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.

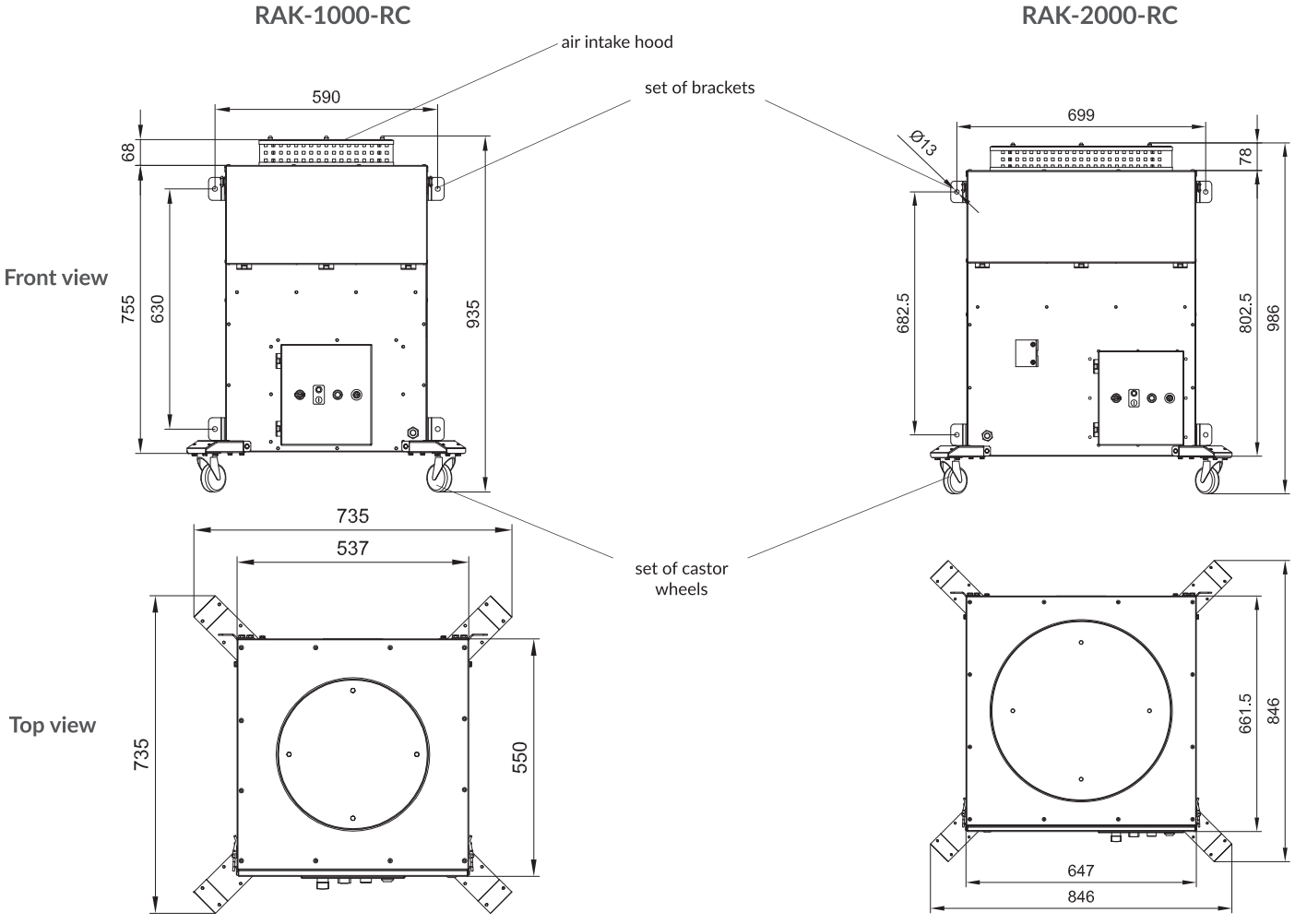
Technical data

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

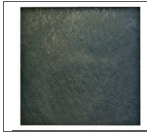
Filtering pad

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	