

# Directions for use

CK AC/EC



## ENGLISH

This directions for use contains following products: CK AC and EC.  
Scan the QR code on the product label or visit [www.ostberg.com](http://www.ostberg.com) for further information about the product.



### DESCRIPTION

CK is a circular in-line duct fan with backward curved impeller. The fan is equipped with external rotor induction AC or EC motor with maintenance-free sealed ball-bearings. The fanhousing are manufactured from galvanized steel sheet.

### APPLICATION

- CK is accessible for the user, according to IEC 60335-2-40, to by themselves do the service and maintenance, according to this Directions for use. But before this work the unit must be currentless. With reservation according to IEC 60335-2-7.12 "This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety." "Children should be supervised to ensure that they do not play with the appliance."
- The fan is used for transportation of "clean" air, meaning not intended for fire-dangerous substances, explosives, grinding dust, soot, etc.
- To achieve maximum life time for installations in damp or cold environments, the fan should be operating continuously.
- The fan can be installed outside or in damp environments. Make sure that the fan house is equipped with drainage.
- The fan is intended to be used at the highest voltage and frequency that's stated on the label on the fan.
- The fan can be installed in any position.

### HOW TO HANDLE

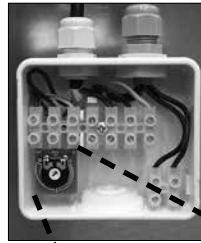
- The fan must be transported in its packing until installation. This prevents transport damages, scratches and the fan from getting dirty.
- Attention, look out for sharp edges and corners.
- Avoid extreme heat or cold (temperature range for storage and transport).

## INSTALLATION

- The fan must be installed according to the air direction label on the fan.
- The fan must be connected to duct or equipped with a safety grille.
- The fan should be installed in a safe way and make sure that no foreign objects are left behind.
- The fan should be installed in a way that makes service and maintenance easy. N.B.! Consider the weight and size of the fan.
- The fan should be installed in a way that vibrations not can be transfused to duct or building. To provide this, use for example a flange.
- Electrical installations must be made by an authorized electrician.
- See Wiring diagram at the lid of the junction box.
- Electrical installation must be connected to a locally situated isolator switch or by a lockable main switch.
- 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 i used (type A).

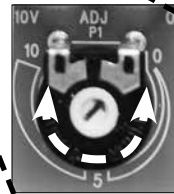
### AC-MOTOR

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



### 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-/over-voltage protection.

# ENGLISH

## OPERATION

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 connecting voltage is in between +6% to -10% of the rated voltage.
- no noise appears when starting the fan.

## MAINTENANCE

- Before service, maintenance or repair begins, the fan must be tension free and the impeller must have stopped.
- Attention, look out for sharp edges and corners.
- Consider the weight of the fan when removing or opening larger fans to avoid jamming and contusions.
- **Attention!** 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.

- When cleaning and maintaining, the fan always have to be secured when open, so it can't fall down and cause injury.
- The fan must be cleaned when needed, at least once a year to maintain the capacity and to avoid unbalance which may cause unnecessary damages on the bearings.
- When cleaning the fan, high-pressure cleaning or strong dissolvent must not be used. Cleaning should be done without dislodging or damaging the impeller.
- The fan bearings are maintenance-free and should be renewed only when necessary.
- Notice the weight of the fan when closing after inspection/cleaning.
- Mount back all details in reverse order. Check that the fan is closed and locked before starting.
- Make sure that there is no noise from the fan.

## FAULT DETECTION

1. Make sure that there is power to the fan.
2. Cut the power and verify that the impeller is not blocked.
3. Check the thermal contact (for AC). If it is disconnected the cause of overheating must be taken care of, not to be repeated. To restore the manual thermal contact, cut the power for a couple of minutes. If it has automatic thermal contact the resetting will be done automatically when the motor has cooled.

4. Make sure that the capacitor is connected according to the wiring diagram (for AC).
5. If the fan still does not work, the first thing to do is to change the capacitor (for AC).
6. If nothing of this works, contact your fan supplier.
7. If the fan is returned to the supplier, it must be cleaned, the motor cable undamaged and a detailed nonconformity report enclosed.

## WARRANTY

The warranty is only valid under condition that the fan is used according to this "Directions for use" and a regular maintenance has been made and record. The warrantor is responsible only for the operation if app-

roved accessories are used. The warranty does not cover product failures caused by accessories/equipment from other manufacturers.

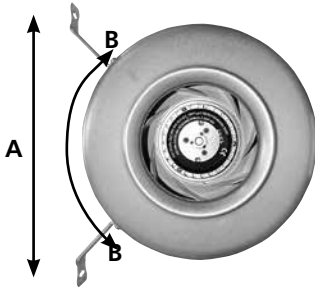
## ASSEMBLY INSTRUCTION

Mounting bracket kit for easy suspension of CK contents:

1. 2 pcs mounting bracket
2. 4 pcs screws



The brackets can be mounted horizontal everywhere around the joint of the fan. For right distance between the brackets, see the dimension table (B) and the distance from the joint to screw-hole (C).



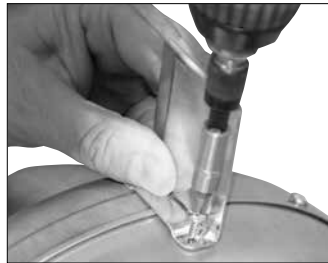
Fan size	A +2	B +2	C +-1
100	277	185	18
125	277	185	15
150 B	299	210	18
150 C	323	248	17
160 B	299	210	18
160 C	323	248	17
200	323	248	18
250	323	248	18
315	350	275	17



1. Mark the measure of **B** on the fan for the placement of the mounting brackets.



2. Mark the measure of **C**. Start from the joint of the fan.

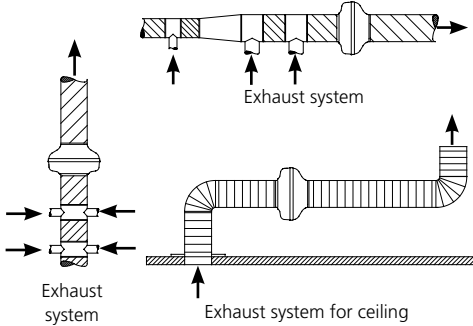


3. Fasten the mounting brackets with the self-drilling screws.



INSTALLATION INSTRUCTIONS

Installation instructions for exhaust systems for duct fan, type CK.



1. Mark the measure of **A** on the wall or roof and then fasten the fan.

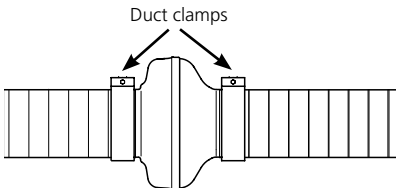


2. Put together the ducts and the fan.

Installation with duct clamps for duct fan CK.

Duct clamp, type MK is made of pre-galvanized steel and is rubber-lined to seal connection and absorb vibrations. The clamp allows the fan to be easily removed for inspection and cleaning.

Available in sizes: Ø 80, 100, 125, 150, 160, 200, 250, 315, 355, 400, 500 and 630 mm.



3. Strap the duct clamps on each side of the fan with the screws.