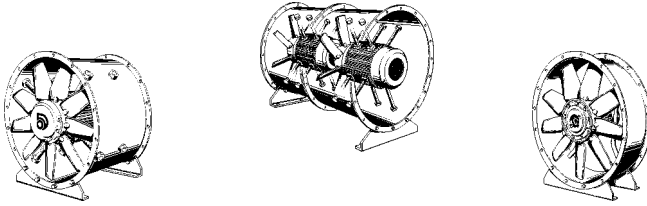


Axial Flow Fans (direct drive)



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Secureness

Safety-Symbols

The following symbols want to pointed you at certain perils or give you tips for safe operation.



Beware of bruises!



Attention! Danger spot! Safety instruction!



Danger of life! Do not step below hovering load!



Hazard through electrical power or high voltage!



Important informations and instructions!

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Storage on site

Storage of the fan must be in a clean dry area, free from vibration. Prior to installation, dampness tests by measurement of the resistance from terminals to earth should be carried out. Should the test produce a less than 1 megaohm resistance then the motor should be dried out prior to applying mains voltage.



Protection



Protection by circuit fuses are not regarded as suitable as overload protection. Devices used as fuses must be sufficient to carry starting currents of approximately 6 times the nameplate current for 3 phase motors or 4 times the nameplate current for single phase motors.

For 3 phase motors a single phase protection device should be fitted and if not may invalidate the warranty.

Electrical supply



Site supply must be checked to ensure compatibility with the nameplate details in all respects.



Installation



Fully assembled axial flow fans can be installed in horizontal, vertical and inclined positions with motor frames up to and including the D225 frame. Above the D225 frame the mounting position must be specified at the time of ordering. Other exclusions are where fans are to be installed in other than normal ambient conditions where special provisions and/or modifications may be required. These conditions should be nominated by the purchaser at the time of ordering.

Drain holes in weatherproof motors must be at the lowest point to ensure all excess moisture can escape from the enclosure. Any storage protection material such as tape, plugs etc. must be removed prior to commissioning.

Reference should be made to our Specification Sheet Installation Guide which illustrates recommended installation procedures and some „wrongs“ which must be avoided.



Starting

Fan motors are suitable for both manual and automatic starting. The number of starts should be limited to a maximum of 15 starts per hour. For any increase over 15 starts per hour refer to the manufacturer.

Operating conditions

The standard fan range is suitable for operation in ambient temperatures of - 40°C to + 40°C. Care must be taken to avoid “icing up” of fans operating in temperatures below 0°C. Standard fans should not be used in air, containing free moisture, volatile or corrosive fumes.



Electrical connection



Wiring connections must be in accordance with the diagram supplied. Rotational direction is marked on the nameplate together with the air direction and should be checked on start up. When anti-vibration mounts are used flexible conduit must be used between the external supply and the fan junction or terminal box.

Earthing of the fan must be carried out in accordance with the local supply authority.



Lubrication

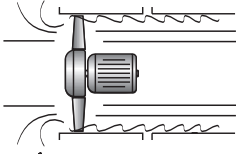
Generally fan motors are not fitted with lubrication facilities. Lubrication of motors should be carried out in accordance with the motor manufacturers recommendations. These will be supplied when the motor manufacturer is nominated by us and accepted by the purchaser.

Axial Flow Fans (direct drive)

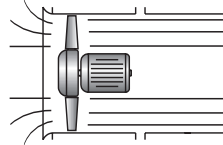
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Installation Guide

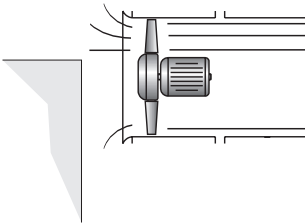
Inlets



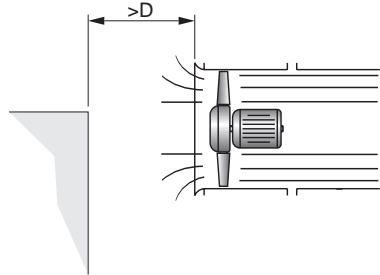
WRONG - Impeller blade tips starved of air, reducing performance and increasing noise.



RECOMMENDED - A coned inlet assists smooth air entry into the impeller blade tips

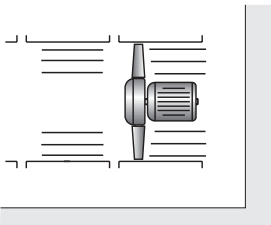


WRONG - Obstructions close to the fan inlet also starve the impeller of air.

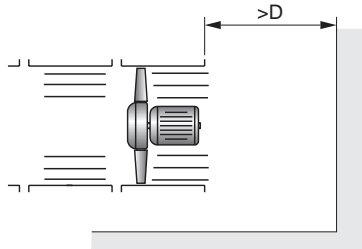


RECOMMENDED - A space of not less than one fan diameter [D] should be allowed at the inlet.

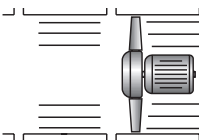
Outlets



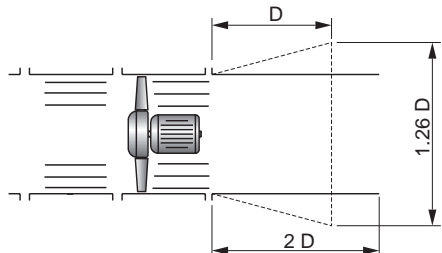
WRONG - Obstructions close to the fan outlet must be avoided.



RECOMMENDED - A space of not less than one fan diameter [D] should be allowed at the inlet.



WRONG - The discharge end of a system should not be terminated by the fan.



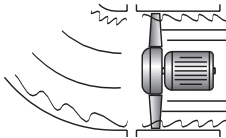
RECOMMENDED - A 2D duct length or a discharge evase of dimensions illustrated reduces system discharge losses.

Axial Flow Fans (direct drive)

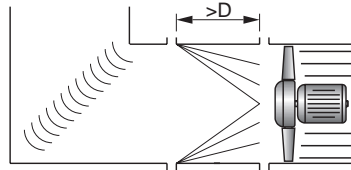
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Installation Guide

Bends

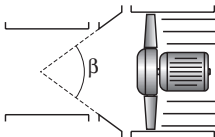


WRONG - Circular ducts with small radius bends adversely affect air performance and noise levels if fitted immediately before the fan.

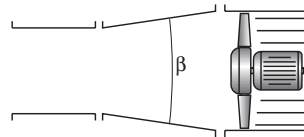


RECOMMENDED - It is preferable to use a square bend with short chord turning vanes.

Adjacent duct size changes

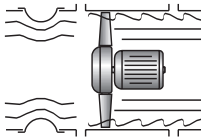


WRONG - Expanders or contractions with an included angle greater than 30° should not be used.

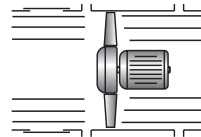


RECOMMENDED - If possible limit the included angle to 15°.

Flexible connectors



WRONG - Slack inlet connectors partially throttle the fan, reducing air performance and increasing noise.



RECOMMENDED - Flexible connectors should be taut permitting the required isolation movement only.

Manufacturer

Our products are manufactured in compliance with applicable international standards and regulations.



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