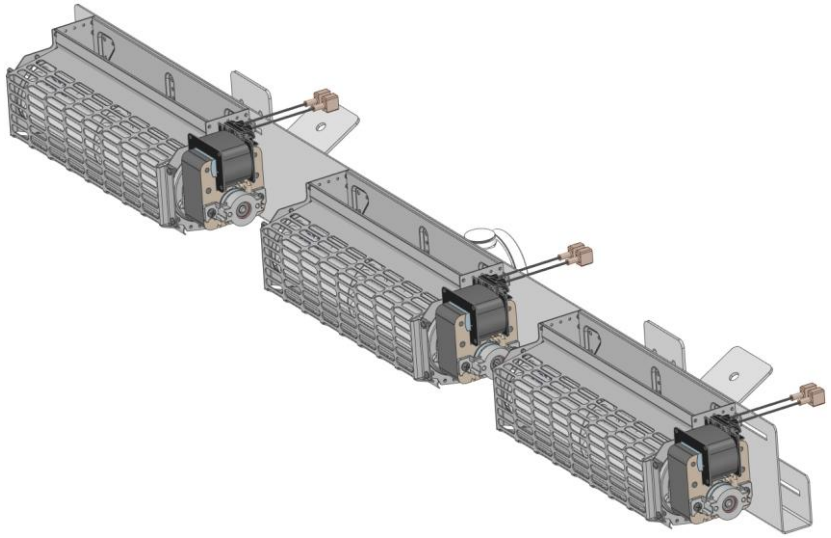
INSTRUCTION MANUAL

BAR
400-600-800



1MN0088 REV.1

operates with ISO9001 certified quality system

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ENGLISH

"Translations of the original instructions"

INTRODUCTION

First of all thank you for choosing and using TECSYSTEM product, we strongly suggest you to read carefully this instruction manual. It will allow you to understand how to use the system and take full advantage of all its features.

WARNING! THIS MANUAL IS VALID AND COMPLETE ONLY FOR THE BAR MODEL: 400, 600 AND 800.

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SAFETY REGULATIONS

WARNING:

Carefully read the manual before using the fan. Keep these instructions for future reference.

Do not touch /move fans while they are in operation: RISK INJURY.
The product must be installed in a location with limited access to qualified technician. Any work on the appliance must be left to a qualified repair technician.

Do not touch the motor or power cables: contact with a voltage of 230/120 Volts AC can be fatal. To reduce the risk of electric shock, do not disassemble or modify in any way the fan motor. Before connecting the device to make sure that all connections have been made correctly. Always disconnect the fan from power supply before performing any type of maintenance.

Never touch the fan motor burns danger: RISK INJURY.

Failure to follow these instructions can cause damage, fire or electric shock, with possible serious injury!

POWER SUPPLY
Before using it, make sure the power cords are not damaged, twisted or crushed. Do not tamper with the power cords. Never disconnect the power supply by pulling the cable, avoiding touching the pins. Do not perform connection/disconnection operations with wet hands. Do not use objects such as levers to disconnect the system power supply. Disconnect the power immediately if you notice that the system emits a burning smell or smoke, contact the the Tecsystem technical service department.

LIQUIDS
Do not expose the product to dripping or splashing liquids. Do not allocate in places where humidity is over 90% and never touch with wet hands.

CLEANING
Before cleaning the fans always disconnect the power supply. To avoid malfunctions, cleaning the fans only using compressed air to remove dust and dirt. Do not use oils or fats of any kind.

OBJECTS
Never push objects through the air inlet or outlet, if this happens, disconnect the fan and call a technician.

RESTRICTED USE A COMPONENT PERSON
The product is a sophisticated electromechanical system, absolutely not suitable for use by untrained personnel. All work must be performed by a qualified technician.

ACCESSORIES
Do not use accessories or replacement parts that are not original, it could cause damage to the fan and put at risk the safety of the user. In case of failure, contact technical support.

LOCATION
Install the bar indoor protected from splashing water and sunlight. Do not place near heat sources exceed the parameters specified in this manual. Place the bar in a horizontal and stable surface, away from vibration. The product must be in-stalled in a location with limited access to qualified technician.

RIPAIR
Do not repair or adjust the fan. If any fault occur always contact a qualified technician. Opening the fan tampering involves the automatic invalidation of the warranty.

PRODUCTION
The date and the batch production of the device are shown on the label attached on the fan. Removing the label implies the automatic invalidation of the warranty.

TECHNICAL SUPPORT

Mail: ufficiotecnico@tecsystem.it - tel: +39 024581861

TECHNICAL SPECIFICATIONS			
BAR MODEL	**400**	**600**	**800**
BAR LENGTH	1110mm	1470mm	1470mm
NUMBER OF FANS FOR BAR	3	3	3
MODEL FANS	TTG240	TTG300	TTG360
LUNGTH IMPELLER	240 mm	300 mm	360 mm
DIAMETER IMPELLER	60 mm	60 mm	60 mm
FLOW	600 m3/h	720 m3/h	780 m3/h
POWER SUPPLY	230Vac –50Hz		

(*) Note: Before connecting power supply of the bar always check the parameters of voltage and frequency listed on the label of the fans.

FANS PARAMETERS

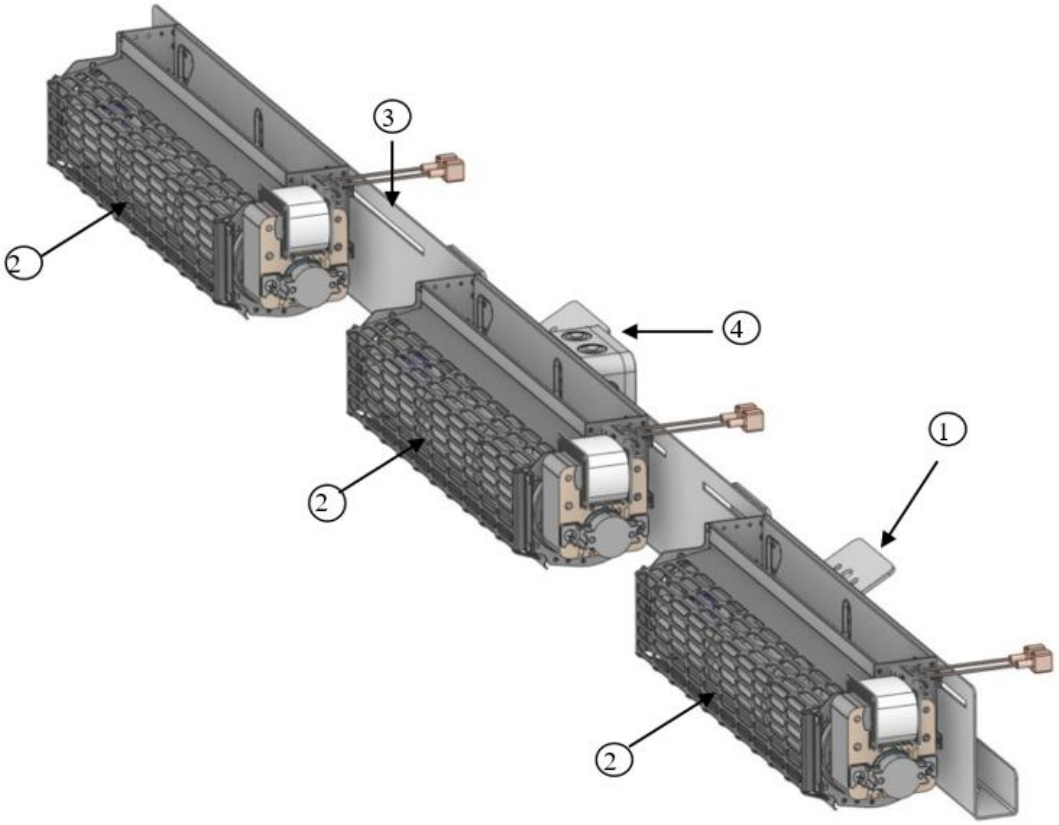
MODEL TTG 240	
POWER SUPPLY	230Vac –50Hz
CURRENT	210mA
POWER	31W

MODEL TTG300	
POWER SUPPLY	230Vac –50Hz
CURRENT	220mA
POWER	32W

MODEL TTG360	
POWER SUPPLY	230Vac 50Hz
CURRENT	230mA
POWER	34,5W

(*) Note: the technical data of the product may be subject to variations depending on the installation

3) BAR COMPONENTS



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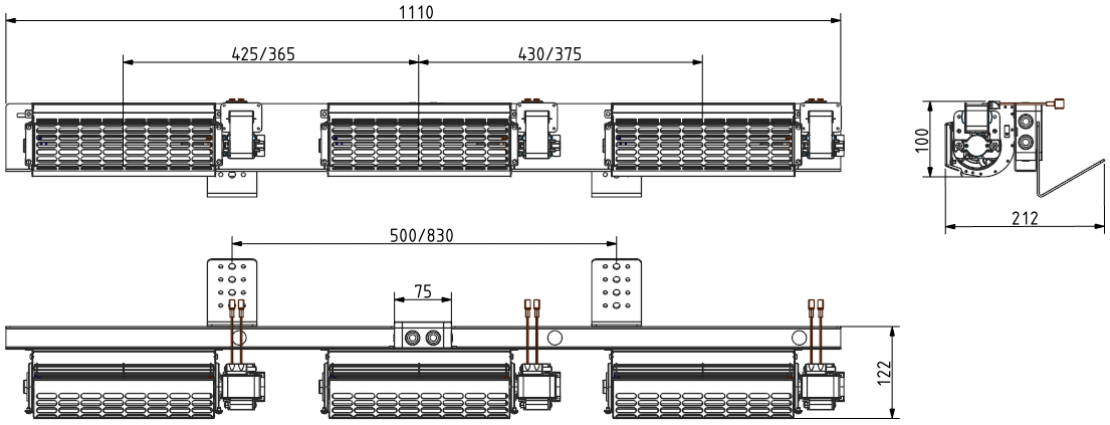
1)	Bracket mounting and adjustment bar	3)	Fixing bar fans
2)	Fans	4)	Connection box

4) MOUNTING

SIZE (mm) BAR 400



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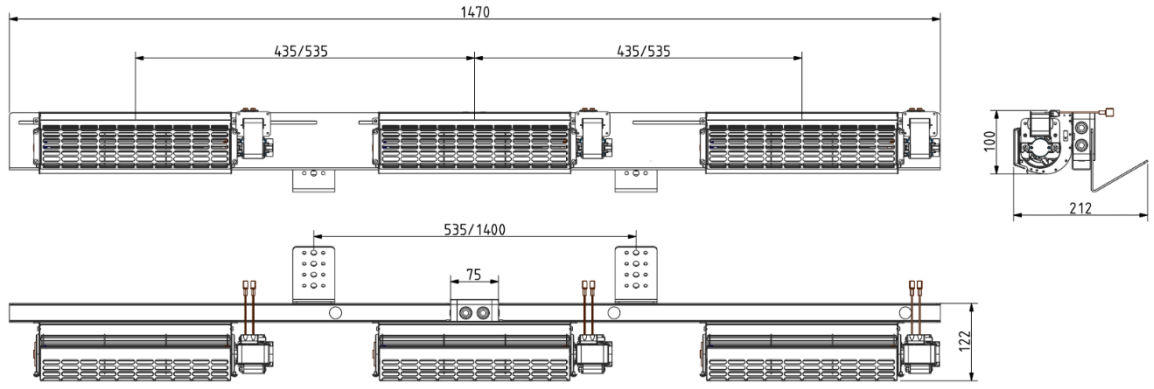
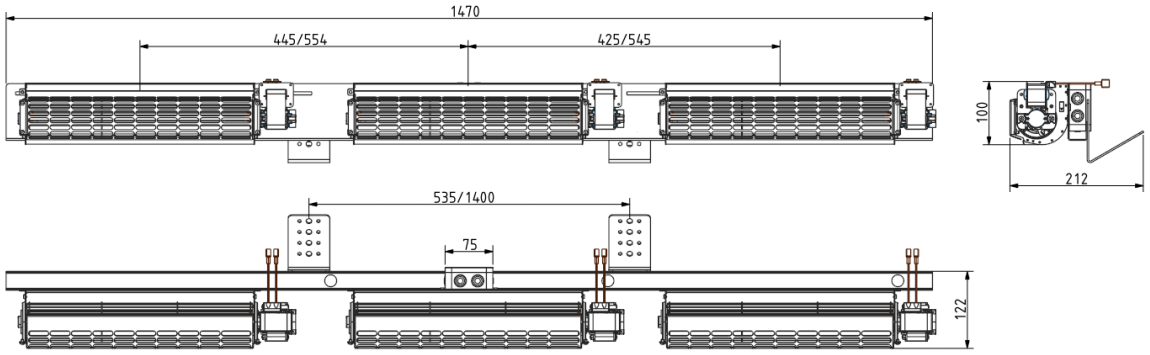
SIZE (mm) BAR 600



1MN0089 Rev 3

SIZE (mm) BAR 800



1MN0090 Rev 3

COMPONENTS INCLUDED IN THE BAR KIT

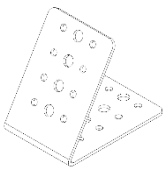
A ventilation kit complete consists of:

- 2 wired ventilation bars
- 3 Fans for bar (pre-mounted), in function of the bar pattern purchased:

  TTG240 (bar 400)
  TTG300 (bar 600)
  TTG360 (bar 800)

Figure 1: brackets with fixed inclination 60°

- 2 brackets with fixed angle 60° (Figure 1)
- 1 bar
- 4 screws M5x18
- M5 nuts



1MN0001 Rev 1

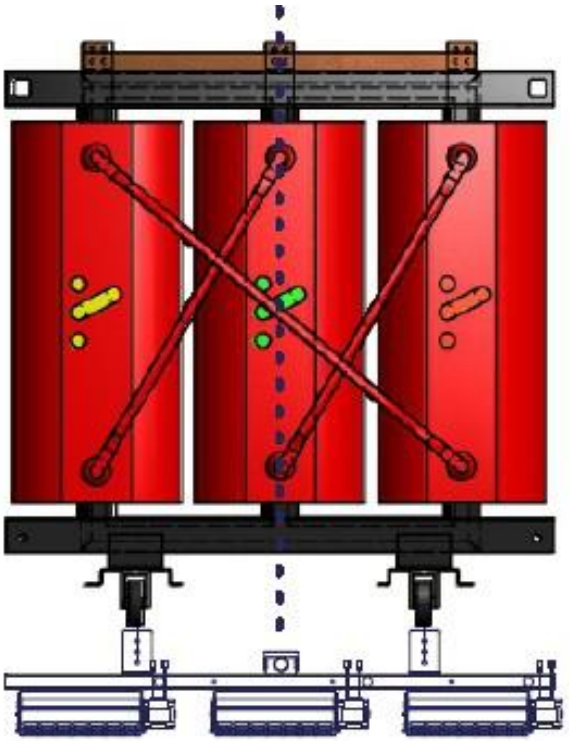
BAR INSTALLATION ON TRANSFORMER

1) Carefully remove the bar from the packaging and replace it in front of the transformer, avoiding deforming segments aluminium impellers.

2) Loosely secure the bracket 60 ° **(figure 1)**, to the bar using the bolts present in the box of the electrical connection (N.4 M5x18 + N.4 nuts M5), adjust the height of the bar, depending on the distance of security provided by the manufacturer of the transformer and select one of three pre-set heights in the bracket.

3) After adjusting the height of the bar, place the bar so as to bring the two brackets with the side members of the transformer **(figure 2)**, tighten the screws of the bracket.

Figure 2: positioning fans

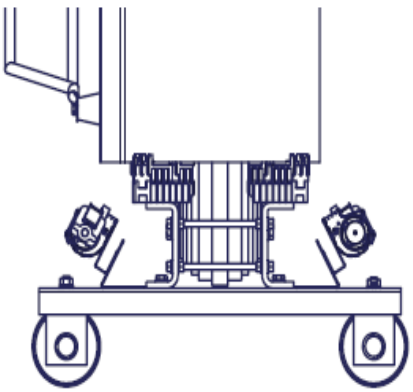


4) Place the bar on the transformer and adjust the length of the bar from the transformer, always depending on the distance of security provided by the manufacturer, set the bar on the side members using two of the three holes in the bracket (**figure 3**).

5) Check that the bar is properly installed on the flat using a spirit level.

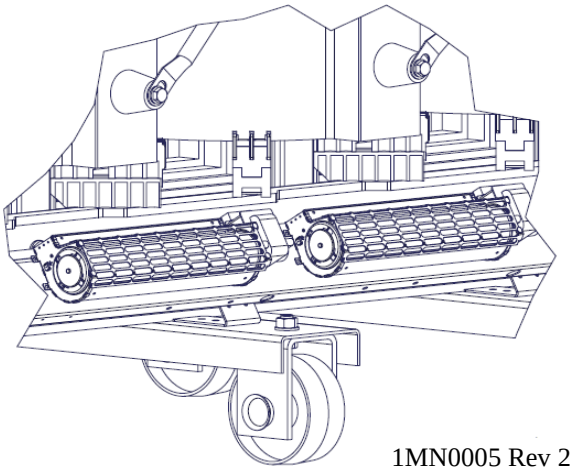
6) Add the fans, by sliding along the slots so that the axis of the coils of the transformer is aligned with the axis of the fan impellers **(figure 4**).

Figure 3: fixing fan, view from side



1MN0001 Rev 1

Figure 4: fixing fan



1MN0005 Rev 2

ALTERNATIVE MOUNTING OF THE BAR ON THE TRANSFORMER

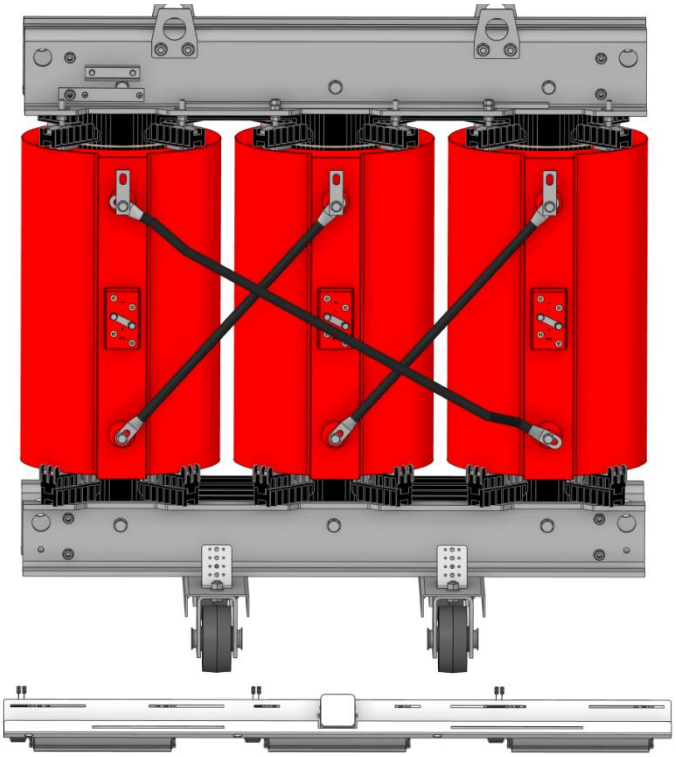
The alternative mounting allows the junction box to face outwards to facilitate electrical connections.

1) Carefully remove the bar from the packaging and replace it in front of the transformer, avoiding deforming segments aluminium impellers.

2) Loosely secure the bracket 60 ° **(figure 1)**, to the bar using the bolts present in the box of the electrical connection (N.4 M5x18 + N.4 nuts M5), adjust the height of the bar, depending on the distance of security provided by the manufacturer of the transformer and select one of the four pre-set heights in the bracket.

3) After adjusting the height of the bar, place the bar so as to bring the two brackets with the side members of the transformer **(figure 2)**, tighten the screws of the bracket.

Figure 2: positioning fans

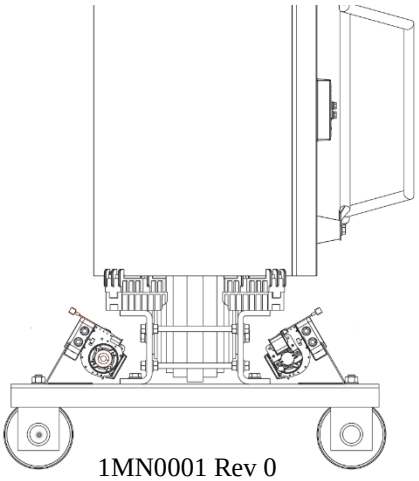


4) Place the bar on the transformer and adjust the length of the bar from the transformer, always depending on the distance of security provided by the manufacturer, set the bar on the side members using the holes on the bracket (**figure 3**).

5) Check that the bar is properly installed on the flat using a spirit level.

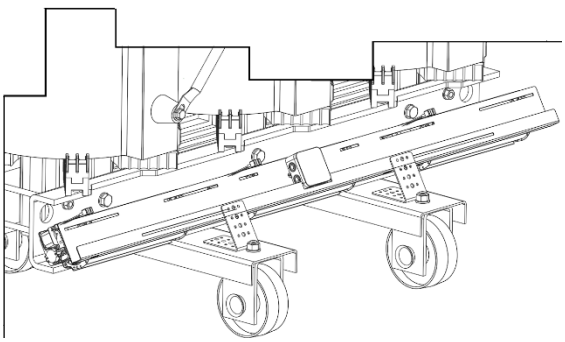
6) Add the fans, by sliding along the slots so that the axis of the coils of the transformer is aligned with the axis of the fan impellers **(figure 4**).

Figure 3: fixing fan, view from side



1MN0001 Rev 0

Figure 4: fixing fan



1MN0005 Rev 1

WARNING:
Install the fan trying not obstruct the mouth of the inlet / outlet, whether partial or total occlusion of the air vents can cause malfunction.

7) Always check all the tightening of the screws of the bar and the fans.
8) Connect the power supply line to the terminal block located into the connection box installed on the bar, see electrical connections.

The ideal location is the one that allows to direct the interspace (FP) between the coils of the primary and the secondary of the transformer around the flow of air that coming from the fans.
Positioning the fans, or let entering as much air as possible inside the chimney, you increase the cooling efficiency.
It's a good idea to bring an anemometer to measure the speed of the air coming out from the top of the transformer.
We suggest to check a bar at a time.

WARNING: always keep a safe distance from the windings, indicated by the manufacturer of the transformer.

ELECTRICAL CONNECTIONS

Each bar ventilation is equipped with a junction box, containing a terminal for the connection of the power line.

Configurazione cablaggio Standard.
The **figure 6** is shown the connection of the power terminals of the bar placed inside the junction box. The connection of the fans is made according to the diagram shown in **figure 7**.

Figure 6: junction box

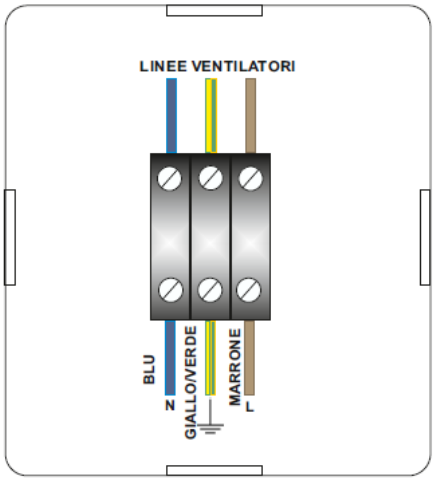
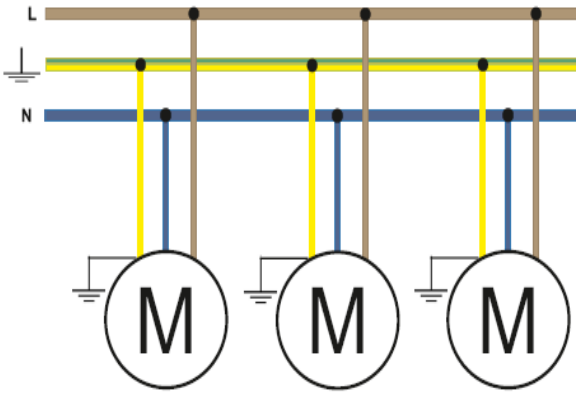


Figure 7: wiring diagram



1MN0092 Rev 1

WARNING: Always respect the connection diagram and the color of the cables indicated.

MOUNTING NOTES

Fix the fans on the bar using the holes on the back, do not change the mounting holes of the fan. During the handling of the fans avoid deforming the fins of the impeller. Never change the motor positioning.

If the fan/bar is mounted on board of a transformer the working position of the fan must comply with the safety distance, indicated in the manual of the transformer, on which you are installing the fan. The fan must be positioned in the horizontal plane, always make sure, through the help of a level tool, that the fan is positioned correctly.

The maximum rate of vibration permitted is 60Hz.

ATTENZIONE:
Utilizzare il ventilatore cercando di non ostruire la bocca d'ingresso/uscita dell'aria, l'eventuale occlusione totale o parziale delle bocche d'aria può causare malfunzionamenti.

ALIMENTAZIONE

The value of power supply is indicated on the fan label, to see the available fan options see parameters at page 4.
Note: do not power the fan with different values of voltage and frequency. Always control those indicated on the label.
Maximum permitted harmonic content in accordance with EN 61000-3-2:

5%	3rd,
6%	5th,
5%	7th,
1.5%	9th,
3.5%	11th,
3%	13th,
0.3%	15th,
2%	17th.

ENVIRONMENTAL CONDITIONS OF USE

Absence of fine particles.
Absence of corrosive or flammable gases.
Relative Humidity: 90% non-condensing (for short periods).

N.B.: maximum temperature as prescribed by IEC 60076-11.

It is not recommended to install the fans in marine environment, if not after treatment of metal parts.

NOTE: wrong installation and critical environmental conditions as: long periods of inactivity, high temperature, high humidity, excessive dust and excessive vibration can anticipate the deterioration of the mechanical parts of the fans.

MAINTENANCE

In order to maintain the efficiency of the fans, we suggest to perform regularly, every 6 months, a cleaning operation of the fans (do it using only compressed air). Do not use oils or fats of any kind.

Any prolonged shutdown of the fan may be the cause of failure. The installation of the fans combined with thermometric Tecsystem avoids any longer standstill. Enabling the HFN Tecsystem present in the unit can be programmed cycles of activation of fans from 1 to 200 hours, recommended setting every 24 hours (for more information about the HFN check the manual of the unit).

When the fans are connected with Tecsystem VRT control unit always remember that reporting a defect by the VRT could be related to the malfunction of the fan. Do not reprogram the VRT without having carried out a verification of the status of the fans and a possible maintenance (cleaning fans with compressed air).

NOTE: periodic maintenance and activation of the HFN function will allow you to extend the efficiency of the fans. The maintenance on the fans must be programmed as a function of environmental conditions in which they operate.

TROUBLE SHOOTING	CAUSES AND REMEDIES
The fan is powered, but the impeller does not turn.	Remove the power supply and check that: the power connectors are properly inserted into their home, the connection wires are tight, there are no obvious signs of burns on the connectors.
The fan runs very slow or too fast.	Check the value of the power, using a multimeter, and check the correspondence of the values with those reported on the identification label of the product purchased.
The impeller is stuck and cause the fan failure.	The critical environmental conditions can anticipate the deterioration of the mechanical parts. Proper planning of cleaning, maintenance and the installation of the VRT control series will allow you to lengthen significantly the efficiency of the fan.
If the problem persists, contact the TECSYSTEM technical department.	

WARRANTY CONDITIONS

The Product purchased is covered by the manufacturer's or seller's warranty at the terms and conditions set forth in the "Tecsystem s.r.l's General Conditions of Sale", available at www.tecsystem.it and / or in the purchase agreement..

The warranty is considered valid only when the product is damaged by causes attributable to TECSYSTEM srl, such as manufacturing or components defects.

The warranty is invalid if the Product proves to have been tampered with / modified, incorrectly connected, because of voltages outside the limits, non-compliance with the assembly and use technical data, as described in this instruction manual.

The warranty is always ex Corsico as stated in the "General Conditions of Sale".

EQUIPMENT DISPOSAL

European directive 2012/19/EU (WEEE) has been approved to reduce electrical and electronic waste and promote the recycling and reuse of the materials and components of said equipment, cutting down on the disposal of the residues and harmful components of electrical and electronic materials.

All the electrical and electronic equipment supplied after 13 August 2005 is marked with this symbol, pursuant to European directive 2012/19/EU on electrical and electronic waste (WEEE). Any electrical or electronic equip-ment marked with this symbol must be disposed of separately from normal domestic waste.

Returning used electrical devices: contact TECSYSTEM or your TECSYSTEM agent for information on the correct dis-posal of the devices.

TECSYSTEM is aware of the impact its products have on the environment and asks its customers active support in the correct and environmentally-friendly disposal of its devices.

USEFUL CONTACTS

TECHNICAL INFORMATION: ufficiotecnico@tecsystem.it

COMMERCIAL INFORMATION: info@tecsystem.it