

Residential ventilation 2009



FläktWoods

Contents

Residential ventilation	
General	2
Single-family house.....	3
Multiple-unit dwellings.....	9
Heat recovery units.....	15
Heat recovery unit RDKG	17
Heat recovery unit RDKR.....	21
Heat recovery unit RDAB.....	25
Heat recovery unit RDAE.....	29
Heat recovery unit RDAR.....	33
Replacement of older heat recovery units.....	37
Air handling unit TopMaster	39
Air handling unit eQ	40
Exhaust fans.....	41
Exhaust fan JBDD	43
Exhaust fan JBFG	47
Roof fan STEF	50
Cooker hoods.....	51
Cooker hood CPD.....	53
Designer hood Combiranda CPKA	57
Designer hood Magnium CPMA	58
Designer hood Slimline CPSA.....	59
Insert CPE for designer hoods.....	61
Replacement of older cooker hoods.....	65
Accessories.....	67
Combined air terminal device RDKZ-26	69
Heat recovery ventilation hood CBAE	71
Air intake BSDB	72
Devices for residential ventilation.....	73
Product overview	74
Exhaust air valve GPD.....	75
Exhaust air valve KGEB.....	76
Supply air diffusers and valves.....	77
Transfer air devices	78
Fresh air valves	79
Disc valve.....	80

General

The purpose of ventilation is to provide us with healthy fresh air indoors. It removes old, stale air and takes in clean, fresh air. Of course its main task is to ensure that the air indoors is healthy to breathe.

Nowadays ventilation is also focused on energy, on saving energy costs by using ventilation with heat recovery.

Ventilation in homes - technical solutions

There are three key types of technical solution for ventilation. Naturally there are variations within these but the three main types are:

- Natural ventilation systems
- Mechanical exhaust air systems
- Balanced ventilation systems containing supply air and exhaust air fans. These are also called mechanical supply and exhaust air systems.

Today the last two systems are almost always combined with some form of heat recovery.

Apart from natural ventilation, good control systems are needed for all ventilation systems.

Natural ventilation

The principles of natural ventilation are simple. Warm air in the house rises and leaves through air ducts creating a partial vacuum in the building.

This partial vacuum sucks in new air from outside through gaps in the structure of the house. The greater the temperature difference between outdoor and indoor air, the greater the air volume replaced.

Airflows great enough to provide healthy air indoors waste energy as heated air escapes literally straight up the chimney. Remedying this by reducing the air flow has a negative effect on the indoor environment making the air stale. Another problem with natural ventilation is that it cannot be controlled. The air is also not cleaned, one cannot install a filter in all the gaps.

Mechanical exhaust air systems

Mechanical exhaust air ventilation is just that. Air is sucked out of the home using fans. Air is sucked out of the kitchen, toilets, bathrooms and utility rooms and replaced in the same way as for houses with natural ventilation, through outdoor air terminal devices, windows and leaks in the building. However, one difference is that air is generally taken in through vents or airing panels, not through gaps under doors or other leaks. It is important not to remove air from bedrooms and reception rooms as the air would then be flowing in the wrong direction. This would result in cooking smells and humidity spreading throughout the home.

Mechanical exhaust air ventilation is popular because it is cheap and easy to install. However, in the past mechanical exhaust air systems have often had the same disadvantages as natural ventilation with outdoor air, it is not cleaned and it is cold. Nowadays supply air terminal devices in outer walls can be fitted with filters that remove the worst dirt. Careful design and positioning of these devices can counteract draughts.

Balanced ventilation systems

The most complete form of ventilation system is the balanced ventilation system.

Fans control both the supply and exhaust air, this achieves full control of the volume of fresh air, which does not occur in the other two systems. In fairly well sealed houses this means that almost all supply air comes through supply air terminal devices as the system is not based on a partial vacuum. This also means that it is easy to clean the air, filters are installed on the air intakes. These systems are normally more expensive to buy but do allow lower energy consumption and better comfort. Today these systems are both effective and quiet and there is plenty of research showing that if one wants an installation with low energy consumption and good indoor climate, one needs a balanced ventilation system. Low energy use requires heat recovery and energy efficient products such as fans, filters and heat exchangers.

A good balanced ventilation system is both stable and flexible. Stability means that the system must work as intended, irrespective of what happens in the house. Flexibility means that the ventilation can be controlled to meet requirements. If there are more people in the house more ventilation is needed than if the house is empty. Such on-demand control of ventilation is becoming ever more common. This, and heat recovery, reduce energy consumption and lower the operating costs of the house. Instead of releasing the used, warm air straight into the atmosphere, it passes a heat recovery unit in which the exhaust air heats the cold outdoor air as it comes in. In new installations, heat recovery is often a matter of course.

Control systems

Control systems have a crucial effect on the function of the installation and the air quality in the house. A good control system will maintain set functional requirements for a long time with a minimum of energy use. Fläkt Woods has control systems for the various systems.

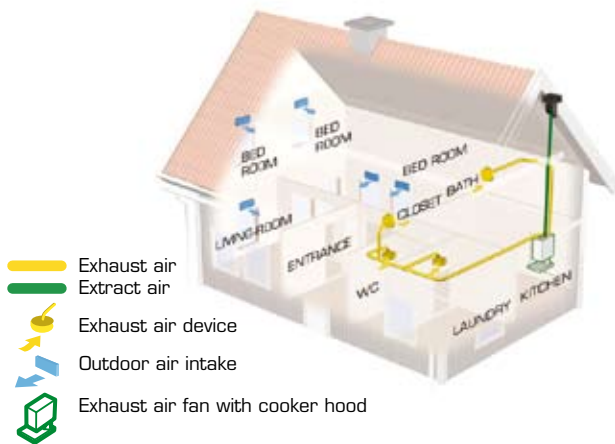
Source: Indoor Air - The Silent Killer

Single-family house



Fläkt Woods offer various solutions of ventilation systems for single-family houses. More information is found on the following pages.

Mechanical exhaust air, balanced ventilation



Mechanical exhaust air ventilation

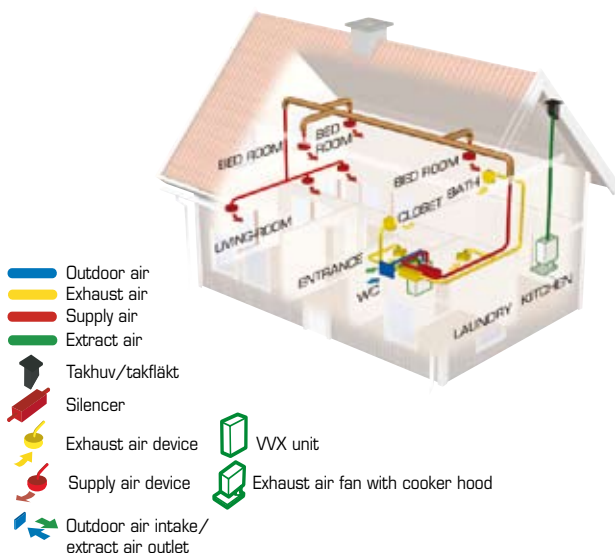
Mechanical exhaust air ventilation is just that. Air is sucked out of the home using fans.

Outdoor air is often taken in through slot ventilators in the window frames. The warm used air is sucked out through exhaust air vents in wet rooms and through the kitchen extractor. These exhaust air vents are connected by a ducting system from which the air is expelled through a roof cowl using an exhaust air fan.

The disadvantage is that outdoor air is untreated when it is taken in, this causes cold draughts when it is cold outside. This leads to the outdoor air vents being closed and never reopened which results in the ventilation system ceasing to work. Also the outdoor air is not filtered when it comes into the home.

Summary of mechanical exhaust air systems

Function	Yes	No	Comment
Control of air change rate	X		
Low energy consumption		X	In modern systems energy consumption can be low as heat recovery is possible.
On-demand control	X		
Filtration of outdoor air		X	In modern systems air intakes can be fitted with filters.
Good comfort		X	Risk of noise and draughts.
Noise from outside	X		Supply air vents can propagate noise which can be a big problem in noisy environments.
Good air quality	X		As long as the ground does not contain radon and the outdoor air is not polluted.



Balanced ventilation with heat recovery

The most complete form of ventilation system is the balanced ventilation system with heat recovery.

In a supply and exhaust air system with heat recovery the outdoor air vents are positioned in living rooms and bedrooms and the exhaust air vents in the bathroom, toilet and utility room. This system makes use of the heat in the used ventilation air, air that would otherwise be released straight out into the cold.

The heated indoor air passes through a heat recovery unit before being expelled and is used to heat the incoming outdoor air. This saves energy while providing a better climate indoors. So it is possible to control the air quality and the air volume coming into the home.

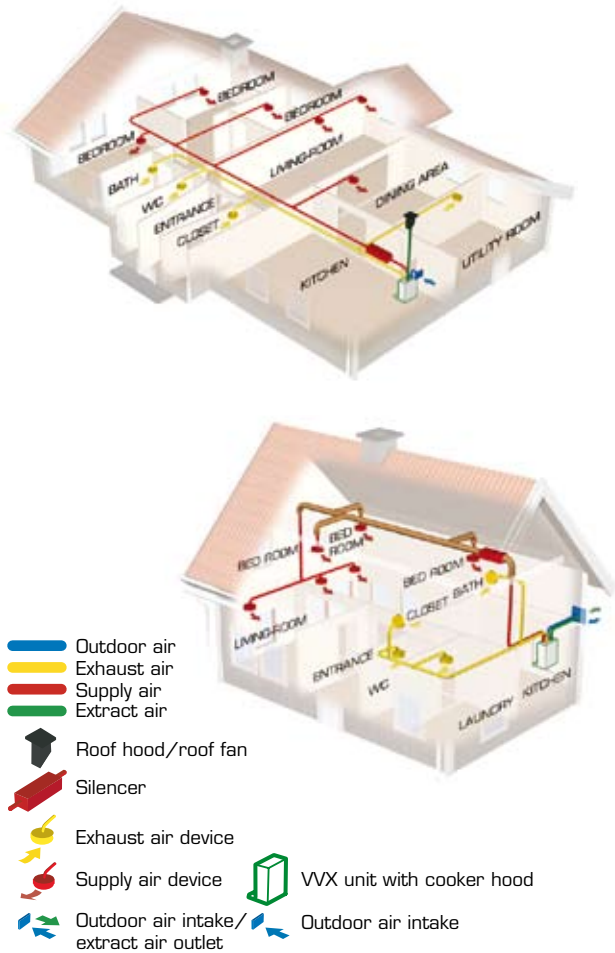
Balanced ventilation systems also have effective filters which filter out dust and pollen from the outdoor air.

FTX-system i korthet

Function	Yes	No	Comment
Control of air change rate	X		Both supply and exhaust air flows can be controlled easily.
Low energy consumption	X		Heat recovery and on-demand control save energy.
On-demand control	X		Provides better air quality during periods of high contamination.
Filtration of outdoor air	X		Filters should be changed twice a year.
Good comfort	X		Draught problems are avoided as the supply air is preheated.
Noise from outside		X	Ducts are fitted with silencers.
Good air quality	X		On-demand control ensures this.

Source: Indoor Air - The Silent Killer

Balanced ventilation 0-130m² One storey/Two storey house



Minimaster system

Heat recovery unit RDKG with cooker hood CPDK or heat recovery unit RDKR with cooker hood CPDJ

The Minimaster is a balanced ventilation system for ventilation with heat recovery in houses and apartments.

The RDKG or RDKR heat recovery unit with cooker hood CPDK or CPDJ is used as the principal unit in the system.

- Kitchen based unit:
Simple installation located in a warm area, easily accessible for maintenance and service.
- Comfort advantages of the balanced ventilation system:
Preheated supply air is distributed to all rooms. No cold draughts caused by replacement air from outside.
- Effective energy recovery
- Energy efficient defrosting
- With a test socket for air flow measurement.
- Allows the effective filtration of outdoor air and exhaust air.

The following products are included:

RDKG or RDKR, wall mounted units in the kitchen

RDKG



Cooker hood CPDK



RDKR



Cooker hood CPDJ



Minimaster temperature efficiency

Air flow l/s	Living space m ²	Temperature efficiency*	
		RDKG	RDKR
30	85	66	83
35	100	64	82,5
40	115	61	82
45	130	60	81,5

Energy saved using heat recovery

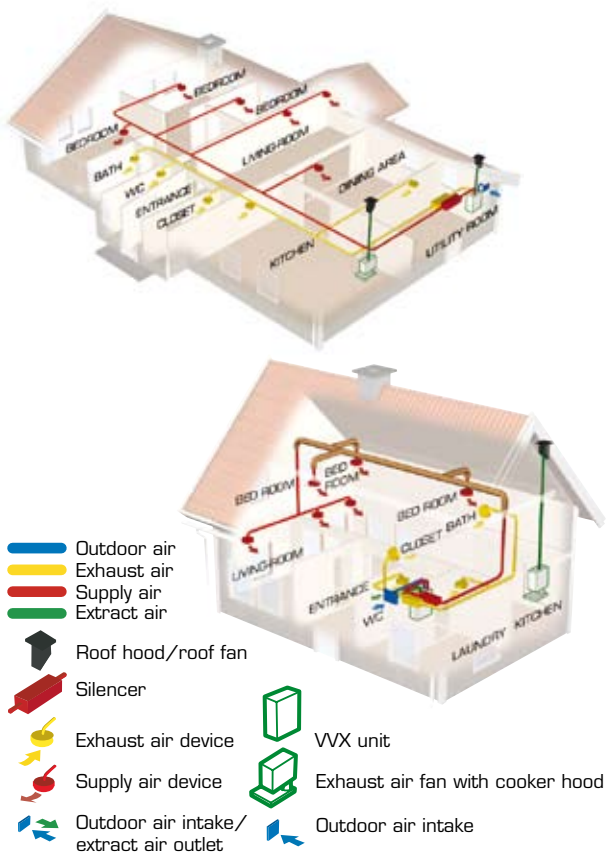
Air flow l/s	Living space m ²	Energy saving* for heating southern Sweden kWh/year		Energy saving* for heating mid Sweden kWh/year		Energy saving* for heating northern Sweden kWh/year	
		RDKG	RDKR	RDKG	RDKR	RDKG	RDKR
30	85	2830	3100	2920	3290	3920	4410
35	100	3190	3490	3310	3800	4390	5110
40	115	3520	4070	3700	4370	4850	5800
45	130	3880	4590	4010	4910	5370	6500

* The following annual temperature averages have been used in calculations:

- Southern Sweden 7.1 °C
- Mid Sweden 6.6 °C
- Northern Sweden 2.5 °C

Energy savings are based on a comparison with a mechanical exhaust air system with an equivalent air flow.

Balanced ventilation 0-155m² One storey/Two storey house



Minivent system

RDKG or RDKR heat recovery unit or RDAR with built-in control unit

The Minivent system is a balanced ventilation system for ventilation with heat recovery in houses, apartments and small commercial premises. RDKG or RDKR ventilation unit or RDAR with built-in control unit is used as the principal unit in the system.

- Location in warm spaces in homes or commercial premises.
- Easily accessible for maintenance and service.
- Allows the effective filtration of outdoor air and exhaust air.
- Advantages of the balanced ventilation system: Pre-heated supply air is distributed to all spaces that are in use more than temporarily.
- No cold draughts caused by replacement air from outside.
- Effective heat recovery.
- Energy efficient defrosting.
- With a test socket for air flow measurement.
- Can be equipped with control panel for remote control.

The following products are included:

RDKG, RDKR or RDAR, wall mounted units in kitchen or utility rooms.

RDKG



RDKR



RDAR



Minivent temperature efficiency

Air flow l/s	Living space m ²	Temperature efficiency*		
		RDKG	RDKR	RDAR
30	85	66	83	-
40	115	61	82	84
50	145	58	81	84
60	170	56	80	83
80	230	-	-	82
100	285	-	-	81
120	345	-	-	80
140	400	-	-	78

Energy saved using heat recovery

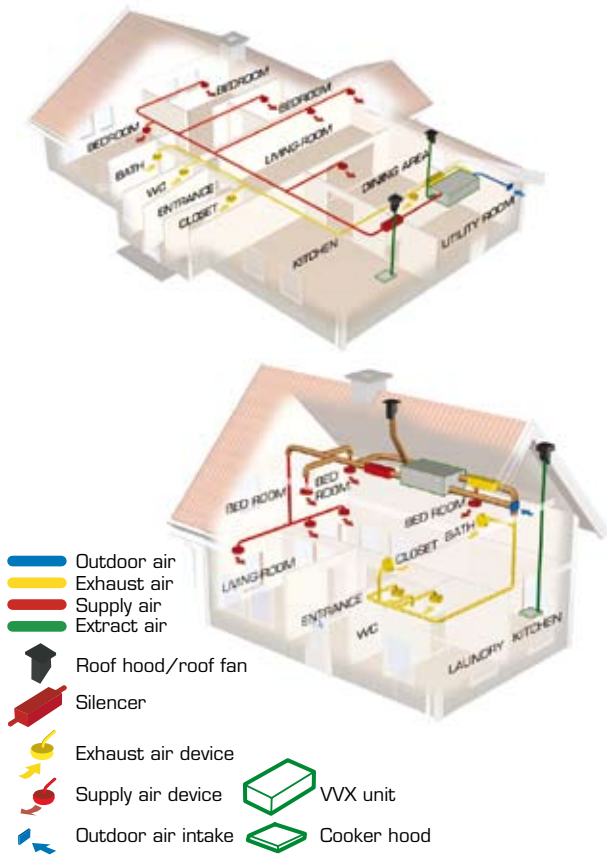
Air flow l/s	Living space	Energy saving* for heating southern Sweden kWh/year			Energy saving* for heating mid Sweden kWh/year			Energy saving* for heating northern Sweden kWh/year		
		RDKG	RDKR	RDAR	RDKG	RDKR	RDAR	RDKG	RDKR	RDAR
30	85	2830	3100	-	2920	3290	-	3920	4410	-
40	115	3520	4070	4250	3700	4370	4500	4850	5800	5800
50	145	4200	5080	5250	4340	5460	5600	5820	7260	7300
60	170	4850	6050	6250	5040	6450	6650	6840	8640	8750
80	230	-	-	8300	-	-	8800	-	-	11650
100	285	-	-	10400	-	-	10900	-	-	14500
120	345	-	-	12250	-	-	12900	-	-	17250
140	400	-	-	14100	-	-	14800	-	-	19950

* The following annual temperature averages have been used in calculations:

Southern Sweden 7.1 °C Mid Sweden 6.6 °C Northern Sweden 2.5 °C

Energy savings are based on a comparison with a mechanical exhaust air system with an equivalent air flow.

Balanced ventilation 156-370 m² One storey/Two storey house



System Rexovent

RDAB, RDAE heat recovery units or RDAR

The Rexovent system is a balanced ventilation system for ventilation with heat recovery in houses and small commercial premises. It is based on the RDAA ventilation unit located in a cold space.

The system provides effective ventilation for all rooms and recycles the heat in the used air leaving the house. In addition it contains a number of components customised for the system.

- External insulation for cold spaces.
- Easily accessible for maintenance and service.
- Advantages of the balanced ventilation system: Pre-heated supply air is distributed to all spaces that are in use more than temporarily.
- No cold draughts caused by replacement air from outside.
- Effective heat recovery.
- Energy efficient defrosting.
- With a test socket for air flow measurement.

The following products are included:

RDAB, RDAE and RDAR, units located in cold spaces, lofts for example.

RDAE



RDAB



RDAR



Rexovent temperature efficiency

Air flow l/s	Living space m ²	Temperature efficiency*	
		RDAB	RDAE/RDAR
40	115	67	84
60	170	60	83
80	230	56	82
100	285	54	81
120	345	-	80
140	400	-	78

Energy saved using heat recovery

Air flow l/s	Living space m ²	Energy saving* for heating southern Sweden kWh/year		Energy saving* for heating mid Sweden kWh/year		Energy saving* for heating northern Sweden kWh/year	
		RDAB	RDAE/RDAR	RDAB	RDAE/RDAR	RDAB	RDAE/RDAR
40	115	3950	4250	4100	4500	5650	5800
60	170	5550	6250	5800	6650	7820	8750
80	230	7010	8300	7300	8800	9750	11650
100	285	8330	10400	8650	10900	11500	14500
120	345	-	12250	-	12900	-	17250
140	400	-	14100	-	14800	-	19950

* The following annual temperature averages have been used in calculations:

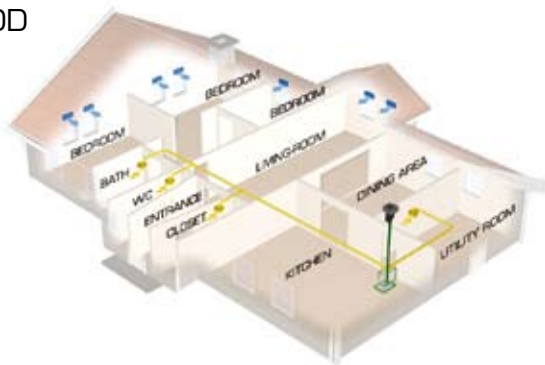
Southern Sweden 7.1 °C Mid Sweden 6.6 °C Northern Sweden 2.5 °C

Energy savings are based on a comparison with a mechanical exhaust air system with an equivalent air flow.

Mechanical exhaust air ventilation

One storey/Two storey house

JBDD



Living space of a maximum 170 m²

One storey/Two storey house

For improving the ventilation in houses with a maximum living space of 170 m² with natural ventilation systems the Exonet system is recommended. The Exonet system is a mechanical exhaust air system consisting of the JBDD exhaust air fan and cooker hood*.

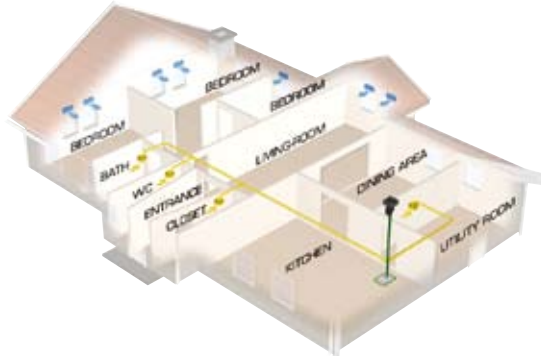


Living space of a maximum 250 m²

One storey/Two storey house

For improving the ventilation in houses with a maximum living space of 250 m² with natural ventilation systems a system with a roof mounted exhaust air fan is recommended. This system consists of the JBFG roof fan and cooker hood*.

JBFG/STEF



Living space of a maximum 370 m²

One storey/Two storey house

For improving the ventilation in houses with a maximum living space of 370 m² with natural ventilation systems a system with a roof mounted exhaust air fan is recommended. This system consists of the STEF roof fan and cooker hood*.

For more information about the products see Products for Single-family Houses.

*See separate documentation on cooker hoods for information about which cooker hoods are suited to the exhaust air fans.

The following products are included:

Exhaust air fans



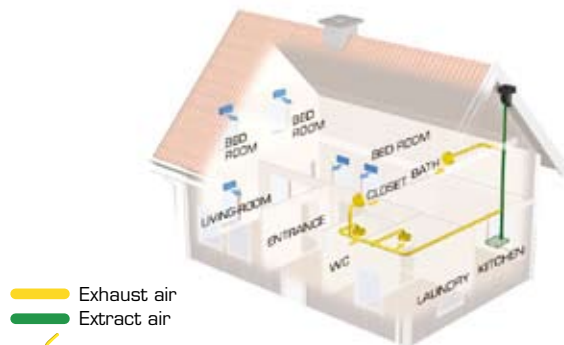
JBDD



JBFG



STEF



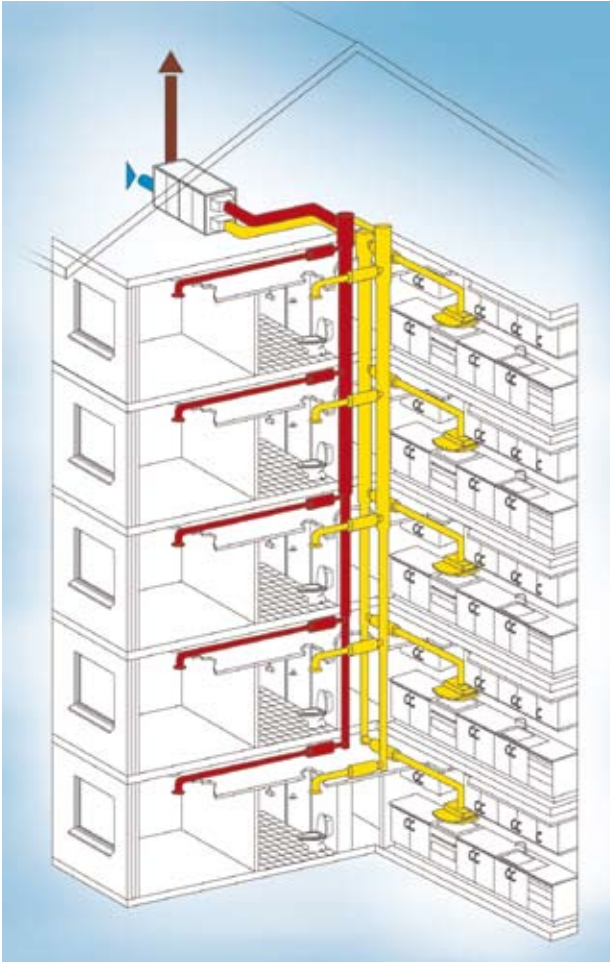
- Exhaust air
- Extract air
- Exhaust air device
- Outdoor air intake
- Roof hood/roof fan
- Exhaust air fan with cooker hood
- Cooker hood

Multiple-unit dwellings



Fläkt Woods offer various solutions of ventilation systems for multiple-unit dwellings. More information is found on the following pages. Information about fire safety is also found in this chapter.

Balanced ventilation with heat recovery



The most complete form of ventilation system is the balanced ventilation system with heat recovery. In a supply and exhaust air system with heat recovery the supply air valves are positioned in living rooms and bedrooms and the exhaust air valves in the bathroom, toilet and utility room. This system makes use of the heat in the used ventilation air, air that would otherwise be released straight out into the cold.

The heated indoor air passes through a heat recovery unit before being expelled and is used to heat the incoming outdoor air. This saves energy while providing a better climate indoors. So it is possible to control the air quality and the air volume coming into the home.

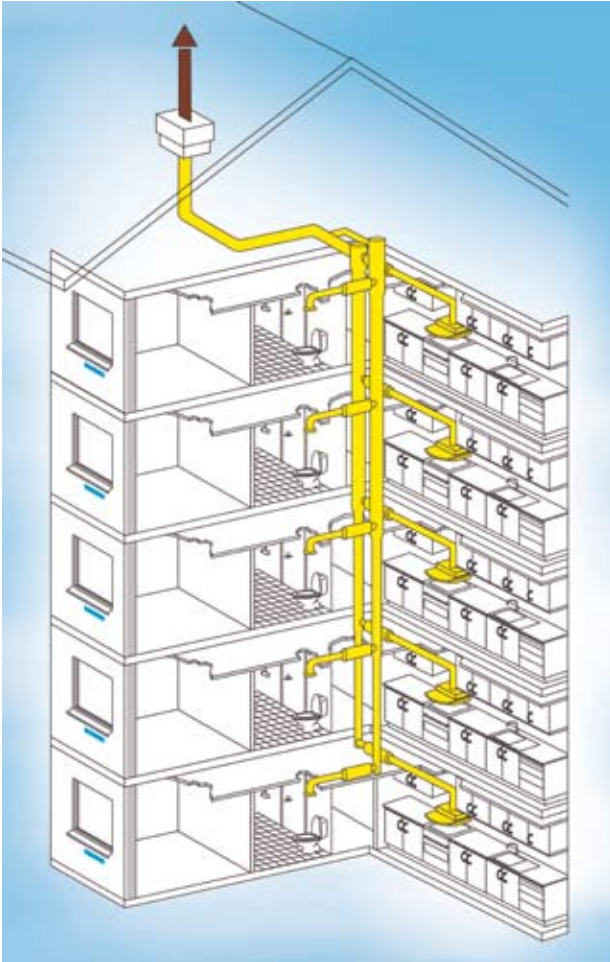
Balanced ventilation systems also have effective filters which filter out dust and pollen from the outdoor air.

Summary of balanced ventilation systems

Function	Yes	No	Comment
Control of air change rate	X		Both supply and exhaust air flows can be controlled easily.
Low energy consumption	X		Heat recovery and on-demand control save energy.
On-demand control	X		Provides better air quality during periods of high contamination.
Filtration of outdoor air	X		Filters should be changed twice a year.
Good comfort	X		Draught problems are avoided as the supply air is preheated.
Noise from outside		X	Ducts are fitted with silencers.
Good air quality	X		On-demand control ensures this.

Source: Indoor Air - The Silent Killer

Mechanical exhaust air ventilation



Mechanical exhaust air ventilation is just that. Air is sucked out of the home using fans.

Outdoor air is often taken in through slot ventilators in the window frames. The warm used air is sucked out through exhaust air valves in wet rooms and through the kitchen fan. These exhaust air valves are connected by a ducting system from which the air is expelled using an exhaust air fan.

The disadvantage is that outdoor air is untreated when it is taken in, this causes cold draughts when it is cold outside. This leads to the outdoor air vents being closed and never reopened which results in the ventilation system ceasing to work. Also the outdoor air is not filtered when it comes into the home.

Summary of mechanical exhaust air systems

Function	Yes	No	Comment
Control of air change rate	X		
Low energy consumption		X	In modern systems energy consumption can be low as heat recovery is possible.
On-demand control	X		
Filtration of outdoor air		X	In modern systems air intakes can be fitted with filters.
Good comfort		X	Risk of noise and draughts.
Noise from outside	X		Supply air vents can propagate noise which can be a big problem in noisy environments.
Good air quality	X		As long as the ground does not contain radon and the outdoor air is not polluted.

Source: Indoor Air - The Silent Killer

Fire safety

General

In the event of a fire the ventilation system must not help spread the fire or combustion gas. Based on our expertise and long experience we have developed a range of fire safety products and systems for all types of building and applications.

Modern buildings have ventilation ducts that connect different fire cells. These are a perfect route for the flow of a fire, but combustion gases must not spread to spaces in which there are people.

To limit the injury and damage to people and property it is important to have active protection, preventing fire and combustion gases spreading through the building. Good fire protection consists of several components acting together. That said nothing is stronger than the weakest link. Ventilation fire protection must be taken into account in order to fulfil the requirements for personal safety contained in building standards.



Fire protection in dwellings

Apartment buildings have high requirements for protection. Sleeping people must not be exposed to toxic combustion gases. These high protection requirements mean that systems must be designed with large safety margins.

Protection goals

"To prevent the spread of fire and combustion gases between fire cells.*)"

In apartment buildings there are usually parts of the building with other protection goals (storage spaces and services rooms for example). These should always be separated with fire/combustion gas dampers and not contain active fans.

*1) Fire cell – Fire cell limits separate different applications, floors, services rooms etc. to limit the extent of damage in the event of fire.



Selecting systems

Multi-unit dwellings consist of an number of apartments in separate fire cells. It is easier to design a large number of equally large apartments for active fans than a small number of apartments with varying living areas. However, the integrity of one's own apartment is great, which makes the necessary assessment of a system with active fans difficult to carry out. A system of fire/combustion gas dampers in apartments is easier to maintain than a system of active fans. The high protection goals mean large safety margins. Fläkt Woods recommends fire/combustion gas dampers to ensure that these protection goals are fulfilled.

Apartments with fire/combustion gas dampers

The design of system describes an apartment building containing a number of apartments per floor and stairwells. Apartments, in which there are sleeping people, and associated evacuation routes, have the highest protection requirements. Other parts of the apartment building, storage areas etc. can be designed with fire/combustion gas dampers according to the same methodology.

Design using fire/combustion gas dampers follows a simple principle for apartment buildings. From fire cell to fan the protection against the spread of fire and combustion gas must meet fire resistance class EI 60. This specifies the location of dampers, detectors, exercise cycles as well as suspension and mounting. The position and design of shafts is also covered by this requirement.

Fire safety

Positioning of fire/combustion gas dampers

Each fire cell that is served by a ventilation system is equipped with fire/combustion gas dampers at lead-ins to the structure separating the fire cell. The mounting and design of dampers and walls must be type approved. Dampers must always be mounted with spindles horizontal. Fire/combustion gas dampers must meet a class 2 air-tightness rating.

Design of mountings

Mountings and suspension must fulfil class R60 so that deflection does not cause a rupture of the ventilation duct.

Design of shafts

Fire cell separation between floors must meet fire resistance class EI 60 in total. This can be achieved using shaft walls EI 30 and the sealing of the floor structure ($30 + \text{sealing} + 30$). Alternatively the shaft can be open without sealing but in that case the shaft walls must meet fire resistance class EI 60.

Supply and exhaust air ventilation installations should be separated to at least fire resistance class EI 15 in accordance with the advice in BBR (Swedish Building Regulations) 5:652. This can be achieved using insulation to EI 15 of either the exhaust or supply air duct, separation of a wall of 15 or with a protective gap of 0.1 metres.

Design of detection system

Fire/combustion gas dampers must close to provide protection. The location and design of detectors is therefore very important. If the apartment building is fitted with an automatic fire alarm approved according to SBF 110:6, this can be used as a signal to activate dampers. A signal from sprinkler systems is not recommended because the sprinklers are activated later. The type of detector and its

location in the duct is important because turbulence and dilution can delay activation. As a guideline the dilution of combustion gas should be a maximum of 10 times. Fläkt Woods recommends a detector adjacent to every damper to ensure function.

The detector should not be located in duct bends, duct branches or by the fan's inlet or outlet. Ionising detectors are recommended for apartment buildings.

Design of fan rooms

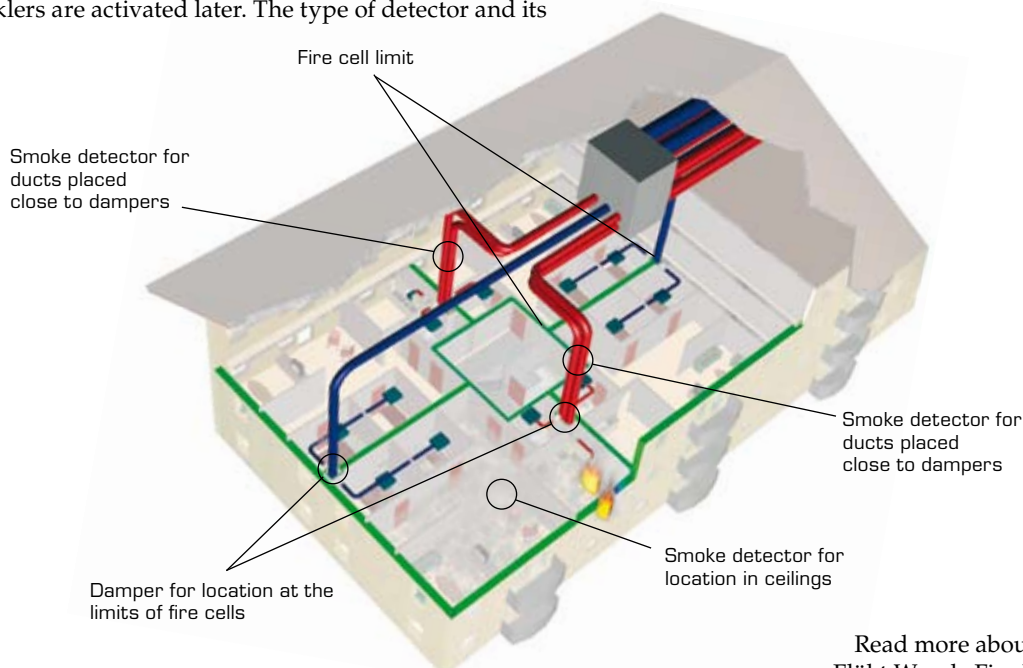
Fan rooms are normally located in cellars, lofts or on roofs. When designing fire/combustion gas dampers the fan is normally shut down or bypassed with smoke extraction.

Airtightness class 2 fire/combustion gas dampers must protect against a spread of combustion gas. To avoid a smell of smoke adjacent to the building it may be a good idea to keep the fan on in the event of a fire.

There must be no flammable material in the fan room. This means that the fan room can be in the same fire cell as the shaft. This is provided that all fire cells are equipped with fire/combustion gas dampers. The fan room must be separated to fire resistance class EI 60 from the rest of the building.

Insulation

Ducts with fire/combustion gas dampers inside building structures do not normally require insulation. If fire/combustion gas dampers are not mounted in the wall then the duct should be insulated up to the damper to EI 60. If the duct only passes one fire cell no fire/combustion gas damper is required in that building section. The duct should be insulated to the equivalent fire resistance class on both sides of the building section through which it passes.



Read more about fire protection in
Fläkt Woods Fire Protection Manual

Exhaust air fans



Exhaust air fan JBDD



For one storey and two storey houses with a living space of max 170 m².

The exhaust air fan JBDD is primarily intended for central extraction in houses and apartments. It can be installed in combination with the cooker hood, and connected, through ducts, to other spaces that need extraction.

The fan is intended for use with cooker hood CPDG, which is available in different widths and with various functions.

Quick selection

Sound level in room L _{A10}	25	30	35	40dB(A)
l/s / Pa	33/60	42/100	53/150	86/200

Product data

- The fan is quiet and has forward curved blades
- Stable air flow
- The fan shroud and motor can be easily dismantled
- Lightweight
- Connected using spiral duct
- Available in two sizes

Product code example

Exhaust air fan, galvanised sheet metal JBDD-01-1-2

Description, technical data

Description

The fan, together with cooker hood CPDG, has three different speeds. The minimum and maximum speeds are fixed while Normal has six different speeds.

Main connection is by a 0.8 m long cable and earthed plug.

The fan has either two exhaust air connections on top (JBDD-01-b-2), one on each side of extract air, or one exhaust air connection on the top (JBDD-00-b-2) and one on the underside for connection to the cooker hood.

A flexible metal hose for connecting the fan to the cooker hood and a cover is supplied. The fan is connected to the cooker hood with an electrical quick connector. The front cover is opened with quarter turn screw fasteners. The fan motor also has an electrical quick connector which means that the motor with the fan gear can easily be lifted out for cleaning.

Materials and surface finish

Impeller and cover: Galvanised sheet metal.

Casing and hatch: Galvanised sheet metal, bare (or white enamelled). Internally insulated.

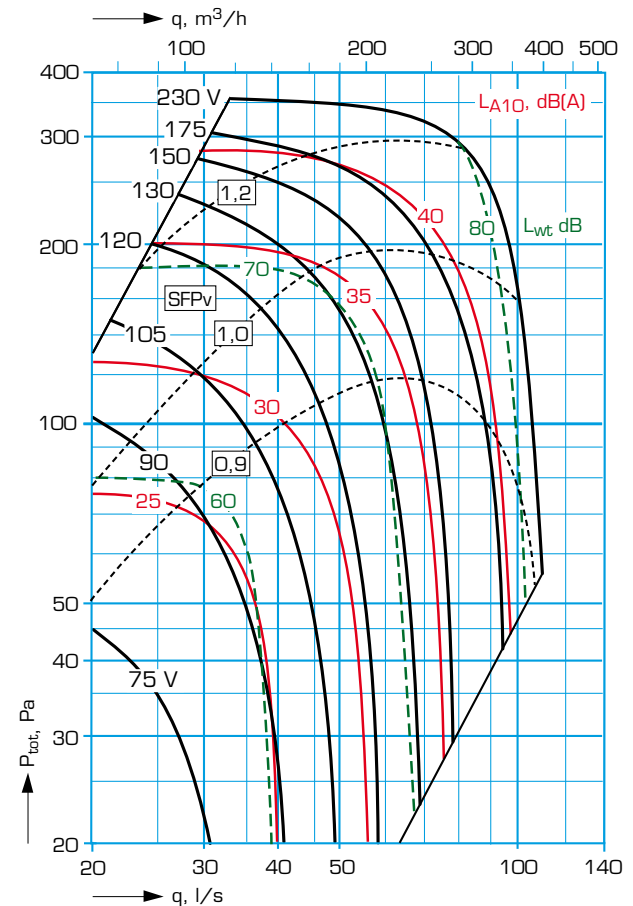
Motor data

External rotor motor; 230 V, 50 Hz, 0.57 A, 130 W, 1700 rpm, 3 μ F capacitor.

Instructions

Installation and maintenance instructions are supplied with the product.

Technical data



- = Sound level L_{A10} , to room incl. cooker hood CPD with a flow of about 10 l/s through the hood. Exhaust air fan JBDD mounted in a kitchen cabinet
- = Sound power level, dB, to extract air duct (duct in fan outlet).

The diagram applies for air with a density of 1.2 kg/m³ and indicates the total pressure rise (measured according to fig. 1) across the exhaust air fan with an air flow through the cooker hood of approximately 10 l/s.

The graphs are applicable for fan data with the exhaust air connection on the fan box's right-hand side. In the diagram there is sound curves added for sound power level to the surroundings of the fan and the extract air duct of the fan (duct in fan outlet).

Sound data, dimensions

Sound data

Sound power level to inlet duct in octave band

The sound power level in octave bands is obtained by adding the correction in the table (with characters) to sound power level $L_{w_{tot}}$ according to the diagram.

$$L_w = L_{w_{tot}} + K_{ok}$$

L_w = Sound power level, dB, in octave band.

$L_{w_{tot}}$ = Total sound power level, dB, to extract air duct for octave bands 63 - 8000 Hz.

K_{ok} = Frequency dependant correction factor for calculating the sound power level in octave band.

Sound path	Correction K_{ok} , for sound power level, dB							
	Octave band, mid-frequency Hz							
	63	125	250	500	1k	2k	4k	8k
Exhaust air duct ¹⁾	-14	-6	-12	-20	-24	-31	-35	-40
Extract air duct ¹⁾	-8	-2	-9	-15	-14	-21	-25	-29
Tolerance ±	6	3	2	2	2	2	2	2

¹⁾ duct in fan outlet.

Sound power level to room in octave band

Obtain the sound power level to the room in octave bands by adding the correction factor as shown in the table below (with characters) to the L_{A10} value from the diagram.

Sound path	Correction K_{ok} , for sound power level, dB							
	Octave band, mid-frequency Hz							
	63	125	250	500	1k	2k	4k	8k
Room	+12	+15	+8	±0	-8	-9	-14	-18
Tolerance ±	6	3	2	2	2	2	2	2

Sound level to room

Sound level L_{A10} is shown for a room with a sound absorption area of 10m². Depending on the layout of the room the sound levels are effected according to the table below. To obtain the true sound level the following dB(A) values are added (with the relevant characters).

Area of room, m ²	Normally furnished room	Heavily furnished room
5	+2	+6
10	0	+3
15	-1	+1

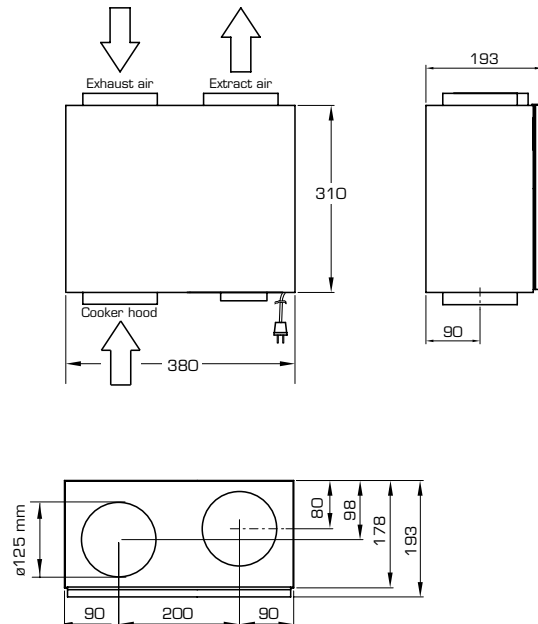
SFP (Specific Fan Power)

Results of the motor's power consumption at different working voltages and air flows.

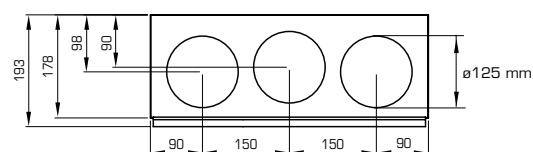
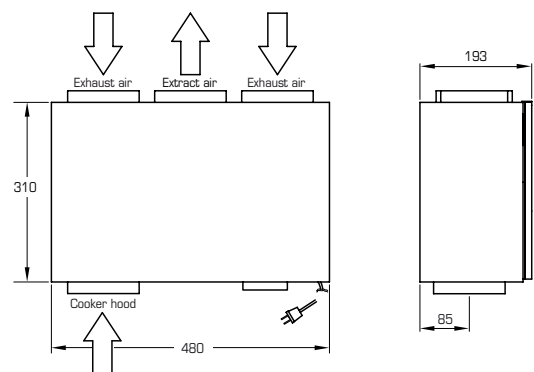
Working voltage, V	Air flow, l/s	SFP, W per l/s
230	100	1.02
150	70	0.86
90	40	0.71
230	85	1.15
150	60	0.98
90	35	0.77
230	60	1.48
150	45	1.18
90	25	1.02

Dimensions

JBDD-00-b-2



JBDD-01-b-2



Product code

Product code

Exhaust air fan **JBDD-aa-1-2**

Size (aa) _____

00 = 2 connections

01 = 3 connections

Material (b) _____

1 = Galvanized sheet steel

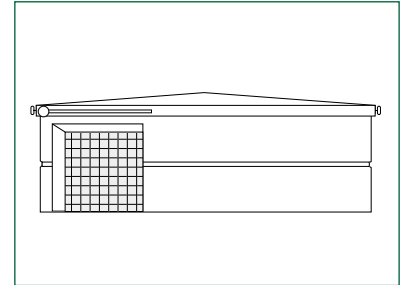
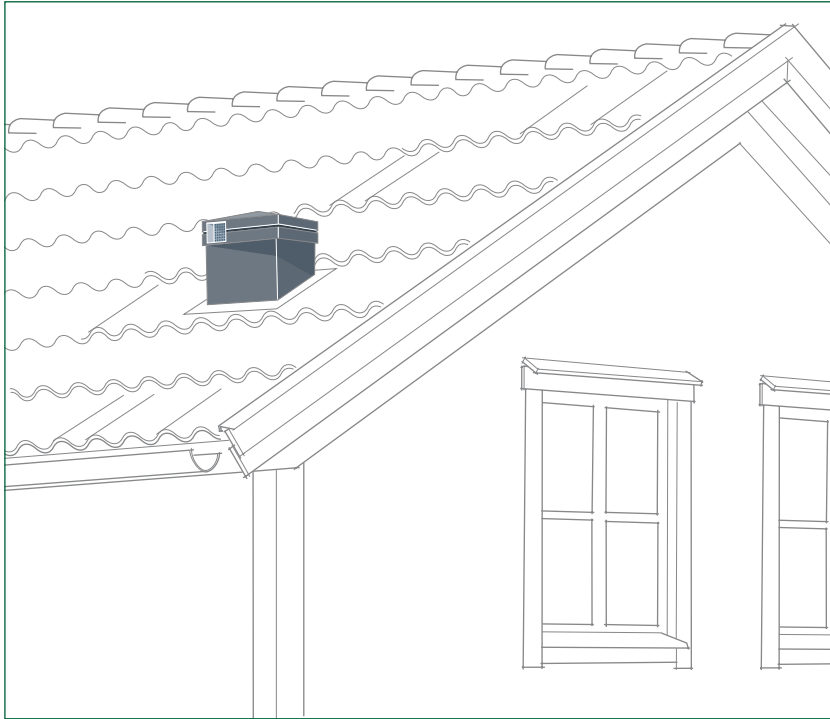
Accessories

Ventilation hood **CBAE-12-111**

(roof tile shaped base in black
plastic coated sheet steel)

**Cooker hood CPDG, Slimline CPSA together with
insert CPEG**

Exhaust air fan JBFG



For one storey and two storey houses with a living space of max 250 m². Roof fan JBFG is primarily intended for use for central extraction in small ventilation systems, in small houses for example. It is best combined with cooker hood CPDG.

Quick selection

dB(A)		25	30	35
l/s / Pa	motor 130 W	37/80	60/100	89/100

Product data

- Is to a large extent independent of the size and dimensions of the roof lead-in, and therefore suitable when replacing old fans as well as for new installations.
- Low sound level.
- With speed control.
- Easy to clean as the fan can be removed.
- Easy to install because of its customizable mounting.

Product code example

Exhaust air fan JBFG-30-100-2

Description, technical data

Description

The JBFG roof fan is intended for mounting on a roof with a roof lead-in. The fan is a direct driven, single inlet radial fan with forward curved blades. The fan has an extract air outlet in one direction.

Together with cooker hood CPDG, JBFG has three different speeds. The minimum and maximum speeds are fixed while Normal has six different speeds.

The fan motor can be easily dismantled by slackening off the wing nut holding it. This facilitates the cleaning of the fan gear and duct.

Materials and surface finish

The fan are manufactured in galvanized or plastic coated, black or red, sheet steel.

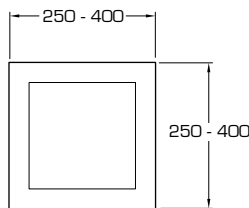
Supplied design

The fan is supplied with a ready-connected connector, which is used as an operating switch. Incoming excitation voltage connects to the supplied box with terminal block. In addition, mountings and self-tapping screws for installation on the lead-in are included.

Mounting

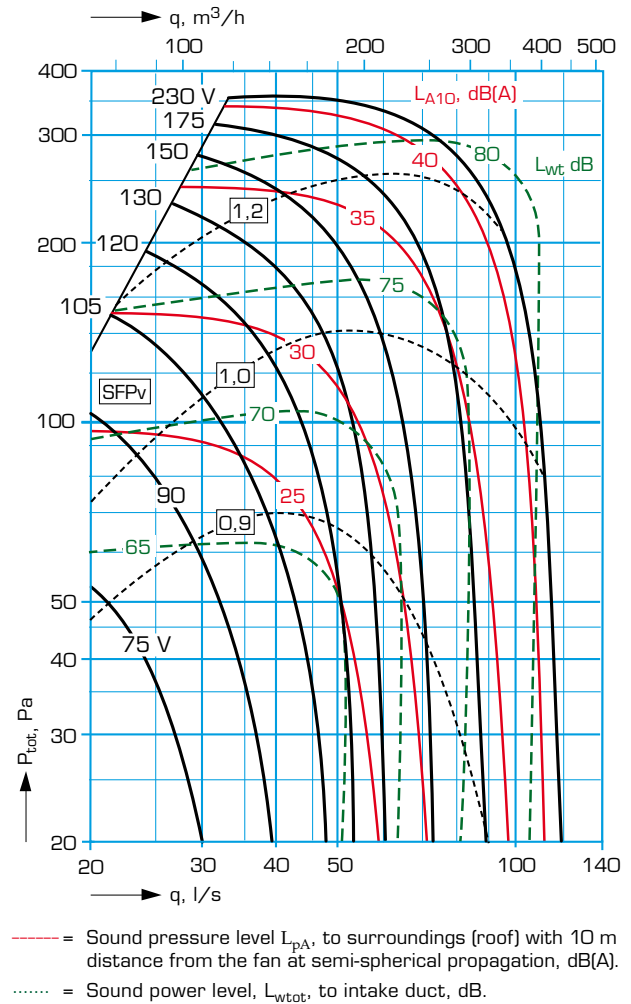
As fastening device at lead-in, steel brackets are enclosed with the roof fan. The brackets flexible placement can easily be adjusted to different sizes of lead-in.

Note that the upper surface of the lead-in must be levelled. JBFG is prepared with coordinated placement of output for cables when mounted on lead-in JBFZ-00.



JBFG can be mounted on lead-ins which outer dimensions range between 250-400 mm. mm.

Technical data



--- = Sound pressure level L_{pA} , to surroundings (roof) with 10 m distance from the fan at semi-spherical propagation, dB(A).
 = Sound power level, L_{wtot} , to intake duct, dB.

Sound data, dimensions, product code

Sound data

Sound power level to the intake duct in octave bands

The sound power level in octave bands is obtained by adding the correction in the table below (with characters) to sound power level $L_{w\text{tot}}$ according to the diagram on the previous page.

$$L_w = L_{w\text{tot}} + K_{ok}$$

L_w = Sound power level, dB, to the intake duct in octave bands.

$L_{w\text{tot}}$ = Total sound power level, dB, to intake duct for octave bands 63 - 8000 Hz.

K_{ok} = Frequency-dependent correction factor for calculating the sound power level in octave bands.

Sound path	Correction, K_{ok} , for sound power level to intake duct.							
	Octave band, mid-frequency dB							
	63	125	250	500	1000	2000	4000	8000
Intake duct	-9	-2	-7	-15	-19	-21	-23	-29

Sound power level to the surroundings in octave bands

The sound power level in octave bands is obtained by adding the correction in the table (with characters) to sound pressure level L_{pA} according to the diagram.

$$L_w = L_{pA} + K_{ok}$$

L_w = Sound power level to the surroundings (roof) in octave bands.

L_{pA} = Sound power level, dB(A), at 10 m from the fan with a semi-spherical sound propagation for octave bands 63 - 8000 Hz.

K_{ok} = Frequency-dependent correction factor for calculating the sound power level in octave bands.

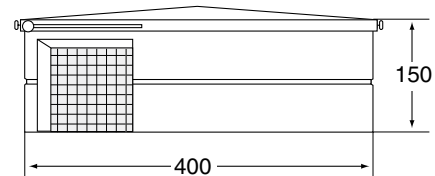
Sound path	Correction, K_{ok} , for sound power level to surroundings							
	Octave band, mid-frequency dB							
	63	125	250	500	1000	2000	4000	8000
Intake duct	+18	+23	+23	+21	+23	+20	+17	+15

SFP (Specific Fan Power)

Results of the motor's power consumption at different working voltages and air flows.

Working voltage, V	Air flow, l/s	SFP, W per l/s
230	100	0.98
150	70	0.84
90	40	0.70
230	85	1.26
150	60	0.99
90	35	0.77
230	60	1.48
150	45	1.17
90	25	1.02

Dimensions and weight



Weight: 7kg

Speed control of roof fan JBF8

In combination with cooker hood CPDG and insert CPEG.

Packaging

The fan is supplied in a cardboard box.

Motor data

External rotor motor: 230 V, 50 Hz, 0,57 A, 130 W, 1700 rpm.
Condensator 3μF.

Product code

Roof fan

JBF8-aa-bbb-2

Fan model (a) _____
30 = motor output 130 W

Colour / Coating (b) _____
000 = Galvanized sheet steel
100 = Black plastic coated sheet metal
200 = Tile red plastic coated sheet metal

Accessories

Cooker hood CPDG, Combiranda, Magnum, Slimline combined with insert CPEG.

Roof fan STEF



The Roofmaster roof fan series provides comfort in several respects. It works quietly and is easy to install and service. It is controllable and effective and fits both single-family houses and multiple-unit dwellings.

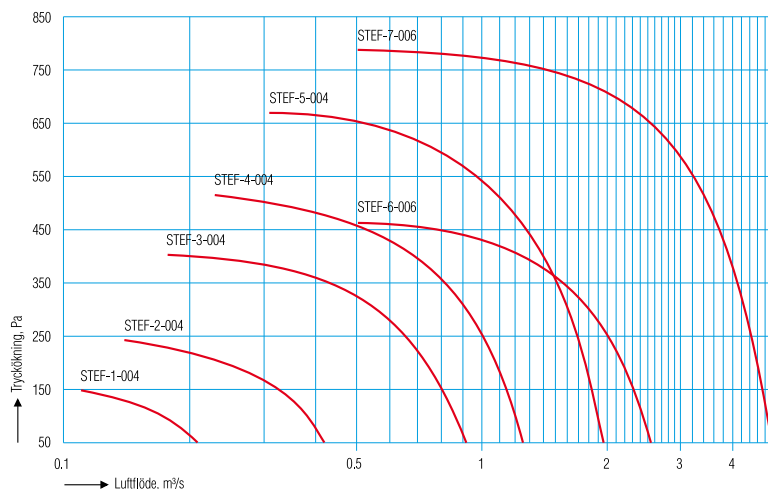
The Roofmaster STEF series is available in seven sizes with sound insulation and for flows up to 5 m³/s. Standardised control system for pressure control etc. Integrated frequency converter available. This control equipment is specified separately.

The fan is available in a combustion gas version that will withstand 400° for 2 hours.

Product data

- Air flow up to 5m³/s
- Available in 7 sizes
- Low sound level
- Integrated frequency converter available
- The control unit is available as an accessory
- Combustion gas variant
- Safety switch
- Roof pipe or frame as accessories

Quick selection



Read more about the roof fan STEF in the Fläkt Woods catalogues or on the Fläkt Woods website www.flaktwoods.com.

Heat recovery units



Heat recovery unit RDKG

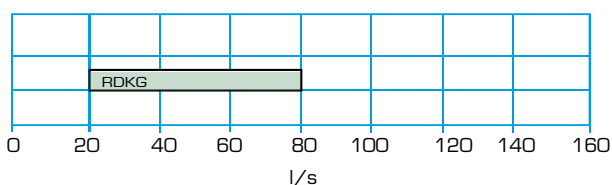


The RDKG heat recovery unit is a component in the Minimaster/Minivent systems. The unit has a cross flow heat exchanger which gives good heat recovery. RDKG has built-in control equipment and can be supplied with an external control panel. It is primarily intended for homes and small commercial premises. All connection ducts are on the top of the unit and it is intended for wall mounting. The forced air flow of the cooker hood gives a bypass function if the unit is used in the Minimaster system. This gives a greater forced air flow and better odour extraction when cooking.

Energy consumption

RDKG is an energy efficient heat recovery unit that in comparison with a mechanical exhaust air ventilation system reduces energy consumption remarkably. The reduction is made through recycling of the energy of the exhaust air in the heat exchanger. The fans have AC-motors that are easily adjusted to the right speed.

Air flow chart



Product data

- Up to 73% temperature efficiency
- Supply and exhaust air flows between 20-80 l/s
- Can serve living areas up to 155 m²
- Filters up to class F7
- Individually adjustable fans
- Easy to install
- Service friendly

Product code example

RDKG-1-2-2-1-2

Description, material, technical data

Casing

The outer and inner casing are made of galvanized sheet metal with 15 mm insulation made of expanded polystyrene. The service hatch is secured with quick-release screws.

Fans

The fans have AC-motors. They are easy to remove for servicing and maintenance. The fan speed can be adjusted in nine steps.

Heat exchanger

The cross flow heat exchanger is made of aluminium with completely separate supply and exhaust air ducts. It has a temperature efficiency up to 73%. The unit is fitted with an automatic defrost function controlled by time and outside temperature. The heat exchanger is easily removed for cleaning.

Preheater and afterheater

The unit has an afterheater that heat the supply air to set value when the heat recovery is not sufficient. A preheater is recommended for areas where the outdoor temperature drops below -25°C. Please note that preheater for this unit is not included in the selection range of Fläkt Woods.

Filter

The unit is equipped with G3/G3 filter. Filters up to class F7 are available as accessories.

Sound power level in octave bands

The sound power level L_w in octave bands to ducts is calculated by adding the correction factor (with the relevant characters) to the sound power level L_{wt} read off diagram 1.

	Octave band, mid-frequency Hz					
	63	125	250	500	1000	2000
Correction, dB	+11	-3	-5	-12	-10	-16
Tolerance \pm dB	6	3	2	2	2	2

Sound level

Sound level L_{A10} is shown for a room with a 10 m² sound-absorption area. To obtain the true sound level the following are added dB(A) values (with the relevant characters) to the value read off in diagram 2.

Area of room	Normally furnished room	Heavily furnished room, for example kitchen
5 m ²	+2 dB(A)	+7 dB(A)
10 m ²	\pm 0 dB(A)	+4 dB(A)
15 m ²	-1 dB(A)	+1 dB(A)

Supply air fan

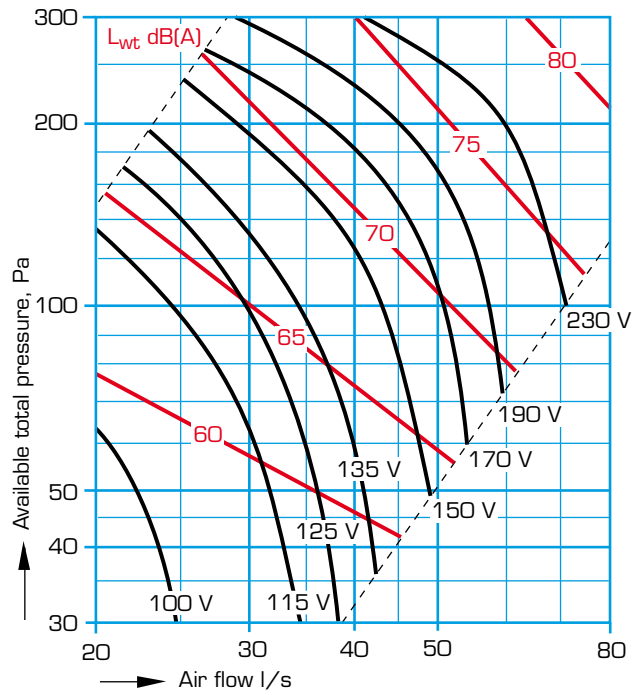


Diagram 1. a) Supply air fan, (supply voltage 100-230V)
 b) Sound to duct, L_{wt} , for supply air and exhaust air fans
 c) Filter G3

Exhaust air fan

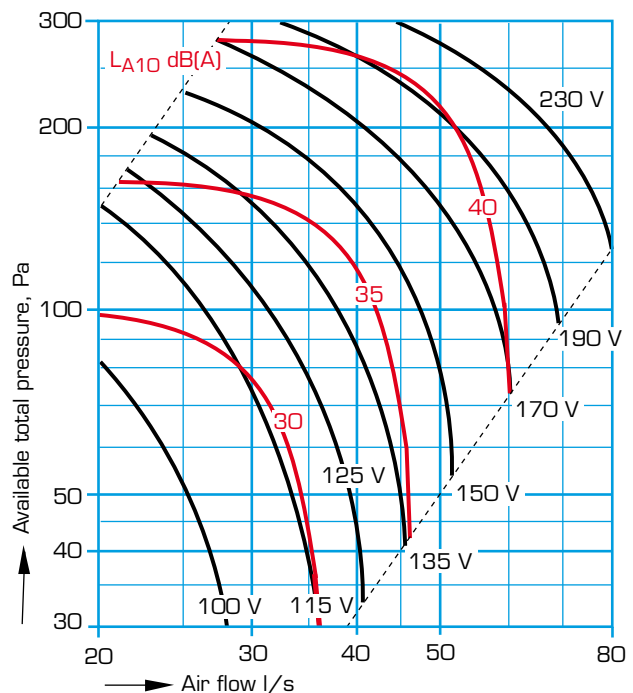
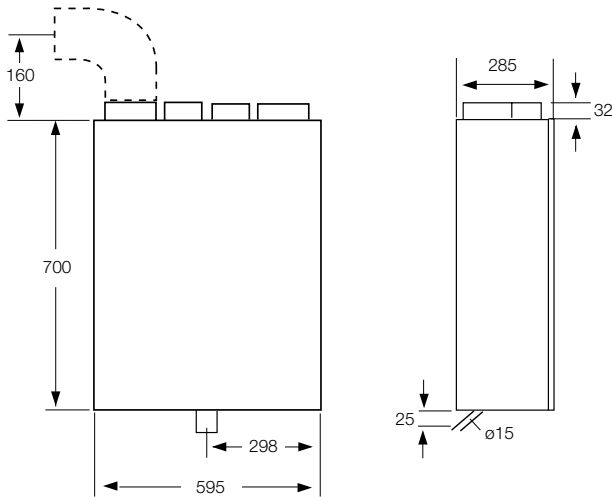


Diagram 2. a) Exhaust air fan, (supply voltage 100-230V)
 b) Sound to room, L_{A10} , from unit including cooker hood with flow 10 l/s
 c) Filter G3

Dimensions, electrical data, control equipment

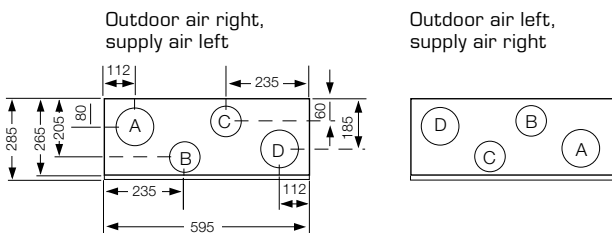
Dimensions and weight



Weight 35 kg

Conn. (female)	A	B	C	D
Diameter	125	100	100	125
	Supply air	Exhaust air ¹⁾	Outdoor air ¹⁾	Extract air

¹⁾ Increased to $\varnothing 125$ as space permits.



Electrical data

Voltage: 230V, single phase 50Hz

Code	Fan motors rated output, W	Afterheater electric, W	Rated output electric, W	Rated output with cooker hood
RDKG	2 x 105	600	820	840

Control equipment

The unit is supplied with a built-in electronic control unit that regulates the fan speed and afterheater.

Fan control

There is three different modes that can be chosen through the control panel (accessory):

- "AWAY" is used when nobody will be at home for a longer period to save energy.
- "HOME" is used for normal ventilation.
- "FORCED" is used when there is a greater need of ventilation (it will automatically return to the "HOME" mode after 120 minutes).

The control panel (accessory), that can be installed at desired location, has a button with an arrow on it that is used to choose mode.

The fan speed can be adjusted independently in nine steps through the control panel (accessory).

The fans can also be controlled through a cooker hood when the unit is installed in a kitchen.

Temperature control

For the most part of the year the heat exchanger recycles enough heat to obtain an acceptable supply air temperature. The control unit regulates the temperature by activating the afterheater if the recycled heat is insufficient to deliver the desired temperature.

During cold periods the unit has an automatic defrosting function. It is activated when the outdoor temperature drops below -5°C and melts the frost that has developed on the heat exchanger.

Alarm

The control panel (accessory) has a filter alarm to indicate when it is time to change the filter.

Packaging

The unit is supplied in a cardboard box. Mounting brackets for wall mounting and all instructional documentation are enclosed.

Accessories, product code

Accessories

Control panel RDKZ-41

External control panel for wall installation. The fan speeds to select are AWAY, HOME or FORCED. The panel also shows filter alarm and can be used to adjust the air flow.

Summer insert RDKZ-100

For use in the summer when no heat recovery is normally required. Cool outdoor air can be drawn in to lower the indoor temperature, at night for example.

Mounting kit RDKZ-102

The fitting kit is used to attach the decorative panel in front of the ventilation unit when it is installed between two continental height high level cabinets.

Combined air terminal device RDKZ-26

The combined air terminal device takes in outdoor air and removes extract air from the heat recovery device serving a home. It is mounted on an outside wall. Outdoor air is taken in at the bottom and extract air is blown straight out. Both openings are fitted with screens. The screen over the extract air opening can be easily removed for inspection and cleaning.

Air intake BSDB-20

For positioning on outside walls. The intake consists of a box which has a outside wall grille as a rain guard. So it does not need to be positioned where it is not exposed to rain.

Ventilation hood CBAE-12

For connection to kitchen fans, exhaust air systems or ventilation systems with heat recovery. It is connected to sheet metal ducting or flexible steel tubing.

Pipe insulation RDKZ-45

For condensation and heat insulation for ducts routing cold air through heated spaces. Pipe insulation consists of non-flammable cellular polyethylene plastic. The thickness of the insulation is 15 mm and it comes in one metre lengths. Pipe insulation is pushed on from the end of the duct.

Silencer BDER-38

Rectangular silencer for 125 mm diameter pipes.

L x W x H = 1000 x 250 x 175.

Noise attenuation at	Centre frequency, Hz							
	63	125	250	500	1k	2k	4k	8k
BDER-38-012-100	13	12	18	34	46	43	44	24

Product code

Heat recovery unit RDKG-a-b-c-d-e

with cross flow exchanger

Connection (a) _____

1 = Outdoor air right, supply air left

2 = Outdoor air left, supply air right

Function type (b) _____

2 = Electric battery with bypass function

Casing (c) _____

1 = Galvanised sheet metal

2 = White enamelled

Filter Supply air/Exhaust air (d) _____

1 = G3 flat filter/G3 flat filter

Generation (e) _____

2

Accessories

Filter

RDKZ-13-b-c

Filter Supply air/Exhaust air (b) _____

1 = G3 flat filter

2 = F5 bag filter

3 = F7 bag filter

Generation (c) _____

1

Installation cable to control panel RDKZ-43-b-cc-d

Model (b) _____

1 = 6-pole flat cable

Length (cc) _____

10 = 10 meters

25 = 25 meters

Generation (d) _____

1

Control panel

RDKZ-41-1

Summer insert

RDKZ-100

Mounting kit

RDKZ-102

Cooker hood for RDKG-1-b-c-d-2

CPDK-b-cc-d-1-1

Cooker hood for RDKG-2-b-c-d-2

CPDK-b-cc-d-2-1

Combined air terminal device

RDKZ-26-000

Air intake

BSDB-20-012

Ventilation hood

CBAE-12-111

Pipe insulation ø 100

RDKZ-45-010

Pipe insulation ø 125

RDKZ-45-012

Silencer

BDER-38-012-100

Heat recovery unit RDKR

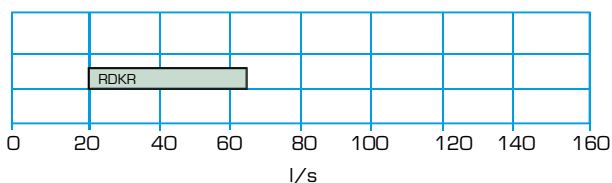


The RDKR heat recovery unit is a component in the Minimaster and Minivent systems. This unit has been developed from our standard RDKG unit and has an extremely efficient rotary heat exchanger with high temperature efficiency. The unit has a built-in control equipment and can be supplied with an external control panel. It can be connected to a cooker hood if placed in a kitchen. RDKR is primarily intended for homes and small commercial premises. The unit does not need draining, which is a great advantage when replacing existing installations. All units are supplied in right-hand or left-hand versions with all connectors facing upwards. The unit is intended for wall mounting. The cooker hood has a tightly sealed damper that opens when cooking. Exhaust air in the kitchen is arranged through a separate exhaust air valve.

Energy consumption

RDKR is an extremely energy efficient heat recovery unit that reduces energy consumption remarkably. The reduction is possible because the fans are driven by EC motors, which have an energy consumption of only 50 - 60 percent of that of an equivalent AC motor. The RDKR unit also has a rotary heat exchanger. It is so effective that supplementary heating is only needed at outside temperatures of below 10° C.

Air flow chart



Product data

- Up to 83% temperature efficiency
- Supply and exhaust air flows between 20 - 65 l/s
- Can serve living areas up to 155 m²
- Filters up to class F7
- High efficient EC motors
- Individually adjustable fans
- No need for drainage
- Easy to install
- Service friendly

Product code example

RDKR-1-1-0-2-2

Description, materials, technical data

Casing

The outer and inner casing are made of galvanized sheet metal with 15 mm insulation made of expanded polystyrene. The control electronics inside the protective hatch are easily accessible without the need to open the unit. The unit door is locked with screws.

Fans

The fans are driven by very quiet and energy efficient EC motors. The fans are easy to remove for service and maintenance. The speed of the fans can be independently regulated steplessly.

Heat exchanger

The heat exchanger is an aluminium rotary heat exchanger. It has a temperature efficiency up to 83%.

The unit is fitted with an automatic defrost function controlled by outside temperature. The heat exchanger can easily be removed for cleaning. In the Minimaster system the air from the cooker hood bypasses the heat exchanger to avoid odour exchange.

Preheater and afterheater

The unit is prepared for a built-in electric preheating and afterheating battery. In areas where the rated outside temperature (DUT5) is lower than -25°C the installation is fitted with a preheater. The preheater is controlled by a thermostat. The afterheater in the unit regulates the supply air temperature. The unit can easily be retrofitted with a preheating and afterheating battery.

Filter

The unit is fitted with filters in F5/G3 classes. Filters up to class F7 are available as accessories.

Sound power level in octave bands

The sound power level L_w in octave bands to ducts is calculated by adding the correction factor (with the relevant characters) to the sound power level L_{wt} read off diagram 1.

Sound path correction, dB	Octave band, mid-frequency Hz					
	63	125	250	500	1000	2000
Supply air	+5	+6	-1	-5	-6	-15
Extract air	+4	+3	0	-4	-5	-15
Exhaust air	0	-3	-11	-15	-22	-30
Outdoor air, dB	-2	-3	-11	-15	-25	-33

Sound level

Sound level L_{A10} is shown for a room with a 10 m^2 sound-absorption area. To obtain the true sound level the following are added dB(A) values (with the relevant characters) to the value read in diagrams.

Area of room	Normally furnished room	Heavily furnished room, a kitchen for example
5 m^2	+2 dB(A)	+7 dB(A)
10 m^2	0 dB(A)	+4 dB(A)
15 m^2	-1 dB(A)	+1 dB(A)

Supply air fan

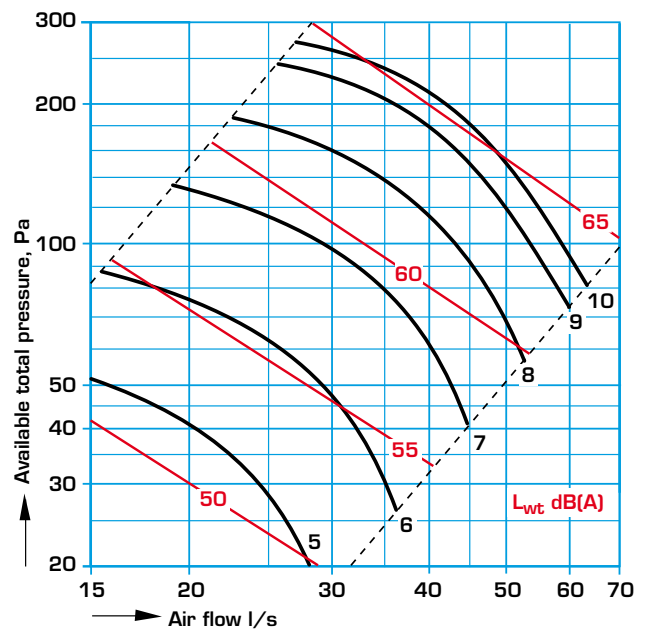


Diagram 1. a) Supply air fan, potentiometer setting (V)
b) Sound to duct, L_{wt} , for supply air fan
c) Filter F5

Exhaust air fan

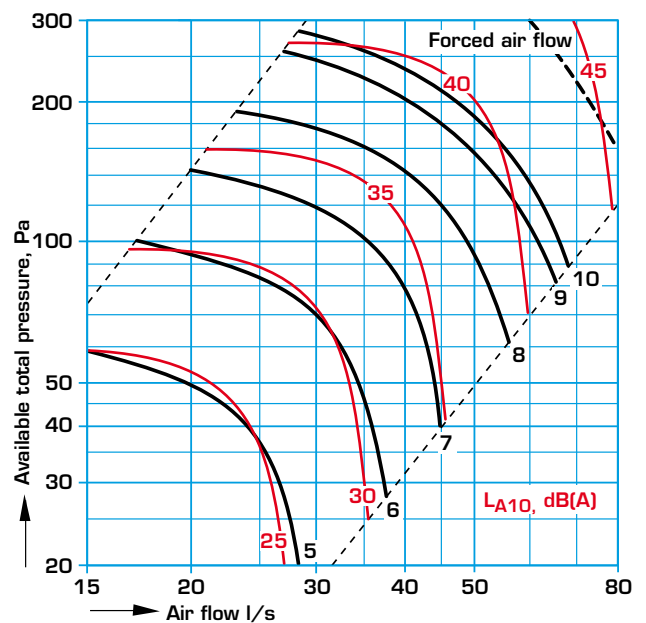
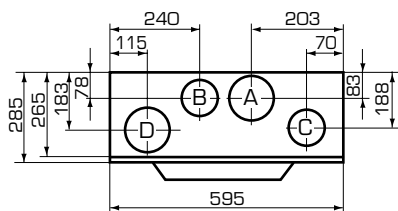
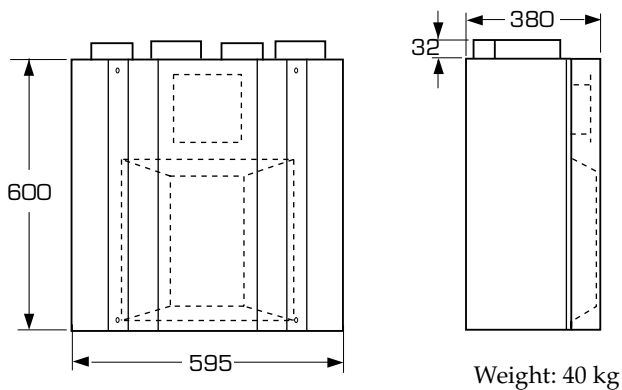


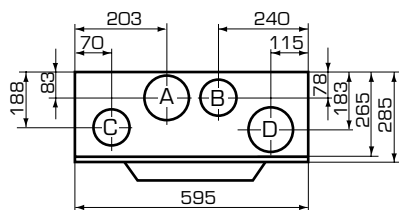
Diagram 2. a) Exhaust air fan, potentiometer setting (V)
b) Sound to kitchen, L_{A10} , from unit with the forced air damper in the cooker hood closed
c) Filter G3

Dimensions, electrical data, control equipment

Dimensions and weight



RDKR-1
Connection -
outdoor air right, supply air right



RDKR-2
Connection -
outdoor air left, supply air left

Conn. (female)	A	B	C	D
Diameter	125	100	100	125
	Supply air	Exhaust air ¹⁾	Outdoor air ¹⁾	Extract air

¹⁾ Increased to $\varnothing 125$ as space permits.

Electrical data

Voltage: 230V, single phase 50Hz

Code	Fan motors rated output, W	Preheater Electric, W	Afterheater Electric, W	Rated output Electric, W ¹⁾	Rated output with cooker hood
RDKR	2 x 82	500	500	1170	1210

¹⁾ Rated output when both preheater and afterheater are installed.

Packaging

The unit is supplied in a cardboard box. Mounting brackets for wall mounting and all instructional documentation are enclosed.

Control equipment

The unit is supplied with an electronic control unit, located behind the protective hatch. It regulates the fan, the rotary heat exchanger and possible electric heater.

Fan control

There is three different modes that can be chosen through the control panel (accessory):

- "AWAY" is used when nobody will be at home for a longer period to save energy.
- "HOME" is used for normal ventilation.
- "FORCED" is used when there is a greater need of ventilation (it will automatically return to the "HOME" mode after 120 minutes).

The control panel (accessory), that can be installed at desired location, has a button with an arrow on it that is used to choose mode.

The fans can also be controlled through a cooker hood when the unit is installed in a kitchen. The air flow is set in forced mode automatically when the damper in the cooker hood is open.

The speed of the fans can be adjusted independently of one another. The air flow of the three different modes can be regulated with a potentiometer on the circuit board. There is normally only need for adjusting the air flow of the "HOME" mode.

Temperature control

The control unit regulates the rotary heat exchanger and potential preheater and afterheater to deliver the desired temperature. There are two different energy modes:

- In the "NORMAL" position, the supply air temperature is adjusted to the desired reference value in two stages. As a first stage with the energy recovery from the rotary heat exchanger, and, if this is insufficient, as a second stage with the electrical after heater.
- In the "REDUCED" position, the impeller and the electrical afterheater have separate reference values. The supply air temperature is first adjusted to the desired reference value with the energy recovery from the rotary heat exchanger. If the impeller is not able to recover sufficient heat, the electrical after heater is used, but with a reference value that is 2° C lower than the normal reference value.

In both energy operating modes, the electrical afterheater can only heat the supply air if the rotary heat exchanger is in operation. The heat recycling can get too high during some periods of the year and result in a slightly higher temperature which has to be accepted in order to save energy.

The control unit handles defrosting during very cold periods when frost may develop on the heat exchanger. This occurs when the outdoor temperature drops below -10°C.

Alarm

The control panel (accessory) has an alarm to indicate when it is time to change the filter and also temperature alarm. An external alarm such as fire alarm can be connected to stop the unit from operating.

Accessories, product code

Accessories

Control panel RDKZ-41

External control panel for installation on wall. There is three different settings for choosing the fan speed; "AWAY" for saving energy, "HOME" and "FORCED" air flow. The control panel also has a temperature alarm and filter replacement indicator lamp.

Combined air terminal device RDKZ-26

The combined air terminal device takes in outdoor air and removes extract air from the heat recovery device serving a home. It is mounted on an outside wall. Outdoor air is taken in at the bottom and extract air is blown straight out. Both openings are fitted with screens. The screen over the extract air opening can be easily removed for inspection and cleaning.

Air intake BSDB-20

For positioning on outside walls. The intake consists of a box which has a outside wall grille as a rain guard. So it does not need to be positioned where it is not exposed to rain.

Ventilation hood CBAE-12

Used for the extract air from the heat recovery unit. It is connected to sheet metal ducting or flexible steel tubing.

Pipe insulation RDKZ-45

For condensation and heat insulation for ducts routing cold air through heated spaces. Pipe insulation consists of nonflammable cellular polyethylene plastic. The thickness of the insulation is 15 mm and it comes in one metre lengths. Pipe insulation is pushed on from the end of the duct.

Silencer BDER-38

Rectangular silencer for 125 mm diameter pipes.
L x W x H = 1000 x 250 x 175.

Noise attenuation at	Centre frequency, Hz							
	63	125	250	500	1k	2k	4k	8k
BDER-38-012-100	13	12	18	34	46	43	44	24

Product code

Heat recovery unit RDKR-a-b-c-d-e
with rotary heat exchanger

Connection (a) _____
1 = Outdoor air right
2 = Outdoor air left

Electric heater (b) _____
0 = Without
1 = Only afterheater
2 = Afterheater and preheater

Front cover (c) _____
0 = Without front cover
(for front cover see RDKZ-14 below)

Filter Supply air/Exhaust air (d) _____
2 = F5 bag filter/G3 flat filter

Generation (e) _____
2

Accessories

Spare filter RDKZ-13-b-c
Supply air/Exhaust air (b) _____
1 = G3
2 = F5
3 = F7

Generation (c) _____
1

Front cover RDKZ-14-b-c-d-e
Material (b) _____
3 = White painted
4 = Stainless steel

Extension part against ceiling (c) _____
0 = Without
1 = With (+300 mm)

Height (d) _____
6 = 600
7 = 700

Generation (e) _____
1

Installation cable for control panel RDKZ-43-b-cc-d
Model (b) _____
1 = 6-pole flat kabel

Lenght (cc) _____
10 = 10 m
25 = 25 m

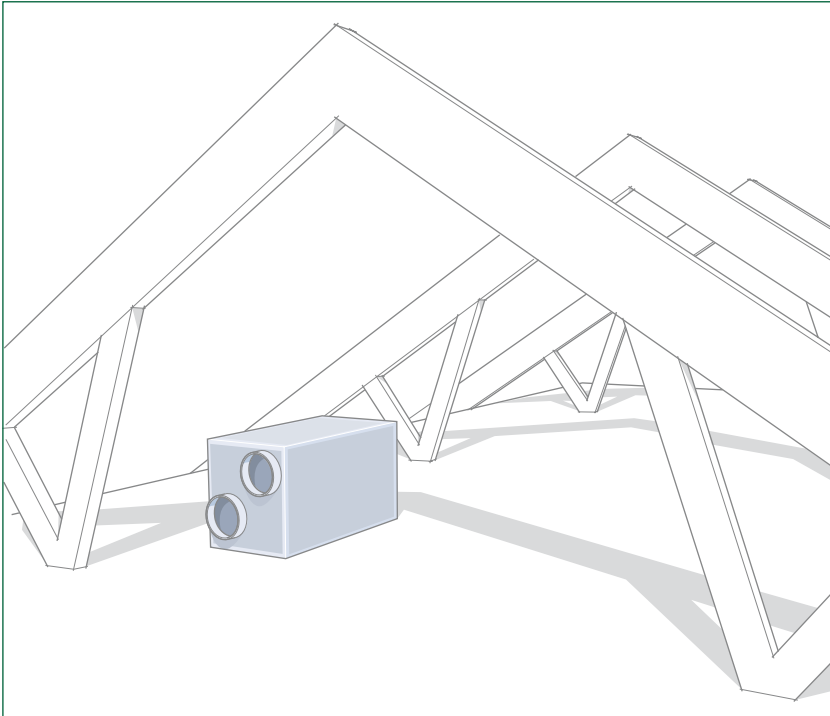
Generation (d) _____
1

Control panel RDKZ-41-1
Electric heater for retrofitting RDKZ-12-001
(can serve as preheater as well as afterheater)

Cooker hood for RDKR-1-b-c-d-2 CPDJ-b-cc-d-1-1
Cooker hood for RDKR-2-b-c-d-2 CPDJ-b-cc-d-2-1

Combined air terminal device RDKZ-26-000
Air intake BSDB-20-012
Ventilation hood CBAE-12-111
Pipe insulation ø 100 RDKZ-45-010
Pipe insulation ø 125 RDKZ-45-012
Silencer BDER-38-012-100

Heat recovery unit RDAB

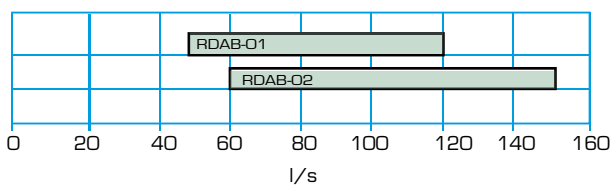


The RDAB heat recovery unit is a component in the Rexovent system. This unit has been developed from our RDAA unit and has cross flow heat exchanger with high temperature efficiency. The unit has a built-in control equipment and can be supplied with an external control panel. RDAB is primarily intended for homes and small commercial premises. It has the connectors on the gables and get installed in cold spaces, for example attics.

Energy consumption

RDAB is an energy efficient heat recovery unit that in comparison with a mechanical exhaust air ventilation system reduces energy consumption remarkably. The reduction is made through recycling of the energy of the exhaust air in the heat exchanger. The fans have AC-motors that are easily adjusted to the right speed.

Air flow chart



Product data

- Up to 66% temperature efficiency
- Supply and exhaust air flows between 50-150 l/s
- Can serve living areas up to 380 m²
- Filter, class F5/G4
- Individually adjustable fans
- Easy to install
- Service friendly

Product code example

RDAB-01-1-0-1

Description, materials, technical data

Casing

The outer casing is made of white painted sheet metal and the inner casing of galvanized sheet metal with an intermediate layer of 25 mm mineral wool insulation. The unit door is locked with screws and has flush handles.

Fans

The fans have AC-motors. They are easy to remove for servicing and maintenance. The speed of the fans can be independently adjusted in nine steps.

Heat exchanger

The cross flow heat exchanger is made of aluminium with completely separate supply and exhaust air ducts. It has a temperature efficiency up to 66%. The unit is fitted with an automatic defrost function controlled by outside temperature. The heat exchanger is easily removed for cleaning.

Preheater and afterheater

The unit has an electrical preheater for defrosting. Some unit models also have an afterheater for additional heat.

Filter

The unit is fitted with filters in F5/G4 classes.

Sound data

The fan curves in the diagrams relate to the supply air fan on the outlet side of the unit. Sound power level per octave band dB, is calculated from $L_{w\text{tot}}$ in the diagram + octave band correction (with sign) according to the table below.

RDAB-01 with fan effect 2 x 130W octave band correction

Sound path, HZ	63	125	250	500	1k	2k	4k	8k
Supply air duct, dB	8	7	2	-6	-6	-10	-13	-15
Exhaust air duct, dB	7	12	4	-4	-15	-21	-23	-35
Through unit casing, dB	6	-11	-9	-1	-6	-10	-8	-11

Supply air duct = L_{wA} in the diagram

Exhaust air duct = L_{wA} in the diagram minus (-15dB)

Noise to room = L_{wA} in the diagram minus (-31dB) gives sound pressure level, dB(A) vid 10 m² room absorption

RDAB-02 octave band correction

Sound path, HZ	63	125	250	500	1k	2k	4k	8k
Supply air duct, dB	7	6	0	-5	-4	-11	-13	-15
Exhaust air duct, dB	7	11	5	-4	-14	-22	-25	-37
Through unit casing, dB	6	11	10	0	-6	-12	-12	-10

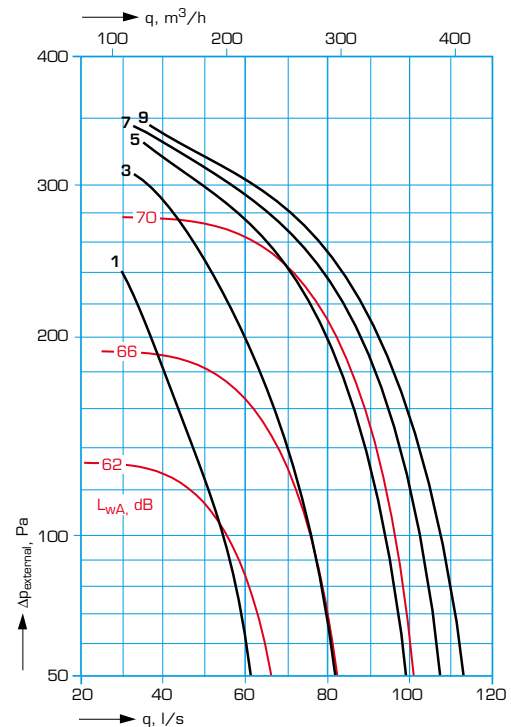
Supply air duct = L_{wA} in the diagram

Exhaust air duct = L_{wA} in the diagram minus (-15dB)

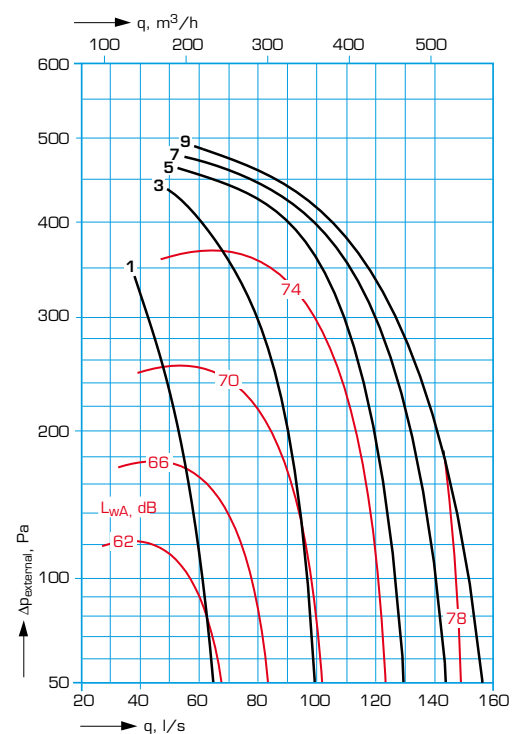
Noise to room = L_{wA} in the diagram minus (-28dB) gives sound pressure level, dB(A) vid 10 m² room absorption

Supply air and exhaust air fan

RDAB-01

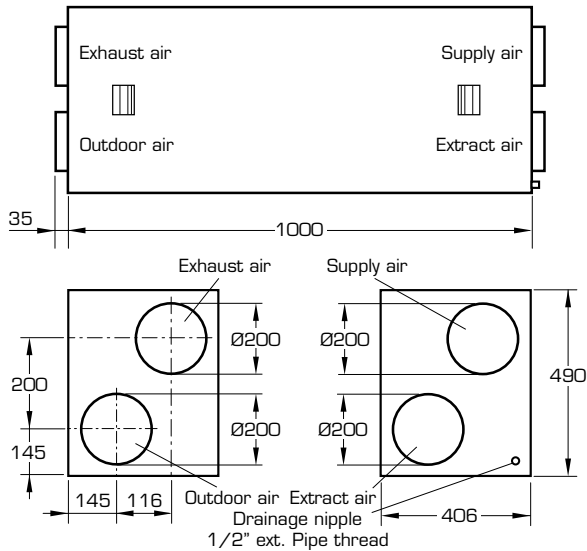


RDAB-02



Dimensions, electrical data, control equipment

Dimensions and weight



Weight: 55kg.

Electrical data

Voltage: 230V, single phase 50Hz or 400V, 3 phase 50Hz

Code	Fan motors ¹⁾		Preheater		Afterheater		Total kW
	Output kW	Current A	Output kW	Current A ²⁾	Output kW	Current A ²⁾	
RDAB-01	0.26	1.14	2	9.1	2	9.1	4.26
RDAB-02	0.50	2.34	2	9.1	2	9.1	4.50

¹⁾ Refers to two fan motors

²⁾ Voltage 230V, single phase, 50 Hz

Preheater is always included. Afterheater can be ordered extra.

Packaging

Corrugated cardboard box. All instructional documentation are enclosed.

Control equipment

The unit is supplied with a built-in electronic control unit. It regulates the fan and electric heater.

Fan control

There is three different modes that can be chosen through the control panel (accessory):

- "AWAY" is used when nobody will be at home for a longer period to save energy.
- "HOME" is used for normal ventilation.
- "FORCED" is used when there is a greater need of ventilation (it will automatically return to the "HOME" mode after 120 minutes).

The control panel (accessory), that can be installed at desired location, has a button with an arrow on it that is used to choose mode.

The speed of the fans can be adjusted independently of one another in nine steps through the control panel (accessory).

Temperature control

For the most part of the year the heat exchanger recycles enough heat to obtain an acceptable supply air temperature. It can be supplemented with an electric afterheater that controls the supply air temperature to set value.

The unit has an electrical preheating coil that handles defrosting during very cold periods when frost may develop on the heat exchanger. The preheater and afterheater are not both connected at delivery to reduce the connection load.

Alarm

The control panel (accessory) has an alarm to indicate when it is time to change the filter.

Accessories, product code

Accessories

Control panel RDKZ-41

External control panel for installation on wall. There is three different settings for choosing the fan speed; "AWAY", "HOME" and "FORCED" air flow. The control panel also has a filter replacement indicator lamp.

Summer insert RDAZ-08

For use in the summer when no heat recovery is normally required. Cool outdoor air can be drawn in to lower the indoor temperature, at night for example.

Combined air terminal device ABRZ-01

For mounting on an outside wall. Outdoor air is taken in at the bottom and extract air is blown straight out of the unit to prevent the two from mixing. It is made of black plastic coated sheet metal and consist of a wall piece, wall hood and front cover.

Silencer BDER-30

Circular silencer for 200 mm diameter pipes.
L x Dy = 900xØ300.

Product code

Heat recovery unit **RDAB-aa-b-c-d**
with preheater 2000 W and plate heat exchanger

Size (aa) _____
01 = Motor 130 W
02 = Motor 250 W

Connection (b) _____
1 = Outdoor air left, supply air right
2 = Outdoor air right, supply air left

Supplementary heater (c) _____
0 = Without
2 = Afterheater, electric 2000 W

Generation (d) _____
1

Accessories

Installation cable for control panel **RDKZ-43-b-cc-d**

Model (b) _____
1 = 6-pole flat cabel

Length (cc) _____
10 = 10 meters
25 = 25 meters

Generation (d) _____
1

Control panel **RDKZ-41-1**

Summer insert **RDAZ-08-001**

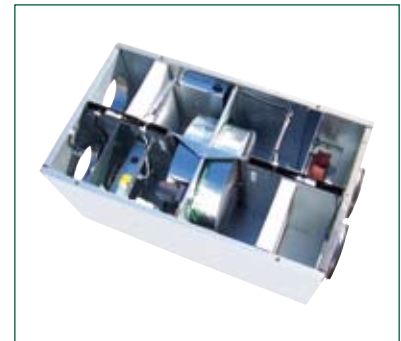
Connection cable **RDAZ-11**
For 3-phase connection , length 4 m

Replacement filters **RDAZ-09**
Set of 2+2, supply air and exhaust air

Combined air terminal device **ARBZ-01-1**

Silencer **BDER-30-020-120**

Heat recovery unit RDAE



The RDAE heat recovery unit is a component in the Rexovent system. This unit has been developed from our RDAR unit and is extremely energy efficient and has a low SFP_v value. The unit has a rotary heat exchanger with high temperature efficiency.

RDAE has a built-in control equipment and can be supplied with an external control panel. It is primarily intended for homes and small commercial premises. The unit does not need draining, which is a great advantage when replacing existing installations.

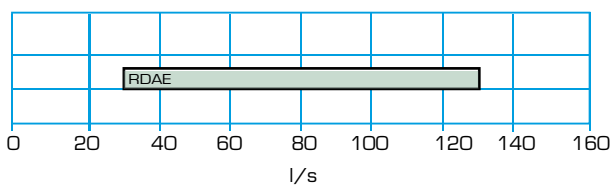
The unit has the connectors on the gables and get installed in cold spaces, for example attics.

Energy consumption

RDAE is an energy efficient heat recovery unit with low SFP_v value that reduces energy consumption remarkably. The reduction is made through B-wheel fitted chamber fans driven by modern, efficient EC motors. EC motors have an energy consumption of only 50 - 60 percent of an equivalent AC motor.

The RDKR unit also has a rotary heat exchanger with a temperature efficiency up to 83%.

Air flow chart



Product data

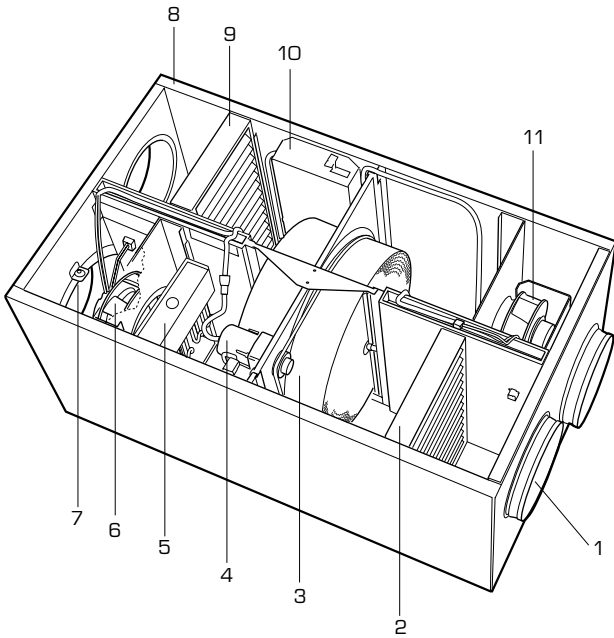
- Low SFP_v value
- Up to 83% temperature efficiency
- Supply and exhaust air flows between 30-130 l/s
- Can serve living areas up to 310 m²
- Filter, class F7/F5
- Individually adjustable fans
- Easy to install
- Service friendly

Product code example

RDAE-2-4-3-1-0-1

Description, material, technical data

Main components of the unit



- | | |
|-------------------------|-----------------------|
| 1. Outdoor air sensor | 7. Supply air sensor |
| 2. Supply air filter | 8. Casing |
| 3. Heat exchanger | 9. Exhaust air filter |
| 4. Heat exchanger motor | 10. Control unit |
| 5. Afterheater | 11. Exhaust air fan |
| 6. Supply air fan | |

Casing

The outer casing is made of white painted sheet metal and the inner casing of galvanized sheet metal with an intermediate layer of 25 mm mineral wool insulation. The unit door is locked with screws.

Fans

The fans are driven by very quiet and energy efficient EC motors. The fans are easy to remove for service and maintenance. The speed of the fans can be independently regulated steplessly.

Heat exchanger

The heat exchanger is an aluminium rotary heat exchanger. It has a temperature efficiency up to 83%.

The unit is fitted with an automatic defrost function controlled by outside temperature.

The heat exchanger can easily be removed for cleaning.

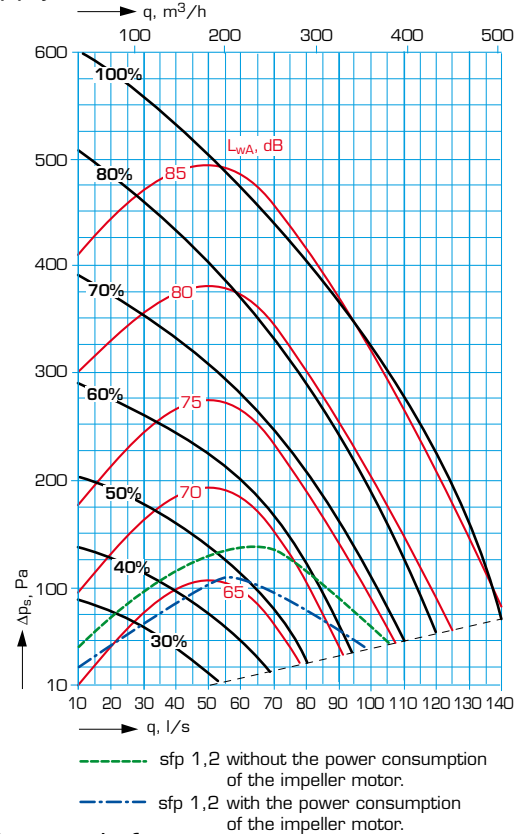
Afterheater

The unit can be supplemented with an electrical afterheater.

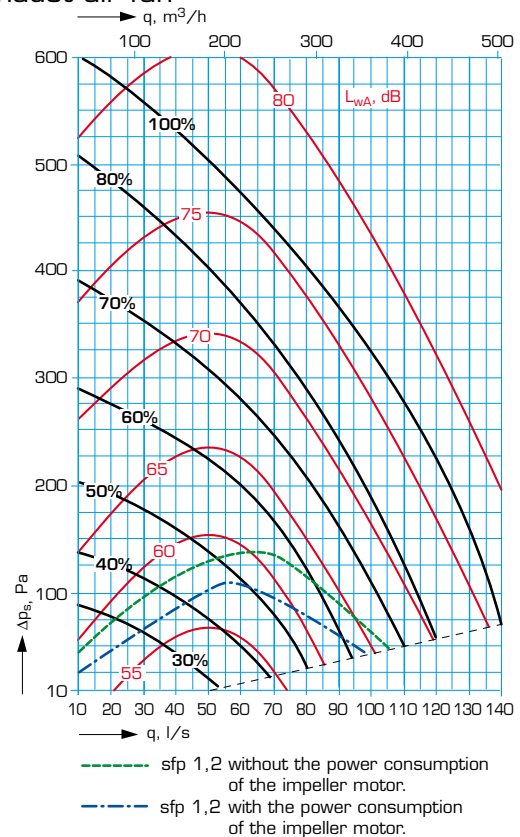
Filter

The unit is fitted with filters in F7/F5 classes.

Supply air fan



Exhaust air fan



Dimensions, electrical data, control equipment

Sound data

The fan curves in the diagrams relate to the supply air duct and the exhaust air duct on the outlet side of the unit.

Sound power level per octave band dB, is calculated from (L_{wA}) + in the diagram + octave band correction (with sign) according to the table below.

Sound path	Octave band, mid-frequency, Hz							
	63	125	250	500	1k	2k	4k	8k
Supply air duct, dB	5	4	5	-4	-11	-13	-18	-28
Exhaust air duct, dB	5	9	6	-8	-14	-19	-31	-41
To room, dB [-23]	5	11	10	0	-16	-20	-25	-30

Supply air duct = L_{wA} in the diagram for supply air fan

Exhaust air duct = L_{wA} in the diagram for exhaust air fan

Noise to room = L_{wA} in the diagram for exhaust air fan minus 23 dB gives sound pressure level, dB(A) at 10 m² room absorption

Electrical data

Voltage: 230 V, single phase 50 Hz

Code	Fan motors ¹⁾ Output, W	Afterheater Output, W	Total W
RDAE-2	160	1000	1180

¹⁾ Refers to two fan motors.

Packaging

Corrugated cardboard box. All instructional documentation are enclosed.

Control equipment

The unit is supplied with a built-in electronic control unit. It regulates the fan, the rotary heat exchanger and possible electric heater.

Fan control

There is three different modes that can be chosen through the control panel (accessory):

"AWAY" is used when nobody will be at home for a longer period to save energy.

"HOME" is used for normal ventilation.

"FORCED" is used when there is a greater need of ventilation (it will automatically return to the "HOME" mode after 120 minutes).

The control panel (accessory), that can be installed at desired location, has a button with an arrow on it that is used to choose mode.

The speed of the fans can be adjusted independently of one another steplessly through the control panel (accessory).

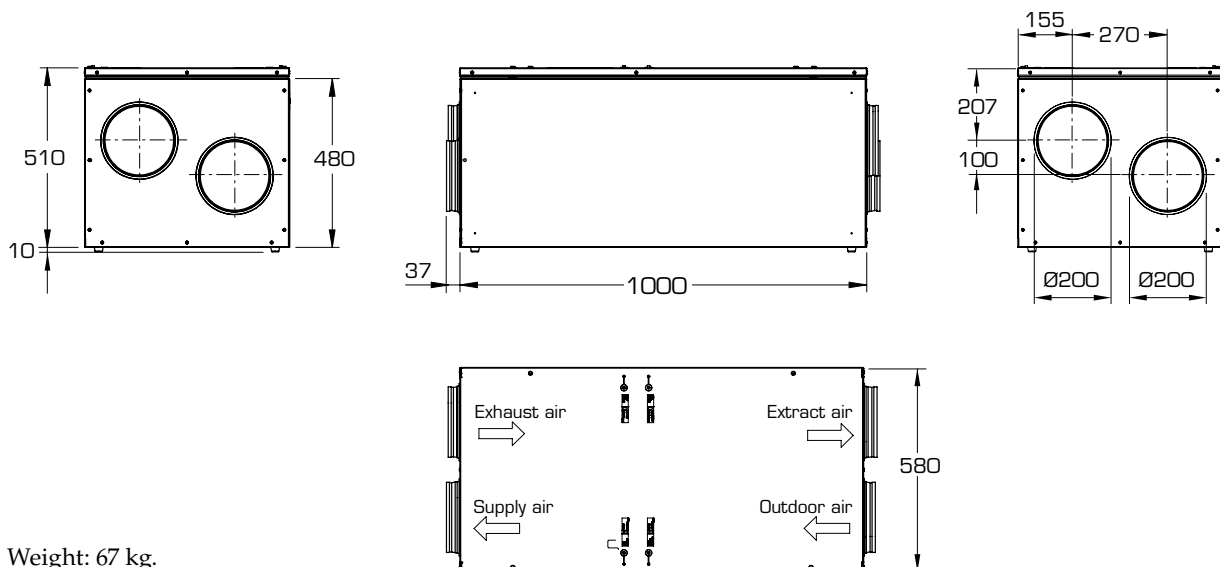
Temperature control

For the most part of the year the heat exchanger recycles enough heat to obtain an acceptable supply air temperature. It can be supplemented with an electric afterheater that controls the supply air temperature to set value. The control equipment in the unit regulates the rotary heat exchanger and possible afterheater to maintain set temperature value.

Alarm

The control panel (accessory) has an alarm to indicate when it is time to change the filter.

Dimensions and weight



Weight: 67 kg.

Accessories, product code

Accessories

Control panel RDKZ-41

External control panel for installation on wall. There is three different settings for choosing the fan speed; "AWAY", "HOME" and "FORCED" air flow. The control panel also has a filter replacement indicator lamp.

Combined air terminal device ABRZ-01

For mounting on an outside wall. Outdoor air is taken in at the bottom and extract air is blown straight out of the unit to prevent the two from mixing. It is made of black plastic coated sheet metal and consist of a wall piece, wall hood and front cover.

Silencer BDER-30

Circular silencer for 200 mm diameter pipes.
L x Dy = 900xØ300.

Noise attenuation at	Center frequency, Hz							
	63	125	250	500	1k	2k	4k	8k
BDER-30-020-090	2	7	13	24	31	44	31	20

Product code

Heat recovery unit **RDAE-a-b-c-d-e-f**

Size (a) _____
2

Fan (b) _____
4 = EC motor, B-wheel

Connection (c) _____
1 = Outdoor air right, supply air left

Recovery unit (d) _____
1 = not hygroscopic impeller

Supplementary heater (e) _____
0 = without
1 = Afterheater, electric 1000 W

Generation (f) _____
1

Accessories

Installation cable for control panel **RDKZ-43-b-cc-d**

Model (b) _____
1 = 6-pole flat cabel

Length (cc) _____
10 = 10 meters
25 = 25 meters

Generation (d) _____
1

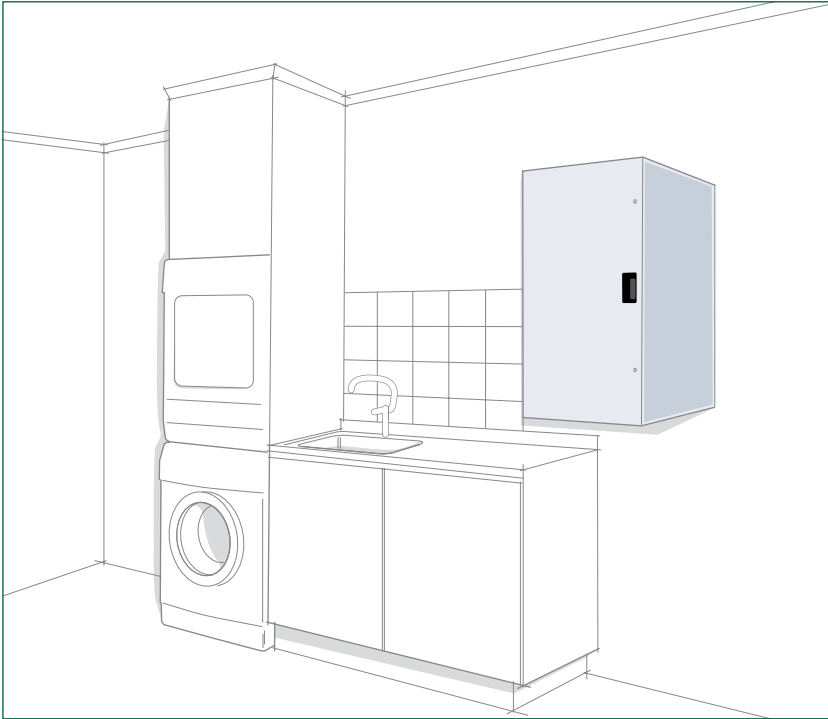
Control panel **RDKZ-41-1**

Replacement filters **RDAZ-12**
Set of 2+2, supply air and exhaust air

Combined air terminal device **ABRZ-01-1**

Silencer **BDER-30-020-090**

Heat recovery unit RDAR

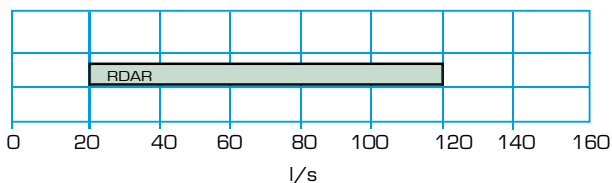


The RDAR heat recovery unit is a component in the Rexovent/Minivent systems. This unit has been developed from our RDAB unit and has a rotary heat exchanger with high temperature efficiency. RDAR has a built-in control equipment and can be supplied with an external control panel. It is primarily intended for homes and small commercial premises. The unit does not need draining, which is a great advantage when replacing existing installations. The unit has all connectors facing upwards and is intended for wall mounting or standing or lying with the door facing upwards. RDAR can be placed in cold spaces, for example attics.

Energy consumption

RDAR is an extremely energy efficient heat recovery unit that reduces energy consumption remarkably. The reduction is possible because the fans are driven by EC motors, which have an energy consumption of only 50 - 60 percent of that of an equivalent AC motor. The RDAR unit also has a rotary heat exchanger. It is so effective that supplementary heating is only needed at outside temperatures of below 10° C.

Air flow chart



Product data

- Up to 83% temperature efficiency
- Supply and exhaust air flows between 20-120 l/s
- Can serve living areas up to 350 m²
- Filter, class F5/G4
- High efficient EC motors
- Individually adjustable fans
- No need for drainage
- Easy to install
- Service friendly

Product code example

RDAR-01-1-1-1

Description, material, technical data

Casing

The outer casing is made of white painted sheet metal and the inner casing of galvanized sheet metal with an intermediate layer of 25 mm mineral wool insulation. The unit door is locked with screws and has flush handles.

Fans

The fans are driven by very quiet and energy efficient EC motors. The fans are easy to remove for service and maintenance. The speed of the fans can be independently regulated steplessly.

Heat exchanger

The heat exchanger is an aluminium rotary heat exchanger. It has a temperature efficiency up to 83%.

The unit is fitted with an automatic defrost function controlled by outside temperature.

The heat exchanger can easily be removed for cleaning.

Preheater and afterheater

The unit is prepared for a built-in electric preheater and afterheater. In areas where the rated outside temperature (DUT5) is lower than -25°C the installation is fitted with a preheater.

The preheater is controlled by a thermostat. The afterheater in the unit regulates the supply air temperature. The unit can easily be retrofitted with a preheating and afterheating battery. The afterheater is available as electric coil or water coil. Valve, actuators, frost protection and control of water coil are not included.

Filter

The unit is fitted with filters in F5/G4 classes.

Sound data

The fan curves in the diagrams relate to the supply air duct and the exhaust air duct on the outlet side of the unit.

Sound power level per octave band dB, is calculated from (L_{wA}) + in the diagram + octave band correction (with sign) according to the table below.

Sound path	Octave band, mid-frequency, Hz							
	63	125	250	500	1k	2k	4k	8k
Supply air duct, dB	13	9	2	-4	-8	-11	-16	-21
Exhaust air duct, dB	18	11	2	-4	-16	-23	-33	-41
To room, dB [-13]	11	14	9	-2	-6	-12	-16	-17

Supply air duct = L_{wA} in the diagram for supply air fan

Exhaust air duct = L_{wA} in the diagram for exhaust air fan

Noise to room = L_{wA} in the diagram for exhaust air fan minus 13 dB gives sound pressure level, dB(A) at 10 m² room absorption

Supply air fan

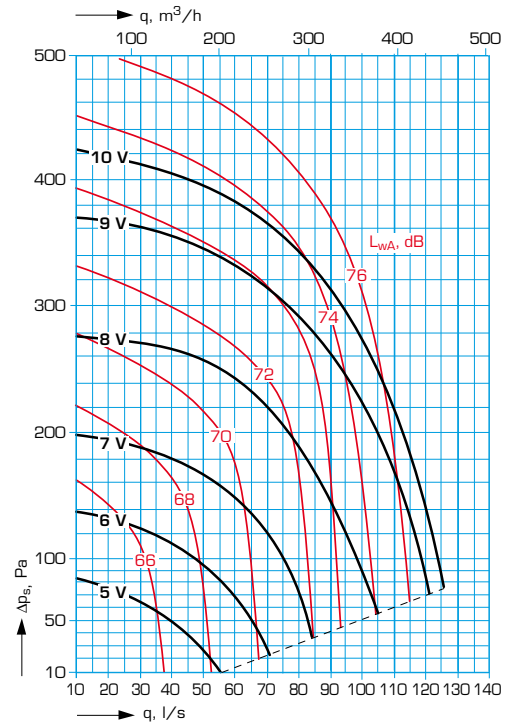


Diagram 1. a) Supply air fan, pentimeter setting
b) Sound to duct, L_{wTA} for supply air fan
c) Filter F5

Exhaust air fan

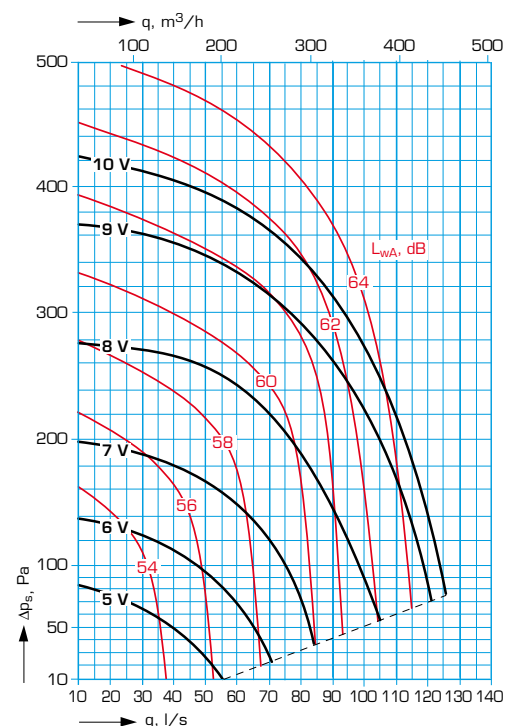
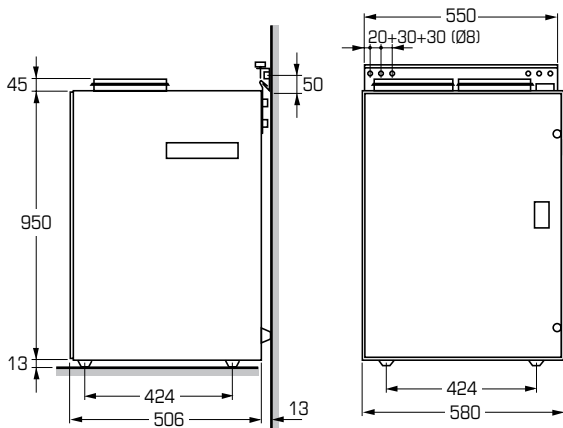


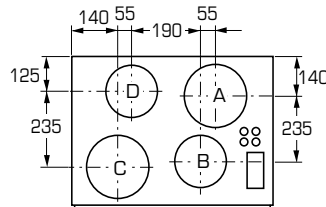
Diagram 2. a) Exhaust air fan, pentimeter setting
b) Sound to room, L_{A10} from unit with the forced air damper in the cooker hood closed
c) Filter G4

Dimensions, electrical data, control equipment

Dimensions and weight



Weight: 67 kg



Connection	A	B	C	D
Diameter	200	160 ¹⁾	200	160 ¹⁾
	Supply air	Exhaust air	Outdoor air	Extract air

¹⁾ Increased to $\varnothing 200$ as space permits.

Electrical data

Voltage: 230V, single phase 50 Hz

Code	Fan motors Output, W	Preheater Electrical, W	Afterheater Electrical, W	Output ¹⁾ Electrical, W
RDAR-01	2 X 175	1000	1000	2360

¹⁾ Rated output when both preheater and afterheater are installed.

Packaging

The unit is supplied in a cardboard box. Mounting brackets for wall mounting, rubber suspension studs and all instructional documentation are enclosed.

Control equipment

The unit is supplied with a built-in electronic control unit. It regulates the fan, the rotary heat exchanger and possible electric heater.

Fan control

There is three different modes that can be chosen through the control panel (accessory):

- "AWAY" is used when nobody will be at home for a longer period to save energy.
- "HOME" is used for normal ventilation.
- "FORCED" is used when there is a greater need of ventilation (it will automatically return to the "HOME" mode after 120 minutes).

The control panel (accessory), that can be installed at desired location, has a button with an arrow on it that is used to choose mode.

The speed of the fans can be adjusted independently of one another. The air flow of the three different modes can be regulated with a potentiometer on the control unit. There is normally only need for adjusting the air flow of the "HOME" mode.

Temperature control

The control unit regulates the rotary heat exchanger and potential preheater and afterheater to deliver the desired temperature. There are two different energy modes:

- In the "NORMAL" position, the supply air temperature is adjusted to the desired reference value in two stages. As a first stage with the energy recovery from the rotary heat exchanger, and, if this is insufficient, as a second stage with the electrical after heater.
- In the "REDUCED" position, the impeller and the electrical afterheater have separate reference values. If the impeller is not able to recover sufficient heat, the electrical after heater is used, but with a reference value that is 2° C lower than the normal reference value.

In both energy operating modes, the electrical after-heater can only heat the supply air if the rotary heat exchanger is in operation. The heat recycling can get too high during some periods of the year and result in a slightly higher temperature which has to be accepted in order to save energy.

The control unit handles defrosting during very cold periods when frost may develop on the heat exchanger. This occurs when the outdoor temperature drops below -10°C.

Alarm

The control panel (accessory) has an alarm to indicate when it is time to change the filter and also temperature alarm. An external alarm such as fire alarm can be connected to stop the unit from operating.

Accessories, product code

Accessories

Control panel RDKZ-41

External control panel for installation on wall. There is three different settings for choosing the fan speed; "AWAY", "HOME" and "FORCED" air flow. The control panel also has a filter replacement indicator lamp.

Combined air terminal device ABRZ-01

For mounting on an outside wall. Outdoor air is taken in at the bottom and extract air is blown straight out of the unit to prevent the two from mixing. It is made of black plastic coated sheet metal and consist of a wall piece, wall hood and front cover.

Silencer BDER-30

Circular silencer for 200 mm diameter pipes.
L x Dy = 900xØ300.

Noise attenuation at	Center frequency, Hz							
	63	125	250	500	1k	2k	4k	8k
BDER-30-020-090	2	7	13	24	31	44	31	20

Product code

Heat recovery unit **RDAR-aa-b-c-d-e**

Size (aa) _____
01

Connection (b) _____
1 = Outdoor air left, supply air right

Recovery unit (c) _____
1 = not hygroscopic impeller

Supplementary heater (d) _____
0 = without
1 = afterheater, electric 1000 W
2 = preheater + afterheater, electric 2 x 1000 W
3 = preheater, electric 1000 W + afterheater water coil¹⁾

Generation (e) _____
1

¹⁾ Valve, actuator, frost protection and control of wate coil are not included.

Accessories

Installation cable for control panel **RDKZ-43-b-cc-d**

Model (b) _____
1 = 6-pole flat cabel

Length (cc) _____
10 = 10 meters
25 = 25 meters

Generation (d) _____
1

Control panel **RDKZ-41-1**

Replacement filters **RDAZ-10**
Set of 2+2, supply air and exhaust air

Combined air terminal device **ABRZ-01-1**

Silencer **BDER-30-020-090**

Replacement of older heat recovery units



Fläkt Woods offer various solutions for replacing older heat recovery units. More information is found on the following page.

Replacement of older heat recovery units

Is it time to evaluate your existing balanced ventilation system?

Replacing your existing heat recovery unit allows you to obtain a more effective and economical balanced ventilation system with heat recovery.

Which system do you have?

System	Unit designation	
Bahco Minimaster	ACF or ACC	
Fläkt Rexonet	RDKA, RDKB or RDKE	
Fläkt Minivent	RDKG-a-b-c-d-1	
Fläkt Rexovent	RDAA, RDAC	

Replacement products

RDKG (Minimaster/Rexonet/Minivent)

- Easy to install in place of an existing unit
- Same electrical connectors
- Can be connected to the existing ducting
- High recovery capacity, up to 66%

RDKR (Minimaster/Rexonet/Minivent)

Same advantages as the RDKG, with the addition of:

- Higher recovery capacity, approximately 20%, in total up to 83% with rotary heat exchanger
- Low energy consumption and service life thanks to DC motor
- No need for drainage

The units above can easily be moved from above the cooker to another location. The units can be connected to the Fläkt Woods cooker hood selection range including the designer cooker hoods, see the selection range in the Designer cooker hoods' chapter.

RDAB (Rexovent)

- Easy to install in place of an existing unit
- More efficient filter than RDAA, RDAC

RDAE (Rexovent)

- Up to 83% heat recovery capacity with rotary heat exchanger
- Low energy consumption and service life thanks to DC motor
- No need for drainage

RDAR (Minivent/Rexovent)

- Can be mounted both horizontally or vertically
- Up to 83% heat recovery capacity with rotary heat exchanger
- Low energy consumption and service life thanks to DC motor
- No need for drainage

Some modifications may be needed.

Air handling unit TopMaster



The TopMaster is a compact unit that requires minimal space. Compact dimensions and low sound data provide great flexibility in the location of the unit. Its attractive design also adds to the flexibility of location.

All duct connections are on top of the unit.

The unit is supplied with direct driven supply and exhaust air fans, supply and exhaust air filters as well as a rotating heat exchanger.

Heater battery for hot water or electricity are built into the unit.

The control system, which is integrated in the unit, is equipped for a large number of external functions.

There is a large range of accessories for in-duct air processing. This contains dampers, cooling batteries, silencers etc.

The TopMaster has a wide range of applications and can be installed in most buildings that require ventilation such as multiple-unit dwellings, schools, offices, conference premises, shops etc.

Product data

- Available in two sizes
- Air flow range 100-550 l/s
- Attractive design
- High heat recovery
- Integrated control system
- Built-in afterheating battery
- Minimal installation with all connectors upwards

Read more about the TopMaster air handling unit in the Flakt Woods catalogues or on the Flakt Woods website www.flaktwoods.com.

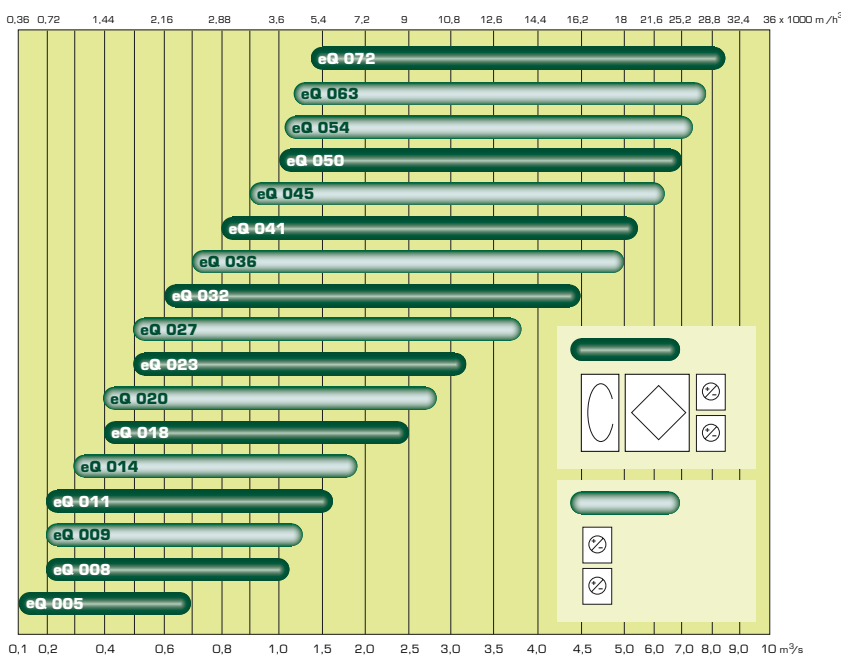
Air handling unit eQ



eQ is our new, highly adaptable air handling unit offering a number of new features and accessories.

The eQ series is so adaptable that it is suitable for both industrial premises and public buildings as well as dwellings, schools, offices, shops and hospitals. The unit is very easy simple to select, install and commission with fast deliveries and easy to perform maintenance and service on.

Air flow chart



Read more about the eQ air handling unit in the Flakt Woods catalogues or on the Flakt Woods website www.flaktwoods.com.

Product data

- Air flow range 0,1 - 8,3 m³/s
- Available in 17 sizes
- Conforms to air-tightness class L2 and corrosivity class C4.
- Easy selection with the web-based product selection program ACON
- The selection range covers all needs, from supply air units to integrated solutions with heat recovery and advanced control equipment.
- Energy efficient components such as a number of different heat exchangers.
- Can be delivered with Eff 1- and award winning Centriflow Plus EC fans.
- New integrated control system with especially developed and adapted software provides the best energy efficient solution.

Cooker hoods

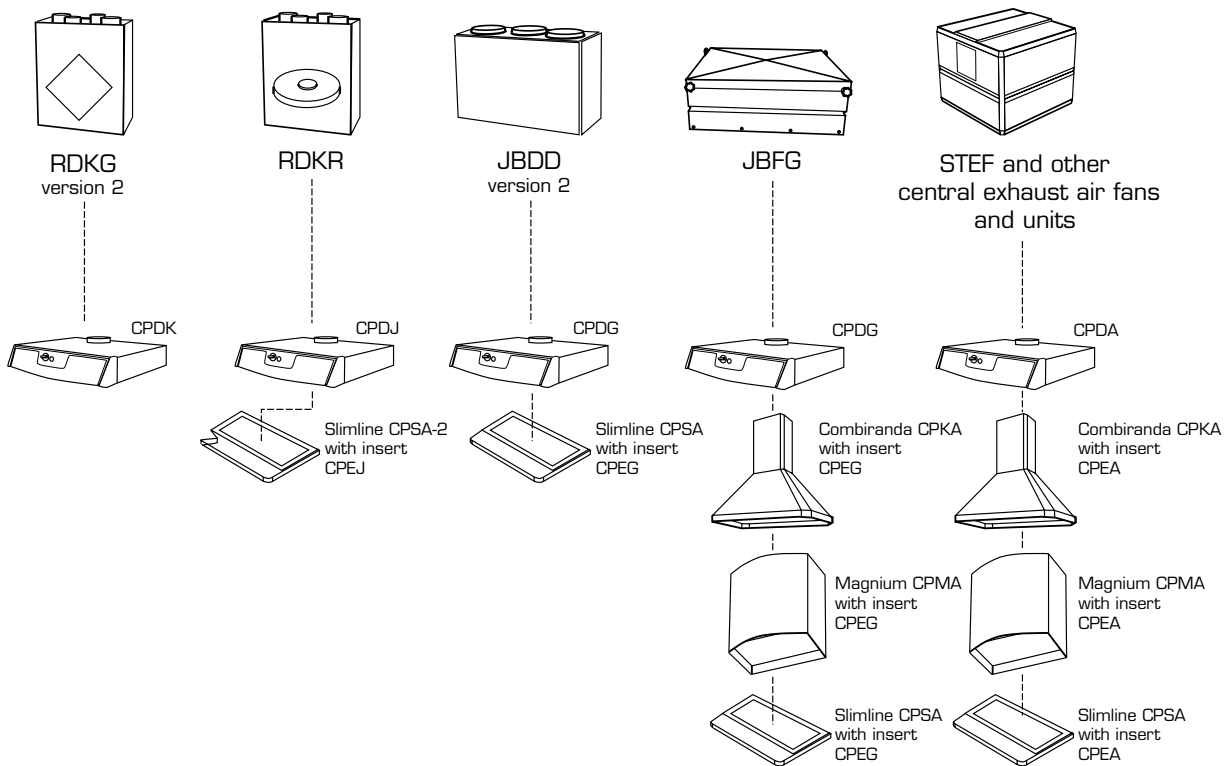


General

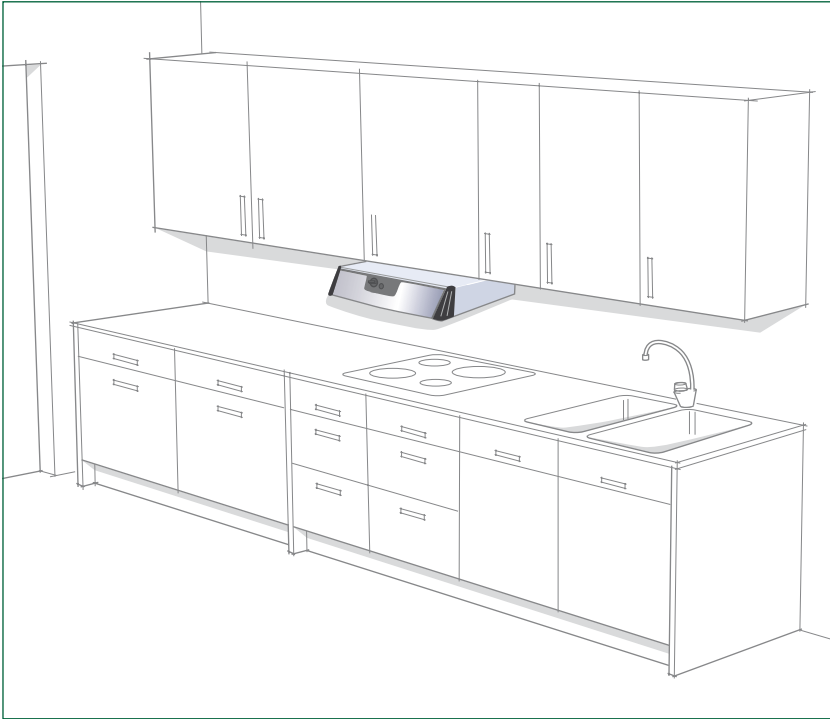
Today a modern kitchen is as much about style as it is function.

Fläkt Woods has always supplied cooker hoods for exhaust air and balanced ventilation systems. Now we are expanding our range of standard hoods and offering a range of designer cooker hoods that meet the requirements for good odour extraction capacity.

This is how you can combine your cooker hood with a Fläkt Woods ventilation unit and exhaust air fan.

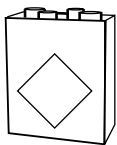


Cooker hood CPD

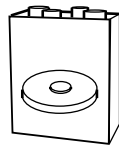


The cooker hood CPD is a newly developed cooker hood with a modern design. The hood is available in white enamelled and stainless steel versions. The cooker hood has easily accessible controls in the middle of the front. The hood is available in a number of variants, for example for multiple-unit dwellings with central extraction, for our heat recovery units and exhaust air fans or for replacing older cooker hoods.

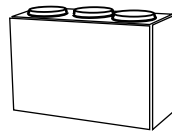
CPD can be used with the following units/exhaust air fans



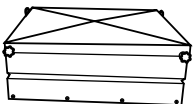
RDKG



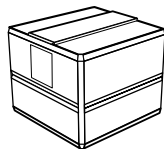
RDKR



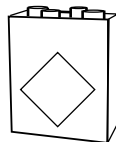
JBDD



JBFG



STEF and other central exhaust air fans and units



Older units and exhaust air fans

Product data

- High odour extraction capacity
- Controls easily accessible on the cooker hood front panel
- Cooker lighting with low-energy bulb
- Effective grease filter
- Available in several widths as standard
- Low height which provides plenty of work space under the hood

Product code example

CPDA-2-03-6-3-1

Description, materials, control

Description

The cooker hood has a modern design with controls located in the middle of the front.

The lighting comprises an E14 bulb holder for 11 W low energy bulb which can be replaced without tools.

The low overall height of the cooker hood makes it suitable for installation either under or between high level top cabinets. There are pre-drilled holes for mounting the unit under the cabinets and brackets are supplied for mounting it between the cabinets.

When the hood is used in the Minimaster System together with a heat recovery unit it is installed directly on the unit.

Materials and coatings

The hood is available in white enamelled or stainless steel versions. The front panel is made of polycarbonate. The knobs and corners are made of black ABS plastic and the lamp glass of polycarbonate. The filter is manufactured in woven aluminium surrounded by rib mesh and an aluminium frame.

Control

The hood is equipped with a damper for forced air flow. The damper is opened through a knob on the front and has a manually or timer-controlled return (60min).

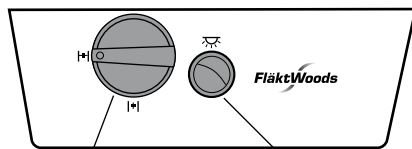
Some hoods also have a basic air flow and both basic and forced air flow are adjustable. When cleaning the kitchen flue the throttling device can be removed without tools.

Cooker hoods controlling a heat recovery unit or a exhaust air fan also have a knob for fan speed.

The cooker hood CPDJ controlling RDKR has a automatic function that control the fan speed when the throttling device is opened.

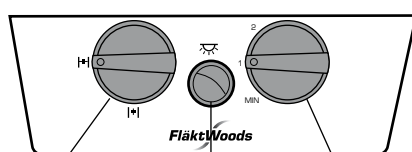
The lighting on the cooker hood is lit through a separate switch, see illustrations below.

CPDA, CPDJ



Knob for forcing throttling device Lighting

Other CPD cooker hoods



Knob for forcing throttling device Lighting Knob for fan speed

Packaging

The fan is supplied in a cardboard box with all instructional documentation enclosed.

Models

CPDA

Intended for multiple-unit dwellings with central extraction or heat recovery unit. Suitable for both new production and replacement of older cooker hoods.

CPDB

Replacement hood for older exhaust air fan JBDD-aa with condensing apparatus, manufactured before 2007.

CPDC

Replacement hood for older heat recovery unit RDKG without bypass (fits RDKG-a-1-c-d-1).

CPDD

Replacement hood for older heat recovery unit ACF and older exhaust air fan BAF.

CPDG

With transformer, fits for example the new JBDD and JBFG. (Fits JBDD-aa-1-2 but also as replacement hood for controlling older exhaust air fans and units, for example JBDB, JBDC and RDAA.

CPDH

Replacement hood for older heat recovery units RDKG with bypass. Fits RDKG-a-2-c-d-1.

CPDJ

For heat recovery unit RDKR.

CPDK

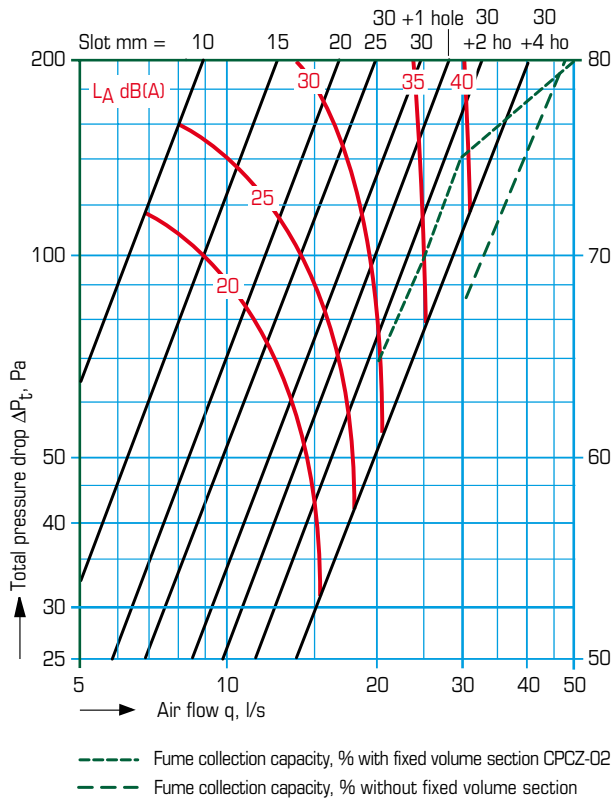
For heat recovery unit RDKG. Fits RDKG-a-b-c-d-2.

CPDL

Replacement hood for older heat recovery unit RDKB and RDKE.

Technical data, dimensions

Technical data



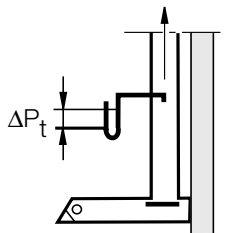
Basic ventilation and fume collection. The throttling device is set to sprint mode 7 and 15 mm slot at delivery.

In the diagram the following applies:

Pressure drop: Applies to air with a density of 1.2 kg/m³.
 Self generated noise for hoods with throttling devices when installed according to the figure below.

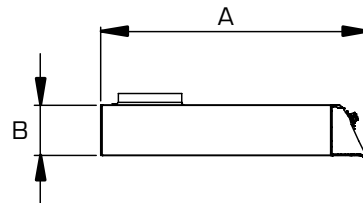
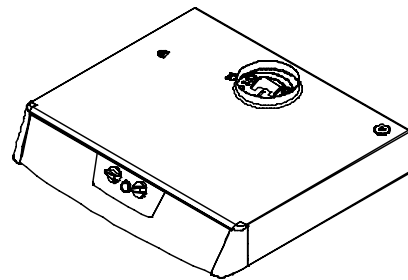
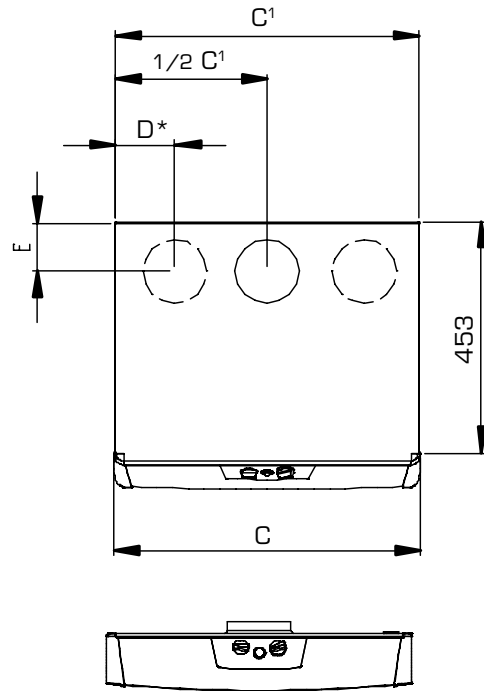
The indicated sound level L_A applies at a room damping of 4 dB, which corresponds to a damping of the reverberant field in a room with a sound absorption area equivalent to 10 m². Sound value tolerance ± 2 dB(A).

The cooker hood has been tested concerning fume collection by SP Technical Research Institute of Sweden according to the testing standard SS-EN 61:591.



Dimensions and weight

Dimensions in mm



Width	A	B	C	C1	D ¹⁾	E ¹⁾	F	W, kg
500	524	100	502	498	114	96	453	4,4
600	524	100	602	598	114	96	453	5,0
700	524	100	702	698	214	96	453	5,9

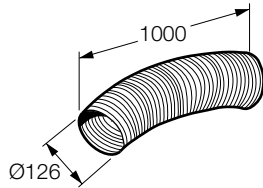
¹⁾ The D-measurement is from the right of the hood at right hand side connection. These dimensions are adjusted to the unit for models (CPD) C, D, H, J, K and L.

Accessories, product code

Accessories

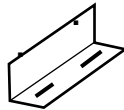
Connection kit CPAZ-25

For flexible connection between cooker hood and kitchen flue. The tube is standard-compliant. Two hose clamps are included.



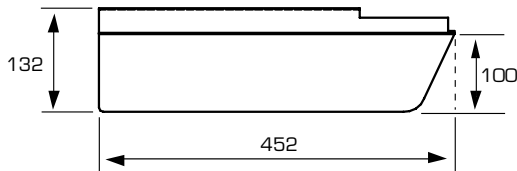
Bracket set CPAZ-27

For mounting of cooker hood CPDA and CPDG in side cabinet.



Fixed volume section, white CPDZ-02, stainless steel CPDZ-06

The accessory consists of two gables to mount on the hood to increase it's volume.



Product code

Cooker hood

CPDa-b-cc-d-e-f

Model (a) _____

- A
- B
- C
- D
- G
- H
- J
- K
- L

(See page 54 for information about the different models)

Lighting (b) _____

2 = Low-energy bulb 11W

Throttling device (cc) _____

- 02 = Manual forcing (only models D and L)
- 03 = Forcing with timer return (not models D and L)

Width (d) _____

- 5 = 500mm (only models A, B and G)
- 6 = 600mm
- 7 = 700mm (not model L)

Connection (e) _____

- 1 = Left-hand side
- 2 = Right-hand side (not models D and L)
- 3 = Middle (only models A and G)

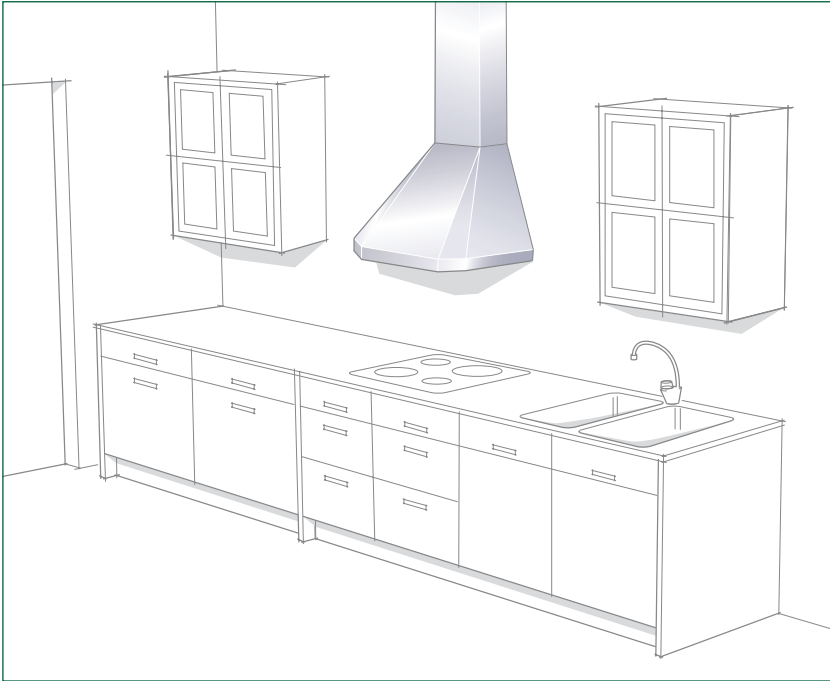
Material (f) _____

- 1 = White
- 2 = Stainless steel

Accessories

Connection kit	CPAZ-25-000
Bracket set	CPAZ-27-000
Fixed volume section, white	CPDZ-02-000
Fixed volume section, stainless steel	CPDZ-06

Combiranda CPKA - Designer hood

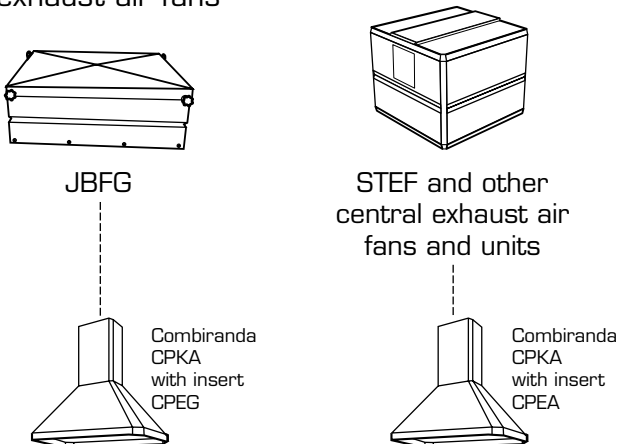


Combiranda is one of Fläkt Woods designer cooker hoods supplied in stainless steel.

CPKA is wall mounted and can be, depending on which insert is chosen, used for multi-unit dwellings with a central exhaust air fan or single-family houses with JBFG or other exhaust air fans controlled with transformer. CPKA can not be combined with JBDD or other fans positioned above the cooker.

A insert CPE must also be ordered when ordering a designer cooker hood. For technical specifications see documentation for Insert CPE.

Combiranda can be used with the following units/ exhaust air fans



Produktfakta

- Modern design
- Wall mounted

Product code

Designer hood **CPKA-1**

Execution _____

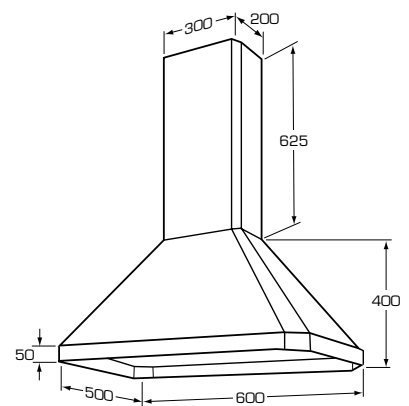
1 = stainless steel

(always add a insert CPE to the order)

Product code example

CPKA-1 + CPEA-8-03-6-3-3

Dimensions (mm)



Magnium CPMA - Designer hood



Magnium CPMA is one of Fläkt Woods designer cooker hoods supplied in stainless steel and can be supplied with decoration lighting which gives a decorative pattern on the arched front of the hood.

Magnium is wall mounted and can be, depending on which insert is chosen, used for multi-unit dwellings with a central exhaust air fan or single-family houses with JBFG or other exhaust air fans controlled with transformer. CPMA can not be combined with JBDD or other fans positioned above the cooker.

A insert CPE must also be ordered when ordering a designer cooker hood. For technical specifications see documentation for Insert CPE.

Product data

- Modern design
- Wall mounted
- Can be supplied with decorative lighting

Product code

Designer hood **CPMA-1**

Execution _____

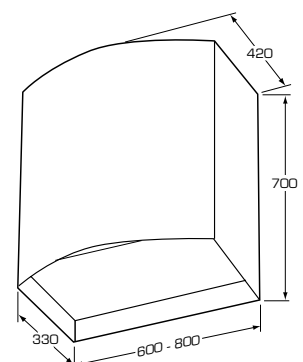
1 = stainless steel

(always add a insert CPE to the order)

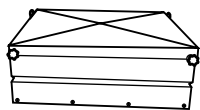
Product code example

CPMA-1 + CPEA-8-03-6-3-3

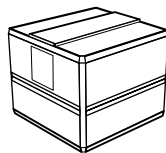
Dimensions (mm)



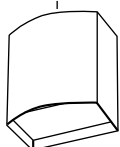
Combiranda can be used with the following units/
exhaust air fans



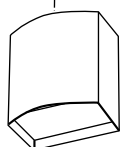
JBFG



STEF and other
central exhaust air
fans and units

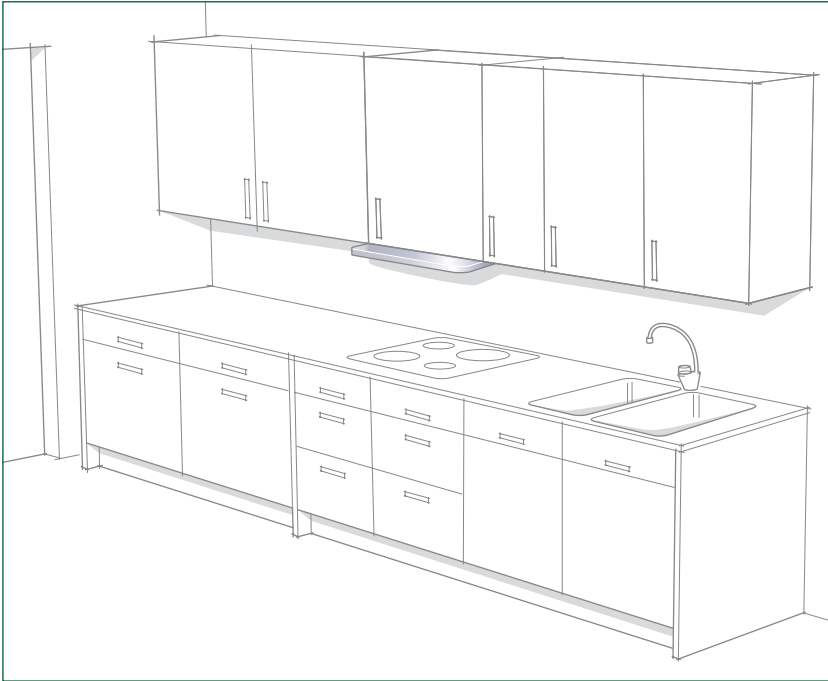


Magnium
CPMA
with insert
CPEG



Magnium
CPMA
with insert
CPEA

Slimline CPSA - Designer hood

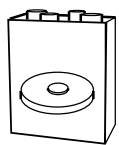


Slimline CPSA is one of Flåkt Woods designer cooker hoods supplied in white or stainless steel. CPSA has a very low height and is mounted beneath a kitchen cabinet.

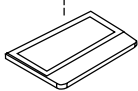
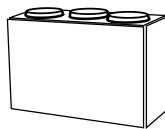
Magnium can be, depending on which insert is chosen, used for multi-unit dwellings with a central exhaust air fan or single-family houses with JBDD, JBFG or other exhaust air fans controlled with transformer. CPSA-2 with insert CPEJ is a combination that fits with heat recovery unit RDKR.

A insert CPE must also be ordered when ordering a designer cooker hood. For technical specifications see documentation for Insert CPE.

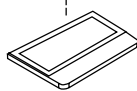
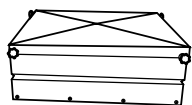
Combiranda can be used with the following units/exhaust air fans



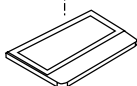
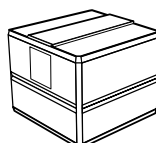
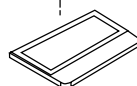
RDKR

Slimline
CPSA-2
with insert
CPEJ

JBDD

Slimline
CPSA-1
with insert
CPEG

JBFG

Slimline
CPSA-1
with insert
CPEGSTEF and other central
exhaust air fans and unitsSlimline
CPSA-1
with insert
CPEA

Product data

- Modern design
- For mounting beneath a kitchen cabinet
- Available in white or stainless steel
- The height of the cooker hood is very low

Product code

Designer hood CPSA-a-00-6-0-f

Models (a) _____

1 = Fits only inserts
CPEA/CPEG

2 = Fits only insert
CPEJ for RDKR

Execution (f) _____

1 = White

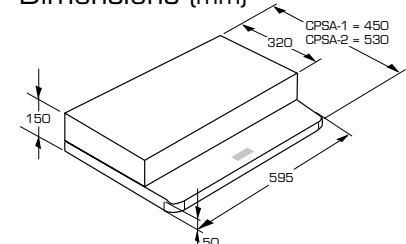
2 = Stainless steel

(always add a insert CPE to the order)

Product code example

CPSA-1-00-6-0-2 + CPEA-8-03-6-3-3

Dimensions (mm)



Insert CPE for Fläkt Woods designer hoods



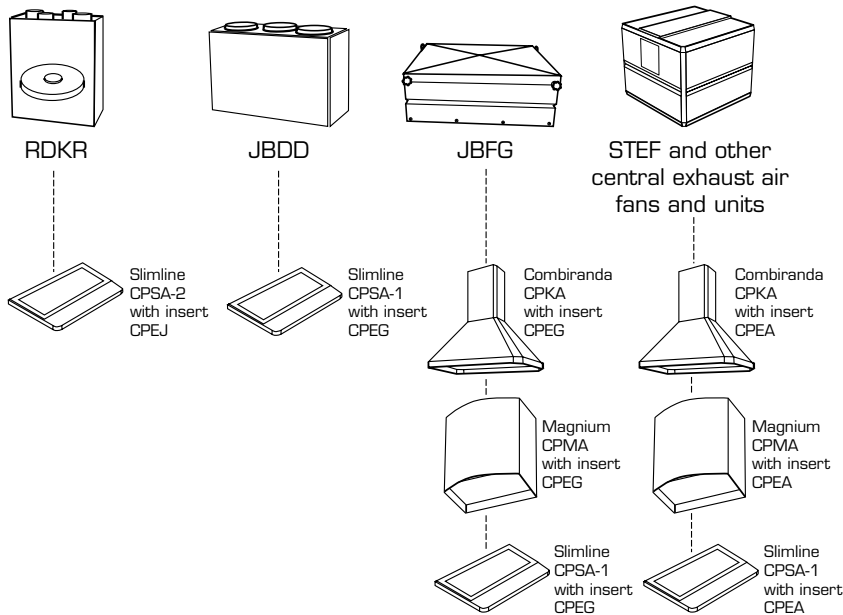
Insert CPE insert is mounted in the Fläkt Woods designer cooker hoods, Combiranda CPKA, Magnum CPMA and Slimline CPSA.

The insert is available in a number of models, for example for multiple-unit dwellings with central exhaust air fan, for our heat recovery units and exhaust air fans and for replacing older cooker hoods.

Product data

- Insert for Fläkt Woods designer cooker hoods
- Cooker lighting with spotlights
- Effective grease filter

The CPE insert can be used with the following units/ exhaust air fans



Product code example

CPEA-8-03-6-3-3

Description, materials, control

Description

CPE is available with knobs or touch panel and the lighting consists of two 12V/20W halogen spotlights. No controls are visible on the cooker hood which gives a clean impression.

The insert is equipped with a forcing throttling device, some inserts also have a basic flow and both flows are adjustable.

When cleaning the kitchen flue the throttling device can be removed without tools.

Materials and coatings

The insert CPE is painted in aluminium colour. The filter is manufactured in woven aluminium surrounded by rib mesh and an aluminium frame.

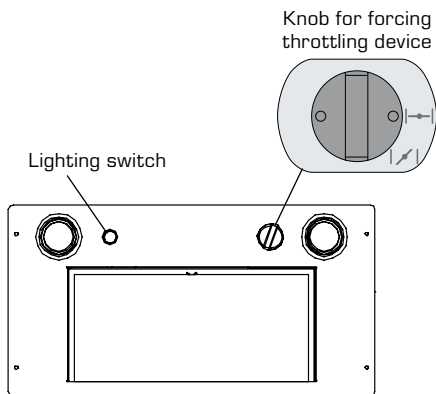
The knobs are made in grey ABS plastic for inserts with knobs.

Control with knobs

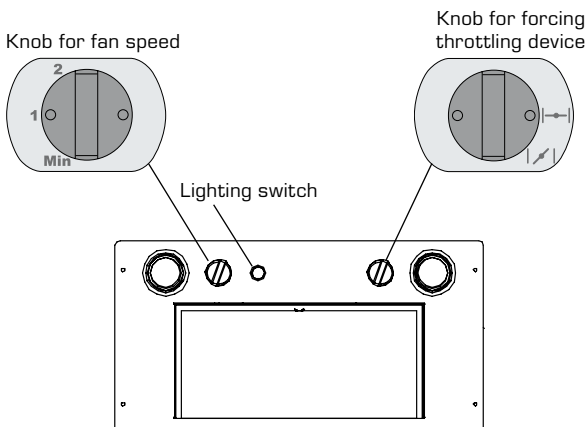
The throttling device is opened through a knob beneath the cooker hood and has a timer-controlled return (60 minutes maximum).

The cooker hoods that control a heat recovery unit or an exhaust air fan has a knob for fan speed.

The lighting has a separate switch.



Controls for cooker hood insert CPEA.



Controls for cooker hood insert CPEG.

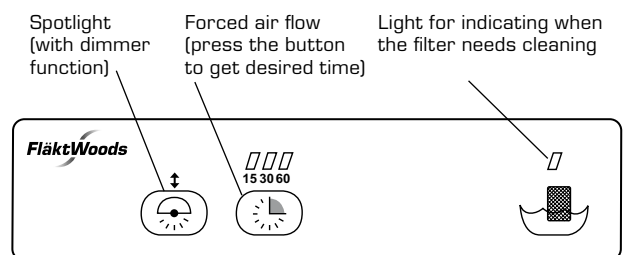
Control with touch panel

The touch panel is positioned on the front of the cooker hood.

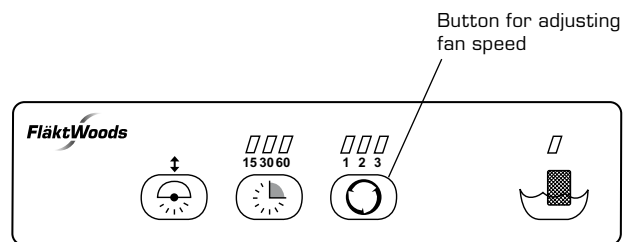
The forcing throttling device is opened through a button on the touch panel and has timer-controlled return (15, 30 or 60 minutes, a lamp indicate which position is selected).

The touch panel for CPEG, that also control a heat recovery unit or an exhaust air fan, has a button for fan speed (three speeds).

The lighting has dimmer function and adjusts through a button on the touch panel.



Touch panel for cooker hood inserts CPEA and CPEJ.



Touch panel for cooker hood insert CPEG.

Packaging

The cooker hood insert is supplied in a cardboard box with all instructional documentation enclosed.

Models

CPEA

Intended for multiple-unit dwellings with central extraction or heat recovery unit. Suitable for both new production and replacement of older cooker hoods.

CPEG

With transformer, fits for example the new JBDD and JBFG (fits JBDD-aa-1-2 but can also serve as replacement hood for controlling older exhaust air fans and units, for example JBDB, JBDC and RDAA).

CPEJ

For heat recovery unit RDKR and the Slimline CPSA-2 designer hood.

Air flow, pressure drop, sound data, dimensions

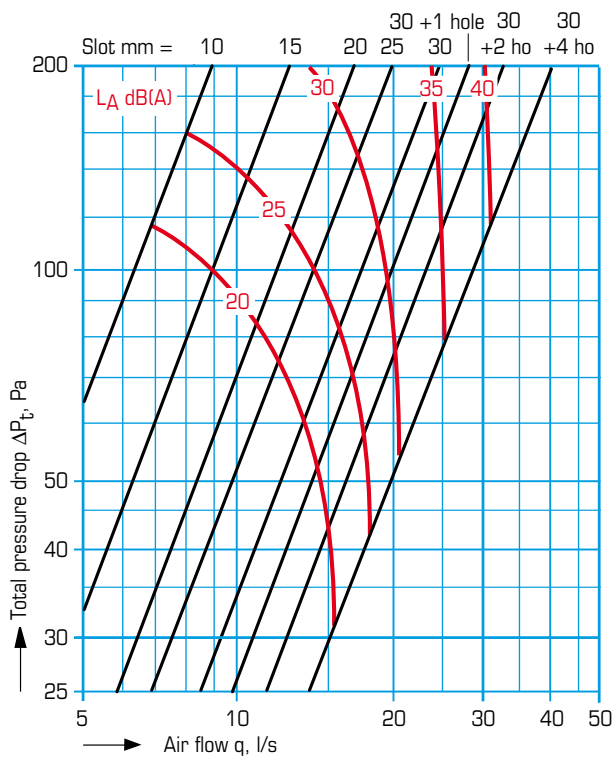
Note!

Insert CPE is not a complete cooker hood. It needs to be combined with one of our designer hoods, Combiranda CPKA, Magnium CPMA or Slimline CPSA. See separate documentation concerning designer hoods for more information.

Dimensions

All dimensions in mm (the dimensions of insert CPE do not alter the dimensions of the cooker hood).

Air flow, pressure drop, sound data



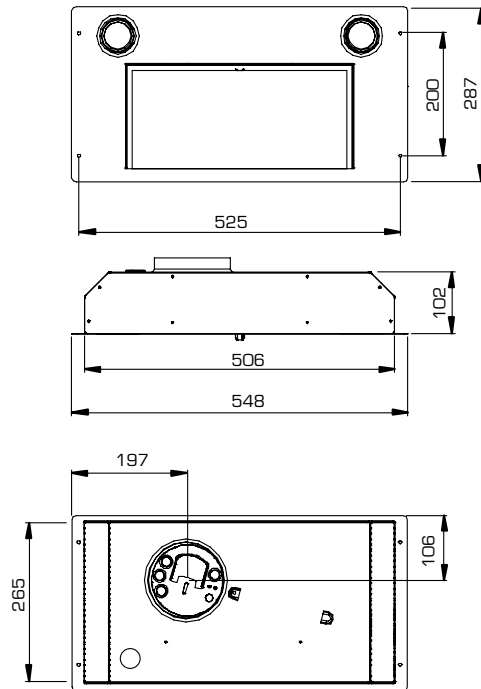
Basic ventilation. The throttling device is set to sprint mode 7 and 15 mm slot at delivery.

In the diagram the following applies:

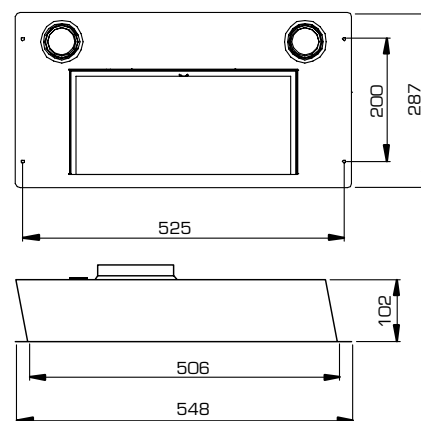
Pressure drop: Applies to air with a density of 1.2 kg/m^3 .
 Self generated noise for hoods with throttling devices when installed according to the figure below.

The indicated sound level L_A applies at a room damping of 4 dB, which corresponds to a damping of the reverberant field in a room with a sound absorption area equivalent to 10 m^2 . Sound value tolerance $\pm 2 \text{ dB(A)}$.

CPEA, CPEG



CPEJ



Product code

Product code

Insert for Fläkt Woods designer CPEa-b-cc-d-e-f
cooker hoods

Models (a) _____

A
G (See page 62 for information
J about the different models)

Lighting (b) _____

8 = Spotlights and knobs (not CPEJ)
9 = Spotlights and touch panel

Control (cc) _____

03 = Forced ventilation with timer-controlled return
(only if b = 8)
04 = Motor-driven damper (only if b = 9)
05 = Motor-driven damper and ornamental lighting
(only if b = 9 and with Magnium CPMA)

Width (d) _____

6 = 600 mm

Connection (e) _____

1 = Left side (only CPEJ and with RDKR-1)
2 = Right side (only CPEJ and with RDKR-2)
3 = Standard (only CPEA and CPEG)

Execution (f) _____

3 = Painted in aluminium colour

Replacement of older cooker hoods



Replacement hoods are intended to replace cooker hoods in old ventilation installations to provide a more modern design when a kitchen is renovated. The ventilation installations for which there are replacement hoods

include Rexovent, Rexonet and Minimaster, using either one of the heat recovery units RDAA, RDKA, RDKB, RDKE or ACF or one of the exhaust air fans BAF, JBDB, JBDC or JBDD.

Possible combinations

ACF	Units				Exhaust air fans		
	Old RDKG	RDKB	RDKE	Old RDAA	JBDB/JBDC	JBDD-aa	BAF
CPDD	CPDC/CPDH	CPDL	CPDL	CPDG	CPDG	CPDB	CPDD
				CPKA/CPMA/CPSA with insert CPEG	Slimline CPSA with insert CPEG		

Cooker hood CPD models

CPDA

Intended for multiple-unit dwellings with central extraction or heat recovery unit. Suitable for both new production and replacement of older cooker hoods.

CPDB

Replacement hood for older exhaust air fan JBDD-aa with condensing apparatus, manufactured before 2007.

CPDC

Replacement hood for older heat recovery unit RDKG without bypass (fits RDKG-a-1-c-d-1).

CPDD

Replacement hood for older heat recovery unit ACF and older exhaust air fan BAF.

CPDG

With transformer, fits for example the new JBDD and JBFG. (Fits JBDD-aa-1-2 but also as replacement hood for controlling older exhaust air fans and units, for example JBDB, JBDC and RDAA).

CPDH

Replacement hood for older heat recovery unit RDKG with bypass (fits RDKG-a-2-c-d-1).

CPDJ

For heat recovery unit RDKR.

CPDK

For heat recovery unit RDKG. Fits RDKG-a-b-c-d-2.

CPDL

Replacement hood for older heat recovery units RDKB and RDKE.

Cooker hood insert CPE models

Fits designer hoods Combiranda CPKA, Magnum CPMA and Slimline CPSA.

CPEA

Intended for multiple-unit dwellings with central extraction or heat recovery unit. Suitable for both new production and replacement of older cooker hoods.

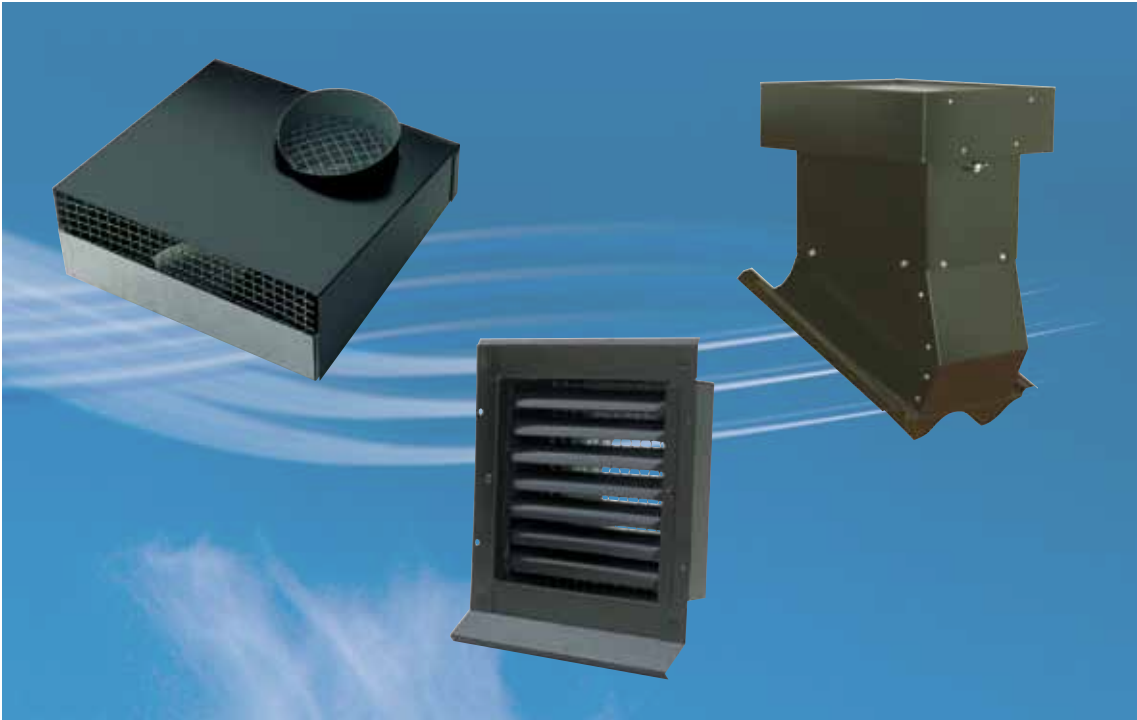
CPEG

With transformer, fits for example the new JBDD and JBFG (fits JBDD-aa-1-2 but can also serve as replacement hood for controlling older exhaust air fans and units, for example JBDB, JBDC and RDAA).

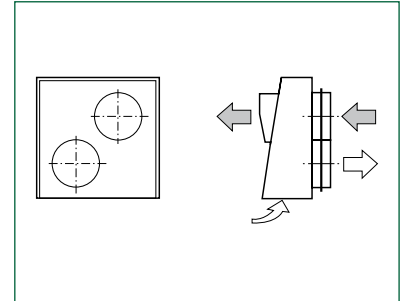
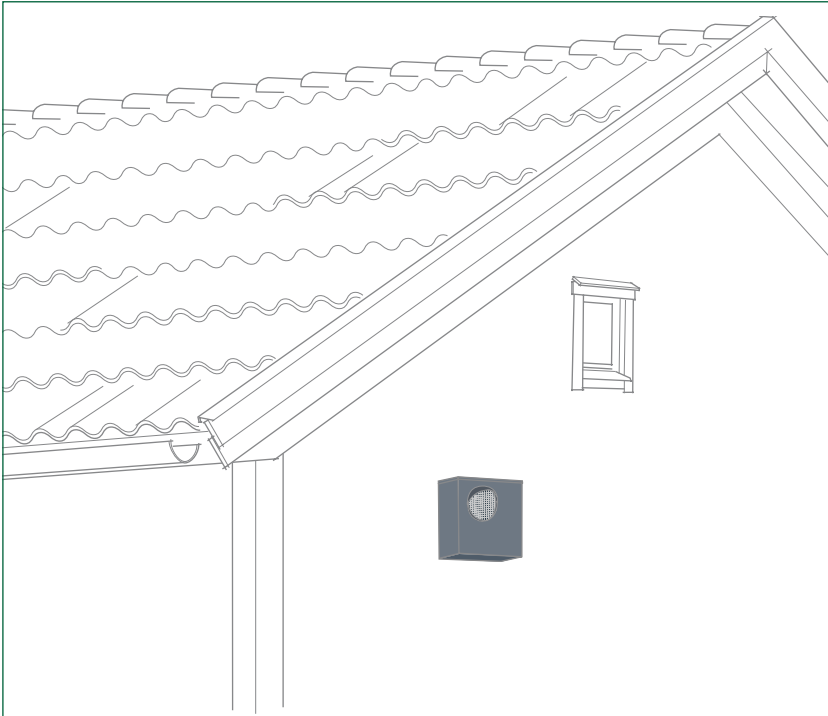
CPEJ

For heat recovery unit RDKR and the Slimline CPSA-2 designer hood.

Accessories



Combined air terminal device RDKZ-26



The combined air terminal device RDKZ-26 takes in outdoor air and removes extract air from the heat recovery unit serving a home. It is mounted on an outside wall. Outdoor air is taken in at the bottom and extract air is blown straight out. Both openings are fitted with screens. The screen over the extract air opening can be easily removed for inspection and cleaning.

Product data

- For mounting on outside wall
- Manufactured in aluzinc coated sheet steel

Product code

Combined air terminal device
RDKZ-26-000

Description, material, dimensions and weight

Description

The combined air terminal device RDKZ-26 takes in outdoor air and removes extract air from the heat recovery unit serving a home. It is mounted on an outside wall. Outdoor air is taken in at the bottom and extract air is blown straight out. Both openings are fitted with screens. The screen over the extract air opening can be easily removed for inspection and cleaning.

Mounting

RDKZ-26 is mounted on a free outside wall with no obstructions to the extract air flow.

The device may not be mounted

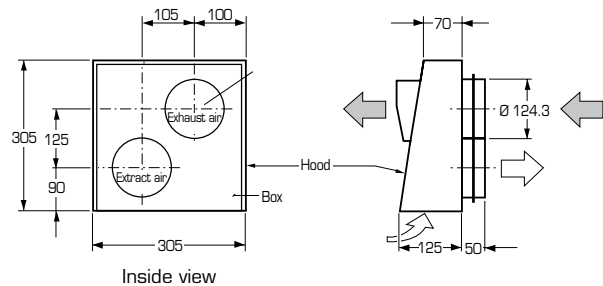
- beneath a entrance ceiling, canopy, balcony or roofs projecting further out than 1 m.
- facing a limited surrounding where risk of retraction of the extract air could occur, for example inner corners (for buildings forming an L).
- closer than 3 m to a neighbour's window or air intake.
- making the extract air flow directed to a nearby patio (at least 5 m from a neighbour's patio).
- close to a trafficated street, car park or similar.
- as close to the boundary of the building plot that the sound level from the device exceeds 40 dB(A) at basic air flow.

The connecting ducts have to be condensate and heat insulated. The device has to have a protecting cover if the device is mounted closer than 0.3 m to the lower edge of the eave.

Materials and surface finish

The device is manufactured in aluzinc coated sheet steel och visible parts are painted in black. There are two connection ducts, \varnothing 125 mm, on the back of the device. The ducts have rubber seals.

Dimensions and weight



Weight: 2 kg

Total pressure drop

Flow, l/s	30	40	50	60	70
Exhaust air, Pa	6	10	16	23	30
Supply air, Pa	8	14	21	31	41

A slight contamination of the exhaust air to the supply air might occur at certain wind conditions when using a combined air terminal device. Better outcome in this respect is attained through transporting out exhaust air above the roof and the air intake is through outside wall.

Description

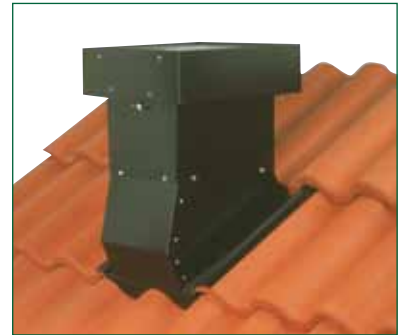
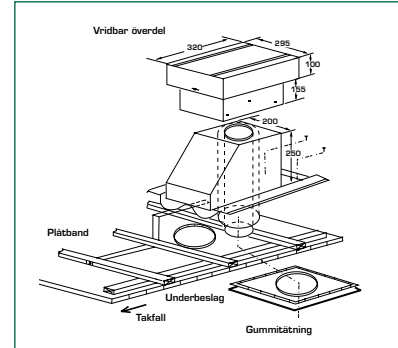
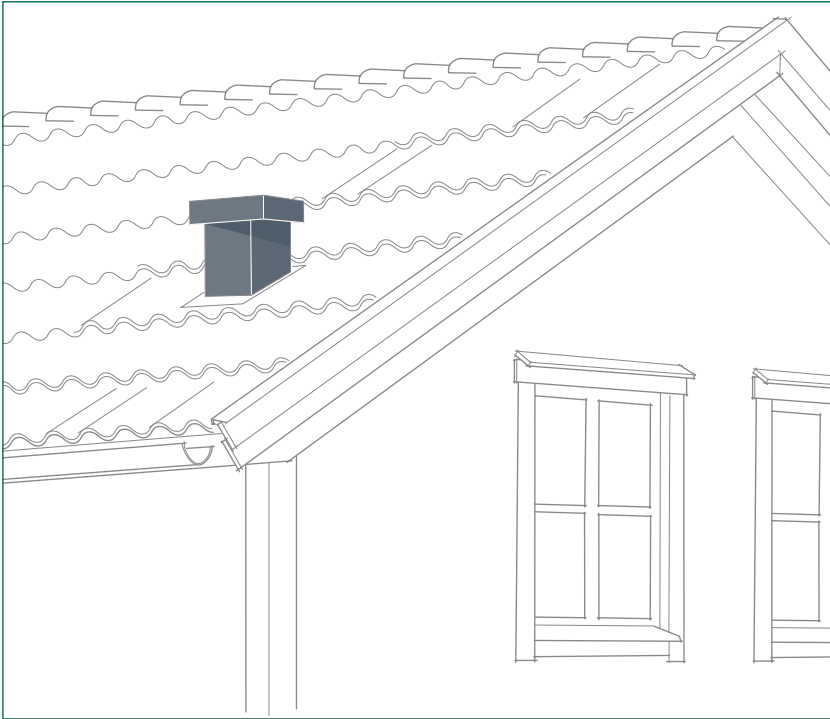
The combined air terminal device is manufactured in aluzinc coated sheet steel and has two connection ducts, \varnothing 125 mm.

Product code

Combined air terminal device

RDKZ-26-000

Ventilation hood CBAE



The CBAE ventilation hood is standard-compliant for homes with separate ventilation. It has an adjustable hood making it suitable for roof pitches of between 14 – 45°. The CBAE is intended for connection to kitchen fans, exhaust air systems or ventilation systems with heat recovery. It is connected to sheet metal ducting or flexible steel tubing.

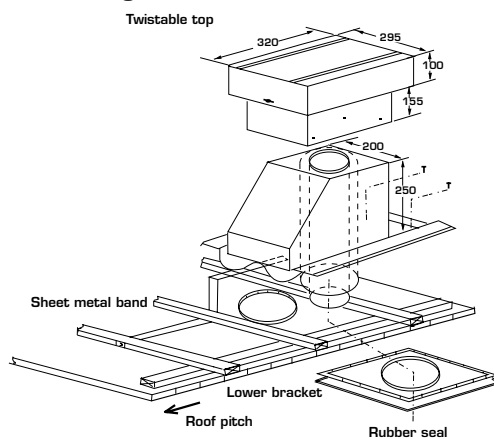
Quick selection

Connection	10 Pa	20 Pa	50 Pa
125	40 l/s	55 l/s	87 l/s
160	65 l/s	90 l/s	145 l/s

Materials

The hood is in black plastic coated (180 µm) sheet metal. It is also available in other colours on request. Environmental class: M3.

Dimensions and weight



Weight: 7.5 kg

Product data

- Black plastic coated sheet metal
- For connection to kitchen fans, exhaust air systems or ventilation systems
- With adjustable hood

Product code example

Ventilation hood CBAE-1-2-1-1-1

Description

The CBAE is designed for the most common concrete double-lap tiles, such as Zanda, Jönåker, Bender etc. It replaces one roof tile. The hood is available with \varnothing 125 and \varnothing 160 mm connections.

Product code

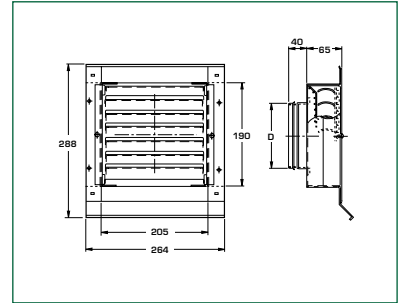
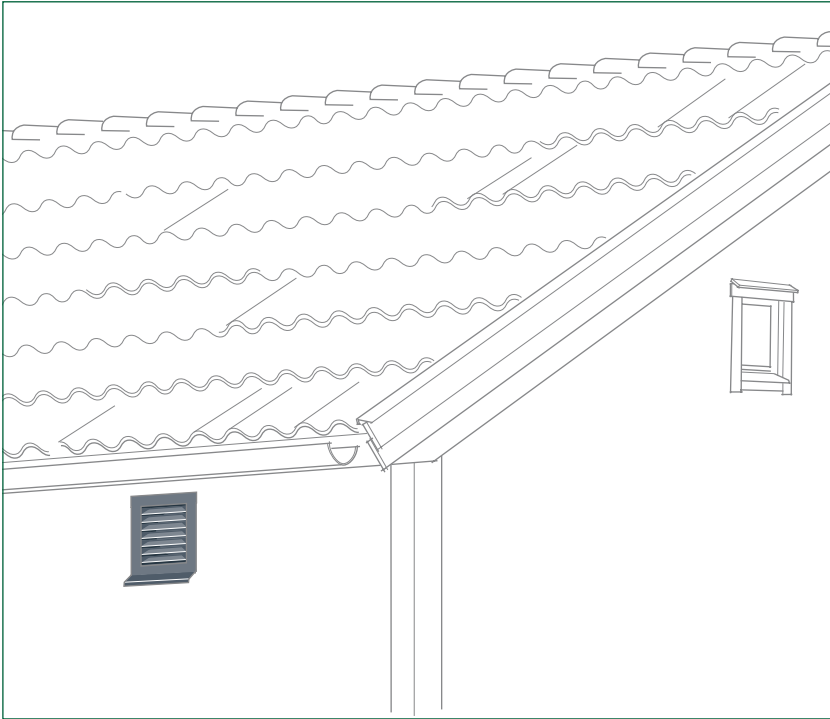
Ventilation hood CBAE-1-c-1-1-1

Roof covering _____
1 = Double-lap concrete tiles

Connection _____
2 = \varnothing 125 mm
3 = \varnothing 160 mm

Colour _____
1 = Black

Air intake BSDB

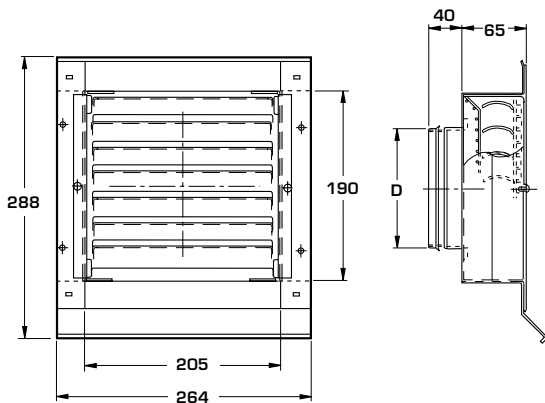


Air intake BSDB is for positioning on outside walls. The intake consists of a box which has a outside wall grille as a rain guard. So it does not need to be positioned where it is not exposed to rain.

Quick selection

Connection	5 Pa	10 Pa
125	33 l/s	45 l/s
160	41 l/s	60 l/s

Dimensions and weight



Weight: 2 kg

Duct connection	D
125	125
160	160

Product data

- For positioning on outside walls
- Air intake in black, plastic coated, galvanised sheet metal

Product code example

Air intake conn. 125 BSDB-20-012

Description

The air intake is manufactured in black, plastic coated, galvanised sheet steel and is available for connection to 125 and 160 mm diameter ducts.

Product code

Air intake **BSDB-20-bbb**

Size _____
 012 = connection Ø125
 016 = connection Ø160

Air terminal devices for residential ventilation



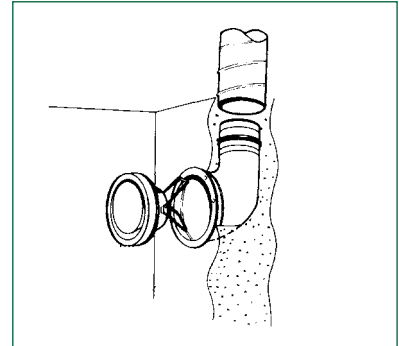
Overview air terminal devices

Air terminal devices for residential ventilation

Product	Comment	Product	Comment
 GPDF, GPDB	Exhaust air valve	 CTKV	Supply air diffuser
 KGEB	Exhaust air valve	 VDTA	Supply air diffuser
 KGFC	Exhaust air valve	 VLC	Supply air diffuser in plastic
 KGEA	Exhaust air valve adjustable	 GPDT	Supply air diffuser
 BYBA	Exhaust air terminal device in plastic	 KE	Supply air valve
 BYFA	Exhaust air terminal device in plastic (forced air flow)	 VST	Supply air valve in plastic
 VEF	Exhaust air valve in plastic	 BYSE	Transfer air valve rectangular
 VEF-S	Exhaust air valve in plastic with integrated sleeve	 BYSO	Transfer air valve round
 VEL	Exhaust air valve in plastic; standard, timer and motor control	 VFLC	Fresh air valve in plastic
 KSO-M, KSO-MH	Exhaust air valve (forced air flow)	 VFLH	Fresh air valve in plastic
 KSOP	Fire damper valve	 VFLR	Fresh air valve in plastic
 KTI	Supply air diffuser	 RK-T	Air valve in enamelled sheet metal
 STQA	Supply air diffuser	 RK-PK	Air valve in impregnated pine
 STI	Supply air diffuser	 RK	Air valve in plastic

On the following pages you can find a selection of our air terminal devices for residential ventilation. For other air terminal devices, visit www.flaktwoods.com.

Exhaust air valve **GPDF, GPDB**



Exhaust valve GPDF and GPDB are exhaust air valves with universal application in the area of comfort ventilation.

GPDF has a spring mounting and fits with angle duct KGEZ 43 or mounting ring KKT. GPDB has a bayonet mounting and is only available in size 200.

GPDF and GPDB have a fixed setting for the basic flow.

Product data

- Simple and symmetrical design
- Easy to install

Product code

Exhaust air valve with spring mounting **GPDF-aaa**

Size _____
100, 125, 160

Exhaust air valve with bayonet mounting **GPDB-aaa**

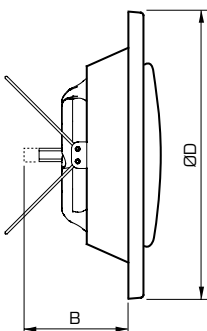
Size _____
100, 125, 160, 200

Quick selection

Size	Connection mm	Air flow l/s (m ³ /h) at sound level		
		25 dB	30 dB	35 dB
GPDF-100	100	33	40 (144)	48
GPDF-125	125	52	62 (223)	75
GPDF-160	160	80	97 (350)	115
GPDB-200	200	115	140 (504)	160

At fully open slot with long mounting ring.

Dimensions and weight

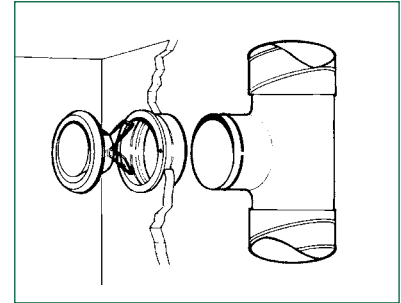
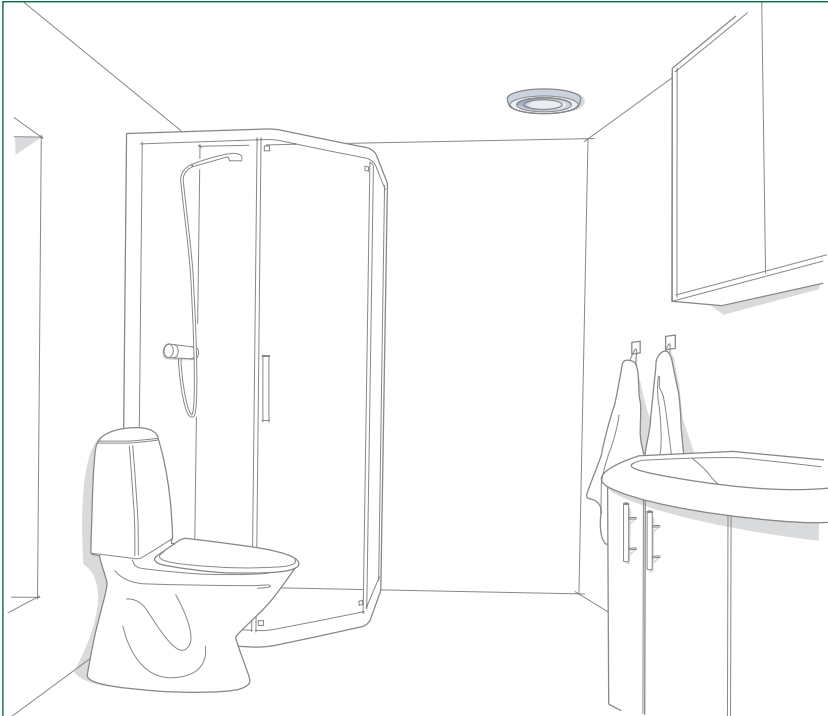


Size	B	ØD	W, kg
GPDF/GPDB-100	67	132	0.17
GPDF/GPDB-125	74	162	0.25
GPDF/GPDB-160	83	193	0.35
GPDB-200	100	245	0.50

Product code example

Exhaust air valve GPDF-100
Mounting ring KKT-100

Exhaust air valve KGEB



The KGEB exhaust air valve is a design protected valve suitable for all sorts of buildings.

The KGEB has a low noise level, even if the pressure drop is high, and it has good natural sound attenuation. The valve has a number of accessories for different types of installations.

The valve in sizes 12 and 16 fits in buildings with already existing older KGEZ mounting rings in the corresponding sizes.

The valve can be wall mounted or ceiling mounted and the air flow is simple to adjust.

Product data

- Low noise level at high pressure drops
- Good natural sound attenuation
- Both for new installations and renovation

Product code

Exhaust air valve **KGEB-aaa**

Size _____
100, 125, 160

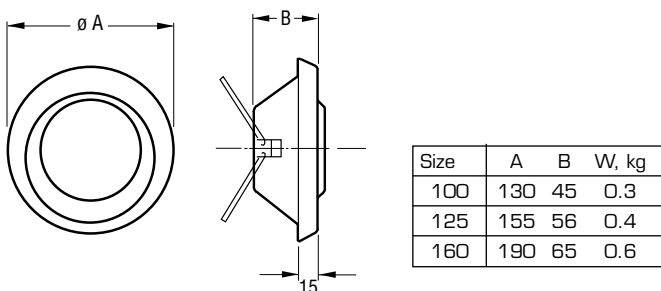
Product code example

Exhaust air valve KGEB-100
Mounting frame KGEZ-20

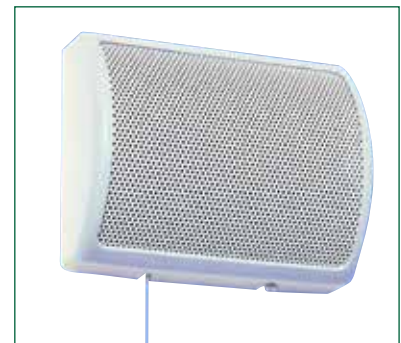
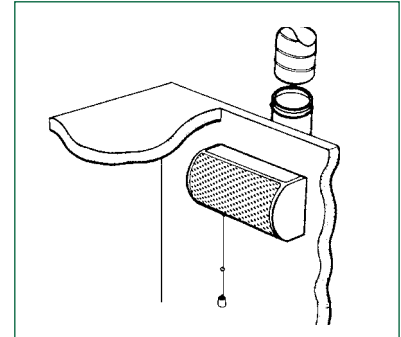
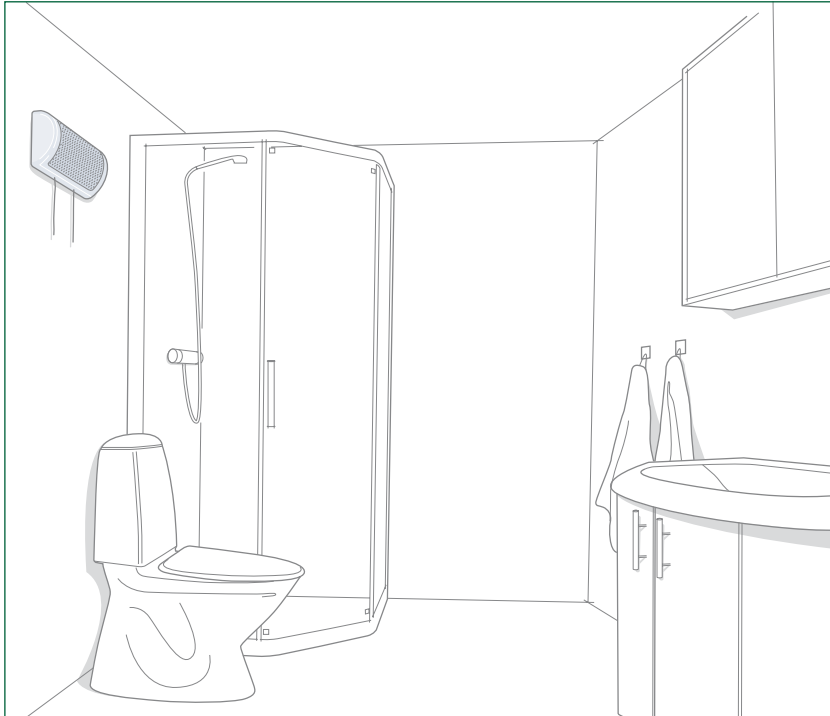
Quick selection at fully open slot

Size	Connection alternatives	Air flow l/s (m ³ /h) at sound level		
		25 dB	30 dB	35 dB
KGEB-100	T-piece	16	19 (68)	23
	Mounting ring	20	24 (86)	27
	Angle duct	14	16 (58)	19
KGEB-125	T-piece	22	25 (90)	28
	Mounting ring	29	34 (122)	38
	Angle duct	16	20 (72)	23
KGEB-160	T-piece	42	50 (180)	58
	Mounting ring	47	55 (198)	64

Dimensions and weight



Exhaust air valve BYFA



Exhaust air valve BYFA is used, for example, in bathrooms and wet rooms in apartments and single-family houses with a mechanical exhaust air system. It can be positioned in the ceiling or on a wall.

Quick selection

Size	Position	Air flow l/s (m ³ /h) at sound level		
		25 dB	30 dB	35 dB
BYFA-3	Basic	9	13 (46)	16
BYFA-3	Forced	27	30 (108)	34
BYFA-4	Basic pos 3	8	12 (43)	15
BYFA-4	Forced	16	20 (72)	25

Product data

- Low sound level
- Can be installed without a frame
- Easy to adjust
- Automatic resetting from forced flow to basic flow
- Manufactured of polyurethane plastic

Product code

Exhaust air valve **BYFA-a**

Execution _____

3 = for single-family houses

4 = for apartments

Metal front kit

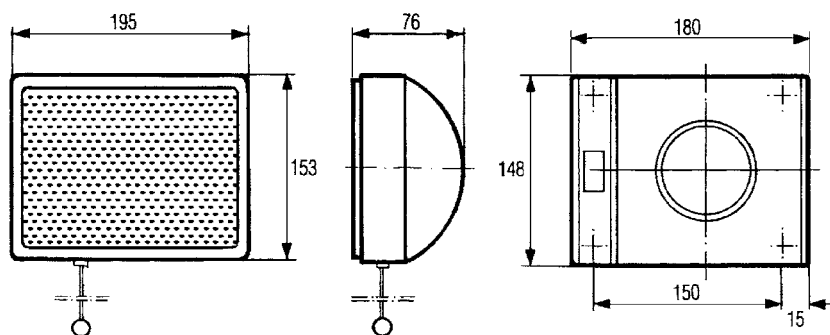
BYFA-99-11

Product code example

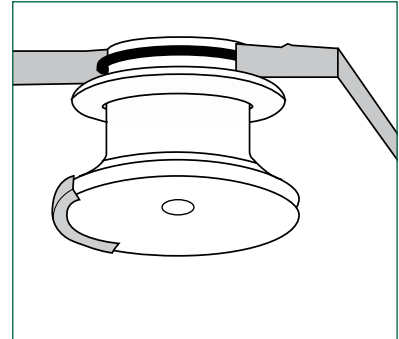
Exhaust air valve BYFA-3 for single-family houses

Exhaust air valve BYFA-4 for apartments

Dimensions



Supply air valve KTI



Supply air valve KTI is a supply air valve suitable for offices as well as houses and has a wide air volume range between 5 - 100 l/s. The valve is quick and easy to install in the duct without need for a mounting ring. Available with three different diffusion patterns.

Quick selection

Size	Connection alternatives	Air flow l/s (m ³ /h) at sound level		
		25 dB	30 dB	35 dB
KTI-100	180°	19	24 (86.4)	29
	270°	24	39 (140.4)	34
	360°	29	34 (122.4)	39
KTI-125	180°	30	36 (129.6)	44
	270°	40	46 (165.6)	56
	360°	46	56 (201.6)	68
KTI-160	180°	45	55 (198)	68
	270°	47	68 (244.8)	64
	360°	63	78 (280.8)	95
KTI-200	180°	68	80 (288)	100
	270°	85	100 (360)	120
	360°	90	110 (396)	139

Product data

- Wide air volume range
- Adjustable diffusion pattern
- Four sizes

Product code

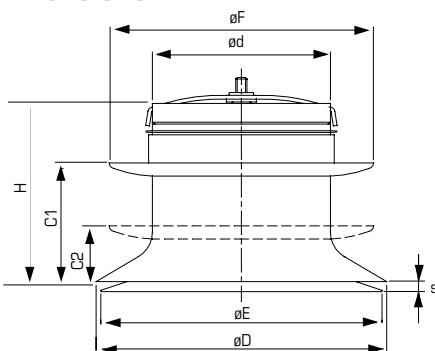
Supply air valve **KTI-aaa**

Size _____
100, 125, 160, 200

Product code example

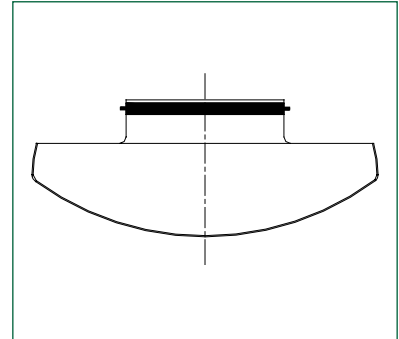
Supply air valve KTI-125,
air diffusion 360°

Dimensions



Size	ØD	Ød	H	C1	C2	ØE	ØF
100	155	95	95	60	25	150	141
125	185	120	95	60	25	180	166
160	226	155	100	63	28	220	201
200	274	195	100	63	28	268	241

Supply air valve STQA



Supply air valve STQA is a very quiet wall mounted valve. Used in smaller premises, such as apartments and offices. The flow is adjustable. STQA is easy to keep clean thanks to the smooth front.

Quick selection at 8 open hole rows

Size	Connection mm	Air flow l/s (m ³ /h) at sound level		
		25 dB(A)	30 dB(A)	35 dB(A)
STQA-100	100	17	20 (72)	24
STQA-125	125	20	24 (86)	28

At fully open slot.

Product data

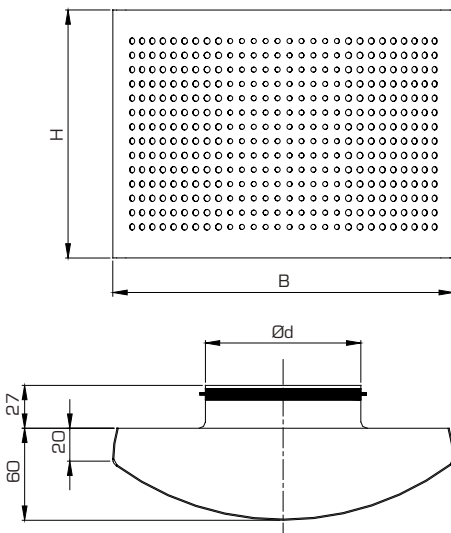
- Low noise level
- Connected to round duct with mounting ring

Product code

Supply air valve **STQA - aaa**

Size _____
100, 125

Dimensions and weight

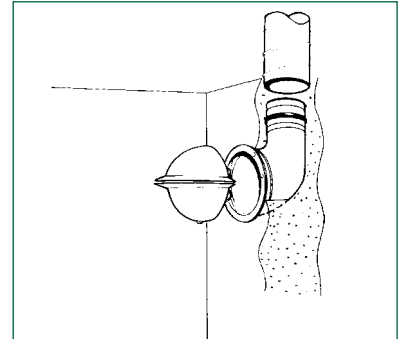


Size	ød	B x H	Weight kg
100	98	218x156	0.66
125	123	218x156	0.65

Product code example

Supply air valve STQA-125

Supply air valve CTVK



The CTVK is a very quiet supply air valve designed for wall mounting. The valve is suitable for use in small premises, such as offices, houses and hotel rooms. The air discharged from the valve is mixed thoroughly with the room air thus providing a draught-free air supply. The air flow is adjustable.

The design of the CTVK minimizes the risk of dust deposits forming on the wall surface. The valve is easy to install and easy to keep clean since it has large, smooth surfaces.

Quick selection fully open

Size	Air flow l/s (m ³ /h) at sound level		
	25 dB	30 dB	35 dB
CTVK-100	14	-	-

- = outside working area

Product data

- Adjustable flow
- Easy to install
- Easy to clean

Product code

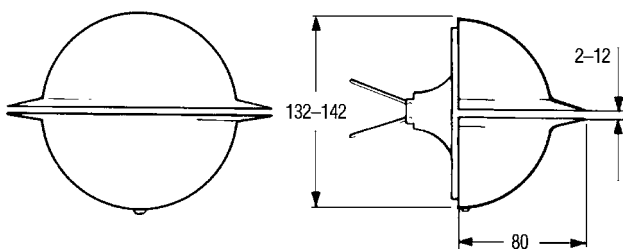
Supply air valve **CTVK-100**

Product code example

Supply air valve CTVK-100

Mounting ring KGEZ-01-100

Dimensions and weight



Weight: 0.4 kg

We Bring Air to Life

Fläkt Woods is a global leader in air management. We specialise in the design and manufacture of a wide range of air climate and air movement solutions. And our collective experience is unrivalled.

Our constant aim is to provide systems that precisely deliver required function and performance, as well as maximise energy efficiency.

Solutions for all your air climate and air movement needs

Fläkt Woods is providing solutions for ventilation and air climate for buildings as well as fan solutions for Industry and Infrastructure.

● Air Handling Units (AHUs)

Modular, compact and small AHU units. Designed to ensure optimisation of indoor air quality, operational performance and service life.

● Air Terminal Devices and Ducts

Supply and exhaust diffusers and valves for installation on walls, ceiling or floor are all included in our large range and fit all types of applications.

● Chilled Beams

Active induction beams for ventilation, cooling and heating, and passive convection beams for cooling. For suspended or flush-mounted ceiling installation – and multi-service configuration. With unique Comfort Control and Flow Pattern Control features.

● Residential ventilation

A complete range of products for residential ventilation. Consists of ventilation units, exhaust air fans and cooker hoods designed to optimise indoor comfort and save energy.

● Fans

Advanced axial, centrifugal and boxed fans for general and specialist applications. Comprehensive range including high temperature and ATEX compliant options. Engineered for energy efficiency and minimised life cycle cost.

● Chillers

Air-cooled and water-cooled chillers with cooling capacity up to 1800kW. Designed to minimise annual energy consumption in all types of buildings.

● Controls and drives

Variable speed drives and control systems, all tested to ensure total compatibility with our products. Specialist team can advise on energy saving and overall system integration.

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