UNITSYSTEM

RHOSS

ISTRUZIONI PER L'USO
INSTRUCTIONS FOR USE
MODE D'EMPLOI
GEBRAUCHSANWEISUNG
INSTRUCCIONES DE USO

CE

Yardy HP 100÷300

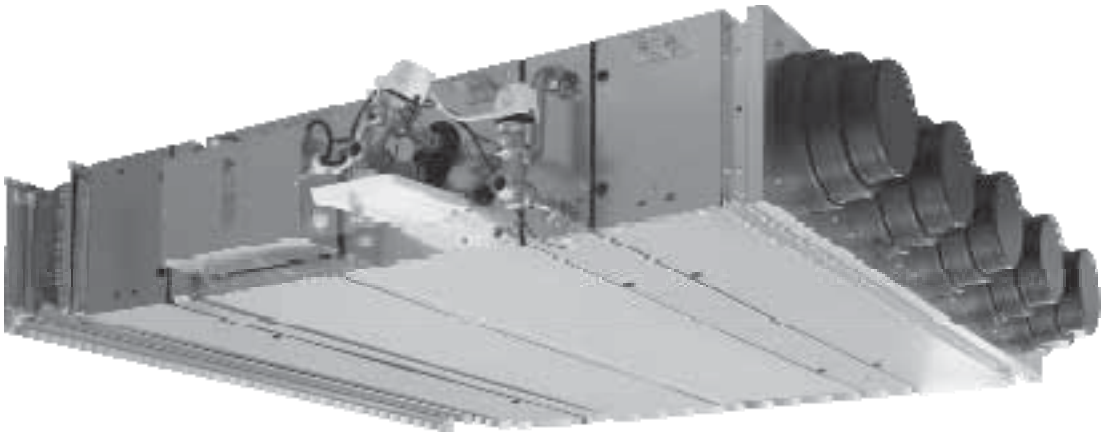
Ventilconvettore

Fan coil

Ventilo convecteur

Klimakonvektoren

Fan coil



H57994

Italiano English Français Deutsch Español

E' vietata la riproduzione la memorizzazione e la trasmissione anche parziale della presente pubblicazione, in qualsiasi forma, senza la preventiva autorizzazione scritta della ***RHOSS*** S.p.A. I centri di assistenza tecnica della ***RHOSS*** S.p.A. sono disponibili a risolvere qualunque dubbio inerente all'utilizzo dei suoi prodotti ove la manualistica fornita risulti non soddisfacente. La ***RHOSS*** S.p.A. si ritiene libera di variare senza preavviso le caratteristiche dei propri prodotti. ***RHOSS*** S.p.A. attuando una politica di costante sviluppo e miglioramento dei propri prodotti, si riserva il diritto di modificare specifiche, equipaggiamenti ed istruzioni relative all'uso e alla manutenzione in qualsiasi momento e senza alcun preavviso.

Italiano

Reproduction, data storage and transmission, even partial, of this publication, in any form, without the prior written authorisation of ***RHOSS*** S.p.A., is prohibited. ***RHOSS*** S.p.A. technical service centres can be contacted for all queries regarding the use of its products, should the information in the manuals prove to be insufficient. ***RHOSS*** S.p.A. reserves the right to alter features of its products without notice. ***RHOSS*** S.p.A. follows a policy of continuous product development and improvement and reserves the right to modify specifications, equipment and instructions regarding use and maintenance at any time, without notice.

English

La reproduction, la mémorisation et la transmission quand bien même partielles de la présente publication sont interdites, sous quelque forme que ce soit, sans l'autorisation préalable de ***RHOSS*** S.p.A. Les centres d'assistance technique de ***RHOSS*** S.p.A. sont à la disposition de l'utilisateur pour fournir toute information supplémentaire sur ses produits dans le cas où les notices fournies s'avèreraient insuffisantes. ***RHOSS*** S.p.A. conserve la faculté de modifier sans préavis les caractéristiques de ses produits. Mettant en œuvre des activités de développement et de constante amélioration de ses produits, ***RHOSS*** S.p.A. se réserve la faculté de modifier à tout moment et sans préavis aucun, spécifications, équipements et instructions d'utilisation et d'entretien.

Français

Die auch teilweise Vervielfältigung, Abspeicherung und Weitergabe der vorliegenden Veröffentlichung in jeder Form ist ohne vorherige schriftliche Genehmigung seitens des Herstellers ***RHOSS*** S.p.A. untersagt. Die technischen Kundendienststellen ***RHOSS*** S.p.A. helfen bei Zweifeln über die Anwendung der betriebseigenen Produkte gern weiter, sollte die beigestellte Dokumentation in dieser Hinsicht nicht ausreichend sein. ***RHOSS*** S.p.A. behält sich das Recht vor, ohne Vorankündigung die Eigenschaften der Geräte zu ändern. ***RHOSS*** S.p.A. behält sich weiterhin das Recht vor, im Zuge seiner Geschäftspolitik ständiger Entwicklung und Verbesserung der eigenen Produkte jeder Zeit und ohne Vorankündigung die Beschreibung, die Ausrüstung und die Gebrauchs- und Wartungsanweisungen zu ändern.

Deutsch

Se prohíbe la reproducción, memorización y transmisión incluso parcial de esta publicación, de cualquier manera, sin la autorización previa por escrito de ***RHOSS*** S.p.A. Los servicios técnicos de ***RHOSS*** S.p.A. están disponibles para solucionar cualquier duda acerca del uso de los productos, si el manual no fuese suficiente. ***RHOSS*** S.p.A. se reserva el derecho de aportar modificaciones a los productos sin previo aviso. ***RHOSS*** S.p.A., siguiendo una política de constante desarrollo y mejora de sus productos, se reserva el derecho de modificar especificaciones, equipamientos e instrucciones referentes al uso y el mantenimiento en cualquier momento y sin previo aviso.

Español

CE

Dichiarazione di conformità

La società ***RHOSS*** **S.p.A.**
con sede a Arquà Polesine (RO), via delle Industrie 211, dichiara, sotto la propria esclusiva responsabilità, che i prodotti della serie

Yardy HP 100÷300

sono conformi ai requisiti essenziali di sicurezza di cui alla Direttiva Macchine 2006/42/CE.

La macchina è inoltre conforme alle seguenti direttive:
- 2006/95/CE (Bassa Tensione).
- 2004/108/CE (Compatibilità Elettromagnetica).

CE

Statement of conformity

RHOSS **S.p.A.**
located in Arquà Polesine (RO), via delle Industrie 211, hereby states on its own exclusive responsibility that the products in the

Yardy HP 100÷300

are compliant with the essential safety requirements as set forth in Machine Directive 2006/42/CE.

The machine is also compliant with the following directives:
- 2006/95/CE (Low Voltage).
- 2004/108/CE (Electromagnetic Compatibility).

CE

Déclaration de conformité

La société ***RHOSS*** **S.p.A.**
dont le siège se trouve à Arquà Polesine (RO), via delle Industrie 211, déclare, sous sa responsabilité exclusive, que les produits de la série

Yardy HP 100÷300

sont conformes aux caractéristiques de sécurité requises par la Directive Machines 2006/42/CE.

L'appareil est par ailleurs conforme aux directives suivantes :
- 2006/95/CE (Basse Tension).
- 2004/108/CE (Compatibilité Electromagnétique).

CE

Konformitätserklärung

Der Hersteller ***RHOSS*** **S.p.A.**
mit Geschäftssitz in Arquà Polesine (RO), via delle Industrie 211, erklärt eigenverantwortlich, dass die Geräte der Baureihe

Yardy HP 100÷300

den grundsätzlichen Anforderungen an die Sicherheit in Übereinstimmung mit der Maschinenrichtlinie 2006/42/EG entsprechen.

Darüber hinaus entspricht die Maschine folgenden Richtlinien:
- 2006/95/EG, (Nieder Spannung).
- 2004/108/EG (Elektromagnetische Verträglichkeit).

CE

Declaración de conformidad

La empresa ***RHOSS*** **S.p.A**
con sede en Arquà Polesine (RO), via delle Industrie 211, declara bajo su única responsabilidad que los productos de la serie

Yardy HP 100÷300

Se encuentran en conformidad con los principales requisitos de seguridad indicados en la Directiva de máquinas 2006/42/CE.

La máquina, además, se encuentra en conformidad con las siguientes directivas:
- 2006/95/CE, (Baja Tensòn).
- 2004/108/CE (Compatibilidad electromagnética).

Codroipo, lì 01 dicembre 2013

Il direttore tecnico / The Technical Director / Le Directeur Technique
Der Leiter der Technischen Abteilung / El director técnico

Michele Albieri

CONTENTS

KEY TO SYMBOLS

SYMBOL	MEANING
	**GENERIC DANGER! The GENERIC DANGER sign warns the operator and maintenance personnel about risks that may cause death, physical injury, or immediate or latent illnesses of any kind.**
	**DANGER: LIVE COMPONENTS! The DANGER: LIVE COMPONENTS sign warns the operator and maintenance personnel about risks due to the presence of live voltage.**
	**DANGER: SHARP EDGES! The DANGER: SHARP EDGES sign warns the operator and maintenance personnel about the presence of potentially dangerous sharp edges.**
	**DANGER: MOVING PARTS! The DANGER: MOVING PARTS sign warns the operator and maintenance personnel about risks due to the presence of moving parts.**
	**IMPORTANT WARNING! The IMPORTANT WARNING sign draws attention to actions or hazards that could damage the unit or its equipment.**
	**ENVIRONMENTAL PROTECTION! The ENVIRONMENTAL PROTECTION sign provides instructions for using the machine in an eco-friendly manner.**

Normative References

UNI EN 292	Sicurezza del macchinario. Concetti fondamentali, principi generali di progettazione
UNI EN 294	Sicurezza del macchinario. Distanze di sicurezza per impedire il raggiungimento di zone pericolose con gli arti superiori.
UNI EN 563	Sicurezza del macchinario. Temperature delle superfici di contatto. Dati ergonomici per stabilire i valori limiti di temperatura per superfici calde.
UNI EN 1050	Sicurezza del macchinario. Principi per la valutazione del rischio.
UNI 10893	Documentazione tecnica di prodotto. Istruzioni per l'uso
EN 13133	Brazing. Brazer approval
EN 12797	Brazing. Destructive tests of brazed joints
EN 378-1	Refrigeration systems and heat pumps – safety and environmental requirements. Basic requirements, definitions, classification and selection criteria
PrEN 378-2	Refrigeration systems and heat pumps – safety and environmental requirements. Design, construction, testing, installing, marking and documentation
CEI EN 60335-2-40	Sicurezza degli apparecchi elettrici d'uso domestico e similare. Parte 2: Norme particolari per le pompe di calore elettriche, per i condizionatori d'aria e per i deumidificatori.
UNI EN ISO 3744	Determinazione dei livelli di potenza sonora delle sorgenti di rumore mediante pressione sonora. Metodo tecnico progettuale in un campo essenzialmente libero su un piano riflettente.
EN 50081-1:1992	Electromagnetic compatibility - Generic emission standard Part 1: Residential, commercial and light industry

I SECTION I: USER

I.1 MACHINE DESCRIPTION

Yardy HP is a ductable fan coil unit designed for applications in the service industry, hotels and offices where a high E.S.P. value is required.

I.1.1 CONDITIONS OF USE

HP is a fan coil for air handling (summer and winter use) in domestic environments or similar.
The unit is not designed for installation in laundries (CEI EN 60335-2-40).
The units comply with the following directives:
- Machinery directive 2006/42/CE (MD);
- Low voltage directive 2006/95/CE (LVD);
- Electromagnetic compatibility directive 2004/108/CE (EMC).
- Regulation implementing Directive 2009/125/EC n.327/2011/UE in ERP.

	**DANGER!** **The unit is only designed for installation in domestic and similar environments.**
	**DANGER!** **Do not insert objects into the air inlet or outlet grilles.**
	**IMPORTANT!** **The unit will only function correctly if the instructions for use are scrupulously followed, if the specified clearances are complied with during installation and if the operating restrictions indicated in this manual are strictly adhered to.**
	**IMPORTANT!** **Should the unit installation not comply with the recommended clearances, this will lead to maintenance problems and reduced performance.**

I.1.2 MACHINE IDENTIFICATION

The units are fitted with a serial number plate (Fig. 1) located on the outside of the left side of the unit (left in the case of right unit connections).

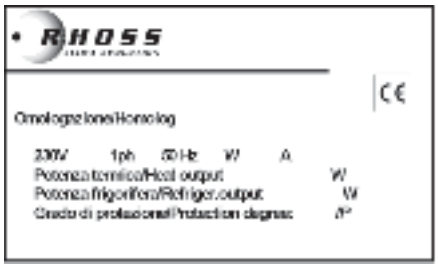
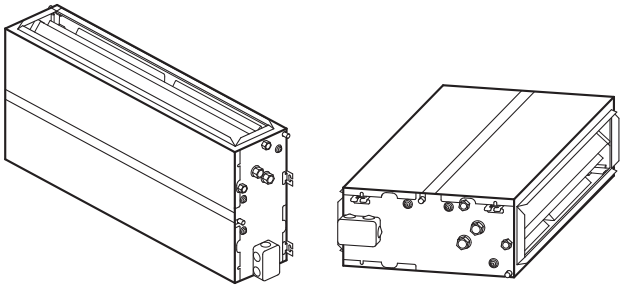


Fig. 1

I.1.3 CONSTRUCTIVE FEATURES

The Yardy HP range is suitable for horizontal or vertical recessed installations with rear or lower air inlets.
The air inlet can be easily moved from the lower or rear positions directly to the place of installation by removing a metallic panel.



The units consist of:
- Supporting structure, thickness 1.5 mm, and infill panels, thickness 1.0 mm, galvanized steel, fully insulated internally with mattress, closed cell polyethylene (class M1). Condensate drain pan vertical and horizontal condensate drain pan made of plastic, insulated by a layer of closed cell polyethylene (class M1); natural discharge condensate drain pipe with outer diameter of 16mm. Horizontal pan easily removable from below for any maintenance.
- Heat exchanger finned coil with copper tubes and aluminum fins with hydrophilic treatment, complete with air vent and drain water, available in 3, 4 or 5 ranks. Water connections (Ø ¾ "male models 100,150, 200 Ø 1" for male models 250, 300). The connections are located on the left side of the unit and are reversible to the right directly at the worksite.
- The battery is easily removable from below for any maintenance operations.
- Centrifugal fan with double inlet with fans in statically and dynamically balanced aluminium and directly coupled motor with 3 speeds, fitted with internal thermal protection with permanently inserted condenser, protection level IP20.
- Power supply 230 V–1 ph–50 Hz.
- Power supply terminal board and connection to commands and controls located on the same side of the water connection with the possibility of moving it to the right directly at the worksite.

I.1.3.1 Versions

- BA-3R 3-row coil.
- BA-4R 4-row coil.
- BA-5R with 5-row coil.

I.1.4 OPERATING LIMITS

Incoming water temperature: 7÷90°C.
Maximum heat exchanger pressure: 8 bar.
Power supply tension: 230 V ±10%

Minimum average water temperature
If the fan coil cools in a high relative humidity environment, condensation could form on the air flow and outside the device. Said condensation could deposit on the floor and on any items underneath. To avoid condensation forming on the device's outer structure when the fan is on, the average water temperature must not be any lower than limits indicated in the table below which depend on ambient air hygrothermal conditions. Said limits refer to operations with the fan in motion at minimum speed. In the event of a prolonged situation with the fan off and the passage of cold water in the battery, it is possible the formation of condensation on the outside of the unit, so it requires the insertion of the accessory valve three-way or 2-way.

MINIMUM AVERAGE WATER TEMPERATURE [°C]		Dry bulb temperature of ambient air					
		21	**23**	**25**	**27**	**29**	**31**
Wet bulb temperature of ambient air	**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

I.1.5 INFORMATION ON IMPROPER USE

	IMPORTANT! **The machine has been designed and constructed solely and exclusively for use as a terminal unit for air handling byducts or panels. Any other use is strictly prohibited. Do not install the machine in an explosive environment.**

I.1.6 INFORMATION ON RESIDUAL AND IRREMOVABLE RISKS

	IMPORTANT! **Pay careful attention to the signs and symbols on the machine.**

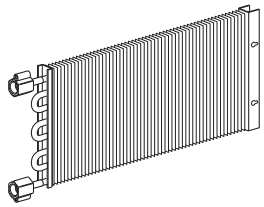
If there are any remaining risks in spite of the provisions adopted, or if there are any potential or hidden risks, stickers are attached to the machine in compliance with standard ISO 7000.

I.2 ACCESSORIES AND SPARE PARTS

	IMPORTANT! **Only use original spare parts and accessories. *RHOSS* S.p.A. shall not be held liable for damage caused by tampering or work carried out by unauthorised personnel or malfunctions caused by the use of non-original spare parts or accessories.**
	IMPORTANT! **In places where the water is particularly hard, it is advisable to use a water softener.**

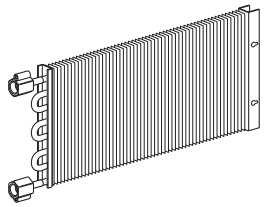
I.2.1 FACTORY FITTED ACCESSORIES

● **BAA**
Additional coil (1 row) for units with 4 pipes, available only for the version BA3R.

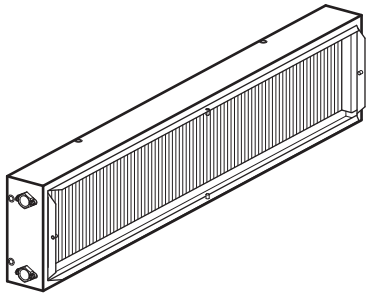


I.2.1.1 Accessories supplied loose

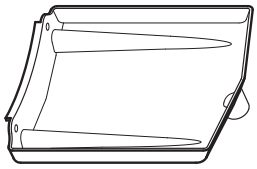
● **KBAA**
Additional coil (1 row) for units with 4 pipes, available only for the version BA3R.



● **PBAB**
Plenum with additional heating coil (2 rows for sizes 100-150-200, 3 rows for sizes 250-300) for units with 4 pipes.

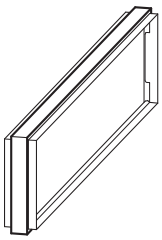


● **KVA**
Auxiliary condensation collection tray for water connections (only for sizes 100-150-200).

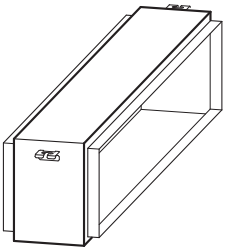


● **KCF1 - KCF2 - KCF3**
Filter cage made of galvanized sheet, which is available with different types of filter:
- ○ Washable polypropylene filter efficiency class G1 (EU1);
- ○ Regenerable filter efficiency class G2 (EU2);
- ○ Regenerable filter efficiency class G4 (EU4);

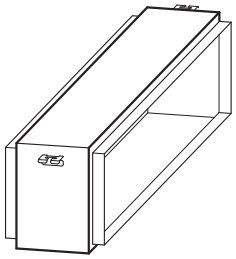
The filter can be easily removed in any direction.



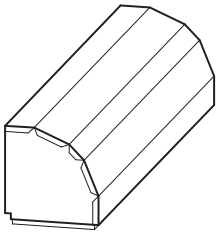
● **KRDA**
Straight fitting on the suction side, galvanized sheet metal.



● **KRDM**
Straight fitting in the supply of galvanized sheet metal with internal insulation.

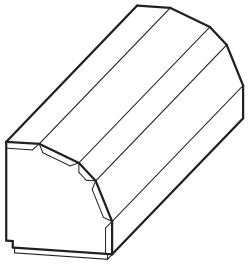


● **KR9A**
90 ° fitting on suction, in galvanized sheet metal.



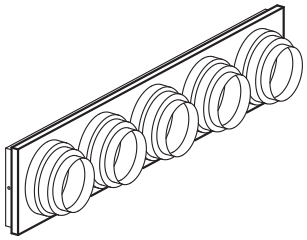
- **KR9M**

90 ° fitting outlet, galvanized sheet metal, with internal insulation.



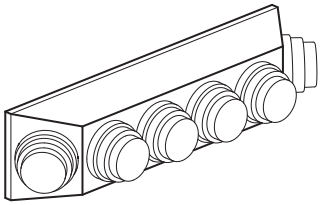
- **KBAM (for sizes 100-150-200)**

ABS polymer embossed circular nozzles (Ø 150-180-200 mm), complete with thermal and acoustic insulation.



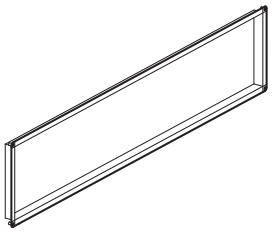
- **KBAM (for sizes 250-300)**

ABS polymer embossed circular nozzles (Ø 150-180-200 mm), complete with thermal and acoustic insulation, for mounting on the side of the inlet or outlet.



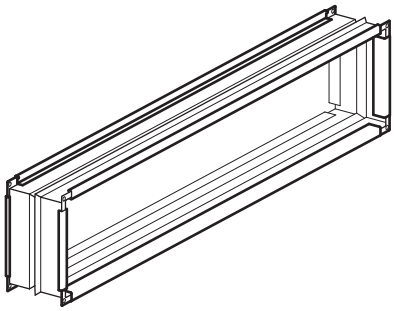
- **KFG**

Flanges in galvanized steel channel for connection to the shooting or discharge.



- **KAS**

Connection vibration for connection to suction and delivery channels, made with a frame laier a galvanized and polyester fiber.



I.2.2 ON/OFF VALVES

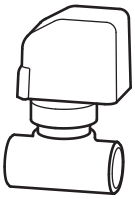
3-way valves to 4 attacks, with by-pass.
2-way valves.
Electrical actuators acting ON / OFF (NC normally closed).
Power supply: 230 V
Protection level: IP44
Total opening time: 4 minutes

- **KE2-2V (supplied separately)**
- **E2-2V (factory fitted)**

2-way ON/OFF valves for 2-pipe-systems.

- **KE4-2V (supplied separately)**
- **E4-2V (factory fitted)**

2-way ON/OFF valves for 4-pipe-systems.



- **KE2-3V (supplied separately)**
- **E2-3V (factory fitted)**

3-way ON/OFF valves for 2-pipe-systems.

- **KE4-3V (supplied separately)**
- **E4-3V (factory fitted)**

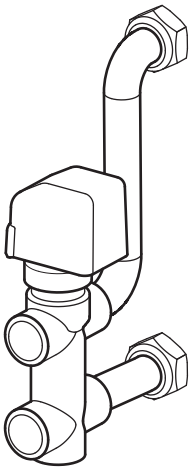
3-way ON/OFF valves for 4-pipe-systems.

- **KV-2V (supplied separately)**

2-way valve ON / OFF PBAB-Plenum box with extra battery or reheat.

- **KV-3V (factory fitted)**

3-way valve ON / OFF PBAB-Plenum with extra battery or reheat.

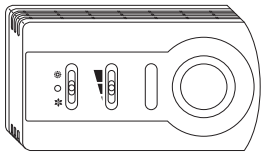


I.3 COMMANDS AND CONTROLS

I.3.1 STANDARD CONTROLS

- **KCV2 (supplied loose)**

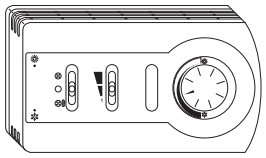
Panel with 3-speed switch complete with summer/off/winter switch, with possibility to connect the minimum temperature thermostat externally. Wall-mounted.



(Dimensions 145 x 82 x 40 mm)

- **KTCV2 (supplied separately)**

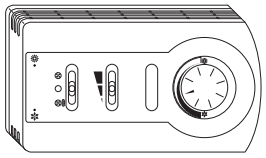
Control and regulation panel comprising: off/continuous ventilation/thermostat-controlled ventilation switch; ambient thermostat; summer/winter switch; speed switch; auxiliary contacts (230 Vac) for controlling ON/OFF valves in 2-pipe, 2-pipe with heater or 4-pipe systems, with possibility to connect the minimum temperature thermostat externally.



(Dimensions 145 x 82 x 40 mm)

- **KTCVA (supplied separately)**

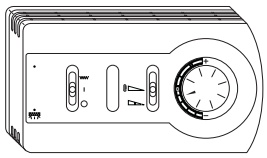
Electronic control panel comprising: continuous ventilation/off/thermostat-controlled ventilation switch; three-speed switch; ambient thermostat; automatic summer/winter switch; red/green heating/cooling LED; auxiliary contact (230 Vac) for controlling the ON/OFF valve for 2-pipe systems.



(Dimensions 145 x 82 x 40 mm)

- **KTCVR (supplied separately)**

Electronic control panel comprising: on/off/heater switch; automatic summer/winter switch; automatic speed/minimum speed switch; comfort adjustment knob ±5°C; auxiliary contacts (230 Vac) for controlling the ON/OFF valve for 2-pipe, 2-pipe with heater or 4-pipe systems. Minimum temperature thermostat function, de-layering cycle and dirty filter signal.

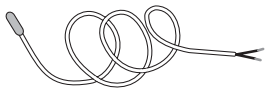


(Dimensions 145 x 82 x 40 mm)

Switching from heating to cooling takes place automatically by measuring the temperature of the water in the fan coil upstream from the valve according to the following logic. The heating element, if present, can be activated.

- **KSO (supplied loose)**

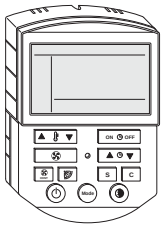
Air temperature sensor with remote control (2m) for KTCV2, KTCVA, KTCVR.



I.3.2 EVOLVED CONTROLS

- **KPCM (supplied loose)**

Electronic control panel with LCD display and 11 keys, for the manual or automatic regulation of all the machine functions on the basis of the chosen ambient temperature. The panel is designed to be wall-mounted.



(Dimensions 70 x 101 x 20 mm)

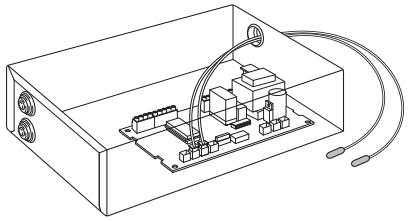
- **KICM (supplied loose)**

Built-in panel with liquid crystal display for electronic control of CMS fan coil. The panel is suitable for fastening in three-module wall-mounted recessed boxes.

(Dimensions 65.2 x 44.4 x 27.3 mm)

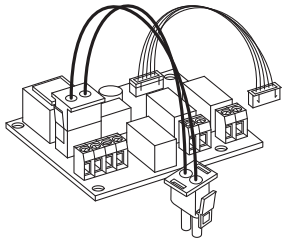
- **KCMS (supplied loose)**
- **CMS (factory fitted)**

Electronic board, which can be configured as a master or slave card, for the manual or automatic regulation of all the machine functions, complete with container for any additional KMVR modules.



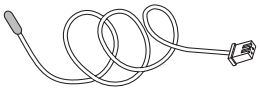
- **KMVR (supplied loose)**
- **MVR (factory fitted)**

Module for management of ON/OFF valves in 2-pipe or 4-pipe systems, to be used in conjunction with the electronic card KCMS and CMS. Includes two auxiliary contacts: summer/winter consensus and boiler control.



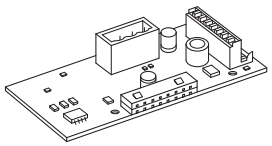
- **KSTI (supplied loose)**
- **STI (factory fitted)**

Temperature sensor for additional water heating coil, to be used in combination with the KCMS and CMS electronic card.

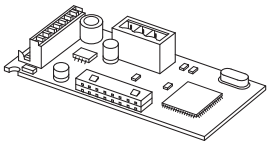


I.3.3 SERIAL INTERFACES (FOR ADVANCED CONTROLS)

● **KRS485 (supplied loose)**
RS485 serial interface card to create dialogue networks between cards (maximum of 200 units at a maximum distance of 1,000m) and building automation, external supervision systems or ***RHOSS*** (Supported protocols: proprietary protocol; Modbus® RTU).

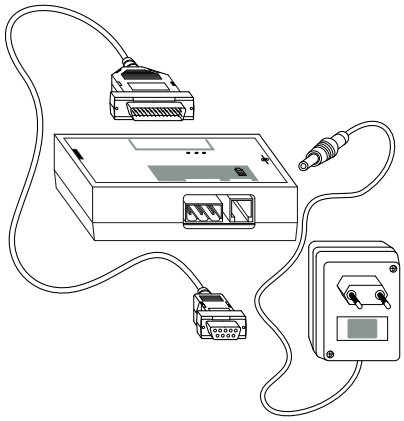


● **KISI (supplied loose)**
CAN bus serial interface (Controller Area Network) compatible with evolved hydronic system for integrated comfort management (protocol supported CanOpen®).

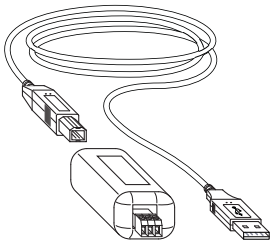


I.3.4 SERIAL CONVERTERS (SUPPLIED LOOSE)

● **KRS232 (supplied loose)**
RS485/RS232 serial converter for dialogue between the RS485 serial network and supervision systems with serial connection to the PC via the RS232 serial port (RS232 cable provided).



● **KUSB (supplied loose)**
RS485/USB serial converter for dialogue between the RS485 serial network and supervision systems with serial connection to the PC via the USB port (USB cable provided).



I.4 INSTRUCTIONS FOR USE

The following operations can be executed via command panels:
- Unit run/stop.
- Selection of the three fan speeds.
- Adjusting the thermostat and maintaining the desired ambient temperature.
- Switching between the cooling/heating operating cycle.
- Continuous ventilation command.

The specific instructions for use of controls is attached to the controls.

I.4.1 PUTTING THE APPLIANCE OUT OF SERVICE

IMPORTANT!
Failure to use the unit during the winter period may cause the water contained in the system to freeze.

During long periods of non-use, the unit should be electrically isolated, opening the system's mains switch installed by the installer.
Failure to use the unit during the winter period may cause the water contained in the system to freeze. The water circuit needs to be emptied in time. As an alternative, mix an appropriate amount of liquid anti-freeze with the water.

I.4.2 START-UP AFTER PERIODS OUT OF USE

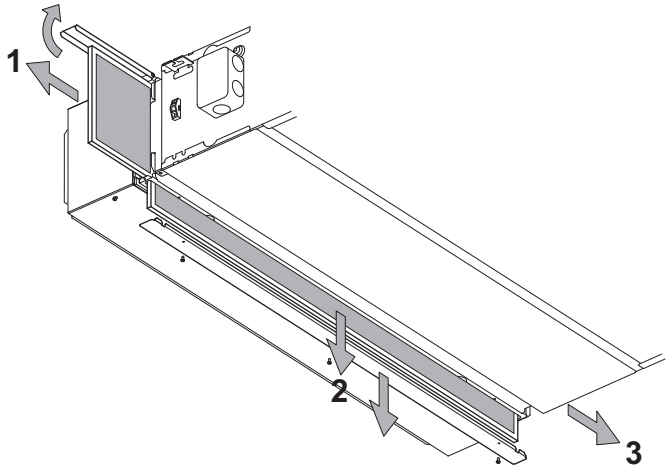
Before starting up:
- Clean or replace the air filter.
- Clean or unblock the condensation collection tray drain.
- Bleed the air from the water system.
- We recommend running the unit at maximum speed for several hours.

I.5 CLEANING THE UNIT

DANGER!
Always disconnect from the power supply before starting cleaning or maintenance work.
Never obstruct the air flow. The use of water or spray canisters near the unit could cause electric shocks and malfunctions.

I.5.1 CLEANING THE AIR FILTER

To ensure correct air suction, the filter must be cleaned at least once a month, or even more often if the unit is installed in a very dusty environment. The filter must always be removed from the unit for cleaning purposes.
The air filter is located within the KCF accessory and can be disassembled from three sides of the accessory.



The air filter can be cleaned by blowing with compressed air or by washing with water. Before replacing the filter, make sure that it is clean and completely dry. If the filter is damaged, replace it with an original ***RHOSS*** S.p.A. filter.

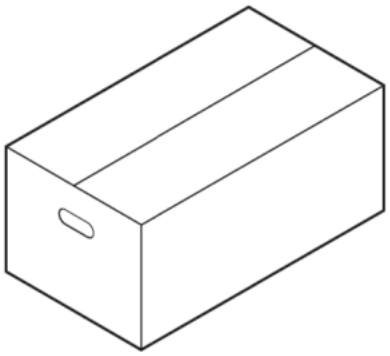
II SECTION II: INSTALLATION AND MAINTENANCE

II.1 TRANSPORT INSTRUCTIONS

II.1.1 PACKAGING, COMPONENTS

DANGER!
DO NOT OPEN OR TAMPER WITH THE PACKAGING BEFORE INSTALLATION.
The units should only be moved and lifted by specialist personnel trained in these operations.

Upon receipt, make sure that the unit has not been damaged during transport and that it is complete.
In the case of visible damage, record the damage straight away on the transport document using the words: "RECEIPT WITH RESERVE DUE TO EVIDENT DAMAGE TO THE PACKAGING", indicating the serial number in the case of several machines, inasmuch as the ex works delivery entails compensation for damage covered by the insurance pursuant to current law.



Follow the instructions below when removing the packaging:
- Check for visible damage;
- Open the packaging;
- Make sure that the envelope containing the use and maintenance manual is present;
- Dispose of the packaging material in keeping with current legislation, delivering it to specific collection or recycling centres.

ENVIRONMENTAL PROTECTION!
Dispose of the packaging materials in compliance with the national or local legislation in force in your country.

DANGER!
Do not leave the packaging within reach of children.

II.1.2 HANDLING INSTRUCTIONS

DANGER!
The unit should be handled with care to avoid damage to the external structure and to the internal mechanical and electrical components.
Also make sure that there are no obstacles or people blocking the route, to avoid the danger of collision, crushing or the lifting-gear overturning.
Always use personal protective equipment.

All the above operations must be performed in compliance with current safety standards, both as regards the equipment used, and the operating methods. Before moving the unit, make sure that the lifting capacity is suitable for the weight of the unit in question.
The units can be moved/lifted manually or by means of a forklift truck. If the unit weights more than 30 Kg, it must be lifted by two people.
However, we recommend using a forklift truck. If several machines need to be moved at the same time, we recommend placing them in a container and lifting it with a crane or similar.

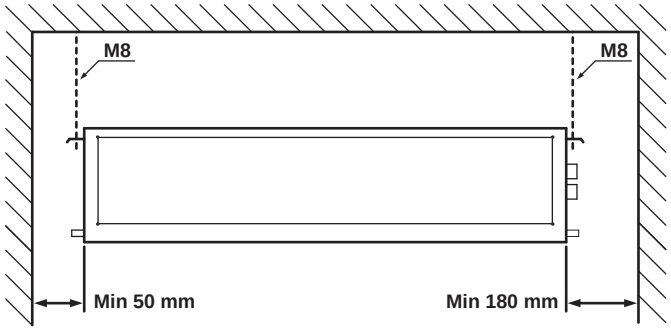
II.1.3 STORAGE CONDITIONS

The packaged units are stored by placing no more than four units one on top of the other. They must be stored in a dry place.

II.1.4 CLEARANCE SPACES, POSITIONING

IMPORTANT!
Incorrect positioning or installation of the unit may amplify noise levels and vibrations generated during operation.

The HP Yardy units can be mounted in a vertical or horizontal position, respecting the technical requirements for positioning.

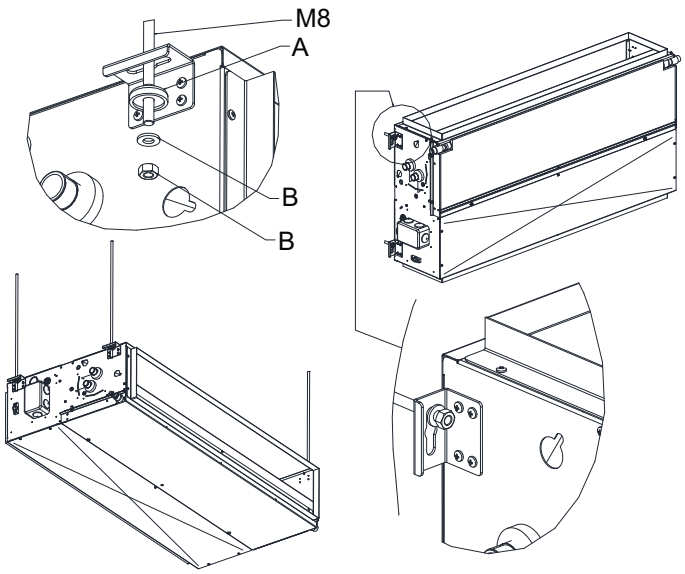


II.2 INSTALLATION INSTRUCTIONS

DANGER!
Installation must only be carried out by skilled technicians, qualified to work on air conditioning and cooling systems. Incorrect installation could cause the unit to run badly, with a consequent noticeable deterioration in performance.

DANGER!
The unit must be installed according to national or local rules in force at the time of installation.

For installation, follow the instructions provided below:
- Before installing the unit it is necessary to check the positions of the mounting hooks according to the planned installation. The mounting hooks are provided fastened to the machine.
- Mark the mounting points on the wall or ceiling using the points on the unit or referring to the height measurements in the section *Attachments A2*.



A Anti-vibrating

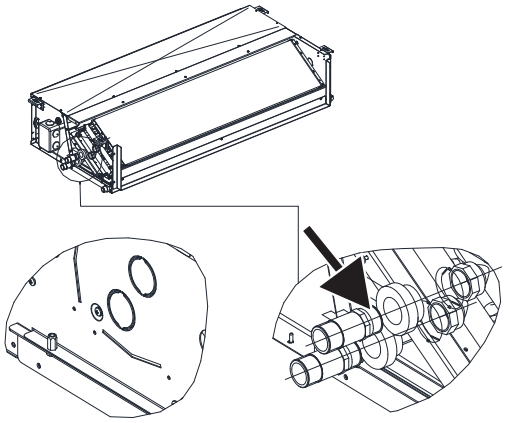
B Flat washer

II.2.1 WATER CONNECTIONS

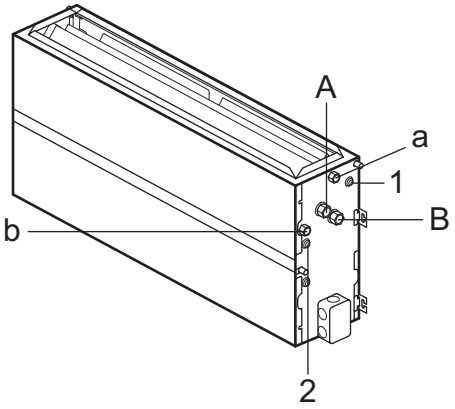
II.2.1.1 Connection to the system

	IMPORTANT! **The water connections are very important and particular care should be dedicated to these operations by specialist personnel.**
	IMPORTANT! **To facilitate drainage of condensation water install the unit with an inclination of at least 3cm/m towards the drain.**

Connect the unit to the water system using the input/output connections indicated in the figure. Make sure that the connections are appropriately sealed.



Note: Where indicated by the arrow, apply liquid thread lock on the threads of the male nipple supplied.



A Main coil water inlet
B Main coil water outlet
a Additional coil water inlet
b Additional coil water outlet
1 Air bleed valve
2 Water drain valve

All of the water coils (including the additional coil) are fitted with an air bleed valve (1) near the upper connection, and a water drain valve (2) near the lower connection. Both of these are protected by rubber caps. All of the valves can be manoeuvred with screwdrivers or hexagonal wrenches.

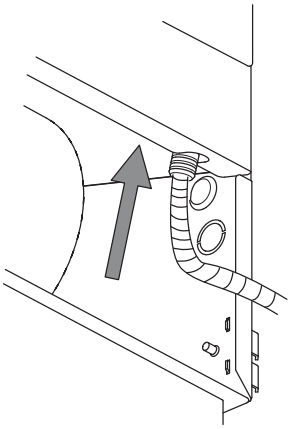
	IMPORTANT! **The water coils can be partially drained; to drain the coils it is recommended to blow air inside of the coil.**

Once installation has been completed, you will need to:

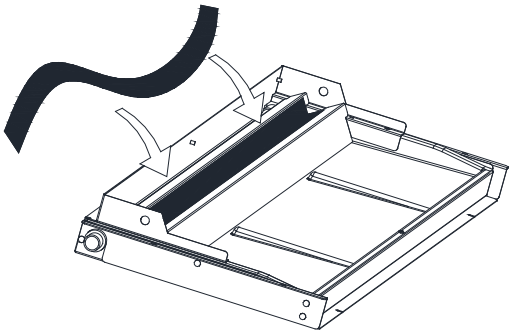
- Bleed the air out of the circuit.
- Make sure that there are no water leaks.
- Cover the valve (if present) and connection pipes carefully with anti-condensation material of 10 mm thick or install the auxiliary trays (only for models 100-150).
- Pour water into the condensation collection trays and make sure that the liquid is drained properly, following its course until it leaves the condensation drain. If this does not occur, check the angle and look for any blockages.

II.2.1.2 Assembly of vertical drain

For units that are installed vertically it is necessary to install a plastic coupling onto which the condensation drain can be mounted.

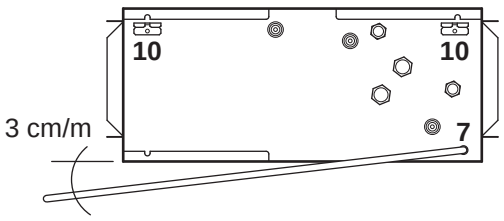


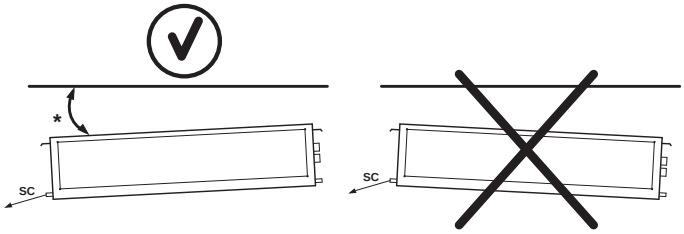
For vertical installations apply the aluminized tape supplied on the condensate collection tank where indicated.



II.2.1.3 Creation of the condensation drain

The condensation drainage system must have an adequate slope for facilitating water drainage. Instructions on how to create correct condensation drainage are given below.



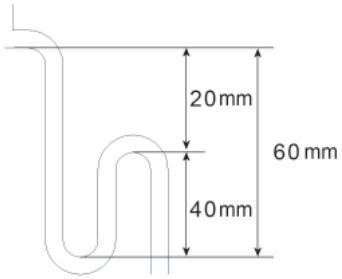


(*) The unit must be installed with a slight slope to facilitate the discharge of condensate.

Provide air vent on the condensate drain line if more than one unit discharge during the same backbone.

II.2.1.4 Creation of the water siphon

The condensation drainage system must include a suitable siphon to prevent odours from infiltrating the room. Instructions on how to create a water siphon are given below.



Always include a cap at the bottom of the siphon for cleaning purposes, or ensure that it can be quickly disassembled.

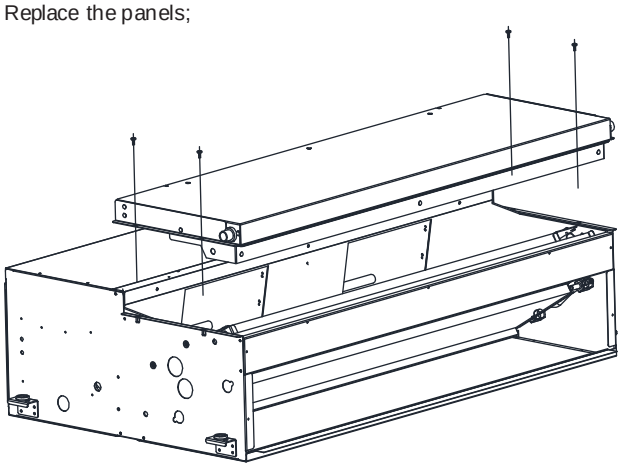
	IMPORTANT! **Position the drain pipe so that it does not place any mechanical stress on the unit drain connection.**

II.2.1.5 How to turn the coils from left connections (standard) to right connections

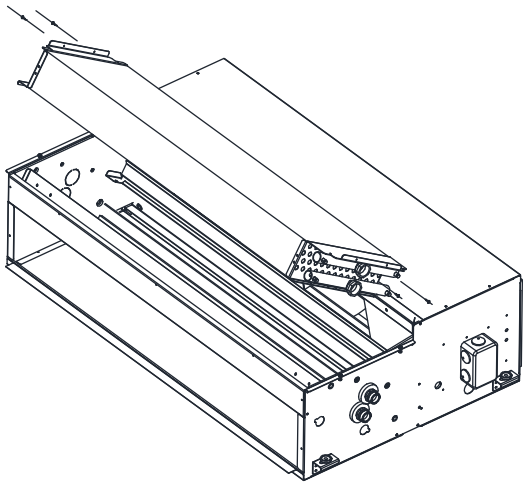
The unit is supplied with standard left coil connections. It is possible to turn the coil to accommodate right connections.
Rotating the main coil and additional coil must take place prior to installation with the unit placed on the ground.

To turn the coil, follow the instructions below:

- Remove the covering panels;
- Remove the screws that secure the coil to the structure of the unit on both sides;
- Turn the coil;
- Replace the fastening screws;
- Replace the panels;



Turn the coil so that the drip stops are located on the opposite sides of the coil.



II.2.1.6 Anti-freeze protection

	IMPORTANT! **When the unit is out of service, drain all the water contents from the circuit as soon as possible.**
	IMPORTANT! **Mixing the water with glycol modifies the performance of the unit. Read the glycol safety precautions provided on the packaging.**

Failure to use the unit during the winter period may cause the water contained in the system to freeze. The water circuit needs to be emptied in time. If the water drainage operation is felt to be too much work, the water can be mixed with a suitable quantity of antifreeze fluid.

II.2.2 ELECTRICAL CONNECTIONS

	IMPORTANT! **Electrical connection of the unit must be carried out by personnel skilled in the matter and in compliance with the regulations in effect in the country where the unit is installed. Non-conforming electrical connection relieves *RHOSS* S.p.a. from all responsibility for damage to persons and property.**
	DANGER! **Always install a general automatic switch in a protected area near the appliance with a characteristic delayed curve, sufficient capacity and breaking power. There should be a minimum distance of 3 mm between the contacts.** **Earth connection is compulsory by law and safeguards the user while the machine is in use.**

Make sure that the voltage and frequency of the electricity network correspond to 230V (± 10%) single-phase at 50 Hz; that the installed power available is sufficient for operation and that the power line wires have a section suitable for the maximum current.
Make sure that the power supply network corresponds to current national safety standards.
The connections must be executed in respect to the diagrams provided with the machine. When connecting the unit to the electricity network, use flexible, double insulation, bipolar wire + earth, section 1.5 mm², type H05RN-F.

Use the cable gland present on the external side to fasten the power supply cable and interconnection cables; unsheathe the cables only in proximity of the connection terminal board.
If the unit is mounted on a metallic wall it must be fitted with an earth connection in accordance with current laws in the country of installation.

II.3 START-UP INSTRUCTIONS

	IMPORTANT! **The commissioning or first start-up of the machine (where envisaged) must be carried out by personnel qualified to work on this type of product.**
	DANGER! **Before starting up, make sure that the installation and electrical connections conform with the instructions in this manual. Also make sure that there are no unauthorised persons in the vicinity of the machine during the above operations.**

II.3.1 CHECKS PRIOR TO START-UP

Before starting up the unit, make sure that:

1. the unit is correctly positioned;
2. the water system outlet and inlet pipes are correctly connected and insulated;
3. the pipes have been cleaned and the air has been bled out of them;
4. the unit slopes correctly towards the drain and siphon;
5. the electrical connections are correct;
6. the screws holding the conductors are tightly fastened;
7. the power supply voltage is correct;
8. the absorption of the motor-driven fan is correct and does not exceed the maximum allowed level, see attachments *A1 Technical Data*.

We recommend running the unit at maximum speed for several hours.

II.4 MAINTENANCE INSTRUCTIONS

	**DANGER!** **Scheduled maintenance must be carried out by skilled technicians, qualified to work on conditioning and cooling products. Use suitable gloves for the task.**
	**DANGER!** **Do not introduce pointed objects through the air inlet or outlet grilles.**
	**DANGER!** **Always use the mains switch to isolate the unit from the mains before carrying out any maintenance work on the unit, even if it is for inspection purposes only. Make sure that no one accidentally supplies power to the machine, lock the mains switch in the OFF position.**

II.4.1 ORDINARY MAINTENANCE

II.4.1.1 Monthly

○ **Check the cleanliness of the air filters.**

The air filters are made from fibre that can be washed with water. The cleanliness of the filters must be checked at the start of the operating season and on a monthly basis as standard.

II.4.1.2 Every Six Months

○ **Checking the condensation drain.**

- Make sure that the condensation drain does not contain any blockages that could hinder the normal water flow.

○ **Checking the presence of air in the system**

1. Start up the system for a few minutes;
2. stop the system;
3. loosen the bleed screws on the inlet line and bleed;

Repeat the operation several times until no more air comes out of the system.

II.4.1.3 At the end of the season

○ **Empty the water system (for all the coils).**

In order to prevent damage caused by frost, we recommend draining all the water from the system at the end of each season.

II.4.1.4 Electrical Circuit

We recommend carrying out the following electrical circuit maintenance operations:

- check the electrical absorption of the unit using an ammeter and compare the value with that indicated in the documentation.
- inspect and check the tightness of the electrical contacts and terminals.

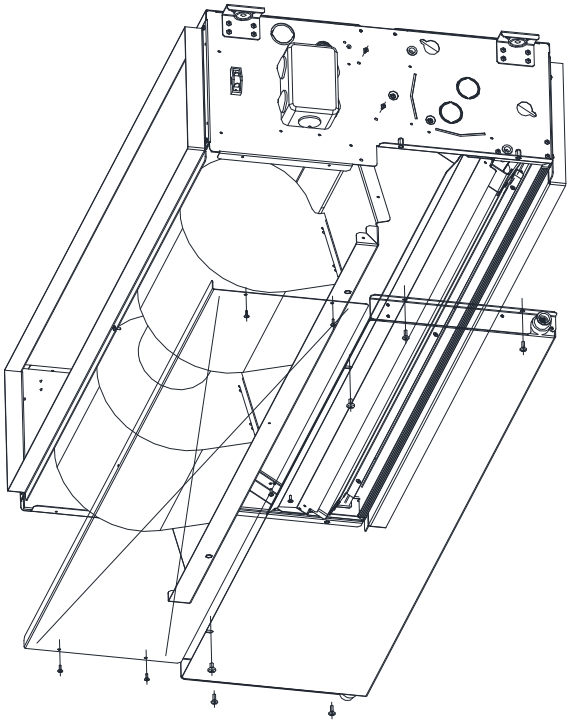
II.4.2 SPECIAL MAINTENANCE

II.4.2.1 Replacement of the fan assembly

If the fan electric motor breaks, the entire fan assembly will need to be replaced.

○ **To remove the fan, proceed as follows:**

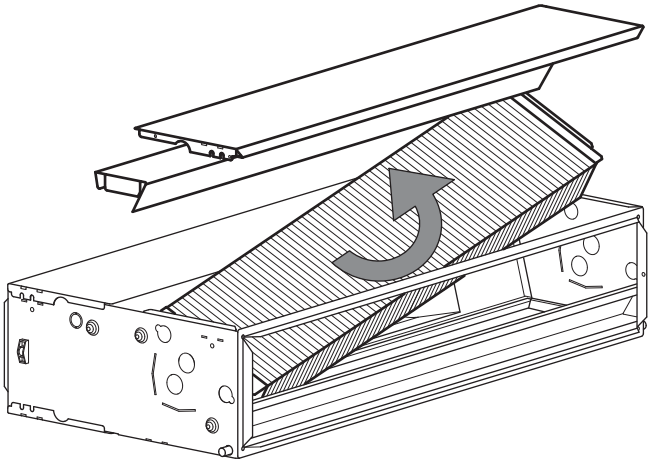
- Remove the covering panel;
- Disconnect the fan electric connection cable;
- Remove the screws that secure the fan to the structure of the unit on both sides;
- Extract the fan;
- Install the new fan;
- Replace the panels;



II.4.2.2 Replacing the Exchanger

○ **To remove the exchanger, proceed as follows:**

- Intercept the water outlet and inlet;
- Empty the water coil;
- Remove the panels;
- Disconnect the exchanger from the system;
- Remove the screws that secure the exchanger to the structure of the unit on both sides;
- Extract the exchanger;
- Install the new exchanger;
- Replace the panels;
- Circulate water and blow air from the system;



II.4.3 INSTRUCTIONS FOR DISMANTLING THE UNIT AND DISPOSING OF HAZARDOUS SUBSTANCES

ENVIRONMENTAL PROTECTION!
***RHOSS* S.p.A. has always been aware of the importance of protecting the environment.**
When the unit is dismantled, it is important to adhere scrupulously to the following procedures.

The unit should only be dismantled by a firm authorised for the disposal of scrap machinery/products.

The unit as a whole is composed of materials which can be treated as SRM (secondary raw materials) and the following conditions must be observed:

- if the appliance contains antifreeze, this should not just be disposed of freely, as it causes pollution.
- It must be collected and disposed of in a suitable manner;
- The electronic components (electrolytic condensers) should be considered as special refuse. As such, they should be handed over to an authorised collection body;
- The pipe insulation material, in foamed polyurethane rubber, in reticulated foamed polyethylene, in foamed polyurethane and soundproof sponge, which covers the panelling, must be removed and treated as normal urban refuse.

A1 TECHNICAL DATA

2 pipes system

YardyHP				with 3R-coil				
				100	150	200	250	300
Nominal cooling capacity (total heat) (*)		kW	max	7,16	8,37	10,14	13,55	15,26
		kW	med	6,62	6,70	7,46	9,76	11,77
		kW	min	5,46	6,36	6,63	7,17	10,31
Nominal cooling capacity (sensible heat) (*)		kW	max	5,72	7,16	8,72	11,69	13,43
		kW	med	5,22	5,43	6,16	7,92	9,96
		kW	min	4,19	5,08	5,36	5,56	8,45
Water flow (*)		l/h	max	1229	1436	1738	2321	2611
		l/h	med	1136	1150	1280	1675	2016
		l/h	min	937	1091	1138	1230	1767
Water pressure drops (*)		kPa	max	18	16	21	31	42
		kPa	med	16	16	20	26	36
		kPa	min	11	14	16	15	29
Nominal heating capacity (inlet water 50°C) (***)		kW	max	9,62	11,71	14,28	19,06	21,79
		kW	med	8,76	8,97	10,23	13,10	16,45
		kW	min	7,03	8,43	8,91	9,18	14,05
Water flow (***)		l/h	max	1229	1436	1738	2321	2611
		l/h	med	1136	1150	1280	1675	2016
		l/h	min	937	1091	1138	1230	1767
Water pressure drops (***)		kPa	max	16	13	17	27	35
		kPa	med	13	14	17	23	32
		kPa	min	9	12	14	13	25
Heating capacity (inlet water 70°C) (**)		kW	max	16,50	20,14	24,62	33,03	37,82
		kW	med	15,00	15,39	17,57	22,57	28,48
		kW	min	12,00	14,45	15,27	15,72	24,24
Water flow (**)		l/h	max	1449	1769	2162	2901	3322
		l/h	med	1317	1352	1543	1982	2501
		l/h	min	1054	1269	1341	1381	2129
Water pressure drops (**)		kPa	max	19	18	24	37	50
		kPa	med	16	17	22	28	43
		kPa	min	11	15	17	15	32
Coil water content		l		3,5	3,5	3,5	4,5	4,5
Dimensions		mm	A	555	555	670	720	720
		mm	B	1225	1225	1225	1225	1225
		mm	C	250	250	285	335	335
Weight		kg		35	35	44	52	52
Air flow	60 Pa	m³/h	max	1552	1840	2339	3312	3875
	50 Pa	m³/h	med	1369	1623	1717	2189	3075
	35 Pa	m³/h	min	1013	1432	1414	1329	2415
Fans		n°		2	2	2	2	2
Intake sound power level (with G3 filter, Eurovent class EU4) (****)		dB(A)	max	65	67	67	67	71
		dB(A)	med	63	66	65	63	67
		dB(A)	min	60	64	62	60	64
Delivery sound power level (with G3 filter, Eurovent class EU4) (****)		dB(A)	max	61	62	62	63	68
		dB(A)	med	59	61	60	59	64
		dB(A)	min	56	59	57	55	61
Intake sound power level (with G2 filter, Eurovent class EU2) (****)		dB(A)	max	66	68	68	69	73
		dB(A)	med	64	67	66	65	69
		dB(A)	min	61	65	63	62	66
Delivery sound power level (with G2 filter, Eurovent class EU2) (****)		dB(A)	max	62	63	63	65	69
		dB(A)	med	60	62	61	60	65
		dB(A)	min	57	60	58	57	63
Power supply		V-ph-Hz		230 – 1 – 50				
Maximum absorbed power (0 Pa)		W	max	270	340	400	700	710
		W	med	200	260	290	450	620
		W	min	150	220	210	280	480
Maximum absorbed current (0 Pa)		A	max	1,3	1,6	1,8	3,2	3,2
		A	med	0,9	1,2	1,3	2,1	2,8
		A	min	0,7	1,0	1,0	1,3	2,2

(*) In the following conditions: ambient temperature 27°C D.B.; 19°C W.B.; incoming water temperature 7°C with Δt 5°C.
(**) In the following conditions: ambient temperature 20°C; incoming water temperature 70°C with Δt 10°C.
(***) In the following conditions: ambient temperature 20°C; incoming water temperature 50°C, water flow as during cooling.
(****) Sound pressure level = Sound power level - 8dB(A).

2 pipes system

Yardy HP				with 4R-coil					with 5R-coil	
				100	150	200	250	300	250	300
Nominal cooling capacity (total heat) (*)		kW	max	8,41	9,51	11,38	16,58	18,80	18,71	20,50
		kW	med	7,69	8,29	9,22	12,23	14,91	13,20	16,91
		kW	min	6,44	7,78	8,33	8,64	12,99	9,18	14,50
Nominal cooling capacity (sensible heat) (*)		kW	max	6,42	7,57	9,15	13,36	15,29	14,80	16,17
		kW	med	5,80	6,38	7,20	9,54	12,08	9,90	12,70
		kW	min	4,76	5,89	6,38	6,45	10,11	6,63	11,10
Water flow (*)		l/h	max	1443	1632	1951	2840	3217	3209	3517
		l/h	med	1319	1422	1582	2097	2555	2265	2900
		l/h	min	1105	1335	1429	1482	2227	1575	2488
Water pressure drops (*)		kPa	max	20	31	39	28	43	28	33
		kPa	med	17	31	37	18	38	18	26
		kPa	min	12	27	30	14	29	9	21
Nominal heating capacity (inlet water 50°C) (***)		kW	max	10,84	12,71	15,42	22,28	25,70	24,90	28,04
		kW	med	9,73	10,57	11,96	15,92	20,20	16,54	21,31
		kW	min	7,98	9,79	10,61	10,70	17,01	10,93	18,55
Water flow (***)		l/h	max	1443	1632	1951	2840	3217	3209	3517
		l/h	med	1319	1422	1582	2097	2555	2265	2900
		l/h	min	1105	1335	1429	1482	2227	1575	2488
Water pressure drops (***)		kPa	max	17	25	32	24	37	27	31
		kPa	med	15	26	32	23	33	15	23
		kPa	min	11	23	26	12	26	8	18
Heating capacity (inlet water 70°C) (**)		kW	max	18,40	21,54	26,20	38,20	44,16	42,84	48,30
		kW	med	16,50	17,89	20,26	27,16	34,60	28,30	36,61
		kW	min	13,50	16,54	17,94	18,14	29,04	18,63	31,80
Water flow (**)		l/h	max	1616	1892	2301	3355	3878	3763	4242
		l/h	med	1449	1571	1779	2385	3039	2486	3215
		l/h	min	1186	1453	1576	1593	2551	1636	2793
Water pressure drops (**)		kPa	max	20	30	39	30	48	34	40
		kPa	med	16	30	37	27	42	17	27
		kPa	min	11	25	29	13	31	8	21
Coil water content		l		4,6	4,6	4,6	5,5	5,5	6,9	6,9
Dimensions		mm	A	555	555	670	720	720	720	720
		mm	B	1210	1210	1210	1210	1210	1210	1210
		mm	C	250	250	285	335	335	335	335
Weight		kg		38	38	46	55	55	57	57
Air flow	60 Pa	m³/h	max	1502	1744	2153	3225	3756	3197	3758
	50 Pa	m³/h	med	1295	1423	1678	2170	3011	2105	3011
	35 Pa	m³/h	min	999	1366	1414	1309	2375	1281	2375
Fans		n°		2	2	2	2	2	2	2
Intake sound power level (with G4 filter, Eurovent class EU4) (****)		dB(A)	max	65	67	67	67	71	67	71
		dB(A)	med	63	66	65	63	67	63	67
		dB(A)	min	60	64	62	60	64	60	64
Delivery sound power level (with G4 filter, Eurovent class EU4) (****)		dB(A)	max	61	62	62	63	68	63	68
		dB(A)	med	59	61	60	59	64	59	64
		dB(A)	min	56	59	57	55	61	55	61
Intake sound power level (with G2 filter, Eurovent class EU2) (****)		dB(A)	max	66	68	68	69	73	69	73
		dB(A)	med	64	67	66	65	69	65	69
		dB(A)	min	61	65	63	62	66	62	66
Delivery sound power level (with G2 filter, Eurovent class EU2) (****)		dB(A)	max	62	63	63	65	69	65	69
		dB(A)	med	60	62	61	60	65	60	65
		dB(A)	min	57	60	58	57	63	57	63
Power supply		V-ph-Hz		230 – 1 – 50					230 – 1 – 50	
Maximum absorbed power (0 Pa)		W	max	260	330	430	680	720	690	730
		W	med	190	260	290	450	610	460	640
		W	min	140	220	210	280	480	290	490
Maximum absorbed current (0 Pa)		A	max	1,2	1,5	2,0	3,1	3,3	3,2	3,4
		A	med	1,0	1,2	1,3	2,1	2,8	2,2	2,9
		A	min	0,6	1,0	1,0	1,3	2,2	1,3	2,3

(*) In the following conditions: ambient temperature 27°C D.B.; 19°C W.B.; incoming water temperature 7°C with Δt 5°C.
(**) In the following conditions: ambient temperature 20°C; incoming water temperature 70°C with Δt 10°C.
(***) In the following conditions: ambient temperature 20°C; incoming water temperature 50°C, water flow as during cooling.
(****) Sound pressure level = Sound power level - 8dB(A).

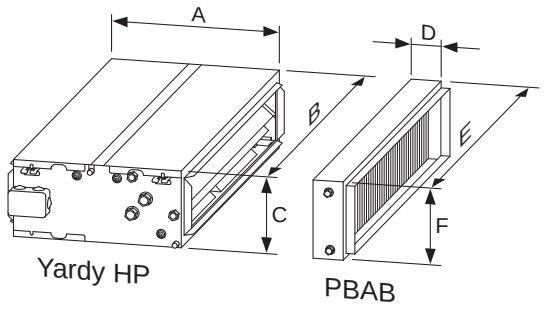
4 pipes system

Heating coil BAA - KBAA				with 3R-coil				
				100	150	200	250	300
Air flow	60 Pa	m³/h	max	1552	1840	2339	3312	3875
	50 Pa	m³/h	med	1369	1430	1717	2189	3075
	35 Pa	m³/h	min	1013	1313	1414	1329	2415
Nominal heating capacity (inlet water 70°C) (**)		kW	max	6,69	6,78	9,35	10,44	11,31
		kW	med	6,17	5,88	8,18	8,32	10,09
		kW	min	5,18	5,59	7,20	6,35	8,80
Water flow (**)		l/h	max	588	596	821	917	993
		l/h	med	542	516	719	731	886
		l/h	min	455	491	633	558	773
Water pressure drops (**)		kPa	max	13	10	24	30	38
		kPa	med	11	10	19	24	34
		kPa	min	8	9	15	15	26
Coil water content		l		0,69	0,69	0,69	0,89	0,89

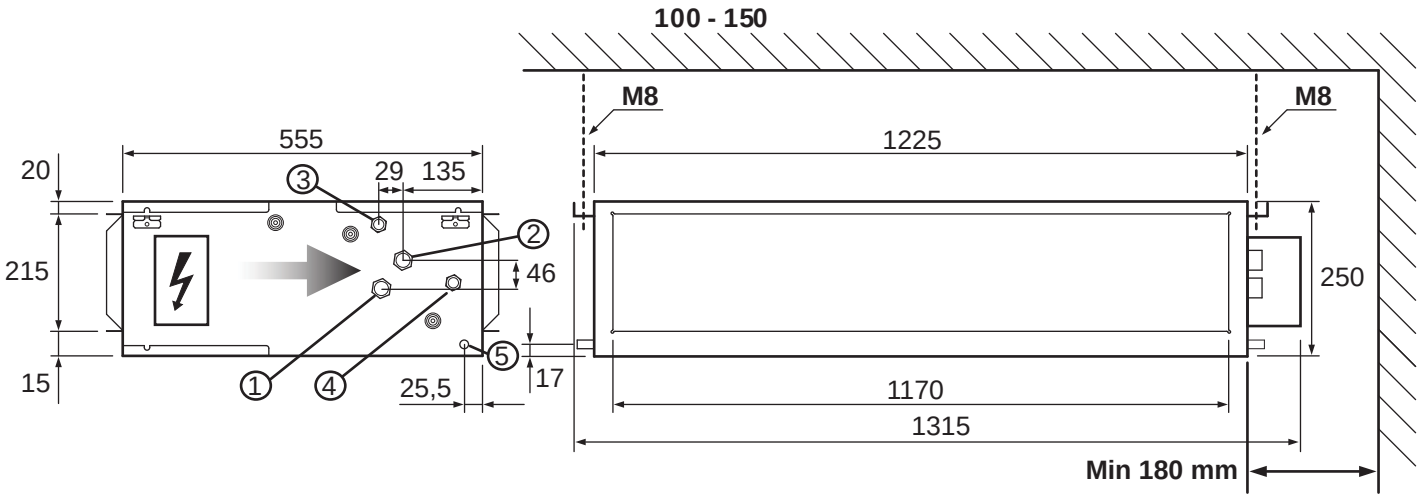
Plenum with Heating coil PB AB				with 3R-coil				
				100	150	200	250	300
Air flow	60 Pa	m³/h	max	1552	1840	2339	3312	3875
	50 Pa	m³/h	med	1369	1430	1717	2189	3075
	35 Pa	m³/h	min	1013	1313	1414	1329	2415
Nominal heating capacity (inlet water 70°C) (**)		kW	max	12,90	14,14	16,40	29,73	32,77
		kW	med	11,09	12,06	13,63	22,60	28,33
		kW	min	9,67	11,48	11,98	15,76	24,20
Water flow (**)		l/h	max	1133	1241	1441	2612	2879
		l/h	med	1045	1059	1197	1985	2488
		l/h	min	849	1008	1052	1384	2126
Water pressure drops (**)		kPa	max	17	19	24	38	45
		kPa	med	15	15	19	23	35
		kPa	min	10	14	15	12	26
Coil water content		l		2,35	2,35	2,35	3,35	3,35
Dimensions		mm	A	200	200	200	200	200
		mm	B	1210	1210	1210	1210	1210
		mm	C	250	250	250	315	315
Weight		kg		9,5	9,5	9,5	11,5	11,5

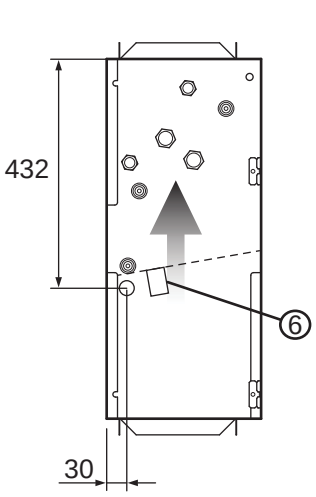
Plenum with Heating coil PB AB				with 4R-coil					with 5R-coil	
				100	150	200	250	300	250	300
Air flow	60 Pa	m³/h	max	1502	1744	2153	3225	3756	3128	3643
	50 Pa	m³/h	med	1295	1423	1678	2170	3011	2100	2950
	35 Pa	m³/h	min	999	1292	1414	1309	2375	1300	2500
Nominal heating capacity (inlet water 70°C) (**)		kW	max	12,40	12,92	15,51	29,19	32,13	28,90	31,80
		kW	med	11,40	12,04	13,41	22,41	28,01	22,10	27,80
		kW	min	9,59	11,32	12,08	15,57	23,87	15,60	24,90
Water flow (**)		l/h	max	1089	1135	1363	2564	2822	2526	2784
		l/h	med	1001	1059	1178	1969	2460	1930	2431
		l/h	min	491	994	1061	1367	2096	1362	2177
Water pressure drops (**)		kPa	max	16	17	24	37	44	36	43
		kPa	med	14	15	19	23	34	22	33
		kPa	min	10	13	15	12	25	12	27
Coil water content		l		2,35	2,35	2,35	3,35	3,35	3,35	3,35
Dimensions		mm	D	200	200	200	200	200	200	200
		mm	E	1210	1210	1210	1210	1210	1210	1210
		mm	F	250	250	250	315	315	315	315
Weight		kg		9,5	9,5	9,5	11,5	11,5	11,5	11,5

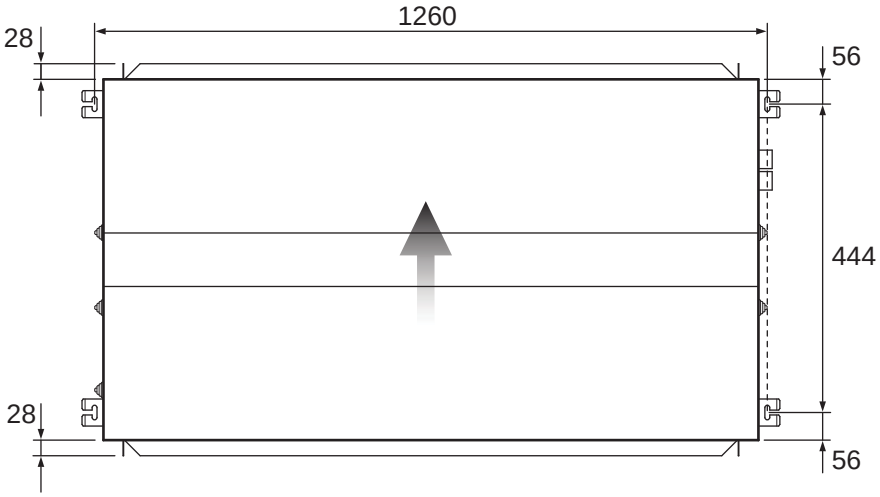
(*) In the following conditions: ambient temperature 27°C D.B.; 19°C W.B.; incoming water temperature 7°C with Δt 5°C.
(**) In the following conditions: ambient temperature 20°C; incoming water temperature 70°C with Δt 10°C.
(***) In the following conditions: ambient temperature 20°C; incoming water temperature 50°C, water flow as during cooling.

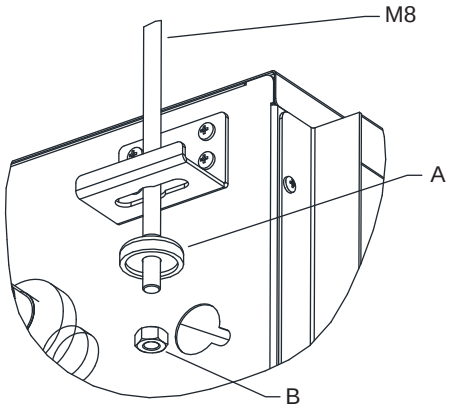


A2 DIMENSIONI / DIMENSIONS / DIMENSIONS / ABMESSUNGEN / DIMENSIONES









A Antivibrante
B Rondella piana

A Anti-vibrating
B Flat washer

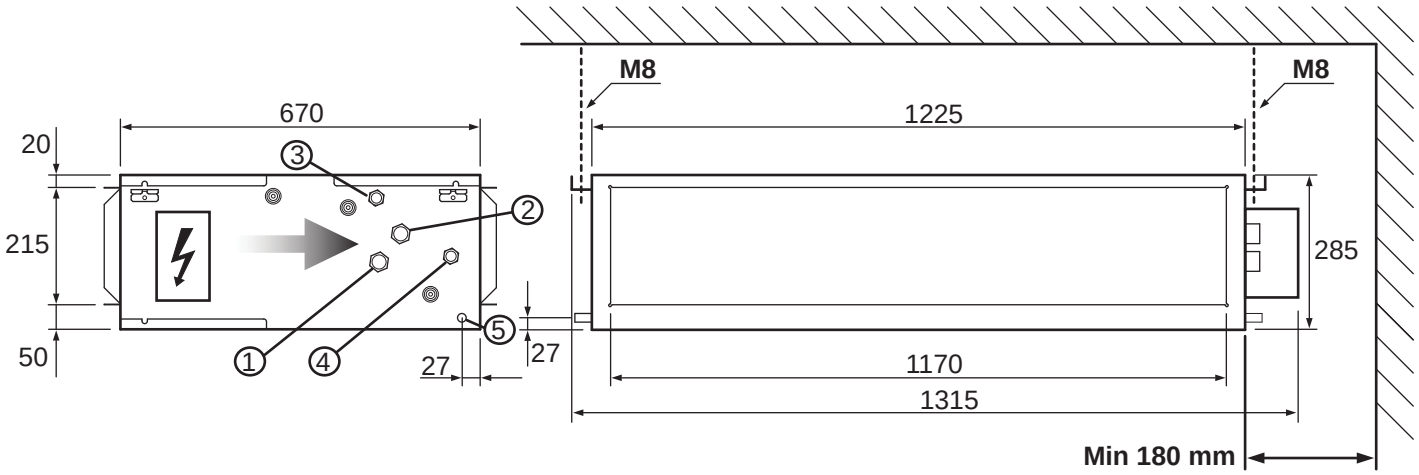
A Antivibratoire
B Rondelle plate

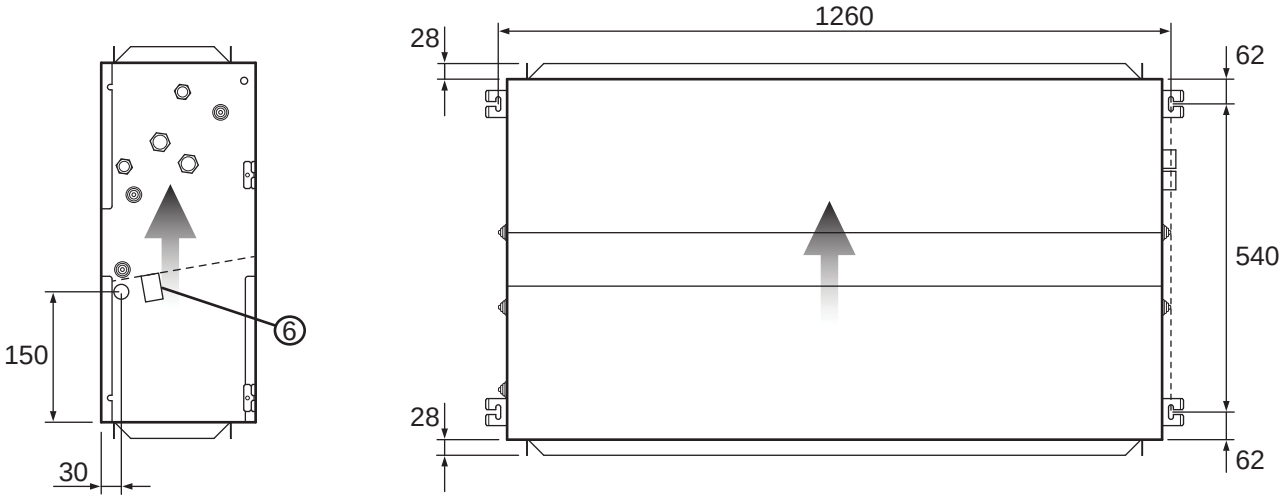
A Schwingungsdampfer
B Unterlegscheibe

A Antivibratorio
B Arandela plana

		Connessioni idrauliche / Water connections / Raccordements hydrauliques / Wasseranschlüsse / Conexiones hidráulicas				
		100	**150**	**200**	**250**	**300**
1	Ø	¾"	¾"	¾"	1"	1"
2	Ø	¾"	¾"	¾"	1"	1"
3	Ø	½"	½"	½"	½"	½"
4	Ø	½"	½"	½"	½"	½"
5	mm	24	24	24	24	24
6	mm	21	21	21	21	21

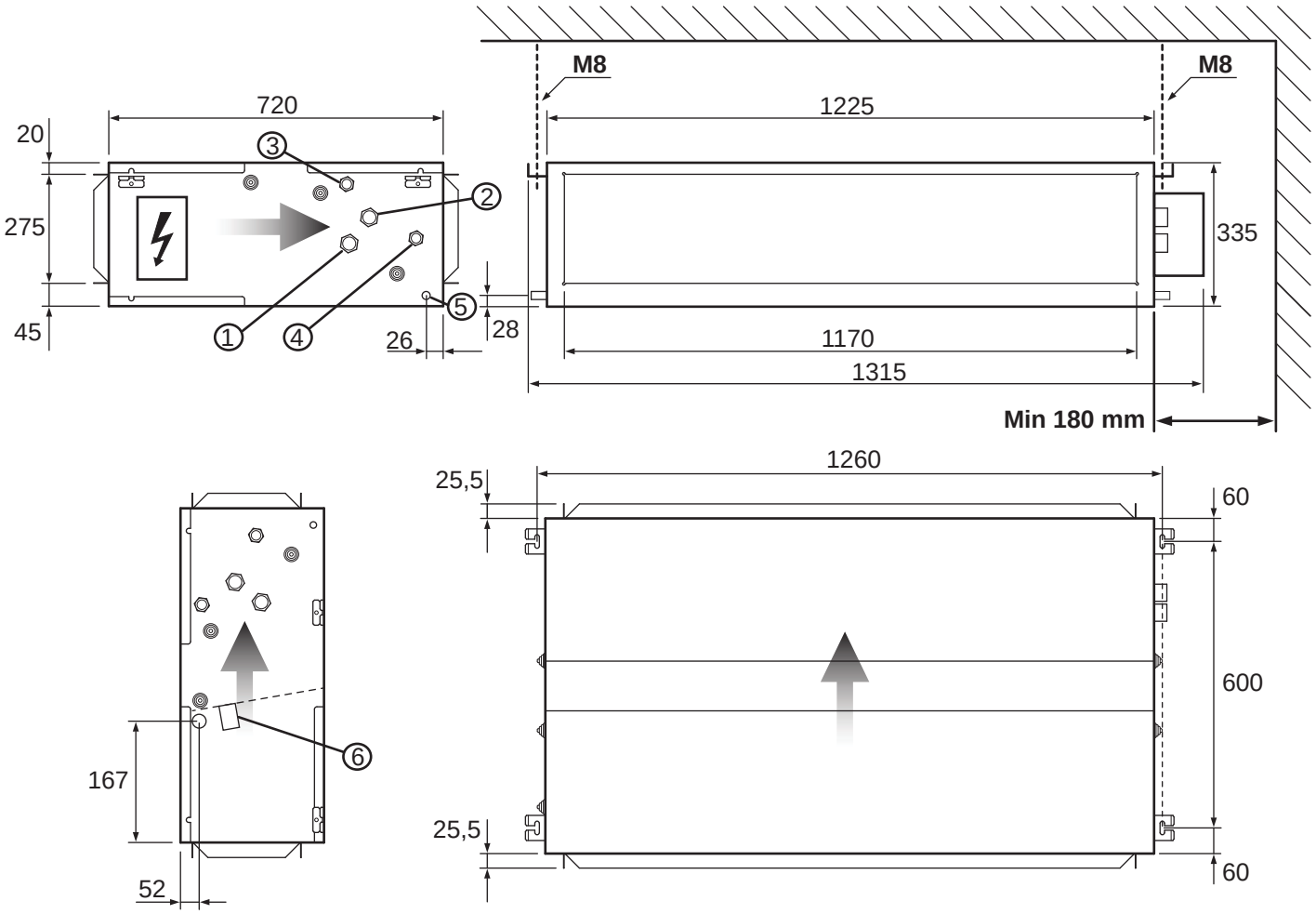
200



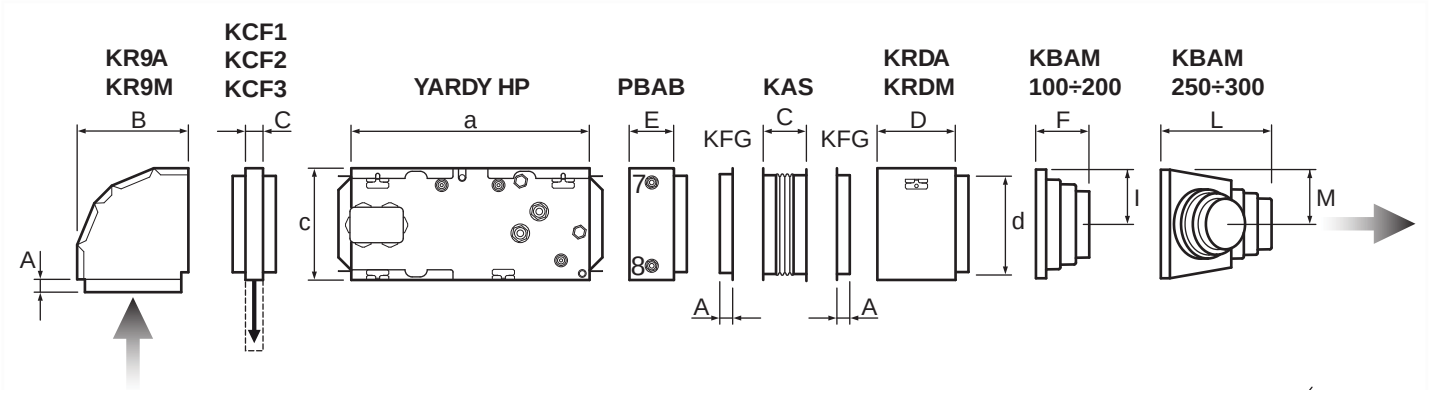


		Connessioni idrauliche / Water connections / Raccordements hydrauliques / Wasseranschlüsse / Conexiones hidráulicas				
		100	**150**	**200**	**250**	**300**
1	Ø	¾"	¾"	¾"	1"	1"
2	Ø	¾"	¾"	¾"	1"	1"
3	Ø	½"	½"	½"	½"	½"
4	Ø	½"	½"	½"	½"	½"
5	mm	24	24	24	24	24
6	mm	21	21	21	21	21

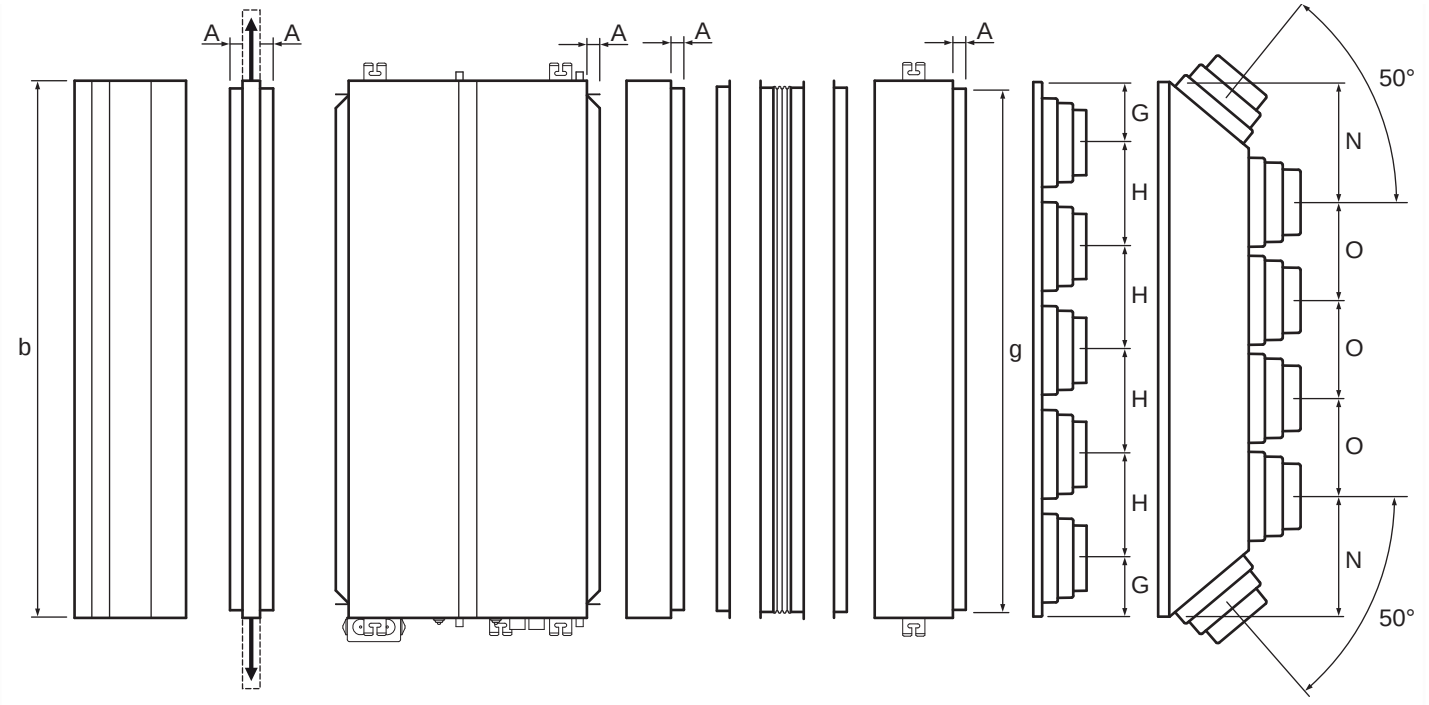
250 - 300



		Connessioni idrauliche / Water connections / Raccordements hydrauliques / Wasseranschlüsse / Conexiones hidráulicas				
		100	**150**	**200**	**250**	**300**
1	Ø	¾"	¾"	¾"	1"	1"
2	Ø	¾"	¾"	¾"	1"	1"
3	Ø	½"	½"	½"	½"	½"
4	Ø	½"	½"	½"	½"	½"
5	mm	24	24	24	24	24
6	mm	21	21	21	21	21



		Connessioni idrauliche				
		100	**150**	**200**	**250**	**300**
7	Ø	¾"	¾"	¾"	¾"	¾"
8	Ø	¾"	¾"	¾"	¾"	¾"



		Yardy HP				
		100	**150**	**200**	**250**	**300**
a	mm	555	555	670	720	720
b	mm	1205	1205	1205	1205	1205
c	mm	250	250	285	335	335
d	mm	215	215	215	275	275
e	mm	15	15	15	15	15
g	mm	1150	1150	1150	1150	1150
A	mm	30	30	30	30	30
B	mm	280	280	280	340	340
C	mm	160	160	160	160	160
D	mm	200	200	200	200	200
E	mm	110	110	110	110	110
F	mm	150	150	150	150	150
G	mm	130	130	130	130	130
H	mm	235	235	235	235	235
I	mm	115	115	115	115	115
L	mm	-	-	-	315	315
M	mm	-	-	-	155	155
N	mm	-	-	-	280	280
O	mm	-	-	-	220	220

1 Uscita acqua batteria principale;
2 Entrata acqua batteria principale;
3 Uscita acqua batteria aggiuntiva;
4 Ingresso acqua batteria aggiuntiva;
5 Uscita acqua PBAB;
6 Ingresso acqua PBAB;
7 Scarico condensa per le installazioni orizzontali;
8 Scarico condensa per le installazioni verticali;
9 Pannello removibile per il cambio di direzione aria.
10 Ganci di fissaggio.

1 Main coil outlet water;
2 Main coil inlet water;
3 Additional coil outlet water;
4 Additional coil inlet water;
5 PBAB coil outlet water;
6 PBAB coil inlet water;
7 Condensation drip tray for orizontal installation;
8 Condensation drip tray for vertical installation;
9 Removable panel for the change air direction.
10 Fixture slots.

1 Sortie d'eau de la batterie principale;
2 Entrée d'eau de la batterie principale;
3 Sortie d'eau de la batterie supplémentaire;
4 Entrée d'eau de la batterie principale;
5 Sortie d'eau PBAB;
6 Entrée d'eau PBAB;
7 Évacuation de la condensation pour les installations horizontales;
8 Évacuation de la condensation pour les installations verticales;
9 Panneau amovible pour le changement de direction de l'air.
10 Crochets de fixation.

1 Wasseraustritt Hauptwärmetauscher;
2 Wassereintritt Hauptwärmetauscher;
3 Wasseraustritt Zusatzregister;
4 Wassereintritt Zusatzregister;
5 Wasseraustritt PBAB;
6 Wassereintritt PBAB;
7 Kondensatablauf für horizontale Installationen;
8 Kondensatablauf für vertikale Installationen;
9 Abnehmbares Paneel für den Wechsel der Luftrichtung.
10 Befestigungshaken.

1 Salida de agua batería principal;
2 Entrada de agua batería principal;
3 Salida de agua batería adicional;
4 Entrada de agua batería adicional;
5 Salida de agua PBAB;
6 Entrada de agua PBAB;
7 Desagüe de condensación para las instalaciones horizontales;
8 Desagüe de condensación para las instalaciones verticales;
9 Panel extraíble para el cambio de dirección del aire.
10 Ganchos de fijación.

A3 SCHEMI ELETTRICI DI ABBINAMENTO / CONNECTION WIRING DIAGRAMS / SCHÉMAS ÉLECTRIQUES DE BRANCHEMENT / ANSCHLUSS-SCHALTPLÄNE / ESQUEMAS ELÉCTRICOS DE COMBINACIÓN

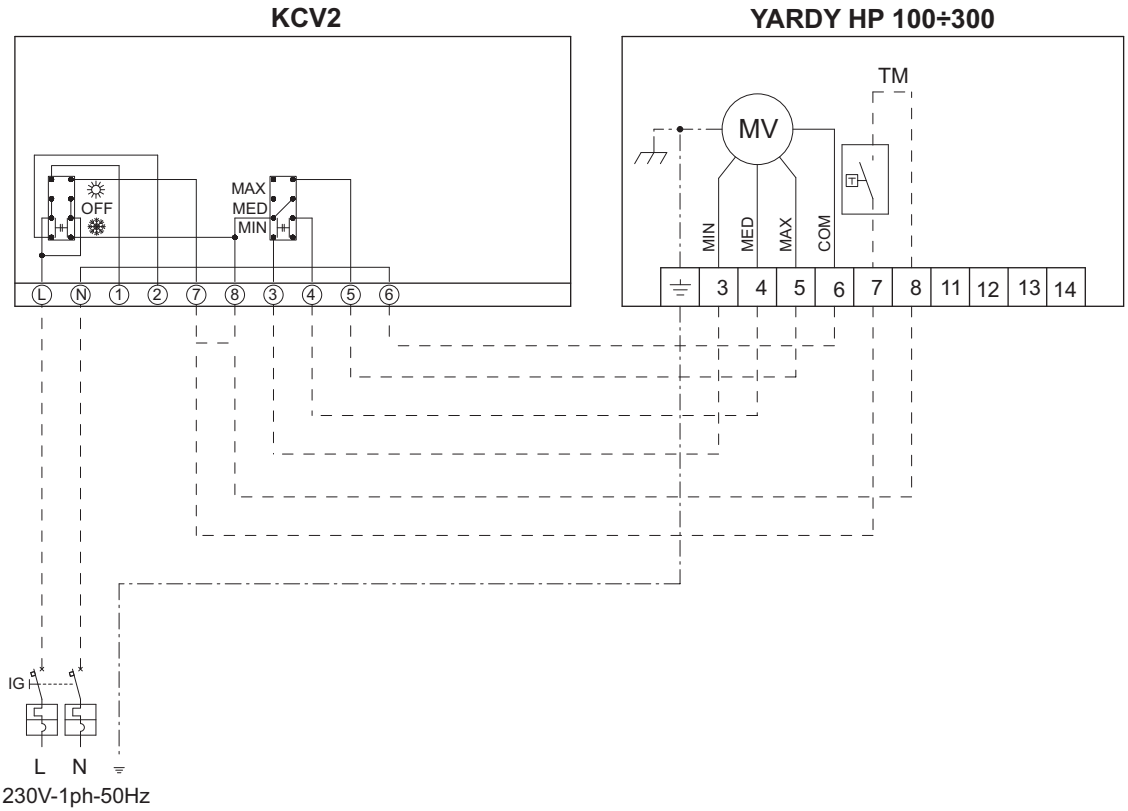
YardyHP	Unità base	Base unit
KCV2- KTCV2-KCTVA-KTCVR	Pannello comando	Control panel
IG	Interruttore automatico generale	Automatic general switch
TM	Termostato di minima	Minimum temperature thermostat
EV	Elettrovalvola estiva/invernale	Summer/winter valve
EV1 / EV2	Elettrovalvola estiva / Elettrovalvola invernale	Summer valve / Winter valve
ST1 / ST2	Sonda aria / Sonda acqua	Air probe / Water probe
L	Linea	Line phase
N	Neutro	Neutral
- - - -	Collegamenti a cura dell'installatore	Connections to be made by the installer
☼ / ❄	Riscaldare / Raffrescare	Heating / Cooling

YardyHP	Unité de base	Grundeinheit
KCV2- KTCV2-KCTVA-KTCVR	Panneau de commande	Bedientafel
IG	Interrupteur automatique général	Automatischer Schutzschalter
TM	Thermostat de température minimale	Mindesttemperaturregler
EV	Électrovanne été/hiver	Elektroventil Sommer/Winterbetrieb
EV1 / EV2	Électrovanne été / Électrovanne hiver	Elektroventil Sommerbetrieb / Elektroventil Winterbetrieb
ST1 / ST2	Sonde de l'air / Sonde de l'eau	Luftfühler / Wasserfühler
L	Phase ligne	Phasenleiter
N	Neutre	Nullleiter
- - - -	Raccordements à la charge de l'installateur	Vom Installateur auszuführender Anschluss
☼ / ❄	Chauffage / Rafraîchissement	Heizung / Kühlung

YardyHP	Unidad base
KCV2- KTCV2-KCTVA-KTCVR	Panel de mandos
IG	Interruptor automático general
TM	Termostato de mínima
EV	Electroválvula de verano-invierno
EV1 / EV2	Electroválvula de verano / Electroválvula de invierno
ST1 / ST2	Sonda del aire / Sonda del agua
L	Fase de línea
N	Neutro
- - - -	Conexiones a cargo del instalador
☼ / ❄	Calefacción / Enfriamiento

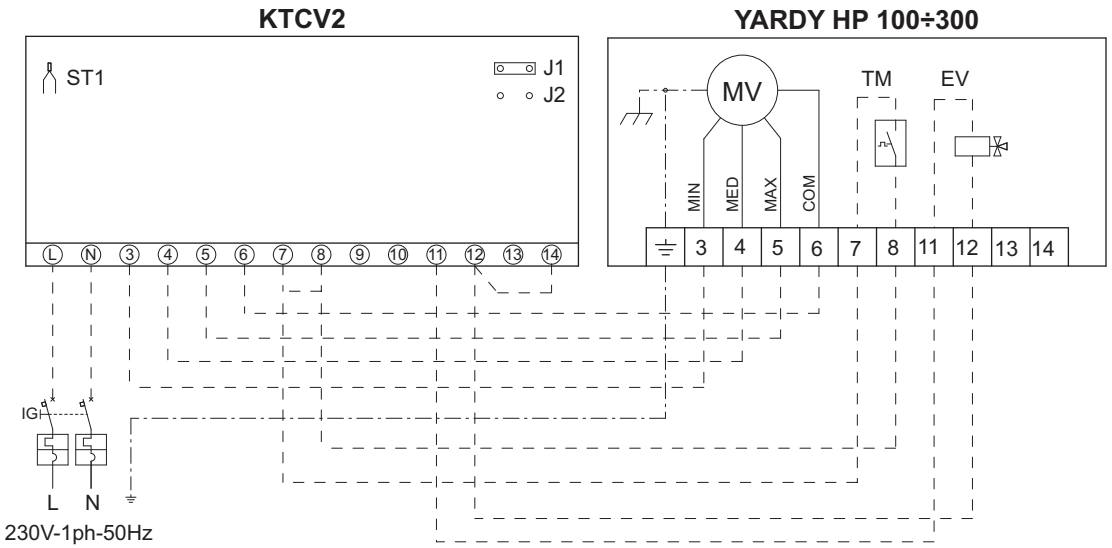
	100	150	200÷300
Min	Rosso / Red / Rouge / Rot / Rojo	Arancio / Orange / Naranja	Rosso / Red / Rouge / Rot / Rojo
Med	Arancio / Orange / Naranja	Nero / Black / Noir / Schwarz / Negro	Arancio / Orange / Naranja
Max	Nero / Black / Noir / Schwarz / Negro	Marrone / Brown / Marron / Braun / Marrón	Nero / Black / Noir / Schwarz / Negro
Com	Blu / Blue / Bleu / Blau / Azul		

Yardy HP + KCV2 (2 tubi) (2 pipes) (2 tubes) (2 Rohre) (2 tubos)



TM non fornito
TM not supplied
TM non fourni
TM Liegt nicht bei
TM no suministrada

Yardy HP + KTCV2 (2 tubi) (2 pipes) (2 tubes) (2 Rohre) (2 tubos)

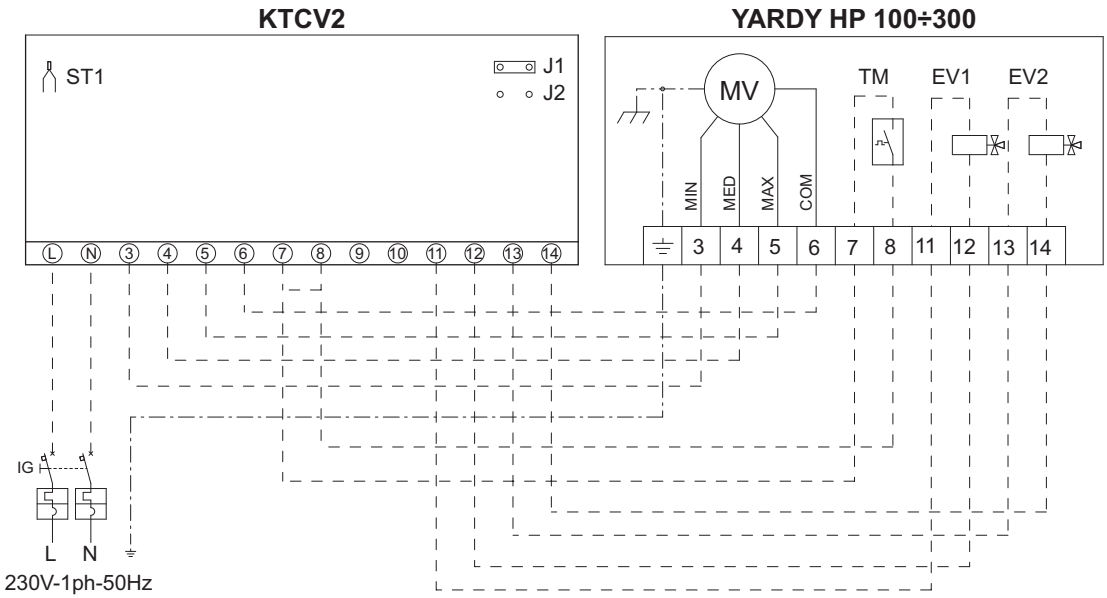


TM non fornito
TM not supplied
TM non fourni
TM Liegt nicht bei
TM no suministrada

Jumper J1 chiuso = Sonda aria ST1 interna
Jumper J1 closed = Internal ST1 air sensor
Jumper J1 fermé = Sonde air ST1 interne
Jumper J1 geschlossen = Interner Luftfühler ST1
Puente J1 cerrado = Sonda aire ST1 interna

Jumper J2 chiuso = Sonda aria ST1 Esterna
Jumper J2 closed = External ST1 air sensor
Jumper J2 fermé = Sonde air ST1 externe
Jumper J2 geschlossen = Externer Luftfühler ST1
Puente J2 cerrado = Sonda aire ST1 externa

Yardy HP + KCV2 (4 tubi) (4 pipes) (4 tubes) (4 Rohre) (4 tubos)

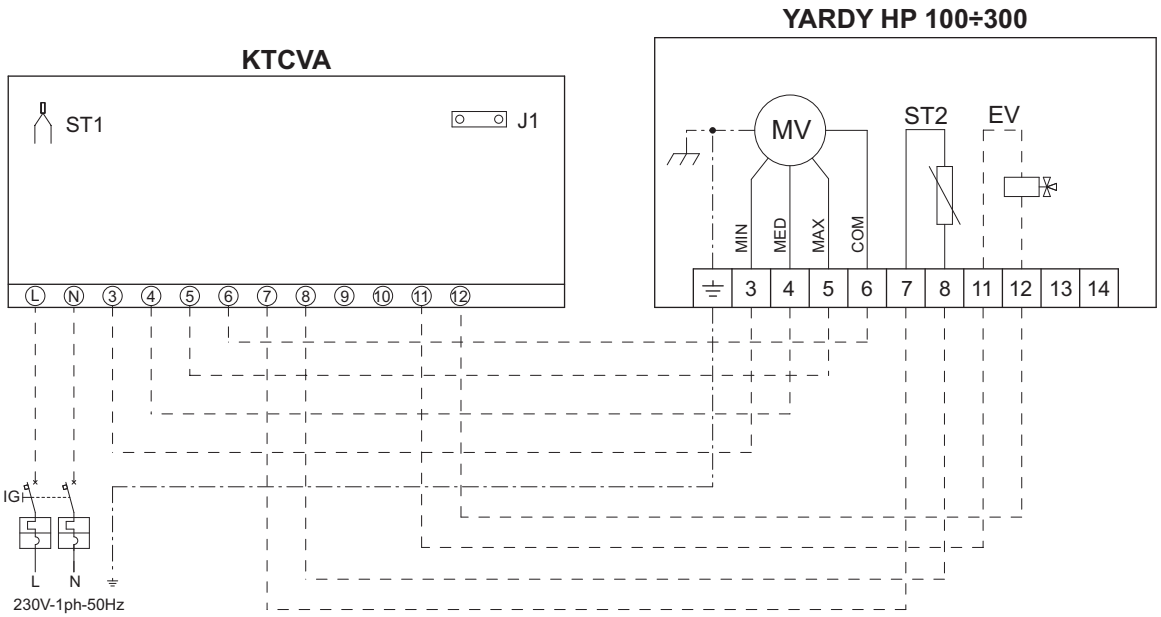


TM non fornito
TM not supplied
TM non fourni
TM Liegt nicht bei
TM no suministrada

Jumper J1 chiuso = Sonda aria ST1 interna
Jumper J1 closed = Internal ST1 air sensor
Jumper J1 fermé = Sonde air ST1 interne
Jumper J1 geschlossen = Interner Luftfühler ST1
Puente J1 cerrado = Sonda aire ST1 interna

Jumper J2 chiuso = Sonda aria ST1 Esterna
Jumper J2 closed = External ST1 air sensor
Jumper J2 fermé = Sonde air ST1 externe
Jumper J2 geschlossen = Externer Luftfühler ST1
Puente J2 cerrado = Sonda aire ST1 externa

Yardy HP + KTCVA (2 tubi) (2 pipes) (2 tubes) (2 Rohre) (2 tubos)



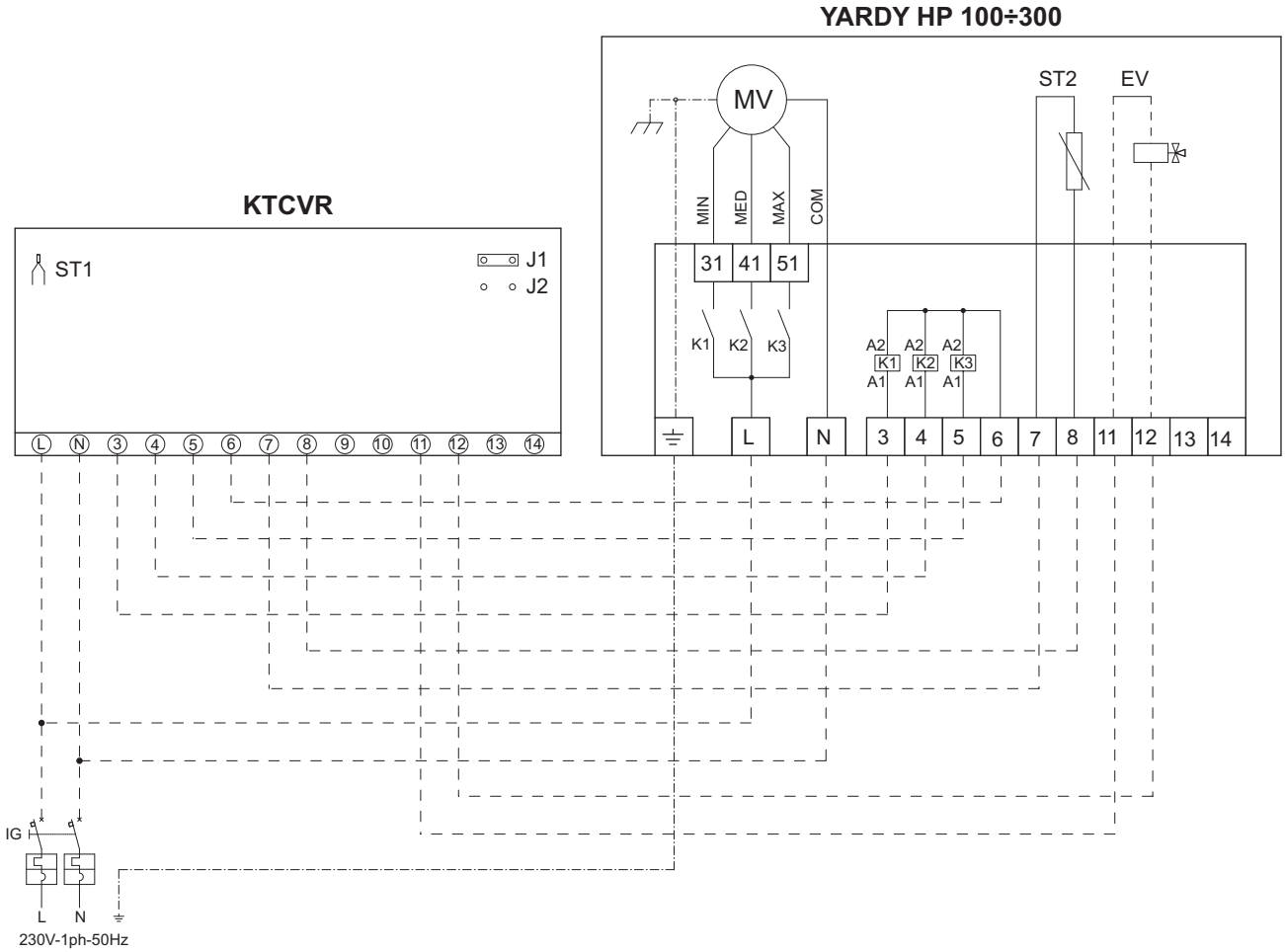
Jumper J1 chiuso = Sonda Aria ST1 Interna
Jumper J1 closed = Internal ST1 air sensor
Jumper J1 fermé = Sonde air ST1 interne
Jumper J1 geschlossen = Interner Luftfühler ST1
Puente J1 cerrado = Sonda aire ST1 interna

Jumper J1 aperto = Sonda Aria ST1 Esterna
Jumper J1 open = External ST1 air sensor
Jumper J1 ouvert = Sonde air ST1 externe
Jumper J1 öffnen = Externer Luftfühler ST1
Puente J1 abierto = Sonda aire ST1 exterior

La sonda ST2 è compresa nell'imballo del termostato.
The sensor ST2 is included in the thermostat package.
La sonde ST2 est comprise dans l'emballage du thermostat.
Der Fühler ST2 liegt der Verpackung des Thermostats bei.
La sonda ST2 se incluye en el embalaje del termostato.

In caso di presenza della valvola ON/OFF, la sonda acqua ST2 deve essere posta a monte della valvola stessa.
In the presence of the ON/OFF valve, the ST2 water sensor must be installed upstream of the valve itself.
En présence de la vanne ON/OFF, la sonde eau ST2 doit être placée en amont de la vanne.
Bei vorhandenem Ventil ON/OFF muss der Wasserfühler ST2 vor dem Ventil installiert sein.
Con la válvula ON/OFF, la sonda de agua ST2 debe instalarse aguas arriba de la válvula.

Yardy HP + KTCVR (2 tubi) (2 pipes) (2 tubes) (2 Rohre) (2 tubos)



Jumper J1 chiuso = Sonda Aria ST1 Interna
Jumper J1 closed = Internal ST1 air sensor
Jumper J1 fermé = Sonde air ST1 interne
Jumper J1 geschlossen = Interner Luftfühler ST1
Puente J1 cerrado = Sonda aire ST1 interna

Jumper J2 chiuso = 4 tubi
Jumper J2 closed = 4 pipes
Jumper J2 fermé = 4 tubes
Jumper J2 geschlossen = 4 Rohre
Puente J2 cerrado = 4 tubos

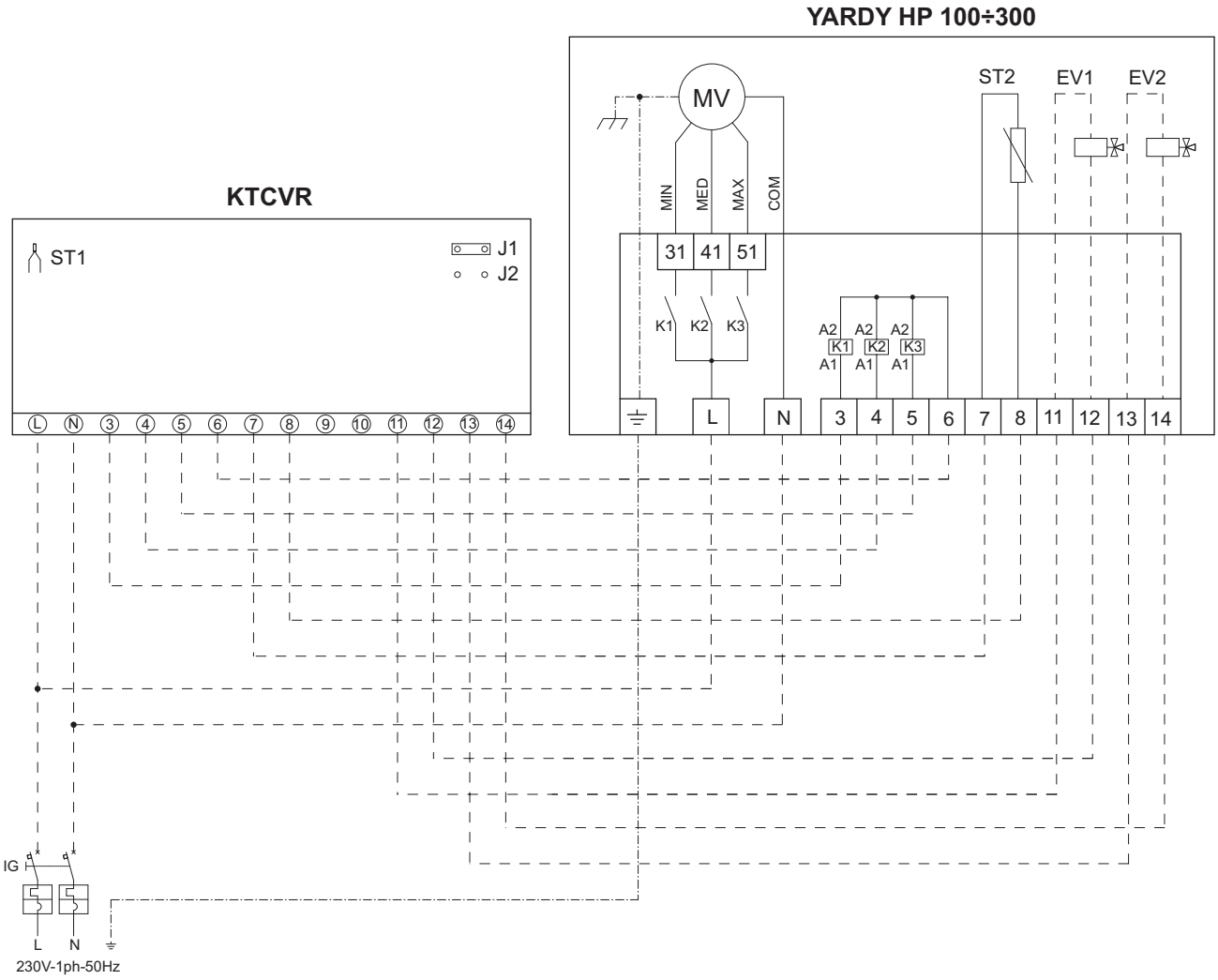
Jumper J1 aperto = Sonda Aria ST1 Esterna
Jumper J1 open = External ST1 air sensor
Jumper J1 ouvert = Sonde air ST1 externe
Jumper J1 öffnen = Externer Luftfühler ST1
Puente J1 abierto = Sonda aire ST1 exterior

Jumper J2 aperto = 2 tubi (2 tubi + RE)
Jumper J2 open = 2 pipes (2 pipes + RE)
Jumper J2 ouvert = 2 tubes (2 tubes + RE)
Jumper J2 öffnen = 2 Rohre (2 Rohre)
Puente J2 abierto = 2 tubos (2 tubos + RE)

La sonda ST2 è compresa nell'imballo del termostato.
The sensor ST2 is included in the thermostat package.
La sonde ST2 est comprise dans l'emballage du thermostat.
Der Fühler ST2 liegt der Verpackung des Thermostats bei.
La sonda ST2 se incluye en el embalaje del termostato.

Impianto a 2 tubi (2 tubi + RE) Jumper J2 aperto e sonda acqua ST2 a monte valvola (se presente).
2 pipe system (2 pipes + RE) Jumper J2 open and ST2 water sensor upstream from valve (if present).
Installation à 2 tuyaux (2 tuyaux + RÉ), Jumper J2 ouvert et sonde eau ST2 en amont de la vanne (si présente).
2-Rohr-Anlage (2 Rohre + Heizwiderstand) Jumper J2 geöffnet und Wasserfühler ST2 vor dem Ventil installiert (falls vorhanden).
Instalación de 2 tubos (2 tubos + resistencia): puente J2 abierto y sonda de agua ST2 antes de la válvula (si está presente).

Yardy HP + KTCVR (4 tubi) (4 pipes) (4 tubes) (4 Rohre) (4 tubos)



Jumper J1 chiuso = Sonda Aria ST1 Interna
Jumper J1 closed = Internal ST1 air sensor
Jumper J1 fermé = Sonde air ST1 interne
Jumper J1 geschlossen = Interner Luftfühler ST1
Puente J1 cerrado = Sonda aire ST1 interna

Jumper J2 chiuso = 4 tubi
Jumper J2 closed = 4 pipes
Jumper J2 fermé = 4 tubes
Jumper J2 geschlossen = 4 Rohre
Puente J2 cerrado = 4 tubos

Jumper J1 aperto = Sonda Aria ST1 Esterna
Jumper J1 open = External ST1 air sensor
Jumper J1 ouvert = Sonde air ST1 externe
Jumper J1 öffnen = Externer Luftfühler ST1
Puente J1 abierto = Sonda aire ST1 exterior

Jumper J2 aperto = 2 tubi (2 tubi + RE)
Jumper J2 open = 2 pipes (2 pipes + RE)
Jumper J2 ouvert = 2 tubes (2 tubes + RE)
Jumper J2 öffnen = 2 Rohre (2 Rohre)
Puente J2 abierto = 2 tubos (2 tubos + RE)

La sonda ST2 è compresa nell'imballo del termostato.
The sensor ST2 is included in the thermostat package.
La sonde ST2 est comprise dans l'emballage du thermostat.
Der Fühler ST2 liegt der Verpackung des Thermostats bei.
La sonda ST2 se incluye en el embalaje del termostato.

Impianto a 4 tubi Jumper J2 chiuso e sonda acqua ST2 posizionata sulla batteria calda (con o senza valvola).
4 pipe system Jumper J2 closed and ST2 water valve installed on the hot fan coil (with or without valve).
Installation à 4 tubes Jumper J2 fermé et sonde eau ST2 positionnée sur la batterie chaude (avec ou sans vanne).
4-rohrige Anlage Jumper J2 geschlossen und Wasserfühler ST2 auf das warme Register eingestellt (mit oder ohne Ventil).
Instalación de 4 tubos Jumper J2 cerrado y sonda agua ST2 ubicada en la batería caliente (con o sin válvula).

NOTE

RHOSS S.p.A.
Via Oltre Ferrovia - 33033 Codroipo (UD) Italy - tel. 0432.911611 - fax 0432.911600 - rhoss@rhoss.it www.rhoss.it - www.rhoss.com