SMOG FILTER/Ex

GENERAL FILTRATION OF DUST AND GAS

II 2 G c Ex e II T3

APPLICATION

- cleaning the air from vapour, gas dust, in chemical-, analitic-, biological laboratories, during the grinding of various materials
- control of unpleasant smells appearing e.g. during gluing or usage of various types of aerosoles
- usage in zones of Ex hazard

FEATURES

The appliance consists of:

- steel housing,
- Ex fan – located in the bottom part of the system, at the side of clean air,
- pre-filter Paint-Stop,
- high-efficiency HEPA filter – class H13,
- cassettes with granulated activated carbon,
- terminal box,
- motor starter – installed in the room, beyond the zone of Ex hazard,
- inlet cover (on demand).

ADVANTAGES

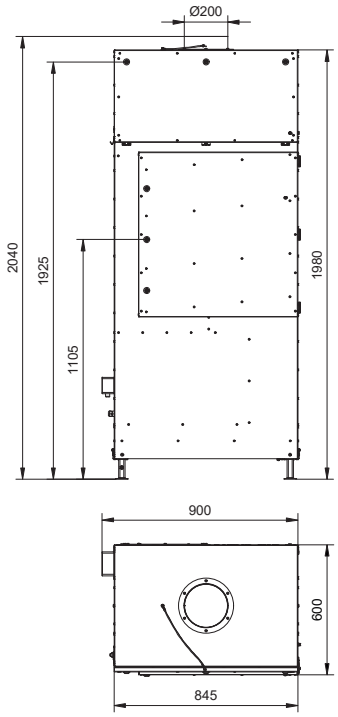
- high filtration efficiency
- safe contamination control of the air, in the zones of the Ex hazard
- full recirculation of the extracted air
- activated carbon – wide range of absorbtion of numerous chemical compounds

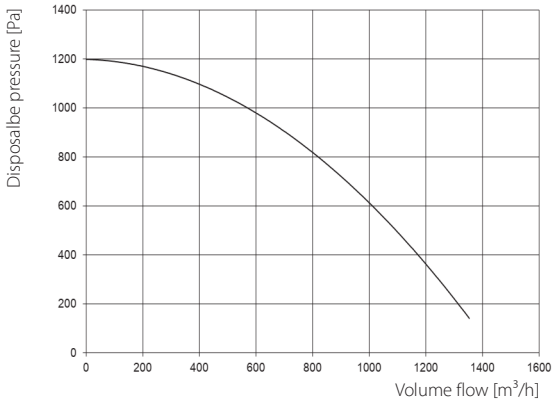
TECHNICAL DATA

Type	Part No.	Maximum volume flow [m^3/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

* Acoustic pressure level was measured from distanxe of 1m.

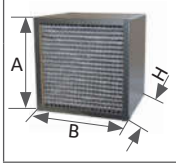
SMOG Filter-1200/Ex





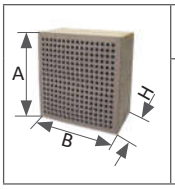
REPLACEABLE FILTERS

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 filtration efficiency: 99,95%

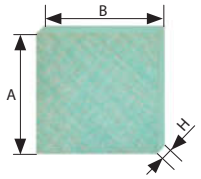
CASSETTE WITH ACTIVATED CARBON



Type	Part No.	Weight [kg]	Dimensions AxBxH [mm]	Quantity of cassettes	Application	Remarks
WA-ECO-20	838K98	24*	534x534x155	3	SMOG Filter-1200/Ex	the cassette case is of cardboard and plywood

* Weight of the active carbon – 20 kg.

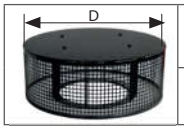
PRE-FILTER PAINT-STOP



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	non-woven of glass fibre with progressively increasing density

ADDITIONAL EQUIPMENT

INLET GUARD



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

WET-ALU/Ex

WET DUST SEPARATORS

II 3D Ex h IIIC T200° Dc

APPLICATION

- extraction of explosive dust, especially dust emitted during aluminium grinding
- capturing of dry, humid and viscous dust

FEATURES

- mixing chamber – contains a guiding plate, creating a whirlpool of a water-dust mixture
- hopper – receiving the waste of filtration
- shear bottom closing, with a sludge container
- drainage valve
- fan – located above the mixing chamber
- float indicators – controlling the level and water replenishment in the mixing chamber
- deaerator – in the top cover
- switchgear (installed beyond the Ex zone)
- revision covers of the dripping set
- the device is connected to the water supply ducting
- the device is equipped with a double-set of sludge discharge (for daily removal of sludge, is implemented a sludge container, supplied from the water installation, that washes out the accumulated waste, that is conveyed further to a container placed nearby the device, providing the efficient water saving)
- the accumulated sludge (in the collective hopper) uoght to be discharged systematically after the pneumatulic shear closing is closed, whereby the drainage valve must be opened
- after the sludge is discharged, the water in the mixing chamber is re-filled automatically

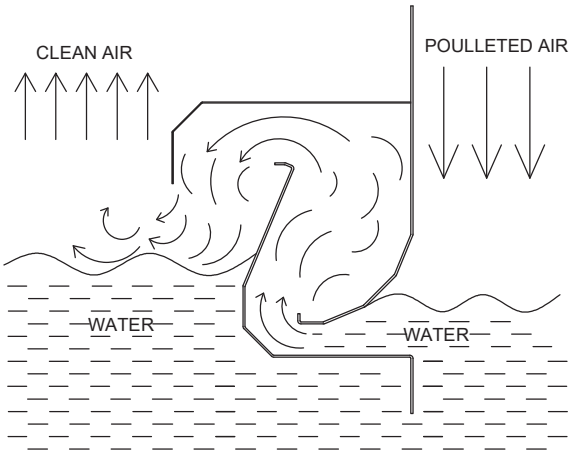
ADVANTAGES

- functiones in the Ex zone
- double-set of sludge discharge
- automatic water replenishment
- wide application in varipus fields of industry
- safe and efficient dust filtration, even dusts with significant amount of sparks and with hard to handle viscous dust particles

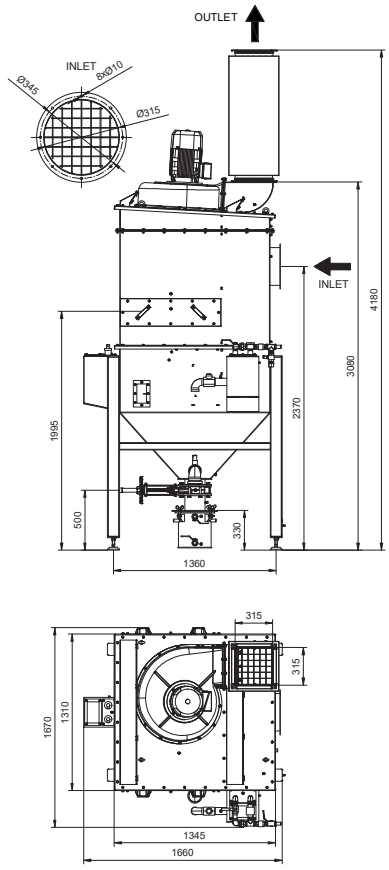
TECHNICAL DATA

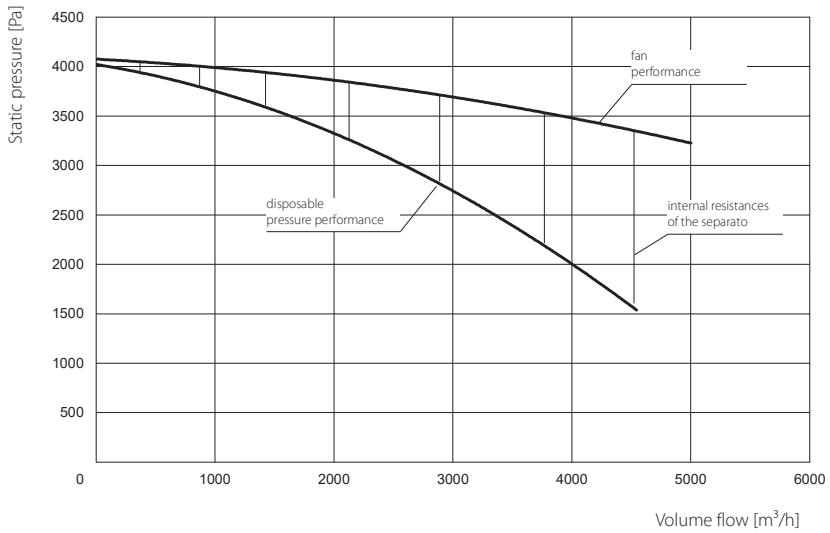
Type	Part No.	Maximum volume flow [m^3/h]	Maximum vacuum [Pa]	Supply voltage [V]	Motor rate [kW]	Acoustic pressure level [dB(A)] from distance 1 m:	Capacity of the water chamber [m^3]	Weight [kg]
WET-ALU-4000/Ex	800O94	5000	4000	3x400	5,5	72	0,65	937
WET-ALU-6000/Ex	800O95	9000	4500	3x400	11	76	0,65	1037

FUNCTION



WET-ALU-4000/Ex





WET-ALU-6000/Ex