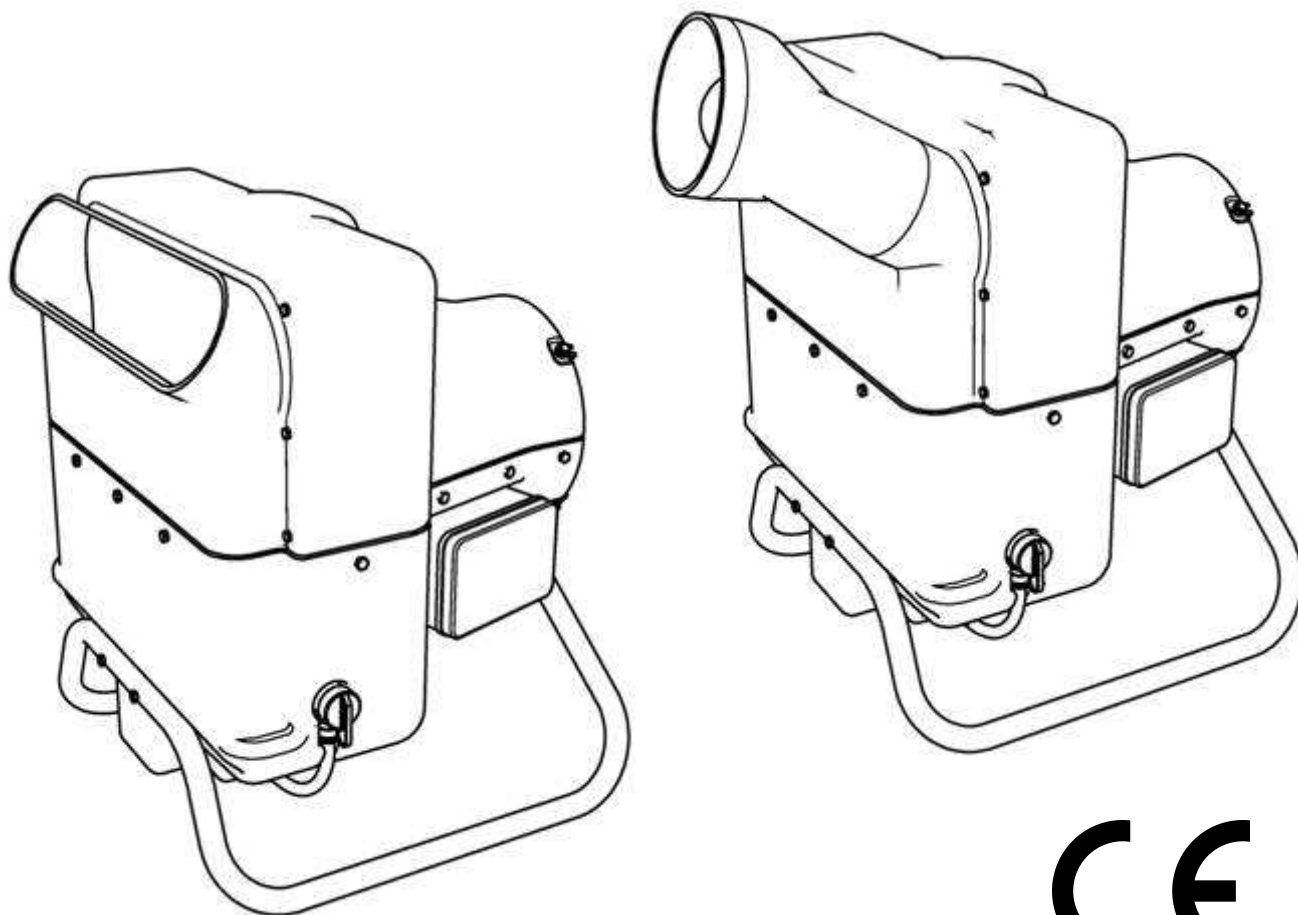


FRANCO
HVAC technologies

**INSTRUCTION MANUAL FOR USE
AND MAINTENANCE**

PH

PROFESSIONAL HUMIDIFIER



CE

E N G L I S H

Before installing or running the unit,
it is obligatory to carefully read and consult this manual.

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1 - INTRODUCTION

1.1 General warnings

This device must be used only for the functions for which it was intended "Adiabatic Cooler – Humidifier". Any other use is to be considered improper and dangerous. Franco srl cannot be held liable for any damages caused by improper, incorrect or unreasonable use, or if the device is used in systems that do not comply with safety regulations.

- Check the integrity of the device at the opening of the package, paying particular attention to the presence of damages or deformations of the plastic parts that can lead to breakage and / or malfunction during use. In such cases do not connect the machine to the mains. Carry out these checks before each use.

- Before connecting the unit, make sure that the data shown on the device's plate matches that of your electricity distribution network. The data label is located on the side of the device (par.1.9).

- Respect the safety standards set for the electrical equipment and in particular:

- Follow the installation and operation instructions concerning the use of the equipment.
- Do not place objects on the humidifier.
- Avoid children from using the device, and / or unable subjects without proper supervision.
- Do not touch the humidifier during operation or until the complete stop of the disk.
- Never place water or any other liquids into the device. In the scenario of the device becoming wet, immediately turn off the electricity by lowering the switch on the electrical panel of your system and disconnect the power before touching the device.
- Do not insert objects inside the tank as the device may be damaged irreparably.
- Do not use accessories, spare parts and / or components that are not provided or supplied by the manufacturer.
- Avoid touching the appliance with wet and / or humid hands.
- Do not pull the power cord nor expose it to risk of severing.
- Do not expose the unit to weather (rain, sun, etc...).
- In case of failure or malfunction, switch off immediately and disconnect the power. Do not try to open or tamper the device: contact the technical service offered by Franco srl.
- Do not try to fill and / or empty the tank during operation.

1.2 Instructions for proper disposal of the product

Under the European Directive 2002/96/EC.

At the end of its useful life the product must not be disposed of as waste.

The device can be taken to special recycling centers provided by local authorities, or at retailers that provide this service. Disposing the product in separate parts avoids possible negative consequence to the environment and to human health, which would both be the result of an inappropriate disposal, and allows the retrieval of materials so that significant savings in energy and resources would be reached. As a reminder of the obligation to dispose electrical equipment separately, the product is marked with the crossed mobile waste container.

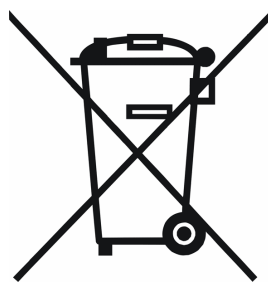


Fig. 1.1

1.3 Covenants used throughout this manual

The Manual is divided into autonomous chapters, each of which is addressed to a specific operator's figure (installer, operator and maintainer), for which the skills needed to operate the machine safely have been defined. The sequence of chapters follows the temporal logic life of the machine.

To facilitate the immediate comprehension of the text, throughout the manual are used terms, abbreviations and pictograms, whose meaning is shown below.

The Instruction Manual consists of a cover, an index and a series of chapters (sections).

The home page lists the identification data of the machine and model, the revision of the manual instructions, and finally, a picture of the machine described, drawn in order to facilitate the reader in identifying the machine and its use.

ABBREVIAZIONI

Ch. = Chapter

Par. = Paragraph

P. = Page

Fig. = Figure

Tab. = Table

UNITS OF MEASURE

The units of measure used in this manual are those provided by the International System (SI).

1.4 Conservation of the instruction manual

The instruction manual must be carefully stored and must follow and match the device in all the cases of change of ownership incurred during the life span of the machine itself.

The conservation must be done by handling the manual with care, with clean hands and on clean surfaces. Parts must not be removed, torn or arbitrarily modified.

The manual must be stored in a secure environment, protected from moisture and heat, and near the referring device. The manufacturer, if requested by the User, may provide additional copies of the instruction manual of the machine.

The User can request additional copies of the manual by writing to **customer@francosrl.com**.

METHODOLOGY FOR UPDATING THE MANUAL

The Manufacturer reserves the right to modify the design or specifications of the machine as part of its policy of improving and enabling them to comply with the statutory or other requirements or standards applicable in any territory in which goods are sold, without notifying the Customer and without updating the manuals given to the user. Moreover, in case of changes (previously agreed between the Customer and the manufacturer) to the machine installed, which signifies the modification of one or more chapters of the Handbook of Instructions, the manufacturer will be responsible for sending the modified chapters affected by the structural change (including the new model of revision) to the User.

The User is responsible, following the directions accompanying the updated documentation, for replacing all the copies owned, the old chapters with the new chapters, the home page, and the index with the copy updated to the new revision level.

The manufacturer shall be responsible for the descriptions included in this manual; in case of an inconsistency being detected in a translated version of the manual (English version), the reader must refer back to the original Italian version of the handbook and, eventually, contact the sales department, who will make necessary changes.

1.5 Recipients

The manual is addressed to: the installer, the operator, and the qualified personnel entitled to the maintenance of the device.

EXPOSED PERSON:	refers to any person exposed, wholly or partially, to a danger zone;
OPERATOR:	refers to those persons responsible for installing, operating, regulating, clearing, repairing and moving the machine, and also performing the maintenance of the device;
QUALIFIED PERSONNEL QUALIFIED OPERATOR:	refers to the persons who have completed courses of specialization and training, and that have acquired experience in: installing, starting, operating, maintaining, repairing and transporting the device, or similar ones.

The machine is intended for industrial use (professional and not widespread) for which qualified operators are needed, in particular, workers that:

- Have reached the age of majority;
- Are physically and mentally appropriate to perform works that include technical difficulties;
- Have been properly educated on the use and maintenance of the machinery;
- Have been considered suitable to undertake the assigned job by their employer;
- Can understand and interpret the operator's manual and the safety requirements;
- Know the emergency procedures and their implementation;
- Possess the ability to operate the specific type of equipment;
- Are familiar with the specific applicable rules;
- Have understood the operating procedures defined by the manufacturer of the machine.

1.6 Glossary and pictographs

In this section we list the non common terms included in the manual. The following also explains the abbreviations used and the meaning of the pictograms in relation to the qualification of the operator and the state of the machine; their use can provide quick and unique information, necessary for the proper use of the machine under safety conditions.






GLOSSARY (Att. I p. 1.1.1 Dir. 2006/42/CE)

HAZARD	A potential source of injury or damage to personal health;
DANGER ZONE	All areas within and/or around the machinery in which the presence of a person constitutes a risk to the health and safety of himself/herself;
EXPOSED PERSON	Any person that finds himself/herself entirely or partially in a hazardous area;
OPERATOR	The person responsible for installing, operating, regulating, clearing, repairing and moving the machine, and also performing the maintenance of the machinery;
RISK	The combination of probability and severity of an injury or harm to health that can arise in a hazardous situation;
GUARD	The part of the machinery used specifically to provide protection by means of a physical barrier;
PROTECTION DEVICE	The device (other than a shelter) that reduces (alone or in conjunction with a shelter) the risk of an operation;
INTENDED USE	Use of the machinery according to the information provided in the instruction manual;
REASONABLY FORESEEABLE MISUSE	Use of the machinery in an indifferent manner from that stated in the instruction manual, which may result from a foreseeable human behavior.

OTHER DEFINITIONS:



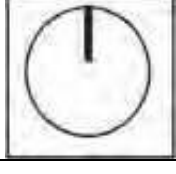
HUMAN-MACHINE INTERACTION:	Any situation in which an operator interacts with the machine in any of the operational phases at any time of the life of the machine itself;
OPERATOR'S QUALIFICATION:	Minimum level of competence that an operator must have in order to perform the described operation;
NUMBER OF OPERATORS:	The appropriate number of operators needed to optimally perform the described operation, it is derived from an accurate analysis made by the manufacture, and for which the use of a different number of operators may prevent the occurrence of the expected result or endanger the safety of the personnel involved;
STATE OF THE MACHINE:	The state of the machine includes the operating mode, for example: running in automatic mode, maintained action control (jog), shutdown, etc... the safety conditions on the machine such as included protectors, excluded protectors, emergency shutdown, isolation from energy sources, etc...
RESIDUAL RISK:	Risks that remain, despite of the protective measures incorporated in the design of the machine, the complementary protections, and the additional protective measures.
SAFETY COMPONENT:	Component: <ul style="list-style-type: none">- designed to fulfill a safety function;- the failure and/or malfunctioning of which endangers the safety of persons (such as a lifter; a fixed, moving or adjustable protector; an electrical, electronic, optical, pneumatic or hydraulic device that interlock a protector; etc...).

PICTOGRAPHS CONCERNING THE OPERATOR'S QUALIFICATION

Symbol	Description
	Generic laborer: operator lacking of specific competences, capable of performing only simple tasks under the control of qualified technicians.
	Lifting and handling vehicles driver: operator qualified for the use of vehicles used in lifting and handling materials and machines (carefully following the manufacturer's instructions), in accordance with the user's country's laws.
	Mechanic maintainer: qualified technician, able to operate the machine under normal conditions, to run it with the maintained action control (JOG) with disabled protections, and to intervene on the mechanical parts in order to make the necessary adjustments, maintenances and repairs. Typically this operator is not qualified to work on electrical systems while the device is connected to the mains.
	Electrical maintainer: qualified technician, able to operate the machine under normal conditions, to run it with the maintained action control (JOG) with disabled protections, and enabled to any kind of operation of electrical adjustment, maintenance and repair. This operator is qualified to work on electrical systems while the device is connected to the mains.
	Manufacturer's technician: qualified technician offered by the manufacturer to carry out complex or particular operations or, in any other case agreed with the user. The skills are, as contingently appropriated, mechanical and/or electrical and/or electronic and/or concerning software.

PICTOGRAPHS CONCERNING THE STATE OF THE DEVICE

The pictographs contained in a square/rectangle provide information.

Symbol	State of the device
	Device OFF: with electric and pneumatic power disconnected.
	Machine in motion: with automatic function, movable protections closed and relative interlocking devices activated, and fixed protections closed.
	Device ON: in standby and ready to start by functional consent activation (eg. switchboard consent), movable protections closed with relative safety device included, and fixed protections closed.

PICTOGRAPHS CONCERNING SAFETY

The pictographs contained in a triangle indicate DANGER.

The pictographs contained in a circle impose PROHIBITION / OBLIGATION.

Pictograph	Denomination
	Hazardous voltage.
	Entanglement.
	Dragging.
	General danger.
	Do not remove safety devices.
	Prohibition of cleaning, oiling, greasing, repairing or adjusting by hand when the device is in motion.
	Duty to remove power before starting works or repairs.
	Protective gloves required.
	Safety footwear required.
	Safety helmet required.

1.7 Applications

In the industrial field, the machine is installed in places where it is necessary to maintain a certain humidity level, for example in fruits and vegetable refrigerating rooms, in aging warehouses, in the paper and tobacco industries, and in the textile companies.

In agriculture the machine is used to humidify greenhouses and mushroom farms, and for disinfectant treatments.

In the animal husbandry the machine is used to maintain the humidity in rooms or nebulize disinfectant in the environment or other solutions.

The materials used in building the machine ensure reliability and durability in time.

The casing is made in PE, the screws are stainless steel made, and the remaining parts of the humidifier are made in PA and PC.

The use of materials that do not suffer from the corrosive action of water and acids makes the PH a machine capable of working in almost all the environments.

The PH combines the power of the humidification, the ease of installation, and, by operating without nozzles is not subject to clogging by impurities and limestone.

The required water pressure is that of the water supply (between 2 and 6 atm).



This device must be used only for the functions for which it was intended and designed: "Humidifier".

Any other use is to be considered improper and dangerous.



1.8 Versions

The professional humidifier PH is available in the following versions:

3308400 Version PH3 - up to 2,5kg/h - 280m³/h - 230V 50Hz
3308500 Version PH5 - up to 5,0kg/h - 330m³/h - 230V 50Hz
3308200 Version PH7 - up to 7,5kg/h - 390m³/h - 230V 50Hz

3308410 Version PH3 - up to 2,5kg/h - 280m³/h - 230V 60Hz
3308510 Version PH5 - up to 5,0kg/h - 330m³/h - 230V 60Hz
3308210 Version PH7 - up to 7,5kg/h - 390m³/h - 230V 60Hz

1.9 Identification and data label of the unit

Each machine is identified by the CE plate on which, indelibly set, is reference data of the device itself.

In any communication, either with the manufacturer or with the customer service, always cite these references.



 FRANCO HVAC technologies	
Model : PH5	
Umidificatore - Humidifier	
Serial Number: 3308500/07-0	
Capacità di atomiz.	1~5 l/h
<i>Atomization capacity</i>	
Portata aria	330 m³/h
<i>Air flow</i>	
Alimentazione	230V 50Hz
<i>Power Supply</i>	
	1~+N
Potenza	250W
<i>Power</i>	
Assorbimento	2,2 A
<i>Current</i>	
Anno di Costruzione	2015
<i>Construction Year</i>	
IP55	 
FRANCO s.r.l. - Via Nazionale, 80 12010 Cervasca CN (Italy)	

Fig.1.2

1.10 Description of the parts

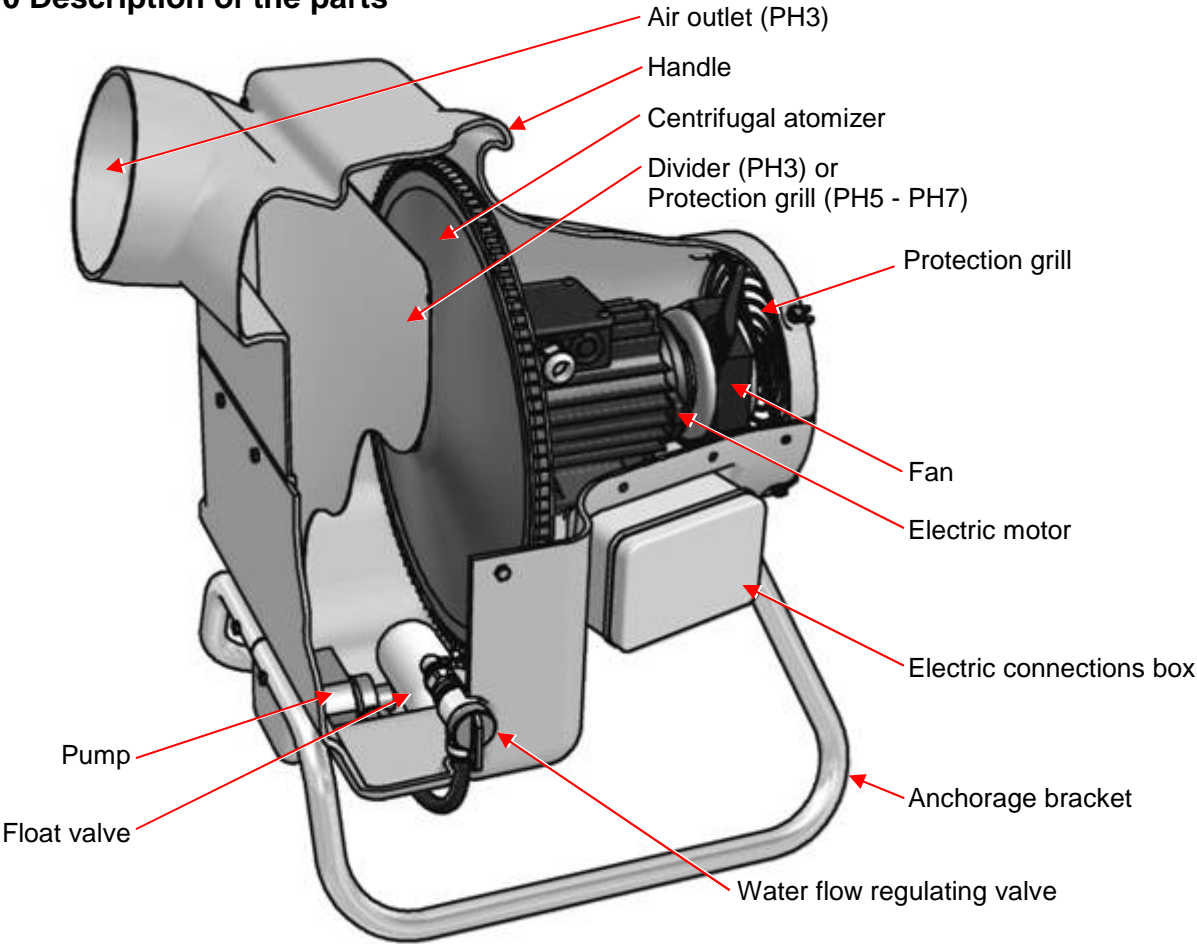


Fig.1.3

Constituent parts of the centrifugal atomizer

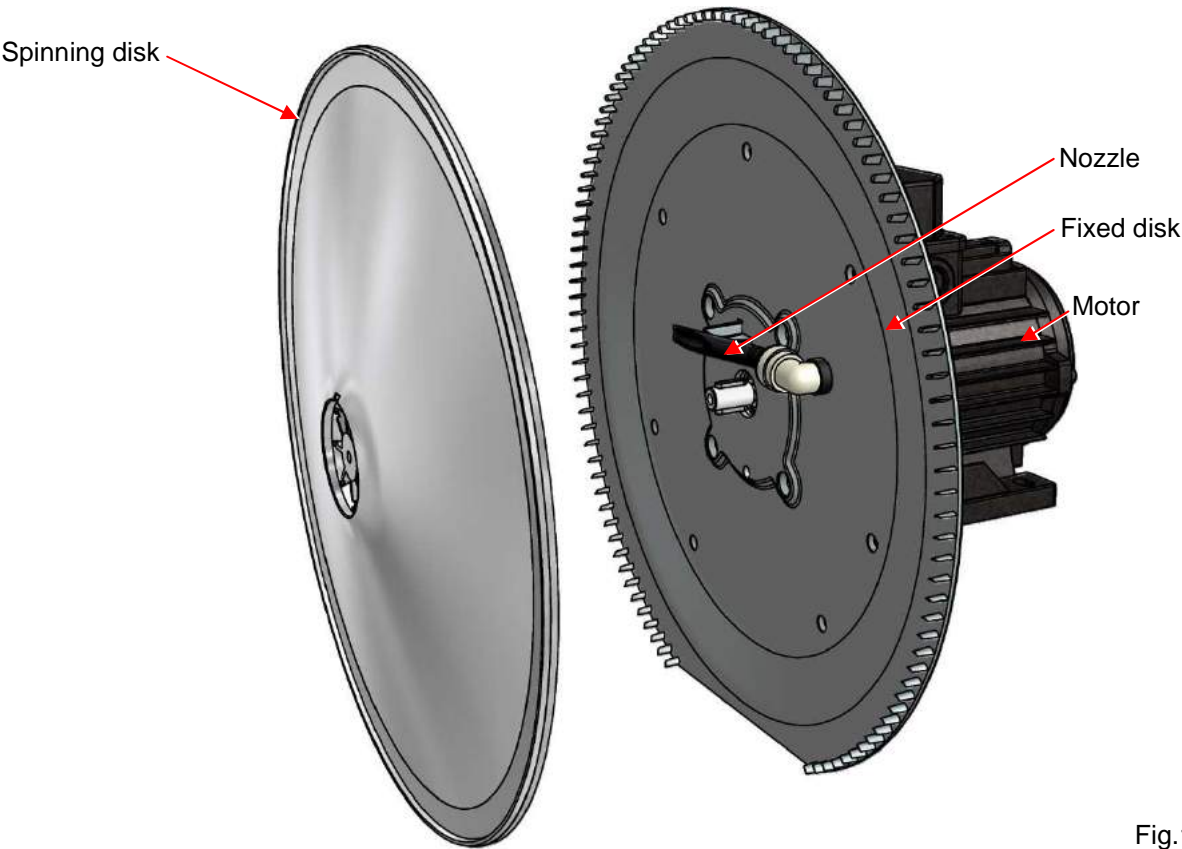


Fig.1.4

1.11 Transport and handling



The machine has been properly packaged before being put into strong carton boxes. Prevent damages to the components of the device by taking care when opening the package. Verify the integrity of the machine by controlling that there are no visible damaged parts. Do not dispose the packaging elements in the environment; they must be placed in proper collection points.

The PH can be lifted and hung by using the proper handle.



WARNING!

Before handling the device:

- stop the machine,
- disconnect the electricity supply,
- interrupt the water supply.



To lift the machine, use a suitable lifting device (consult the weights table). Lift the machine slowly, being careful not to drop it and move the straps depending on the centre of mass.

1.12 Warranty

This device is guaranteed for 12 months from the date of manufacture for all failures attributed to a proven manufacturing or material defect.

All the parts damaged by transport, improper maintenance, negligence, inability to use, improper use, tampering by unauthorized personnel and by any other cause not dependent from the company Franco s.r.l. from Cervasca (CN), Italy. During the warranty period, the company Franco s.r.l. commits itself to replace or repair free of charge those parts which result faulty from the origin.

The intervention must be made at Franco s.r.l. with transport charged to the user.

1.13 Manufacturer's identification data

Manufacturer
FRANCO S.r.l.

Registered office – Administrative headquarters
VIA NAZIONALE, 80 - 12010 CERVASCA (CN) - ITALY

Contacts
Tel.: (0039) 0171 - 61.16.63
Fax: (0039) 0171 - 61.23.37
Email: info@francosrl.com
Web: www.francosrl.com

1.14 Statements

The machine is built in accordance with the EC directives that are relevant and applicable at the time of the market entry of the machine itself.

The machine is not among those mentioned in the Att. IV of the Directive 2006/42/CE.

1.15 Declaration of conformity

(Att. IIa DIR. 2006/42/CE)

THE MANUFACTURER

FRANCO S.r.l.

Company

Via Nazionale, 80

Address

12010

Postal code

CN

Province

Cervasca

City

Italy

Country

DECLARES THAT THE MACHINE

Umidifier

Description

PH3; PH5; PH7

Model

3308400; 3308500; 3308200; 3308410; 3308510; 3308210

Series/Registration number

2015

Year of construction.

PH Professional Humidifier

Commercial denomination

Humidification of environments

Intended use

Meets the following essential requirements:

RESS from 1.1 to 1.7

Complies with the EU directives:

Directive 2006/42/CE - Directive 2006/95/CE - Directive 2004/108/CE

Referring to harmonized norms: EN 120100-1; EN 12100-2; EN 60204-1

AND AUTHORIZES

Marco Fantino

Nominative

Via Nazionale 80

Address

12010

Postal code

CN

Province


Cervasca

City

Italia

Country

TO COMPILE THE TECHNICAL FILE ON HIS BEHALF

Place and date of the document	The manufacturer
Cervasca, 10/05/2010	
	Function Administrator

D.C. : DC N-002/000001

2 - INSTALLATION

2.1 Before installing

In order to start the humidifier PH, the following conditions are required:

- connection to the electric power supply with voltage and frequency suitable for the machine and with grounding and safety devices;



The installation must meet the safety requirements provided by local regulation in force.

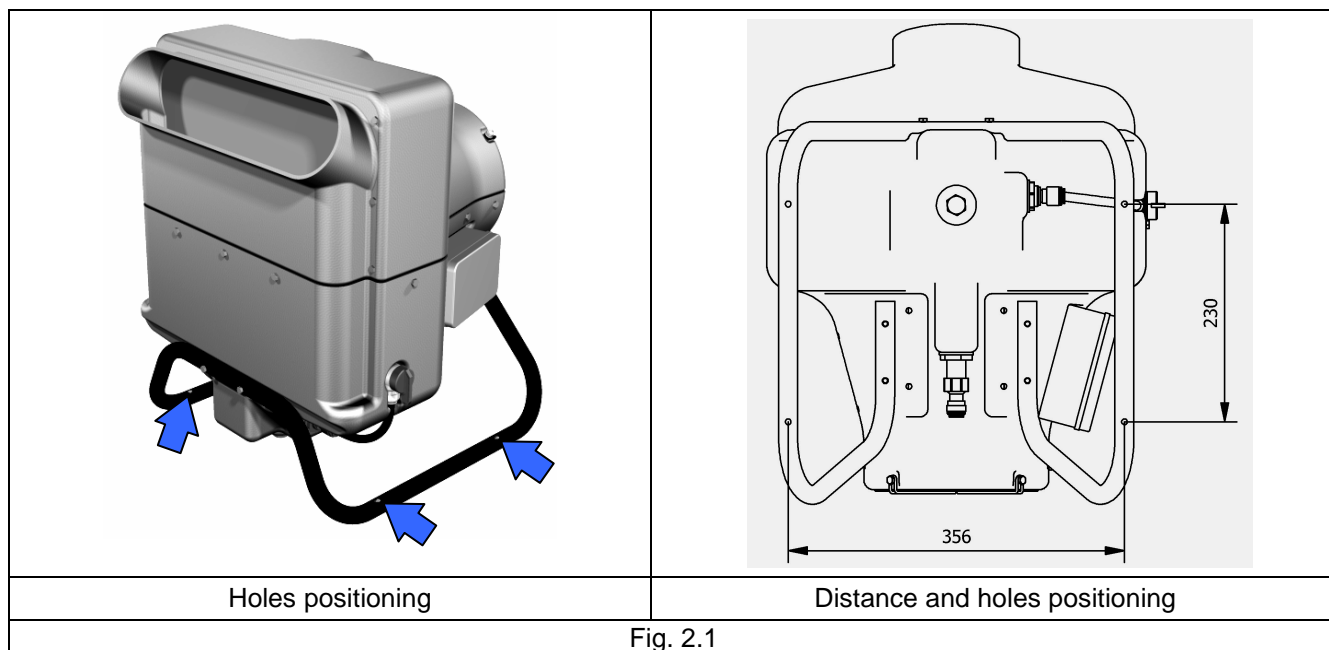


- connection to water supply (pressure required: between 2 and 6 atm);
- water drain connection.

Make sure that all the connections necessary to operate the equipment have been properly prepared.

2.2 Positioning

The humidifier PH must be installed horizontally, placing the support on the ground or on an appropriate horizontal shelf. If necessary, use the holes Ø6 situated on the support (remove the pins by levering with a screwdriver). Always keep the machine in a horizontal position (the distance between the holes is shown in Figure 2.1)



2.3 Electrical connection

The installation involves the use of a humidistat or a thermostat ON/OFF controlling the power of the machine; it is still possible to use, alternatively, a switch ON/OFF, in this case the start and stop of the machine must be done manually.

The choice, however, does not affect the installation procedure described below.



- Electrical connections must be undertaken by specialized, experienced and trained technicians, in accordance with the current legislation.
- Ensure that the electricity supply specifications correspond to those indicated in the in this manual.
- It is obligatory that the device is grounded using an efficient ground line.

The installation must foresee a device enabled to disconnect the machine from the electric supply, furthermore, a safety fuse of 2.5 A (delayed motor starting type) must be installed.

2.4 Hydraulic connection

The installation of the humidifier foresees the connection of the piping lines of the water supply and the drainage, to proper points (Fig. 2.2 – Water supply connection 3/8" – Threaded exhaust hole M12).

The pipes that must be used are of type hard "rilsan" for the supply, while, for the waste, a M12 threaded connection is predisposed.



2.5 Funnel flow and suction

In order to collect the air from the exterior of the room, a Ø200mm tube is to be connected to the device's suction inlet.

Furthermore, the PH3 versions, also allows to canalize the outlet flow, thanks to a special outlet in which a Ø125mm tube can be inserted.

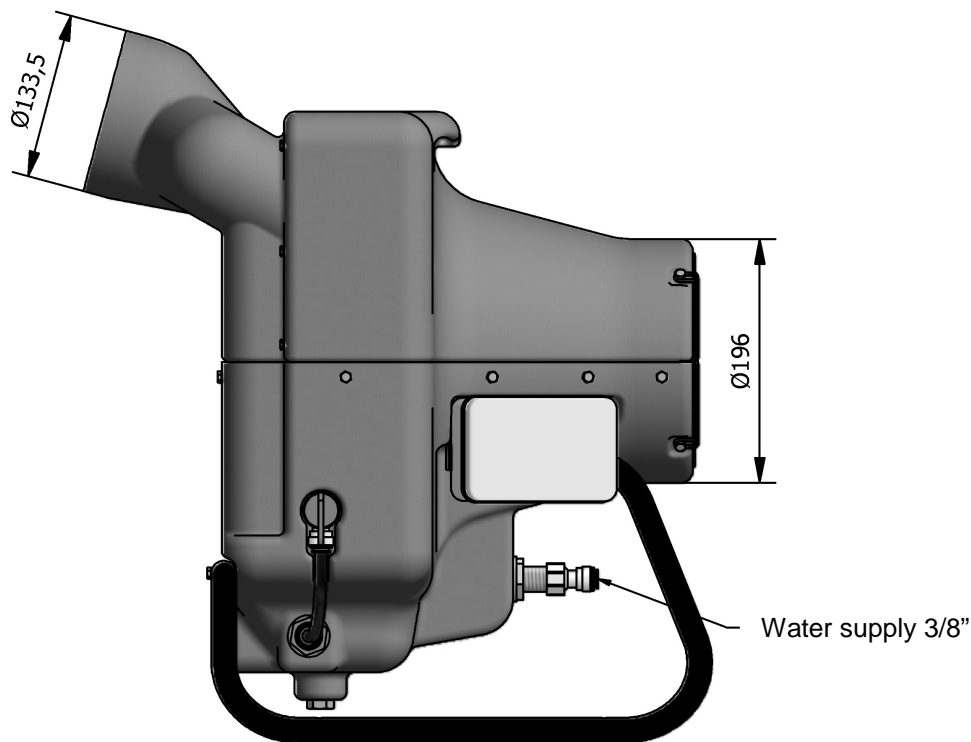


Fig.2.2

3 - OPERATION

3.1 Getting started

Before operating the humidifier, verify that:

1. All connections, both electrical and hydraulic, are made according to the instructions contained in this manual;
2. The humidifier is free and clean;
3. The water supply tap is open.

3.2 First start

- Check the correct air flow direction (Fig. 3.1);
- Make sure all wires are regularly placed and not caught or pulled by any object;
- Ensure that the water connections are correct;
- Open the water supply tap and make sure that there are no leaks along the load circuit;



3.3 Starting

The machine starts automatically when the electrical power is switched on.

The pump circulates the water bringing it to the rotating disk that nebulizes the water inside of the humidifier. The particular shape of the PH humidifier allows the outlet of only the smallest and lightest particles, carried by the airflow created by the fan.

3.4 Setting

It is possible to vary the amount of atomized water by adjusting the valve that regulates the spinning disk's water supply (Fig. 3.1).

The maximum quantity of nebulized water can differ from one model to another (the quantity of atomized water affects the quality of the fog). Consult the technical tables for further details.

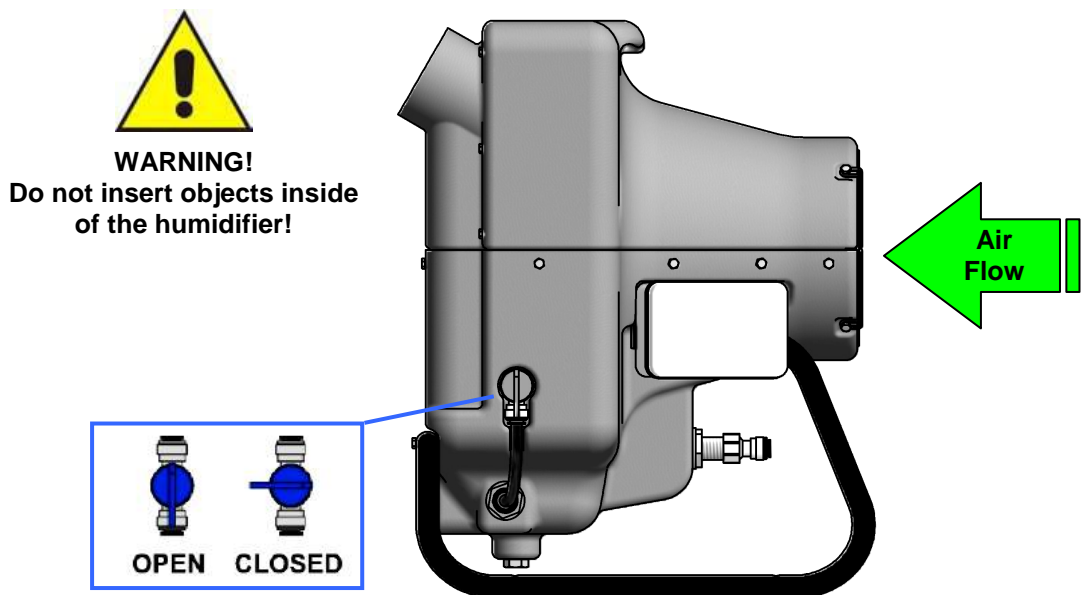


Fig. 3.1

Adjust the water flow with the proper flow regulator in order to obtain a nebulization without drag of droplets by the spinning disk.

Warning: an excessive quantity of water increase the size of the droplets



The pump must not operate without water.
The temperature of the liquid used must not exceed 35°C.



3.5 Water waste

The machine comes with a cap placed on the bottom of the storage tank. It is possible to empty the tank by removing the cap.

To do this operation, use a #19 wrench.

4 - MAINTENANCE



**Before undertaking any maintenance,
disconnect the device from the electricity and water supply!**

Periodically check that the amount of water reaching the humidifier is correct, if necessary adjust the flow regulator. Keep clean the disks, the tank and the internal components, and prevent the accumulation of dirt on the lid.

4.1 Access to internal parts

To access internal components of the device in order to do the maintenance, it is necessary to open the device following this exact procedure:

- 1) Unplug or stop the electric supply and make sure it cannot be switched on during maintenance;
- 2) Unplug or stop the water supply and make sure it cannot be switched on during maintenance;
- 3) Remove the safety protection grill unscrewing the 4 hexagonal-head screws with a no.7 screwdriver;
- 4) Remove the 2 M5 screws on the suction inlet with a no.8 wrench (fig.4.2)
- 5) Remove the 11 M5 screws that unite the two parts of the device with a no.8 wrench (fig.4.3)
- 6) Gently pull the superior part of the device.



Fig. 4.1



Fig. 4.2



Fig. 4.3

4.2 Cleaning the disk

Keep the disk clean to avoid the formation of calcareous deposits or accumulation of dirt, which could cause an increase in vibration or coarse nebulization.

To clean the rotating disk, simply use a soft damp cloth and a non-toxic and solvent free detergent, rubbing and being careful to avoid excessive pressure.

Do not use solvents.

The fixed disk should be cleaned with a small brush with stiff bristles, rubbing the teeth, being careful not to damage them.

Any eventual lime scale can be removed with muriatic acid diluted with water.

4.3 Cleaning the tank

Periodically clean the water tank.

To ease the cleaning, it is necessary to remove the humidifier's motor (4 screws – no.10 wrench) and remove the float's sphere and the pump.

To remove the sphere, unscrew the float's bracket's plastic wing nut (Fig 4.4).

To remove the pump it is necessary to rotate it in vertical position (Fig. 4.5), operate while holding with a no. 13 spanner the stop ring in which the pump is placed and pull gently the pump up to complete removal.

Once all these operations have been completed, it is possible to clean the interior of the tank with a cloth or a sponge, rubbing gently on the walls. **Do not use solvents.**

It is necessary to periodically check the functioning and the cleanliness of the pump and the float.

Each 2-3 months clean the internal parts of the pump with warm water.



WARNING!

Repeat the sequence backward, being careful to reposition the float so that the water level inside the tank covers the pump completely.

A water level that is too high may cause a malfunctioning in the atomizing process and, consequently, may overheat the motor. A water level that is too low does not allow the pump to correctly operate.

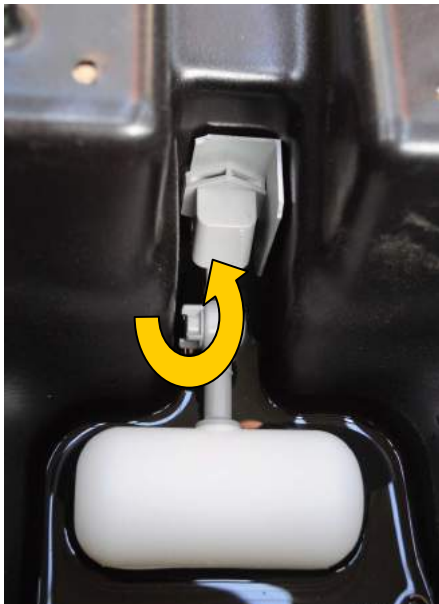


Fig. 4.4



Fig. 4.5

4.4 Positioning the nozzle

After removing the spinning disk (par. 4.5), verify that the nozzle is positioned as shown in the following pictures.

If the nozzle is not properly positioned, rotate the nozzle until the optimal position is reached.

Always make sure that the nozzle rests properly in its holder.

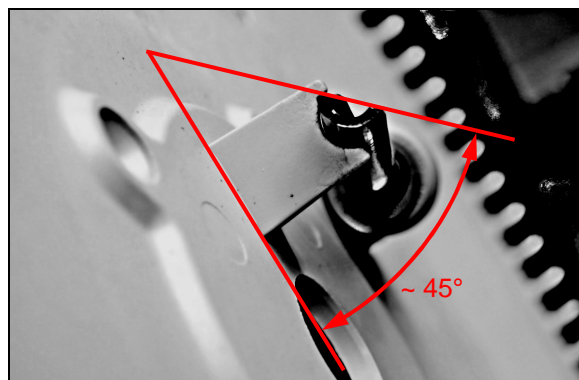
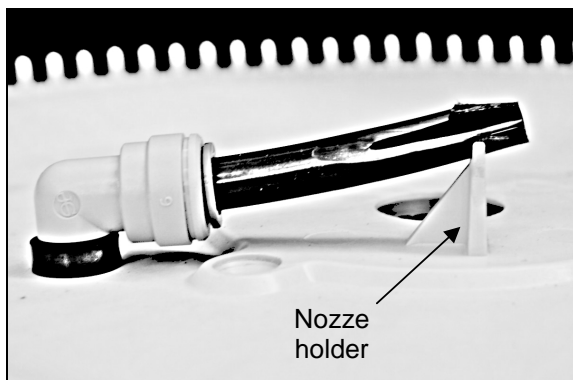


Fig. 4.6 Nozzle positioning

4.5 Replacing the spinning disk

Use a flat-head screwdriver to remove the cap covering the spinning disk by levering the hollow. With a Nut-driver no. 7 remove the M4 screw (fig 4.7).

Using a pair of flat-head 150mm screwdrivers, pry between the spinning disk and the fixed disk to remove the disk from the motor shaft (fig 4.8).

Grease the driveshaft and insert the new disk, checking the alignment of the keys and pressing the center without blinking or exerting excessive force. Replace the washer, the M4 screw and the cap.

Verify that the spinning disk can rotate without obstructions and that the distance between the spinning disk and the fixed disk is less than 6mm.



Fig. 4.7

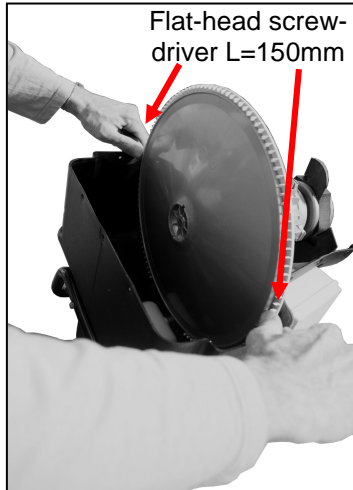


Fig. 4.8

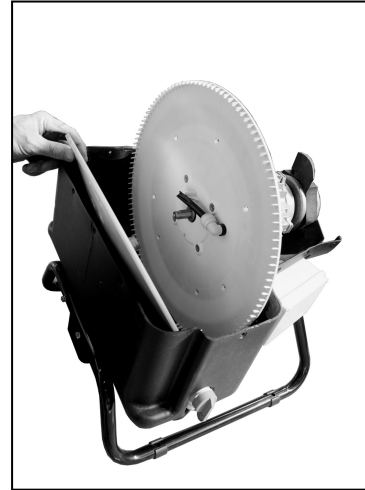


Fig. 4.9

4.6 Changing the pump

To remove the sphere it is necessary to rotate it in vertical position (Fig. 4.5), operate while holding with a no. 13 spanner the stop ring in which the pump is placed and pull gently the pump up to complete removal.

Repeat the sequence backward, being careful to reposition the float so that the water level inside the tank covers the pump completely.

4.7 Replacing the fan

Use a no.7 screwdriver to unscrew the central screw on the fan's impeller.

Remove the fan. Before positioning the new fan, grease the driveshaft, being careful not to misplace the key.

Ensure the screws are replaced properly, fixing the fan and safety grill.

4.8 Changing the float

Disconnect the water supply and remove, with a no.26 wrench, the fast connection 3/8".

Remove the four M6 screws that fix the motor with a no.10 wrench, loose the cable of the motor and disconnect the supply tubes on the hard disk.

Remove the motor. Unscrew the plastic ring nut indicated in Fig. 4.10 with a no.30 wrench and, consequently, remove the body of the float.

Place the new float and repeat the sequence in the opposite direction, so that the water level inside the tank covers the pump completely.

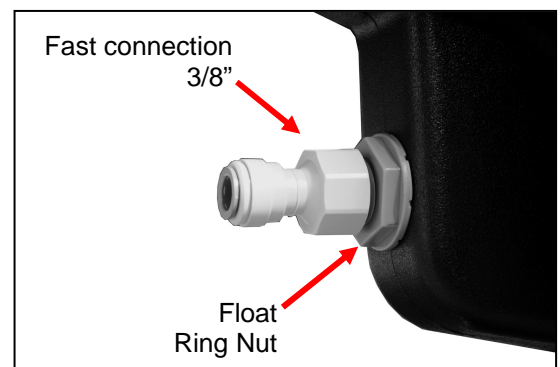


Fig. 4.10

4.9 Accessories

A full range of accessories matching your PH is available, including electronic humidity controls, thermostats, timing systems for the drainage of the tank (anti-legionella), electric wiring accessories, hydraulic accessories, air conveying and inhalation channeling pipes.

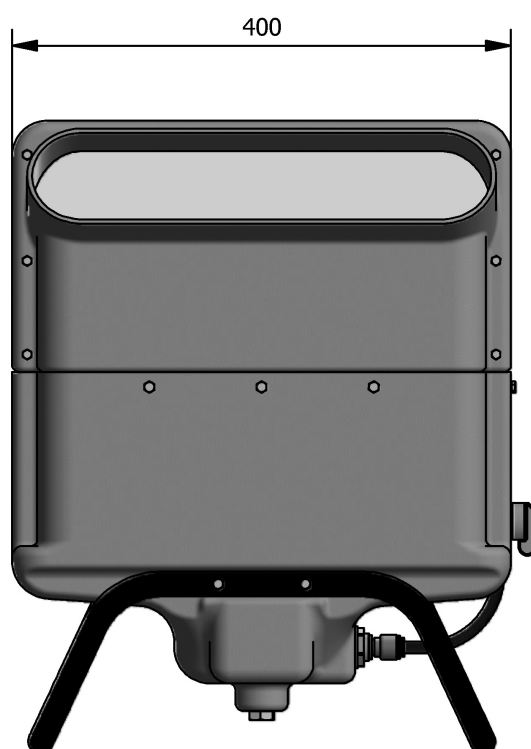
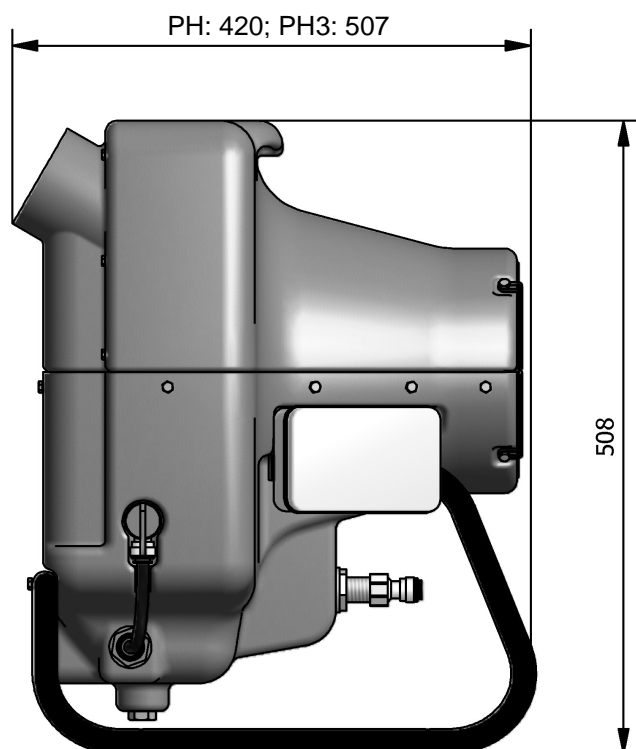
Request the accessories catalog from your dealer for further details.

5 - TECHNICAL SPECIFICATIONS

5.1 Technical data

General data				
		PH		
		PH3 - 3308400	PH5 -3308500	PH7 -3308200
Atomization capacity	lt/h	up to 2,5*	up to 5,0*	up to 7,5*
Electrical supply		1 phase		
Weight	Kg	11		
Air flow	m³/h	280	330	390
Electrical characteristics				
Fan-humidifier's motor				
Power	W	250		
Voltage	V	230		
Current	A	2,3	2,2	1,98
Frequency	Hz	50		
Pump's motor				
Power	W	14		
Voltage	V	230		
Frequency	Hz	50		

* with free outlet



5.2 Wiring

All the wires used must be suitable to carry the current intensity (A) of the motor (par. 5.1).

The terminal's screws must be accurately tightened.

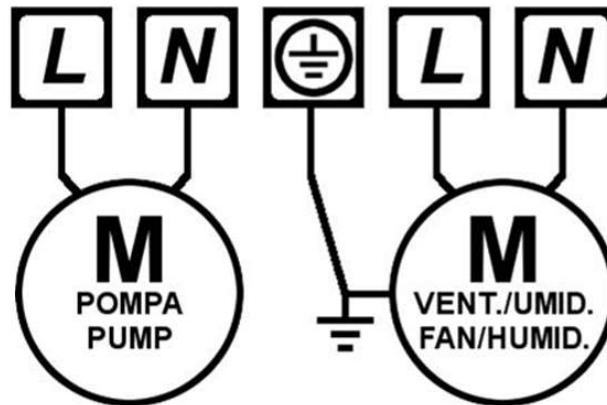
Make sure that the electricity supply characteristics are exactly as shown in the table (par. 5.1).

Install a differential magnetic switch upstream of the device.

Protect with a suitable motor overload protection (par 5.1).



Make sure all connections are stuck on the box, the box cover is secured and that the screws are tightened to ensure the necessary level of protection.

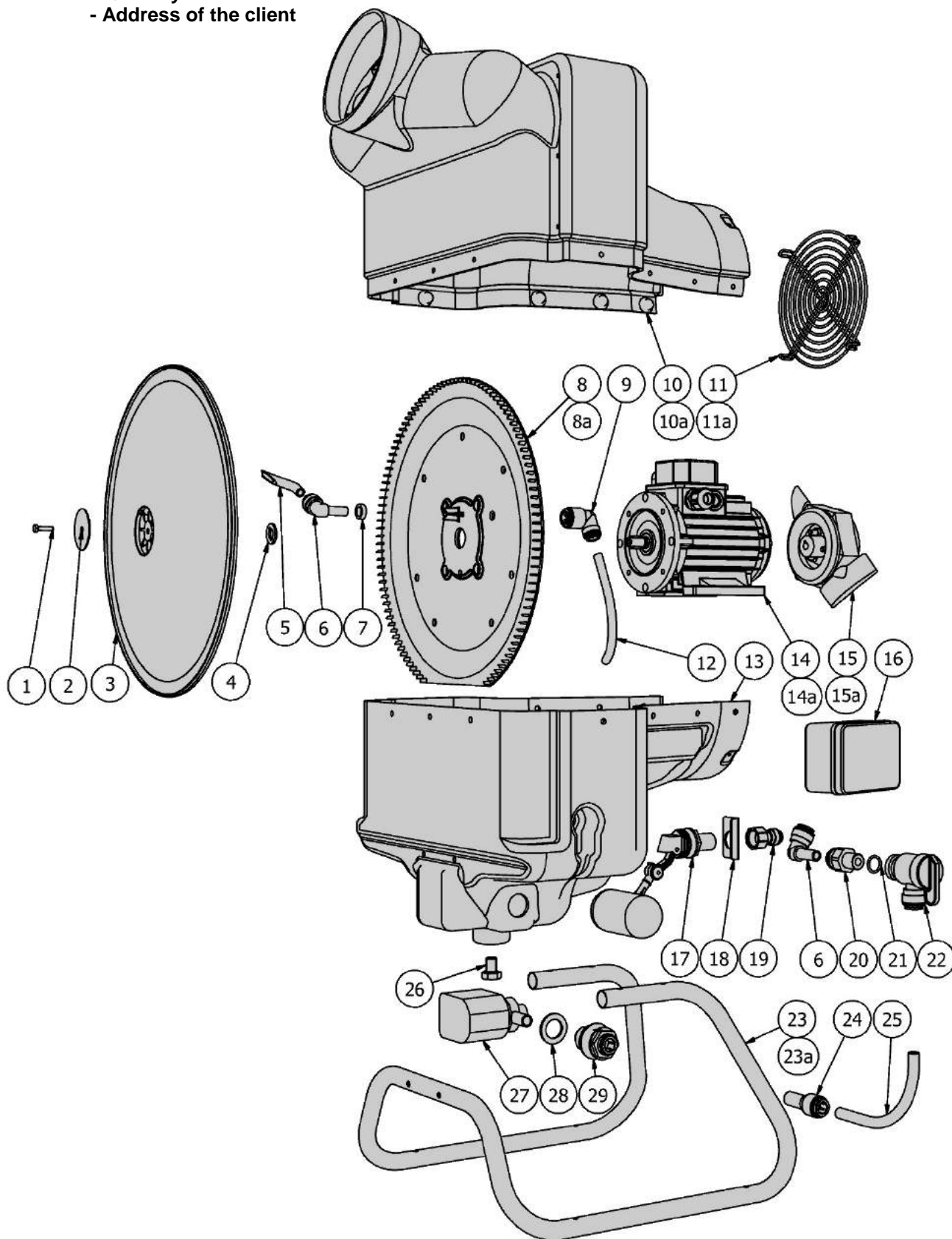


5.3 Spare parts



It is highly recommended to use only original spare parts.
Orders must be made by specifying what follows:

- Device model
- Reference of the piece (as indicated as follows)
- Quantity of items to be ordered
- Address of the client



Pos.	Codice parte	Qtà	Descrizione
1	F.6001001	1	VITE TE TF A2 M4 / EXAGONAL HEAD INOX SCREW M4x16
2	F.1801003	1	RONDELLA DISCO ROTANTE / SPINNING DISK CAP
3	F.1801002	1	DISCO ROTANTE / SPINNING DISK
4	F.1801009	1	DISTANZIALE DISCO ROTANTE 1mm / SPINNING DISK SPACER 1mm
	F.1801010		DISTANZIALE DISCO ROTANTE 2mm / SPINNING DISK SPACER 2mm
5	F.1806001	1	UGELLO / NOZZLE
6	F.8202001	2	RACCORDO A GOMITO CON CODOLO / 90° STEM ELBOW FITTING
7	F.7303003	1	DISTANZIALE / SPACER
8	F.3302002	1	DISCO FISSO / FIXED DISK
8a	F.3302500		KIT FISSAGGIO DISCO FISSO / FIXED DISK FIXING KIT
9	F.8202009	1	RACCORDO A GOMITO / ELBOW FITTING
10	F.3302011	1	PARTE SUPERIORE CORPO PH3 / PH3 UPPER BODY
	F.3302012		PARTE SUPERIORE CORPO PH5 / PH5 UPPER BODY
	F.3302013		PARTE SUPERIORE CORPO PH7 / PH7 UPPER BODY
10a	F.3302501	1	KIT DI FISSAGGIO CORPO PH / PH BODY FIXING KIT
11	F.3301020	1	RETE DI PROTEZIONE / PROTECTION GRILL
11a	F.3302502	1	KIT DI FISSAGGIO RETE DI PROTEZIONE / PROTECTION GRILL FIXING KIT
12	F.3302001	1	TUBO DISCO FISSO / FIXED DISK TUBE
13	F.3302014	1	PARTE INFERIORE CORPO PH / PH BOTTOM BODY
14	F.5001500	1	MOTORE 230V 50Hz 250W / MOTOR 230V 50Hz 250W
	F.5001501		MOTORE 230V 60Hz 250W / MOTOR 230V 60Hz 250W
14a	F.3302503	1	KIT FISSAGGIO MOTORE / MOTOR FIXING KIT
15	F.5101100	1	VENTOLA / FAN
15a	F.3302504	1	KIT DI FISSAGGIO VENTOLA / FAN FIXING KIT
16	F.3302010	1	SCATOLA COMPLETA / COMPLETE ELECTRIC CONNECTION BOX
17	F.8202510	1	VALVOLA DI RIEMPIMENTO CON GHIERA / FILL VALVE WITH BUSH
18	F.3301031	1	STAFFA ANTIROTAZIONE / ANTI-ROTATION BRACKET
19	F.8202008	1	RACCORDO DIRITTO FEMMINA 1/2" 3/8" / FEMALE ADAPTOR 1/2" 3/8"
20	F.8202015	1	TERMINALE DIRITTO / STRAIGHT ADAPTOR
21	F.8201501	1	GUARNIZIONE OR / OR GASKET
22	F.8202003	1	VALVOLA A SFERA / BALL VALVE
23	F.3301010	1	SUPPORTO PH / PH SUPPORT
23a	F.3302505	1	KIT FISSAGGIO SUPPORTO PH / PH SUPPORT FIXING KIT
24	F.8202016	1	RIDUZIONE 1/2" 3/8" / 1/2" TO 3/8" REDUCTION
25	F.3302000	1	TUBO POMPA / PUMP TUBE
26	F.7303006	1	TAPPO SCARICO M12 / M12 PLUG
27	F.3302050	1	POMPA 230V 50Hz / PUMP 230v 50Hz
	F.3302051		POMPA 230V 60Hz / PUMP 230v 60Hz
28	F.8201500	1	GUARNIZIONE PASSAPARETE / BULKHEAD CONNECTOR GASKET
29	F.8202014	1	PASSAPARETE 1/2" / 1/2" BULKHEAD CONNECTOR

6 - PROBLEMS AND SOLUTIONS



**Before undertaking any maintenance,
disconnect the device from the electricity and water supply!**

PROBLEM	CAUSE	SOLUTION
The device does not start.	The power supply is not plugged.	Verify the electrical connection, or the functioning of the mains itself.
The spinning disk does not turn but the water is re-circulated by the pump.	The motor power supply is disconnected.	Check the power supply line of the motor.
	The motor is broken.	Contact qualified and authorized personnel to replace the motor.
The spinning disk turns but the water is not atomized.	The pump's water supply is unplugged.	Check the water supply line of the pump.
	The circuit of water supply is disconnected.	Check the water supply pipe and the atomizing control valve.
	The pump is clogged.	Clean the tank and accurately clean the pump.
	The pump is full of air.	Disconnect the 3/8" tube from the valve, allowing the vent of the hydraulic circuit. Accurately clean the pump.
	The pump is broken.	Contact qualified and authorized personnel to replace the pump.
	The float does not fill the tank.	Test the functioning of the float, in case of damage or failure contact qualified and authorized personnel to replace it. .
The atomization is coarse.	The fixed disk is dirty.	Clean the fixed disk.
	The spinning disk is too distant from the fixed disk.	Verify that the distance between the fixed disk and the spinning disk is around 4mm; add or remove spacers to adjust the distance.
	The nozzle is badly positioned.	Verify the position of the nozzle.
The machine vibrates.	The spinning disk is broken.	Contact qualified and authorized personnel to replace the spinning disk.
	The motor is broken.	Contact qualified and authorized personnel to replace the motor.

7)

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