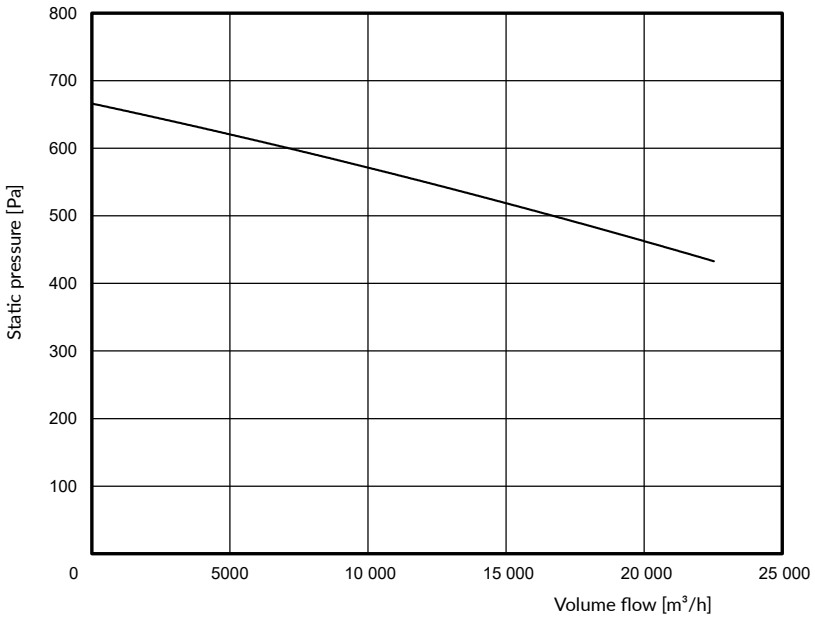


Sound absorbing roof base
TPDC-500-N



NOTE:
The above mentioned values of the acoustic pressure level are specified for fans mounted on the sound absorbing roof base TPD-N or TPDC-N.
To reduce more the noise level, it is possible to apply a TK silencer suspended under the TPD-N or TPDC-N roof base.

SPARK-S-630/Ex

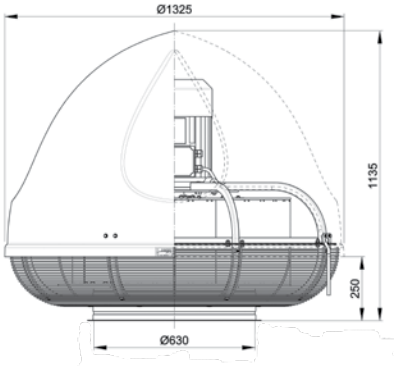


Technical data

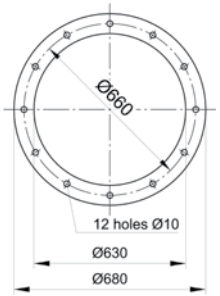
Type	Part no.	Marking	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:					Max. volume flow [m³/h]	Max. vacuum [Pa]	Weight [kg]
							outlet				inlet			
							1m	5m	10m	15m	1m			
SPARK-S-630/1000/Ex	808W81	II2GcExeIIT3	1000	3x400	5,5	54	84	74	67	64	77	22 500	690	178
Roof base TPD-630-N	843P46	–	–	–	–	–	–	–	–	–	–	–	–	88
Roof baseTPDC-630-N	843P56	–	–	–	–	–	–	–	–	–	–	–	–	100

Dimensions

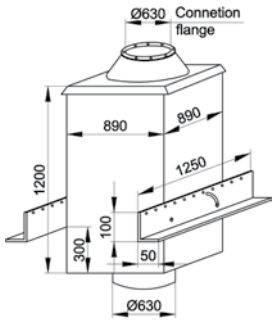
Roof fan
SPARK-S-630/1000/Ex



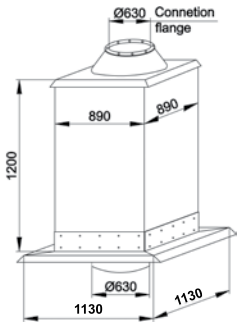
Connection flange



Sound absorbing roof base
TPD-630-N

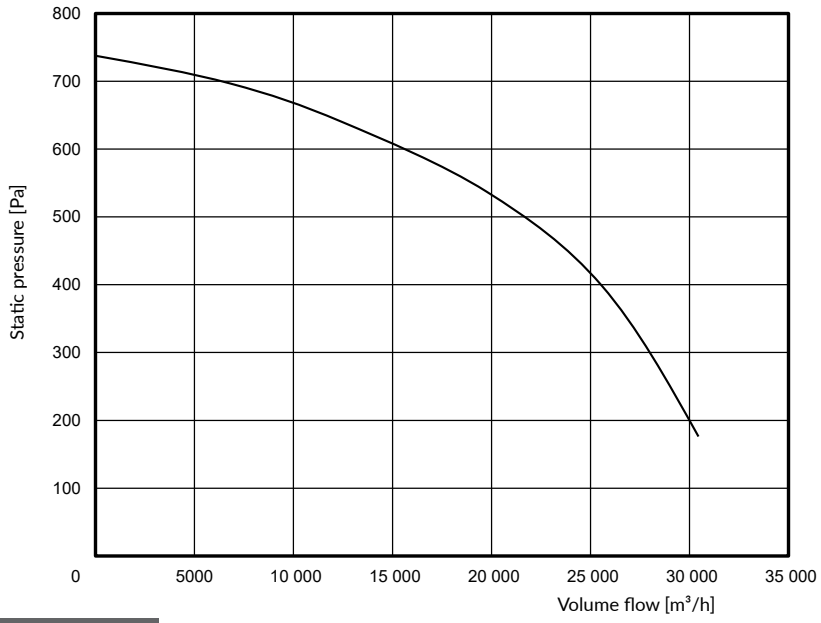


Sound absorbing roof base
TPDC-630-N



NOTE:
The above mentioned values of the acoustic pressure level are specified for fans mounted on the sound absorbing roof base TPD-N or TPDC-N.
To reduce more the noise level, it is possible to apply a TK silencer suspended under the TPD-N or TPDC-N roof base.

SPARK-S-710/Ex

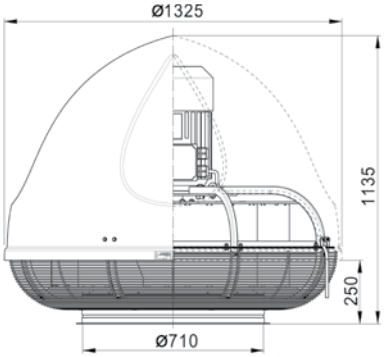


Technical data

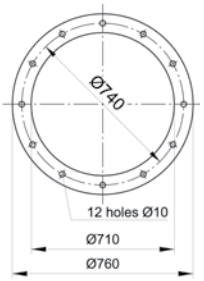
Type	Part no.	Marking	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:					Max. volume flow [m³/h]	Max. vacuum [Pa]	Weight [kg]
							oulet				inlet			
							1m	5m	10m	15m	1m			
SPARK-S-710/1000/Ex	808W82	II2GcExeIIT3	1000	3x400	7,5	54	87	77	70	66	77	31 000	760	208
Roof baseTPD-710-N	843P47	–	–	–	–	–	–	–	–	–	–	–	–	88
Roof baseTPDC-710-N	843P57	–	–	–	–	–	–	–	–	–	–	–	–	100

Dimensions

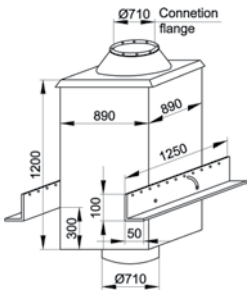
Roof fan
SPARK-S-710/1000/Ex



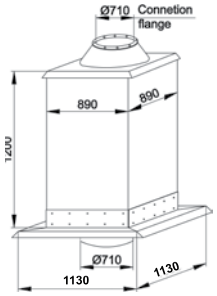
Connection flange



Sound absorbing roof base
TPD-710-N



Sound absorbing roof base
TPDC-710-N



NOTE:
The above mentioned values of the acoustic pressure level are specified for fans mounted on the sound absorbing roof base TPD-N or TPDC-N.
To reduce more the noise level, it is possible to apply a TK silencer suspended under the TPD-N or TPDC-N roof base.

medium-pressure explosion proof fans for general ventilation

WPA-D-N/Ex – roof fan with horizontal outlet

II 2 G c Ex e II T3

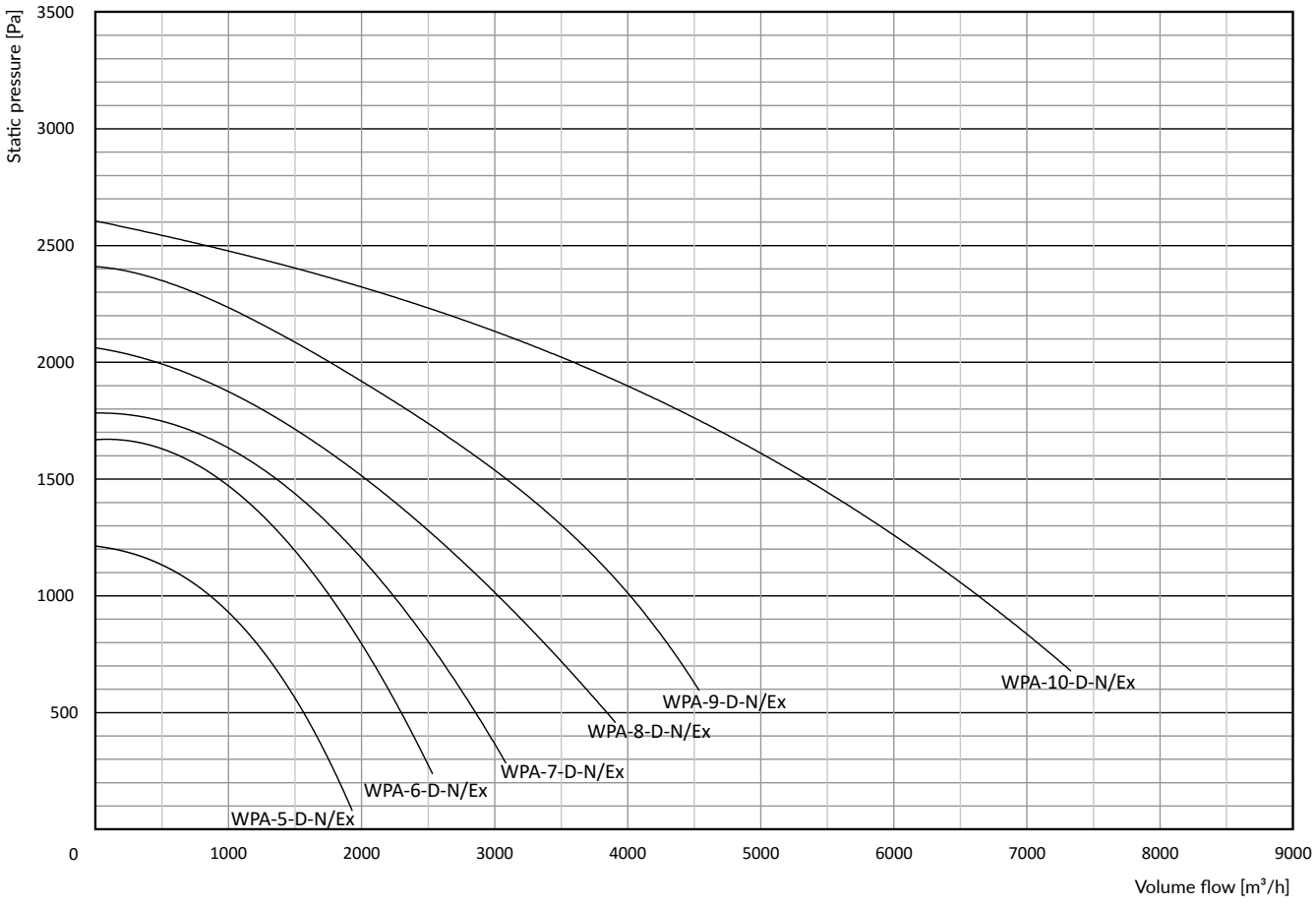
Purpose

In general, WPA-D-N/Ex fans have been designed for application in the areas of explosion risk, where explosive atmosphere (i.e. mixture of flammable compounds in the form of gas and vapour with the air) is likely to occur. Increased fan pressure make them particularly efficient within installations of local exhausts, filtering units and also within a system of significant flow resistances. The fan can be applied in a system with an air discharge of required dynamic uplift.

Structure

The fan consists of a spiral steel housing, Ex motor, aluminium radial impeller and a steel hood. The impeller is directly installed at the motor shaft (direct drive). Impeller blades cross-section reminds the profile of an aircraft wing, providing low acoustic pressure level. The fan inlet is equipped with a flange to install it on a roof base or on wall bracket. Typical feature of the fan is a silencer fastened at the fan outlet of its spiral housing, directed horizontally. For safety reason, the inlet and outlet are equipped with a protective grill.

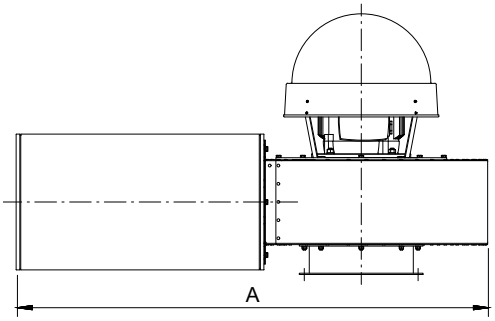
It is recommended to install TK-type silencers at the fan inlet (for details see acoustic data in the table).

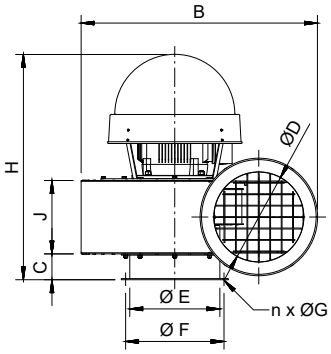


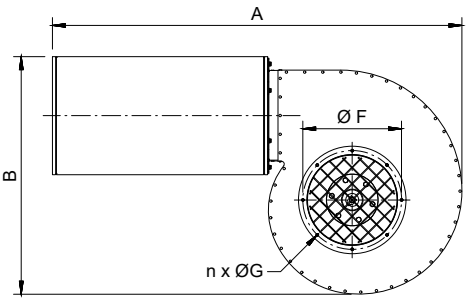
Technical data

Type	Part no.	Marking	Synchronous rotations [1/min]*	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:		Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
							1 m	5 m			
WPA-5-D-N/Ex	888W09	II 2 G c Ex e II T3	3000	3x400	0,55	54	73/67**	59/53**	1900	1250	25
WPA-6-D-N/Ex	888W10	II 2 G c Ex e II T3	3000	3x400	0,75	54	78/75**	64/61**	2500	1700	26
WPA-7-D-N/Ex	888W11	II 2 G c Ex e II T3	3000	3x400	1,1	54	81/74**	67/60**	3100	1800	31
WPA-8-D-N/Ex	888W12	II 2 G c Ex e II T3	3000	3x400	1,5	54	82/78**	68/64**	3900	2050	38
WPA-9-D-N/Ex	888W13	II 2 G c Ex e II T3	3000	3x400	2,2	54	86/82**	72/68**	4500	2400	42
WPA-10-D-N/Ex	888W14	II 2 G c Ex e II T3	3000	3x400	4,0	54	87/81**	73/67**	7400	2600	74

* The fan motors are not adapted for application with a rotational speed governor.
** Measurements have been carried out with the additional TK L = 500 mm silencer installed at the fan inlet.







Bottom view of the fan

Dimensions

Type	A [mm]	B [mm]	C [mm]	D [mm]	ØE [mm]	ØF [mm]	n [pc.]	ØG [mm]	H [mm]	J [mm]
WPA-5-D-N/Ex	905	525	60	160	160	194	6	6,5	500	140
WPA-6-D-N/Ex	915	550	60	200	160	194	6	6,5	535	155
WPA-7-D-N/Ex	965	570	60	200	160	194	6	6,5	535	155
WPA-8-D-N/Ex	990	600	60	200	200	224 234 246	8 6 8	9,0 6,5 9,0	535	155
WPA-9-D-N/Ex	1030	665	60	200	200	224 234 246	8 6 8	9,0 6,5 9,0	605	155
WPA-10-D-N/Ex	1050	675	100	250	250	275	8	9,0	720	232

WPA-D-N/Ex – roof fan with vertical outlet

II 2 G c Ex e II T3

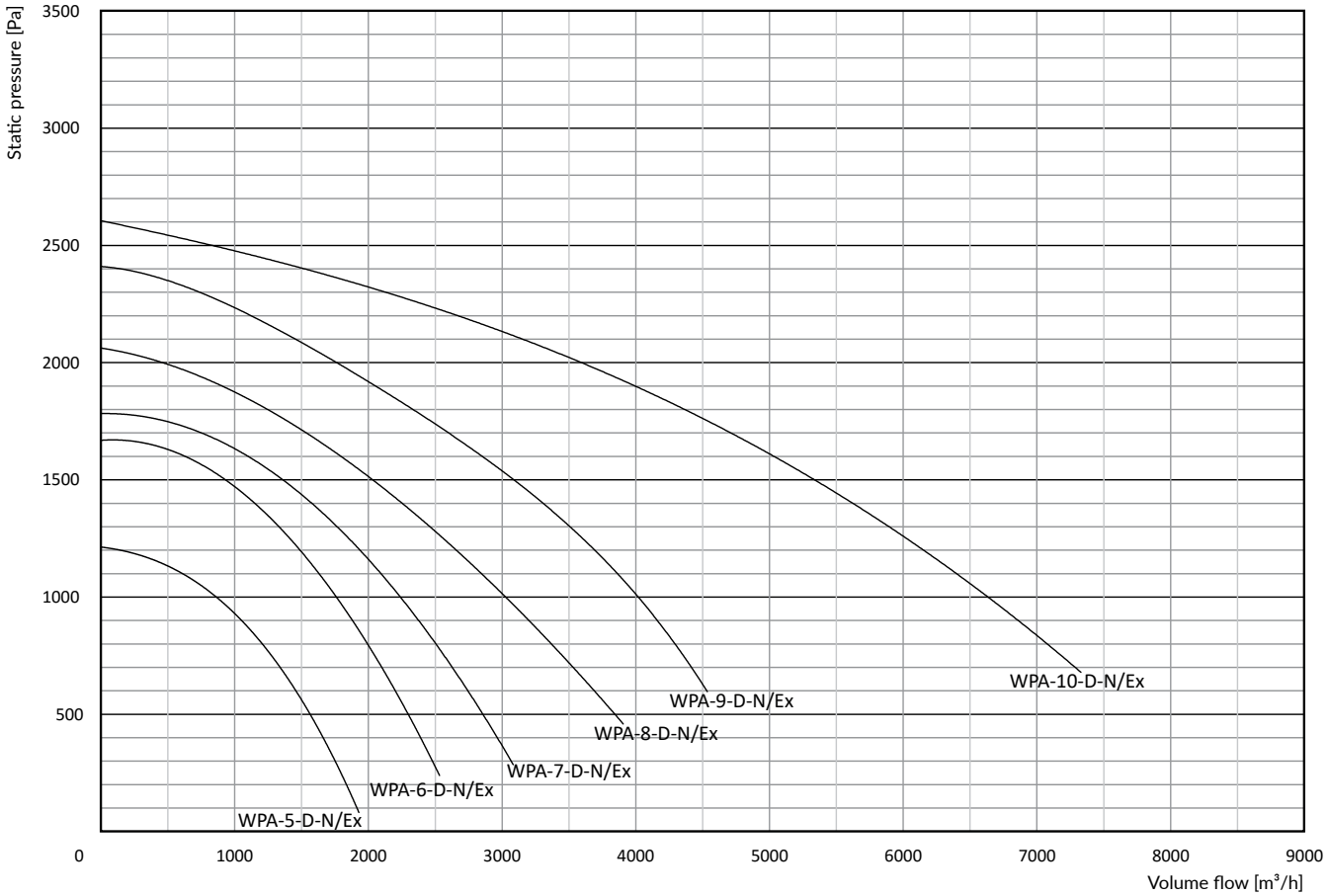
Purpose

WPA-D-N/Ex fans have been designed for application in the areas of explosion risk, where explosive atmosphere (i.e. mixture of flammable compounds in the form of gas and vapour with the air) is likely to occur. Increased fan pressure make them particularly efficient within installations of local exhausts, filtering units and also within a system of significant flow resistances. The fan can be applied in a system with an air discharge of required dynamic uplift.

Structure

The fan consists of a spiral steel housing, Ex motor, aluminium radial impeller and a steel hood. The impeller is directly installed at the motor shaft (direct drive). Impeller blades cross-section reminds the profile of an aircraft wing, providing low acoustic pressure level. The fan inlet is equipped with a flange to install it on a roof base or on wall bracket. Typical feature of the fan is a silencer fastened at the fan outlet of its spiral housing, directed vertically. For safety reason, the inlet and outlet are equipped with a protective grill.

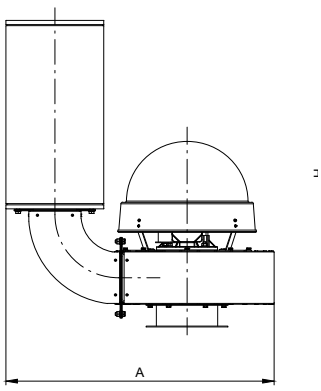
It is recommended to install TK-type silencers at the fan inlet (for details see acoustic data in the table).

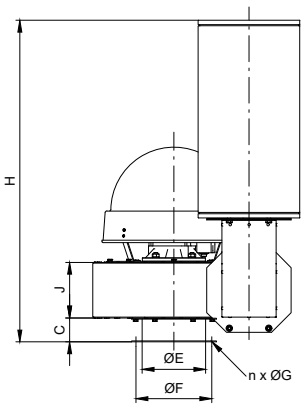


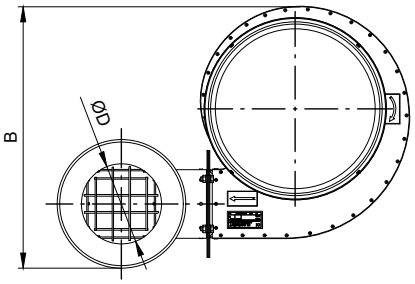
Technical data

Type	Part no.	Marking	Synchronous rotations [1/min]*	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:		Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
							1 m	5 m			
WPA-5-D-N/Ex	888W09	II 2 G c Ex e II T3	3000	3×400	0,55	54	73/67**	59/53**	1900	1250	25
KL-160-WPA	829K14	–	–	–	–	–	–	–	–	–	1,8
WPA-6-D-N/Ex	888W10	II 2 G c Ex e II T3	3000	3×400	0,75	54	78/75**	64/61**	2500	1700	26
KL-160-WPA	829K14	–	–	–	–	–	–	–	–	–	1,8
WPA-7-D-N/Ex	888W11	II 2 G c Ex e II T3	3000	3×400	1,1	54	81/74**	67/60**	3100	1800	31
KL-200-WPA	829K15	–	–	–	–	–	–	–	–	–	2,4
WPA-8-D-N/Ex	888W12	II 2 G c Ex e II T3	3000	3×400	1,5	54	82/78**	68/64**	3900	2050	38
KL-200-WPA	829K15	–	–	–	–	–	–	–	–	–	2,4
WPA-9-D-N/Ex	888W13	II 2 G c Ex e II T3	3000	3×400	2,2	54	86/82**	72/68**	4500	2400	42
KL-200-WPA	829K15	–	–	–	–	–	–	–	–	–	2,4
WPA-10-D-N/Ex	888W14	II 2 G c Ex e II T3	3000	3×400	4,0	54	87/81**	73/67**	7400	2600	74
KL-250-WPA	829K16	–	–	–	–	–	–	–	–	–	7,5

* The fan motors are not adapted for application with a rotational speed governor.
** Measurements have been carried out with the additional TK L = 500 mm silencer installed at the fan inlet.
1. Maximum temperature of the conveyed air is +60°C. Maximum temperature within the work area +40°C
2. Maximum dustiness of the conveyed air should not exceed 0,3 g/m³.







Bottom view of the fan

Dimensions

Type	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	n [pc.]	G [mm]	H [mm]	J [mm]
WPA-5-D-N/Ex	700	525	60	160	160	194	6	6,5	810	140
WPA-6-D-N/Ex	715	550	60	160	160	194	6	6,5	815	155
WPA-7-D-N/Ex	815	570	60	200	160	194	6	6,5	840	155
WPA-8-D-N/Ex	840	600	60	200	200	224 234 246	8 6 8	9,0 6,5 9,0	840	155
WPA-9-D-N/Ex	880	665	60	200	200	224 234 246	8 6 8	9,0 6,5 9,0	840	155
WPA-10-D-N/Ex	960	675	100	250	250	275	8	9,0	960	323

WPA-E-N/Ex – stand fan

II 2 G c Ex e II T3

Purpose

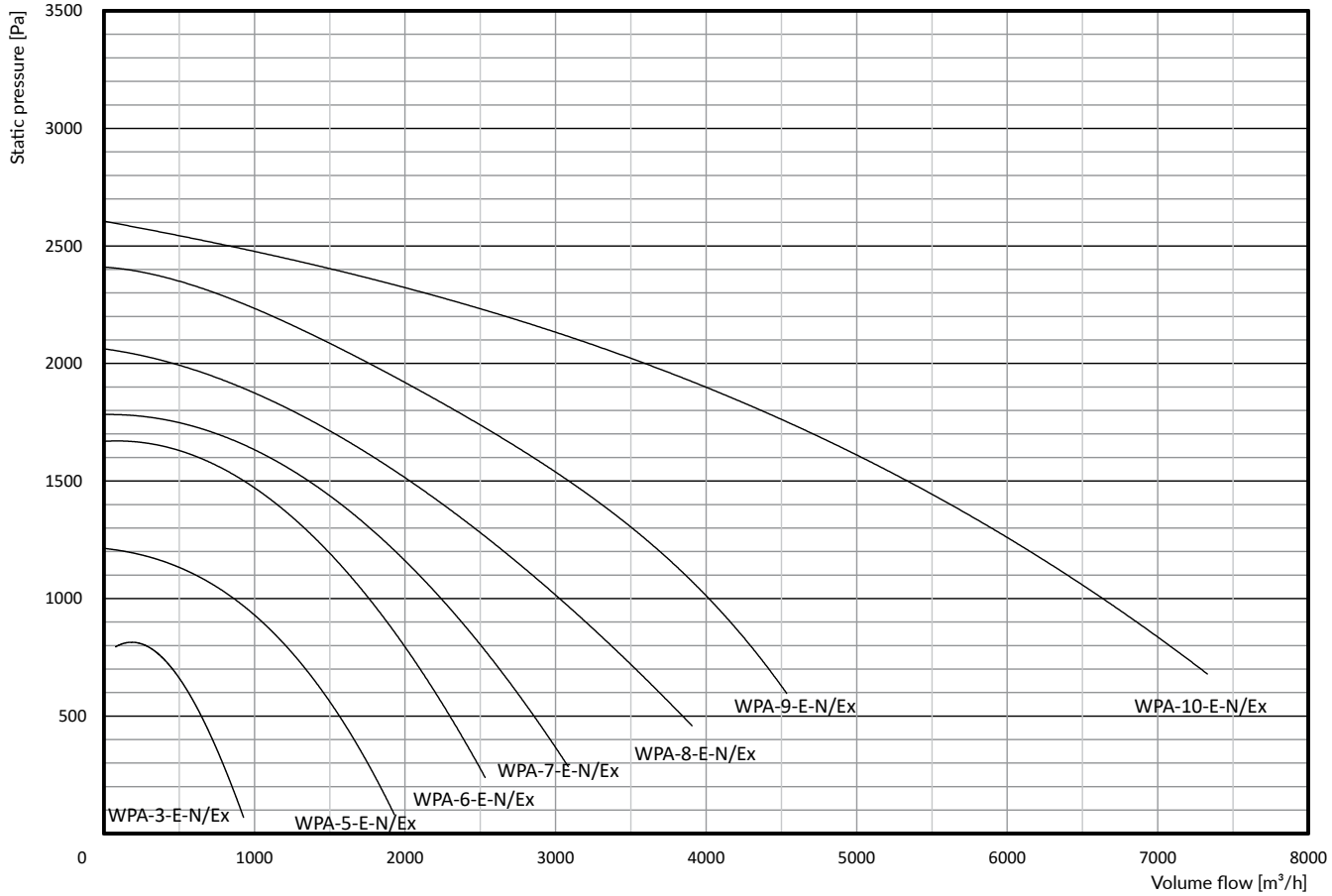
The WPA-E-N/Ex fans have been designed for application in the areas of explosion risk, where explosive atmosphere (i.e. mixture of flammable compounds in the form of gas and vapour with the air) is likely to occur.

Increased fan pressure make them particularly efficient within installations of local exhausts, filtering units and also within a system of significant flow resistances. They are installed on wall brackets inside and outside the rooms.

Structure

The fan consists of a spiral steel housing, Ex motor, and aluminium radial impeller. The impeller is directly installed at the motor shaft (direct drive). Impeller blades cross-section reminds the profile of an aircraft wing, providing low acoustic pressure level. The fan inlet is equipped with a flange to install it on a wall bracket or on a filtering unit. The outlet is ended with a round ferrule to fasten safely a spiral-seam conduit (rigid duct) or to make flexible connections. For safety reason, the inlet and outlet are equipped with a protective grill.

It is recommended to install TK silencers at the fan inlet and outlet (for details see catalogue card INSTALLATION ELEMENTS).

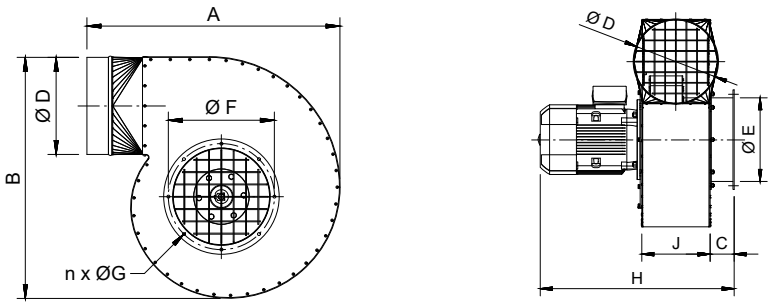


Technical data

Type	Part no.	Marking	Synchronous rotations* [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:		Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
							1 m	5 m			
WPA-3-E-N/Ex	888W01	II 2 G c Ex e II T3	3000	3x400	0,25	54	69/61**	55/47**	950	800	12,5
WPA-5-E-N/Ex	888W02	II 2 G c Ex e II T3	3000	3x400	0,55	54	76/67**	62/53**	1900	1250	17
WPA-6-E-N/Ex	888W03	II 2 G c Ex e II T3	3000	3x400	0,75	54	83/75**	69/61**	2500	1700	20
WPA-7-E-N/Ex	888W04	II 2 G c Ex e II T3	3000	3x400	1,1	54	86/74**	72/60**	3100	1800	23
WPA-8-E-N/Ex	888W05	II 2 G c Ex e II T3	3000	3x400	1,5	54	88/78**	74/64**	3900	2050	31
WPA-9-E-N/Ex	888W06	II 2 G c Ex e II T3	3000	3x400	2,2	54	91/82**	77/68**	4500	2400	38
WPA-10-E-N/Ex	888W07	II 2 G c Ex e II T3	3000	3x400	4,0	54	91/87**	77/67**	7400	2600	66

* The fan motors are not adapted for application with a rotational speed governor.

** Measurement has been carried out with the additional TK L = 500 mm silencer installed at the fan inlet and outlet (for WPA-3-E-N/Ex apply the TK L = 370 mm silencer).



Dimensions

Type	A [mm]	B [mm]	C [mm]	ØD [mm]	ØE [mm]	ØF [mm]	n [pc.]	ØG [mm]	H [mm]	J [mm]
WPA-3-E-N/Ex	410	385	50	125	125	155	6	6,5	400	130
WPA-5-E-N/Ex	480	480	60	160	160	194	6	6,5	420	140
WPA-6-E-N/Ex	490	505	60	160	160	194	6	6,5	445	140
WPA-7-E-N/Ex	550	520	60	200	160	194	6	6,5	460	155
WPA-8-E-N/Ex	570	550	60	200	200	224 234 246	8 6 8	9,0 6,5 9,0	490	155
WPA-9-E-N/Ex	615	620	60	200	200	224 234 246	8 6 8	9,0 6,5 9,0	520	155
WPA-10-E-N/Ex	645	625	100	250	250	274	8	9,0	670	232

WPA-S-N/Ex – stationary fan

II 2 G c Ex e II T3

Purpose

WPA-S-N/Ex stationary fans have been developed for use in the areas of explosion hazard, where explosive atmosphere (i.e. mixture of flammable compounds in the form of gas and vapour with the air) is likely to occur.

Increased fan pressure make them particularly efficient within installations of local exhausts, filtering units and also within a system of significant flow resistances.

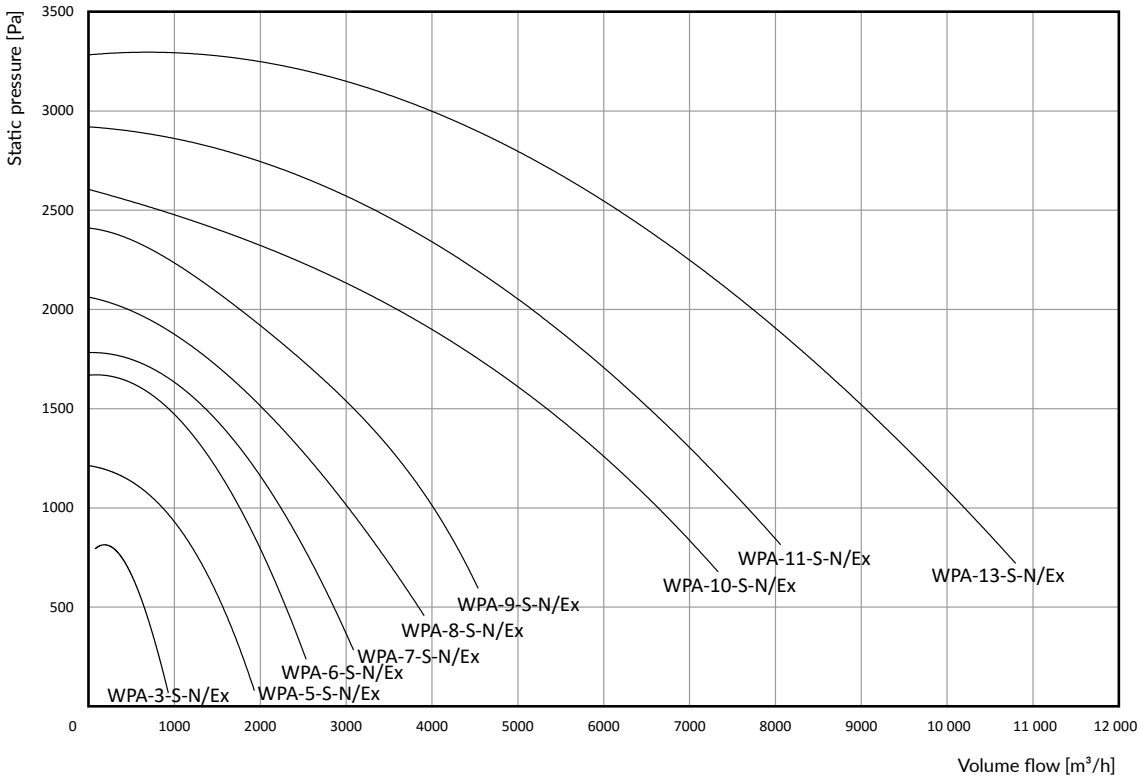
The fans can be operated within the range of temperatures –20°C up to +40°C. They are efficient in forwarding the dry air, of dustiness not exceeding 0,3 g/m³, without viscous contamination, aggressive compounds and of maximum temperature +60°C.

Structure

Stationary fans consist of a spiral steel housing and a motor of Ex execution. The aluminium radial impeller is directly installed on the motor shaft, whereby the impeller blades cross-section is inspired by the aircraft wing profile, providing low acoustic pressure level. Outlet connection is adapted for attachment of round-section flexible connectors, whereas the inlet can be equipped with a connection ferrule.

For safety reason, the inlet and outlet are equipped with a protective grill. The fan motor is screwed to a base which is placed on a vibro-absorbing frame, to avoid vibration transmission to the floor.

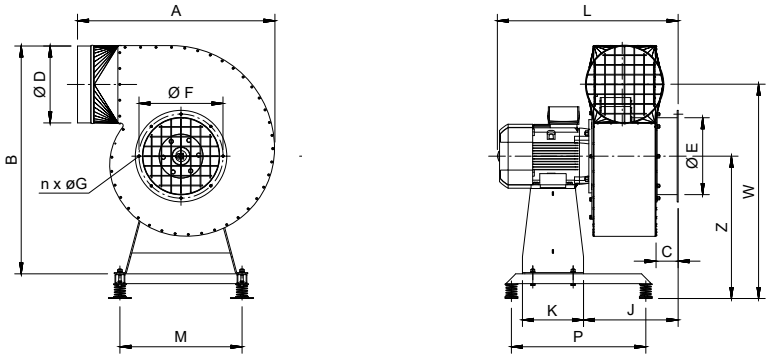
NOTE: As additional accessory, we offer connectors to attach a flexible hose to the fan inlet (see catalogue card INSTALLATION ELEMENTS).



Technical data

Type	Part no.	Marking	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:		Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
							1 m	5 m			
WPA-3-S-N/Ex	888W19	II 2 G c Ex e II T3	3000	3x400	0,37	54	78/70*	64/56*	1160	940	23
WPA-5-S-N/Ex	888W20	II 2 G c Ex e II T3	3000	3x400	0,55	54	76/67*	62/53*	1900	1250	27
WPA-6-S-N/Ex	888W21	II 2 G c Ex e II T3	3000	3x400	0,75	54	83/75*	69/61*	2500	1700	31
WPA-7-S-N/Ex	888W22	II 2 G c Ex e II T3	3000	3x400	1,1	54	86/74*	72/60*	3100	1800	32
WPA-8-S-N/Ex	888W23	II 2 G c Ex e II T3	3000	3x400	1,5	54	88/78*	74/64*	3900	2050	45
WPA-9-S-N/Ex	888W24	II 2 G c Ex e II T3	3000	3x400	2,2	54	91/82*	77/68*	4500	2400	47
WPA-10-S-N/Ex	888W25	II 2 G c Ex e II T3	3000	3x400	4,0	54	91/87*	77/67*	7400	2600	79
WPA-11-S-N/Ex	888W26	II 2 G c Ex e II T3	3000	3x400	5,5	54	97/88*	83/74*	8050	2950	104
WPA-13-S-N/Ex	888W27	II 2 G c Ex e II T3	3000	3x400	7,0	54	99/90*	85/76*	10 800	3300	140

* Acoustic pressure level was measured with the TK L = 500 mm silencers, installed at the fan inlet and outlet (for WPA-3-S-N/Ex is suitable the TK L = 370 mm silencer).
1. Maximum temperature of the conveyed air is +60°C. Maximum temperature in the work area +40°C.
2. Maximum dustiness of the conveyed air should not exceed 0,3 g/m³.



Dimensions

Type	A [mm]	B [mm]	C [mm]	W [mm]	Z [mm]	D [mm]	E [mm]	F [mm]	n [pc.]	G [mm]	M [mm]	P [mm]	K [mm]	J [mm]	L [mm]
WPA-3-S-N/Ex	415	520	50	555	405	125	125	155	6	7,0	345	400	200	170	400
WPA-5-S-N/Ex	485	575	60	595	405	160	160	194	6	7,0	345	400	200	195	420
WPA-6-S-N/Ex	500	600	60	620	410	160	160	194	6	7,0	345	400	200	205	445
WPA-7-S-N/Ex	550	605	60	605	410	200	160	194	6	7,0	345	400	200	220	460
WPA-8-S-N/Ex	570	685	60	685	480	200	200	224 234 246	8 6 8	9,0 7,0 9,0	425	450	220	215	490
WPA-9-S-N/Ex	615	730	60	725	480	200	200	224 234 246	8 6 8	9,0 7,0 9,0	425	450	220	215	510
WPA-10-S-N/Ex	655	810	80	780	550	250	250	274	8	9,0	500	550	250	325	650
WPA-11-S-N/Ex	675	830	80	805	565	250	250	274	8	9,0	500	550	250	335	665
WPA-13-S-N/Ex	805	940	90	880	585	315	315	274	8	9,0	500	550	250	390	775

WPA-14-S-N/Ex –
stationary fan

II 2 G c Ex e II T3

Purpose

The WPA-14-S-N/Ex stationary fan has been designed for use in the areas of explosion hazard, where explosive atmosphere (i.e. mixture of flammable compounds in the form of gas and vapour with the air) can occur.

Increased fan pressure make them particularly efficient within installations of local exhausts, filtering units as well as within a system of significant flow resistances.

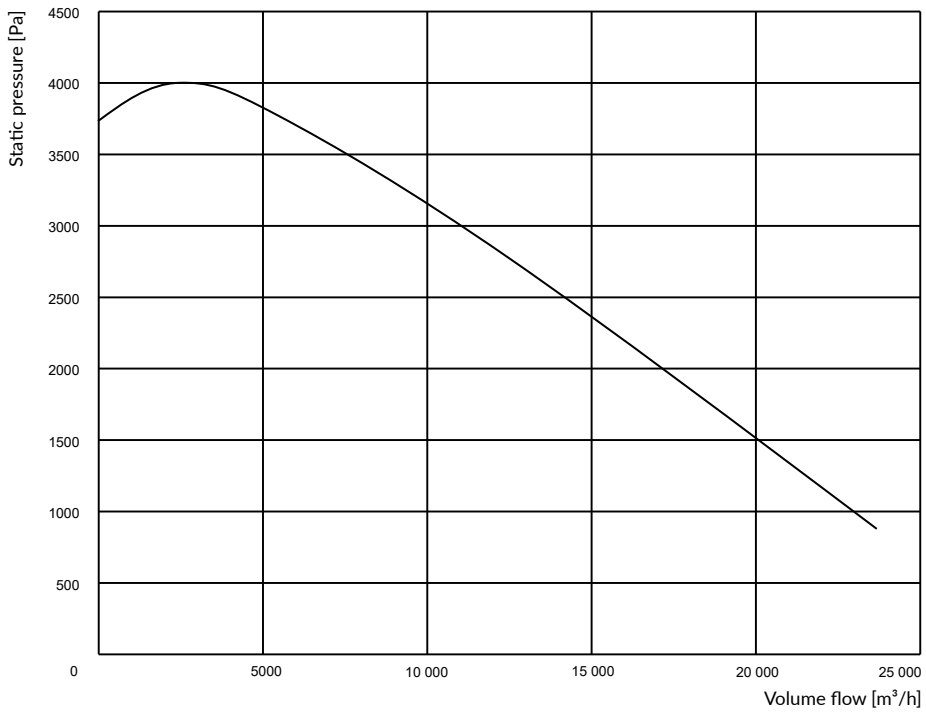
The fan can be applied within the range of temperatures –20°C up to +40°C. It is efficient in forwarding the dry air, of dustiness not exceeding 0,3 g/m³, without viscous contamination, aggressive compounds and of maximum temperature +60°C.

Structure

The stationary fan consist of a spiral steel housing and a motor of Ex execution. The aluminium radial impeller is directly installed on the motor shaft, whereby the impeller blades cross-section is inspired by the aircraft wing profile, providing low acoustic pressure level. The outlet connection is adapted for attachment of round flexible connectors, whereas the inlet can be equipped with a connection ferrule.

For safety reason, the inlet and outlet are equipped with a protective grill. The fan motor is screwed to a base which is placed on a vibro-absorbing frame, to avoid vibration transmission to the floor.

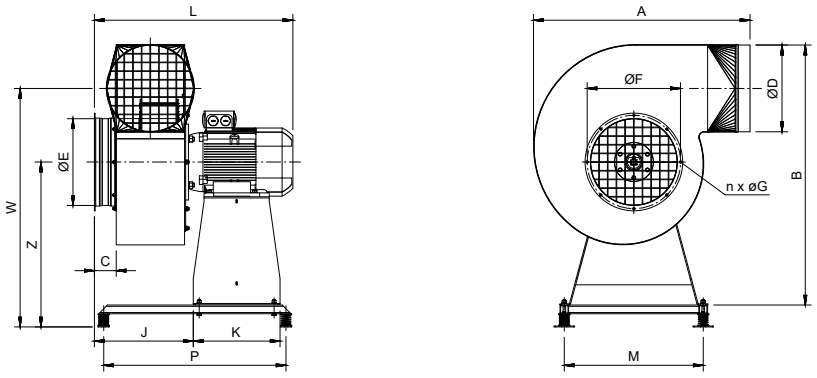
NOTE: As additional accessory, we offer connectors to attach a flexible hose to the fan inlet (see catalogue card INSTALLATION ELEMENTS).



Technical data

Type	Part no.	Marking	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:		Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
							1 m	5 m			
WPA-14-S-N/Ex	888W28	II 2 G c Ex e II T3	3000	3x400	16	54	100	91	23 100	4000	240

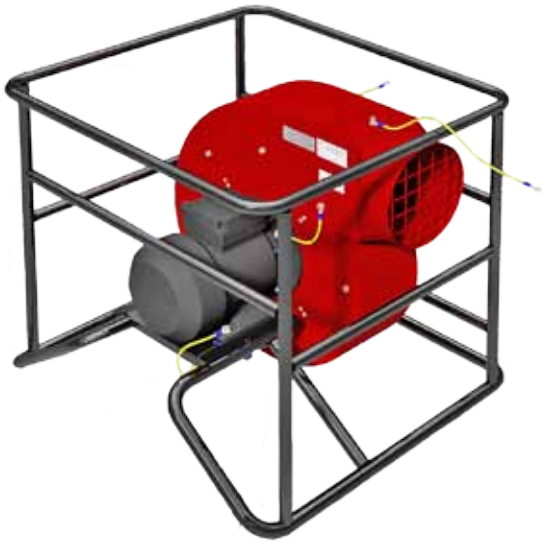
1. Maximum temperature of the conveyed air is +60°C. Maximum temperature in the work area +40°C.
2. Maximum dustiness of the conveyed air should not exceed 0,3 g/m³.



Dimiensions

Type	A [mm]	B [mm]	C [mm]	W [mm]	Z [mm]	D [mm]	E [mm]	F [mm]	n [pc.]	G [mm]	M [mm]	P [mm]	K [mm]	J [mm]	L [mm]
WPA-14-S-N/Ex	1000	1200	100	1100	760	400	400	430	8	10	640	840	400	455	970

WPA-P-N/Ex – portable fan



II 2 G c Ex e II T3

Purpose

WPA-P-N/Ex stationary fans have been developed for use in the areas of explosion hazard, where explosive atmosphere (i.e. mixture of flammable compounds in the form of gas and vapour with the air) is likely to occur.

Increased fan pressure make them particularly efficient within installations of local exhausts, filtering units and also within the system of significant flow resistances.

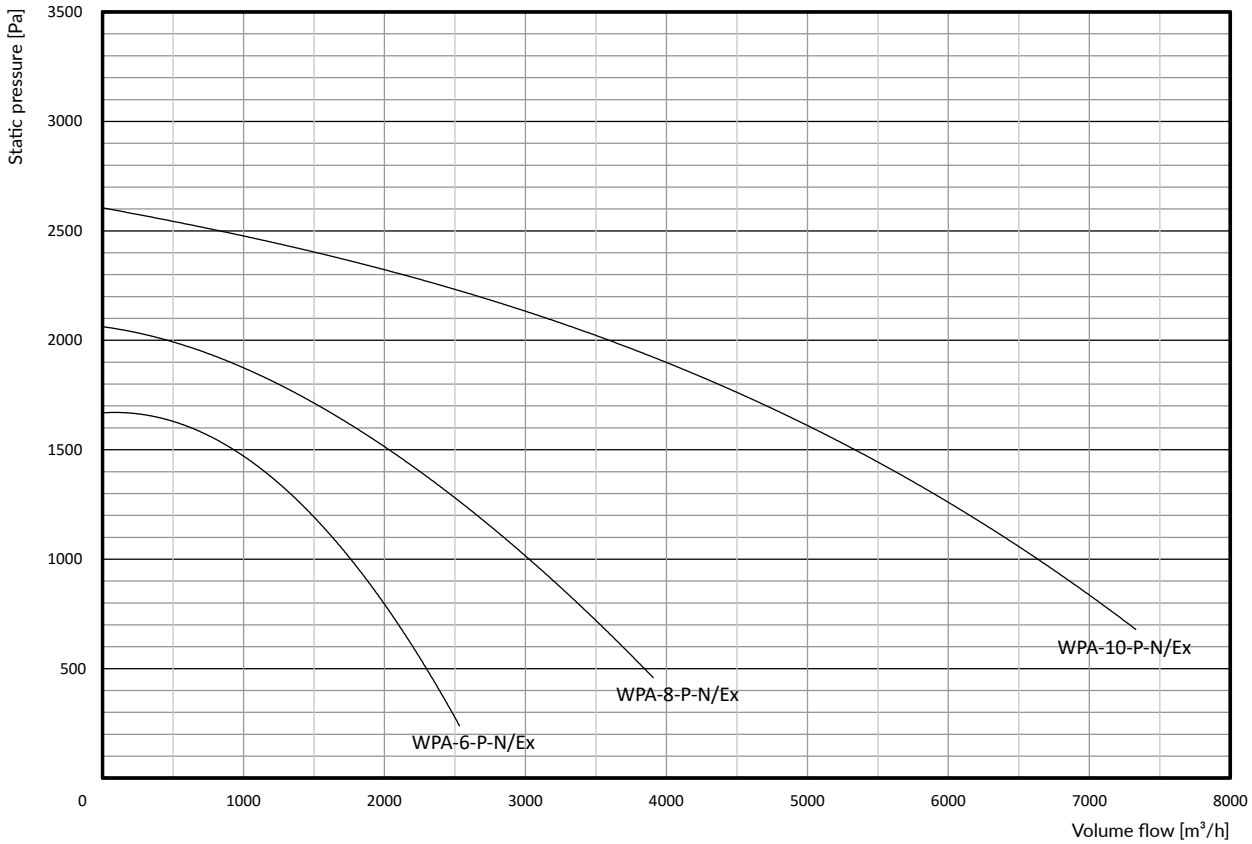
The fans can be operated within the range of temperatures –20°C up to +40°C. They are efficient in forwarding the dry air, of dustiness not exceeding 0,3 g/m³, without viscous contamination, aggressive compounds and of maximum temperature +60°C.

Structure

Stationary fans consist of a spiral steel housing and a motor of Ex execution. The aluminium radial impeller is directly installed on the motor shaft, whereby the impeller blades cross-section is inspired by the aircraft wing profile, providing low acoustic pressure level.

For safety reason, the inlet and outlet are equipped with a protective grill and adapted for connection of flexible hoses, fastened by hose clamps. The fan is mounted on a stand of vibro-isolating features.

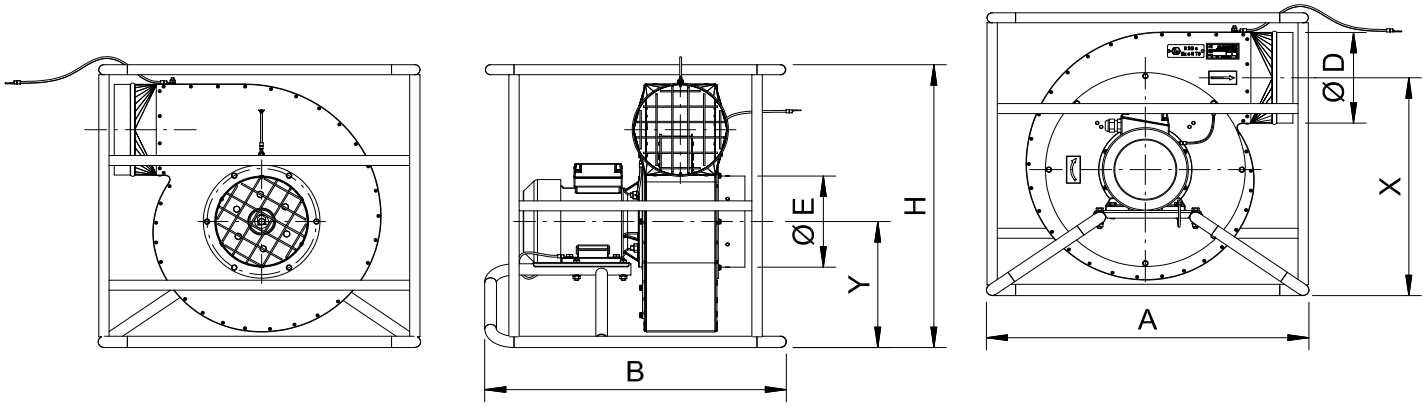
The fan connections are equipped with protective cables to lead the electrostatic charges away.



Technical data

Type	Part no.	Marking	Synchronous rotations* [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:		Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
							1 m	5 m			
WPA-6-P-N/Ex	888W16	II 2 G c Ex e II T3	3000	3x400	0,75	56	83/75**	69/61**	2500	1700	26
WPA-8-P-N/Ex	888W17	II 2 G c Ex e II T3	3000	3x400	1,5	56	88/78**	74/64**	3900	2050	34
WPA-10-P-N/Ex	888W18	II 2 G c Ex e II T3	3000	3x400	4,0	56	91/81**	77/67**	7400	2600	74

* Fan motors are not adapted for rotational speed governors.
** Acoustic pressure level was measured with the TK L = 500 mm silencers, installed at the fan inlet and outlet (TK L = 370 mm).



Dimensions

Type	A [mm]	B [mm]	ØD [mm]	ØE [mm]	X [mm]	Y [mm]	H [mm]
WPA-6-P-N/Ex	555	605	160	160	455	245	575
WPA-8-P-N/Ex	690	645	200	200	480	280	625
WPA-10-P-N/Ex	775	825	250	250	540	310	745

medium-pressure explosion proof fans of stainless steel for local exhausts

WP-D/Ex – roof fan

II 2 G c Ex e II T3

Purpose

First of all, WP-D/Ex fans are designed for application in areas of explosion hazard, where explosive atmosphere (i.e. mixture of flammable compounds in the form of gas, vapour and mist with the air) can occur.

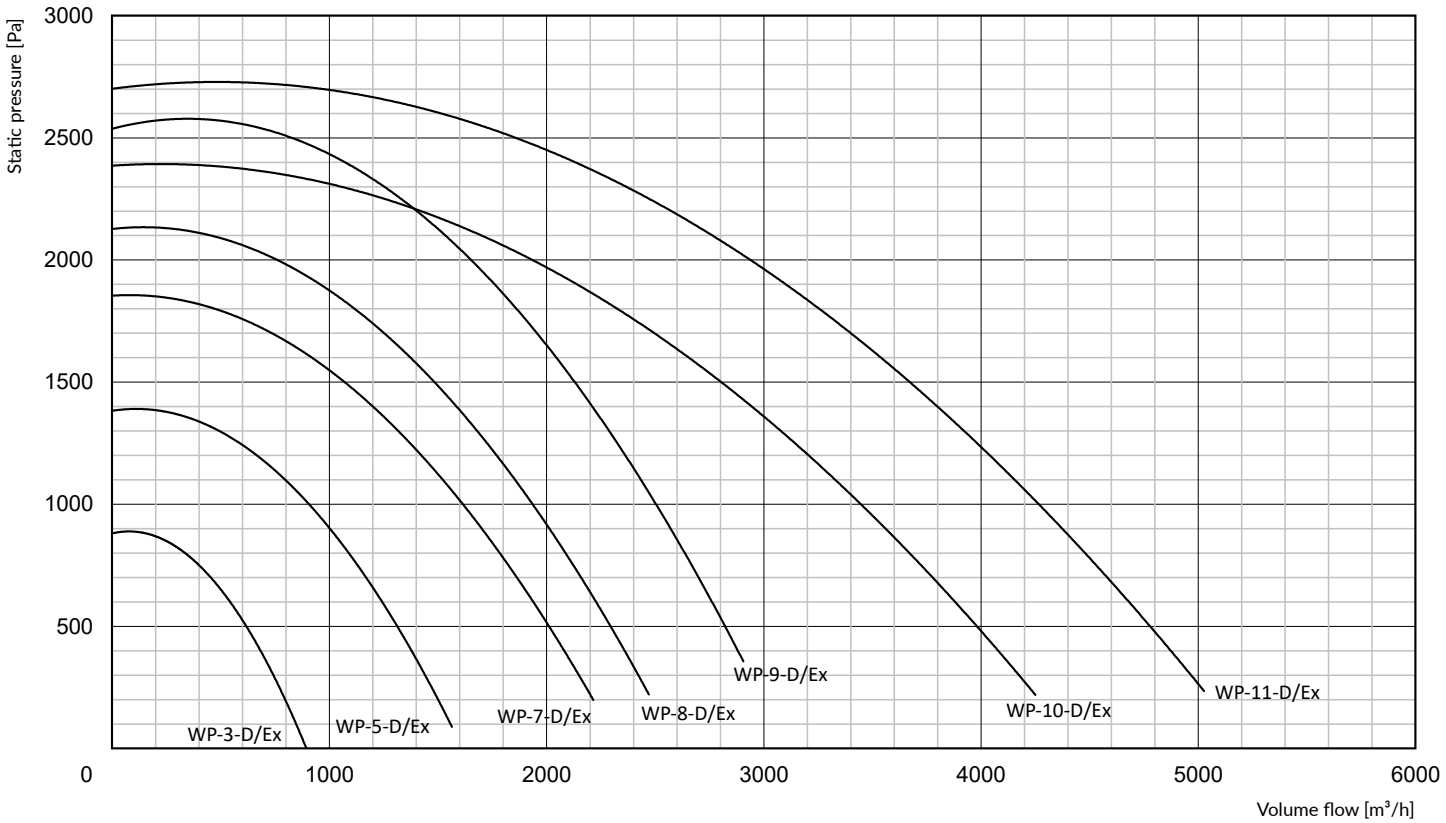
Increased fan pressure make them particularly efficient within installations of local exhausts, filtering units and also within the system of significant flow resistances.

Structure

The fan consists of subsequent elements:

- spiral housing,
- Ex motor,
- radial impeller – installed directly at the motor shaft,
- silencer – installed at the fan outlet,
- fan mounting flange,
- hood.

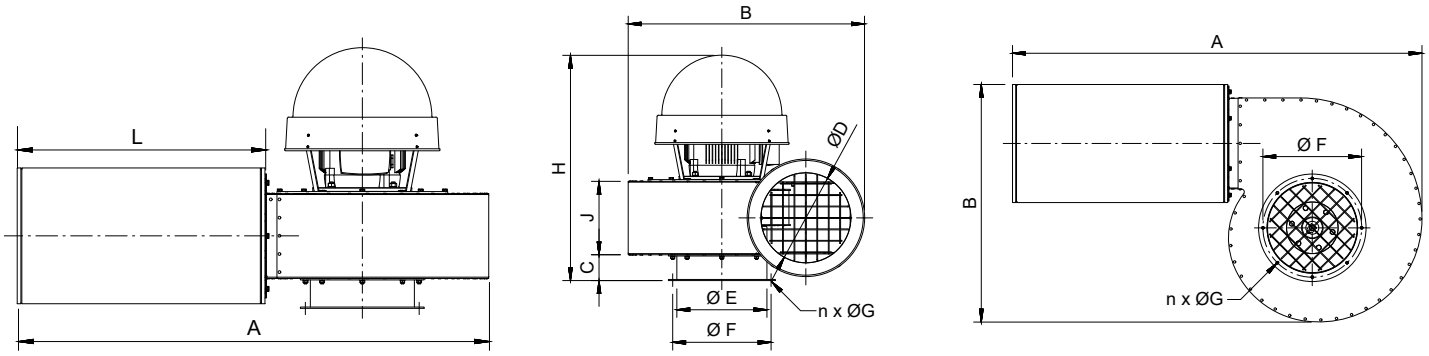
The basic elements of the fan (housing, impeller, silencer, flange) are manufactured of non-magnetic austenitic stainless steel. The hood is of aluminium sheet. The whole fan is in natural colour of stainless steel.



Technical data

Type	Part no.	Marking	Synchronous rotations [1/min]*	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:		Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
							1 m	5 m			
WP-3-D/Ex	808W49	II 2 G c Ex e II T3	3000	3x400	0,37	54	61	52	900	900	19
WP-5-D/Ex	808W50	II 2 G c Ex e II T3	3000	3x400	0,55	54	64	56	1550	1400	24
WP-7-D/Ex	808W51	II 2 G c Ex e II T3	3000	3x400	1,1	54	71	62	2200	1850	26
WP-8-D/Ex	808W52	II 2 G c Ex e II T3	3000	3x400	1,5	54	77	67	2500	2200	37
WP-9-D/Ex	808W53	II 2 G c Ex e II T3	3000	3x400	2,2	54	77	68	2800	2500	43
WP-10-D/Ex	808W54	II 2 G c Ex e II T3	3000	3x400	4,0	54	78	69	4250	2400	78
WP-11-D/Ex	808W55	II 2 G c Ex e II T3	3000	3x400	4,0	54	80	70	5000	2700	80

* Fan motors are not adapted for rotational speed governors.
1. Maximum temperature of the conveyed air is +60°C. Maximum temperature in the work area +40°C.
2. Maximum dustiness of the conveyed air should not exceed 0,3 g/m³.
3. Acoustic pressure level measurements have been taken at:
– maximum air flow efficiency,
– the installed silencer type TK at the inlet (silencer length 370 mm is for the WP-3-D/Ex only, whereas the length 1000 mm for the other fans of the series).



Dimensions

Type	A [mm]	B [mm]	L [mm]	C [mm]	D [mm]	E [mm]	F [mm]	n [pc.]	G [mm]	H [mm]	J [mm]
WP-3-D/Ex	840	445	500	50	125	125	155	6	6,5	480	130
WP-5-D/Ex	915	525	500	60	160	160	194	6	6,5	480	140
WP-7-D/Ex	965	570	500	60	200	160	194	6	6,5	510	155
WP-8-D/Ex	990	600	500	60	200	200	224	8	8,5	535	155
WP-9-D/Ex	1030	665	500	60	200	200	224	8	8,5	580	155
WP-10-D/Ex	1050	680	500	60	250	250	274	8	8,5	690	232
WP-11-D/Ex	1070	700	500	60	250	250	274	8	8,5	690	232

WP-E/Ex – stand fan

II 2 G c Ex e II T3

Purpose

WP-E/Ex fans are designed for application in areas of explosion hazard, where explosive atmosphere (i.e. mixture of flammable compounds in the form of gas, vapour and mist with the air) can occur.

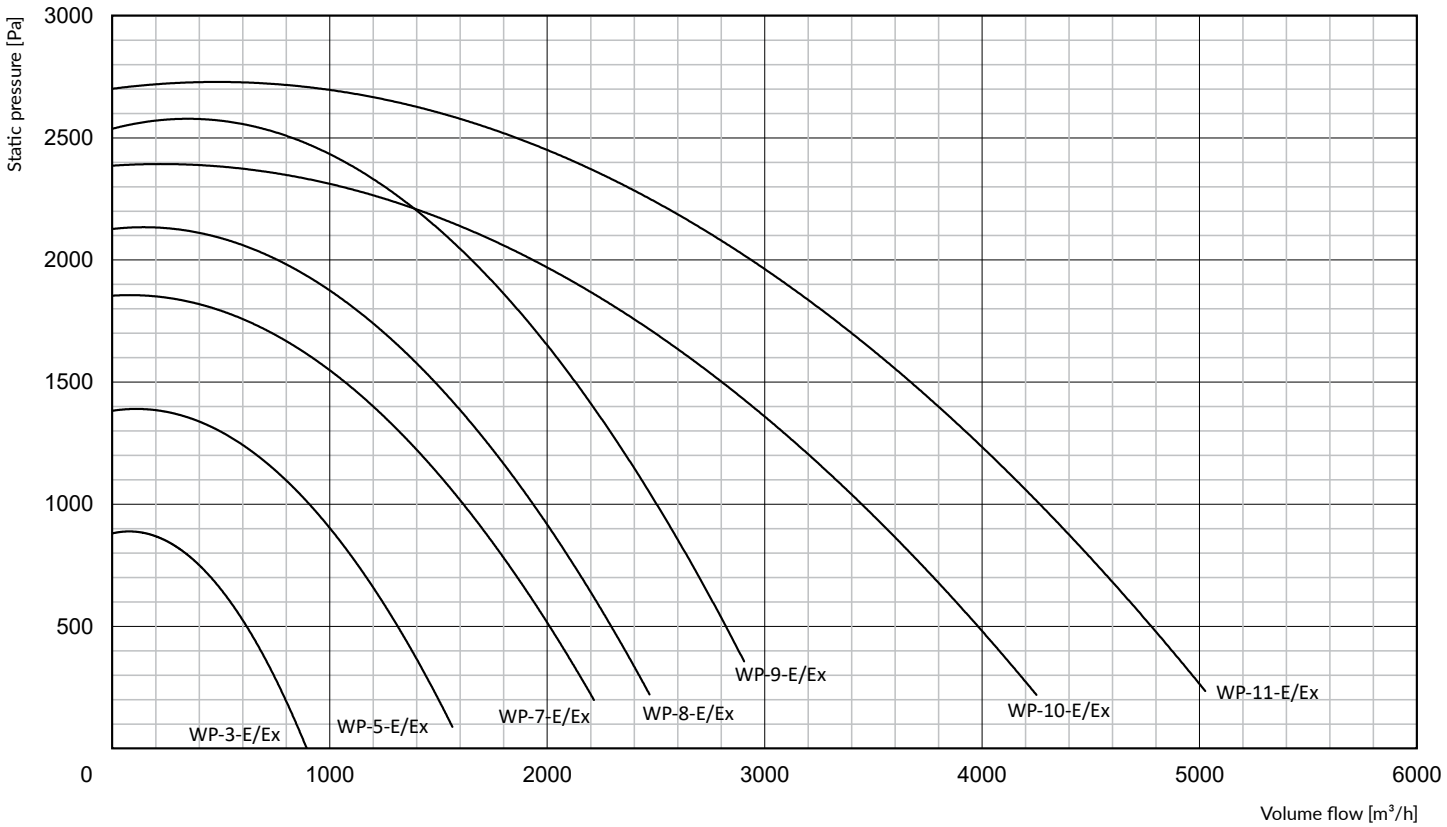
Increased fan pressure make them particularly efficient within installations of local exhausts, filtering units and also within the system of significant flow resistances. The fans are installed on wall brackets inside the rooms.

Structure

The fan consists of subsequent elements:

- spiral housing,
- Ex motor,
- radial impeller – installed directly at the motor shaft,
- fan mounting flange.

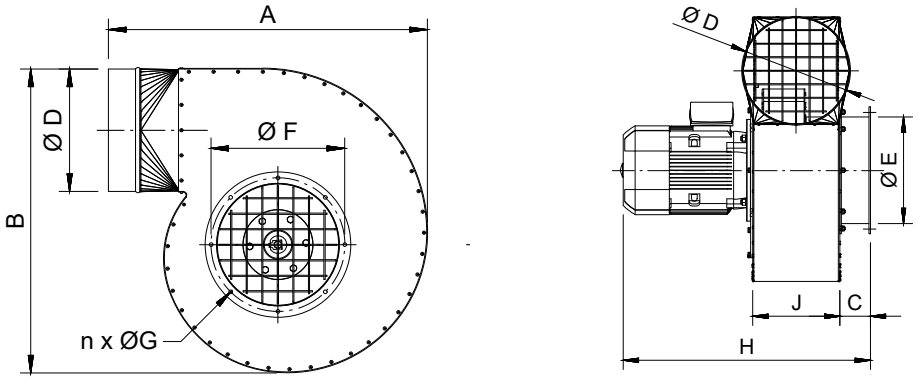
The basic elements of the fan (housing, impeller, flange) are manufactured of non-magnetic austenitic stainless steel. The whole fan is in natural colour of stainless steel.



Technical data

Type	Part no.	Marking	Synchronous rotations [1/min]*	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:		Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
							1 m	5 m			
WP-3-E/Ex	808W40	II 2 G c Ex e II T3	3000	3x400	0,37	54	58	51	900	900	14
WP-5-E/Ex	808W41	II 2 G c Ex e II T3	3000	3x400	0,55	54	63	55	1550	1400	19
WP-7-E/Ex	808W42	II 2 G c Ex e II T3	3000	3x400	1,1	54	67	61	2200	1850	24
WP-8-E/Ex	808W43	II 2 G c Ex e II T3	3000	3x400	1,5	54	72	64	2500	2200	32
WP-9-E/Ex	808W44	II 2 G c Ex e II T3	3000	3x400	2,2	54	74	67	2800	2500	40
WP-10-E/Ex	808W45	II 2 G c Ex e II T3	3000	3x400	4,0	54	75	68	4250	2400	69
WP-11-E/Ex	808W46	II 2 G c Ex e II T3	3000	3x400	4,0	54	77	69	5000	2700	70

* Fan motors are not adapted for rotational speed governors.
1. Maximum temperature of the conveyed air is +60°C. Maximum temperature in the work area +40°C.
2. Maximum dustiness of the conveyed air should not exceed 0,3 g/m³.
3. Acoustic pressure level measurements have been taken at:
– maximum air flow efficiency,
– the installed silencer type TK at the inlet (silencer length 370 mm is for the WP-3-E/Ex only, whereas the length 1000 mm for the other fans of the series).



Dimensions

Type	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	n [pc.]	G [mm]	H [mm]	J [mm]
WP-3-E/Ex	410	385	50	125	125	155	6	6,5	410	130
WP-5-E/Ex	485	480	60	160	160	194	6	6,5	445	140
WP-7-E/Ex	550	520	60	200	160	194	6	6,5	485	155
WP-8-E/Ex	570	550	60	200	200	224	8	8,5	550	155
WP-9-E/Ex	615	610	60	200	200	224	8	8,5	525	155
WP-10-E/Ex	645	615	60	250	250	274	8	8,5	685	232
WP-11-E/Ex	665	635	60	250	250	274	8	8,5	650	232

smoke removal fans

Klimawent Fire
ALL FOR SAFETY

INTENSIVE fans
carry the Certificate of Functional Properties Constancy No.:
1488-CPR-0523/W
They have been submit to tests according to EN 12101-3 Standard and classified in accordance to EN 13501-4 Standard in the class:
- **$F_{400}120$**
- **$F_{300}60$**
- **$F_{200}120$**

Purpose

INTENSIVE fans have been developed for reduction of heat, exhaust fumes and smoke arising during fire disaster.
They can work in systems:
- general ventilation
- fire emergency ventilation
- mixed ventilation [two-functional, application of a two--speed motor]

A series of types counts 7 sizes [315, 355, 400, 500, 630, 710, 800 mm] of motor rates ranging from 0,18 up to 22 kW.

Maximum volume flow is 52 000 [m^3/h] and maximum static pressure – 1850 [Pa].

Structure

Outer housing of octagonal shape is made of aluminium sheet. Inside, on the supporting structure, is located a motor. The radial impeller is directly mounted at the motor shaft pivot (direct drive), and is statically and dynamically balanced, according to PN-93/N-01359 standard, gaining the class G 6,3.

Appropriate selection of the blade inclination angle guarantees high fan pressure, flow efficiency and, at the same, low acoustic pressure.

Double-action impeller, provides intensive air flow, through the isolated motor chamber. The motor is not located within the stream of the flowing air. It is cooled by external air, supplied through an isolated cooling duct.

The fan can be installed both on a roof base and on a stable concrete pedestal of square section.

The fans are driven by:
- three-phase single-speed motors [230/400V (Y) or 400/690V (D/Y)],
- three-phase double-speed motors [400/400V (Y/YY)] motors of class IE2, IE3.

In the standard execution, the fan housing is powder painted in RAL 7001. On demand of Customer the housing can be painted in another selected RAL.

Additional equipment

Additional equipment of the INTENSIVE fan consists of following elements:
- insulated roof base – IPD,
- sound absorbing roof base – TPD,
- self-activating return damper – SKZ,
- flange compensator – KK,
- mounting flange – K,
- guard wire net – SO,
- silencer – KTH, KTH-R [without core / with core],
- sound absorbing fan housing – TOW,
- safety switch – WS.

The accessories have been submitted to fire tests of the series of fan types INTENSIVE, according to the EN 12101-3 and are included in the offer assortment of KLIMAWENT FIRE.

Accessories ought to be selected by Customer on one's own. Especially, for safety reasons, it is recommended to apply a safety switch to cut off the power supply during the installing- and servicing activity.

For full range of the smoke extract fans and the high-temperature fans see web site www.klimawentfire.pl

Klimawent Fire
ALL FOR SAFETY

Roof fans INTENSIVE 120°C

- 120°C – maximum temperature of the co-nveyed air
- continuous work
- swinging-up fan housing
- drainage device – to discharge the water, drippings, oil outside the housig

Purpose

INTENSIVE 120°C fans are adapted for continuous work in the maximum temperature 120°C.

- general ventilation,
- air extraction from above the grates and from fume hoods,
- industrial systems, factories, steelworks

A series of types counts 6 sizes [250, 315, 355, 400, 450, 500, mm] of motor rates ranging from 0,25 up to 4 kW.

Maximum volume flow is 16 000 [m³/h] and maximum static pressure – 1200 [Pa].

Structure

Outer housing of octagonal shape is made of zinc-coated steel sheet.

As standard, the housing is painted in colour RAL 7001.

Inside, on a supporting structure, is located a motor. The radial impeller is directly mounted at the motor shaft pivot (direct drive).

The housing is equipped with two ducts to discharge the condensate water drippings and oil.

The impeller is statically and dynamically balanced, according to PN-93/N-01359 standard, gaining the class G 6,3.

Appropriate selection of the blades inclination angle guarantees high fan pressure, flow efficiency and, at the same, low acoustic pressure.

Double-action impeller, provides intensive air flow, through the isolated motor chamber.

The motor is located beyond the stream of the flowing air; whereby it is cooled by external air, supplied through a cooling duct.

The fan can be installed on a roof base or on a stable concrete pedestal of square section.

The fans are driven by:
- one-phase motors [INTENSIVE 120°C – 250, 315, 355, 400],
- three-phase motors [INTENSIVE 120°C – 450, 500].

For safety reasons, the fans are (as standard) equipped with a safety switch to cut off the power supply during the installing and servicing activities.

Mainly, the fan construction enables tilting aside the external housing for easy servicing.

Additional equipment

Additional equipment of the INTENSIVE 120°C fan consists of following elements:
- roof base – PD
- sound absorbing roof base – PDT
- self-activating return damper – SKZ
- flange compensator – KK
- mounting flange – K
- guard wire net – SO
- silencer – KTH
- intermediate plate – PP
- electrical equipment [see section: ELECTRICAL EQUIPMENT].

Equipment has to be selected by User on one's own.

For full range of the smoke extract fans and the high-temperature fans see web site www.klimawentfire.pl

electrical equipment for fans

Safety switch type IS

To disconnect the supply circuit of one-phase or three-phase motors of rated current up to 16A. It is possible to block the setting wheel in position 0-OFF. It is suggested to install it close to the fan.

IP 55

Type	Part no.	Supply voltage [V]; 50 Hz	Current range [A]
IS	843W30	230/3x400	0–16

Motor starter type RS

For direct connecting/disconnecting the one-phase and three-phase motors. Provides overload- and under-voltage protection and is equipped with a switch-on signalling.

IP 65

Type	Part no.	Supply voltage [V]; 50 Hz	Motor rate [kW]	Current range [A]
RS-3,7-1	816R01	230	0,37	2,6–3,7
RS-5,5-1	816R02	230	0,55	3,7–5,5
RS-8-1	816R05	230	1,1	5,5–8
RS-2,6-3	816R15	3x400	0,75	1,8–2,6
RS-1,8-3	816R10	3x400	0,55	0,8–1,2
RS-3,7-3	816R11	3x400	1,1	2,6–3,7
RS-5,5-3	816R12	3x400	1,5	3,7–5,5
RS-8-3	816R14	3x400	2,2–3,0	5,5–8
RS-14-3	816R21	3x400	5,5	10–14
RS-16-3	816R20	3x400	7,5	12–16
RS-11,5-3	816R18	3x400	4,0	8–11,5

Speed governor type RP

For voltage speed control of the fans with one-phase motors. Short-circuit protection and kickstart function.

IP 54

Type	Part no.	Supply voltage [V]; 50 Hz	Current range [A]	Motor rate [kW]
RP-5-K	811R05	230	0,5–6	0,37–0,55
RP-10-K	811R06	230	0,5–10	0,75–1,1

Connect the speed governor according to the connection diagram in the User's Manual.

Motor protective switch type WS-1

For direct connecting/disconnecting the one-phase and three-phase motors. Contains short-circuit and overload protection. Protects the motor against damage, in case of blocked start-up, overload, short-circuit and fade of one phase, in three-phase circuits.

IP 55

Type	Part no.	Supply voltage [V]; 50 Hz	Motor rate [kW]	Current range [A]
WS-4-1	843W12	230	0,37	2,5–4
WS-6,3-1	843W06	230	0,55–0,75	4–6,3
WS-10-1	843W08	230	1,1	6,3–10
WS-1,6-3	843W47	3x400	0,55	1–1,6
WS-2,5-3	843W07	3x400	0,75	1,6–2,5
WS-4-3	843W09	3x400	1,1–1,5	2,5–4
WS-6,3-3	843W10	3x400	2,2	4–6,3
WS-10-3	843W11	3x400	3,0	6,3–10
WS-14-3	843W48	3x400	5,5	9–14
WS-18-3	843W49	3x400	7,5	13–18

Motor start type ŁS-1

For direct connecting/disconnecting the one-phase or three-phase motors, of rated current up to 16A. The motor start does not provide protective functions.

IP 55

Type	Part no.	Supply voltage [V]; 50 Hz	Current range [A]
ŁS-1	816Ł01	230/3x400	0–16

Inverter type FA/3

For speed control of the fans with three-phase motors. It is possible to program it for the application specified by Customer.

IP 54

Type	Part no.	Motor rate [kW]	Supply voltage [V]; 50 Hz	Maximum continuous output current [A]
FA/3/0,75	816F13	0,55–0,75	3x400	2,2
FA/3/1,1/1,5	816F14	1,1–1,5	3x400	3,7
FA/3/2,2	816F15	2,2	3x400	5,1
FA/3/3,0	816F16	3,0	3x400	7,2
FA/3/5,5	816F17	5,5	3x400	12
FA/3/7,5	816F18	7,5	3x400	16
FA/3/12/15	816F19	12,0–15,0	3x400	30,5
FA/3/18,5	816F20	18,5	3x400	37
FA/3/22,0	816F21	22,0	3x400	43,5

Potentiometr

The potentiometer enables setting of the requested value of rotational speed for fans equipped with motors that are EC electronically commutated.

	Type	Part no.	Supply voltage [V]; 50–60 Hz	Output	Output setting		Remarks
					Min.	Max.	
 IP 44	P-EC	840P99	230	analogue signal, 1-10 VDC, 2-20 mA or PWM (with constant frequency 5 kHz)	1–7 VDC/2–14 mA/ 10–70%	3–10 VDC/6–20 mA/ 30–100%	• built-in switch with function ON / OFF • wall installing

Control unit for remote control of the fan – type ZE-Z

ZE-Z type control unit is designed for installing in the garage room or other room, indicated by User.

Is equipped with a control mode switch, with positions:

- 0 – control switched off,
- L – local control,
- Z – remote control.

Local control (L) – to start the fan from the ZE-Z control unit, by pressing the green pushbutton “START”, whereas the red pushbutton “STOP” switches it off.

Remote control (Z) – switches on the fan by means of the auxiliary control units ZP-1/24V, ZP-2/24V or through radio, by means of a radio transmitter and radio receiver (exhaust extractors with balancer).

Control unit, depending on the motor rate, is equipped with an adequately selected motor disconnector and and contactor. The control unit is provided with short-circuit, thermal protection.

Control units used to operate the fans of motor rate above 5 kW provide a soft start of the fan by means of a star-delta starting system.

	Type	Part no.	Supply voltage [V]; 50 Hz	Motor rate [kW]	Current range of thermal protection [A]	Devices to work with
 	ZE-Z1-4	816Z80	230	0,37	2,5–4	WPA-3-(E, S)-1-N,
	ZE-Z1-6,3	816Z81	230	0,55	4–6,3	WPA-5-(D, E, S)-1-N, WPA-6-(D, E, S)-1-N
	ZE-Z1-10	816Z82	230	1,1	6,3–10	WPA-7-(D, E, S)-1-N
	ZE-Z3-1,6	816Z75	3x400	0,55	1–1,6	WPA-5-(D, E, S)-3-N
	ZE-Z3-2,5	816Z85	3x400	0,75	1,6–2,5	WPA-6-(D, E, S)-3-N
	ZE-Z3-4	816Z86	3x400	1,1	2,5–4	WPA-7-(D, E, S)-3-N WPA-8-(D, E, S)-3-N
	ZE-Z3-6,3	816Z87	3x400	2,2	4–6,3	WPA-9-(D, E, S)-3-N
	ZE-Z3-10	816Z88	3x400	3,0–4,0	6,3–10	WPA-10-(D, E, S)-3-N
	ZE-Z3-13-Y/D	816Z03	3x400	5,5	9–13	WPA-11-(D, E, S)-3-N
	ZE-Z3-17-Y/D	816Z04	3x400	7,5	11–17	WPA-13-(D, E, S)-3-N
	ZE-Z3-32-Y/D	816Z05	3x400	15	22–32	WPA-14-S-3-N

Auxiliary control units Type ZP-1/24V and ZP-2/24V – for remote control of the fan, by cable

Supporting control units Type ZP-1/24V and ZP-2/24V – designed for remote control, manual control, cable control of the fan, from the chosen place. They work with control units ZE-SSAK and ZE-Z. The control mode switch in the control unit must be set into position (Z) – remote control.

	Type	Part no.	Remarks
	ZP-1/24V	811Z02	Provides possibility of controlling the fan function from another selected place: • button "start" – Normally Open contact (NO), • button "stop" – Normally Closed contact (NC), • signalling lamp z4V.
	ZP-2/24V	811Z03	Provides possibility of controlling the fan function from another selected place, switch by a Normally Open contact (NO) and a signalling lamp.

devices for contamination extraction

ERGO LUX –
extraction arms

ERGO LUX extraction arm – hanging version

Purpose

ERGO LUX extraction arms are developed for capturing the welding dusts and gases, as well as other fine dusts, directly at the emission source. Therefore, the contamination is not expanding within the room and is not being inhaled by the endangered workers. The appliance is designed for the most demanding users, appreciating its functionality and modern design.

The extraction arms are manufactured in a hanging- or standing version. It can work independently, with a single extraction fan, or in a group of local exhausts, connected to the main collecting ductwork with a central fan.

Structure

ERGO LUX extraction arms consist of following assemblies:

- swivel – integrated with a tight shut-off damper (additional equipment),
- self-braking rotary hood,
- adjustment damper,
- two pipe segments – integrated with frictional joints,
- gas springs – to stabilise the weight of the subsequent pipe segments.

Operational use

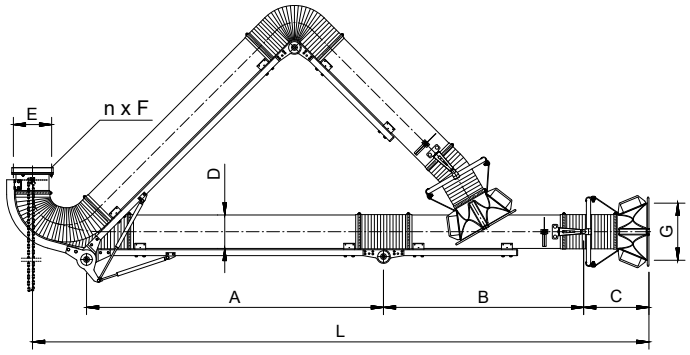
The extraction arm is constructed for installing on a wall or a column by means of a wall bracket. Simultaneously, to the wall bracket can be fastened a suitable fan or a connection piece. As standard, the extraction arm is equipped with an adjustment damper placed directly after the hood. On demand, the device can be equipped with an additional shut-off damper in the swivel. In case of extended extraction system (consisting of many extraction arms), when operator closes shut-off dampers in the not being in operation extraction arms, the flow efficiencies of the other extraction arms are significantly increased.

Adequately adjusted frictional joints, along with the springs, provide the comfort of arm manoeuvring and easy position setting by gripping at the suction hood. The hood is equipped with self-braking joints enabling its setting within two operational planes. There is a protective mesh in the hood inlet, to prevent the glowing particles from entering the extraction arm.

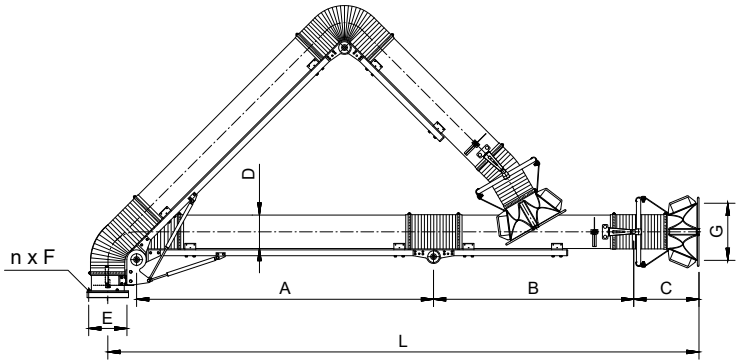
On demand, the hood can be equipped with a halogen spot-light to light up the operational field.

Recommended volume flows of the subsequent arm sizes are: 2000 m3/h for diameter Dn = 200 mm, 1000 m3/h for Dn = 160 mm, 700 m3/h for Dn = 125 mm, 350 m3/h for Dn = 100 mm.

Hanging version



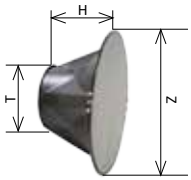
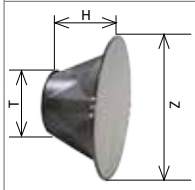
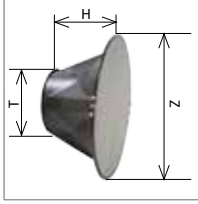
Standing version



Technical data

		Type	Part no	Dimensions								Weight [kg]
				D [mm]	L [m]	A [mm]	B [mm]	C [mm]	E [mm]	n x F [mm]	G [mm]	
Hanging version	Standard hood	ERGO LUX-M/1,5	810R70	Ø100	1,8	630	555	335	Ø155	6xØ6,5	Ø235	10
		ERGO LUX-M/2	810R71	Ø100	2,2	960	675	335	Ø155	6xØ6,5	Ø235	11
		ERGO LUX-K/2	810R72	Ø125	2,3	1055	650	335	Ø155	6xØ6,5	Ø235	12,5
		ERGO LUX-K/3	810R73	Ø125	3,0	1540	915	335	Ø155	6xØ6,5	Ø235	14
		ERGO LUX-L/2	810R74	Ø160	2,3	905	790	335	Ø194	6xØ6,5	Ø295	17,5
		ERGO LUX-L/3	810R75	Ø160	3,15	1530	1030	335	Ø194	6xØ6,5	Ø295	19,5
		ERGO LUX-L/4	810R76	Ø160	3,8	1910	1260	335	Ø194	6xØ6,5	Ø295	22
		ERGO LUX-D/2	810R77	Ø200	2,3	905	790	335	Ø246	8xØ8,5	Ø335	19
		ERGO LUX-D/3	810R78	Ø200	3,15	1530	1030	335	Ø246	8xØ8,5	Ø335	22,5
		ERGO LUX-D/4	810R79	Ø200	3,8	1910	1260	335	Ø246	8xØ8,5	Ø335	25
	Hood with halogen light	ERGO LUX-LL/2	809R02	Ø160	2,3	905	790	335	Ø194	6xØ6,5	Ø295	17,5
		ERGO LUX-LL/3	809R03	Ø160	3,15	1530	1030	335	Ø194	6xØ6,5	Ø295	19,5
		ERGO LUX-LL/4	809R04	Ø160	3,8	1910	1260	335	Ø194	6xØ6,5	Ø295	22
		ERGO LUX-DL/2	809R05	Ø200	2,3	905	790	335	Ø246	8xØ8,5	Ø335	19
		ERGO LUX-DL/3	809R06	Ø200	3,15	1530	1030	335	Ø246	8xØ8,5	Ø335	22
		ERGO LUX-DL/4	809R07	Ø200	3,8	1910	1260	335	Ø246	8xØ8,5	Ø335	25
Standing version	Standard hood	ERGO LUX-M/1,5-R	810R80	Ø100	1,6	630	555	335	Ø155	6xØ6,5	Ø235	9,5
		ERGO LUX-M/2-R	810R81	Ø100	2,1	960	675	335	Ø155	6xØ6,5	Ø235	10,5
		ERGO LUX-K/2-R	810R82	Ø125	2,2	1055	650	335	Ø155	6xØ6,5	Ø235	12,5
		ERGO LUX-K/3-R	810R83	Ø125	2,9	1540	915	335	Ø155	6xØ6,5	Ø235	14
		ERGO LUX-L/2-R	810R84	Ø160	2,2	905	790	335	Ø194	6xØ6,5	Ø295	17
		ERGO LUX-L/3-R	810R85	Ø160	3,0	1530	1030	335	Ø194	6xØ6,5	Ø295	19
		ERGO LUX-L/4-R	810R86	Ø160	3,65	1910	1260	335	Ø194	6xØ6,5	Ø295	21
		ERGO LUX-D/2-R	810R87	Ø200	2,2	905	790	335	Ø246	8xØ8,5	Ø335	17,5
		ERGO LUX-D/3-R	810R88	Ø200	3,0	1530	1030	335	Ø246	8xØ8,5	Ø335	21
		ERGO LUX-D/4-R	810R89	Ø200	3,65	1910	1260	335	Ø246	8xØ8,5	Ø335	23,5
	Hood with halogen light	ERGO LUX-LL/2-R	809R08	Ø160	2,2	905	790	335	Ø194	6xØ6,5	Ø295	17
		ERGO LUX-LL/3-R	809R09	Ø160	3,0	1530	1030	335	Ø194	6xØ6,5	Ø295	19
		ERGO LUX-LL/4-R	809R10	Ø160	3,65	1910	1260	335	Ø194	6xØ6,5	Ø295	21
		ERGO LUX-DL/2-R	809R11	Ø200	2,2	905	790	335	Ø246	8xØ8,5	Ø335	17,5
		ERGO LUX-DL/3-R	809R12	Ø200	3,0	1530	1030	335	Ø246	8xØ8,5	Ø335	21
		ERGO LUX-DL/4-R	809R13	Ø200	3,65	1910	1260	335	Ø246	8xØ8,5	Ø335	23,5

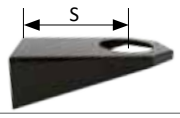
Hoods

Sort of hood	Material	Type	Part no.	Z [mm]	T [mm]	H [mm]	Weight [kg]	Application	Equipment
	plastic ABS	MST	810H47	330	100	190	0,47	ERGO LUX-M/1,5 ERGO LUX-M/2	– replaceable inlet mesh
		KST	810H48	330	125	190	0,48	ERGO LUX-K/2 ERGO LUX-K/3	
	plastic ABS	LST	810H49	365	170	190	0,56	ERGO LUX-L/2 ERGO LUX-L/3 ERGO LUX-L/4	– replaceable inlet mesh
		DST	810H50	415	210	190	0,69	ERGO LUX-D/2 ERGO LUX-D/3 ERGO LUX-D/4	
	plastic ABS	LLT	810H11	365	170	190	0,56	ERGO LUX-LL/2 ERGO LUX-LL/3 ERGO LUX-LL/4	– replaceable inlet mesh – halogen spot-light 12V – switch
		DLT	810H12	415	210	190	0,69	ERGO LUX-DL/2 ERGO LUX-DL/3 ERGO LUX-DL/4	

Inlet wire-mesh for ERGO LUX hoods

Type	Part no.	Weight [kg]	Type of hood
DST	834Z36	0,31	DST
LST	834Z37	0,24	LST
MKST	834Z38	0,20	MST, KST
LLT	834Z39	0,23	LLT
DLT	834Z40	0,30	DLT

Wall brackets

Sort of bracket	Material	Type	Part no.	S [mm]	Weight [kg]	Suitable extraction arms
	steel sheet	WBN-125-K	817W52	250	3	ERGO LUX-M and ERGO LUX-K
		WBN-160-L	817W53	320	4,6	ERGO LUX-L
		WBN-200-D	817W54	340	6,1	ERGO LUX-D

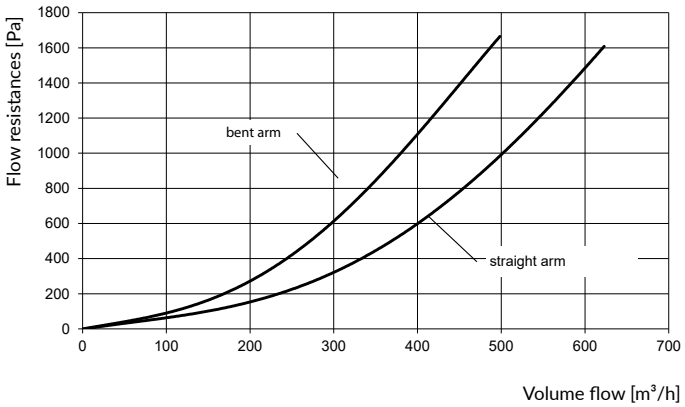
Additional equipment

Shut-off damper

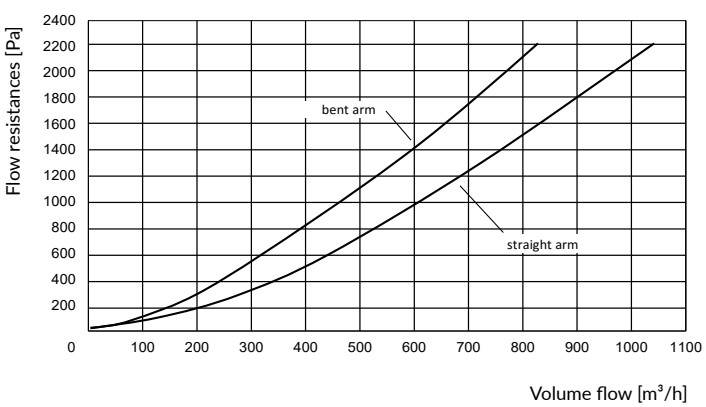
Type	Part no.	Remarks	Suitable extraction arms
PO-ERGO LUX-M	829P12	A tight damper to cut off entirely the air flow in the extraction arm. The damper is located in the swivel.	ERGO LUX-M
PO-ERGO LUX-K	829P13		ERGO LUX-K
PO-ERGO LUX-L	829P14		ERGO LUX-L
PO-ERGO LUX-D	829P15		ERGO LUX-D

Flow charts of ERGO LUX extraction arms

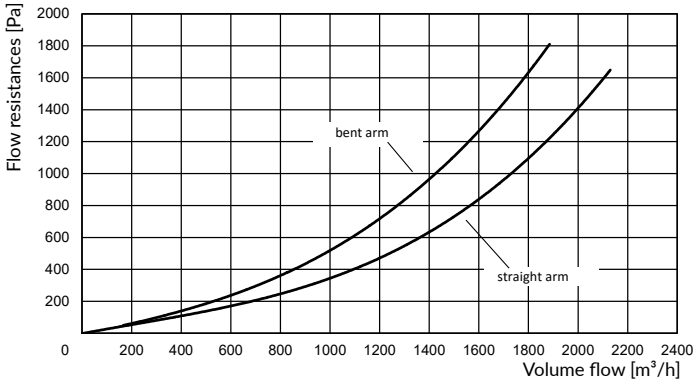
ERGO LUX-M



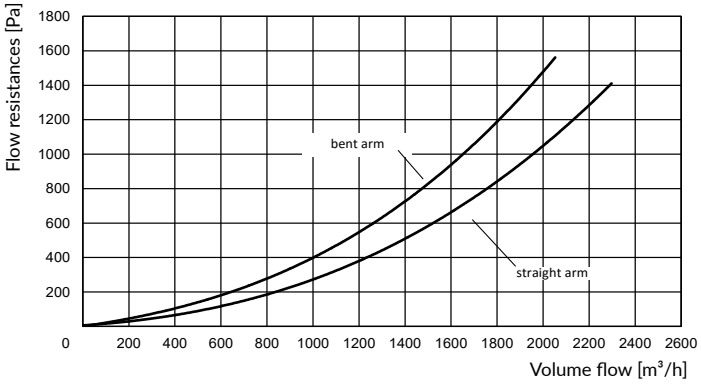
ERGO LUX-K



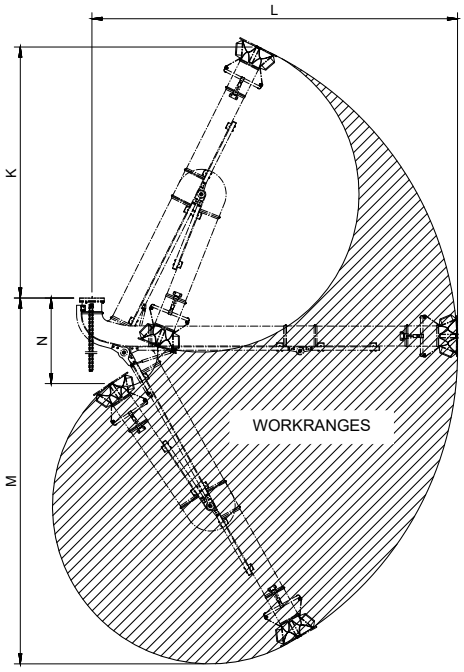
ERGO LUX-L

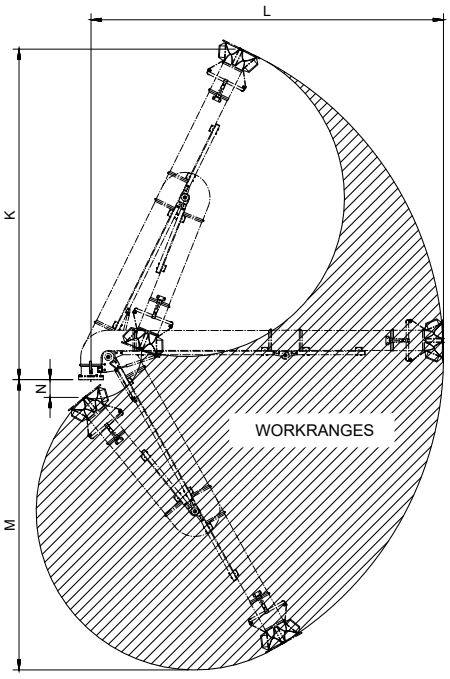


ERGO LUX-D



Workranges of the ERGO LUX extraction arms





Type	K [m]	L [m]	M [m]	N [m]
ERGO LUX-L(L)/2; ERGO LUX-D(L)/2	1,4	2,3	2,4	0,6
ERGO LUX-L(L)/3; ERGO LUX-D(L)/3	2,2	3,2	3,2	0,75
ERGO LUX-L(L)/4; ERGO LUX-D(L)/4	2,7	3,8	3,7	1,2

Type	K [m]	L [m]	M [m]	N [m]
ERGO LUX-L(L)/2-R; ERGO LUX-D(L)/2-R	2,0	2,2	1,7	0
ERGO LUX-L(L)/3-R; ERGO LUX-D(L)/3-R	2,85	3,0	2,5	0,15
ERGO LUX-L(L)/4-R; ERGO LUX-D(L)/4-R	3,4	3,65	3,0	0,5

ERGO-FLEX LUX –
extraction arms

ERGO-FLEX LUX arm – hanging version

Purpose

ERGO-FLEX LUX extraction arms are designed for extraction of dust and welding fumes, as well as other fine dust particles, directly at the emission source. Thus they do not allow to expand the contamination within the room and to be inhaled by people. The arms are manufactured in hanging and standing version. The appliance can operate independently, with its own extraction fan, or in a group of stationary extractors connected to the main ducting with a central fan.

Structure

ERGO-FLEX LUX extraction arm consists of following assemblies:

- swivel,
- hood,
- hose – sleeved onto the joint construction of aluminium profiles,
- tension spring – to equilibrate the weight of the extraction arm.

To mount the extraction arm on a wall or a column, apply a wall bracket. Simultaneously, to the wall bracket can be fastened an appropriate fan or a connection fitting piece.

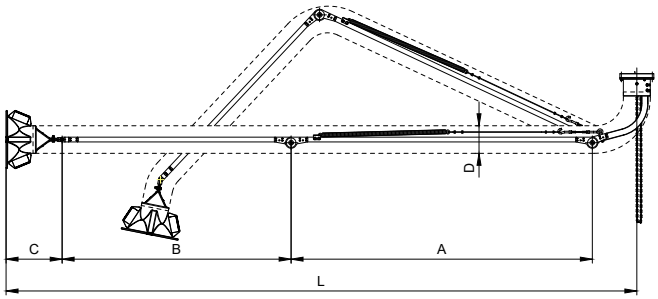
Correctly adjusted frictional joints, along with the spring, provide the comfort of arm manoeuvring and easy position setting. The hood is equipped with self-braking joints, providing easy positioning within two operational planes. At the hood inlet is located a protective mesh, to prevent the glowing particles from entering the extraction arm.

It is possible to equip the arm swivel with a tight shut-off damper in the swivel, as additional equipment.

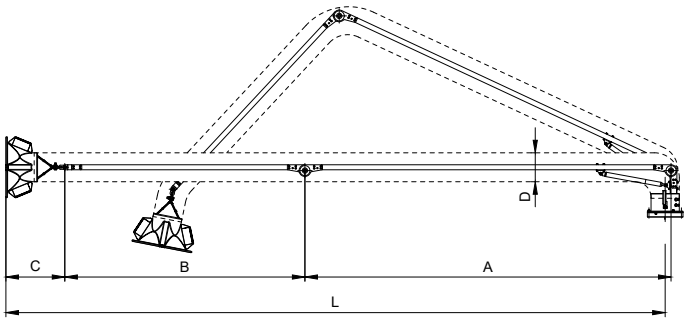
In case of an extended extraction system (consisting of many arms), by closing the shut-off dampers in the not being in operation arms, it is possible to increase significantly the flow efficiencies in the other extraction arms.

ERGO-FLEX LUX is produced in a version of 160 mm nominal diameter, whereby the recommended volume flow is: 1000 m³/h.

Hanging version



Standing version

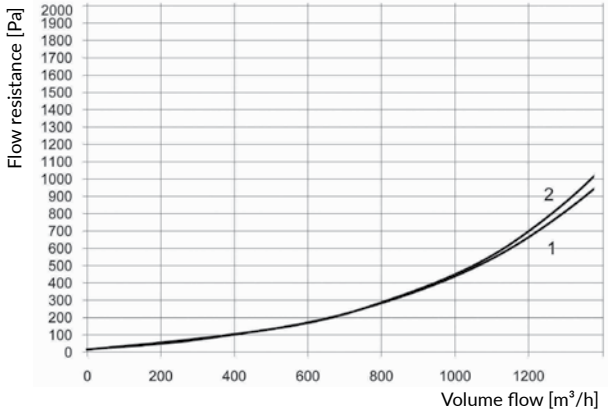


Technical data

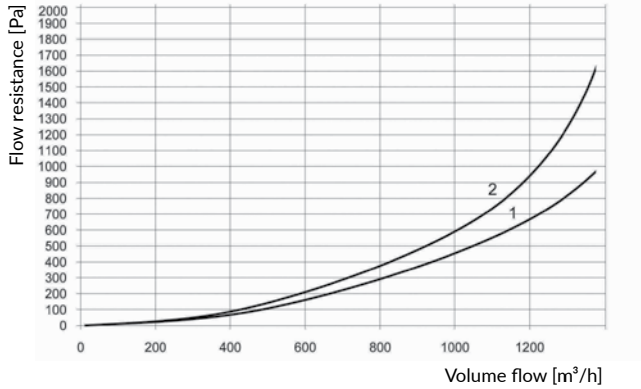
Type	Part. no	Dimensions					Weight [kg]
		A [mm]	B [mm]	C [mm]	L [m]	Dn [mm]	
ERGO-FLEX LUX-2	810R42	930	435	355	2,0	160	8,5
ERGO-FLEX LUX-3	810R43	1510	846	355	3,0	160	9,6
ERGO-FLEX LUX-4	810R44	1890	1435	355	4,0	160	10,2
ERGO-FLEX LUX-2-R	810R45	1230	435	355	2,0	160	8,4
ERGO-FLEX LUX-3-R	810R46	1810	846	355	3,0	160	9,1
ERGO-FLEX LUX-4-R	810R47	2190	1435	355	4,0	160	9,8

1. Straightened arm
2. Bend arm

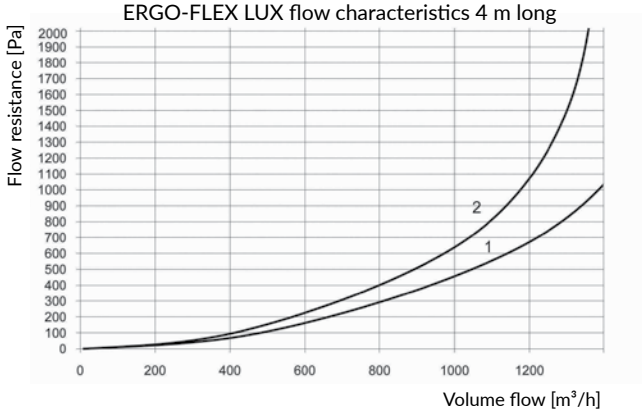
ERGO-FLEX LUX flow characteristics 2 m long



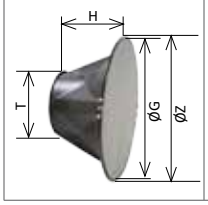
ERGO-FLEX LUX flow characteristics 3 m long



ERGO-FLEX LUX flow characteristics 4 m long



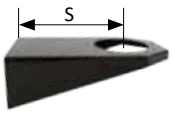
Suction hood

Suction hood type	Material	Type	Part. no	ØG [mm]	ØZ [mm]	ØT [mm]	H [mm]	Weight [kg]	Application	Equipment
	plastic ABS	LST	810H49	295	365	170	190	0,42	ERGO-FLEX LUX-2 ERGO-FLEX LUX-3 ERGO-FLEX LUX-4 ERGO-FLEX LUX-2-R ERGO-FLEX LUX-3-R ERGO-FLEX LUX-4-R	– replaceable inlet mesh

Inlet mesh for the ERGO hoods

	Type	Part. no	Weight [kg]
	LST	834Z33	0,10

Wall brackets

Sort of the bracket	Material	Type	Part. no	S [mm]	Weight [kg]	Suitable extraction arms
	Steel plate	WBN-160-L	817W53	320	4,6	ERGO-FLEX LUX

Additional equipment

Shut-off damper

	Type	Part. no	Remarks	Suitable extraction arms
	PO-ERGO LUX-L	829P14	A tight damper to cut off entirely the air flow in the extraction arm. The damper is located in the swivel.	ERGO-FLEX LUX

ERGO/Ex – explosion proof extraction arms

ERGO/Ex extraction arm – hanging version

II 2 G /D

Purpose

The ERGO-L/Z/Ex extraction arms are designed for capturing the dust and gases arising during technological processes, especially in areas of explosion risk, where explosive atmosphere can occur, as a mixture of flammable substances in form of dust or gases with the air. ERGO-L/Z/Ex extraction arms have been classified as devices of group II, category 2, of gaseous risk G and dust risk D.

The devices guarantee high level of protection, therefore they can be applied in areas 1(G) or 21(D). Admissible temperature of the forwarded air is +70°C.

Structure

ERGO-L/Z/Ex extraction arms consist of following elements:

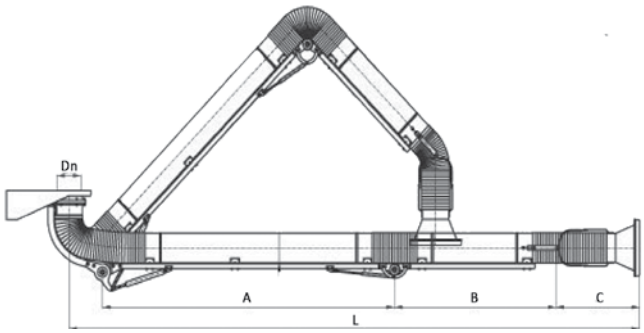
- full-rotation swivel – stainless steel,
- circular hood – stainless steel,
- two pipe segments with joints – all elements are of stainless steel,
- frictional spacers – made of textolite,
- gas springs of stainless steel,
- shut-off damper located in the pipe segment near above the hood – stainless steel,
- hose sections (joining the pipe segments) – made of polyurethane conducting electrical charges and a steel wire spiral.

Superficial resistance $<10^6$ Ω. Elements of steel plate, pipes and stainless profiles are made of material 1.4301 according to PN-EN 10088, whereas screw materials, washers and rivets are of material A2 according to PN-EN ISO 7089.

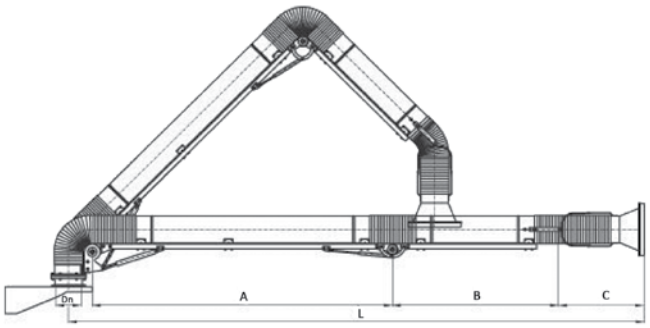
All constructional elements are joined together by copper cables to conduct the electrostatic charges to the grounding installation.

ERGO-L/Z/Ex extraction arms are manufactured according to ATEX 95 (94/9/EC) Directive and carry the Type Research Certificate No 737/CW/001 issued by Technical Supervision Office.

Hanging version



Standing version



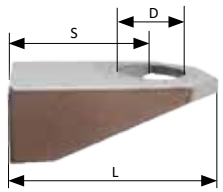
Technical data

Type	Part no.	Dimensions					Weight [kg]
		Dn [mm]	L [mm]	A [mm]	B [mm]	C [mm]	
ERGO-L/Z-2/Ex	814R21	160	2280	947	580	534	22,5
ERGO-L/Z-3/Ex	814R22	160	3100	1527	820	534	25,5
ERGO-L/Z-4/Ex	814R23	160	3710	1907	1050	534	28,0
ERGO-L/Z-2-R/Ex	814R24	160	3710	947	580	534	19,5
ERGO-L/Z-3-R/Ex	814R25	160	3033	1527	820	534	22,5
ERGO-L/Z-4-R/Ex	814R26	160	3643	1907	1050	534	25,0

Hood

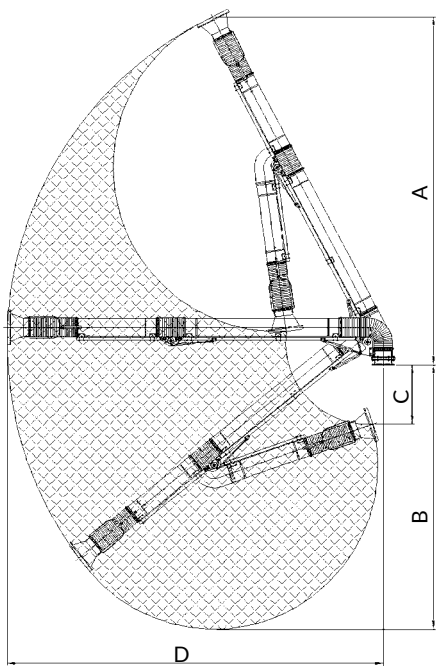
Sort of hood	Material	Type	Part no.	d [mm]	D [mm]	Weight [kg]
	stainless steel	LS	810H35	160	336	1,3

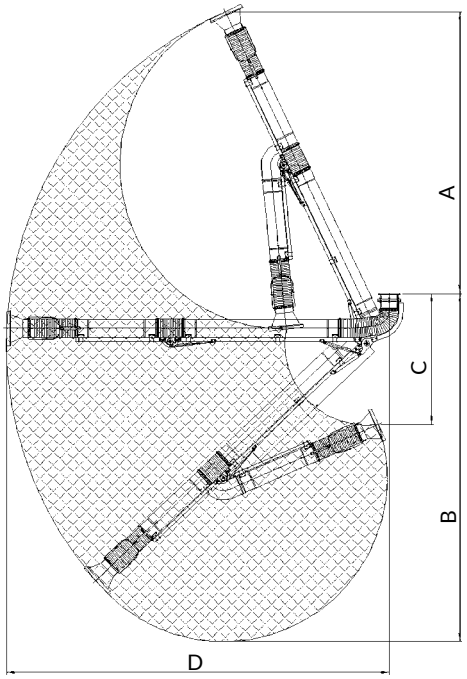
Wall bracket



Type	Part no.	Dn [mm]	S [mm]	L [mm]	Weight [kg]
WBN-160/Ex	817W45	160	320	445	3,9

Work ranges of the ERGO/Ex extraction arms

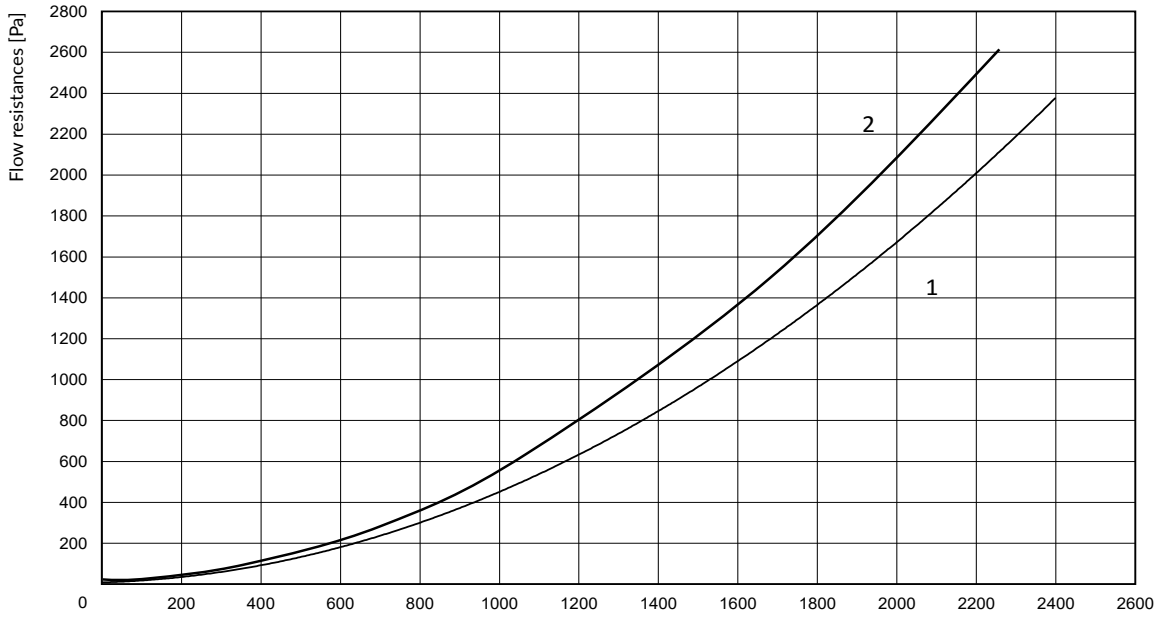




Type	A [mm]	B [mm]	C [mm]	D [mm]
ERGO-L/Z-2-R/Ex	2110	1487	122	2213
ERGO-L/Z-3-R/Ex	2835	2092	409	3033
ERGO-L/Z-4-R/Ex	3374	2561	573	3643

Type	A [mm]	B [mm]	C [mm]	D [mm]
ERGO-L/Z-2/Ex	1440	1650	800	2280
ERGO-L/Z-3/Ex	2195	2888	922	3100
ERGO-L/Z-4/Ex	2732	3372	1266	3710

Flow charts of the ERGO/Ex extraction arms



1. Stretched arm
2. Bent arm

TELERGO – telescopic extraction arms

TELERGO-FLEX-L-1600

TELERGO-L-3-2000

TELERGO-L-2-2400

Purpose

TELERGO extraction arms have been constructed for effective extraction the welding dust and gas contamination, as well as other small dust particles – directly at the emission source. Important is not to allow the contamination to expand in the process room, preventing it from being inhaled by people. The extraction arms can be applied in any areas where the workspace is limited. Commonly, this is the case in welding schools, where the welding boots are very small. The arm can work as a single appliance, with its own extraction fan, or in a group of local exhausts connected to the main collecting ductwork (with a central fan).

Structure

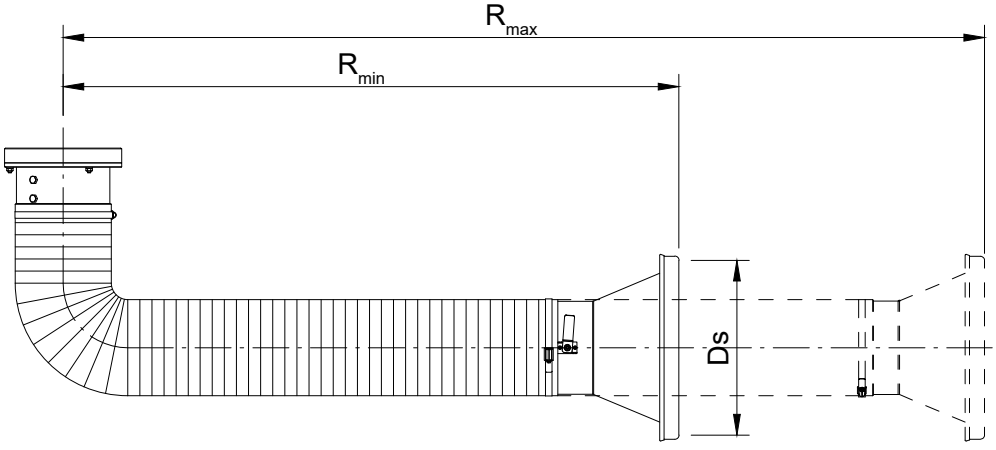
The extraction arm consists of following elements:

- swivel,
- suction hood with a shut-off damper,
- pipe segments of telescopic construction – the segments are sliding one into the another (in case of TELERGO FLEX the supporting structure is made of the sliders inside the flexible hose).

Pipe segments are made of stainless steel sheet, whereas the swivel of aluminium cast elements. The nominal diameter of the arms is 160 mm. The extraction arm is equipped with a frictional joint located near the swivel.

Operational use

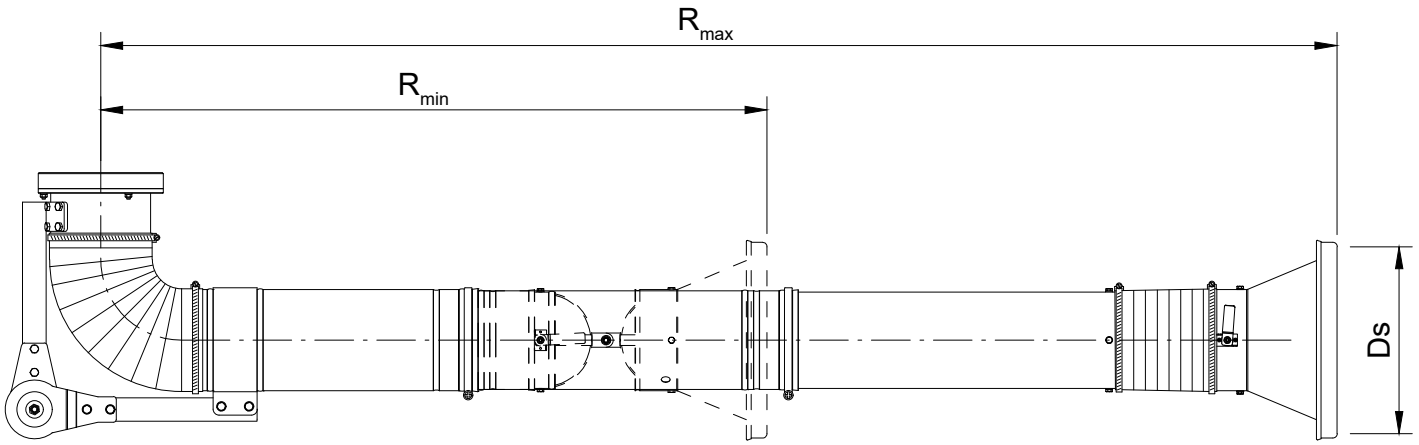
To install the extraction arm on a wall (or supporting column) use a wall bracket. Additionally, the wall bracket is an appropriate installing point for the extraction fan or the connection fitting piece. The pipe-segments can be slid telescopically, one segment can turn within the other segment, providing the most useful position of the suction hood. Adequately adjusted frictional joint gives easy manoeuvrability with the arm. The suction hood is equipped with a shut-off damper to adjust the air volume flow. The TELERGO-L-3-3000 is additionally equipped with a support of the gas spring, improving the manoeuvrability performance.



TELERGO-FLEX-L-1600

Technical data

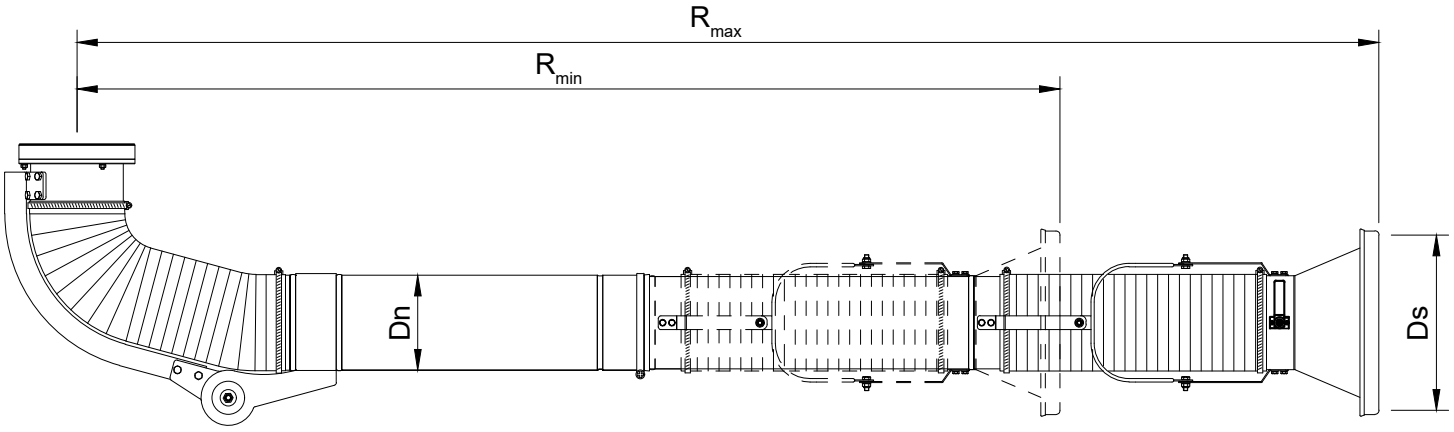
Type	Part no.	Nominal diameter Dn [mm]	Ds [mm]	Recommended volume flow [m³/h]	Workrange [m]		Weight [kg]
					R_{min}	R_{max}	
TELERGO-FLEX-L-1600	810R69	160	315	1000	1,1	1,7	10



TELERGO-L-3-2000

Technical data

Type	Part no.	Nominal diameter Dn [mm]	Ds [mm]	Recommended volume flow [m³/h]	Quantity of pipe segments	Workrange [m]		Weight [kg]
						R_{min}	R_{max}	
TELERGO-L-3-2000	810R67	160	315	1000	3	1,1	2,1	13

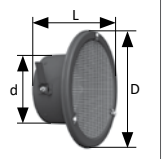
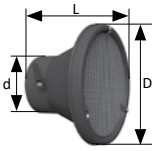


TELERGO-L-2-2400

Technical data

Type	Part no.	Nominal diameter Dn [mm]	Ds [mm]	Recommended volume flow [m³/h]	Quantity of pipe segments	Workrange [m]		Weight [kg]
						R_{min}	R_{max}	
TELERGO-L-2-2000	810R63	160	315	1000	2	1,6	2,0	11,5
TELERGO-L-2-2400	810R64	160	315	1000	2	1,8	2,4	13
TELERGO-L-3-3000	810R65	160	315	1000	3	1,85	3,0	15

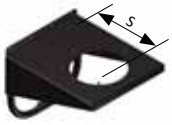
Hood

Sort of the hood	Material	Type	Part no.	d [mm]	D [mm]	L [mm]	Weight [kg]	Remarks
	aluminium sheet	LSO-S	810H45	173	340	227	0,72	– replaceable inlet wire-mesh – shut-off damper – for extraction arms: TELERGO-FLEX-L-1600, TELERGO-L-3-2000
	aluminium sheet	LSO/Flex	810H42	173	340	227	0,72	– replaceable inlet wire-mesh – shut-off damper – for extraction arms: TELERGO-L-2-2000, TELERGO-L-2-2400, TELERGO-L-3-3000

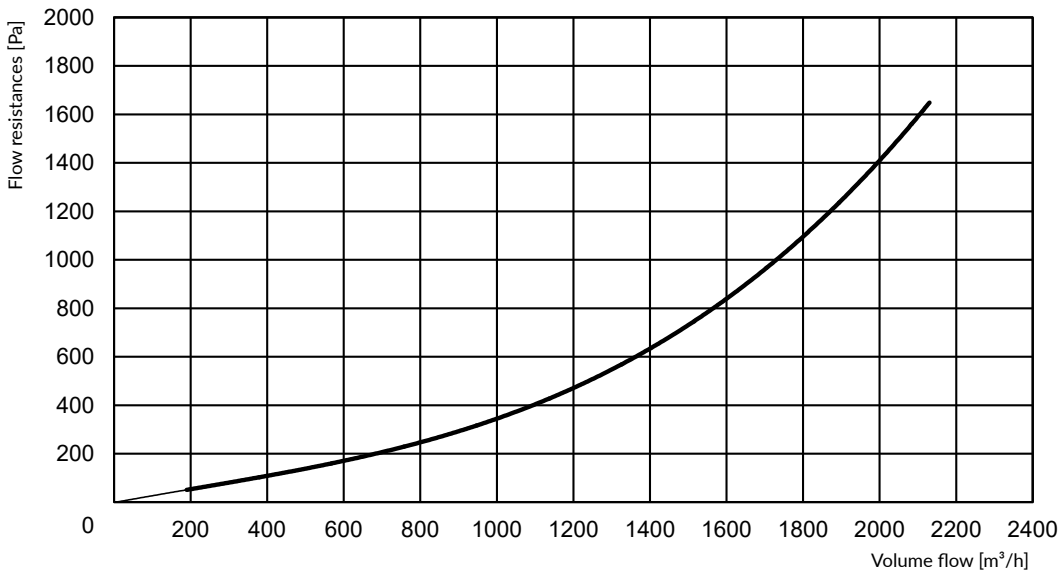
Replaceable inlet wire-mesh ERGO

	Type	Part no.	D [mm]	Weight [kg]	Remarks
	WOLS	834Z31	226	0,06	for the hood LSO-S
	WOL	834Z33	287	0,09	for the hood LSO/Flex

Wall bracket

Sort of bracket	Material	Type	Part no.	S [mm]	Weight [kg]
	steel sheet	WB-ERGO-L/S	817W27	277	7

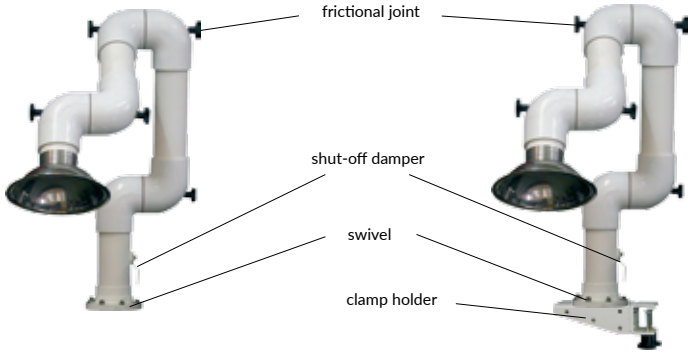
Flow chart



ERGO-MINI –
extraction arms

Purpose

Acid-proof extraction arms ERGO-MINI are designed for removal the dust and gas impurities arising at workplaces during processes of not large emission of contamination. They are manufactured in two diameters Ø50 and Ø75. Due to the self-adjustable frictional joints and swivel, User can set the arm in the most convenient work position. The elements of the extraction arm are constructed of acid-proof materials (i.e. PVC, polyamide, stainless steel). They can be applied among others in chemical-, pharmaceutical-, electronic industries as well as in jewellery workshops. The extraction arm can work with an appropriate extraction fan that serves a main collecting ductwork, where other several to several dozen extraction arms are connected.



Arm
– mounted directly

Arm mounted by means
of a clamp holder

Structure

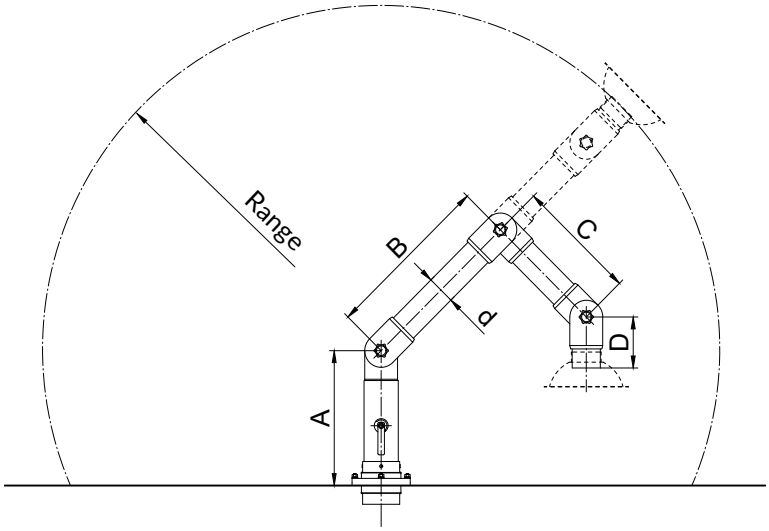
Extraction arms are manufactured in versions varying in diameter and workrange. The ERGO-MINI arm consists of subsequent parts:

- swivel with a vertical pipe,
- three adjustable pipe segments,
- elbow joints with adjustment of the frictional moment,
- clamp holder (delivery on demand),
- replaceable hoods (delivery on demand).

The pipe of the swivel contains a shut-off damper and can make a full rotation around the vertical axis.

The arm can be mounted to the tabletop in following ways:

- directly (through a mounting flange),
- by means of clamp holder.



ERGO-MINI/K-50/3, ERGO-MINI/K-75/3

Technical data

Type	Part no.	Workrange [mm]	d [mm]	A [mm]	B [mm]	C [mm]	D [mm]	Weight [kg]	Flow resistances at volume flow 120 m^3/h [Pa]
ERGO-MINI/K-50/3-950	810R53	720	60	280	360	260	100	2,5	490
ERGO-MINI/K-75/3-1150	810R59	950	80	265	460	360	130	3,0	220

Replaceable hoods

Sort	Type	Part no.	Dimension [mm]			Weight [kg]
			d	D	L	
	SS-50/K	810S70	70	–	180	0,12
	SS-75/K	810S71	85	–	200	0,19
	SM-50/K	810S72	64	158	70	0,12
	SM-75/K	810S73	76	200	80	0,18
	SD-50/K	810S74	64	182	80	0,15
	SD-75/K	810S75	76	222	90	0,20

Clamp holder (one size for dimensions 50 mm and 75 mm)

	Type	Part no.	h [mm]	Weight [kg]
	VK/K	810U06	30	0,45

NOTE: Ordering the devices and accessories specify their name and Part.No.

RO – rotational arm

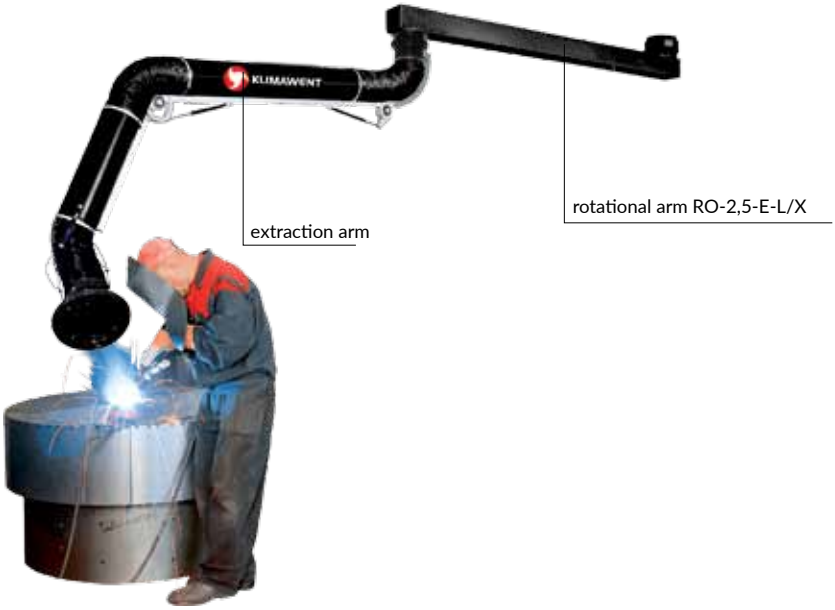
Purpose

Rotational arms are enhancing the work range of the hanging ERGO LUX extraction arms. In the basic version, at the end of the rotational arm is fastened an ERGO LUX extraction arm. Whereas, in the "broken" version – ERGO LUX arm has to be fastened at the end of the set consisting of two rotational arms.

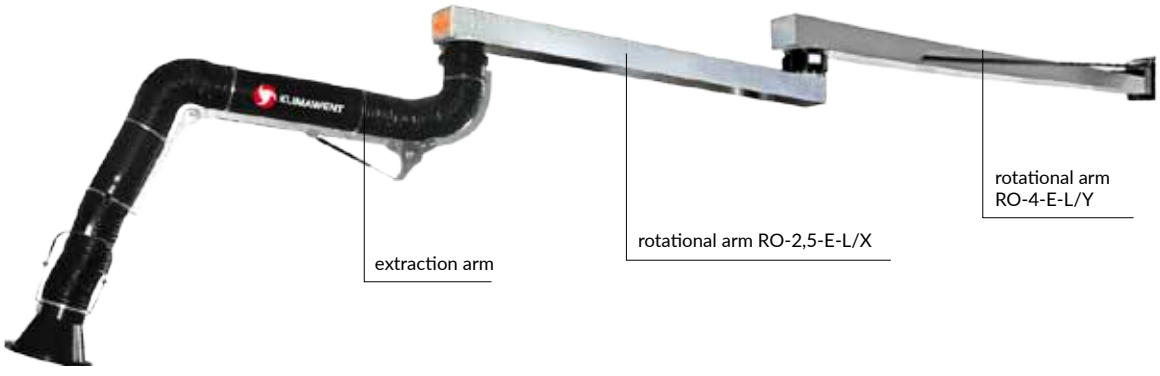
Structure

The rotational arm consists of a bearing swivel and the steel duct of rectangular section. Rotational arms RO-L/X of range 1,5 and 2,5 m are equipped with swivels made of aluminium cast rings with a roller bearing, whereas the other rotational arms are featured by steel swivels with slide bearings. Their torsion resistances are minimum, providing easy manoeuvring with the arm within the work area.

A set of arms in basic version – rotational arm RO-2,5-E-L/X and an extraction arm



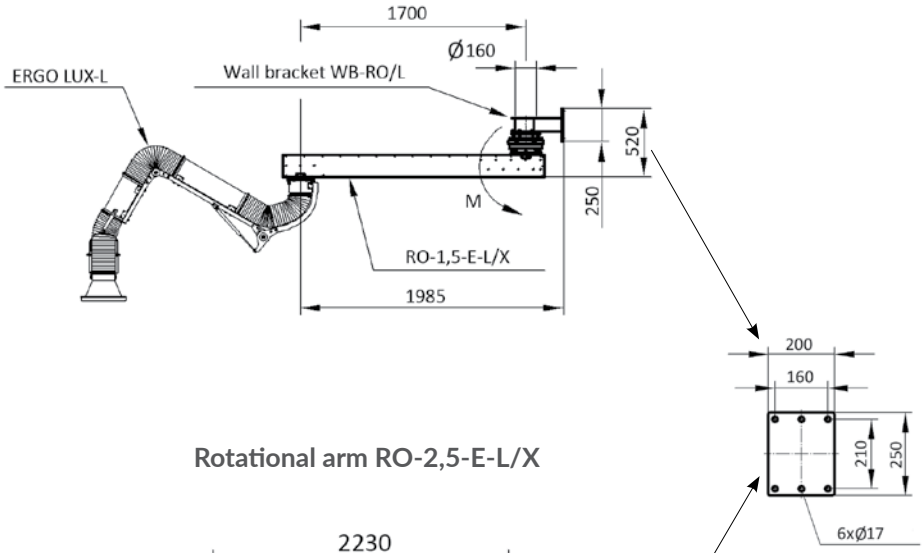
A set of arms in a "broken" version – rotational arm RO-4-E-L/Y, an rotational arm RO-2,5-E-L/X and extraction arm



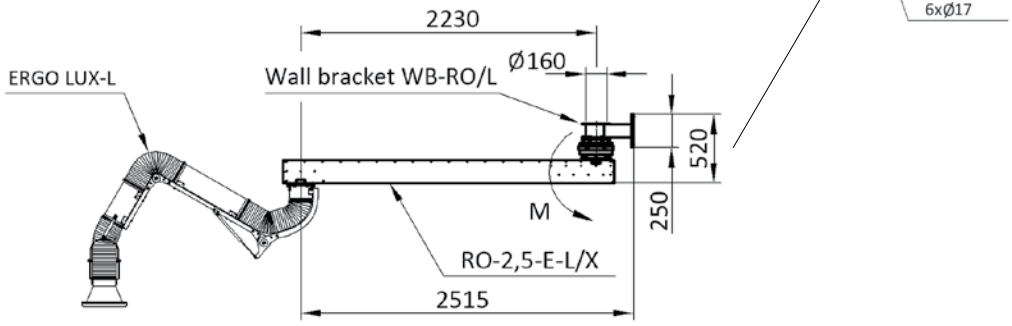
Rotational arm RO-E-L/X

Rotational arm type RO-E-L/X is adapted to connect the ERGO LUX-L extraction arm at its free end. The rotational arm has to be mounted to the wall of the room by means of a WP-RO/L wall bracket, in case of RO-1,5 and RO-2,5 rotational arms or directly installed to the wall RO-4-E-L/X.

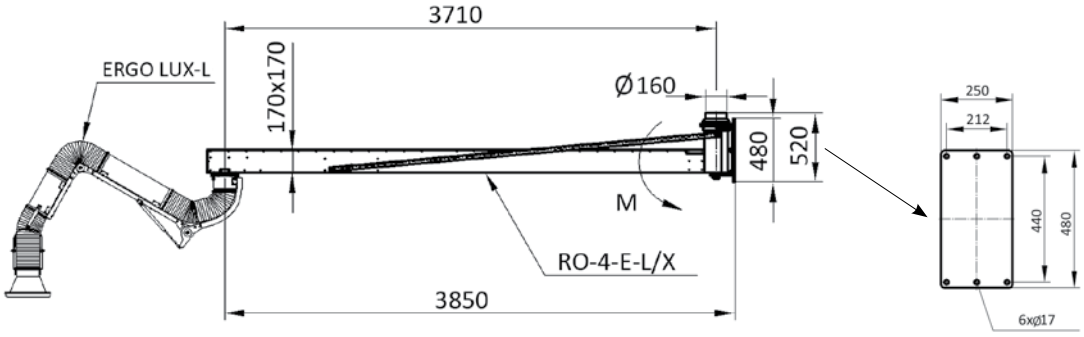
Rotational arm RO-1,5-E-L/X



Rotational arm RO-2,5-E-L/X



Rotational arm RO-4-E-L/X

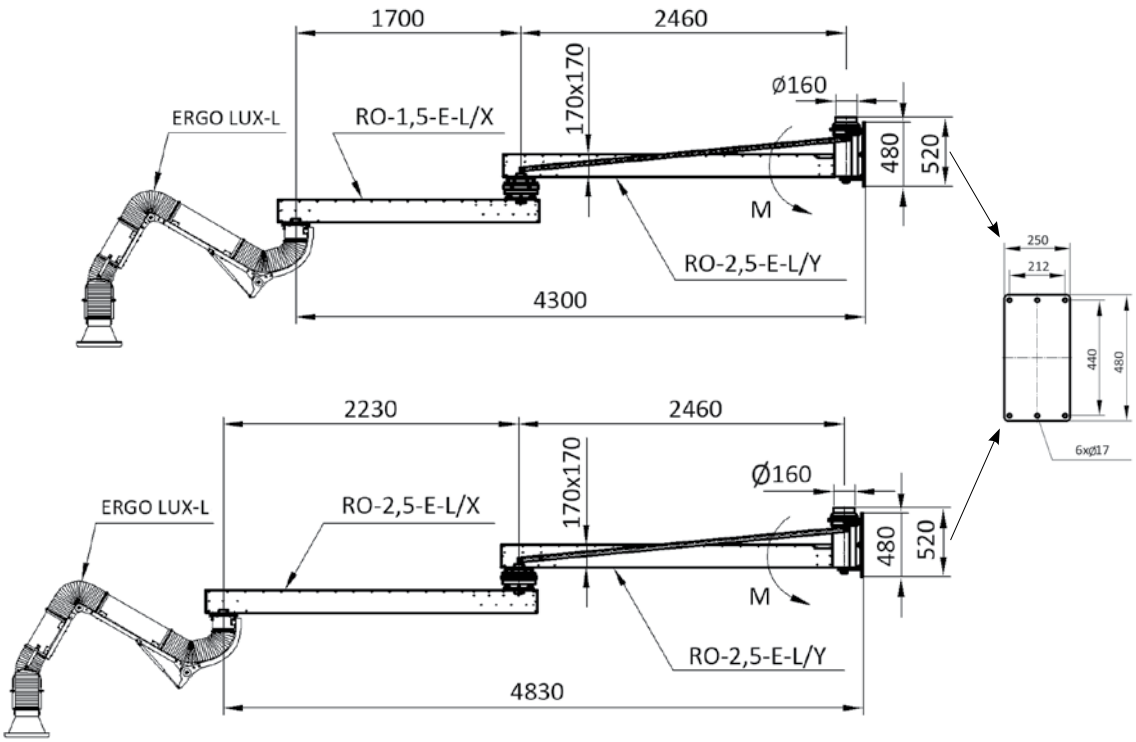


M – maximum torque applying load on the arm – see Table TECHNICAL DATA.

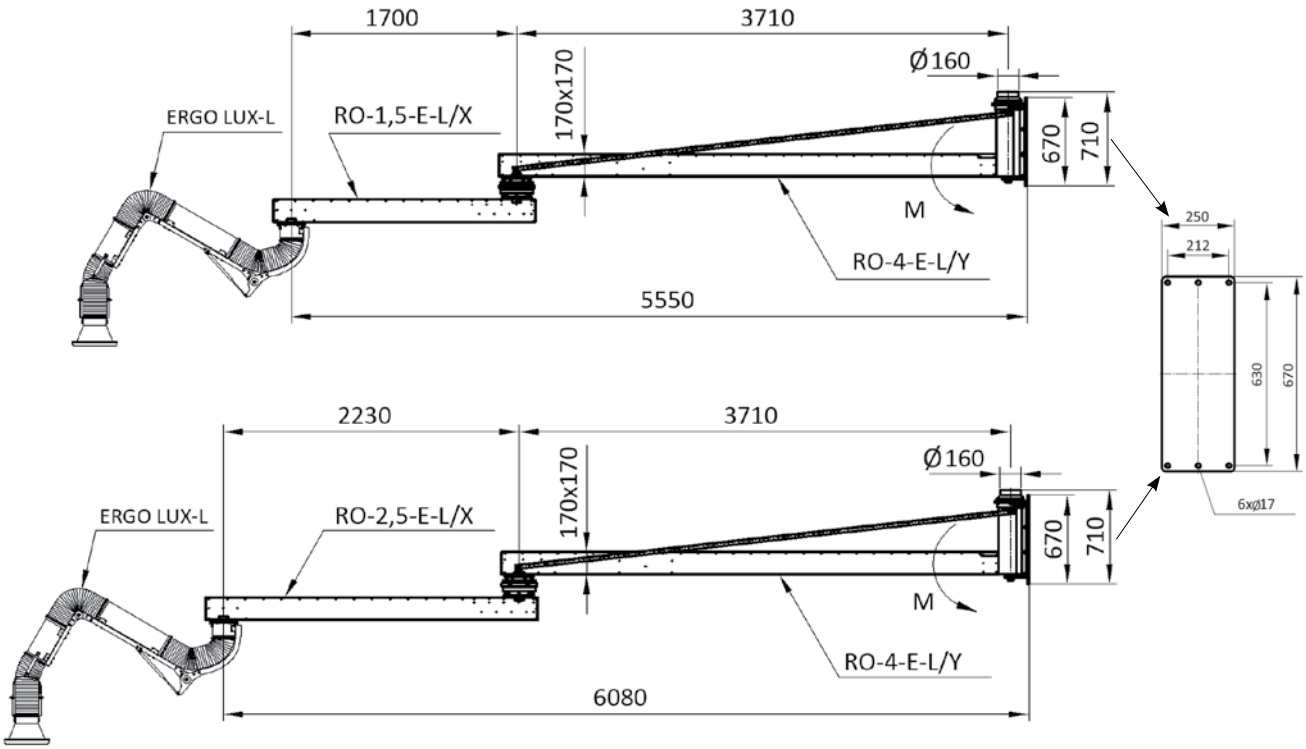
Rotational arm RO-E-L/Y

Rotational arm RO-E-L/Y – has been designed for connection the RO-1,5-E-L/X, RO-2,5-E-L/X rotational arm and simultaneously the ERGO LUX-L extraction arm. The rotational arm has to be mounted directly to the wall.

Rotational arm RO-2,5-E-L/Y



Rotational arm RO-4-E-L/Y



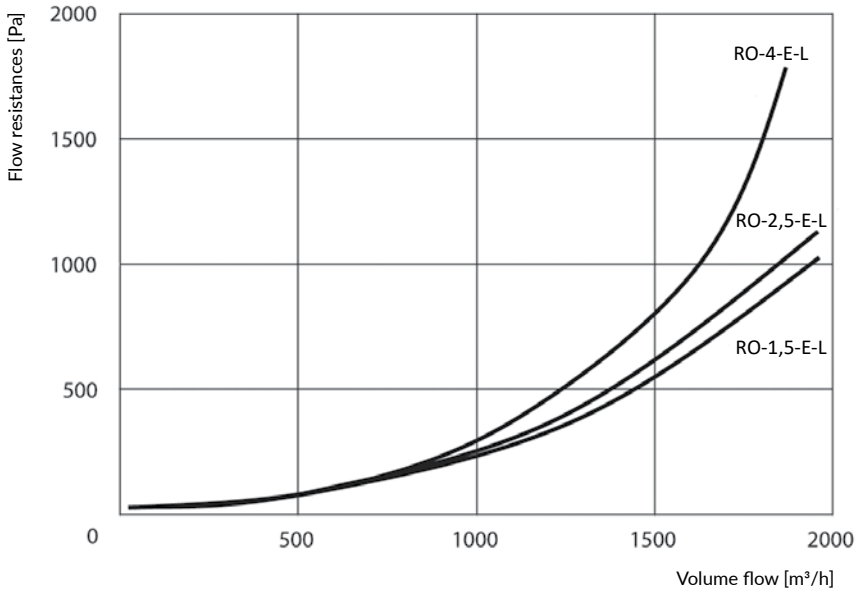
The WB-RO/L bracket serves to install the rotational arms – RO-1,5-E-L/X, RO-2,5-E-L/X. Wall bracket does not constitute standard equipment of the rotational arm – it has to be ordered separately.
Arms RO-4-E-L/X, RO-2,5-E-L/Y, RO-4-E-L/Y – are not equipped with a flange to install a fan.
M – maximum torque applying load on the arm – see Table TECHNICAL DATA.

Technical data

Type	Part no.	Connection diameter [mm]	Weight [kg]	Maximum torque M [Nm]
RO-1,5-E-L/X	811R16	160	46	1400
RO-2,5-E-L/X	811R17	160	51	1700
RO-4-E-L/X	811R22	160	84	3100
RO-2,5-E-L/Y	811R21	160	68	4400
RO-4-E-L/Y	811R23	160	98	6400

NOTE: Before installing the rotational arm, check if the load capacity of the wall (or other constructional ele¬ment of the building) is sufficient to transmit the moment M, and it is also important to select the mounting bolts adequately.

Flow charts of the RO rotational arms



ROL-TP –
point extraction set

Purpose

The ROL-TP extraction systems is meant for dust-gas contamination extraction at mobile workplaces. Additionally, it can be used for effective removal of exhaust gas emitted through exhaust pipe of vehicles not being in movement. Generally, the appliance can serve vehicles with a vertical exhaust pipe (directed upwards) as well as traditional vehicles with horizontal exhaust pipe. The extraction set can work with a fan mounted on a wall bracket or located on a roof. Additionally, the assembly can be connected to a collecting extraction ductwork.

Structure

ROL-TP set consists of following elements:

- set of two rotational arms,
- vertical telescopic duct
- suction hood.

The rotational arm consists of a swivel with bearing, and a horizontal metal duct of square section.

Friction movement resistance is minimal, allowing for easy movement of the arm in the horizontal plane.

Two rotational arms are connected together in a “broken” version (i.e. one arm is suspended at the end of the other arm), whereas the vertical telescopic duct is fastened at the end of the terminal rotational arm. The segmented vertical telescopic duct provides positioning of the hood in the requested height and it is possible to block it by means of an adjusting cable.

A hood is fastened at the telescopic duct through a quick-connector. We have a choice of three sorts of hoods: ERGO hood to extract welding fumes, large extraction hood to remove welding fumes or exhaust gas from vertical exhaust systems and extraction nozzle for gas removal from vertical exhaust pipe.

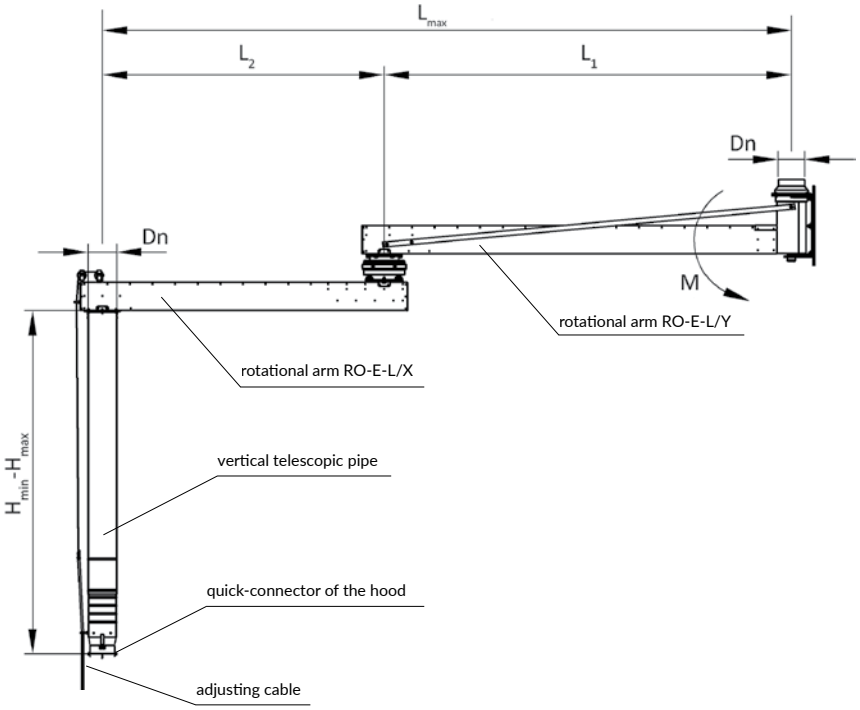
Operational use

Before the start of the process, it is important to fasten through a quick-connector a suitable hood, adjust adequately the set of rotational arms, and then with an adjustment cable set the hood in adequate height.

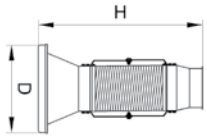
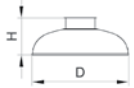
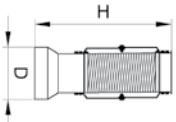
Technical data

Type	Part no.	Nominal diameter Dn [mm]	Recommended volume flow [m³/h]	Workrange					Weight [kg]	Maximum torque M [Nm]	Sort of the applied rotational arms
				L_1 [mm]	L_2 [mm]	L_{max} [mm]	H_{max} [mm]	H_{min} [mm]			
ROL-TP-2,5-1,5	811R25	160	1000	2460	1700	4160	3200	1800	127	3500	RO-2,5-E-L/Y + RO-1,5-E-L/X
ROL-TP-2,5-2,5	811R26	160	1000	2460	2230	4690	3200	1800	132	3800	RO-2,5-E-L/Y + RO-2,5-E-L/X
ROL-TP-4-1,5	811R27	160	1000	3710	1700	5410	3200	1800	158	5000	RO-4-E-L/Y + RO-1,5-E-L/X
ROL-TP-4-2,5	811R28	160	1000	3710	2230	5940	3200	1800	163	5710	RO-4-E-L/Y + RO-2,5-E-L/X

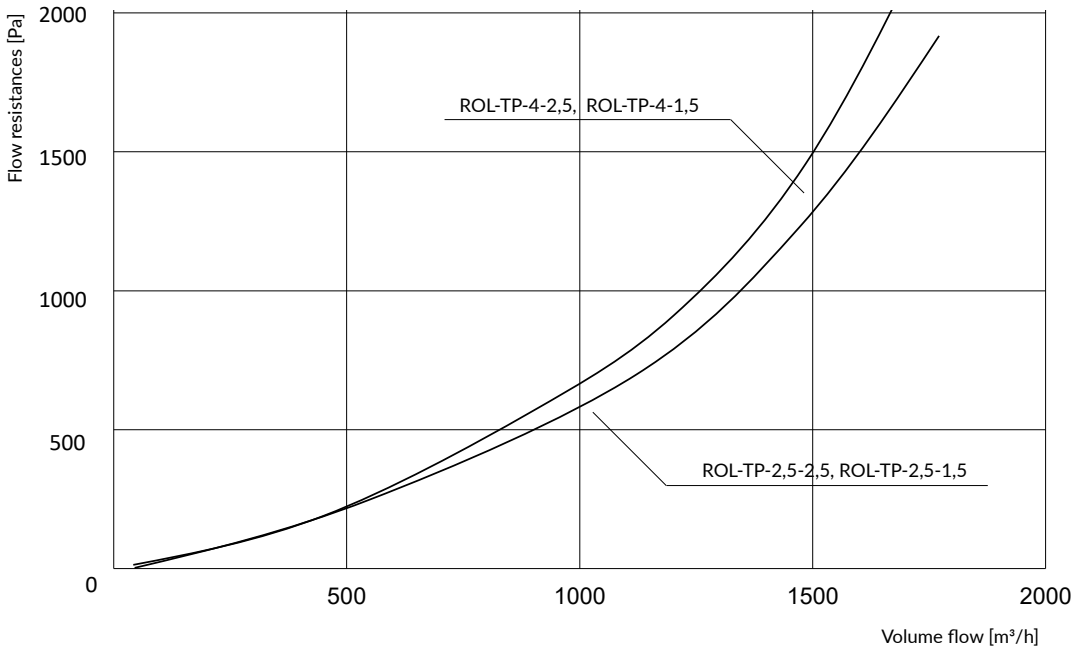
NOTE: Prior to installing of the extraction assembly, check if the load carrying capacity of the wall (or other constructional element) is sufficient to resist the torque M and select the appropriate mounting bolts.



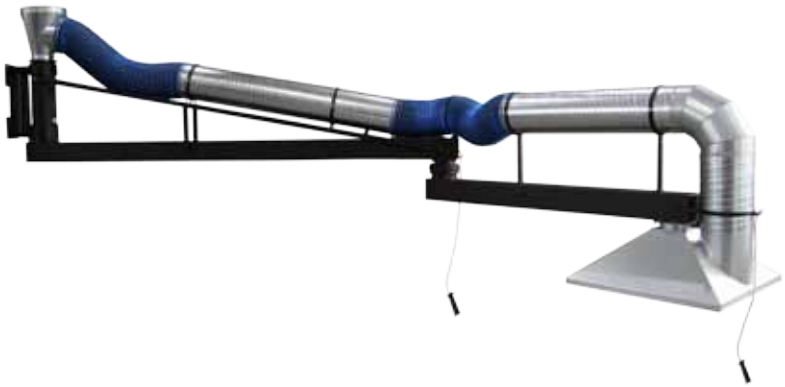
Hood

Sort of the hood	Type	Part no.	Dimensions		Weight [kg]	Remarks
			D [mm]	H [mm]		
ERGO suction hood 	SE-L-160	819S81	160	635	2,6	aluminium, hose is fastened by a quick-connector
hood suction device 	SO-L-500	819S82	500	540	2,0	aluminium, hose is fastened by a quick-connector
nozzle for exhaust pipes 	SW-L-200	819S83	200	190	3,0	metallic, hose is fastened by a quick-connector

Flow charts



ROL-GOL – hood extraction set



Purpose

ROL-GOL extraction system has been designed for capturing the exhaust emitted by exhaust systems of locomotives or large process vehicles (i.e. building construction machines, military combat vehicles) during the servicing-repairing activity. The system is suitable for vehicles where the exhaust pipe is located in the highest point of the vehicle and is directed right upwards. The extraction system ought to work with an extraction fan located on the roof of the building.

Structure

ROL-GOL extraction system consists of subsequent assemblies:

- rotational arm RO-4-E-D,
- rotational arm RO-2-E-D,
- extraction hood,
- discharge ductwork “spiro” D315,
- high-temperature flexible hoses D315.

Operational use

Before the vehicle engine is started, adjust the hood that it hangs right above the vehicle exhaust pipe. The hood can be positioned by means of two lines. Then switch on the extraction fan.

Technical data

Type	Part no.	Recommended volume flow [m^3/h]	Flow resistances [Pa]	Workrange [m]	Thermal resistance of the flexible hose [°C]	Wight [kg]
ROL-GOL	803Z01	9000–10 000	~1000	maximum 6	200	290

ERGO-KOS-AL – rail extraction system

Purpose

ERGO-KOS-AL extraction system has been developed for capturing the welding fumes at the mobile workplaces, for welding straight-shaped elements – of length from several metres up to several-teens metres.The system can be operated by one or two extraction fans, depending on the quantity of applied ERGO LUX extraction arms (one ERGO LUX arm is cooperating with one fan).

Structure

The ERGO-KOS-AL extraction system consists of subsequent assemblies:

- self-tightening suction duct – type KOS-AL (of aluminium segments of length 2 m or 4 m – joined together into a requested duct length),
- trolley – displacing along the duct,
- extraction arm ERGO LUX or ERGO-FLEX LUX – suspended underneath the trolley (maximum 3 m),
- fitting pieces and supporting elements – according to the arrangement below.

Operational use

During the welding the operator moves the ERGO LUX extraction arm with the trolley along the suction duct. The hood of the arm ought to be adjusted in a distance ca. 30 cm from the welding point. Low movement resistances of the trolley and easy adjustment of the hood provides perfect manoeuvring of the whole system. After the completed work at one welding post, close the shut-off damper (placed at the hood) to improve the suction volume in the second extraction arm. Two extraction arms can be installed at one suction duct simultaneously.

Technical data

Self-tightening suction duct

Type	Part no.	Segment length [m]	Cross-section [cm²]	Segment weight [kg]
KOS-AL-2	804K43	2	290	19,4
KOS-AL-4	804K44	4	290	38,8

Trolley

Type	Part no.	Weight [kg]
OP-ERGO-L	851W10	9

Extraction arms – ERGO LUX and ERGO-FLEX LUX

	Type	Part no.	Weight [kg]	Remarks
	ERGO LUX-L/2	810R74	17,5	Detailed dimensions of the extraction arms ERGO LUX and ERGO-FLEX LUX are listed on separate catalogue cards.
	ERGO LUX-L/3	810R75	19,5	
	ERGO-FLEX LUX-2	810R42	8,5	
	ERGO-FLEX LUX-3	810R43	9,6	

Connection ferrule

Sort of the ferrule		Type	Part no.	Diameter [mm]	Remarks
	for axial connection	KPC	804K20	160	To connect the duct to the discharge installation.

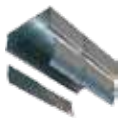
Duct hanger

Sort of the hanger		Type	Part no.	Remarks
	for ceiling mounting	Z	804K29	Hangers are fastened at the duct by bolting. The spacing between the hangers should not be larger than 3 m.
	for wall mounting	Z	804K27	

Terminal stopper

	Type	Part no.	Remarks
	STK	804K30	To stop the movement of the trolley at the duct end.

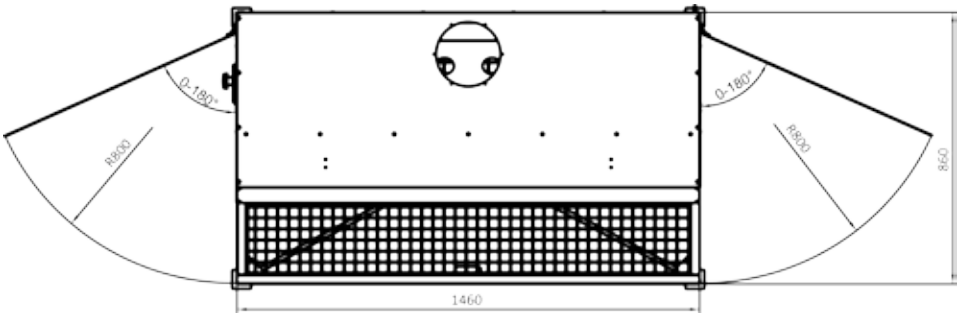
Duct segment connector

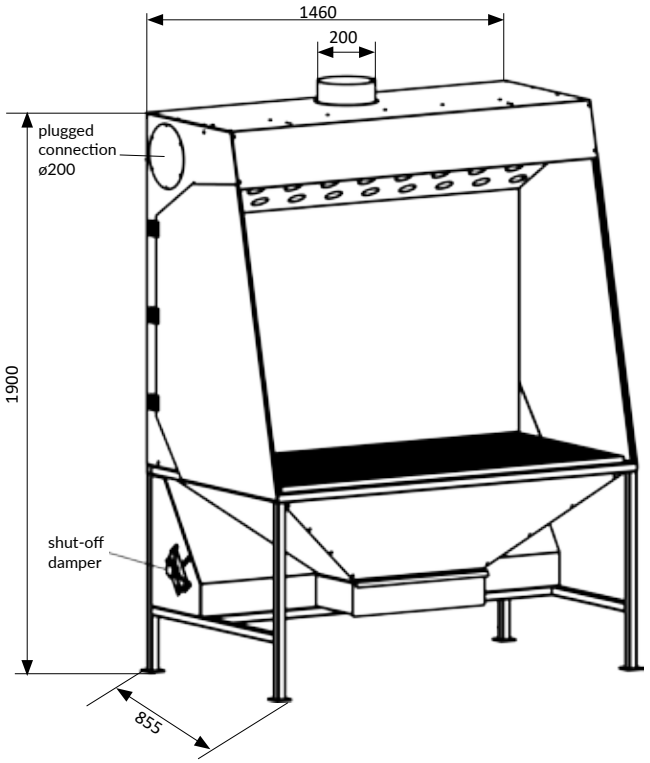
	Type	Part no.
	KSG	804K21

Duct closing

	Type	Part no.	Remarks
	PZC	804K22	Are installed at the front end of the first segment or at the terminal end of the last segment of the duct.

UES-N –
grinding-welding stand





Purpose

The filtering stand is applied for capturing the dust- and gas particles, arising during grinding with portable grinding tools and during welding-locksmith activities. The filtering stand can work with an extraction fan or with a filtering unit. Due to the swinging side doors, it is possible to put on the table elements of total length, larger than the table width, itself.

Structure

The device consists of following elements:

- worktable with a grate made of a supporting grill,
- half-open housing,
- suction chamber with a drawer,
- adjusting shut-off damper,
- light set to light up the work area,
- connection for outlet conduit,
- swinging doors – on the left- and right side.

On choice, the connection fitting piece can be fixed on the upper housing surface, its side walls or on the side surface of the suction chamber. The air is drawn downwards through the grate of the suction chamber or upwards through the openings in upper part of the housing. The air division (i.e. upflow-extraction/downflow-extraction) is controlled by a shut-off damper, placed in the suction chamber housing.

Technical data

Type	Part no.	Dimensions of the worktable [mm]	Hole size in the grate [mm]	Weight [kg]	Recommended volume flow [m³/h]	Flow resistances [Pa]
UES-N	802U32	1400x707	30x44	150	2400	250

NOTE: Ordering the devices and accessories specify their name and Part no.

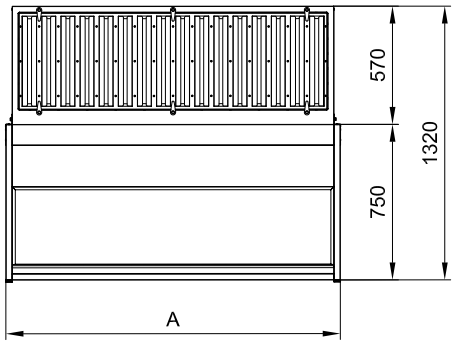
SLOT –
welding-grinding station

Purpose

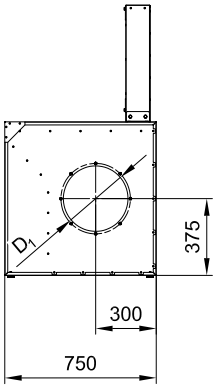
The SLOT welding-grinding station is designed for extraction the air polluted with dry dust, emitted mainly during the welding processes, but also in other operations as wood processing, grinding, metal trimming. Additionally, (after the grate is replaced) the station can be applied for dust extraction during manual cutting with a plasma burner (see ADDITIONAL EQUIPMENT). The contamination is being captured directly close at the source of emission: downwards – through the suction chamber with a grate surface and in rear direction – through the vertical suction chamber. It is important to connect the station to an extraction fan, filtering unit or to the central collecting ductwork.

Structure

The self-supporting structure consists of a chamber with a grate top. On the back chamber edge is located a chamber with a vertical suction wall. Each table is equipped with a connection (on both sides of the device), of a diameter adjusted to the volume flow efficiency. In the lower part of the device, there is a drawer to collect the accumulated dust.



Front view



Side view

Technical data

Device type	Part no.	A [mm]	D_1[mm]	Recommended volume flow [m³/h]	Load capacity [kg]	Weight [kg]
SLOT 1600	813S13	800	200	1600	500	57
SLOT 2000	813S14	1200	250	2000	500	75
SLOT 3000	813S15	1600	315	3000	500	94
SLOT 4000	813S16	2000	315	4000	500	113

* Load capacity is given for the whole surface of the work grate.

Additional equipment

Replaceable grate

Device type		Part no.	Remarks
	R-1600	801R04	Due to the replaceable grate, it is possible to apply the station for extraction the impurities arising during the cutting with a manual plasma burner. The grate is to be installed in a place of the standard grate.
	R-2000	801R05	
	R-3000	801R06	
	R-4000	801R07	

FPS – mist extraction wall for spray painting

FPS-1 with a UWT worktable

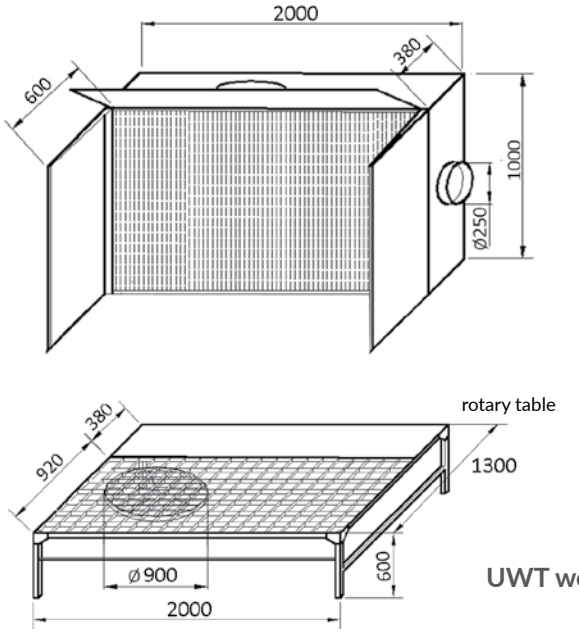
FPS-2

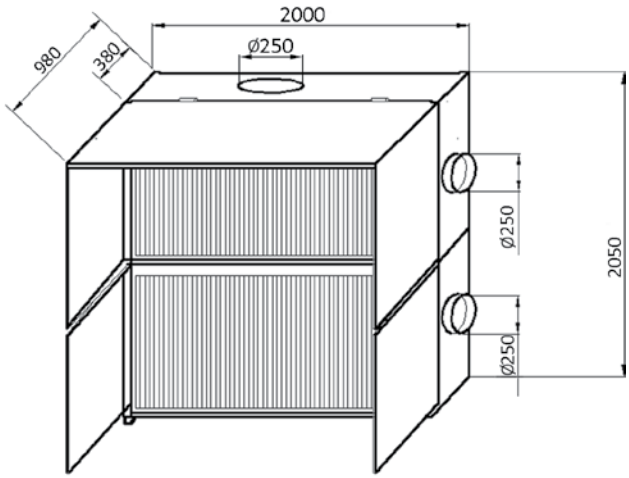
Purpose

FPS-type filtering pains stations are appropriate for extraction of the mist, arising during the spray painting of various not large elements.

Structure

FPS-1 wall is a one-segment structure, whereas FPS-2 consists of two filtration segments. Each wall segment is equipped with an exchangeable pleated filter, providing labyrinthine air circulation. Paint particles deposit on this filter cartridge (efficiency – approx. 50%). Behind the labyrinth-filter are placed parallel 3 spunbond filters, providing the second filtration stage – of efficiency up to 90%. Each wall segment is equipped with a connection fitting piece, to the extraction fan, (as standard located on the right side surface). It is easy to displace the connection to the left surface, or to the top of the paint station. Each paint wall has two side swinging boards and an upper board. FPS-1 filtering station can be mounted on the UWT worktable (as a Universal Ventilation Station), equipped with a deposit grate and a rotary disk-table. The whole device must be connected to the Ex fan of minimum volume flow 3000 m³/h for each wall segment.



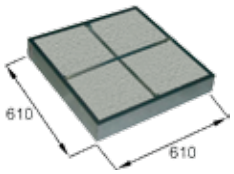
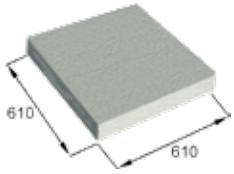
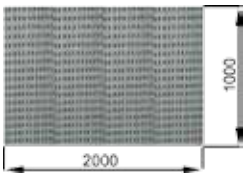


UWT worktable

Filtering walls and worktable

Type	Part no.	Recommended volume flow [m³/h]	Flow resistances [Pa]	Weight [kg]
FPS-1	814S02	3000	350	97
FPS-2	814S04	6000	350	183
UWT	814S00	–	–	160

Replaceable filters

Sort of the filter		Type	Filter class	Part no.	Quantity
	filtration cassette with spunbond	KF	G3	838K01	3 pc. for FPS-1 6 pc. for FPS-2
	replaceable filtration spunbond for the cassette, as above	WF	G3	838W20	3 pc. for FPS-1 6 pc. for FPS-2
	perforated labyrinthine filter	PL	G1	838F25	1 pc. for FPS-1 2 pc. for FPS-2

Fans

The filtering paint station should be connected with the fan (which serves for one filtering paint station only) or to the main collecting ventilation system, operated by one central fan. The fans should be in explosion proof execution. As the air is removed outside the building (no re-circulation), it is recommended to use roof fans. Fan selection ought to be carried out with reference to the catalogue section FANS.

NOTE: Ordering the devices and accessories specify their name and Part no.

stand filtering unit for welding dust extraction

BIG-1000 – single stand extraction unit for dry dusts

Purpose

BIG-1000 filtering unit is the efficient solution for cleaning the air from dust impurities and optionally for gas contaminations, arising during various production processes. It is irreplaceable for capturing the dry dust particles, arising during welding and other processes, where fine dust is being emitted. Maximum temperature of the conveyed air should not exceed +60°C. Due to automatically regenerated cartridge filters, the dust particles are separated on the outer filter surface. By means of impulses of compressed air, the contamination is cyclically struck off from the filter surface.

BIG-1000 appliances are manufactured in versions:

- mobile – with air recirculation,
- stationary – the air is discharged outside of building.

Structure

BIG-1000 filtering unit consists of following assemblies:

- steel sheet housing,
- radial fan,
- spark catcher,
- high-efficiency cartridge filter – polyester fabric – filtration efficiency 99,9%,
- pneumatic filter regeneration system – consisting of a compressed air tank, electromagnetic valve,
- waste container for the accumulated dust – capacity 30 l,
- control unit – to start the device and control its function,
- differential pressure control (pressostat) – indicating the filter pollution degree,
- hour-meter,
- a set of 4 castor wheels for the mobile version (stationary version stands on four legs).

Versions of the device:

1. Mobile BIG-1000-R – equipped with a set of castor wheels, the cleaned air is redirected to the process room (full air recirculation). The mobile version is adapted for attachment of an extraction arm of workrange 2 or 3 m and diameter 160 mm.
2. Stationary BIG-1000-O – equipped with an outlet fitting piece, for connection to the ductwork to discharge the air outside the building. The stationary version is equipped with a set of legs, that should be screwed up to the floor. To the device can be connected extraction arms of ranges 2, 3 or 4 m and diameter 160 mm.

Operational use

Before the start-up, connect the device to the external compressed air installation of pressure 6–8 bars. When the device is started, the automatic filter regeneration system provides continuous work of the fan and automatic cyclical filter cleaning (by means of impulses of compressed air) – without work interruption. The filter cleaning grade is controlled by pressostat (pressure control). When the filter is excessively charged with dust (increased flow resistance, drop in capacity efficiency), this will be indicated by a yellow signalling lamp.

Moreover, the appliance is equipped with an hour-meter to measure the time of operational use of the device. Maintenance of filters consists in periodical replacement of the cartridge filter (every 1–2 years).

As option, the appliance can be equipped with the active carbon impregnated spunbond filter – for filtering the gas contamination during the welding processes. The spunbond ought to be replaced every several months, depending on the use intensity.

Technical data

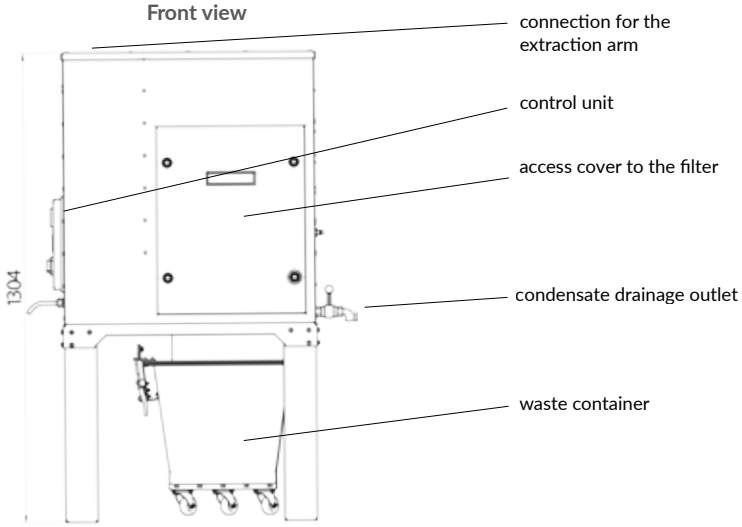
Type	Part no.	Version	Maximum volume flow [m³/h][1]	Maximum vacuum [Pa]	Supply voltage [V]	Motor rate [kW]	Acoustic pressure level [dB(A)] from a distance of:		Compressed air consumption [Nm³/h]	Weight [kg]	Quantity of connections for ERGO LUX extraction arms[2]
							1 m	5 m			
BIG-1000-O	804U44	stationary with outlet outside the building	1500	2000	230	1,1	75	61	0,7	136	1
BIG-1000-R	804U49	mobile with recuperation	1500	2000	230	1,1	75	61	0,7	140	1

1. Volume flow has been measured at the clean filter.
2. Complete offer of extraction arms is presented on separate catalogue cards

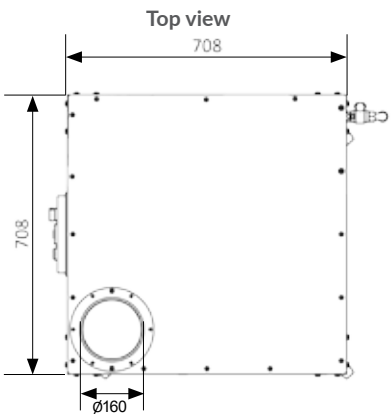
BIG-1000

Stationary version
BIG-1000-O

Front view

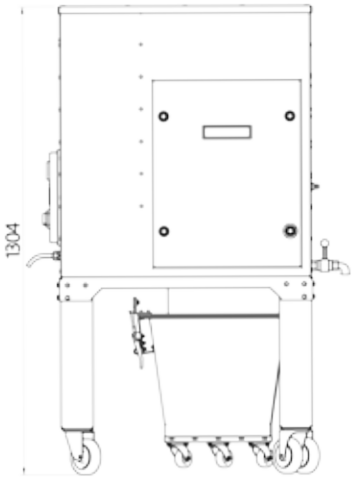


Top view

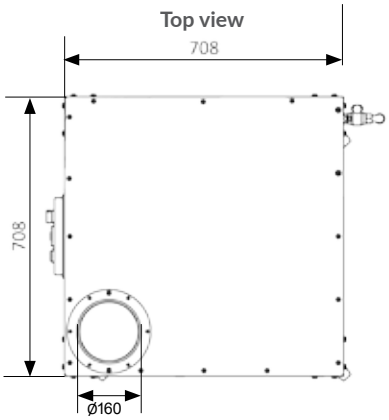


Mobile version
BIG-1000-R

Front view



Top view



Replaceable cartridge filter

	Type	Part no.	Weight [kg]	Filtration efficiency [%]	Quantity of filters
	PN105032T	800F20	4,2	99,9	1

Additional equipment

Activated carbon impregnated spunbond

	Type	Part no.	Weight [kg]	Remarks
	FCR-BIG-1000	838F73	0,6	The complete filter consists of the carbon spunbond along with the protective net. All these elements are placed inside the cartridge filter.
	WFCR-BIG-1000	838W95	0,3	The carbon spunbond is a replaceable element of the filter.

BIG-2000-N – double stand extraction unit for dry dusts

Purpose

For cleaning the air from dust impurities and optionally for gas contaminations arising during various production processes, is appropriate the BIG-2000-N filtering unit. It is irreplaceable for capturing the dry dust particles arising during welding and other processes where fine dust is emitted. Maximum temperature of the conveyed air should not exceed +60°C. Due to automatically regenerated cartridge filters, dust particles are separated on the outer surface of the filter. By means of impulses of compressed air, the contamination is cyclically struck off from the filter surface.

The BIG-2000-N appliance is manufactured in a mobile version with air recirculation.

Structure

BIG-2000-N filtering unit consists of subsequent elements:

- steel sheet housing,
- radial fan,
- spark catcher,
- cut-off dampers – to cut off the air flow while the fan is switched off,
- high-efficiency cartridge filter – polyester fabric – filtration efficiency 99,9%,
- pneumatic filter regeneration system – compressed air tank, electromagnetic valve,
- waste container for the accumulated dust – capacity 30 litres,
- control unit – to start the device and control its function,
- differential pressure control (pressostat) – to indicate the pollution degree of the filter,
- hour-meter,
- a set of castor wheels.

Operational use

BIG-2000-N is manufactured in a mobile version and there can be installed two extraction arms, of workrange 2, 3 or 4 m and 160 mm diameter.

Prior to the start-up, connect the device to the external compressed air installation of pressure 6–8 bars. When the device is started, the automatic filter regeneration system provides continuous work of the fan and automatic cyclical filter cleaning, by means of compressed air impulses – without work interruption. The filter cleaning grade is controlled by the pressostat (differential pressure control). When the filter is excessively charged with dust (increased flow resistance, drop in flow efficiency), this will be indicated by a yellow signalling lamp.

Moreover, the appliance is equipped with an hour-meter indicating the time of operational use of the device.

Maintenance of filters consists in periodical replacement of the cartridge filter (every 1–2 years).

As option, the appliance can be equipped with activated carbon impregnated spunbond filter – for filtering the gas contamination during the welding processes. The spunbond (nonwoven) must be replaced every several months, depending on the intensity of use.

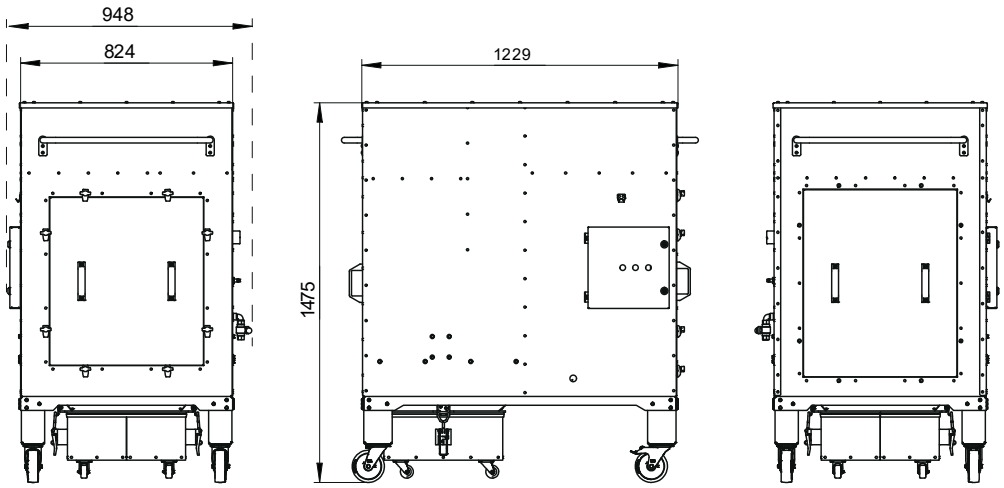
Technical data

Type	Part no.	Maximum volume flow [m^3/h][1]	Maximum vacuum [Pa]	Supply voltage [V]	Motor rate [kW]	Acoustic pressure level [dB(A)] from a distance of:		Compressed air consumption [Nm^3/h]	Weight [kg]	Quantity of connections for ERGO LUX extraction arms[2]
						1 m	5 m			
BIG-2000-N	805U02	2500	2000	3x400	1,5	74	60	0,7	260	2

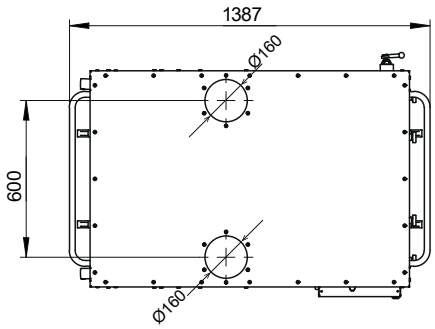
1. Volume flow has been measured at the clean filter.
2. Complete offer of extraction arms is presented on separate catalogue cards.

BIG-2000-N

Front view



Top view



Replaceable cartridge filter

	Type	Part no.	Weight [kg]	Filtration efficiency [%]	Quantity of filters
	PN206638U	800F23	4,2	99,9	1

Additional equipment

Activated carbon impregnated spunbond filter

	Type	Part no.	Weight [kg]	Remarks
	FCR-BIG-2000	838F79	0,6	The complete filter consists of the carbon nonwoven (spunbond) along with the protective net. All these elements are placed inside the cartridge filter.
	WFCR-BIG-2000	838W94	0,3	The carbon nonwoven is a replaceable element of the filter.

UFO-S – single- and double stand extraction unit for dry dusts

UFO-1-MN-S

UFO-2-MN-S

Purpose

UFO-S filtering units are applied for cleaning the air from dust- and gas impurities, arising during various production processes. They are irreplaceable for capturing the dry dust particles, arising during welding and other processes, where fine dust is being emitted. Maximum temperature of the conveyed air should not exceed +60°C. Due to automatically regenerated cartridge filters, the dust particles are separated on the outer filter surface. By means of impulses of compressed air, the contamination is cyclically struck off from the filter surface.

UFO-S are manufactured in versions:

- mobile,
- stationary – on-wall application.

Both these versions provide full air re-circulation.

Structure

UFO-S filtering unit consists of subsequent assemblies:

- steel sheet housing,
- radial fan,
- pre-filter – woven of net – holes dimensions 0,8x0,25 mm – functioning as spark-catcher,
- high-efficiency cartridge filters – polyester fabric – filtration efficiency 99,9%,
- pneumatic filter regeneration system – consisting of a compressed air tank, electromagnetic valve,
- waste container for the accumulated dust,
- control unit – to start the device and control its function,
- a set of castor wheels for the mobile version or a set of brackets for the wall-mounted version.

Operational use

Filtering units UFO-S are adapted for installing the extraction arms, o ranges 2, 3 or 4 m and diameter 160 mm. UFO-1-S is designed for installing one extraction arm, whereas UFO-2-S for two extraction arms. Before the start-up, connect the device to the external compressed air installation of pressure 6–8 bars. After start-up, the automatic filter regeneration system provides continuous work of the fan and automatic cyclical filter cleaning (by means of impulses of compressed air) – without work interruption. Additional feature is offline filter cleaning, simply by manual pressing the button to generate the compressed air impulse.

The maintenance of the filters consists of following activities:

- periodical cleaning the pre-filter from deposited dust (every several weeks),
- periodical replacement of the carbon spunbond filter (every several months),
- periodical replacement of the cartridge filter (every 1–2 years).

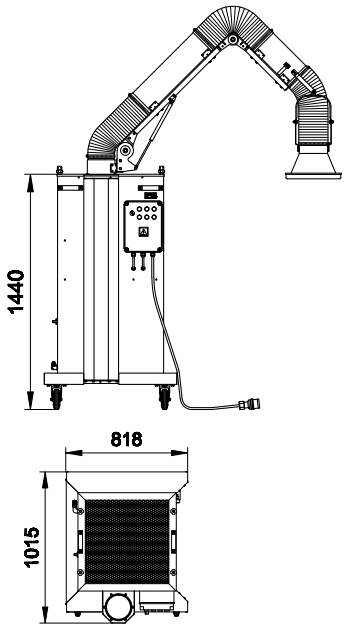
Technical data

Type	Version	Part no.	Maximum volume flow [m³/h][1]	Maximum vacuum [Pa]	Supply voltage [V]	Motor rate [kW]	Acoustic pressure level [dB(A)] from a distance of:		Compressed air consumption [Nm³/h]	Weight [kg]	Quantity of connections for ERGO LUX extraction [2]
							1 m	5 m			
UFO-1-MN-S	mobile	804U52	2000	2500	230	1,1	75	61	0,7	160	1
UFO-1-HN-S	stationary	804U51	2000	2500	230	1,1	75	61	0,7	156	1
UFO-2-MN-S	mobile	804U54	3000	2600	3x400	2,2	74	60	1,4	209	2
UFO-2-HN-S	stationary	804U53	3000	2600	3x400	2,2	74	60	1,4	220	2

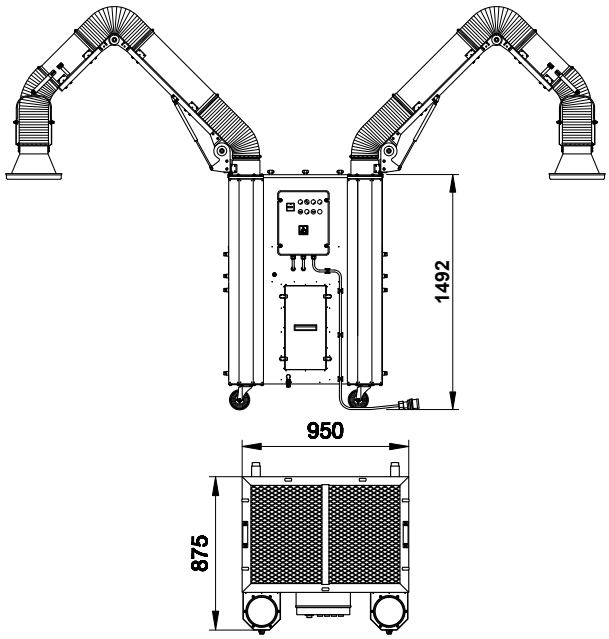
1. Volume flow has been measured at the clean filters.
2. Complete offer of extraction arms is presented on separate catalogue cards.

Mobile version

UFO-1-MN-S

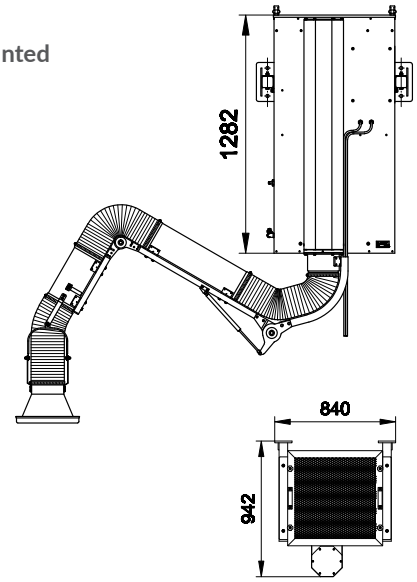


UFO-2-MN-S

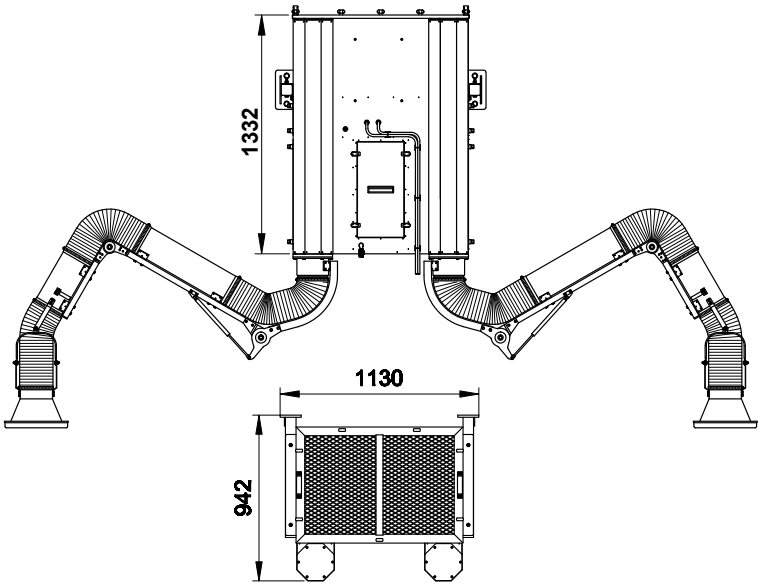


Wall-mounted version

UFO-1-HN-S



UFO-2-HN-S



Replaceable filters

Cartridge filter

	Type	Part no.	Weight [kg]	Filtration efficiency [%]	Quantity of filters
	PN105032T	800F20	4,2	99,9	1 pc. in UFO-1-S 2 pc. in UFO-2-S

NOTE: As standard the device is equipped with filters PN105032T.

Activated carbon impregnated spunbond

	Type	Part no.	Weight [kg]	Dimensions [mm]		Quantity of filters
				A	B	
	WF-1-MH	838W27	0,3	610	610	1 pc. in UFO-1-S
	WF-2-MH	838W26	0,6	486	844	1 pc. in UFO-2-S

RAK – single- and double stand extraction unit for viscous dusts

Purpose

As a basic appliance, RAK filtering unit has been developed for cleaning the air from welding fumes, arising at mobile or stationary workplaces. It is designed for intermittent (easy access) use at welding stations of not significant emission of welding dust.

The device is efficient in capturing both, the dry, as well as viscous dust, that arise during welding the oil-laden steel sheet and while using the anti-spattering liquids in large amounts. Each device features four-step filtration system: pre-filter, filtering pad, compact filter and carbon filter, absorbing the part of gaseous contamination. At the moment the filters reach the limit pollution degree, replace them for new – they cannot be submit to regeneration.

Structure

RAK consists of subsequent elements:

- housing of steel sheet,
- radial fan,
- pre-filter – wire mesh of 0,8x0,25 mm holes,
- filtering pad – class G-3
- compact filter – class F-9,
- spunbond filter impregnated with active carbon,
- control unit,
- hour-meter – to measure the work time,
- differential pressure control (pressostat),
- castor assembly for the mobile version, or brackets for the wall mounted version.

Operational use

RAK-type filtering unit is adapted to install castor wheels (mobile version) or wall brackets (stationary version). Both, mobile- and stationary version can work with extraction arms of work-range 2 or 3 m.

The RAK series of units are of two sizes:

- RAK-1000 – adapted for installing of one extraction arm,
- RAK-2000 – adapted for installing of two extraction arms.

Air outlet of the RAK filtering unit is carried out in two ways: version RAK-R – the air is fully recirculated and redirected back to the process room, whereas in version RAK-O, there is an outlet fitting piece, providing connection to the discharge extraction ductwork, removing the air outside. For convenience of the operator, the connection fitting piece can be fastened on the right or left side of the device.

The device is switched on through a control unit. Each filtering unit is equipped with a hour-meter (to measure the work time) and a pressure control. The pressure control indicates by the signalling lamp the replacement necessity of the compact filter.

Maintenance of the filter consists in:

- periodical cleaning the wire-mesh pre-filter,
- periodical replacement of the filtering pad and the carbon spunbond,
- periodical replacement of the compact filter.

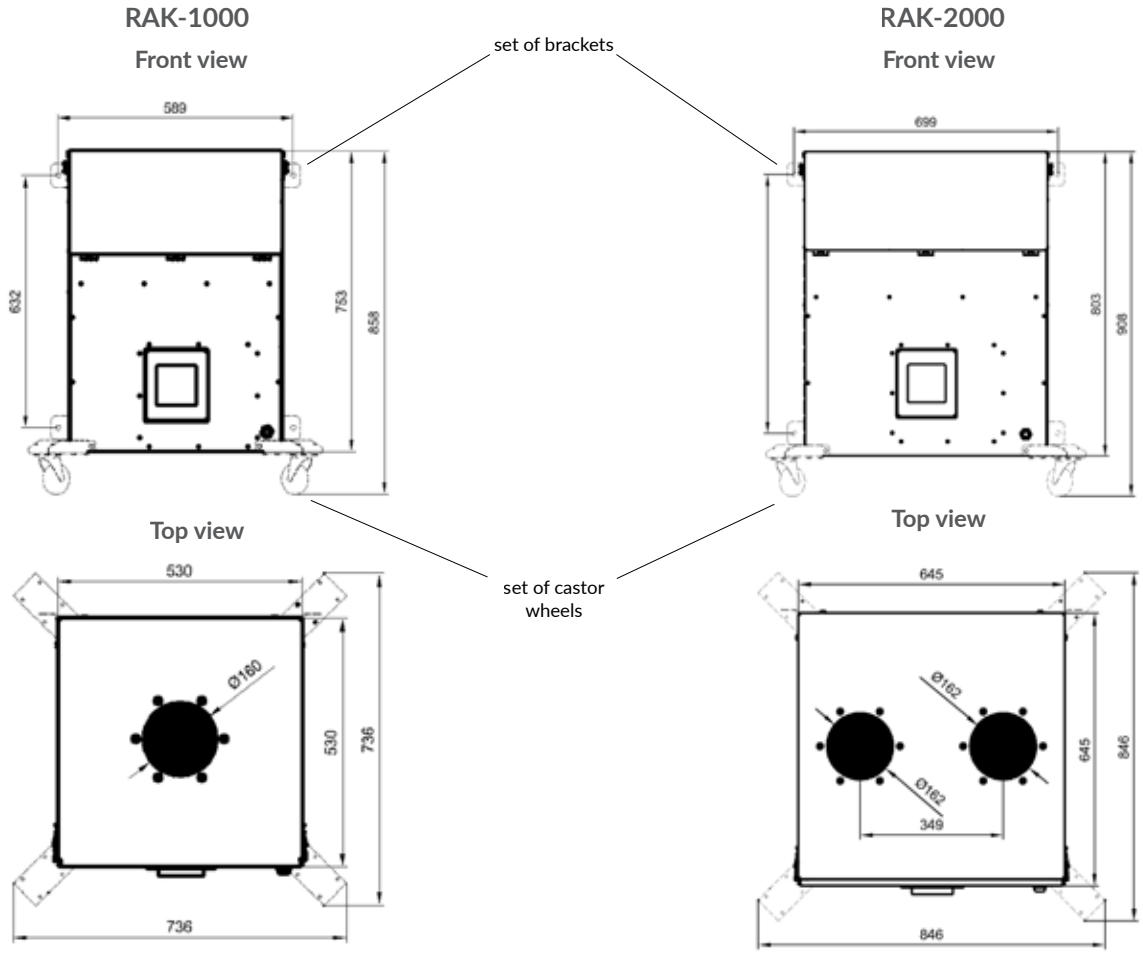
Technical data

Type	Version	Part no.	Maximum volume flow [m³/h][1]	Supply voltage [V]	Motor rate [kW]	Acoustic pressure level [dB(A)] from a distance of[2]:		Weight [kg]	Quantity of connections for ERGO LUX extraction arms[3]
						1 m	5 m		
RAK-1000-R	with recirculation	800O42	1800	230	1,1	74	60	65	1
RAK-1000-O	with outlet fitting piece	800O43	1800	230	1,1	69	55	65	1
RAK-2000-R	with recirculation	800O44	2650	230	1,5	77	63	85	2
RAK-2000-O	with outlet fitting piece	800O45	2650	230	1,5	73	59	85	2

1. Volume flow has been measured at the clean filters.
2. Acoustic pressure level are given in conditions of free field.
3. Full reference for the ERGO LUX extraction arms is represented on separate catalogue cards.

Additional equipment

Type		Part no.	Remarks
	Set of castor wheels	828K00	Consists of 4 castor wheels along with the brackets (for RAK-1000 and RAK-2000).
	Set of brackets	828W00	Consists of 4 pieces of wall brackets (for RAK-1000 and RAK-2000).



NOTE: Broken line illustrates the elements of additional equipment.

Replaceable filters

Filtering pad

Type	Part no.	Weight [kg]	Dimensions [mm]	Class	Filtration efficiency [%]	Remarks
FWR-1000	838W78	0,18	490x490	G3	88	In each device is placed one filtration pad.
FWR-2000	838W79	0,20	600x600			

Compact filter

Type	Part no.	Weight [kg]	Dimensions [mm]	Class	Filtration efficiency [%]	Remarks
FKR-1000	838F47	2,5	490x490	F9	95,6	1 pc. in RAK-1000
FKR-2000	838F48	4	600x600			1 pc. in RAK-2000

Active carbon impregnated spunbond

Type	Part no.	Weight [kg]	Dimensions [mm]	Remarks
FCR-1000	838W96	0,30	450x450	In each device is placed one sheet of spunbond. Dimensions of spunbond in FCR-2000 is given in the developed view.
FCR-2000	838W97	0,32	570x700	

RAK-RC – device for general filtration

Purpose

RAK-RC filtering units have been developed for general ventilation/filtration. They can be used in any places where it is not possible to apply local exhausts, or they are not sufficient in extraction efficiency. Both, the appliances can be used in not large rooms as well in large buildings, under the condition that several filtering units are used, which are suitable to the sort of pollution emission source. Each device features four-step filtration system: pre-filter, filtering pad, compact filter and carbon filter, absorbing the part of gaseous contamination. At the moment the filters reach the limit pollution degree, replace them for new – they cannot be submit to regeneration.

Structure

RAK-RC filtering unit consists of following elements:

- housing of steel sheet,
- radial fan (one or two),
- pre-filter – woven wire mesh of 0,8x0,25 mm holes,
- filtering pad – class G-3,
- compact filter – class F-9,
- spunbond impregnated with active carbon filter,
- control unit,
- hour-meter,
- differential pressure control (pressostat),
- castor assembly for the mobile version, or a set of brackets for the wall mounted version,
- air intake hood (cap).

Operational Use

RAK-RC type filtering unit is adapted to install castor wheels (mobile version) or wall brackets (stationary version). There are two sizes in the RAK-RC series – of nominal volume flow 1000 m^3/h and 2000 m^3/h.

The polluted air is drawn in, at the top of the device, whereas the cleaned air flows out at the bottom of the filtering unit, as a full recirculation into the process room.

The inlet is guarded by an air intake hood (cap) and additionally protected with a circumferential grill.

The device is switched on through a control unit. Each appliance is equipped with an hour-meter to measure the work time and a differential pressure control (pressostat), indicating the replacement requirement of the compact filter.

Maintenance of the filters consists in:

- periodical cleaning the wire-mesh pre-filter,
- periodical replacement of the filtering pad and the carbon spunbond,
- periodical replacement of the compact filter.

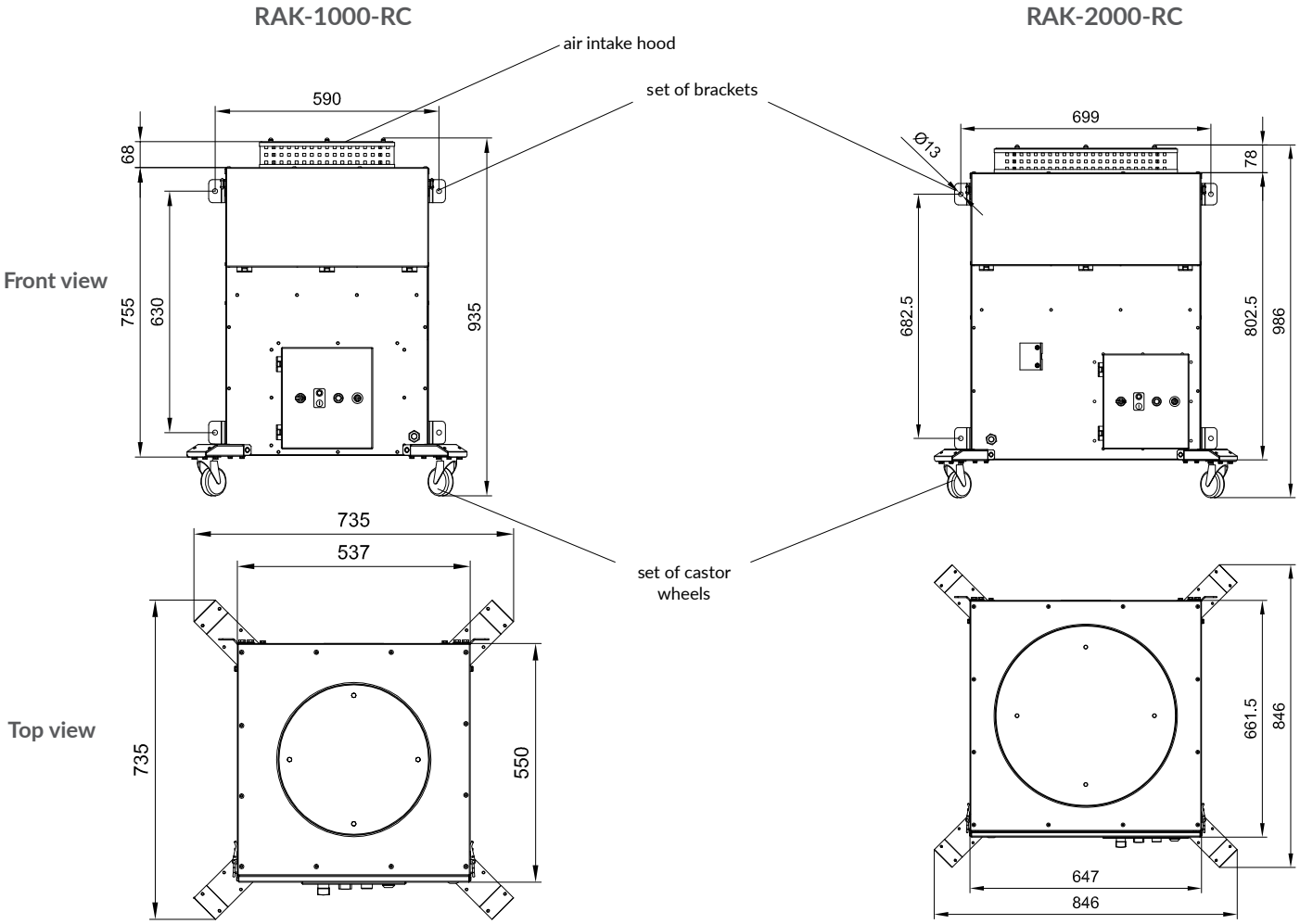
Technical data

Type	Part no.	Maximum volume flow [m^3/h][1]	Supply voltage [V]	Motor rate [W]	Acoustic pressure level [dB(A)] from a distance of[2]:		Weight [kg]
					1 m	5 m	
RAK-1000-RC	800O48	1260	230	160	59	40	65
RAK-2000-RC	800O49	2320	230	2x160	62	63	85

1. Volume flow has been measured at the clean filters.
2. Acoustic pressure level values are given in the of free field conditions.

Additional equipment

Type		Part no.	Uwagi
	Set of castor wheels	828K00	Consists of 4 castor wheels along with the brackets (for RAK-1000-RC and RAK-2000-RC).
	Set of brackets	828W00	Consists of 4 wall brackets (for RAK-1000-RC and RAK-2000-RC).



Replaceable filters

Filtering pad

Type	Part no.	Weight [kg]	Dimensions [mm]	Class	Filtration efficiency [%]	Remarks
FWR-1000	838W78	0,18	490x490	G3	88	In each device is placed one filtration pad.
FWR-2000	838W79	0,20	600x600	G3	88	

Compact filter

Type	Part no.	Weight [kg]	Dimensions [mm]	Class	Filtration efficiency [%]	Remarks
FKR-1000	838F47	2,5	490x490	F9	95,6	1 pc. in RAK-1000-RC
FKR-2000	838F48	4	600x600	F9	95,6	1 pc. in RAK-2000-RCX

Active carbon impregnated spunbond (nonwoven)

Type	Part no.	Weight [kg]	Dimensions [mm]	Remarks
FCR-1000	838W96	0,30	450x450	In each device is placed one sheet of spunbond. Dimensions of spunbond in FCR-2000 is given in the developed view.
FCR-2000	838W97	0,32	570x700	

electrostatic stand filter

PROTON – filtration of welding dust and oil mist

Purpose

PROTON filtering unit is designed for cleaning the air form dust contamination and oil mist. The appliance is irreplaceable for extraction of mist and fumes arising at stands of metal processing, emulsion mists applied for tool cooling by means of water-oil emulsion, as well as for welding – especially during welding of oil-laden steel sheet and welding with use of high amounts of anti-spattering preparations. The appliance is not designed for extraction of electrical conductivity dust particles. The device can work with a system of local exhausts that extract the dust contamination from several points, whereby the air stream is cleaned centrally and distributed back to the process hall as clean air, afterwards. Maximum temperature of the conveyed air should not exceed +60°C. The appliance can be installed both, inside and outside the building.

Structure

PROTON consists of subsequent elements:

- steel housing,
- radial fan – at the side of clean air,
- net filter – at the device outlet,
- ionizer section,
- capture section,
- silencer – at the fun outlet,
- control unit – start of the device and control of its function. The unit is installed on the device housing. It can be installed in an another place as convenient for User.

The appliance is manufactured in a stationary version, in three sizes varying in volume flow: 2000 m^3/h, 4000 m^3/h and 8000 m^3/h. It is equipped with a set of legs to be screwed up to the floor.

Operational Use

After the device start, the automation unit provides continuous work of the fan and cleaning of the forwarded air. As first step, the polluted air flows through the net filter for coarse particle separation. Subsequently, the air passes the ioniser section to load the particles positively, next in the capture section, the particles build up on the negatively charged plates. Having left the capture section, the clean air returns to the process room, forced through the fan. The filtration efficiency is approx. 97%.

In case of dust extraction during the welding, the maintenance consists in periodical cleaning of the ioniser- and capture section – the viscous impurities (adhering on the elements) ought to be removed and this is performed by rinsing them in a container with the water with detergent.

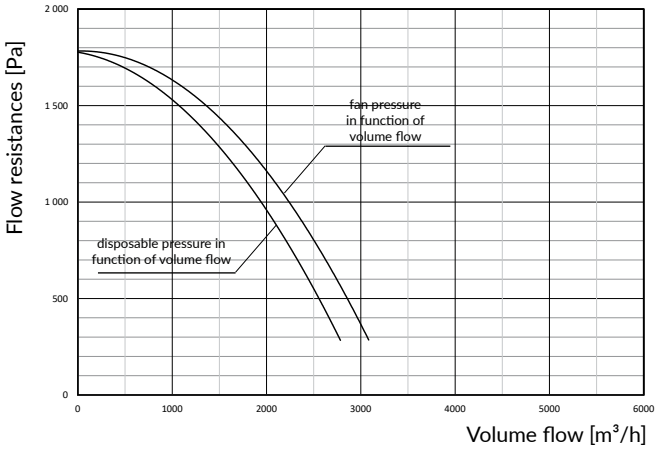
In application for oil mist-, water-oil emulsion extraction, etc., the impurities flow onto the drip tray under the filtration sections, whereby the condensed oil can be discharged through a drainage valve.

Technical Data

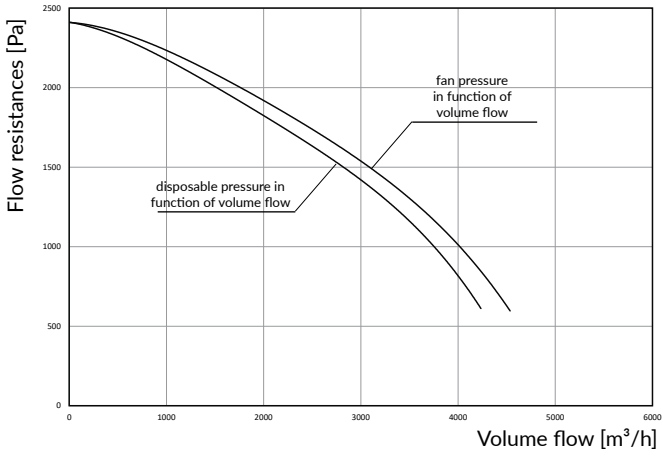
Type	Part No.	Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Supply voltage [V]	Motor rate [kW]	Acoustic pressure level [dB(A)] from distance		Weight [kg]
						1 m	5 m	
PROTON 2000	800E00	2500	1800	3x400	1,1	74	60	198
PROTON 4000	800E01	4000	2400	3x400	2,2	82	68	218
PROTON 8000	800E02	8000	2950	3x400	5,5	87	74	397

Flow charts

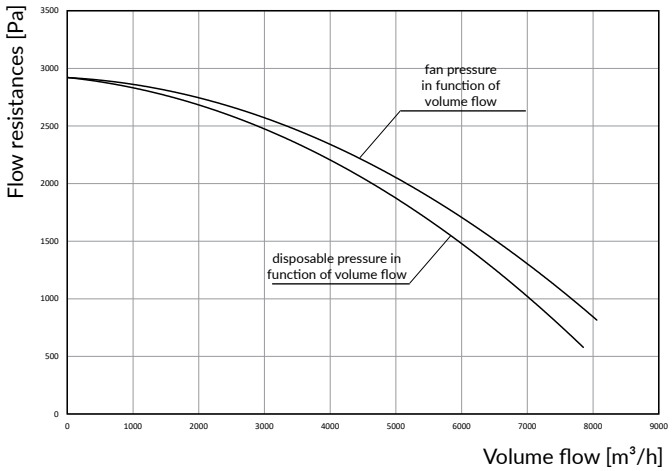
PROTON-2000



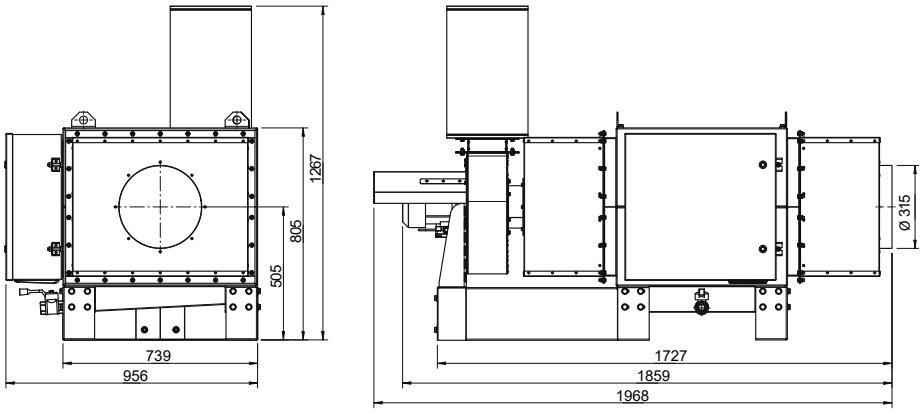
PROTON-4000



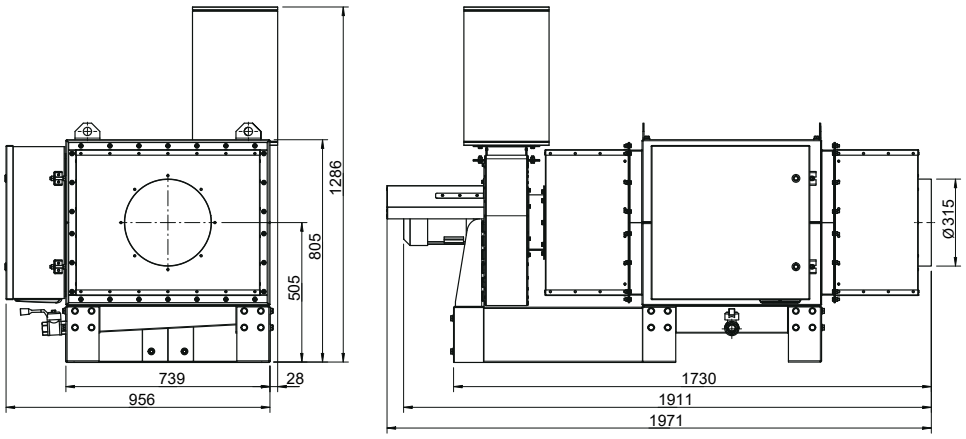
PROTON-8000



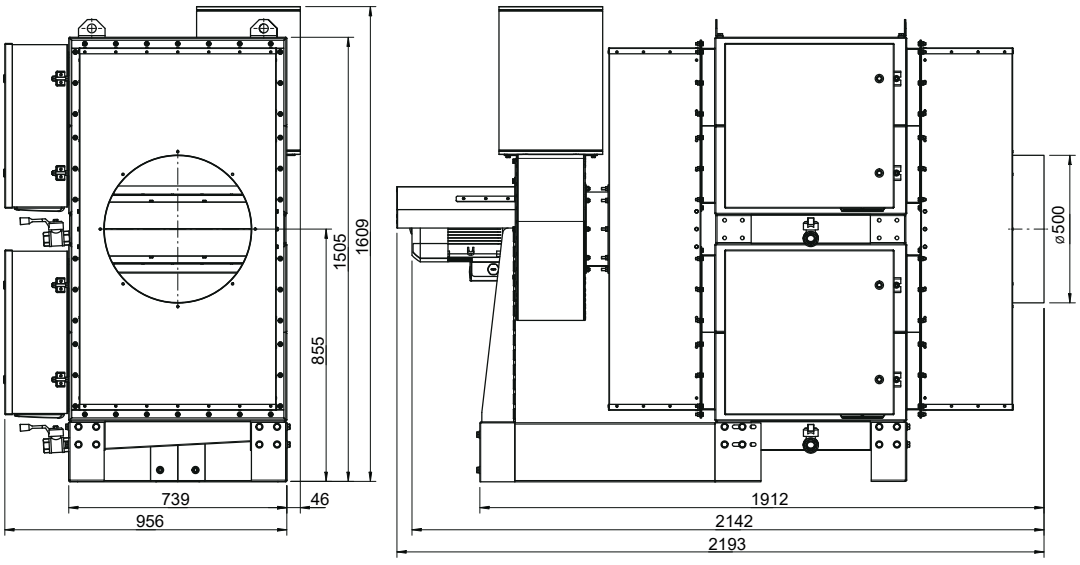
PROTON-2000



PROTON-4000



PROTON-8000



Additional equipment

Washing container

	Type	Part No.	Remarks
	P-PROTON	800E10	To wash the capture section; equipped with a drainage valve.

multi-stand filtering unit for welding dust

UFO-4-M/N – filtering unit with electromagnetic valves

UFO-4-M/N-1

UFO-4-M/N-2

UFO-4-M/N-3

Purpose

The UFO-4-M/N filtering unit is applied for cleaning the dust laden air from impurities arising during the manufacturing processes. It is irreplaceable in capturing the dry dust, formed during welding, grinding the non-sparking materials, gas- or plasma metal cutting and other dust-emitting processes, in chemical-, pharmaceutical-, plastic industry, and others. Maximum temperature of the forwarded air is +60°C. The appliances are equipped with cartridge filters, capturing dust on the outer filter surface. The accumulated dust (on the filters) is struck off by cyclical compressed air impulses.

Structure

The device consists of one filtration chamber (UFO-4-M/N-1), two filtration chambers (UFO-4-M/N-2) or three filtration chambers (UFO-4-M/N-3) – placed vertically one on top of another. On the filtration chamber is installed the fan-silencer assembly.

The filtering chamber is based on a four-leg-base equipped with a hopper chamber and a waste container.

- UFO-4-M/N-1 – consists of 1 filtration chamber and a fan of volume flow 5000 m^3/h.
- UFO-4-M/N-2 – consists of 2 filtration chambers and a fan of volume flow 10 000 m^3/h.
- UFO-4-M/N-3 – consists of 3 filtration chambers and a fan of volume flow 15 000 m^3/h.

Each filtration chamber is divided vertically with a partition wall into two spaces:

- chamber of filters – there are four self-cleaning cartridge filters of polyester fabric – filtration efficiency 99,9%,
- chamber of electromagnetic valves – containing the compressed air tank, supplied from the external installation of pressure 6–8 bar and 4 electromagnetic valves for filter regeneration by impulses of compressed air. The filter regeneration (striking) proceeds automatically.

The UFO-4-M/N is equipped with subsequent connection fitting pieces:

- Inlet connection Ø500 mm – (on each filtration chamber), as standard it is located on the right side of the device when viewing at the filtration chamber. It is possible to swap the side walls so that the inlet is on the left side.
- Outlet connection 400x400 mm as outlet from the silencer.
- The outlet can be connected to the discharge installation, or – in case of direct air discharge into the process room – it is recommended to fasten on the 400x400 outlet an additional silencer with a set of connection fittings (bend and reducer).

A control unit energizing the fan and controlling the pneumatic filter regeneration system is fastened to the device. UFO-4-M/N-R filtering units are equipped with an inverter, controlling the motor function. Due to adjustment of motor rotations, User can control the device efficiency, keeping the constant vacuum within the extraction installation.

Operational use

UFO-4-M/N filtering unit is appropriate for use in closed rooms as well as outdoors. The appliance ought to be fastened firmly to the floor. The filtering unit is designed for:

- use with installation consisting of local exhausts, e.g. extraction arms connected (through inlet ferrules) to the main collecting ductwork,
- general ventilation with air filtration. In this application it is important to place a multi-jet air-supply device WNK-8, and inlet wire-mesh grids SW-500 at the inlet ferrules.

Upon the device start, the control unit provides constant function of the fan and automatic filter regeneration by means of impulses of compressed air. Cartridge filters ought to be replaced after 1–2 years of operational use. In application for plasma- or laser cutting, the filters efficiency reduces twice. In this case following volume flows should be assumed:

- for UFO-4-MN-1 – 2500 m^3/h,
- for UFO-4-MN-2 – 5000 m^3/h,
- for UFO-4-MN-3 – 7500 m^3/h.

On demand of Customer, the filtering unit can be equipped with active carbon impregnated spunbond filter – for filtration of gaseous impurities, formed during welding processes.
On demand of Customer, the filtering unit can be equipped with fire self-extinguishing system.

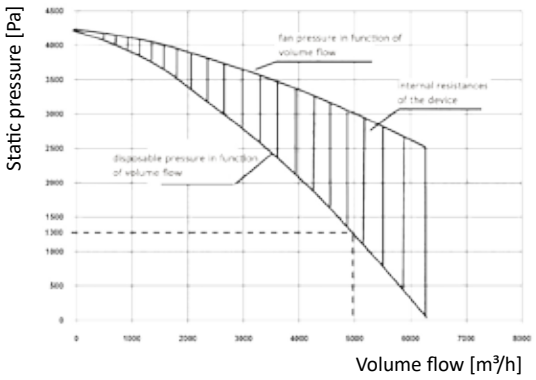
Technical data

Type	UFO-4-M/N-1	UFO-4-M/N-2	UFO-4-M/N-3	UFO-4-M/N-1/R	UFO-4-M/N-2/R	UFO-4-M/N-3/R
Remarks	–	–	–	system of volume flow control		
Part no.	804U85	804U86	804U87	804U05	804U06	804U07
Maximum volume flow [m³/h]	6300	12 000	16 200	6300	12 000	16 200
Maximum vacuum [Pa]	4200	4260	4800	4200	4260	4800
Motor rate [kW]	5,5	11	18	5,5	11	18
Supply voltage [V]	3x400	3x400	3x400	3x400	3x400	3x400
Acoustic pressure level [dB(A)]*	72	76	79	72	76	79
Weight [kg]	565	860	1200	565	860	1200
Inlet diameter [mm]	1xØ500	2xØ500	3xØ500	1xØ500	2xØ500	3xØ500
Outlet diameter [mm]	400x400	400x400	400x400	400x400	400x400	400x400
Required pressure of the compressed air [MPa]	0,6	0,6	0,6	0,6	0,6	0,6
Quantity of cartridge filters	4	8	12	4	8	12
Capacity of the waste container [dm³]	72	72	72	72	72	72
Consumption of compressed air [Nm³/h]	2,8	5,6	8,4	2,8	5,6	8,4

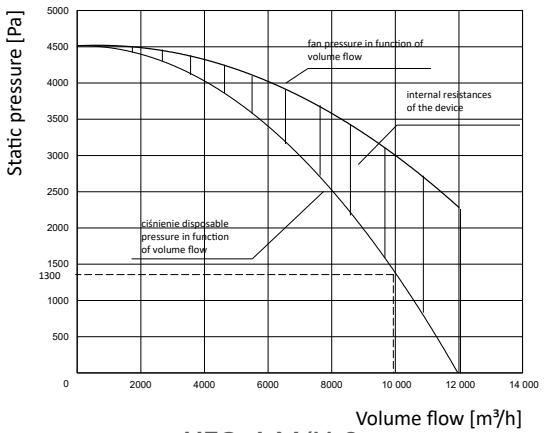
* Acoustic pressure level has been measured at distance of 1 m.

Flow charts

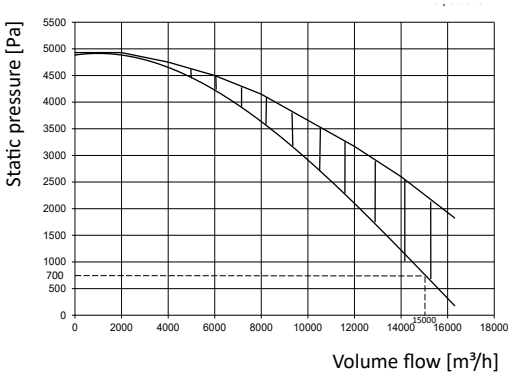
UFO-4-M/N-1



UFO-4-M/N-2

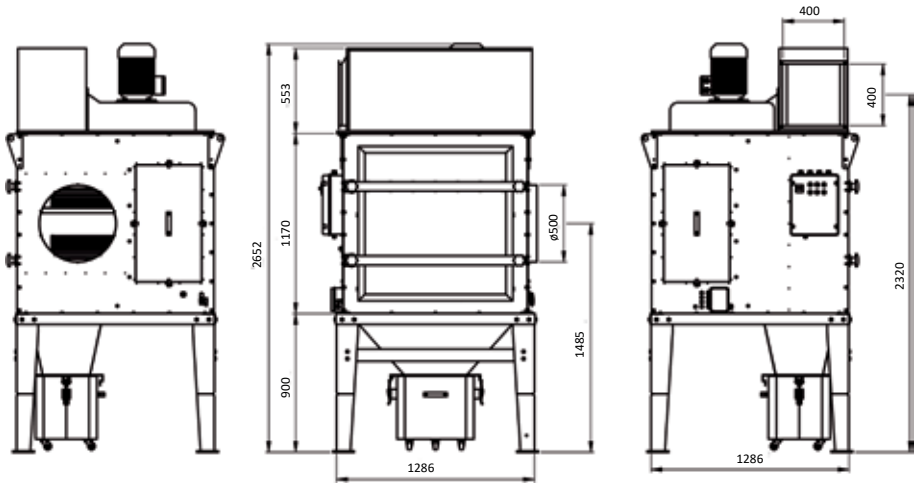


UFO-4-M/N-3

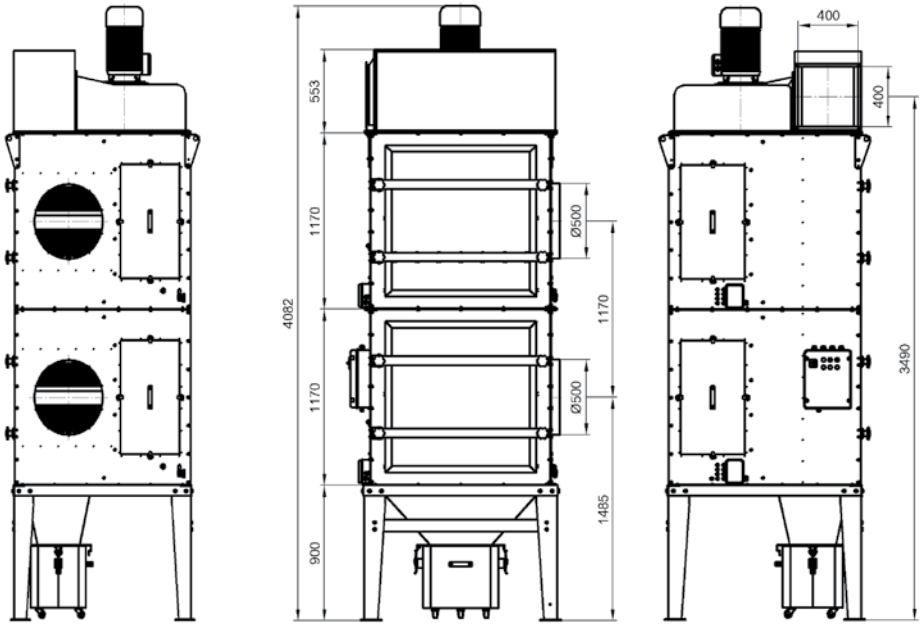


NOTE: Flow charts have been carried out for cartridge filters slightly polluted with dusts after welding out 1500 electrodes ER24.

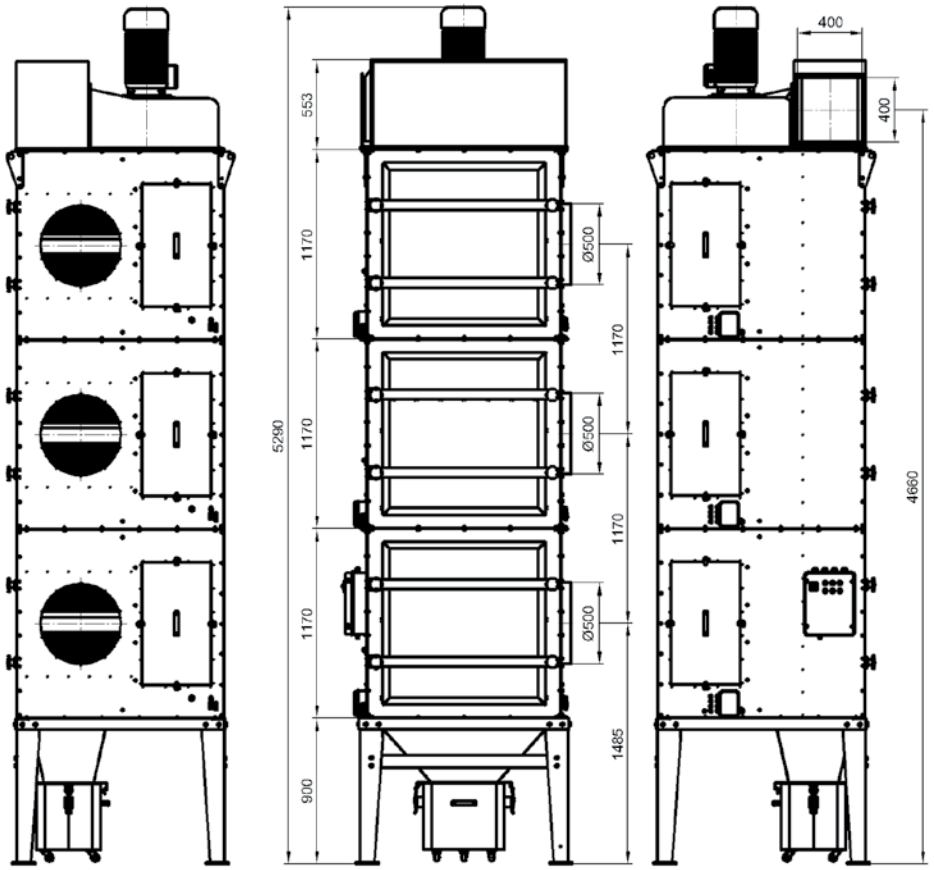
UFO-4-M/N-1



UFO-4-M/N-2



UFO-4-M/N-3



Replaceable equipment

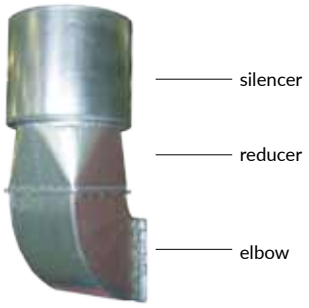
Cartridge filter

Type	Part no.	Weight [kg]	Filtration efficiency [%]
PN105032T	800F20	4,2	99,9

NOTE: As standard, devices are equipped with filters type PN105032T.

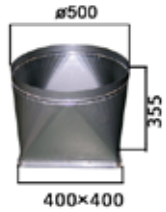
Additional equipment

Additional sound absorbing assembly



Remarks
The assembly can be adjusted with the silencer outlet upwards or sidewards. Components are specified below.

Reducer 400x400/Ø500 mm



Type	Part no.
ZR-UF	829R82

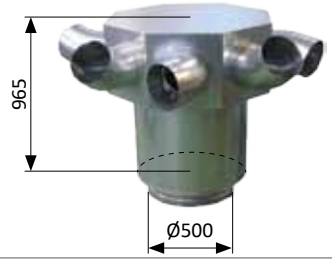
Silencer

Type	Part no.
TK-UF	830T92

Elbow 400x400 mm

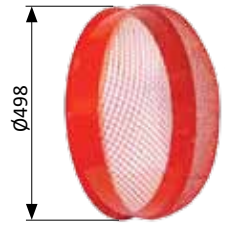
Type	Part no.
KL-UF	829K97

Multi-jet air-supply device



Type	Part no.	Outlet diameter of the jet [mm]	Weight [kg]	Application
WNK-8/M-1	829W01	125	33	Fastened at the air outlet of the UFO-4-M/N unit in application of general ventilation.
WNK-8/M-2	829W02	160	34	
WNK-8/M-3	829W03	200	35	

Inlet grid



Type	Part no.	Weight [kg]	Application
SW-500	834Z35	1,3	As a guard of the outlets at free air discharge.

UFO-A-N – devices with Venturi orifices

UFO-A-5000-N

UFO-A-10000-N

UFO-A-15000-N

UFO-A-20000-N

Purpose

UFO-A-N filtering units are designed for cleaning the dust-laden air from impurities arising during manufacturing processes. They are irreplaceable in elimination the dry dusts during the welding, grinding the non-sparking materials, gas- or plasma metal cutting, powder painting, cast iron processing and during other dust emitting processes in chemical industry, pharmaceutics, food-, plastic industry and others. Maximum temperature of the conveyed air should not exceed +60°C. The appliances are equipped with cartridge filters accumulating the dust particles at the external surface of the filter, where the dust is struck off by impulses of compressed air.

Structure

The appliance consists of one or two filtration chambers and a fan located on the filtration fan. The filtration chamber is placed on a four-leg base with a hopper and a dust container.

UFO-A-5000-N and UFO-A-10000-N consists of one filtration chamber and a fan of nominal volume flows 5000 and 10 000 m^3/h respectively.

UFO-A-15000-N and UFO-A-20000-N consists of two filtration chambers and a fan of nominal volume flows 15 000 and 20 000 m^3/h respectively.

Each filtration chamber is separated inside with a vertical wall, creating two areas:

- chamber of filters — containing the self-cleaning cartridge filters with coated polyester fabric, of filtration efficiency up to 99,9%,
- cleaning chamber — containing the Venturi orifices, to clean the cartridge filters from the accumulated dust by means of the compressed air impulses. The cleaning / shaking proceeds automatically.

Outside of the filtration chamber is located a compressed air tank with electromagnetic valves, connected to the external compressed air installation of 6–8 bar pressure. Above the filtration chamber is installed a decompression chamber and ex extraction fan in aluminium housing.

At the inlet side, UFO-A-N is equipped with Ø500 mm connection fitting piece, on each filtration chamber. As standard, the connections are located on the right side of the device, (viewing onto the filtration chamber side). It is possible to execute a device version with its inlet on the left side. The appliance is integrated with an automation system to control the power supply of the fan and the system of the pneumatic filter regeneration system.

Operational use

It is possible to install the UFO-A-N system inside the process rooms or as outdoor application. Prior to use it is important to fasten firmly the device to the floor.

The appliance is designed for:

- operation with a system of local exhausts, e. g. extraction arms, connected to the main collecting ductwork attached to its inlets,
- general ventilation, combined with air filtration, e. g. operation within the push-pull system.

After the system is started, the automation control unit provides continuous work of the extraction fan, and the automatic filters regeneration with the impulses of compressed air. The cartridge filters ought to be replaced for new after 1–2 years of operational use.

REMARKS:

1. In case of plasma cutting application, take into account the fact that the real flow efficiency of the device is two times lower than the nominal efficiency.
1. For example: UFO-A-10000-N with its volume flow 10 000 m^3/h provides 5000 m^3/h during the plasma cutting, whereby this is sufficient for extraction from one table segment: 2100 x 500 mm.
2. On demand, the cartridge filters can be equipped with activated carbon activated fabric, for filtration of gaseous contamination during the welding.
3. UFO-A-N can be additionally equipped with an inverter to control the motor function. Due to this, it is possible to adjust the motor rotational speed to the efficiency of the device, at the constant vacuum within the extraction ductwork.

Additional equipment

1. spark catcher,
2. dust spraying unit.

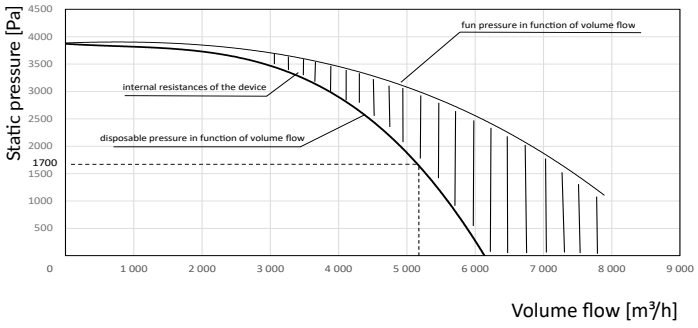
Technical data

Type	UFO-A-5000-N	UFO-A-10000-N	UFO-A-15000-N	UFO-A-20000-N
Part No.	805U20	805U21	805U22	805U23
Maximum volume flow [m³/h]	7500	13 000	18 000	24 000
Operational volume flow [m³/h]	4000–5000	8000–10 000	12 000–15 000	16 000–20 000
Maximum vacuum [Pa]	3900	4500	5100	5000
Motor rate [kW]	5,5	11	18,5	22
Filtration surface [m²]	60	120	180	240
Supply voltage [V]	3x400	3x400	3x400	3x400
Acoustic pressure level [dB(A)][1]	72	76	78	80
Weight [kg][2]	575	765	1015	1125
Quantity of inlet connections [szt.]	1x500	1x500	2x500	2x500
Required compressed air pressure [bar]	6–8			
Quantity of cartridge filters	2	4	6	8
Capacity of the dust container [dm³]	72	72	72	72
Minimum compressed air consumption [Nm³/h]	2,8	5,6	5,6	11,2

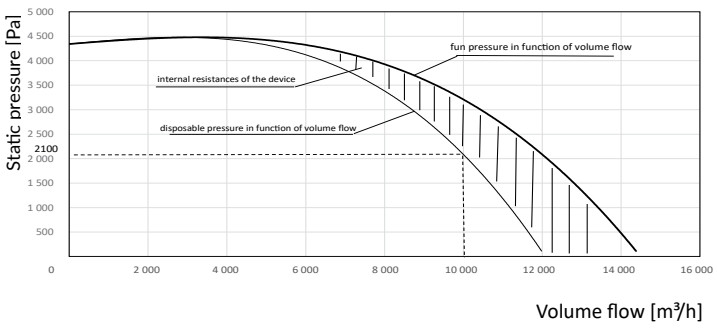
1. Measuring has been carried out from distance 1 metre, at the device at its nominal volume flow.
2. Weight of the device without silencers.

Flow charts

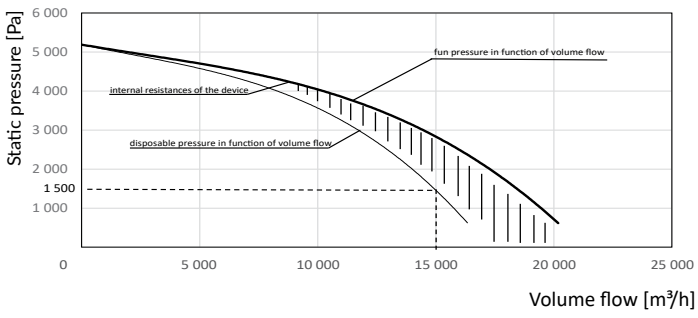
UFO-A-5000-N



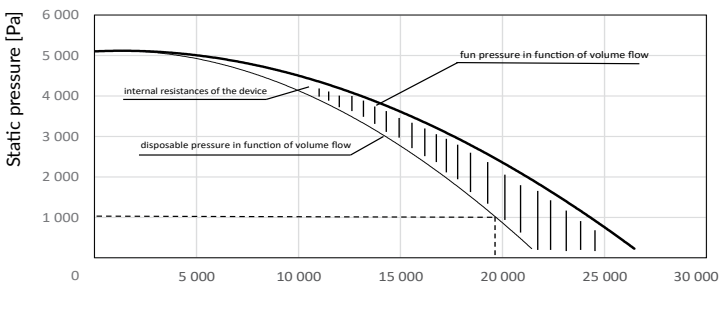
UFO-A-10000-N



UFO-A-15000-N

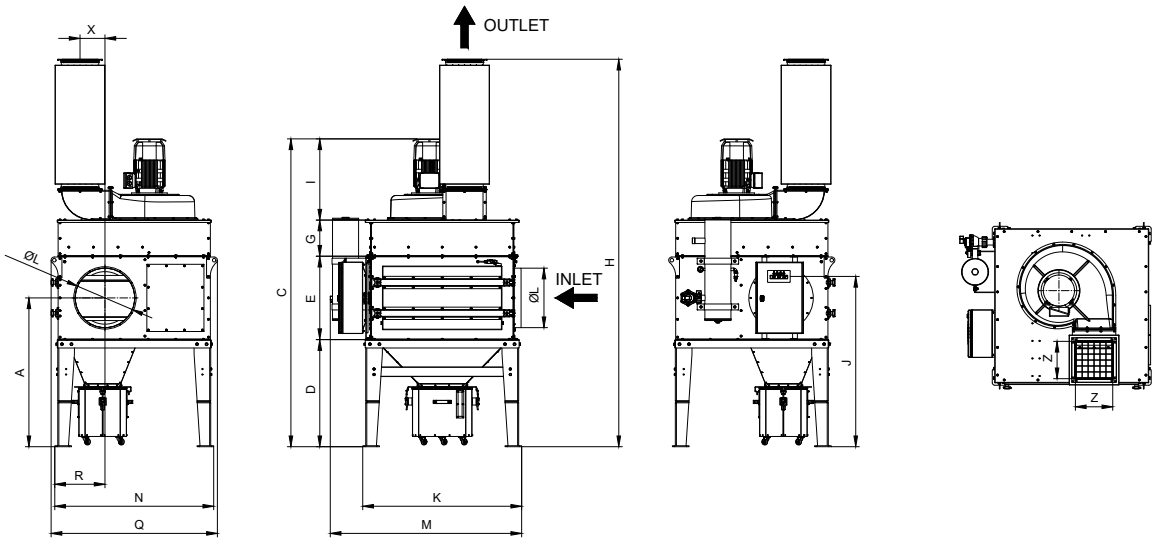


UFO-A-20000-N

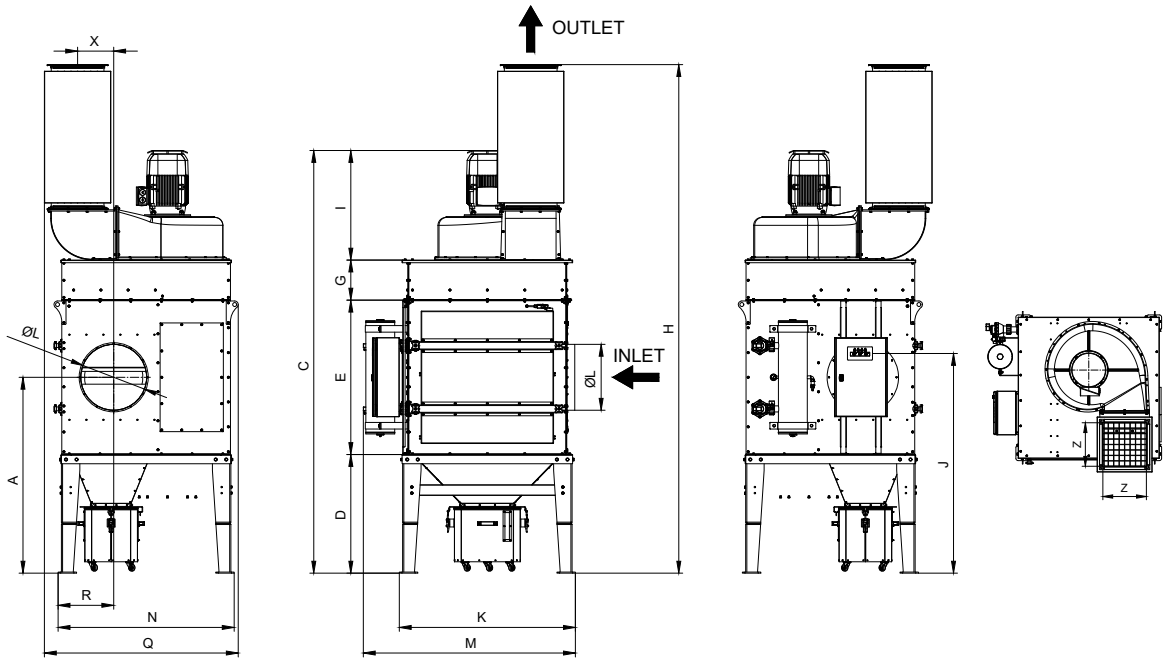


Remark: Flow charts has been prepared for cartridge filters initially polluted with dust after using 1500 electrodes ER24.

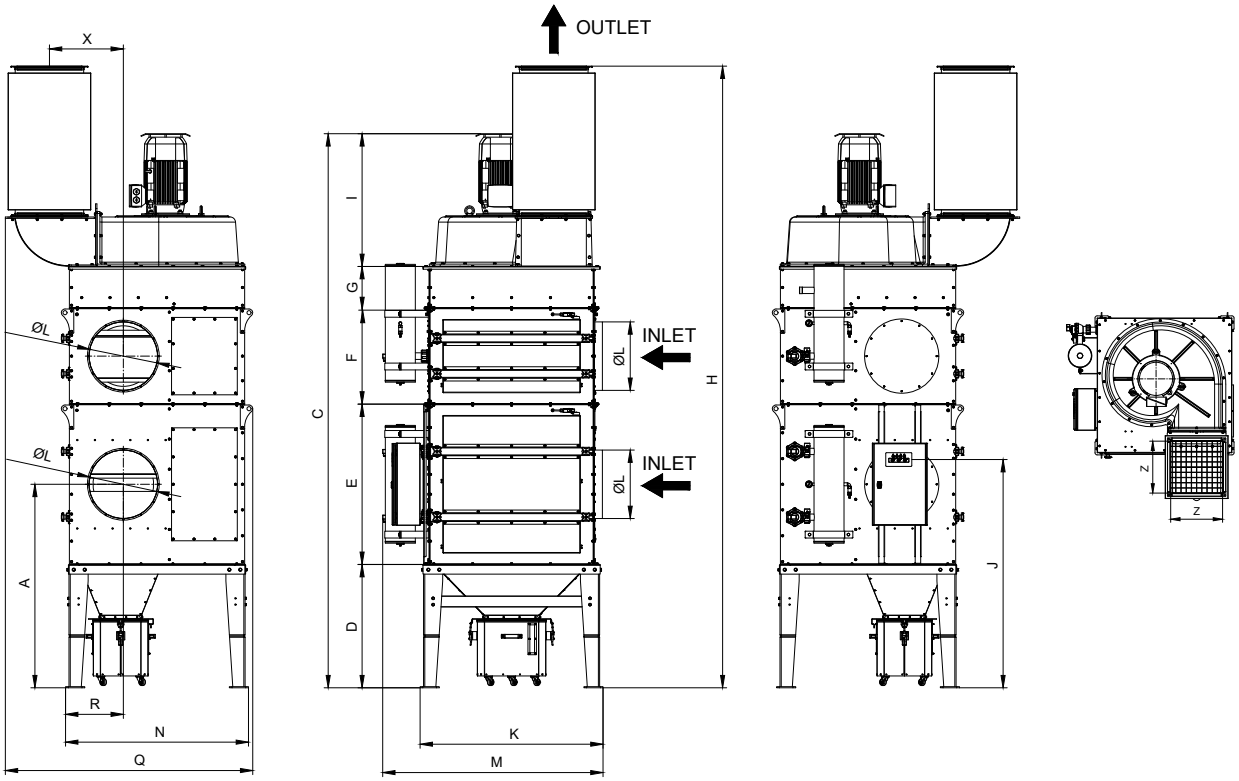
UFO-A-5000-N



UFO-A-10000-N

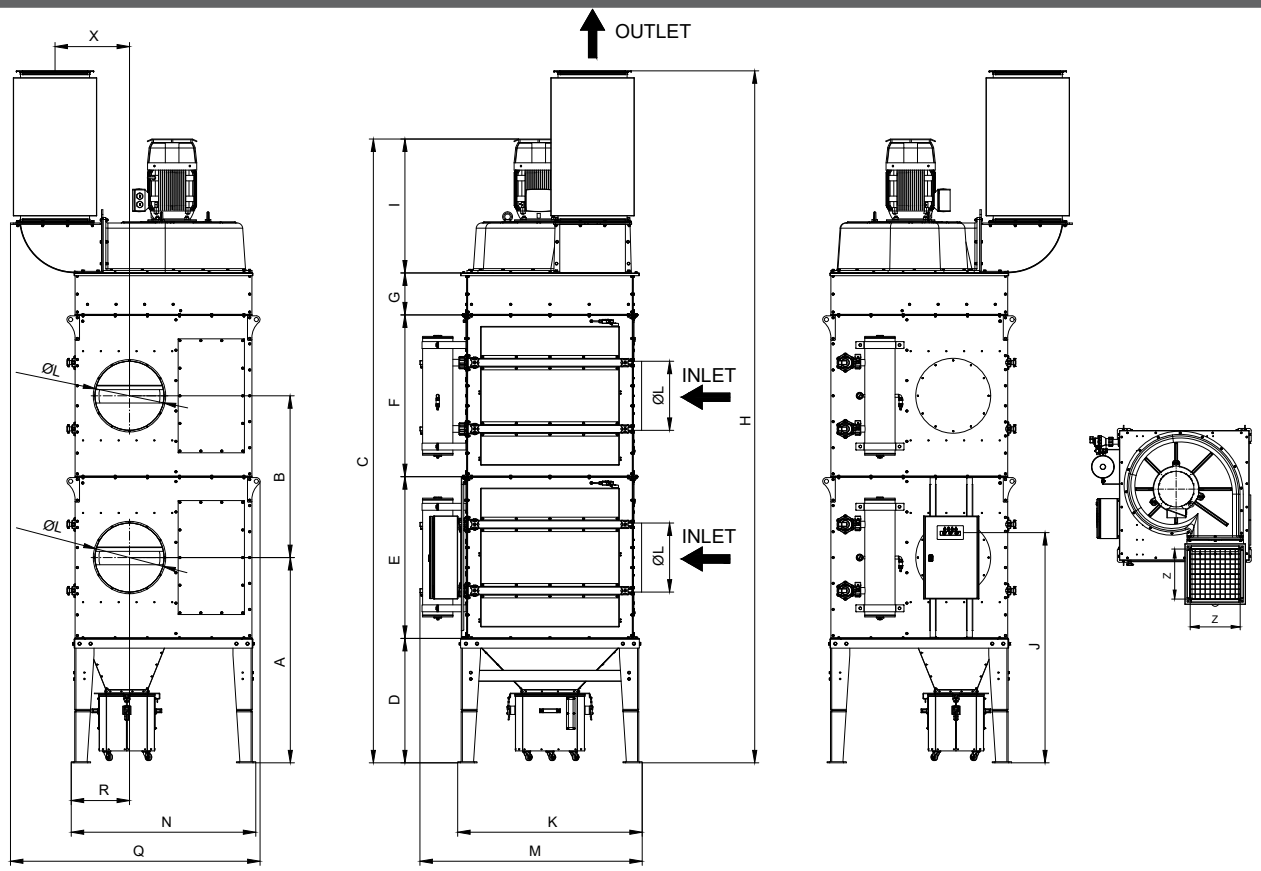


UFO-A-15000-N



UFO-A-N

UFO-A-20000-N



Dimensions

Type	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	J [mm]	K [mm]	ØL [mm]	M [mm]	N [mm]	R [mm]	Q [mm]	X [mm]	Z [mm]
UFO-A-5000-N	1250	–	2590	900	700	–	305	3260	680	1430	1335	500	1610	1335	420	1400	210	315
UFO-A-10000-N	1485	–	3205	900	1170	–	305	3860	830	1665	1335	500	1610	1335	420	1470	275	400
UFO-A-15000-N	1485	–	4045	900	1170	700	305	4540	970	1665	1335	500	1610	1335	420	1805	540	500
UFO-A-20000-N	1485	1170	4515	900	1170	1170	305	5010	970	1665	1335	500	1610	1335	420	1805	540	500

Replaceable parts

Cartridge filter

Type	Part No.	Weight [kg]	Filtration efficiency [%]	Filtration surface [m^2]
PN306638U	800F25	4,2	up to 99,9	30

Additional equipment

Spark catcher

Type	Part No.	Connection diameter [mm]	Weight [kg]	Remarks
D-500	840Ł03	500	55	Spark catcher should be installed at the inlet connection of the UFO-A-N device or within the extraction ductwork. This eliminates the sparks or other glowing particles/embers that might be conveyed along with discharged dust, to protect the filtering unit from fire hazard. It is important to clean the spark catcher net.

Dust spraying unit

Type	Part No.	Remarks
UN-1	804U20	UN-1 dust spraying unit dispenses the $CaCo_3$ (from the container) into the extraction ductwork. The created air-$CaCo_3$ mixture protects the filters from excessive pollution deposits, increases their longevity and reduces the hazard of ignition/fire.

cartridge filters regenerator

RFN – cartridge filters regenerator

Application

RFN cartridge filters regenerator is designed for cleaning the cartridge filters which during the operation of the filtering unit became polluted to such degree that the automatic filter cleaning system is not able to regenerate. This case is an example of the flow efficiency decrease of the device. The device is designed for cleaning the filters that are charged with dry dust particles, non-explosive dusts and with chemically neutral pollutants. The regenerator has been developed for application in closed rooms (indoor application). It is important that in the vicinity of the process should be present servicing people only, because the regeneration process occurs in a closed space.

Structure

The device consists of subsequent elements:

- steel housing,
- container of 33 litres capacity – displacing on wheels,
- a pneumatic system controlling the regeneration process,
- cleaning nozzle,
- vacuum cleaner located under the device.

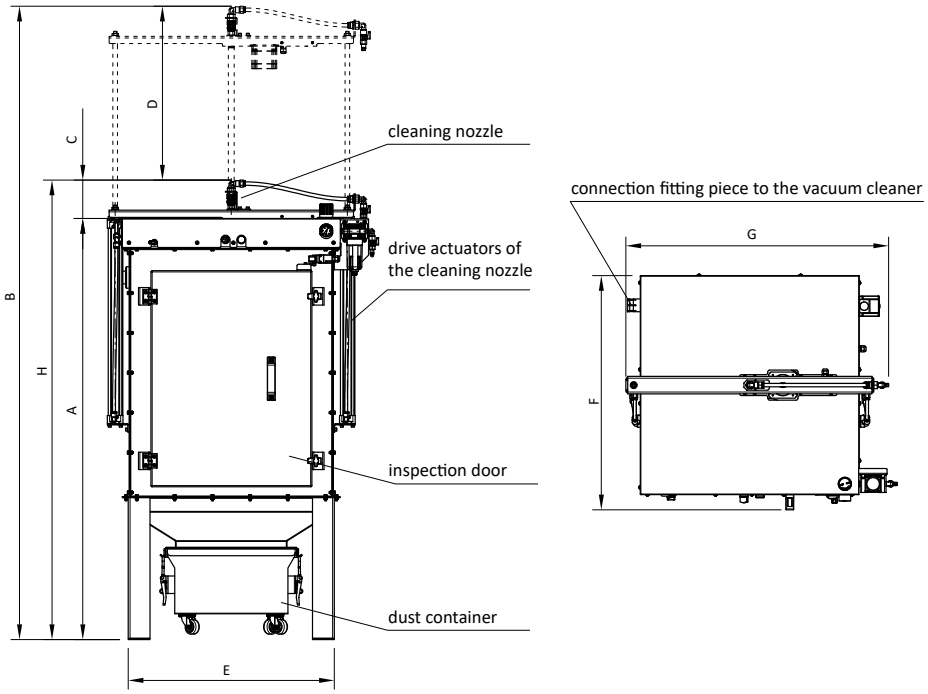
Operational Use

Prior to start-up, the appliance ought to be connected to the compressed air installation 6–8 bar. After the cartridge filter is placed in the regenerator, it should be fixed by a pneumatic blockade. Next, close the revision door of the regenerator. To the back wall of the device, connect the vacuum cleaner hose and switch on the vacuum cleaner. Subsequently, press the button to operate the regeneration process. The filter pleats are cleaned by an air-supply nozzle that is moving up and down. Until the device is manually switched off, the nozzle displaces constantly and automatically. During the cleaning process, the dust impurities accumulate in the container underneath the hopper of the device. The air undergoes decompression in the regenerator housing and is discharged through the vacuum cleaner fitting piece. The appliance provides removal of the smallest contamination fractions that are released during the filter regeneration.

The control panel contains electrical and pneumatic switches in the front of the device.

Technical Data

Type	Part No.	Capacity of the container [dm^3]	Supply voltage [V]	Required air pressure [bar]	Consumption of the compressed air [l/min]	Weight [kg]	Application
RFN-660	805U01	33	230	6–8	1000	190	filter for filtering units: BIG-1000, BIG-2000-N, UFO-S, UFO-4-M/N, UFO-A-N



Dimensions

Nazwa	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]
RFN	1450	2185	130	600	710	808	905	1585

stationary filtering-extraction units for welding stands

ERGO-STW –
welding table with
upward extraction

Purpose

ERGO-STW welding stations are applied as fully ventilated welding posts. They serve for extraction the air polluted with dry dust formed generally during metal welding. The dust is captured very close to the emission source, in two directions: upwards through the self-supporting extraction arm or downwards through the suction chamber with a grate.

Both, ERGO-STW-R and ERGO-STW-R-MINI require connection to the discharge ventilation ductwork (removing the extracted volume outside the building), whereas ERGO-STW-F contains a built-in filtering unit and the cleaned air is recirculated to the process room to avoid further thermal loss in winter.

ERGO-STW-S-MINI is a solution for smaller welding workshops, and especially for welding schools. A compact size table does not require much place in a small school welding box. In this case, the extraction arm ought to be installed separately on a wall or under the ceiling.

Structure

In all versions, the supporting structure is a workbench, with grate. Each table is equipped with a clamp for grounding cable of the welding machine. ERGO-STW-R, ERGO-STW-R-MINI, ERGO-STW-F welding tables, depending on the position of the shut-off damper are able to extract through a suction hood (upwards and sidewards) or through the grate (downwards). Additionally, ERGO-STW-F and ERGO-STW-R are equipped with a rotary table for welding of small elements, and additionally an ERGO LUX extraction arm can be installed on the table.

Workstation table ERGO-STW-R

The complete welding station consists of:

- workbench with a tool locker,
- fan,
- motor switch,
- as option: ERGO LUX extraction arms.

Workstation table ERGO-STW-F

The complete welding station consists of:

- workbench with a tool locker,
- filtering unit,
- as option: ERGO LUX extraction arms.

The filtering unit is equipped with a fan, polyester cartridge filter of polyester fabric, class H13, pneumatic filter regeneration system and a control unit (supply and control). Contamination that has accumulated in the filter surface, is struck down by the cyclical impulses of compressed air. Pneumatic filter regeneration system consists of a compressed air tank, and an electromagnetic valve. Therefore the device has to be connected to the external compression installation.

Workstation table ERGO-STW-R-MINI

Workstation table ERGO-STW-S-MINI

The complete welding station consists of:

- workbench with grate,
- fan,
- electrical unit,
- magnetic hood with a flexible hose.

The complete welding station consists of:

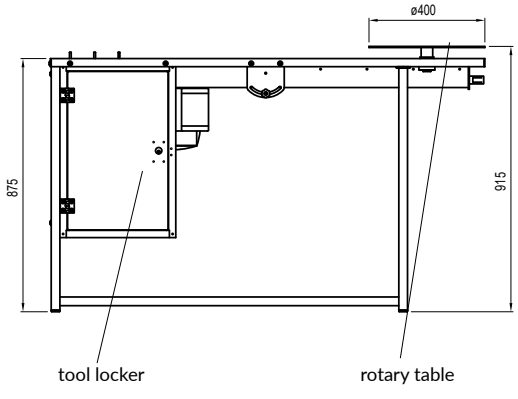
- workbench with grate,
- support for the welding handle,
- screen,
- as option: ERGO LUX extraction arms to be installed on a wall or under the ceiling.

Technical data

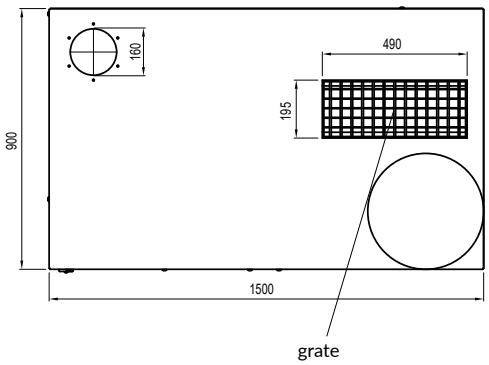
Type	Part no.	Volume flow [m³/h]	Supply voltage [V]	Motor rate [kW]	Weight [kg]	Acoustic pressure level [dB(A)]	Required pressure of compressed air [MPa]	Connection diameter of the fan outlet [mm]
ERGO-STW-R	813S05	1500	3x400	0,55	164	67	–	160
ERGO-STW-F	813S03	1500	230	1,1	250	68	0,6	–
ERGO-STW-R-MINI	813S08	1500	230	0,75	66	78	–	160
ERGO-STW-S-MINI	813S09	–	–	–	15	–	–	–

ERGO-STW-R

Front view

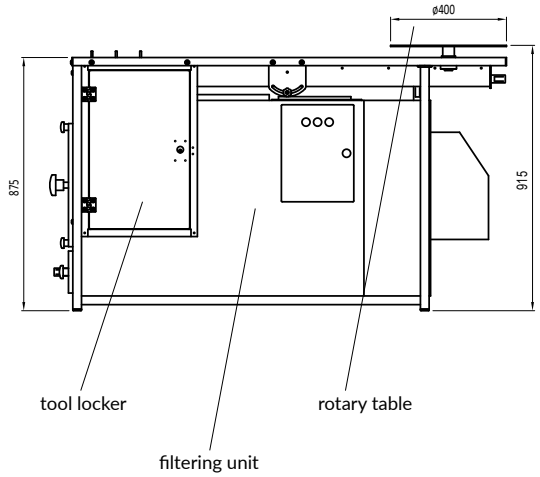


Top view

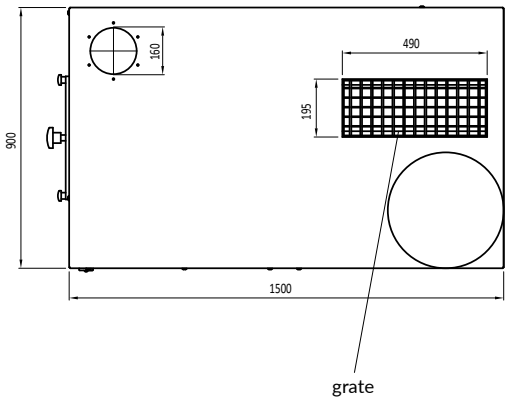


ERGO-STW-F

Front view

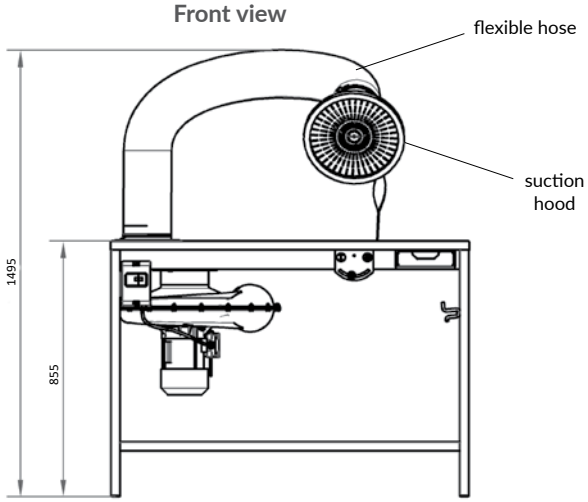


Top view

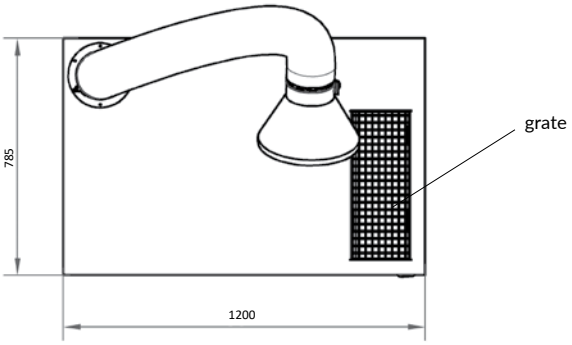


ERGO-STW-R-MINI

Front view

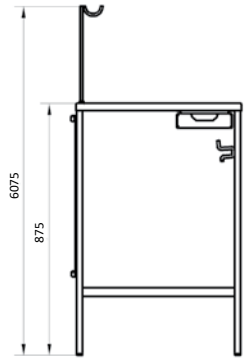


Top view

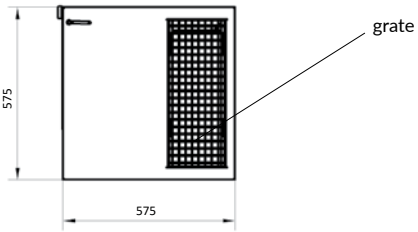


ERGO-STW-S-MINI

Front view



Top view



Replaceable parts

Cartridge filter

	Type	Part no.	Weight [kg]	Filtration efficiency [%]	Remarks
	PN126638U	800F02	6,2	99,9	Purpose: for the filtering unit in ERGO-STW-F welding station. Replacement frequency 1–2 years.

dust separating system for viscous dusts

SOPEL – dust separating system for viscous dusts

Application

SOPEL dust separator systems are meant for extraction and filtration of dusts arising during processes connected with viscous dust emissions, especially efficient for polishing processes of details of stainless steel-, brass and other materials. The system is foreseen for air filtration in three steps, as well as they provide a complete air recirculation back into the process room.

Basic problem during polishing is the necessity of waste separation and filtration of the pollutants as a mixture of fibres from the felt-cotton polishing discs, particles from the polishing pastes and the mists created by wax vapours contained in the polishing pastes. SOPEL efficiently eliminates all the above mentioned contaminants.

Structure

SOPEL is constructed from a row-assembled separate dust-separating filtration devices:

- OC-1 cyclone separator – flow efficiency from 2 000 m^3/h up to 2 700 m^3/h,
- PW-1 bag prefilter – flow efficiency from 2 000 m^3/h up to 8 100 m^3/h,
- PROTON HV electrostatic filter – flow efficiencies 2 000, 4 000 and 8 000m^3/h up to 8100 m^3/h.

OC-1 cyclone separator captures large fibre particles mixed with particles arising from polishing pastes, representing approx. 90–95% from the total capacity of the total extracted contamination. Therefore it is necessary to empty the waste container from the collected dusts everyday.
PW-1 bag prefilter captures fine dusts that accumulate on the internal surface of the filtration bags that serve, at the same, as waste containers. These dusts make up approx. 5–10% of the total capacity of the dusts. Filtration bags, along with the collected dust, ought to be replaced periodically for new ones.

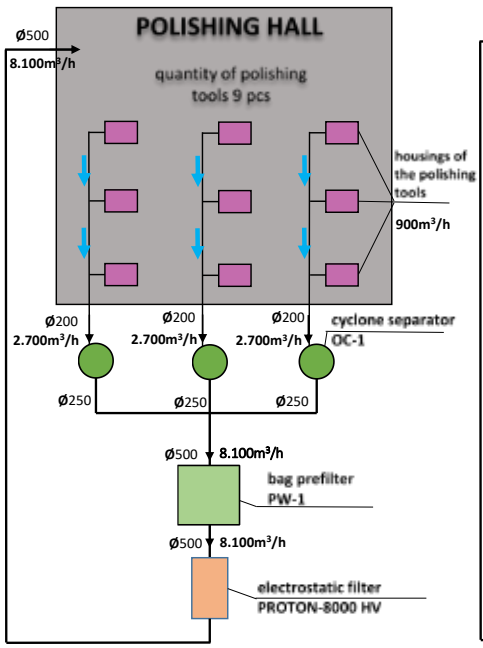
PROTON HV electrostatic filter captures the most fine dust particles, along with the wax vapour. The contamination accumulates on the surface of the plates of the capturer. These dusts do not constitute more than 1% of the total dust volume. Every several days, the capturer should be washed up in a container with water and detergent. Electrostatic filter us equipped with a fan that provides the air flow through all the devices of the system.
The air that is cleaned by SOPEL, can be directed directly from the PROTON HV electrostatic filter back to the process room. Regardless of the SOPEL system, it is recommended to install a small-dimension recuperator to deliver fresh air into the room.

Operational use

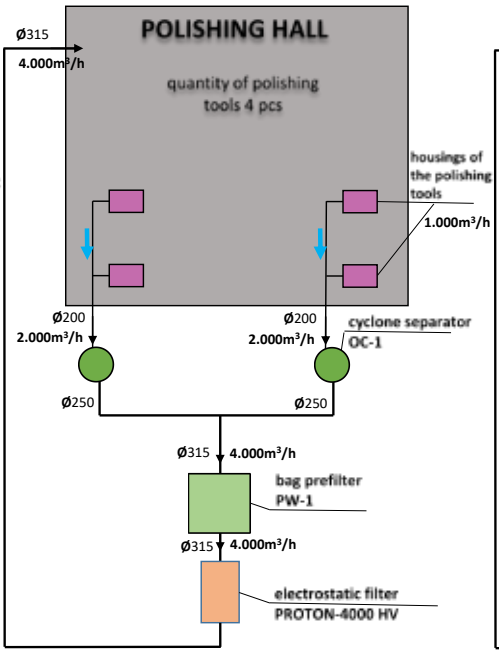
Essential condition for proper function is the efficient extraction of the dust-laden air directly from the polishing tools housings. The connection to the polishing tool should have 125 mm diameter. Depending on the quantity of the polishing tools, it is important to select the right dimension of the conduits that are joining the polishing tools to the OC-1 cyclone separator, and to select the suitable diameters of the connectors of the PW-1 bag prefilter.

The air that has been cleaned in the cyclone separator, bag prefilter and in the electrostatic filter, can be returned back to the process room.

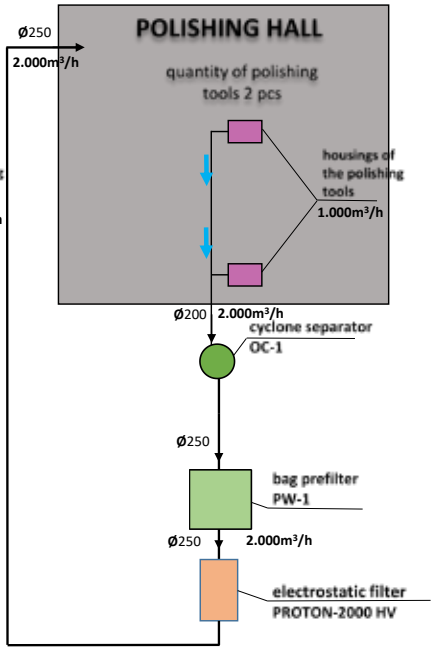
Dust separating system for stationary polishing tools SOPEL-8000



Dust separating system for stationary polishing tools SOPEL-4000



Dust separating system for stationary polishing tools SOPEL-2000



Equipment for the SOPEL system

Type	Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Motor power [kW]	Equipment		
				Cyclone separator OC-1	Bag prefilter PW-1	Electrostatic filter PROTON
				pcs	pcs	pcs
SOPEL 2000	2000	4000	2,2	1	1	1x2000 HV
SOPEL 4000	4000	4000	5,5	2	1	1x4000 HV
SOPEL 8000	8100	4500	11,0	3	1	1x8000 HV

Technical data for the devices of the SOPEL system

Sort of the device	Type	Part No.	Volume flow [m³/h]	Weight [kg]
Cyclone separator	OC-1	802O23	2000–2700	95
Bag prefilter	PW-1	815F06	2000–8100	320
Electrostatic filter	PROTON 2000 HV	800E03	2000	198
Electrostatic filter	PROTON 4000 HV	800E04	4000	218
Electrostatic filter	PROTON 8000 HV	800E05	8100	397

OC-1 – cyclone separator

Application

OC-1 cyclone separator is meant for cleaning the air from non-abrasive dust of particle size above 5µm, both dry and viscous. The application is appropriate for fibrous, wood-, cellulose-based particles. On the other hand, do not use it for quartz-, corundum dusts. One of the applications is the removal of dusts, arising during the polishing of stainless steel, where emission of fibrous mixture as abrasive particles from the polishing discs and polishing pastes are observed. Device dimensions provide possibility of dust separation efficiency within 95–99%. The appliance is not equipped with an extraction fan. The fan ought to be placed at the vacuum side of the installation, as a first filtration stage. Further, the partially cleaned air should be directed to the filtering unit of higher class, as a device equipped with a suction fan.

Structure

The appliance is constructed of a cylindrical steel housing with a conic cyclone inside, with a revision cover. In the bottom part is located a waste container, with a discharge door to remove the accumulated waste. The connections are located in the upper part of the separator. Non-abrasive dusts are the construction target of the OC-1 separator, of light-weight construction of zinc-coated steel, of not significant thickness of 1 mm, reducing the manufacturing costs (in comparison with the heavy cyclone separators of 3–4 mm sheet thickness). OC-1 separators can be both of indoor and outdoor application. They ought to be fixed by 4 anchor bolts to the floor.

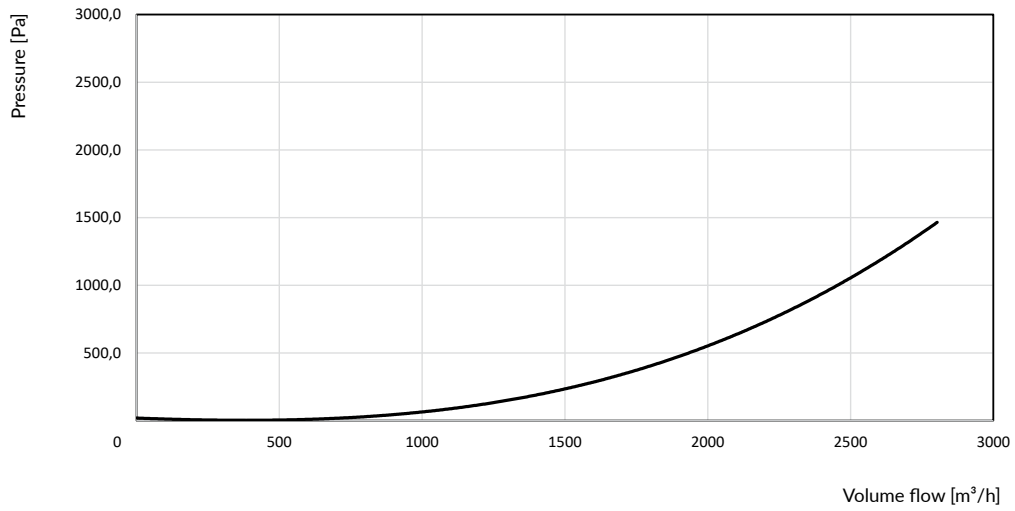
Operational Use

The inlet connection (of the cyclone) ought to be connected via 200 mm duct, whereas its outlet connection with 250 mm duct. Whereby, the inlet ought to be equipped with a conduit supplying the polluted air. The outlet connection should be integrated with the extraction fan, or with the subsequent filtering unit. It is important to empty systematically the waste container.

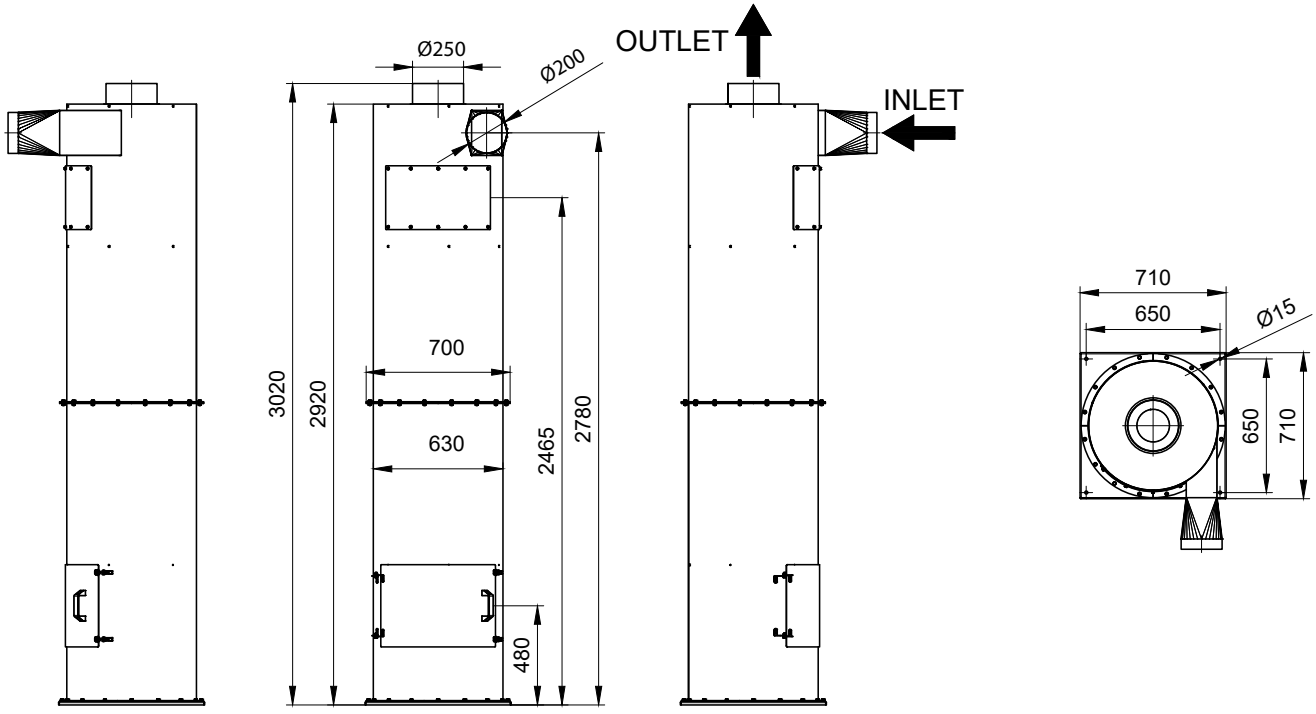
Technical Data

Type	Part No.	Recommended volume flow [m^3/h]	Capacity of the waste container [dm^3]	Weight [kg]	Diameters of the connections [mm]	
					inlet	outlet
OC-1	802O23	2000-2700	200	90	200	250

Flow Charts



Dimensions



PW-1 – bag pre-filter

Application

PW-1 bag pre-filter is applied in many industrial fields, for coarse air filtration of viscous fibrous dusts. Additionally, the filtration bags serve as collective bags for the accumulated dust.

Structure

The applliance consists of subsequent elements:

- filtration chamber — containing 4 bag filters — class G4,
- doors to the filtration chamber — 4 pieces — for easy replacement of the filtration bags,
- connections — one inlet, one outlet.

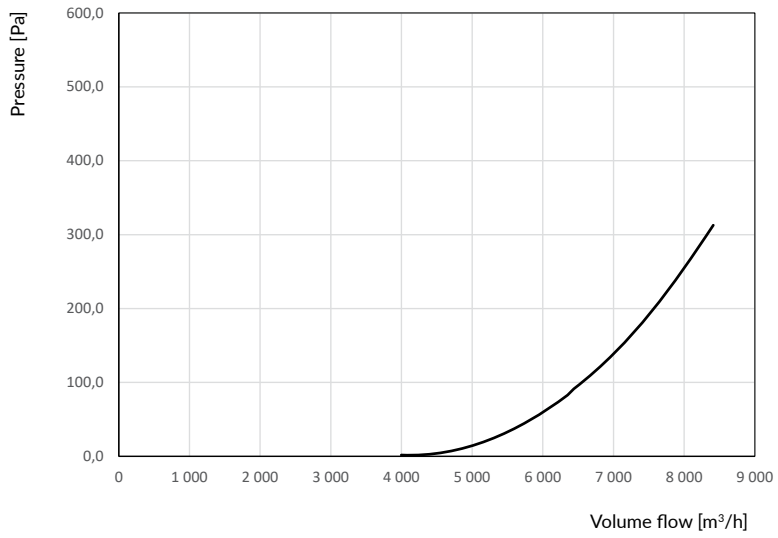
Operational Use

The polluted air is drawn in, through the connection in the upper part. Inlet and outlet are of standard diameters Ø500 mm. By means of suitable reducers, it is easy to adapt the device to the most convenient connection variant. PW-1 bag pre-filter captures fine dusts that accumulate on the internal surface of the filtration bags. Filtration bags, along with the accumulated dust inside, should be periodically replaced for new ones, at the moment when the device flow efficiency decreases.

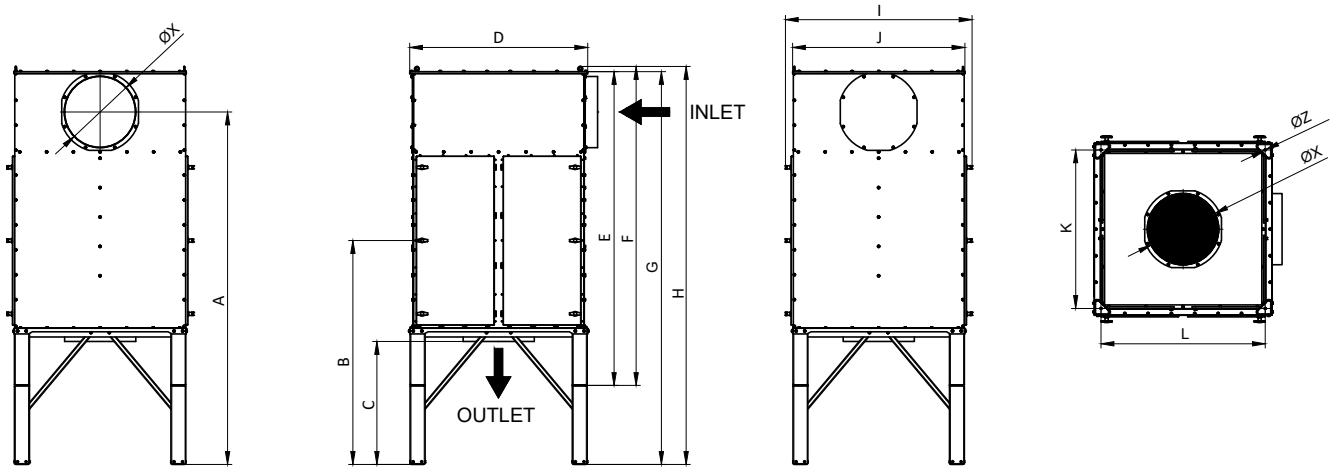
Technical Data

Type	Part No	Recommended volume flow [m^3/h]	Weight [kg]	Diameters of the connections [mm]	
				inlet	outlet
PW-1	815F06	2000–8100	320	500	500

Flow Charts



Dimensions



Type	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	ØZ [mm]	ØX [mm]
PW-1	2475	1570	865	1250	2205	2240	2760	2795	1310	1210	1115	1155	15	500

Reducers

Type	Part No.	Remarks
R-500/315-PW	829R58	to reduce the inlet and outlet of the bag pre-filter in application with the SOPEL-4000 system, 2 reducers for 1 set
R-500/250-PW	829R59	to reduce the inlet and outlet of the bag pre-filter in application with the SOPEL-2000 system, 2 reducers for 1 set

Replaceable filters

Type	Part No.	Quantity of filters	Class	Filtration material	Application
PW-1	843W16	4	G4	polyester	Bag pre-filter PW-1

PROTON-HV –
electrostatic stand filter

Application

PROTON-HV filtering unit is an efficient solution for filtration of dusts arising during processes accompanied by emission of viscous dusts, especially for polishing of details of stainless steel, brass and other materials. PROTON-HV cooperates in a SOPEL system, as the last filtration stage. Due to its high vacuum, it overcomes the flow resistances of the cyclone separator and the pre-filter, in a configuration where these elements are placed in front of the PROTON-HV system. Maximum temperature of the conveyed air should not exceed +60°C. The device has to be installed inside the buildings (indoor application).

Structure

PROTON-HV consists of subsequent elements:

- steelsheet housing,
- radial fan — in a sound absorbing housing, placed nearby,
- net filter — at the device inlet,
- ioniser section,
- catcher section,
- control unit — to start the device and control its function; it is installed on the device housing, but it can be fastened in an another place as convenient for the operator.

The appliance is manufactured as a stationary version, in three sizes, varying in volume flows: 2000 m^3/h, 4000 m^3/h and 8000 m^3/h. It is equipped with a set of legs that has to be fastened to the floor.

Operational use

After the start, the automation system provides continuous work of the fan and cleaning the air that flows through. As the first stage, the polluted air passes the net filter capturing larger coarse fractions. Subsequently, the air passes the ioniser section to load the particles positively. As a last stage, in the capturer, the particles are sedimenting on the negatively charged plates. After the capturer, the cleaned air is recirculated through the fan, back into the process room. The filtration efficiency is approx. 97%.

In case of application for polishing dusts, the maintenance consists in cleaning of the ioniser- and the capturer section from the deposited viscous contamination. This is carried out by washing these sections in a container with water and detergent.

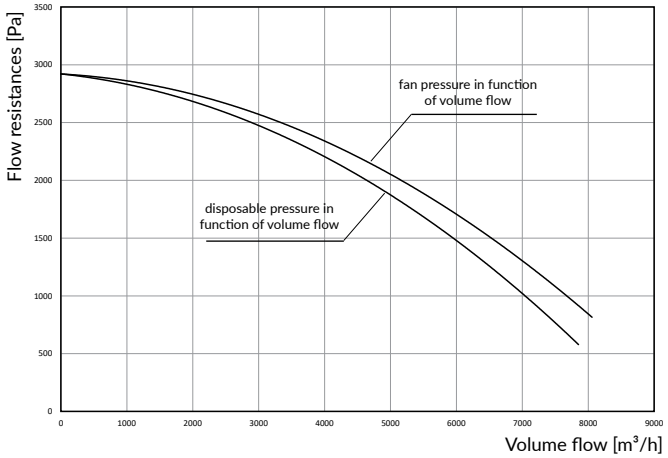
Technical Data

Type	Part No.	Volume flow in the work point [m³/h]	Vacuum in the work point [Pa]	Supply voltage [V]	Motor rate [kW]	Acoustic pressure level [dB(A)] measured from*:		Weight [kg]
						1 m	5 m	
PROTON-2000 HV	800E03	2000	2700	3x400	5,5	75	61	155
PROTON-4000 HV	800E04	4000	2800	3x400	7,5	77	63	156
PROTON-8000 HV	800E05	8000	3250	3x400	15	80	71	309

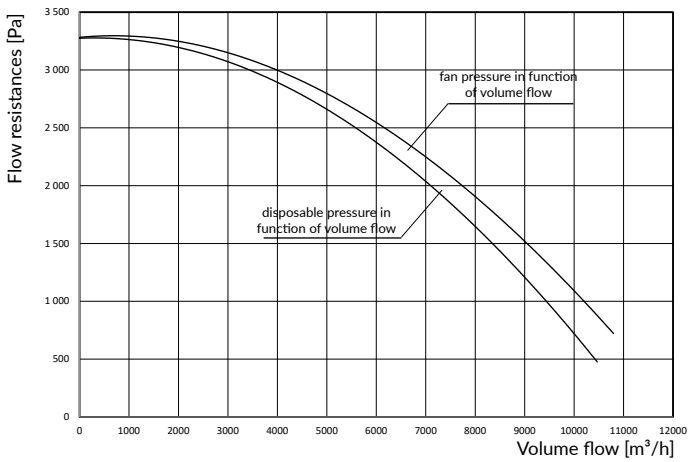
* Measuring of the acoustic pressure level has been performed within the system with silencers T-WPA-BOX at the inlet and outlet of the fan chamber.

Flow Charts

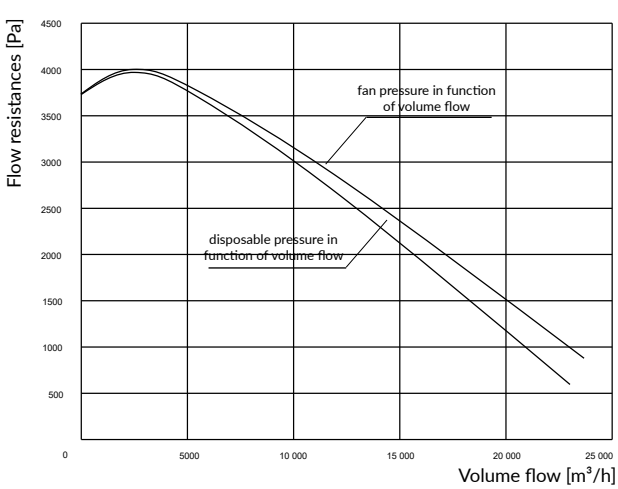
PROTON-2000 HV



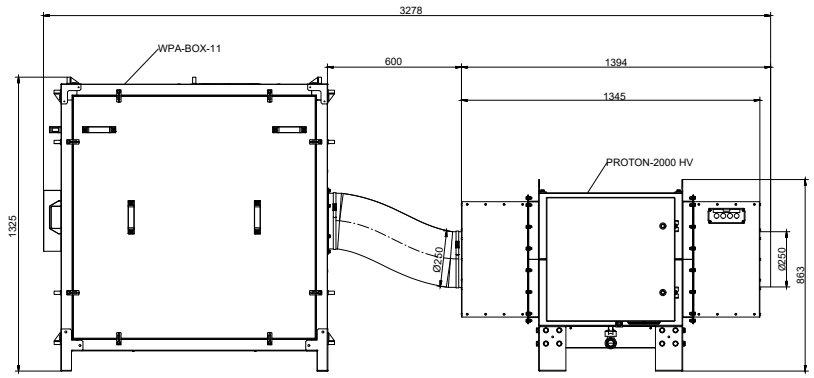
PROTON-4000 HV



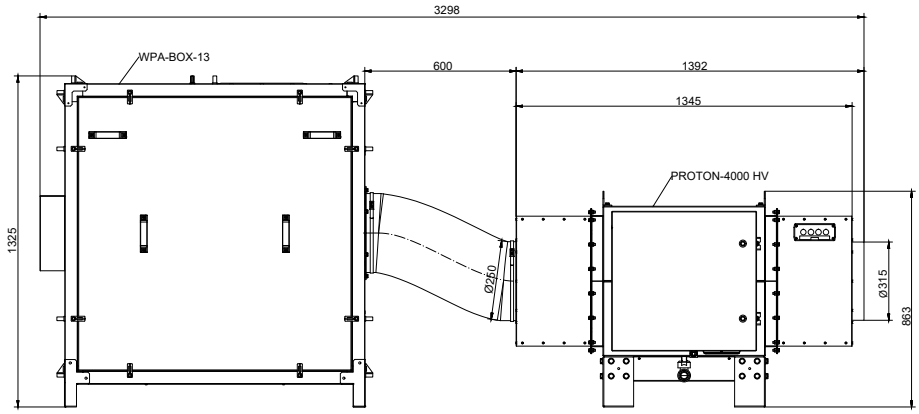
PROTON-8000 HV



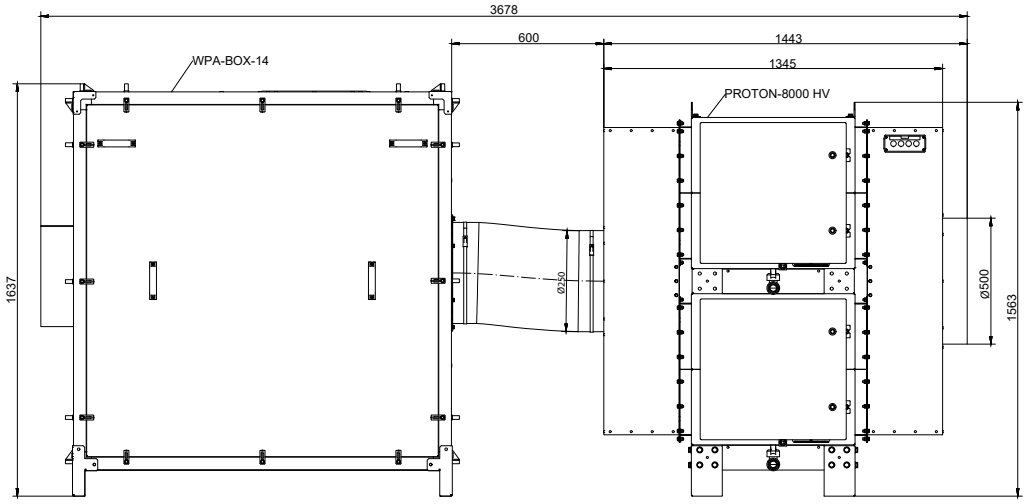
PROTON-2000 HV



PROTON-4000 HV

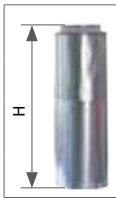


PROTON-8000 HV



Additional accessories

Silencer



Type	Part no.	Inlet [mm]	Outlet [mm]	Height H [mm]	Cooperating fan chambers	Remarks
T-315 WPA-BOX	830T28	250	315	1250	11	The set consists of: reducer, silencer, silencer bracket. Install the set on the inlet ferrule or on the outlet of the WPA-BOX fan chamber.
T-400 WPA-BOX	830T29	315	400	1300	13	
T-500-WPA-BOX	830T37	400	500	1300	14	

Air discharge

Type	Part no.	Diameter inlet/outlet/height [mm]	Weight [kg]
E-315	842W39	315/315/700	14
E-400	842W40	400/400/900	18
E-500	842W41	500/500/1100	24

filtering unit for various dusts

STRONG – filtration of dry fine dust

STRONG-1000-N

STRONG-2000-N

STRONG-5000-S

Purpose

As stationary filtering units – STRONG are proper solutions for cleaning the air from dry dust, arising during various manufacturing processes, in metal processing industry, chemical industry, food production, pharmaceutics, plastic processing and others. Especially, they are appropriate for dust capturing during grinding. Maximum temperature of the conveyed air is 60°C. Due to the automatically regenerated cartridge filter of polyester fabric, the dust particles are separated on the outer surface of the filter. Subsequently, the impurities are struck cyclically down by impulses of compressed air.

Structure

STRONG consists of following elements:

- housing of steel sheet,
- radial fan – housing of cast aluminium,
- high-efficiency cartridge filters – polyester fabric – filtration efficiency 99,9%,
- compressed air regeneration system for filters – consists of a compressed air tank and electromagnetic ,
- sparks catcher,
- waste container (metallic, on wheels),
- connection ferrules – for direct installing of extraction arms (STRONG-1000-N, STRONG-2000-N) or to connect the discharge ductwork through a flange connector (all version of STRONG),
- silencer at the fan outlet,
- control unit – to operate the device and control its function.

Operational use

The appliance ought to be fastened firmly to the floor. Prior to start-up, connect it with the external compressed air installation of pressure 6–8 bar. Install the extraction arms (or connect the extraction installation) to the suction connectors. After the device start, the control unit ensures a continuous work of the fan and automatic filter cleaning by means of periodical impulses of the compressed air – without work interruption. The cartridge filters ought to be replaced after a period of use (every 1–2 years). Each device is equipped with a waste container with a viewing hole to control the fill-up state of the container. The fan outlets are equipped with silencers. User can set the silencer in another position by turning it on the outlet ferrule. STRONG-5000-S can be additionally equipped with an extra silencer to improve the acoustic performances.

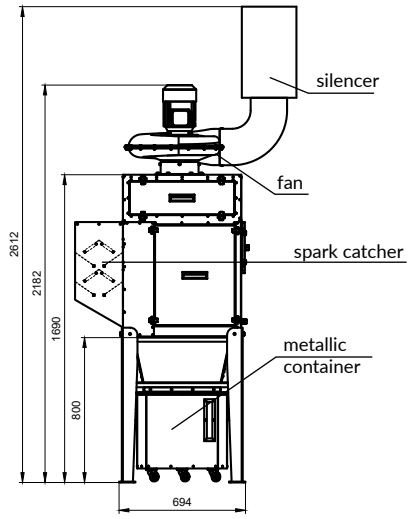
Technical data

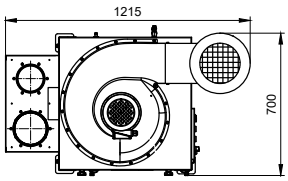
Type	Part no.	Maximum volume flow [m³/h][1]	Maximum vacuum [Pa]	Supply voltage [V]	Motor rate [kW]	Acoustic pressure level [dB(A)] from a distance of[2]:		Capacity of the waste container [dm³]	Compressed air consumption [Nm³/h]	Weight [kg]	Suction connections[3]
						1 m	5 m				
STRONG-1000-N	804U42	1750	2000	230	1,5	71*	65*	72	0,7	181	1xØ125 1xØ160
STRONG-2000-N	804U43	3150	2250	3x400	3,0	72,5*	66*	72	1,4	253	1xØ160 1xØ200
STRONG-5000-S	804U59	7200	4200	3x400	5,5	73,5	69	72	2,8	619	1xØ400

1. Volume flow was measured at clean filters.
2. Noise level of STRONG-5000-S was measured with the attached additional silencer.
3. Full reference for the ERGO LUX extraction arms is represented on separate catalogue cards.

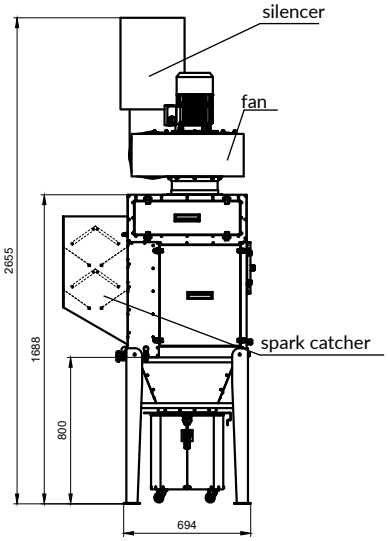
* Measurement has been carried out on the device equipped with an extraction arm.

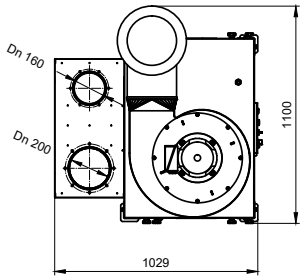
STRONG-1000-N



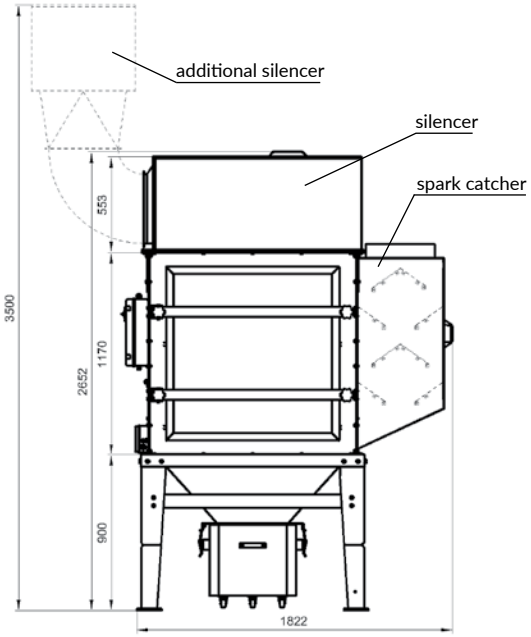


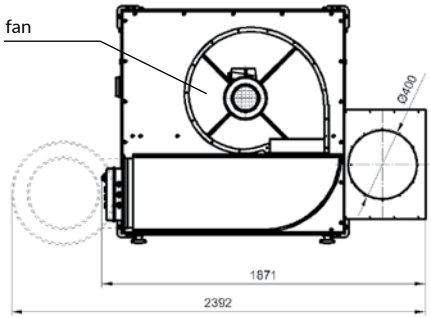
STRONG-2000-N





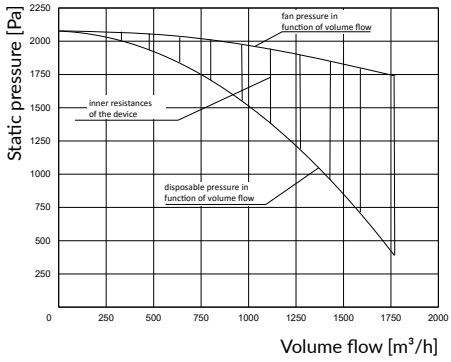
STRONG-5000-S



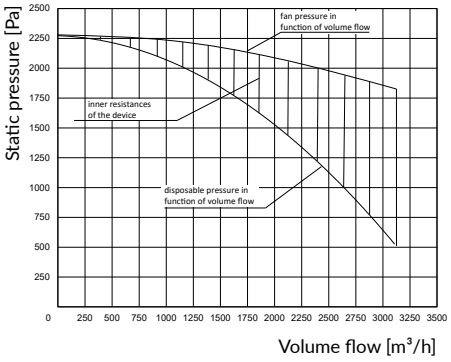


Flow charts

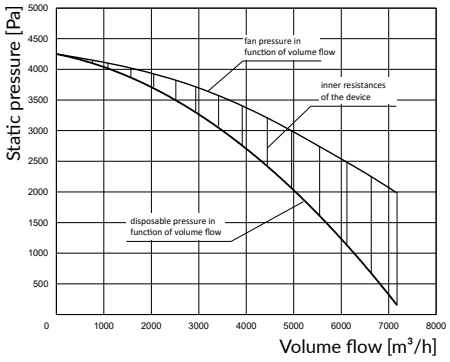
STRONG-1000-N



STRONG-2000-N



STRONG-5000-S



Replaceable elements

Cartridge filter

	Type	Part no.	Weight [kg]	Filtration efficiency [%]	Quantity of filters
	PN105032T	800F20	4,2	99,9	1 pc. inSTRONG-1000-N 2 pc. in STRONG-2000-N 4 pc. in STRONG-5000-S

On demand we offer cartridge filters of other filtration class.

Additional elements (refers to STRONG-5000-S)

Reducer 400x400/Ø500 mm

	Type	Part no.		Type	Part no.		Type	Part no.
	ZR-UF	829R82		TK-UF	830T92		KL-UF	829K97

ROBUST – filtration of dry coarse dust

ROBUST-1000

ROBUST-2000

Purpose

ROBUST units have been developed for cleaning the air from dry and coarse dust of size above 5 µm, arising during various technological processes. Especially, they are designed for capturing the dusts during grinding, refilling the powdery materials and other dust emitting processes in such industries as chemical, food processing, pharmaceutical, plastics processing etc.

Structure

ROBUST consists of subsequent elements:

- housing of steel sheet,
- radial fan – cast aluminium housing,
- cartridge filter – of cellulose-polyester fabric – class F9,
- manual filter cleaner – removing the dusts deposited on the cartridge filter surface,
- sparks catcher,
- drawer to collect the struck off dusts,
- connection fitting pieces – to mound the extraction arms or to connect hoses,
- silencer – at the fan outlet,
- motor protective switch – with short-circuit- and overload protection.

Operational Use

The dust-laden air is drawn through connection fitting pieces, located on the inlet side of the device. To the connections can be installed ERGO LUX extraction arms or hoses, directed to the contamination source. ROBUST-1000 is equipped with one Ø125 mm and one Ø160 mm connection, whereas ROBUST-2000 with one Ø160 mm and one Ø200 mm connection. By means of adequate reducers User can easily adapt both devices into the most convenient connection variant. The unit is delivered with two fitting pieces that are plugged, as manufacturer's state. User decides on how to use the connection ferrules.

It is important to use the manual filter cleaning device after certain time, as the flow capacity significantly drops during the use. Simply, turn the knob of the cleaning device to shake the dusts off from the filter surface. Subsequently, the struck off impurities are accumulating in the waste drawer, that has to be emptied periodically. Cartridge filters must be replaced for new after a period of use (approx. 1–2 years).

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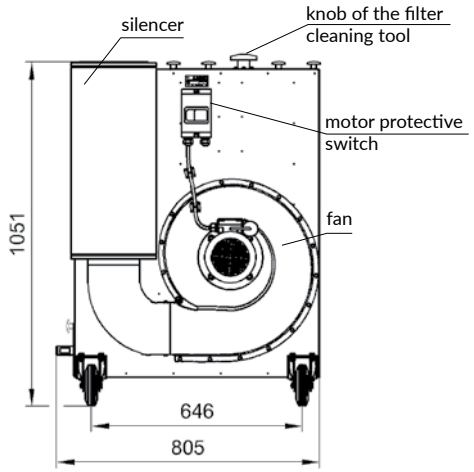
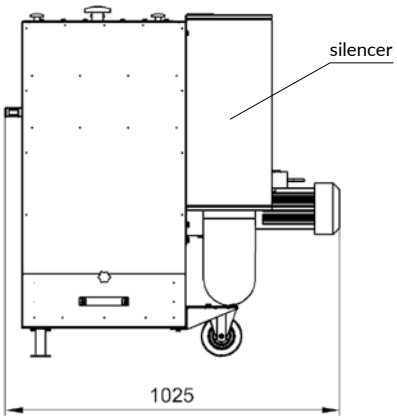
Technical data

Type	Part no.	Maximum volume flow [m³/h][1]	Maximum vacuum [Pa]	Supply voltage [V]	Motor rate [kW]	Capacity of the waste drawer [dm³]	Acoustic pressure level [dB(A)] from a distance of:		Weight [kg]	Intake connections[2]
							1 m	5 m		
ROBUST-1000	800O87	1100	1700	230	0,75	39	70	61,5	100	1xØ125 mm 1xØ160 mm
ROBUST-2000	800O89	2000	2000	230	1,5	80	73	66,5	152	1xØ160 mm 1xØ200 mm

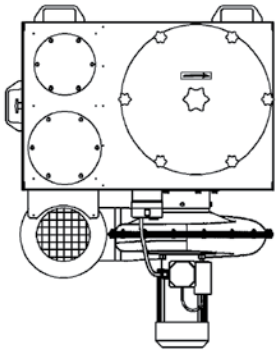
1. Volume flow has been measured at the clean filters.
2. Workranges of ERGO LUX extraction arms is represented on separate catalogue cards.

ROBUST-1000

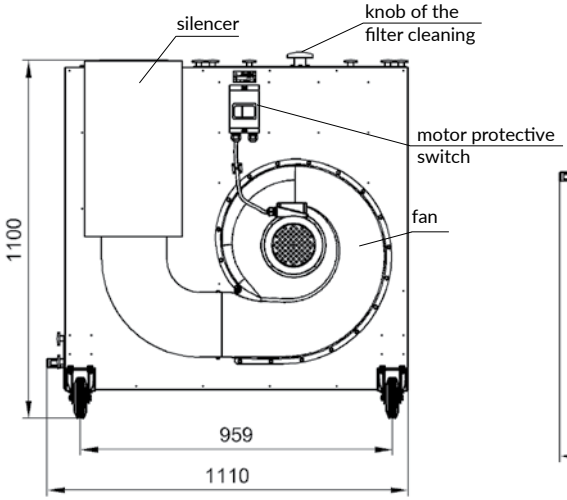


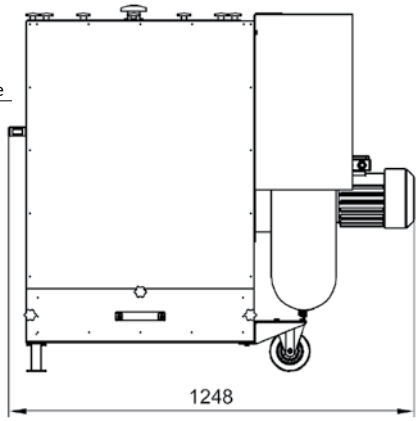


Top view

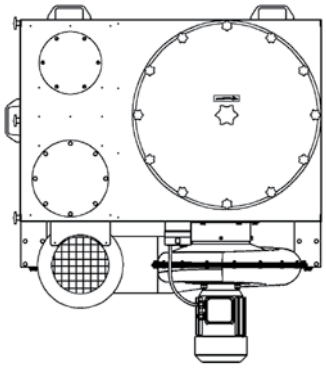


ROBUST-2000





Top view

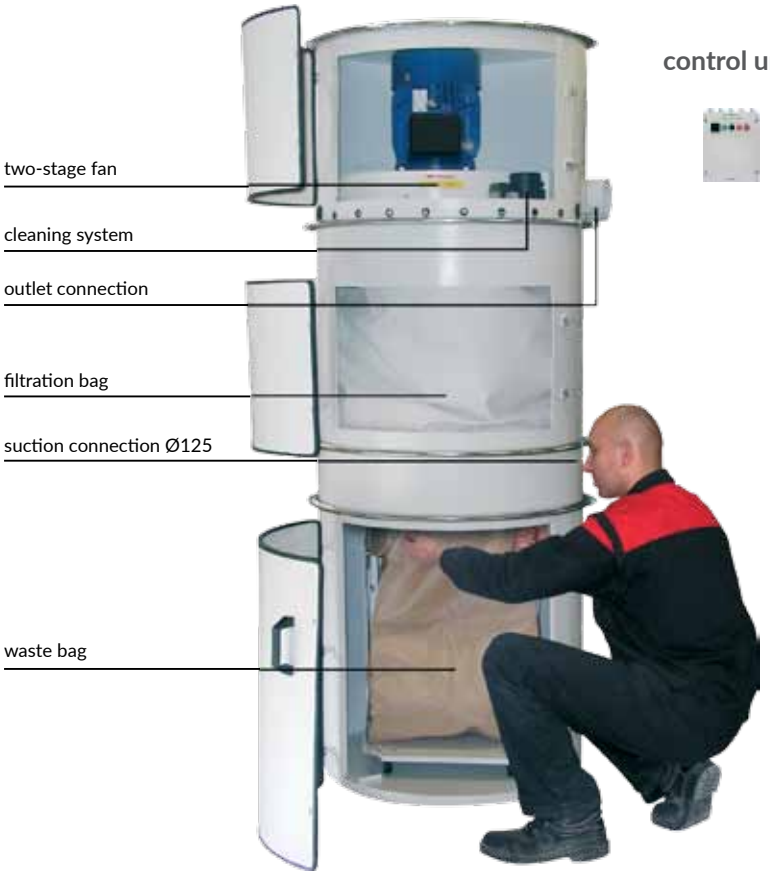


Replaceable parts

Cartridge filter

Type	Part no.	Weight [kg]	Class	Filtration efficiency [%]	Quantity of filters	Application
CP163868U	800F06	9,6	F9	95	1	ROBUST-1000
CP165768U	800F07	13,2	F9	95	1	ROBUST-2000

WE-5,5/D – wood dust capturing from wood processing machines



Purpose

WE-5,5/D dust separator is designed for wood dust extraction from wood processing machines as well as for removal the impurities arising during grinding the non-sparking materials, iron cast processing, powder painting, packing/repacking the powdery materials etc.

Structure

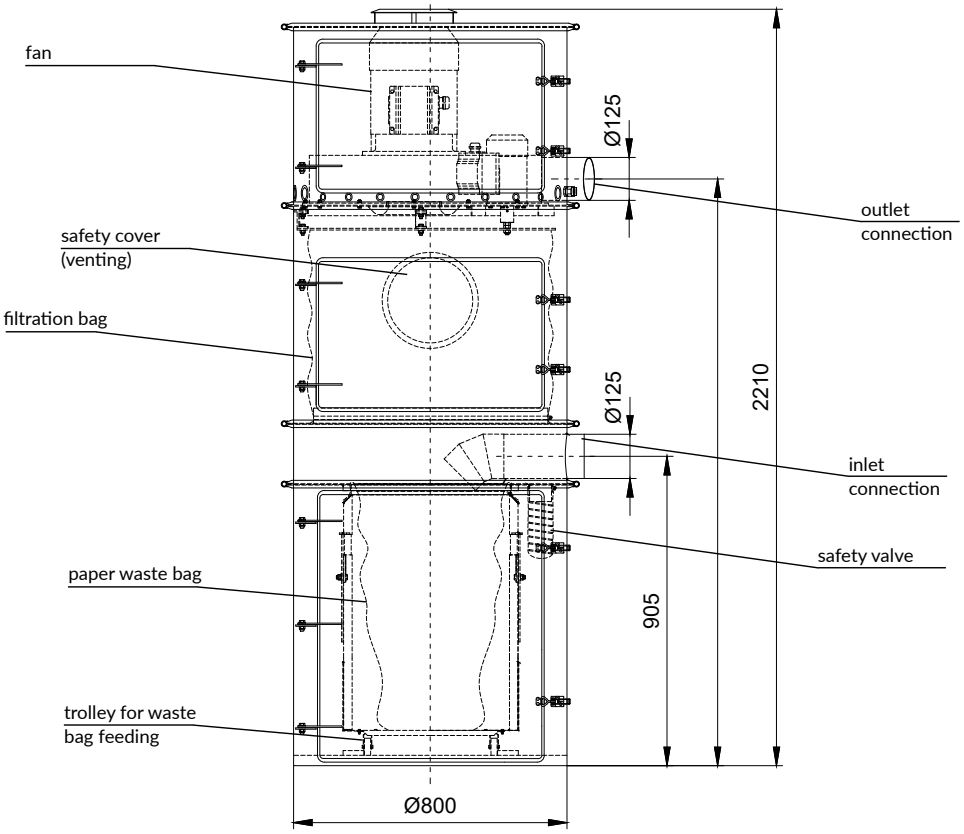
The dust separator consists of a cylindrical housing made of 4 segments, connected together with girdle clamps. In the upper part of the housing is located a fan. Under the fan there is a fabric filtration bag, where the polluted air is supplied. The separated impurities are falling into the lower waste collecting bag. The lightweight dust fractions are depositing on the internal surface of the filtration bag, where they are cyclically shaken into the paper bag by the vibration mechanism. The suction fitting piece (of the separator) ought to be connected through polyurethane hoses with the processing machine where the dust is captured. The device is controlled by an electrical unit (fan ON/OFF).

The function of the vibrator motor starts automatically, right at the moment of the fan switch-off. Additionally, the device is equipped with a fill-up state sensor of the waste bag. When the waste bag is filled up, it has to be drawn out on a trolley.

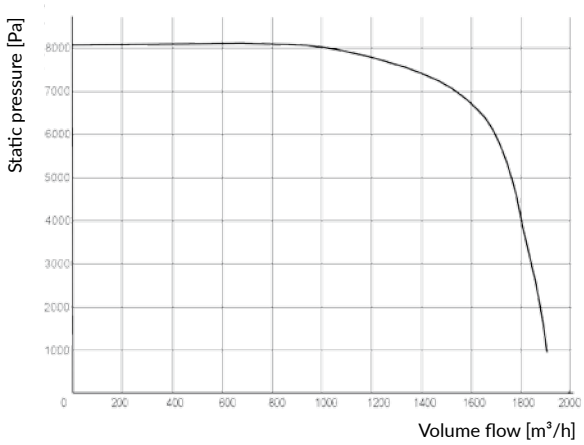
Technical data

Type	Part no.	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]	Inlet diameter [mm]	Outlet diameter [mm]	Acoustic pressure level [dB(A)] from a distance of:		Filtration efficiency [%]
										1 m	5 m	
WE-5,5/D	800096	3x400	5,5	55	1890	8000	~212	125	125	88,7 (75,5)*	84,7 (68,7)*	98

*The noise level measurement was taken with attached silencer at the outlet.



Flow charts



Filtration bag

	Type	Part no.
	WF-WE	876W30

Waste collecting bag

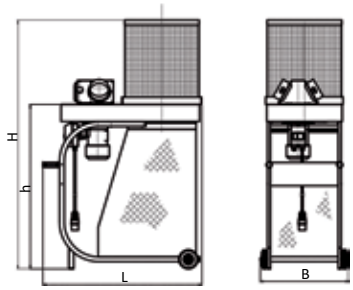
	Type	Part no.
	WZ-WE	876W31

EGO – wood dust capturing from wood processing machines

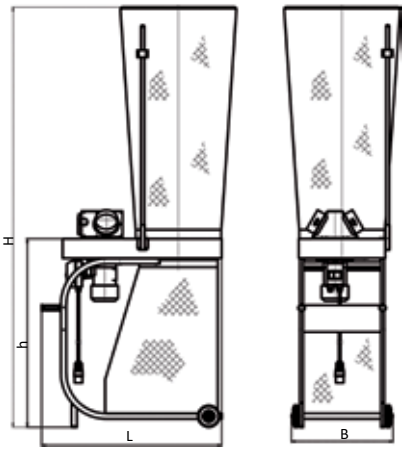
Purpose

EGO-type dust separators are efficient in wood dust extraction, from wood processing machines as well as are appropriate for removal the impurities formed during other similar technological processes. The dust capture efficiency is up to 99,5%.

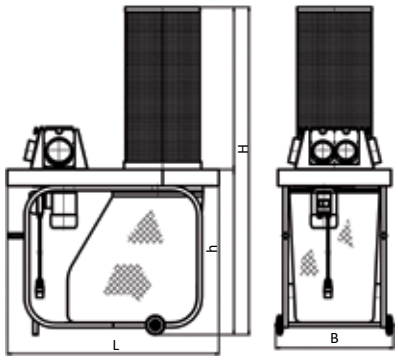
EGO-2N/M



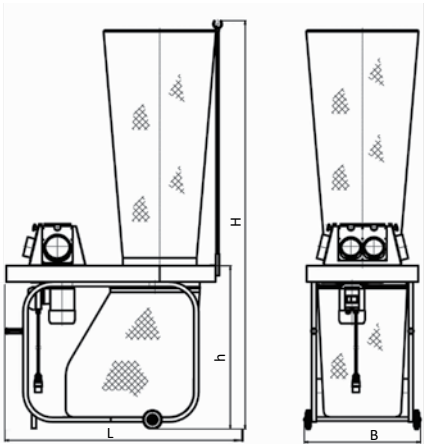
EGO-2W/M



EGO-4N/M



EGO-4W/M



Dimensions

Type	L [mm]	B [mm]	h [mm]	H [mm]
EGO-2W/M	1008	568	1058	2358
EGO-4W/M	1382	756	1062	2652
EGO-2N/M	1024	568	1058	1601
EGO-4N/M	1360	756	1062	2105

Structure

Dust separator consists of a housing based on a frame with wheels for easy displacement.
The motor with impeller is installed to the housing. Impeller is adapted for transporting the air polluted with wood, dust and chips. Underneath the housing is fastened a fabric waste bag, whereas above the housing is located a cellulose-polyester cartridge filter or a filtration bag – depending on the version.
According to the needs of Customer, the separator can be equipped with following hose connectors:

- T-piece (two connections),
- connection head with slide dampers (two connections in EGO-2, four connections in EGO-4),
- elbow (one connection).

Directly on the motor housing is located a motor protective switch with short-circuit- and overload protection and the power supply cable with a plug. The processing machines and other workplaces for dust collection ought to be joined with hoses to the connections of the EGO dust separator. Inside the device takes place the separation of the impurities: heavy parts (wood dust, chips) are falling into the waste bag, whereas smaller particles are accumulating on the inner surface of the filters that have to shaken manually. The lower waste bag needs emptying when it reaches the fill-up state.

Technical data

Type	Part no.*	Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Supply voltage [V]	Motor rate [kW]	Filtration surface [m²]	Acoustic pressure level [dB(A)]	Weight [kg]
EGO-2W/M	800O80	2950	1650	3x400	1,1	2,5	83	49
EGO-4W/M	800O82	3950	2000	3x400	1,5	5	85	80
EGO-2N/M	800O81	3150	1850	3x400	1,1	10	83	60
EGO-4N/M	800O83	4300	1950	3x400	1,5	15	85	94

* The Part no. applies to the EGO dust separator and does not comprise hoses and connection elements.

Connection elements

Sort of connection		Type	Part no.	Connection ferrules		Designed for	Remarks
				Quantity	Diameter [mm]		
	connection head	G-2	800G91	2	125	EGO-2	Each connection can be equipped with an appropriate reducer – see catalogue card INSTALLATION ELEMENTS.
	connection head	G-4	800G92	2 2	125 160	EGO-4	
	T-piece	TR-2	800T91	2	160	EGO-2	
		TR-4	800T92	2	200	EGO-4	
	elbow	K-2	800K91	1	160	EGO-2	
		K-4	800K92	1	200	EGO-4	

Hoses – to connect the suction connections of the EGO dust separator with the suction hoods

	Type	Part no.	Inner diameter [mm]	Bending radius [mm]	Maximum length [m]	Remarks
	PUR/PU-80 PUR/PU-100 PUR/PU-125 PUR/PU-160	863P69 863P70 863P71 863P72	80 100 125 160	56 70 88 110	10	Material: strengthened polyurethane, completely covered steel spiral, high abrasion-resistant, transparent.

Replaceable parts

Sort		Type	Part no.	Weight [kg]	Application
	cartridge filter	CP-2	852F103	7,85	EGO-2-N/M
		CP-4	852F104	9	EGO-4-N/M
	filtration bag	WF-2	876W16	0,4	EGO-2-W/M
		WF-4	876W26	0,5	EGO-4-W/M
	waste bag	T2	838W12	0,1	EGO-2
		T4	834W10	0,1	EGO-4

Dust collecting hood

	Type	Part no.	Connection diameter [mm]	Length of the suction slot [mm]
	S-100/L	819S01	100	300
	S-125/L	819S13	125	500

dust separators

STORM-H – cyclone separator

STORM-1000-H

STORM-2000-H

STORM-5000-H

Purpose

The STORM-H cyclone separators are applied for cleaning the air contaminated with dry dust of particles size above 5 µm. They belong to the vacuum device group. Centrifugal force enables dust separation, whereby the accumulated dust is falling into the waste container, placed underneath the separator. For coarse dust, STORM-H separator constitutes the final filtration stage. Whereas, in case of dust particles of smaller size, it serves as a pre-filter, and additionally a fine filter should be installed parallel. The dust separating efficiency ranges 95–99%.

STORM-H separators are manufactured in a version with a fan (STORM-1000-H, STORM-2000-H, STORM-5000-H) or without fan (STORM-1000 SOFT-H, STORM-2000 SOFT-H, STORM-5000 SOFT-H). In the second version, the specific flow resistance of the cyclone separator must be overcome by the fan of the final filtering unit.

Structure

The STORM-H cyclone separator consists of:

- supporting frame structure,
- conic cyclone with a revision cover,
- self-discharge waste container – with a sight to control the fill-up state,
- radial fan – for version STORM-H,
- connection ferrule – for version STORM SOFT-H,
- silencer assembly – for the version STORM-H (on demand),
- motor protective switch – for the version with a fan (STORM-H, STORM-2000-H) or motor starter (for STORM-5000-H).

Operational use

Connect the inlet ferrule of the cyclone through a conduit (of the same diameter) with the place of dust discharge. In case when STORM-H dust separator is operated as a final filter stage, the fan outlet ought to be equipped with a silencer assembly. In application where separator is applied as a pre-filter, and in configuration of STORM SOFT-H – it is important to connect the outlet fitting piece through a conduit with the final filtering unit. The filled up waste container is adapted for loading and transporting by a lift-fork. The waste container can be discharged after the bottom plate is opened.

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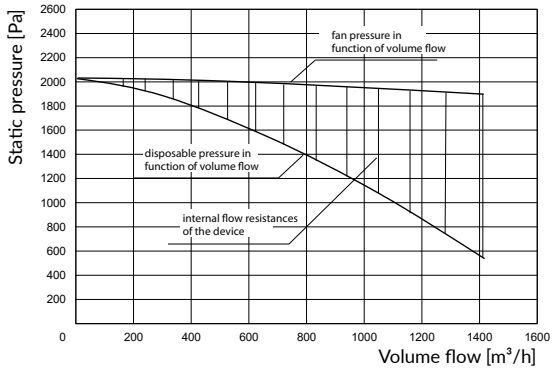
Technical data

Type of the device	Part no.	Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Supply voltage [V]	Motor rate [kW]	Acoustic pressure level [dB(A)] from a distance of:		Weight [kg]	Waste container capacity [dm³]	Separating efficiency [%]			
						1 m	5 m			wood chips	quartz sand	moulding mass	portland cement
STORM-1000-H	802O20	1400	2000	230	1,5	77	67	227	330	99,5	99	98	95
STORM-2000-H	802O21	3500	4200	3x400	4	78,4	73,3	353					
STORM-5000-H	802O22	7700	4200	3x400	7,5	77,2	72	531					
STORM-1000 SOFT-H	802O14	–	–	–	–	–	–	193					
STORM-2000 SOFT-H	802O15	–	–	–	–	–	–	244					
STORM-5000 SOFT-H	802O16	–	–	–	–	–	–	335					

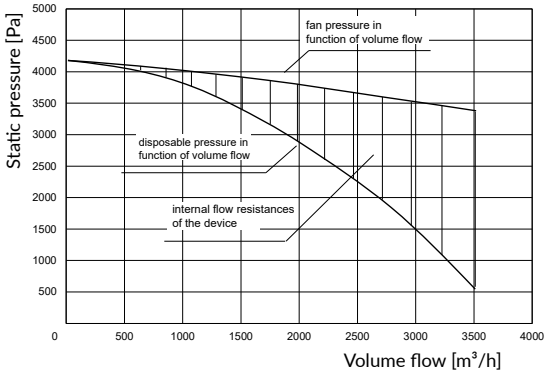
1. The noise level was measured along with the attached silencer at the outlet.
2. The weight of the STORM-H separator was given without the silencer assembly weight.

Flow charts of the STORM-H cyclone separator

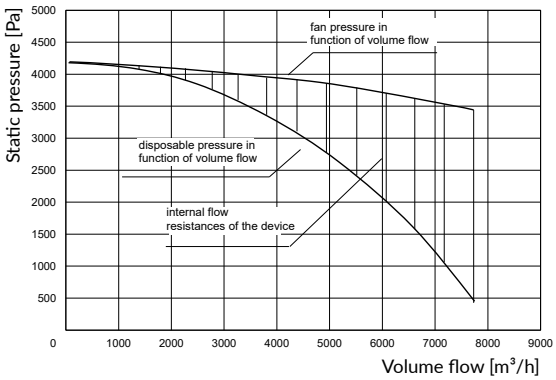
STORM-1000-H



STORM-2000-H

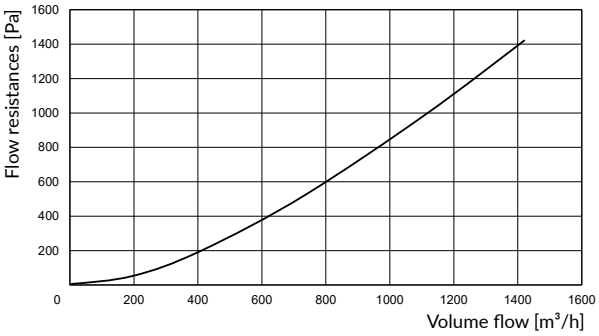


STORM-5000-H

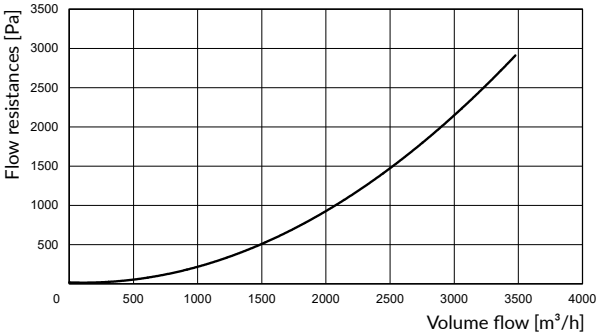


Flow charts of the STORM SOFT-H cyclone separator

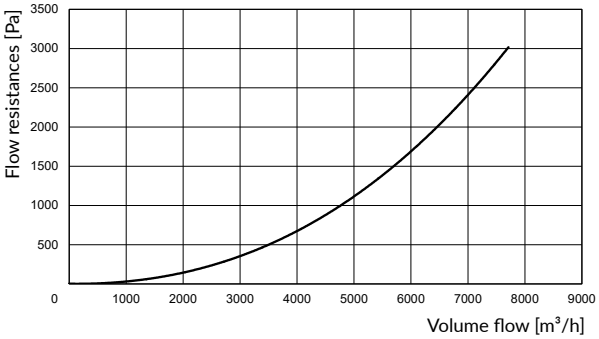
STORM-1000 SOFT-H

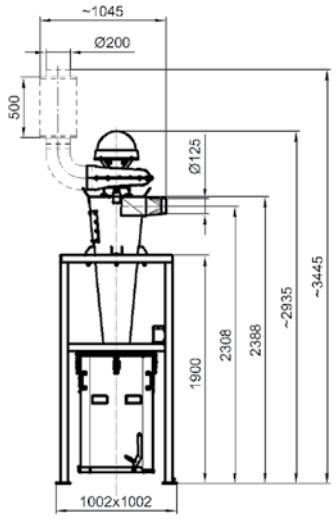


STORM-2000 SOFT-H

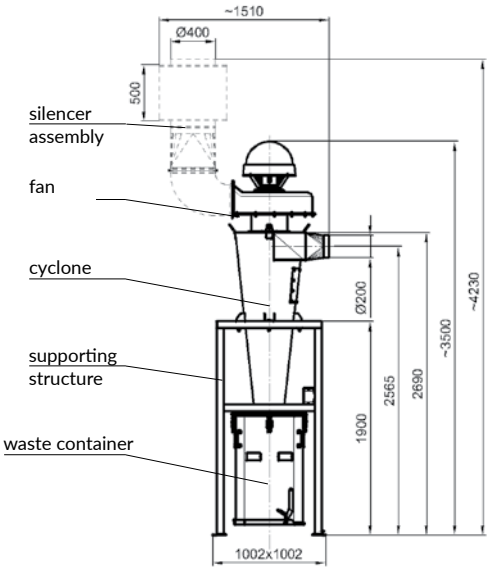


STORM-5000 SOFT-H

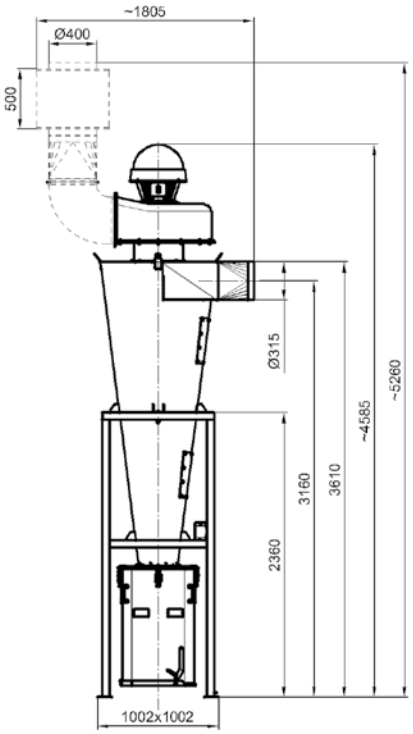




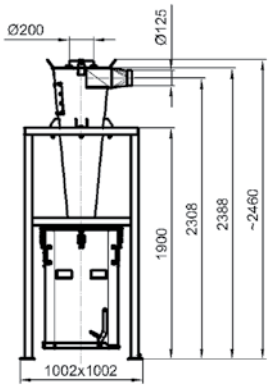
STORM-1000-H



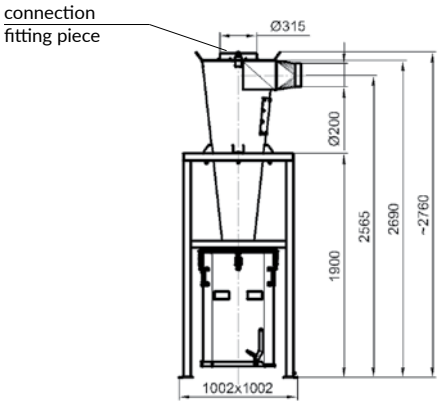
STORM-2000-H



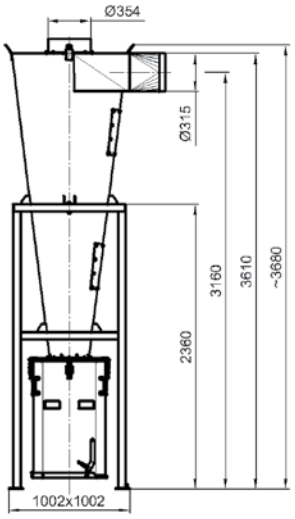
STORM-5000-H



STORM-1000 SOFT-H



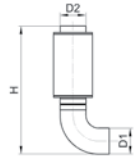
STORM-2000 SOFT-H



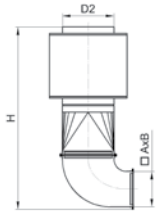
STORM-5000 SOFT-H

Replaceable parts

Silencer assembly



Type	Part no.	D1 [mm]	D2 [mm]	H [mm]	Weight [kg]	Application
ZT-STORM-1000-H	843P61	200	200	990	6	STORM-1000-H



Type	Part no.	AxB [mm]	D2 [mm]	H [mm]	Weight [kg]	Application
ZT-STORM-2000-H	843P62	250x295	400	1410	24	STORM-2000-H
ZT-STORM-5000-H	843P63	370x380	400	1525	26	STORM-5000-H

SEP-4-M – inertial separator

Purpose

SEP-4-M separators have been developed for use as pre-filters, to capture the dry and coarse dust arising in various technological processes. Additionally, separators are appropriate for other purposes:

- spark neutralisation during some processes, e.g. welding and metal grinding,
- capturing various sorts of harmful waste materials, e.g. non-extinguished particles, glowing cigarettebutts, that would enter the discharge ductwork, and subsequently into the final filter.

Due to their above mentioned features, separators can protect the final filter from excessive dustiness overload and from the possible fire risk.

SEP-4-M separators can work with any chosen final filters of approximately similar volume flow, especially with the UFO-4-M/N filtering unit – dimensionally adapted.

Separators are not equipped with a fan. The air flow is created by the fan of the final filtering unit.

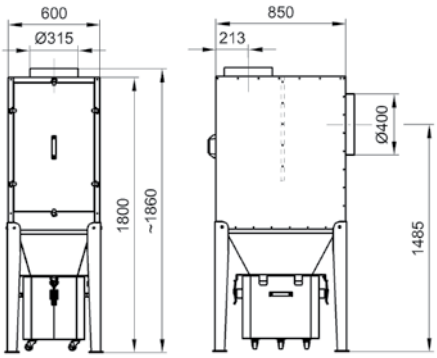
Structure

Separators are constructed of a rectangular housing with a partition inside, dividing the separator in an inflow chamber for the dust laden air and the outlet chamber for the cleaned air. The inflow fitting piece is placed in the upper cover, whereas the outlet connections are in the side wall. The installation height of the outlet ferrules matches the suitable ferrules in the UFO-4-M/N filtering unit.

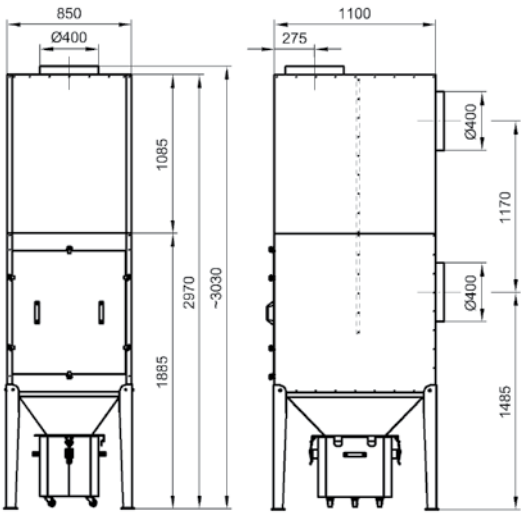
Dust separation proceeds in an inertial way. The extracted particles accumulate in a waste container that has to be emptied periodically.

Technical data

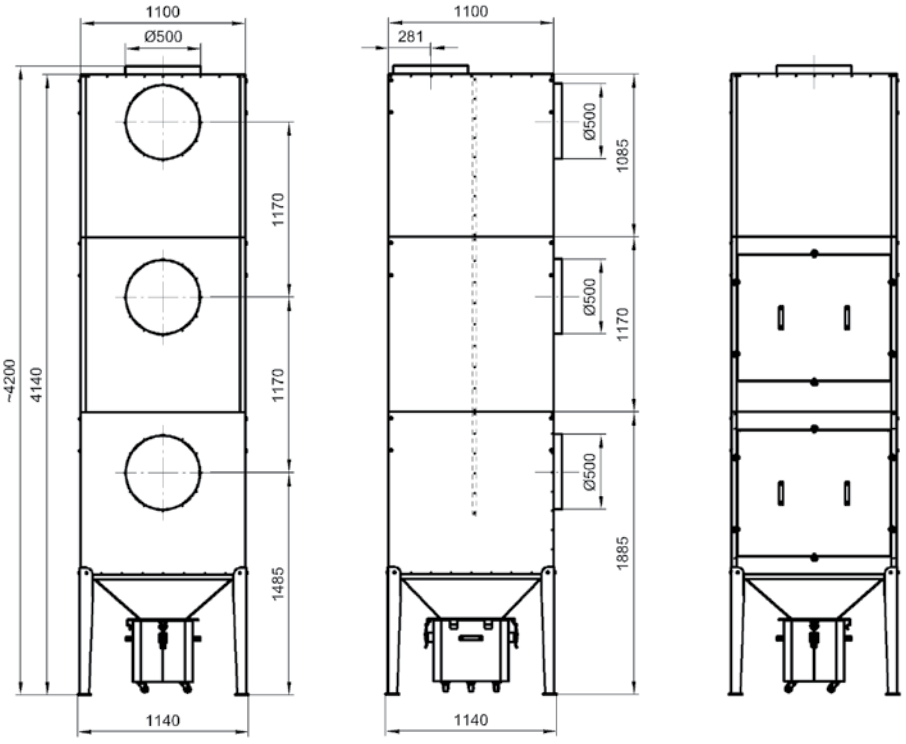
Type	Part no.	Recommended volume flow [m³/h]	Flow resistances [Pa]	Weight [kg]	Capacity of the waste container [dm³]
SEP-4-M-1	800S10	5000	200	110	72
SEP-4-M-2	800S11	10 000	200	145	72
SEP-4-M-3	800S12	15 000	200	328	72



SEP-4-M-1



SEP-4-M-2



SEP-4-M-3

SEP-UFO-A – inertial separator

Purpose

SEP-UFO-A separators are used as pre-filters, for capturing the dry and coarse dust particles, arising during various technological processes. Additionally, separators are appropriate for other purposes:

- spark neutralisation – during some processes, e.g. welding and metal grinding,
- capturing various sorts of harmful waste materials, e.g. non-extinguished particles, glowing cigarettebutts, that would enter the discharge ducting, and subsequently into the final filter, during the use of a careless operator.

Due to their above mentioned features, separators protect the final filters from excessive dustiness overload and from the possible fire risk.

SEP-UFO-A separators can work with any chosen final filters of approximately similar volume flow, especially with the UFO-A filtering units – as they are dimensionally adapted.

Separators are not equipped with a fan. The air flow is created by the fan of the final filtering unit.

Structure

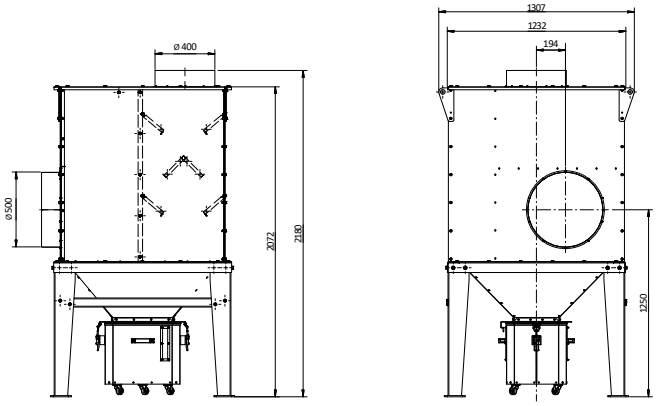
Separators are constructed of a rectangular housing with partition walls inside, dividing the separator in an inflow chamber for the dust laden air and the outlet chamber for the cleaned air. The inflow fitting piece is placed in the upper cover, whereas the outlet connections are in the side wall. The installation height of the outlet ferrules matches the suitable ferrules in the UFO-A filtering units.

Dust separation proceeds in an inertial way. The extracted particles accumulate in a waste container that has to be emptied periodically.

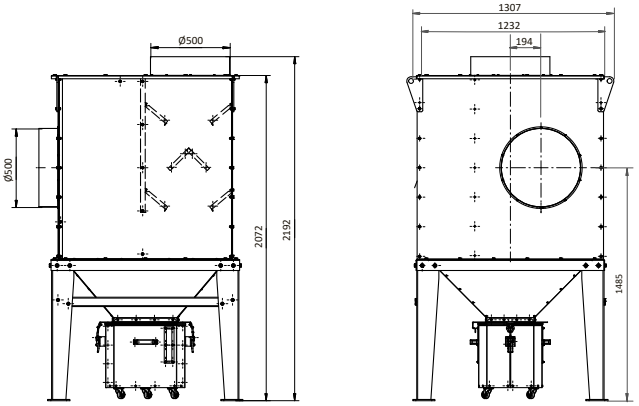
Technical data

Type	Part No	Recommended volume flow [m³/h]	Flow resistances [Pa]	Weight [kg]	Capacity of the waste container [dm³]
SEP-UFO-A-5000	800S23	5 000	200	257	72
SEP-UFO-A-10000	800S24	10 000	200	253	72
SEP-UFO-A-15000	800S25	15 000	200	375	72
SEP-UFO-A-20000	800S26	20 000	200	374	72

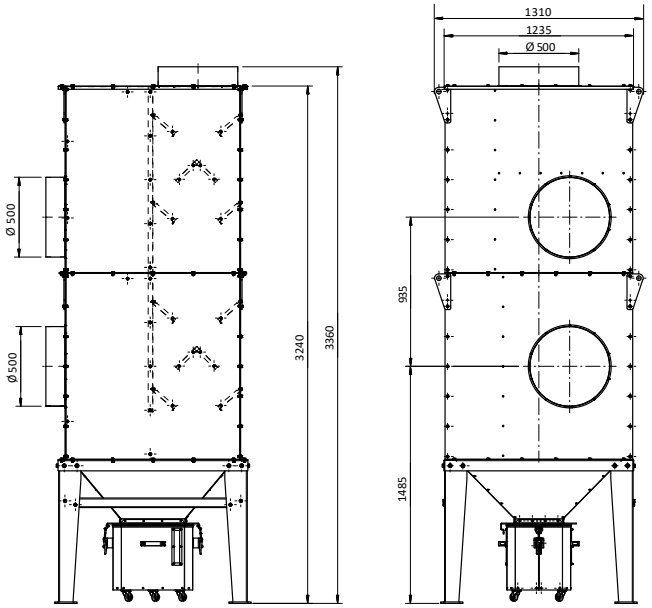
SEP-UFO-A-5000



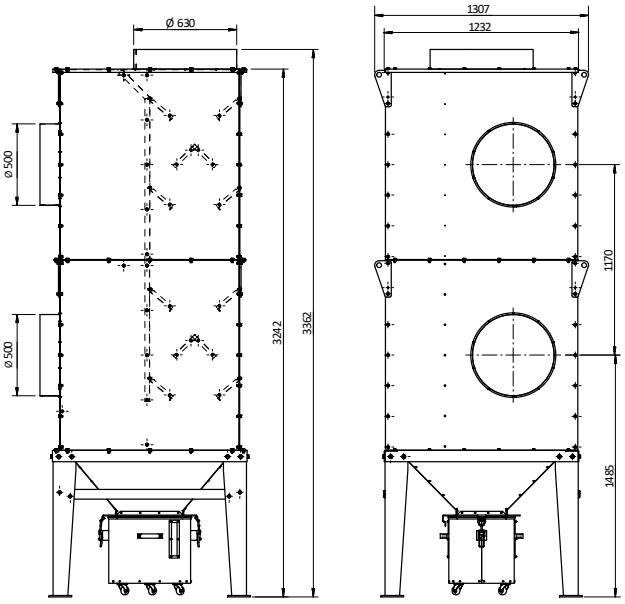
SEP-UFO-A-10000



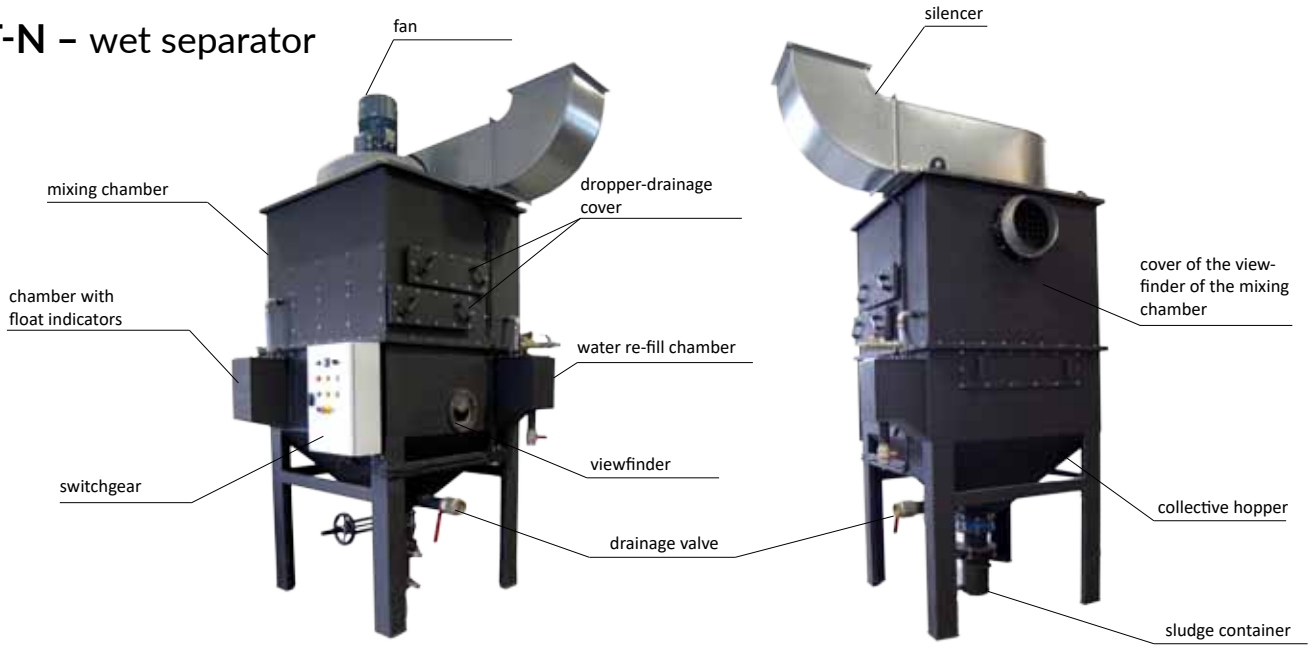
SEP-UFO-A-15000



SEP-UFO-A-20000



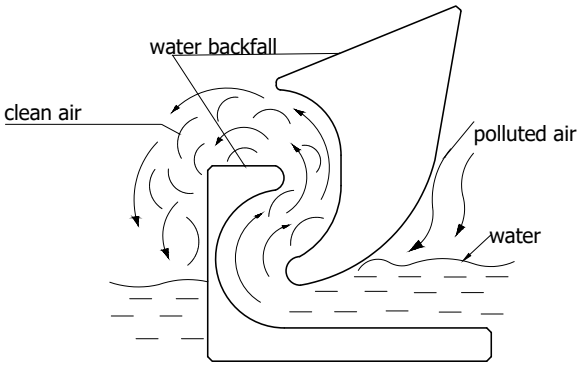
WET-N – wet separator



Application

WET-N – wet dust separators are efficient in cleaning the dust--laden air from the impurities arising during the manufacturing processes. They are irreplaceable in removal of dust particles of dry, humid, viscous nature. Additionally, they are efficient in capturing the dust with high amount of sparks arising during various manufacturing processes such as grinding and other processes in chemical-, pharmaceutical industry and food production.

Function



The polluted air flows through a set of immersed in the water guiding plates (backfall) and here the air gets mixed with the water, creating an aerated foamy dust-water mixture with bubbles. Particles that are captured in the separator, create sludge with the water. The sludge sediments in the hopper (collecting the waste) and it is dropping into the waste container.

Having passed the backfall, the cleaned air is additionally separated from the leftover water particles in the dropper-drainage.

Water level is monitored by means of minimum- and maximum level float indicators.

Structure

The system consists of subsequent assemblies:

- mixing chamber – includes a guiding plate, creating a whirl of the dust-water mixture,
- hopper – collecting the waste from the filtration,
- pneumatic shear damper with the container for sludge,
- drainage valve,
- a fan located above the mixing chamber,
- float indicators – a system controlling the water level and its refilling,
- switchgear,
- viewfinder covers of the dropper-drainage,
- technological doors.

Operational use

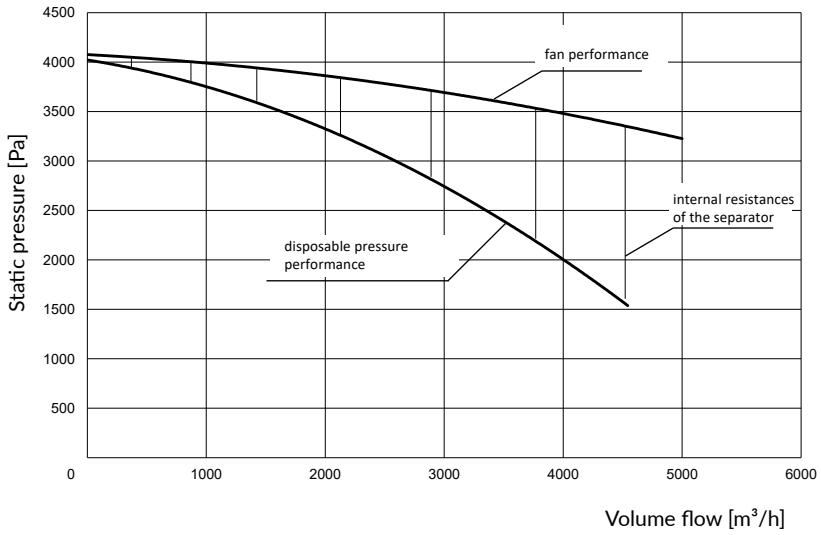
WET-N separator should be connected to the water supply system to provide the appropriate water level in the device.

The appliance is equipped with a duoble system of sludge removal. For everyday sludge discharge is used a sludge container, supplied from the external water supply system. The water washes out the accumulated impurities. Subsequently, the waste is transported to a barrel located near the WET-N system.

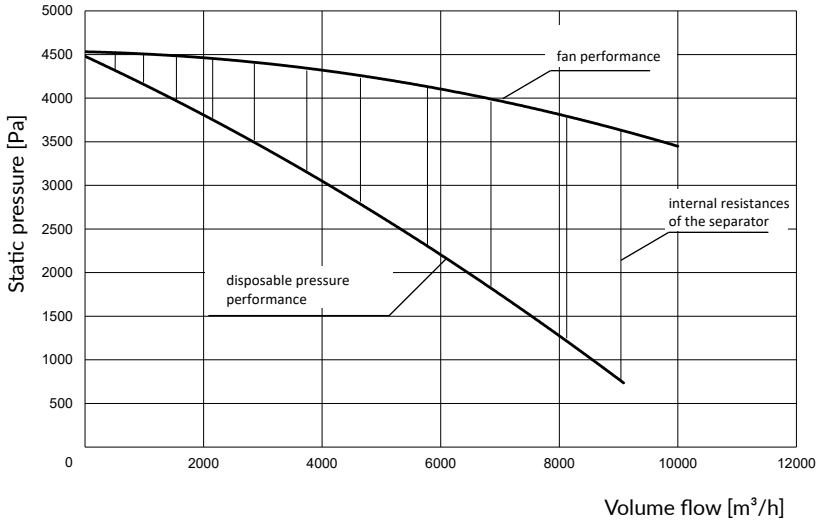
After all the sludge is removed, the water in the mixing chamber is refilled automatically.

Flow charts

WET-4000-N



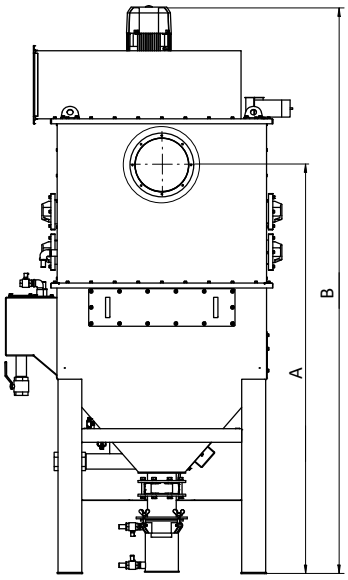
WET-6000-N

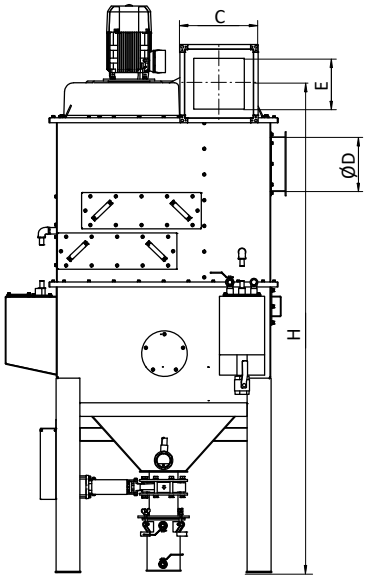


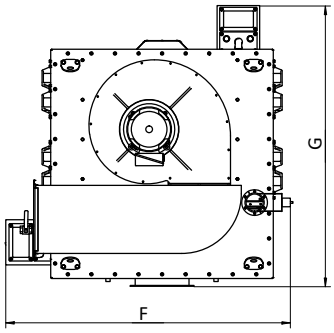
Technical Data

Type	Part No.	Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Supply voltage [V]	Motor rate [kW]	Acoustic pressure level [dB(A)] measured from distance 1m:	Capacity of the water chamber [m³]	Weight [kg]
WET-4000-N	800O14	7000	4000	3x400	5,5	72	0,65	937
WET-6000-N	800O13	9000	4500	3x400	11	76	0,65	1037

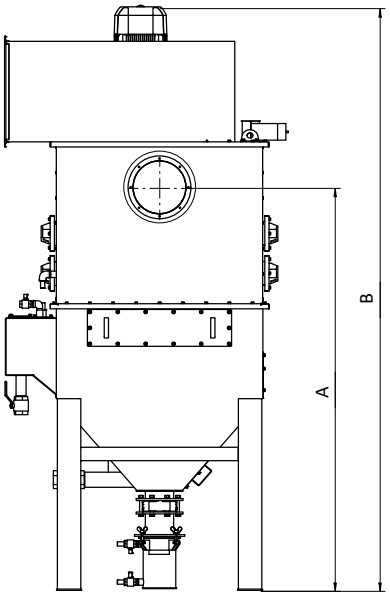
WET-4000-N

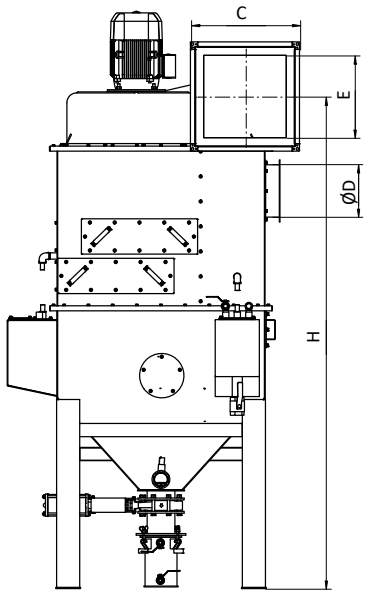


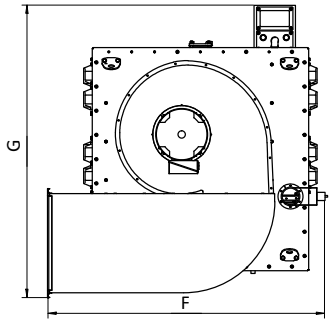




WET-6000-N



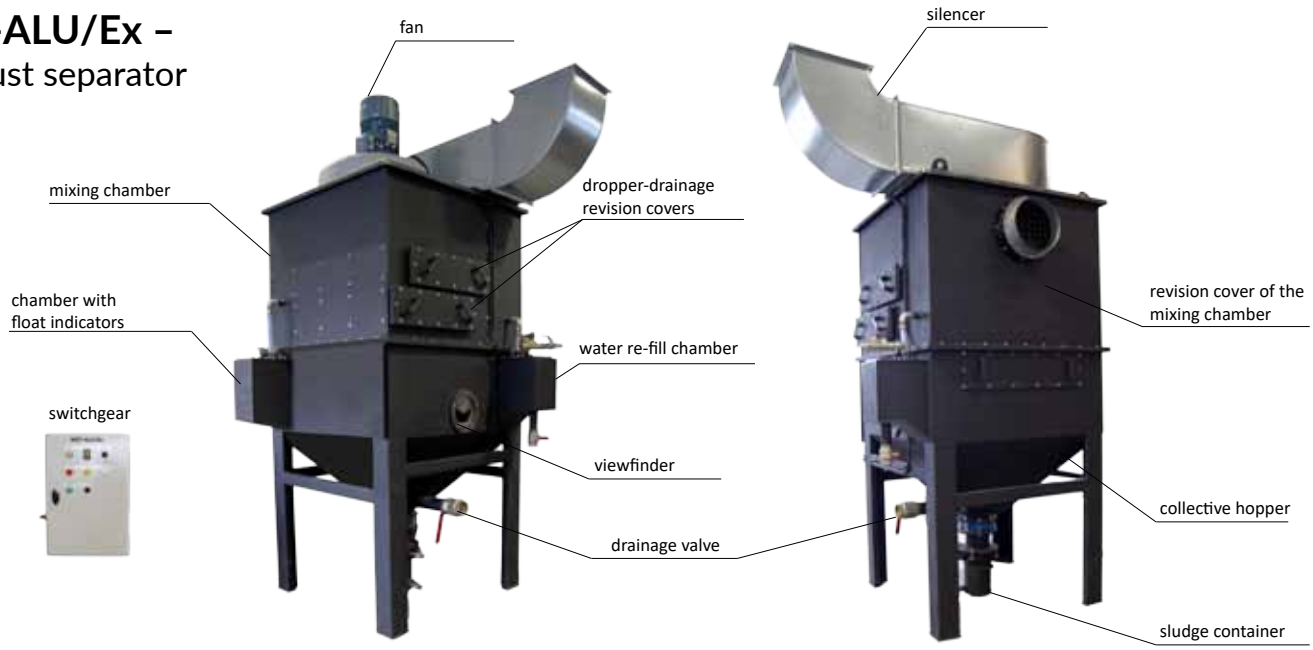




Dimensions

Name	A [mm]	B [mm]	C [mm]	ØD [mm]	E [mm]	F [mm]	G [mm]	H [mm]
WET-4000-N	2403	3324	460	315	300	1673	1649	2887
WET-6000-N	2403	3474	660	315	500	1673	1767	2974

WET-ALU/Ex –
wet dust separator

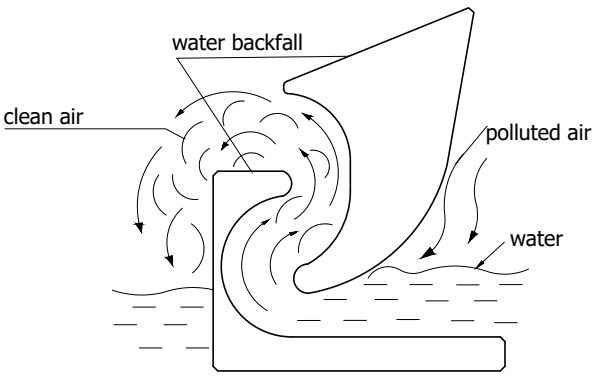


II 3 D Ex IIC T3

Application

WET-ALU/Ex wet dust separators are efficient in cleaning the dust-laden air from the impurities arising during the manufacturing processes. They are irreplaceable in removal of dust particles of dry, humid, viscous nature and. Additionally, they are efficient in capturing the dust with high amount of sparks. WET-ALU/Ex separators are also designed for removal of dusts of explosive properties, especially for dusts arising during the aluminium grinding.

Function



The polluted air flows through an immersed in the water guiding plate (backfall) and here the air gets mixed with the water, creating an aerated foamy dust-water mixture with bubbles. Particles that are captured in the separator, create sludge with the water. The sludge sediments in the hopper (collecting the waste) and in the sludge container.

Having passed the backfall, the cleaned air is additionally separated from the leftover water particles in the dropper-drainage.

Water level is monitored by means of minimum- and maximum level float indicators.

Structure

The system consists of subsequent assemblies:

- mixing chamber – includes a guiding plate, creating a whirl of the dust-water mixture,
- hopper – collecting the waste from the filtration,
- pneumatic shear damper with the sludge container,
- drainage valve,
- a fan located above the mixing chamber,
- float indicators – a system controlling the water level and its refilling in the mixing chamber,
- gas remover (deaerator),
- switchgear – (installed beyond the Ex area),
- revision covers of the dropper-drainage,
- technological doors.

Operational use

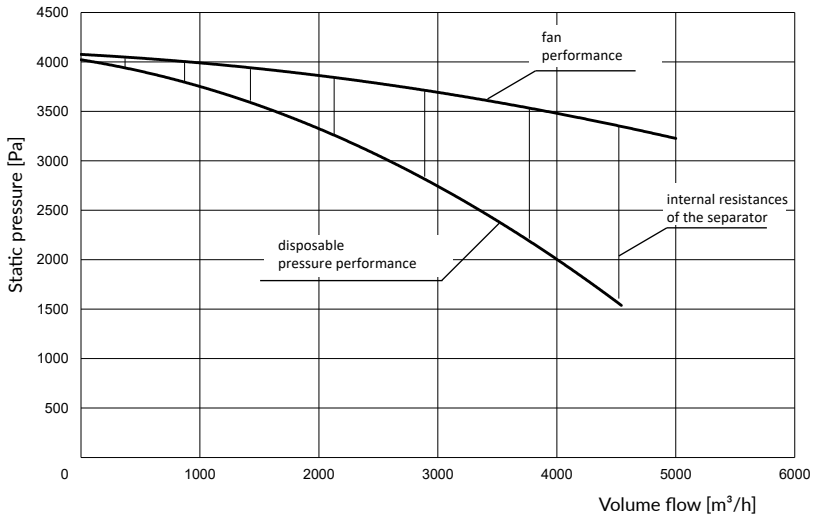
The dust separator should be connected to the water supply system to provide the appropriate water level in the device.

The appliance is equipped with a duoble system of sludge removal. For everyday sludge discharge is used a sludge container, supplied from the external water supply system. The water washes out the accumulated impurities. Subsequently, the waste is transported to a container (barrel) located near the dust separator.It is important to remove periodically the sludge accumulated in the collective hopper – first close the shear damper and then open the drainage valve.

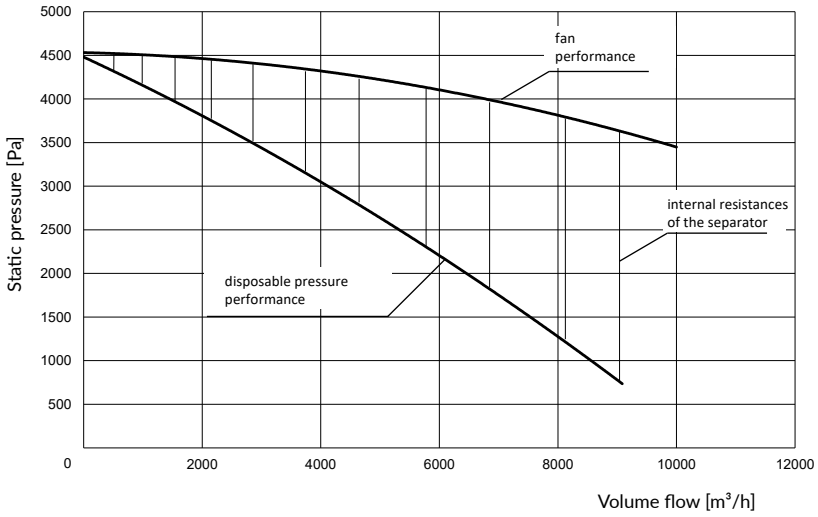
After all the sludge is removed, the water in the mixing chamber is refilled automatically.

Flow charts

WET-ALU-4000/Ex



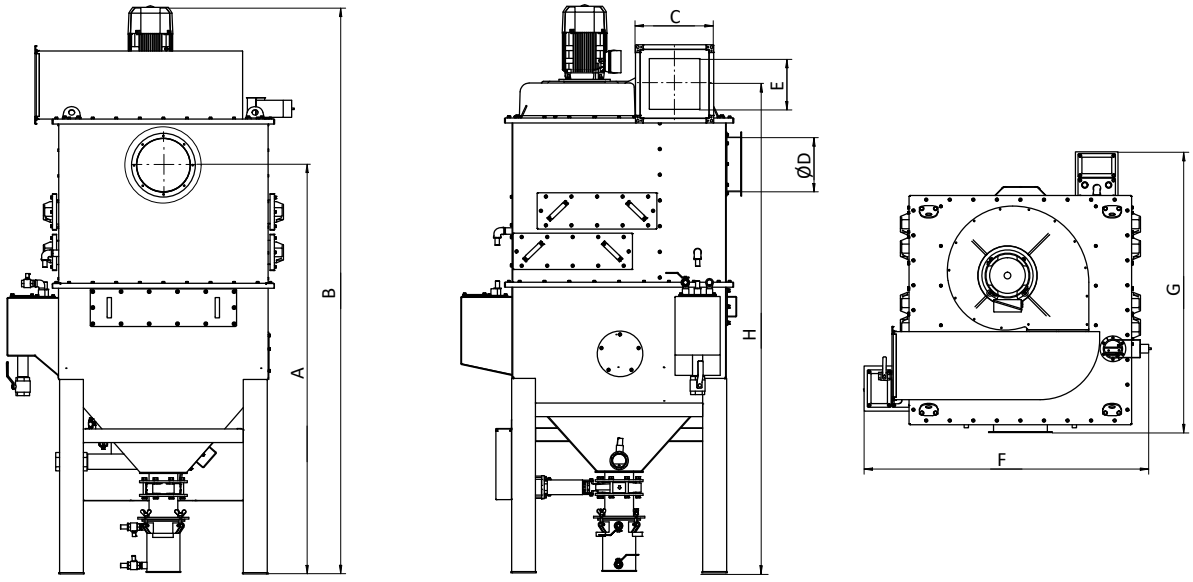
WET-ALU-6000/Ex



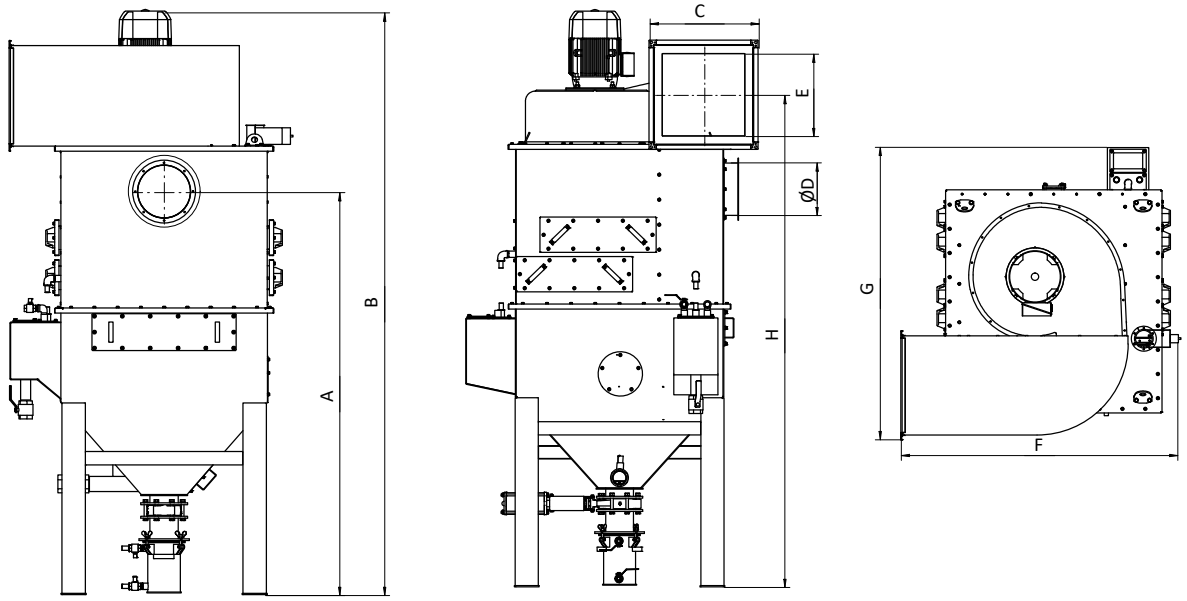
Technical Data

Type	Part No.	Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Supply voltage [V]	Motor rate [kW]	Acoustic pressure level [dB(A)] measured from distance 1m:	Capacity of the water chamber [m³]	Weight [kg]
WET-ALU-4000/Ex	800O94	7000	4000	3x400	5,5	72	0,65	937
WET-ALU-6000/Ex	800O95	9000	4500	3x400	11	76	0,65	1037

WET-ALU-4000/Ex



WET-ALU-6000/Ex



Dimensions

Name	A [mm]	B [mm]	C [mm]	ØD [mm]	E [mm]	F [mm]	G [mm]	H [mm]
WET-ALU-4000/Ex	2403	3324	460	315	300	1673	1649	2887
WET-ALU-6000/Ex	2403	3474	660	400	500	1673	1767	2974

dust-gas filtering units

HARD-S – filtration of dust and gas

HARD-1000-S HARD-2000-S HARD-5000-S

Purpose

HARD-S filtering unit has been developed for cleaning the air from dust-gas contamination, whereby dusts can have dry- and also viscous properties. Among others, it is an ideal solution for:

- filtration of the aerosols arising during spray painting of not large surfaces,
- filtration of the air polluted with dust and gas arising during rubber laser cutting, cutting of materials as plywood, plexi, acrylic and other plastics or grinding the above mentioned materials,
- dust- and gas contamination – arising during polishing of various materials,
- oil laden welding fumes with gas emitted during the welding process,
- ation of the air polluted with fat particles at the kitchen extraction hoods,
- unpleasant aromas in chemistry laboratories,
- vapours arising during upholstery works – among others cutting and gluing.

Structure

HARD-S consists of following elements:

- housing of steel sheet,
- radial fan – cast aluminium housing,
- pre-filter – Paint-Stop spunbond – class G3,
- pocket filter – class F8,
- high-efficiency HEPA filter – class H13,
- gas absorber – cassettes with granulated active carbon,
- two pressure controls (pressostats) activating the light signalling at the moment of excessive flow resistances of the pocket filter and the high-efficiency filter,
- connections – to mount the extraction arms and discharge hoses (HARD-1000-S and HARD-2000-S), or discharge conduit (HARD-5000-S)
- silencer at the fan outlet,
- hour-meter – for measuring the work time,
- control unit.

Operational use

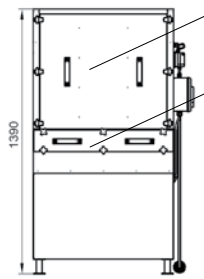
HARD-5000-S ought to be fastened stably to the floor surface. Install the extraction arms, hoses or extraction installation to the connections. In the course of operational use, observe the replacement periods of filters according to indications of signal lamps, activated by pressure controls (pressostat). In case when the given signal lamp lights on, replace the clogged filter for a new. Granulated active carbon must be replaced at the moment when it is losing its absorbing properties (organoleptic observation). For this purpose, observe the hour-meter indications. In application where the air should be expelled outdoors, equip the outlet of the HARD-5000-S with an R-5000 discharge fitting piece, to connect the Ø315 mm ventilation conduit.

Technical data

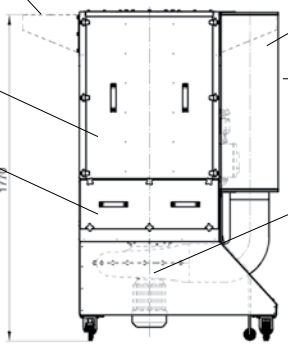
Type	Part no.	Maximum volume flow [m³/h][1]	Maximum vacuum [Pa]	Supply voltage [V]	Motor rate [kW]	Acoustic pressure level [dB(A)] from a distance of:		Weight [kg]	Suction connections[2]
						1 m	5 m		
HARD-1000-S	800O92	1250	1700	230	0,75	70	67	180	1xØ160 mm 2xØ125 mm
HARD-2000-S	800O88	2000	2000	230	1,5	73	66,5	237	1xØ200 mm 2xØ160 mm 2x250x152 mm
HARD-5000-S	800O93	6500	4200	3x400	5,5	76	72	695	1xØ400 mm

1. Volume flow was specified at clean filters.
2. References for the ERGO LUX extraction arms are on separate catalogue cards.

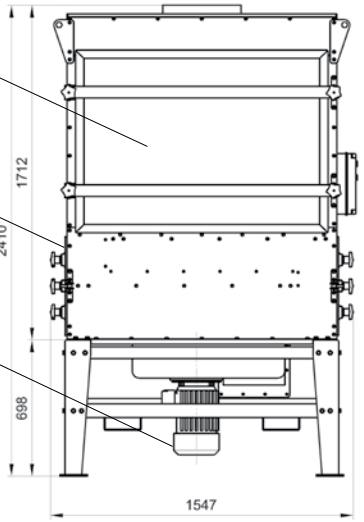
HARD-1000-S

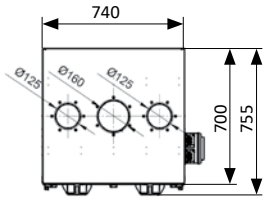


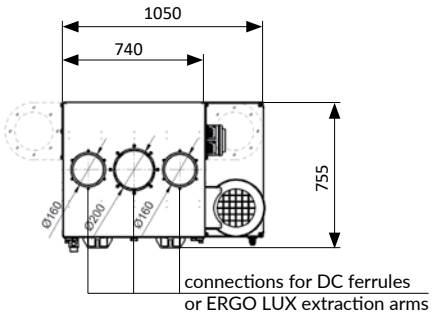
HARD-2000-S

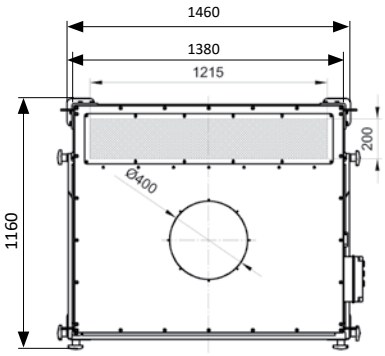


HARD-5000-S



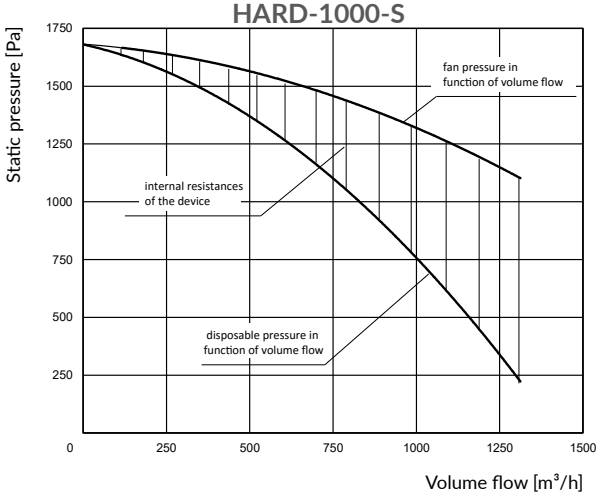




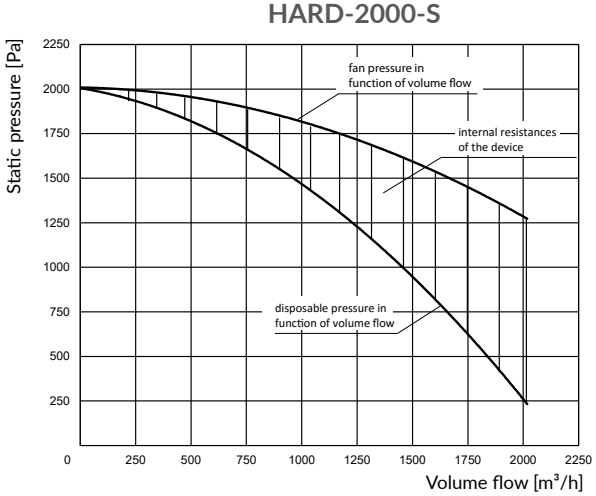


Flow charts

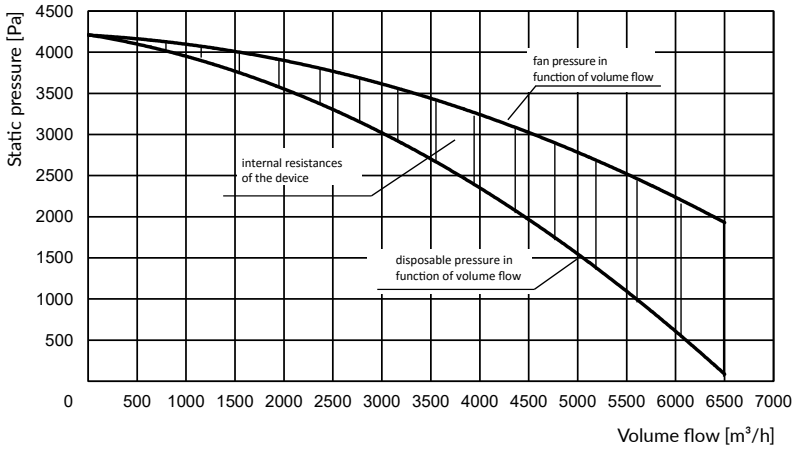
HARD-1000-S



HARD-2000-S

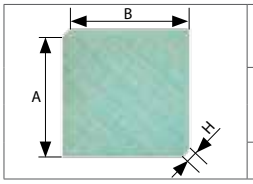


HARD-5000-S



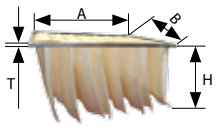
Replaceable filters

Pre-filter



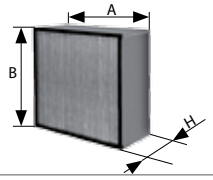
Type	Part no.	Weight [kg]	Dimensions AxBxH [mm]	Quantity of filters	Class	Filtration material	Purpose
PS-HARD-2000-S	838F76	0,5	700x740x50	1	G3	Glass spunbond with progressively growing density.	HARD-1000-S
							HARD-2000-S
PS-HARD-5000-S	838F77	0,7	720x1030x50	1	G3		HARD-5000-S

Pocket filter



Type	Part no.	Weight [kg]	Dimensions AxBxHxT [mm]	Quantity of filters	Class	Filtration material	Purpose
FK-HARD-2000-S	838F86	2,3	610x610x360x20	1	F8	Polyester spunbond of progressive construction. Filtration efficiency 90%.	HARD-1000-S
							HARD-2000-S
FK-HARD-5000-S	838F82	4,5	720x1030x550x20	1	F8		HARD-5000-S

High-efficiency HEPA filter



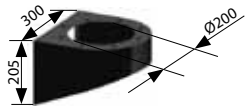
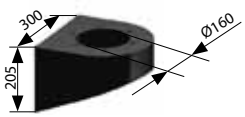
Type	Part no.	Weight [kg]	Dimensions AxBxH [mm]	Quantity of filters	Class	Filtration material	Purpose
FW-HARD-1000-S	838F87	5,4	610x610x80	1	H13	Non-hygroscopic card-board of glass-fibre. Filtration efficiency 99,95%.	HARD-1000-S
FW-HARD-2000-S	838F83	18,8	610x610x292	1	H13		HARD-2000-S
FW-HARD-5000-S	838F84	23,5	762x610x292	2	H13		HARD-5000-S

Granulated active carbon filter

Type	Part no.	Weight overall [kg]	Quantity of cassettes	Remarks	Purpose
ORGANOSORB 10CO 4x8	874W04	20	1	Active carbon ought to be replaced according to the indications of the hour-meter.	HARD-1000-S
		20	2		HARD-2000-S
		40	2		HARD-5000-S

Additional equipment

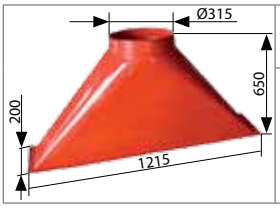
Brackets for ERGO extraction arms

Sort of the bracket	Type	Part no.	Weight [kg]	Appropriate extraction arms	Purpose
	DB-ERGO-D	817W29	4	ERGO-D	HARD-2000-S
	DB-ERGO-L	817W28	4,2	ERGO-L	HARD-2000-S

Connection ferrules – to fasten the extraction flexible hoses

Type	Part no.	Dn [mm]	Purpose
DC-125	830Z13	125	HARD-1000-S
DC-160	830Z14	160	HARD-1000-S, HARD-2000-S
DC-200	830Z15	200	HARD-2000-S

Outlet fitting piece



Type	Part no.	Weight [kg]	Purpose
R-5000 HARD	829R94	6	To fasten at the outlet of HARD-5000-S unitin order to connect the ventilation conduit.

MiniDygestorium-350 – individual stand for work with dusts and gases

Purpose

MiniDygestorium-350 was designed to purify air and absorb any waste gases produced in small amounts in chemical, biological or analytical laboratories, research or healthcare facilities, school labs and other places that produce where harmful gases or vapors are produced.

MiniDygestorium-350 makes it impossible for waste gases to spread across the room. The device must not be used in hazardous areas with explosive atmospheres.

Structure

The device is composed of the following elements:

- cabinet hood – glass-covered exhaustion chamber made of acid-proof steel with two openings for hands allowing for the performance of various tasks inside the device,
- enclosure made of steel sheets – 3 segments secured with clasps,
- Paint-Stop filter,
- High efficiency HEPA filter of H13 class,
- gas absorber in the form of a case with granular activated carbon,
- radial fan with enclosure,
- pressure control that signalizes excessive resistance on the high efficiency filter,
- control unit.

Operatinal Use

The device is an independent, mobile workstation. After switching it on, the operator places the source of emission on the desktop inside the cabinet hood and performs the required tasks inside the negative pressure zone, which eliminates the possibility of polluting the room with gases.

Dust contaminants are then filtered by the high efficiency HEPA filter, while the case with activated carbon absorbs most of the harmful chemical compounds, such as styrene monomer, toluene, alcohols, phenol and other. When the threshold value of HEPA filter clogging is reached, a light signal will be activated to inform the operator about the need to replace the filter.

Air gets inside the cabinet hood through the perforated upper wall of the extraction chamber and through the openings for hands located in the front wall. It is removed through the perforated outlet located beneath the device.

Operation of the device requires:

- periodic replacement of the HEPA filter – the need to replace the filter is signalized by a red lamp,
- periodic replacement of the case with activated carbon – the need to replace the case is determined on the basis of a visual inspection of the case,
- periodic replacement of the Paint-Stop filter.

NOTE:

Absorption efficiency of activated carbon differs depending on the type of vapor or gas. Referential values are given on the following page.

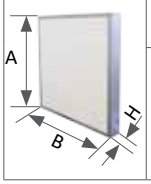
Technical data

Type	Part no.	Maximal volume flow [m³/h]	Maximal vaccum [Pa]	Motor rate [W]	Supply voltage [V/Hz]	Acoustic pressure level [dB(A)]*	Weight [kg]
MiniDygestorium-350	801O20	350	220	124	230/50	53	80

* Measurements were performed 1 m away from the device.

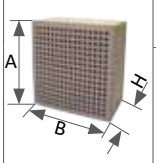
Spare parts

High efficiency HEPA filter



Type	Part no.	Weight [kg]	Dimensions AxB xH [mm]	Class	Filter material
FW-MD-350	838F98	3,2	535x535 x78	H13	Hydrophobic glass fiber filter paper 99.95%.

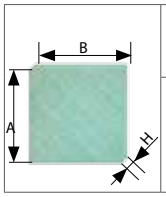
Case with activated carbon



Type	Part no.	Weight [kg]	Dimenisons AxB xH [mm]	Remarks
WA-ECO-20	838K98	24*	534x534 x155	Case is made of cardboard and plywood.

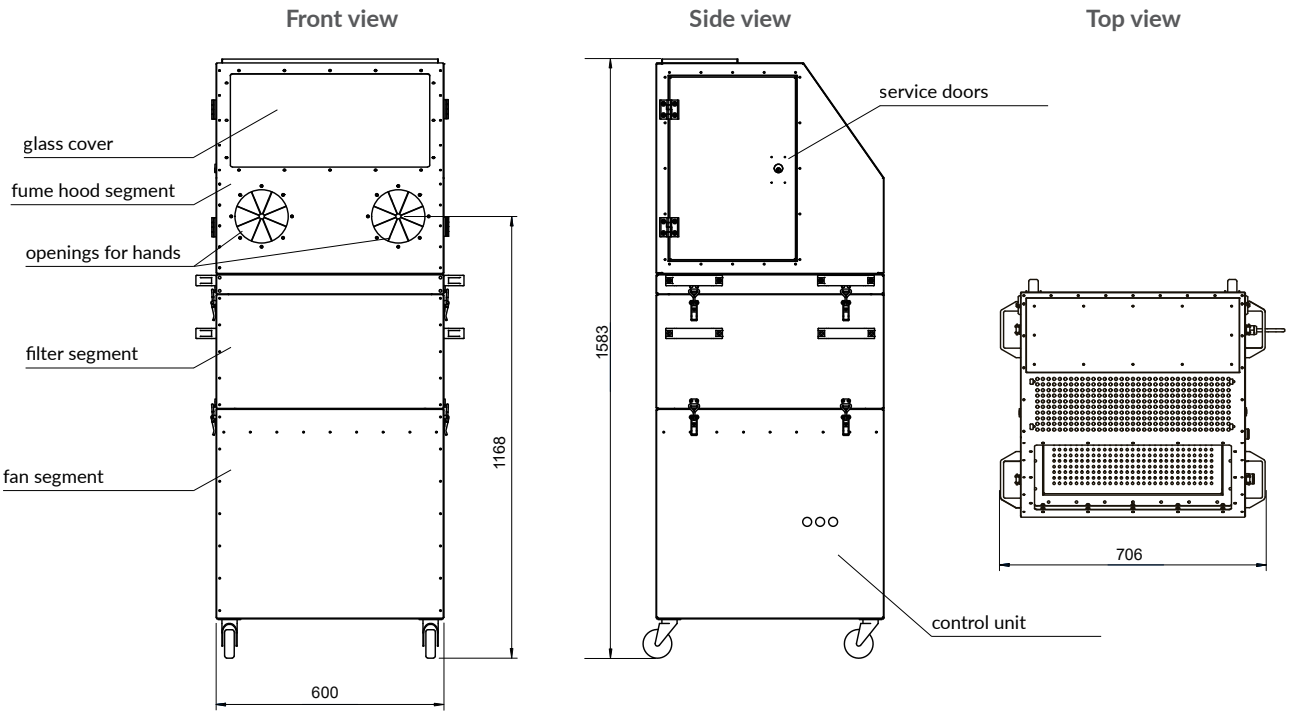
*Weight of activated carbon 20 kg.

Pre-filter



Type	Part no.	Weight [kg]	Dimensions AxB xH [mm]	Class	Filter material
PS-MD-350	852F03	0,5	535x535 x50	G3	Non woven glass fabric of progressive density.

Dimensions



Values of activated carbon absorption efficiency for various types of vapors and gases

High efficiency

ethyl acrylate – $C_5H_8O_2$
methyl acrylate – $C_4H_6O_2$
acrylonitrile – C_3H_3N
valericaldehyde – $C_5H_{10}O$
amyl alcohol – $C_5H_{12}O$
butyl alcohol – $C_4H_{10}O$
propyl alcohol – C_3H_7OH
aniline – $C_6H_5NH_2$
naphta (petroleum)
naphta (coal tar)
bromine – Br_2
butyl cellosolve – $C_6H_{14}O_2$
– cellosolve – $C_4H_{10}O_2$
– cellosolve acetate – $C_6H_{12}O_3$
butyl chloride – C_4H_9Cl
propyl chloride – C_3H_7Cl
monochlorobenzene – C_6H_5Cl
chlorobenzene – C_6H_5Cl
ethylene chlorhydrin – C_2H_5ClO
chloroform – $CHCl_3$
chloronitropropane – $C_3H_6ClNO_2$
chloropicrin – CCl_3NO_2
chlorobutadiene – C_4H_5Cl
cyclohexanol – $C_6H_{12}O$
cyclohexanone – $C_6H_{10}O$
tetrachloroethane – $C_2H_2Cl_4$
tetrachloroethylene – C_2Cl_4
carbon tetrachloride – CCl_4
decane – $C_{10}H_{22}$
dioxane – $C_4H_8O_2$
dibromomethane – CH_2Br_2
ethylene dichloride – $C_2H_4Cl_2$
dichlorobenzene – $C_6H_4Cl_2$
dichloroethane – $C_2H_4Cl_2$
dichloroethylene – $C_2H_2Cl_2$
dichloronitroethane – $CH_3CCl_2NO_2$
dichloropropane – $C_3H_6Cl_2$
dimethylaniline – $C_8H_{11}N$
amyl ether – $C_{10}H_{22}O$
butyl ether – $C_8H_{18}O$
dichloroethyl ether – $C_4H_8Cl_2O$
isopropyl ether – $C_6H_{14}O$
propyl ether – $C_6H_{14}O$
ethyl benzene – C_8H_{10}
phenol – C_6H_6O
heptane – C_7H_{16}
heptylene – C_7H_{14}
indole – C_8H_7N
isophorone – $C_9H_{14}O$
iodine – I
iodoform – CHI_3
camphor – $C_{10}H_{16}O$
diethyl ketone – $C_5H_{10}O$
dipropyl ketone – $C_7H_{14}O$
methyl butyl ketone – $C_6H_{12}O$
methyl isobutyl ketone – $C_6H_{12}O$
methyl ethyl ketone – C_4H_8O
creosole – $C_8H_{10}O_2$
cresol – C_7H_8O
crotonaldehyde – C_4H_6O
ethyl silicate – $C_8H_{20}O_4Si$
acrylic acid – $C_3H_4O_2$
caprylic acid – $C_8H_{16}O_2$
butyric acid – $C_4H_8O_2$
lactic acid – $C_3H_6O_3$
uric acid – $C_5H_4N_4O_3$
acetic acid – CH_3COOH
propionic acid – $C_3H_6O_2$
valeric acid – $C_5H_{10}O_2$
menthol – $C_{10}H_{20}O$
ethyl mercaptan – C_2H_6S
propyl mercaptan – C_3H_8S
– methyl cellosolve – $C_3H_8O_2$
– methyl cellosolve acetate – $C_5H_{10}O_3$
methylcyclohexane – C_7H_{14}
methylcyclohexanol – $C_7H_{14}O$
urea – CH_4N_2O
kerosene
nicotyne – $C_{10}H_{14}N_2$
nitrobenzene – $C_6H_5NO_2$
nitroethane – $C_2H_5NO_2$
nitroglicerine – $C_3H_5N_3O_9$
nitropropane – $C_3H_7NO_2$
nitrotoluene – $C_7H_7NO_2$
nonane – C_9H_{20}
amyl acetate – $C_7H_{14}O_2$
butyl acetate – $C_6H_{12}O_2$
ethyl acetate – $C_4H_8O_2$
isopropyl acetate – $C_5H_{10}O_2$
propyl acetate – $C_5H_{10}O_2$
octalene – $C_{12}H_8Cl_6$
octane – C_8H_{18}
putrescine – $C_4H_{12}N_2$
ozone – O_3
paradichlorobenzene – $C_6H_4Cl_2$
– pentanone – $C_5H_{10}O$
perchloroethylene – C_2Cl_4
pyridine – C_5H_5N
dimethylsulphate – $C_2H_6O_4S$
skatole – C_9H_9N
styrene monomer – C_8H_8
turpentine – $C_{10}H_{16}$
mesityl oxide – $C_6H_{10}O$
toluene – C_7H_8
toluidine – C_7H_9N
trichloroethylene – C_2HCl_3

Average efficiency

acetone – C_3H_6O
acetylene – C_2H_2
acrolein – C_3H_4O
butyraldehyde – C_4H_8O
ethyl alcohol – C_2H_5OH
methyl alcohol – CH_3OH
benzene – C_6H_6
ethyl bromide – C_2H_5Br
methyl bromide – CH_3Br
butadiene – C_4H_6
chlorine – Cl_2
ethyl chloride – C_2H_5Cl
vinyl chloride – C_2H_3Cl
cyclohexene – C_6H_{10}
dichlorodifluoromethan – CCl_2F_2
diethyl amine – $C_4H_{11}N$
carbon disulphyde – CS_2
ether – $C_4H_{10}O$
ethyl ether – $C_4H_{10}O$
ethyl amine – C_2H_7N
fluorotrichloromethan – CCl_3F
phosgene – $COCl_2$
anaesthetics
hexane – C_6H_{14}
hexylene – C_6H_{12}
hexyne – C_6H_{10}
isoprene – C_5H_8
hydrogen iodide – HI
xylene – C_8H_{10}
formic acid – HCOOH
methyl mercaptan – CH_3SH
ethyl formate – $C_3H_6O_2$
methyl formate – $C_2H_4O_2$
nitromethane – CH_3NO_2
methyl acetate – $C_3H_6O_2$
pentane – C_5H_{12}
pentylene – C_5H_8
pentyne – C_5H_8
propionandehyde – C_3H_6O
ethylene oxide – C_2H_4O
carbon monoxide – CO

Low efficiency

acetaldehyde – C_2H_4O
ammonia – NH_3
hydrogen bromide – HBr
butane – C_4H_{10}
butanone – C_4H_8O
butylene – C_4H_8
butyne – C_4H_6
methyl chloride – CH_3Cl
hydrogen chloride – HCl
hydrogen cyanide – HCN
nitrogen dioxide – NO_2
sulphur dioxide – SO_2
hydrogen fluoride – HF
formaldehyde – CH_2O
propane – C_3H_8
propylene – C_3H_6
propyne – C_3H_4
hydrogen selenide – H_2Se
hydrogen sulphide – H_2S
sulphur trioxide – SO_3

SMOG Filter – general filtration of dusts and gases

SMOG Filter-400 SMOG Filter-800 SMOG Filter-1200 SMOG Filter-2400

Purpose

SMOG Filter absorbers are efficient solutions for cleaning the air from vapour, gas and dust particles in chemical-, biological labs, analytical labs, during the grinding or laser cutting of rubber, plywood, plexi, acryl and other plastics. Especially, they are applied in processes where annoying smell is emitted, e.g. during gluing or while using various types of aerosols. Additionally, SMOG Filter absorbers efficiently absorb tobacco smoke and contaminations contained in the smog that has infiltrated into the room from the environment. Do not use the appliance in areas of explosion hazard, where explosive atmosphere can occur.

Structure

SMOG Filter absorber consists of following elements:

- housing of steel sheet,
- fan – placed in the lower part of the device, at the side of clean air,
- Paint-Stop filter,
- high-efficiency HEPA filter – class H13,
- cassette with granulate of active carbon,
- pressure control – to signalise the excessive flow resistances of the HEPA filter,
- control unit,
- suction cover (on demand).

Operational Use

SMOG Filter absorbers provide a full recirculation of the extracted air. The device inlet can be connected with a local exhaust, with a system of general ventilation or equipped with a suction cover. In all configurations, the drawn in air returns into the room through a perforated outlet surface (underneath the device), after the filtration. The cassettes with granulated active carbon, efficiently absorb the majority of harmful chemical compounds as styrene, toluene, alcohols, phenol and many others. Dust pollutants are captured by the high-efficiency HEPA filter. At the moment when the HEPA filter reaches its limit pollution degree, the signalling lamp indicates the filter replacement necessity. Active carbon absorptiveness for different vapours and gases is presented on next page.

The maintenance of device consists in:

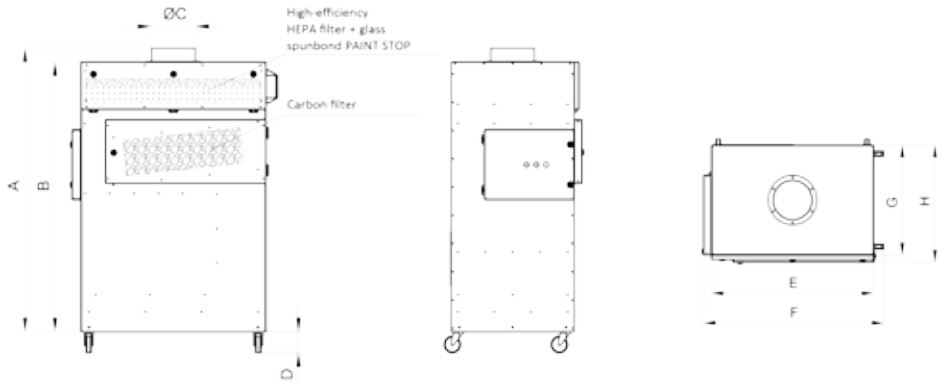
- periodical replacement of the HEPA filter – as indicated by signaling lamp,
- periodical replacement of cassettes with active carbon – depending on the organoleptic evaluations of User,
- periodical replacement of the Paint-Stop filter.

Technical Data

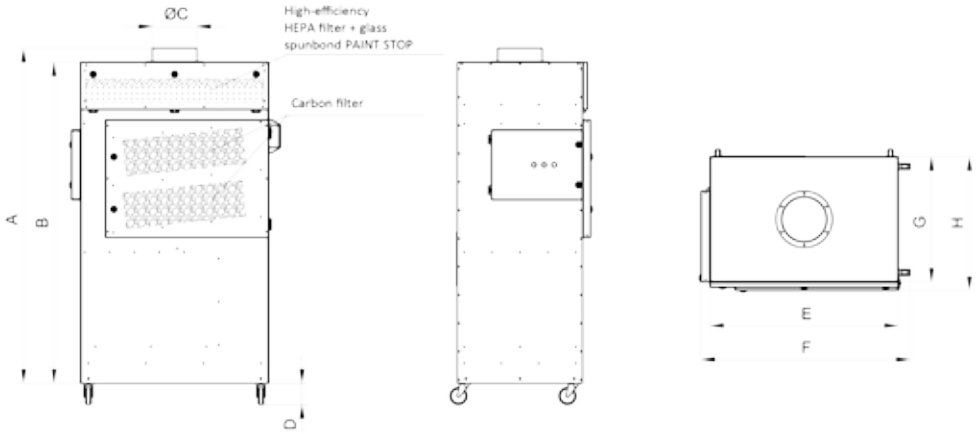
Type	Part No.	Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Motor rate [kW]	Supply voltage [V/Hz]	Acoustic pressure level [dB(A)]*	Weight [kg]
SMOG Filter-400	801O30	500	940	0,25	230/50	57	136
SMOG Filter-800	801O31	800	940	0,25	230/50	57	182
SMOG Filter-1200	801O32	1200	1270	0,37	230/50	59	228
SMOG Filter-2400	801O33	2350	1750	1,1	230/50	68	365

* Acoustic pressure level measurement has been carried out in distance of 1 m from the device.

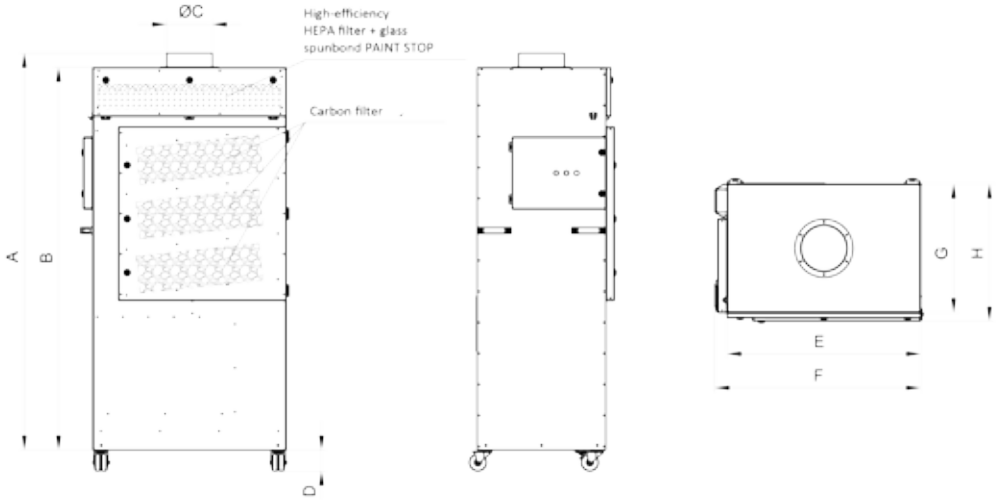
SMOG Filter-400



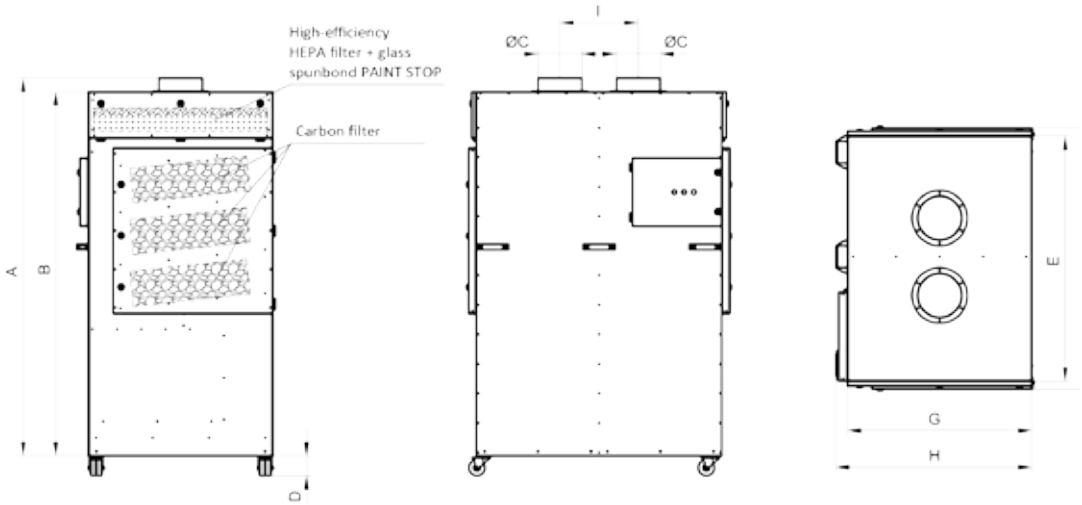
SMOG Filter-800



SMOG Filter-1200



SMOG Filter-2400

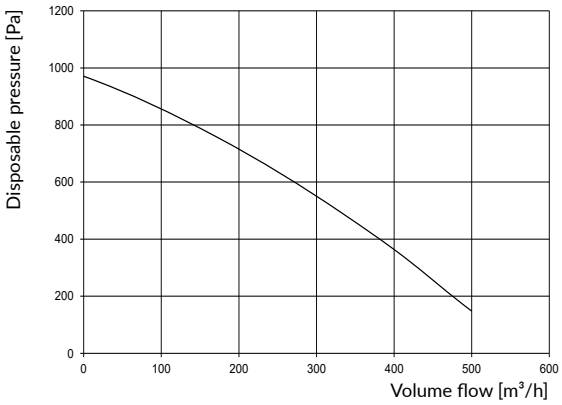


Dimensions

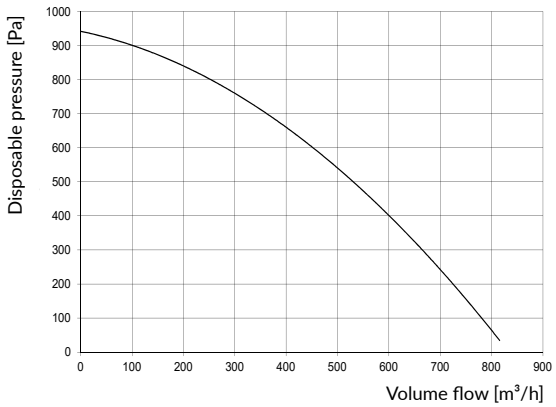
Type	A [mm]	B [mm]	ØC [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]
SMOG Filter-400	1275	1210	Ø 200	95	850	940	565	600	–
SMOG Filter-800	1505	1440	Ø 200	95	850	940	565	600	–
SMOG Filter-1200	1735	1670	Ø 200	95	850	900	565	600	–
SMOG Filter-2400	1735	1670	Ø 200	95	1130	1200	850	900	560

Flow charts

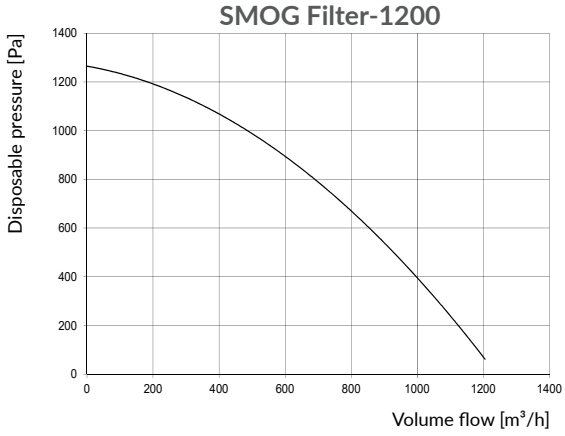
SMOG Filter-400



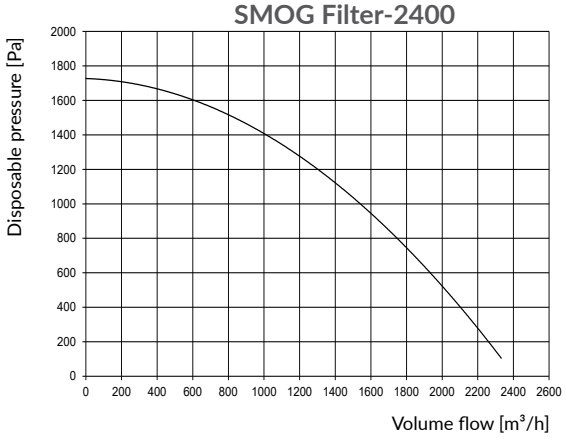
SMOG Filter-800



SMOG Filter-1200

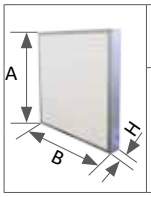


SMOG Filter-2400



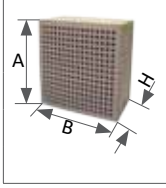
Replaceable parts

High-efficiency HEPA filter



Type	Part No.	Weight [kg]	Dimensions AxBxH [mm]	Class	Quantity of filters	Purpose	Filtration material
FW-SF	852F01	3,2	800x535x80	H13	1	SMOG Filter-400, 800, 1200	Hydrophobic paper of glass-fibre 99,95%.
					2	SMOG Filter-2400	

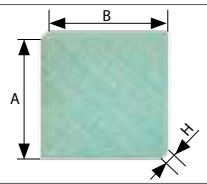
Cassette with active carbon



Type	Part No.	Weight [kg]	Dimensions AxBxH [mm]	Quantity	Purpose	Remarks
WA-ECO-20	838K98	24*	534x534x155	1	SMOG Filter-400	Cassette of cardboard and plywood
				2	SMOG Filter-800	
				3	SMOG Filter-1200	
				6	SMOG Filter-2400	

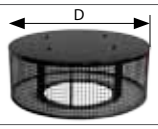
*Weight of the active carbon 20 kg.

Pre-filter



Type	Part No.	Weight [kg]	Dimensions AxBxH [mm]	Class	Quantity of filters	Purpose	Filtration material
PS-SF	852F02	0,5	800x535x50	G3	1	SMOG Filter-400, 800, 1200	Glass spunbond with progressively growing density.
					2	SMOG Filter-2400	

Suction cover



Type	Part No.	Weight [kg]	Diameter D [mm]
K-SF	810H70	0,7	450

Values of activated carbon absorption efficiency for various types of vapors and gases

High efficiency

ethyl acrylate – $C_5H_8O_2$
methyl acrylate – $C_4H_6O_2$
acrylonitrile – C_3H_3N
valericaldehyde – $C_5H_{10}O$
amyl alcohol – $C_5H_{12}O$
butyl alcohol – $C_4H_{10}O$
propyl alcohol – C_3H_7OH
aniline – $C_6H_5NH_2$
naphta (petroleum)
naphta (coal tar)
bromine – Br_2
butyl cellosolve – $C_6H_{14}O_2$
– cellosolve – $C_4H_{10}O_2$
– cellosolve acetate – $C_6H_{12}O_3$
butyl chloride – C_4H_9Cl
propyl chloride – C_3H_7Cl
monochlorobenzene – C_6H_5Cl
chlorobenzene – C_6H_5Cl
ethylene chlorhydrin – C_2H_5ClO
chloroform – $CHCl_3$
chloronitropropane – $C_3H_6ClNO_2$
chloropicrin – CCl_3NO_2
chlorobutadiene – C_4H_5Cl
cyclohexanol – $C_6H_{12}O$
cyclohexanone – $C_6H_{10}O$
tetrachloroethane – $C_2H_2Cl_4$
tetrachloroethylene – C_2Cl_4
carbon tetrachloride – CCl_4
decane – $C_{10}H_{22}$
dioxane – $C_4H_8O_2$
dibromomethane – CH_2Br_2
ethylene dichloride – $C_2H_4Cl_2$
dichlorobenzene – $C_6H_4Cl_2$
dichloroethane – $C_2H_4Cl_2$
dichloroethylene – $C_2H_2Cl_2$
dichloronitroethane – $CH_3CCl_2NO_2$
dichloropropane – $C_3H_6Cl_2$
dimethylaniline – $C_8H_{11}N$
amyl ether – $C_{10}H_{22}O$
butyl ether – $C_8H_{18}O$
dichloroethyl ether – $C_4H_8Cl_2O$
isopropyl ether – $C_6H_{14}O$
propyl ether – $C_6H_{14}O$
ethyl benzene – C_8H_{10}
phenol – C_6H_6O
heptane – C_7H_{16}
heptylene – C_7H_{14}
indole – C_8H_7N
isophorone – $C_9H_{14}O$
iodine – I
iodoform – CHI_3
camphor – $C_{10}H_{16}O$
diethyl ketone – $C_5H_{10}O$
dipropyl ketone – $C_7H_{14}O$
methyl butyl ketone – $C_6H_{12}O$
methyl isobutyl ketone – $C_6H_{12}O$
methyl ethyl ketone – C_4H_8O
creosole – $C_8H_{10}O_2$
cresol – C_7H_8O
crotonaldehyde – C_4H_6O
ethyl silicate – $C_8H_{20}O_4Si$
acrylic acid – $C_3H_4O_2$
caprylic acid – $C_8H_{16}O_2$
butyric acid – $C_4H_8O_2$
lactic acid – $C_3H_6O_3$
uric acid – $C_5H_4N_4O_3$
acetic acid – CH_3COOH
propionic acid – $C_3H_6O_2$
valeric acid – $C_5H_{10}O_2$
menthol – $C_{10}H_{20}O$
ethyl mercaptan – C_2H_6S
propyl mercaptan – C_3H_8S
– methyl cellosolve – $C_3H_8O_2$
– methyl cellosolve acetate – $C_5H_{10}O_3$
methylcyclohexane – C_7H_{14}
methylcyclohexanol – $C_7H_{14}O$
urea – CH_4N_2O
kerosene
nicotyne – $C_{10}H_{14}N_2$
nitrobenzene – $C_6H_5NO_2$
nitroethane – $C_2H_5NO_2$
nitroglicerine – $C_3H_5N_3O_9$
nitropropane – $C_3H_7NO_2$
nitrotoluene – $C_7H_7NO_2$
nonane – C_9H_{20}
amyl acetate – $C_7H_{14}O_2$
butyl acetate – $C_6H_{12}O_2$
ethyl acetate – $C_4H_8O_2$
isopropyl acetate – $C_5H_{10}O_2$
propyl acetate – $C_5H_{10}O_2$
octalene – $C_{12}H_8Cl_6$
octane – C_8H_{18}
putrescine – $C_4H_{12}N_2$
ozone – O_3
paradichlorobenzene – $C_6H_4Cl_2$
– pentanone – $C_5H_{10}O$
perchloroethylene – C_2Cl_4
pyridine – C_5H_5N
dimethylsulphate – $C_2H_6O_4S$
skatole – C_9H_9N
styrene monomer – C_8H_8
turpentine – $C_{10}H_{16}$
mesityl oxide – $C_6H_{10}O$
toluene – C_7H_8
toluidine – C_7H_9N
trichloroethylene – C_2HCl_3

Average efficiency

acetone – C_3H_6O
acetylene – C_2H_2
acrolein – C_3H_4O
butyraldehyde – C_4H_8O
ethyl alcohol – C_2H_5OH
methyl alcohol – CH_3OH
benzene – C_6H_6
ethyl bromide – C_2H_5Br
methyl bromide – CH_3Br
butadiene – C_4H_6
chlorine – Cl_2
ethyl chloride – C_2H_5Cl
vinyl chloride – C_2H_3Cl
cyclohexene – C_6H_{10}
dichlorodifluoromethan – CCl_2F_2
diethyl amine – $C_4H_{11}N$
carbon disulphyde – CS_2
ether – $C_4H_{10}O$
ethyl ether – $C_4H_{10}O$
ethyl amine – C_2H_7N
fluorotrichloromethan – CCl_3F
phosgene – $COCl_2$
anaesthetics
hexane – C_6H_{14}
hexylene – C_6H_{12}
hexyne – C_6H_{10}
isoprene – C_5H_8
hydrogen iodide – HI
xylene – C_8H_{10}
formic acid – HCOOH
methyl mercaptan – CH_3SH
ethyl formate – $C_3H_6O_2$
methyl formate – $C_2H_4O_2$
nitromethane – CH_3NO_2
methyl acetate – $C_3H_6O_2$
pentane – C_5H_{12}
pentylene – C_5H_8
pentyne – C_5H_8
propionandehyde – C_3H_6O
ethylene oxide – C_2H_4O
carbon monoxide – CO

Low efficiency

acetaldehyde – C_2H_4O
ammonia – NH_3
hydrogen bromide – HBr
butane – C_4H_{10}
butanone – C_4H_8O
butylene – C_4H_8
butyne – C_4H_6
methyl chloride – CH_3Cl
hydrogen chloride – HCl
hydrogen cyanide – HCN
nitrogen dioxide – NO_2
sulphur dioxide – SO_2
hydrogen fluoride – HF
formaldehyde – CH_2O
propane – C_3H_8
propylene – C_3H_6
propyne – C_3H_4
hydrogen selenide – H_2Se
hydrogen sulphide – H_2S
sulphur trioxide – SO_3

dust-gaseous filtering unit in Ex execution

MiniDygestorium-350/Ex – individual stand for work with dusts and gases

II 2 G c Ex e II T3

Purpose

MiniDygestorium-350/Ex has been developed for purifying the air of the gaseous contaminations, emitted in small amounts, in chemical laboratories, biological-, analytical-, scientific facilities, research labs, health service units, in chemical ateliers in schools and in numerous other places, where noxious gases and vapours arise, which endanger our health.

MiniDygestorium-350/Ex eliminates the expansion possibility of the pollutants within the room. The appliance can be used in areas of explosion hazard, where explosive atmosphere is likely to occur.

Structure

The device consists of following elements:

- cabinet fume hood – a glass extraction chamber made of acid--proof steel, with two holes for operator's hands, due to which various operations can be carried out on the desktop,
- housing of steel sheets – 3 segments assembled together with clasp locks,
- pre-filter,
- high-efficiency HEPA filter – class H13,
- gas absorber – a cassette with granular activated carbon,
- Ex fan placed in the lower part of the device, at the side of clean air,
- pressure control – indicating the excessive resistances of the high-efficiency filter,
- control unit (to be installed within the room, beyond the Ex hazard area).

Operational Use

The construction is an independent mobile workplace. After switching it on, the operator places the emission source on the desktop (inside the cabinet), whereby the tasks are executed in the vacuum area, that eliminates the pollution being emerged outside.

The dust pollutants are captured by the pre-filter and the high-efficiency HEPA filter. Whereas, the active carbon layer absorbs the majority of noxious chemical compounds, such as: styrene, toluene, alcohols, phenol and many others. At the point when the HEPA filter reaches the limit pollution degree, a light signal indicates the need of filter replacement.

Air is supplied into the extraction cabinet through the perorated upper wall and the holes for hands (in the front). The polluted air is expelled through the perforated outlet, located underneath the device.

Maintenance consists in:

- periodical replacement of the HEPA filter – as signalised by the lamp,
- periodical replacement of the cassette with active carbon – depending on organoleptic evaluation of operator,
- periodical replacement of the pre-filter.

CAUTION:

Absorption efficiency of the active carbon for various vapours and gases is listed on the next page.

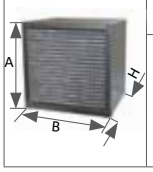
Technical Data

Type	Part No.	Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Motor rate [W]	Supply voltage [V/Hz]	Acoustic pressure level [dB(A)]*	Weight [kg]
MiniDygestorium-350/Ex	888D01	350	220	120	3x400	48	98

* Noise level has been measured at a distance of 1 metre (from the device).

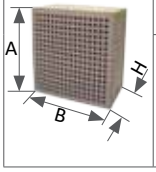
Replaceable Parts

High-efficiency HEPA filter



Type	Part No.	Weight [kg]	Dimensions AxB xH [mm]	Class	Filtration material
FW-MD-350/Ex	838W03	15	535x535 x292	H13	Hydrophobic glass paper 99,95%

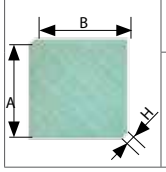
Cassette with activated carbon



Type	Part No.	Weight [kg]	Dimensions AxB xH [mm]	Remarks
WA-ECO-20	838K98	24*	534x534 x155	The cassette is made of cardboard and plywood

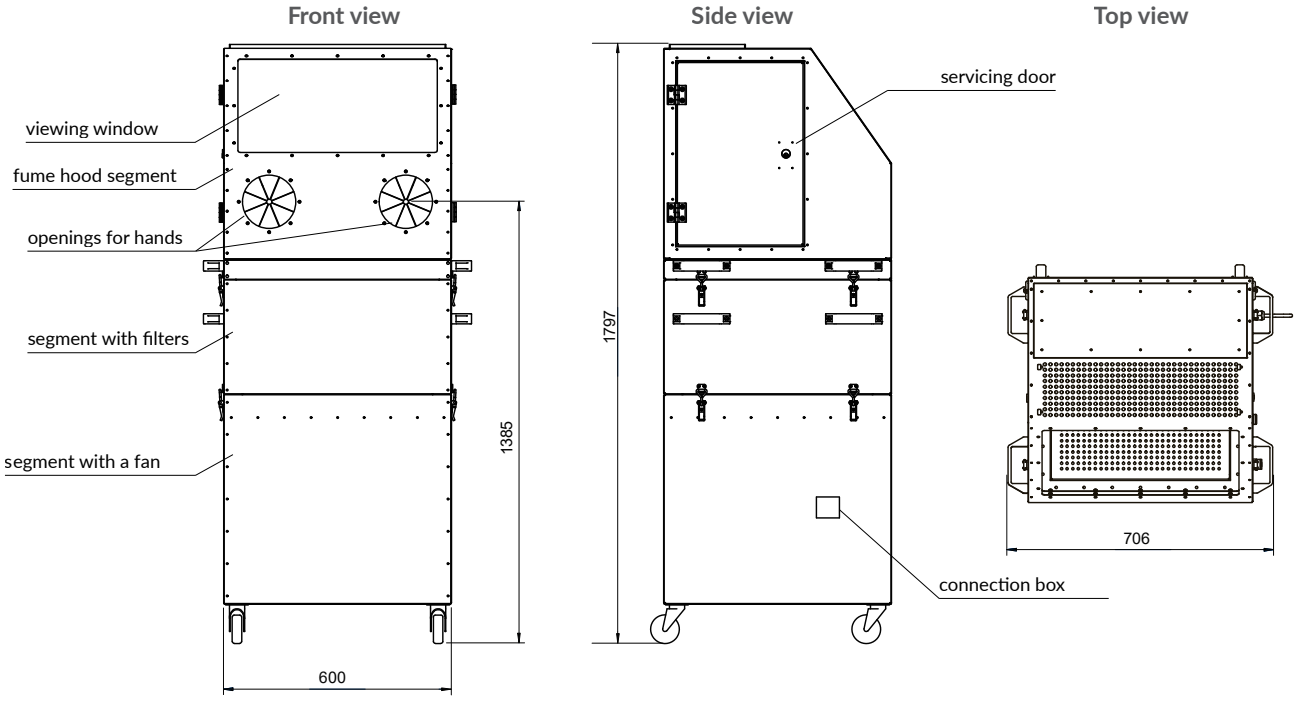
*Weight of the activated carbon ~20 kg

Pre-filter



Type	Part No.	Weight [kg]	Dimensions AxB xH [mm]	Class	Filtration material
PS-MD-350	852F03	0,5	535x535 x50	G3	Glass unwoven with progressively growing density

Dimensions



Values of activated carbon absorption efficiency for various types of vapors and gases

High efficiency

ethyl acrylate – $C_5H_8O_2$
methyl acrylate – $C_4H_6O_2$
acrylonitrile – C_3H_3N
valericaldehyde – $C_5H_{10}O$
amyl alcohol – $C_5H_{12}O$
butyl alcohol – $C_4H_{10}O$
propyl alcohol – C_3H_7OH
aniline – $C_6H_5NH_2$
naphta (petroleum)
naphta (coal tar)
bromine – Br_2
butyl cellosolve – $C_6H_{14}O_2$
– cellosolve – $C_4H_{10}O_2$
– cellosolve acetate – $C_6H_{12}O_3$
butyl chloride – C_4H_9Cl
propyl chloride – C_3H_7Cl
monochlorobenzene – C_6H_5Cl
chlorobenzene – C_6H_5Cl
ethylene chlorhydrin – C_2H_5ClO
chloroform – $CHCl_3$
chloronitropropane – $C_3H_6ClNO_2$
chloropicrin – CCl_3NO_2
chlorobutadiene – C_4H_5Cl
cyclohexanol – $C_6H_{12}O$
cyclohexanone – $C_6H_{10}O$
tetrachloroethane – $C_2H_2Cl_4$
tetrachloroethylene – C_2Cl_4
carbon tetrachloride – CCl_4
decane – $C_{10}H_{22}$
dioxane – $C_4H_8O_2$
dibromomethane – CH_2Br_2
ethylene dichloride – $C_2H_4Cl_2$
dichlorobenzene – $C_6H_4Cl_2$
dichloroethane – $C_2H_4Cl_2$
dichloroethylene – $C_2H_2Cl_2$
dichloronitroethane – $CH_3CCl_2NO_2$
dichloropropane – $C_3H_6Cl_2$
dimethylaniline – $C_8H_{11}N$
amyl ether – $C_{10}H_{22}O$
butyl ether – $C_8H_{18}O$
dichloroethyl ether – $C_4H_8Cl_2O$
isopropyl ether – $C_6H_{14}O$
propyl ether – $C_6H_{14}O$
ethyl benzene – C_8H_{10}
phenol – C_6H_6O
heptane – C_7H_{16}
heptylene – C_7H_{14}
indole – C_8H_7N
isophorone – $C_9H_{14}O$
iodine – I
iodoform – CHI_3
camphor – $C_{10}H_{16}O$
diethyl ketone – $C_5H_{10}O$
dipropyl ketone – $C_7H_{14}O$
methyl butyl ketone – $C_6H_{12}O$
methyl isobutyl ketone – $C_6H_{12}O$
methyl ethyl ketone – C_4H_8O
creosole – $C_8H_{10}O_2$
cresol – C_7H_8O
crotonaldehyde – C_4H_6O
ethyl silicate – $C_8H_{20}O_4Si$
acrylic acid – $C_3H_4O_2$
caprylic acid – $C_8H_{16}O_2$
butyric acid – $C_4H_8O_2$
lactic acid – $C_3H_6O_3$
uric acid – $C_5H_4N_4O_3$
acetic acid – CH_3COOH
propionic acid – $C_3H_6O_2$
valeric acid – $C_5H_{10}O_2$
menthol – $C_{10}H_{20}O$
ethyl mercaptan – C_2H_6S
propyl mercaptan – C_3H_8S
– methyl cellosolve – $C_3H_8O_2$
– methyl cellosolve acetate – $C_5H_{10}O_3$
methylcyclohexane – C_7H_{14}
methylcyclohexanol – $C_7H_{14}O$
urea – CH_4N_2O
kerosene
nicotyne – $C_{10}H_{14}N_2$
nitrobenzene – $C_6H_5NO_2$
nitroethane – $C_2H_5NO_2$
nitroglicerine – $C_3H_5N_3O_9$
nitropropane – $C_3H_7NO_2$
nitrotoluene – $C_7H_7NO_2$
nonane – C_9H_{20}
amyl acetate – $C_7H_{14}O_2$
butyl acetate – $C_6H_{12}O_2$
ethyl acetate – $C_4H_8O_2$
isopropyl acetate – $C_5H_{10}O_2$
propyl acetate – $C_5H_{10}O_2$
octalene – $C_{12}H_8Cl_6$
octane – C_8H_{18}
putrescine – $C_4H_{12}N_2$
ozone – O_3
paradichlorobenzene – $C_6H_4Cl_2$
– pentanone – $C_5H_{10}O$
perchloroethylene – C_2Cl_4
pyridine – C_5H_5N
dimethylsulphate – $C_2H_6O_4S$
skatole – C_9H_9N
styrene monomer – C_8H_8
turpentine – $C_{10}H_{16}$
mesityl oxide – $C_6H_{10}O$
toluene – C_7H_8
toluidine – C_7H_9N
trichloroethylene – C_2HCl_3

Average efficiency

acetone – C_3H_6O
acetylene – C_2H_2
acrolein – C_3H_4O
butyraldehyde – C_4H_8O
ethyl alcohol – C_2H_5OH
methyl alcohol – CH_3OH
benzene – C_6H_6
ethyl bromide – C_2H_5Br
methyl bromide – CH_3Br
butadiene – C_4H_6
chlorine – Cl_2
ethyl chloride – C_2H_5Cl
vinyl chloride – C_2H_3Cl
cyclohexene – C_6H_{10}
dichlorodifluoromethan – CCl_2F_2
diethyl amine – $C_4H_{11}N$
carbon disulphyde – CS_2
ether – $C_4H_{10}O$
ethyl ether – $C_4H_{10}O$
ethyl amine – C_2H_7N
fluorotrichloromethan – CCl_3F
phosgene – $COCl_2$
anaesthetics
hexane – C_6H_{14}
hexylene – C_6H_{12}
hexyne – C_6H_{10}
isoprene – C_5H_8
hydrogen iodide – HI
xylene – C_8H_{10}
formic acid – HCOOH
methyl mercaptan – CH_3SH
ethyl formate – $C_3H_6O_2$
methyl formate – $C_2H_4O_2$
nitromethane – CH_3NO_2
methyl acetate – $C_3H_6O_2$
pentane – C_5H_{12}
pentylene – C_5H_8
pentyne – C_5H_8
propionandehyde – C_3H_6O
ethylene oxide – C_2H_4O
carbon monoxide – CO

Low efficiency

acetaldehyde – C_2H_4O
ammonia – NH_3
hydrogen bromide – HBr
butane – C_4H_{10}
butanone – C_4H_8O
butylene – C_4H_8
butyne – C_4H_6
methyl chloride – CH_3Cl
hydrogen chloride – HCl
hydrogen cyanide – HCN
nitrogen dioxide – NO_2
sulphur dioxide – SO_2
hydrogen fluoride – HF
formaldehyde – CH_2O
propane – C_3H_8
propylene – C_3H_6
propyne – C_3H_4
hydrogen selenide – H_2Se
hydrogen sulphide – H_2S
sulphur trioxide – SO_3

SMOG Filter/Ex – general filtering of dusts and gases

SMOG Filter-1200/Ex

SMOG Filter-2400/Ex

II 2 G c Ex e II T3

Purpose

SMOG Filter/Ex separators are efficient in cleaning the air of vapours, gases and dust particles in chemical laboratories, biological research units, analytical labs, during the grinding of various materials. Especially, they are applied in processes, accompanying by unpleasant smells, e.g. during gluing or using various types of aerosols. The appliance can be used within areas of explosion hazard, where explosive atmosphere can occur.

Structure

SMOG Filter/Ex absorber is constructed of subsequent elements:

- steel sheet housing,
- Ex fan – located in the lower part of the device, at the side of clean air
- Paint-Stop pre-filter,
- high-efficiency HEPA filter – class H13,
- cassettes with granulated activated carbon,
- terminal box,
- motor starter (to be installed within the room outside of the explosion risk area),
- inlet guard (on demand).

Operational Use

SMOG Filter/Ex provide complete recirculation of the extracted air. The device inlet can be connected with a local exhaust, system of general ventilation or can be equipped with a protective inlet suction head. In all these cases, the extracted air is being returned (recirculated) back into the process room, after the filtration. The recirculation proceeds through a perforated outlet surface underneath the device.

The cassettes with granulated activated carbon absorb efficiently the majority of noxious chemical compounds, such as styrene, toluene, alcohols, phenol and many others. Dust contaminants are captured by the high-efficiency HEPA filter.

Absorptivity efficiency of the activated carbon for various vapours and gases is mentioned on next page.

Maintenance consists in:

- periodical cleaning of the Paint-Stop pre-filter,
- periodical replacement of the HEPA filter,
- periodical replacement of the cassettes with activated carbon.

Replacement of the Paint-Stop and HEPA filters ought to be carried out at the moment of noticeable decrease of air volume flow.

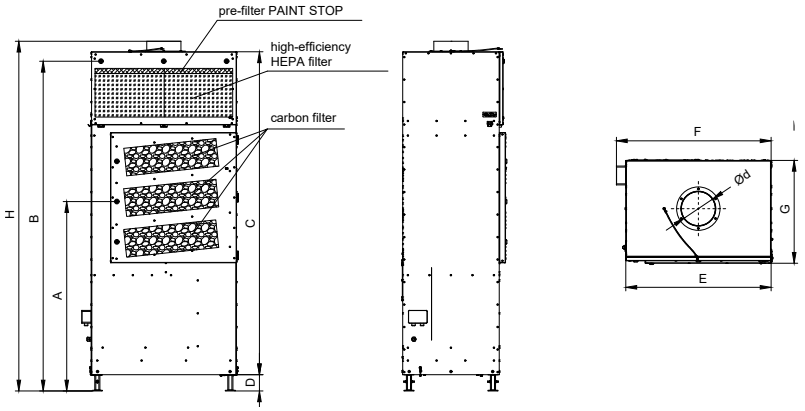
Execute the replacement of the cassettes with activated carbon when the worse air quality (at the device outlet) is perceptible.

Technical Data

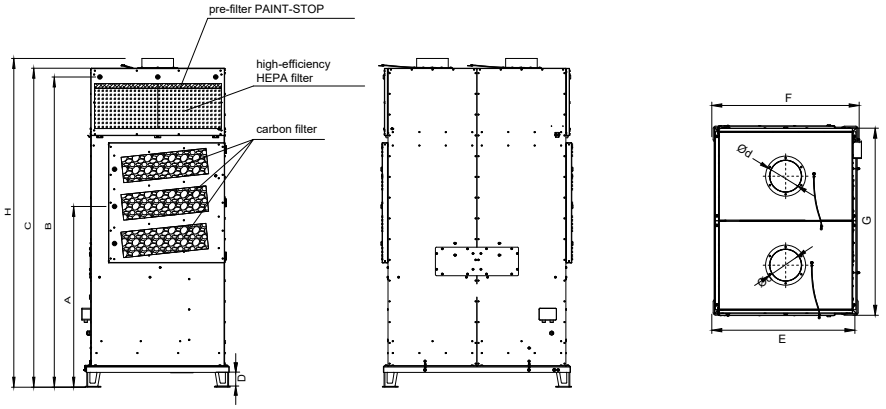
Type	Part No.	Maximum volume flow [m³/h]	Marking	Maximum vacuum [Pa]	Motor rate [kW]	Supply voltage [V/Hz]	Acoustic pressure level [dB(A)]*	Weight [kg]
SMOG Filter-1200/Ex	801O35	1200	II 2 G c Ex e II T3	1270	0,55	3x400/50	59	230
SMOG Filter-2400/Ex	801O36	2350	II 2 G c Ex e II T3	1750	1,1	3x400/50	61	375

* Acoustic pressure level has been measured at a distance of 1 m from the device.

SMOG Filter-1200/Ex



SMOG Filter-2400/Ex

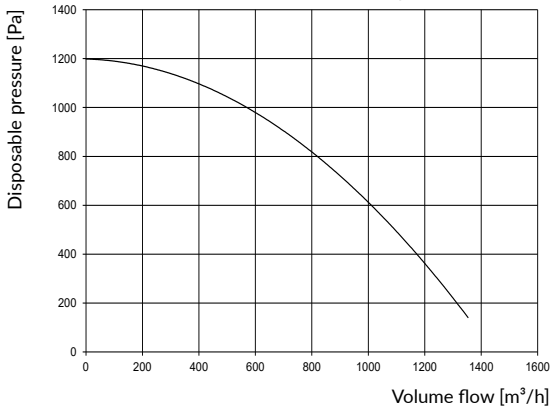


Dimensions

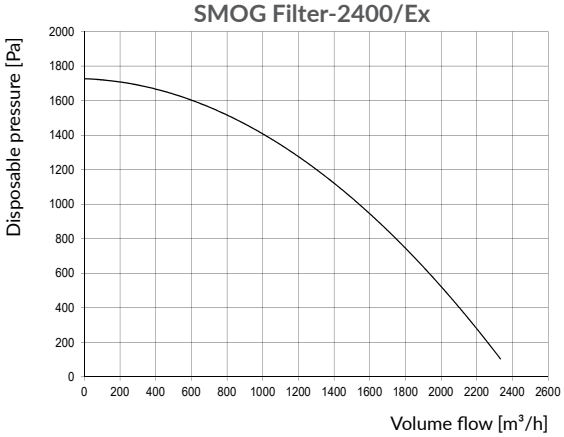
Type	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	Ød [mm]
SMOG Filter-1200/Ex	1105	1925	1885	95	845	900	600	2040	200
SMOG Filter-2400/Ex	1145	1965	2020	95	905	935	1185	2080	200

Flow charts

SMOG Filter-1200/Ex

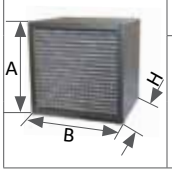


SMOG Filter-2400/Ex



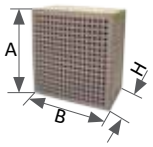
Replaceable parts

High-efficiency HEPA filter



Type	Part No.	Weight [kg]	Dimensions AxBxH [mm]	Class	Quantity of filters	Application	Filtration material
FW-SF-Ex	852F00	3,2	390x535x292	H13	2	SMOG Filter-1200/Ex	Hydrophobic glass paper 99,95%.
					4	SMOG Filter-2400/Ex	

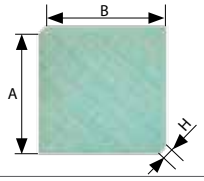
Cassette with activated carbon



Type	Part No.	Weight [kg]	Dimensions AxBxH [mm]	Quantity of filters	Application	Remarks
WA-ECO-20	838K98	24*	534x534x155	3	SMOG Filter-1200/Ex	Cassette housing is of cardboard and plywood.
				6	SMOG Filter-2400/Ex	

*Weight of the active carbon ~20 kg.

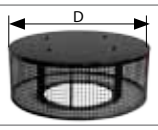
Pre-filter Paint-Stop



Type	Part No.	Weight [kg]	Dimensions AxBxH [mm]	Class	Quantity of filters	Application	Filtration material
PS-SF	852F02	0,5	800x535x50	G3	1	SMOG Filter-1200/Ex	Glass unwoven with progressively increasing density.
					2	SMOG Filter-2400/Ex	

Additional equipment

Suction head



Type	Part No.	Weight [kg]	Diameter D [mm]
K-SF	810H70	0,7	Ø450

Values of activated carbon absorption efficiency for various types of vapors and gases

High efficiency

ethyl acrylate – $C_5H_8O_2$
methyl acrylate – $C_4H_6O_2$
acrylonitrile – C_3H_3N
valericaldehyde – $C_5H_{10}O$
amyl alcohol – $C_5H_{12}O$
butyl alcohol – $C_4H_{10}O$
propyl alcohol – C_3H_7OH
aniline – $C_6H_5NH_2$
naphta (petroleum)
naphta (coal tar)
bromine – Br_2
butyl cellosolve – $C_6H_{14}O_2$
– cellosolve – $C_4H_{10}O_2$
– cellosolve acetate – $C_6H_{12}O_3$
butyl chloride – C_4H_9Cl
propyl chloride – C_3H_7Cl
monochlorobenzene – C_6H_5Cl
chlorobenzene – C_6H_5Cl
ethylene chlorhydrin – C_2H_5ClO
chloroform – $CHCl_3$
chloronitropropane – $C_3H_6ClNO_2$
chloropicrin – CCl_3NO_2
chlorobutadiene – C_4H_5Cl
cyclohexanol – $C_6H_{12}O$
cyclohexanone – $C_6H_{10}O$
tetrachloroethane – $C_2H_2Cl_4$
tetrachloroethylene – C_2Cl_4
carbon tetrachloride – CCl_4
decane – $C_{10}H_{22}$
dioxane – $C_4H_8O_2$
dibromomethane – CH_2Br_2
ethylene dichloride – $C_2H_4Cl_2$
dichlorobenzene – $C_6H_4Cl_2$
dichloroethane – $C_2H_4Cl_2$
dichloroethylene – $C_2H_2Cl_2$
dichloronitroethane – $CH_3CCl_2NO_2$
dichloropropane – $C_3H_6Cl_2$
dimethylaniline – $C_8H_{11}N$
amyl ether – $C_{10}H_{22}O$
butyl ether – $C_8H_{18}O$
dichloroethyl ether – $C_4H_8Cl_2O$
isopropyl ether – $C_6H_{14}O$
propyl ether – $C_6H_{14}O$
ethyl benzene – C_8H_{10}
phenol – C_6H_6O
heptane – C_7H_{16}
heptylene – C_7H_{14}
indole – C_8H_7N
isophorone – $C_9H_{14}O$
iodine – I
iodoform – CHI_3
camphor – $C_{10}H_{16}O$
diethyl ketone – $C_5H_{10}O$
dipropyl ketone – $C_7H_{14}O$
methyl butyl ketone – $C_6H_{12}O$
methyl isobutyl ketone – $C_6H_{12}O$
methyl ethyl ketone – C_4H_8O
creosole – $C_8H_{10}O_2$
cresol – C_7H_8O
crotonaldehyde – C_4H_6O
ethyl silicate – $C_8H_{20}O_4Si$
acrylic acid – $C_3H_4O_2$
caprylic acid – $C_8H_{16}O_2$
butyric acid – $C_4H_8O_2$
lactic acid – $C_3H_6O_3$
uric acid – $C_5H_4N_4O_3$
acetic acid – CH_3COOH
propionic acid – $C_3H_6O_2$
valeric acid – $C_5H_{10}O_2$
menthol – $C_{10}H_{20}O$
ethyl mercaptan – C_2H_6S
propyl mercaptan – C_3H_8S
– methyl cellosolve – $C_3H_8O_2$
– methyl cellosolve acetate – $C_5H_{10}O_3$
methylcyclohexane – C_7H_{14}
methylcyclohexanol – $C_7H_{14}O$
urea – CH_4N_2O
kerosene
nicotyne – $C_{10}H_{14}N_2$
nitrobenzene – $C_6H_5NO_2$
nitroethane – $C_2H_5NO_2$
nitroglicerine – $C_3H_5N_3O_9$
nitropropane – $C_3H_7NO_2$
nitrotoluene – $C_7H_7NO_2$
nonane – C_9H_{20}
amyl acetate – $C_7H_{14}O_2$
butyl acetate – $C_6H_{12}O_2$
ethyl acetate – $C_4H_8O_2$
isopropyl acetate – $C_5H_{10}O_2$
propyl acetate – $C_5H_{10}O_2$
octalene – $C_{12}H_8Cl_6$
octane – C_8H_{18}
putrescine – $C_4H_{12}N_2$
ozone – O_3
paradichlorobenzene – $C_6H_4Cl_2$
– pentanone – $C_5H_{10}O$
perchloroethylene – C_2Cl_4
pyridine – C_5H_5N
dimethylsulphate – $C_2H_6O_4S$
skatole – C_9H_9N
styrene monomer – C_8H_8
turpentine – $C_{10}H_{16}$
mesityl oxide – $C_6H_{10}O$
toluene – C_7H_8
toluidine – C_7H_9N
trichloroethylene – C_2HCl_3

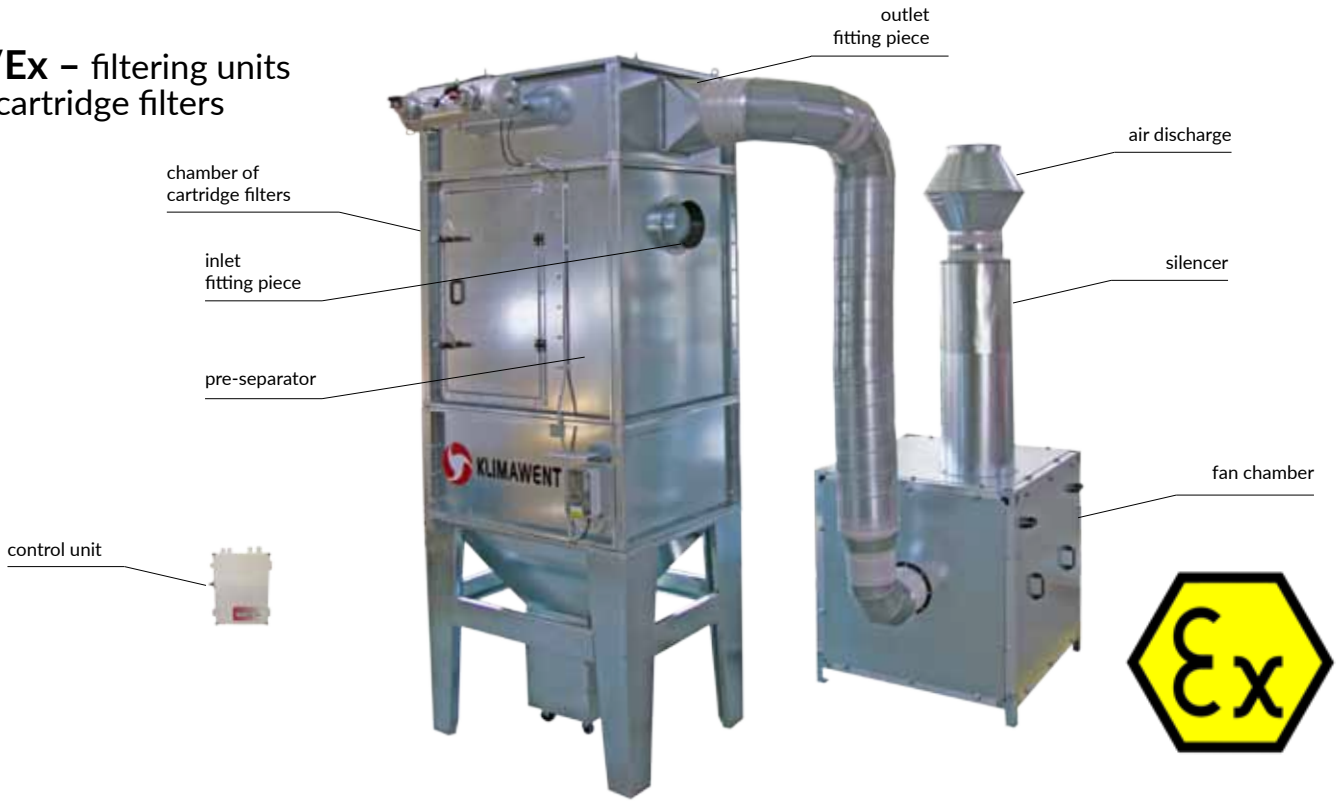
Average efficiency

acetone – C_3H_6O
acetylene – C_2H_2
acrolein – C_3H_4O
butyraldehyde – C_4H_8O
ethyl alcohol – C_2H_5OH
methyl alcohol – CH_3OH
benzene – C_6H_6
ethyl bromide – C_2H_5Br
methyl bromide – CH_3Br
butadiene – C_4H_6
chlorine – Cl_2
ethyl chloride – C_2H_5Cl
vinyl chloride – C_2H_3Cl
cyclohexene – C_6H_{10}
dichlorodifluoromethan – CCl_2F_2
diethyl amine – $C_4H_{11}N$
carbon disulphyde – CS_2
ether – $C_4H_{10}O$
ethyl ether – $C_4H_{10}O$
ethyl amine – C_2H_7N
fluorotrichloromethan – CCl_3F
phosgene – $COCl_2$
anaesthetics
hexane – C_6H_{14}
hexylene – C_6H_{12}
hexyne – C_6H_{10}
isoprene – C_5H_8
hydrogen iodide – HI
xylene – C_8H_{10}
formic acid – HCOOH
methyl mercaptan – CH_3SH
ethyl formate – $C_3H_6O_2$
methyl formate – $C_2H_4O_2$
nitromethane – CH_3NO_2
methyl acetate – $C_3H_6O_2$
pentane – C_5H_{12}
pentylene – C_5H_8
pentyne – C_5H_8
propionandehyde – C_3H_6O
ethylene oxide – C_2H_4O
carbon monoxide – CO

Low efficiency

acetaldehyde – C_2H_4O
ammonia – NH_3
hydrogen bromide – HBr
butane – C_4H_{10}
butanone – C_4H_8O
butylene – C_4H_8
butyne – C_4H_6
methyl chloride – CH_3Cl
hydrogen chloride – HCl
hydrogen cyanide – HCN
nitrogen dioxide – NO_2
sulphur dioxide – SO_2
hydrogen fluoride – HF
formaldehyde – CH_2O
propane – C_3H_8
propylene – C_3H_6
propyne – C_3H_4
hydrogen selenide – H_2Se
hydrogen sulphide – H_2S
sulphur trioxide – SO_3

BIG/Ex – filtering units with cartridge filters



Purpose

BIG/Ex filtering system with cartridge filters are applied for cleaning the dust laden air from impurities, arising during manufacturing processes with powdery materials and dust of ST1 explosion class.

The filtering system is designed for application in areas of explosion hazard, according to the ATEX 94/9/EC Directive.

Maximum temperature of the conveyed air is +40°C. Filtering efficiency of the filters 99,9%.

Structure

BIG/Ex filtering system consists of a filtration unit, fan chamber and a control unit.

A. Filtration unit

Consists of following elements:

- base with a hopper chamber and a waste container,
- pre-separator,
- filtration chamber – with cartridge filters,
- chamber of electromagnetic valves – striking off the dust which accumulated on the filters
- decompression panels – to relieve an explosion, by discharging the blast effects (mainly pressure) outside the device (through the venting).

On the four-legs base (with hopper chamber and waste container), are placed two chambers: pre-separator chamber and a chamber with cartridge filters. The polluted air is drawn in, through the inlet, into the pre-separator. Here are captured the largest dust fractions. Subsequently, the air is directed to the cartridge filters for fine filtration.

Above the filtration chambers, there is an electro-valves chamber. The electromagnetic valves are cleaning the filters from the deposited dust, by means of compressed air impulses. This proceeds automatically. The appliance can work in a continuous mode. The separated dust is falling into a waste container on wheels.

On the side wall, there is a decompression panel, relieving the explosion by discharging the blast effects (mainly pressure) outside the device through the vent. In case of explosion, the internal device pressure will be reduced to the safe level. Due to explosion risk, it is recommended to install the whole device outside the building, (as the decompression panel, can cause impact hazard to people in the vicinity, while discharging).

B. Fan chamber

As a sound-isolated construction, the chamber contains a radial fan. The fan is manufactured according to the ATEX 94/9/EC Directive. The fan chamber must be placed near the filtering unit and connected with it through SPIRO spiral-seam ducts.

C. Control unit

The automation set provides continuous work of the fan and automatic filter cleaning by impulses of compressed air. As the control unit is not of Ex execution, it must be installed beyond the explosion risk area.

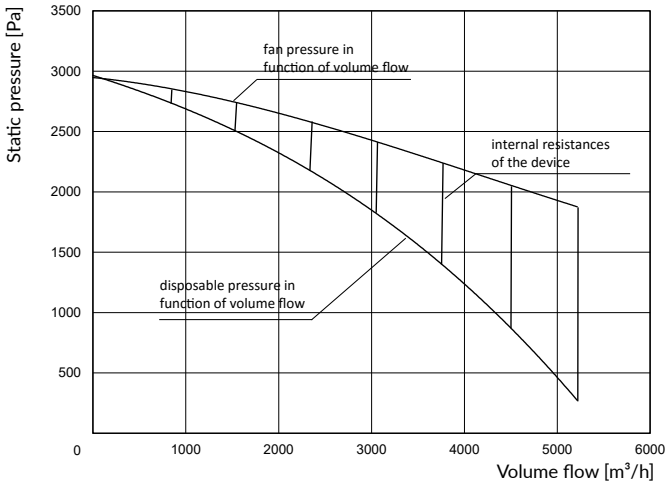
Additional accessories:

On demand of Customer we deliver:

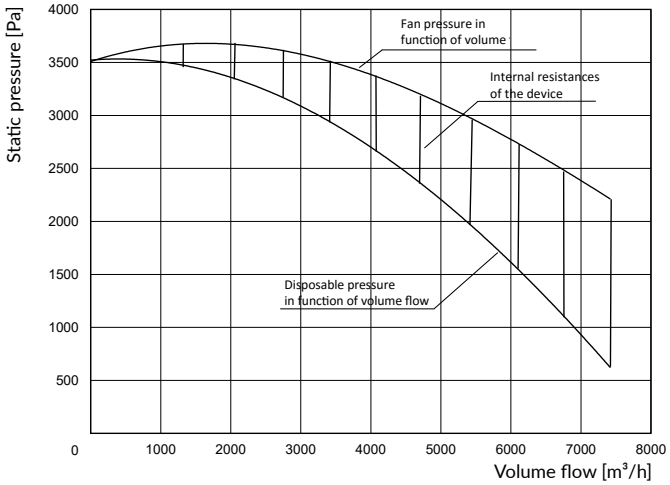
- non-return valves – in ATEX Directive compatible execution, to be installed on the extraction ductwork (in case of explosion, those valves protect from expanding the explosion blast further within the extraction installation),
- rotary-cell valve – to carry the dust onto a belt conveyor.

Flow charts of the filtration systems

Filtration system BIG-4000/Ex with chamber WPA-BOX-11/Ex



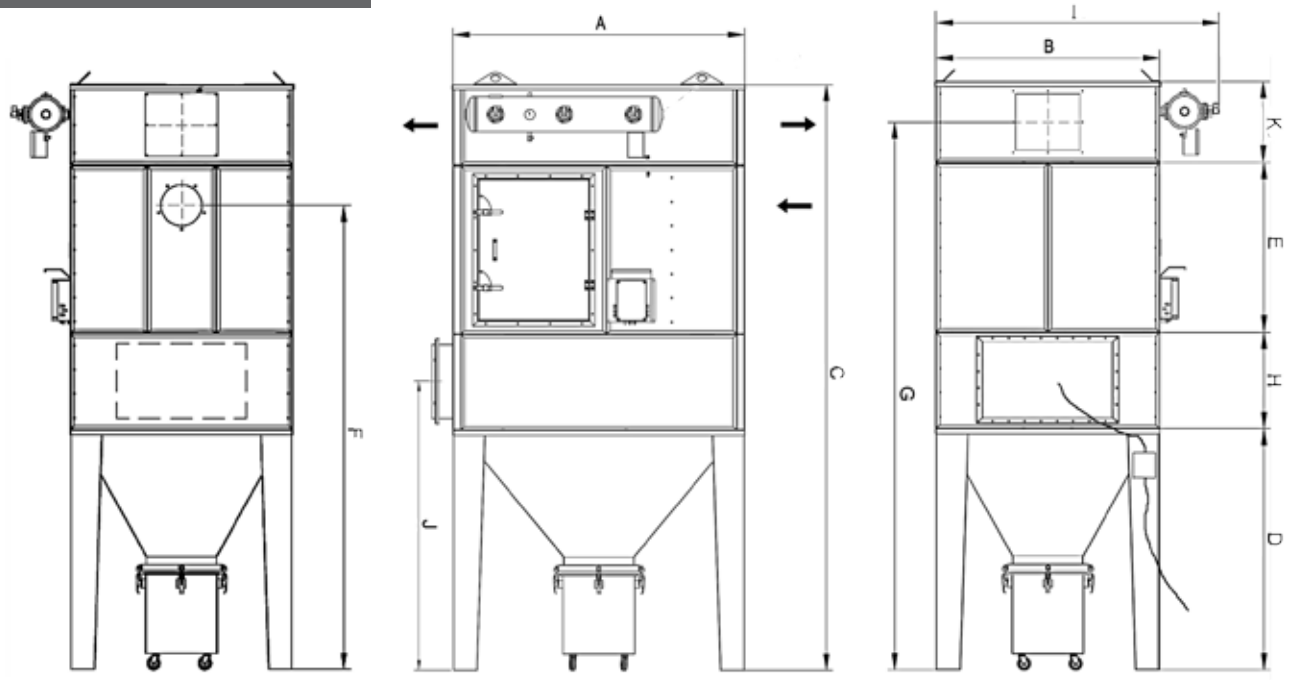
Filtration system BIG-5000/Ex with chamber WPA-BOX-13/Ex



Technical data

Type	BIG-4000/Ex	BIG-5000/Ex
Marking	II 3 D Ex tD A22 T200 ° C -10 ° C 40 ° <T <C.	
Part no.	815F02	815F00
Maximum volume flow [m³/h]	5200	7400
Weight [kg]	710	1075
Diameter of inlet [mm]	250	315
Size of outlet [mm]	200x350	200x350
Required compressed air pressure [MPa]	0,6	0,6
Quantity of cartridge filters	4	6
Capacity of waste container [dm³]	99	99
Consumption compressed air [Nm³/h]	4,8	7,2

Dimensions

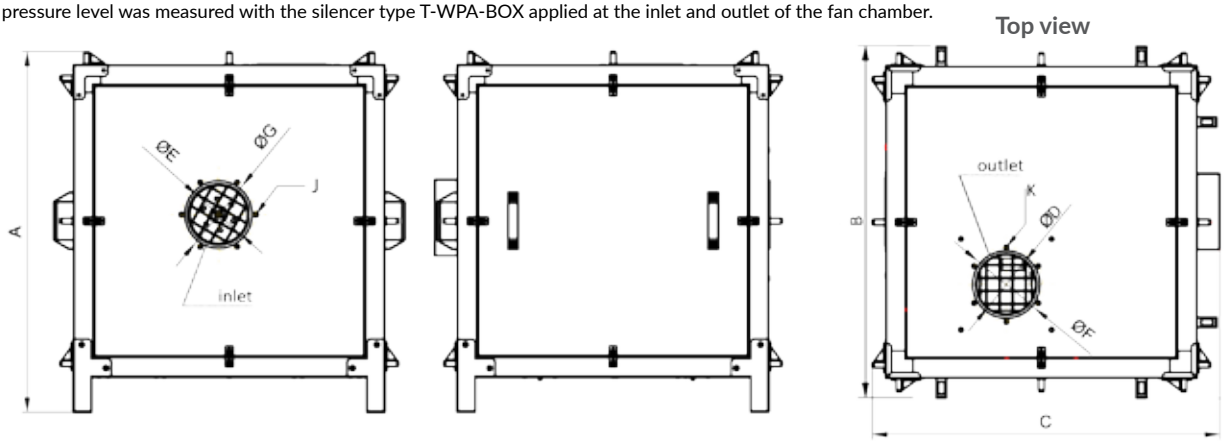


Type	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	K [mm]
BIG-5000/Ex	1820	960	3856	1500	1253	3050	3600	600	1320	503
BIG-4000/Ex	1390	960	3556	1200	1253	2750	3300	600	1320	503

Technical data of the fan chambers

Type	Part no.	Marking	Synchronous rotations [1/min]	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Acoustic pressure level [dB(A)] from a distance of:*		Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Weight [kg]
							1 m	5 m			
WPA-BOX-11/Ex	888W36	II 3 G/D c Exe II T4	3000	3x400	5,5	54	75	61	8050	2950	300
WPA-BOX-13/Ex	888W37	II 3 G/D c Exe II T4	3000	3x400	7,5	54	77	63	10 800	3300	322

* Acoustic pressure level was measured with the silencer type T-WPA-BOX applied at the inlet and outlet of the fan chamber.



Dimensions

Type	A [mm]	B [mm]	C [mm]	Diameters of connections		Pitch diameters of the connection openings		K [mm]	J [mm]
				ØD [mm]	ØE [mm]	ØF [mm]	ØG [mm]		
WPA-BOX-11/Ex	1329	1336	1336	250	250	274	274	M8	M8
WPA-BOX-13/Ex	1329	1336	1336	315	315	344	344	M8	M8

Additional accessories (for the fan chamber)

Silencer T-WPA-BOX

Type	Part no.	Inlet [mm]	Outlet [mm]	Remarks
T-315 WPA-BOX	830T28	250	315	The set consists of: reducer, silencer, silencer bracket. Install the set on the inlet ferrule or/and on the outlet of the WPA-BOX fan chamber.
T-400 WPA-BOX	808T28	315	400	

Air discharge

Type	Part no.	Diameter inlet/outlet/height [mm]	Weight [kg]
E-315	842W39	315/315/700	14
E-400	842W40	400/400/900	18

Replaceable parts (for the filtration unit)

Cartridge filter

Type	Part no.	Weight [kg]	Class	Filtration efficiency [%]
PTA/Ex	838N16	8,55	H 13	99,9

Decompression panel

Type	Part no.	Dimensions of the panel [mm]
DP1/Ex	800P02	450x500

oil mists separators

MISTOL – filtering unit with HEPA-Filter

MISTOL-1000

MISTOL-2000

MISTOL-5000

Purpose

MISTOL oil mist separators are intended for cleaning the air from the oil mist, arising during various manufacturing processes. Especially, they are recommended for removal of oil particles from the vapours of the cooling-lubricating liquid, used in metal machining (e.g. processing on lathe, milling, drilling). Separators are manufactured in three sizes varying in efficiency: MISTOL-1000, MISTOL-2000 and MISTOL-5000.

Structure

MISTOL separator consists of:

- housing of steel sheet,
- radial fan – housing of cast aluminium,
- pre-filter,
- high-efficiency HEPA filter – class H13,
- sedimentation chamber – equipped with connection fittings for the oil laden air,
- silencer at the fan outlet,
- motor protective switch – short-circuit- and overload protection,
- supporting construction (for MISTOL-1000 and MISTOL-2000 the supporting construction is additional equipment),
- oil drainage valve.

As first stage, the polluted air is submit to pre-filter cleaning, subsequently it streams through the HEPA filter (filtration medium non-hygroscopic cardboard of glass-fibre). The separated oil is draining into the oil sedimentation chamber. Underneath the chamber is located an oil drainage valve to discharge the accumulated oil from the chamber, further into a container placed under the device.

Operational use

MISTOL-1000 and MISTOL-2000 should be placed on a supporting construction (additional equipment of the device). User can construct a supporting frame on one's own, suitable for installing the separator at the requested height (in this case there is no need to buy a supporting construction). This situation exists when User requests to direct the collected oil (from the sedimentation chamber) directly into the container of the processing machine. As standard, there are three locations of the air inlets in the device. User can choose the most convenient inlet location – at the back- or on the side walls of the device. Additionally, it is possible to change the location of the air outlet of the fan. Simply, by turning the fan on the suction connection flange or by turning the silencer on the fan outlet.

In the course of operational use, separators do not need continuous supervision, except switching ON and OFF. The HEPA high-efficiency filter ought to be replaced at the moment when the flow efficiency decreases, (but usually they can work even throughout several years without replacement).

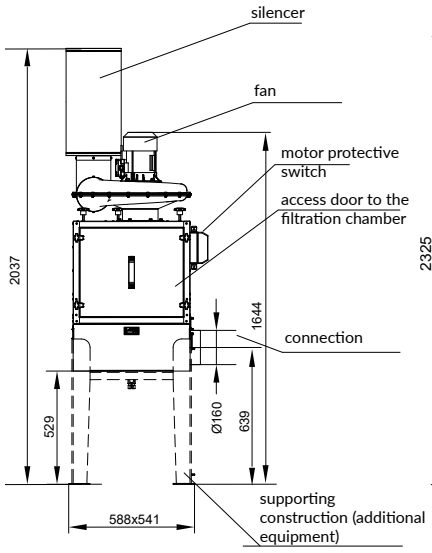
The everyday maintenance consists in emptying the sedimentation chamber from the deposited oil, by opening the drainage valve. Put a suitable container underneath the device, or the accumulated oil should be drained directly into the container of the processing machine.

The device is not designed for continuous day and night operation, as the filter must have enough time to drain off the excessive oil amount. As estimation, the oil drainage time is 4–8 hours.

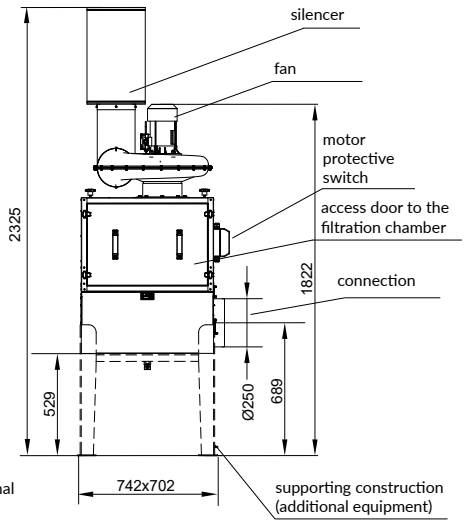
Technical data

Type	Part no.	Maximum volume flow [m³/h]	Maximum vacuum [Pa]	Supply voltage [V]	Motor rate [kW]	Acoustic pressure level [dB(A)] from a distance of:		Weight [kg]
						1 m	5 m	
MISTOL-1000	800S07	1750	1700	230	0,75	69	64,5	100
MISTOL-2000	800S08	3100	2000	230	1,5	73,5	68	130
MISTOL-5000	800S09	8300	4200	3x400	5,5	77	71	400

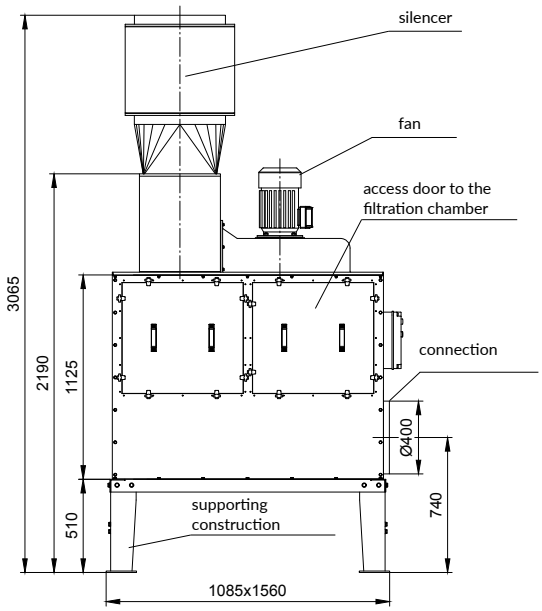
MISTOL-1000

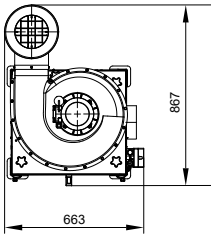


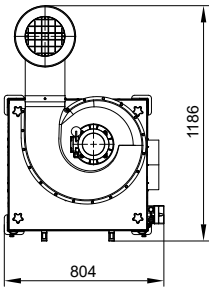
MISTOL-2000

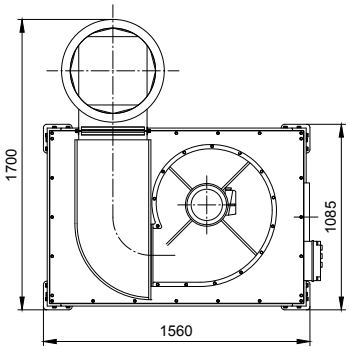


MISTOL-5000



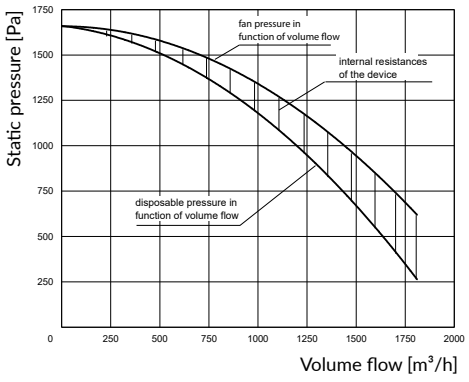




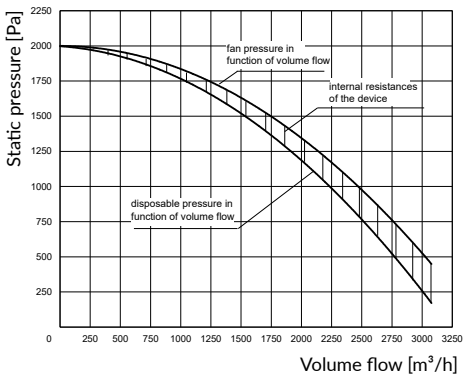


Flow charts

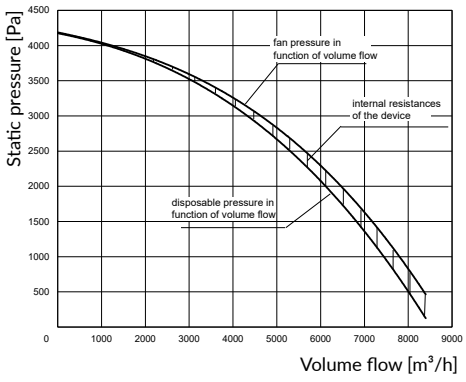
MISTOL-1000



MISTOL-2000

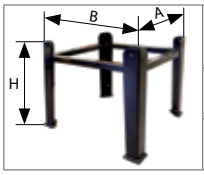


MISTOL-5000



Additional equipment

Supporting construction



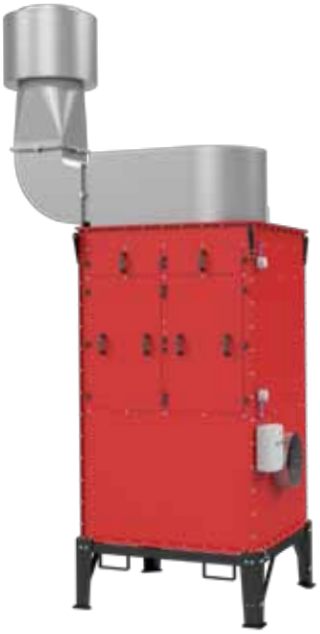
Type	Part no.	Dimensions AxBxH [mm]	Weight [kg]	Purpose
KW-MISTOL-1000	841K50	511x558x630	18	MISTOL-1000
KW-MISTOL-2000	841K51	704x662x625	20	MISTOL-2000

NOTE: In separator MISTOL-5000 supporting construction is regarded as standard equipment.

MISTOL MIX – filtering unit with pocket-filter and HEPA-Filter

MISTOL MIX-1000

MISTOL MIX-2000



MISTOL MIX-5000

Purpose

MISTOL MIX oil mist separators have been developed for cleaning the air from the oil mist, contaminated with dust impurities, arising during various manufacturing processes. Chiefly, they are recommended for removal of vapours of the cooling-lubricating liquid, used in metal machining, such as grinding or milling. Separators are manufactured in three sizes varying in efficiency: MISTOL MIX-1000, MISTOL MIX-2000 and MISTOL MIX-5000.

Structure

MISTOL MIX separator consists of subsequent elements:

- housing of steel sheet,
- radial fan – housing of cast aluminium,
- decompression chamber with a blast screen,
- pre-filter,
- pocket filter – F8,
- HEPA filter (additional equipment)
- silencer at the fan outlet,
- two differential pressure controls – signalising excessive flow resistances of the filters: pocket filter and HEPA filter,
- control unit,
- oil drainage valve.

During the first stage, the polluted air enters the decompression chamber, where the largest oil drops are captured on the blast screen. Subsequently, the air passes the net filter and further through the pocket filter, (medium: spunbond resistant to oil/fatty pollutants). The next filtration stage is the HEPA filter (additional equipment) of 99,95% efficiency. Depending on the required filtration efficiency, the filter can be added as the last filtration stage. The separated oil drips into the sedimentation chamber. Under the chamber is installed an oil drainage valve, used for emptying the chamber of the oil, directly into the collecting container, placed underneath the device. The filtering unit is equipped with a revision cover for easy cleaning of the decompression chamber.

Operational Use

MISTOL MIX-1000 and MISTOL MIX-2000, as standard, have three locations of the air inlets. User can choose the most convenient location of the connection: on the back or on side walls. Moreover, it is possible to change the position of the fan outlet, simply by turning the fan on the suction flange or turning the silencer on the outlet.

During the use, separators do not require continuous supervision, except switching ON and OFF. The everyday maintenance consists in emptying the sedimentation chamber from the deposited oil, by opening the drainage valve. It is important to put an appropriate container under the device. In the course of operational use, control the replacement times of the filters by observing the signal lights, activated by pressure controls of the filters.

The filtering unit is not designed for continuous day and night work, because of the excessive oil amount to be drained from the filter. The oil dripping time is estimated for 4–8 hours.

In order to monitor the filters state, the unit is equipped with control lamps (activated by pressure controls). During operation, a lamp can go on – it is a signal that the filter must be left for oil drainage.

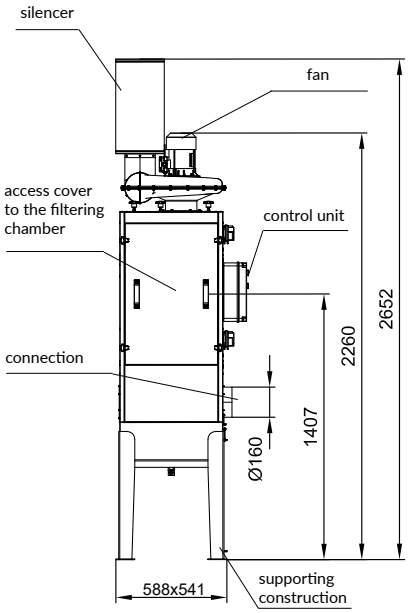
If after the drainage time the lamp is still on, the filter should be replaced.

Technical Data

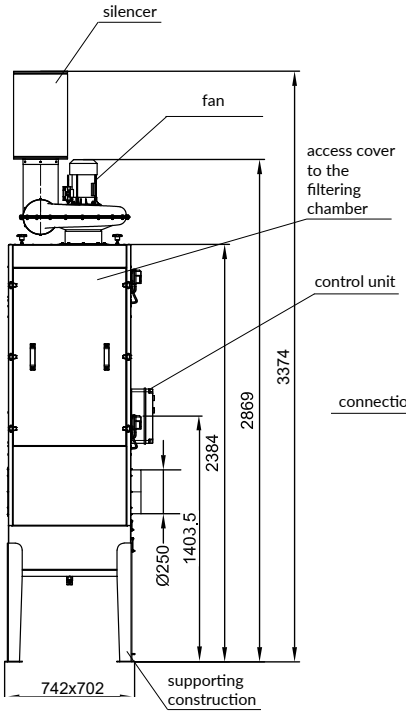
Type	Part no.	Maximum volume flow [m^3/h]	Maximum vacuum [Pa]	Supply voltage [V]	Motor rate [kW]	Acoustic pressure level [dB(A)] from a distance of:		Weight [kg]
						1 m	5 m	
MISTOL MIX-1000	800S20	1600	1650	230	0,75	69	64	104
MISTOL MIX-2000	800S21	2850	2050	230	1,5	72	66	134
MISTOL MIX-5000	800S22	8700	4200	3x400	7,5	75	69	660

MISTOL MIX

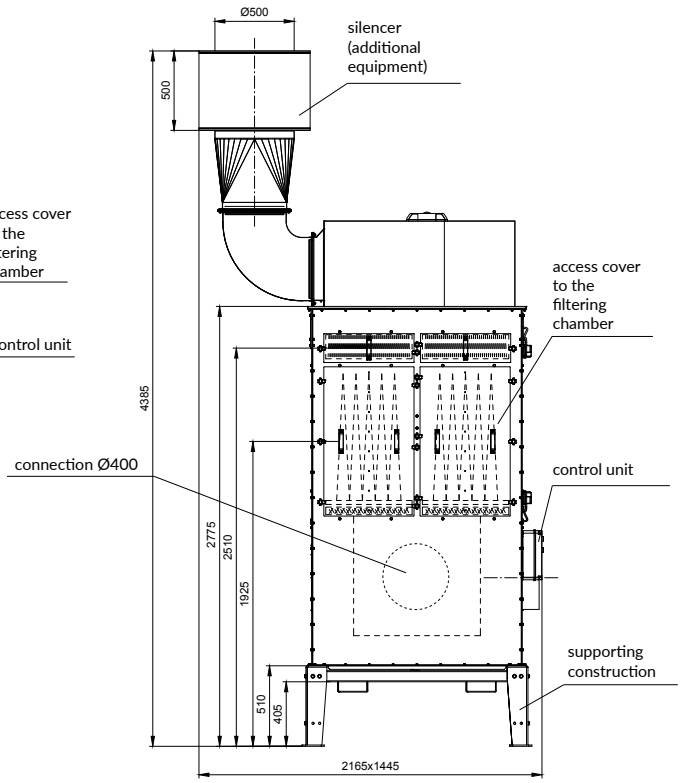
MISTOL MIX-1000

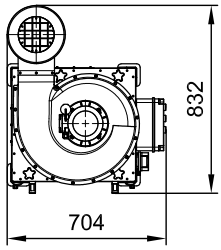


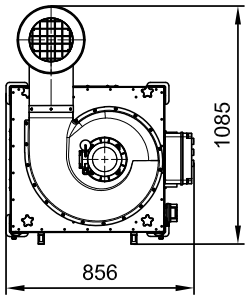
MISTOL MIX-2000

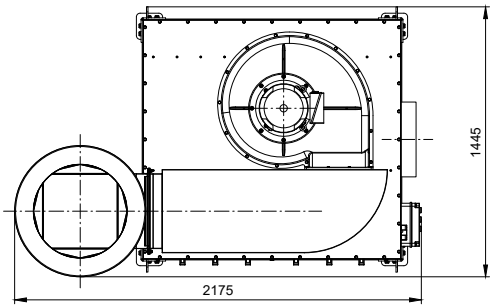


MISTOL MIX-5000



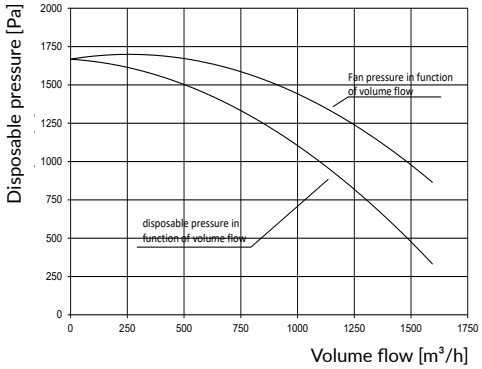




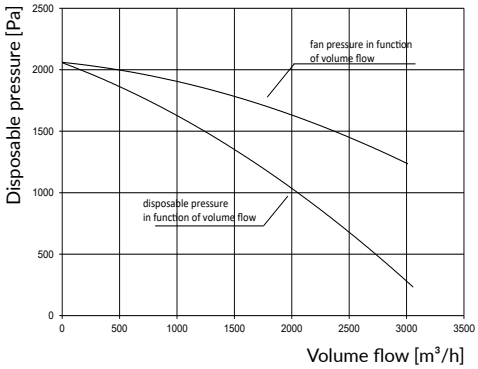


Flow charts

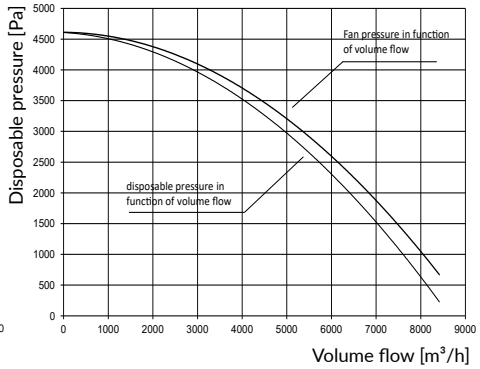
MISTOL MIX-1000



MISTOL MIX-2000



MISTOL MIX-5000



Additional equipment (for MISTOL MIX-5000)

Reducer 400x400/Ø500 mm | **Silencer** | **Elbow 400x400 mm**

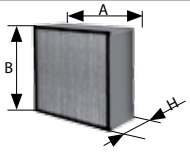
	Type	Part No.		Type	Part No.		Type	Part No.
	ZR-UF	829R82		TK-UF	830T92		KL-UF	829K97

Replaceable filters for MISTOL-1000, 2000, 5000

Metal-filter

Type	Part no.	Weight [kg]	Dimensions AxBxH [mm]	Quantity of filters	Class	Filtration material	Purpose
FM-MISTOL-1000	852F04	0,6	457x457x48	1	G2	Multi-layer zinc-coated wire, formed in a compact labyrinth.	MISTOL-1000
FM-MISTOL-2000	852F05	1,1	610x610x48	1	G2		MISTOL-2000
FM-MISTOL-5000	852F06	1,9	915x610x48	2	G2		MISTOL-5000

Hepa Filter



Type	Part no.	Weight [kg]	Dimensions AxBxH [mm]	Quantity of filters	Class	Filtration material	Purpose
FW-MISTOL-1000	838F88	10,5	457x457x292	1	H13	Hydrophobic glass paper 99,95%	MISTOL-1000
FW-MISTOL-2000	838F89	18,8	610x610x292	1	H13		MISTOL-2000
FW-MISTOL-5000	838F90	28	915x610x292	2	H13		MISTOL-5000

Replecable filter for MISTOL MIX-1000, 2000, 5000

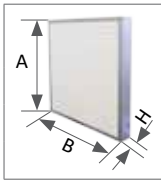
Metal-filter

Type	Part no.	Weight [kg]	Dimensions AxBxH [mm]	Quantity of filters	Class	Filtration material	Purpose
FM-MISTOL-MIX-1000	852F04	0,6	457x457x48	1	G2	Multi-layer zinc-coated wire, formed in a compact labyrinth.	MISTOL MIX-1000
FM-MISTOL-MIX-2000	852F05	1,1	610x610x48	1	G2		MISTOL MIX-2000
FM-MISTOL-MIX-5000	852F09	7,6	1200x545x48	2	G2		MISTOL MIX-5000

Pocket filter

Type	Part no.	Weight [kg]	Dimensions AxBxH [mm]	Quantity of filters	Class	Filtration material	Purpose
FK-MISTOL-MIX-1000	800F10	2,0	457x457x400	1	F8	Filtration spunbond of polypropylene, with micro-fibres	MISTOL MIX-1000
FK-MISTOL-MIX-2000	800F11	5,4	610x610x665	1	F8		MISTOL MIX-2000
FK-MISTOL-MIX-5000	800F12	9,0	1200x545x800	2	F8		MISTOL MIX-5000

Hepa Filter



Type	Part no.	Weight [kg]	Dimensions AxBxH [mm]	Quantity of filters	Class	Filtration material	Purpose
FA-MISTOL-MIX-1000	800F13	6	457x457x150	1	H13	Hydrophobic glass paper 99,95%	MISTOL MIX-1000
FA-MISTOL-MIX-2000	800F14	8,2	610x610x150	1	H13		MISTOL MIX-2000
FA-MISTOL-MIX-5000	800F15	15	545x1200x150	2	H13		MISTOL MIX-5000

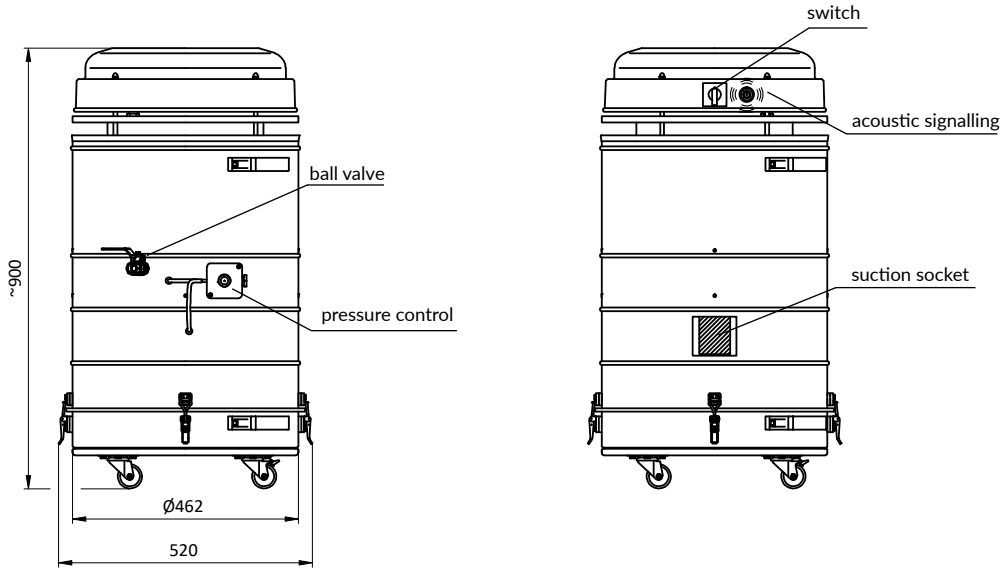
high-vacuum filtering units

SPLENDID VAC 200 – filtration of dry welding dusts

Purpose

SPLENDID VAC 200 belongs to the high-vacuum filtering unit group. It is designed for capturing and filtration the dry welding dust, arising at the mobile workplaces. It should not be applied for extraction the viscous dust, that is forming during the welding of the oil-laden steel sheets.

SPLENDID VAC 200



Structure

SPLENDID VAC 200 consists of:

- cylindrical shape steel housing,
- suction turbine,
- high-efficiency cartridge filter – polyester fabric – filtration efficiency 99,9%,
- rotary jet – for cartridge filter regeneration,
- suction socket – equipped with a loose Ø44 mm fitting piece to connect the extraction hose,
- cut-off valve for the compressed air – manual or electromagnetic, (depending on the version),
- control unit (version with manual or automatic control),
- pressure control – activating the acoustic signalling upon excessive filter flow resistances,
- waste container along with the castor wheels assembly, enabling the device displacement.

SPLENDID VAC 200 is a perfect solution for fume extraction, from welding torches with an integrated extraction system. Additionally, it can be connected to the welding faceshields with extraction or to other miniature local exhausts – e.g. to the slot- or point nozzles.

Options

There are two control options applied for SPLENDID VAC 200:

- Standard version – the fan is switched on manually, whereby it is important to open the compressed air valve for several seconds (supplying the rotary jets) before the turbines are operated.
- Automatic version – after the turbine is switched on, first the electromagnetic valve of the compressed air opens automatically, then – after several seconds – the turbine is automatically operated.

Operational use

Connect the SPLENDID VAC 200 to the external compressed air installation of minimum 0,6 MPa. The device is energised through a five-metre-long supply cable with a plug. During the filter regeneration process, the dust which has been struck from the filters, accumulates in the waste container (periodical emptying required). The cartridge filter ought to be replaced every 1–2 years. SPLENDID VAC 200 – can work with one local exhaust. At the moment when the filter reaches the extreme pollution rate, pressure control automatically switches on the acoustic signalling. After the turbine is switched off, it is necessary to regenerate the filter and in several seconds the appliance is ready for operation.

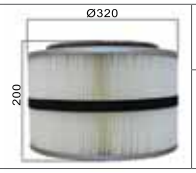
Technical data

Type of the device	Part no.	Filter regeneration	Volume flow [m³/h]	Motor rate [kW]	Supply voltage [V]	Acoustic pressure level [dB(A)]	Capacity of the waste container [dm³]	Weight [kg]
SPLENDID VAC 200-S	801005	manual	225	1,6	230	72	15	30,5
SPLENDID VAC 200-A	801006	automatic	225	1,6	230	72	15	31

1. Maximum vacuum for all sizes is 30 000 Pa.
2. Filtration efficiency amounts 99,9%.

Replaceable elements

Cartridge filter



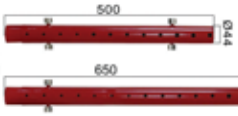
Type	Part no.	Weight [kg]	Filtration efficiency [%]	Remarks
PN032032U	800F01	4,2	99,9	Replacement frequency – 1 up to 2 years.

Suction turbine

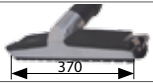
Type	Part no.	Weight [kg]	Remarks
AS 309,5	810T07	1,4	Replacement frequency – after approx. 1000 hours of use.

Additional equipment

Magnetically fixed nozzles

Sort of the nozzle	Type	Part no.	Weight [kg]	Remarks
Slot magnetic nozzle 	SMS-44-500	819S68	0,8	The nozzle is applied for welding fume extraction – longitudinal welding.
	SMS-44-650	819S69	1,2	
Point magnetic nozzle 	SMP-44-400	819S67	1,80	The nozzle is applied for welding fume extraction – point welding.

Dust collecting nozzle



Type	Part no.	Weight [kg]
SC-50	856S05	1

Pipe

Type	Part no.	Weight [kg]
S-50	801Z02	1,2

Connection fitting piece

Type	Part no.	Weight [kg]
Z50/44	832Z00	0,11

Hose

Type	Part no.	Weight [kg/m]	Remarks
PCV FLEX-44	821P29	0,36	Flexible extraction hose. Standard purchase length 15 m. For technical data see section VENTILATION ACCESSORIES.

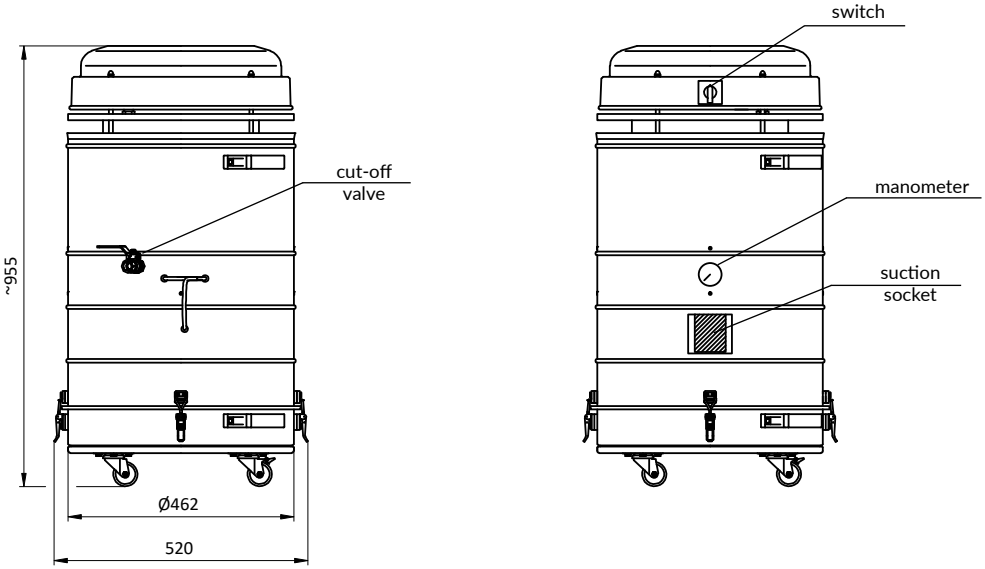
SPLENDID VAC 200-EC –
filtration of dry welding dusts

Application

SPLENDID VAC 200-EC belongs to the high-pressure filtering units group and is efficient in extraction and filtration of the dry welding dusts at mobile welding posts. The appliance must not be applied for viscous dusts that are arising during the welding of the oil laden steel sheet.

SPLENDID VAC 200-EC is an ideal solution for extraction of the welding fumes directly from the welding torches with an integrated extraction system. Additionally, it can be connected to the face shields with an extraction or to mini local exhausts – e.g. to the slot- or point nozzles.

SPLENDID VAC 200-EC



Structure

SPLENDID VAC 200-EC consists of subsequent elements:

- cylindrical steel housing,
- suction turbine EC,
- high-efficiency cartridge filter – polyester fabric of filtration efficiency 99,9%,
- rotary nozzle for cartridge filter regeneration,
- suction socket – equipped with a loose Ø44 mm fitting piece to connect the extraction hose,
- manual compressed air cut-off valve,
- control unit,
- waste container on castor wheels for easy device displacement,
- terminal with a sensor – for automatic start-up.

Operational use

Connect the SPLENDID VAC 200-EC to the external compressed air installation. In case when the filter reached the limit pollution degree (indication of the manometer), the filter ought to be regenerated. Filter regeneration: before the turbine is started, open the valve of the compressed air valve. The air flowing from the regenerator nozzles strike off the dust from the filter surface. Subsequently, the contamination drops into the waste container. After the filter is regenerated, close the valve and start the suction turbine. Cartridge filter ought to be periodically replaced every 1–2 years. The device can work with one local exhaust.

The appliance works in two modes: manual and automatic.

Manual mode: the fan is operated manually.

Automatic mode: the appliance starts directly after the current is detected in the mass cable of the welding machine.

SPLENDID VAC 200-EC is equipped with an electronically commutated EC suction turbine of high efficient operating performances, as well as of good longevity, (no need of turbine replacement).

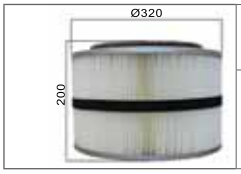
SPLENDID VAC 200-EC

Technical Data

Device type	Part No.	Maximum vacuum [kPa]	Volume flow [m³/h]	Motor rate [kW]	Supply voltage [V]	Acoustic pressure level [dB(A)] measured from distance of 1m:	Waste container capacity [dm³]	Weight [kg]
SPLENDID VAC 200-EC	801O09	23,5	240	1,6	230	70	15	30,5

Replaceable parts

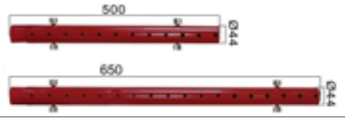
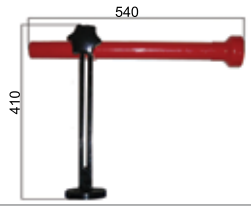
Cartridge filter



Type	Part No.	Weight [kg]	Filtration efficiency [%]	Remarks
PN032032U	800F01	4,2	99,9	Replacement frequency: 1–2 years

Additional equipment

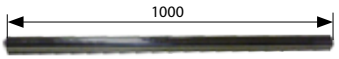
Magnetically mounted nozzles

Sort of the nozzle	Type	Part No.	Weight [kg]	Remarks
slot magnetic nozzle 	SMS-44-500	819S68	0,8	For extraction of welding fumes for longitudinal welding
	SMS-44-650	819S69	1,2	
point magnetic nozzle 	SMP-44-400	819S67	1,80	For extraction of welding fumes for point welding

Dust collecting nozzle

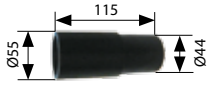
Type	Part No.	Weight [kg]
SC-50	856S05	1

Pipe



Type	Part No.	Weight [kg]
S-50	801Z02	1,2

Connector



Type	Part No.	Weight [kg]
Z50/44	832Z00	0,11

Waste container

Type	Part No.	Capacity of the waste container [dm³]	Remarks
P-SPLENDID-200	801O12	45	For processes of large amounts of dust, it is possible to replace the normal waste container for a waste contained of larger capacity.

Hose

Type	Part No.	Weight [kg/m]	Remarks
PCV FLEX-44	821P29	0,36	A flexible extraction hose. Standard length: 15m. Technical Data are in the Section VENTILATION ACCESSORIES

exhaust extractors of general application

ALAN-N – reel exhaust extractor

ALAN-U/C-12-N

Purpose

Reel Exhaust Extractors – type ALAN-N are designed for efficient extraction the exhaust fumes, emitted by vehicle exhaust pipes during the engine tests, adjustment and diagnostics. They are applied in depots, garages and car service stations. Due to economic optimal air extraction volume and simple use, they capture the whole exhaust amount and removes it outside. The reel extractors can be mounted both, directly under the ceiling or to the wall or to column by means of wall brackets. The extractor works with following fans produced by KLIMAWENT:

- built-on fans – type FA – mounted directly to the device,
- fans – type WPA-E-N – mounted independently on the wall bracket,
- roof fans – type WPA-D-N.

Structure

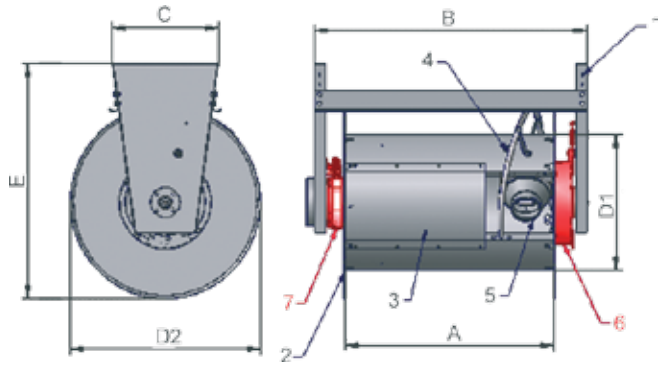
The reel exhaust extractor consists of a winding reel with the (wound on) exhaust hose with a nozzle to connect at the vehicle exhaust pipe. The nozzle draws in the ambient air, mixes it with the exhaust fumes decreasing their temperature. Exhaust extractors are adapted for hoses of diameters 100 (for cars) 125 (for vehicles of admissible total weight – up to 3,5 t) or 150 mm (for trucks). Hose diameter selection is depended on the engine cubic capacity of the serviced vehicle and its rotational speed. For more precise selection contact KLIMAWENT S.A. In all extractor versions, the free overhang of the hose (entirely wound on the reel) is 1,5 to 2 m. The devices are produced with two sorts of reel drive:

1. Type C – spring drive for hose reeling. The hose is wound down manually and reeled up automatically, upon the force of a spring mechanism. To the equipment set belong following elements:
   - band brake – to slow down the hose speed during winding-up,
   - ratchet device – which locks the hose in the required position (while it is being wound down),
   - rubber stopper – to be fixed on the hose, stops the hose after it is fully wound up onto the reel.
2. Type E – with electrical drive for ³hose wind-UP/DOWN". Inside the reel is located a gear-motor (of small motor power and low rotations).

As option, both types can be equipped with a shut-off damper which automatically opens and closes during reeling/unreeling of the hose. Therefore it is possible to apply a smaller fan when the reel extractors are connected to one main collecting ductwork, and the use coincidence factor is lower than 1.

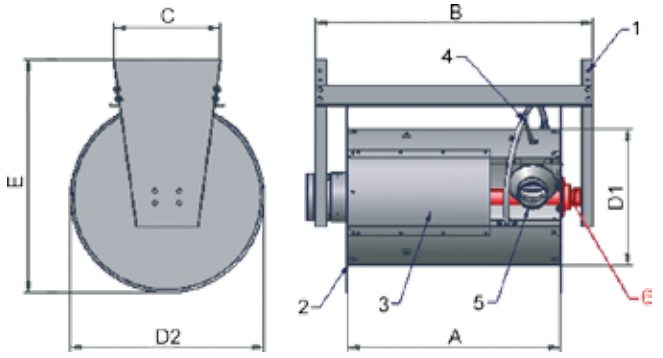
NOTE:

1. For fans working with spring driven reel extractors type C use electrical equipment described in section FANS. For fans, working with motor driven reel extractors type E, use the control unit – type ZE, additionally serving for reel control "hose wind-UP/DOWN".
2. For standard applications, we offer ZW hose sets of thermal resistance 150°C (short duration 200°C). For application with Diesel engine vehicles, equipped with Diesel Particulate Filter – Euro 5, Euro 6, (as there high exhaust temperature can occur), we recommend extractors with hose sets of increased thermal resistance (ZW/CF).



Spring drive		
Dimension	U/C-8-N	U/C-12-N
A	775	1000
B	1000	1225
C	355	355
D1	450	450
D2	645	645
E	780	780

1. Framework
2. Hose reel
3. Reel cover
4. Spiral
5. Connection
6. Spring mechanism
7. Brake



Motor drive		
Dimension	U/E-8-N	U/E-12-N
A	775	1000
B	1000	1225
C	355	355
D1	450	450
D2	645	645
E	780	780

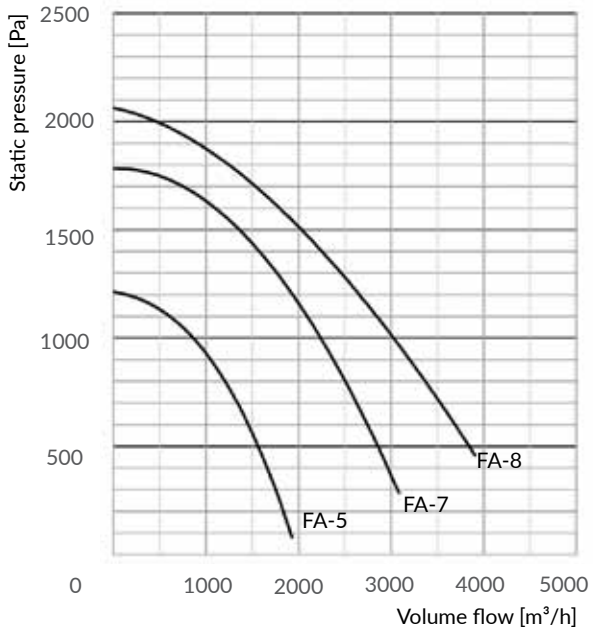
1. Framework
2. Hose reel
3. Reel cover
4. Spiral
5. Connection
6. Gear motor

Technical data

	Type[1]	Equipped with a shut-off damper	Part no.	Maximum torque [Nm]	Maximum hose length [m]	Hose	Fan	Weight of the device[2] [kg]
	ALAN-U/C-8-N ALAN/P-U/C-8-N ALAN-U/E-8-N ALAN/P-U/E-8-N	no yes no yes	805O70 805O72 805O82 805O88	50	8	Each reel is adapted to be equipped with a hose of diameter Ø100, Ø125 or Ø150 mm.	The fans should be selected according to the hose diameter (see Table HOSE SETS).	51 42
	ALAN-U/C-12-N ALAN/P-U/C-12-N ALAN-U/E-12-N ALAN/P-U/E-12-N	no yes no yes	805O71 805O73 805O83 805O89	50 50 80 80	12			61 54

1. Prior the selection of the appropriate size of reel extractor, please contact KLIMAWENT S.A.
2. Values of weight are given without the hose weight.

Flow charts



Built-on fans (mounted directly to the reel extractor)

Type	Part no.	Supply voltage [V]; 50 Hz	Inlet/outlet diameter [mm]	Motor rate [kW]	Acoustic pressure level [dB(A)][1]	Weight [kg]
FA-5-1	804W72	230	160/160	0,55	55	17
FA-5-3	804W73	3x400	160/160	0,55	55	17
FA-7-1	804W74	230	160/200	1,1	72	24
FA-7-3	804W75	3x400	160/200	1,1	72	24
FA-8-3	804W76	3x400	160/200	1,5	74	31

1. Noise level measured from distance of 5 m.
For other fans – flange type fans WPA-E-N or roof fans WPA-D-N – see catalogue FANS.

Rubber stoppers

Type	Part no.	Internal diameter [mm]
ZO-100	804K40	100
ZO-125	804K41	125
ZO-150	804K42	150

Applied in spring driven reel extractors, fastened on the exhaust hose.

Wall bracket

Type	Part no.	Length [mm]	Weight of the set [kg]
L860	817W33	800	12

A set – to install the reel extractor to the wall or a column.

Hose sets

Type	Part no.	Hose diameter [mm]	Weight [kg]	Hose length [m]	Recommended volume flow [m³/h]	Flow resistance[1] [Pa]	Thermal resistance [°C]	Application[4]	Fans to operate with
ZW-8/100	828P64	100	5,2	8	400	1100	150[2]	SO	FA-5, WPA-5-E-N, WPA-5-D-N
ZW-8/100/CF	828P51	100	5,2	8	400	1100	300/150[3]	SO	
ZW-8/125	828P65	125	6,4	8	700	1200	150[2]	SD	FA-5, WPA-5-E-N, WPA-5-D-N
ZW-8/125/CF	828P52	125	6,4	8	700	1200	300/150[3]	SD	
ZW-8/150	828P66	150	7,6	8	1500	1500	150[2]	SC	FA-7, WPA-7-E-N, WPA-7-D-N
ZW-8/150/CF	828P53	150	7,6	8	1500	1500	300/150[3]	SC	
ZW-12/100	828P67	100	7,8	12	400	1500	150[2]	SO	FA-5, WPA-5-E-N, WPA-5-D-N
ZW-12/100/CF	828P54	100	7,8	12	400	1500	300/150[3]	SO	
ZW-12/125	828P68	125	9,5	12	700	1600	150[2]	SD	FA-7, WPA-7-E-N, WPA-7-D-N
ZW-12/125/CF	828P55	125	9,5	12	700	1600	300/150[3]	SD	
ZW-12/150	828P69	150	14,8	12	1500	2000	150[2]	SC	FA-8, WPA-8-E-N, WPA-8-D-N
ZW-12/150/CF	828P56	150	14,4	12	1500	2000	300/150[3]	SC	

1. Flow resistances concern to the hose completely wound down of the reel.
2. Hose of thermal resistance 150°C (short duration 200°C).
3. First hose section of length 2 m of thermal resistance 300°C (short duration 350°C), further hose section thermal resistance 150°C (short duration 200°C).
4. SO – car, SD – medium size vehicle, SC – truck.

Control units for reel exhaust extractor type E

ZE-ALAN control unit is for installing in a garage or other room indicated by User. The unit provides switch ON/OFF of the fan through a motor protective switch and as well as operates the reel as 'hose wind-UP/DOWN" by means of buttons. Depending on the motor power rate, the control unit is equipped with an appropriately selected motor protective switch. Additionally, the unit is equipped with a short-circuit and thermal protection. The motor disconnector protects the motor when it gets blocked while starting-up, during the overload, short-circuit and during the non-complete-phase operation (three-phase motors).

Type	Part no.	Supply voltage [V]; 50 Hz	Motor rate [kW]	Current range [A]	Fans to operate with
ZE-ALAN-U/E-6,3-1	816Z31	230	0,55	4,0–6,3	FA-5-1, WPA-5-D-1-N, WPA-5-E-1-N
ZE-ALAN-U/E-1,6-3	816Z32	3x400	0,55	1,0–1,6	FA-5-3, WPA-5-D-3-N, WPA-5-E-3-N
ZE-ALAN-U/E-10-1	816Z33	230	1,1	6,3–10	FA-7-1, WPA-7-D-1-N, WPA-7-E-1-N
ZE-ALAN-U/E-4-3	816Z34	3x400	1,1 i 1,5	2,5–4,0	FA-7-3, FA-8-3, WPA-7-D-3-N, WPA-8-D-3-N, WPA-7-E-3-N, WPA-8-E-3-N

Nozzles

Nozzles and suction stands – for application with the exhaust extractor – are described on separate catalogue card and they are additional equipment.

ALAN-HD-N – reel exhaust extractor

Purpose

Reel exhaust extractors – type ALAN-HD-N are designed for efficient extraction the exhaust fumes, emitted by vehicle exhaust pipes during the engine tests, adjustment and diagnostics. They are applied in depots, truck garages and service stations for: large vehicles, building construction machines and special vehicles. Due to economic optimal air extraction volume and simple use, they capture the whole exhaust amount and removes it outside. The reel extractors can be mounted both, directly under the ceiling or to the wall or to column by means of wall brackets. The extractor works with following fans produced by KLIMAWENT:

- built-on fans – type FA/HD – mounted directly to the device,
- fans – type WPA-E-N – mounted independently on the wall bracket,
- roof fans – type WPA-D-N.

Structure

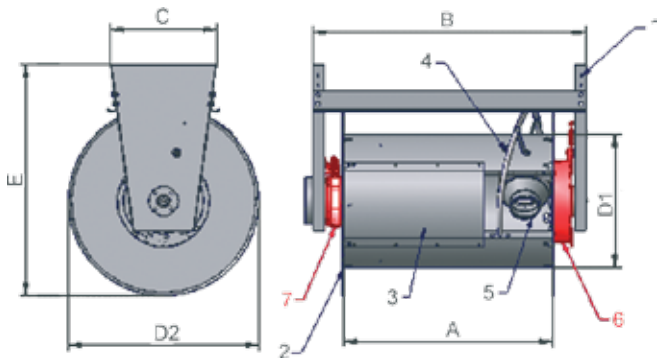
The reel exhaust extractor consists of a winding reel with the (wound on) exhaust hose with a nozzle to connect at the vehicle exhaust pipe. The nozzle draws in the ambient air, mixes it with the exhaust fumes decreasing their temperature. Exhaust extractors are adapted for a hose of diameters 200 mm (to be wound on). In all extractor versions, the free overhang of the hose (entirely wound on the reel) is 1,5 to 2 m. The devices are produced with two sorts of reel drive:

1. Type C – spring drive for hose reeling. The hose is wound down manually and reeled up automatically, upon the force of a spring mechanism. To the equipment set belong following elements:
   - band brake – to slow down the hose speed during winding-up,
   - ratchet device – which locks the hose in the required position (while it is being wound down),
   - rubber stopper – to be fixed on the hose, stops the hose after it is fully wound up onto the reel.
2. Type E – with electrical drive for "hose wind-UP/DOWN". Inside the reel is located a gear-motor (of small motor power and low rotations).

NOTE:

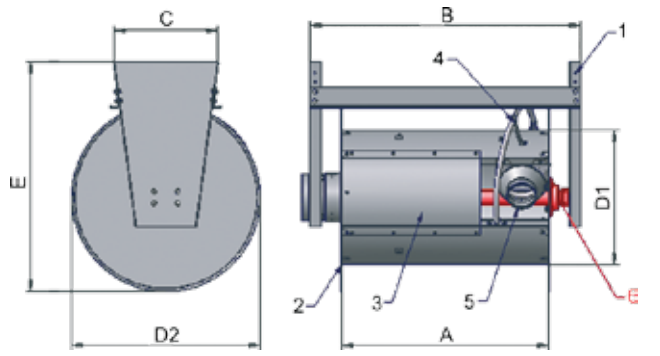
1. For fans working with spring driven reel extractors type C use electrical equipment described in the present catalogue, Section FANS. For fans, working with motor driven reel extractors type E, use the control unit – type ZE, additionally serving for reel control "hose wind-UP/DOWN".
2. For standard applications, we offer ZW hose sets of thermal resistance 150°C (short duration 200°C).
3. On demand of Customer, we deliver hose sets of increased thermal resistance.

ALAN-HD-N



Spring drive		
Dimension	U/C-8-HD-N	U/C-12-HD-N
A	775	120
B	1000	1465
C	455	455
D1	550	550
D2	820	820
E	965	965

1. Framework
2. Hose reel
3. Reel cover
4. Spiral
5. Connection
6. Spring mechanism
7. Brake



Motor drive			
Dimension	U/E-10-HD-N	U/E-15-HD-N	U/E-22-HD-N
A	1000	1200	2000
B	1225	1425	2240
C	455	455	455
D1	550	550	550
D2	820	820	820
E	965	965	965

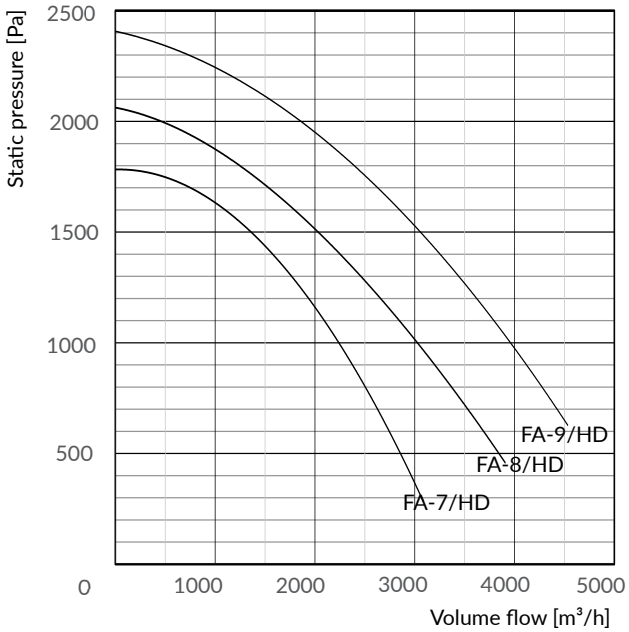
1. Framework
2. Hose reel
3. Reel cover
4. Spiral
5. Connection
6. Gear motor

Technical data

	Type[1]	Equipped with a shut-off damper	Part no.	Maximum torque [Nm]	Maximum hose length [m]	Hose	Fan	Weight of the device[2] [kg]
	ALAN-U/C-8/HD-N	no	805O74	50	8	Each reel is adapted to be equipped with a hose of diameter Ø200 mm.	The fans should be selected according to the hose diameter (see Table HOSE SETS).	68
	ALAN-U/C-12-HD-N	no	805O75	100	12			90
	ALAN-U/E-10-HD-N	no	805O85	80	10			65
	ALAN-U/E-15-HD-N	no	805O86	100	15			69
	ALAN-U/E-22-HD-N	no	805O87	120	22			95

1. Prior the selection of the appropriate size of reel extractor, please contact KLIMAWENT S.A.
2. Values of weight are given without the hose.

Flow charts



Built-on fans (mounted directly to the reel extractor)

Type	Part no.	Supply voltage [V]; 50 Hz	Inlet/outlet diameter [mm]	Motor rate [kW]	Acoustic pressure level [dB(A)][1]	Weight [kg]
FA-7-1/HD	804W77	230	200/200	1,1	72	24
FA-7-3/HD	804W78	3x400	200/200	1,1	72	24
FA-8-3/HD	804W79	3x400	200/200	1,5	74	31
FA-9-3/HD	804W80	3x400	200/200	2,2	77	38

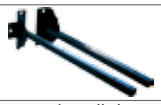
1. Noise level measured from distance of 5 m.
For other fans – flange type fans WPA-E-N or roof fans WPA-D-N – see catalogue FANS.

Rubber stoppers

Type	Part no.	Internal diameter [mm]
ZO-200	804K39	200

Applied in spring driven reel extractors, fastened on the exhaust hose.

Wall bracket



Type	Part no.	Length [mm]	Weight of the set [kg]
L860	817W33	800	12

A set – to install the reel extractor to the wall or a column.

Hose sets

Type	Part no.	Hose diameter [mm]	Weight [kg]	Hose length [m]	Recommended volume flow [m³/h]	Flow resistance[1] [Pa]	Thermal resistance [°C]	Fans to operate with
ZW-8/200	828P80	200	10,4	8	2000	1000	150[2]	FA-7/HD, WPA-7-E-N, WPA-7-D-N
ZW-10/200	828P81	200	12,8	10	2000	1200	150[2]	FA-7/HD, WPA-7-E-N, WPA-7-D-N
ZW-12/200	828P82	200	15,3	12	2000	1500	150[2]	FA-8/HD, WPA-8-E-N, WPA-8-D-N
ZW-15/200	828P83	200	19	15	2000	1900	150[2]	FA-9/HD, WPA-9-E-N, WPA-9-D-N[3]
ZW-22/200	828P84	200	28,1	22	2000	2100	150[2]	WPA-10-E-N, WPA-10-D-N[3]

1. Flow resistances concern to the hose completely wound onto the reel.
2. Hose of thermal resistance 150°C (short duration 200°C).
3. Data for fans – see Section FANS.

Control units for reel exhaust extractor type E

ZE-ALAN control unit is for installing in a garage or other room indicated by User. The unit provides switch ON/OFF of the fan through a motor protective switch and as well as operates the reel as ³hose wind-UP/DOWN" by means of buttons. Depending on the motor power rate, the control unit is equipped with an appropriately selected motor protective switch. Additionally, the unit is equipped with a short--circuit and thermal protection. The motor disconnector protects the motor when it gets blocked while starting-up, during the overload, short-circuit and during the non-complete-phase operation (three-phase motors).

Type	Part no.	Supply voltage [V]; 50 Hz	Motor rate [kW]	Current range [A]	Fans to operate with
ZE-ALAN-U/E-10-1	816Z33	230	1,1	6,3–10	FA-7-1/HD, WPA-7-D-1-N, WPA-7-E-1-N
ZE-ALAN-U/E-4-3	816Z34	3x400	1,1 i 1,5	2,5–4,0	FA-7-3/HD, FA-8-3/HD, WPA-7-D-3-N, WPA-8-D-3-N, WPA-7-E-3-N, WPA-8-E-3-N
ZE-ALAN-U/E-6,3-3	816Z35	3x400	2,2	4–6,3	FA-9-3/HD, WPA-9-E-N, WPA-9-D-N
ZE-ALAN-U/E-10-3	816Z38	3x400	3,0	6,3–10	WPA-10-E-N, WPA-10-D-N

Nozzles

Nozzles and suction stands – for application with the exhaust extractor – are described on separate catalogue card and they are additional equipment.

OBS/P – stationary extractor with balancer

Purpose

Stationary balancing exhaust extractors OBS/P are designed for effective removal of exhaust fumes, emitted by the vehicles exhaust pipes, during the engine tests, adjustment and diagnostics. They are applied in depots, garages, car service stations and workshops. OBS/P can be mounted on a wall or a column. It can work with an extraction fan installed on a wall bracket or on a roof base. Moreover, the extractor can be connected to a main collecting discharge ductwork. Due to the built-in shut-off damper, it is possible to apply a smaller extraction fan, in application where only part of the connected (to the collecting duct) extractors is simultaneously used.

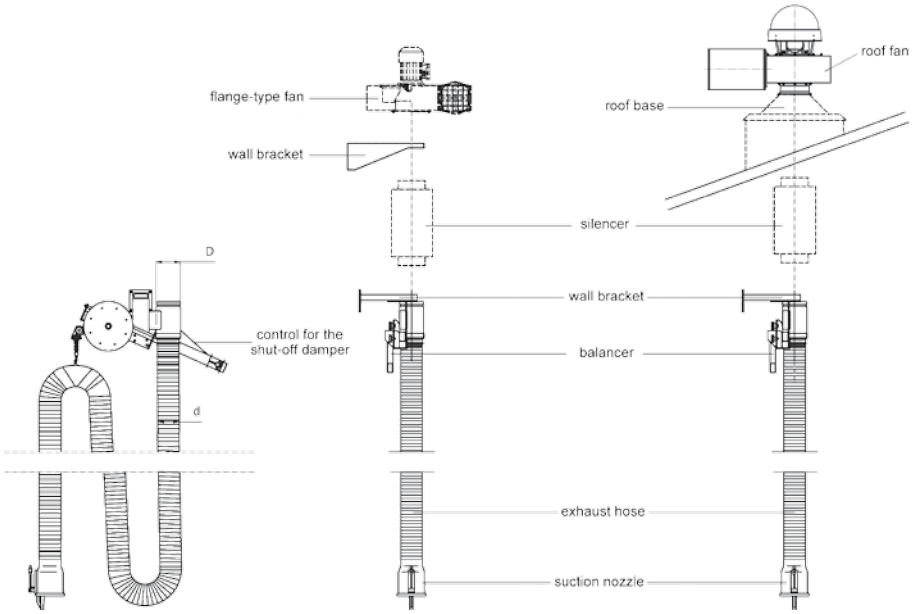
Structure

The extractor consists of a balancer, ratchet device, wall bracket (or ceiling hanger), tubular housing with a shut-off damper and a connection fitting piece, as well as an exhaust hose with nozzle. The balancer allows the hose to be pulled down manually, using small force only, whereas the ratchet device stops the hose lifting – giving the convenient nozzle position. After the manual nozzle disconnection, the balancer lifts the nozzle to the home position and simultaneously closes the shut-off damper. OBS/P along with the hose of diameter Ø100 mm is adapted for cars, with hose of diameter Ø125 mm is for medium-size vehicles (of admissible total weight up to 3,5t), whereas Ø150 mm for trucks. Selection of the hose diameter is conditioned on the engine cubic capacity of the serviced vehicle and its rotational speed. In order to select the appropriate configuration contact with KLIMAWENT S.A.

NOTE:

For standard applications, we recommend extractors equipped with hoses of thermal resistance 150°C (short duration 200°C). For application with Diesel engine vehicles, equipped with Diesel Particulate Filter – Euro 5, Euro 6 (as there high exhaust temperature can occur), we recommend extractors with hoses of increased thermal resistance (OBS/P/CF).

Example of application with the fans



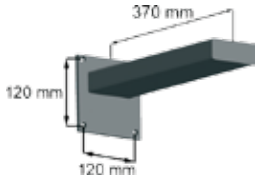
NOTE: Elements drawn in broken line are not belonging to the extractor set.
On demand we deliver ventilation accessories (roof base, silencer etc.).

Technical data

Type[1]	Part no.	Diameter of the hose (d) [mm]	Length of the hose [m]	Thermal resistance [°C]	Recommended volume flow [m³/h]	Flow resistance [Pa]	Diameter of the connection (D) [mm]	Weight [kg]	Application[4]	Fans to work with
OBS/P-100-6	805O26	100	6	150[2]	400	800	160	21,9	SO	WPA-5-E-N, WPA-5-D-N
OBS/P-100-6/CF	805O16	100	6	300/150[3]	400	800	160	21,9	SO	
OBS/P-125-6	805O27	125	6	150[2]	700	1000	160	22,9	SD	WPA-5-E-N, WPA-5-D-N
OBS/P-125-6/CF	805O17	125	6	300/150[3]	700	1000	160	22,9	SD	
OBS/P-150-6	805O28	150	6	150[2]	1500	1200	160	24,3	SC	WPA-7-E-N, WPA-7-D-N
OBS/P-150-6/CF	805O18	150	6	300/150[3]	1500	1200	160	24,3	SC	
OBS/P-125-9	805O29	125	9	150[2]	700	1200	160	32,1	SD	WPA-6-E-N, WPA-6-D-N
OBS/P-125-9/CF	805O19	125	9	300/150[3]	700	1200	160	32,1	SD	
OBS/P-150-9	805O30	150	9	150[2]	1500	1500	160	34,3	SC	WPA-8-E-N, WPA-8-D-N
OBS/P-150-9/CF	805O20	150	9	300/150[3]	1500	1500	160	34,3	SC	

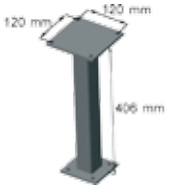
1. Prior to selection of the appropriate extractor size, please contact KLIMAWENT S.A.
2. Hose of thermal resistance 150°C (short duration 200°C).
3. First hose section of length 2 m of thermal resistance 300°C (short duration 350°C), further hose section of thermal resistance 150°C (short duration 200°C).
4. SO – car, SD – medium-size vehicle, SC – truck.

Wall hanger



Type	Part no.
WB-OBS	817W21

Ceiling hanger



Type	Part no.
CB-OBS	817W22

Nozzles

Nozzles and suction stands – for application with the exhaust extractor – are described on separate catalogue card and they are additional equipment.

KOS-AL, OBP/P-AL – rail extraction systems

Purpose

KOS-AL self-tightening suction duct is designed for capturing the exhaust fume from vehicles by means of the mobile balancing extractor – type: OBP/P-AL or mobile extractor OP-AL which is displacing along the suction duct. The trolley displacement proceeds while the vehicle is pulling the hose with nozzle (clamped on the vehicle exhaust pipe). The duct is meant for application with cars and trucks.

Structure

The KOS-AL duct consists of aluminium segments of length 2 m or 4 m joined together to any required length depending on the needs. Along the suction duct displaces a trolley with balancer and hose with the nozzle clamped at the vehicle exhaust pipe. The trolley is equipped with a shut-off damper which opens and closes when the hose is pulled down and lifted. Therefore, it is possible to apply a smaller fan, in application where to one duct are installed two or more extractors, and the use coincidence factor is lower than 1. The trolley fitting piece is sliding between the rubber aprons of the duct. The vacuum formed by extraction fan seals up the rubber aprons one to another. The extractor is equipped with a balancer (providing smooth hose retraction), a ratchet device fixing the hose at the required length and operational position. Using the self-release nozzle – the release mechanism disconnects the nozzle, while the extraction trolley approaches the duct end. Subsequently, the hose nozzle assembly returns to its home position. On the other hand, the non-self-release-nozzle ought to be disconnected manually and should be pulled slightly to activate the balancer, which lifts the hose up afterwards. Terminal stoppers (fixed at the duct-ends) – are braking smoothly the trolley movement while it approaches the duct-ends. The recommended mounting height of the duct is 3 up to 4 m. The duct connection to the ventilation installation is possible to both duct ends as well as to its upper surface.

KOS-AL duct and OBP/P-AL with hose Ø100 mm is adapted for cars, Ø125 mm for medium-size vehicles of admissible total weight – up to 3,5 t, Ø150 mm for trucks. Selection of the hose diameter is depended on the engine cubic capacity of the serviced vehicle and its rotations. For more precise selection contact KLIMAWENT S.A. As option, we offer radio control – for automatic fan start at the moment, when the hose with nozzle is pulled down. After the completed work, the extraction fan switches off upon time delay (see catalogue card RADIO CONTROL).

NOTE:

For standard applications, we recommend extractors equipped with hoses of thermal resistance 150°C (short duration 200°C). For application with Diesel engine vehicles, equipped with Diesel Particulate Filter – Euro 5, Euro 6 (as there high exhaust temperature can occur), we recommend extractors with hoses of increased thermal resistance (OBP-AL/CF).

Mobile balancing extractor

Type[1]	Part no.	Diameter of the hose [mm]	Hose length [m]	Recommended volume flow [m³/h]	Flow resistances [Pa]	Thermal resistance [°C]	Application[4]	Weight [kg]
OBP/P-AL-100-6	805O31	100	6	400	900	150[2]	SO	35,8
OBP/P-AL-100-6/CF	805O06	100	6	400	900	300/150[3]	SO	35,8
OBP/P-AL-125-6	805O32	125	6	700	1000	150[2]	SD	36,7
OBP/P-AL-125-6/CF	805O07	125	6	700	1000	300/150[3]	SD	36,7
OBP/P-AL-150-6	805O33	150	6	1500	1700	150[2]	SC	37,6
OBP/P-AL-150-6/CF	805O08	150	6	1500	1700	300/150[3]	SC	37,6

1. Prior to selection of appropriate extractor, please contact KLIMAWENT S.A.
2. Flexible hose of thermal resistance 150°C (short duration 200°C).
3. First hose section of length 2 m of thermal resistance 300°C (short duration 350°C), further hose section of thermal resistance 150°C (short duration 200°C).
4. SO – car, SD – medium-size vehicle, SC – truck.

Self-tightening suction duct

Type	Part no.	Segment length [m]	Cross-section [cm²]	Segment weight [kg]
KOS-AL-2	804K43	2	290	19,4
KOS-AL-4	804K44	4	290	38,8

Mobile extractors – without balancer – hose should be deposited manually on a hanger, there are no restrictions according to the length of the hose.

Type[1]	Part no.	Hose diameter [mm]	Hose length [m]	Recommended volume flow [m³/h]	Flow resistances [Pa]	Thermal resistance [˚C]	Application[4]	Weight [kg]
OP-AL-100-6	804O35	100	6	400	700	150[2]	SO	11,8
OP-AL-100-6/CF	804O84	100	6	400	700	300/150[3]	SO	11,8
OP-AL-125-6	804O36	125	6	700	800	150[2]	SD	12,7
OP-AL-125-6/CF	804O85	125	6	700	800	300/150[3]	SD	12,7
OP-AL-150-6	804O37	150	6	1500	1500	150[2]	SC	13,6
OP-AL-150-6/CF	804O86	150	6	1500	1500	300/150[3]	SC	13,6

1. Prior to selection of appropriate extractor, please contact KLIMAWENT S.A.
2. Flexible hose of thermal resistance 150°C (short duration 200°C).
3. First hose section of length 2 m of thermal resistance 300°C (short duration 350°C), further hose section of thermal resistance 150°C (short duration 200°C).
4. SO – car, SD – medium-size vehicle, SC – truck.

Connectors*

Sort of the fitting piece		Type	Part no.	Diameter [mm]
	for axial connection	KPC	804K20	160
	universal connector	KTSU-200	804K79	200

* To connect the KOS-AL duct with the discharge ductwork

Duct hangers

Sort of the hanger		Type	Part no.	Remarks
	ceiling hanger	Z	804K29	The hangers are fixed to the duct by bolting. The spacing between the hangers should not exceed 3 m.
	wall hanger	L	804K27	

Duct closing*

Type	Part no.
PZC	804K22

* To install at the beginning of the first segment and at the end of the last segment.

Segment connector

Type	Part no.
KSG	804K21

Terminal stopper

Type	Part no.	Remarks
STK	804K30	Stops the trolley when it approaches the duct ends.

Fans

Fans should be selected from separate catalogue cards, according to the flow efficiency and flow resistances.

Nozzles

Nozzles and suction stands – for application with the exhaust extractor – are described on separate catalogue card and they are additional equipment.

KOS-L, OBP/P –
rail extraction systems

Purpose

The KOS-L self-tightening suction duct is designed for capturing the vehicle exhaust fumes by means of the mobile balancing extractor – type OBP/P which is displacing along the duct. The trolley displacement proceeds while the vehicle is pulling the hose with nozzle (clamped on the vehicle exhaust pipe).

Structure

The KOS-L duct consists of steel segments of length: 1,25 and 2,5 m joined together to any required length, depending on the User's needs. Along the suction duct, displaces a trolley with balancer and hose with the nozzle clamped at the vehicle exhaust pipe. The trolley is equipped with a shut-off damper which opens and closes (when the hose is pulled down and lifted). Therefore it is possible to apply a smaller fan, in application where to one duct are installed two or more extractors, and the use coincidence factor is lower than 1. The trolley fitting piece is sliding under a rubber apron, covering the perforated side wall on the whole length of the duct. The vacuum created by extraction fan seals up the apron to the duct surface. The extractor is equipped with a balancer, (to provide smooth hose retraction) and a ratchet device fixing the hose at required operational length. Using the self-release nozzle – the release mechanism disconnects the nozzle while the extraction trolley reaches the duct end. Then the hose with the nozzle returns to its home position. On the other hand, the non-self-release-nozzle ought to be disconnected manually and should be pulled slightly to activate the balancer, which lifts the hose up. Terminal rubber stoppers (fixed at the duct-ends) brake smoothly the trolley movement, while it reaches the duct ends. The recommended duct installing height is 4,3 m. The duct connection to the ventilation installation is possible to both the duct-ends as well as to duct side wall. KOS-L duct and OBP/P with hose Ø100 mm is adapted for cars, Ø125 mm for medium-size vehicles of admissible total weight – up to 3,5 t, Ø150 mm for trucks. Selection of the hose diameter is depended on the engine cubic capacity of the serviced vehicle and its rotations. For more precise selection contact KLIMAWENT S.A. As option, we offer radio control – for automatic fan start at the moment, when the hose with nozzle is pulled down. After the completed work, the extraction fan switches off upon time delay (see catalogue card RADIO CONTROL).

NOTE:

For standard applications, we recommend extractors equipped with hoses of thermal resistance 150°C (short duration 200°C). For application with Diesel engine vehicles, equipped with Diesel Particulate Filter – Euro 5, Euro 6 (as there high exhaust temperature can occur), we recommend extractors with hoses of increased thermal resistance (OBP/P/CF).

Mobile balancing extractor

Type[1]	Part no.	Hose diameter [mm]	Hose length [m]	Recommended volume flow [m³/h]	Flow resistances [Pa]	Thermal resistance [°C]	Application[4]	Weight [kg]
OBP/P-100-6	805O34	100	6	400	900	150[2]	SO	26,7
OBP/P-100-6/CF	805O58	100	6	400	900	300/150[3]	SO	26,7
OBP/P-125-6	805O35	125	6	700	1000	150[2]	SD	28,7
OBP/P-125-6/CF	805O59	125	6	700	1000	300/150[3]	SD	28,7
OBP/P-150-6	805O36	150	6	1500	1700	150[2]	SC	29,8
OBP/P-150-6/CF	805O60	150	6	1500	1700	300/150[3]	SC	29,8
OBP/P-125-9	805O37	125	9	700	1300	150[2]	SD	35,7
OBP/P-125-9/CF	805O61	125	9	700	1300	300/150[3]	SD	35,7
OBP/P-150-9	805O38	150	9	1500	1900	150[2]	SC	38,3
OBP/P-150-9/CF	805O62	150	9	1500	1900	300/150[3]	SC	38,3

1. Prior to selection of appropriate extractor, please contact KLIMAWENT S.A.
2. Flexible hose of thermal resistance 150°C (short duration 200°C).
3. First hose section of length 2 m of thermal resistance 300°C (short duration 350°C), further hose section of thermal resistance 150°C (short duration 200°C).
4. SO – car, SD – medium-size vehicle, SC – truck.

Self-tightening suction duct

Type	Part no.	Segment length [m]	Transverse dimensions [mm]	Cross-section [cm²]	Unit weight [kg/m]	Segment weight [kg]
KOS-L	804K45	1,25	160x240	384	14,2	17,75
	804K46	2,5	160x240	384	14,2	35,5

Connectors*

Sort of the fitting piece		Type	Part no.	Diameter [mm]
	axial connector	KO	804K70	200
	universal connector	KTSU-200	804K79	200

* To connect the duct with the discharge ductwork.

Duct ending set*

Sot of the ending set	Type	Part no.	Remarks
	ZKL	804K76	left ending set
	ZKP	804K77	right ending set

* To be installed at the beginning of the first duct segment and at the end of the last segment.

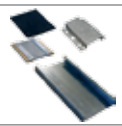
Duct closing

Type	Part no.	Remarks
ZK	804K87	To cover the duct end frontally in a place where the axial connector is not applied.

Segment connector

Type	Part no.	Remarks
ZSK	804K75	A set of elements to connect the two adjacent segments.

Duct hanger set



Type	Part no.	Remarks
ZWK	804K82	Used to connect the duct with the wall bracket.

Duct wall hanger

Type	Part no.	Remarks
WPK-2	804K86	Used to install the duct on the wall or column.

Terminal rubber stopper

Type	Part no.	Remarks
ZG	804K31	Installed at the ends of the duct.

Fans

Fans should be selected from separate catalogue cards, according to the flow efficiency and flow resistances.

Nozzles

Nozzles and suction stands – for application with the exhaust extractor – are described on separate catalogue card and they are additional equipment.

ZS-OBP – radio control for rail extraction systems

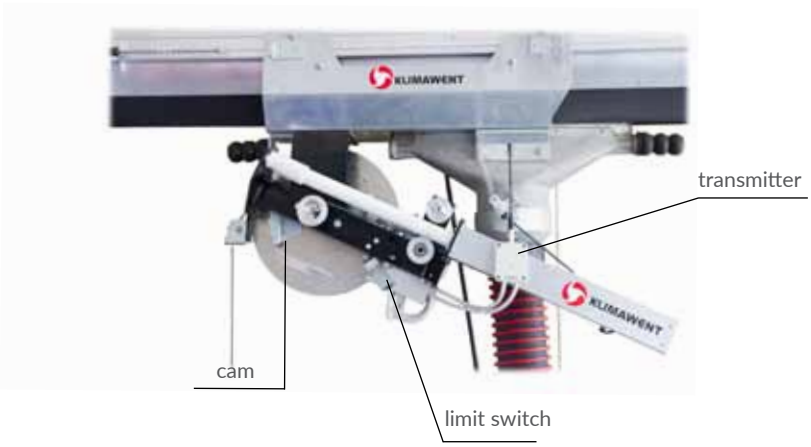
Radio control – additional equipment

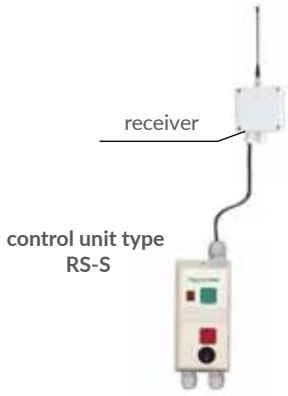
Radio control is offered for mobile balancing exhaust extractors, displacing on KOS-AL (aluminium) and KOS-L (steel) suction ducts. This is optional equipment.
The complete set provides automatic fan start via radio, at the moment when the hose and nozzle are lowered. The system consists of a radio control set and a control unit type RS-S.

Type		Part no.	Remarks
Control unit	ZS-OBP	816Z37	The set consists of: a transmitter, receiver, 2 limit switches and a cam.

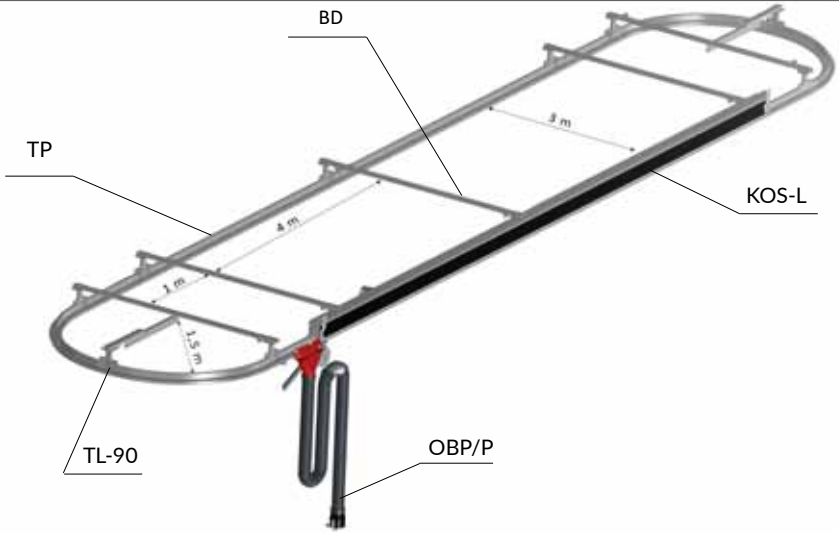
Type		Part no.	Supply voltage [V]; 50 Hz	Motor rate [kW]	Current range of the thermal protection [A]	Devices to work with
Control unit	RS-5,5-1-S	816R22	230	0,55	3,7–5,5	WPA-5-E-1-N, WPA-5-D-3-N, WPA-6-E-3-N, WPA-6-D-3-N
	RS-8-1-S	816R23	230	1,1	5,5–8	WPA-7-E-3-N, WPA-7-D-3-N
	RS-1,8-3-S	816R24	3x400	0,55	0,8–1,2	WPA-5-E-3-N, WPA-5-D-3-N
	RS-2,6-3-S	816R25	3x400	0,75	1,8–2,6	WPA-6-E-3-N, WPA-6-D-3-N
	RS-3,7-3-S	816R26	3x400	1,1	2,6–3,7	WPA-7-E-3-N, WPA-7-D-3-N, WPA-8-E-3-N, WPA-8-D-3-N
	RS-5,5-3-S	816R34	3x400	1,5	3,7–5,5	WPA-8-E-3-N, WPA-8-D-3-N
	RS-8-3-S	816R27	3x400	2,2–3,0	4–6,3	WPA-9-E-3-N, WPA-9-D-3-N, WPA-10-E-3-N, WPA-10-D-3-N

Radio control located on the mobile balancing exhaust extractor OBP/P-AL





KOS-L-N – rail extraction systems with return rail



Purpose

The return rail extraction system KOS-L-N is designed for exhaust fume capturing by means of a mobile balancing extractor OBP/P, displacing along the KOS-L suction duct. After the nozzle is manually or automatically disconnected (depending on the selected nozzle type), the released extractor slows down its movement on the rail arc. Subsequently, the extractor should be guided manually from the rail arc to the home position (through the return rail) and it is ready to be connected to the next vehicle.

Structure

The system consists of a standard self-tightening suction duct KOS-L and a return rail in a form of four arcs TL-90 and straight rails TP and spacing beams BD. The system can be suspended from hangers or installed on supporting columns.

Return suction duct

Type		Part no.	Segment dimensions [m]	Segment weight [kg]	Remarks
Return rail	TP	804K51	lenght 2,5	30	Quantity of the segments is corresponding the length of KOS-L.
Arc of the return rail 90°	TL-90	804K53	radius 1,5	37	The set consists of 4 arcs.
Spacing profile	BD	804K54	lenght 3	21	Spacing between the profiles is approx. 4 m.

Self-tightening suction duct

Type	Part no.	Segment length [m]	Transverse dimensions [mm]	Cross-section [cm²]	Unit weight [kg/m]	Segment weight [kg]
KOS-L	804K45	1,25	160x240	384	14,2	17,75
	804K46	2,5	160x240	384	14,2	35,5

Mobile balancing extractor

Type[1]	Part no.	Hose diameter [mm]	Hose length [m]	Recommended volume flow [m³/h]	Flow resistances [Pa]	Thermal resistance [°C]	Application[4]	Weight [kg]
OBP/P-100-6	805O34	100	6	400	900	150[2]	SO	26,7
OBP/P-100-6/CF	805O58					300/150[3]		
OBP/P-125-6	805O35	125	6	700	1000	150[2]	SD	28,7
OBP/P-125-6/CF	805O59					300/150[3]		
OBP/P-150-6	805O36	150	6	1500	1700	150[2]	SC	29,8
OBP/P-150-6/CF	805O60					300/150[3]		
OBP/P-125-9	805O37	125	9	700	1300	150[2]	SD	35,7
OBP/P-125-9/CF	805O61					300/150[3]		
OBP/P-150-9	805O38	150	9	1500	1900	150[2]	SC	38,3
OBP/P-150-9/CF	805O62					300/150[3]		

1. Before selection of appropriate extractor, contact KLIMAWENT S.A.
2. Flexible hose of thermal resistance 150°C (short duration 200°C).
3. First hose section of length 2 m of thermal resistance 300°C (short duration 350°C), further hose section of thermal resistance 150°C (short duration 200°C).
4. SO – car, SD – medium-size vehicle, SC – truck.

NOTE: Connection fitting piece, segment connectors and hangers – see catalogue card KOS-L.

Fans

Fans should be selected from separate catalogue cards, according to the flow efficiency and flow resistances.

Nozzles

Nozzles and suction stands – for application with the exhaust extractor – are described on separate catalogue card and they are additional equipment.

KOS-L-ALAN-N – rail extraction systems with reel exhaust extractor

Purpose

The rail extraction system KOS-L-ALAN-N is designed for exhaust fume removal by means of a spring driven Reel Exhaust Extractor OP-ALAN-U/C-N, displacing along the KOS-L suction duct. Due to the trolley, underneath which the reel extractor is suspended – it is possible to position the exhaust extractor within the area of the exhaust pipe of the serviced vehicle.

Structure

The system consists of a standard self-tightening suction duct KOS-L and the Reel Exhaust Extractor OP-ALAN-U/C-N. It is possible to place several OP-ALAN-U/C-N Reel Exhaust Extractors on one suction duct. The system can be installed through hangers or supporting columns.

Self-tightening suction duct

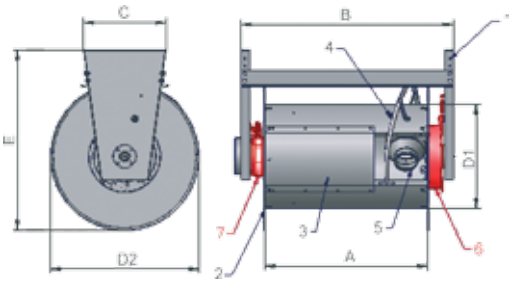
Type	Part no.	Segment length [m]	Transverse dimensions [mm]	Cross-section [cm²]	Unit weight [kg/m]	Segment weight [kg]
KOS-L	804K45	1,25	160x240	384	14,2	17,75
	804K46	2,5	160x240	384	14,2	35,5

Accessories for the KOS-L suction duct are on separate catalogue card KOS-L, OBP/P.

Mobile reel extractor

Type[1]	Equipped with a shut-off damper	Part no.	Maximum torque [Nm]	Hose	Weight[2] [kg]
OP-ALAN-U/C-8-N	no	805O76	50	Each reel is adapted to be equipped with a hose of diameter Ø100, Ø125 or Ø150 mm and of lengths 8 or 12 m. For selection of the hose set see: catalogue card ALAN-N.	61,7
OP-ALAN/P-U/C-8-N	yes	805O78	50		61,7
OP-ALAN-U/C-12-N	no	805O77	50		63,7
OP-ALAN/P-U/C-12-N	yes	805O79	50		63,7

1. Before the selection of the appropriate type of extractor, please contact KLIMAWENT S.A.
2. The quoted values do not include the weight of the hose.



Spring drive		
Dimension	U/C-8-N	U/C-12-N
A	775	1000
B	1000	1225
C	355	355
D1	450	450
D2	645	645
E	780	780

1. Framework
2. Hose reel
3. Reel cover
4. Spiral
5. Connection
6. Spring mechanism
7. Brake

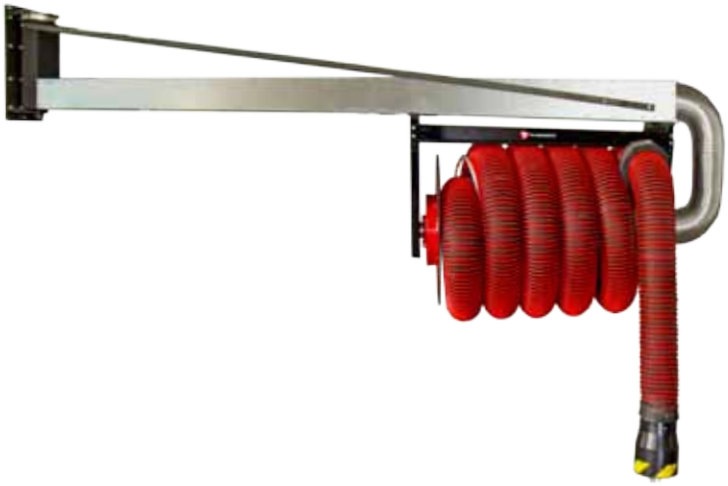
Fans

Fans should be selected from separate catalogue cards, according to the flow efficiency and flow resistances.

Nozzles

Nozzles and suction stands – for application with the exhaust extractor – are described on separate catalogue card and they are additional equipment.

RO-4-ALAN-N – exhaust extraction assembly



Purpose

Due to the rotational arm, the system provides enlarged work range for the Reel Exhaust Extractor and it is possible to adapt the extractor operation area to the serviced vehicle.

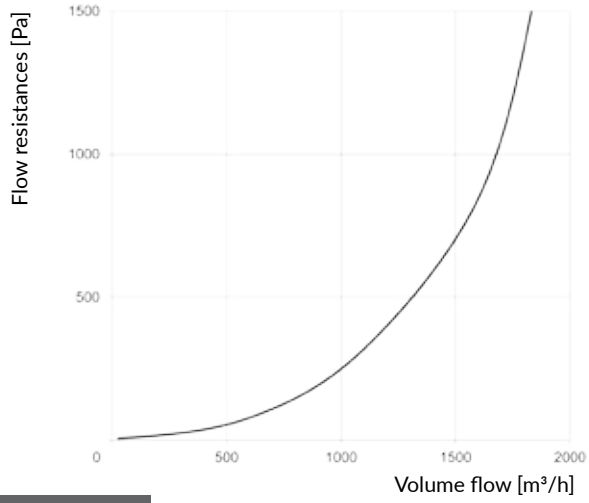
Structure

The system consists of a RO-4-ALAN-N rotational arm, equipped with a swivel, suction duct and the ALAN-C-N Reel Exhaust Extractor. The system cooperates with an extraction fan installed in the process hall, or on the roof. The rotational arm has to be mounted directly to the wall or column of the hall.

Rotational arm RO-4-ALAN-N

Type	Part no.	Connection diameter [mm]	Maximum work range [m]	Maximum torque M [Nm]	Weight [kg]
RO-4-ALAN-U/C-8-N	805O80	160	3850	3100	145
RO-4-ALAN-U/C-12-N	805O81	160	3850	3100	150

Flow chart of the RO-4-ALAN-N arm



Technical data

	Type[1]	Equipped with a shut-off damper	Part no.	Maximum torque [Nm]	Maximum hose length [m]	Hose	Weight of the device[2] [kg]
	ALAN-U/C-8-N	no	805O70	50	8	Each reel is adapted to be equipped with a hose of diameter Ø100, Ø125 or Ø150 mm. For selection of the hose set see: catalogue card ALAN-N.	51
	ALAN/P-U/C-8-N	yes	805O72	50	8		51
	ALAN-U/C-12-N	no	805O71	50	12		61
	ALAN/P-U/C-12-N	yes	805O73	50	12		61

1. Before selection of the extractor size, please contact KLIMAWENT S.A.
2. The quoted values do not include the weight of the hose.

Fans

Fans have to be selected from separate catalogue cards, depending on the flow efficiency and flow resistances.

Nozzles

Nozzles and suction stands – for application with the exhaust extractor – are described on separate catalogue card and they are additional equipment.

GLOBAL – hanging exhaust extractor

GLOBAL-2-100

GLOBAL-1-125

Purpose

GLOBAL stationary exhaust extractors are applied for capturing the exhaust fumes, emitted by vehicle exhaust pipes during engine tests, adjustments and diagnostics. They are installed at the height of 2 up to 3 m, on pillars or walls of the garage, workshop or car service station.

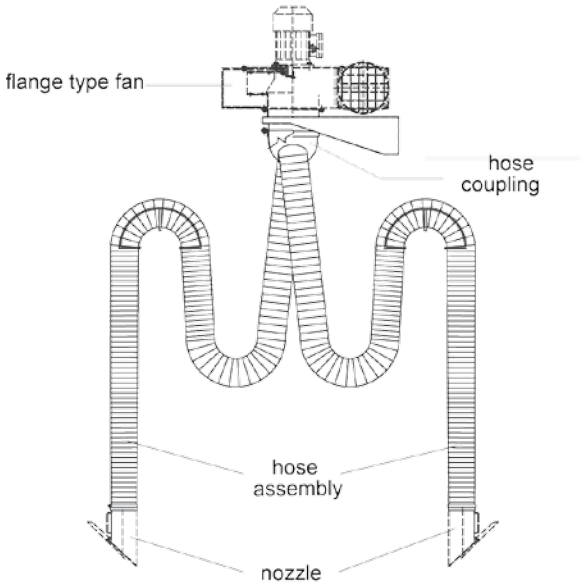
Structure

The extractor consists of a wall bracket, flange type fan and double- or single coupling as a connection for flexible hoses. At the hose end is attached a nozzle which has to be connected at the exhaust pipe of the serviced vehicle. For double exhaust extractors we recommend metallic nozzles, which are shutting off automatically after nozzle disconnection from the exhaust pipe. At the place of the flange type fan, can be installed a coupling for connection with the roof fan that is mounted outside the room.

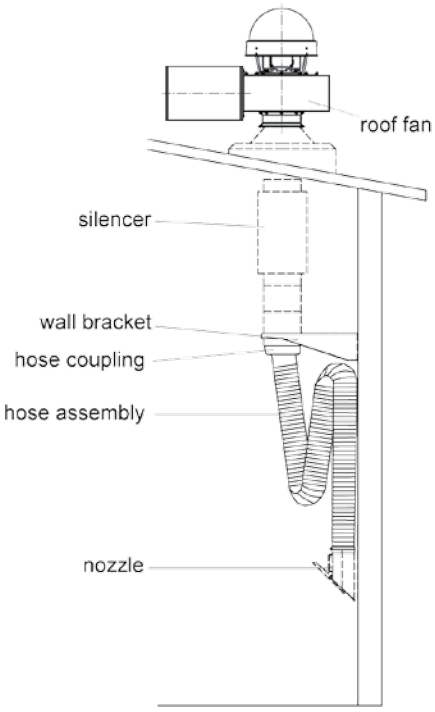
NOTE:

1. Particular selection of the sort and hose diameter and fan size is depended on the engine cubic capacity of the serviced vehicle and its rotational speed.
2. For standard applications, we offer extractor equipped with hoses of thermal resistance 150°C (short duration 200°C). For application with Diesel engine vehicles, equipped with Diesel Particulate Filter – Euro 5, Euro 6 (as there high exhaust temperature can occur), we recommend extractors with hoses of increased thermal resistance (GLOBAL/P/CF).

Example of hanging extractor applied with a flange type fan



Example of hanging extractor applied with a roof fan



NOTE: The elements illustrated in broken line are not belonging to the extractor set.
On demand we deliver ventilation accessories (roof base, silencer etc.).

Technical data

Type[1]		Part no.	Quantity of connections	Diameter [mm]	Hose length [m]	Recommended volume flow [m³/h]	Thermal resistance [°C]	Application[4]	Fans to work with	Weight [kg]
	GLOBAL H-1-100	803O32	1	100	5	400	150[2]	SO	WPA-3-E-N	37,5
	GLOBAL H-1-100/CF	803O37	1	100	5	400	300/150[3]	SO	WPA-3-E-N	37,5
	GLOBAL H-1-125	803O33	1	125	5	700	150[2]	SD	WPA-5-E-N, WPA-5-D-N, WPA-6-E-N, WPA-6-D-N	40
	GLOBAL H-1-125/CF	803O38	1	125	5	700	300/150[3]	SD	WPA-5-E-N, WPA-5-D-N, WPA-6-E-N, WPA-6-D-N	40
	GLOBAL H-1-150	803O34	1	150	5	1500	150[2]	SC	WPA-5-E-N, WPA-5-D-N, WPA-6-E-N, WPA-6-D-N	50
	GLOBAL H-1-150/CF	803O39	1	150	5	1500	300/150[3]	SC	WPA-5-E-N, WPA-5-D-N, WPA-6-E-N, WPA-6-D-N	50
	GLOBAL H-2-100	803O35	2	100	2x5	800	150[2]	SO	WPA-5-E-N, WPA-5-D-N	50
	GLOBAL H-2-100/CF	803O40	2	100	2x5	800	300/150[3]	SO	WPA-5-E-N, WPA-5-D-N	50
	GLOBAL H-2-125	803O36	2	125	2x5	1400	150[2]	SD	WPA-6-E-N, WPA-6-D-N	60
	GLOBAL H-2-125/CF	803O41	2	125	2x5	1400	300/150[3]	SD	WPA-6-E-N, WPA-6-D-N	60

1. Before selecting the sort and size of the extractor, please contact KLIMAWENT S.A.
2. Hose of thermal resistance 150°C (short duration 200°C).
3. First hose section of length 2 m of thermal resistance 300°C (short duration 350°C), further hose section thermal resistance 150°C (short duration 200°C).
4. SO – car, SD – medium size vehicle, SC – truck.

NOTE: The extractor consists of: hose with hose clamps and clamp covers and installing accessories – wall bracket, couplings (single, double) and wall hose hangers.

Fans

Type		Part no.	Supply voltage [V]	Motor rate [kW]	Ingress protection IP	Weight [kg]
	WPA-3-E-1-N	804W00	230	0,37	54	14
	WPA-5-E-1-N	804W01	230	0,55	54	17
	WPA-6-E-1-N	804W03	230	0,75	54	24
	WPA-5-D-1-N	807W11	230	0,55	54	25
	WPA-6-D-1-N	807W13	230	0,75	54	32

NOTE: For motor switches see section ELECTRICAL ACCESSORIES.

Nozzles

Nozzles and suction stands – for application with the exhaust extractor – are described on separate catalogue card and they are additional equipment.

GEPARD – portable exhaust extractor

GEPARD-1000

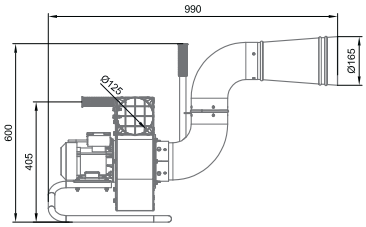
GEPARD-2000

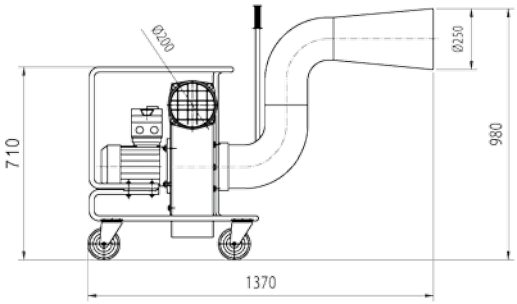
Purpose

GEPARD extractors are meant for capturing the exhaust fumes from exhaust pipes of vehicles during engine tests, adjustments and diagnostics. GEPARD-1000 is designed for exhaust extraction from cars, while GRPARD-2000 from trucks. Exhaust volume is conveyed further, outside the building, through a flexible hose attached to the extractor outlet.

Structure

The extractor is equipped with rotary "S"-shape suction tube (mounted eccentrically) which can easily be settled at a convenient position according to exhaust pipe being at various heights. GEPARD-1000 is placed on a frame for easy displacement, whereas GEPARD-2000 is meant for trucks, and can be displaced on a frame with wheels. On the motor is placed a motor protective switch WS (GEPARD-2000) or motor switch ŁS (GEPARD-1000). It is important to attach a hose to the fan outlet, to discharge the exhaust volume outside the building.





Technical data

Type	Part no.	Volume flow [m³/h]	Supply voltage [V]	Motor rate [kW]	Weight [kg]	Diameter of the outlet [mm]
GEPARD-1000	803O20	1000	230	0,37	25	125
GEPARD-2000	803O21	2000	230	1,1	48	200

NOTE: Prior to selection of the extractor size, please contact KLIMAWENT S.A.

Additional equipment

Hoses

Type		Part no.	Diameter [mm]	Range of temperatures of the conveyed air [°C]	Remarks
	G-EX1-125	828P61	125	–20 up to +150 (short duration up to +200)	External helix of plastic. Hose wall: neoprene-coated polyester fabric. Does not undergo durable deformations.
	G-EX1-200	828P63	200		
	MCS-125	828P33	125	–20 up to +90 (short duration up to +110)	External helix of zinc-coated steel. Hose wall: hard-flammable, of glass-fibre, PVC-coated.
	MCS-200	828P35	200		
	ST/MP-125	863P93	125	–30 up to +120	Without external helix. Glass fabric, PVC-coated, wrapped onto an internal steel spiral.
	ST/MP-200	863P95	200		
	STX-125	828P91	125	–30 up to +170 (short duration 220*)	Without external spiral. Steel wire within the hose wall. Reinforced with a fabric braid. Hardly flammable wall. During the use, there is no rubbing, due to external smooth hose surface.
	STX-200	828P93	200		

*during the supply of fresh air (approx. 50%).

Nozzles for application with exhaust extractors

Below are listed all sorts of nozzles for exhaust extractors.
While selecting, take into account the diameter, material and equipment.

Sort of nozzle	Type	Part no.	Connection diameter [mm]	Inlet dimension [mm]	Weight [kg]	Remarks	Cooperating devices
	SZGO-125	819S28	125	Ø150	2,5	Rubber circular nozzle, with lever gripper, manual disconnection.	ALAN-N, OBS/P, OBP/P-AL, OBP/P, GLOBAL
	SZGO-150	819S29	150	Ø170	3,2		
	SZGO-125-N	819S27	125	Ø150	2,2	Polyethylene circular nozzle, with lever gripper, manual disconnection.	ALAN-N, OBS/P, OBP/P-AL, OBP/P, GLOBAL
	SZGO-150-N	819S31	150	Ø170	2,25		
	SZGP-100	819S18	100	180x100	2,1	Rubber oval nozzle, with lever gripper, manual disconnection.	ALAN-N, OBS/P, OBP/P-AL, OBP/P, GLOBAL
	SZGP-125	819S19	125	180x100	3,2		
	SZGO-125/S	819S75	125	Ø150	2,5	Rubber circular nozzle, with lever gripper and steel cable for automatic disconnection.	OBP/P
	SZGO-150/S	819S76	150	Ø170	3,2		
	SZGO-125/S-N	819S14	125	Ø150	2,2	Polyethylene circular nozzle, with lever gripper and steel cable for automatic disconnection.	OBP/P
	SZGO-150/S-N	819S15	150	Ø170	2,25		
	SZGP-100/S	819S77	100	180x100	2,1	Rubber oval nozzle, with lever gripper and steel cable for automatic disconnection.	OBP/P
	SZGP-125/S	819S78	125	180	3,2		
	SZGO-125/B	819S70	125	Ø150	2,5	Rubber circular nozzle, with lever gripper and Bowden cable for automatic disconnection.	OBP/P-AL, OBP/P
	SZGO-150/B	819S71	150	Ø170	3,2		
	SZGO-125/B-N	819S16	125	Ø150	2,2	Polyethylene circular nozzle, with lever gripper and Bowden cable for automatic disconnection.	OBP/P-AL, OBP/P
	SZGO-150/B-N	819S17	150	Ø170	2,25		
	SZGP-100/B	819S72	100	180x100	2,1	Rubber oval nozzle, with lever gripper and Bowden cable for automatic disconnection.	OBP/P-AL, OBP/P
	SZGP-125/B	819S73	125	180x100	3,2		
	SRGP-100	819S33	100	180x100	2,3	Rubber oval nozzle for built-up, covered exhaust pipes, manual disconnection (gripper is inside the exhaust pipe).	ALAN-N, OBS/P, OBP/P-AL, OBP/P, GLOBAL
	SRGP-125	819S34	125	180x100	2,4		
	AN-100	819S06	100	Ø125	1	Metallic nozzle, knob gripper, for manual disconnection.	ALAN-N, OBS/P, GLOBAL
	AN-125	819S07	125	Ø125	1,2		
	AN-150	819S08	150	Ø150	1,45		
	AN-200	819S00	200	Ø200	2		
	D-100	819S09	100	Ø100	1,3	Metallic nozzle, spring retracted shut-off cover, for manual disconnection.	GLOBAL
	D-125	819S10	125	Ø125	1,6		
	D-150	819S11	150	Ø150	2,2		

On special request of Customer, it is possible to adapt a set of nozzles for double exhaust pipe assembly.

Suction stands for exhaust extractors

	Type	Part no.	Connection diameter [mm]	Inlet dimension [mm]	Weight [kg]	Remarks
	S-100-2	818S13	100	Ø230	14	Mobile nozzle on a stand with wheels, of aluminium.
	S-125-2	818S14	125	Ø230	15	
	S-152	818S04	150	260x205	17	Nozzle on a stand, of steel.

Nozzle Euro 5/6

	Type	Part no.	Connection diameter [mm]	Inlet dimension [mm]	Weight [kg]	Remarks
	Euro 5/6	819S35	150	400x250	13	Adjustable mobile nozzle on a stand with wheels, adapted for capturing the exhaust fume of exhaust pipes located underneath the vehicle.

Quick-connector

	Type	Part no.	Connection diameter [mm]	Weight [kg]	Remarks
	SZS-125/100	830S03	125/100	0,6	Quick-connector reduces the nozzle diameter and adapts it to another diameter of the hose.
	SZS-150/125	830S02	150/125	0,8	
	SZS-150/100	830S04	150/100	0,75	

exhaust extractors for fire departments

Great efficiency in exhaust extraction and comfort in use. Irreplaceable in application with vehicles that require instant readiness departure for action.

Exhaust extraction system SSAK

High efficiency in exhaust extraction and comfort in use. Irreplaceable in application with vehicles that need to be ready for action at any moment.

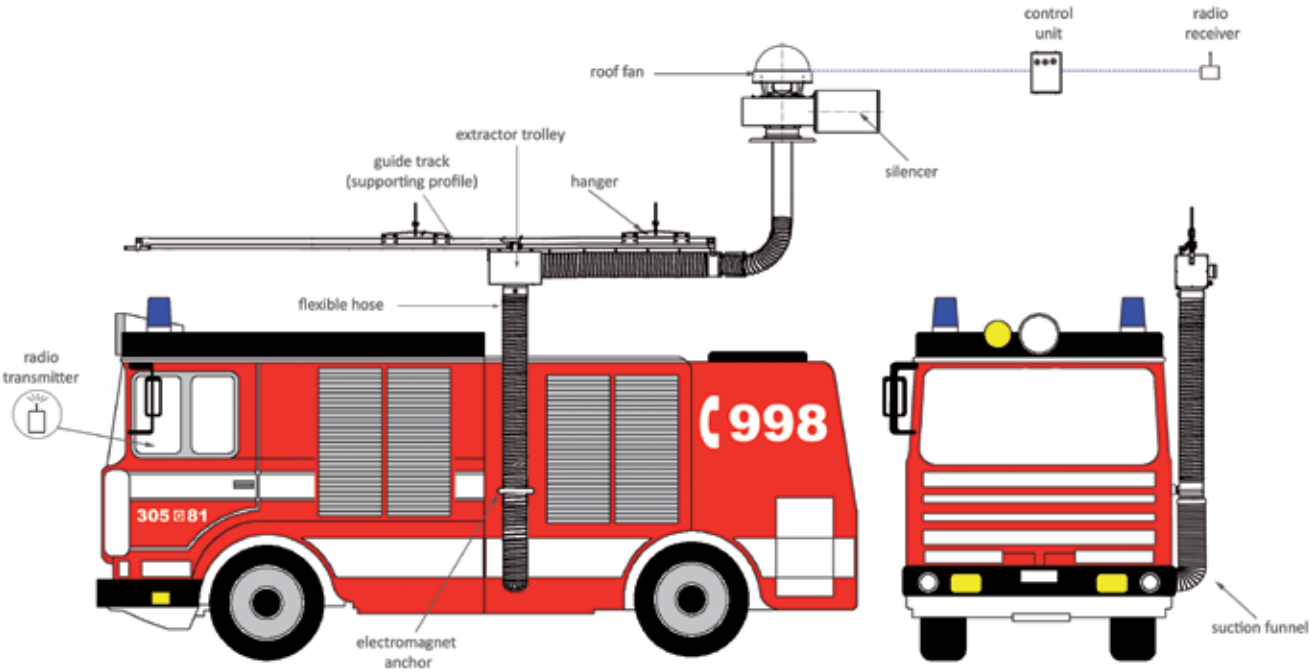
A specially shaped suction funnel

Suction funnel guarantees 100% capture efficiency, extracting the ambient air. With the aid of electromagnet anchor, the nozzle is attached to the gripper fixed on the carbody. Even during a sudden leaving of the garage, the electromagnet system provides sure disconnection of the suction funnel from the carbody.

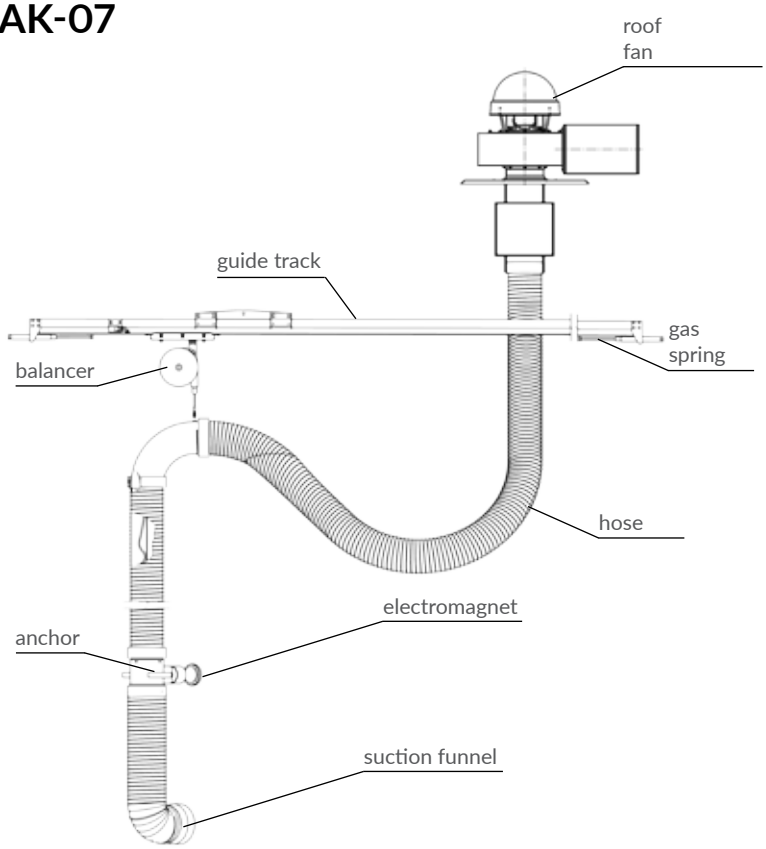
The hose

A 160 mm diameter hose of higher temperature resistance (200°C) assuring an optional air flow.It does not make any unnecessary flow resistances that can cause unwanted pressure loss.

Example of use of the BEL/SSAK exhaust extraction system



SSAK-07



Purpose

SSAK-07 type exhaust extractor is the appropriate solution for removal the vehicle exhaust volume from the garage, in case where the vehicles are of stable stationing place, i.e. fire department depot, where absolute readiness for emergency action departure is required. The system is adapted for vehicles with side exhaust pipe or back exhaust pipe.

Structure

The extraction system consists of a guide truck – a profile suspended under the ceiling (the recommended installing height – approx. 4 m). Along the guide-track is displacing the extraction trolley (moving on rollers) with the balancing assembly. The vertical hose section is equipped with an electromagnet anchor – for attachment at the magnet gripper screwed at the carbody. Inside the exhaust hose is a cable to energize the electromagnet. A specially shaped suction funnel is fastened at the end of the exhaust hose. The magnet gripper plate should be fixed on the carbody, at such a height that the suction funnel is hanging right opposite the vehicle exhaust pipe, (at a small distance), to provide safe funnel connection.

At the moment when the vehicle leaves the garage, the trolley displaces on the guide track. On the trolley is located a limitswitch which automatically disconnects the electromagnet of the suction funnel from the carbody. Subsequently, the hose and funnel will be lifted by the spring balancer (located on the trolley under the guide track).

The flexible hose should be connected to the discharge ductwork. It is recommended to apply a roof fan or a stand fan. The extraction fan can be operated, both manually or vie radio, by means of a radio transmitter, (see catalogue card with elements of the control system).

Other elements of the electrical equipment are: control unit ZE-SSAK, radio receiver and auxiliary controller. In application with the radio control, the fan will be disconnected automatically at the moment when the vehicle leaves the garage. Upon re-entry, the extraction fan will be started automatically, right before the vehicle enters the garage. User can adjust the time of delay when the fan is switched off.

Technical data

Type	Part no.	Range of volume flow [m³/h]	Flow resistances [Pa]	Hose		Inlet diameter of the funnel [mm]	Length of the guide track [m]	Weight[1] [kg]
				Internal diameter [mm]	Length [m]			
SSAK-07	804052	1200–1500	1200–1900	150	5	170	6	16

1. Weight is given without the guide-track and fan.

KOS-L/SSAK

Purpose

The rail extraction system – type KOS-L/SSAK is designed for capturing the exhaust fumes emitted by vehicles of stable stationing place, for example fire-brigade depot, ambulance service and other emergency units – where absolute readiness for emergency vehicle exit is required. It can be applied for vehicles with side exhaust pipe or back exhaust pipe. In case when the exhaust pipe termination is placed underneath the vehicle – adequate additional pipe extension is needed.

Structure

The exhaust system KOS-L/SSAK consists of:

- self-tightening suction duct KOS-L constructed of steel segments of length 2,5 or 1,25 m, connected together in the requested length depending on needs,
- trolley of the extractor,
- control unit assembly,
- duct suction fitting piece,
- ventilation hose,
- electromagnet assembly (supply 24 V),
- L-shape funnel.

Along the suction duct on rollers displaces a trolley (in a special execution, it is possible to apply two extraction trolleys displacing on one suction duct). The suction fitting piece of the trolley is sliding under the rubber apron, covering the perforated duct side wall in the whole length. The vacuum formed by extraction fan seals up the apron to the duct surface. Terminal stoppers (fixed at the duct-ends) are braking smoothly the trolley movement, while it reaches the duct ends. The duct connection to the ventilation installation is possible to any of the duct ends as well as to duct side wall.

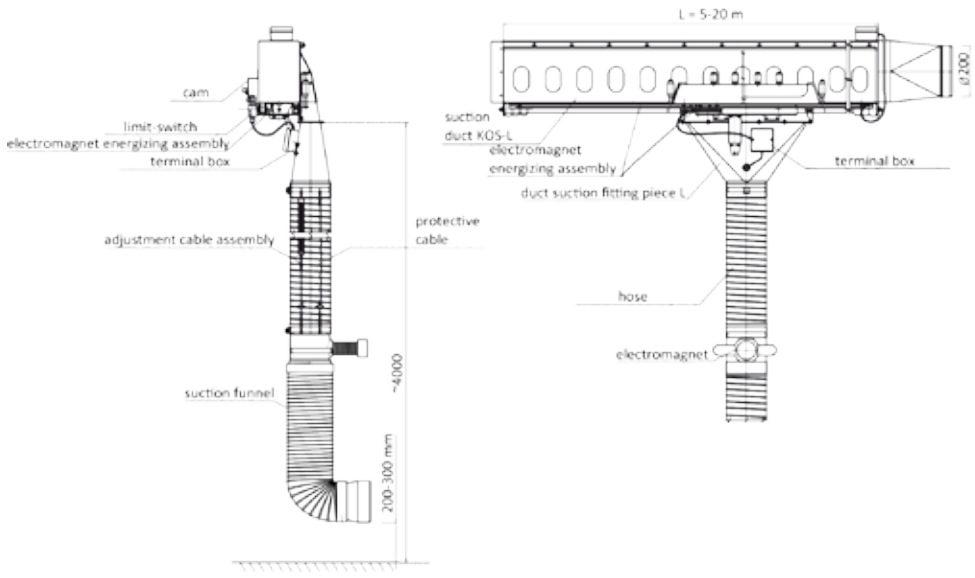
The recommended installing height of the duct is 4–4,5 m.

Along with the extraction trolley displaces the hose with an electromagnet anchor to attach it to the magnet gripper plate fixed on the side wall or rear wall of the carbody. The magnet gripper plate should be fixed on the carbody, at such a height that the suction funnel is hanging right opposite the vehicle exhaust pipe, (at a small distance), to provide safe funnel disconnection.

Inside the exhaust hose is a cable to energize the electromagnet. Energizing proceeds through the conductor strap (mounted on a support strap) and the duct corpus. The voltage is supplied, while the receiving cube in the trolley slides on the conductor strap.

At the moment, when the vehicle leaves the garage, the extraction trolley moves along the guide track. The end of the guide track is equipped with a limit-switch, disconnecting automatically the funnel electromagnet from the vehicle. Subsequently, the spring balancer, (inside the hose) lifts the hose and funnel to upper position.

It is recommended that the exhaust system works with the roof or flange-type fan. The extraction fan can be driven manually or by radio, by a radio transmitter. There are following elements of the electrical equipment: control unit ZE-SSAK, radio receiver and auxiliary controller (see catalogue card with elements of the control system). After the vehicle leaves the garage – the fan stops automatically. Upon re-entry, the fan is automatically started just before the vehicle enters the garage. User can adjust the time of delay when the fan is switched off.



Technical data

Type	Part no.	Recommended volume flow at the funnel [m³/h]	Flow resistances [Pa]	Hose		Inlet diameter of the funnel [mm]
				Internal diameter [mm]	Thermal resistance [°C]	
KOS-L/SSAK	804O55	1200–1500	1000–1300	150	200	170

Self-tightening suction duct

Type	Part no.	Segment length [m]	Transverse dimensions [mm]	Cross-section [cm²]	Unit weight [kg/m]	Segment weight [kg]
KOS-L	804K45	1,25	160x240	384	14,2	17,75
	804K46	2,5				35,5

Connectors*

Sort of the fitting piece		Type	Part no.	Diameter [mm]
	axial	KO	804K70	200
	universal connector	KTSU-200	804K79	200

* To connect the duct with the discharge ductwork.

Duct ending set*

Sort of the ending	Type	Part no.	Remarks
	ZKL	804K76	left ending
	ZKP	804K77	right ending

* Mounted at the beginning of the first segment and at the termination of the last segment.

Rubber stopper

	Type	Part no.	Remarks
	ZG	804K31	Installed at the terminal positions of the duct.

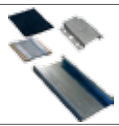
Duct closing

Type		Part no.	Remarks
	ZK	804K87	To cover the duct end in a place where the axial connector is not used.

Segment connector

Type		Part no.	Remarks
	ZSK	804K75	A set of elements to connect the two adjacent segments.

Duct wall hanger

	Type	Part no.	Remarks
	ZWK	804K82	Used to connect the duct with the wall bracket.

Wall bracket

	Type	Part no.	Remarks
	WPK-2	804K86	Used to install the duct to the wall or column.

BEL/SSAK

Purpose

As a solution, BEL/SSAK system is appropriate for exhaust removal of vehicles of stable stationing place, i.e. fire department depot, where absolute readiness for action departure is required. The system can be applied for vehicles with side exhaust pipe or back exhaust pipe.

Structure

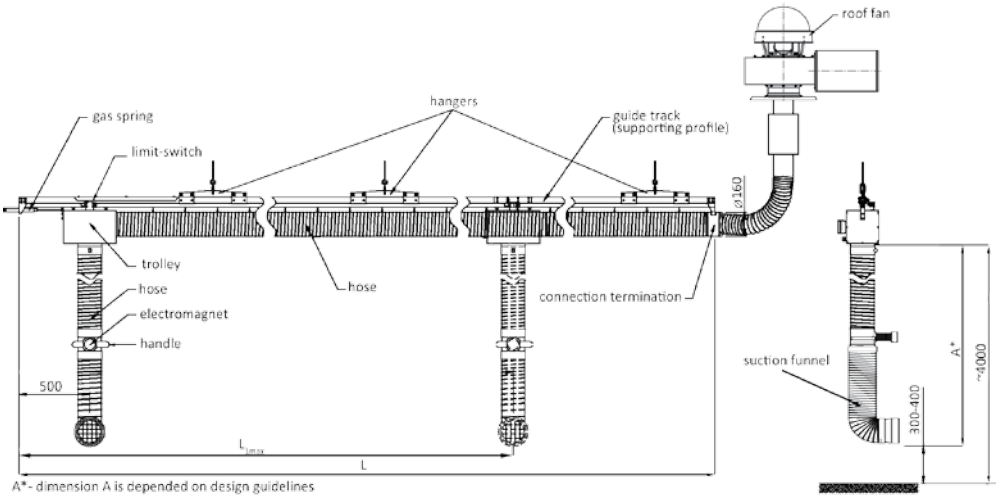
The system consists of a guide track – a profile with electrical cable, with a hose, suspended from the ceiling (recommended installing height – approx. 4 m). Along the guide track is displacing the extraction trolley with the attached suction hose.

The vertical hose section contains an electromagnet anchor for attachment at the magnet gripper plate screwed on the carbody. Inside the hose is a cable to energize the electromagnet. A specially shaped suction funnel is fixed at the hose termination. The magnet-gripper plate has to be fixed in such a point on the carbody that the exhaust funnel is hanging right opposite and in close distance from the exhaust pipe, to provide safe funnel connection.

At the moment when the vehicle leaves the garage, the trolley displaces on the guide track. On the trolley is located a limit-switch which automatically disconnects the electromagnet (of the suction funnel) from the carbody. After that, the funnel shall be lifted by the spring balancer to the upper position.

The immobile hose termination should be connected to the discharge ductwork. It is recommended that the extraction system works with the roof fan or flange-type fan (see catalogue card FANS). The extraction fan can be operated manually or via radio, by means of a radio transmitter. Other elements of the electrical equipment are: control unit ZE-SSAK, radio receiver and auxiliary controller. The fan is automatically switched off while the vehicle is leaving the garage. Upon re-entry the fan is automatically started – just before the vehicle enters the garage. User can adjust the time of delay when the fan is stopping.

Exhaust extraction system BEL/SSAK working with a roof fan



Technical data

Type	BEL/SSAK-6	BEL/SSAK-9	BEL/SSAK-12	BEL/SSAK-15
Part no.	804O80	804O81	804O82	804O83
Recommended volume flow at the suction funnel [m³/h]	1200–1500	1200–1500	1200–1500	1200–1500
Flow resistances [Pa]	1400–1800	1800–2100	2300–2600	2500–2900
Length of the guide track L [m]	6	9	12	15
Operational range of the funnel L_{1max} [m]	4,2	6,5	8,7	11
Weight [kg]	40	60	70	82
Thermal resistance of the exhaust hose [°C]	200	200	200	200

OVER/SSAK

Purpose

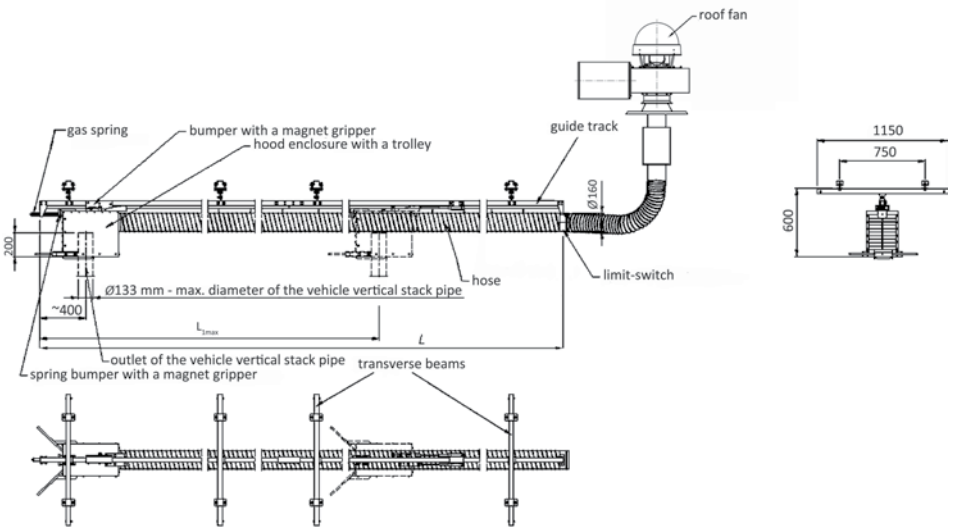
The OVER/SSAK extraction system is designed for exhaust removal of vehicles with the upper vertical stack exhaust pipe. The unit is used in garages for heavy vehicles of stable stationing place, i.e. fire-brigade depot and other emergency units, where absolute readiness for emergency action is required. Therefore the vehicle is entering the garage only with its rear part.

Structure

The OVER/SSAK system consists of a guide track – a profile with electrical cable, suspended under the ceiling and a trolley (with a hood enclosure) that is displacing with its hose along the guide track. While the vehicle is entering the garage bay, the hood enclosure is connecting with the vertical exhaust stack and farther this exhaust stack is pushing the trolley (and shrinking the hose) along the guide track. The guide track is adjusting itself (to the stack cane) moving laterally on the transverse beams. The on-drive tolerance of the vehicle is 150 mm left and right from the guide track axis. The springs at the transverse beams enable the guide-track side adjusting movement.

The movement of the hood enclosure is absorbed by a gas spring at the termination of the guide track. Additionally, at the hood enclosure is installed a bumper with a magnet-gripper that keeps the hood in the limit position.

Exhaust extractor OVER/SSAK working with a roof fan



Technical data

Type	OVER/SSAK-6	OVER/SSAK-9	OVER/SSAK-12	OVER/SSAK-15
Part no.	804O90	804O91	804O92	804O93
Recommended volume flow at the suction funnel [m³/h]	1200–1500	1200–1500	1200–1500	1200–1500
Flow resistances [Pa]	1200–1600	1500–1900	1800–2200	2100–2500
Length of the guide track L [m]	6	9	12	15
Range of active movement of the hood enclosure L_{1max} [m]	4,2	6,5	8,7	11
Weight [kg]	59	74	89	104
Thermal resistance of the exhaust hose [°C]	200	200	200	200

Fans working with extractors KOS-L/SSAK, BEL/SSAK, OVER/SSAK

Fans working with exhaust extractors ought to be selected, depending on the needs (quantity of the served workplaces, sort of the served vehicle, coincidence factor of the exhaust extraction). It is recommended to apply the radial fans WPA-N (see Section FANS). To select the fans correctly contact KLIMAWENT S.A.

Elements of electrical equipment to control with function of extractors KOS-L/SSAK, BEL/SSAK, OVER/SSAK

1. Control unit ZE-SSAK – installed in the garage or another room, indicated by User.
Contains a switch with subsequent positions:
- 0 – the control unit is switched off,
- L – local control,
- Z – remote control.

Local control L – to switch on the fan from the ZE-SSAK control unit – press the green pushbutton START, to disconnect press the red button STOP.
Remote control Z – the fan is operated by means of auxiliary control units ZP-1/24 V, ZP-2/24 V or via radio through radio transmitter NR-1 Ap and receiver OR-1.

1. Control unit ZE-SSAK

Control unit, depending on the motor rate, is equipped with an adequately selected Motor Protective Switch and a contactor. Serves as a short-circuit- and thermal protection, includes a time relay delaying the fan STOP (exclusively in the remote mode) – manufacturer's setting is approx. 1,5 min.
Control units used to operate the fans of motor rate above 5 kW provide a soft start of the fan by means of a star-delta starting system.

Type	Part no.	Supply voltage [V]; 50 Hz	Current range [A]	Motor rate [kW]	Devices to cooperate wi th
ZE-SSAK-4-3	811Z50	3x400	2,5–4	1,5	WPA-8-(D, E, S)-3-N, NR-1Ap, OR-1
ZE-SSAK-6,3-3	811Z51	3x400	4–6,3	2,2	WPA-9-(D, E, S)-3-N, NR-1Ap, OR-1
ZE-SSAK-10-3	811Z52	3x400	6–10	3	WPA-10-(D, E, S)-3-N, NR-1Ap, OR-1
ZE-SSAK-13-Y/D	811Z55	3x400	9–13	5,5	WPA-11-(D, E, S)-3-N, NR-1Ap, OR-1
ZE-SSAK-17-Y/D	811Z56	3x400	11–17	7,5	WPA-13-(D, E, S)-3-N, NR-1Ap, OR-1
ZE-SSAK-32-Y/D	811Z57	3x400	22–32	15	WPA-14-S-3-N, NR-1Ap, OR-1

2. Control unit ZE-SSAK 07

To control the fan in application with the exhaust extractor SSAK-07, in case of other extractors SSAK do not provide remote control (via cable or wireless).

Type	Part no.	Supply voltage [V]; 50 Hz	Motor rate [kW]	Current range of the motor switch [A]	Devices to cooperate with
ZE-SSAK 07	811Z49	3x400	1,5	2,5–4	WPA-7-E-3-N, WPA-7-D-3-N, WPA-8-E-3-N, WPA-8-D-3-N

3. Radio receiver OR-1

To cooperate with the radio transmitter NR-1Ap. Install the receiver in a place where radio waves interference do not occur. The receiver is connected electrically with this unit.

Type	Part no.	Voltage	Devices to cooperate with
OR-1	812O01	24 V AC	ZE-SSAK, NR-1Ap

4. Radio transmitter NR-1Ap

Is designed for wireless control of the fan, from driver's cabin. The fan is started automatically while starting the vehicle engine. When the engine is stopped or the vehicle leaves the garage for action, the fan switches off automatically upon adjusted time delay. At the moment the vehicle returns to garage, the fan is automatically switched on. The pushbutton on the radio transmitter starts the fan. When the vehicle engine is stopped and started again, the transmitter will be activated one more time.

	Type	Part no.	Voltage	Devices to cooperate with
	NR-1Ap	812N04	12÷24 V DC	OR-1

5. Safety switch IS

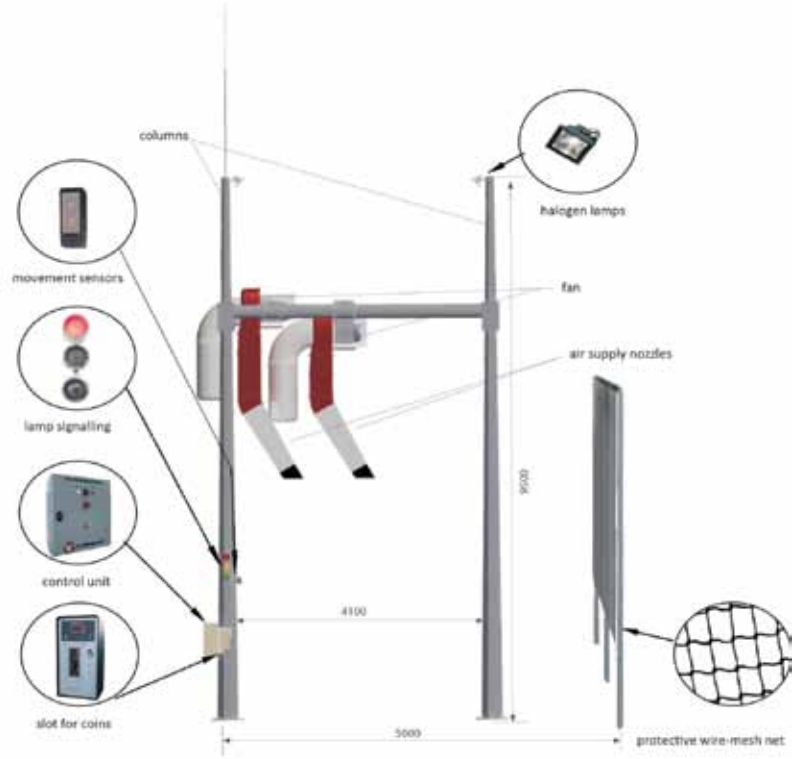
To cut off the supply circuit of the one-phase or three-phase motor of rated current 16 A. It is possible to block the switch wheel in position 0–OFF. It is suggested to install the switch near the fan.

	Type	Part no.	Supply voltage [V]; 50 Hz	Current range of the thermal protection [A]
 IP 55	IS	843W30	230/3x400	0–16

SNOW OUT TRUCK

SYSTEM SNOW OUT TRUCK – a system of snow removal from vehicles

SNOW OUT TRUCK during the operation



SNOW OUT TRUCK – view from the side of entrance for vehicles

Structure

SNOW OUT TRUCK consists of a supporting structure – two columns forming a gate, between which is placed a carrying beam with two fans. Outlet of each fan is connected with air supply nozzle, directed at an angle onto the vehicle roof for snow removal. The system is equipped with a lighting operated by a twilight switch, signalling lamps indicating the device readiness for operation and a protective guard for protection from spreading the ice and snow debris.

Optionally, the system can be equipped with automation for fees reception (coins or tokens) for snow removal.

Function

The proximity sensor detects the approaching vehicle and operate the fans. Green lamp signalling is an information for the driver to enter through the snow removal system. While the vehicle is passing through, the strong air streams discharging from the fans are directed onto the vehicle roof, perpendicularly to the driving line. The snow and ice debris are blown away, from the vehicle and they accumulate under the protective guard. After the vehicle leaves the system, the fans stop automatically. The efficient snow removal time for the passage of a single vehicle is 3 minutes.

Assembly

We carry out installing/assembly within the range of the delivered typical project, setting of foundations, delivery, installing and start up of the system.

Technical data

Type	Part no.	Supply voltage [V]	Power [kW]	Maximum width of the serviced vehicle [m]	Width of the passage gate [m]	Maximum height of the serviced vehicle [m]	Noise level [dB(A)]	Weight [kg]
SNOW OUT TRUCK	843W46	3x400	30	2,5	4,1	4,2	85	1250

SYSTEM SNOW OUT TRUCK TWINS– system

for snow removal from vehicles

Snow and ice that accumulated on roofs of trucks and TIR's during overnight stops on car parks constitute significant hazard for traffic users. The snow charged roof of such a large vehicle could slide off from the roof and its snow and ice debris might be blown down onto the road, causing risk for other road users, damages of vehicles, accidents and hazard of people near the passing by large vehicle. Therefore, it is important to remove the deposited snow and ice from the truck roof efficiently before the departure. Normally, this is carried out manually as an inefficient and laborious activity. The KLIMAWENT designed and manufactured SNOW OUT TRUCK TWINS systems offer perfect snow/ice removal for each TIR roof just within several minutes, by means of strong streams.

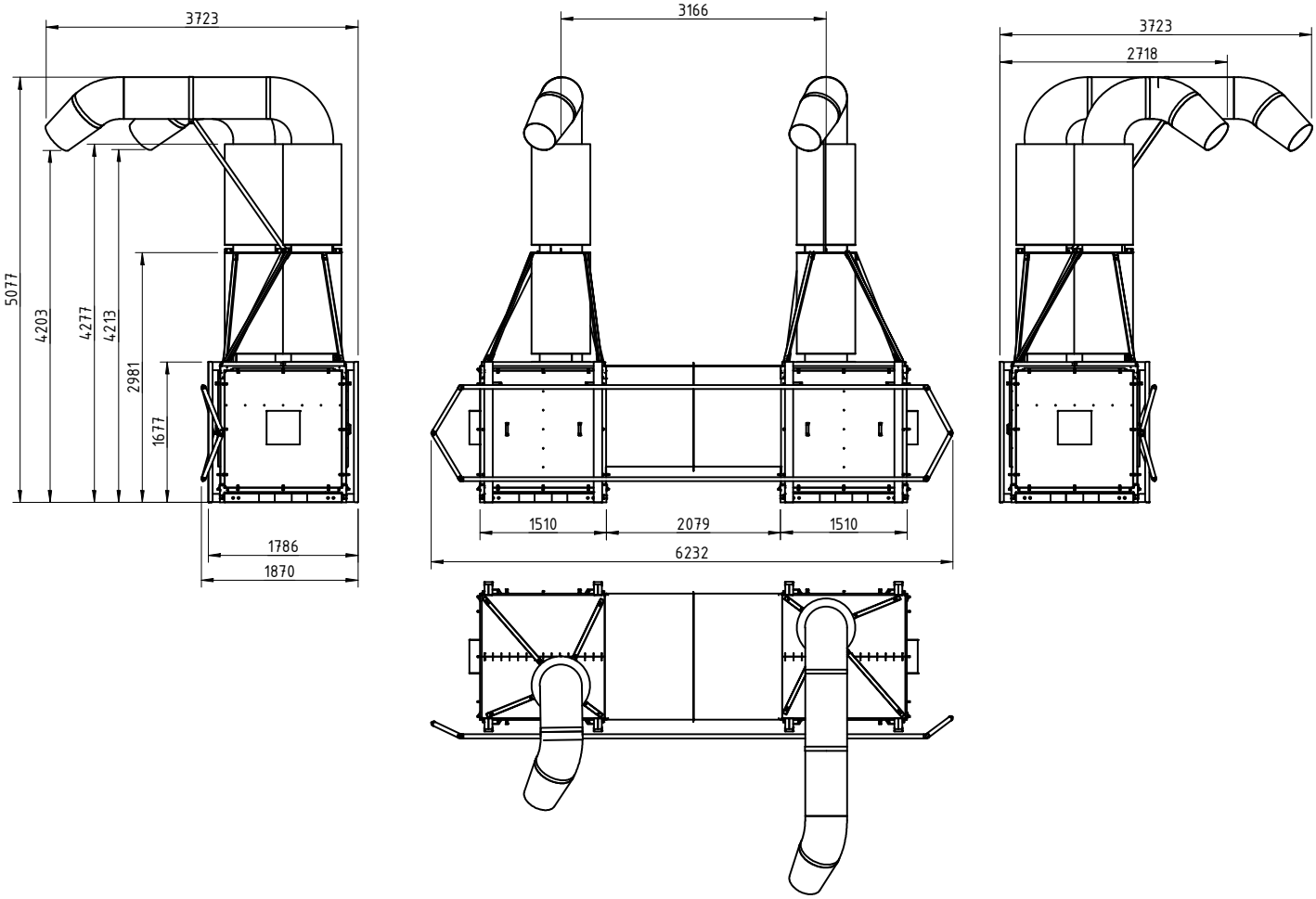
Structure and function

SNOW OUT TRUCK TWINS consists of two adjacent ventilation chambers that are equipped with vertical ducts, ended with discharge nozzles, directed onto the snow charged roof. The discharge air is distributed in such a way that the first nozzle directs the strong air stream onto the area near the roof edge, whereas the other nozzle operates the middle line of the vehicle roof. Due to the double-nozzle cooperation, the whole roof surface is cleaned efficiently. Subsequently, the snow/ice debris fall on the other side, beyond the served vehicle. All this process lasts about 3 minutes.

Assembly

Ventilation chambers ought to be placed at a designated place withing the park place, for snow removal. The ground must be firm — i.e. concrete, asphalt, bituminous or paving cubes. As the chambers are heavy and stable, they do not need to be fastened to the ground and the whole system is firmly connected with ducts. Additionally, the foundation area must be supplied with 3x400V cable. After the system is installed at the place and connected with ducts, it is important to create a vehicle passage way with bollards. The first row of bollards should be 0,7 metre far from the ventilation chambers. To start the system, the driver should switch on each chamber, whereby the fans shall switch off automatically after 5 minutes.

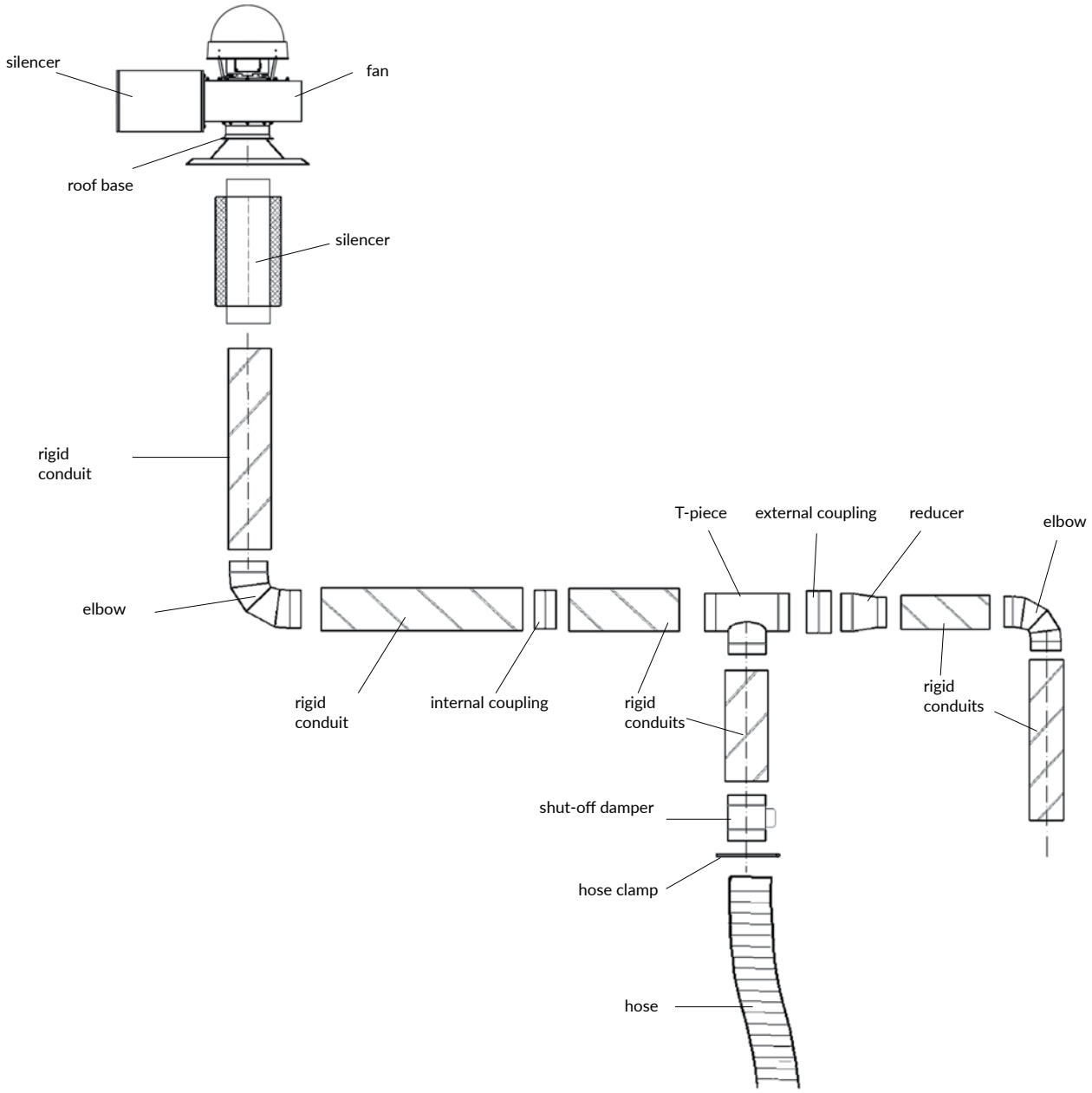
Type	Part No.	Supply voltage [V]	Motor rate [kW]	Maximum width of the vehicle [m]	Maximum height of the vehicle [m]	Noise level [dB(A)]	Weight [kg]
SNOW OUT TRUCK TWINS	843W62	3x400	2x15	2,5	4,2	85	1300


3723
5077
4203
4277
4213
2981
1677
1786
1870
3166
1510
2079
1510
6232
3723
2718

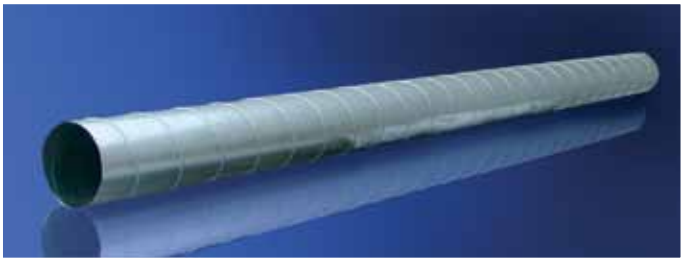
installation elements

We offer a series of types of hoses and fitting pieces as well as installation materials guaranteeing fast and precise mounting of various ventilation installations.

Example of the completed ventilation installation



SPIRO – spiral-seam ducts



Purpose

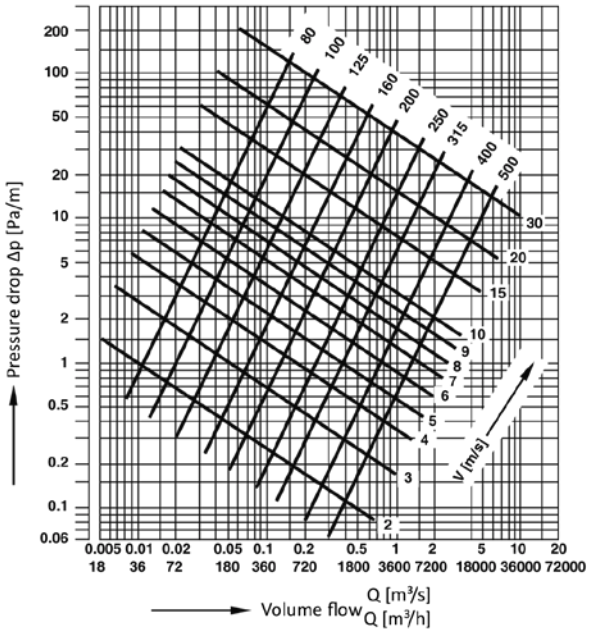
A spiral-seam duct SPIRO of zinc-coated steel are applied as standard ducts for air distribution within ventilation installations and air condition systems. The duct can also convey other media, i.e. welding fumes or dust.

Structure

The wall of the duct is made of a spirally wound straps of zinc-coated steel.

- Characteristic: tightness, high stability of shape, light weight, possibility of joining the sections by means of internal couplings.
- Standard length: 3 m.
- Colour: silver-grey.

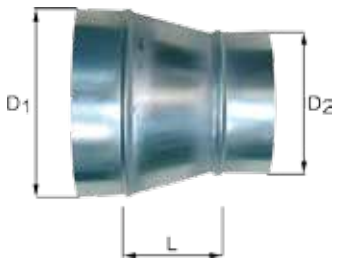
Flow charts



Technical data

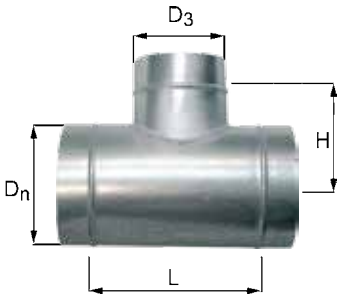
Type	Part no.	Internal diameter [mm]	Unit wight [kg/m]	Thickness [mm]	Section [m²]	Surface 1 mb [m²/mb]
SP-80	824P01	80	1,25	0,5	0,01	0,251
SP-100	824P02	100	1,45	0,5	0,01	0,315
SP-125	824P03	125	1,80	0,5	0,01	0,393
SP-160	824P04	160	2,30	0,5	0,02	0,502
SP-200	824P05	200	2,90	0,5	0,03	0,628
SP-250	824P06	250	4,30	0,5	0,05	0,785
SP-315	824P07	315	5,20	0,5	0,08	0,989
SP-400	824P09	400	8,20	0,7	0,13	1,256
SP-500	824P08	500	10,20	0,7	0,20	1,570

Reducers of zinc-coated steel*



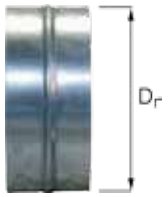
Type	Part no.	D1 [mm]	D2 [mm]	L [mm]
ZR-100/80	829R01	100	80	105
ZR-125/80	829R02	125	80	140
ZR-160/80	829R03	160	80	120
ZR-125/100	829R04	125	100	100
ZR-160/100	829R05	160	100	140
ZR-200/100	829R06	200	100	125
ZR-160/125	829R07	160	125	125
ZR-200/125	829R08	200	125	150
ZR-200/160	829R09	200	160	145
ZR-250/200	829R10	250	200	145
ZR-315/200	829R12	315	200	210
ZR-400/315	829R21	400	315	165
ZR-400/250	829R19	400	250	145

T-pieces of zinc-coated steel*



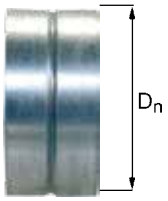
Type	Part no.	Dn [mm]	D3 [mm]	L [mm]	H [mm]
TR-80/80/80	829T01	80	80	180	80
TR-100/100/80	829T02	100	80	180	105
TR-100/100/100	829T03	100	100	190	100
TR-125/125/80	829T04	125	80	190	115
TR-125/125/100	829T05	125	100	190	130
TR-125/125/125	829T06	125	125	215	120
TR-160/160/100	829T07	160	100	180	135
TR-160/160/125	829T08	160	125	195	150
TR-160/160/160	829T09	160	160	250	140
TR-200/200/160	829T10	200	160	250	150
TR-200/200/200	829T11	200	200	330	150
TR-250/250/250	829T12	250	250	370	190
TR-315/315/315	829T22	315	315	420	230
TR-400/400/400	829T24	400	400	520	340

Internal couplings of zinc-coated steel



Type	Part no.	Dn [mm]
ZW-80	831Z01	80
ZW-100	831Z02	100
ZW-125	831Z03	125
ZW-160	831Z04	160
ZW-200	831Z05	200
ZW-250	831Z06	250
ZW-315	831Z07	315
ZW-400	831Z08	400

External couplings of zinc-coated steel



Type	Part no.	Dn [mm]
ZZ-80	832Z01	80
ZZ-100	832Z02	100
ZZ-125	832Z03	125
ZZ-160	832Z04	160
ZZ-200	832Z05	200
ZZ-250	832Z06	250
ZZ-315	832Z07	315
ZZ-400	832Z08	400

Square-cross-section ducts and fittings of zinc-coated steel – dimensions on demand*

Type	Part no.
A/I	842K01

Type	Part no.
A/I	842K02

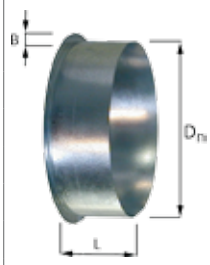
* On demand of Customer we offer installation elements of PVC.

NOTE: On demand of Customer we offer round ventilation conduits of PVC of diameters from Ø100 up to Ø400.

Elbows 90° of zinc-coated steel*

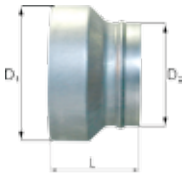
Type	Part no.	Dn [mm]	R [mm]
KL-80	829K01	80	80
KL-100	829K02	100	100
KL-125	829K03	125	125
KL-160	829K04	160	160
KL-200	829K05	200	200
KL-250	829K06	250	250
KL-315	829K07	315	315
KL-400	829K08	400	400

Flange couplings of zinc-coated steel



Type	Part no.	Dn [mm]	L [mm]	B [mm]
ZK-80	830Z01	80	44	6
ZK-100	830Z02	100	44	8
ZK-125	830Z03	125	49	8
ZK-160	830Z04	160	49	10
ZK-200	830Z05	200	59	10
ZK-250	830Z06	250	59	10
ZK-315	830Z07	315	109	10
ZK-400	830Z08	400	109	10

Reducers of aluminium



Type	Part no.	D_1 [mm]	D_2 [mm]	L [mm]
ZR-80/50	829R13	80	50	110
ZR-80/63	829R14	80	63	110
ZR-160/150	829R11	160	152	90
ZR-200/150	829R15	200	152	100
ZR-250/200	829R16	250	200	95

Duct holders

Type	Part no.	Diameter of the mounted duct [mm]
UR-100	830U03	100
UR-125	830U04	125
UR-160	830U01	160
UR-200	830U02	200
UR-250	830U05	250
UR-315	830U06	315
UR-400	830U08	400
UR-500	830U09	500

Hose clamps

Type	Part no.	Dn [mm]
OST-80	833O02	80
OST-100	833O03	100
OST-125	833O04	125
OST-160	833O05	160
OST-200	833O06	200
OST-250	833O07	250
OST-315	833O08	315
OST-500	833O09	500

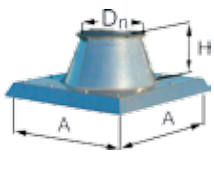
Shut-off dampers*

Type	Part no.	Dn [mm]	L [mm]	Masa [kg]
PO-80	829P01	80	160	0,60
PO-100	829P02	100	160	0,70
PO-125	829P03	125	160	0,80
PO-160	829P04	160	200	1,10
PO-200	829P05	200	200	1,90
PO-250	829P06	250	200	1,30
PO-315	829P07	315	200	1,70
PO-400	829P08	400	250	3,90

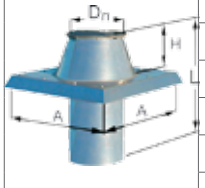
Couplings

Type	Part no.	Dn [mm]
DC-125	830Z13	125
DC-160	830Z14	160
DC-200	830Z15	200
DC-250	830Z20	250
DC-315	830Z18	315

Rood bases BI and BII of zinc-coated steel*



Type	Part no.	Dn [mm]	H [mm]	A [mm]
BI-125	843P19	125	110	356
BI-160	843P07	160	198	456
BI-200	843P08	200	198	456
BI-250	843P09	250	198	456
BI-315	843P10	315	198	544
BI-400	843P11	400	165	656



Type	Part no.	Dn [mm]	H [mm]	A [mm]	L [mm]
BII-125	843P18	125	110	356	1000
BII-160	843P03	160	198	456	1000
BII-200	843P04	200	198	456	1000
BII-250	843P05	250	198	456	1000
BII-315	843P06	315	198	544	1000
BII-400	843P17	400	165	656	1000

* On demand of Customer we offer installation elements of PVC.

Sound absorbing roof base TPD-N

	Type	Part no.	Dimensons [mm]					Weight [kg]
			A	B	H	D1	D2	
	TPD-160-N	843P40	430	1250	625	160	160	28
	TPD-200-N	843P41	430	1250	625	200	200	28
	TPD-250-N	843P42	530	1250	950	250	250	41
	TPD-315-N	843P43	530	1250	950	315	315	41
	TPD-400-N	843P27	790	1250	1200	400	400	75
	TPD-500-N	843P45	790	1250	1200	500	500	75
	TPD-630-N	843P46	890	1250	1200	630	630	88
	TPD-710-N	843P47	890	1250	1200	710	710	88

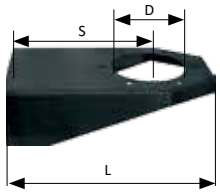
Sound absorbing roof base TPDC-N*

	Type	Part no.	Dimensons [mm]					Weight [kg]
			A	B	H	D1	D2	
	TPDC-160-N	843P50	430	680	625	160	160	30
	TPDC-200-N	843P51	430	680	625	200	200	30
	TPDC-250-N	843P52	530	770	950	250	250	46
	TPDC-315-N	843P53	530	770	950	315	315	46
	TPDC-400-N	843P54	790	1030	1200	400	400	84
	TPDC-500-N	843P55	790	1030	1200	500	500	84
	TPDC-630-N	843P56	890	1130	1200	630	630	100
	TPDC-710-N	843P57	890	1130	1200	630	630	100

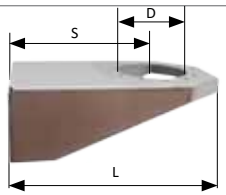
Pedestals CB of zinc-coated steel

	Type	Part no.	A [mm]	H [mm]
	CB-330	843C03	330	450
	CB-430	843C04	430	450
	CB-530	843C07	530	450
	CB-630	843C08	616	450

Wall brackets – to install the fans

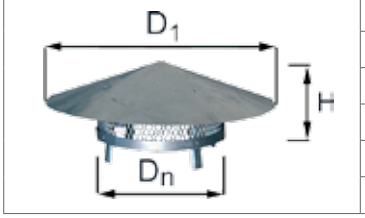
	Type	Part no.	Dn [mm]	S [mm]	L [mm]	Weight [kg]
	WBN-125-K	817W52	125	250	360	3
	WBN-160-L	817W53	160	320	445	4
	WBN-200-D	817W54	200	340	490	6,1
	WBN-250-W	817W55	250	420	585	9,2
	WBN-315-W	817W56	315	480	680	12

Wall brackets – to install the fans of Ex execution

	Type	Part no.	Dn [mm]	S [mm]	L [mm]	Weight [kg]
	WBN-125/Ex	817W44	125	250	360	2,8
	WBN-160/Ex	817W45	160	320	445	3,9
	WBN-200/Ex	817W46	200	360	510	7,9
	WBN-250/Ex	817W47	250	420	585	9,3

* On demand of Customer we offer installation elements of PVC.

Roof air discharges of zinc-coated steel



Type	Part no.	Dn [mm]	D_1 [mm]	H [mm]
D-125	842W20	125	225	120
D-160	842W21	160	280	147
D-200	842W22	200	360	120
D-250	842W23	250	440	185
D-315	842W24	315	700	290
D-400	842W25	400	720	380

Roof vents of zinc-coated steel*

Type	Part no.	Dn [mm]	D_1 [mm]	H [mm]
A-160	842W01	160	320	257
A-200	842W02	200	400	335
A-250	842W03	250	500	400
A-315	842W04	315	630	500
A-400	842W05	400	800	550

Air discharge

Type	Part no.	Diameter inlet/outlet/height [mm]	Weight [kg]
E-200	842W37	200/200/500	6
E-250	842W38	250/250/600	10
E-315	842W39	315/315/700	14
E-400	842W40	400/400/900	18
E-500	842W41	500/500/1100	24

Silencer

Type	Part no.	D [mm]	Dn [mm]	Damping layer [mm]	L [mm]	Weight [kg]	Sound absorbing [dB] for the frequency [Hz]							
							63	125	250	500	1000	2000	4000	8000
TK-80-370	830T60	180	80	50	470	3	2	6	10	17	28	33	35	22
TK-100-370	830T61	200	100	50	470	3	2	4	8	14	23	27	27	16
TK-125-370	830T62	225	125	50	470	4	1	3	6	13	22	24	24	15
TK-160-500	830T63	260	160	50	600	5	4	3	6	14	24	28	25	10
TK-160-1000	830T69	260	160	50	1100	9,5	4	4	10	24	43	43	40	11
TK-200-500	830T74	300	200	50	600	5,5	2	2	6	14	22	23	18	10
TK-200-1000	830T71	300	200	50	1100	12	1	3	9	21	37	37	27	13
TK-250-500	830T73	350	250	50	600	9	1	2	5	13	16	18	13	6
TK-250-1000	830T65	350	250	50	1100	16	1	3	8	21	31	31	19	6
TK-315-1000	830T67	415	315	50	1100	19	2	2	8	20	28	28	15	6
TK-400-1000	830T75	600	400	100	1100	29	3	6	10	25	28	28	15	6
TK-500-1000	830T22	700	500	100	1100	40	4	5	12	26	27	27	18	5
TK-630-1000	830T87	830	630	100	1100	55	4	5	14	27	26	26	16	5
TK-710-1000	830T88	910	710	100	1100	70	4	5	13	26	25	25	17	4

* On demand of Customer we offer installation elements of PVC.

hoses

G-PCV – hoses

Purpose

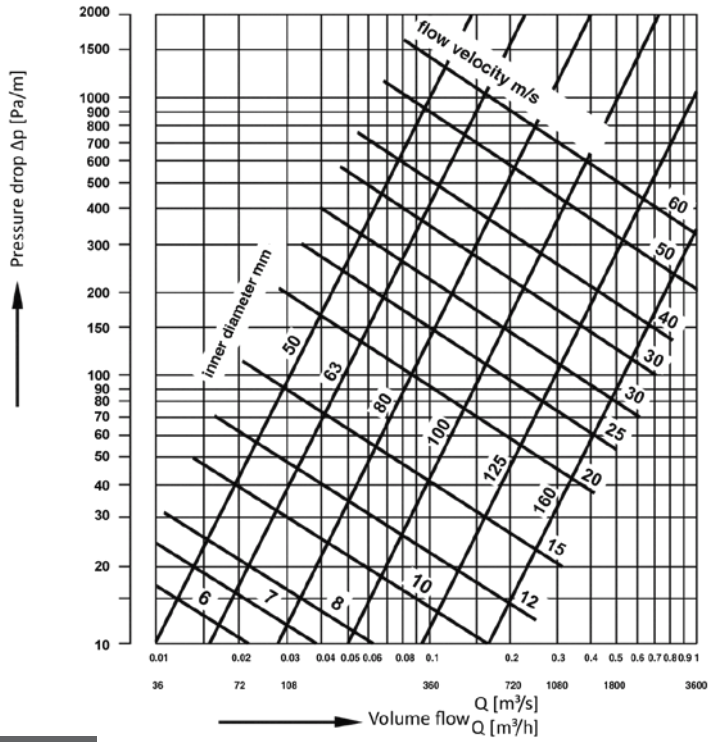
G-PCV hoses are designed for dust- and vapour extraction. They are applied for extraction units at grinding stands and within installations industrial vacuum cleaning.

Structure

The construction of the hose is a helix of hard PVC and a grey wall of softened PVC.

- Characteristic: crush resistance, vibration absorption properties, internal wall surface smooth.
- Standard length: 30 m.
- Colour: grey.

Flow charts



Technical data

Type	Part no.	Internal diameter [mm]	Unit weight [kg/m]	Temperature range of the forwarded air [°C]	Operating pressure [hPa]	Maximum vacuum [hPa]	Bending radius [mm]
G-PCV-50	823P01	50	0,61	from –5 up to +60	400	350	175
G-PCV-63	823P02	63	0,80	from –5 up to +60	300	300	220
G-PCV-80	823P03	80	1,10	from –5 up to +60	200	200	300
G-PCV-100	823P04	100	1,50	from –5 up to +60	200	150	400
G-PCV-125	823P05	125	1,70	from –5 up to +60	200	150	525
G-PCV-160	823P06	160	4,00	from –5 up to +60	100	100	650

ST/MP – hoses

Purpose

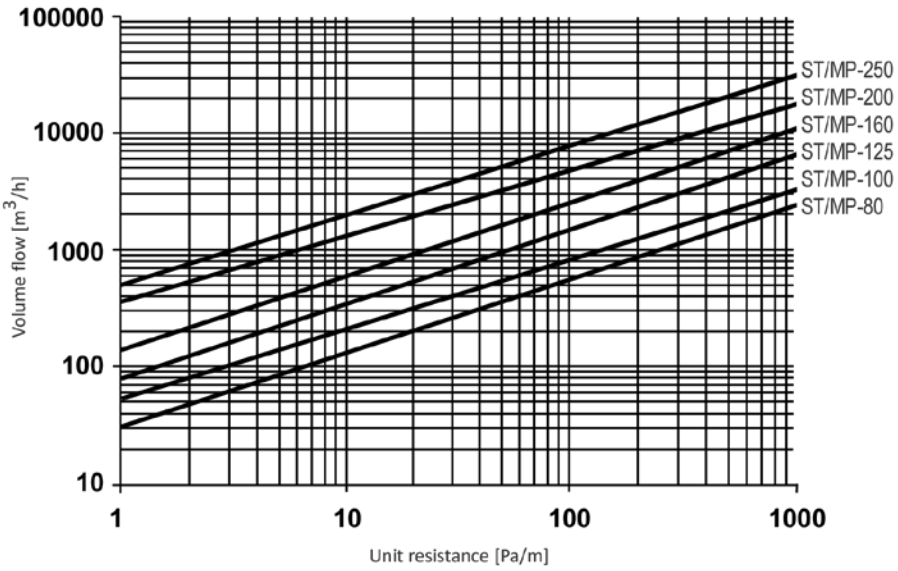
In general, ST/MP hoses are used within dust collecting installations (lightweight dust), in conveying installations for dust, fume and welding gas. Additionally, they are applied within ventilation installations and air conditioning systems. The hoses can work in temperature range from –30°C up to +120°C.

Structure

As hose coating is the glass fabric PVC-coated, wound onto an elastic steel wire helix, (the steel wire is PVC coated).

- Characteristic: very flexible, lightweight, not supporting the burning process, very high compressible.
- Standard length: 5, 10 m.
- Colour: black.

Flow charts



Technical data

Type	Part no.	Internal diameter [mm]	Unit weight [kg/m]	Temperature range of the forwarded air [°C]	Operating pressure [hPa]	Maximum vacuum [hPa]	Bending radius [mm]
ST/MP-80	863P91	80	0,23	from –30 up to +120	600	100	56
ST/MP-100	863P92	100	0,29	from –30 up to +120	500	90	70
ST/MP-125	863P93	125	0,36	from –30 up to +120	500	80	88
ST/MP-160	863P94	160	0,42	from –30 up to +120	200	60	110
ST/MP-200	863P95	200	0,52	from –30 up to +120	200	50	140
ST/MP-250	863P96	250	0,65	from –30 up to +120	100	40	175

MCS – hoses

Purpose

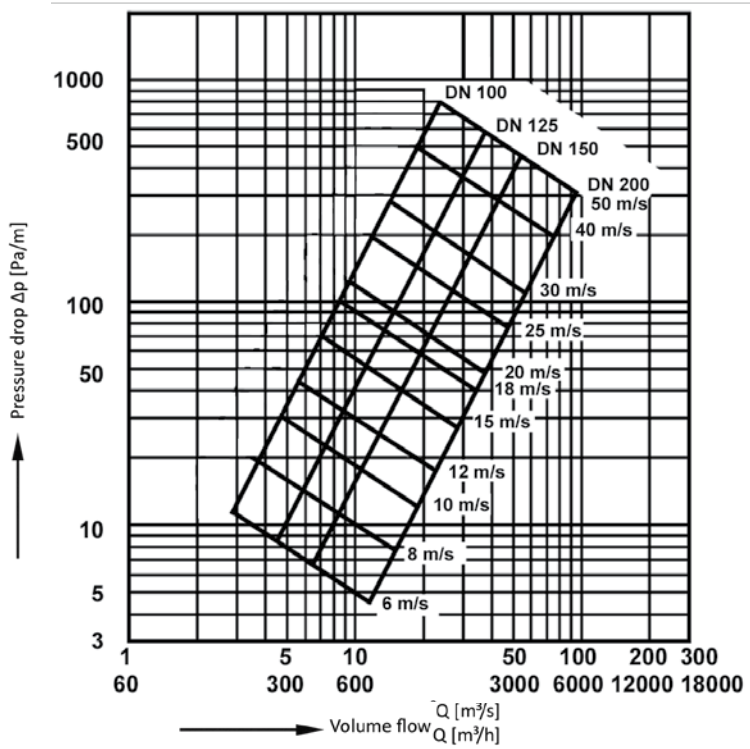
In overall, MCS hoses are used for welding fume removal (due to its resistance to sparks scattering), soldering vapour and for conveying the dust and other dusty impurities. Additionally, the hoses are applied for ventilation, air-supply heating and for vehicle exhaust extraction.

Structure

Walling is of PVC-coated glass fabric, additionally reinforced with an external metallic helix.

- Characteristic: hardly flammable, high resistant to sparks scattering, high flexibility, significant resistant to abrasion.
- Standard length: 3–10 mb.
- Colour: dark grey.

Flow charts



Technical data

Type	Part no.	Internal diameter [mm]	Unit weight [kg/m]	Temperature range of the forwarded air [°C]	Operating pressure [hPa]	Maximum vacuum [hPa]	Bending radius [mm]
MCS-100	828P32	100	0,60	from –20 up to +90 (short duration up to +110)	300	80	60
MCS-125	828P33	125	0,80	from –20 up to +90 (short duration up to +110)	210	50	75
MCS-150	828P36	150	0,90	from –20 up to +90 (short duration up to +110)	157	36	90
MCS-160	828P34	160	0,90	from –20 up to +90 (short duration up to +110)	140	31	96
MCS-200	828P35	200	1,20	from –20 up to +90 (short duration up to +110)	99	20	120

PUR/PU – hoses

Purpose

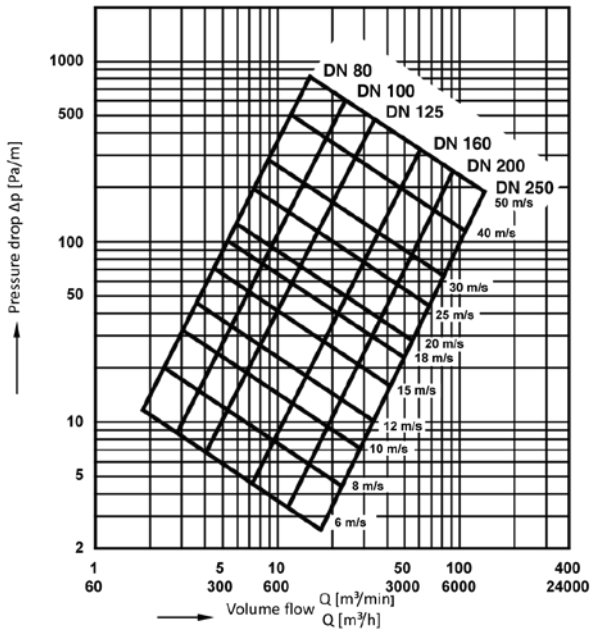
PUR/PU are used mainly as transport hoses for abrasive materials, in areas of increased fire risk. The hose are widely applied extraction installations, in wood processing industry (extractors for wood processing machines) and in industrial vacuum cleaners.

Structure

The hose wall is of polyester polyurethane, reinforced with a spring steel helix.

- Characteristic: high flexibility, very high abrasion resistant, continually kink-proof, good resistance to solvents, oil and fuels, smooth internal wall surface, hardly flammable, compressible up to 20%.
- Standard length: 1–10 mb.
- Colour: transparent.

Flow charts



Technical data

Type	Part no.	Internal diameter [mm]	Unit weight [kg/m]	Temperature range of the forwarded air [°C]	Operating pressure [hPa]	Maximum vacuum [hPa]	Bending radius [mm]
PUR/PU-80	863P69	80	0,46	from –40 up to +100	280	100	56
PUR/PU-100	863P70	100	0,51	from –40 up to +100	200	90	70
PUR/PU-125	863P71	125	0,65	from –40 up to +100	200	80	88
PUR/PU-160	863P72	160	0,82	from –40 up to +100	90	50	110
PUR/PU-200	863P73	200	1,05	from –40 up to +100	80	50	140
PUR/PU-250	863P75	250	1,25	from –40 up to +100	50	40	175

G-EX1 – hoses

Purpose

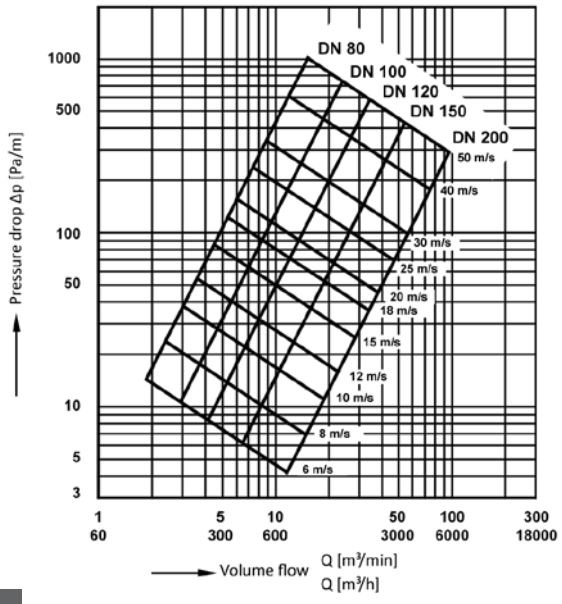
G-EX1 hoses are applied for conveying the hot gas, vapour and exhaust fumes, of temperature up to +200°C, emitted by vehicle exhaust systems. Due to their increased thermal resistance and wide range of diameters, the hoses are applied in various systems of exhaust extraction as reel extractors, rail suction duct, as well as in abovefloor and underfloor extraction systems.

Structure

The hose wall is of neoprene coated polyester fibre, externally reinforced with a nylon helix coated with plastic.

- Characteristic: excellent resilience properties, high flexibility, hardly flammable, abrasion resistant, resistant to oil and other chemical compounds.
- Standard length: 3–18 mb.
- Colour: wall – black, helix – red.

Flow charts



Technical data

Type	Part no.	Internal diameter [mm]	Unit weight [kg/m]	Temperature range of the forwarded air [°C]	Maximum vacuum [hPa]	Bending radius [mm]
G-EX1-80	828P59	80	0,51	from –20 up to +150 (short duration up to +200)	230	80
G-EX1-100	828P60	100	0,64	from –20 up to +150 (short duration up to +200)	180	100
G-EX1-125	828P61	125	0,78	from –20 up to +150 (short duration up to +200)	120	125
G-EX1-150	828P62	150	0,93	from –20 up to +150 (short duration up to +200)	50	150
G-EX1-200	828P63	200	1,22	from –20 up to +150 (short duration up to +200)	20	200

CF2 – hoses

Purpose

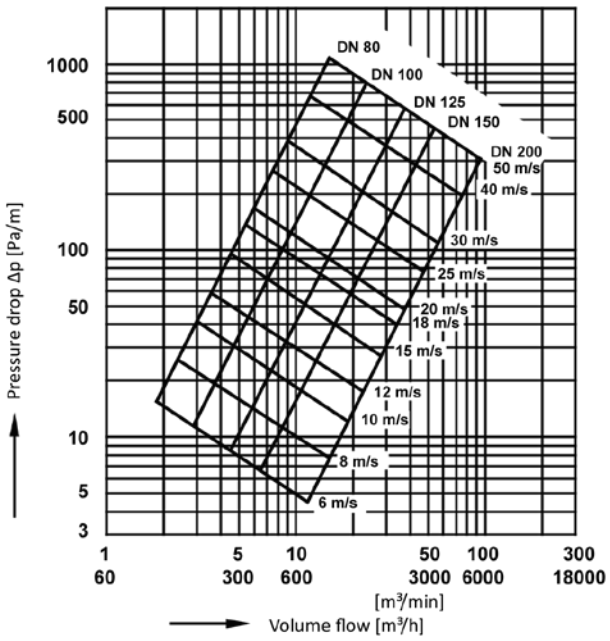
CF2 are efficient hoses for transporting the hot gas, vapour and exhaust fumes of temperature up to 200°C, emitted by exhaust systems of vehicles. Due to the increased thermal resistance and wide range of diameters, the hoses are applied in various systems of exhaust extraction, as reel extractors, rail suction ducts, as well as for abovefloor and underfloor extraction systems.

Structure

The wall is of polyester fabric coated with neoprene. Additionally, reinforced with an external steel galvanized helix coated with plastic.

- Characteristic: vibration proof, hardly flammable.
- Standard length: 3–10 mb.
- Colour: wall – black, helix – blue.

Flow charts



Technical data

Type	Part no.	Internal diameter [mm]	Unit weight [kg/m]	Temperature range of the forwarded air [°C]	Maximum vacuum [hPa]	Bending radius [mm]
CF2-80	828P17	80	0,63	from –20 up to +200	156	48
CF2-100	828P18	100	0,79	from –20 up to +200	100	60
CF2-125	828P19	125	0,95	from –20 up to +200	64	75
CF2-150	828P20	150	1,47	from –20 up to +200	44	90
CF2-200	828P21	200	1,76	from –20 up to +200	25	120

CF3 – hoses

Purpose

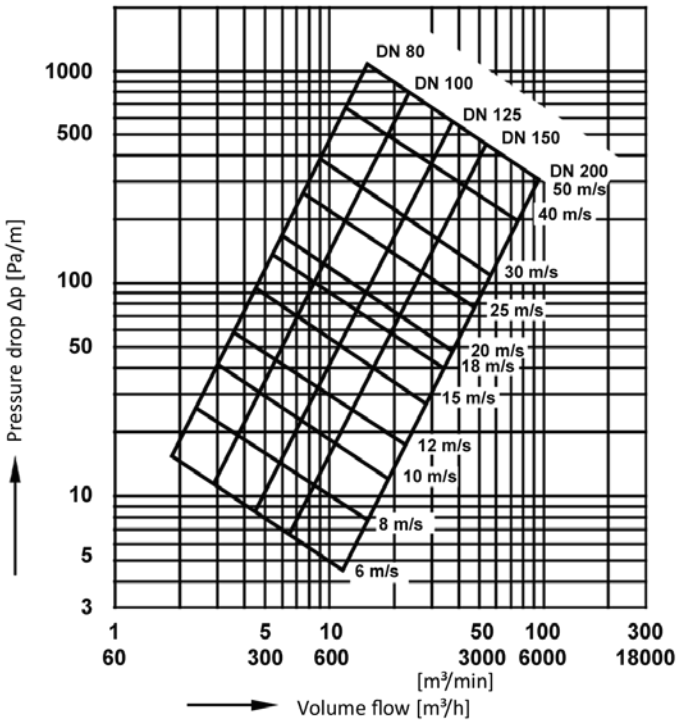
CF3 are applied for conveying the hot gas, vapour and exhaust fumes, of temperature up to +300°C, emitted by exhaust systems of vehicles. Due to the increased thermal resistance and wide range of diameters, the hoses are applied in various systems of exhaust extraction, as reel extractors, rail suction ducts, as well as for abovefloor extraction systems.

Structure

The wall is of a high thermal resistant fabric, specially coated. Additionally, it is externally reinforced with a steel helix, galvanized and plastic coated.

- Characteristic: vibration-proof, hardly flammable, abrasion resistant.
- Standard length: 3–10 mb.
- Colour: wall – grey-green, helix – red.

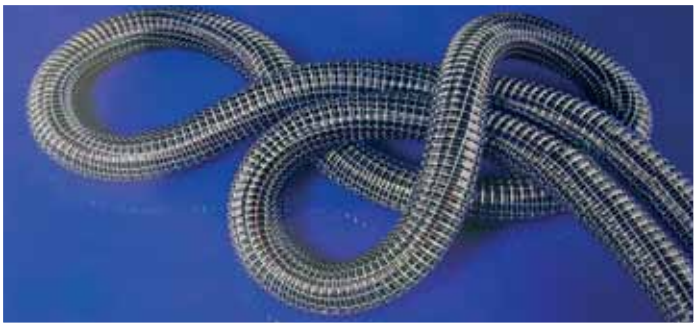
Flow charts



Technical data

Type	Part no.	Internal diameter [mm]	Unit weight [kg/m]	Temperature range of the forwarded air [°C]	Maximum vacuum [hPa]	Bending radius [mm]
CF3-80	828P37	80	0,51	from –20 up to +300 (short duration up to +350)	125	48
CF3-100	828P22	100	0,64	from –20 up to +300 (short duration up to +350)	80	60
CF3-125	828P23	125	0,79	from –20 up to +300 (short duration up to +350)	50	75
CF3-150	828P24	150	1,23	from –20 up to +300 (short duration up to +350)	36	90
CF3-200	828P25	200	1,67	from –20 up to +300 (short duration up to +350)	20	140

PVC-Flex – hoses



Purpose

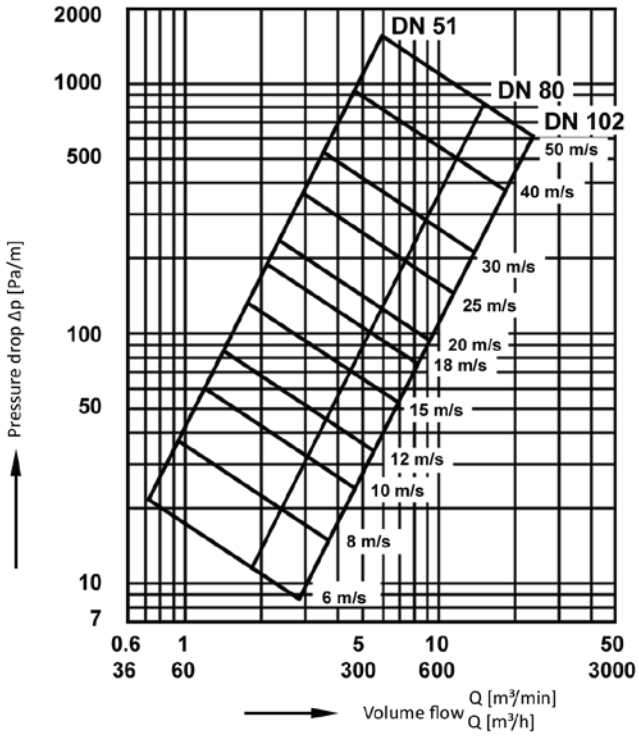
Mainly, PVC-Flex are used as industrial hoses for various media (liquid, gas and solid). They are applied for extraction of welding fumes, in industrial vacuum cleaners, house vacuum cleaners and for general ventilation.

Structure

The wall is of two layers of soft PVC and reinforced with yarn. Additionally, the wall is reinforced with a spring steel helix.

- Characteristic: extremely flexible, resistance to bases, acids and oil.
- Standard length: 5, 10, 15 mb.
- Colour: black.

Flow charts



Technical data

Type	Part no.	Internal diameter [mm]	Unit weight [kg/m]	Temperature range of the forwarded air [°C]	Operating pressure [hPa]	Maximum vacuum [hPa]	Bending radius [mm]
PVC-Flex-44	821P29	44	0,36	from –20 up to +70	1300	157	44
PVC-Flex-51	821P31	51	0,43	from –20 up to +70	1300	150	51
PCV-Flex-75	821P34	75	0,66	from –20 up to +70	800	100	76
PVC Flex-80	821P30	80	0,81	from –20 up to +70	700	90	80
PVC-Flex-102	821P32	102	0,96	from –20 up to +70	600	80	102

ALG – aluminium flexible conduits

Purpose

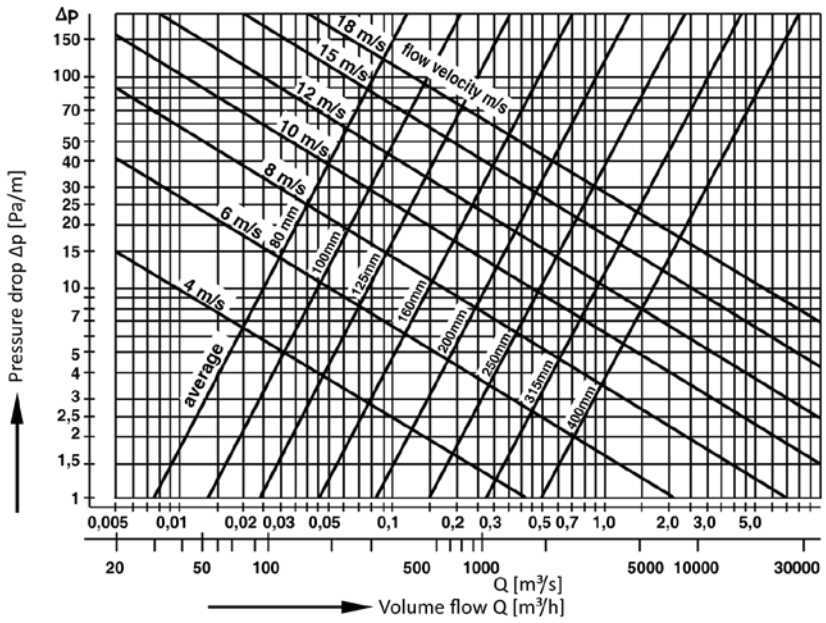
ALG flexible conduits are used in ventilation installations and air conditioning systems. The conduits are easy to bend in the chosen point and at any angle (plasticity), without changing the internal round section. Therefore ALG are used in complicated ventilation systems.

Structure

The conduit coating is of aluminium alloy.

- Characteristic: non-flammable, high mechanical strength (due to crimping), corrosion resistance.
- Standard length: 3 m.
- Colour: silver-grey.

Flow charts



Technical data

Type	Part no.	Internal diameter [mm]	Unit weight [kg/m]	Temperature range of the forwarded air [°C]	Admissible static pressure [Pa]	Admissible static vacuum [Pa]
ALG-80	821P01	80	0,11	from –30 up to +250	2000	1000
ALG-100	821P02	100	0,14	from –30 up to +250	2000	1000
ALG-125	821P03	125	0,17	from –30 up to +250	2000	1000
ALG-160	821P04	160	0,22	from –30 up to +250	2000	1000
ALG-200	821P05	200	0,30	from –30 up to +250	2000	1000
ALG-250	821P06	250	0,37	from –30 up to +250	2000	1000
ALG-315	821P07	315	0,47	from –30 up to +250	2000	1000
ALG-400	821P09	400	0,60	from –30 up to +250	2000	1000

PLT/Z – hoses

Purpose

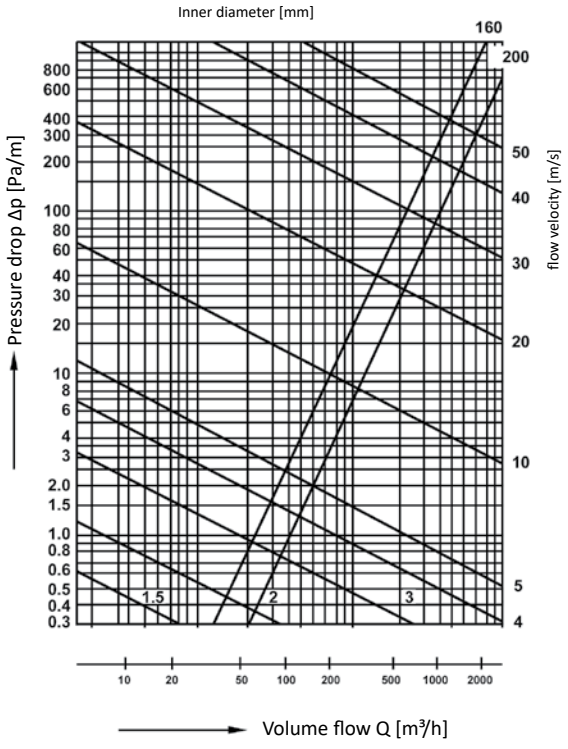
PLT/Z explosion-proof hoses have been developed for gas conveying in mining industry, on non-methane- and methane zones, in spaces of methane explosion hazard degree “a”, “b”, “c”. The hose fabric meets the requirements of CZ/1473/2006 of Superior Mining Department as acknowledgement for application in mining plants.

Structure

The hoses are made of a two layers of polyamide fabric, coated from both sides with polyvinyl chloride. The hose is reinforced with spring steel helix, placed within the layers.

- Characteristic: antistatic properties, hardly flammable.
- Standard length: 5 m.
- Colour: black.

Flow charts



Technical data

Type	Part no.	Iternal diameter [mm]	Unit weight [kg/m]	Temperature range of the forwarded air [°C]	Maximum pressure [Pa]	Maximum vacuum [Pa]
PLT/Z-160	828P08	160	3,9/5	from –15 up to +70	15 000	3000
PLT/Z-200	828P11	200	4,6/5	from –15 up to +70	15 000	3000

STX – flexible hoses

Application

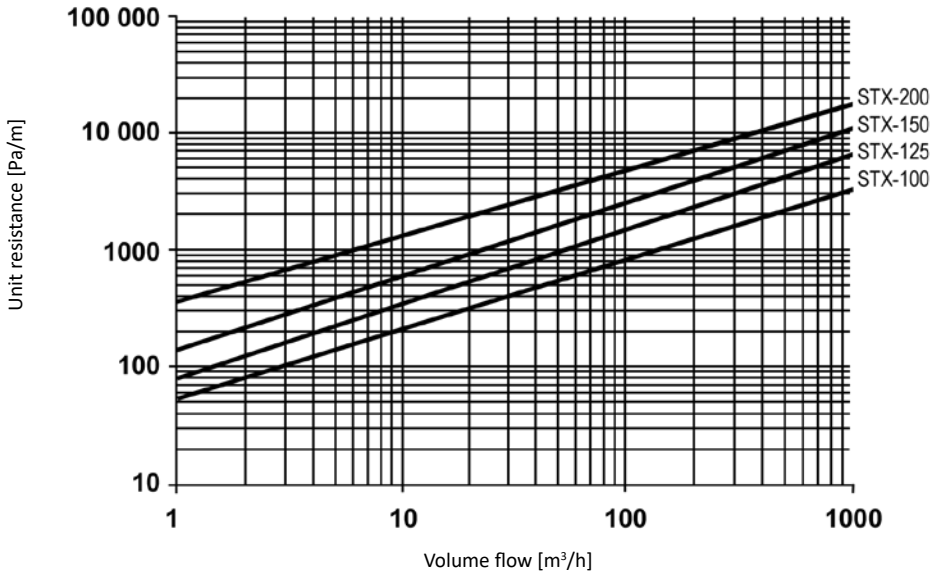
STX hoses are designed for conveying the hot gases, vapours and exhaust gases of temperature up to +170°C, emitted by vehicles exhaust pipes. Due to their increased thermal resistance and wide range of diameters, these hoses are applied in various systems of exhaust extraction, as well as extraction systems from above- and from underneath the floor.

Structure

The hose is reinforced with a fabric coating. A steel wire is placed within the hose wall to protect the floors.

- Characteristic: hardly flammable wall, friction resistance .
- Standard length: 5, 10, 15 r.m.
- Colour: black.

Flow charts



Technical Data

Type	Part No.	Internal diameter [mm]	Unit weight [kg/m]	Temperature range of the conveyed air [°C]	Maximum vacuum [Pa]	Bending radius [mm]
STX-100	828P90	100	0,66	from –30 up to +170 (for a short time up to +220*)	25	45
STX-125	828P91	125	0,9	from –30 up to +170 (for a short time up to +220*)	15	65
STX-150	828P92	150	1,15	from –30 up to +170 (for a short time up to +220*)	5	85
STX-200	828P93	200	1,52	from –30 up to +170 (for a short time up to +220*)	1	125

*at the inflow of fresh air 50%.

HT-450 – flexible hoses

Application

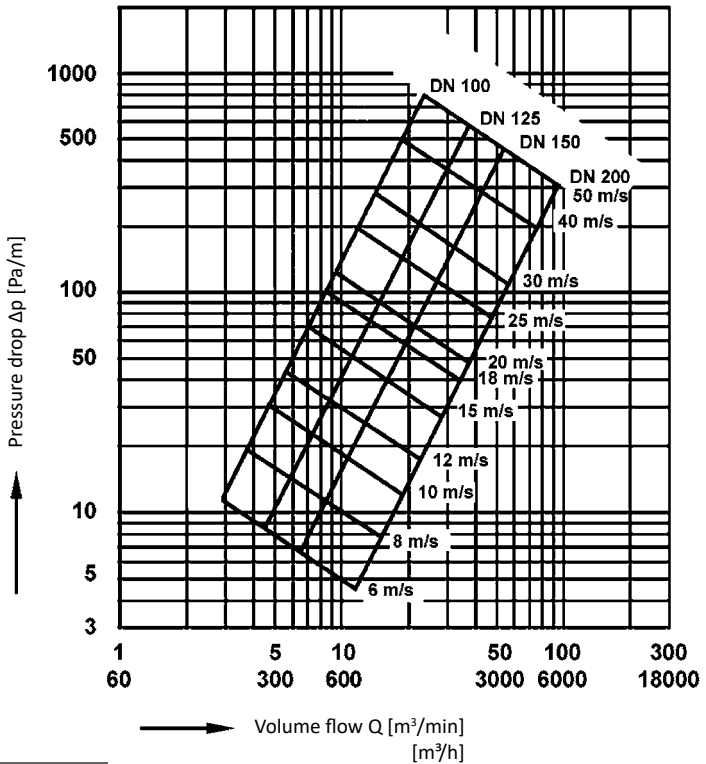
HT-450 hoses are applied for conveying the hot gases, vapours and exhaust gases of temperature up to +500°C, emitted by vehicles exhaust pipes. Due to their increased thermal resistance and wide range of diameters, these hoses are applied in various systems of exhaust extraction, such as reel exhaust extractor, suction ducts, as well as extraction systems from above the floors.

Structure

Coating: high-temperature resistant fabric, reinforced with stainless-steel fibres. Additionally it is reinforced with an external zinc-coated steel spiral.

- Characteristic: hardly flammable, friction resistance, high mechanical strength.
- Standard length: 3–10 r.m.
- Colour: outside – grey, inside – silver.

Flow charts



Technical Data

Type	Part No.	Internal diameter [mm]	Unit weight [kg/m]	Temperature range of the conveyed air [°C]	Maximum vacuum [hPa]	Bending radius [mm]
HT-450-100	826P24	100	1,3	from –20 to +450 (for a short time up to +500)	88	60
HT-450-125	826P25	125	1,5	from –20 to +450 (for a short time up to +500)	55	75
HT-450-150	826P26	150	1,8	from –20 to +450 (for a short time up to +500)	40	90
HT-450-200	826P27	200	2,4	from –20 to +450 (for a short time up to +500)	22	140

HT-650 – flexible hoses

Application

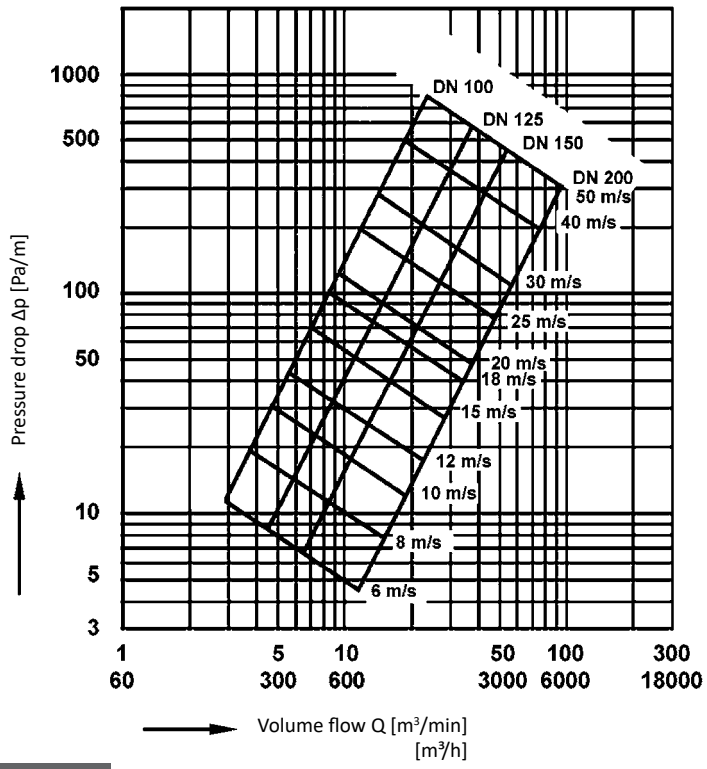
HT-650 hoses are applied for conveying the hot gases, vapours and exhaust gases of temperature up to +750°C, emitted by vehicles exhaust pipes. Due to their increased thermal resistance and wide range of diameters, these hoses are applied in various systems of exhaust extraction, such as reel exhaust extractor, suction ducts, as well as extraction systems from above the floors.

Structure

Coating: high-temperature resistant fabric, coated with temperature stabilisers and reinforced with stainless-steel fibres. Additionally it is reinforced with an external steel spiral.

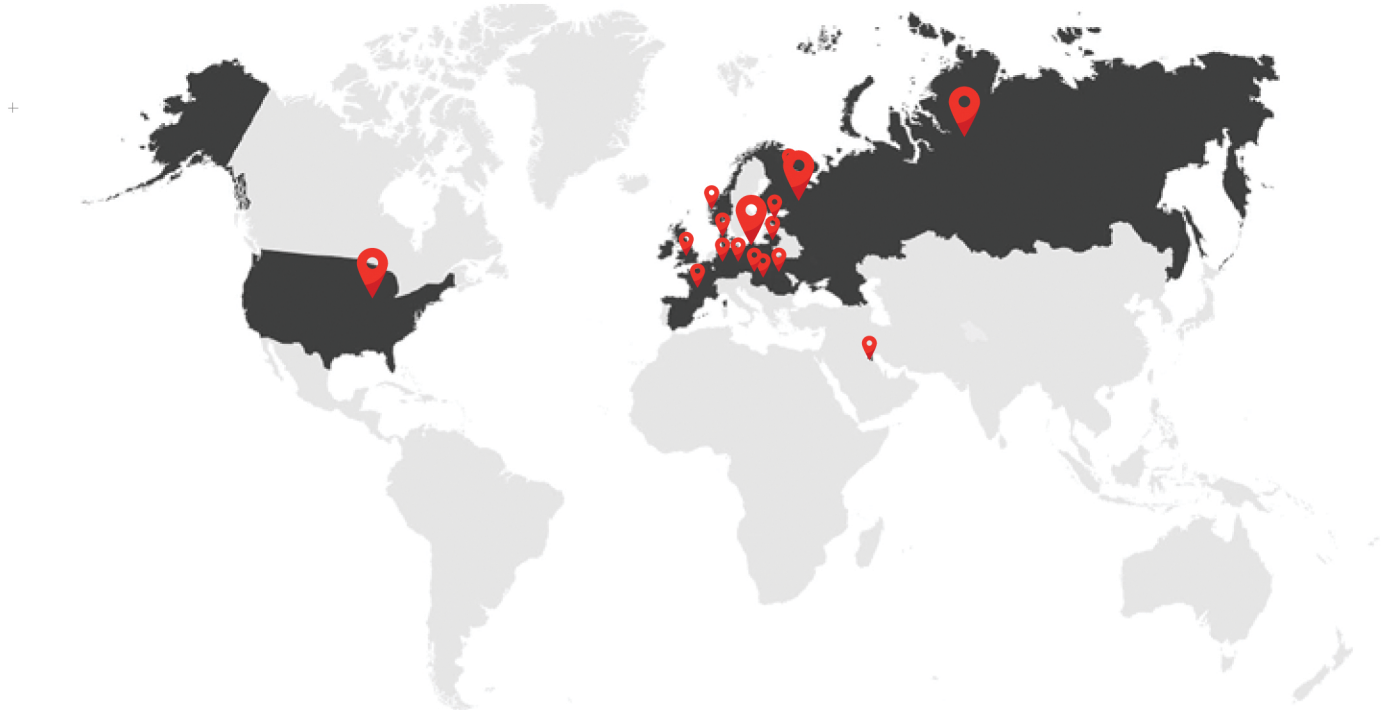
- Characteristic: resistance to vibrations, hardly flammable, friction resistance.
- Standard length: 3–10 r.m.
- Colour: silver.

Flow charts



Technical Data

Type	Part No.	Internal diameter [mm]	Unit weight [kg/m]	Temperature range of the conveyed air [°C]	Maximum vacuum [hPa]	Bending radius [mm]
HT-650-100	826P10	100	1,57	from –20 to +650 (for a short time up to +750)	168	60
HT-650-125	826P11	125	1,93	from –20 to +650 (for a short time up to +750)	105	75
HT-650-150	826P12	150	2,29	from –20 to +650 (for a short time up to +750)	76	90
HT-650-200	826P13	200	3,01	from –20 to +650 (for a short time up to +750)	42	120



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