

Air Control Industries (ACI)

- Location
Ambient temperature conditions can range from -10 to +45 degrees centigrade when adequate ventilation is provided for the motor. In factory locations subject to high-pressure water or caustic wash-down cycles, protect or relocate the blower to prevent damage.
- Blower Connections
Both the inlet and discharge can be fitted with wire mesh guards, filters and/or spigots to aid connection to different ducting depending on your requirements.
Flexible hose can introduce a high pressure drop and lengths and excessive bends should be kept to a minimum.
- Drive Motor
Units are typically driven by induction type electric motors. If alternative motors are supplied, reference to the motor rating plate is required for all electrical details. The fan is designed to be continuously run at its designated speed, any inverter drive program giving speed control and/or speed changes must be approved by ACI.
- Shaft Rotation
Check that the rotation of the blower is in accordance with the arrow on the unit. Note: If the fan rotates backwards, it will still operate but with a reduced performance of around 60% max.
- Filters
The standard inlet filters have a filtration rate of 5-7 microns. ACI recommend that the filters are inspected at least once a month and replaced every 6 months depending on the working environment. Different grade filters can be purchased through ACI.

INSTALLATION:

Installation, electrical connection and commissioning are only to be performed by trained service personnel. Adhere to all machinery-related requirements and specifications supplied by the system manufacturer or machine builder. Failure to comply will invalidate the guarantee on our fans and accessories. The following applies for all ACI fans:

- Do not install without adequate support
- Flange and mounting brackets must be fixed flat on a level surface.
- Do not apply force
- Secure all connection points with a suitable fastener.
- Secure bolted connections with a locking compound.
- Do not use metal compression-gland fittings with plastic terminal boxes.
- For control equipment, refer to the safety instructions supplied with the equipment.
- The fan should not be run at frequency/speed greater than that which it was originally intended for. If in doubt, contact ACI or your reseller for advice.
- The fan inlet and discharge must be guarded or connected to enclosed system e.g. ducting

MAINTENANCE & SERVICE:

The following points must be observed when performing any maintenance or service operation:

- ALWAYS ISOLATE THE FAN BEFORE COMMENCING MAINTENANCE.
- Fan impeller has come to a standstill
- Power supply interrupted and secured against restoration.
- Observe personal safety regulations
- Keep fan inlet and discharge free of obstruction.
- Regular cleaning helps prevent impeller imbalance.
- Never use high pressure cleaners to clean.
- Avoid bending or damaging blades on all impellers.
- If a filter is fitted, it is recommended that these are inspected at least once a month and replaced every 6 months depending on the working environment.
- Disposal/End of life – please dispose of all parts of our equipment responsibly.
- Regular maintenance checks should include tightening of all fixings. Ensure fan is isolated prior to performing check

TROUBLESHOOTING:

- Fan is underperforming - check the fan rotation.
- If the fan fails to rotate when switched on, turn the power off immediately
- Fan will not start - Capacitor failure (Single phase)
- Fan will not start - Phase burn out (Three phase).
- Fan will not start - Check wiring is correct.
- There are no serviceable parts within the motor assembly, do not disassemble – contact ACI
- Fan is noisy and/or vibrating, contact ACI.
- If any other problems arise, contact ACI

TRANSPORT, STORAGE:

- ACI fans are packaged at the factory to comply with requirements for the agreed mode of transport.
- Transport of the fan(s) either in the original packaging or using the transport fixtures provided. Use suitable lifting equipment.
- Do not lift the fan by the connecting cable or fan impeller. When transporting manually, please refer to the EC guidelines for recommended maximum weight.
- Avoid excessive vibration and shock loads.
- Check for any damage to the packaging or the fan.
- Store the fan in the original packaging in a dry area protected from the weather or protect it from dirt or weather until final installation.
- Avoid exposure to extreme heat and cold.
- Avoid excessive storage periods (we recommend one year max.) and inspect the motor bearings for proper operation prior to installation.

ACCESSORIES:

ACI can provide a comprehensive range of accessories such as hose, clamps, pedestals, spigots, and inverters. For a complete overview please visit: - www.aircontrolindustries.com

ROUTINE INSPECTIONS, SERVICING & CLEANING:

Some fans come with an inspection hatch (when requested). This can be used for clearing dust deposits from the impeller and inside of the fan case to prevent build up which can lead to an ignition risk. Where there is no inspection hatch fitted, the inlet spinning (where fitted) can be removed to obtain access to the fans internals. Compressed air (or ACI's Jetblack) can be used to blow off the deposits, or a soft bristled brush (nylon) can be used for tougher deposits.

For fans with a coating using a wire brush is not advised to prevent damage, use a damp cloth only. This work should be carried out when required (cleaning intervals will vary depending on the environment the unit is operating in). If left, uneven build up could cause vibration and eventually failure which could result in an ignition.

During inspection, shaft seals (if fitted) should be checked and replaced if any damage is present. This work should be carried out by ACI to ensure the correct clearances are maintained during reassembly. Any monitoring devices (temperature, vibration, etc.) should be checked regularly to ensure correct operation. If a maintenance schedule exists, details of all of the mentioned work should be added to this.

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GENERAL WARNINGS

If the fan fails to rotate when switched on, turn the power off immediately

Before starting the fan check that there are no foreign bodies inside it otherwise these could be ejected at high speed with considerable force.

The inlet must be placed in a clean and dry area well away from possible sources of liquid contamination

WEEE RECYCLING & MATERIALS DISPOSAL

<https://www.aircontrolindustries.com/about-us/certificates-approvals/>

WARRANTY AND MAINTENANCE

<https://www.aircontrolindustries.com/terms-conditions/>

MANUFACTURER SERVICE ADDRESS:

Our products are manufactured in compliance with applicable international standards and regulations. If you have any queries regarding the use of our products, please visit: www.aircontrolindustries.com

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DECLARATION

<https://www.aircontrolindustries.com/about-us/certificates-approvals/>

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ACI GENERAL FAN INSTALLATION, OPERATION, MAINTENANCE & DISPOSAL INSTRUCTIONS



Air Control Industries

IMPORTANT :

Please read the following installation, operation and maintenance instructions carefully. Always ensure that the power is isolated before commencing any maintenance on the fan unit. This following manual is also available from the download section of ACI's website: www.aircontrolindustries.com

EQUIPMENT ARRIVAL / INSPECTION:

Check the equipment against the delivery note, and that the details on the motor rating plate are in accordance with the electrical supply to which the unit is to be connected.

If you have any shortages, discrepancies or damage, please contact your ACI Distributor or alternatively:

ACI Ltd: +44 (0)1297 630 960

ACI Inc: 207-445-2518

SAFETY INFORMATION:

- Always risk assess the area of the fan installation, be sure adequate inlet & discharge guarding is present if required.
- Installation, commissioning and electrical installation are only to be performed by trained service personnel and in accordance with the latest IEE Lifting & working regulations. It is recommended that all fans are earthed, especially if static electricity is in the environment.
- Safety features e.g. inlet and discharge guards, are not to be dismantled, circumvented or made inoperative. **ACI recommend guarding on inlets & discharges of fans if not ducted.**
- Caution, fans can produce high noise levels, ensure that the fan has silencers, or that the environment is suitable for the supplied fan(s).

OPERATING CONDITIONS:

- Do not operate the fan unit in an explosive atmosphere except for ATEX certified fans. ATEX fans should be installed in accordance with ATEX regulations.
- Each unit has a wiring diagram fitted as close to the connection area as possible. For example, if the component machine is fitted with a terminal box, the diagram will be inside the box. If flying leads are fitted the diagram will be on the lead or on the motor itself. Protective circuitry is the customer's responsibility. More information is available from ACI's website.
- All our motors are continuously rated; therefore, frequent stop starts should be avoided. Start and stop control is dependent on customer installation. If the unit has been fitted with a speed controller please refer to the appropriate instructions that will be included.
- If the fan is supplied with an inverter, please read the appropriate instructions that will be included.
- The fan should not be operated until it is connected to the system it will be operating in. Some motors will draw over the maximum current rating when in "free air".
- All fan units are tested to the correct supply voltage prior to them being despatched.

OPERATION:

Before starting the fan check that there are no foreign bodies inside it otherwise these could be ejected at high speed with considerable force.

- Mounting
The inlet must be placed in a clean and dry area well away from possible sources of liquid contamination. If the fan is to be placed in an enclosure adequate ventilation should be provided for the motor. If the fan is to be mounted on / within machinery that transmits vibration, anti-vibration mounts should be used.