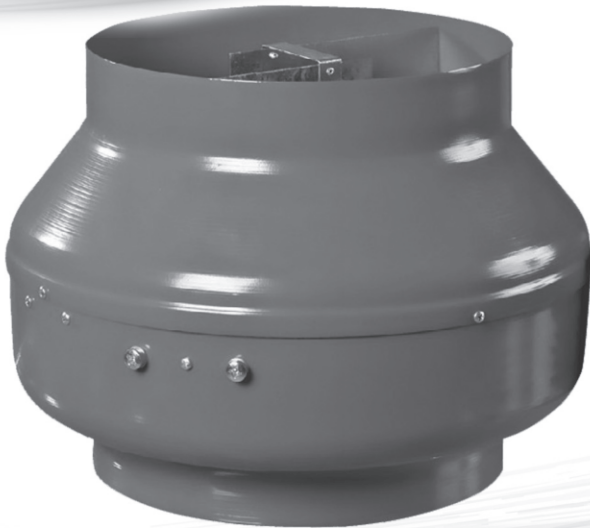




*better AIRFLOW by DESIGN™*

# *Installation & Maintenance*



**AXS EC  
IN-LINE DUCT FANS**

# SAFETY INSTRUCTIONS

**NOTICE** **AXS EC** in-line duct fans are not explosion proof and should not be used when a potentially explosive situation exists. Do not use where temperatures will exceed 104 F.

## **WARNING**

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, INJURY TO PERSONS, PLEASE READ THESE INSTRUCTIONS CAREFULLY

1. Before servicing or cleaning the unit, ensure that the electrical service to the fan is locked in the "OFF" position to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device such as a tag to the service panel. Do not re-establish power supply until the fan has been completely installed.
2. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the factory.
3. A qualified person(s) must perform installation work and electrical wiring in accordance with all applicable codes and standards, including fire-rated construction codes and standards.
4. The combustion airflow needed for safe operation of fuel burning equipment may be affected by this unit's operation. Follow the heating equipment manufacturer's guidelines and safety standards as published by the National Fire Protection Association (NFPA), the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE), and the local code authorities.
5. When cutting or drilling into walls or ceilings, take care not to damage electrical wires and other hidden utilities.
6. When used to exhaust moist / humid air, fans must always be vented to the outdoors.
7. This unit may have sharp edges. Use caution to avoid injury when installing and cleaning.
8. The fan is intended to be hard wired to a properly rated electrical circuit, and must be properly grounded. Do not use an extension cord.

## **CAUTION**

1. For general ventilating use only. For use in non-fire installations only. Do not use to exhaust hazardous or explosive materials and vapors.
2. For interior use only. Mount with the lowest moving parts at least 8 feet (2.5 meters) above the floor or grade level.
3. To avoid motor damage and noisy and/or unbalanced impeller, keep the fan clean from dry-wall spray, construction dust, etc.
4. Before installing the unit, check for any visible damage to the impeller and housing. The housing internals must be free of debris, which can damage the impeller blades.
5. Please read the specification label on product for further information and requirements.
6. Not for installation by any person that is unable to follow these safety guidelines.
7. To ensure optimal airflow, do not close or block the unit inlet or outlet. Do not sit or put objects on the unit.
8. Store the fan in manufacturer's packaging in a ventilated room at temperatures between 41 F and 104 F. Relative humidity should not exceed 70%.

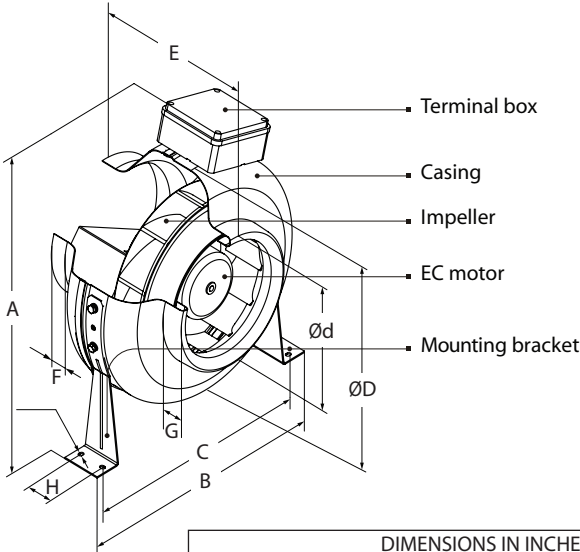
# AXS EC IN-LINE DUCT FANS

AXS EC fans are made of a corrosion resistant steel housing.  
 Delivery set includes:

- Fan -1
- Fan bracket - 2



Depending on model, fan is compatible with 4" (100 mm), 5" (125mm), 6" (150mm), 8" (200mm), 10" (250mm), or 12" (300mm) diameter duct.



| MODEL     | WATTS | RPM  | CFM<br>@ O.S.P. | DIMENSIONS IN INCHES* |      |      |      |      |      |     |     |     | SHIP WT<br>(LBS) |
|-----------|-------|------|-----------------|-----------------------|------|------|------|------|------|-----|-----|-----|------------------|
|           |       |      |                 | Ød                    | ØD   | A    | B    | C    | E    | F   | G   | H   |                  |
| AXS100-EC | 33.0  | 2760 | 151             | 3.9                   | 10.0 | 13.4 | 12.2 | 10.6 | 8.0  | 0.8 | 1.0 | 1.2 | 7.0              |
| AXS125-EC | 57.1  | 3396 | 248             | 4.8                   | 10.0 | 13.4 | 12.2 | 10.6 | 8.0  | 0.8 | 1.0 | 1.2 | 6.8              |
| AXS150-EC | 75.1  | 3336 | 306             | 5.8                   | 12.0 | 14.2 | 14.2 | 12.6 | 7.9  | 0.8 | 1.0 | 1.2 | 8.2              |
| AXS200-EC | 99.0  | 2820 | 539             | 7.8                   | 13.6 | 17.1 | 15.6 | 14.0 | 9.6  | 1.0 | 1.2 | 1.6 | 11.2             |
| AXS250-EC | 133.6 | 2628 | 667             | 9.8                   | 13.6 | 17.1 | 15.6 | 14.0 | 9.8  | 1.0 | 1.2 | 1.6 | 12.8             |
| AXS300-EC | 173.5 | 2796 | 801             | 11.9                  | 15.9 | 18.3 | 17.9 | 16.3 | 10.2 | 1.2 | 1.2 | 1.6 | 15.8             |

WATTS ARE INDICATED AT 0.2" WG STATIC PRESSURE

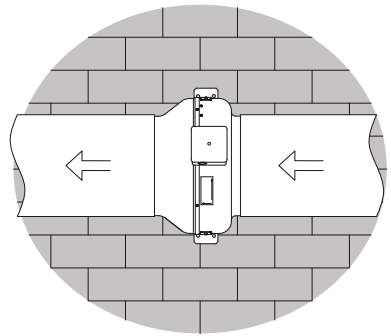
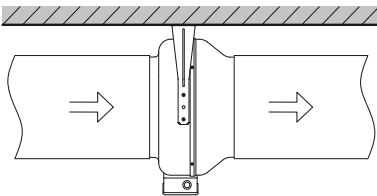
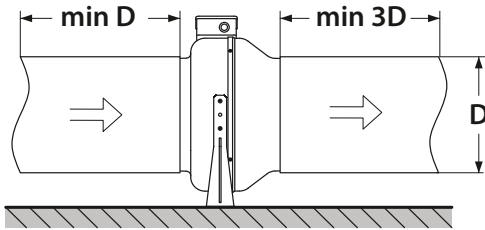
\*DO NOT USE DRAWINGS FOR CONSTRUCTION  
 CONSULT FACTORY FOR CERTIFIED PRINTS

The wiring diagram for AXS EC models is shown in Figure 8. Fans are designed for continuous operation. Protection rating from access to dangerous parts and water penetration is IPX4. Fans can be operated at ambient temperatures between -13 F and 104 F.

For smooth airflow control, it is recommended to use a speed controller. A speed controller is not included in the delivery set and is available as an accessory.

## TYPICAL FAN INSTALLATION

Fans may be mounted in ventilation shafts either vertically or horizontally. (Figure 1) The air motion in the system must be as shown with the pointer of the fan casing. In case of the vertical installation, the intake spigot must be protected with a ventilation hood. To attain the best performance of the fan and to minimize turbulence-induced air pressure losses while mounting, connect straight air duct sections to the fan spigots. Minimum straight air duct length equal to 1 air duct diameter on intake side and equal to 3 air duct diameters on outlet side.



If the air ducts are too short or not connected at any spigot, protect the fan inner parts from ingress of foreign objects by installing a protecting grille or other protecting device with mesh width not more than  $\frac{1}{2}$  inch to prevent uncontrollable access to the fans.

While installing the fan, ensure convenient access for subsequent maintenance and repair.

The unit must be mounted on an even wall.

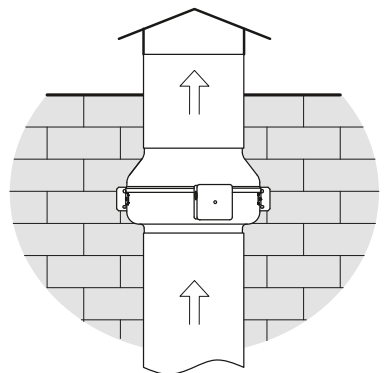
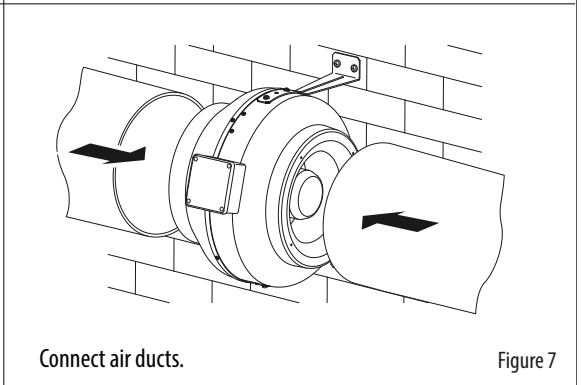
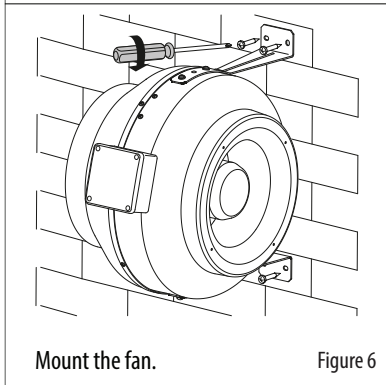
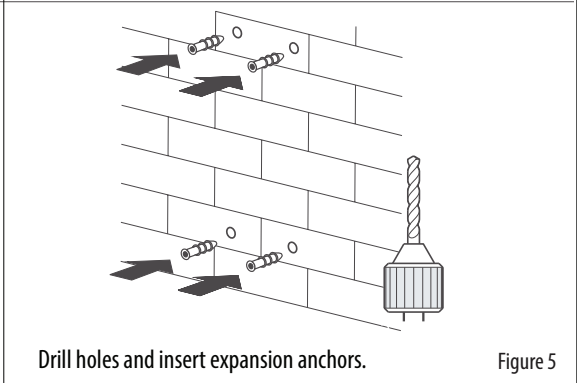
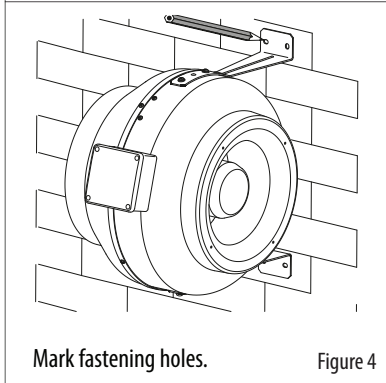
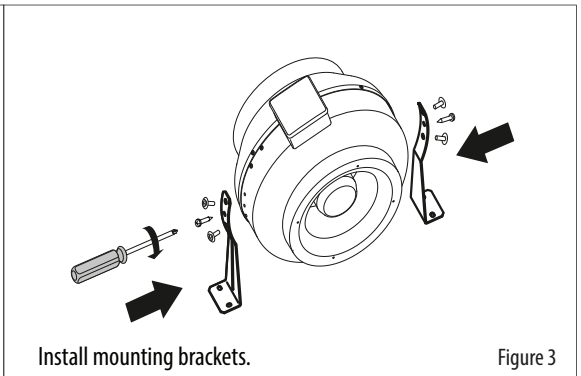
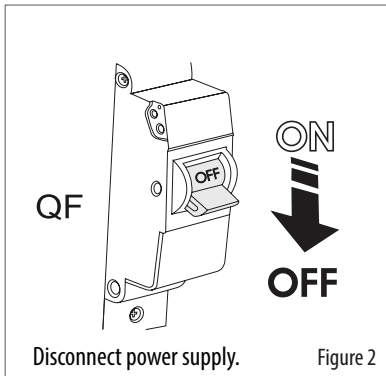


Figure 1

# FAN INSTALLATION

**⚠ WARNING** Disconnect and lock out power supply before performing any installation work. Working on or near energized equipment could result in death or serious injury.

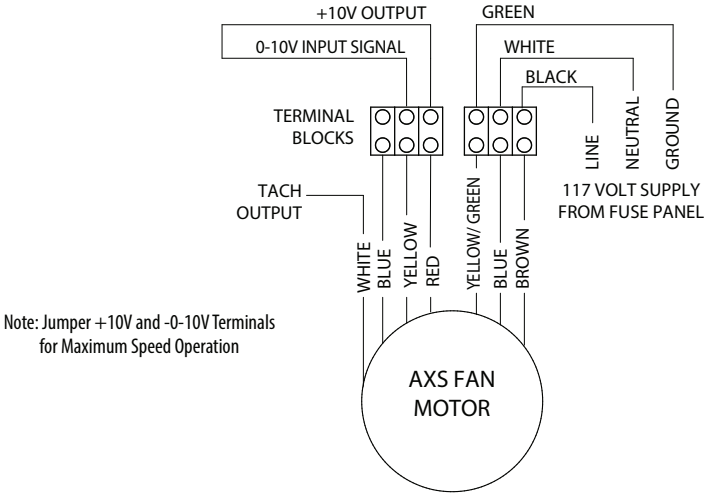
Fan installation is shown in Figures 2-7. The airflow direction should match that indicated on the fan housing. Exhausted air must not contain any dust or other solid impurities, sticky substances or fibrous materials.



# WIRING DIAGRAMS

**⚠ WARNING** Disconnect and lock out power supply before performing any installation work. Working on or near energized equipment could result in death or serious injury.

## MAXIMUM SPEED OPERATION



## VARIABLE SPEED OPERATION

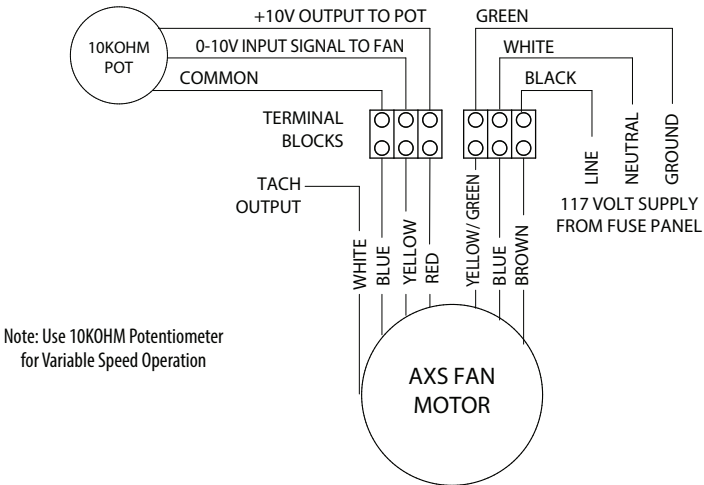


Figure 8

# RECOMMENDED MAINTENANCE

**⚠ WARNING** Make sure to disconnect the fan from the power mains prior to any cleaning. Proper maintenance (Figure 9-14) includes periodic cleaning of the fan surfaces from dirt and dust.

The impeller blades require thorough cleaning every 6 months. Remove the self-tapping screws (Figures 11) and disconnect the grill from the casing. Wipe the fan blades with a soft cloth soaked in a mild detergent, avoiding dripping on the electric motor. After cleaning, install the cover and tighten screws.

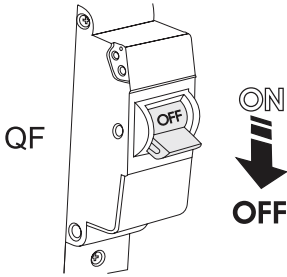


Figure 9

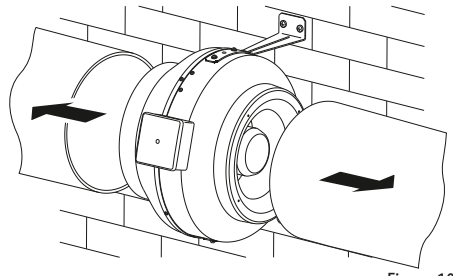


Figure 10

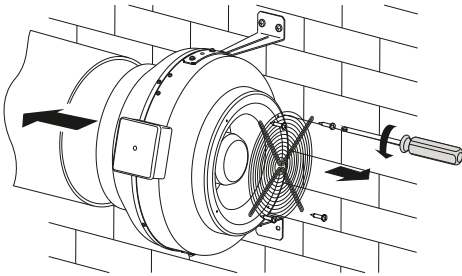


Figure 11

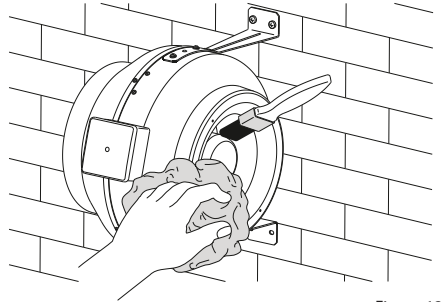


Figure 12

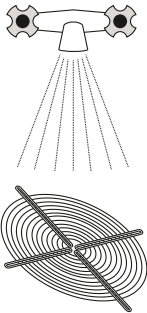


Figure 13

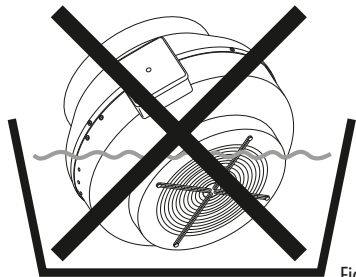


Figure 14

## ACCEPTANCE CERTIFICATE

**The AXS EC fan has been duly certified as serviceable.**

AXS100EC

AXS125EC

AXS150AC

AXS200EC

AXS250EC

AXS300EC

Manufactured on (date): \_\_\_\_\_

Date of sale: \_\_\_\_\_

Sold by: \_\_\_\_\_

(name of trading enterprise, stamp of store)

## CONNECTION CERTIFICATE

Company name: \_\_\_\_\_

Electrician name: \_\_\_\_\_

Date: \_\_\_\_\_ Signature: \_\_\_\_\_

Due to constant product improvements, some models may differ slightly from those portrayed in this manual.

AXS EC-I&M-2104



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