

**UNITÀ TRATTAMENTO ARIA
AIR HANDLING UNIT
VENTILO-CONVECTEUR À PRESSION
LÜFTUNGSEINHEIT FÜR KANALANSCHLUSS
UNIDAD DE TRATAMIENTO DEL AIRE**

TS



TS 13
TS 16
TS 23
TS 34
TS 36
TS 43
TS 46
TS 53
TS 56
TS 63
TS 74
TS 76

TS 635V
TS 745V
TS 765V



ITSLJ 1002 - 5964000_04

OSSERVAZIONI

Conservare i manuali in luogo asciutto, per evitare il deterioramento, per almeno 10 anni per eventuali riferimenti futuri. **Leggere attentamente e completamente tutte le informazioni contenute in questo manuale. Prestare particolare attenzione alle norme d'uso accompagnate dalle scritte "PERICOLO" o "ATTENZIONE" in quanto, se non osservate, possono causare danno alla macchina e/o a persone e cose.**

Per anomalie non contemplate da questo manuale, interpellare tempestivamente il Servizio Assistenza di zona.

L'apparecchio deve essere installato in maniera tale da rendere

re possibili operazioni di manutenzione e/o riparazione.

La garanzia dell'apparecchio non copre in ogni caso i costi dovuti ad autoscale, ponteggi o altri sistemi di elevazione che si rendessero necessari per effettuare gli interventi in garanzia. AERMEC S.p.A. declina ogni responsabilità per qualsiasi danno dovuto ad un uso improprio della macchina, ad una lettura parziale o superficiale delle informazioni contenute in questo manuale.

Il numero di pagine di questo manuale è: 44.

REMARKS

Store the manuals in a dry location to avoid deterioration, as they must be kept for at least 10 years for any future reference.

All the information in this manual must be carefully read and understood. Pay particular attention to the operating standards with "DANGER" or "WARNING" signals as failure to comply with them can cause damage to the machine and/or persons or objects.

If any malfunctions are not included in this manual, contact the local After-sales Service immediately.

The apparatus must be installed in such a way that maintenance

ce and/or repair operations are possible.

The apparatus's warranty does not in any case cover costs due to automatic ladders, scaffolding or other lifting systems necessary for carrying out repairs under guarantee.

AERMEC S.p.A. declines all responsibility for any damage whatsoever caused by improper use of the machine, and a partial or superficial acquaintance with the information contained in this manual.

The number of pages in this manual is : 44

REMARQUES

Conservier les manuels dans un endroit sec, afin d'éviter leur détérioration, pendant au moins 10 ans, pour toutes éventuelles consultations futures.

Lire attentivement et entièrement toutes les informations contenues dans ce manuel. Prêter une attention particulière aux normes d'utilisation signalées par les inscriptions "DANGER" ou "ATTENTION", car leur non observance pourrait causer un dommage à l'appareil et/ou aux personnes et objets.

Pour toute anomalie non mentionnée dans ce manuel, contacter aussitôt le service après-vente de votre secteur.

Lors de l'installation de l'appareil, il faut prévoir l'espace

nécessaire pour les opérations d'entretien et/ou de réparation.

La garantie de l'appareil ne couvre pas les coûts dérivant de l'utilisation de voitures avec échelle mécanique, d'échafaudages ou d'autres systèmes de levée employés pour effectuer des interventions en garantie.

AERMEC S.p.A. décline toute responsabilité pour tout dommage dû à une utilisation improprie de l'appareil et à une lecture partielle ou superficielle des informations contenues dans ce manuel.

Ce manuel se compose de pages: 44

HINWEISE

Bewahren Sie die Gebrauchsanleitungen mindestens 10 Jahre für eventuelles zukünftiges Nachschlagen an einem trockenen Ort auf. **Alle in diesem Handbuch enthaltenen Informationen aufmerksam und vollständig lesen. Insbesondere auf die Benutzungsanweisungen mit den Hinweisen "VORSICHT" oder "ACHTUNG" achten, da deren Nichtbeachtung Schäden am Gerät bzw. Sach- und Personenschäden zur Folge haben kann.**

Bei Betriebsstörungen, die in dieser Gebrauchsanweisung nicht aufgeführt sind, wenden Sie sich umgehend an die zuständige

Kundendienststelle.

Das Gerät so aufstellen, dass Instandhaltungs- und/oder Reparaturarbeiten durchgeführt werden können.

Die Garantie des Gerätes deckt in keinem Fall Kosten für Feuerwehrlern, Gerüste oder andere Hebesysteme ab, die sich für die Garantiearbeiten als erforderlich erweisen sollten.

Die AERMEC S.p.A. übernimmt keine Haftung für Schäden aus dem unsachgemäßen Gebrauch des Gerätes und der teilweisen oder oberflächlichen Lektüre der in diesem Handbuch enthaltenen Informationen.

Die Seitenanzahl diese Handbuches ist: Nr. 44 Seiten

OBSERVACIONES

Guarde los manuales en un lugar seco para evitar su deterioro, al menos durante 10 años, por si fuera posible consultarlos en el futuro.

Leer atenta y completamente todas las informaciones contenidas en este manual. Preste particular atención a las normas de uso acompañadas de las indicaciones "PELIGRO" o "ATENCIÓN" puesto que, si no se cumplen, pueden causar el deterioro de la máquina y/o daños personales y materiales.

En caso de anomalías no contempladas en este manual, contacte inmediatamente con el Servicio de Asistencia de su zona.

El aparato debe ser instalado de manera que haga posibles las

operaciones de mantenimiento y/o reparación.

En cualquier caso, la garantía del aparato no cubre los costes derivados del uso de escaleras automáticas, andamios u otros sistemas de elevación necesarios para efectuar las intervenciones en garantía.

AERMEC S.p.A. declina cualquier responsabilidad por cualquier daño debido a un uso impropio de la máquina, o bien a una lectura parcial o superficial de las informaciones contenidas en este manual.

Número de páginas de este manual: 44.

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Español

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DICHIARAZIONE DI CONFORMITÀ CE

Noi, firmatari della presente, dichiariamo sotto la nostra esclusiva responsabilità, che il prodotto:
unità trattamento dell'aria serie **TS**

al quale questa dichiarazione si riferisce è conforme alle seguenti norme armonizzate:

- CEI EN 60335-2-40
- CEI EN 61000-6-1
- CEI EN 61000-6-3

soddisfando così i requisiti essenziali delle seguenti direttive:

- Direttiva LVD 2006/95/CE
- Direttiva compatibilità elettromagnetica 2004/108/CE
- Direttiva Macchine 2006_42_CE

CE CONFORMITY DECLARATION

We the undersigned declare, under our own exclusive responsibility, that the product:

Air handling unit **TS** series

to which this declaration refers, complies with the following standardised regulations:

- EN 60335-2-40
- EN 61000-6-1
- EN 61000-6-3

soddisfando così i requisiti essenziali of the the following community standards:

- LVD Directive 2006/95/EC
- Electromagnetic Compatibility Directive 2004/108/EC
- Machine Directive 2006_42_CE

DÉCLARATION DE CONFORMITÉ CE

Nous soussignés déclarons sous notre exclusive responsabilité que le produit :

VENTILO-CONVECTEURS À PRESSION série **TS**

auquel cette déclaration fait référence, est conforme aux normes harmonisées suivantes :

- EN 60335-2-40
- EN 61000-6-1
- EN 61000-6-3

satisfaisant ainsi aux conditions essentielles des directives suivantes :

- Directive LVD 2006/95/CEE
- Directive sur la compatibilité électromagnétique 2004/108/CEE
- Directive Machines 2006_42_CE

CE-KONFORMITÄTSERKLÄRUNG

Wir, die hier Unterzeichnenden, erklären auf unsere ausschließliche Verantwortung, dass das Produkt:

LÜFTUNGSEINHEIT FÜR KANALANSCHLUSS der Serie **TS**

auf das sich diese Erklärung bezieht, den folgenden harmonisierten Normen entspricht:

- EN 60335-2-40
- EN 61000-6-1
- EN 61000-6-3

womit die grundlegenden Anforderungen folgender Richtlinien erfüllt werden:

- Richtlinie LVD 2006/95/EG
- Richtlinie zur elektromagnetischen Verträglichkeit 2004/108/EG
- Maschinenrichtlinie 2006_42_CE

DECLARACIÓN DE CONFORMIDAD CE

Nosotros, signatarios de la presente, declaramos bajo nuestra exclusiva responsabilidad, que el producto:

UNIDAD DE TRATAMIENTO DEL AIRE serie **TS**

al quale questa dichiarazione si riferisce è conforme alle seguenti norme armonizzate:

- EN 60335-2-40
- EN 61000-6-1
- EN 61000-6-3

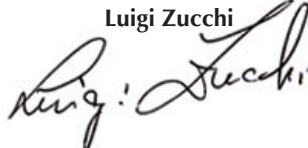
al que esta declaración se refiere, está en conformidad a las siguientes normas armonizadas:

- Directiva LVD 2006/95/CE
- Directiva Compatibilidad Electromagnética 2004/108/CE
- Directiva Máquinas 2006_42_CE

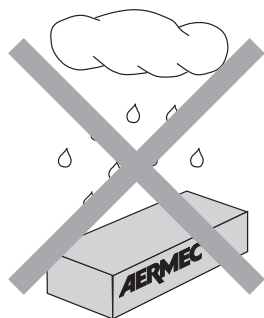
Bevilacqua, 02/01/2010

La Direzione Commerciale – Sales and Marketing Director

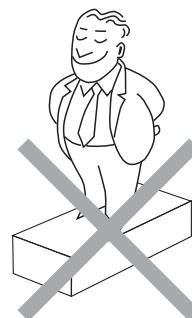
Luigi Zucchi



NON bagnare • Do NOT wet
CRAINT l'humidité • Vor Nässe schützen
NO mojar



NON calpestare • Do NOT trample
NE PAS marcher sur cet emballage • Nicht betreten
NO pisar



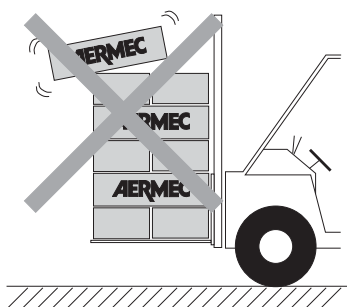
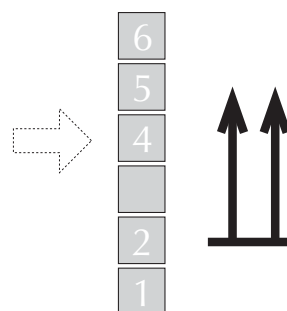
Sovrapponibilità: controllare sull'imballo la posizione della freccia per conoscere il numero di macchine impilabili.

Stacking: control the packing for the arrow position to know the number of machines that can be stacked.

Empilement: vérifier sur l'emballage la position de la flèche pour connaître le nombre d'appareils pouvant être empilés.

Stapelung: Anhand der Position des Pfeiles an der Verpackung kontrollieren, wieviele Geräte stapelbar sind.

Apilamiento: observe en el embalaje la posición de la flecha para saber cuántos equipos pueden apilarse.



NON lasciare gli imballi sciolti durante il trasporto.
Do NOT leave loose packages during transport.
ATTACHER les emballages pendant le transport.
Die Verpackungen nicht ungesichert transportieren.
NO lleve las cajas sueltas durante el transporte.

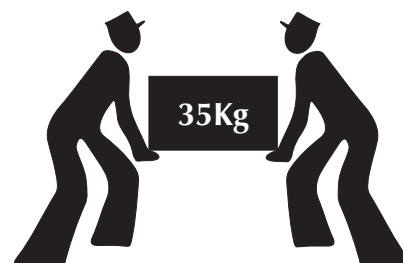
NON trasportare la macchina da soli se il suo peso supera i 35 Kg.

DO NOT handle the machine alone if its weight is over 35 Kg.

NE PAS transporter tout seul l'appareil si son poids dépasse 35 Kg.

Das Gerät NICHT alleine tragen, wenn sein Gewicht 35 Kg überschreitet.

NO maneje los equipos en solitario si pesan más de 35 kg.



SIMBOLI DI SICUREZZA • SAFETY SYMBOL • SIMBOLES DE SECURITE
SICHERHEITSSYMBOL • SÍMBOLOS DE SEGURIDAD



Pericolo:

Tensione

Danger:

Power supply

Danger:

Tension

Gefahr !

Spannung

Peligro:

Tensión



Pericolo:

Organi in movimento

Danger:

Movings parts

Danger:

Organes en mouvement

Gefahr !

Rotierende Teile

Peligro:

Elementos en movimiento



Pericolo!!!

Danger!!!

Danger!!!

Gefahr!!!

Peligro!!!

IMPORTANT INFORMATION AND MAINTENANCE

ATTENTION: the air handling unit is connected to the electric circuit and the hydraulic circuit. An intervention by unspecialised staff could lead to injury of the operator and damage to the appliance and the surrounding area.

POWER THE AIR HANDLING UNIT ONLY WITH SINGLE-PHASE 230 VOLT VOLTAGE

If different electric power supplies are used the air handling unit may undergo unrepairable damage.

DO NOT USE THE AIR HANDLING UNIT IN AN IMPROPER MANNER

The air handling unit must not be used to breed, deliver and rear animals.

VENTILATE THE ENVIRONMENT

It is recommended to periodically ventilate the environment where the air handling unit is installed, especially if a lot of people reside in the room or if gas appliances or odour sources are present.

ADJUST THE TEMPERATURE CORRECTLY

The environmental temperature must be adjusted in a way to allow maximum well-being for the persons present, especially if they are old, children or ill,

preventing sudden temperature changes between indoors and outdoors exceeding 7 °C in summer.

If the temperature is too low in the summer, it leads to greater electrical consumption.

POSITION THE JET OF AIR CORRECTLY

The air that comes out of the fan coils must not hit persons directly; in fact, even if it has a higher temperature than that of the environment, it can cause a sensation of coldness and consequent discomfort.

DO NOT USE WATER THAT IS TOO HOT

Use water at a maximum temperature of 40 °C. to clean the air handling unit. Do not use chemical products or solvents on any part of the air handling unit. Do not spray water on the internal or external surfaces of the air handling unit (short circuits could be caused).

CLEAN THE FILTER PERIODICALLY

Clean frequently, remove the accumulated dust using a suction device.

Frequent cleaning of the filter guarantees greater functioning efficiency.

Check if the filter is very dirty: if so, repeat the operation more often.

When the filter is clean, re-mount it on the fan coils in the opposite order to disassembly.

DURING FUNCTIONING

Envision the presence of the filter so as not to compromise the quality of the air.

IT IS NORMAL

During functioning in cooling mode steam may escape from the air handling unit delivery.

During functioning in heating mode a slight hiss of air may be noticed in proximity of the air handling unit. Sometimes the machine may emit unpleasant odours due to the accumulation of substances present in the environment air (especially if the room is not periodically aired, clean the filter more often).

During functioning it is possible to detect sounds and creaking noises inside the appliance due to the different thermic dilation of the elements (plastics and metals), this, however, does not indicate malfunctioning and does not cause damage to the unit if the maximum temperature of the input water is not exceeded.

FUNCTIONING LIMITS

Maximum working temperature	120°C
Operating temperature	0°C - 50°C
Maximum working pressure	15 bar

The assembling place must be chosen so that the max. and min. room temperature limit is respected 0÷45°C (<85% U.R.).

Average minimum water temperature

To prevent the formation of condensation on the exterior of the unit while the fan is operating, the average water temperature should not drop beneath the limits shown in the table below, determined by the ambient conditions.

These limits refer to unit operation with fan at minimum speed. Note that condensation may form on the exterior of the unit if cold water circulates through the coil while the fan is off for prolonged periods of time, so it is advisable to fit the additional three-way valve.

MINIMUM AVERAGE WATER TEMPERATURE

		Temperature with dry bulb of the air in the room °C					
		21	23	25	27	29	31
Wet bulb temperature °C	15	3	3	3	3	3	3
	17	3	3	3	3	3	3
	19	3	3	3	3	3	3
	21	6	5	4	3	3	3
	23	-	8	7	6	5	5

PACKAGING

The units are supplied with standard cardboard packaging.

USE

Consult the command panel manual for methods of use.

DESCRIPTION

The ductable air handling terminal units in the **TS** series are available in 7 sizes in relation to the air flow rate with 3, 4 and 6 coil ranges with 3-speed fans or only for 6 and 7 sizes, 5-speed fans (3 selections) that allows to obtain the static pressure necessary to guarantee a correct air flow rate.

The TS units have been designed for horizontal installation in small environ-

ments, with centrifugal fans with start condenser always inserted and internal circuit breaker protection; it is directly coupled to statically and dynamicaly balanced impellers in order to limit vibrations and noise.

The TS units are realised in Aluzink plate and internally lined with sheets of polyethylene and polyester.

The coils consist of aluminium gills with

pipes in expanded copper.

The condensate collection trays are in AISI 304 stainless steel with connection to the condensate discharge plant.

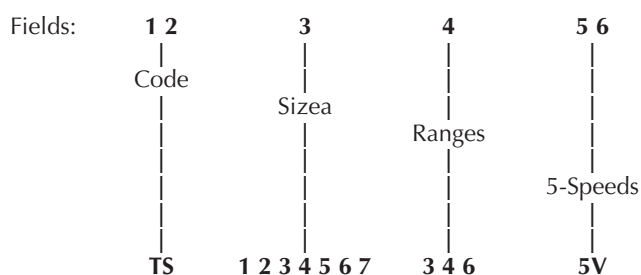
The TS units can be coupled to control panels with electronic thermostat (accessory).

The TS units can be equipped with accessories for air filtering, ducting and post-heating.

VERSIONS AVAILABLE

By appropriately combining the many options available, each model can be configured in a way to satisfy the most specific plant demands.

Field configurator:



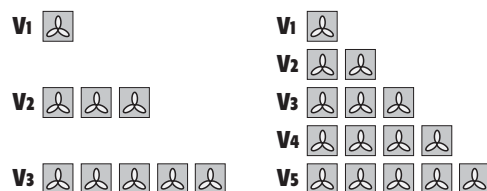
Models available:

3-Speeds	5-Speeds
TS 13	
TS 16	
TS 23	
TS 34	
TS 36	
TS 43	
TS 46	
TS 53	
TS 56	
TS 63	TS 635V
TS 74	TS 745V
TS 76	TS 765V

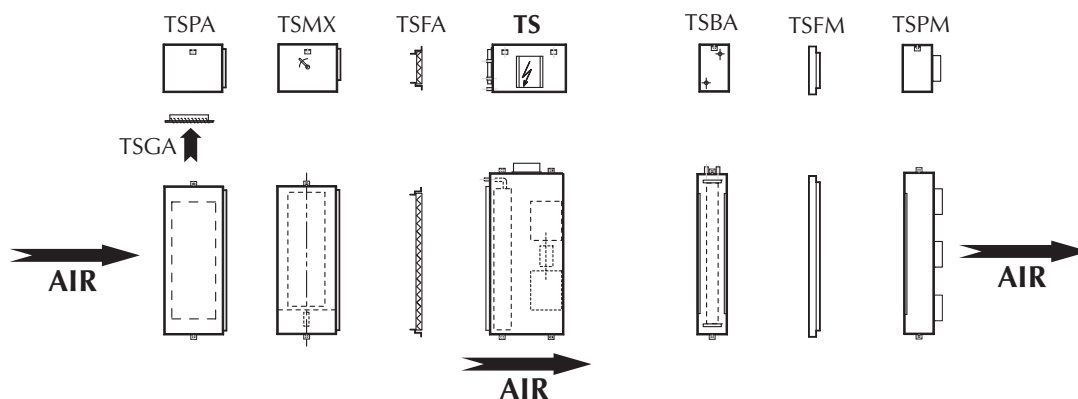
Examples of the commercial code:

TS34 This is a **TS** unit, size **3**, with **4**-row coil, **3** speeds.

TS635V This is a **TS** unit, size **6**, with **3**-row coil, 5 speeds.



ACCESSORIES



TECHNICAL DATA

Model		TS 13	TS 16	TS 23	TS 34	TS 36	TS 43	TS 46	TS 53	TS 56	TS 63	TS 63 5V	TS 74	TS 74 5V	TS 76	TS 76 5V
Cooling																
Total cooling capacity	kW	4.85	5.80	7.90	9.60	10.50	11.10	13.30	13.90	16.50	16.60	16.60	21.90	21.90	24.80	24.80
Sensible cooling capacity	kW	3.75	4.45	6.40	7.60	8.30	8.95	10.70	9.80	11.70	13.10	13.10	17.80	17.80	20.10	20.10
Water side pressure drop	kPa	21	9	24	24	16	23	17	32	27	26	26	28	28	26	26
Water flow rate	l/h	840	1000	1360	1650	1810	1910	2290	2390	2840	2860	2860	3770	3770	4270	4270
Heating																
Heating capacity	kW	9.80	12.58	15.50	19.70	21.52	21.60	27.49	25.90	32.89	35.50	35.50	46.30	46.30	52.06	52.06
Water side pressure drop	kPa	12	8	17	20	13	17	13	21	21	20	20	23	23	21	21
Water flow rate	l/h	840	1080	1330	1690	1850	1860	2360	2230	2830	3050	3050	3980	3980	4480	4480
Common data																
Nominal air flow rate	m ³ /h	930	930	1500	1600	1600	2050	2050	2400	2400	3600	3600	4200	4200	4200	4200
Useful static pressure (1)	Pa	90	55	100	85	45	115	80	105	70	120	120	115	115	75	75
TSFA filter pressure drop (2)	Pa	13	13	11	12	12	13	13	11	11	16	16	25	25	25	25
Coil rows	n°.	3	6	3	4	6	3	6	3	6	3	3	4	4	6	6
Coil water connections	d.	G3/4"	G1"	G3/4"	G3/4"	G1"	G3/4"	G1"	G3/4"	G1"	G1"	G1"	G1"	G1"	G1 1/4"	G1 1/4"
Fans	n°.	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2
Ventilation speed number	n°.	3	3	3	3	3	3	3	3	3	3	5	3	5	3	5
Motors	n°.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Motor maximum power	W	90	90	147	147	147	184	184	184	184	420	420	600	600	600	600
Maximum input current	A	1	1	1.9	1.9	1.9	2.6	2.6	2.6	2.6	3.9	3.9	5.5	5.5	5.5	5.5
Sound pressure level (3)	dB(A)	50	50	51	52	52	55	55	55	55	58	58	58	58	58	58

Power supply = 230V ~ 50Hz

Performances refer to the following conditions:

- (1) Rated capacity (maximum speed) without air filter.
- (2) Air filter (TSFA accessory) at rated capacity.
- (3) Sound pressure measured in free field conditions at a frontal distance of 1,5 m from air inlet side, nominal air flow rate.

Cooling:

- inlet air temperature 27 °C D.B. ; 19 °C W.B.
- water inlet temperature 7 °C ; $\Delta t = 5$ °C

Heating:

- inlet air temperature 20 °C
- water inlet temperature 70 °C ; $\Delta t = 10$ °C

INSTALLATION

ATTENTION: be prepared with relevant I.P.D. before carrying out any interventions.

ATTENTION: make sure that the electric power supply is disconnected before performing any interventions.

ATTENTION: the electric connections, installation of the units and their accessories must only be performed by persons with technical-professional requisites regarding installation, transformation, enlargement and maintenance of the plants and able to check the same regarding safety and functioning. In particular, electric connections require checks relative to:

- Measurement of the installation resi-

stance of the electric plant .

- Continuity test of the protection wires.

The essential indications for correct installation of the appliances are stated here.

However, leave the perfecting of all operations to the experience of the installation technician according to the specific requirements.

Do not install the units where inflammable gases and acid or alkaline substances are present that may irretrievably damage the copper-aluminium heat exchangers or the external plastic components.

The place of assembly must be selected in a way that the minimum and maximum temperature limits are respected

0÷50°C (<85% U.R.).

Keep the following warnings in mind regarding installation:

The figures give the sizes and weights.

Check that the wall selected for installation is sufficiently solid to support the weight of the unit and its accessories.

Respect the minimum technical spaces in order to guarantee the passage of air through the coils and allow routine and extraordinary maintenance operations.

Free access to the base unit must be prevented using relevant means, such as protection nets or grids, in compliance with UNI EN 294.

INSTALLATION OF THE UNIT

- Prepare the hydraulic and electric connections and condensate discharge.

- Apply any accessories to the unit

- Fix the unit to the ceiling using the four M8 threaded bars fixed to the relevant fixing rods with anti-vibration device. Mount the unit with a slope of 3mm towards condensate discharge. Fix the unit by tightening the bolts.

- Connect the condensate discharge (D. 22mm). The condensate discharge network must be suitably dimensioned and the pipes positioned in a way to maintain an adequate slope along the route

(min.1%). In the case of discharge into the drain system, it is advised to realise a siphon that prevents the return of bad odours towards the environments.

- Connect the unit to the hydraulic plant. The hydraulic attachments have Gas threads.

The position and the diameter of the hydraulic couplings are stated in the dimensional data. It is recommended to isolate the water pipes suitably to prevent dripping during the cooling function.

- Bleed the air present in the plant by means of the valve positioned above the

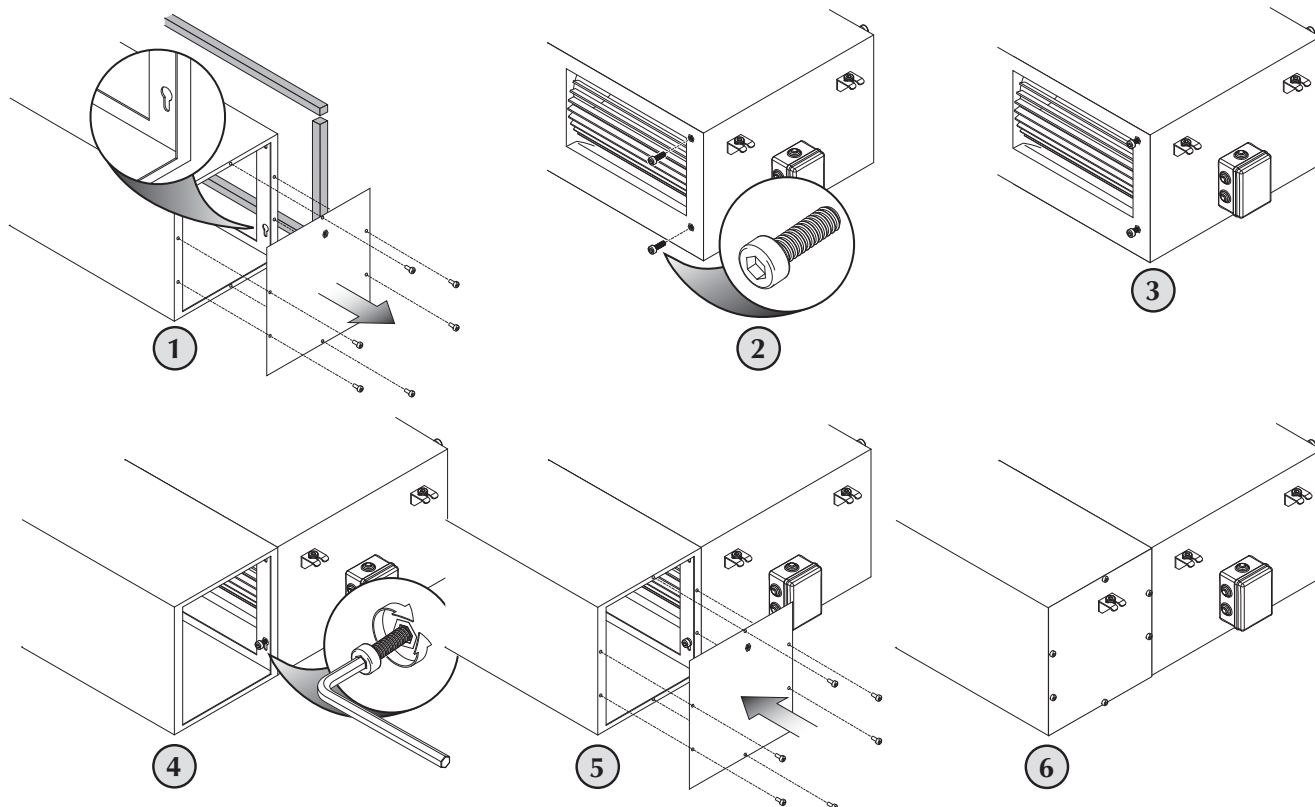
unit's hydraulic connections.

- Carry out the electric connections according to that stated in the wiring diagrams and dedicated chapter.

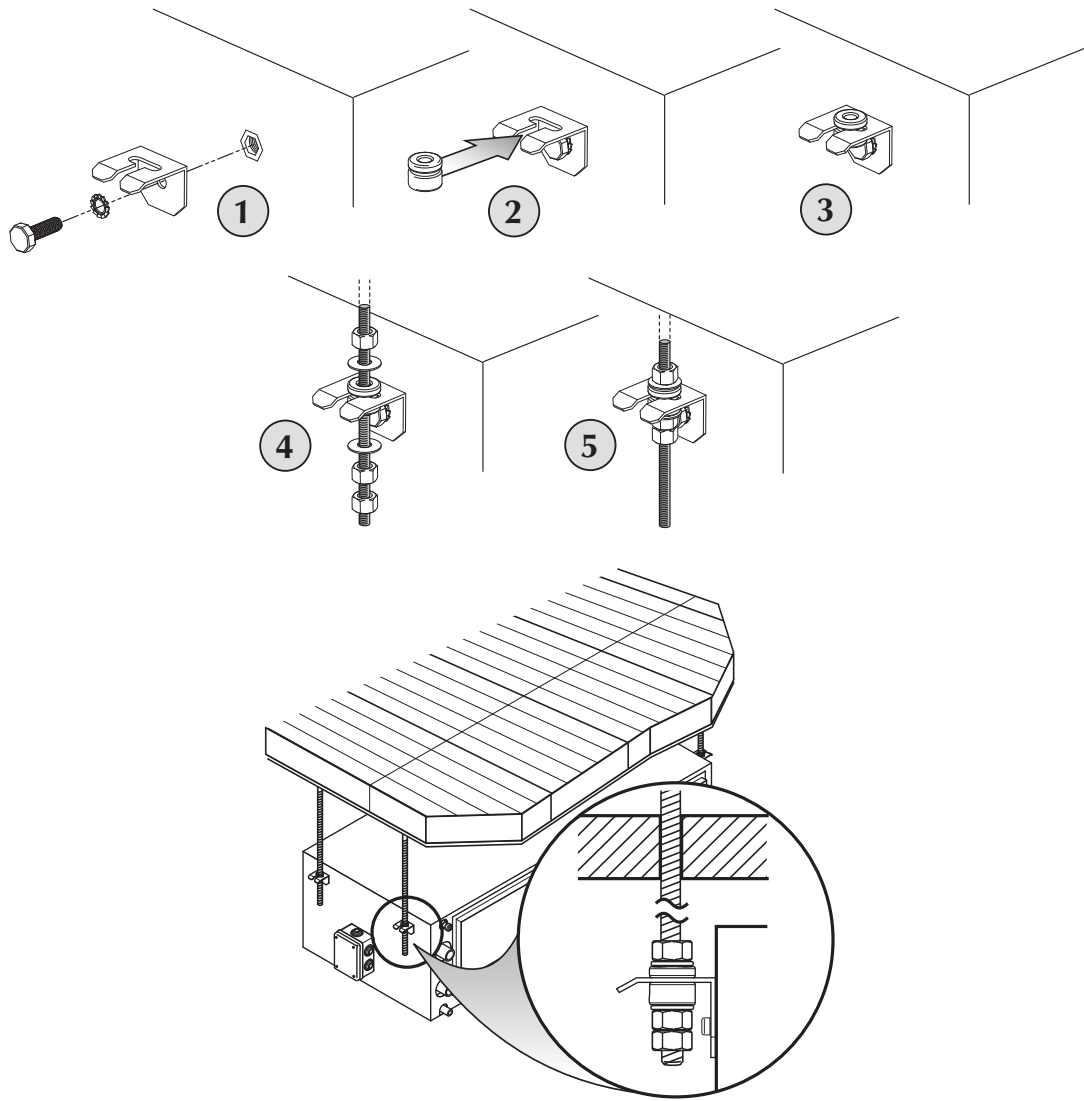
- Connect the unit to the air ducts.

- It is prohibited to start up the unit if installation has not been completed and the suction and delivery vents are not ducted or protected against intrusion using an accident-prevention net in compliance with the UNI 9219 and successive regulations.

ACCESSORY ASSEMBLY



BRACKET ASSEMBLY



ELECTRIC CONNECTIONS

FEATURES OF THE CONNECTION CABLES

Use H05V-K or N07V-K type cables with 300/500 V insulation enclosed in a pipe or duct.

Minimum thickness of the line cable: 1.5mm.

All cables must be enclosed in a pipe or duct until they are inside the air handling unit.

The cables exiting the pipe or duct must be positioned in a way so that they do not undergo pulling or twisting and are protected against external agents.

Wire strand cables can only be used

with a tag board. Ensure that the wire strands are introduced correctly. The wiring diagrams are subject to continuous updating, it is therefore compulsory to refer to that on the machine. To protect the unit against short circuits, mount an omnipolar magnet-circuit breaker protection on the power supply line (see table), with minimum contact opening distance of 3mm.

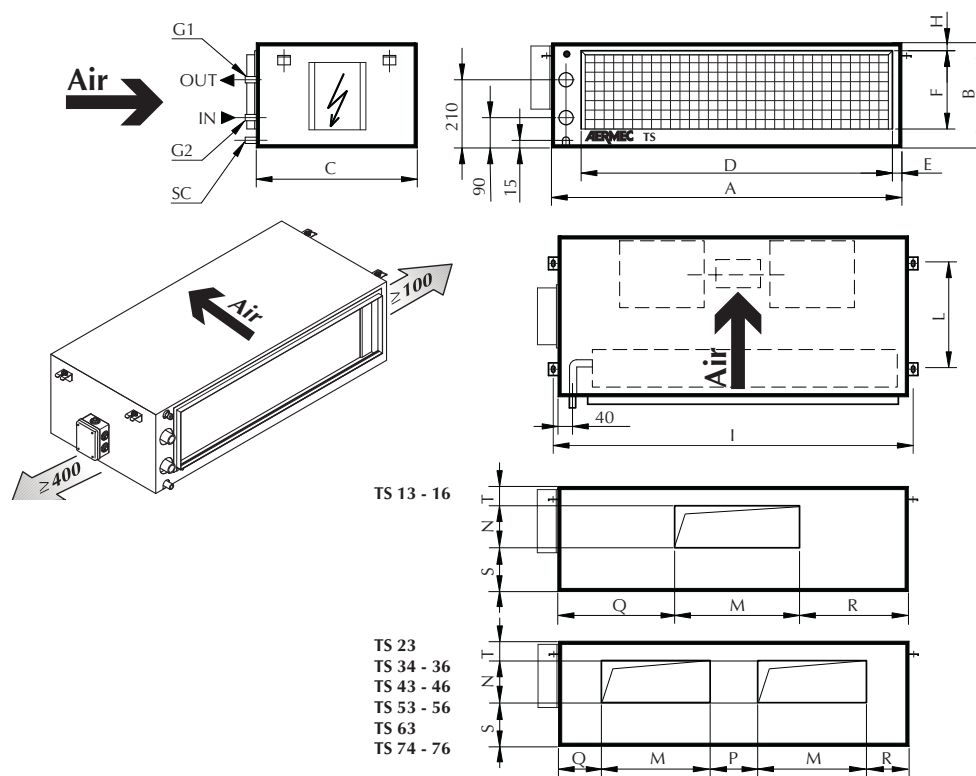
The units require a command panel (accessory) to be connected as indicated in the wiring diagrams and the instructions supplied with the command

panel.
The command panel must be compatible with the unit, consult the technical documentation of the TS unit for selection.
Each command panel can control just one unit.
The command panel cannot be mounted on a metal wall, unless this is connected to earth permanently .
ATTENTION: check that installation has been performed correctly. Follow the control procedures indicated in the command panel manuals.

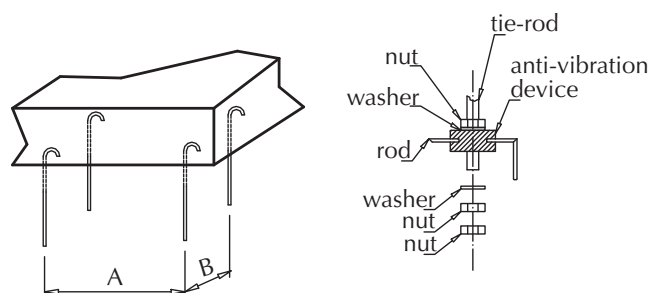
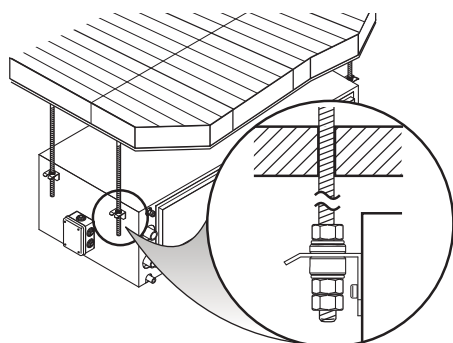
Omnipolar magnet-circuit breaker protection (IM)

TS		13	16	23	34	36	43	46	53	56	63 635V	74 745V	76 765V
Max. input current	[A]	1	1	1,9	1,9	1,9	2,6	2,6	2,6	2,6	3,9	5,5	5,5
IM (curve C)	[A]	2	2	3	3	3	4	4	4	4	6	8	8

DIMENSIONS [mm]



TS	13	16	23	34	36	43	46	53	56	63 635V	74 745V	76 765V
A [mm]	645	1000	1000	1000	1000	1100	1100	1345	1345	1345	1345	1345
B [mm]	296	296	296	296	296	325	325	325	325	375	375	375
C [mm]	520	520	520	520	520	600	600	600	600	600	600	600
D [mm]	500	860	860	860	860	960	960	1200	1200	1200	1200	1200
E [mm]	40	40	40	40	40	40	40	40	40	40	40	40
F [mm]	210	210	210	210	210	235	235	235	235	260	260	260
G1 - G2	G 3/4"	G 1"	G 3/4"	G 3/4"	G 1"	G 3/4"	G 1"	G 3/4"	G 1"	G 1"	G 1"	G 1 1/4"
H [mm]	30	30	30	30	30	30	30	30	30	30	30	30
I [mm]	675	1035	1035	1035	1035	1135	1135	1375	1375	1375	1375	1375
L [mm]	335	335	335	335	335	335	335	335	335	335	335	335
M [mm]	321	290	290	290	290	307	307	307	307	330	330	330
N [mm]	138	138	138	138	138	154	154	154	154	240	240	240
P [mm]	-	187	187	187	187	171	171	171	171	209	209	209
Q [mm]	130	138	138	138	138	157,5	157,5	279,5	279,5	238	238	238
R [mm]	194	95	95	95	95	157,5	157,5	279,5	279,5	238	238	238
S [mm]	141	136	136	136	136	144	144	144	144	115	115	115
T [mm]	18	22	22	22	22	27	27	27	27	20	20	20
SC Ø [mm]	22	22	22	22	22	22	22	22	22	22	22	22
Weight [kg]	25	27	35	38	42	42	46	48	52	56	61	67,5



TS	13	16	23	34	36	43	46	53	56	63 635V	74 745V	76 765V
A [mm]	680	680	1040	1040	1040	1140	1140	1380	1380	1380	1380	1380
B [mm]	335	335	335	335	335	335	335	335	335	355	335	335

LEGENDA • READING KEY • LEGENDE • LEGENDE • LEYENDA

F = Fusibile • Fuse • Fusible
Sicherung • Fusible

IG = Interruttore generale • Main switch
Interrupteur général • Hauptschalter
Interruptor general

C = Comune • Common • Commun

Ph1 Durchschaltleitung • Común

M = Velocità Media • Medium speed
Vitesse moyenne • Mittlere Geschwindigkeit
Velocidad media

L = Velocità minima • Minimum speed
Vitesse minimum • Mindestgeschwindigkeit
Velocidad mínima

H = Velocità massima • maximum speed
Vitesse maximum • Maximale Geschwindigkeit
Velocidad máxima

N = Neutro • Neutral • Neutre • Neutral • Neutro

MV = Motore ventilatore • Fan motor
Moteur ventilateur • Ventilatormotor
Motor del ventilador

PE = Collegamento a terra • Earth connection
Mise à terre • Erdanschluss • Toma de tierra

PH = Linea • Line • Ligne • Leitung • Línea

SA = Sonda ambiente • Room sensor
Sonde ambiante • Raumtemperaturfühler
Sonda ambiente

SC = Scheda di controllo
Electronic control board
Platine de contrôle • Steuerschaltkreis
Tarjeta electrónica de control

SW = Sonda minima temperatura acqua
Water low temperature sensor
Sonde minimum temp. eau
Wasserfühler
Sonda temperatura mínima del agua

--- = Collegamenti da eseguire in loco
On-site wiring
Raccordements à effectuer in situ
Vor Ort auszuführende Anschlüsse
Cableado in situ

AR = Arancio • Orange • Orange • Orange • Naranja

BI = Bianco • White • Blanc • Weiss • Blanco

BL = Blu • Blue • Bleu • Blau • Azul

GR = Grigio • Grey • Gris • Gray • Gris

MA = Marrone • Brown • Marron • Braun • Marrón

NE = Nero • Black • Noir • Schwarz • Negro

RO = Rosso • Red • Rouge • Rot • Rojo

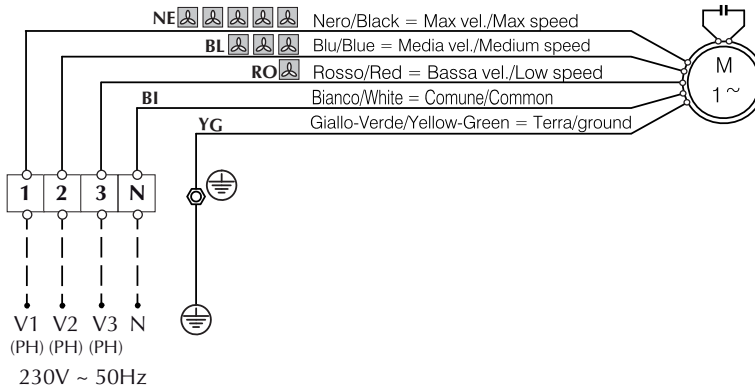
VE = Verde • Green • Vert • Grün • Verde

VI = Viola • Violet • Violet • Violet • Violeta

YG = Giallo-Verde • Yellow-Green • Jaune-Vert
Gelb-Grün • Amarillo-Verde

TS 13

TS 16



TS 23

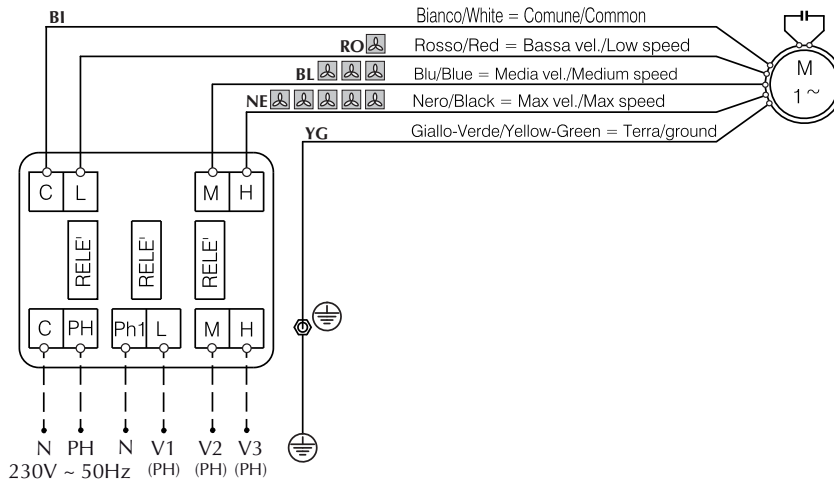
TS 34 - TS 36

TS 43 - TS 46

TS 53 - TS 56

TS 63

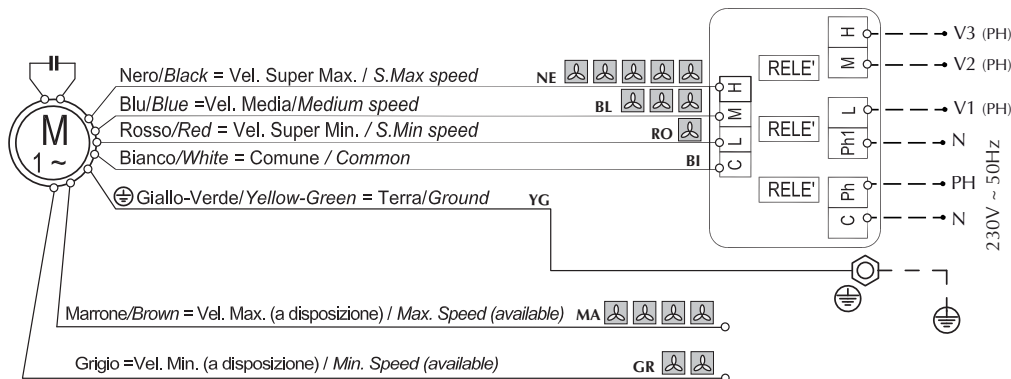
TS 74 - TS 76



TS 63 5V

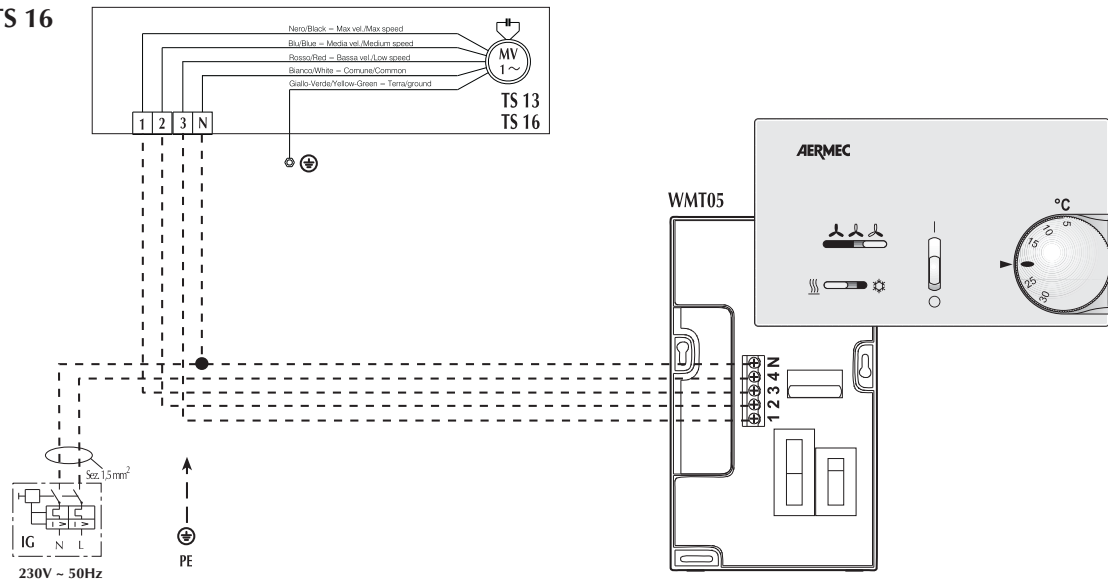
TS 74 5V

TS 76 5V



Gli schemi elettrici sono soggetti ad un continuo aggiornamento, è obbligatorio quindi fare riferimento a quelli a bordo macchina.
All wiring diagrams are constantly updated. Please refer to the ones supplied with the unit.
Nos schémas électriques étant constamment mis à jour, il faut absolument se référer à ceux fournis à bord de nos appareils.
Die Schaltpläne werden ständig aktualisiert, deswegen muss man sich stets auf das mit dem Gerät gelieferte Schaltschema beziehen.
El cableado de las máquinas es sometido a actualizaciones constantes. Por favor, para cada unidad hagan referencia a los esquemas suministrados con la misma.

TS 13 - TS 16



TS 23

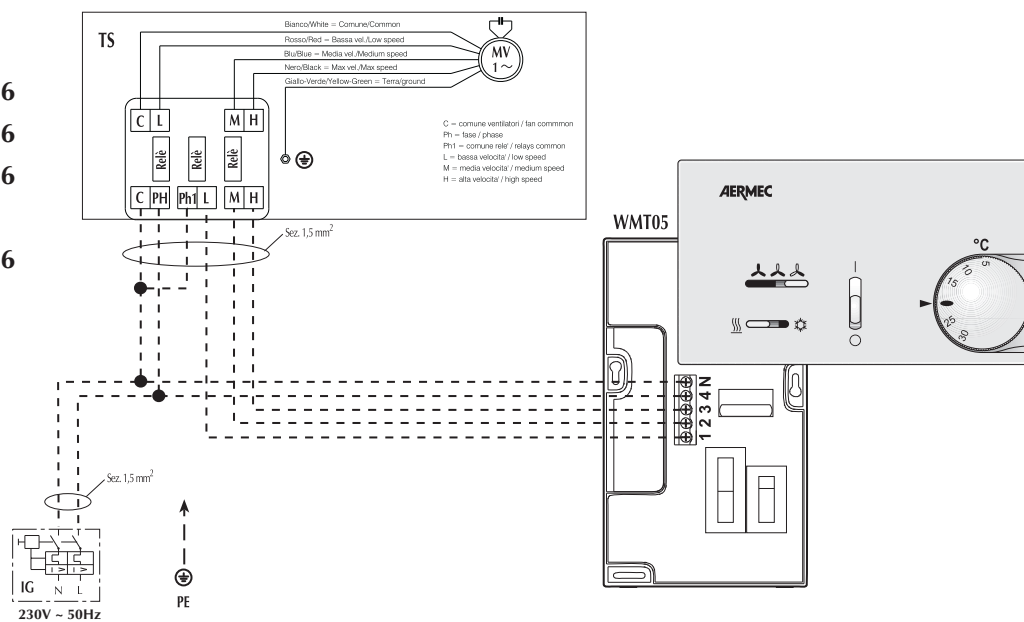
TS 34 - TS 36

TS 43 - TS 46

TS 53 - TS 56

TS 63

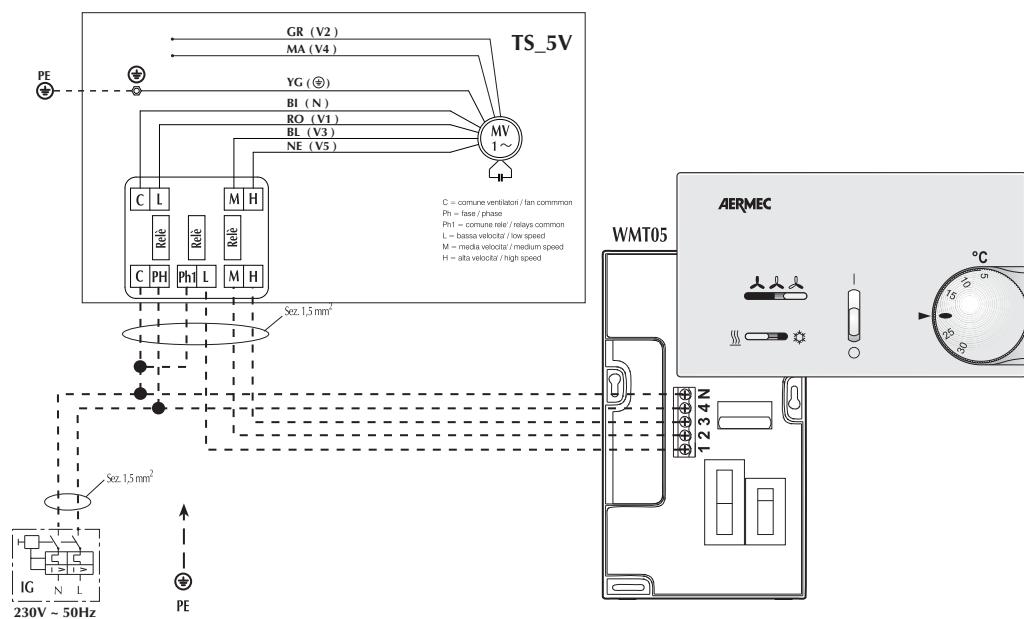
TS 74 - TS 76



TS 63 5V

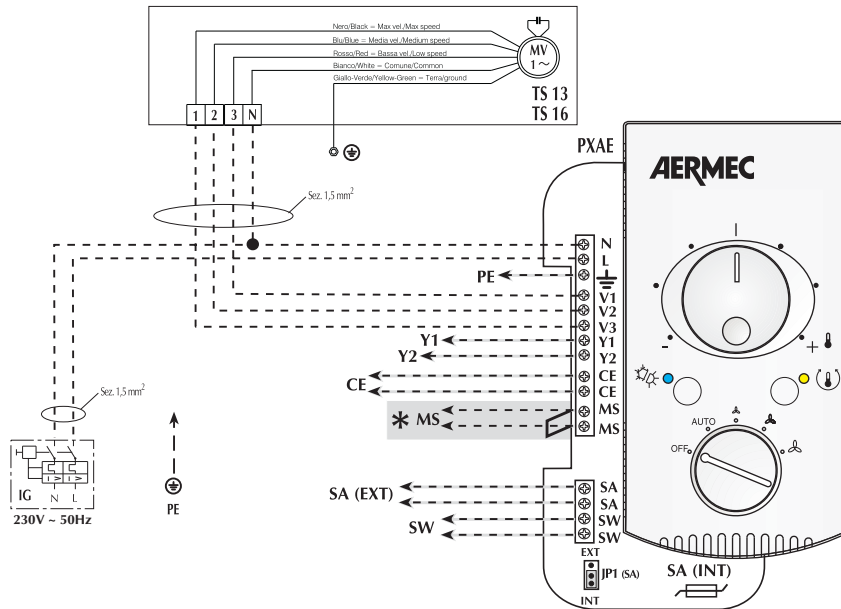
TS 74 5V

TS 76 5V

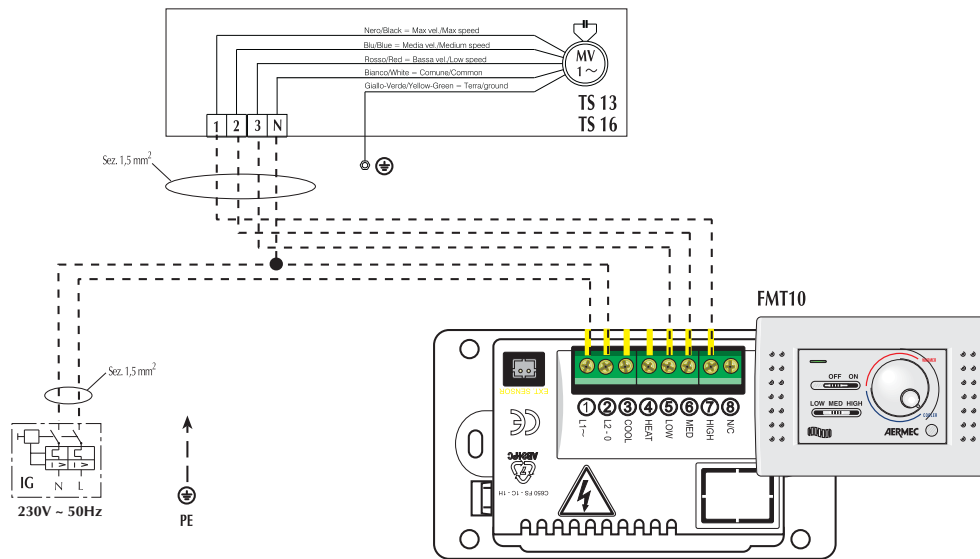


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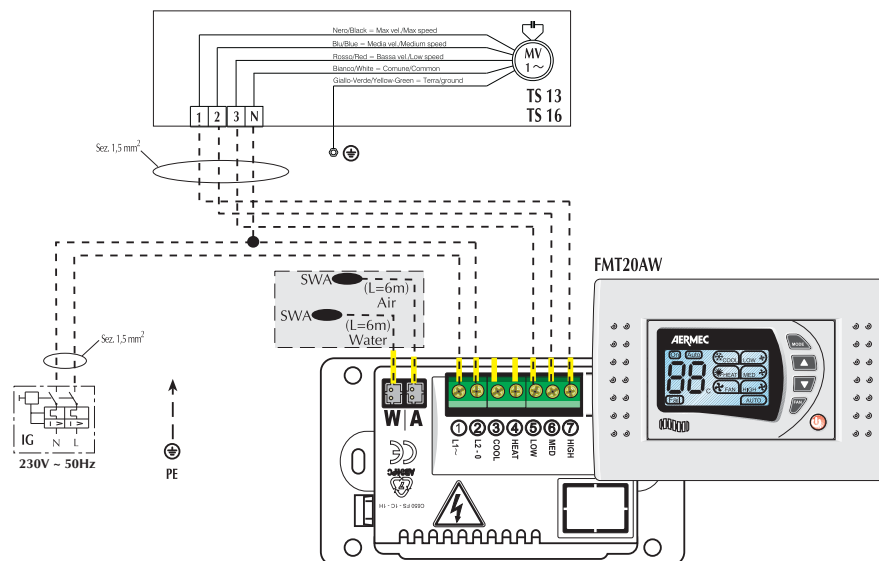
TS 13 - TS 16



TS 13 - TS 16

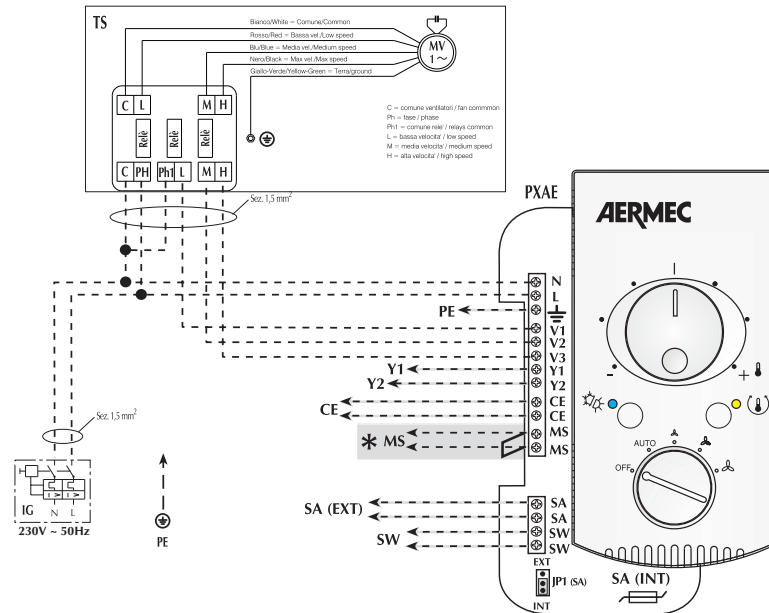


TS 13 - TS 16

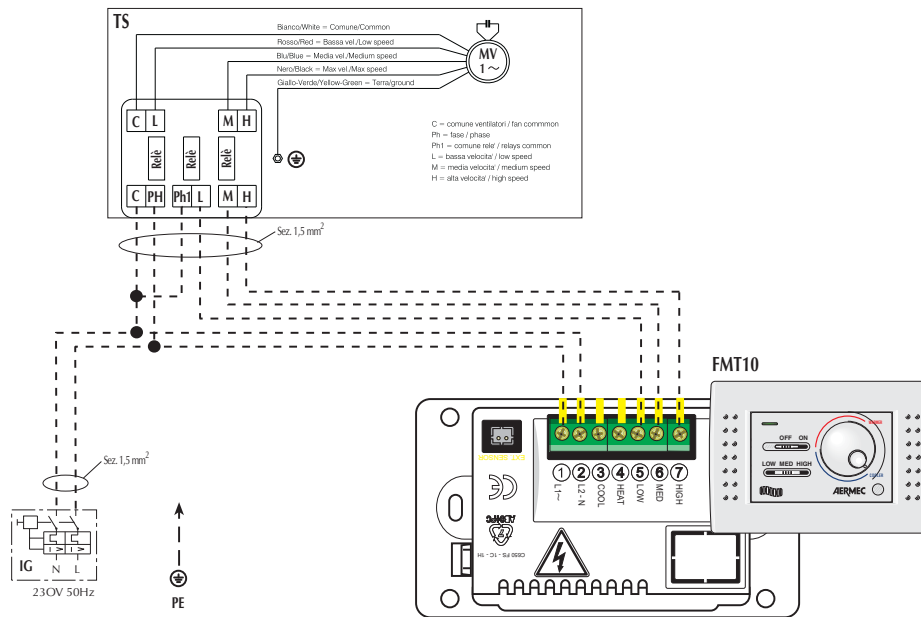


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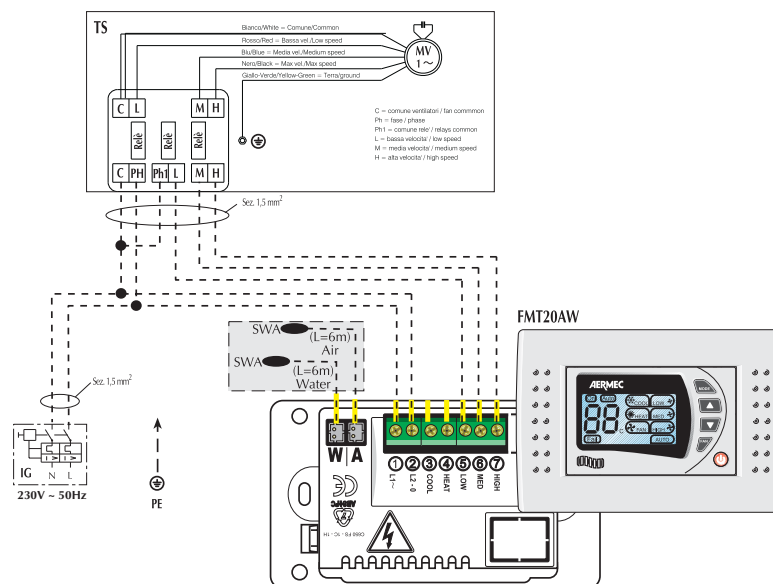
TS 23
TS 34 - TS 36
TS 43 - TS 46
TS 53 - TS 56
TS 63
TS 74 - TS 76



TS 23
TS 34 - TS 36
TS 43 - TS 46
TS 53 - TS 56
TS 63
TS 74 - TS 76

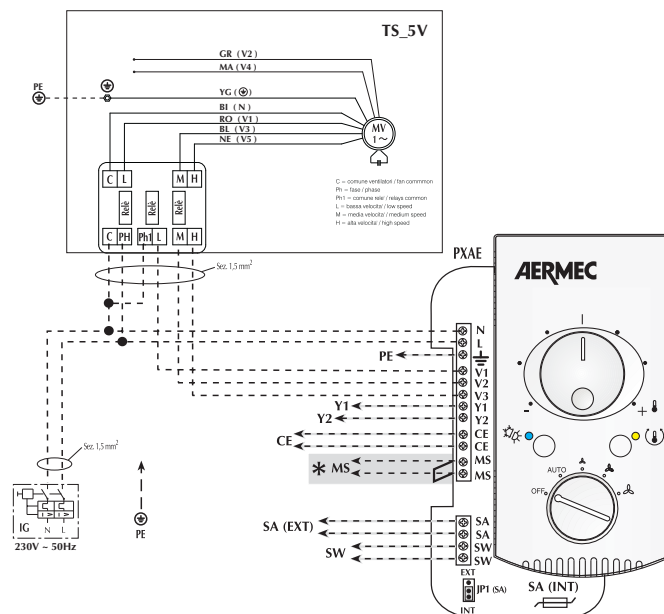


TS 23
TS 34 - TS 36
TS 43 - TS 46
TS 53 - TS 56
TS 63
TS 74 - TS 76

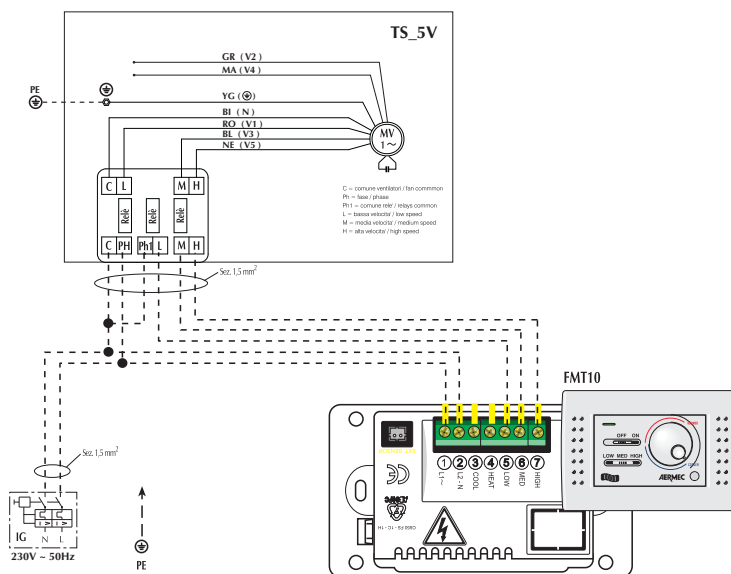


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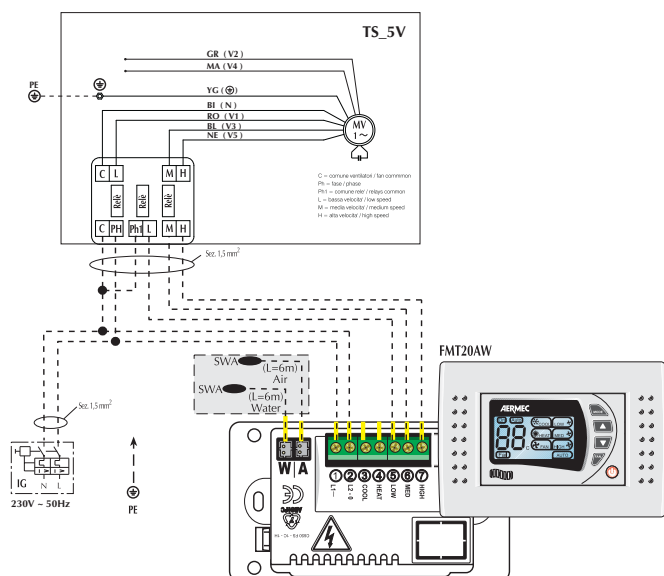
TS 63 5V
TS 74 5V
TS 76 5V



TS 63 5V
TS 74 5V
TS 76 5V

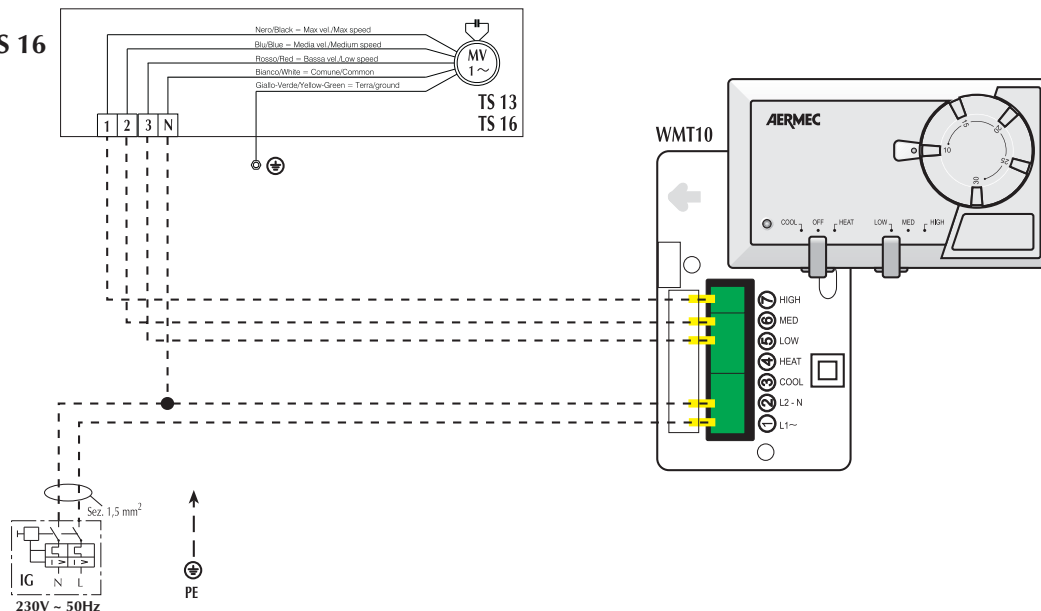


TS 63 5V
TS 74 5V
TS 76 5V



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TS 13 - TS 16



TS 23

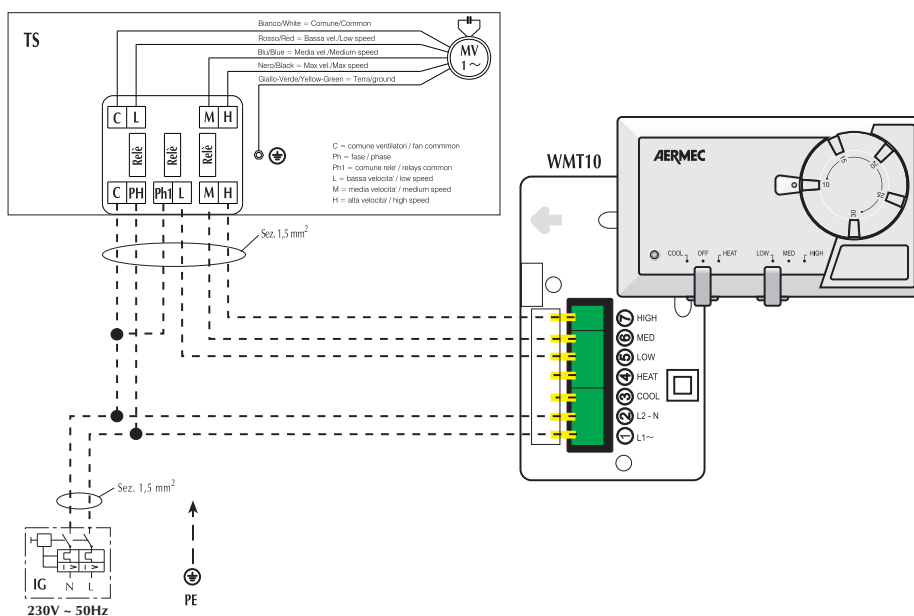
TS 34 - TS 36

TS 43 - TS 46

TS 53 - TS 56

TS 63

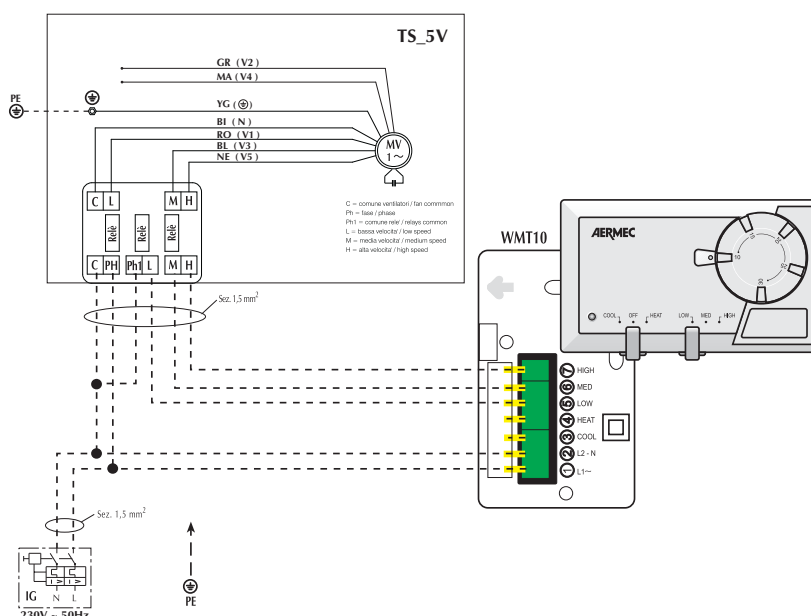
TS 74 - TS 76



TS 63 5V

TS 74 5V

TS 76 5V



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PROBLEMA • PROBLEM PROBLEME • PROBLEM PROBLEMA	PROBABILE CAUSA • PROBABLE CAUSE CAUSE PROBABLE • MÖGLICHE URSACHE CAUSA PROBABLE	SOLUZIONE • REMEDY SOLUTION • ABHILFE SOLUCIÓN
Poca aria in uscita. Feeble air discharge. Il y a peu d'air en sortie. Schwacher Luftstrom am Austritt. Poco aire en salida.	Errata impostazione della velocità sul pannello comandi. Wrong speed setting on the control panel. Mauvaise présélection de la vitesse sur le panneau de commandes. Falsche Geschwindigkeitseinstellung am Bedienpaneel. Programación errada de la velocidad en el tablero de mandos. Filtro intasato. Blocked filter. Filtre encrassé. Filter verstopft. Filtro atascado.	Scegliere la velocità corretta sul pannello comandi. Select the speed on the control panel. Choisir la vitesse sur la panneau de commandes. Die Geschwindigkeit am Bedienpaneel wählen. Elegir la velocidad correcta en el tablero de mandos. Pulire il filtro. Clean the filter. Nettoyer le filtre. Filter reinigen. Limpiar el filtro.
Non fa caldo. It does not heat. Pas de chaleur. Keine Heizung. No hace calor.	Ostruzione del flusso d'aria (entrata e/o uscita). Obstruction of the air flow (inlet and/or outlet). Obstruction du flux d'air (entrée/sortie). Luftstrom behindert (Eintritt bzw. Austritt). Obstrucción del chorro del aire (entrada y/o salida). Mancanza di acqua calda. Poor hot water supply. Il n'y a pas d'eau chaude. Kein Warmwasser. Falta de agua caliente.	Rimuovere l'ostruzione. Remove the obstruction. Enlever l'objet faisant obstruction. Verstopfung beseitigen. Quitar la obstrucción. Controllare la caldaia. Control the boiler. Verifier la chaudière. Kaltwasserseitigen Wärmeaustauscher kontrollieren. Comprobar el calentador.
Non fa freddo. It does not cool. Pas de froid. Keine Kühlung. No hace frío.	Impostazione errata del pannello comandi. Wrong setting on control panel. Mauvaise présélection sur le panneau de commandes. Falsche Einstellung am Bedienpaneel. Programación errada del tablero de mandos. Mancanza di acqua fredda. Poor chilled water supply. Il n'y a pas d'eau froide. Kein Kaltwasser. Falta de agua fría.	Impostare il pannello comandi. See control panel settings. Présélectionner au panneau de commandes. Richtige Einstellung am Bedienpaneel vornehmen. Programar el tablero de mandos. Controllare il refrigeratore. Control the chiller. Vérifier le réfrigérateur. Kaltwasserseitigen Wärmeaustauscher kontrollieren. Comprobar el refrigerador.
Il ventilatore non gira. The fan does not turn. Le ventilateur ne tourne pas. Ventilator Arbeitet nicht. El ventilador no gira.	Impostazione errata del pannello comandi. Wrong setting on control panel. Mauvaise présélection sur le panneau de commandes. Falsche Einstellung am Bedienpaneel. Programación errada del tablero de mandos. Mancanza di corrente. No current. Il n'y a pas de courant. Kein Strom. Falta de corriente. L'acqua non ha raggiunto la temperatura d'esercizio. The water has not reached operating temperature. L'eau n'a pas atteint la température de service. Das Wasser hat die Betriebstemperatur nicht erreicht. El agua no ha alcanzado la temperatura de ejercicio.	Impostare il pannello comandi. See control panel settings. Présélectionner au panneau de commandes. Richtige Einstellung am Bedienpaneel vornehmen. Programar el tablero de mandos. Controllare la presenza di tensione elettrica. Control the power supply. Contrôler l'alimentation électrique. Kontrollieren, ob Spannung anliegt. Comprobar la presencia de tensión eléctrica. Controllare la caldaia o il refrigeratore. Controllare il settaggio del termostato. Please check up the boiler or the chiller. Check up the thermostat settings. Contrôler la chaudière ou le refroidisseur. Contrôler le réglage du thermostat. Das Heiz- oder Kühlaggregat überprüfen. Die Einstellungen des Temperaturreglers überprüfen. Comprobar el calentador o el refrigerador. Comprobar la programación del termostato.
Fenomeni di condensazione sulla struttura esterna dell'apparecchio. Condensation on the unit cabinet. Phénomènes de condensation sur la structure extérieure de l'appareil. Kondenswasserbildung am Gerät. Fenómenos de condensación en la estructura externa del aparato.	Sono state raggiunte le condizioni limite di temperatura e umidità descritte in "MINIMA TEMPERATURA MEDIA DELL'ACQUA". The limit conditions of temperature and humidity indicated in "MINIMUM AVERAGE WATER TEMPERATURE" have been reached. On a atteint les conditions limite de température et d'humidité indiquées dans "TEMPERATURE MINIMALE MOYENNE DE L'EAU". Erreichen der maximalen Temperatur- und Feuchtigkeitswerte (siehe Abschnitt "DURCHSCHNITTLLICHE MINDEST - WASSERTEMPERATUR"). Se han alcanzado las condiciones límites de temperatura y humedad descritas en "MÍNIMA TEMPERATURA MEDIA DEL AGUA".	Innalzare la temperatura dell'acqua oltre i limiti minimi descritti in "MINIMA TEMPERATURA MEDIA DELL'ACQUA". Increase the water temperature beyond the minimum limits indicated in "MINIMUM AVERAGE WATER TEMPERATURE". Elever la température de l'eau au-delà des limites minimales indiquées dans "TEMPERATURE MINIMALE MOYENNE DE L'EAU". Wassertemperatur über die um Abschnitt "DURCHSCHNITTLLICHE MINDEST - WASSERTEMPERATUR" angegebenen min. Werte erhöhen. Aumentar la temperatura del agua por encima de los límites descritos en "Mínima temperatura media del agua".

Per anomalie non contemplate, interpellare tempestivamente il Servizio Assistenza.

For anomalies don't hesitate, contact the aftersales service immediately.

Pour toute anomalie non répertoriée, consulter le service après-vente.

Sich bei hier nicht aufgeführten Störungen umgehend an den Kundendienst wenden.

En el caso de anomalías no contempladas, ponerse en contacto de inmediato con el Servicio de Asistencia.



Aermec partecipa al Programma di Certificazione EUROVENT. I prodotti interessati figurano nella Guida EUROVENT dei Prodotti Certificati.

Aermec is participating in the EUROVENT Certification Programme. Products are as listed in the EUROVENT Directory of Certified Products.

Aermec partecipe au Programme de Certification EUROVENT. Les produits figurent dans l'Annuaire EUROVENT des Produits Certifiés.

Aermec ist am Zertifikations - Programm EUROVENT beteiligt. Die entsprechend gekennzeichneten Produkte sind im EUROVENT - Jahrbuch aufgeführt.

AERMEC S.p.A. participa en el programa de certificación EUROVENT. Sus equipos aparecen en el directorio de productos certificados EUROVENT.

I dati tecnici riportati nella presente documentazione non sono impegnativi.

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AERMEC S.p.A.

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