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.

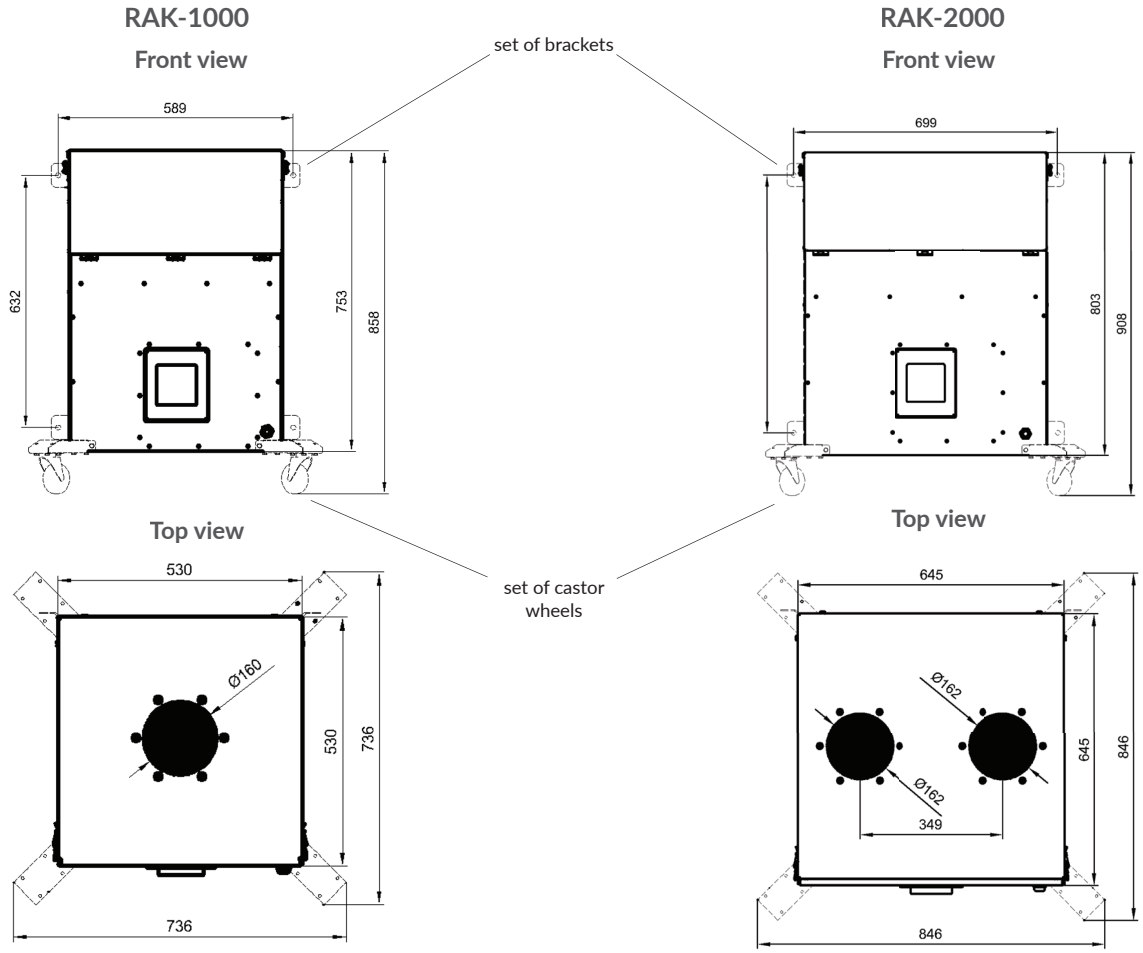
Technical data

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	