Chimney Fan

RSG

UK | Read and save these instructions!

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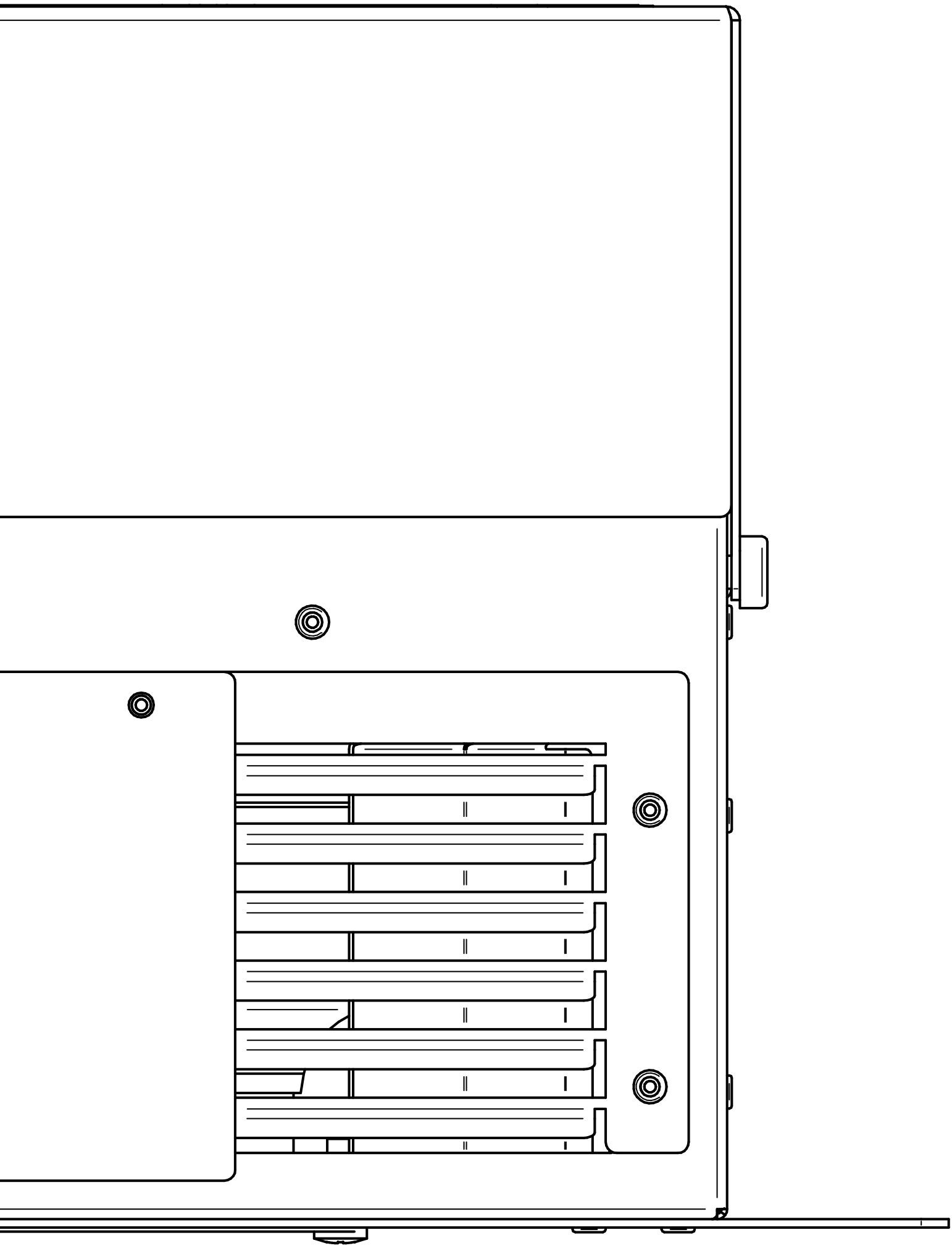
Your energy. **Optimized.**



Chimney Fan | RSG

Content

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

An Exodraft chimney fan RSG/RSGC provide a controllable negative pressure along the full length of the flue and chimney. A fail-safe system is fitted in the fan which automatically measures the velocity of the flue gases.

Only when the velocity exceeds the preset and safe level can the gas appliance be used. The fail-safe system prevents any spillage from the gas appliance as well as any leaks of CO and other poisonous gases.

Fan type RSG/RSGC is installed on the external wall and thereby enables a gas appliance to be installed in a room with no chimney.

The power of the fan will allow for long horizontal flues up to 15 meters. A silencer type SLR is available as an accessory for the fan type RSG.

The RSG type fan is used as part of the fail-safe flue system for open flued gas appliances, such as stoves and domestic boliers. The RSGC type fan is used as part of a fail-safe flue system for closed appliances such as cookers and oil-fired and gas-fired boilers. All gas appliances must be CE-certified.

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

Please always read the installation instructions for the Exodraft control unit, before installation of the chimney fan.

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

Scope of supply

- Exodraft RSG chimney fan
- Installation manual and user instructions

Accessories and spare parts

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

Accessories*	**Spare parts**
Silencer SLR**	Motors
	Impellers and axial vanes
	Pressure differential switch (PDS)

*Normally Exodraft manuals does not describe the specific use of accessories. We refer to the separate manuals for such components. For more details contact your Exodraft dealer.

**But this manual describe the use of the silencer SLR for the RSG-models.

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 Exodraft chimney fan type RSG gives a downward discharge of the flue gases through secure grilles on the underside of the fan housing. It is made from galvanised sheet metal, fitted with a centrifugal impeller.

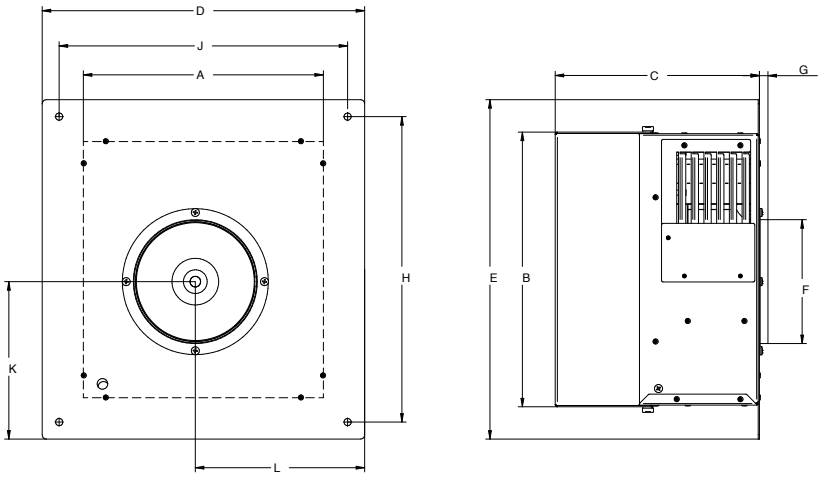
Chimney fan	**Axial vane**
RSG125-41 RSG150-41 RSG200-41	Galvanized steel centrifugal impeller
RSGC150-41	Galvanized steel centrifugal impeller

The air flow sensors are linked to a pressure differential switch (PDS), ensuring correct airflow when the appliance is used. The fan unit is supplied with a 6 core heat resistant silicone cable, which is 3 metres long (RSG) or 4 metres long (RSGC).

The chimney fan is designed to operate with a flue gas temperature min. -20 °C to max. +180 °C, and an ambient temperature min. -20 °C to max. +40 °C

ATTENTION! The fan should be installed on a suitable external wall and its installation must be in accordance with all necessary servicing, environmental and regulatory building regulations, BS Standards, local bylaws and legal requirements

Technical data



Model	Dimension [mm]										
	A	B	C	D	E	F [Ø]	G	H	J	K	L
RSG125-41	265	250	220	336	320	121	35	280	296	153	157
RSG150-41	325	310	240	400	380	146	35	340	360	181	186
RSG200-41	405	380	275	478	453	196	35	413	438	215	221
RSGC150-41	522	482	338	600	560	247	60	516	556	271	279

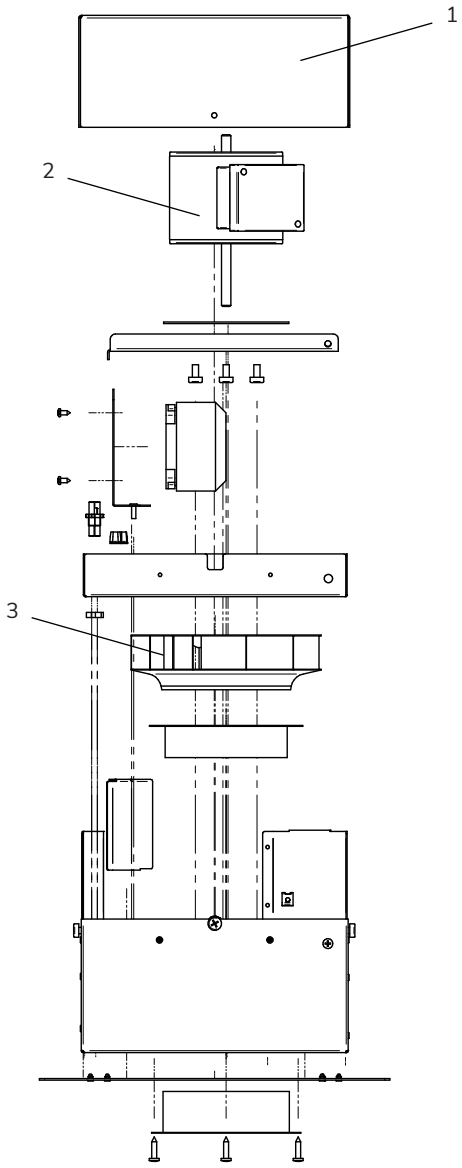
Model	Motor specifications				Weight
	rpm	V	Amp	kW*	kg
RSG125-41	1400	1 x 230	0.3	0.04	11
RSG150-41	1400	1 x 230	0.2	0.05	14
RSG200-41	1400	1 x 230	0.4	0.11	20
RSGC150-41	1400	1 x 230	0.8	0.14	31

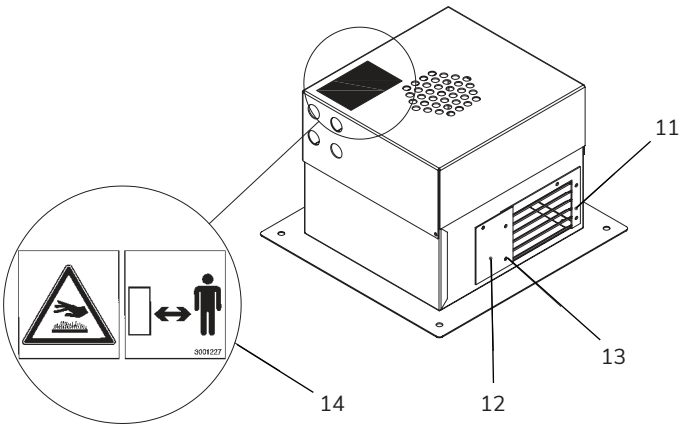
*Effect at the motor shaft at ambient temperature: 20 °C

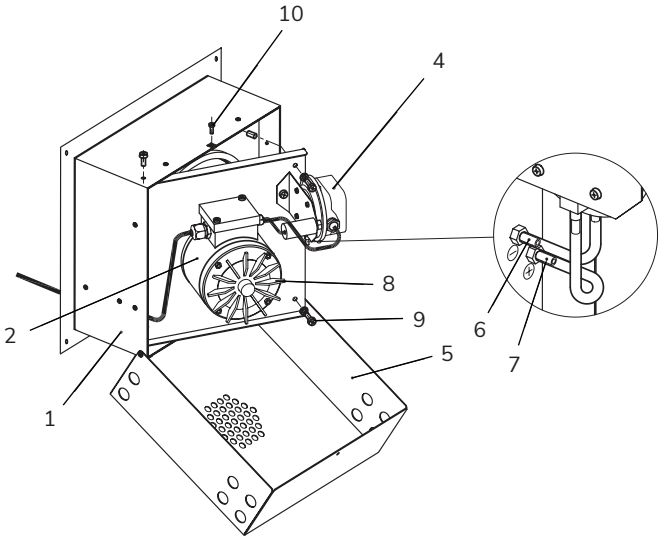
- RPM is infinitely adjustable for all 1x230 V motors
- The motor is overload protected
- Motor protection class IP 54, Insulation class F
- Connection cord 120 cm, 6 core, 0.75 mm2.

Construction and components

1	Fan housing
2	Motor
3	Centrifugal impeller
4	Pressure differential switch (PDS)
5	Hinged outer door
6	Air flow sensor (-)
7	Air flow sensor (+)
8	Cooling impeller
9	Screw to open hinged inner door
10	Screw to open hinged outer door
11	Outlet grill
12	Flow reducing plate
13	Screw for flow reducing plate
14	Label: "Stay clear of hot surface"

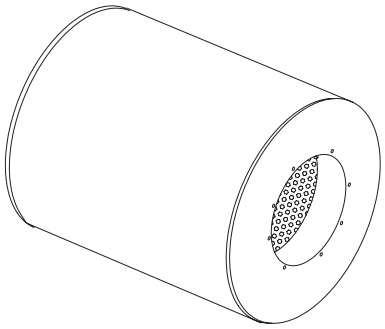


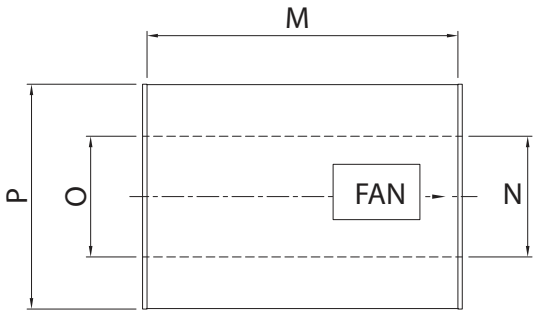




Silencer - Accessorie

A silencer type SLR can be supplied as an accessory for the RSG model. The silencer is round and has a length of min. 280 mm. Its outer housing is made of galvanised sheet metal, insulated by mineral wool to a thickness of 50 mm with a perforated inner steel sleeve. There are four types of SLR.





Type	M	N	O	P
SLR125	280	Ø128	Ø125	Ø240
SLR150	280	Ø153	Ø150	Ø265
SLR200	280	Ø206	Ø203	Ø318
SLR250	280	Ø256	Ø253	Ø370

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.

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.

Gas fireplaces and individual gas-fired boilers used in restaurants are exposed to major pressure changes due to factors like the constant opening/closing of doors, kitchen exhaust fans pulling out air, etc. In an environment like this spillage of smoke can easily occur.

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

Precautions

Be aware

- that RSG/C should not be mounted directly on a timber wall or any other walls of inflammable material.
- that the silencer and the flue pipe should not be in contact with any inflammable material when it is installed in the wall.
- that the chimney fan must always remain switched on when the fireplace is in use
- when the fan is installed in a timber framed house, the recommendations of Institute of Gas Engineers publication UP-7 ”Gas installations in timber framed buildings” should be observed.
- that the RSG and RSGC fans are not to be installed with solid fuel appliances.
- with DFE fireplace installations above 7kW input, an airbrick or similar fresh air inlet must be fitted in the room in which the fireplace is installed and must have an area of not less than 100 cm^2 (15.5 in^2). The air vent must be either direct to outside air or to an adjacent room which itself has a vent direct to outside air of at least the same area.
- that the fan unit should be located on the external wall so it gets a minimum exposure to prevailing wind conditions.
- that the fan unit should be situated at a place, which alow the exhaust gasses to evacuate to surrroun-ding air.
- that it 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. The fan has a label warning of hot surfaces.

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

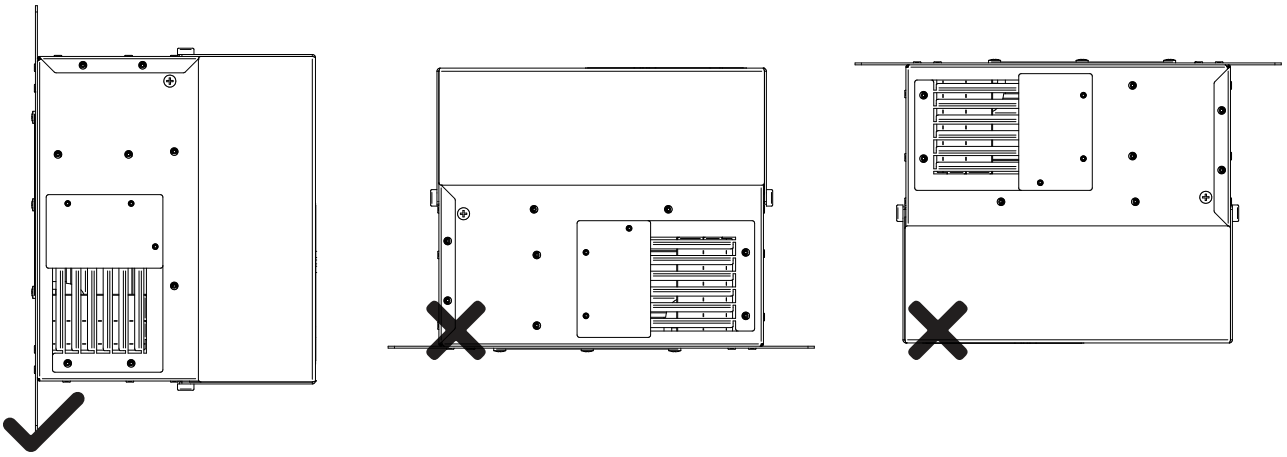
Mechanical installation

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

Location of the fan

In the case of a room without a chimney, decide the final location of the appliance. Check that the fan position on the external wall is acceptable. Mark the centre of the flue exit on the internal wall. Use this centre to make cutting lines for the flue pipe or silencer using dimensions for fan RSG150 and 200 as applicable.

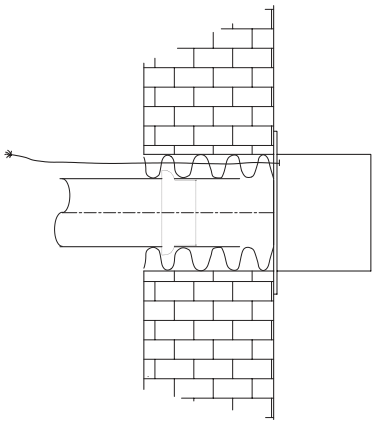
The hole through the wall should provide minimum 5 mm clearance between the wall and the flue pipe or silencer. Drill and cut through the internal and the external wall.



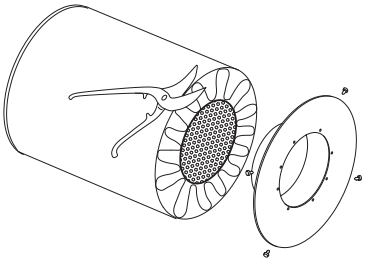
Installation of the silencer

If the silencer is shorter than the wall thickness, use the location brackets supplied with the silencer to secure it in the wall.

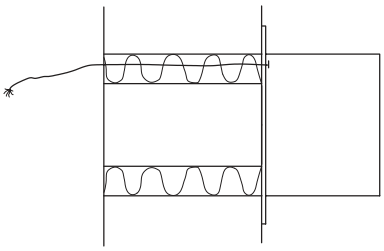
It is possible to use two of the holes and screws, which are used to secure the fan.



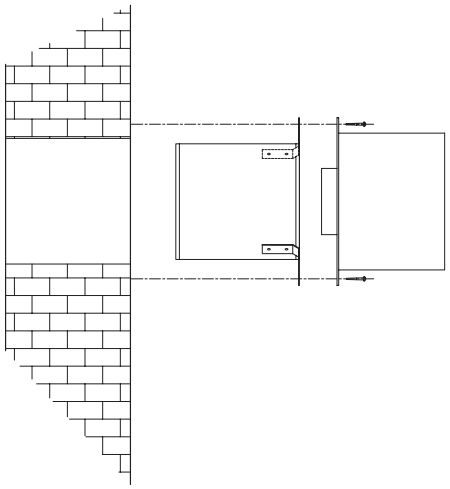
If the silencer is longer than the wall, unscrew the retaining screws at the end of the silencer. Lift off the end plate.



Cut the outer and inner pipe so the length fits the wall thickness. Trim off excess mineral wool insulation and mount the inlet plate. Continue the installation as described below.

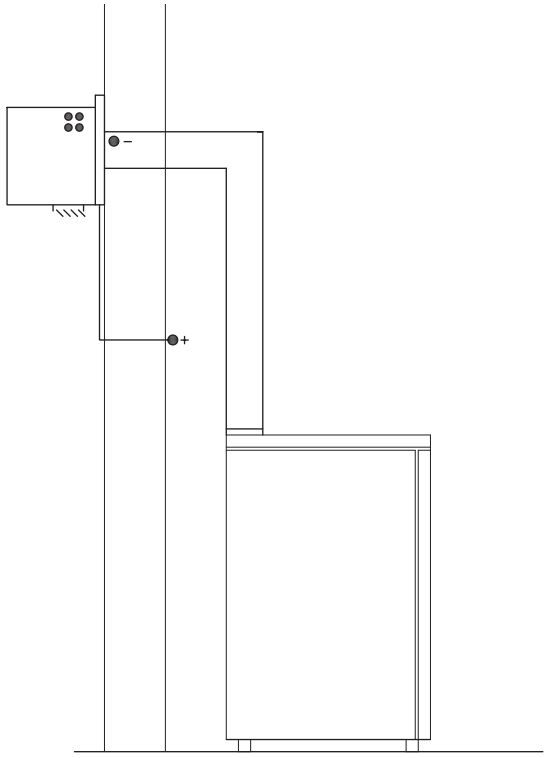


Installation of the fan

Step	Action	Drawing
1	Place the fan (silencer) through the hole from the outside. Mark off the four holes of the fan flange on the external wall.	
2	Remove fan assembly, drill holes and insert rawlplugs supplied. Apply mastic to the underside of the flange, replace fan assembly and anchor it firmly to the wall with the four screws supplied	
3	Connect the flue pipe to the silencer on the inlet side of the fan. Use flue cement to make airtight connections.	
4	Make sure that: the gas seal, if any, fits tightly around the silencer the fan is mounted with the outlet facing downwards	
5	Pack 50 mm mineral wool around the part of the flue pipe which is located in the wall. The cavity between the outer and the inner brick leaf and the space between the brick walls and the silencer should be filled with mineral wool.	
6	Finish by packing flush with the internal wall face.	

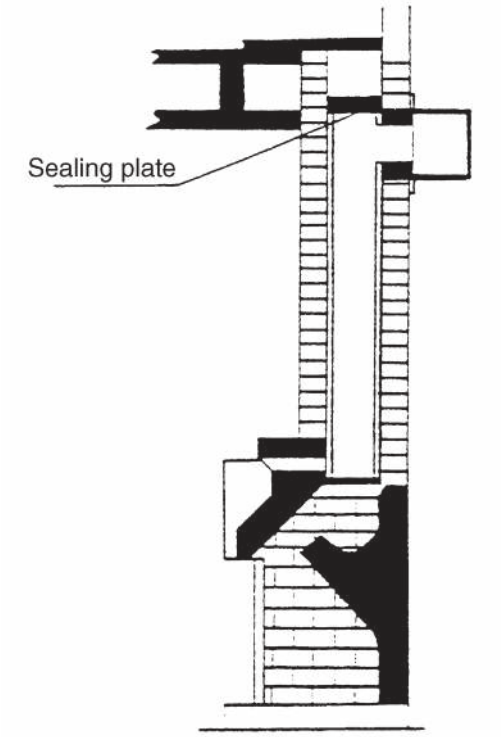
Only RSGC

The long copper tube must be piped into the room where the gas or oil appliance is situated to sense the reference pressure in the room. The length of the tube can be extended if necessary.



RSG for capped chimney

A sealing plate must be located in the chimney approximately 100 mm above the hole for the chimney box. The sealing plate should be firmly inserted into the flue wall and properly sealed. It must be established that there are no leaks. Install the fan without the silencer.



Electrical installation

The fan is variably adjustable.

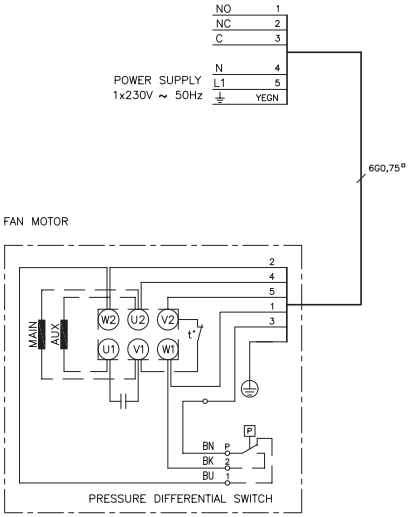
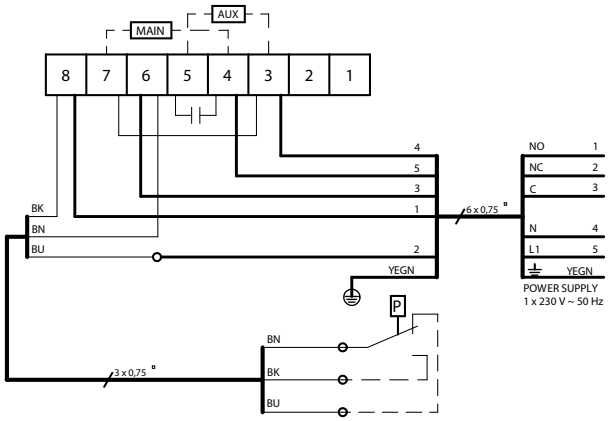
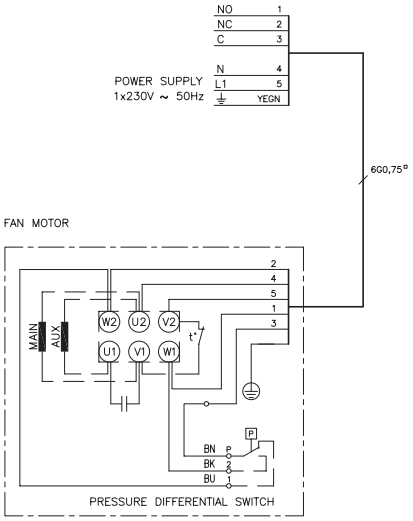
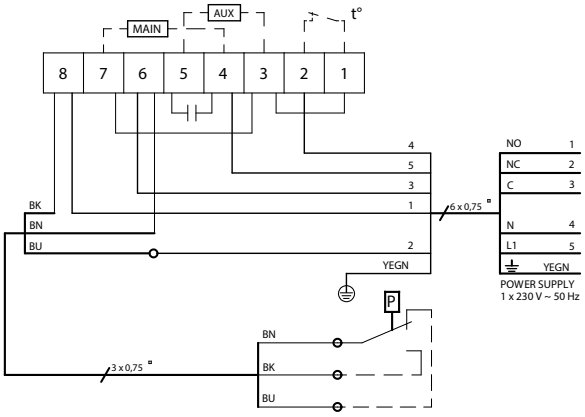
All Exodraft fans require extra safeguards in accordance with power current regulations. For further details, please see guidelines for the Exodraft control units.The diagrams shows the connection of the 6-core cable in the terminal box on the motor.

Setting up the 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 Machine Directive (2006/42/EF/-EEC/-EWG/-CEE) – Appendix 1 item 1.6.3 “Separation of the sources of energy”

Exodraft motor	Grundfos motor
	
	

Spillage test and pressure differential switch

The test should be carried out to ensure that the fan speed and the pressure differential switch (PDS) have been correctly set for the appliance. This should be made with all the doors and windows closed. If any extractor fans have been fitted, the test should be made with these fans on. If spillage is detected, the fan speed must be turned up.

Please refer to the appropriate Exodraft fan control installation guides, for further commissioning assistance.

Type	PDS Factory setting
RSG125-41	30 Pa
RSG150-41	90 Pa
RSG200-41	60 Pa
RSGC150-41	Fix 10/20 Pa

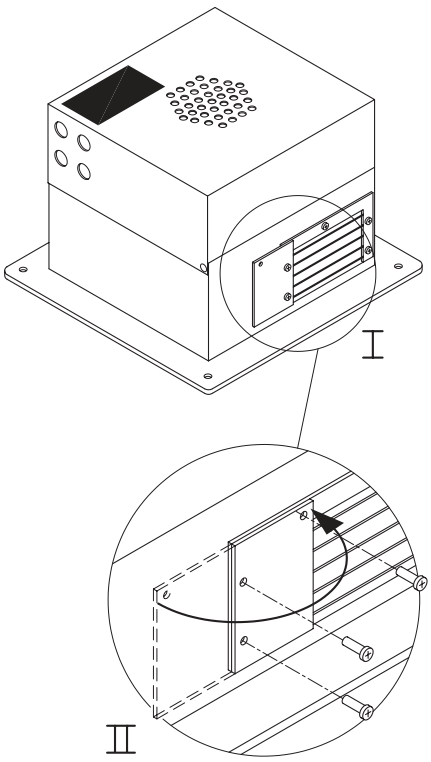
ATTENTION!
- Open the fan cover for setting the PDS
- Start and run the fan as described in the control manual
- Be aware that the cooling vane on the motor is running

WARNING! Turn the fan off at the isolation switch before commisioning is startet.

Reduced fan speed

If...	Then...
the RMS voltage to fan motor is under 160 V	The outlet grill can be adjusted in order to enable the RSG/C to work with low fan speed and still have the failsafe system working.
no spillage has been detected	
the PDS is adjusted to the factory setting	
the fail-safe system sometimes, or always, turns the gas of	

- There is a plate on the underside for this purpose (see figure).
- Turn the plate to position II, commission the system as described above and check with a spillage test.



Startup and configuration

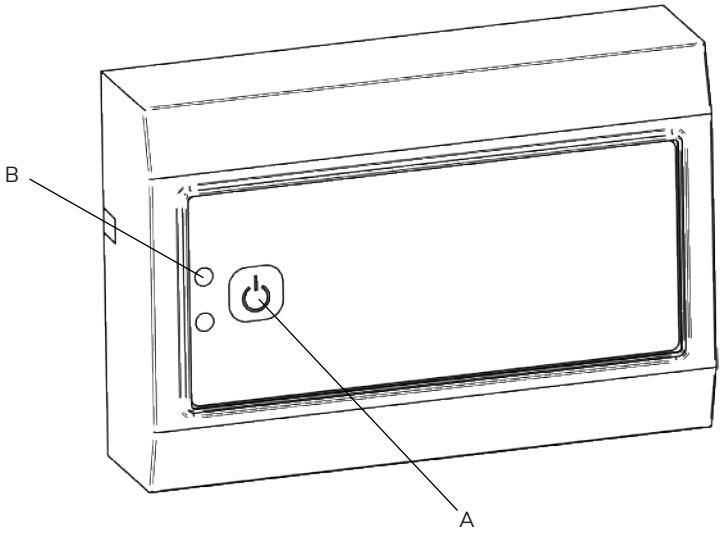
System testing

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!

Maintenance and troubleshooting

The motor has special ball bearings that are sealed, lifetime lubricated and maintenance-free. If replacement of the bearings is required, this should be carried out by qualified professionals.

The run capacitor is considered a wear part and will need to be replaced depending on usage.

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

Inspection

It is recommended that the fan and its connections should be inspected once a year at the same time as the annual maintenance of the appliance.

ATTENTION! Turn the fan off at the isolation switch before any maintenance work commences.

- Remove all soot deposits on the impeller and the sensors.
- On inspection, care should be taken that the flow measuring system is not damaged.

In open position, the hinged chimney fan provides easy access for service and maintenance.

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

CAUTION! Do not overfire the fireplace/stove. Small deposits of creosote could be ignited and start a small chimney fire which could cause the chimney flue to reach a dangerously high temperature.

Troubleshooting

Observation	Problem	Solution
There is no power to the fan	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
There is power to the fan but it is not working	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
There is power to the fan but it hums and does not turn	The capacitor may be worn out	Check capacitor and replace if necessary
	Soot makes the axial vane/impeller stick	Clean the fan
The fan seems to work fine, but there is not enough draught	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)
The fan vibrates	The motor shaft may be bent	Replace motor
	The fan needs cleaning	Clean the fan
	Incorrect installation	Check installation guide in this manual
There is airflow noise from the fireplace opening	The fan is running too fast	Reduce the fan speed
Mechanical noise can be heard	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

Exodraft a/s
Industrivej 10
DK-5550 Langeskov

Hereby declares that the following products:

RSG125-41, RSG150-41, RSG200-41, RSGC150-41

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

Langeskov, 01-11-2022
Managing Director
Anders Haugaard

CE

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:
Erklärt hierdurch auf eigene Verantwortung, daß folgende Produkte:
Déclare, sous sa propre responsabilité, que les produits suivants:
Erklærer på eget ansvar at følgende produkter:
Niniejszym oświadcza, że następujące produkty:
Veklaart dat onderstaande producten:
Deklarerar på eget ansvar, att följande produkter:
Vastaa siltä, että seuraava tuote:
Staðfesti á eigin àbyrgð, að eftirfarandi vörur:
Dichiara con la presente che i seguenti prodotti:

RSG125-41, RSG150-41, RSG200-41, RSGC150-41

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 meðtalin i staðfestingu Pessari, eru i 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 àkvarðana eftirlits:
In conformità con le direttive:

Maskindirektivet:
The Machinery Directive:
Richtlinie Maschinen:
Directive Machines:
Maskindirektivet:
Dyrektywą maszynową:
De machinerichtlijn:
Maskindirektivet
Konedirektiivi:
Vèlaeftirlitið:
Direttiva Macchinari:

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

Lavspændingsdirektiv:
The Low Voltage Directive:
Niederspannungsrichtlinie:
Directive Basse Tension:
Lavspenningsdirektivet:
Dyrektywą Niskonapięciową
De laagspanningsrichtlijn:
Lågspänningsdirektivet:
Pienjännitedirektiivi:
Småspennueftirlitið:
Direttiva Basso Voltaggio:

2014/35/EC

EMC-direktivet:
And the EMC Directive:
EMV-Richtlinie:
Directive Compatibilité Electromagnétique:
EMC-direktivet:
Dyrektywą EMC – kompatybilności elektromagnetycznej
En de EMC richtlijn:
EMC-direktivet:
EMC-direktiivi:
EMC-eftirlitið:
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
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