exodraft

NORDfan

Chimney fans, controllers & accessories

Wood-burning stoves and fireplaces

Multiple appliances on a header system

Biomass boiler

Gas fireplaces, stoves and single non-modulating gas boilers

ETS NORD

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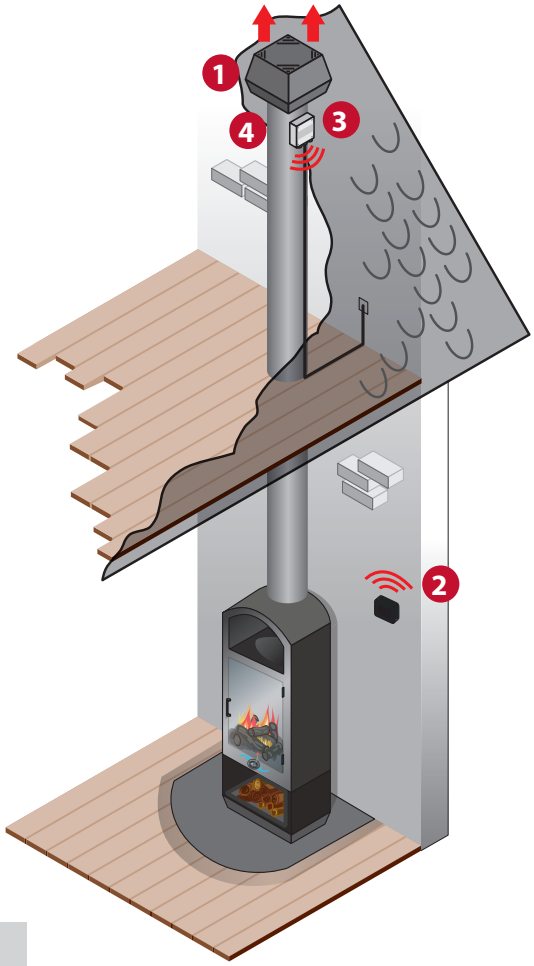
System Descriptions

1. Components for fireplaces or wood-burning stoves

With exodraft chimney fan systems you always have control over the chimney draught regardless of the weather conditions or other factors influencing the natural draught.
The function of the chimney is both to remove the smoke and supply oxygen for effective combustion. In an ideal situation this is done through the natural chimney draught, but in reality, both the chimney itself and other external factors affect the natural draught and thus the effectiveness of the chimney
An exodraft chimney fan gives you complete control over the chimney draught. The chimney fan is installed on top of the chimney and creates a negative pressure in the flue, thus ensuring that the flue gases are extracted up the chimney rather than into the room. The fan control enables you to adjust the chimney draught to suit your needs, so you can enjoy the full comfort of your fireplace.
An exodraft chimney fan system consists of a RS or a RSV chimney fan, a fan control and some installation accessories



Find the components you need here:

1 Chimney fan


RS with horizontal exhaust


RSV with vertical exhaust

2 Control


EFC16


EFC35/EFC35S


EFC18


Xzense


EBC10v2

3 Isolation switch


REP-AFB


REPSW2x16

4 Accessories for Installation

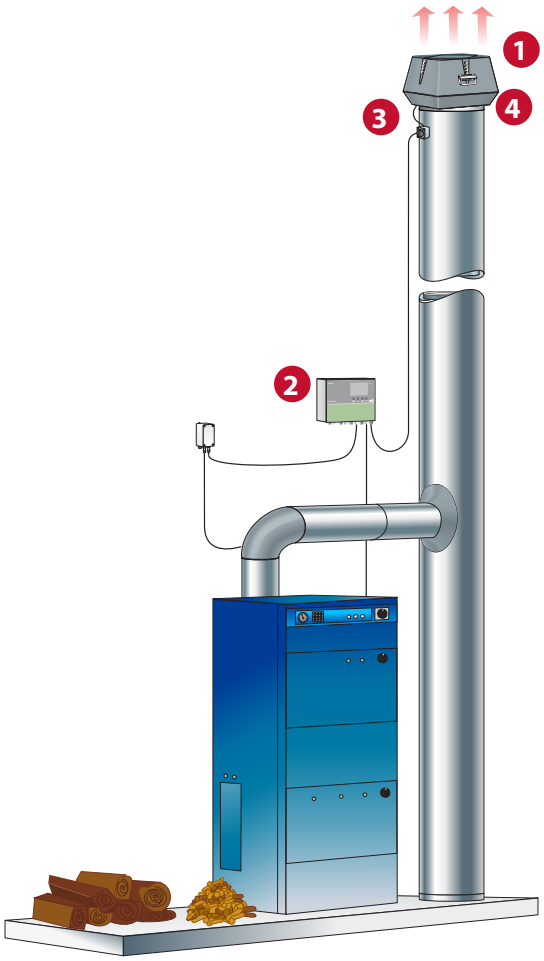

Flange

2. Components for solid fuel or biomass-burning boiler

A natural draught chimney system is designed to work at average conditions for the region. When a solid fuel or biomass boiler is used all year round, the variable climatic conditions will sometimes lead to insufficient chimney draught. The use of a chimney fan system will ensure the correct chimney draught under any climatic conditions at all times.

When a biomass burning appliance, for example a pellet stove, has chimney draught issues it might be a challenge lighting the fire and it may cause soot and smoke to be expelled back into the room. Insufficient chimney draught can also lead to poor combustion, and inefficient use of the fuel.

This can be solved by installing an exodraft chimney fan system which ensures the correct chimney draught all times.



An exodraft system for a solid fuel or biomass burning boiler consists of an RS or RSV chimney fan, a controller and installation accessories.

Find the components you need here:

1 Chimney fan


RS with horizontal exhaust


RSV with vertical exhaust

2 Control


EFC16


EFC35/EFC35S


EFC18


EBC10v2

3 Isolation switch


REP-AFB


REPSW2x16

4 Accessories for Installation


Flange

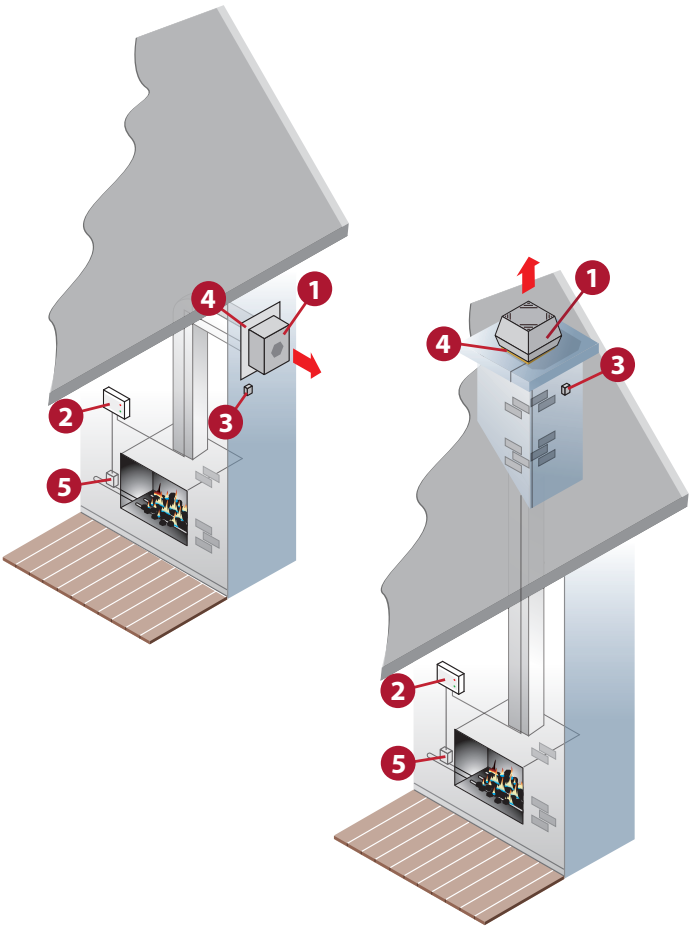
3. Systems for gas fireplaces and gas stoves

The exodraft chimney fan systems for open gas fireplaces are the only ones on the market that feature an approved fail-safe function which ensures that you are not exposed to any unnecessary hazards from your open gas fire.

The exodraft chimney fan system gives you the freedom to choose your gas fireplace based on what you prefer, rather than what the building architecture or layout will allow. In some countries the system can be used in conjunction with a wall-mounted chimney fan.

An exodraft chimney fan system for gas fireplace or stove consists of a chimney fan with a flow measuring system, a Kiwa Gastec approved fan control and installation accessories.

Four types of exodraft chimney fans are available for gas: RHG & RSHG, RSVG and the wall-mounted RSG. They are all fitted with a flow measurement system which –with an EFC21 control system – ensures that gas is not supplied to the fireplace unless there is sufficient draught in the chimney.



When switched on, a signal is sent to the chimney fan to create the optimal updraught in the chimney. When this is achieved, the control system opens the gas valve,

allowing the fire to be lit. Any reduction in updraught will result in the gas supply to the fire being cut and the fire being switched off.

This is the only system in the market with EN298 Kiwa Gastec approval. The design of the optimum system components for the individual system is calculated using the exodraft design software in accordance with BS EN 13384.

Find the components you need here:

1 Chimney fan


RS with horizontal exhaust


RSV with vertical exhaust


RHG with horizontal exhaust


RSG wall-mounted

2 Control


EFC21


EBC22

3 Isolation switch


REPSW2x16

4 Accessories for Installation


Flange

5 Solenoid valve


SMG 12


SMG 14

System Products

4. RS Chimney Fan

Description

An exodraft RS chimney fan is a specially designed chimney fan with horizontal discharge.

The fans can be used with all types of fuel burning appliances and are especially well-suited to solid fuel appliances, such as wood-burning fireplaces and stoves, biomass- and solid-fuel boilers.

Design and construction

exodraft chimney fans are made to continuously withstand flue gas temperatures of up to 250 °C and

continue functioning in dirty environments. They are constructed of corrosion-resistant cast aluminum.

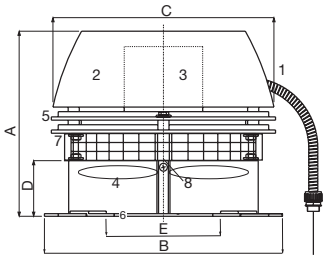
Screws and bolts are made of stainless steel.

RS chimney fans are available in a range of sizes and capacities.
The RS009, RS012, RS014 and RS016 models are equipped with stainless steel axial vanes. The chimney fan RS255 and RS285 are equipped with a centrifugal impeller with cast aluminium blades.

The RS chimney fan has a temperature resistant, entirely closed asynchronous motor, with ball bearings sealed for life. The motor is positioned away from harmful flue gases and is continuously cooled by a special cooling plate and cooling vents. The heat-resistant supply cable has cable-strain relief and is armoured.

The chimney fan opens easily, so that a chimney sweep can sweep the chimney and clean the chimney fan without any problems. A safety mesh covers the radial discharge for protection.

RS technical data



1 - Motor cable
2 - Top section
3 - Motor
4 - Vane
5 - Cooling plate
6 - Base plate
7 - Hinges
8 - Locking screws

Model	Motor data				Weight	Dimension				
	rpm	V	Amp	kW*	kg	A	B	C Ø	D	E Ø
RS009-4-1	1400	1 x 230	0,3	0,05	9	250	300	285	75	220
RS012-4-1	1400	1 x 230	0,4	0,09	14	275	365	350	85	280
RS014-4-1	1400	1 x 230	0,6	0,13	18	330	420	395	100	330
RS016-4-1	1400	1 x 230	1,2	0,29	25	405	480	450	100	380
RS255-4-1	1400	1 x 230	0,4	0,07	14	260	300	350	35	200
RS285-4-1	1400	1 x 230	0,8	0,18	20	290	355	395	35	230

*Power consumption at ambient temperature of 20 °C The RPM of the above fan models are infinitely adjustable
Motor protection IP rating IP54

Insulation class F

The RS009 and RS012 fans can also be supplied with an octagonal bottom section, specially designed for circular chimneys.

RS sound data

Sound levels to external surroundings

Lw (dB) measured in accordance to ISO 3744

Model	Lw (dB)							L_p dB (A)
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
RS009-4-1	54	50	47	43	38	31	25	21
RS012-4-1	64	60	55	52	48	42	34	30
RS014-4-1	75	69	65	62	57	51	44	41
RS016-4-1	81	76	72	69	64	58	52	47

Tolerance +/- 3 dB.

Lw = sound effect level dB (reference: 1 pW)

Lp = sound pressure level dB (A) at 10 m distance from the fan at half spheric sound distribution

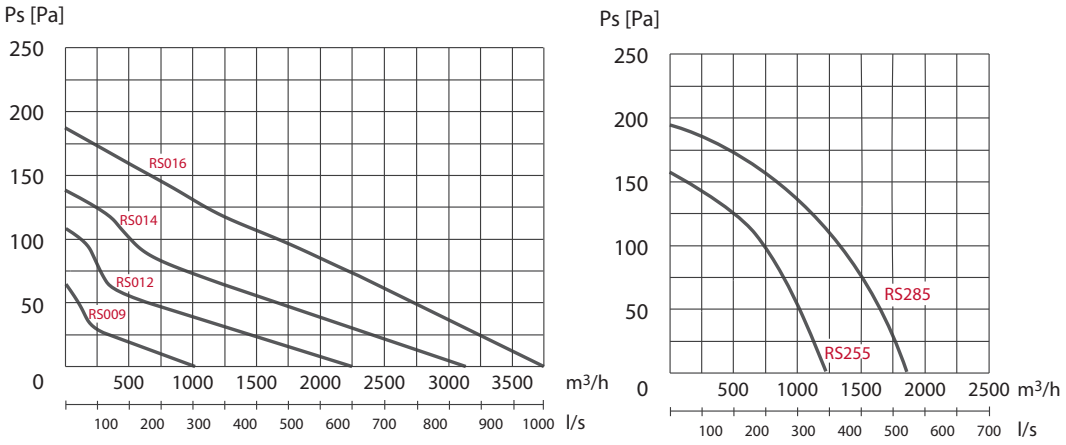
Lp (5 m) = Lp (10 m) + 6 dB

Lp (20 m) = Lp (10 m) - 6 dB

RS capacity diagram

The capacity diagram shown below is only for illustration. Contact exodraft or your nearest dealer to calculate the correct fan size.

Type	Test flue diameters (mm)
RS009	160
RS012	200
RS014	250
RS016	315
RS255	200
RS285	250
at 1400 rpm	



PLEASE NOTE: The capacity diagrams are measured with a flue gas temperature of 20 °C. The fan's capacity changes with the temperature of the flue gases. The correction of the capacity can be calculated using the following equation:

$$Ps_{20} = Ps_t \times \frac{273 + t}{293}$$

Ps = static pressure

t = temperature measured in °C

Example:

System demand: 500 m³/h and 90 Pa at 180 °C

Fan selection: 500 m³/h and 139 Pa at 20 °C

5. RSV chimney fan

Description

An exodraft RSV chimney fan is a specially designed chimney fan with vertical discharge.

The fans can be used with all types of fuel burning appliances and are especially well-suited to solid fuel appliances, such as wood-burning fireplaces and stoves, biomass- and solid-fuel boilers.

Design and construction

Exodraft chimney fans are specially made to continuously withstand flue gas temperatures of up to 250 °C and continue functioning in dirty environments.

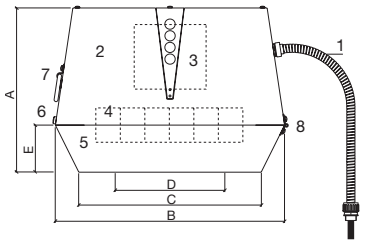
They are constructed of corrision resistant cast aluminium. Screws and bolts are made of stainless steel.

The RSV009, RSV012, RSV014 and RSV016 models are equipped with axial stainless steel vanes. The RSV160, RSV200, RSV250, RSV315 and RSV400 models are equipped with a cast aluminium centrifugal impeller and are used for larger installations.

The RSV chimney fan has a temperature resistant, entirely closed asynchronous motor, with ball bearings sealed for life. The motor is positioned away from harmful flue gases and is continuously cooled by a special cooling plate and cooling vents. The heat- resistant supply cable has cable-strain relief and is armoured.

The chimney fan opens easily, so that a chimney sweep can sweep the chimney and clean the fan without any problems. The exhaust vent has a protective stainless steel grille.

RSV technical data



1 - Connecting cable
2 - Top section
3 - Motor
4 - Vane/centrifugal impeller
5 - Bottom section
6 - Locking screws
7 - Handle
8 - Hinges

Model	Motor data				Weight	Dimension				
	rpm	V	Amp	kW*	kg	A	BxB	CxC	Ø D	E
RSV009-4-1	1400	1 x 230	0,14	0,05	13	250	310	240	215	70
RSV012-4-1	1400	1 x 230	0,35	0,13	17	280	390	310	275	80
RSV014-4-1	1400	1 x 230	0,8	0,16	24	335	485	385	335	100
RSV016-4-1	1400	1 x 230	1,8	0,32	35	380	580	465	365	115
RSV160-4-1	1400	1 x 230	0,4	0,04	12	250	310	240	160	70
RSV200-4-1	1400	1 x 230	0,4	0,07	18	280	390	310	200	80
RSV250-4-1	1400	1 x 230	0,8	0,16	27	335	485	385	250	100
RSV315-4-1	1400	1 x 230	1,8	0,37	37	380	580	465	315	115
RSV400-4-1	1400	1 x 230	2,6	0,60	47	430	650	525	400	130

**Power consumption at ambient temperature of 20 °C.
The RPM of the above fan models are infinitely adjustable.
Motor protection IP rating IP54.
Insulation class F.

RSV sound data

Sound levels to external surroundings

Lw (dB) measured in accordance to ISO 3744

Model	Lw (dB)							L_p dB (A)
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
RSV009-4-1	57	55	54	49	40	35	26	26
RSV012-4-1	64	62	61	55	51	46	40	33
RSV014-4-1	71	70	68	61	56	50	44	40
RSV016-4-1	76	76	70	65	60	55	49	44
RSV160-4-1	56	54	57	51	44	34	28	30
RSV200-4-1	64	62	61	55	51	46	40	33
RSV250-4-1	64	68	66	65	61	49	45	41
RSV315-4-1	71	75	70	73	68	57	52	48
RSV400-4-1	76	80	75	79	74	62	57	53

Tolerance +/- 3 dB

Lw = sound effect level dB (reference: 1 pW)

Lp = sound pressure level dB (A) at 10 m distance from the fan at half spheric sound distribution

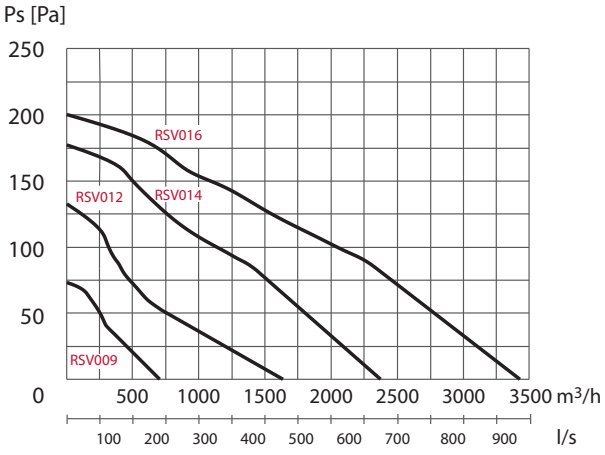
Lp (5 m) = Lp (10 m) + 6 dB

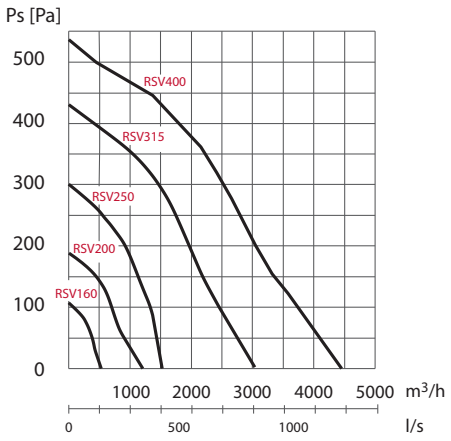
Lp (20 m) = Lp (10 m) - 6 dB

RSV capacity diagram

The capacity diagram shown below is only for illustration. Contact exodraft or your nearest dealer to calculate the correct fan size.

Type	Test flue diameters (mm)
RSV009	160
RSV012	200
RSV014	250
RSV016	315
RSV160	160
RSV200	200
RSV250	250
RSV315	315
RSV400	400
at 1400 rpm	





PLEASE NOTE: The capacity diagrams are measured with a flue gas temperature of 20 °C. The fan's capacity changes with the temperature of the flue gases. The correction of the capacity can be calculated using the following equation:

$$Ps_{20} = Ps_t \times \frac{273 + t}{293}$$

Ps = static pressure

t = temperature measured in °C

Example:

System demand: 500 m³/h and 90 Pa at 180 °C

Fan selection: 500 m³/h and 139 Pa at 20 °C

6. GSV Greasefan

Description

The exodraft Grease Fan chimney fan with integrated grease drain is a specially built chimney fan with a vertical discharge for grills and kitchen exhaust.

When installed on top of a chimney the chimney fan generates a vacuum in the flue pipe and in the chimney.

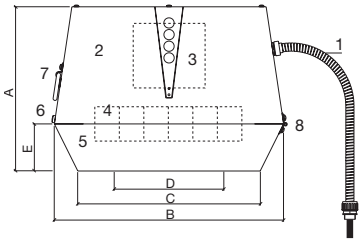
The grease fan is suitable for grills and kitchen exhausts. With its integrated grease drain, grease drip pan and exchangeable granule cushion it is the ideal solution for greasy exhaust air.

Design and construction

GSV chimney fans are built for temperatures up to 250 °C in continuous rating and made from cast aluminium. All screws and bolts are stainless steel.The motor is a temperature-resistant, encapsulated induction motor with sealed and maintenance-free ball bearings, sitting outside the air volume flow.The cable is heat-resistant, strain-relieved and shielded externally with a reinforced hose. These measures give the chimney fan high operational reliability and long service life.

The grease fan chimney fan is hinged, allowing chimney cleaners to easily clean the chimney and enabling easy regular cleaning. The drain opening is fitted with a stainless steel grid as protection.

GSV technical data



1 - Connecting cable
2 - Upper part
3 - Motor
4 - Impeller
5 - Lower part
6 - Locking screws
7 - Handle
8 - Hinge

Integrated fat drain on the Grease Fan

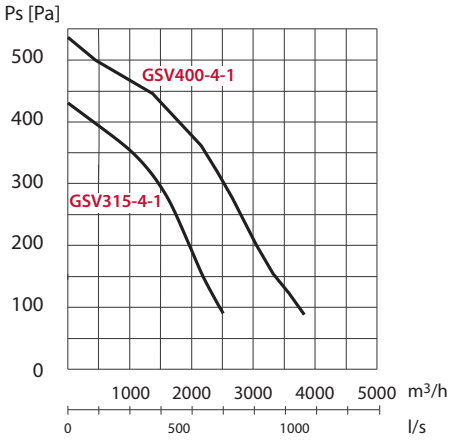
Model	Motor data				Weight	Dimension				
	rpm	V	Amp	kW*	kg	A	B	C Ø	D	E Ø
GSV315-4-1	1400	1 x 230	1,8	0,37	45	430	650	525	280	130
GSV400-4-1	1400	1 x 230	2,6	0,60	47	430	650	525	280	130
GSV400-4-2**	1720	3 x 230	4,0	0,75	52	460	650	525	400	130

*Power consumption for ambient temperature of 20°C
** Frequency converter required
Density class IP54, Insulation class F.

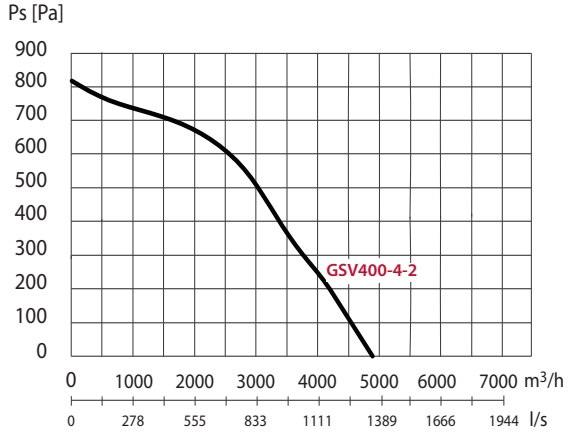
GSV capacity diagram

The capacity diagrams shown below are only for illustration. Contact exodraft or your nearest dealer to calculate the correct fan size.

GSV315 and GSV400



GSV400-4-2



7. EFC16 and EFC35/EFC35S manual controls

Description

EFC16 and EFC35/EFC35S are electronic speed controls used to manually control exodraft chimney fans.

The EFC16 or EFC35/EFC35S speed controls adjust the speed of the chimney fans and thereby makes it possible to control the fan's capacity (draught) in the range 25–100 %.

They have a built-in ON/OFF switch in the control knob, a built-in minimum-speed trimmer, and a LED to indicate operation. The controls are CE-certified.

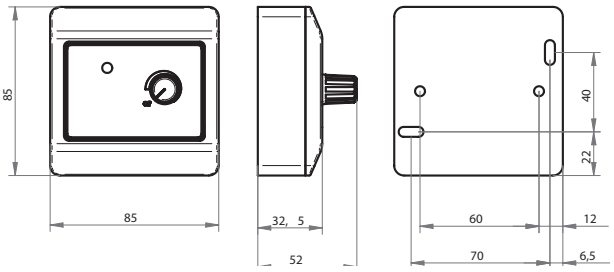
Function

The EFC16 and EFC35/EFC35S speed controls are for manual control. When the knob on these controllers is turned to the right, it will click, and the fan will turn on at full rpm. As the knob is rotated clockwise, the fan speed will be reduced. To turn the fan off, the knob must be turned all the way anti-clockwise, until it has passed the on/off point again.

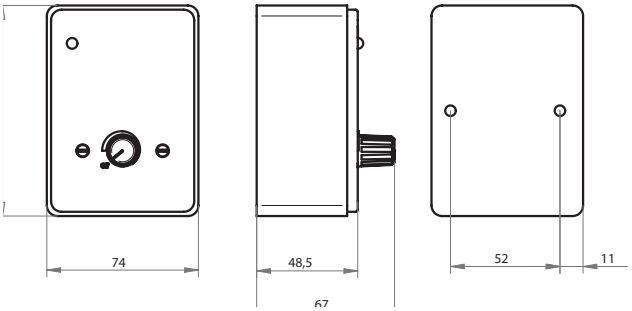
EFC16 or EFC35/EFC35S control units must have a REP-AFB isolation switch installed on the chimney. The isolation switch must be installed by an authorised electrician.

EFC16 and EFC35/EFC35S technical data

EFC16



EFC35/EFC35S

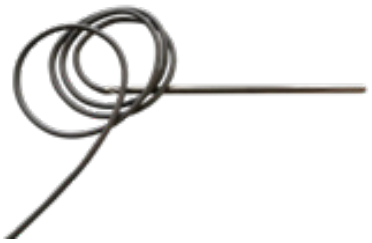


Description	EFC16	EFC35	EFC35S
Height (mm)	85	102	120
Width (mm)	85	74	80
Depth (mm)	52	67	77
Load (Amp)	Max. 1,5 A	Max. 3,5A	Max. 3,5A
Fuse (Amp)	T 1.6 A	T 4 A	T 4 A
Power supply	230 V AC, 50 Hz	230 V AC, 50 Hz	230 V AC, 50 Hz
Ambient temperature	0 °C to +40 °C	0 °C to +35 °C	0 °C to +35 °C
IP-rating	IP30	IP20	IP44
Casing material	ABS	ABS	ABS
Colour	White	White	White
Usable with the following fans listed in this brochure:	RS009/012/014/016 RSV009/012/014 RSV160/200/250	RSV016 RSV315 RSV400	All 230V models

8. EFC18

Description

The EFC18 is a manual nine-step speed control with an integrated automatic START/STOP. It features a boost function, to make lighting the fire easier. The EFC18 controller comes with a temperature sensor to be fitted under the fan.



Function

The EFC18 controller switches the chimney fan on with a simple press on the button on the control panel. To ensure sufficient up-draught when lighting the fire, the fan will run at full speed for seven minutes unless turned down manually. After the start up period the fan will modulate down to the speed it was running at last time it was in operation.

When re-stoking the fire, press the operating button once. The EFC18 control will then run the fan in boost mode for three minutes to avoid smoke and dust in the room.

The EFC18 temperature sensor, which is installed under the chimney fan, registers falling temperature. As the fire burns out and the flue temperature drops, the controller will (at a pre-set temperature of 20, 40 or 80 °C) run the fan for 45 minutes before stopping. This ensures that

all the wood in the fire has combusted and the fan will automatically start if a chimney temperature above a set level is registered.

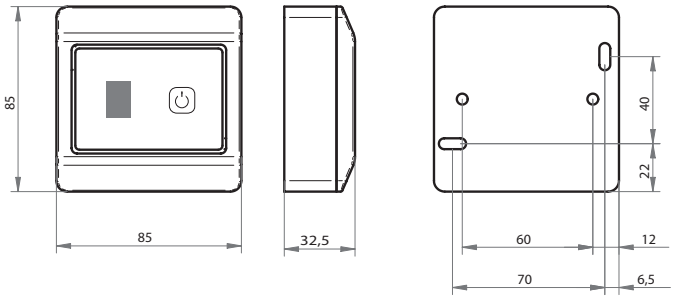
The EFC18 can always be adjusted manually during operation, but the temperature sensor will prevent the fan from being turned off while the fire is still burning and thereby avoid damaging the fan motor and eliminate the risk of spillage.

A REPSW2x16 isolation switch must be fitted to the chimney when the EFC18 control system is installed. The isolation switch must be installed by an authorised electrician.

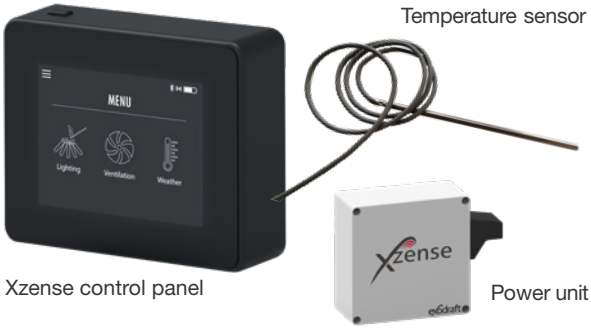
EFC16 and EFC35/EFC35S technical data

Description	EFC18
Height (mm)	85
Width (mm)	85
Depth (mm)	32,5
Load (Amp)	1,2 A
Fuse (Amp)	T 1,25 A
Power supply	230 V AC, 50 Hz
Temperature sensor range	-50 °C to +400 °C
Ambient temperature	0 °C to +40 °C
IP-rating	IP30
Casing material	ABS
Colour	White
Usable with the following fans listed in this brochure:	RS009/012/014/016 RSV009/012/014 RSV160/200/250

EFC18



9. Xzense wireless smart control



Optional accessories (to be ordered separately)

- Mounting kit for power unit on steel chimney
- Repeater unit for maintaining signal strength for those installations where the control panel and power unit are placed far apart
- XTP pressure sensor
- Additional Xzense control panel
- Additional USB charger cable

Xzense technical data

Description	Xzense
Frequency for radiocommunications	868 MHz
Bluetooth LE 2.4 Ghz	1,2 A
Range	~ 18 m inside buildings
Power unit	
Dimensions (w×h×d)	122 x 120 x 55 mm
Material	PC
Ingress protection	IP54
Voltage	230 V ±10 % / 50 Hz
Fuse	T 2,0 A
Power output	2 A
Operating temperature	-30 °C to +60 °C
Power consumption (standby)	1 W
Control panel	
Dimensions (w×h×d)	77 x 86 x 25 mm
Voltage	5 V (USB)
Material	ABS
Operating temperature	0 °C to +40 °C
Ingress protection	IP20
Battery type	Li-Po
Battery life (full charge)	approx. 30 days (normal use)
Temperature sensor	
Dimensions	ø6 x 200 mm
Type	PT 1000
Material	Stainless steel
Ambient temperature	Sensor: -50 °C to +50 °C Cable: -50 °C to +125°C

Description

The Xzense wireless remote from exodraft is used for chimney fans for solid fuel fires, such as wood-burning stoves or open fireplaces. Xzense can be paired with your iOS or Android smart phone via Bluetooth.

Xzense consists of:

- Xzense wireless control panel with touchscreen
- Power unit with 5 metre cable that plugs into the mains
- Temperature sensor to be placed under the fan (must be connected to the power unit)
- Wall-mounting kit for control panel

The Xzense control panel helps you start and stop the fan and regulate its speed. The panel stores the last operating settings and allows you to access current and historical performance data from the display.

When lighting the fire, activate Xzense's boost function and the chimney fan will boost the chimney draught for ten minutes (default setting) to help establish the fire and prevent smoke backflow. Once the boost period expires, Xzense will automatically return to the last used setting to balance the fire.

Once the fire is smouldering, Xzense will notify you that it is time to refuel. If you choose to refuel, Xzense will prompt the chimney fan to return to its maximum speed for three minutes (default setting) to prevent smoke from spilling into the room while the oven door is open.

If you choose not to refuel, the Xzense will instead go into after run mode for 30 minutes (default setting) to ensure that there are no more embers left in the fireplace. The fan will automatically turn off and the heat from the dwelling is not sucked away.

The default run times for boost and after run modes can be changed in the settings menu.

Xzense also has a ventilation mode for ventilating the fireplace at your convenience. This can be useful while cleaning the fireplace to prevent ash and dirt from escaping into the room.

The optional eXotelligence mode, which can be activated from the settings menu, is a self-learning function that stores data from previous lightings and helps you create the best possible chimney draught by automatically adjusting the speed of the chimney fan based on weather conditions and temperature. This mode also helps to further reduce particle emission.

See more at www.xzense.com

10. EFC21 control

Description

exodraft controller EFC21 is developed for gas fireplaces where an exodraft chimney fan is installed.

The control system supervises the fail-safe function. In case of insufficient chimney draught, the EFC21 will shut off the gas supply.

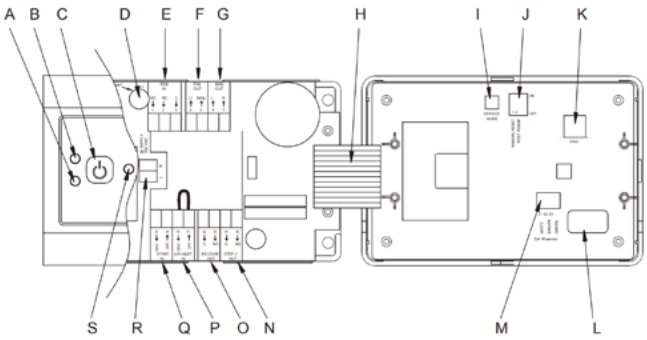
Function

By activating EFC21, the chimney fan will immediately start up at full speed. When the fail-safe supervision confirms sufficient chimney draught, the fireplace can be lit and the fan speed will adjust to the pre-set value which was set during commissioning.

The controller has a step-up function and a 15-second built-in delay function to avoid nuisance cut-outs.

When EFC21 is turned off, the chimney fan stops. It is possible to pre-set a post-purge period of 3 minutes.

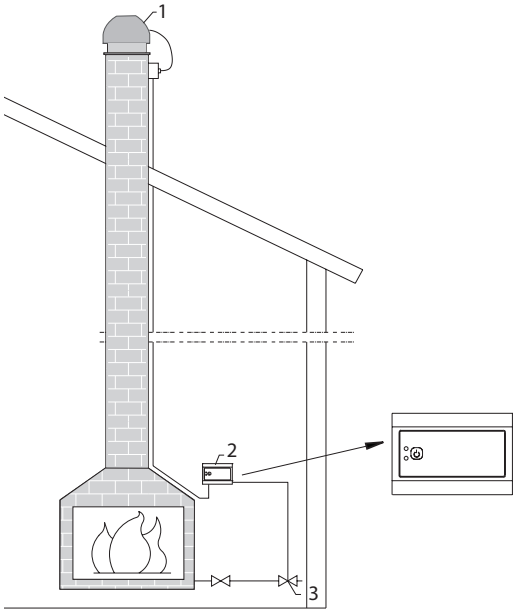
The step-up function is part of the fail-safe system. Should the draught fail during normal operating conditions, the controller will increase the fan speed to compensate. This usually occurs on windier days than the commissioning day. If sufficient draught cannot be re-established, the EFC21 will shut off the gas supply.



Accessories

SMG12: Solenoid valve for EFC21 for 1/2" pipe

SMG14: Solenoid valve for EFC21 for 1/4" pipe.



Description	Data EFC21
Height (mm)	85
Width (mm)	126
Depth (mm)	32
Fuse rating (amps) (A)	3,15 A T
Fail safe (B) Pressure differential	T 1,25 A
switch (PDS)	24 V DC (Closed circuit supply)
Output to chimney fan (C)	1,8 A/230 V (AC 3)
Output to soleniod valve (SMG) (D)	230 V AC max. 100 V A
Dipswitch options (E)	Manual reset
Post-purge 3 min. period	ABS
Set-point running speed (F)	Potentiometer on PCB
Supply (G)	230 V +/- 10 %, 50 Hz
Input for external on/off switch (H)	24 V DC (Closed circuit supply)
Release out Relay (I)	Max. 3 A 230 V AC / 3A 30 V DC (Fused: 3,15AT)
Operating temperature	-10 °C to +40 °C
Degree of protection	IP30
Material	ABS
Colour	White
CE-Approval No.	0063BN1144 based on EN298 (2003)
Usable with the following chimney fans in this brochure	RHG, RSHG, RSVG, RSG

The system consists of:

1 - Chimney fan
2 - Controller EFC21
3 - Solenoid valve SMG (order seperately)

11. EBC10v2 automatic control

EBC10v2

XTP sensor

EBC10v2 technical data

Description	EBC10v2
EBC10v2EU01	
Dimension (W x H x D)	175 x 175 x 110 mm
Weight	1,5 kg
IP-rating / material	IP54 / ABS PA758
Voltage	230 V AC ±10 %, 50 Hz ±1 %
Power consumption	475 W (3,7 A)
Fuse	4.0T
Temperature	-20 °C to +50 °C
Monitoring range	-500 to +500 Pa
XTP-sensor	
Dimension (W x H x D)	82 x 80 x 55 mm
Operating temperature	-25 to +50 °C
Monitoring range	0 to +150 Pa
Max. distance between EBC24 and XTP sensor	100 m
IP-rating	IP65
EBC10v2 Inputs	
Digital boiler inputs (1)	10-230 V AC/DC
Pressure sensor (XTP) input	0 to 10 V DC, 20 mA
Pressure switch (PDS) input	24 V DC, 20 mA
EBC10v2 Outputs	
Digital boiler outputs (1)	250 V AC, 8 A,
Motor regulator	Supply voltage -3 %, 3 A
24 V DC power supply	100 mA
Alarm output relay	250 V AC, 8 A

Description

The EBC10v2 is an automatic control with a pressure transducer (XTP) for one boiler or other installations with one heat source.

With the help of the XTP sensor, which is installed in the chimney, the constant pressure is monitored and maintained by regulating the speed of the chimney fan.

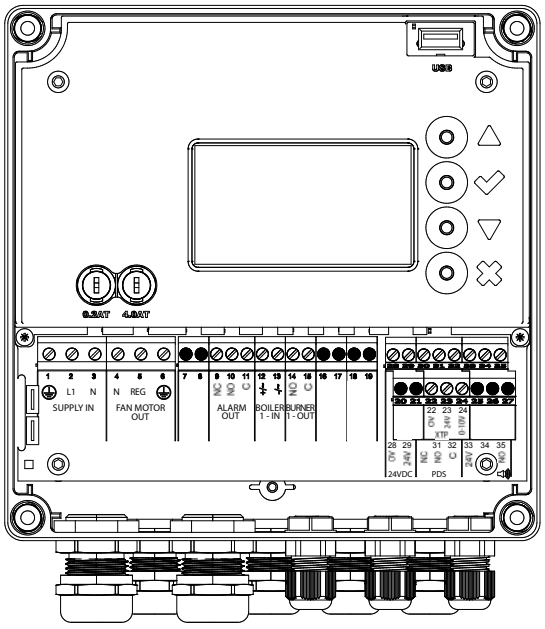
EBC10v2 offers the possibility of an external entry point for a pressure switch or alarm sensor as well as the possibility of an alarm exit point for, for instance, a building management system.

Function

When the boiler or the heating system starts, a signal is sent to the EBC10v2 which starts the chimney fan. When the control receives the signal that the desired chimney vacuum has been reached, a signal is sent to start the burner of the boiler.

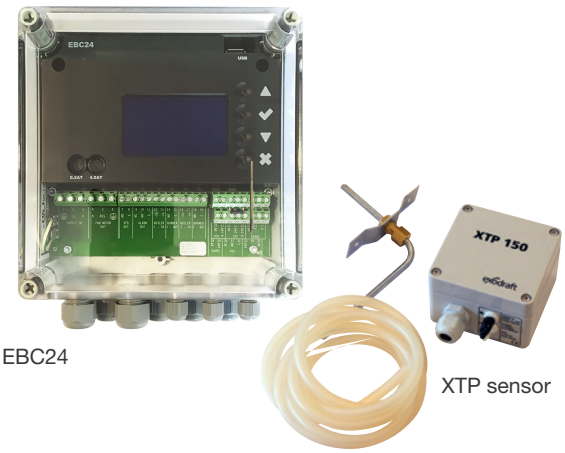
The required chimney draught is therefore always guaranteed when you start the boiler, thereby the best and most economical operating conditions are ensured.

If the draught in the chimney falls below the desired level, the speed of the chimney fan is regulated until the desired chimney draught is re-established.



• = not available on EBC10v2 (see EBC24)

12. EBC24 automatic control



EBC24

XTP sensor

EBC24 technical data

Description	EBC24
EBC24EU01/EBC24EU02	
Dimension (W x H x D)	175 x 175 x 110 mm
Weight	1,5 kg
IP-rating / material	IP54 / ABS PA758
Voltage	230 V AC ±10 %, 50 Hz ±1 %
Power consumption	475 W (3,7 A)
Fuse	4.0T
Temperature	-20 °C to +50 °C
Monitoring range	-500 to +500 Pa
XTP-sensor	
Dimension (W x H x D)	115 x 90 x 55 mm
Operating temperature	-25 to +50 °C
Monitoring range	0 to +150 Pa
Max. distance between EBC24 and XTP sensor	100 m
IP-rating	IP65
EBC24EU01/ EBC24EU02 Inputs	
Digital boiler inputs (2)	18-230 V AC/DC
Pressure sensor (XTP) input	0 to 10 V DC, 20 mA
Pressure switch (PDS) input	24 V DC, 20 mA
EBC24EU01/ EBC24EU02 Outputs	
Digital boiler outputs (2)	250 V AC, 8 A,
Motor regulator	Supply voltage -3 %, 3 A
Motor start/stop relay	250 V AC, 8 A
Control signal 0–10 VDC	20 mA
24 VDC power supply	100 mA
Alarm output relay	250 V AC, 8 A

EBC24EU01 Control for indoor installation

EBC24EU02 Control for outdoor installation

Description

The EBC24 is an automatic control system for boiler installations and for installations in which multiple heat sources are connected to the same chimney. The control monitors and maintains a specific draught by maintaining a constant pressure.

The EBC24 system consists of an EBC24 control, which can be positioned anywhere, and a pressure transducer (XTP sensor) which is positioned in the chimney.

Function

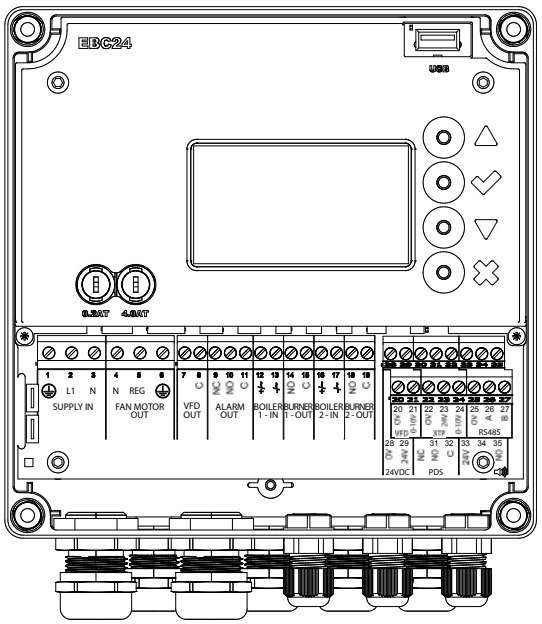
In installations where more fireplaces are connected to the same chimney, the chimney fan operates continuously. The EBC24 controller monitors and maintains a specific draught by maintaining a constant pressure. The pressure in the chimney is measured by the XTP sensor. If the draught falls below the set value, the speed of the chimney fan is regulated until the draught reaches the required level again.

The EBC24 has two heating appliance interlock circuits as standard and can be expanded in multiples of four with the use of additional relay boards (ES12).

A self-diagnostic panel with LEDs monitors all connection terminals for easy service and

troubleshooting. The EBC24 also has an alarm output for a BMS-system. An alarm via a buzzer can be made through the buzzer output.

The EBC24 has terminals for connecting a RS485 communication BUS.



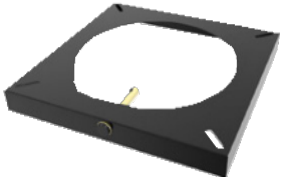
13. Frequency Inverter FRK

Description

The frequency inverters - or variable speed drives (VSD) – are used for regulating the speed of the chimney fans with three-phase motors. All CFIR inline fans have special EC (electronically controlled) motors that can only be regulated by using a frequency inverter. The inverters are used in combination with the controllers EBC22/24 or the manual controller Pot S. All FRK frequency inverters are pre-programmed with a unique software tested and designed to suit each fan.

Type	Description	Power supply
FRK-030	For inline fan CFIR200, Density class IP20	1 x 230 V
FRK-031	For inline fan CFIR200, Density class IP66	1 x 230 V
FRK-032	For inline fan CFIR300, Density class IP20	3 x 400 V
FRK-033	For inline fan CFIR300, Density class IP66	3 x 400 V
FRK-034	For inline fan CFIR400, Density class IP20	3 x 400 V
FRK-035	For inline fan CFIR400, Density class IP66	3 x 400 V
FRK-036	For inline fan CFIR500, Density class IP20	3 x 400 V
FRK-037	For inline fan CFIR500, Density class IP66	3 x 400 V
FRK-040	For chimney fan RSV400-4-2	1 x 230 V
FRK-041	For chimney fan RSV450-4-2	1 x 230 V
FRK-042	For chimney fan RSV400-4-2	3 x 400 V

14. Cover plate



FRAFD

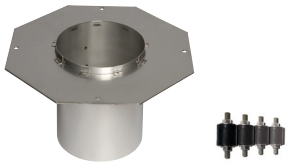
Description

Cover plate for brick and steel chimneys (to cover anti-vibration mat and flange).

Type	Description	Fits chimney fan type
FR1AFD6	Cover plate steel chimney	RSV009, RSV160
FR2AFD6	Cover plate steel chimney	RSV012, RSV200, RSVG200, RS009, RS255, RSHT009
FR3AFD6	Cover plate steel chimney	RSV014, RSV250, RSVG250, RS012, RS014, RS285, RSHG012, RSHG014, RSHT012, RSHT014
FR4AFD6	Cover plate steel chimney	RSV016, RSV315, RSVG315, RS016, RSV400, RSV450, RSHT016
FR1AFD6-001	Cover plate brick chimney	RSV009, RSV160
FR2AFD6-001	Cover plate brick chimney	RSV012, RSV200, RSVG200, RS009, RS255, RSHT009
FR3AFD6-001	Cover plate brick chimney	RSV014, RSV250, RSVG250, RS012, RS014, RS285, RSHG012, RSHG014, RSHT012, RSHT014
FR4AFD6-001	Cover plate brick chimney	RSV016, RSV315, RSVG315, RS016, RSV400, RSV450, RSHT016

15. FR flange

FR (and 4 vibration dampers)



FR-02 (and 4 vibration dampers)

FR5 (and 4 vibration dampers)

Description

FR flanges from exodraft are used to install exodraft chimney fans on steel chimneys.

The flanges are made of stainless steel and ensure that the chimney fans have a flat and level installation base. The flange is supplied with four vibration dampers that reduce vibrations.

The diameter of the flange spigot is 3 or 5 mm smaller than the diameter of the chimney, depending on whether or not it is with drainage. For example, the diameter of the spigot of an FR1200 is Ø 197 mm, designed to fit into a chimney opening

with a Ø 200 mm diameter. The diameter of the spigot of an FR1200D is Ø 195 mm, designed to fit into a chimney opening with a Ø 200 mm diameter.

The flange range caters for all types of chimney fans and chimneys. Flanges with diameters other than those shown in the table can be made to order.

Type	mm	Chimney diameter	Chimney fan
FR1	272 x 272	125 - 150 - 175 - 180 - 190 - 200	RSV009, RSV160
FR1-D	272 x 272	150 - 190 - 200	RSV009, RSV160
FR2	310 x 310	125 - 150 - 160 - 175 - 180 - 190 - 200 - 250	RS009, RS255, RSV012, RSV200, RSVG200, RSHT009
FR2-D	310 x 310	150 - 190 - 200	RS009, RS255, RSV012, RSV200, RSVG200, RSHT009
FR3	395 x 395	150 - 175 - 180 - 190 - 200 - 250 - 300 - 350	RS012, RS014, RS285, RSV014, RSV250, RSVG250, RSHG012, RSHG014, RSHT012, RSHT014
FR3-D	395 x 395	150 - 190 - 200	RS012, RS014, RS285, RSV014, RSV250, RSVG250, RSHG012, RSHG014, RSHT012, RSHT014
FR4	500 x 500	200 - 250 - 300 - 350 - 400 - 450	RS016, RSV016, RSV315, RSV400, RSV450, RSVG315, RSHT016
FR2-02	310 x 310	150 - 160 - 180 - 190 - 200	RS009-02
FR3-02	395 x 395	150 - 180 - 190 - 200	RS012-02
FR5	300 x 300	100 - 125 - 150	RHG160

Spigot length 120 mm

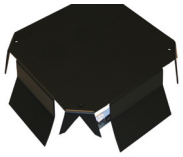
Other fitting accessories

RSD

16. Levelling screws

Four levelling screws type RSD can be installed between the fan and the chimney to create dilution air in brick chimneys if the temperature in the chimney is too high. If dilution air is required, it is important to take the increased capacity need into consideration when sizing the fan system

RS Rainshield



RSV Rainshield

17. Rainshield

Rain protection against driving rain.

Type	Description	Fits chimney fan type
1105619	Rainshield	RS009, RSHT009
1105621	Rainshield	RS012, RSHG012, RSHT012
1105623	Rainshield	RS014, RSHG014, RSHT014
1100178	Rainshield	RSV009, RSV160
1100179	Rainshield	RSV012, RSV200, RSVG200
1100192	Rainshield	RSV014, RSV250, RSVG250

18. Isolation switch

REP-AFB

REPAFB3P

REPSW2x16

It is a legal requirement that an isolation switch is installed in the immediate vicinity of the chimney fan, so that, for example, chimney sweeps can disconnect the electrical current to the chimney fan. The type of isolation switch required depends on the chimney fan control system.

Type	Description	Used with controls
REP-AFB	2-pole isolation switch	EFC16, EFC35/EFC35S, Xzense, EFC21, EBC10v2
REPAFB3P	3-pole isolation switch	EFC16, EFC21
REPSW2x16	4-pole* isolation switch	EFC18, EFC21

* 3-pole with help switch

19. Plenumbox PLX

Example
Chimney fans and accessories not included

The plenum box is a flue gas collector for accommodating several chimney fans on a chimney head. Made of stainless steel, wall thickness 2mm, pickled. The plenum box is made for every chimney head size. Special solutions on site can thus be implemented without problems.

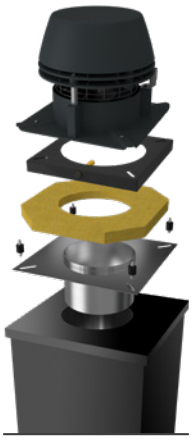
Type	Description
PLX-2	Plenumbox to accommodate 2 chimney fans
PLX-3	Plenumbox to accommodate 3 chimney fans
PLX-4	Plenumbox to accommodate 4 chimney fans

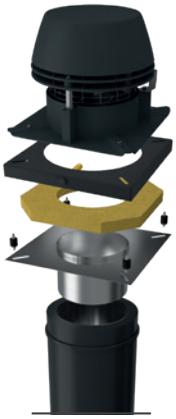
20. Installing a chimney fan

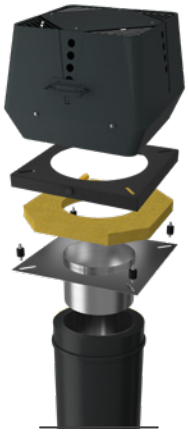
The chimney fan is installed on top of the chimney. The chimney fan is supplied as standard with adjustable location brackets, armoured power cable, a safety wire and a mineral wool mat, which ensures vibration-free operation.

When installing a fan onto a brick chimney the location brackets are fitted under the chimney fan.

If the chimney fan is to be fitted onto a steel chimney, then a flange and vibration dampers must be used instead of location brackets. The flange, which includes vibration dampers is ordered separately.





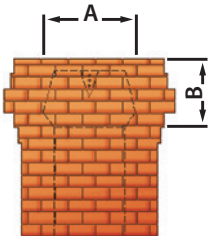


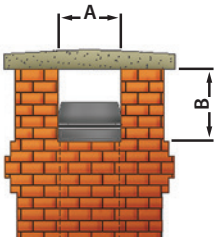
21. Hiding the chimney fan

Installation of exodraft chimney fans on top of chimneys can sometimes be difficult due to special site conditions such as listed buildings or special architectural demands. For those installations it is possible to make the fans virtually invisible.

Contact exodraft for assistance if such a solution is needed. Find more about how to hide a chimney in our brochure at:

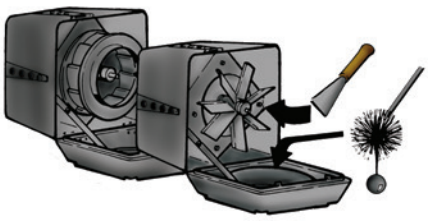
www.exodraftinfo.dk/brochures/3100128-concealing-the-fan-UK.pdf

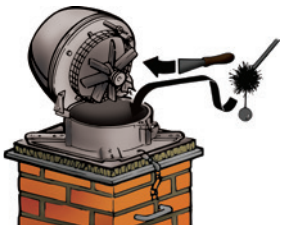




22. Service and maintenance

The chimney fan should be cleaned as often as needed (at least once a year) depending on the type of fire fuel.





When the fan is open, it is easy to clean it while the chimney is being swept.

Find more about how to clean the specific chimney fans, visit www.exodraft-manuals.com.

The chimney fan must always be running when there is a fire in the fireplace, stove or boiler. exodraft provides a two-year manufacturer's warranty. The exodraft warranty does not include damage caused by fire.

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