



ÖSTBERG

RS

INSTALLATION, OPERATION & MAINTENANCE | EN

INSTALLATION, DRIFT & UNDERHÅLL | SE

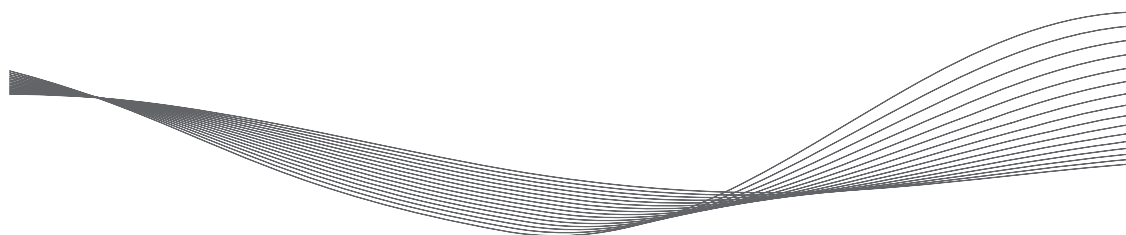


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ÖSTBERG 



EN | Safety

1 Safety

1.1 Warnings



WARNING!

A warning states a risk of personal injury.



CAUTION!

Caution states a risk of damage to equipment.

1.2 General safety



WARNING!

All electrical installations must be performed by a qualified electrician



WARNING!

Ensure that the power cable is not damaged during mounting and installation.



WARNING!

The fan may not be started until the installation is completely finished and the ducts have been connected.



WARNING!

All operations on the unit and its peripheral equipment must be performed in accordance with local laws and regulations.



WARNING!

Watch out for sharp edges and corners on the fan.



WARNING!

Rotating, hot and electrical components can cause serious injuries.



WARNING!

The fan is used for transportation of "clean" air, meaning not intended for flammable substances, explosives, grinding dust, soot, etc.



CAUTION!

The capacitor has finite lifetime and should be exchanged after 45.000 hours of operation (about 5 years) to secure maximum function. Defective capacitor can cause damage.





EN | Safety

1.3 Declaration of conformity



EU DECLARATION OF CONFORMITY

We hereby confirm that our products comply with the requirements in the following EU-directives and harmonised standards and regulations.

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Products: Duct fans: CK, RK, RKC, RKB, LPKB, LPKBS, IRE, IRB, BFS, BFC
Wall fans: CV, KV, RS
Roof fans: TKK, TKS, TKC, TKV, TKH
Exhaust fans: IFK, IFA, CAU
Supply air units: SAU

This EU declaration is applicable for products including our accessories for mounting and installation only if the installation is made in accordance with the enclosed installation instructions and that the product has not been modified.

Machinery Directive (MD) 2006/42/EC

Harmonised standards:

- EN ISO 12100:2010 Safety of machinery - General principles for design – Risk assessment and risk reduction
- EN ISO 13857:2019 Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs.
- SS-EN 60204-1:2018 Safety of machinery – Electrical equipment of machines – Part 1: General requirements
- EN 60335-1:2012, AC 1, A 13 R1, A 11, A 12, A 13, A 1, A 14, A2, A15, Household and similar electrical appliances - Part 1: General requirements

The products are designed to meet the requirements also in the following standards:

- EN 60335-2-80:2003, A 1, A 2, Household and similar electrical appliances - safety- Part 2: Particular requirements for fans*

* Deviations regarding section 24.101 occur. Automatic reset of thermal cut-outs can lead to a sudden start comparable to that of demand-controlled ventilation. These risks are reduced by fixed guards and warnings.

Directive for Electromagnetic Compatibility (EMC) 2014/30/EU

Harmonised standards:

- SS-EN IEC 61000-6-1:2007 Electromagnetic compatibility (EMC) - Generic standards - Immunity for residential, commercial and light-industrial environments
- SS-EN IEC 61000-6-2:2005, AC, Electromagnetic compatibility (EMC) - Generic standards - Immunity for industrial environments
- SS-EN 61000-6-3:2007, A1, AC, Electromagnetic compatibility (EMC) - Generic standards - Emission standard for residential, commercial and light-industrial environments
- SS-EN IEC 61000-6-4:2007, A1, Electromagnetic compatibility (EMC) - Generic standards - Emission standard for industrial environments

Ecodesign Directive 2009/125/EC

Harmonised regulation:

- 1253/2014 Ecodesign requirements for ventilation units
- 1254/2014 Energy labeling of residential ventilation units (Where applicable)

Standards:

- SS-EN 13141-4:2021, SS-EN 13141-8:2022, SS-EN 13141-11:2015 or SS-EN 13053:2019

RoHS 2011/65/EU, 2015/863/EU

Harmonised standards:

- EN IEC 63000:2018

Avesta 2023-11-08



Mikael Östberg
Product Manager

This document is digitally signed.

We hereby confirm that our products comply with the requirements in the following UK legislations and designated standards.

Manufacturer: H. ÖSTBERG AB
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Wall fans: CV, KV, RS
Roof fans: TKK, TKS, TKC, TKV, TKH
Exhaust fans: IFK, IFA, CAU
Supply air units: SAU

This GB declaration is applicable for products including our accessories for mounting and installation only if the installation is made in accordance with the enclosed installation instructions and that the product has not been modified.

The Supply of Machinery (Safety) Regulations 2008, S.I. 2008 No. 1597

Designated standards:

- EN ISO 12100:2010 Safety of machinery - General principles for design – Risk assessment and risk reduction
- EN ISO 13857:2019 Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs.
- EN 60204-1:2018 Safety of machinery – Electrical equipment of machines – Part 1: General requirements
- EN 60335-1:2012, AC 1, A 13 R1, A 11, A 12, A 13, A 1, A 14, A2, A15, Household and similar electrical appliances - Part 1: General requirements, IEC 60335-1:2010 (Modified).

Standard:

- EN 60335-2-80:2003, A 1, A 2, Household and similar electrical appliances - safety- Part 2: Particular requirements for fans*

* Deviations regarding section 24.101 occur. Automatic reset of thermal cut-outs can lead to a sudden start comparable to that of demand controlled ventilation. These risks are reduced by fixed guards and warnings.

Electromagnetic Compatibility Regulations 2016, S.I. 2016 No. 1091

Designated standards:

- EN 61000-6-1:2007 Electromagnetic compatibility (EMC) - Generic standards - Immunity for residential, commercial and light-industrial environments
- EN 61000-6-2:2005, AC, Electromagnetic compatibility (EMC) - Generic standards - Immunity for industrial environments
- EN 61000-6-3:2007, A1, AC, Electromagnetic compatibility (EMC) - Generic standards - Emission standard for residential, commercial and light-industrial environments
- EN 61000-6-4:2007, A1, Electromagnetic compatibility (EMC) - Generic standards - Emission standard for industrial environments

The Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2019, S.I. 2019 No. 539

Retained regulation:

- 1253/2014 EU Ecodesign requirements for ventilation units
- 1254/2014 EU Energy labeling of residential ventilation units (Where applicable)

Standards:

- SS-EN 13141-4, SS-EN 13141-8, SS-EN 13141-11 or EN 13053

Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012, S.I. 2012 No. 3032

Designated standards:

- EN IEC 63000:2018

Avesta 2024-05-21

This document is digitally signed.


Mikael Östberg
Product Manager

2 Warranty

The warranty's validity according to the purchase agreement is calculated from the day of purchase.

2.1 Extent of the warranty

The warranty covers faults that occur during the warranty period that have been notified to the dealer or which have been verified by H.Östberg AB (underwriter) or the warranty provider's representative. Faults are defects in manufacture and materials as well secondary failures that occur due to these. The above faults must be remedied so that the product is operational.

2.2 General limitations in the warranty

The warranty provider's liability is limited according to these warranty conditions and the warranty does not cover injury or damage to people or property. Verbal promises that are made in addition to the warranty agreement are not binding on the warranty provider.

2.3 Limitations in the warranty

The warranty applies on condition that the product is used in the normal manner or under equivalent circumstances and that the user instructions are followed.

The warranty does not cover faults that are caused by:

- Transport of the product.
- Unintended use or overloading of the product.
- Failure on the part of the user to follow the instructions regarding installation, use, maintenance and care.
- Incorrect installation or incorrect positioning of the product.
- Conditions that are not the responsibility of the warranty provider, e.g. excessive variations in voltage, lightning strike, fire and other accidents.
- Repairs, maintenance and changes that are performed by unauthorised parties.

The warranty does not cover:

- Faults that do not affect operation, for example scratches to the surfaces.
- Parts that are exposed to greater risk of fault than normal due to handling or normal wear and tear, for example lamps, glass, ceramics, paper or plastic parts, filters and fuses.
- Settings, information on use, care, service or cleaning that are typically described in the user instructions, or damage that is caused by the user failing to observe warnings or installation instructions, or inspection of such.

The warranty provider is only responsible for the operation if approved accessories are used. The warranty does not cover product faults that are caused by other manufacturers' accessories or equipment.

The unit's current settings must be recorded in the installation and assembly instructions at installation in order to avoid costs in the event of fault. The warranty provider is not responsible for costs such as adjustment costs when changing fans and mainboards in the unit.

2.4 Service conditions during the warranty period

The conditions apply according to the agreement with the local dealer.

2.5 Corrective measures in the event of detected faults

If a fault is detected, the customer must notify this to the dealer.

Shipping damage must be notified to the shipping agent upon delivery. State which product applies (part and serial number as per the name plate) and describe the fault and how this has occurred as accurately as possible.

In order for warranty repair to be performed, the customer must demonstrate that the warranty is valid by presenting a purchase receipt. Once the warranty period has expired, claims that were not made in writing before expiry of the warranty period will not be valid. In other regards, this shall occur in accordance with the sales conditions.

3 Transport and storage

3.1 General

The fan must be transported in its packing until installation. This prevents transport damages, scratches and the fan from getting dirty.

The fan must be stored in a protected and dry space before installation.

3.2 Checking the delivery

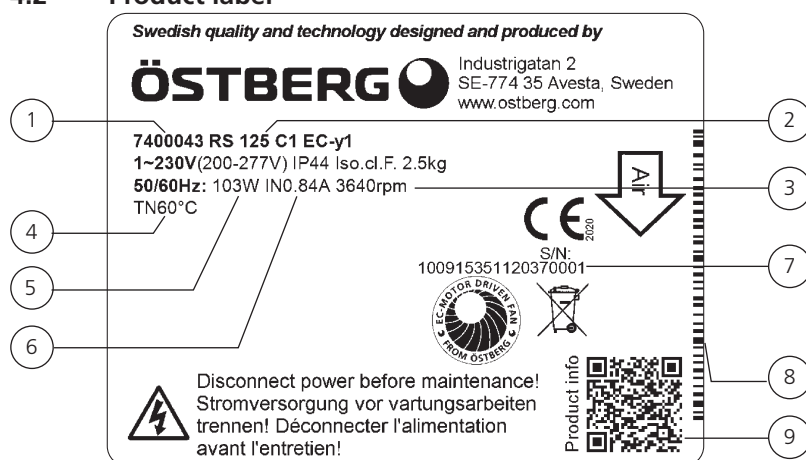
1. Inspect the unit carefully upon delivery to check for any damage that may have occurred during transport. Immediately inform the manufacturer in the event of severe damage.
Note! The manufacturer cannot be held liable for damage to the fan during transport, even if the manufacturer has appointed the shipping agent.
2. Check that the delivery contains all ordered parts.
The following parts will be included in the delivery:
 - Manual for installation, operation and maintenance.
3. Contact your dealer if anything is missing.

4 Product overview and use

4.1 Product description

- The RS is an exhaust fans designed for mounting on an outside wall.
- The casings are manufactured from painted galvanized steel for higher durability.
- The fan is equipped with an AC or EC external rotor induction motor with maintenance-free sealed ball-bearings.
- The fan is used for transportation of "clean" air, meaning not intended for fire-dangerous substances, explosives, grinding dust, soot, etc.
- All fans are as standard, single phase 230V, 50 Hz and some also 220V, 60 Hz.
- The fan is intended to be used at the highest voltage and frequency that's stated on the label on the fan.

4.2 Product label



Example of product label

- 1 Item number
- 2 Product name
- 3 RPM at maximum power
- 4 Max temperature of transported air
- 5 Maximum power
- 6 Current at maximum power
- 7 Serial number
- 8 Serial number as bar code
- 9 QR-code for product web page



5 Installation



WARNING!

Power must be cut before work can be started.



WARNING!

Make sure that the power is cut during the installation.



WARNING!

The fan may not be started until the installation is completely finished and the duct have been connected.



WARNING!

All electrical installations must be performed by a qualified electrician



WARNING!

The fan must be connected to duct or equipped with a safety grille.



WARNING!

The fan should be installed in a safe way and make sure that no foreign objects are left behind.



WARNING!

The fan should be installed in a way that makes service and maintenance easy.



WARNING!

All operations on the fan and its peripheral equipment must be performed in accordance with local laws and regulations.



WARNING!

Rotating, hot and electrical components can cause serious injuries.



WARNING!

Electrical installation must be connected to a locally situated isolator switch or by a lockable main switch.



CAUTION!

Installation and commissioning must be performed by a professional.

Preparations

- The fan is designed for mounting on an external wall or ground work.
- Make sure the the placement of the fan does not cause any inconvenience for neighbours etc.
- The fan should be installed in a way that vibrations can not be transfused to duct or building.
To provide this, use for example a duct clamp.
- The fan must be installed with the air direction downwards.
- Before installation, check that the fan has the correct marking for the current electrical connection.
- For wiring diagram please see the lid of the junction box.
- Control that the fan is installed and connected electrically in the right way, grounded and with motor protection.
- For single phase fans a residual current device is used (type A).



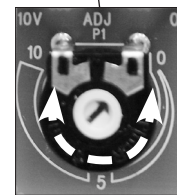
EN | Installation

AC-motor

- For speed regulation of AC motor a transformer or thyristor can be connected.
- The AC motor has a built-in thermal contact.

EC-motor

- Speed regulating of EC motor can be done with the built-in potentiometer, 0-10 V. An external potentiometer can be connected to the terminal if necessary. The internal potentiometer should then be disconnected.
- Some EC motors has tachometer output one pulse per revolution.
- EMC-compatible installation of EXTERNAL control lines: The control cable must not be longer than 30 m. Screened control cables must be used when the cable length is longer than 20 m. When using a shielded cable connect the shielding to one side only, i.e. only to the device with the protective ground (keep cable short and with as little inductance as possible!). Pay attention to sufficient distance from power lines and motor wires to prevent interferences. Attention! Ensure correct polarity! Never apply line voltage to analog inputs!
- The EC motor has electronically thermal/overvoltage protection.



No other preparations are required.

Tools

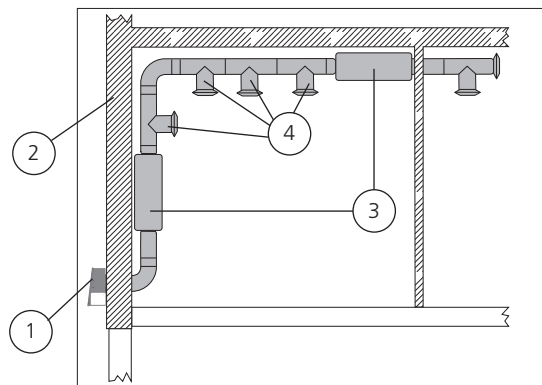
- Screwdriver

Material

- Fastener that is suitable for the construction and condition of the wall
- Pipe clip or flange with surrounding insulation

5.1 Mounting principles

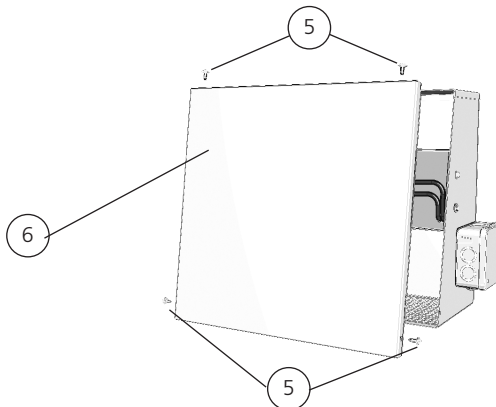
- ① RS wall fan
- ② Exterior wall
- ③ Silencer
- ④ Exhaust diffusers



5.2 Installation

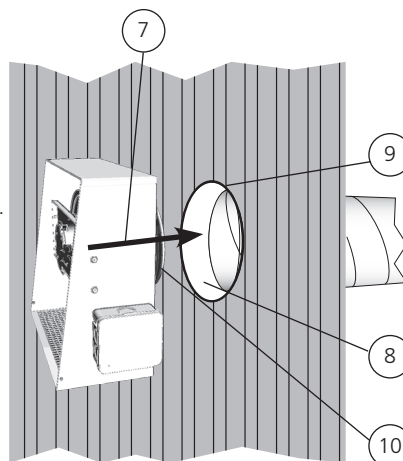
Remove the lid of the fan.

- 5 Losen the screws.
- 6 Lift off the lid.



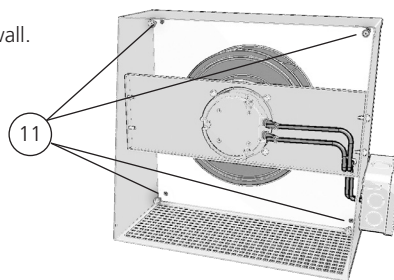
Placement.

- 7 The wall fan is mounted to duct, such as spiro.
- 8 Make the lead-through sealing accurately to avoid moisture damage on the building.
- 9 Apply sealant between the top of the fan and the wall.
- 10 Insulate the outside of the duct to avoid condensation and draughts.



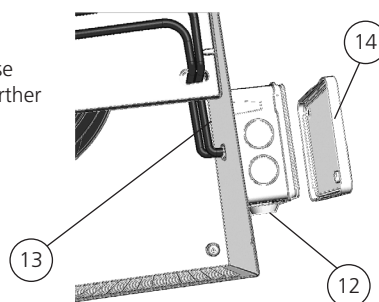
Mounting.

- 11 Secure the fan with screws that is suitable for the construction and condition of the wall.
- There are screw holes in all four corners.

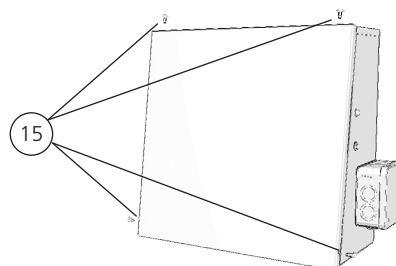


EN | Operation

- 12 Install possible peripheral equipment.
- 13 Make sure that the motor cable is not too close to the fan wheel. The cable can be drawn further into the junction box.
- 14 Refit the lid of the junction box.



- 15 Refit the lid on the fan and tighten the screws.



6 Operation



WARNING!

The fan must be duct connected and the lid closed and locked before the fan is started in order to avoid the risk of personal injury from rotating parts.



CAUTION!

To achieve maximum life time for installations in damp or cold environments, the fan should be operating continuously.

For technical data please see the product label.

Before starting, make sure that:

- the current does not exceed more than +5% of what is stated on the label.
- the supplied voltage is within +6% to -10% of the rated voltage.
- no noise appears when starting the fan.

7 Maintenance

**WARNING!**

Before service, maintenance or repair, disconnect power and wait until the impeller has stopped.

**WARNING!**

Rotating, hot and electrical components can cause serious injuries

**WARNING!**

In accordance with IEC 60335-2-7.12, this apparatus is not intended to be used by people (including children) who have physical, sensory or psychological impairment, or lack of experience and knowledge, unless they have received guidance and instruction on how to use the apparatus by a person who is responsible for their safety. Children must be supervised to ensure that they do not play with the apparatus.

**CAUTION!**

Temperatures up to 85°C can be present on the controller housing (only for EC motor).

- The fan must be cleaned regularly, at least once a year to maintain the capacity and to avoid unbalance which may cause unnecessary damage of the bearings.
- When cleaning the fan, high-pressure cleaning or strong dissolvent must not be used. Cleaning should be done without displacing or damaging the impeller.
- The capacitor (only for AC motor) has finite lifetime and should be exchanged after 45.000 operation hours (about 5 years of operation) to secure maximum function. Defective capacitor can cause damage.
- NOTE! Temperatures up to 85°C can be present on the controller housing (only for EC motor).
- **Waiting period of at least 3 minutes!** (only for EC motor) Because of internal capacitors, danger of death exists even after switching off the device through directly touching the energized parts or due to parts that have become energized due to faults. The controller housing may only be removed or opened when the power line has been switched off and a period of three minutes has elapsed since switching it off.
- The fan bearings are maintenance-free and should be replaced only when necessary.
- Make sure that there is no noise from the fan.

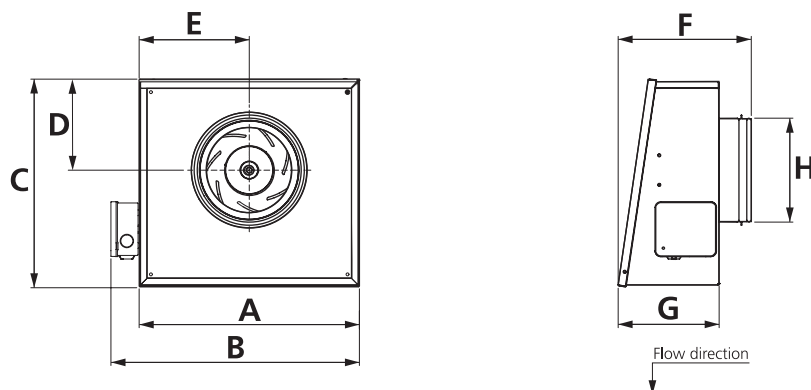


EN | Technical data

8 Technical data

 For further technical data, see <https://fsp.ostberg.com>.

8.1 Dimensions



RS AC

(mm)	A	B	C	D	E	F	G	H
RS 80 A/C	230	273	252	104	115	170	122	Ø 80
RS 100 A/C	230	273	252	104	115	170	122	Ø 100
RS 125 A/C	230	273	252	104	115	170	122	Ø 125
RS 160 A/C	332	375	310	135	166	195	147	Ø 160

RS EC

(mm)	A	B	C	D	E	F	G	H
RS 100 C1	234	277	257	106	117	170	132	Ø 100
RS 125 C1	234	277	257	106	117	180	132	Ø 125
RS 160 A1/C1	336	379	317	139	168	201	154	Ø 160
RS 200 Y1	336	379	371	135	168	229	181	Ø 200
RS 250 y1	425	468	398	178	213	268	222	Ø 250
RS 315 y1	425	468	398	178	213	268	222	Ø 315

EN | Troubleshooting

9 Troubleshooting

1. Make sure that the power is connected to the fan.
2. Disconnect the power and verify that the impeller is not blocked.
3. Check the thermal contact (only for AC). If it is triggered the cause of overheating must be investigated and taken care of. To restore the manual thermo-protector the power must be disconnected for a couple of minutes. In case of automatic thermo-protector the resetting will be done automatically when the motor has cooled down.
4. Make sure that the capacitor is connected according to the wiring diagram (only for AC).
5. If the fan still does not work, the first thing to do is to replace the capacitor (only for AC).
6. If the previous steps doesn't solve the problem, contact your fan supplier.
7. If the fan is returned to the supplier, it must be cleaned, the motor cable must be undamaged and a detailed fault description must be enclosed.