

Installation & Maintenance

Safety & Delivery

Safety

A qualified person should conduct all maintenance work.

Before proceeding with any maintenance work ensure that the fan is electrically isolated.

Ensure there are no loose objects obstructing the fan during start up. This may cause injury to the person/ persons performing maintenance work or damage the fan.

Do not use solvents or caustic fluids.

Do not submerge motor under water.

Delivery & Storage

If fans are not to be installed immediately after arriving on site, they should be stored in a clean and dry environment.

Upon receiving Delivery of Fans inspect goods for damage that may have been sustained in transport and if goods are damaged please contact CFM Airsystems immediately.

Maintenance Instructions

Maintenance

1. After and initial three (3) months of operation, the fan is checked for any built up dirt or other matter that may affect or obstruct the fan performance.
2. Impeller and motor should be thoroughly cleaned **not hosed** unless fan motor is IP 66 rated.
3. Impeller rotation, balance and pitch angles checked.
4. Check the operation of starting equipment, wiring connections should be checked to be safe and secured.
5. Overloads and thermistor relay should be inspected to ensure to correct operation.

In Addition to the above the following should be carried out as: General Maintenance on a monthly basis.

1. Overall fan condition and performance should be inspected.
2. Fan should be thoroughly cleaned.
3. Check fan motor for any bearing noise
4. Impeller balance cracks or damage.
5. Wiring connections are safe and secure.
6. For commercial kitchens make sure canopy filters are cleaned minimum 1-2 times a month depending on usage.

Warning:

A qualified person should conduct all maintenance work.

CFM Airsystems strongly recommends that all maintenance work is carried out to relevant standards.

Cleaning Impellers

CFM Airsystems recommends the use of a firm brush for the removal of dirt build up on fan impellers, care must be taken not to damage or distort fan impeller.

For fans above commercial kitchens it is recommended that the impeller is removed by loosening the screws on the fan collet piece and shaft, pressing down on the impeller hub and taken off motor shaft and rinsed with warm soapy water.

Please note: Impeller should be completely dry before being placed back on motor shaft.

For any assistance please contact CFM Airsystems

General Instructions

General

Off Loading: During off loading, inspect fans for damage.

Maintenance: Install fans and accessories to allow service access for maintenance, most motors are fitted with sealed for life bearings which are maintenance free, ensure motor overloads are connected

Motors: All standard motors are suitable for operation in air temperatures between -20 deg C and + 40 deg C.

Electrical: Read the fan data label to determine the number of phases and amperage Drawn by the unit. All fans must be earthed in accordance with the AS/NZS3000:2000 and local supply regulations. Fuses in the circuit should be regarded as protecting the wiring against short circuit the are Not suitable for overload protection. Fuses must be able to carry a starting loads of a minimum 6 times the running current.

Direction of rotation: The correct rotation and direction of airflow is shown on each individual fan. If backward-curved centrifugal fans rotate in the wrong direction, the motor maybe be overloaded or wiring may be incorrect.

Starting: All fans are suitable for direct-on-line starting by switch or automatically by contactor. Up to and including 5.5kW. The number of starts should be limited to no more than 4per hour or, for motors less than 1kW, no more than 8.

Installation & Maintenance Problem Solving

Problem	Possible Cause of Problem	Possible Solutions
Low Airflow	Air leakage in duct system	Installer to check and seal leakages
	Poor Inlet/outlet conditions	Remove blockages if possible
	No turning veins or bends in duct	Have installer install turning veins
	Dampers not adjusted correctly	In duct system
	System resistance higher than specified	Adjust dampers to system
	Filters dirty	Contact CFM Airsystems for recommended duct size
	Pitch angle of axial fan may be wrong	Clean filters
	Error in motor selection	Check airflow required and adjust pitch angle
	Ducting is undersized	Contact CFM Airsystems for fan or motor selection
	Fan speed too low	Duct changed or new fan selection required high revving fan needed
High Airflow	Dampers not adjusted correctly	Adjust Dampers
	System resistance lower than specified	Lower revving fan may be needed
	Incorrect type of fan for application	New fan selection may be required
	Ducting is oversized	Lower revving fan may be needed
	Fan Speed too high	Lower revving fan may be needed
Electrical	Incorrect wiring	Check wiring diagram supplied with Fan or contact CFM Airsystems.
	Wrong supply voltage	Check wiring diagram supplied with Fan or contact CFM Airsystems.
	Fuses Blown	Change fuses
	Faulty capacitor for single phase motors	Replace capacitor
	Overloads have tripped	Check for power surge
Noise	The Fan could be running in Stall	New fan selection may be Needed
	Bearing Noise, faulty bearings	Replace motor or bearings
	High Duct Velocities	Check duct size is not too small
	Impeller loose on shaft	See Sections 2 & 3 or manual
	Vibration from incorrect mounting	Contact CFM Airsystems for mounting requirements
	Poor design of system	See any consulting engineers

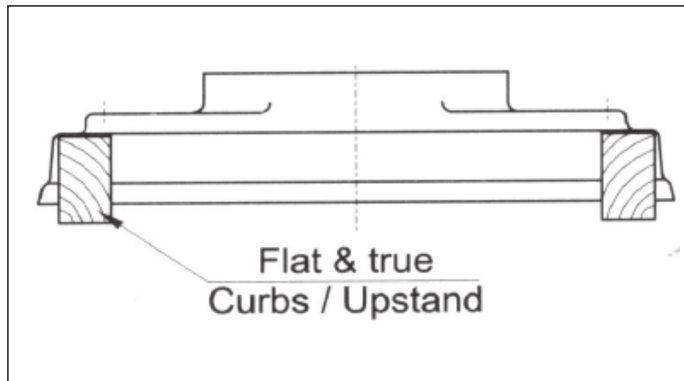
Installation & Maintenance

Installation Guides

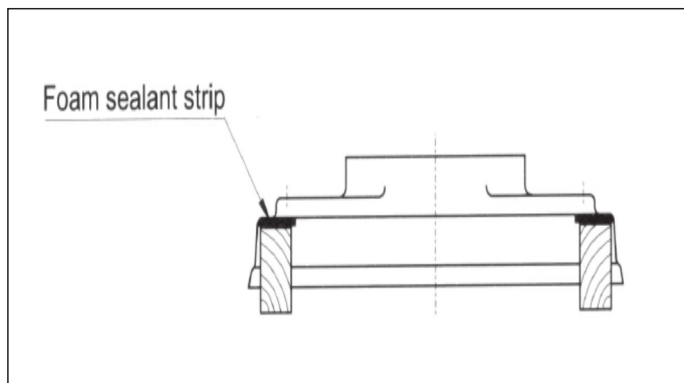
Installation Guides for Roof Mount Fans

To obtain the maximum performance of your fans, it is recommended the following installation be undertaken.

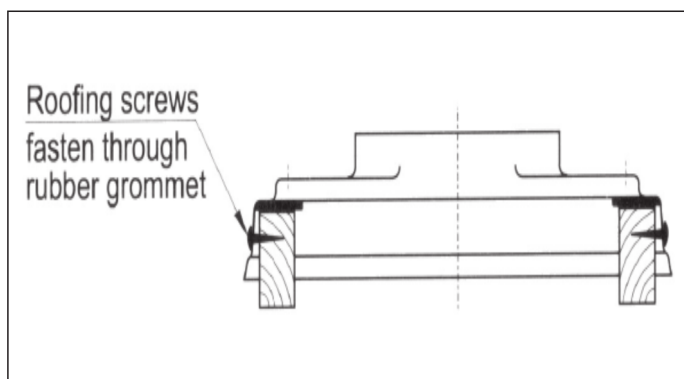
1) Ensure that Curbs / Up stands are flat true square



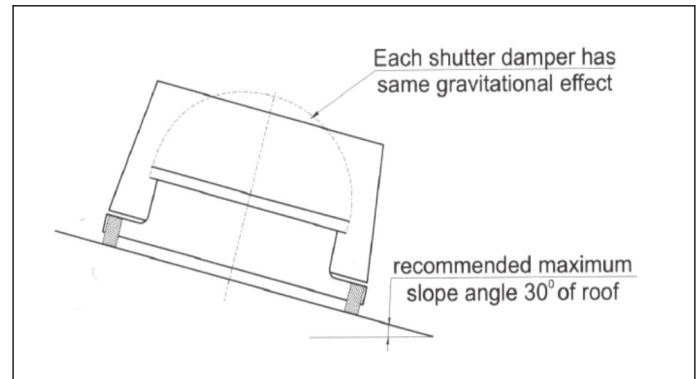
2) Ensure Suitable foam sealant strip to fix on top of curbs / up stands to prevent air leakage through the gap between the curbs / up stands and the fan bases.



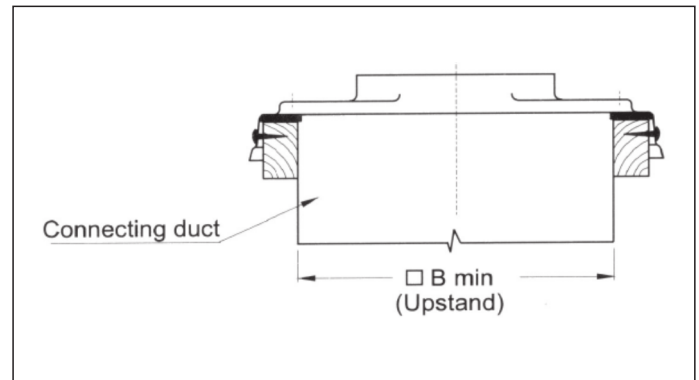
3) Ensure roofing screws are fastened securely through the side midway through the skirt to prevent water leakage through to building.



4) Ensure roof vertical discharge fans with shutter dampers are installed parallel to Slope of Roof.

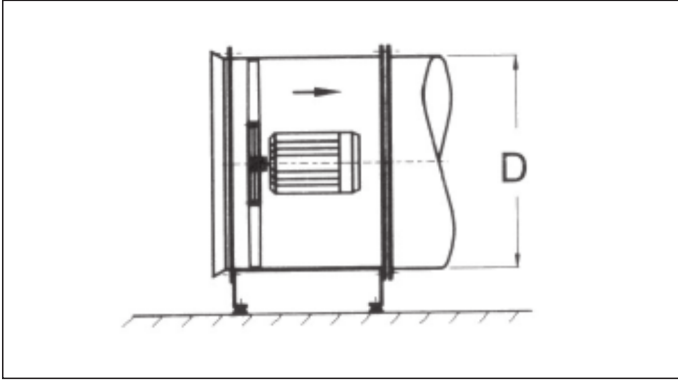


5) Ensure the connecting duct matches sizes in catalogue

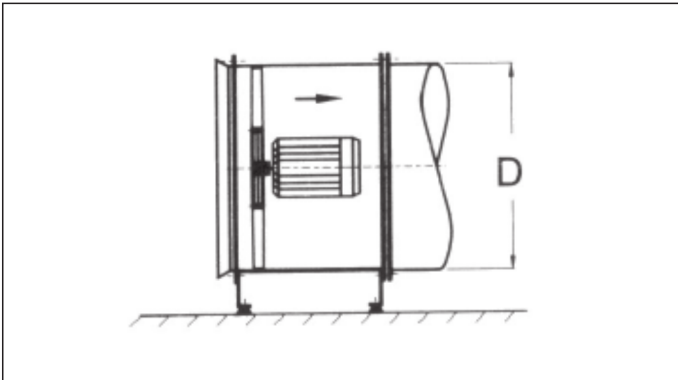


Installation Guide For inline Fans

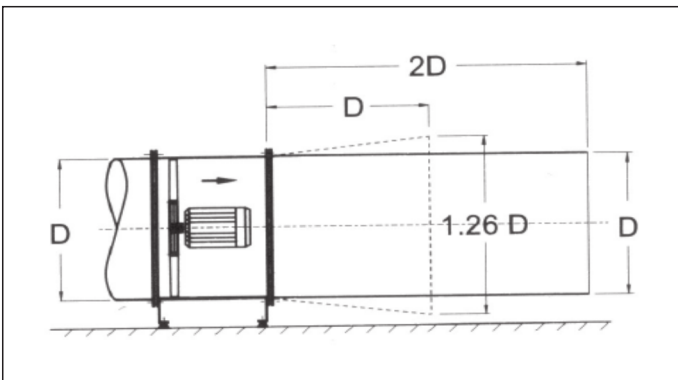
1) Install inlet cones to fan inlet if no duct connection to fans.



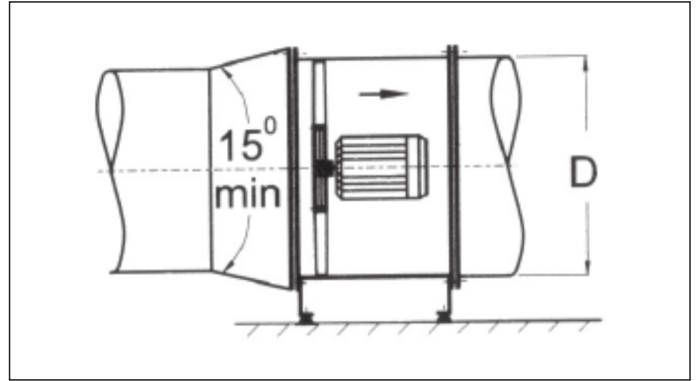
2) Fans should be mounted at least one fan diameter D from any obstruction



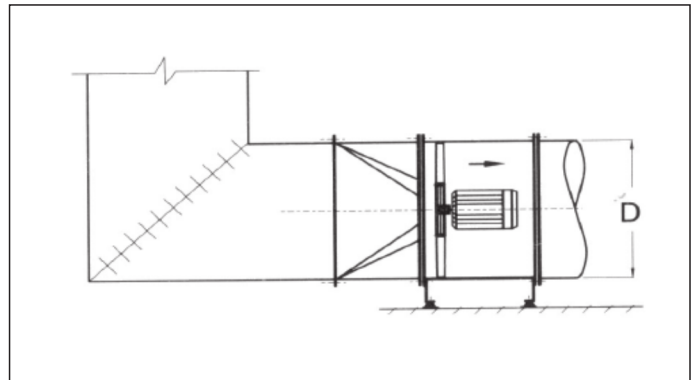
3) Fans should never be terminated abruptly at discharge end. Install a two Diameter D duct Piece or 1.26 diameter D and one diameter length expander.



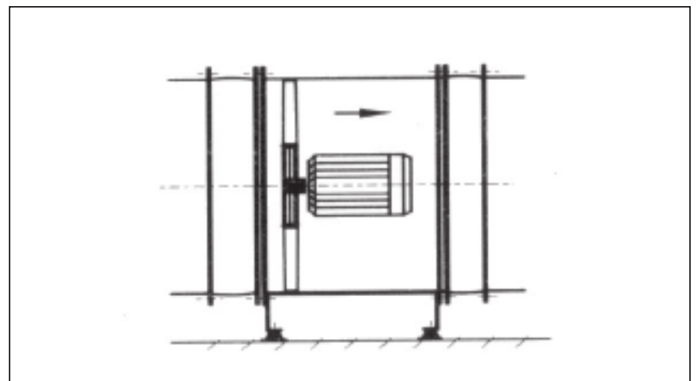
4) Expanders at inlet side of fans should not be less than 15deg and duct should be installed on outlet of fans.



5) In confined spaces Do Not connect small 90deg radius circular bends. A square bend with turning veins is preferable.



6) Flexible duct connectors either side of fans should be taut.



Installation & Maintenance

Warranty Terms

Terms

Statement of Warranty:

CFM Airsystems warrants products to be free from defects in material and workmanship during warranty period. If the product proves to be defective in material or workmanship during the warranty period, CFM Airsystems, at its sole option, repair or replace the product with a same or similar product depends on stock. And all defective products must be sent back to CFM Airsystems within the first two weeks.

Warranty duration:

Strictly 12 months from date of invoice.

Who the warranty protects:

This Warranty is valid for the original consumer purchase only.

What the warranty does not cover:

Any product, which the serial number has been defaced, modified and or removed.

Damage, Deterioration or malfunction resulting from:

- Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to comply with instructions provided with the product.
- Repair or attempted repair by someone not authorized by CFM Airsystems Pty Ltd
- Removal or installation of product.
- Causes external to the product, such as electric power fluctuations or failure
- Use of supplies or parts not meeting specification
- Normal wear and tear
- Any other cause, which does not relate to a product defect.
- Removal, installation and set-up service charges by a third party.
- Continual maintenance & cleaning of fan as per CFM Airsystems recommended Maintenance Program

How to get warranty

For information on obtaining warranty, please call CFM Airsystems directly on 03 9580 779.

Please Note: To obtain warranty, you will be required to provide the serial number of the product and date of purchase along with the description of the problem.

Conditions of Warranty Payment

New or replacement fan/motor need to paid by full by the customer at the time of purchase. There will be no replacement provided for warranty fans. A credit will be provided once the warranty report is received.

Note: CFM Airsystems is not responsible for freight or service charges for sending the goods back.