

DIRECTIONS FOR USE
CENTRIFUGAL FANS



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SAFETY TECHNICAL NOTICE AS FAR AS MAINTENANCE

In this hand-book you can find all necessary informations about the correct use of the products.

All notices herewith enclosed, are intended for qualified technical staff which is peculiarly aware of both gauging, adjustment, checking technics and principles of electrical, mechanical technology

What above is basic to install with no risks, to start working, to get safety working and to maintain the fan.

Inadequate operations on the fan or relating apparatus, unkeeping to warning, may cause serious lesions to people or damage things.

Global installation can start working only when all precautions are active to safeguard the operator.

MA.PI S.a.s. will non take any responsibility of damages caused by improper use of the apparatus.

MAPI S.a.s. are the only one who can effect guarantee and maintaining works on the fan.

Description

The fan is built for industrial purposes.

Usually it is fitted in apparatus where air-conveying is a problem.

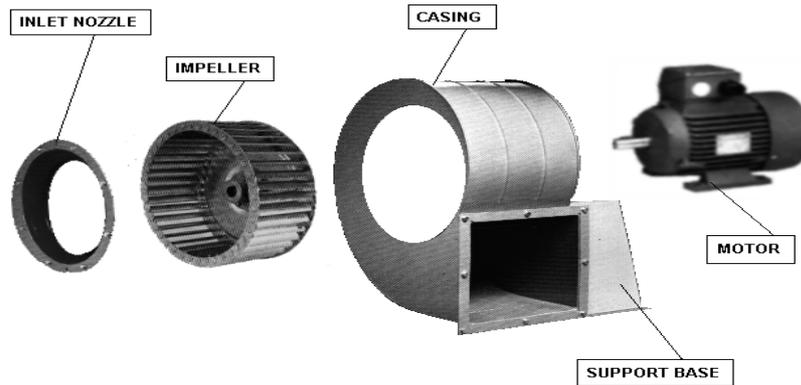
The air passing through can have a maximum temperature of 80°C.

The spiral casing and the impeller are in strong steel sheet.

The fan is orientable in 45° and can be manufactured with a clockwise (RD) or anticlockwise (LG) direction of rotation (as per UNI 7972 rules)

On request:

- Safety grid on the inlet and/or outlet fan
- Outlet Square/round joint
- Inlet flanged fitting
- Special version for airforms passing through the fan with temperatures up to a maximum of 200°C



Adopted precise safety standard

The fan and all the apparatus and the adopted components have been manufactured in conformity with following safety standard

| STANDARD | DESCRIPTION |
|----------------|--|
| UNI EN 292-1 | Apparatus safety: bases, general planning principles Unit 1 : basis methodology and terminology |
| UNI EN 292-2 | Apparatus safety: bases, general planning principles Unit 2 : detailed lists and theoretical principles |
| UNI EN 294 | Apparatus safety: safety range to avoid touching dangerous areas with the arms |
| EN 1050 | Risk estimate |
| CEI EN 60204-1 | Apparatus safety: apparatus electrical equipment |

Improper use

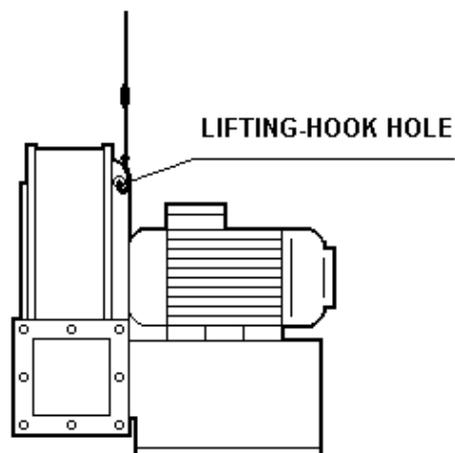
No piles of any materials or incrustations along the system: they could change use conditions of the fan.
No corrosive, explosive, inflammable, toxic fluid through the fan.
No fluid with a temperature higher than 80°C

Carriage

Protect the fans against atmospheric agents during the carriage.
Preserve them against any knock.

Lifting

Make use of suitable holes on the spiral casing plates to lift heavy fans.



Assembling

To correctly assemble the fan :

- Use tools that do not damage the apparatus
- Firmly fasten the support base (or the other parts meant for fixing)
- Fasten the motor to the support base
- Tighten impeller head screw to the driving shaft
- Put the spiral casing on support base disc (if forecast)
- Fasten inlet nozzle and inlet flange (if forecast)
- Discharge direction must be the same as when you choose the fan: a different assembling could cause a wrong working
- Arrange all safety disposals
- Connect power-cables (verify suitable cross-cables as per the regulations in force)
- Check again for correct working of the fan, after a few hours working : verify tightenings.

Disassembling

When disassembling the fan, operate as well as when assembling.

When disassembling the impeller, unscrew the head-screw and remove the impeller with suitable extractor (use the two holes on the hub or the extraction groove on the hub).

When re-assembling the motor, be sure to allow spaces between the impeller and the inlet-collar inside the casing: the impeller must not touch the inlet-collar. Be sure that everything is as well as beginning use conditions, and that every part is correctly assembled.

Always use suitable tools in order not to damage outward appearance nor inside mechanical/electrical parts of the fan.

In case of damage, please contact MA.PI. S.a.s.

Fan-maintenance

Check all tightenings after the first hour working.

The motor must be clean: any deposit on the fin could compromise motor life because of overheating.

Be sure that impeller blades are clean too: any dirt on the blades could cause unbalancing of the impeller.

Safety device

To get a correct use, you must:

- Check correct direction of rotation: the impeller must turn as per the arrow on the fan.
- Check the current absorbed by the electrical motor when the fan is installed in the system and in normal working condition : the fan could work with a higher flow rate than foreseen and the motore will be overloaded.

This will be proven by the absorbtion of a higher number of amps than declared on the motor label. This problem can be avoided by inserting a special flow rate regulation device.

Before starting the fan be sure of the impeller free turning axle, and that no damages or crashes are occurred. Check the whole fan is complete.

Verify the motor : it must freely turn coupled up the impeller.

Carefully check that nothing is inside the spiral casing (screws, bolts etc.)

Installing and maintenance of the fan must be effected by qualified and experienced operators who must also properly arrange piping connections in order to avoid mechanical tensions and / or troubles to the passing air.

Piping will not have to weight to the fan

Check that electrical tension is compatible with the motor label data.

Out of working

To dismantle the fan you will strictly follow all the rules for the prevention of industrial accidents.

Besides you have to respect the standards as far as pollution of different materials the fan is composed of: iron, plastics (motor), nailed parts, lubricating small quantities (oil or grease in the ball bearing of motor)