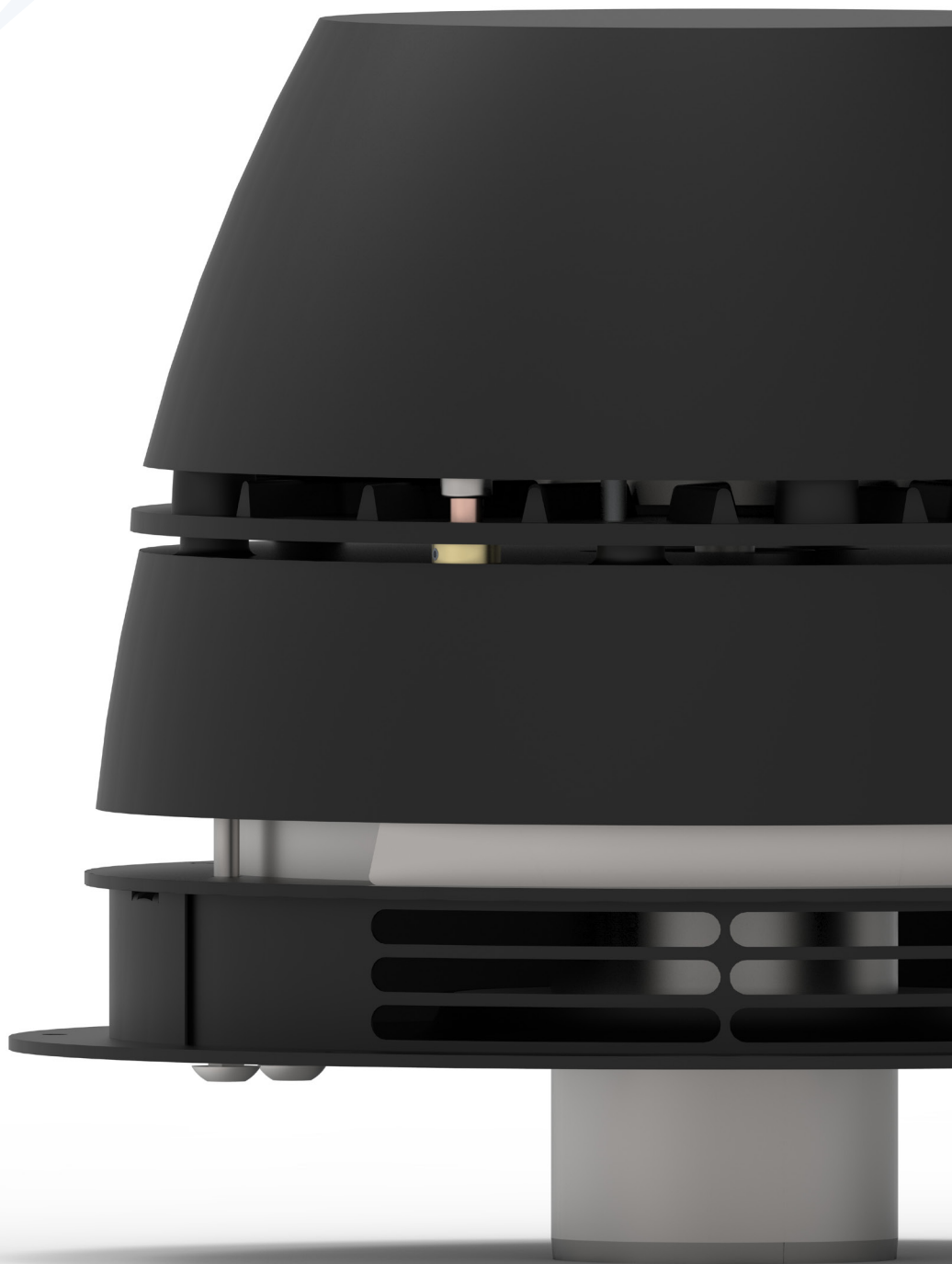


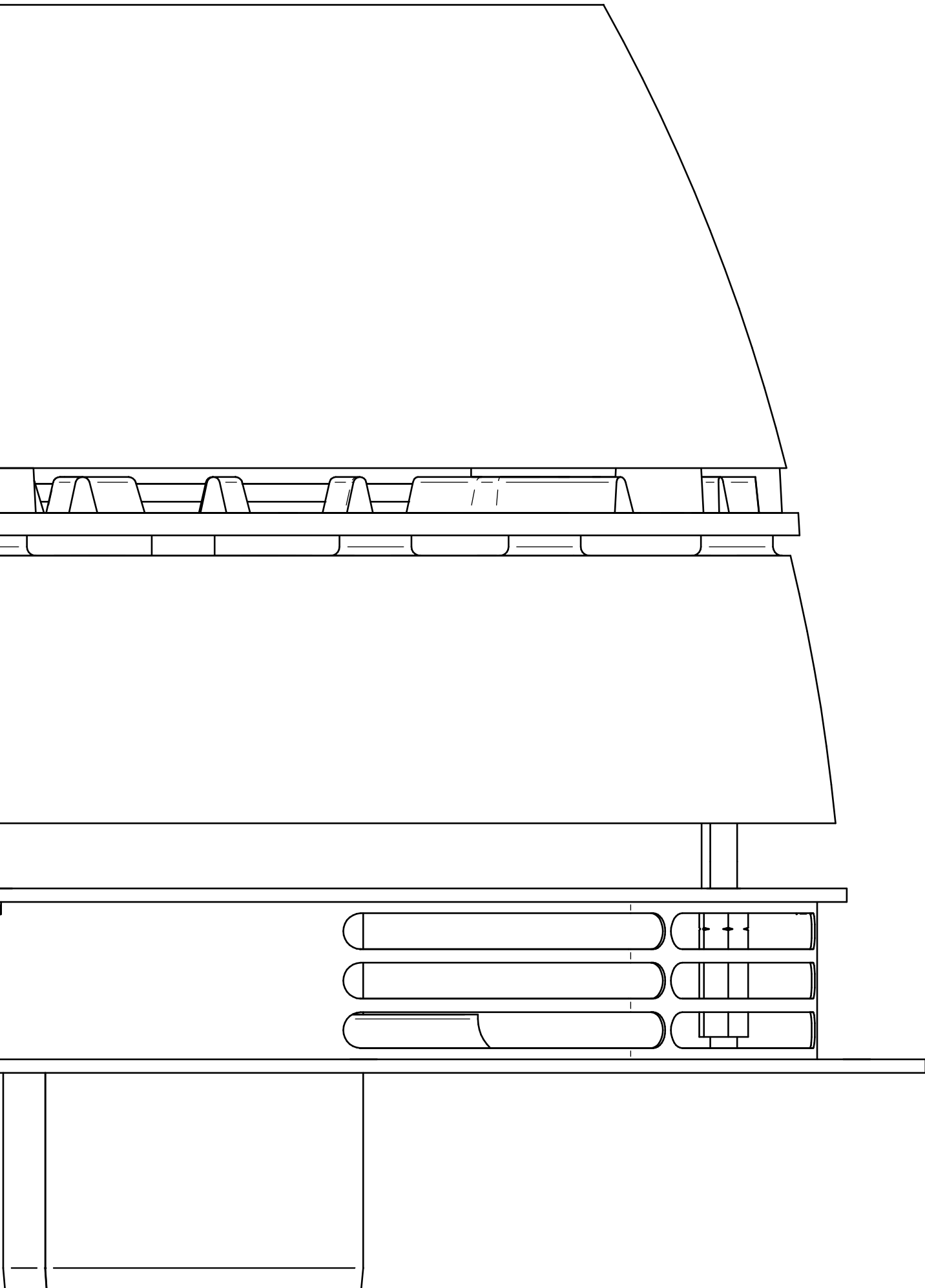
Chimney Fan

# RHGC



UK | Read and save these instructions!

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Your energy. Optimized.



## Chimney Fan | RHGC

# Content

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<b>Product information</b>	<b>7</b>
Scope of supply	7
Accessories and spare parts	7
Technical specifications	8
Precautions and user instructions	11
<b>Mechanical installation</b>	<b>12</b>
Minimum distance	12
Wall Mounting	13
Installation onto a steel chimney	14
<b>Electrical installation</b>	<b>16</b>
Isolation switch	16
<b>Startup and configuration</b>	<b>17</b>
System testing	17
Operating the fireplace using the EFC21 controller	17
Testing flue gas extraction and the pressure switch setting	18
<b>Maintenance and troubleshooting</b>	<b>19</b>
Care and cleaning	19
Troubleshooting	20
<b>UK Conformity Assessed</b>	<b>21</b>
<b>Declaration of Conformity</b>	<b>22</b>



## How to use this manual

*This manual has been prepared based on the specific product and contains relevant technical information and installations guides.*

*Accessories and spare parts are not covered by this manual.  
Please refer to the individual manuals of these components.*

*This installation manual does not contain any system design documentation.*

*Failure to observe instructions marked with a danger symbol  
may result in personal injury and/or damage to the product.*

Errors and omissions excepted.



## Disposal

Electrical and electronic equipment (EEE) often contain materials, components and substances that may harm the environment or be hazardous to your health. Products (WEEE) marked with the 'crossed-out wheeled bin' symbol should be disposed of separately from other waste at the end of its life. Though legislation may differ from country to country we strongly advise that electrical and electronic waste is separated from other waste and disposed of according to national legislation to protect the environment and personnel that may come into contact with waste.

# Symbols

The following symbols may be used in the manual to draw attention to danger or risk of personal injury or damage to the product.



## General prohibition

Failure to observe instructions marked with the prohibited symbol may result in extreme danger or serious personal injury.



## General attention

Marks a dangerous situation that, in the worst-case scenario, can cause serious personal injury or significant damage to the product.



## General warning

Failure to observe instructions marked with a danger symbol may result in personal injury and/or damage to the product.



## Electricity hazard/High Voltage

Marks a situation in which caution is advised due to the risk of high voltage electric shock which can cause serious personal injury or significant damage to the product.



## Connect an earth terminal to the ground

Failure to observe instructions marked with a danger symbol may result in personal injury and/or damage to the product.



## Permitted and approved

Permitted and approved method of installation.



## Prohibited and not approved

Prohibited and not approved method of installation.



## Warning

**To minimise the risk of fire, electric shock, personal injury and/or damage to the product please observe the following:**

- Please read the manual before you start using the product and only use the product in accordance with the manufacturer's instructions. If in doubt, contact one of our specialized dealers.
- All installations must be carried out by properly qualified personnel and in accordance with national legislation and regulations.
- This product must be earthed. Get assistance from a qualified electrician if in doubt.
- In order to avoid chimney fires, ensure that the chimney has been swept before mounting the fan.
- The chimney fan must remain switched on the entire time when the fireplace is in use.
- Exodraft recommends that the chimney fan is switched on at least once every three months, to avoid longer periods of stagnation as this may have a negative effect on the mechanical parts.
- Prior to servicing the product, disconnect the power and ensure that it cannot accidentally be reconnected.
- Exodraft always recommends the use of a smoke alarm when a solid fuel fireplace is installed.
- If the Exodraft fan system has been designed for solid fuel/multi fuel installations, please ensure that the design meets the requirements of BS EN15287-1. If this cannot be achieved, a smoke alarm must be installed in the same room as the heat appliance.
- Note! Fans serving biomass boilers must be cleaned more often due to extensive residue/soot building. It is essential that a regular inspection and cleaning schedule is implemented, especially in the early days of usage, to experience how often regular inspections and cleaning should be carried out.

## Product information

The Exodraft RHGC chimney fan provides reliable chimney draught for closed natural gas and LPG fireplaces connected to a concentric flue gas system with a maximum burner output <13 kW. For output exceeding 13 kW, please contact Exodraft.

**The fan is part of an Exodraft system and should be connected to an EFC21 Exodraft controller for optimal effect.**

Incorrect firing may result in problems with soot, chimney fires, etc. which might damage the product. Please check out this site for advice about lighting and maintaining a fire:

[www.exodraft.com](http://www.exodraft.com)

## Scope of supply

- Exodraft RHGC chimney fan
- Packet with location brackets and nuts
- Installation manual and user instructions

## Accessories and spare parts

The table below shows the accessories and spare parts available for the RHGC-models.

Accessories*	Spare parts
	Motors
	Impeller
	PDS - Pressure differential switch

\*The RHGC does not have accessories. For more details contact your Exodraft dealer.

## Warranty

All Exodraft products are covered by a 2-year guarantee as per European consumer rights legislation. For some countries an extended period of guarantee may apply depending on either national legislation or other clearly stipulated conditions. Customer complaints must be handled by a specialised dealer or wholesaler (preferably where the Exodraft product has been bought originally). An updated list of Exodraft specialised dealers can be found on our website for the country in question.

Exodraft products must always be installed by properly qualified personnel. Exodraft reserves the right to change these guidelines without prior notice.

The warranty and liability does not cover instances regarding personal injury or damage to property or the product that can be ascribed to one or more of the following causes:

- Failure to follow this installation and operation manual
- Incorrect installation, start-up, maintenance or servicing
- Improper repairs
- Unauthorised structural modifications made to the product
- Installation of additional components that have not been tested/approved with the product
- Any damage resulting from continued use of the product despite an evident defect
- Failure to use original spareparts and accessories
- Failure to use the product as intended
- Exceeding or failure to meet the limit values in the technical data
- Force majeure

## Technical specifications

The RHGC fan is designed for horizontal discharge. It is available in one size.

This chimney fan is made of cast aluminium with a forwards-curved centrifugal impeller made of galvanised steel.

Chimney fan	Centrifugal impeller
RHGC160-41 80/125 RHGC160-41 100/150	Galvanised steel impeller

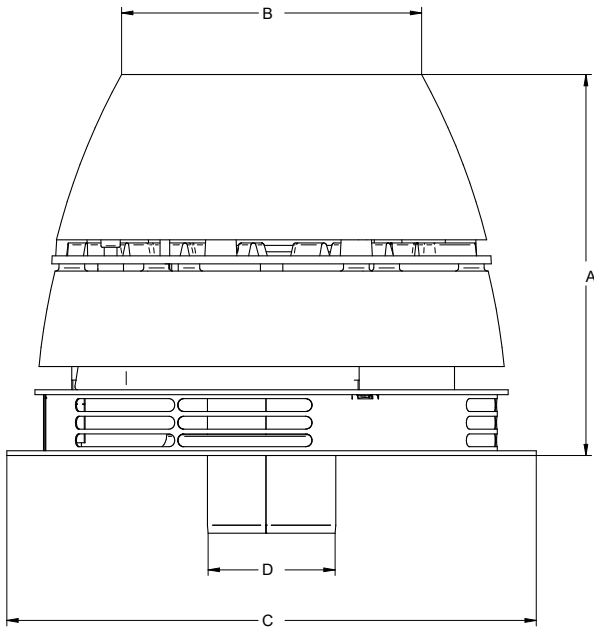
The chimney fan has a built-in fail-safe system consisting of a pressure differential switch (PDS) and two pressure sensors. The pressure switch ensures that the airflow is correct while the fireplace is in use.

The RHGC fan is designed to operate with a maximum flue gas temperature of 200 °C.  
Ambient temperature: min. -20 °C to max. +40 °C.

The sound level varies between the different chimney fan models.  
Further information about sound levels available in our technical brochure/datasheet.



## Technical data



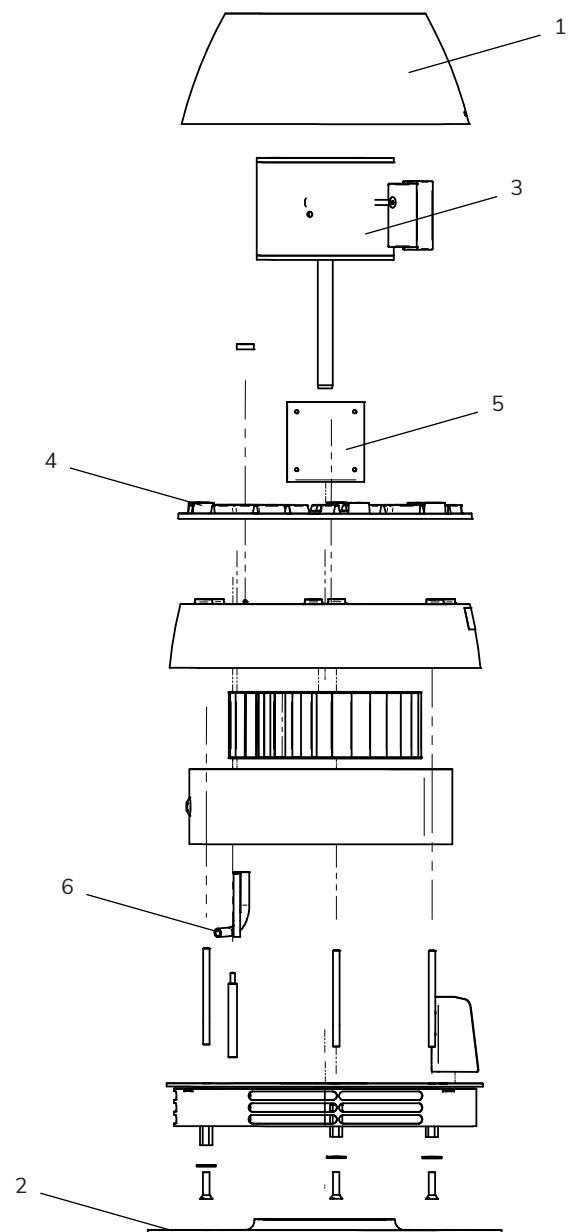
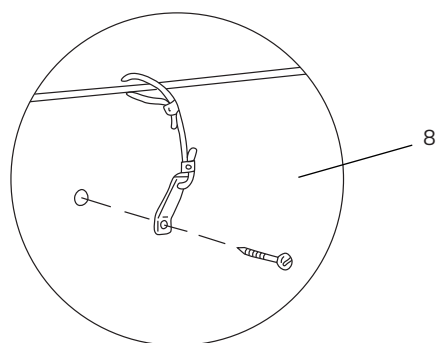
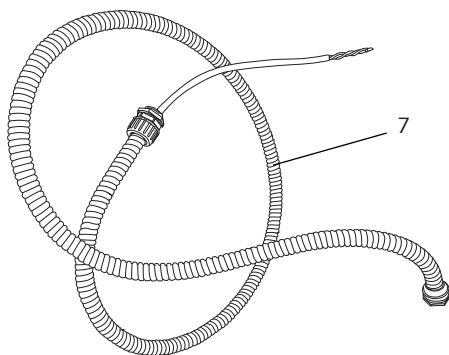
Model	Motor specifications				Weight kg	Dimension [mm]			
	rpm	V	Amp	kW*		A	B [Ø]	C [Ø]	D [Ø]
RHGC160-41 80/125	1400	1 x 230	0.40	0.09	10	227.50	290	323	80
RHGC160-41 100/150	1400	1 x 230	0.40	0.09	10	227.50	290	323	100

\*Power consumption at ambient temperature of 20 °C

- RPM is infinitely adjustable for all 1x230 V motors
- The motor is overload protected
- Motor protection class IP 54, Insulation class F

## Construction and components

1	Motor housing
2	Base plate
3	Motor
4	Cooling panels
5	Pressure switch
6	Pressure sensors
7	Armoured cable and connecting cable
8	Rawlplugs, screws and safety wire



## Precautions and user instructions

These instructions, applicable standards and relevant safety procedures from the manufacturer must be followed and at the same time the official provisions in force in the country, where the product is installed, must be observed.

### Support system

Prior to installation of a chimney fan, it must be determined if the chimney can safely carry the weight of the chimney fan.

A steel chimney should be well supported at the roof penetration point. If the chimney extends high above the roof, the chimney and the fan should be secured. The manufacturer's instructions must be followed.

### System type

Gas fireplaces and individual gas-fired boilers used in private dwellings normally operate in a relatively stable environment, where no major pressure fluctuations occur. However, to secure an optimal use of the Exodraft system speed adjustments and adjustment of air intakes are required depending on the weather outside and on the stage of the firing process.

The fan must be connected to an Exodraft control type EFC21.

### Chimney length

The minimum concentric chimney length between the fireplace and the fan is 5 m.

The maximum guaranteed concentric chimney length between the fireplace and the fan is 60 m and 15 pcs 90° elbows.

### Minimum diameter of the chimney

Chimney fan	min. inside diameter [mm]	min. outside diameter [mm]
RHGC160-41 80/125	80	125
RHGC160-41 100/150	100	150

## Precautions

Be aware

- that it must be installed on top of the chimney
- that it can be mounted on steel as well as brick chimneys
- that it must be mounted with the approved Exodraft accessories
- that the chimney fan must always remain switched on when the fireplace is in use
- that it must be accessible for service and maintenance from the roof or from a ladder/cherry picker
- that the distance to flammable materials must be at least 500 mm
- that the isolation switch must be easily accessible



**ATTENTION!** It is always recommended to install a smoke alarm in connection with a wood fired installation.

## Mechanical installation

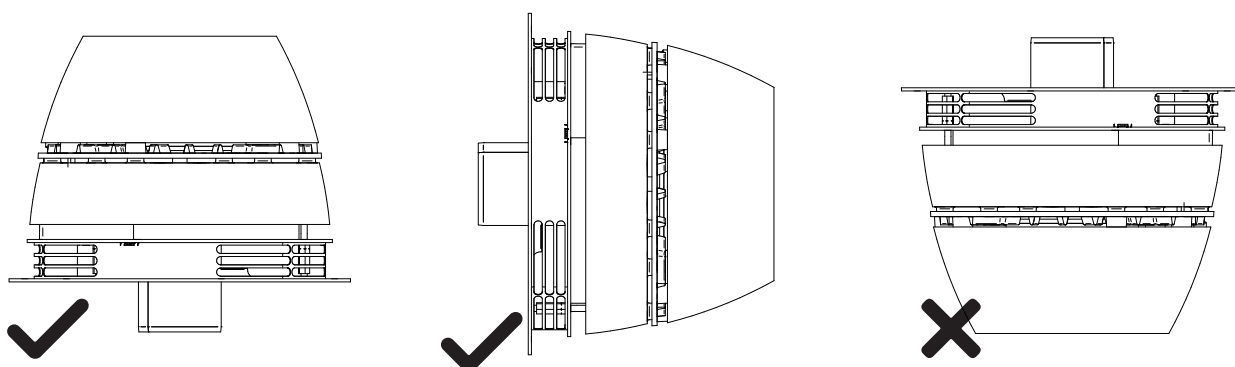
Exodraft products must always be installed by properly qualified personnel and according to the manufacturer's instructions.

Gas appliances should be checked for safety once a year by a installer registered in the Gas Safe Register.

Details of local installers can be obtained by accessing the website at [www.gassaferegister.co.uk](http://www.gassaferegister.co.uk)

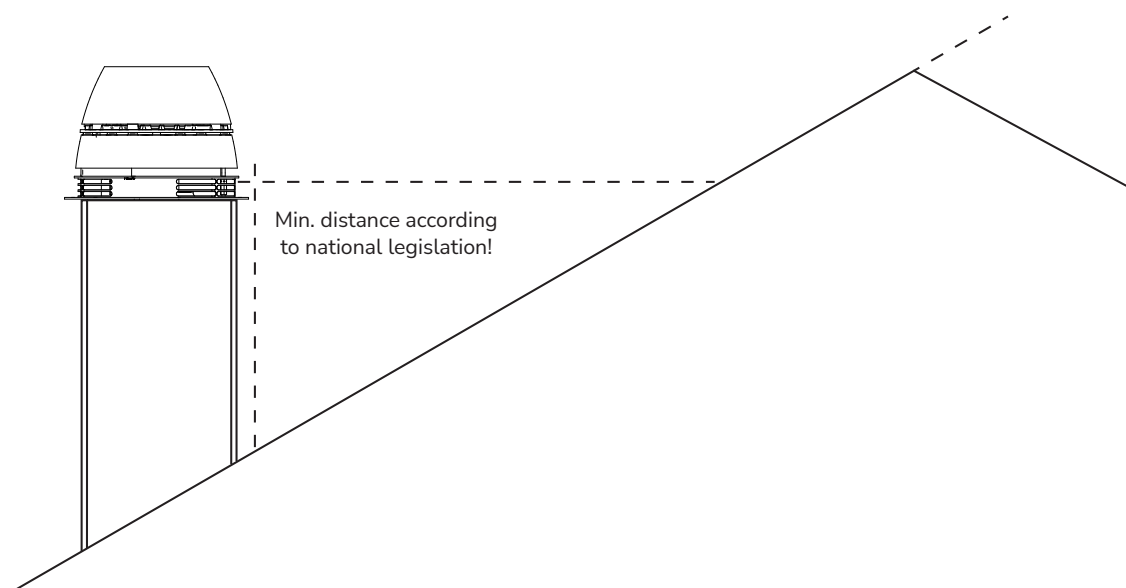
## Positioning of the chimney fan

The chimney fan can be mounted horizontally or vertically. Be aware of national law and building regulations!



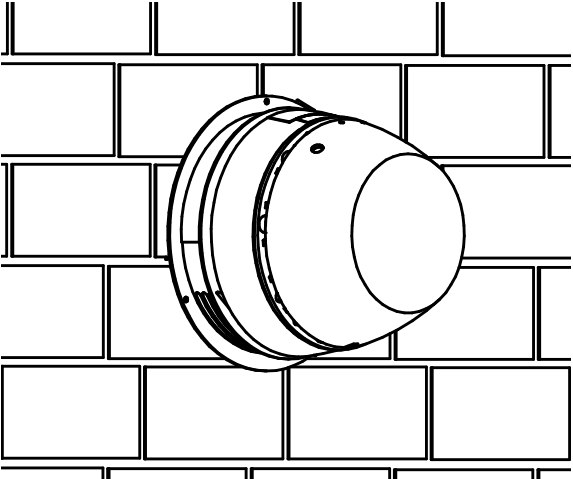
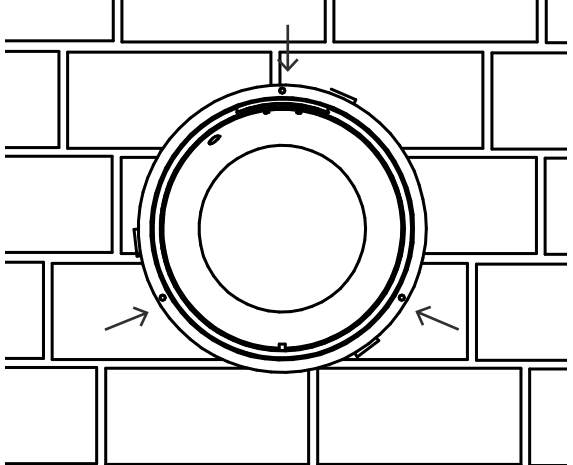
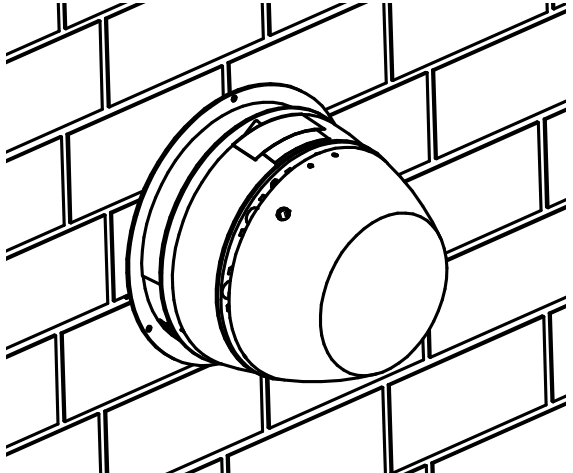
## Minimum distance

The minimum distance to flammable materials must be at least 500 mm (national legislation must be observed)!



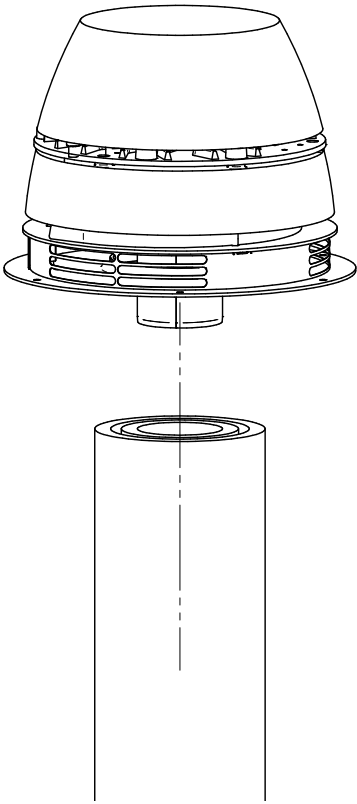
# Wall Mounting

If the fan is to be mounted on wall, please don't mount directly on a timber wall or any other inflammable wall. See the installation guide below.

Step	Action	Illustration
1	<p>When mounted on a wall, the name plate MUST face upwards.</p> <p>It is of utmost importance that the RHGC is positioned correctly or the flow measuring system will not work.</p>	
2	<p>Place the fan on the concentric chimney.</p> <p>Mark off the holes of the base plate on the wall when the fan is positioned correctly.</p>	
3	<p>Remove fan assembly, drill holes in the wall and insert rawlplugs.</p> <p>Apply eat resistant and fireproof silicone/mastic to the underside of the flange and fasten fan assembly securely to the wall.</p>	

# Installation onto a steel chimney

See the installation guide below.

Step	Action	Illustration
1	Mount the chimney fan directly on the concentric steel chimney.	

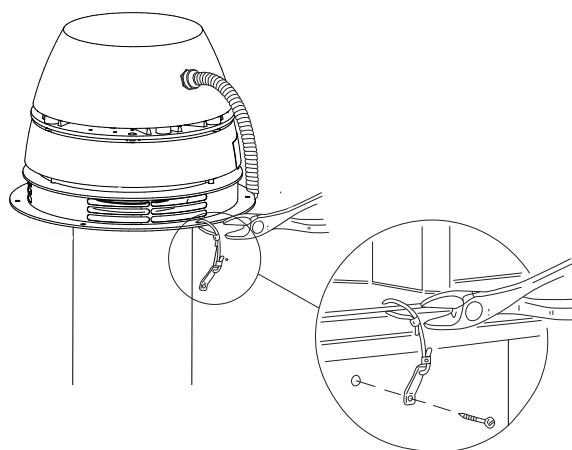
Attach the safety wire to the chimney. Use the screw and rawl plug provided in the brickwork of the chimney or the self-cutting screw if working on a steel chimney. Then fit the wire through the hole in the bottom section and into the wire clamp.

Gently tighten the safety wire, and crimp the wire clamp so that the fan is held safely in place when opened for servicing or cleaning purposes.

2

The isolation switch (supplied as extra) should be fitted onto the side of the chimney, so it is easily accessible when servicing the fan. The armoured cable with connecting cable should be mounted into the underside of the isolator and up into the switch through the coupling.

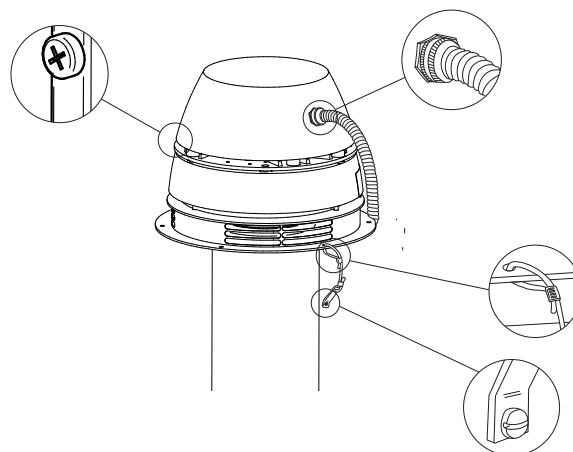
To avoid rainwater from entering the chimney fan the slots and holes must be sealed with heat resistant and fireproof silicone.



**Prior to use check that:**

- The fan is closed and the fastening screws/ wing screws tightened
- The safety wire is taut and the wire clamp crimped
- The coupling nut on the armoured cable is tightened
- The safety wire is securely attached to the chimney
- That the user is aware that the fan must always be switched on whenever the fireplace or boiler is in use

3



**ATTENTION!**

- RHGC should not be mounted directly on a timber wall or any other inflammable wall.
- When the fan is installed on a timber framed house, the recommendations of Institute of Gas Engineers publication UP-7 "Gas installations in timber framed buildings" should be observed.
- The RHGC fan should not be installed in connection with solid fuel appliances.
- On external wall, the fan unit should be located so it is minimally exposed to prevailing wind conditions.
- The fan unit should be situated in a place which allows the exhaust gasses to evacuate to surrounding air.
- Due to the risk of hot surfaces, it is required, according to EN294, that a terminal guard is used on the external wall where the fan is installed in frequented areas below 2.7 m (9 ft) from the ground level.

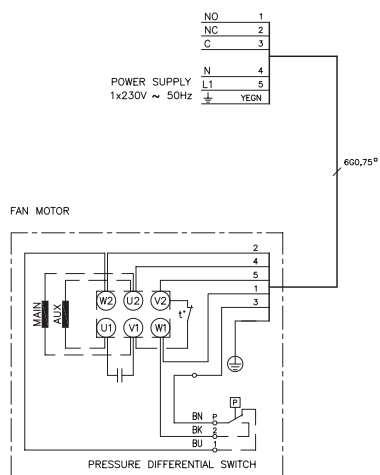
## Electrical installation

The fan and motor specifications are provided on the fan's type plate. All the single-phased fan models are adjustable in speed.

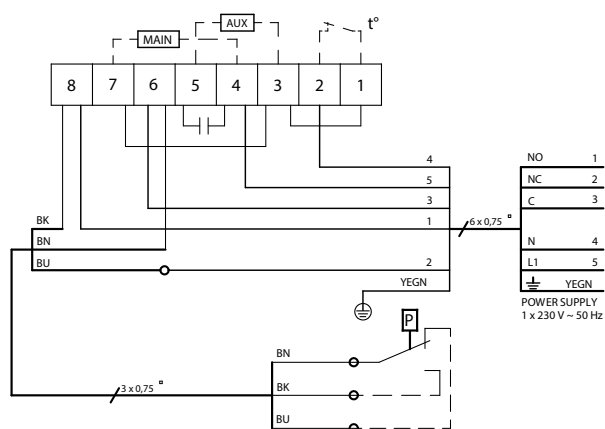
Wires are to be connected in accordance the wiring diagram. For further details, please see guidelines for the Exodraft control units. All Exodraft fans require extra safeguards in accordance with current power regulations.

Any lightning conductor connected to the fan must respect current applicable national legislation.

### Exodraft motor



### Grundfos motor



## Isolation switch

In accordance with the provisions of the EU Machinery Directive\*, a chimney fan must always have an isolation switch fitted. The isolation switch must comply with national wiring standards.

The isolation switch must be ordered separately, as it is not part of the standard Exodraft chimney fan delivery.

\*Please refer to Machinery Directive (2006/42/EF/-EEC/-EWG/-CEE) – Appendix 1 item 1.6.3 "Separation of the sources of energy."



## Startup and configuration

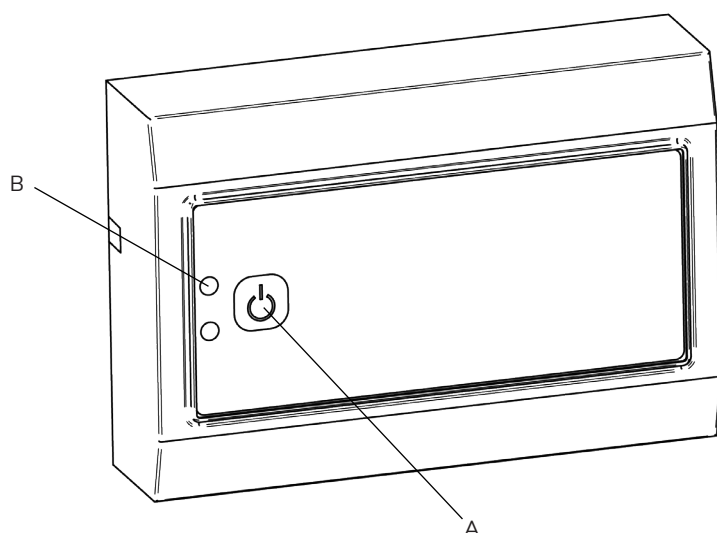
### System testing

Before any adjustments are made to the system, please follow these procedures:

Turn the chimney fan ON and make sure that it is turning. Increase and decrease the speed of the fan by adjusting the speed control to make sure the fan is operating properly.

After system testing, Exodraft recommends igniting your fireplace or stove. Follow the guide below for correct lighting and use of the chimney fan.

### Operating the fireplace using the EFC21 controller



#### Press the ON/OFF button

- The operating LED (**B**) will flash GREEN until the correct chimney draught is confirmed. If it flashes YELLOW, then the Air inlet must be opened. The operating LED will then become GREEN and the fireplace can be lit.
- To stop the fan press the ON/OFF (**A**) button.

#### External ON/OFF switch

- The ON/OFF (**A**) switch can be used to start, stop and reset the controller.
- If the external ON/OFF (**A**) switch is used, it has priority over the control panel and the remote control

**Note!** The switch must be in the OFF position before the controller can be re-started.



**DANGER!** Check that the heating appliance (water heater, furnace, etc.) is working properly after the chimney fan has been switched on. Make sure that no flue gases are spilling out as this can lead to carbon monoxide poisoning!

## Testing flue gas extraction and the pressure switch setting

This test must be carried out to ensure that the pressure switch (PDS) and the speed of the chimney fan have been adjusted correctly for the fireplace in question. Prior to the test, the required speed of the fan must be determined and adjusted according to fireplace manufacturer instruction and appropriate Exodraft fan control installation guides. To set the PDS, open the fan cover.

Start the fan and let it run as described in the fan control manual.

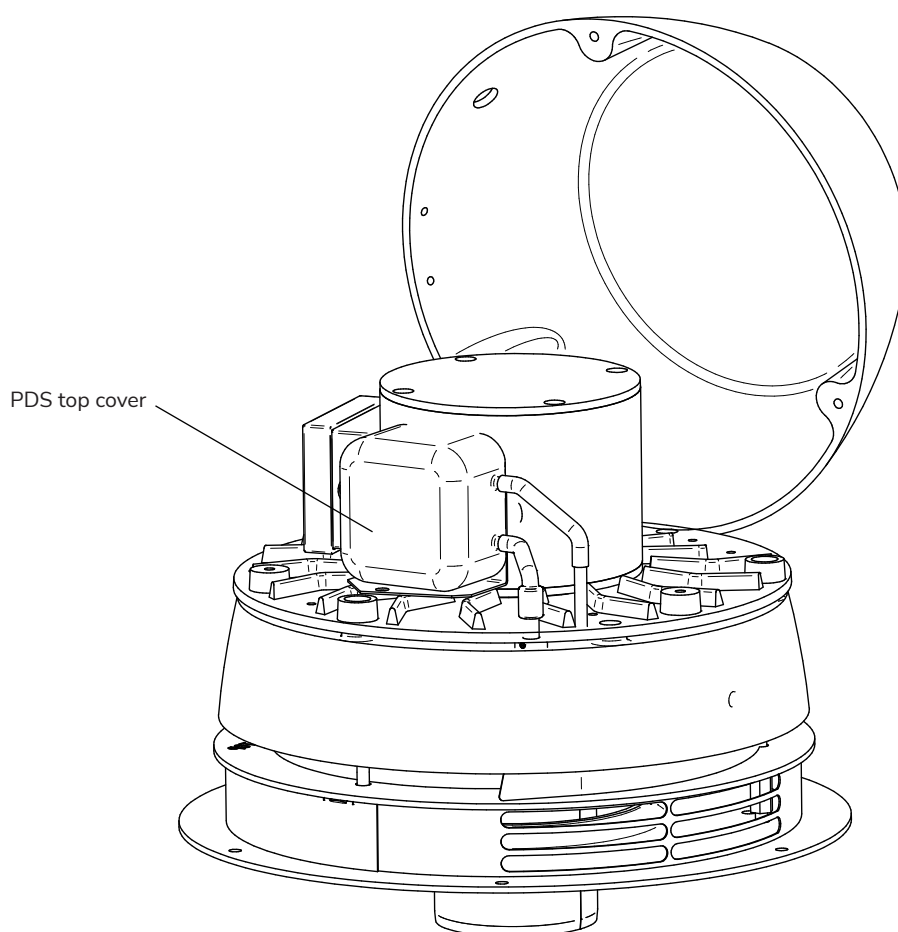
### Test procedure

- Set the pressure switch to a minimum by turning anti-clockwise.
- Slowly increase the pressure switch setting until it cuts out (you will hear a click) or observe the cut-out on the fan control.
- Make a note of the pressure switch setting at cut-off.
- Set the pressure switch to 10 Pa below the previously noted cut-off value.

After it has run for ten minutes, turn the isolation switch off and the fail-safe function will be checked. The fireplace should cut out 15 seconds after the pressure switch has cut off. Remember to switch the isolation switch back on.



**WARNING!** Do not open the top section unless the power to the chimney fan has been disconnected!



# Maintenance and troubleshooting

## Care and cleaning

It is extremely important to keep the flue clean from creosote and deposits as soot is the major cause of chimney fires. The top of the fan is hinged and can be opened to ensure easy cleaning of the fan.

Cleaning intervals depend on the use of the fireplace. The more the appliance is used, the more often the chimney flue must be cleaned. If a fireplace is used regularly (2-3 times a week), a semi-annual cleaning of the chimney and the fan may be required. If used on a daily basis shorter intervals may apply.

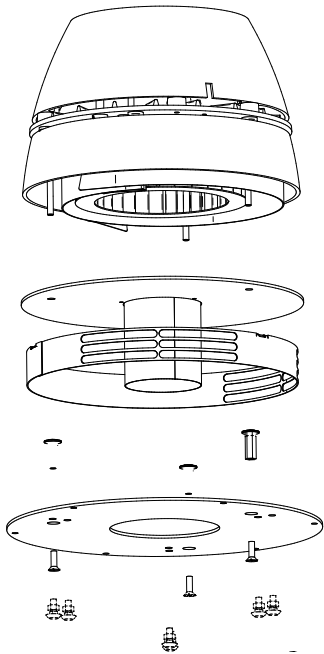
No matter how often the fan is used, the fan must be inspected and cleaned at least once a year – for instance when the chimney is inspected and cleaned by your chimney sweep. The chimney should always be cleaned by a trained professional chimney sweep.

**Gas appliances should be checked for safety once a year by a installer registered in the Gas Safe register.**

### Note!

The chimney fan can be used at temperatures of up to 200 °C. The motor has special ball bearings that are sealed, lifetime lubricated and maintenance-free.

## Cleaning procedure

Step	Action	
1	Use the isolation switch to switch off the power to the fan and make sure the fan doesn't rotate.	
2	Loosen the screw and open the top section of the fan.	
3	Dismantle the chimney fan as shown here.	
4	During this service procedure, all soot deposits must be removed from the centrifugal impeller and the sensors.	
5	Be very careful not to damage the flue gas measuring system.	



**WARNING!** Do not open the motor housing unless the power to the chimney fan has been disconnected!



**WARNING!** The flow sensors must not be bent or moved, as this might affect their performance.

## Troubleshooting

Observation	Problem	Solution
<i>There is no power to the fan</i>	The isolation switch may be on off	Check isolation switch
	The speed control is turned off	Turn speed control on
	Loose electrical connection	Check wiring and correct problem
<i>There is power to the fan but it is not working</i>	Loose electrical connections	Check wiring and correct problems with connections. Pay special attention to the wiring in the junction box
	The voltage setting is too low	Increase the speed setting
<i>There is power to the fan but it hums and does not turn</i>	The capacitor may be worn out	Check capacitor and replace if necessary
	Soot makes the axial vane/impeller stick	Clean the fan
<i>The fan seems to work fine, but there is not enough draught</i>	The fan may be undersized	Replace with a larger fan
	The capacitor may be worn out	Check capacitor and replace if necessary
	The flue is damaged/blocked	Check the flue (chimney sweep)
<i>The fan vibrates</i>	The motor shaft may be bent	Replace motor
	The fan needs cleaning	Clean the fan
	Incorrect installation	Check installation guide in this manual
<i>There is airflow noise from the fireplace opening</i>	The fan is running too fast	Reduce the fan speed
<i>Mechanical noise can be heard</i>	Soot or tar may impair the axial vane/impeller	Clean the axial vane/impeller
	Motor bearings may be worn out/over-heated	Replace bearings
	Incorrect installation	Check installation guide in this manual



**UK Conformity Assessed**

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**exodraft**

**Exodraft a/s  
Industrivej 10  
DK-5550 Langeskov**

---

Hereby declares that the following products:

---

RHGC160-80/125, RHGC160-100/150

---

Were manufactured in conformity with the provisions of the following regulations:

---

**The Supply of Machinery (Safety) Regulations 2008**

**Electrical Equipment (Safety) Regulations 2016**

**Electromagnetic Compatibility Regulations 2016**

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Langeskov, 01-11-2022  
Managing Director  
Anders Haugaard



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## Declaration of Conformity

DK: EU-Overensstemmelseserklæring  
GB: Declaration of Conformity  
DE: EU-Konformitätserklärung  
FR: Déclaration de conformité de l'Union Européenne  
NO: EU-Samsvarserklæring  
PL: EU Deklaracja zgodności

NL: EU-Conformiteits verklaring  
SE: EU-Överensstämmelsedeklaration  
FI: EU-Vaatimustenmukaisuusvakuutus  
IS: ESS-Samræmisstaðfesting  
IT: Dichiarazione di Conformità Unione Europea

**exodraft**

Exodraft a/s  
Industrivej 10  
DK-5550 Langeskov

Erklærer på eget ansvar, at følgende produkter:  
Hereby declares that the following products:  
Erklært hierdurch auf eigene Verantwortung, daß folgende Produkte:  
Déclare, sous sa propre responsabilité, que les produits suivants:  
Erklærer på eget ansvar at følgende produkter:  
Niniejszym oświadczam, że następujące produkty:

Veklaart dat onderstaande producten:  
Deklarerar på eget ansvar, att följande produkter:  
Vastaa siltä, että seuraava tuote:  
Staðfesti à eigin àbyrgð, að eftirfarandi vörur:  
Dichiara con la presente che i seguenti prodotti:

RHGC160-80/125, RHGC160-100/150

Som er omfattet af denne erklæring, er i overensstemmelse med følgende standarder:  
Were manufactured in conformity with the provisions of the following standards:  
Die von dieser Erklärung umfaßt sind, den folgenden Normen:  
Auxquels s'applique cette déclaration sont en conformité avec les normes ci-contre:  
Som er omfattet av denne erklæring, er i samsvar med følgende standarder:  
Zostały wyprodukowane zgodnie z warunkami określonymi w następujących normach:

Zijn vervaardigd in overeenstemming met de voorschriften uit de hieronder genoemde normen en standaards:  
Som omfattas av denna deklaration, överensstämmer med följande standarder:  
Jota tämä selvitys koskee, on seuraavien standardien mukainen:  
Sem eru meðtalín í staðfestingu Pessari, eru í fullu samræmi við eftirtalda staðla:  
Sono stati fabbricati in conformità con le norme degli standard seguenti:

### EN 60335-1, EN 60335-2-80, DS/EN ISO 12100: 2011

I.h.t bestemmelser i direktiv:  
In accordance with  
Entsprechen gemäß den Bestimmungen der folgenden Richtlinien:  
Suivant les dispositions prévues aux directives:  
I.h.t bestemmelser i direktiv:  
Zgodnie z:

En voldoen aan de volgende richtlijnen:  
Enligt bestämmelserna i följande direktiv:  
Seuraavien direktiivien määräysten mukaan:  
Med tilvisun til ákvarðana eftirlits:  
In conformità con le direttive:

Maskindirektivet:  
The Machinery Directive:  
Richtlinie Maschinen:  
Directive Machines:  
Maskindirektivet:  
Dyrektywę maszynową:

De machinerichtlijn:  
Maskindirektivet  
Konedirektiivi:  
Vèlaeftirlitið:  
Direttiva Macchinari:

### 2006/42/EF-EEC/-EWG/-CEE

Lavspændingsdirektiv:  
The Low Voltage Directive:  
Niederspannungsrichtlinie:  
Directive Basse Tension:  
Lavspenningsdirektivet:  
Dyrektywę Niskonapięciową

De laagspanningsrichtlijn:  
Lågspänningsdirektivet:  
Pienjännitedirektiivi:  
Smáspennueftirlitið:  
Direttiva Basso Voltaggio:

### 2014/35/EC

EMC-direktivet:  
And the EMC Directive:  
EMV-Richtlinie:  
Directive Compatibilité Electromagnétique:  
EMC-direktivet:  
Dyrektywę EMC – kompatybilności elektromagnetycznej

En de EMC richtlijn:  
EMC-direktivet:  
EMC-direktiivi:  
EMC-efitirlitið:  
Direttiva Compatibilità Elettromagnetica:

### 2014/30/EC

Langeskov, 01-11-2022  
Adm. direktør  
Managing Director  
Anders Haugaard

Algemeen directeur  
Geschäftsführender Direktor  
Président Directeur Général  
Verkställande direktör  
Toimitusjohtaja  
Framkvemdastjóri  
Direttore Generale



**DK: Exodraft a/s**

Industrivej 10  
DK-5550 Langeskov  
Tel: +45 7010 2234  
Fax: +45 7010 2235  
[info@exodraft.dk](mailto:info@exodraft.dk)  
[www.exodraft.dk](http://www.exodraft.dk)

**SE: Exodraft a/s**

Kalendevägen 2  
SE-302 39 Halmstad  
Tel: +46 (0)8-5000 1520  
[info@exodraft.se](mailto:info@exodraft.se)  
[www.exodraft.se](http://www.exodraft.se)

**NO: Exodraft a/s**

Storgaten 88  
NO-3060 Svelvik  
Tel: +47 3329 7062  
[info@exodraft.no](mailto:info@exodraft.no)  
[www.exodraft.no](http://www.exodraft.no)

**UK: Exodraft Ltd.**

24 Janes Meadow, Tarleton  
GB-Preston PR4 6ND  
Tel: +44 (0)1494 465 166  
Fax: +44 (0)1494 465 163  
[info@exodraft.co.uk](mailto:info@exodraft.co.uk)  
[www.exodraft.co.uk](http://www.exodraft.co.uk)

**DE: Exodraft a/s**

Niederlassung Deutschland  
Soonwaldstr. 6  
DE-55569 Monzingen  
Tel: +49 (0)6751 855 599-0  
Fax: +49 (0)6751 855 599-9  
[info@exodraft.de](mailto:info@exodraft.de)  
[www.exodraft.de](http://www.exodraft.de)

**FR: Exodraft sas**

78, rue Paul Jozon  
FR-77300 Fontainebleau  
Tel: +33 (0)6 3852 3860  
[info@exodraft.fr](mailto:info@exodraft.fr)  
[www.exodraft.fr](http://www.exodraft.fr)