



General Instructions
(Roof Exhaust Fan)
RDA-RDC Series



This manual is to assist the engineer to avoid the most common fan problems caused by improper storage, installation, operation and maintenance. **HANDLING AND MAINTENANCE SHOULD ALWAYS BE PERFORMED BY EXPERIENCED AND TRAINED PERSONNEL.**

RECEIVING, HANDLING AND STORAGE

Rough handling during shipment and improper storage can cause damage that is not noticeable until the fan is in operation. This can be avoided with proper storage and handling techniques.

Fan should be hoisted with slings placed around the fan housing. Touch up the scratch coated surfaces during lifting, to prevent corrosion to occur at this area. Store the fan in a clean and dry place, preferably indoor to ensure fan shaft, bearing and fan casing are protected against dust and corrosion. Do not store the fan in a location where it will be subjected to vibration. This can cause the internal surface to rub against each other and damage the bearings.

START-UP CHECK LIST

Before putting any fan into initial operation the manufacturer's instruction must be followed. Complete the following checklist to make sure that the fan is ready to run.

- Lock out the primary and all secondary power sources.
- Make sure the foundation or mounting arrangement and the duct connections are adequately designed in accordance with recognized acceptable engineering practices and with the fan manufacturer's recommendations.
- Check and tighten all hold-down (securing) bolts.
- Check the fan assembly and bearings for proper grounding to prevent static electricity discharge.
- Spin impeller to see whether it rotates freely and is not grossly out of balance.
- Inspect impeller for correct rotation for the fan design.
- Properly secure all safety guards.
- Switch on the electrical supply and allow the fan to reach full speed.

Check carefully for :- (1) Excessive vibration
(2) Unusual noise
(3) Proper amperage and voltage values

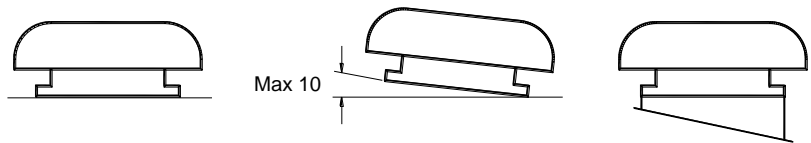
If any problem is indicated, SWITCH OFF IMMEDIATELY. Lock out the electrical supply, secure the fan impeller if there is a potential for wind milling. (impeller turning due to a draft through the system).

Check carefully for the cause of the trouble and correct as necessary.

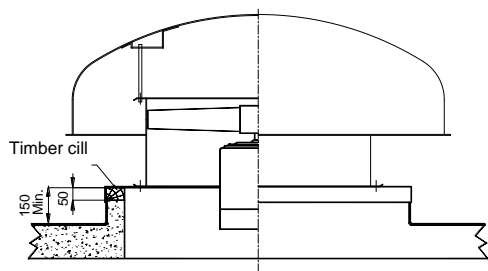
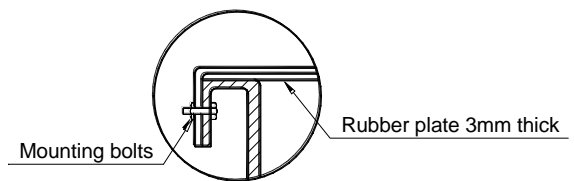
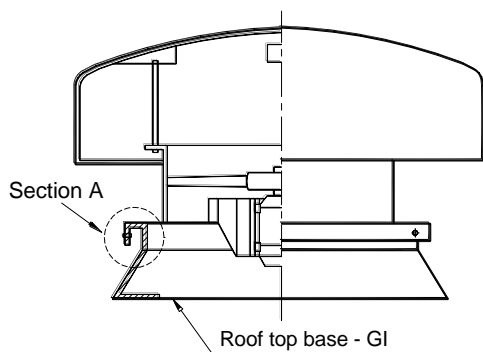
The fan may now be put into operation but during the first 8 hrs of running, it should be periodically observed and checked for excessive vibration and noise. Checks should be made of motor input current and motor & bearing temperature to ensure that they do not exceed manufacturer's recommendation. After 8 hrs of operation, the fan should be shut down to check that all set screws and hold-down bolts.

INSTALLATION

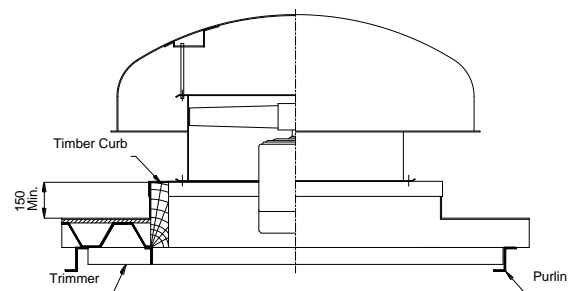
- The unit can be installed on almost any type of roof, flat, pitched (max. 10°) or decking.



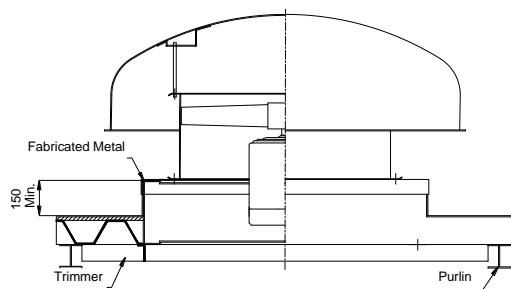
- Inlet ductwork should be free from obstruction.
- Avoid sharp bends at inlet.
- Installing roof ventilators



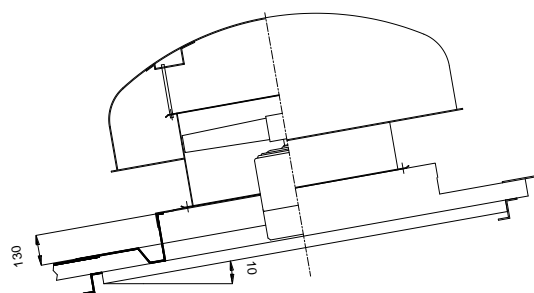
Concrete Roof



Decking Roof



Decking Roof – Metal Upstand



Pitched Roof

ROUTINE MAINTENANCE

Maintenance should always be performed by experienced and trained personnel. Do not attempt any maintenance on a fan unless the electrical supply has been locked out or tagged out and the impeller has been secured.

Under normal circumstances, handling clean air, the system should require cleaning only about a year. However, the fan and system should be checked at regular intervals to detect any unusual accumulation.

The fan impeller should be specially checked for build-up of material or dirt which may cause an imbalance with resulting undue wear on bearings and belt drives. A regular maintenance program should be established as needed to prevent material build-up.

Periodic inspection of the rotating assembly must be made to detect any indication of weakening of the rotor because of corrosion, erosion, or metal fatigue.



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