

# Installation and directions for use

Exhaust wall fan 'KV' UL



UL VERSION



HEALTHY INDOOR CLIMATE  
WITH ENERGY EFFICIENT VENTILATION

This directions for use contains the following product: Exhaust wall fan 'KV'.  
Scan the QR code on the product label or visit [www.ostberg.com](http://www.ostberg.com)  
for further information about the product.

**Read and save these directions.**



**CAUTION! FOR GENERAL VENTILATION USE ONLY.  
DO NOT USE TO EXHAUST HAZARDOUS OR EXPLOSIVE MATERIALS AND VAPORS.**

## DESCRIPTION

- The fan is used for transportation of "clean" air, meaning not intended for fire-dangerous substances, explosives, grinding dust, soot, etc.
- The fan is equipped with an asynchronous external rotor induction motor with maintenance-free sealed ball-bearings.
- To achieve maximum life length for installations in damp or cold environments, the fan should be operating continuously.
- All 'KV'-fans are as standard, single phase 110-127 V 60 Hz.
- The fan can be installed vertically or horizontally.
- The fan is UL 507 "Fans Electric" approved, E226987.

## INSTALLATION

- The fan has rotating parts, therefore safety precautions should be exercised during installation, operation and maintenance. Tighten all screws before operation unit. **USE HAND PROTECTION AND STAY CLEAR OF SHARP EDGES.**
- The fan must be installed according to all local and national codes and the air direction label on the fan.
- The fan must be connected to duct or equipped with a safety grill.
- The fan should be installed in a safe way not to cause vibrations or risking the fan to fall off.
- The junction box must be security fasten to the fan with 2 screws.
- Ensure that the fan and junction box are easily accessible for service after the installation.
- A wiring diagram is applied on the inside of the junction box.
- To ensure quiet operation of inline and remote fans, each fan shall be installed using sound attenuation techniques appropriate for the installation.

For bathroom and general ventilation applications, at least 8 feet of insulated flexible duct shall be installed between the exhaust or supply grille(s) and the fan.

- For a proper tightness to the enclosing duct, use duct clamp MK, which is available as an accessory.
- Ductwork done with a rigid steel ducting. For example a Spiral Duct system, made of galvanized sheet metal together with fittings that have rubber seals, will give the most economical (low pressure drop and airtight) system.  
If flexible ducts are used as a connection to diffusers, it is important that the flex duct is properly stretched and that the bends are made soft and wide.
- The fan (motor with fan wheel) is balanced both dynamic and static. There is always some small vibrations from a rotating machine at some rpm's, if the building is built with light material these small vibrations can be transferred in the construction if there is no deadening materials between the Fan/Ductwork and the building construction.

### **WARNING! TO REDUCE THE RISK OF FIRE, ELECTRICAL SHOCK OR INJURY TO PERSONS, OBSERVE THE FOLLOWING**

- Use this unit only in the manner intended by the manufacturer. If you have any questions, contact your manufacturers representative.
- Before servicing and cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent device, such as a tag, to the service panel.
- Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
- Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent back drafting.

Follow the heating equipment manufacturer's guideline and safety standards such as those published by the National Fire Protection Association (NFPA), and the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), and the local code authorities.

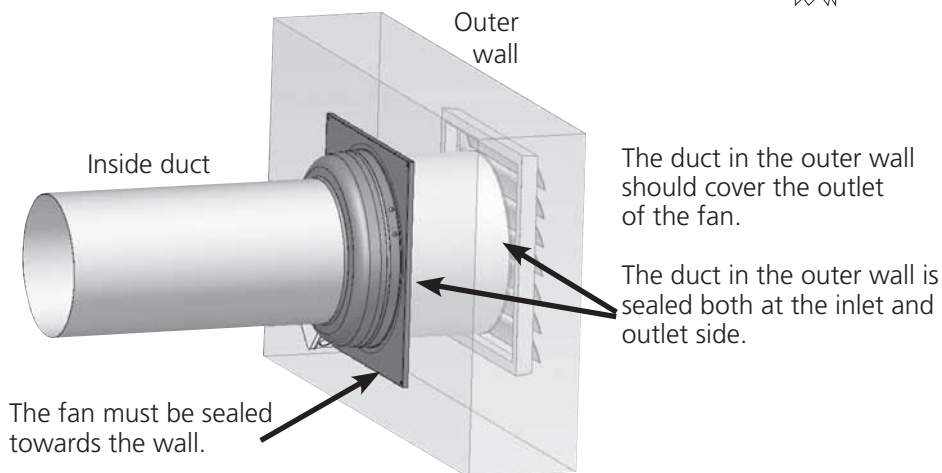
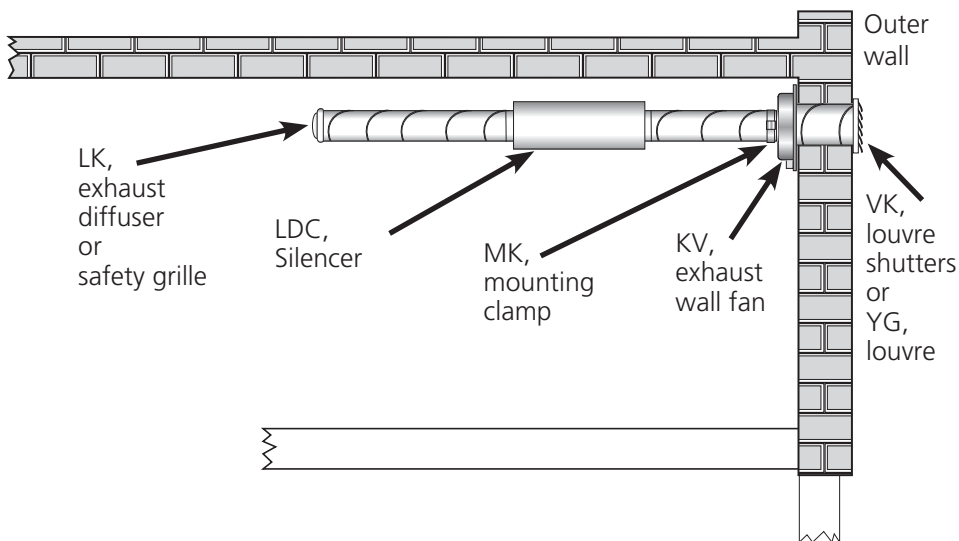
- When cutting or drilling into the wall or ceiling, do not damage electrical wiring or other hidden utilities.
- Ducted fans must always be ventilated to the outdoors.
- Do not install this unit above a tub or a shower, if it's not marked as appropriate for the application.
- **Never** place a switch where it can be reached from a tub or shower.

**CAUTION! TO REDUCE RISK OF FIRE AND TO PROPERLY EXHAUST AIR, BE SURE TO DUCT AIR OUTSIDE - DO NOT VENT EXHAUST AIR INTO SPACES WITHIN WALLS OR CEILINGS OR INTO ATTICS, CRAWL SPACES, OR GARAGES.**

## INSTALLATION INSTRUCTIONS

The KV is an exhaust fan designed for mounting on an inside wall. It is not allowed to use the fan for anything else than clean air transportation. Before mounting, make sure that right current is stated on the label for connection. The fan must be connected to duct and/or fitted with safety grille at the inlet. At the outlet, louvre

or louvre shutter should be mounted. The fan must be sealed towards the wall. **NOTE!** The duct in the outer wall has a larger diameter than the inside duct, and should cover the outlet of the fan. The duct in the outer wall is sealed both at the inlet and outlet side.



## OPERATION

Before starting, make sure that:

- the fan is installed and electrically connected in the correct way to ground.

- the current does not exceed more than +5% of what is stated on the label.
- No foreign object are placed in the fan and no noise appears when starting the fan.

## MAINTENANCE

**WARNING! TO REDUCE THE RISK OF FIRE, ELECTRICAL SHOCK OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:**

- Use this unit only in the manner intended by the manufacturer. If you have any questions, contact your manufacturers representative.
- Before service and cleaning of the unit, switch off the power at the service panel and lock the service disconnecting means to prevent power from being switched on accidentally. If the service disconnecting means cannot be locked, securely fasten a prominent device, such as a tag, to the service panel.
- Consider the weight of the fan when removing larger fans to avoid jamming and contusions.
- The fan must be cleaned when needed, at least once per year to maintain the capacity and to avoid unbalance which may cause unnecessary damages on the bearings.
- The fan bearings are maintenance-free..
- When cleaning the fan, high-pressure cleaning or strong dissolvent must **not** be used. Cleaning should be done without dislodging or damaging the impeller.
- Make sure that there is no noise from the fan.

**If repair must be made to the product, it has to be performed by a qualified maintenance person.**

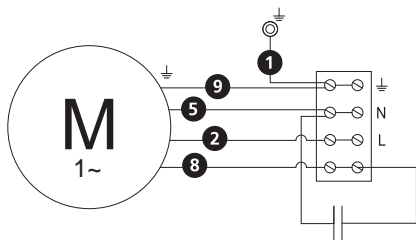
## FAULT DETECTION

1. Make sure that there is electrical power to the fan.
2. Cut the electrical power and verify that the impeller is not blocked.
3. Check the thermo-contact/motor protector. If it is disconnected the cause of overheating must be located and taken care of.
4. 'KV' is equipped with automatic thermo-protector which resets automatically when the motor is back in normal working temperature.
5. Make sure that the capacitor is connected according to the wiring diagram.
6. If the fan still does not work, the first thing to do is to change the capacitor.
7. If nothing of this works, contact your fan supplier.
8. If the fan is returned to the supplier, it must be cleaned, the motor cable undamaged and a detailed nonconformity report enclosed.

## WIRING DIAGRAMS

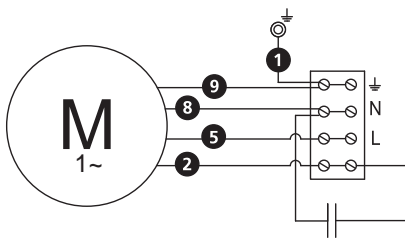
**No: 4040076**

KV 4" C, KV 5" C, KV 6" B, KV 6" C, KV 8" A,  
KV 8" B, KV 10" A, KV 10" C, KV 12" B, KV 12" C.



**No: 4040077**

KV 4" A, KV 5" A.



(M) = Fan Motor

① = Yellow/Green

② = Black

③ = Blue

④ = Brown

⑤ = White

⑥ = Orange

⑦ = Grey

⑧ = Red

⑨ = Green

⑩ = Violet

⑪ = Quick switch

⑫ = Yellow



Distributor:



**AB C.A. ÖSTBERG**

Box 54, SE-774 22 Avesta, Sweden  
Industrigatan 2, Avesta  
Tel: +46 226 860 00. Fax: +46 226 860 05  
Email: [info@ostberg.com](mailto:info@ostberg.com)  
[www.ostberg.com](http://www.ostberg.com)