



## INDEX

Dear Customer.....	4
General Recommendations.....	5
Safety symbols used.....	6
Personal protective equipment .....	6
<b>1 Installing the Indoor Unit.....</b>	<b>7</b>
1.1 Description of the product .....	7
1.2 Installation warnings .....	7
1.3 Data plate.....	10
1.4 Indoor Unit main dimensions .....	12
1.5 Minimum indoor unit installation distances .....	13
1.6 Indoor unit hydraulic connection .....	14
1.7 Connecting the chiller line.....	14
1.8 Electrical connection.....	15
1.9 Remote zone control (Optional) .....	21
1.10 MODBUS temperature and humidity room probes (Optional).....	22
1.11 Room chrono-thermostats (Optional) .....	23
1.12 Humidistat ON/OFF (Optional) .....	24
1.13 External temperature probe (Optional).....	24
1.14 Dominus V2 (optional).....	25
1.15 Dehumidifiers (optional) .....	25
1.16 Temperature control setting .....	26
1.17 System filling .....	27
1.18 Operating limits.....	28
1.19 Indoor Unit start-up (ignition). .....	29
1.20 Circulation pump.....	29
1.21 Domestic hot water storage tank unit.....	35
1.22 Kits available on request .....	36
1.23 Main components .....	37
<b>2 Instructions for use and maintenance .....</b>	<b>38</b>
2.1 General recommendations .....	38
2.2 Cleaning and maintenance .....	39
2.3 Restore central heating system pressure .....	40
2.4 Draining the system.....	40
2.5 Emptying the D.H.W. circuit.....	41
2.6 Storage tank draining .....	41
2.7 Cleaning the case.....	41
2.8 Permanent shutdown.....	41
<b>3 Control panel.....</b>	<b>42</b>
3.1 System use .....	42
3.2 Operating mode .....	45
3.3 Parameters menu, information and P.C.B. programming .....	51
3.4 Fault and anomaly signals .....	79
<b>4 Instructions for maintenance and initial check.....</b>	<b>88</b>
4.1 General recommendations .....	88
4.2 Initial check .....	89
4.3 Yearly appliance check and maintenance .....	89
4.4 Finned air coil maintenance.....	90
4.5 Hydraulic diagram.....	91
4.6 Wiring diagram.....	93
4.7 System filter.....	103



4.8	Troubleshooting.....	103
4.9	First ignition parameter setting.....	104
4.10	DHW (Domestic hot water) BOOST.....	107
4.11	Anti-legionella.....	107
4.12	Domestic hot water pump (optional) .....	107
4.13	Pump anti-block.....	108
4.14	Three-way anti-block.....	108
4.15	System setpoint correction.....	108
4.16	Photovoltaic.....	108
4.17	Integration with system internal electrical resistance .....	109
4.18	Integration with system external electrical resistances .....	110
4.19	Zone 2/3 safety thermostat .....	111
4.20	Conjunction Mode.....	111
4.21	Heat pump disabling function.....	111
4.22	Silent Mode function .....	111
4.23	Diverter valve management (summer / winter) .....	112
4.24	External probe setting .....	112
4.25	Manual drives.....	112
4.26	Outdoor unit Testmode Function .....	112
4.27	Outdoor Unit Pump Down .....	112
4.28	Snow accumulation prevention function .....	112
4.29	Supervision device configuration .....	112
4.30	Additional DHW storage tank function (optional).....	113
4.31	Dehumidification BOOST function .....	114
4.32	Dehumidification function.....	114
4.33	Casing removal.....	115
4.34	Indoor unit separation.....	122
<b>5</b>	<b>Technical data.....</b>	<b>126</b>
5.1	Technical data table (single-phase).....	126
5.2	Technical data table (three-phase).....	130
5.3	Product fiche Magis Hercules Pro 12 I (in compliance with Regulation 811/2013).....	134
5.4	Table 2 regulation 813/2013 (Magis Hercules Pro 12 I) .....	135
5.5	Product fiche Magis Hercules Pro 12 TI (in compliance with Regulation 811/2013) .....	136
5.6	Table 2 regulation 813/2013 (Magis Hercules Pro 12 TI) .....	137
5.7	Product fiche Magis Hercules Pro 14 I (in compliance with Regulation 811/2013).....	138
5.8	Table 2 regulation 813/2013 (Magis Hercules Pro 14 I) .....	139
5.9	Product fiche Magis Hercules Pro 14 TI (in compliance with regulation 811/2013).....	140
5.10	Table 2 regulation 813/2013 (Magis Hercules Pro 14 TI) .....	141
5.11	Product fiche Magis Hercules Pro 16 I (in compliance with Regulation 811/2013).....	142
5.12	Table 2 regulation 813/2013 (Magis Hercules Pro 16 I) .....	143
5.13	Product fiche Magis Hercules Pro 16 TI (in compliance with regulation 811/2013).....	144
5.14	Table 2 regulation 813/2013 (Magis Hercules Pro 16 TI) .....	145
5.15	Parameters for filling in the package fiche .....	146



## Dear Customer

*Congratulations for having chosen a top-quality Immergas product, able to assure well-being and safety for a long period of time. As an Immergas customer you can also count on a Qualified Authorised After-Sales Technical Assistance Centre, prepared and updated to guarantee the constant efficiency of your products. Read the following pages carefully: you will be able to draw useful tips on the proper use of the device, compliance with which will confirm your satisfaction with the Immergas product.*

*For assistance and routine maintenance, contact Authorised Technical Service Centres: they have original spare parts and are specifically trained directly by the manufacturer.*

**Thermal systems must undergo periodic maintenance and scheduled checks of the energy efficiency in compliance with national, regional or local provisions in force.**

The company **IMMERGAS S.p.A.**, with registered office in via Cisa Ligure 95 42041 Brescello (RE), declares that the design, manufacturing and after-sales assistance processes comply with the requirements of standard **UNI EN ISO 9001:2015**.

For further details on the product CE marking, request a copy of the Declaration of Conformity from the manufacturer, specifying the appliance model and the language of the country.

The manufacturer declines all liability due to printing or transcription errors, reserving the right to make any modifications to its technical and commercial documents without forewarning.







## GENERAL RECOMMENDATIONS

This book contains important information for the:

**Installer** (section 1);

**User** (section 2);

**Maintenance Technician** (section 3).

- The user must carefully read the instructions in the specific section (section 2).
- The user must limit operations on the appliance only to those explicitly allowed in the specific section.
- The appliance must be installed by qualified and professionally trained personnel.
- This manual must be stored with care and consulted carefully, as all of the warnings provide important safety indications for installation, use and maintenance stages.
- In compliance with legislation in force, the systems must be designed by qualified professionals. Installation and maintenance must be performed in compliance with the regulations in force, according to the manufacturer's instructions and by professionally qualified staff, intended as staff with specific technical skills in the system sector, as envisioned by the Law.
- Improper installation or assembly of the Immergas appliance and/or components, accessories, kit and devices can cause unexpected problems to people, animals and objects. Read the instructions provided with the product carefully to ensure proper installation.
- This instruction manual provides technical information for installing Immergas products. As for the other issues related to the installation of products (e.g. safety at the workplace, environmental protection, accident prevention), it is necessary to comply with the provisions of the standards in force and the principles of good practice.
- All the Immergas products are protected with suitable transport packaging.
- The material must be stored in a dry place protected from the weather.
- Damaged products must not be installed.
- Maintenance must be carried out by skilled technical staff. For example, the Authorised Service Centre that represents a guarantee of qualifications and professionalism.
- The appliance must only be destined for the use for which it has been expressly declared. Any other use will be considered improper and therefore potentially dangerous.
- If errors occur during installation, operation and maintenance, due to non-compliance with technical laws in force, standards or instructions contained in this booklet (or however supplied by the manufacturer), the manufacturer is excluded from any contractual and extra-contractual liability for any damages and the device warranty is invalidated.
- In the event of malfunctions, faults or incorrect operation, turn the appliance off and contact an authorised company (e.g. the Authorised Technical Assistance Centre, which has specifically trained staff and original spare parts). Do not attempt to modify or repair the appliance alone.



## SAFETY SYMBOLS USED



### GENERIC HAZARD

Strictly follow all of the indications next to the pictogram. Failure to follow the indications can generate hazard situations resulting in possible harm to the health of the operator and user in general, and/or property damage.



### ELECTRICAL HAZARD

Strictly follow all of the indications next to the pictogram. The symbol indicates the appliance's electrical components or, in this manual, identifies actions that can cause an electrical hazard.



### WARNING FOR INSTALLER

Read the instruction booklet carefully before installing the product.



### WARNINGS

Strictly follow all of the indications next to the pictogram. Failure to follow the indications can generate hazard situations resulting in possible minor injuries to the health of both the operator and the user in general, and/or slight material damage.



### ATTENTION

Read and understand the instructions of the appliance before carrying out any operation, carefully following the instructions given. Failure to observe the instructions may result in malfunction of the unit.



### INFORMATION

Indicates useful tips or additional information.



### EARTH TERMINAL CONNECTION

The symbol identifies the appliance's earth terminal connection point.



### DISPOSAL WARNING

The user must not dispose of the appliance at the end of its service life as municipal waste, but send it to appropriate collection centres.

## PERSONAL PROTECTIVE EQUIPMENT



### SAFETY GLOVES



### EYE PROTECTION



### SAFETY FOOTWEAR



# 1 INSTALLING THE INDOOR UNIT

## 1.1 DESCRIPTION OF THE PRODUCT

MAGIS HERCULES PRO 12/14/16 I (single-phase and three-phase) is a heat pump consisting of:

- UIMHP API (single-phase and three-phase) indoor unit (hereinafter called, indoor unit or UIMHPI).
- UE Audax Pro 12-14-16 V2 I outdoor condensing unit (single-phase and three-phase) (hereinafter referred to as outdoor condensing unit or UE Audax Pro).

The product MAGIS HERCULES PRO 12/14/16 I (single-phase and three-phase) is perfectly operational only if the two units are correctly powered and interconnected.

The UIMHP I indoor unit was designed solely for floor installation for heating and air conditioning and to produce domestic hot water for domestic use and similar purposes.

For normal operation it must be paired with one of the following outdoor units:

- UE AUDAX PRO 12 V2 I;
- UE AUDAX PRO 12 V2 TI;
- UE AUDAX PRO 14 V2 I;
- UE AUDAX PRO 14 V2 TI;
- UE AUDAX PRO 16 V2 I;
- UE AUDAX PRO 16 V2 TI.

Accordingly, it is necessary to comply with all of the rules regarding safety and the use of both appliances.

## 1.2 INSTALLATION WARNINGS



**Operators who install and service the appliance must wear the suitable personal protective equipment required by applicable law.**



The place of installation of the appliance and relative Immergas accessories must have suitable features (technical and structural) such to allow (always in safety, efficiency and easy conditions):

- installation (according to the provisions of technical legislation and technical regulations);
- maintenance operations (including scheduled, periodic, routine and special maintenance);
- removal (to outdoors in the place for loading and transporting the appliances and components) as well as the eventual replacement of those with appliances and/or equivalent components.



Installation must be carried out according to regulation standards, current legislation and in compliance with local technical regulations and the required technical procedures.



**The appliance operates with R410A refrigerant gas.**

**This gas is ODOURLESS.**

**Pay the utmost attention**

**Strictly follow the instruction handbook of the Outdoor Unit before installation and any type of operation on the chiller line.**



The manufacturer declines all liability in the event of damage caused by appliances removed from other systems or for any non-conformities with such equipment.



Only a professionally enabled company is authorised to install Immergas appliances.





Check the environmental operating conditions of all parts relevant to installation, referring to this booklet.



If installing a kit or servicing the appliance, first empty the system and domestic hot water circuits when necessary, so as not to compromise the appliance's electrical safety (Par. 2.4, 2.5).

Always disconnect the appliance from voltage and, depending on the type of operation, decrease the pressure and/or bring it to zero in the gas and DHW circuits.



Before installing the appliance, ensure that it is delivered in perfect condition; if in doubt, contact the supplier immediately.

Packing materials (staples, nails, plastic bags, polystyrene foam, etc.) constitute a hazard and must be kept out of the reach of children.

If the appliance is installed inside or between cabinets, ensure sufficient space for routine servicing; for minimum installation distances, see Fig. 4.



Keep all combustible material away from the appliance (paper, rags, plastic, polystyrene, etc.).



Any modification to the appliance that is not explicitly indicated in this section of the booklet is forbidden.

#### Installation standards



The Indoor Unit must only be installed inside in a place in which the temperature cannot fall below 5°C.



This type of installation is possible when permitted by the laws in force in the appliance's country of destination.



**Do not install in places/rooms that constitute public areas of apartment buildings, internal stairways or other escape routes (e.g. floor landings, entrance halls, etc.).**



**To prevent electrocution, fire or injury, always switch off the unit, disable the protective switch and, if smoke escapes or if the unit is extremely noisy, contact the Authorised After-Sales Technical Assistance Centre.**



**Do not install in places where there is the risk of combustible gas escaping.**



**Do not install near sources of heat.**



**Pay attention not to generate sparks as follows:**

**- Do not remove the fuses while the unit is on.**

**It is recommended to install the outlet high up. Lay the cables in such a way that they do not get tangled.**



This Indoor Unit is used to heat water to below boiling temperature in atmospheric pressure.



They must be connected to a central heating system and domestic hot water circuit suited to their performance and capacity.



**The appliance is built to also operate in cooling mode.  
If cold water production, during summer, could interfere and damage the central heating only systems, necessary precautions must be taken to prevent that an unintentional production of cold water enters the heating only system.**



**Failure to comply with the above implies personal responsibility and invalidates the warranty.**

**“Anti-legionella” thermal treatment of the accumulation storage tank.**



The anti-Legionella function is programmed directly on the control panel.

During this phase, the temperature of the water inside the tank exceeds 60°C with the subsequent risk of burns.  
Keep this domestic hot water treatment under control (and inform the users) to prevent unforeseeable damage to people, animals, things.  
If required install a thermostatic valve on the domestic hot water outlet to prevent scalding.

INSTALLER

USER

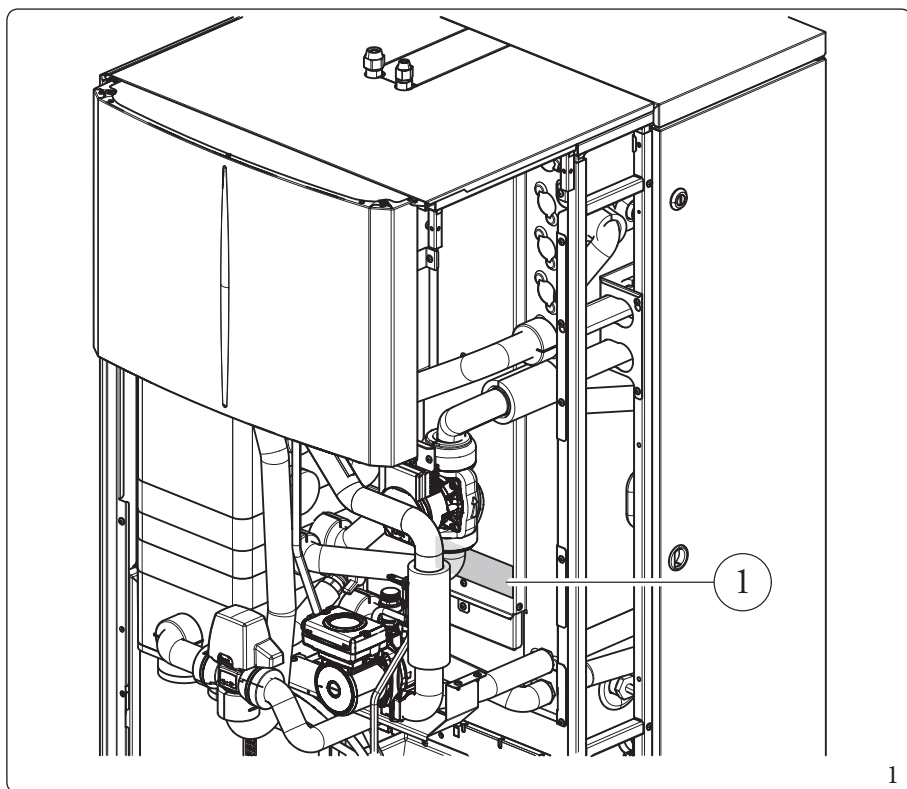
CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



### 1.3 DATA PLATE



Key (Fig. 1):

1 - Data plate



## Key for data nameplate

Md.	Cod.Md.	Sr N°	CHK
Power Supply 1:	Max Refrigerant Pressure (High/Low):		
Power Supply 2 (Opt):	CH - Max Temp:	Max Press:	
Power Supply 2 (Opt):	DHW - Max Temp:	Max Press:	
Power Supply 3 (Opt):	Type:		
Power Supply 3 (Opt):	Refrigerant:		
Operating range:	DHW Tank:		
	Degree of protection:		
	Net weight:		

2



The technical data are provided on the data plate on the appliance.

	ENG
Md.	Model
Cod. Md.	Model code
Sr N°	Serial Number
CHK	Check
Power Supply 1	Electric power supply 1 (voltage, frequency and rated power) of the heat pump (HP) and of the DHW electric resistance (DHW EH 1)
Max Refrigerant Pressure (High/Low)	Refrigerant gas pressure (maximum/minimum)
Power Supply 2 (Optional)	Electric power supply 2 (optional) (voltage, frequency and rated power) of the central heating electric resistance (CHEH 1)
CH - Max Temp / Max Press	Maximum temperature / Maximum pressure in CH mode
Power Supply 2 (Optional)	Electric power supply 2 (optional) (voltage, frequency and rated power) of the CH electric resistance (CHEH 1) and of the CH electric resistance (CHEH 2)
DHW - Max Temp / Max Press	Maximum temperature / Maximum pressure in DHW mode
Power Supply 3 (Optional)	Electric power supply 3 (optional) (voltage, frequency and rated power) of the DHW electric resistance (DHW EH 1)
Type	Type of appliance
Power Supply 3 (Optional)	Electric power supply 3 (optional) (voltage, frequency and rated power) of the DHW electric resistance (DHW EH 2) and of the DHW electric resistance (DHW EH 3)
Refrigerant	Outdoor unit refrigerant
Operating range	Operating temperature
DHW Tank	DHW tank capacity
Degree of production	Electric protection rating
Net weight	Net weight

INSTALLER

USER

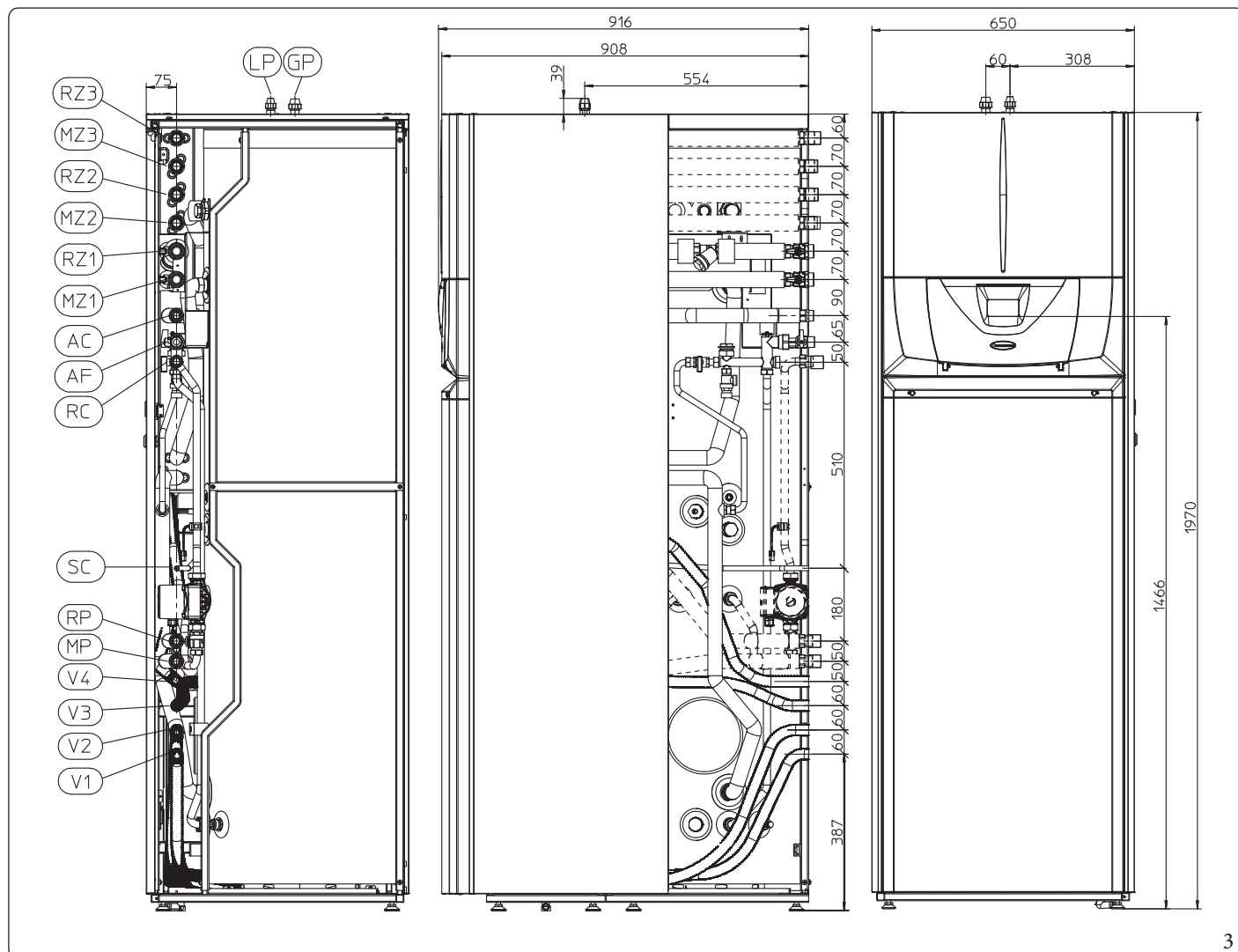
CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



## 1.4 INDOOR UNIT MAIN DIMENSIONS



3

Key (Fig. 3):

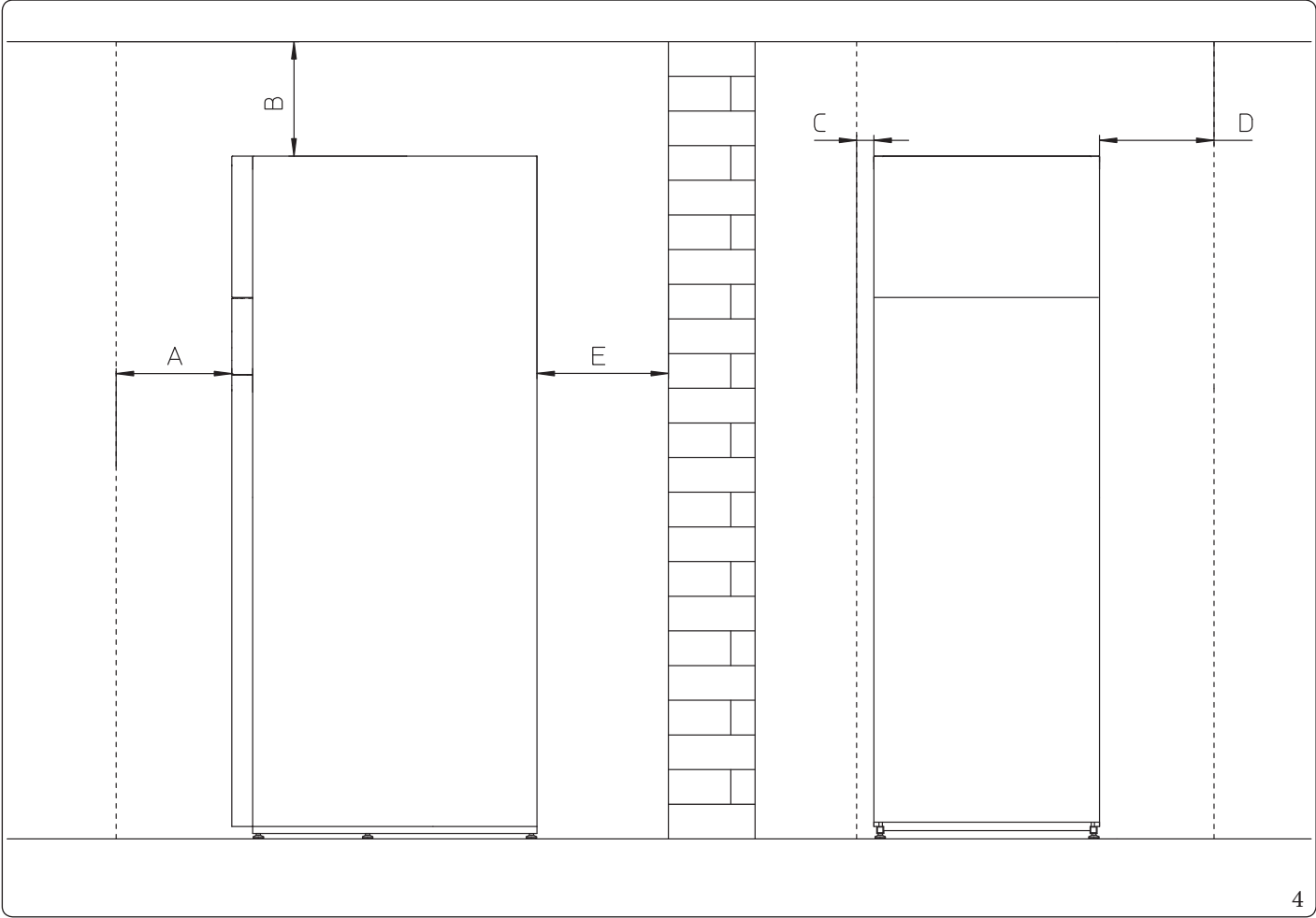
- RP - Return from solar panels (optional)
- MP - Flow from solar panels (optional)
- RZ3 - Mixed zone 3 system return (optional)
- MZ3 - Mixed zone 3 system flow (optional)
- RZ2 - Mixed zone 2 system return (optional)
- MZ2 - Mixed zone 2 system flow (optional)
- RZ1 - Direct zone 1 system return
- MZ1 - Direct zone 1 system flow
- AC - Domestic hot water outlet

- AF - DHW (Domestic hot water) water inlet
- RC - Pump (optional)
- SC - Discharge any condensate collected in the tray
- LP - Chiller line - liquid phase
- GP - Chiller line - gaseous phase
- V1 - 3<sup>rd</sup> zone electrical connections
- V2 - Additional resistance power supply electrical connections
- V3 - Power supply cable electrical connections
- V4 - Main electrical connections

Height (mm)		Width (mm)		Depth (mm)			
1970		650		916			
CONNECTIONS							
CHILLER LINE		D.H.W.	RECIRCULA- TION	SYSTEM			
LP	GP	AC - AF	RC	RP - MP	RZ1 - MZ1	RZ2 - MZ2	RZ3 - MZ3
SAE 3/8"	SAE 5/8"	G 3/4"	G 3/4"	G 3/4"	G 1"	G 1"	G 1"



1.5 MINIMUM INDOOR UNIT INSTALLATION DISTANCES



Key (Fig. 4):

- A - 500 mm
- B - 200 mm
- C - 30 mm
- D - 400 mm
- E - 10 mm



## 1.6 INDOOR UNIT HYDRAULIC CONNECTION

### 3 and 8 bar safety valve



The appliance safety valves outlet must be connected to a tundish.  
Otherwise, the appliance's manufacturer declines any responsibility in case of flooding if the drain valves cut.

The current technical standards in force prescribes the washing and treatment of the water in the heating and water system, in order to protect the system and the appliance from deposits (e.g. scale), slurry or other hazardous deposits.

Water connections must be made in a rational way using the couplings on the Indoor Unit template.



The manufacturer declines all liability in the event of damage caused by the installation of an automatic filling system.

In order to meet the system requirements established by EN 1717 in terms of pollution of drinking water, we recommend installing the IMMERGAS anti-backflow kit to be used upstream of the cold water inlet connection of the Indoor Unit. We also recommend using category 2 heat transfer fluid (ex: water + glycol) in the Indoor Unit primary circuit (heating and/or cooling circuit), as defined in standard EN 1717.



To preserve the duration of appliance efficiency features, in the presence of water whose features can lead to the deposit of lime scale, installation of the "polyphosphate dispenser" kit is recommended.

## 1.7 CONNECTING THE CHILLER LINE

As far as connecting the chiller line is concerned, all the instructions contained in the outdoor unit instructions booklet must be followed.

Make the connections directly on the indoor unit couplings.

# 1.8 ELECTRICAL CONNECTION

## Indoor unit electrical connection

The internal unit has an IPX5D degree of protection; electrical safety of the appliance is achieved only when it is properly connected to an efficient earthing system, as specified by current safety standards.



The manufacturer declines any responsibility for damage or physical injury caused by failure to connect the Indoor Unit to an efficient earthing system or failure to comply with the IEC reference standards.

Connections are provided to both the control panel (Fig. 8) and the main panel (Fig. 9).

### Main panel opening (Fig. 5).

To open the main panel, simply follow the instructions below:

1. Remove the aesthetic profile.
2. Disassemble the lower front.
3. Loosen the screws (a)
4. Remove the main panel cover (b).

Ensure that the electrical installation corresponds to maximum absorbed power specifications as shown on the indoor unit data name-plate.

Indoor units are supplied complete with an “X” type power cable (c) without plug.



**The power supply cable must be connected to a 230V  $\pm 10\%$  / 50Hz mains supply respecting L-N polarity and earth connection; this network must also have a multi-pole circuit breaker with class III overvoltage category in compliance with installation regulations.**



**To protect from possible leakage of DC voltage, it is necessary to provide a type A or type F residual current safety device with 30 mA sensitivity.**



**If the power supply cable is damaged, it must be replaced by a special cable or assembly, which are only available from the manufacturer or its Authorised After-Sales Technical Assistance Centre.  
It is recommended to contact a qualified company (e.g. the Authorised After-Sales Technical Assistance Centre) for replacement to avoid a hazard.**

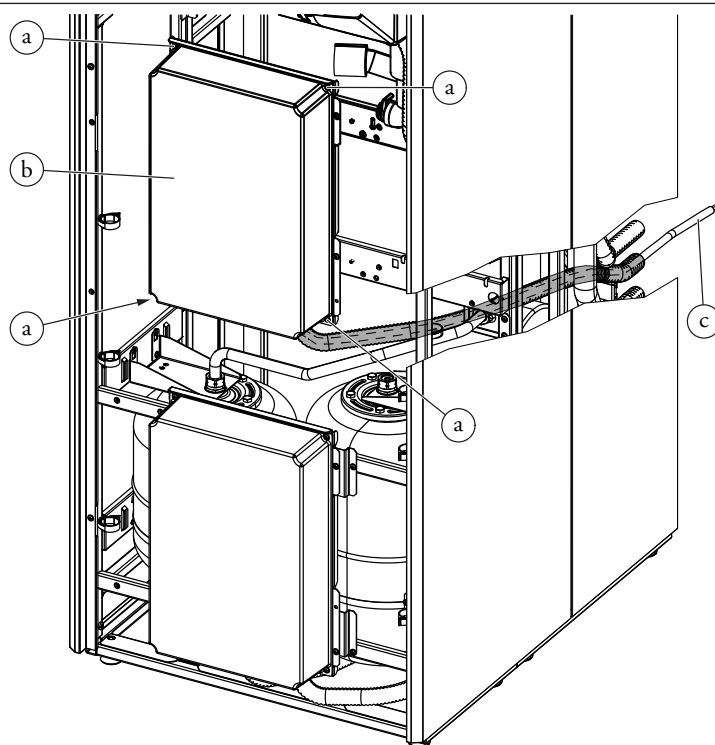


The power supply cable must be laid as shown (Fig. 5).

If the fuses on the circuit boards need to be replaced, this must also be done by qualified personnel.

The appliance is equipped with two fuses: one 3.15A rapid 230 V fuse and one 10 A rapid 230 V fuse for integrative resistance.

For the main power supply to the appliance, never use adapters, multiple sockets or extension leads.





## Electrical connections to the main panel

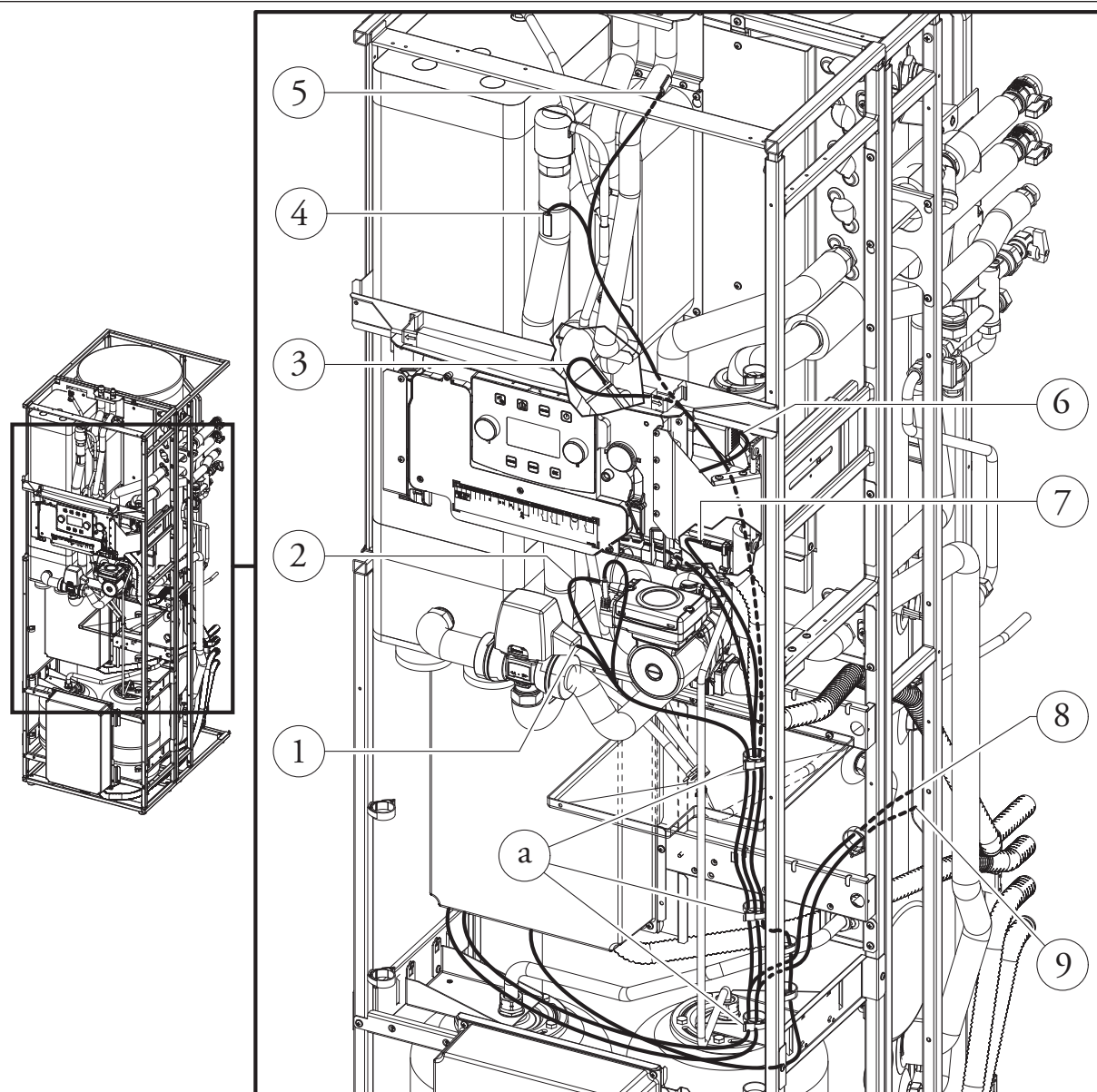
The electrical connections available are:

- Zone 1 flow probe;
- Zone 2 flow probe;
- Dehumidifier Zone 2;
- Zone 2 humidistat;
- Zone 2 thermostat;
- DHW recirculation probe or alternatively additional DHW storage tank probe;
- Optional DHW (Domestic hot water) integrative resistances;
- Optional system integrative resistances;
- Recirculation pump;
- Zone 2 pump;
- Zone 2 Mixing Valve;
- Zone 2 dehumidifier alarm input.

The connection cables must follow the predetermined path using the special cable glands (a) (Fig. 6).

Key (Fig. 6):

1	-	Three-way connection (M30)
2	-	Pump connection (M1)
3	-	Return probe connection (B5)
4	-	Flow probe connection (B1)
5	-	Liquid phase probe (B29)
6	-	Zone 1 pump connection (M10-1)
7	-	Flow meter connection (B25)
8	-	DHW probe connection (B2)
9	-	DHW (Domestic hot water) resistance connection (E15-A)
a	-	Cable gland



### Open the control panel connections compartment (Fig. 7).

To carry out electrical connections, all you have to do is open the connections compartment as follows.

1. Remove the cover and the aesthetic profile.
2. Disassemble the cover.
3. Loosen the screws (a).
4. Remove the cover (b) from the control panel (c).

At this point, you can access the terminal board.

### Electrical connections to the control panel

The electrical connections available are:

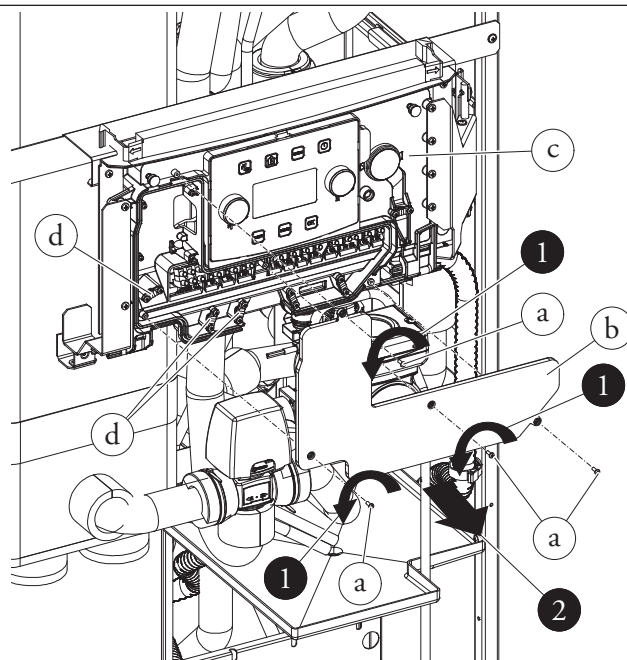
- Photovoltaic system: connecting the product to a photovoltaic system enhances use of the outdoor unit when the photovoltaic panels are operating.
- Dehumidifier zone 1.
- Zone 1 dehumidifier alarm input.
- Summer/winter diverter.
- Multifunction relay.
- Zone 1 humidistat and thermostat.
- Zone 1, 2, 3 remote devices (Zone remote panel, Temperature/humidity probe, Dominus).
- External probe
- Heat pump disabling.

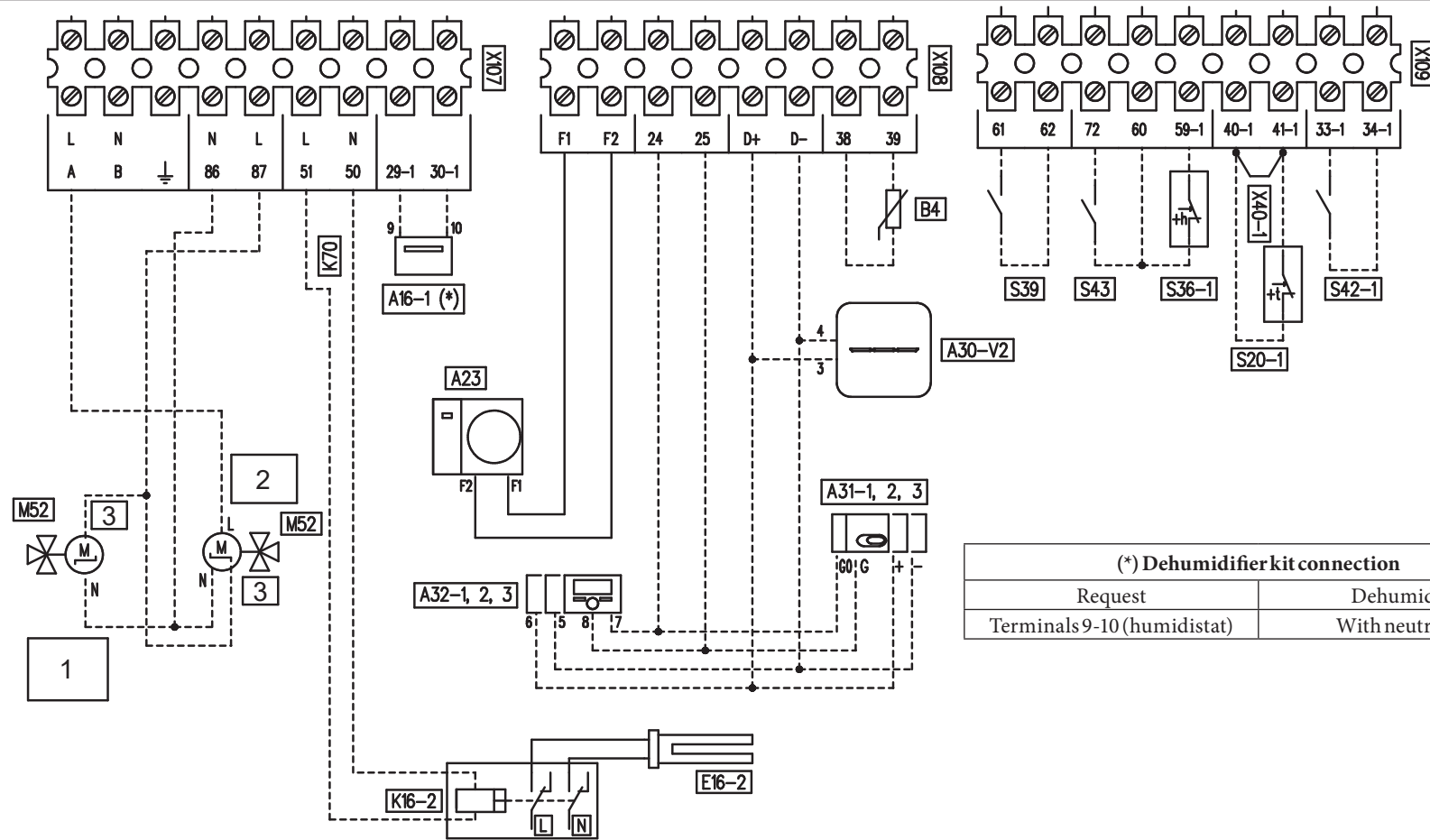
Make the various electrical connections according to your needs (Fig. 8).

### Outdoor unit electrical connection

The indoor unit must be coupled to an outdoor unit by connecting terminals F1 and F2 as shown in the wiring diagram (Fig.8). The outdoor unit is powered at 230 V, regardless of the indoor unit.

Configure the parameter "HP Model" as indicated in the paragraph (Par. 3.3) according to the type of connected outdoor unit.



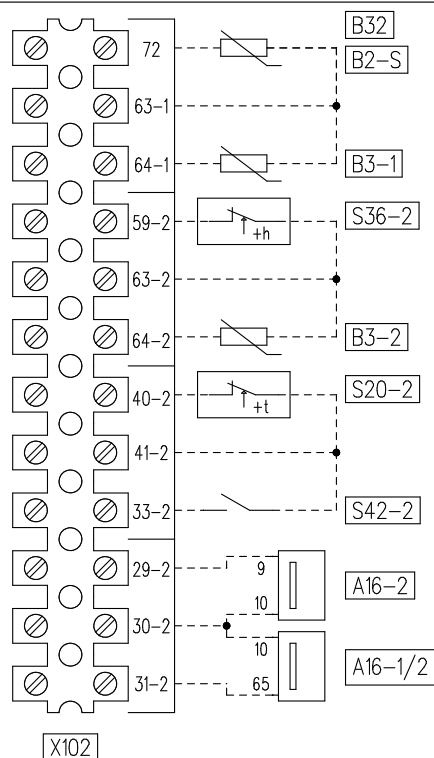


(*) Dehumidifier kit connection	
Request	Dehumidify
Terminals 9-10 (humidistat)	With neutral air

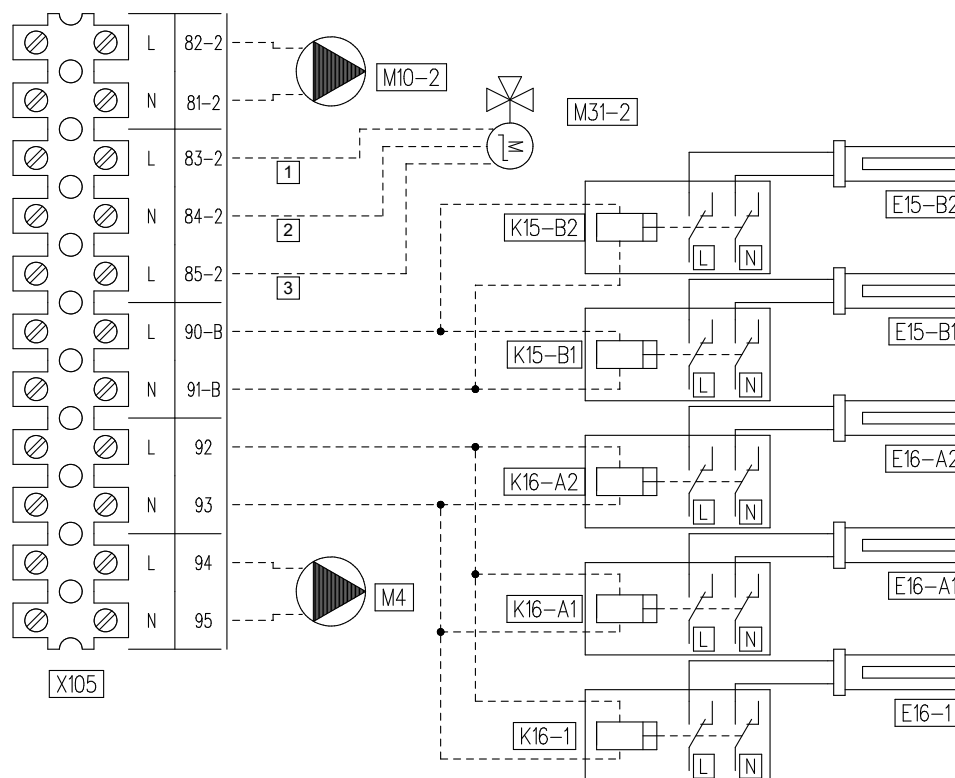
Key (Fig. 8):

- |           |   |       |  |
|-----------|---|-------|--|
| A16-1     | - Zone 1 dehumidifier (optional)                            | S20-1 | - Zone 1 room thermostat (optional)    |
| A23       | - Outdoor unit  | S36-1 | - Zone 1 humidistat (optional)         |
| A30-V2    | - Dominus V2 (optional)                                     | S39   | - Photovoltaic inlet (optional)        |
| A31-1,2,3 | - MODBUS zone 1, 2, 3 Temperature/Humidity probe (optional) | S42-1 | - Zone 1 dehumidifier alarm (optional) |
| A32-1,2,3 | - Zone 1, 2, 3 remote panel (optional)                      | S43   | - Pdc disabling selector (optional)    |
| B4        | - External probe  | X40-1 | - Zone 1 room thermostat link          |
| E16-2     | - Zone 2 external system integrative resistance (optional)  | 1     | - Valve with spring return             |
| K16-2     | - System integrative resistance relay (optional)            | 2     | - 2-point valve                        |
| K70       | - Multifunction relay (optional)                            | 3     | - Open/Closed                          |
| M52       | - Summer/winter diverter (optional)                         |       |  |





Dehumidifier kit connection	
Request	Dehumidify
Terminals 9-10 (humidistat)	With neutral air
Terminals 65-10 (thermostat)	With cooled air



9

*Key (Fig. 9):*

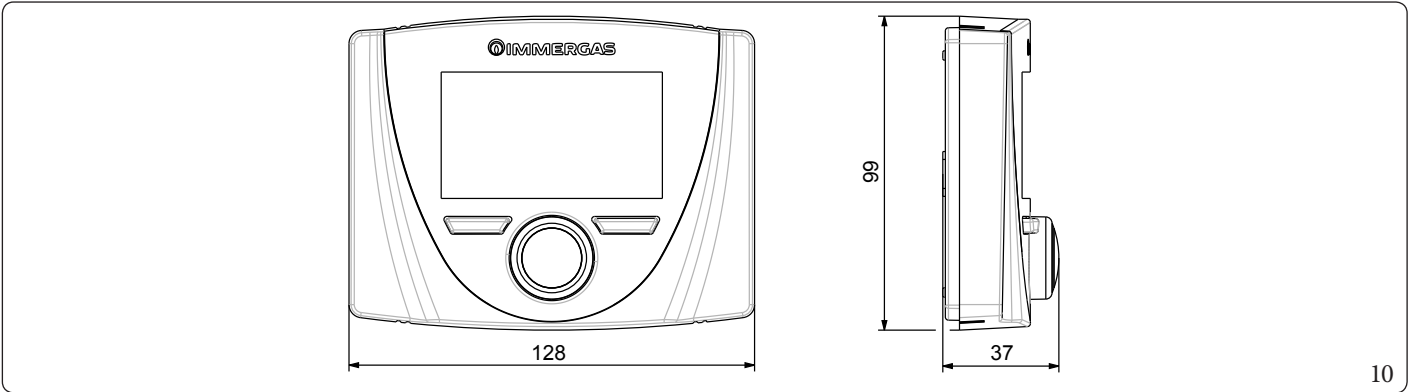
- |             |  |
|-------------|--|
| A16-1/2     | - Zone 1 or zone 2 dehumidifier (optional)                 |
| A16-2       | - Zone 2 dehumidifier (optional)                           |
| B2/S        | - Additional DHW storage tank probe (optional)             |
| B3-1        | - Zone 1 flow probe (optional)                             |
| B3-2        | - Zone 2 flow probe (optional)                             |
| B32         | - Recirculation Probe                                      |
| E15-B1, -B2 | - Secondary DHW integration resistance (optional)          |
| E16-A1, -A2 | - Internal system integrative resistance (optional)        |
| E16-1       | - Zone 1 external system integrative resistance (optional) |
| K15-B1, B2  | - Secondary DHW integration resistance relay (optional)    |
| K16-A1, A2  | - System integrative resistance relay (optional)           |

- |              |   |
|--------------|---|
| <i>K16-1</i> | - <i>System integrative resistance relay (optional)</i> |
| <i>M4</i>    | - <i>DHW recirculation pump (optional)</i>              |
| <i>M10-2</i> | - <i>Zone 2 circulator pump (optional)</i>              |
| <i>M31-2</i> | - <i>Zone 2 mixing valve (optional)</i>                 |
| <i>S20-2</i> | - <i>Zone 2 room thermostat (optional)</i>              |
| <i>S36-2</i> | - <i>Zone 2 humidistat (optional)</i>                   |
| <i>S42-2</i> | - <i>Zone 2 dehumidifier alarm (optional)</i>           |
| <br>         |   |
| <i>1</i>     | - <i>Closed</i>   |
| <i>2</i>     | - <i>Common</i>   |
| <i>3</i>     | - <i>Open</i>   |

1.9 REMOTE ZONE CONTROL (OPTIONAL)

This remote device is used to adjust the setpoints and to view the main information of the zone where it was configured. Make the connection to the appliance as shown (Fig. 8) and leave the jumper on terminals 40-1/41-1 for zone 1 and terminals 40-2/41-2 for zone 2. To correctly configure the device, set the parameters as described below:

Assistance Menu -> Device configuration	
Slave address: Address to configure according to the zone where the device is installed	Zone 1 = 41
	Zone 2 = 42
	Zone 3 = 43
Baud Rate	9600
Parity bit	Even
Stop bits	1
Heat pump control	NO

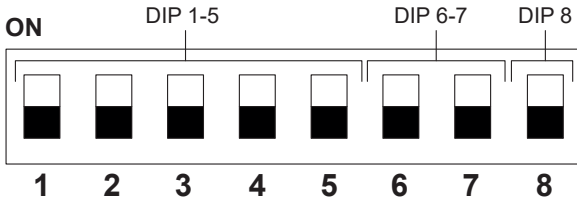



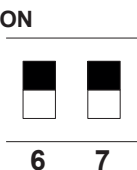
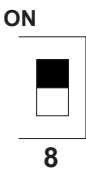


## 1.10 MODBUS TEMPERATURE AND HUMIDITY ROOM PROBES (OPTIONAL)

The Modbus temperature and humidity probe is used to detect the room temperature and humidity and to calculate the dew point. In addition, by setting the relative zone room setpoints available on the Control panel (see Par. 3.3), it is possible to check the temperature and humidity of a room.

Make the connection to the appliance as shown (Fig. 8) and set the DIP-switches on the probe.

DIP-Switch configuration table

		
DIP 1-5 (Address)		Zone 1 (Address 131)
		Zone 2 (Address 132)
		Zone 3 (Address 133)
DIP 6-7 (Type)		Modbus 1 - 8 - E - 1
DIP 8 (Speed)		9600 bit/s



## 1.11 ROOM CHRONO-THERMOSTATS (OPTIONAL)

The Indoor Unit is prepared for the application of room chrono-thermostats, which are available as optional kits. A maximum of 3 temperature controllers can be applied directly to the appliance. All Immergas chrono-thermostats are connected with 2 wires only. Carefully read the user and assembly instructions contained in the accessory kit.



**Disconnect power to the unit before making any electrical connections.**

### Immergas digital chrono-thermostat On/Off.

The chrono-thermostat allows:

- set two room temperature value: one for day (comfort temperature) and one for night (reduced temperature);
- set a weekly programme with four daily switch on and switch off times;
- selecting the required function mode from the various possible alternatives:
  - manual mode (with adjustable temperature);
  - automatic mode (with set programme);
  - forced automatic operation (momentarily changing the temperature of the automatic program).

The chrono-thermostat is powered by two 1.5V LR 6 type alkaline batteries.

### On/Off chrono-thermostat electrical connection (Optional).



**The operations described below must be performed after having removed the voltage from the appliance.**

On/Off ambient thermostat or chrono-thermostat: must be connected to the 40-1 / 41-1 terminals, eliminating the X40-1 jumper for zone 1 and 40-2 / 41-2 for zone 2 and 40-3 / 41-3 connected to the expansion kit for zone 3.

Make sure that the On/Off thermostat contact is of the “clean” type, i.e. independent of the mains voltage, otherwise the P.C.B. would be damaged.

The connections must be made on the terminal board inside the control panel (Fig. 8) or the appliance’s main panel (Fig. 9).



If any On/Off chrono-thermostat is used, arrange two separate lines in compliance with current regulations regarding electrical systems.

No indoor unit pipes must ever be used to earth the electric system or telephone lines.

Ensure elimination of this risk before making the indoor unit electrical connections.



## 1.12 HUMIDISTAT ON/OFF (OPTIONAL)

You can make a dehumidification demand by using a humidistat.

Make the connection to the appliance as shown (Fig. 8) and leave the jumper on terminals 40-1/41-1 for zone 1 and terminals 40-2/41-2 for zone 2.

## 1.13 EXTERNAL TEMPERATURE PROBE (OPTIONAL)

The outdoor unit has a standard external probe that can be used as an external probe of the heat pump.

The external probe is used to:

- Thermoregulate the water flow temperature;
- Determine the use of additional generators (electrical resistances).

If the Outdoor Unit is positioned in an area that is not suitable for temperature reading, it is advisable to use an additional external probe (Fig. 11) which is available as an optional kit.

Refer to the relative instruction sheet for positioning of the external probe.

For the proper operation of the optional probe, it must be electrically connected where envisaged (Fig. 8) and then enabled (Par. 4.24)

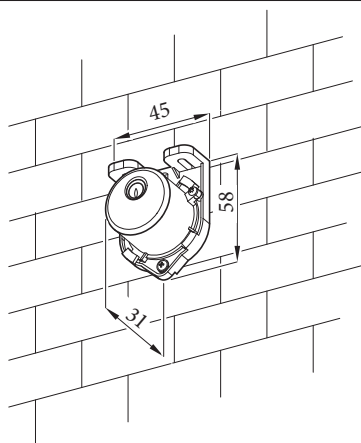
The presence of the external probe allows the system flow temperature to be set automatically based on the outdoor temperature in order to adapt the heating or cooling provided to the system.

The system flow temperature is determined by the setting on the "Zones" menu and by the "User" menu for the offset values based on the curves shown in the diagram (Par. 1.16).



If the system is divided into two or three zones, the flow temperature is calculated based on the zone with the higher temperature in central heating mode and with the lower temperature in cooling mode.

In the event of a fault of the (optional) external probe, after switching it off and back on, the outside temperature is automatically detected by the external probe on the outdoor unit.



## 1.14 DOMINUS V2 (OPTIONAL)

The system can be remote controlled using the optional Dominus V2 kit.

Connect the appliance as shown (Fig. 9).

The following is necessary to enable Dominus:

- set the parameter on the control panel **System supervision = Domin**;
- configure the Dominus APP profile on Magis Hercules Pro I.

For further information, consult the relative instruction sheet.

## 1.15 DEHUMIDIFIERS (OPTIONAL)

To use the dehumidification function required during the cooling function in the radiant systems, it is possible to install dehumidifiers and control them directly from the management board.

Connect as shown in fig. 8 and 9.

With the installation of a Immergas dehumidifier, it is possible to activate either the dehumidification function in neutral air or in cooled air (see dehumidifier kit manual for more details on the function).

In this case the dehumidification function on cooled air must be selected exclusively either on zone 1 or only on zone 2 with parameter **Special parameters / Dehumid. in cool.air** by selecting the corresponding zone where you wish to activate this function and by connecting clamps 65 and 10 of the relative dehumidifier respectively to terminals 31-2 and 30-2 of terminal block X102 (Fig. 9).



## 1.16 TEMPERATURE CONTROL SETTING

By setting the parameters in the menus

### Zones/Configuration

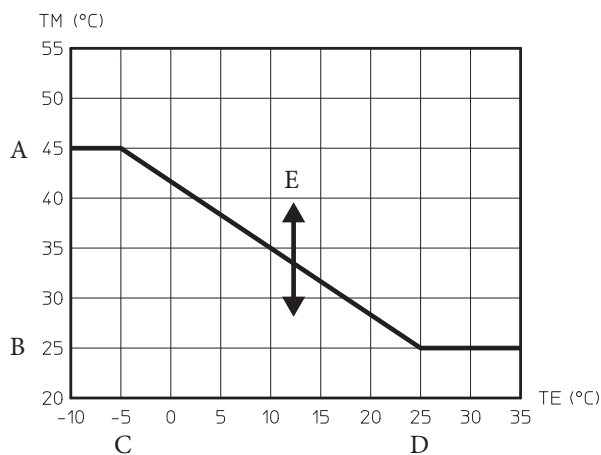
it is possible to automatically adjust the flow temperature of each zone according to the outdoor temperature.

This can be done by enabling the external probe modulation in the menu

### Zones/Enablings

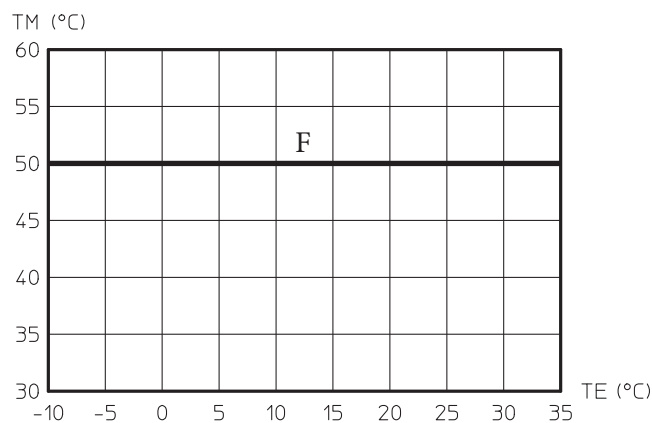
The curves (Fig. 12, 13, 14, 15) show the default settings in the various operating modes available both with external probe and without.

*Zone flow temperature in central heating mode / C.H. mode  
and external probe modulation enabled*



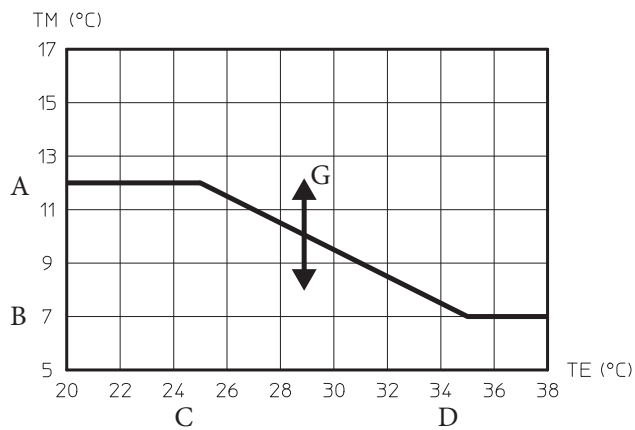
12

*Zone flow temperature in central heating mode / C.H. mode  
and external probe modulation absent*



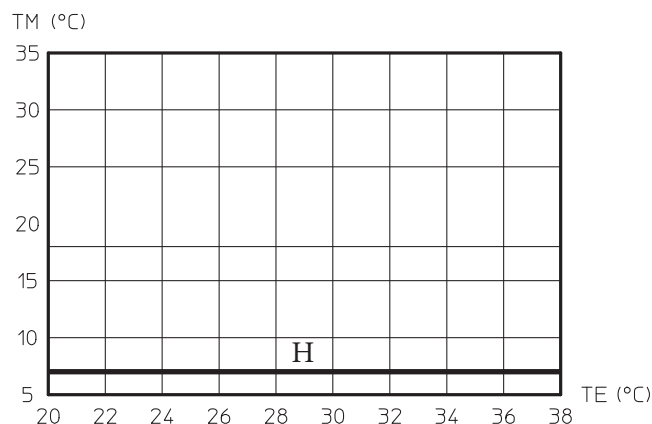
13

*Zone flow temperature in cooling mode  
and external probe modulation enabled*



14

*Zone flow temperature in cooling mode  
and external probe modulation absent*



15

Key (Fig. 12, 13, 14, 15)


- A - Maximum flow set
- B - Minimum flow set
- C - External minimum temperature
- D - External maximum temperature

- E - C.H. flow temperature offset
- F - Central heating / C.H. flow set
- G - Cooling flow temperature offset
- H - Cooling flow set




1.17 SYSTEM FILLING

Once the indoor unit is connected, fill the system using the filling cock (Fig. 27).  
The indoor unit has one incorporated automatic vent valve located on the circulator and another on the 3-way plate heat exchanger pipe (Fig. 27).  
There is also a manual vent valve (Fig. 27) positioned on the top of the central heating / C.H. manifold, which it is recommended to open during the filling phase to completely eliminate the air from the system.

 Make sure that the hoods are loosened.

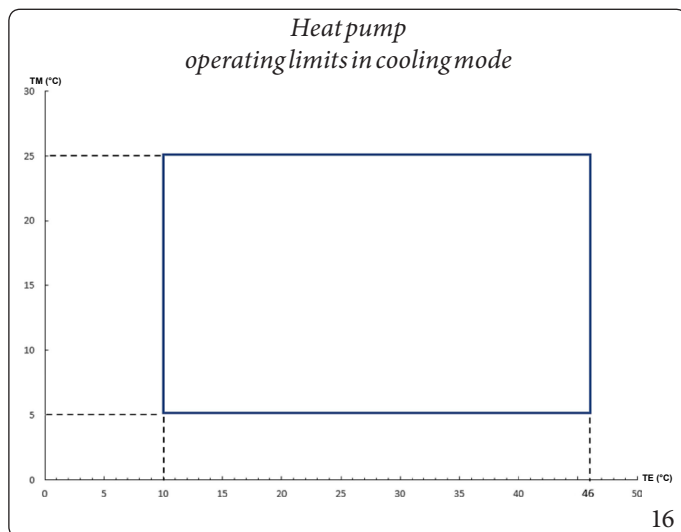
The filling valve must be closed when the indoor unit pressure gauge indicates approximately 1.2 bar.

 At the end of these operations, enable the manual “De-aeration” functions, which lasts about 9 hours (Parag. 3.3).

 For proper and safe operation of the appliance, it is essential to check that the water pressure of the feed system (mains water) is at least 2.5 bar, before opening the filling cock. When filling the central heating system (CH), it is essential to comply with standard EN 1717, which indicates the requirements for the protection against pollution of potable water caused by backflow. If the feed water pressure is insufficient, DO NOT OPEN the filling cock. Otherwise there is the risk of dangerous contamination of the DHW storage tank integrated with the central heating water, which could endanger the user’s comfort and cause health issues. The operator must make sure that the feed water pressure is adequate before filling the central heating system to prevent any possible contamination.

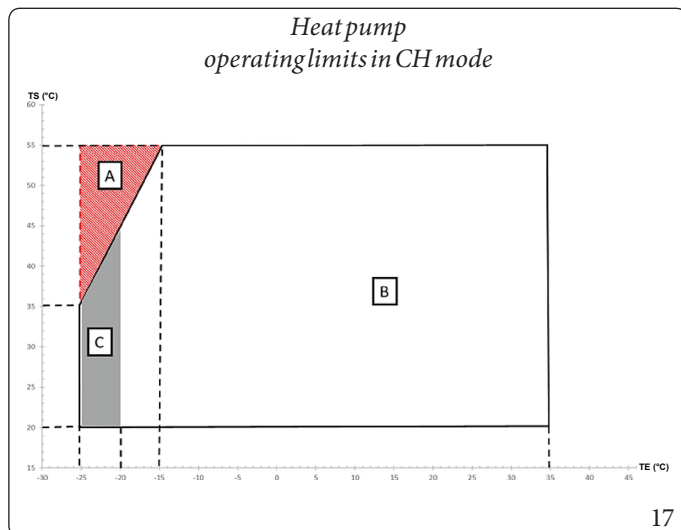
## 1.18 OPERATING LIMITS

The appliance was designed to work in a specific range of outdoor temperatures and at a specific maximum flow temperature, in graph (Fig.16, 17, 18) these limits are represented.



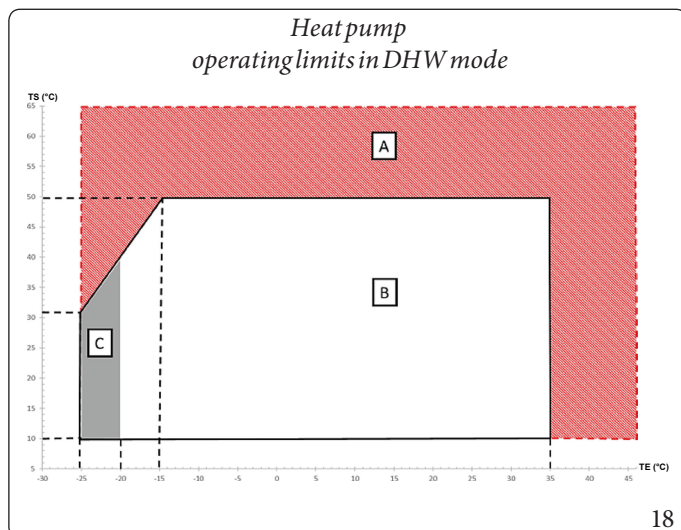
Key (Fig.16):

TE = External temperature  
TM = Flow temperature



Key (Fig.17):

TE = External temperature  
TM = System setpoint temperature  
A = Only with system integration resistance (optional) enabled  
B = Heat pump operating range  
C = For outdoor temperatures below -20°C, the capacity of the heat pump is not guaranteed.



Key (Fig.18):

TE = External temperature  
TS = System setpoint temperature  
A = Only with DHW integration resistance (optional) enabled  
B = Heat pump operating range  
C = For outdoor temperatures below -20°C, the capacity of the heat pump is not guaranteed.



## 1.19 INDOOR UNIT START-UP (IGNITION).

After having installed the chiller lines on the Outdoor Unit, to commission the heat pump (the operations listed below must only be performed by qualified personnel and in the presence of staff only):

1. Check connection to a 230V~50Hz power mains, correct L-N polarity and the earthing connection;
2. Switch the indoor unit on and check correct ignition;
3. Check the intervention of the main switch located upstream from the indoor unit and in the indoor unit.
4. Set the first ignition parameters (Par. 4.9).



The system must not be started up if even only one of the checks should be negative.



**After installation, check for leaks. Toxic gas could be generated if the unit comes into contact with a source of ignition, such as thermal fan, stove and cylinders. Make sure that only refrigerant recovery cylinders are used.**



Apply the product data nameplate contained inside the warranty envelope, in an accessible and visible position.  
Use the serial number on this plate for THERMAL/GSE practices.

## 1.20 CIRCULATION PUMP

The appliance is supplied with two circulators: the heat pump circulator, which deals with the heat exchange with outdoor unit, and the zone pump 1, which deals with the power supply to the system.

### • Heat pump circulator

The appliance is supplied with a variable speed pump with pwm profile that adjusts the speed to ensure the best possible performance. It is possible to modify the heat pump circulator speed by modifying the parameter "Max pump speed" to "Menu / Support / Heat pump / Pump".

It is suggested to set the following values:

- Magis Hercules Pro 12 I/12 T I: Speed = 65%
- Magis Hercules Pro 14 I/14 T I: Speed = 75%
- Magis Hercules Pro 16 I/16 T I: Speed = 100%

### Pump release.

If after a long period of inactivity, the circulator is blocked, adjust the screw in the centre of the head in order to manually release the motor shaft.

Take great care during this operation to avoid damage to the motor.

### • Zone 1 circulator pump

The pump is ideal for the requirements of each central heating system in a domestic and residential environment.

In fact, the pump is equipped with electronic control that allows to set advanced functions.

### Adjustment

Press the button on the front to adjust the pump.

By rotation, it is possible to select the following pump control mode:

- Fixed speed I, II, III.
- Proportional head I, II, III.
- Constant head I, II, III.

### Fixed speed

Adjusts the pump speed in fixed mode.

It is possible to set 3 different speeds:



- I: Minimum Speed.
- II: Intermediate speed.
- III: Maximum speed.



Factory set speed = Fixed speed III

### Proportional head ( $\Delta P-V$ )

This allows the pressure level (head) to be proportionally reduced as the system heat demand decreases (flow rate reduction).

Thanks to this function, the electric power consumption of the circulator pump is reduced further: the energy (power) used by the pump decreases according to the pressure level and flow rate.

With this setting, the pump guarantees optimal performance in most heating systems, thereby being particularly suitable in single-pipe and two-pipe installations.

Any noise originating from the water flow in the pipes, valves and radiators is eliminated by reducing the head.

Optimal conditions for thermal comfort and acoustic well-being.

### Constant head ( $\Delta P-C$ )

The circulator pump maintains the pressure level (head) constant as the system heat demand decreases (flow rate reduction).

With these settings, the circulator pump is suitable for all floor systems where all the circuits must be balanced for the same drop in head.

### Other functions:

- The **vent function** of the pump is activated by pressing and holding (3 seconds) the control key and automatically venting the pump. This function does not act on the central heating / C.H. system. The pump venting function starts and lasts 10 minutes. The two sets of upper and lower LEDs flash alternately every 1 second. To interrupt, press the control key for 3 seconds.
- The **manual restart** is activated by pressing and holding (5 seconds) the control key and releases the pump when needed (e.g. after prolonged inactivity periods during the summer period).
- The **keyboard block** is activated by pressing and holding (8 seconds) the control key and block the pump settings. The keyboard block protects against unintentional or unauthorised pump changes. Activate the keyboard block by pressing the control key for 8 seconds, until the selected setting LEDs flash briefly and then release. The LEDs flash continuously 1 second apart. If the keyboard block is active, the pump settings can no longer be modified. The deactivation of the keyboard block takes place in a similar manner to the activation.

### Troubleshooting.

Faults	Causes	Solutions
Pump not working with power supply on.	Faulty electrical fuse	Check the fuses
	The pump is without voltage	Eliminate the power supply cut-off
The pump generates noise	Cavitation due to insufficient flow pressure	Increase the system pressure within the allowed field
		Check the head setting and eventually set a lower head
The building does not heat up.	Heat output of the radiant panels too low	Increase the delivery value
		Set the adjustment mode to $\Delta P-c$ instead of $\Delta P-v$

### Diagnostics in real time

- The anomaly LED indicates a fault.
- The pump stops (depending on the fault), and performs cyclical attempts to restart.



LED	Faults	Causes	Solutions
<b>It lights up red</b>	Block	Rotor seized	Activate the manual restart or contact the Authorised Technical Service Centre
	Contact/winding	Faulty winding	
<b>It flashes with red light</b>	Under/Overvoltage	Feed side power supply voltage too low/high	Check the mains voltage and operating conditions, ask the Authorised Technical Assistance Centre
	Excessive module temperature	Inside of the too hot module	
	Short-circuit	Motor current too high	
<b>It flashes with red/green light</b>	Turbine operation	The hydraulic system of the pumps is fed but the pump has no mains voltage	Check the mains voltage, the water pressure/flow rate as well as the environmental conditions
	Dry operation	Air in the pump	
	Overload	The motor runs with difficulty. The pump complies with the specifications (e.g. high module temperature). The number of revolutions is lower than normal operation	

### Manual restart

When a blockage is detected, the pump tries to automatically restart.

If the pump does not automatically restart:

- Activate the manual restart by pressing the control key for 5 seconds, then release.
- The restart function starts and last max. 10 minutes.
- The LEDs flash one after the other clockwise.
- To interrupt, press the control key for 5 seconds.

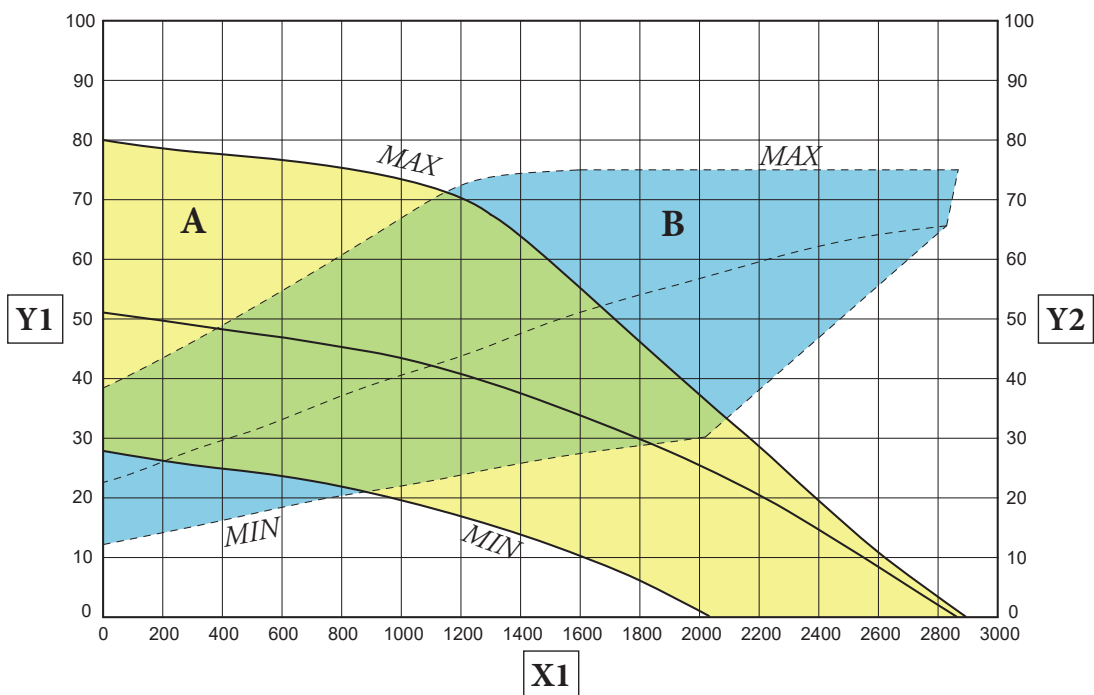
### Zone 2/3 circulator pumps (optional)

The zone 2 and zone 3 pumps have the same functional characteristics as zone pump 1.

For the setting and management of anomalies, refer to zone pump 1.



# Head available to the direct zone 1 system fixed speed



19

Key (Fig. 19):

X1 = Flowrate (l/h)

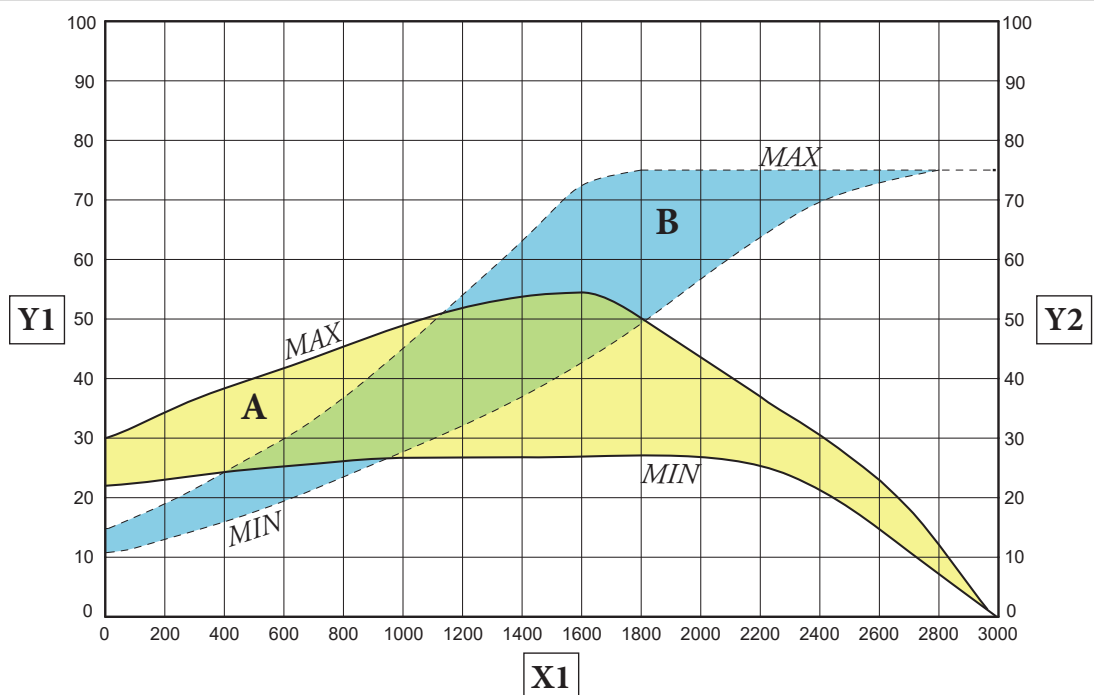
Y1 = Head (kPa)

Y2 = Circulator pump absorbed power (W)

A = Head available to the system

B = Absorbed power by the circulator (dotted area)

# Head available to the proportional speed direct zone 1 system



20

Key (Fig. 20):

X1 = Flowrate (l/h)

Y1 = Head (kPa)

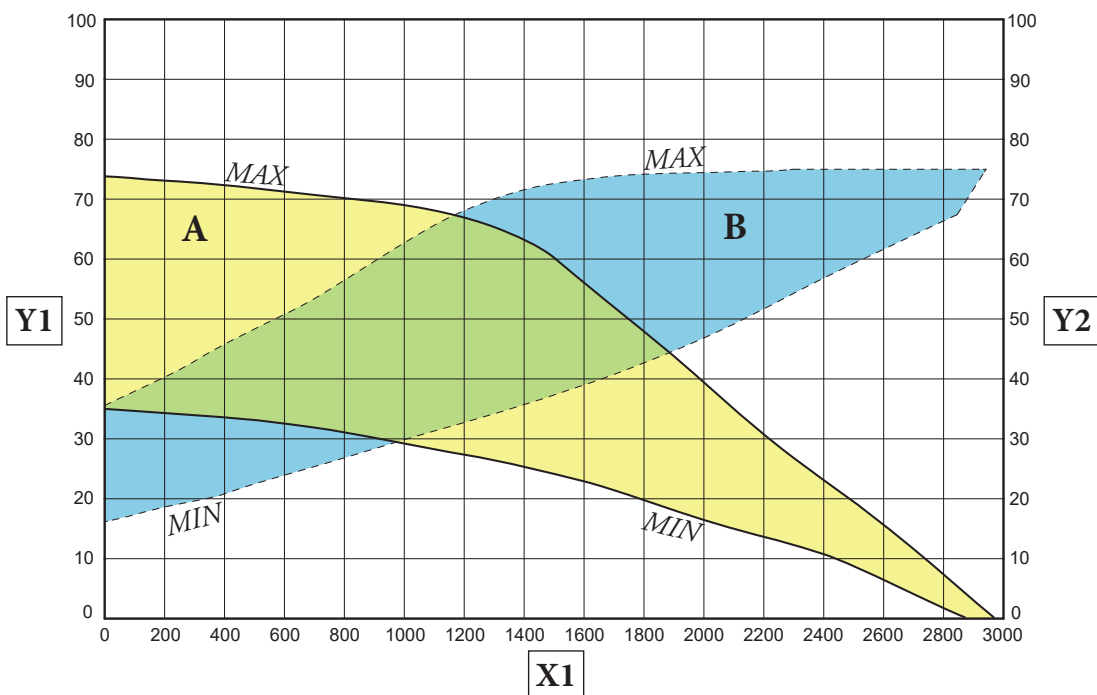
Y2 = Circulator pump absorbed power (W)

A = Head available to the system

B = Absorbed power by the circulator (dotted area)



## Head available to the direct zone 1 system constant speed



21

Key (Fig. 21):

X1 = Flowrate (l/h)

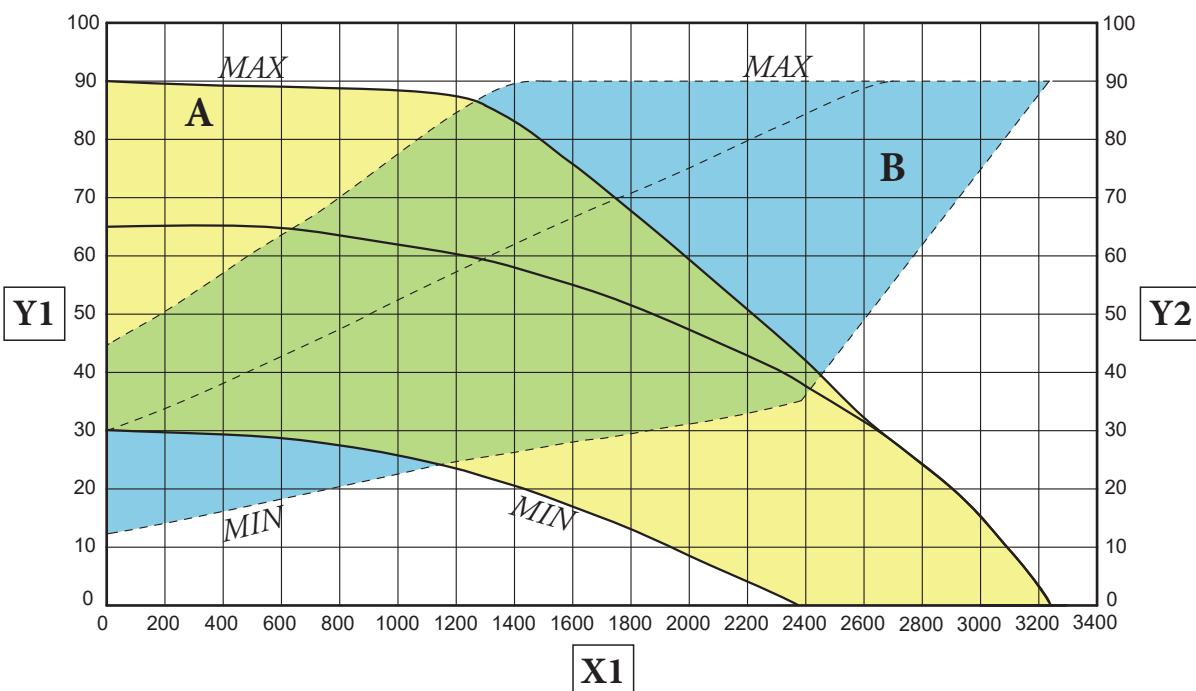
Y1 = Head (kPa)

Y2 = Circulator pump absorbed power (W)

A = Head available to the system

B = Absorbed power by the circulator (dotted area)

## Head available to the fixed speed mixed zone 2/3 system



22

Key (Fig. 22):

X1 = Flowrate (l/h)

Y1 = Head (kPa)

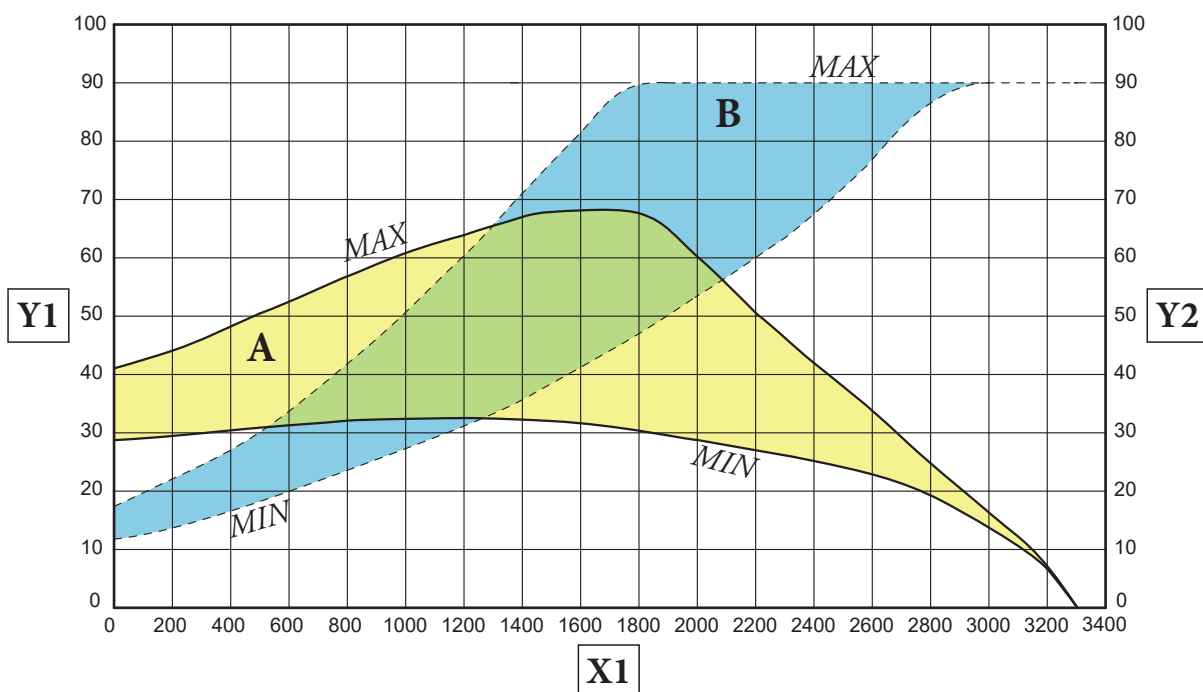
Y2 = Circulator pump absorbed power (W)

A = Head available to the system

B = Absorbed power by the circulator (dotted area)



# Head available to the proportional speed mixed zone 2/3 system



23

Key (Fig. 23):

X1 = Flowrate (l/h)

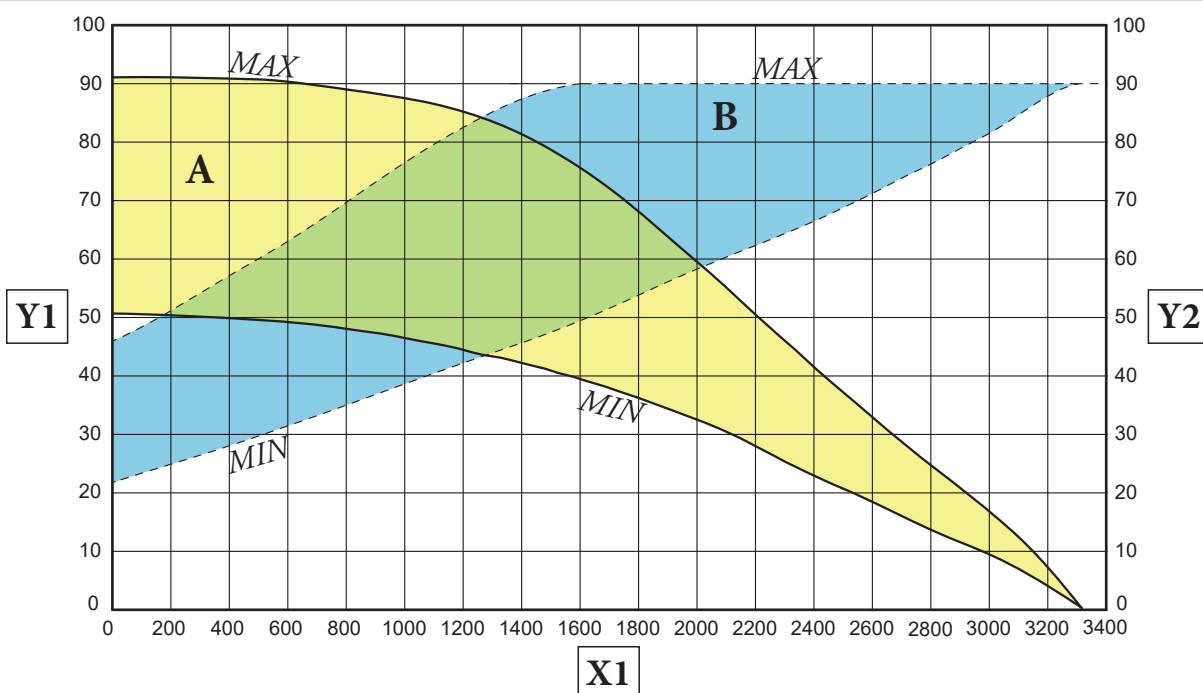
Y1 = Head (kPa)

Y2 = Circulator pump absorbed power (W)

A = Head available to the system

B = Absorbed power by the circulator (dotted area)

# Head available to the constant speed mixed zone 2/3 system



24

Key (Fig. 24):

X1 = Flowrate (l/h)

Y1 = Head (kPa)

Y2 = Circulator pump absorbed power (W)

A = Head available to the system

B = Absorbed power by the circulator (dotted area)



## 1.21 DOMESTIC HOT WATER STORAGE TANK UNIT

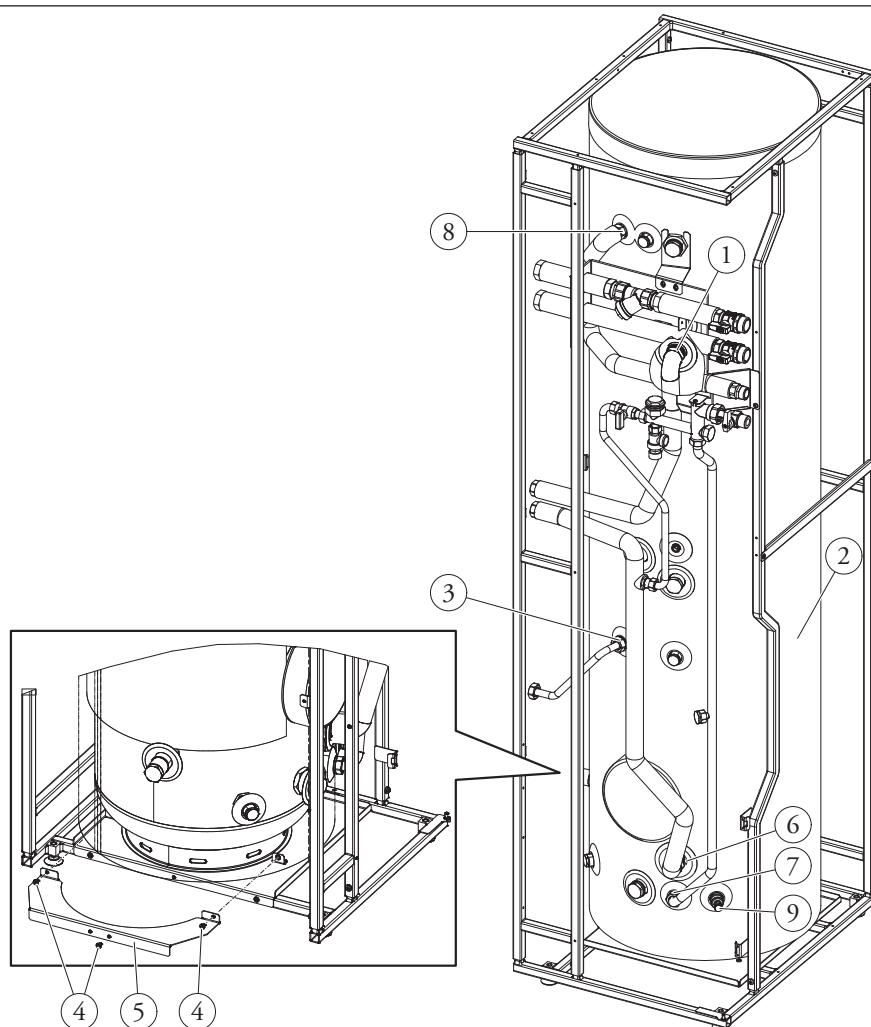
The storage tank in the appliance is the accumulation type with a capacity of 235 litres. It contains large coiled stainless steel heat exchanger pipes, which allow to notably reduce hot water production times. These storage tank units constructed with stainless steel casing and bottoms, guarantee long duration through time. The assembly concepts and welding (T.I.G.) are implemented to the minimum detail to ensure maximum reliability. The side inspection flange ensures practical control of the storage tank unit and the coiled heat exchanger and easy internal cleaning. The Magnesium Anode (pos. 3 and 21, Fig. 27) holder caps include the same, are supplied as standard for the internal protection of the storage tank from possible corrosion. These caps are positioned on the side of the storage tank (pos. 3 and 21, Fig. 27).

### Storage tank disassembly (Fig.25).

For easy maintenance or particular handling requirements, remove the storage tank as described below.

- To disassemble the storage tank unit, empty the appliance system by acting on the relevant drain fitting. Before carrying out this operation, make sure that the system filling valves are closed.
- Close the cold water inlet valve and open any domestic hot water valve.
- Drain the storage tank by means of the draining valve (9).
- Proceed to divide the appliance as described in the relative paragraphs 4.33 and 4.34.
- Loosen the nuts on the storage tank inlet and outlet pipes (1 and 6) and the cold inlet (7) and hot outlet (8) nuts on the storage tank (2).
- Loosen the nut (3) on the connection pipe to the DHW expansion vessel.
- Loosen the bracket (5) fixing screws (4) and remove the bracket itself.
- Slide the storage tank (2) to the front.

Work in reverse order to assemble the storage tank unit.



25

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



### Condensate drainage present in the tray (Fig.26).

Under some operating conditions, condensate may form in the tray.

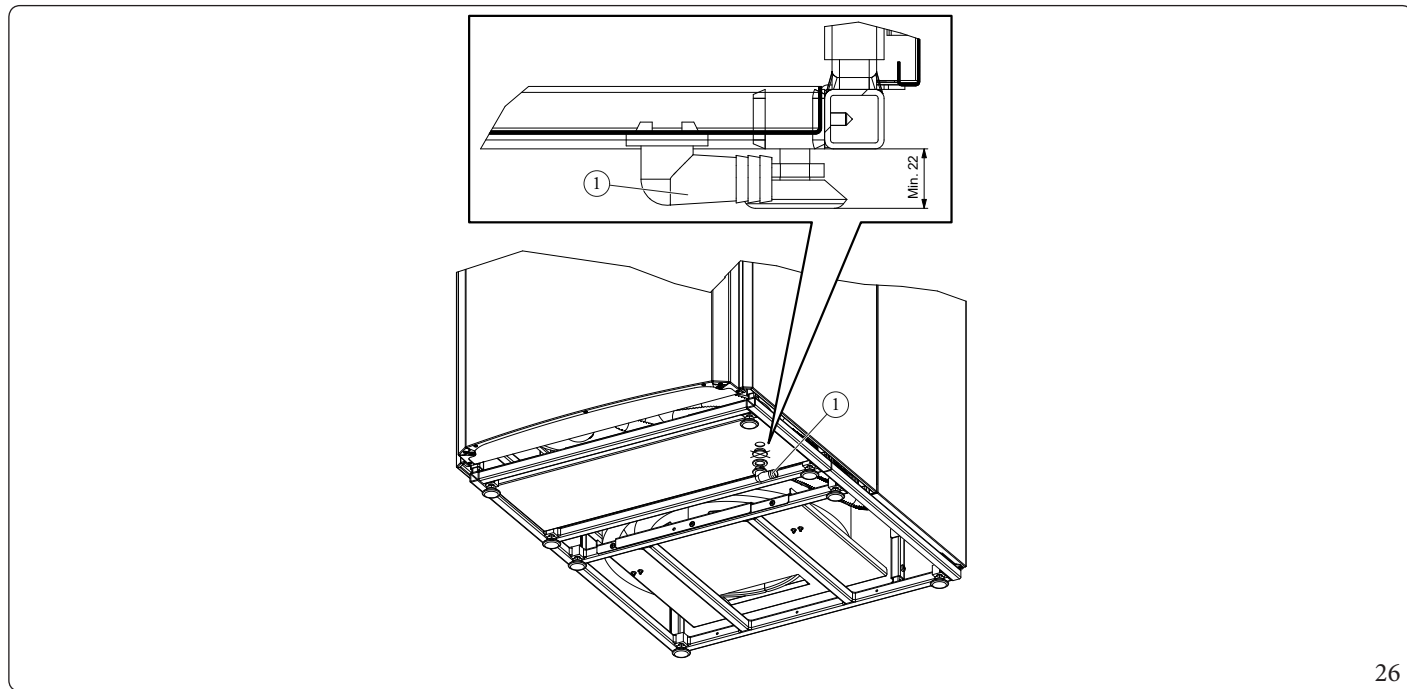
Make a drain hole on the ground towards the sewer system with an internal Ø of at least 13 mm.

To dispose of this condensate, insert the drain bend in the hole present on the bottom of the tray itself.

Connect the drainage elbow (1) to a hose that conveys the water to the desired point.

Make sure dust, debris and/or insects cannot enter this hose.

Also make sure that the liquid contained in it cannot freeze.



26

### 1.22 KITS AVAILABLE ON REQUEST



The flow probe of zone 1 (optional) is, on the other hand, mandatory with the installation of an external system integrative resistance.

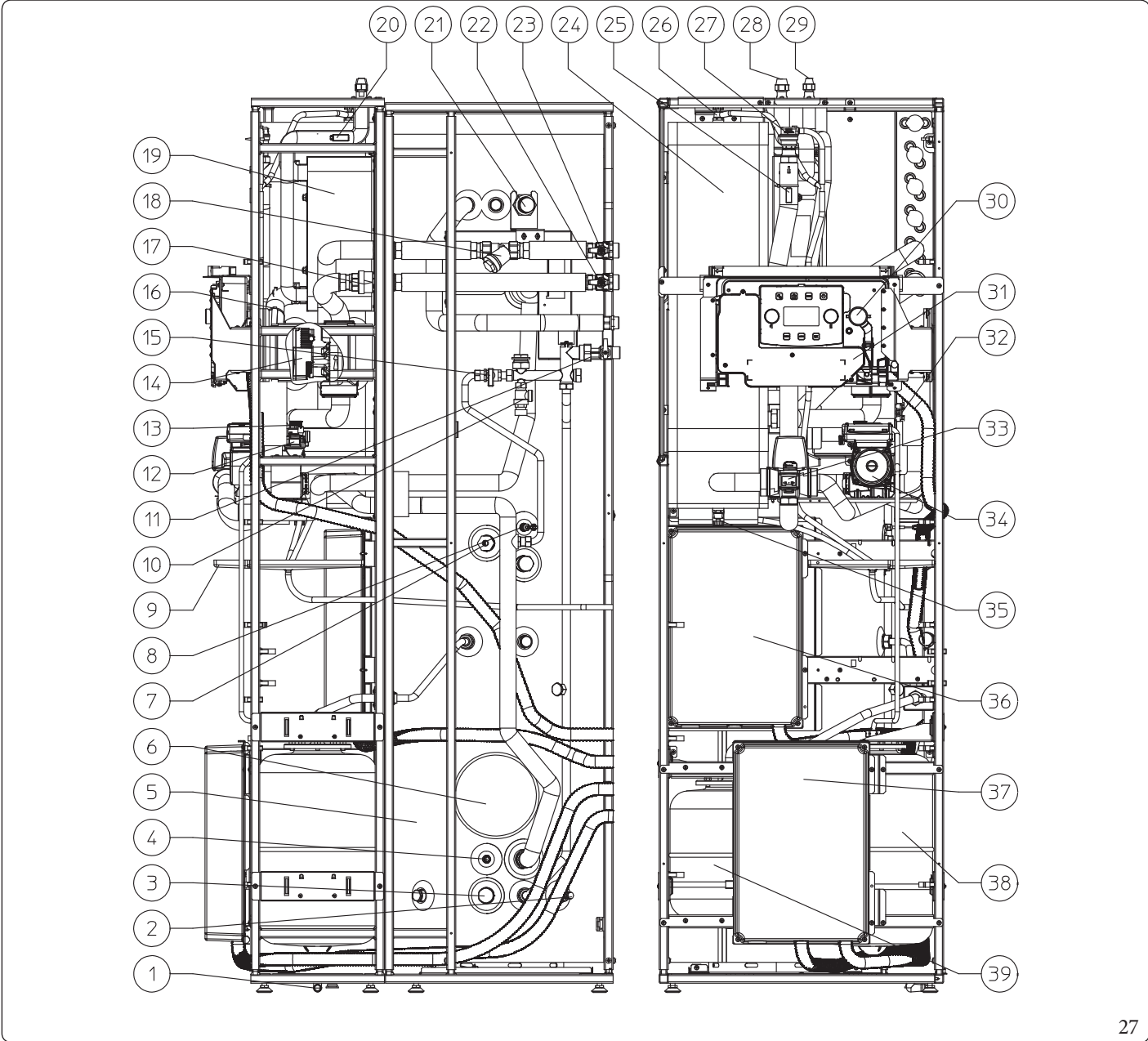


Check the complete list of kits available and which can be combined with the product, consult the Immergas website, the Immergas Price List or the technical-commercial documentation (catalogues and data sheets).





1.23 MAIN COMPONENTS



Key (Fig. 27):

1	- Elbow fitting	15	- System filling valve	27	- Air vent valve
2	- Storage tank draining valve	16	- Heat pump return probe	28	- Chiller line connection gaseous status
3	- Sacrificial anode	17	- One-way valve	29	- Chiller line connection liquid status
4	- Solar panels probe (optional)	18	- Filter that can be inspected	30	- System manometer
5	- Stainless steel storage tank	19	- Plate heat exchanger	31	- Electrical connection compartment
6	- Storage tank flange	20	- Liquid phase detection probe	32	- System flow-meter
7	- DHW electrical resistance	21	- Sacrificial anode	33	- 3-way valve (motorised)
8	- D.H.W. probe	22	- System flow shut-off valve	34	- Heat pump circulator
9	- Condensate collection tray	23	- System return shut-off valve	35	- System draining valve
10	- 8 bar safety valve	24	- Hydraulic manifold	36	- Main panel
11	- Cold water inlet valve	25	- Heat pump flow probe	37	- Optional kit panel
12	- Air vent valve	26	- Hydraulic manifold manual air vent valve	38	- System expansion vessel
13	- 3 bar safety valve			39	- Domestic hot water expansion vessel
14	- Direct zone 1 pump/circulator				



## 2 INSTRUCTIONS FOR USE AND MAINTENANCE

### 2.1 GENERAL RECOMMENDATIONS



**Never expose the Indoor Unit to direct vapours from a hob.**



The device can be used by children at least 8 years old as well as by persons with reduced physical, sensory or mental capabilities, or lack of experience or required knowledge, provided that they are under surveillance, or after they have been instructed relating to the safe use and have understood the potential dangers.

Children must not play with the appliance.

Cleaning and maintenance destined to be performed by the user can not be carried out by unsupervised children.



If temporary shutdown of the HP is required, proceed as follows:

- drain the system if antifreeze is not used;
- shut off the electrical and water supply.



**Never clean the appliance or connected parts with easily flammable substances.**



**Never leave containers or flammable substances in the same environment as the appliance.**



Do not open or tamper with the appliance.



Only use the user interface devices listed in this section of the booklet.



**Do not climb on the appliance, do not use the appliance as a support base.**



In the event of malfunctions, faults or incorrect operation, turn the appliance off and contact an authorised company (e.g. the Authorised Technical Assistance Centre, which has specifically trained staff and original spare parts).

Do not attempt to modify or repair the appliance alone.



The use of components involving use of electrical power requires some fundamental rules to be observed such as:

- do not touch the appliance with wet or moist parts of the body; do not touch when barefoot;
- never pull electrical cables or leave the appliance exposed to atmospheric agents (rain, sunlight, etc.);
- the appliance power cable must not be replaced by the user;
- in the event of damage to the cable, switch off the appliance and contact exclusively qualified staff for replacement;
- if the appliance is not to be used for a certain period, disconnect the main Indoor Unit external switch.



Water at a temperature of more than 50°C can cause serious burns.  
Always check the water temperature before any use.



The temperatures indicated by the display have a tolerance of +/- 3°C due to environmental conditions that cannot be blamed on the Indoor Unit.



At the end of its service life, the appliance must not be disposed of like normal household waste nor abandoned in the environment, but must be removed by a professionally authorised company as required by current legislation.  
Contact the manufacturer for disposal instructions.

## 2.2 CLEANING AND MAINTENANCE



To preserve the system's integrity and keep the safety features, performance and reliability, which distinguish the assembly, unchanged over time, you must execute maintenance operations on a yearly basis in compliance with what is stated in the relative point at “annual check and maintenance of the appliance”, in compliance with national, regional, or local standards in force.

INSTALLER

USER

CONTROL PANEL

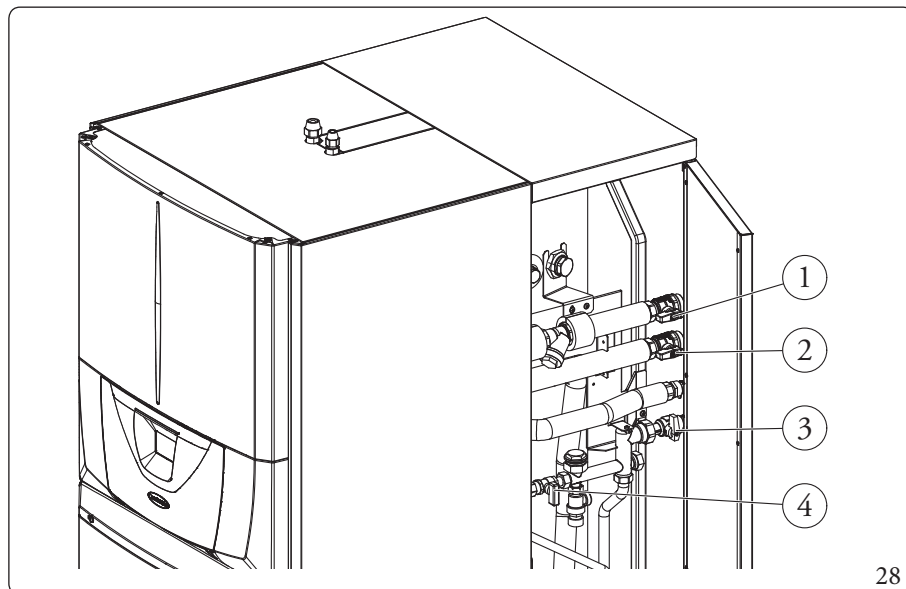
MAINTENANCE TECHNICIAN

TECHNICAL DATA



## 2.3 RESTORE CENTRAL HEATING SYSTEM PRESSURE

1. Periodically check the system water pressure (the Indoor Unit's pressure gauge hand must indicate a value between 1 and 1.2 bar).
2. If the pressure falls below 1 bar (when the system is cold) restore normal pressure via the relevant cock located to the right of the generator and accessible from the side door (Fig. 28).
3. Close the valve after the operation.
4. If the pressure reaches values around 3 bar, there is a risk of tripping the safety valve (in this case, remove water from a radiator air vent valve until a pressure of 1 bar is achieved, or ask for assistance from professionally qualified personnel).
5. In the event of frequent pressure drops, contact qualified staff for assistance to eliminate the possible system leakage.



Key (Fig. 28):

- 1 - System return valve
- 2 - System flow valve
- 3 - Cold water inlet valve
- 4 - System filling valve



For proper and safe operation of the appliance, it is essential to check that the water pressure of the feed system (mains water) is at least 2.5 bar, before opening the filling cock. When filling the central heating system (CH), it is essential to comply with standard EN 1717, which indicates the requirements for the protection against pollution of potable water caused by backflow. If the feed water pressure is insufficient, **DO NOT OPEN** the filling cock. Otherwise there is the risk of dangerous contamination of the DHW storage tank integrated with the central heating water, which could endanger the user's comfort and cause health issues. The operator must make sure that the feed water pressure is adequate before filling the central heating system to prevent any possible contamination.

## 2.4 DRAINING THE SYSTEM

1. Ensure that the filling valve is closed.
2. Open the draining valve (Par.1.23).
3. Open all vent valves.
4. At the end, close the draining valve.
5. Close all previously opened vent valves.




If fluid containing glycol was added to the system circuit, make sure it is recovered and disposed of in accordance with standard EN 1717.

2.5 EMPTYING THE D.H.W. CIRCUIT

To do this, always close the domestic cold water inlet upstream of the appliance.  
Open any domestic hot water tap to discharge the pressure from the circuit.

2.6 STORAGE TANK DRAINING


To drain the storage tank, use the relevant storage tank draining valve (Det. 2, Fig. 27).



Before performing this operation, close the cold water inlet tap (Det. 3, Fig. 28) and open any hot water tap of the domestic hot water system to let air into the storage tank.

2.7 CLEANING THE CASE

1. Use damp cloths and neutral detergent to clean the Indoor Unit casing.



Never use abrasive or powder detergents.

2.8 PERMANENT SHUTDOWN

Should the system be shut down permanently, have professional staff carry out the procedures, making sure that the electrical and water supply lines have been previously shut off.

INSTALLER

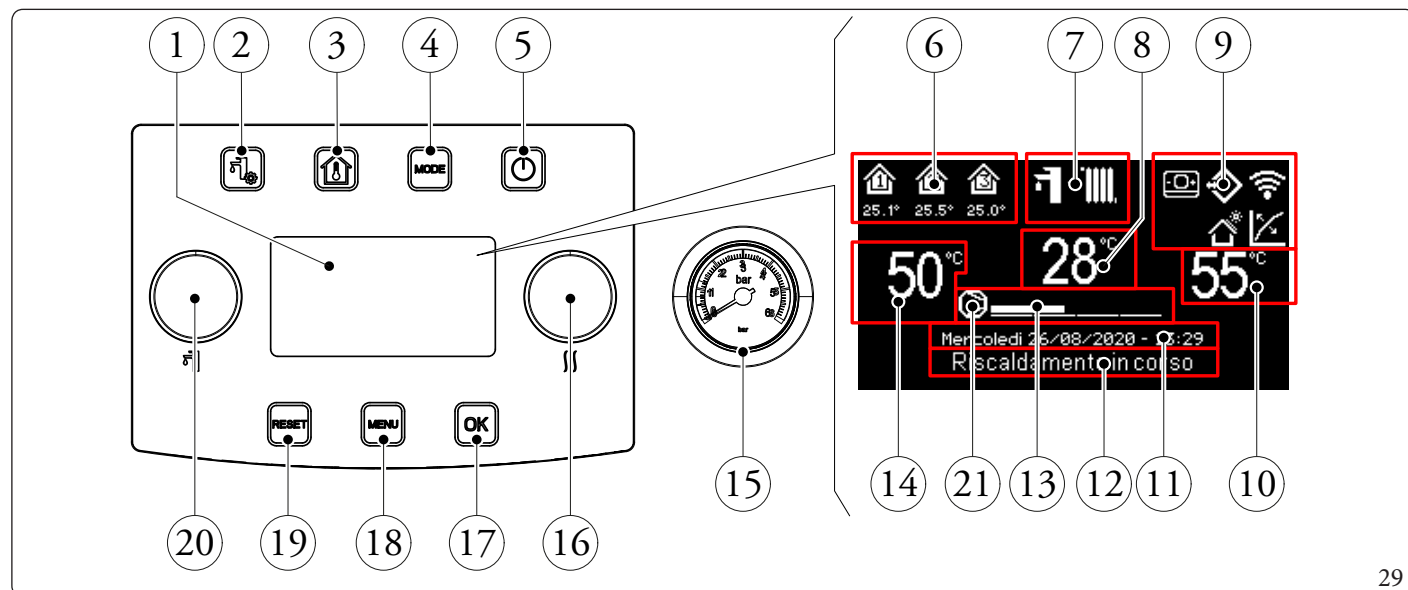
USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA

### 3 CONTROL PANEL



Key (Fig. 29):

- |   |  |
|---|--|
| 1 - Display.  | 11 - Current date and time display.        |
| 2 - "DHW (Domestic hot water)" menu button.             | 12 - System status display.                |
| 3 - "Zones" button.                                     | 13 - Heat pump power scale display.        |
| 4 - Functioning mode button.                            | 14 - DHW (Domestic hot water) set display. |
| 5 - ON/OFF Button.                                      | 15 - Pressure gauge.                       |
| 6 - Zones area (number and information of zone in use). | 16 - "Heating/cooling set" knob.           |
| 7 - Operating mode.                                     | 17 - Selection confirmation/ok button.     |
| 8 - Anomaly code/flow temperature display.              | 18 - "Menu" Button.                        |
| 9 - System general icon display.                        | 19 - Anomalies/esc. reset button.          |
| 10 - Central heating/ C.H. set display.                 | 20 - "Set DHW (Domestic hot water)" Knob.  |
|   | 21 - Internal pump running                 |

#### 3.1 SYSTEM USE











Before ignition, make sure the system is full of water, checking that the pressure gauge needle (Fig. 29) points to a value between 1 and 1.2 bar and make sure that the chiller circuit has been filled as described in the outdoor unit instructions booklet.

The following are displayed upon ignition:

- Type of panel;
- Panel firmware version;
- Board firmware version.

Once the device has been powered, it goes into the status prior to switch-off. Press the "MODE" button to cyclically select the desired operating mode amongst those available.

The operating mode in use is indicated by its icon at the top of the display (Fig. 30) and is unique for all zones. By pressing any button, the pushbutton panel lights up for a few seconds; in this way it is activated and ready to receive the subsequent commands. Depending on the system's configuration, the main screen displays various information regarding the system itself, amongst which:

Symbol	Description and operation
	Zone identification icon. This icon reverses its colour during the central heating / C.H./cooling demand. The values below the zone icon, respectively indicate the temperature and the humidity detected in such zone
	Dominus enabled
	Zone remote panel presence icon
	Thermoregulation enabled on at least one zone
	Active holiday program
	Connection to temperature and humidity room probes
	Active photovoltaic function
	Outdoor unit compressor request





INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA

Operating mode	Description	DHW	Cooling	Central heating	Protection function (antifreeze,...)
OFF	Off	Disabled	Disabled	Disabled	Disabled
	Summer	Enabled	Disabled	Disabled	Activated
	Summer with Cooling	Enabled	Enabled	Disabled	Activated
	Winter	Enabled	Disabled	Enabled	Activated
	Stand-by	Disabled	Disabled	Disabled	Activated

30



The Anti-Legionella function is NOT active in the following modes: Off, Holiday mode Standby active and Antifreeze Function in progress.



Below is a description of how to use the control panel, including:

- Enter the menus;
- Moving in the menus;
- Set a menu item;
- Confirming a change;
- Exit without saving.

- **Enter the menus**

The control panel menus can be accessed by pressing the buttons (Fig. 29):

- **Moving in the menus**

Simply rotate the “Set DHW (Domestic hot water)” knob to scroll the menu items.

The indication “[...]” next to the menu item indicates the availability of a submenu.

Press the “OK” button to access this submenu.

Pressing the “RESET” button goes back to the previous menu page.

- **Set menu item**

Go to the menu item to be set following the instructions given previously.

Once the menu item to be set is reached, press “OK” or rotate the “Set cooling/central heating / C.H.” knob to highlight the value to be changed.

Change the value by turning the “Set cooling/central heating / C.H.” knob.

- **Confirming a change**

At the end of the modification, press “OK” to confirm the change and go back to the previously selected menu item.

- **Exit without saving**

If at the end of the modification you press “RESET”, you will return to the previously selected menu item without confirming the modification.





## 3.2 OPERATING MODE

The indoor unit can work in the following modes:

- OFF;
- STAND-BY (❄️);
- SUMMER (🔥);
- SUMMER WITH COOLING (🔥 + ❄️);
- WINTER (🔥 + 🌬️).

If the indoor unit is at "OFF", press the button "🔌" to activate it. If this is not the case, go to the next point.

Then press the "MODE" button in sequence to set the system to stand-by ❄️, summer 🔥, summer with cooling 🔥 + ❄️, winter 🔥 + 🌬️ position.

### • "OFF" mode

By pressing this button, the display will show "OFF" and the system will be off. In this mode, the safety functions are not guaranteed and the remote devices are disconnected (Fig.30).



**In these conditions the Indoor Unit is considered still live even if there are no functions active.**

### • "Stand-by" Mode

Press the "MODE" button in succession until the ❄️ symbol appears.

In this mode, the system is able to ensure protection functions only, such as: antifreeze function, antiblock function and any anomaly signals (Fig. 30).



**In these conditions the system must still be considered powered.**

### • Summer

Press the "MODE" button in succession until the 🔥 symbol appears.

In this mode the system allows the production of domestic hot water and ensures protection (Fig. 30).

### • Summer with cooling

Press the "MODE" button in succession until the 🔥 + ❄️ symbol appears.

In this mode the system allows the production of domestic hot water, room cooling and dehumidification and ensures protection (Fig. 30).

### • Winter

Press the "MODE" button in succession until the 🔥 + 🌬️ symbol appears.

In this mode the system allows the production of domestic hot water and room central heating / C.H. and ensures protection (Fig. 30).

### List of functions

The following functions can be set on the internal unit:

- DHW (Domestic hot water);
- Central heating / C.H.;
- Cooling;
- Dehumidify.

### DHW

The domestic hot water can be produced with the heat pump or with electrical resistance.

The system automatically manages the activation of the generators to heat up the domestic hot water in the storage tank.

During activation, 'DHW underway' appears on the display.

It is possible to set the domestic hot water temperature adjustment in two ways: MANUAL or AUTOMATIC.

The selection is made by entering the menu "DHW" ("DHW" button) and setting the parameter "Set Management".

Manual adjustment (Man)



Adjustment of the DHW temperature in MAN mode is done via the "DHW Set" knob (Fig. 29) or by changing the value "Manual set" within the "DHW" menu.

Confirmation can take place in two ways: by pressing the OK button or by waiting two minutes after changing the value.

#### Automatic adjustment (Auto)

The AUTOMATIC DHW temperature adjustment involves setting "Comfort set" and "Economy Set" parameters in the "DHW" menu and choosing the calendar inside the menu:

#### **Clock and programs / DHW Program**

In the selected time slots, the DHW set will be automatically set to the "Comfort Set" value; outside these, the set DHW will be set to "Economy Set" value.

It is possible to temporarily modify the DHW set by setting a manual value using the "Set DHW" knob (Fig. 29).

This setting will be lost when the time slot is next changed.

#### **DHW (Domestic hot water) Boost**

Activating the "DHW (Domestic hot water) Boost" function via the menu

#### **DHW / Boost Function = On**

DHW (Domestic hot water) operation takes place with the contribution of both the heat pump and the electrical resistance, with a logic that minimises storage tank charging time.

The activation of this function requires the setting of the DHW electrical integration mode as SIMULTANEOUS by means of a specific parameter only visible with "Service" log-in.

#### **Central heating**

It is possible to set the central heating / C.H. activation parameters for each individual zone in three different ways: MANUAL, AUTOMATIC, OFF.

The selection is made by entering the "Zones"  menu and after having selected the zone of interest, access the menu

#### **Settings / Operation mode**

There are two types of requests:

- Request from room temperature in the presence of remote control

#### **Enablings / Enable remote contr. = Probe / Panel**

- Request from TA (room thermostat)

#### **Enablings / Enable room thermostat = Yes**

- In the first case, the system works in the following way:

#### Manual adjustment (Man)

The central heating / C.H. request is adjusted according to a fixed room setpoint

#### **C.H. / Manual set**

When the room temperature is lower than the manual central heating / C.H. set, the appliance is started in central heating / C.H. mode.

#### Automatic adjustment (Auto)

There are two room temperature setpoints:

#### **C.H. / Comfort Set**

#### **C.H. / Economy Set**

By associating a calendar with the relevant zone program, it is possible to determine the time slots for activating the central heating / C.H. comfort set. The time slots not set, correspond to the central heating / C.H. economy set.

When the detected room temperature is below the central heating / C.H. set active at that moment, the appliance is activated in central heating / C.H. mode.

#### Adjustment OFF

Central heating / C.H. always off.

- In the second case, the system works in the following way:

#### Manual adjustment (Man)

The central heating / C.H. demand is activated according to the closing of the TA contact of the relative zone.

#### Automatic adjustment (Auto)


The central heating / C.H. demand is activated according to the closing of the TA contact of the relative zone, during zone presence in the comfort band.

#### Adjustment OFF

Central heating / C.H. always off.



## Cooling

It is possible to set the cooling activation parameters for each individual zone in three different ways: MANUAL, AUTOMATIC, OFF. The selection is made by entering the "Zones"  menu and after having selected the zone of interest, access the menu

### Settings / Operation mode

There are two types of requests:

- Request from room temperature in the presence of remote control

**Enablings / Enable remote contr. = Probe / Panel**

- Request from TA (room thermostat)

**Enablings / Enable room thermostat = Yes**

- In the first case, the system works in the following way:

Manual adjustment (Man)

The cooling request is adjusted according to a fixed room setpoint

#### Cooling / Manual set

When the room temperature is higher than the manual cooling set, the appliance is started in cooling mode.

Automatic adjustment (Auto)

There are two reference setpoints:

#### Cooling / Comfort Set

#### Cooling / Economy Set

By associating a calendar with the relevant zone program, it is possible to determine the time slots for activating the cooling comfort set. The time slots not set, correspond to the cooling economy set.

When the detected room temperature is above the cooling set active at that moment, the appliance is activated in cooling mode.

Adjustment OFF

Cooling always off.

- In the second case, the system works in the following way:

Manual adjustment (Man)

The cooling demand is activated according to the closing of the TA contact of the relative zone.

Automatic adjustment (Auto)

The cooling demand is activated according to the closing of the TA contact of the relative zone, during zone presence in the comfort band.

Adjustment OFF

Cooling always off.

## Dehumidify

If the system is coupled to a humidistat (optional) or a remote zone panel (optional) or a temperature and humidity probe (optional), you can manage the room humidity in summer air conditioning mode.

- If coupled to a humidistat, set the degree of humidity on the humidistat itself (see the instruction booklet).
- If coupled to a humidity temperature sensor, set the humidity percentage in the relative user menu.
- If coupled to a zone remote panel, set the humidity percentage in the relative user menu of the control panel or directly in the menu of the panel (see instruction booklet).

The dehumidification adjustment parameters can be set by entering the "Zone"  menu and selecting the zone of interest by accessing the settings menu and finally the menu

### Dehumidification / Set humidity

Dehumidification disabling

It is possible to disable dehumidification for a time slot, typically a night time slot, by setting

**Dehumidification / Hourly disabling = Yes**

and the start and end times of disabling.



In central heating or cooling request mode, if the temperature of the water in the system meets the request, the system can work simply by activating the circulator pump.



**Clock and programs**

From this menu, it is possible to set the system's date and time as well as the time slots for operation in Comfort and Economy mode.

- **Date and time.**

The date and time can be set by modifying the parameters in the menu

**Clock and programs / Set date and time**

Set date and time	
TIME	↕ 22:22
DAY	5
MONTH	1
YEAR	2020

31

- **Time slots**

It is possible to set 4 calendars with 4 time operating slots in system comfort mode. The system will operate in economy mode during out-of-range time of these 4 time slots.

After setting these 4 calendars it is possible to associate them to the various days of the week in the zone programs, DHW (Domestic hot water) and recirculation according to one's needs.

Set the time slots by modifying the menu

**Clock and programs / Time slots**

Time slots	
Calendar	: 1
[1] 06:15 - 08:30	[3] 17:45 - 23:00
[2] 11:30 - 13:45	[4] 24:00 - 24:00

32



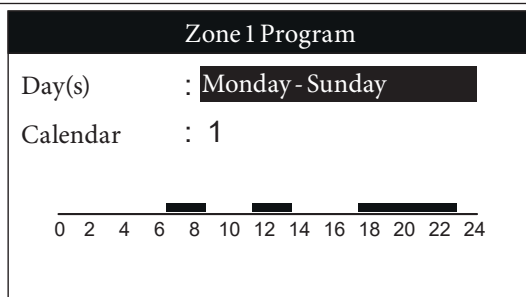
- **Program for Zone 1, Zone 2 (if present), Zone 3 (if present), DHW (Domestic hot water) and recirculation.**

Time ranges (calendars from 1 to 4) are assigned to Zone 1, Zone 2 (if present), Zone 3 (if present), DHW (Domestic hot water) and Central heating / C.H. in these menus.

You can assign the calendar to a single day or to a group of days (single day, Monday - Friday, Saturday-Sunday, Monday - Saturday, Monday - Sunday).

Therefore each day may be personalised with 4 different operating programs.

For convenient selection, the bottom part displays the graphics of the relevant calendar being selected (Fig. 33).



33



On the menu

#### **Zone / Information**

it is possible to identify the status of the various controls managing the central heating / C.H..

- **Holiday program.**

If required, it is possible to pause system operation for an established period.

#### **Clock and programs / Holiday Program**

Set the period in which you wish to pause system operation. During this time, the previously set calendars will not be taken into consideration.

The antifreeze function is still ensured during the holiday period.



In order to ensure maximum comfort for both the central heating/cooling system and domestic hot water, it is suggested to set the period expressed in days to end the day before the expected return from holiday.

#### **Heat pump disabling**

It is possible to disable the heat pump operation for a certain time slot, by setting:

**User / Disable HP = Yes**

and the start and end times of disabling.

#### **Integration Disabling**

The use of the integration electrical resistances can be permanently disabled by setting:

**User / Disable Integration = Yes**

#### **Automatic Vent Function**

In the case of new systems and, in particular, for floor systems, it is very important that de-aeration is performed correctly.

The function consists of the cyclic activation of the pumps and the 3-way valve.

The function is activated by setting

**User / Enable func. Deaeration = Yes**

De-aeration lasts 9 hours and it can be interrupted by setting

**User / Enable func. Deaeration = No**

#### **Screed Heater Function**

The Indoor Unit is equipped with a function to perform the thermal shock on new radiant panel systems, as required by the applicable standard.



Contact the manufacturer of the radiant panels for the thermal shock characteristics and its correct execution.





To be able to activate the function there must be no remote control connected, while in case of system divided into zones it must be properly connected, both hydraulically and electrically.

The active zone pumps are those with ongoing requests, made via the room thermostat input.

The standard function lasts in total 7 days - 3 days at the lowest temperature set and 4 days at the highest temperature set (Fig. 34).

Duration can be changed by changing the value of the parameters:

#### Screed heater / Min dwell time set

#### Screed heater / Max dwell time set

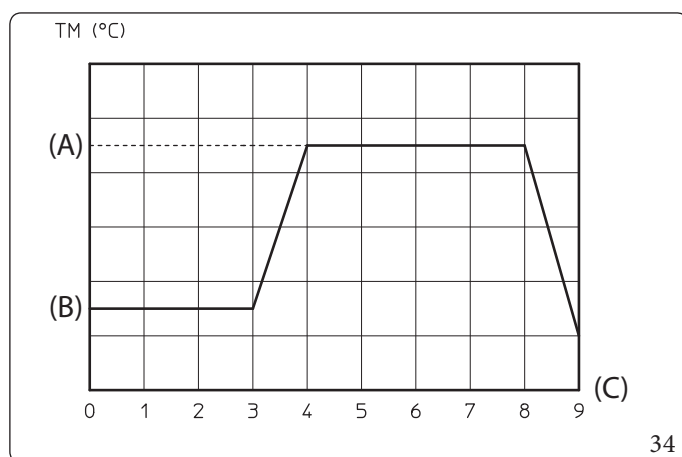
and the temperature gradients within the same menu.

The function is activated from the indoor unit in stand-by, by accessing the menu

#### Screed heater / Activation

At this point, "Screed heater underway" appears on the display.

In case of failure, the function is suspended and will resume when normal operating conditions are reset from the point where it was interrupted.



Key (Fig. 34):

(A) - Top set

(B) - Lower set

(C) - Days

#### Operation with external probe

It is possible to use the thermoregulation functions associated to an external probe.

The system is standard set up to use the outdoor unit external probe or an optional external probe.

With the external probe connected and the thermoregulation function active, the system flow setpoint for room central heating / C.H. or cooling is managed by the system according to the outdoor temperature measured (Par. 1.13).

You can correct the flow setpoint by choosing the offset value in the specific user menu.

It is possible to enable thermal adjustment for each individual zone. The symbol is present in case of thermoregulation of at least one zone.

#### Room Antifreeze Function

The room antifreeze function serves to ensure the protection of system components. If the room temperature of the zone falls below the limit set in the 'Special Parameters' menu, the heat pump is switched on until the set antifreeze protection temperature is reached.

To enable this function, a zone remote panel or a zone humidity temperature probe is required.

#### DHW Antifreeze Function

The DHW antifreeze function protects the internal components of the system in standby mode.

If the temperature of the storage tank drops below 4°C, the system automatically switches on one of the generators available based on the environmental conditions, heat pump or electric resistance, to heat the storage tank until it reaches a temperature of 5°C.



### 3.3 PARAMETERS MENU, INFORMATION AND P.C.B. PROGRAMMING

#### Menu "DHW".

Press the "DHW (Domestic hot water)" button to access a list of variables that enable you to customise use of the DHW (Domestic hot water).

The system is set up for possible programming of the operation parameters. By modifying these parameters as described below, the system can be adapted according to specific needs.

To view the advanced operating parameters, press the "Menu" button, enter the "General settings" submenu and select "Access level" and then select "**Login type = Service**" and enter the specific password, press "OK" and go back to the main screen using the "RESET" key.

Enter the "DHW" menu and adjust the parameters below as needed.

To save the parameter change, press the "OK" button (Fig. 29).

Exit the menu with access type "Service" waiting 4 minutes of inactivity and press the "Menu" button, go back into the "General settings" sub menu and select "Access level" then select "**Login type = User**" and enter the specific password, press "OK" to confirm.

 The following menus refer to display board firmware rev. 3.02 and supervision board rev. 4.00.

Hereunder is a list of all available menus:

DHW Settings					
Menu item	Description	Range	Default	Customised value	S
Boost Function	Enabling of DHW (Domestic hot water) BOOST function	Off / On / Auto	Off		
Set Management	Enabling of the DHW (Domestic hot water) setpoint management in Automatic mode	Manual / Auto	Manual		
Comfort Set	Domestic hot water accumulation setpoint in Comfort phase (Automatic mode)	20 ÷ 65 °C	20 °C		
Economy Set	Domestic hot water accumulation setpoint in Economy phase (Automatic mode)	10 ÷ 35 °C	10 °C		
Manual set	Domestic hot water accumulation setpoint in Manual phase	10 ÷ 65 °C	10 °C		
Temperature	Display of the DHW (Domestic hot water) temperature	-	-		
Anti-legionella	Manages the anti-legionella function.	-	-		S
Configuration	DHW (Domestic hot water) configuration parameters	-	-		S

S = menu entry only visible with "Service" access.

Set. DHW / Anti-legionella					
Menu item	Description	Range	Default	Customised value	S
Anti-legion.cycle time	Establishes the time of activation of the anti-legionella function.	00:00 – 23:59	02:00		S
Anti-legion.cycle day	Establishes the day of activation of the anti-legionella function.	None / Monday - Sunday / All	None		S
Max antilegion. time	Time after which an alarm is signalled for incomplete anti-legionella cycle.	1 - 48 (h)	3h		S

S = menu entry only visible with "Service" access.

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA




Set. DHW / Configuration					
Menu item	Description	Range	Default	Customised value	S
DHW hysteresis	The system activation temperature in DHW (Domestic hot water) is given by the set DHW (Domestic hot water) – DHW (Domestic hot water) hysteresis	1 ÷ 12 °C	5 °C		S
DHW flow offset	The DHW (Domestic hot water) flow temperature is given by the DHW (Domestic hot water) set + DHW (Domestic hot water) flow offset	5 - 55 °C	10 °C		S
Priority	In case of simultaneous heat./cool. system and DHW request, the heat pump will give priority to DHW or to the system.	DHW / CH	DHW		S
Max time DHW	Time after which an alarm is signalled for incomplete DHW (Domestic hot water).	1 - 48 (h)	5h		S

S = menu entry only visible with "Service" access.





## Menu "Zones".

Press the "Zones" button  to access a list of variables that enable you to customise use of the zones.

The system is set up for possible programming of the operation parameters. By modifying these parameters as described below, the system can be adapted according to specific needs.

To view the advanced operating parameters, press the "Menu" button, enter the "General settings" submenu and select "Access level" and then select "**Login type = Service**" and enter the specific password, press "OK" and go back to the main screen using the "RESET" key.

Enter the "Zones" menu and adjust the parameters below as needed.

To save the parameter change, press the "OK" button (Fig. 29).

Exit the menu with access type "Service" waiting 4 minutes of inactivity and press the "Menu" button, go back into the "General settings" sub menu and select "Access level" then select "**Login type = User**" and enter the specific password, press "OK" to confirm.

Below is the complete list of available menus, some of which are only visible after enabling the component or activating the specific associated function:

Zones		
Menu item	Description	S
Zone 1	Defines the operating parameters to manage zone 1.	
Zone 2 (*)	Defines the operating parameters to manage the zone 2 (if present).	
Zone 3 (*)	Defines the operating parameters to manage the zone 3 (if present).	
General information	This display system operating data.	

S = menu entry only visible with "Service" access.

(\*) if present.

Zones / Zone 1		
Menu item	Description	S
Information	This displays the system operating data.	
Settings	Defines the operating parameters to manage zone 1.	
Configuration	Defines the configuration parameters to manage zone 1.	S

S = menu entry only visible with "Service" access.

Zones / Zone 1 / Information		
Menu item	Description	S
Room temperature	Room temperature on zone 1	
Room humidity	Zone 1 room humidity	
Dew temperature	Zone 1 dew temperature	
Room humidity set	Room humidity setpoint set on zone 1	
Set room temperature	Room setpoint set on zone 1	
Flow set	Flow setpoint on zone 1	
Flow temperature	Flow temperature set on zone 1	
Operation status	Description of the zone 1 operating mode Off = zone in OFF mode Economy = Zone in economy mode Comfort = zone in comfort mode Manual = zone in manual mode	S
Room Thermostat Stat.	Yes = Zone TA contact closed No = TA contact open	S

S = menu entry only visible with "Service" access.



Zones / Zone 1 / Settings					
Menu item	Description	Range	Default	Customised value	S
Operation mode	Setting of the zone 1 operating mode. Off = zone in OFF mode Auto = Zone in Automatic mode Manual = zone in manual mode	Off / Manual / Auto	Auto		
C.H.					
Cooling					
Dehumidification					

S = menu entry only visible with "Service" access.

Zones / Zone 1 / Setting / C.H.					
Menu item	Description	Range	Default	Customised value	S
Comfort Set	Room setpoint in central heating zone 1 Comfort mode (Auto mode)	10 ÷ 35 °C	20 °C		
Economy Set	Room setpoint in central heating zone 1 Economy mode (Auto mode)	5 ÷ 30 °C	16 °C		
Manual set	Room setpoint in central heating zone 1 manual mode	5 ÷ 35 °C	20 °C		
Flow set	Flow setpoint set for zone 1 in central heating / C.H.	20 – 65 °C	25 °C		
Flow offset	Offset temperature for central heating zone 1	- 9 ÷ + 9 °C	0 °C		

S = menu entry only visible with "Service" access.

Zones / Zone 1 / Setting / Cooling					
Menu item	Description	Range	Default	Customised value	S
Comfort Set	Room temperature in cooling zone 1 in Comfort mode (Auto mode)	10 ÷ 35 °C	25 °C		
Economy Set	Room temperature in cooling zone 1 in Economy mode (Auto mode)	5 ÷ 30 °C	28 °C		
Manual set	Room setpoint in cooling zone 1 manual mode	5 ÷ 35 °C	25 °C		
Flow set	Flow setpoint set for zone 1 in cooling	5 ÷ 25 °C	20 °C		
Flow offset	Offset temperature for cooling zone 1	- 9 ÷ + 9 °C	0 °C		

S = menu entry only visible with "Service" access.

Zones / Zone 1 / Setting / Dehumidification					
Menu item	Description	Range	Default	Customised value	S
Set humidity	Humidity setpoint for zone 1	30 ÷ 70 %	50 %		
Hourly disabling	Disabling of request to the dehumidifier, according to the daily time slot	No / Yes	No		
Hourly disable start	Time of dehumidification request disabling phase start	0-23h	22h		
Hourly disable end	Time of dehumidification request disabling phase end	0-23h	8h		

S = menu entry only visible with "Service" access.



Zones / Zone 1 / Configuration		
Menu item	Description	S
Enablings		S
Thermoreg. CH	Central heating thermoregulation setting sub-menu	S
Thermoreg. Cool.	Cooling thermoregulation setting sub-menu	S

S = menu entry only visible with "Service" access.

Zones / Zone 1 / Config. / Enablings					
Menu item	Description	Range	Default	Customised value	S
Mode	Establishes the zone 1 operating mode	CH Cool. Cool+CH	Cool+CH		S
Enable remote contr.	Enables the operation of a remote device. - No = No remote control installed - Panel = Remote zone control - Probe = Temperature and humidity probe	No Panel Probe	No		S
Room. probe modul.	Enables modulation with room probe	Yes / No	Yes		S
Enable room thermostat	Enable operation of a room thermostat to check the zone	Yes / No	Yes		S
Enable dew point	In the presence of a remote device, calculation of the dew point. The calculation is particularly needed in case of radiant panel systems.	Yes / No	Yes		S
Enable humidistat	Enables the operation of a humidistat	No / Yes	No		S
Enable dehumidifiers	Enables the operation of a dehumidifier	Yes / No	No		S
Max dehum. temp.	Maximum flow temperature acceptable for the dehumidifier, beyond which it is kept switched off.	10 - 50 °C	25 °C		S
Dehum. alarm set	Maximum flow set calculated, acceptable by the dehumidifier.	10 - 50 °C	25 °C		S
Ext. probe modul.	Thermoregulation with external probe	No / Yes	No		S

S = menu entry only visible with "Service" access.

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



Zones / Zone 1 / Config. / **Thermoreg. CH**

Menu item	Description	Range	Default	Customised value	S
Max flow set	Without the external probe it defines the maximum flow temperature that can be set by the user. With the external probe present it defines the maximum flow temperature corresponding to operation with minimum external temperature	20 ÷ 65 °C	55 °C		S
Min flow set	Without the external probe it defines the minimum flow temperature that can be set by the user. With the external probe present it defines the minimum flow temperature corresponding to operation with maximum external temperature	20 ÷ 65 °C	20 °C		S
Min. outside temp.	With the external probe present it defines at what minimum external temperature the system must operate at the maximum flow temperature	-25 ÷ +15 °C	-5 °C		S
Max. outside temp.	With the external probe present it defines at what maximum external temperature the system must operate at the minimum flow temperature	-5 ÷ +45 °C	25 °C		S

S = menu entry only visible with "Service" access.

Zones / Zone 1 / Config. / **Thermoreg. Cool.**

Menu item	Description	Range	Default	Customised value	S
Max flow set	Without the external probe it defines the maximum flow that can be set by the user. With the external probe present it defines the maximum flow temperature corresponding to operation with minimum external temperature	5 ÷ 25 °C	20 °C		S
Min flow set	Without the external probe it defines the minimum flow that can be set by the user. With the external probe present it defines the minimum flow temperature corresponding to operation with maximum external temperature	5 ÷ 25 °C	7 °C		S
Min. outside temp.	With the external probe present, it defines at what maximum external temperature the system must operate at the minimum flow temperature	20 ÷ 45 °C	25 °C		S
Max. outside temp.	With the external probe present, it defines at what minimum external temperature the system must operate at the maximum flow temperature	20 ÷ 45 °C	35 °C		S

S = menu entry only visible with "Service" access.



Zones / Zone 2 (*)		
Menu item	Description	S
Information	This displays the system operating data.	
Settings	Defines the operating parameters to manage the zone 2.	
Configuration	Defines the configuration parameters to manage zone 2.	S

S = menu entry only visible with "Service" access.

(\*) if present.

Zones / Zone 2 (*) / Information		
Menu item	Description	S
Room temperature	Room temperature on zone 2	
Room humidity	Zone 2 room humidity	
Dew temperature	Zone 2 dew temperature	
Room humidity set	Room humidity setpoint set on zone 2	
Set room temperature	Room setpoint set on zone 2	
Flow set	Flow setpoint on zone 2	
Flow temperature	Flow temperature set on zone 2	
Operation status	Description of the zone 2 operating mode Off = zone in OFF mode Economy = Zone in economy mode Comfort = zone in comfort mode Manual = zone in manual mode	S
Room Thermostat Stat.	Yes = Zone TA contact closed No = TA contact open	S

S = menu entry only visible with "Service" access.

(\*) if present.

Zones / Zone 2 (*) / Settings					
Menu item	Description	Range	Default	Customised value	S
Operation mode	Setting of the zone 2 operating mode. Off = zone in OFF mode Auto = Zone in Automatic mode Manual = zone in manual mode	Off / Manual / Auto	Auto		
C.H.					
Cooling					
Dehumidification					

S = menu entry only visible with "Service" access.

(\*) if present.

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



Zones / Zone 2 (*) / Setting / C.H.					
Menu item	Description	Range	Default	Customised value	S
Comfort Set	Room setpoint in central heating zone 2 Comfort mode (Auto mode)	10 ÷ 35 °C	20 °C		
Economy Set	Room setpoint in central heating zone 2 Economy mode (Auto mode)	5 ÷ 30 °C	16 °C		
Manual set	Room setpoint in central heating zone 2 manual mode	5 ÷ 35 °C	20 °C		
Flow set	Flow setpoint set for zone 2 in central heating / C.H.	20 – 65 °C	25 °C		
Flow offset	Offset temperature for central heating zone 2	- 9 ÷ + 9 °C	0 °C		

S = menu entry only visible with "Service" access.

(\*) if present.

Zones / Zone 2 (*) / Setting / Cooling					
Menu item	Description	Range	Default	Customised value	S
Comfort Set	Room temperature in cooling zone 2 in Comfort mode (Auto mode)	10 ÷ 35 °C	25 °C		
Economy Set	Room temperature in cooling zone 2 in Economy mode (Auto mode)	5 ÷ 30 °C	28 °C		
Manual set	Room setpoint in cooling zone 2 manual mode	5 ÷ 35 °C	25 °C		
Flow set	Flow setpoint set for zone 2 in cooling	5 ÷ 25 °C	20 °C		
Flow offset	Offset temperature for cooling zone 2	- 9 ÷ + 9 °C	0 °C		

S = menu entry only visible with "Service" access.

(\*) if present.

Zones / Zone 2 (*) / Setting / Dehumidification					
Menu item	Description	Range	Default	Customised value	S
Set humidity	Humidity setpoint for zone 2	30 ÷ 70 %	50 %		
Hourly disabling	Disabling of request to the dehumidifier, according to the daily time slot	No / Yes	No		
Hourly disable start	Time of dehumidification request disabling phase start	0-23h	22h		
Hourly disable end	Time of dehumidification request disabling phase end	0-23h	8h		

S = menu entry only visible with "Service" access.

(\*) if present.



Zones / Zone 2 (*) / Configuration		
Menu item	Description	S
Enablings		S
Thermoreg. CH	Central heating thermoregulation setting sub-menu	S
Thermoreg. Cool.	Cooling thermoregulation setting sub-menu	S

S = menu entry only visible with "Service" access.

(\*) if present.

Zones / Zone 2 (*) / Config. / Enablings					
Menu item	Description	Range	Default	Customised value	S
Mode	Establishes the zone 2 operating mode	CH Cool. Cool+CH	Cool+CH		S
Enable remote contr.	Enables the operation of a remote device. - No = No remote control installed - Panel = Remote zone control - Probe = Temperature and humidity probe	No Panel Probe	No		S
Room. probe modul.	Enables modulation with room probe	Yes / No	Yes		S
Enable room thermostat	Enable operation of a room thermostat to check the zone	Yes / No	Yes		S
Enable dew point	In the presence of a remote device, calculation of the dew point. The calculation is particularly needed in case of radiant panel systems.	Yes / No	Yes		S
Enable humidistat	Enables the operation of a humidistat	No / Yes	No		S
Enable dehumidifiers	Enables the operation of a dehumidifier	Yes / No	No		S
Max dehum. temp.	Maximum flow temperature acceptable for the dehumidifier, beyond which it is kept switched off.	10 - 50 °C	25 °C		S
Dehum. alarm set	Maximum flow set calculated, acceptable by the dehumidifier.	10 - 50 °C	25 °C		S
Ext. probe modul.	Thermoregulation with external probe	No / Yes	No		S
Zonetype	Not used	MIX/DIR	MIX		S

S = menu entry only visible with "Service" access.

(\*) if present.

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



Zones / Zone 2 (*) / Config. / Thermoreg. CH					
Menu item	Description	Range	Default	Customised value	S
Max flow set	Without the external probe it defines the maximum flow temperature that can be set by the user. With the external probe present it defines the maximum flow temperature corresponding to operation with minimum external temperature	20 ÷ 65 °C	45 °C		S
Min flow set	Without the external probe it defines the minimum flow temperature that can be set by the user. With the external probe present it defines the minimum flow temperature corresponding to operation with maximum external temperature	20 ÷ 65 °C	20 °C		S
Min. outside temp.	With the external probe present it defines at what minimum external temperature the system must operate at the maximum flow temperature	-25 ÷ +15 °C	-5 °C		S
Max. outside temp.	With the external probe present it defines at what maximum external temperature the system must operate at the minimum flow temperature	-5 ÷ +45 °C	25 °C		S

S = menu entry only visible with "Service" access.

(\*) if present.

Zones / Zone 2 (*) / Config. / Thermoreg. Cool.					
Menu item	Description	Range	Default	Customised value	S
Max flow set	Without the external probe it defines the maximum flow that can be set by the user. With the external probe present it defines the maximum flow temperature corresponding to operation with minimum external temperature	5 ÷ 25 °C	20 °C		S
Min flow set	Without the external probe it defines the minimum flow that can be set by the user. With the external probe present it defines the minimum flow temperature corresponding to operation with maximum external temperature	5 ÷ 25 °C	18 °C		S
Min. outside temp.	With the external probe present, it defines at what maximum external temperature the system must operate at the minimum flow temperature	20 ÷ 45 °C	25 °C		S
Max. outside temp.	With the external probe present, it defines at what minimum external temperature the system must operate at the maximum flow temperature	20 ÷ 45 °C	35 °C		S

S = menu entry only visible with "Service" access.

(\*) if present.





Zones / Zone 3 (*)		
Menu item	Description	S
Information	This displays the system operating data.	
Settings	Defines the operating parameters to manage the zone 3.	
Configuration	Defines the configuration parameters to manage zone 3.	S

S = menu entry only visible with "Service" access.

(\*) if present.

Zones / Zone 3 (*) / Information		
Menu item	Description	S
Room temperature	Room temperature on zone 3	
Room humidity	Zone 3 room humidity	
Dew temperature	Zone 3 dew temperature	
Room humidity set	Room humidity setpoint set on zone 3	
Set room temperature	Room setpoint set on zone 3	
Flow set	Flow setpoint on zone 3	
Flow temperature	Flow temperature set on zone 3	
Operation status	Description of the zone 3 operating mode Off = zone in OFF mode Economy = Zone in economy mode Comfort = zone in comfort mode Manual = zone in manual mode	S
Room Thermostat Stat.	Yes = Zone TA contact closed No = TA contact open	S

S = menu entry only visible with "Service" access.

(\*) if present.

Zones / Zone 3 (*) / Settings					
Menu item	Description	Range	Default	Customised value	S
Operation mode	Setting of the zone 3 operating mode. Off = zone in OFF mode Auto = Zone in Automatic mode Manual = zone in manual mode	Off / Manual / Auto	Auto		
C.H.					
Cooling					
Dehumidification					

S = menu entry only visible with "Service" access.

(\*) if present.

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



Zones / Zone 3 (*) / Setting / C.H.					
Menu item	Description	Range	Default	Customised value	S
Comfort Set	Room setpoint in central heating zone 3 Comfort mode (Auto mode)	10 ÷ 35 °C	20 °C		
Economy Set	Room setpoint in central heating zone 3 Economy mode (Auto mode)	5 ÷ 30 °C	16 °C		
Manual set	Room setpoint in central heating zone 3 manual mode	5 ÷ 35 °C	20 °C		
Flow set	Flow setpoint set for zone 3 in central heating / C.H.	20 – 65 °C	25 °C		
Flow offset	Offset temperature for central heating zone 3	- 9 ÷ + 9 °C	0 °C		

S = menu entry only visible with "Service" access.

(\*) if present.

Zones / Zone 3 (*) / Setting / Cooling					
Menu item	Description	Range	Default	Customised value	S
Comfort Set	Room temperature in cooling zone 3 in Comfort mode (Auto mode)	10 ÷ 35 °C	25 °C		
Economy Set	Room temperature in cooling zone 3 in Economy mode (Auto mode)	5 ÷ 30 °C	28 °C		
Manual set	Room setpoint in cooling zone 3 manual mode	5 ÷ 35 °C	25 °C		
Flow set	Flow setpoint set for zone 3 in cooling	5 ÷ 25 °C	20 °C		
Flow offset	Offset temperature for cooling zone 3	- 9 ÷ + 9 °C	0 °C		

S = menu entry only visible with "Service" access.

(\*) if present.

Zones / Zone 3 (*) / Setting / Dehumidification					
Menu item	Description	Range	Default	Customised value	S
Set humidity	Humidity setpoint for zone 3	30 ÷ 70 %	50 %		
Hourly disabling	Disabling of request to the dehumidifier, according to the daily time slot	No / Yes	No		
Hourly disable start	Time of dehumidification request disabling phase start	0-23h	22h		
Hourly disable end	Time of dehumidification request disabling phase end	0-23h	8h		

S = menu entry only visible with "Service" access.

(\*) if present.



Zones / Zone 3 (*) / Configuration		
Menu item	Description	S
Enablings		S
Thermoreg. CH	Central heating thermoregulation setting sub-menu	S
Thermoreg. Cool.	Cooling thermoregulation setting sub-menu	S

S = menu entry only visible with "Service" access.

(\*) if present.

Zones / Zone 3 (*) / Config. / Enablings					
Menu item	Description	Range	Default	Customised value	S
Mode	Establishes the zone 3 operating mode	CH Cool. Cool+CH	Cool+CH		S
Enable remote contr.	Enables the operation of a remote device. - No = No remote control installed - Panel = Remote zone control - Probe = Temperature and humidity probe	No Panel Probe	No		S
Room. probe modul.	Enables modulation with room probe	Yes / No	Yes		S
Enable room thermostat	Enable operation of a room thermostat to check the zone	Yes / No	Yes		S
Enable dew point	In the presence of a remote device, calculation of the dew point. The calculation is particularly needed in case of radiant panel systems.	Yes / No	Yes		S
Enable humidistat	Enables the operation of a humidistat	No / Yes	No		S
Enable dehumidifiers	Enables the operation of a dehumidifier	Yes / No	No		S
Max dehum. temp.	Maximum flow temperature acceptable for the dehumidifier, beyond which it is kept switched off.	10 - 50 °C	25 °C		S
Dehum. alarm set	Maximum flow set calculated, acceptable by the dehumidifier.	10 - 50 °C	25 °C		S
Ext. probe modul.	Thermoregulation with external probe	No / Yes	No		S
Zonetype	Not used	MIX/DIR	MIX		S

S = menu entry only visible with "Service" access.

(\*) if present.

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



Zones / Zone 3 (*) / Config. / Thermoreg. CH					
Menu item	Description	Range	Default	Customised value	S
Max flow set	Without the external probe it defines the maximum flow temperature that can be set by the user. With the external probe present it defines the maximum flow temperature corresponding to operation with minimum external temperature	20 ÷ 65 °C	45 °C		S
Min flow set	Without the external probe it defines the minimum flow temperature that can be set by the user. With the external probe present it defines the minimum flow temperature corresponding to operation with maximum external temperature	20 ÷ 65 °C	20 °C		S
Min. outside temp.	With the external probe present it defines at what minimum external temperature the system must operate at the maximum flow temperature	-25 ÷ +15 °C	-5 °C		S
Max. outside temp.	With the external probe present it defines at what maximum external temperature the system must operate at the minimum flow temperature	-5 ÷ +45 °C	25 °C		S

S = menu entry only visible with "Service" access.

(\*) if present.

Zones / Zone 3 (*) / Config. / Thermoreg. Cool.					
Menu item	Description	Range	Default	Customised value	S
Max flow set	Without the external probe it defines the maximum flow that can be set by the user. With the external probe present it defines the maximum flow temperature corresponding to operation with minimum external temperature	5 ÷ 25 °C	20 °C		S
Min flow set	Without the external probe it defines the minimum flow that can be set by the user. With the external probe present it defines the minimum flow temperature corresponding to operation with maximum external temperature	5 ÷ 25 °C	18 °C		S
Min. outside temp.	With the external probe present, it defines at what maximum external temperature the system must operate at the minimum flow temperature	20 ÷ 45 °C	25 °C		S
Max. outside temp.	With the external probe present, it defines at what minimum external temperature the system must operate at the maximum flow temperature	20 ÷ 45 °C	35 °C		S

S = menu entry only visible with "Service" access.

(\*) if present.



Zones / General information					
Menu item	Description	Range	Default	Customised value	S
Outside temperature	External temperature detected by the external probe	-	-		
System flow set	Flow temperature set on the system	-	-		
Zone 1 flow set	Flow temperature set on zone 1	-	-		
Zone 1 request	Request present on zone 1 No = no request CH = Central heating request Cool. = Cooling request Dehumid. = Dehumidification request in neutral air R. Air = Dehumidification request in cooled air R + D = Cooling and dehumidification requests in neutral air R + A = Cooling and dehumidification requests in cool air	No CH Cool. Dehumid. R. Air R + D R + A	-		
Zone 2 flow set (*)	Flow temperature set on zone 2 (if present)	-	-		
Zone 2 request (*)	Request present on zone 2 No = no request CH = Central heating request Cool. = Cooling request Dehumid. = Dehumidification request in neutral air R. Air = Dehumidification request in cooled air R + D = Cooling and dehumidification requests in neutral air R + A = Cooling and dehumidification requests in cool air	No CH Cool. Dehumid. R. Air R + D R + A	-		
Zone 3 flow set (*)	Flow temperature set on zone 3 (if present)	-	-		
Zone 3 request (*)	Request present on zone 3 No = no request CH = Central heating request Cool. = Cooling request Dehumid. = Dehumidification request in neutral air R. Air = Dehumidification request in cooled air R + D = Cooling and dehumidification requests in neutral air R + A = Cooling and dehumidification requests in cool air	No CH Cool. Dehumid. R. Air R + D R + A	-		

S = menu entry only visible with "Service" access.  
 (\*) if present.

## Main Menu

Press the "Menu" button to access a list of variables that enable you to customise use of the system.

The system is set up for possible programming of the operation parameters. By modifying these parameters as described below, the system can be adapted according to specific needs.

To view the advanced operating parameters, press the "Menu" button, enter the "General settings" submenu and select "Access level" and then select "**Login type = Service**" and enter the specific password, press "OK" and go back to the main screen using the "RESET" key.

Enter the "Main Menu" and adjust the parameters below as needed.

To save the parameter change, press the "OK" button (Fig. 29).

Exit the menu with access type "Service" waiting 4 minutes of inactivity and press the "Menu" button, go back into the "General settings" sub menu and select "Access level" then select "**Login type = User**" and enter the specific password, press "OK" to confirm.

Below is the complete list of available menus, some of which are only visible after enabling the component or activating the specific associated function:

Menu		
Menu item	Description	S
Clock and programs	Defines the date/time and time operating slots	
User	Defines the system parameters that can be modified by the user	
Information	Display system operating data	
Faults management	Displays the list of the last 10 anomalies and resets the fault history	
General settings	Allows selecting the panel operating language, the display operating mode and to access the password-protected menus dedicated to a qualified technician.	
Support	Defines the advanced operating parameters	S

S = menu entry only visible with "Service" access.

Menu / Clock and programs					
Menu item	Description	Range	Default	Customised value	S
Set date and time	Defines the system clock and calendar	-	-		
Automatic summer time	Defines whether to activate the summer time changeover	Yes/No	Yes		
Time slots	Set the 4 time slots of each calendar.	00.00 - 24.00h	-		
Zone 1 Program	Zone 1 time scheduling	-	-		
	Zone 1: Monday	CAL1, CAL2, CAL3, CAL4	CAL1		
	Zone 1: Tuesday	CAL1, CAL2, CAL3, CAL4	CAL1		
	Zone 1: Wednesday	CAL1, CAL2, CAL3, CAL4	CAL1		
	Zone 1: Thursday	CAL1, CAL2, CAL3, CAL4	CAL1		
	Zone 1: Friday	CAL1, CAL2, CAL3, CAL4	CAL1		
	Zone 1: Saturday	CAL1, CAL2, CAL3, CAL4	CAL1		
	Zone 1: Sunday	CAL1, CAL2, CAL3, CAL4	CAL1		

S = menu entry only visible with "Service" access.



Menu / Clock and programs					
Menu item	Description	Range	Default	Customised value	S
Zone 2 Program (*)	Zone 2 time scheduling (if present)	-	-		
	Zone 2: Monday	CAL1,CAL2,CAL3,CAL4	CAL1		
	Zone 2: Tuesday	CAL1,CAL2,CAL3,CAL4	CAL1		
	Zone 2: Wednesday	CAL1,CAL2,CAL3,CAL4	CAL1		
	Zone 2: Thursday	CAL1,CAL2,CAL3,CAL4	CAL1		
	Zone 2: Friday	CAL1,CAL2,CAL3,CAL4	CAL1		
	Zone 2: Saturday	CAL1,CAL2,CAL3,CAL4	CAL1		
	Zone 2: Sunday	CAL1,CAL2,CAL3,CAL4	CAL1		
Zone 3 Program (*)	Zone 3 time scheduling (if present)	-	-		
	Zone 3: Monday	CAL1,CAL2,CAL3,CAL4	CAL1		
	Zone 3: Tuesday	CAL1,CAL2,CAL3,CAL4	CAL1		
	Zone 3: Wednesday	CAL1,CAL2,CAL3,CAL4	CAL1		
	Zone 3: Thursday	CAL1,CAL2,CAL3,CAL4	CAL1		
	Zone 3: Friday	CAL1,CAL2,CAL3,CAL4	CAL1		
	Zone 3: Saturday	CAL1,CAL2,CAL3,CAL4	CAL1		
	Zone 3: Sunday	CAL1,CAL2,CAL3,CAL4	CAL1		

S = menu entry only visible with "Service" access.  
 (\*) if present.



Menu / Clock and programs					
Menu item	Description	Range	Default	Customised value	S
DHW Program	DHW operation time programming	-	-		
	DHW: Monday	CAL1, CAL2, CAL3, CAL4	CAL1		
	DHW: Tuesday	CAL1, CAL2, CAL3, CAL4	CAL1		
	DHW: Wednesday	CAL1, CAL2, CAL3, CAL4	CAL1		
	DHW: Thursday	CAL1, CAL2, CAL3, CAL4	CAL1		
	DHW: Friday	CAL1, CAL2, CAL3, CAL4	CAL1		
	DHW: Saturday	CAL1, CAL2, CAL3, CAL4	CAL1		
	DHW: Sunday	CAL1, CAL2, CAL3, CAL4	CAL1		
Recirculation Program	Recirculation operation time programming	-	-		
	Recirculation: Monday	CAL1, CAL2, CAL3, CAL4	CAL1		
	Recirculation: Tuesday	CAL1, CAL2, CAL3, CAL4	CAL1		
	Recirculation: Wednesday	CAL1, CAL2, CAL3, CAL4	CAL1		
	Recirculation: Thursday	CAL1, CAL2, CAL3, CAL4	CAL1		
	Recirculation: Friday	CAL1, CAL2, CAL3, CAL4	CAL1		
	Recirculation: Saturday	CAL1, CAL2, CAL3, CAL4	CAL1		
	Recirculation: Sunday	CAL1, CAL2, CAL3, CAL4	CAL1		
Holiday Program	Defines the period during which the system disables both hot water heating and room central heating and/or cooling functions. At the end of the set days, the previously active functions will be reset.	Off / 1 day - 30 days	Off		

S = menu entry only visible with "Service" access.





Menu / User					
Menu item	Description	Range	Default	Customised value	S
Disable HP	It allows you to disable the heat pump according to the set time slot or via the outdoor contact.	Yes / No	No		
Start hourly HP disab.	Allows to set when disabling starts.	0-23h	0h		
End hourly HP disab.	Allows to set when disabling ends.	0-23h	0h		
Disable Integration	Allows the integration device to be permanently disabled.	Yes / No	No		
Enable func. Deaeration	Enables the de-aeration function.	Yes / No	No		
Enab. Silent func.	Enables the noise reduction function of the outdoor unit	Yes / No	No		
Start Silent func.	Allows to set the starting time of the noise reduction function of the outdoor unit.	0-23h	0h		
End Silent func.	Allows to set the finish time of the noise reduction function of the outdoor unit.	0-23h	0h		
Screed heater		-	-		

S = menu entry only visible with "Service" access.

Menu / User / Screed heater					
Menu item	Description	Range	Default	Customised value	S
Min dwell time set	Defines the time spent at minimum operating temperature during the active function	1 - 7 days	3 days		
Rise gradient	Defines the ascent gradient of the temperature	3 ÷ 30 °C/g	30 °C/g		
Max dwell time set	Defines the time spent at maximum operating temperature during the active function	1 - 14 days	4 days		
Fall gradient	Defines the descent gradient of the temperature	3 ÷ 30 °C/g	30 °C/g		
Minimum flow set	Defines the minimum delivery temperature of the screed heater function	20 ÷ 45 °C	25 °C		
Maximum flow set	Defines the maximum delivery temperature of the screed heater function	25 ÷ 55 °C	45 °C		
Activation	Activation of the screed heater function	Yes / No	No		

S = menu entry only visible with "Service" access.

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



Menu / Information		
Menu item	Description	S
Heat pump	Defines the heat pump operating parameters.	
Board revisions	This displays the system board revisions.	
Meters	This displays the operating data.	

S = menu entry only visible with "Service" access.

Menu / Information / Heat pump		
Menu item	Description	S
Flow temperature	Heat pump flow temperature	
Return temperature	Heat pump return temperature	
Compress.outlet temp.	Outdoor unit compressor temperature	
Compress. drain temp.	Outdoor unit compressor discharge temperature	
Compress.int.temp.	Not present	
Expan.valve pos.	Outdoor unit expansion valve position	
Heat exch.cool.temp.	Coolant temperature inside the plate heat exchanger	
Coil temperature	Outdoor unit coil temperature	
Outdoor HP temp.	External temperature	
HP frequency	Heat pump frequency	
HP request mode	Status of the request to heat pump	
HP Status	Heat pump status	
System resistance	System resistance active control	
DHW resistance 1	Standard DHW (Domestic hot water) resistance active control	
System state	Technical parameter (only for Immergas Service).	
Integration state	Technical parameter (only for Immergas Service).	
Output status	Technical parameter (only for Immergas Service).	
DHW resistance 2	Manual ignition of the DHW (Domestic hot water) resistance 2	
Disable HP	Heat pump activation/deactivation status	
Inverter current	Outdoor unit inverter current	
Fan speed (H)	Outdoor unit high fan speed	
Fan speed (L)	Outdoor unit low fan speed	
HP Setpoint	Request setpoint to heat pump	

S = menu entry only visible with "Service" access.



Menu / Information / <b>Heat pump</b>		
Menu item	Description	S
Pump speed	Heat pump circulator speed	
System flow temp.	System temperature	
Heat. set correc.	Current correction of the flow setpoint	
System flow rate	Heat pump circuit flow rate	
Photovoltaic	Operating status combined with a photovoltaic system	
Power reduction	This displays a reduction of the HP operating frequency	
Hot/Cold three-way	Summer/Winter Three-way Position	
Recirculation pump	Active recirculation pump	
Interface board type	Communication board type	
Screed heater end days	Days left until the end of the screed heater	
Recirculation Temp.	DHW recirculation probe temperature	
Information 1	Heat pump configuration code	
Information 2	Flow temperature calculated after electrical resistance (multiplied by 10)	
Information 3	Not used	
Information 4	Not used	
Information 5	Parameter for internal use	
Information 6	Not used	
Information 7	Not used	
Information 8	Not used	
Information 9	Not used	
Information 10	Not used	

S = menu entry only visible with "Service" access.

Menu / Information / <b>Board revisions</b>		
Menu item	Description	S
Display board rev. SW	Remote panel software revision	
Display board rev. HW	Remote panel hardware revision	
Supervis. board SW	Supervision board software revision	
Supervis. board BIOS	Supervision board hardware revision	
EU main board rev. no.	Outdoor unit main board firmware revision	
EU main board rev. date	Outdoor unit main board firmware date	
EU inverter rev. no.	Outdoor unit inverter board firmware revision	
EU inverter rev. date	Outdoor unit inverter board firmware date	
UE eeprom rev. no.	Outdoor unit EEPROM firmware revision	
UE eeprom rev. data	Outdoor unit EEPROM firmware date	
EU interface rev. no.	Communication board firmware revision	
EU interface rev. date	Communication board firmware data	
Expans. board rev. (H)	Revision of the expansion board (top part)	
Expans. board rev. (L)	Revision of the expansion board (bottom part)	

S = menu entry only visible with "Service" access.



Menu / Information / <b>Meters</b>		
Menu item	Description	S
HP running hours	Number of hours of operation of the compressor	
Resist. run hours Heating.	Hours of operating of the electrical resistance	
Resist. run hours DHW1	Hours of operation of the standard DHW (Domestic hot water) resistance	
Resist. run hours DHW2	Hours of operation of the optional DHW (Domestic hot water) resistance	

S = menu entry only visible with "Service" access.

Menu / <b>Faults management</b>		
Menu item	Description	S
Reset Log	Resets the list of anomalies	
Anomalies log		

S = menu entry only visible with "Service" access.

Menu / Faults management / <b>Anomalies log</b>		
Menu item	Description	S
History index		
Anomaly code	This displays the selected anomaly code	
Technical anomaly		

S = menu entry only visible with "Service" access.

Accessing the menu **Faults management / Anomalies log**, allows you to consult the type and date on which the last 10 errors were detected.



Only an Authorised Technical Service Centre can reset the faults history in order to collect and assess all the diagnostic information useful for evaluating the operational condition of the system.

Menu / General settings					
Menu item	Description	Range	Default	Customised value	S
Language	Defines the remote panel operation language	ITA - ALB - BUL - CZE - FRA - NLD - GER - ENG - GRE - LIT - POL - POR - RUM - RUS - SLO - SLV - SPA HUN - TUR - UKR	ITA		
Display	It allows for various display adjustments.				
Access level	Allows the entry of an access code to access the parameter customisation menus according to ones needs (dedicated to a qualified technician)				
Factory setting	Allows to reset all parameters with factory values.	Yes/No			S

S = menu entry only visible with "Service" access.

Menu / General settings / Display					
Menu item	Description	Range	Default	Customised value	S
Contrast	Allows to adjust the display contrast	Min / 2 ÷ 9 / Max	5		
Display lighting	Allows to set the display operation mode	Off / Min / Auto / Max	Auto		

S = menu entry only visible with "Service" access.



The parameters referring to zone 2 can only be displayed if there is a zone 2 on the system and it is configured correctly.



The parameters referring to zone 3 can only be displayed if there is a zone 3 on the system and it is configured correctly.

Menu / Support		
Menu item	Description	S
System definition	Sub-menu to define the devices connected to the system	S
Heat pump	Heat pump operating parameters sub-menu	S
Integration	System integration setting sub-menu	S
Manual drives	Submenu for load operation check	S
Special parameters	Parameters for various uses	S

S = menu entry only visible with "Service" access.

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



Menu/Support/Definit. System					
Menu item	Description	Range	Default	Customised value	S
Number of zones	Defines the number of zones present	1-3	1		S
Main zone	Defines the main zone of the system in which the remote panel will be used	1-2-3	1		S
External probe	This defines the type of external probe enabled. - IU = indoor unit - OU = outdoor unit.	OU / IU	OU		S
External probe corr.	Correction of the external probe value	-9 +9	0		S
Photovoltaic function	Enables the operation combined with a photovoltaic system.	Yes / No	No		S
System supervision	Enabling connection to Dominus or System supervisor	No/Domin/ BMS	No		S
Activation time	Waiting time before activation of the system setpoint correction	1 - 120	20		S
Increase time	Time interval for the increase or decrease of 1°C of correction of the system setpoint	1 - 20	5		S
Max CH adjust	Max correction during central heating mode	0 - 10	0		S
Max Cool. adjust	Max correction during cooling mode.	0 - 10	0		S

S = menu entry only visible with "Service" access.



Menu/Support/Heat pump					
Menu item	Description	Range	Default	Customised value	S
HP Type	Setting the indoor unit.	MHP / MHP Mini / MHM Hyd	MHP		S
Powers					S
Timers					S
Pump					S

S = menu entry only visible with "Service" access.

Menu/Support / HP / Powers					
Menu item	Description	Range	Default	Customised value	S
HP Model	Setting the connected outdoor unit.	4 / 6 / 9 / 12 / 14 / 16	12		S
HP power off	Enable the Disabling function of the heat pump. By selecting "Reduct.", it is possible to reduce the heat pump performance to the power set in the parameter "Power in reduced"	No / Yes	No		S
Power in reduced	Not used	10 ÷ 100 %	75 %		S
Enab. Silent func.	Enables the noise reduction function of the outdoor unit	No / Yes	No		S

S = menu entry only visible with "Service" access.

Menu / Support / HP / Timers					
Menu item	Description	Range	Default	Customised value	S
Anti-cycle time	Setting of the minimum waiting time between switching off the compressor of the outdoor unit and switching it back on.	0-840 s	180 s		S
Ramp time	Not used	0-840 s	0 s		S
Req. delay time TA	In the case of both the room thermostat and the Zone Panel, the request to the appliance occurs with a delay set with respect to the request to the zones.	0-600 s	0 s		S
Prec. end wait time	Not used	0-100 s	0 s		S

S = menu entry only visible with "Service" access.

Menu / Support / HP / Pump					
Menu item	Description	Range	Default	Customised value	S
Pump mode	Enable the pump operation with speed set "Max Sp." or the modulating mode with tracking of the modulating temperature ("Modul.") differential.	Max Sp. / Modul.	Modul.		S
Min pump speed	Value of minimum speed used in modulating operation	20 – 100 %	-- %		S
Max pump speed	Heat pump circulator speed	20 – 100 %	70 %		S
Pump T Delta	Not used	5	5		S
Automatic vent	Not used	No / Yes	No		S

S = menu entry only visible with "Service" access.

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



Menu/Support/Integration					
Menu item	Description	Range	Default	Customised value	S
Min. CH integr. temp.	Temperature threshold below which integration is activated at the heat pump in central heating.	-25 ÷ +35 °C (*)	-20 °C		S
DHW integration mode.	Mode of intervention of the DHW (Domestic hot water) integration and resistance	Met. / Altern.	Altern.		S
CH integration mode	Mode of intervention of the central heating / C.H. integration and resistance	Met. / Altern.	Altern.		S
Concomitant mode	Enabling of conjunction function 0 = No 1 = C.H./Cool. 2 = Only Cool. 3 = C.H. only	0 - 3	0		S
Enable DHW integr.	Enabling of generators for the DHW Mode	HP HP-Int Int	HP		S
Enable heat. integr.	Enabling of generators for the Central heating mode.	HP HP-Int Int	HP		S
CH wait time	Waiting time to reach the setting set before activation of the integration in room central heating / C.H.	20 ÷ 540'	60 min		S
DHW wait time	Waiting time to reach the setting set before activation of the integration in the production of domestic hot water	20 ÷ 540'	120 min		S
Integration band	Setting of the activation band equal to the activation delay time will activate the additional heater.	1 - 20 °C	5 °C		S
Reset HP meter	Reset the number of operating hours of the heat pump	Yes / No	No		S
Reset plant int. met.	Reset hours of operation of the central heating / C.H. integration	Yes / No	No		S
Reset sanitary int. met.	Reset hours of operation of the DHW (Domestic hot water) integration	Yes / No	No		S

S = menu entry only visible with "Service" access.

(\*) For outdoor temperatures below -20°C, the capacity of the heat pump is not guaranteed.



If an additional electric resistance is installed and enabled for heating the system, it is necessary to check and, if necessary, change the pump settings to ensure a minimum flow rate of 1000 l/h.  
Flow rate values below this limit can damage the resistance.





Menu / Support / Drive Manual(*)					
Menu item	Description	Range	Default	Customised value	S
Sys./DHW 3-way	Manual activation of the DHW (Domestic hot water) 3-way	Yes / No	No		S
Enable sys.resistance	Manual activation of the system resistance	Yes / No	No		S
Enable DHW resistance 1	Manual activation of the DHW (Domestic hot water) resistance 1	Yes / No	No		S
Zone 1 circulator	Manual activation of zone 1 pump	Yes / No	No		S
Dehumidifier zone 1	Manual activation of the dehumidifier in neutral air on zone 1	Yes / No	No		S
Zone 1 air conditioning	Manual activation of the dehumidifier in cooled air on zone 1	Yes / No	No		S
Zone 2 circulator	Manual activation of zone 2 pump	Yes / No	No		S
Dehumidifier zone 2	Manual activation of the dehumidifier in neutral air on zone 2	Yes / No	No		S
HP Flow meter	Shows the flow rate read on the flowmeter	0-4000 l/h			S
Circulator speed		0-100%	0%		S
Mixer zone 2	Manual activation of the mixing valve on zone 2	Stop Close Open	Stop		S
Zone 2 air conditioning	Manual activation of the dehumidifier in cooled air on zone 2	Yes / No	No		S
Zone 3 mixing valve	Manual activation of the mixing valve on zone 3	Stop Close Open	Stop		S
Zone 3 circulator	Manual activation of zone 3 pump	Yes / No	No		S
Dehumidifier zone 3	Manual activation of the dehumidifier in neutral air on zone 3.	Yes / No	No		S
Zone 3 air conditioning	Manual activation of the air conditioner in cooled air in zone 3	Yes / No	No		S
Hot/Cold three-way	Manual activation of the summer/winter three-way valve (M52)	Yes / No	No		S
Enable DHW recirculation	Manual activation of the DHW recirculation pump, which can only be done if correctly set in the "Special parameters" Menu	Yes / No	No		S

S = menu entry only visible with "Service" access.

(\*) If you are within the "Manual drives" menu, the 4-minute time-out for exiting the "Support" menu is not taken into account.

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



Menu/Support/Special parameters					
Menu item	Description	Range	Default	Customised value	S
Dehumid. in cool.air	Dehumidification control in cooled air	Zone 1 / Zone 2	Zone 2		S
Safety therm. Zone 2	Zone 2 safety thermostat	20÷80	45		S
Safety therm. Zone 3	Zone 3 safety thermostat	20÷80	45		S
Enable recirculation	DHW recirculation enabling	On/Off	Off		S
Integr.multiplier	Not used	1÷100	--		S
Enab.ext. CH resistance	Enable external central heating integrated electrical resistance	Yes/No	No		S
Parameter 1	Enable flow probe Zone 1 (0 = disabled, 1 = enabled)	0 ÷ 1	0		S
Parameter 2	System-side electrical integration power (value multiplied by a factor of 10, e.g. 30 corresponds to a 3kW resistance)	0 ÷ 100	30		S
Parameter 3	Room antifreeze protection setpoint (value multiplied by a factor of 10, 40 is equal to 4°C)	0 ÷ 100	50		S
Parameter 4	Boost dehumidification (0 = disabled, 1 = enabled)	0 ÷ 1	0		S
Parameter 5	Temperature threshold below which the DHW integration to the heat pump is activated (value multiplied by a factor of 10, e.g. -200 corresponds to -20°C)	-250 ÷ 350	-200		S
Parameter 6	DHW recirculation offset correction respect to DHW setpoint	-15 ÷ 0	0		S
Parameter 7	Enabling of anti-Legionella function on DHW recirculation loop (0 = disabled, 1 = enabled)	0 ÷ 1	0		S
Parameter 8	Do not use	-1000÷1000	0		S
Parameter 9	Do not use	-1000÷1000	0		S
Parameter 10	Enabling of Zone 2 direct flow probe (0 = disabled, 1 = enabled)	0 ÷ 1	0		S
Parameter 11	Enabling of Zone 3 direct flow probe (0 = disabled, 1 = enabled)	0 ÷ 1	0		S
Parameter 12	Do not use	-1000÷1000	0		S
Parameter 13	Enabling additional DHW storage tank	0 ÷ 1	0		S
Parameter 14	Additional DHW storage tank hysteresis value multiplied by a factor of 10 (e.g. 50 corresponds to 5°C)	0 ÷ 150	0		S
Parameter 15	Do not use	-1000÷1000	0		S
Parameter 16	Do not use	-1000÷1000	0		S
Parameter 17	Do not use	-1000÷1000	0		S
Parameter 18	Do not use	-1000÷1000	0		S
Parameter 19	Do not use	-1000÷1000	0		S
Parameter 20	Do not use	-1000÷1000	0		S

S = menu entry only visible with "Service" access.

The recirculation function cannot be activated when the additional DHW storage tank function is enabled.



### 3.4 FAULT AND ANOMALY SIGNALS

The indoor unit indicates a possible anomaly through a code flanked by the symbol of a key "🔑" in the centre of the display and the message "indoor unit anomaly" at the bottom of the display itself (Fig. 29).

If a fault is displayed, note down the code displayed in the centre of the display in addition to the phrase "indoor unit fault" or "outdoor unit fault" and report it to the technician authorised to carry out repairs and maintenance, if necessary. Some of these alarms are associated with a temporary event, in which case you can attempt to reset the system and the alarm by pressing the RESET button on the display.

Error Code	Anomaly signalled	Cause	Appliance status / Solution
5	<b>Delivery probe fault</b>	The board detects an anomaly on the flow NTC probe.	The system does not start (1).
8	<b>Incorrect operation / fault reset</b>	Number of allowed resets already performed.	The anomaly can be reset 5 consecutive times, after which the function is inhibited for at least one hour and it is possible to try once every hour, for a maximum of 5 attempts. By switching the appliance on and off again, the 5 attempts are re-acquired
12	<b>Storage tank probe anomaly</b>	The board detects an anomaly on the storage tank probe	The hydronic module is unable to produce domestic hot water (1).
15	<b>Configuration error</b>	If the board detects an anomaly or incongruity on the electric wiring, the appliance will not start	If normal conditions are restored, the heat generator restarts without having to be reset (1).
23	<b>Return probe anomaly</b>	The board detects an anomaly on the return NTC probe	The system does not start (1).
24	<b>Push button control panel anomaly</b>	The board detects an anomaly on the pushbutton panel.	If normal conditions are restored, the system restarts without having to be reset (1).
26	<b>Flowmeter anomaly</b>	The board detects an anomaly on the flowmeter. Booster pump, if any, always working.	The system does not start (1). Make sure the booster pump (optional) only activates when requested. Check, and if necessary eliminate, any air in the manifold unit.
(1) If the shutdown or fault persists, contact an authorised company (e.g. Authorised After-Sales Technical Assistance Centre).			

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



Error Code	Anomaly signalled	Cause	Appliance status / Solution
27	<b>Circulation insufficient</b>	This happens when the hydronic module overheats due to poor water circulation in the primary circuit. The causes can be: - pdc pump blocked; free the pump; - damaged flowmeter.	Check system circulation and flowmeter. Press the Reset button (1).
32	<b>Zone 2 Low Temperature probe anomaly</b>	If the board detects an anomaly on the zone 2 low temperature probe, the system cannot work in the affected area.	(1)
33	<b>Zone 3 low temperature probe anomaly</b>	If the board detects an anomaly on the zone 3 low temperature probe; the system cannot work in the affected area.	(1)
34	<b>Low-temperature Zone 2 safety thermostat intervention</b>	During normal operation, if an anomaly causes excessive overheating of the flow temperature in the low temperature zone 2, the unit indicates the malfunction.	The unit does not meet the zone central heating requirement. (1)
35	<b>Low-temperature zone 3 safety thermostat intervention</b>	During normal operation, if an anomaly causes excessive overheating of the flow temperature in the low temperature zone 3, the unit indicates the malfunction.	The unit does not meet the zone central heating requirement. (1)
37	<b>Low power supply voltage value</b>	This occurs when the power supply voltage is lower than the allowed limits for correct system operation.	If normal conditions are restored, the system restarts without having to be reset (1)
50	<b>External probe anomaly</b>	In the event the external probe is not connected or is faulty, the anomaly is indicated.	Check the external probe connection. The system continues to operate with the external probe integrated in the external unit (1). In case of replacement of the external probe, repeat the installation operations.
55	<b>Zone 1 temperature probe anomaly</b>	The zone 1 flow probe has an out-of-range resistive value	(1)
104	<b>Zone 3 off-line expansion alarm</b>	The device connected to zone 3 is offline	(1)

(1) If the shutdown or fault persists, contact an authorised company (e.g. Authorised After-Sales Technical Assistance Centre).



Error Code	Anomaly signalled	Cause	Appliance status / Solution	INSTALLER	
120	Alarm set high for zone 1 dehumidification	The cooling flow set calculated for dehumidification is higher than the limit set in zone 1	The calculated flow set is higher than the limit allowed by the dehumidifier. Cool the room and wait for the dew temperature to go back within acceptable values (1).		
121	Zone 1 offline device alarm	The device connected to zone 1 is offline	(1)		
122	Zone 2 offline device alarm	The device connected to zone 2 is offline	(1)		
123	Zone 3 offline device alarm	The device connected to zone 3 is offline.	(1)	USER	
125	Zone 1 room temperature probe error	The zone 1 room probe has an out of range resistive value	(1)		
126	Zone 2 room temperature probe error	The zone 2 room probe has an out of range resistive value	(1)		
127	Zone 3 room temperature probe error	The zone 3 room probe has an out of range resistive value.	(1)		
129	Zone 1 humidity probe error	Anomaly on the zone 1 humidity probe.	In addition to the humidity, the dew point is not calculated for the zone either (1). Zone humidity cannot be checked.	CONTROL PANEL	
130	Zone 2 humidity probe error	Anomaly on the zone 2 humidity probe.	In addition to the humidity, the dew point is not calculated for the zone either (1). Zone humidity cannot be checked.		
131	Zone 3 humidity probe error	Anomaly on the zone 3 humidity probe.	In addition to the humidity, the dew point is not calculated for the zone either (1). Zone humidity cannot be checked.		
132	Alarm set high for zone 2 dehumidification	The cooling flow set calculated for dehumidification is higher than the limit set in zone 2	The calculated flow set exceeds the limit permitted by the dehumidifier. Cool the room and wait for the dew temperature to go back within acceptable values (1).		
(1) If the shutdown or fault persists, contact an authorised company (e.g. Authorised After-Sales Technical Assistance Centre).					TECHNICIAN

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



Error Code	Anomaly signalled	Cause	Appliance status / Solution
133	<b>Zone 1 dehumidifier fault alarm</b>	Anomaly coming from the dehumidifier (optional) on zone 1	The system does not dehumidify in the relative zone (1)
134	<b>Zone 2 dehumidifier fault alarm</b>	Anomaly coming from the dehumidifier (optional) in zone 2	The system does not dehumidify in the relative zone (1)
135	<b>Zone 3 dehumidifier fault alarm</b>	Anomaly coming from the dehumidifier (optional) on zone 3	The system does not dehumidify in the relative zone (1)
136	<b>High set alarm for dehumidification-zone 3</b>	The cooling flow set calculated for dehumidification exceeds the limit set in zone 3	The calculated flow set is higher than the limit allowed by the dehumidifier. Cool the room and wait for the dew temperature to go back within acceptable values (1).
137	<b>Reset system alarm – Restart the system</b>	When the default parameters are restored, the system needs to be restarted.	Turn the system off and on.
139	<b>De-aeration in progress</b>	Deaeration function in progress	No demand can be made until the end of the function in progress (1)
142	<b>Errore Dominus offline</b>	Communication with Dominus is offline	(1)
143	<b>Recirculation probe alarm</b>	The board detects an anomaly on the D.H.W. recirculation probe	The system does not recirculate DHW (1)
177	<b>DHW maximum time alarm</b>	Domestic hot water production is not met within the pre-established time (see parameter P014)	The system continues to operate with non-optimal performance (1)
178	<b>Block: anti-legionella cycle not successful</b>	The anti-Legionella cycle is run without success within the pre-established time (see parameter P013)	Press the Reset button (1)
179	<b>Liquid phase probe alarm</b>	The board detects an anomaly on the liquid phase NTC probe.	The system does not start (1).
183	<b>Outdoor unit in test mode</b>	A signal notifies that the outdoor unit is in test mode.	During this time, room air conditioning and domestic hot water production requirements cannot be met
188	<b>Request out of operating range</b>	A request is made with the outdoor temperature exceeding the operating limits (Parag. 1.18)	The system does not start (1). Wait for the outdoor unit to be restored within operating limits.
<b>(1) If the shutdown or fault persists, contact an authorised company (e.g. Authorised After-Sales Technical Assistance Centre).</b>			



Error Code	Anomaly signalled	Cause	Appliance status / Solution
189	Time out alarm with communication board	If communication between the printed circuit boards is lost, an anomaly is signalled.	The system does not start (1). Check communication between the P.C.B. and the interface board.
195	Alarm low liquid phase probe temperature	Too low temperature is detected in the liquid phase	Check that the cooling circuit is working properly (1).
196	High flow temp. block	An excessively high temperature is detected on the heat pump flow circuit	Check the hydraulic circuit (1).
197	Communication board configuration error	An incorrect communication board configuration has been detected	The system does not start (1).
209	Low circulation block in TEST MODE	An insufficient amount of water circulation to guarantee operation of the compressor during TEST MODE was detected.	The system does not start. Check the correct flow rate read on the flow meter.
210	Low circulation block during a defrosting cycle	An insufficient amount of water circulation to guarantee operation of the compressor during the defrosting cycle was detected.	The system does not start. Check the correct flow rate read on the flow meter.
219	Additional storage tank probe fault	The board detects a fault on the additional storage tank probe. The hydronic module cannot produce domestic hot water.	(1)
220	Loss of communication with Master control panel	Loss of communication between Master control panel and Main slave management board	(1)
250	Anti-legionella function enabled with DHW integration absent alarm	The system does not start.	Check the settings in the Integration menu.
266	Circulation insufficient with electrical integration on	Warning of flow rate not suitable to guarantee correct operation of the internal electric resistance. Do not interrupt operation of the resistance.	Check system circulation and flowmeter
(1) If the shutdown or fault persists, contact an authorised company (e.g. Authorised After-Sales Technical Assistance Centre).			

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



### List of outdoor unit anomalies

If the outdoor unit is faulty, the error code is displayed in the middle of the control panel (Fig. 29) with a key symbol next to it "🔑". In addition, the message "Outdoor condensing unit anomaly" is displayed at the bottom of the display (Fig. 29).

If a fault is displayed, note down the code displayed in the centre of the display in addition to the phrase "indoor unit fault" or "outdoor unit fault" and report it to the technician authorised to carry out repairs and maintenance, if necessary. Alarms from the outdoor unit cannot be reset using the RESET button on the display. In this case you must first disconnect power to the outdoor unit, wait a few minutes, restore it and press the RESET button on the display.

Error Code	Anomaly signalled	Hydronic module status / Solution
101	<b>Outdoor unit communication error</b>	Check the communication cable to the outdoor unit. Check that the interface board works properly. (1)
109	<b>Communication error due to incorrect address of interface board</b>	Check the address on the interface board. (1)
111	<b>MODBUS communication error</b>	Check communication between the management board and interface boards. (1)
162	<b>EEPROM error</b>	Replace the main board of the outdoor unit (1)
177	<b>Emergency error</b>	(1)
201	<b>Communication error (failed coupling) between interface board and outdoor unit</b>	Check the communication cable to the outdoor unit. Check that the interface board and main board of the outdoor unit work properly (1)
202	<b>Communication error (failed coupling) between indoor unit and interface board</b>	Check the communication cable to the outdoor unit. Check that the interface board and main board of the outdoor unit work properly (1)
203	<b>Communication error between Inverter and main board of the outdoor unit</b>	Check wiring of communication between the two boards. Replace the main board. Replace the inverter board (1)
221	<b>Outdoor unit air temperature sensor error</b>	Check the position of the sensor. Check the relative wiring Replace the sensor (1)
231	<b>Condenser temperature sensor error</b>	Check the position of the sensor. Check the relative wiring Replace the sensor (1)
(1) If the shutdown or fault persists, contact an authorised company (e.g. Authorised After-Sales Technical Assistance Centre).		



Error Code	Anomaly signalled	Hydronic module status/ Solution	
251	Discharge temperature sensor error	Check the position of the sensor. Check the relative wiring Replace the sensor	INSTALLER
320	Compressor sensor error (overload protection sensor)	Check the position of the sensor. Check the relative wiring Replace the sensor (1)	
403	Freezing detection (during cooling operation)	Check the chiller cycle. Check the temperatures of the plate heat exchanger (1)	
404	Protection of outdoor unit when in overload (during safety start-up, normal operating status)	Check the chiller cycle. Check the compressor connections. Check the resistances between the different phases of the compressor (1)	USER
407	Compressor not working due to high pressure	Check the chiller cycle (1)	
416	The compressor discharge is overheated	(1)	
425	Not used on this model	(1)	
440	Central heating blocked (outdoor temperature beyond 35°C)	(1)	
441	Cooling blocked (outdoor temperature below 9°C)	(1)	
458	Error of outdoor unit fan no.1	1	
461	Compressor start-up error (Inverter)	Check the chiller cycle. Check the compressor connections. Check the resistances between the different phases of the compressor (1)	CONTROL PANEL
462	Inverter total current overload error	Check the inlet current. Check the refrigerant charge. Check normal operation of the fan. (1)	
463	Compressor overheated sensor	Check the compressor sensor. (1)	
(1) If the shutdown or fault persists, contact an authorised company (e.g. Authorised After-Sales Technical Assistance Centre).			

MAINTENANCE TECHNICIAN

TECHNICAL DATA



Error Code	Anomaly signalled	Hydronic module status / Solution
464	<b>Inverter IPM current overload error</b>	Check the compressor connections and its normal operation. Check the refrigerant charge. Check whether there are obstacles around the outdoor unit. Check whether the service valve is open. Check whether the installation pipes are mounted properly. (1)
465	<b>Compressor overload error</b>	Check the compressor connections and its normal operation. Check the resistances between the different phases of the compressor. (1)
466	<b>Low voltage error of DC circuit</b>	Check the input voltage. Check the power connections. (1)
467	<b>Compressor rotation error</b>	Check the compressor connections. Check the resistances between the different phases of the compressor. (1)
468	<b>Current sensor error (inverter)</b>	Check the main board. (1)
469	<b>Voltage sensor error of DC circuit (inverter)</b>	Check the power connector of the inverter board. Check the connectors RY21 and R200 of the inverter board. (1)
470	<b>EEPROM reading/writing error of outdoor unit</b>	Check the main board. (1)
471	<b>EEPROM reading/writing error of outdoor unit</b>	Check the main board. (1)
474	<b>Inverter temperature sensor error</b>	Replace inverter board (1)
475	<b>Error of outdoor unit fan no.2 (where present)</b>	Check the wiring. Check that the fan is powered. Check the board fuses. (1)
484	<b>PFC overload</b>	Check inductances. Replace inverter board. (1)
(1) If the shutdown or fault persists, contact an authorised company (e.g. Authorised After-Sales Technical Assistance Centre).		



Error Code	Anomaly signalled	Hydronic module status/ Solution
485	Incoming current sensor error	Replace inverter board. (1)
488	Incoming voltage sensor error	Replace inverter board. (1)
500	IPM overheated	Check temperature of inverter board. Switch the machine off. Wait for the inverter to cool down. Switch the machine back on. (1)
554	Coolant gas leak error	Check that the coolant is charged Check the liquid sensor of the indoor unit Check whether the service valve is open Check whether the installation pipes are mounted properly. (1)
590	Inverter board error	Check normal operation of the main board. Replace the main board (1)
(1) If the shutdown or fault persists, contact an authorised company (e.g. Authorised After-Sales Technical Assistance Centre).		

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



# 4 INSTRUCTIONS FOR MAINTENANCE AND INITIAL CHECK

## 4.1 GENERAL RECOMMENDATIONS



Operators who install and service the appliance must wear the suitable personal protective equipment (PPE) required by applicable law.  
The list of possible PPE is not all-comprehensive as it is indicated and chosen by the Employer of the authorised company (installer or maintenance).



Before carrying out any maintenance work, make sure that:

- you have disconnected the power to the appliance;
- you have discharged the pressure from the system and domestic hot water circuit.



### Supply of spare parts

The device's warranty shall be rendered null and void if unapproved or unsuitable parts are used for maintenance or repairs. These will also compromise the product's compliance, and the said product may no longer be valid and fail to meet the current regulations. In regard to the above, only use original Immergas spare parts when replacing components.



If additional documentation needs to be consulted for extraordinary maintenance, contact the Authorised After-Sales Service.



The appliance operates with R410A refrigerant gas.

This gas is ODOURLESS.

Pay the utmost attention

Strictly follow the instruction handbook of the Outdoor Unit before installation and any type of operation on the chiller line.

## 4.2 INITIAL CHECK

To commission the package, you must:

- Check connection to a 230V~50Hz power mains, correct L-N polarity and the earthing connection;
- make sure the central heating system is filled with water and the indoor unit pressure gauge reads a pressure of 1-1.2 bar;
- make sure the chiller circuit has been filled according to what is described in the outdoor unit instructions booklet;
- check the activation of the main switch located upstream of the indoor unit;
- ensure activation of all adjustment devices;
- ensure production of domestic hot water;
- check the tightness of the hydraulic circuits;



**Even if just one single safety check provides a negative result, do not commission the system.**

## 4.3 YEARLY APPLIANCE CHECK AND MAINTENANCE



The following checks and maintenance should be performed once a year to ensure operation, safety and efficiency of the appliance over time.

- Check for water leaks or oxidation from/on the fittings.
- Check, after discharging the system pressure and bringing it to zero (read on Indoor Unit pressure gauge), that the expansion vessel charge is at 1.0 bar.
- Check that the system static pressure (with system cold and after refilling the system by means of the filling valve) is between 1 and 1.2 bar.



For proper and safe operation of the appliance, it is essential to check that the water pressure of the feed system (mains water) is at least 2.5 bar, before opening the filling cock. When filling the central heating system (CH), it is essential to comply with standard EN 1717, which indicates the requirements for the protection against pollution of potable water caused by backflow. If the feed water pressure is insufficient, DO NOT OPEN the filling cock. Otherwise there is the risk of dangerous contamination of the DHW storage tank integrated with the central heating water, which could endanger the user's comfort and cause health issues. The operator must make sure that the feed water pressure is adequate before filling the central heating system to prevent any possible contamination.

- Visually check that the safety and control devices have not been tampered with and/or short-circuited.
- Check the condition and integrity of the electrical system and in particular:
  - the power supply wires must be housed in the cable glands;
  - there must be no traces of blackening or burning.
- Check correct lighting and operation.
- Check correct operation of control and adjustment devices and in particular:
  - system regulation probes intervention.
- Check chiller line connections.
- Check mesh filter on system return.
- Check the correct flow rate on plate heat exchanger.
- Check the integrity of the internal insulation.



In addition to yearly maintenance, one must also check the energy efficiency of the thermal system, with frequency and procedures that comply with the indications of the technical regulations in force.



#### 4.4 FINNED AIR COIL MAINTENANCE



We recommend regularly inspecting the finned air coils to check the level of fouling.

This depends on the environment where the unit is installed.

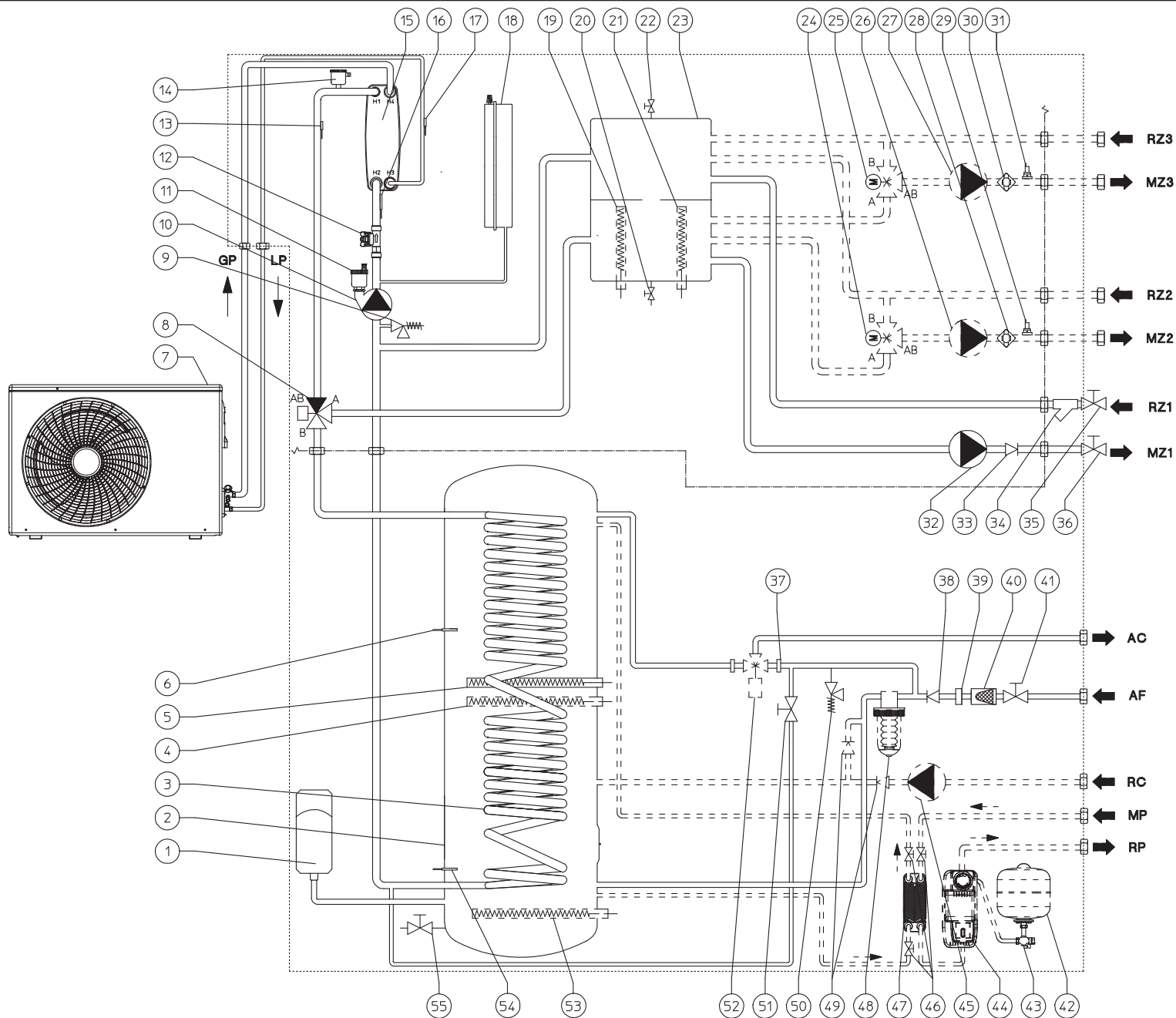
The level of fouling will be worse in urban and industrial sites, as well as near trees that lose their leaves.

There are two maintenance levels to clean the coils:

- If the air heat exchangers are encrusted, clean them gently with a brush in a vertical direction.
- Turn off the fans before working on the air heat exchangers.
- To perform this type of intervention, stop the unit only if the maintenance considerations allow it.
- Perfectly clean air heat exchangers ensure an optimal operation of the unit. When the air heat exchangers begin to encrust, they must be cleaned. The cleaning frequency depends on the season and location of the unit (ventilated, wooded, dusty, etc.).
- Do not use pressurised water without a large diffuser. Do not use high-pressure cleaners for Cu/Cu and Cu/Al air coils.
- Concentrated and/or rotating water jets are strictly prohibited. Never use fluid with a temperature above 45°C to clean the air heat exchangers.
- Proper and frequent cleaning (approx. every three months) prevents 2/3 of corrosion problems.

Clean the air coil using suitable products.





## Key (Fig. 35):

- 1 - Domestic hot water expansion vessel
- 2 - Stainless steel storage tank
- 3 - Stainless steel coil for storage tank
- 4 - DHW electrical resistance (Optional)
- 5 - DHW electrical resistance
- 6 - D.H.W. probe
- 7 - Outdoor unit
- 8 - Central heating / C.H. / cooling 3-way valve (motorised)
- 9 - 3 bar safety valve
- 10 - Heat pump circulator
- 11 - Air vent valve
- 12 - System flow-meter
- 13 - Heat pump flow probe
- 14 - Air vent valve
- 15 - Plate heat exchanger
- 16 - Heat pump return probe
- 17 - Liquid phase detection probe
- 18 - System expansion vessel
- 19 - System electrical resistance (Optional)
- 20 - System draining valve
- 21 - System electrical resistance (Optional)
- 22 - Hydraulic manifold manual air vent valve
- 23 - Hydraulic manifold
- 24 - Zone 2 mixing valve (Optional)
- 25 - Zone 3 mixing valve (Optional)
- 26 - Zone 2 circulator (Optional)
- 27 - Zone 3 circulator pump (Optional)
- 28 - Zone 2 safety thermostat (Optional)
- 29 - Zone 2 low-temperature flow probe (Optional)
- 30 - Zone 3 safety thermostat (Optional)
- 31 - Zone 3 low-temperature flow probe (Optional)
- 32 - Direct zone 1 circulator
- 33 - One-way valve
- 34 - Filter that can be inspected
- 35 - System return shut-off valve
- 36 - System flow shut-off valve
- 37 - Cap for solar kit installation
- 38 - Cold water inlet non-return valve
- 39 - Flow limiter
- 40 - Cold water filter
- 41 - Cold water inlet valve
- 42 - Solar expansion vessel (Optional)
- 43 - Shut-off valve with solar system thermometer (Optional)
- 44 - Single solar circulation unit (Optional)
- 45 - DHW recirculation pump (Optional)
- 46 - Solar shut-off valves (Optional)
- 47 - Solar system plate heat exchanger (Optional)
- 48 - Polyphosphate dispenser (Optional)
- 49 - DHW recirculation one-way valve (Optional)
- 50 - 8 bar safety valve
- 51 - System filling valve
- 52 - Solar system DHW mixing valve (Optional)
- 53 - DHW electrical resistance (Optional)
- 54 - Storage tank solar probe (Optional)
- 55 - Storage tank draining valve

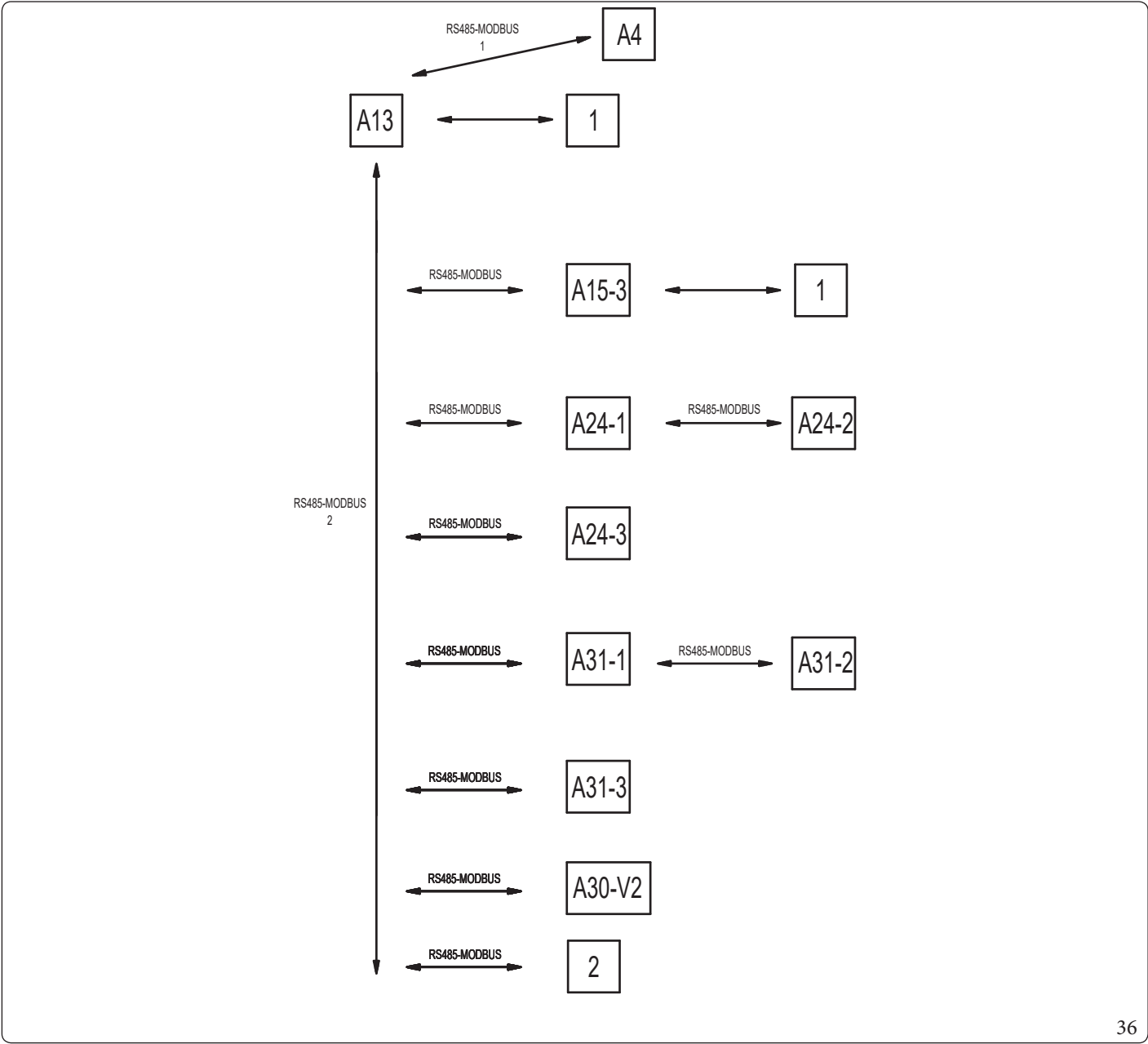
- RZ1 - Direct zone 1 system return
- MZ1 - Direct zone 1 system flow
- RZ2 - Direct zone 2 system return (Optional)
- MZ2 - Direct zone 2 system flow (Optional)
- RZ3 - Direct zone 3 system return (Optional)
- MZ3 - Direct zone 3 system flow (Optional)
- AC - Domestic hot water outlet
- AF - Domestic cold water inlet
- RC - Pump (optional)
- MP - Flow from solar panels (optional)
- RP - Return to solar panels (optional)
- GP - Chiller line - gaseous phase
- LP - Chiller line - liquid phase





4.6 WIRING DIAGRAM

Electrical board wiring diagram



Key (Fig. 36):

- |   |   |
|---|---|
| A4 - Display board                        | A17-1 - Zone 1 temperature/humidity sensor (optional) |
| A13 - System supervision board            | A17-2 - Zone 2 temperature/humidity sensor (optional) |
| A15-3 - Zone 3 expansion board (optional) | A17-3 - Zone 3 temperature/humidity sensor (optional) |
| A24-1 - Zone 1 remote panel (optional)    | A30 - Dominus (optional)                              |
| A24-2 - Zone 2 remote panel (optional)    | 1 - Electrical connections terminals                  |
| A24-3 - Zone 3 remote panel (optional)    | 2 - UE AUDAX PRO                                      |

INSTALLER

USER

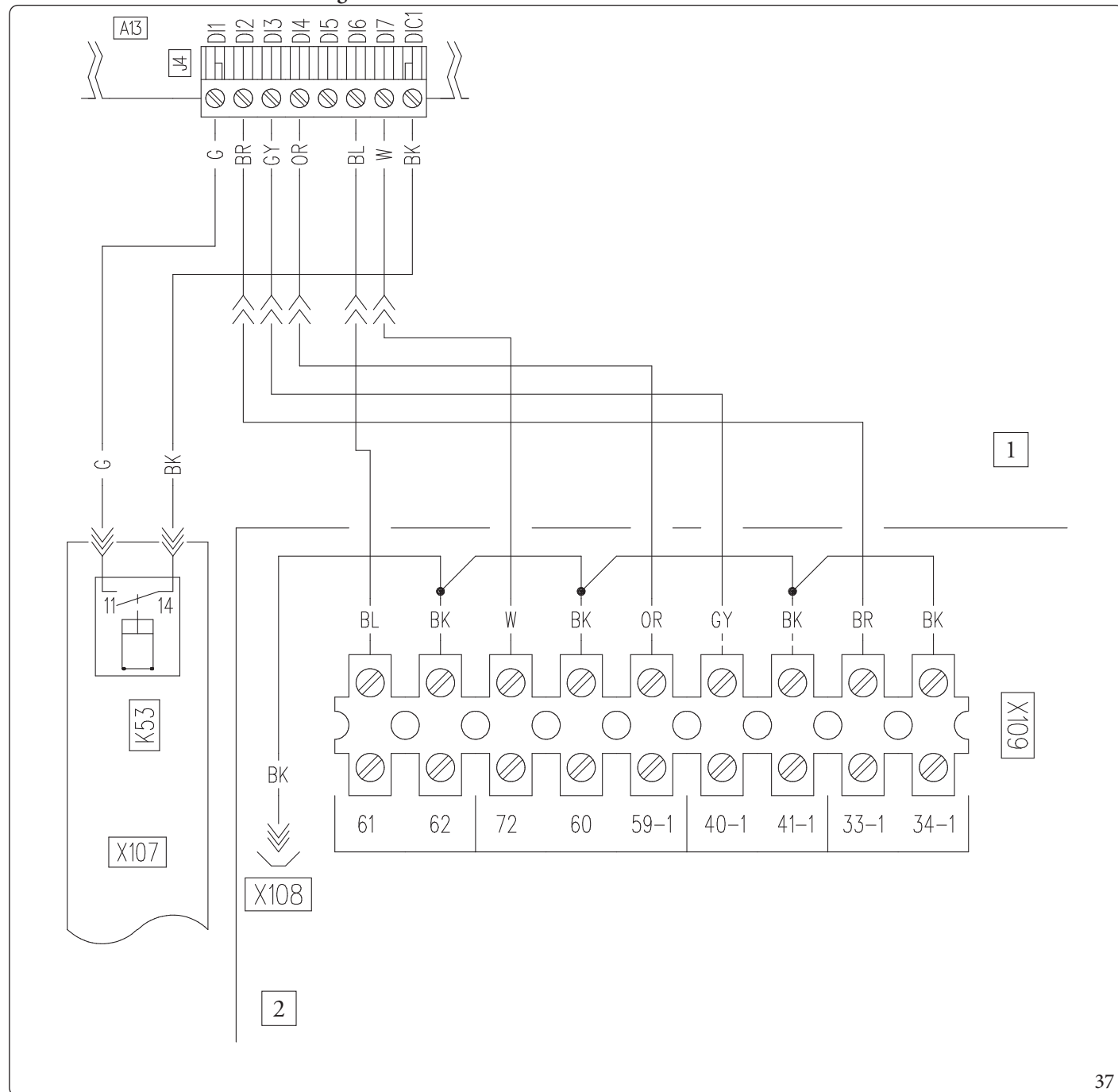
CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



# X109 Terminal board connections diagram



Key (Fig. 37):

A13 - Supervision board

K53 - Flow meter signal conversion relay

1 - Main panel

2 - Control panel

BK - Black

BL - Blue

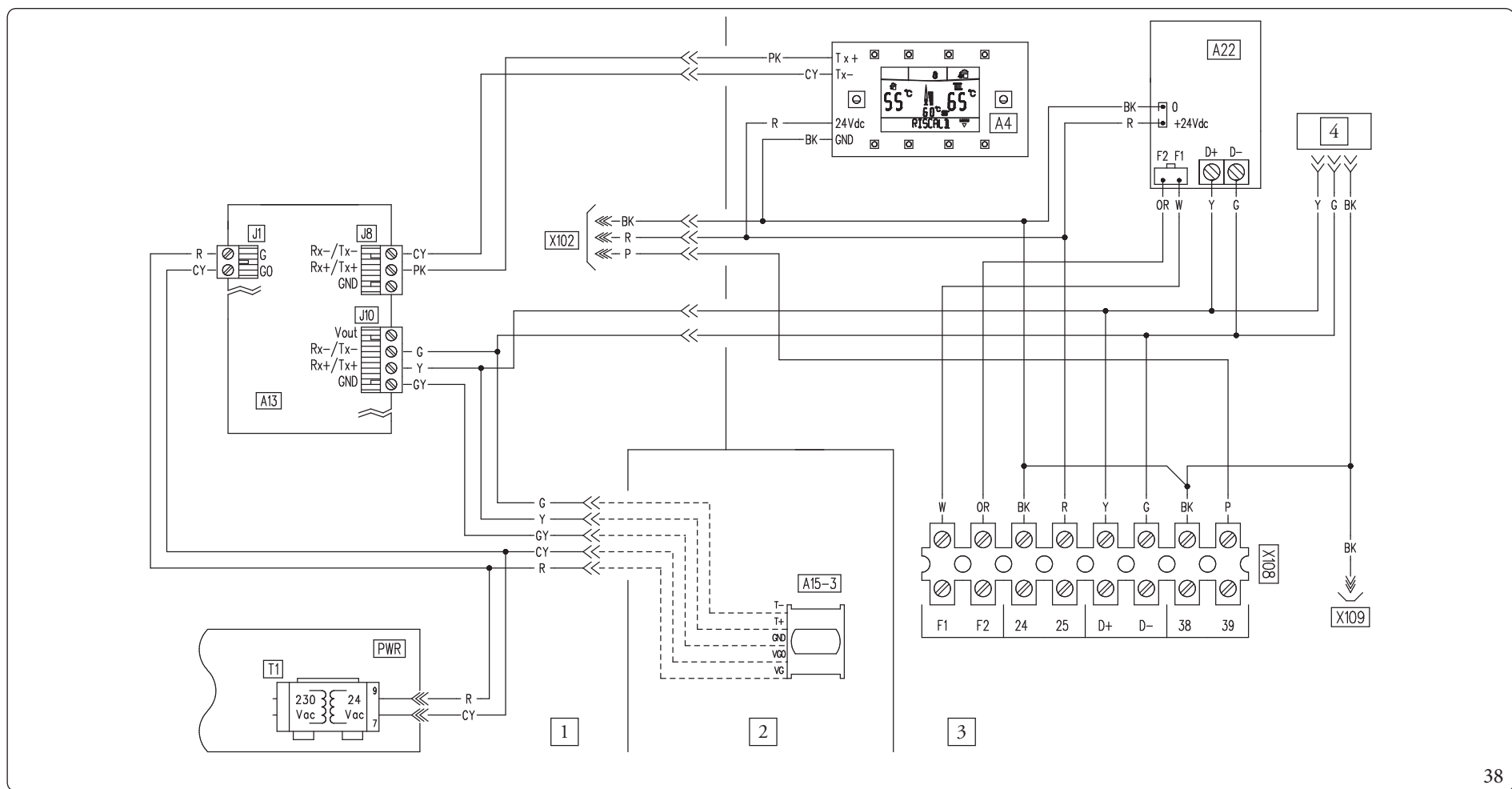
W - White

OR - Orange

GY - Grey

BR - Brown

G - Green



38

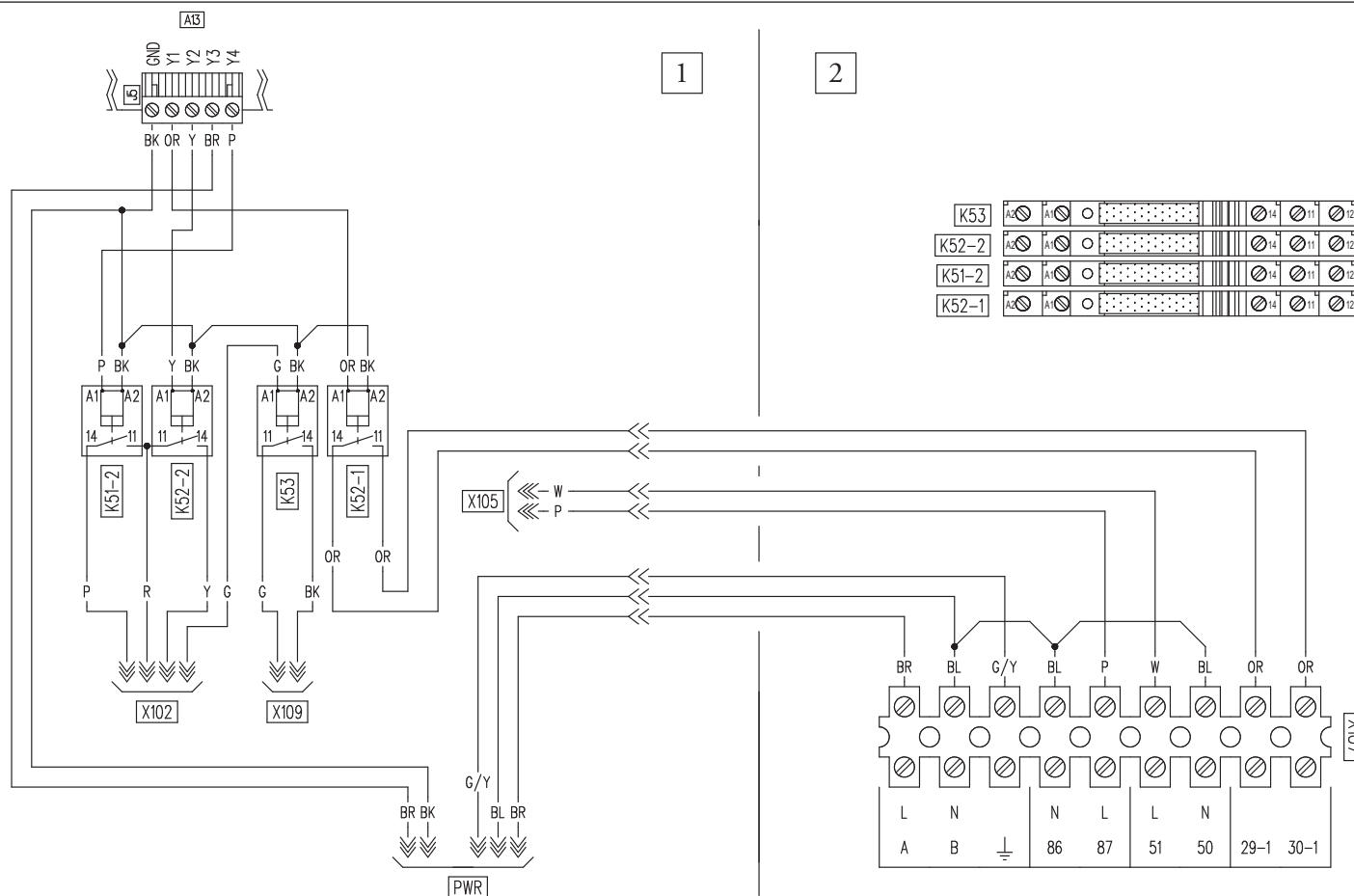
Key (Fig. 38):

- A4 - Displayboard
- A13 - Supervision board
- A15-3 - Zone 3 expansion (optional)
- A22 - Condensing unit interface board
- A36 - Touch keyboard
- T1 - Transformer

- 1 - Mainpanel
- 2 - Optionalkit panel
- 3 - Controlpanel
- 4 - Test connector
- 5 - 230 Vac

- BK - Black
- W - White
- OR - Orange
- GY - Grey
- G - Green
- PK - Pink
- R - Red
- P - Purple
- Y - Yellow
- CY - Cyan





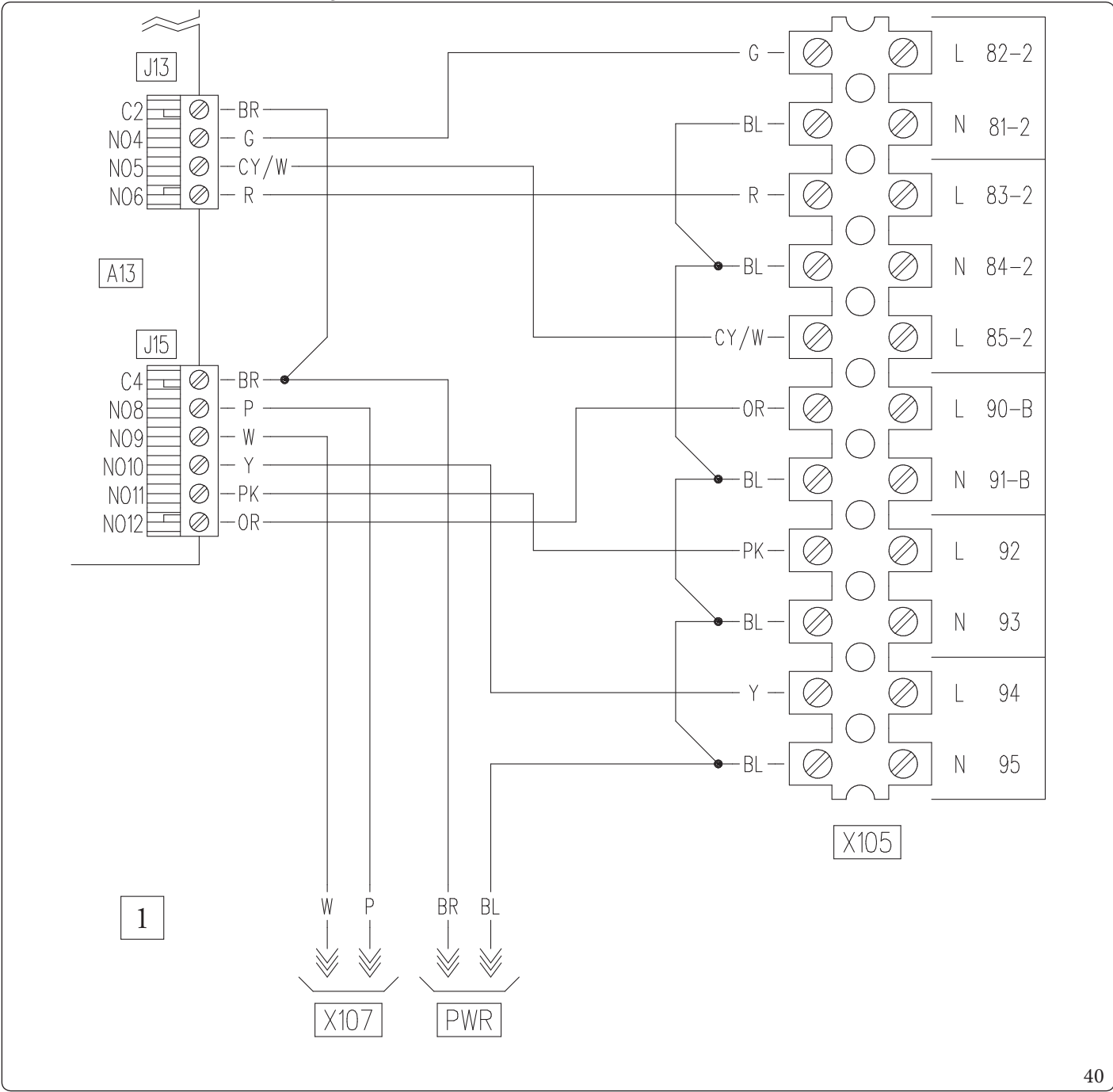
Key (Fig. 39):

- A13 - Supervision board
- K51-2 - Zone 2 air conditioning control relay
- K52-1 - Zone 1 dehumidification control relay
- K52-2 - Zone 2 dehumidification control relay
- K53 - Flow meter signal conversion relay

- 1 - Main panel
- 2 - Control panel

- BK - Black
- W - White
- OR - Orange
- G - Green
- P - Purple
- Y - Yellow
- R - Red
- BL - Blue
- BR - Brown
- G/Y - Yellow/Green

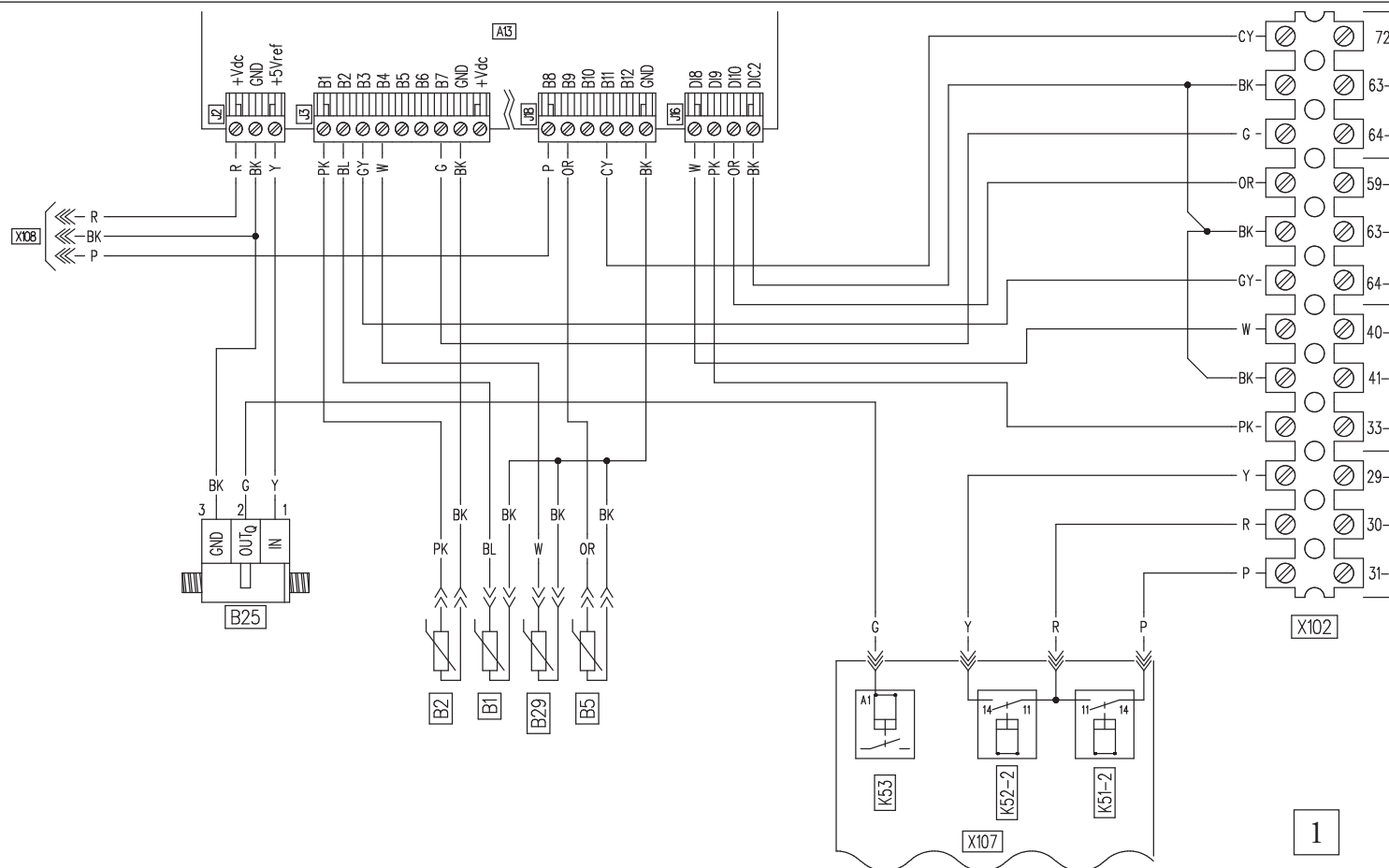
X105 Terminalboard connections diagram



Key (Fig. 40):  
A13 - Supervision board  
1 - Main panel

- W - White
- OR - Orange
- G - Green
- P - Purple
- Y - Yellow
- R - Red
- BL - Blue
- BR - Brown
- CY/W - Cyan/White
- PK - Pink





41

Key (Fig. 41):

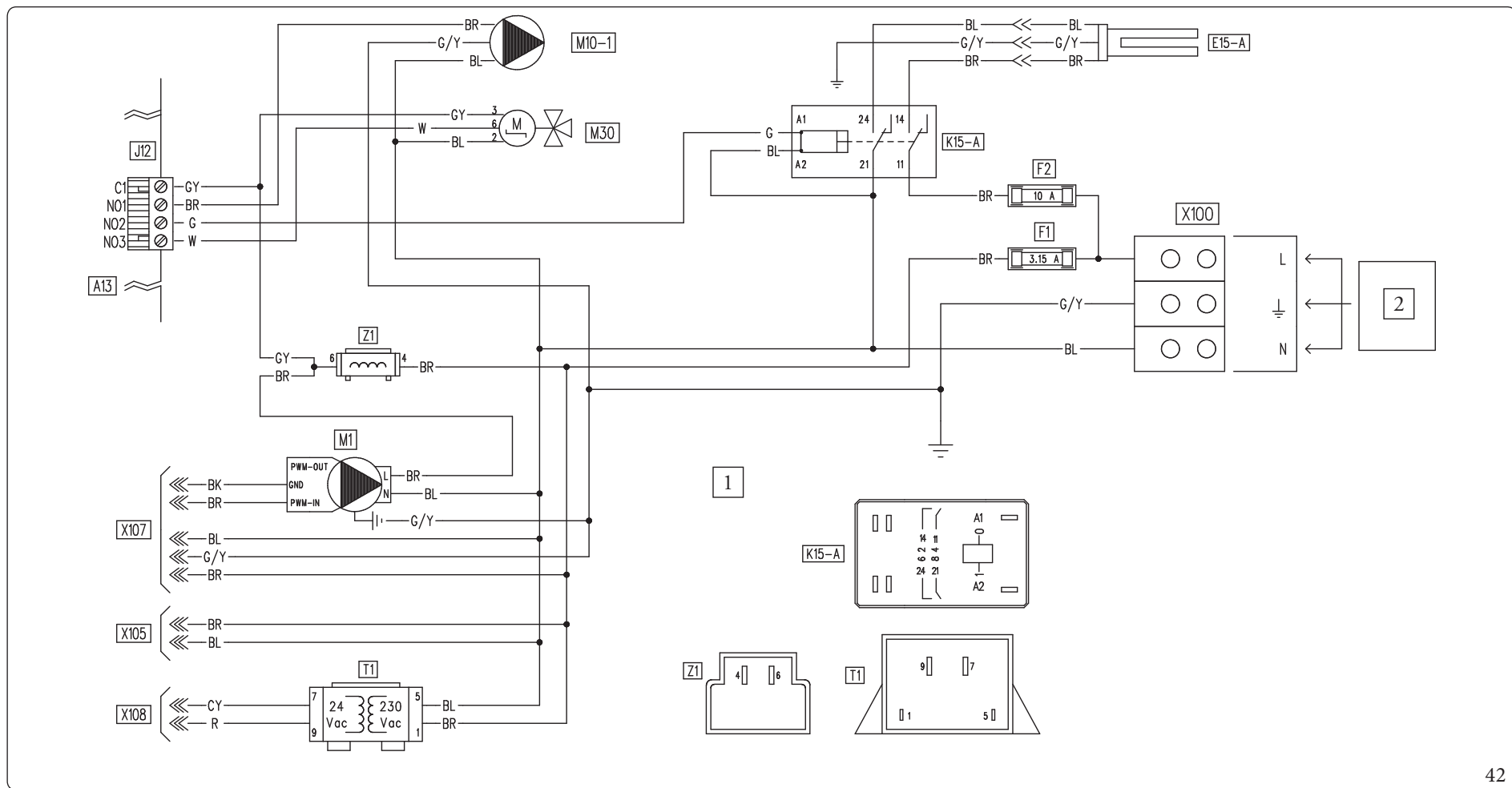
- A13 - Supervision board
- B1 - Flow probe
- B2 - D.H.W. probe
- B5 - Return probe
- B25 - System flow-meter
- B29 - Liquid phase probe
- K51-2 - Zone 2 air conditioning control relay
- K52-2 - Zone 2 dehumidification control relay
- K53 - Flow meter signal conversion relay

1 - Main panel

- W - White
- OR - Orange
- G - Green
- P - Purple
- Y - Yellow

- R - Red
- BL - Blue
- BR - Brown
- CY - Cyan
- PK - Pink
- BK - Black
- GY - Grey



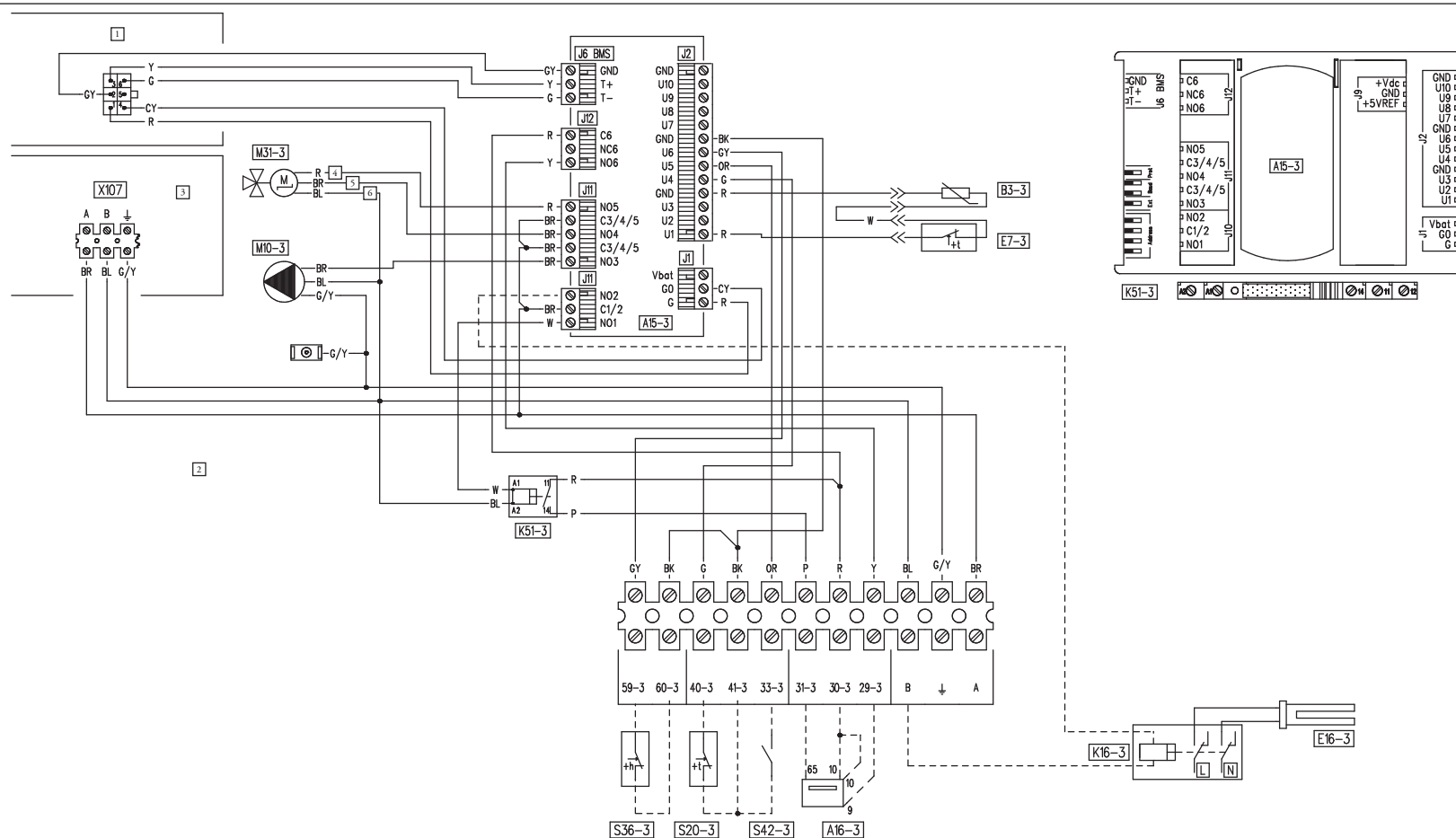


*Key (Fig. 42):*

- A13 - Supervision board
- E15-A - Domestic hot water integration resistance
- F1 - Control Phase fuse
- F2 - Resistance Phase fuse
- K15-A - DHW integrative resistance relay
- M1 - Heat pump circulator
- M10-1 - Zone 1 circulator pump
- M30 - DHW (Domestic hot water) diverter
- T1 - Transformer
- Z1 - Antijamming filter

- |   |   |   |
|---|---|---|
| 1 | - | Main panel                                |
| 2 | - | 230 Vac, 50 Hz, 3 kW, 1.5 mm <sup>2</sup> |

- |            |   |                     |
|------------|---|---------------------|
| <i>G</i>   | - | <i>Green</i>        |
| <i>R</i>   | - | <i>Red</i>          |
| <i>BL</i>  | - | <i>Blue</i>         |
| <i>BR</i>  | - | <i>Brown</i>        |
| <i>CY</i>  | - | <i>Cyan</i>         |
| <i>BK</i>  | - | <i>Black</i>        |
| <i>GY</i>  | - | <i>Grey</i>         |
| <i>W</i>   | - | <i>White</i>        |
| <i>G/Y</i> | - | <i>Yellow/Green</i> |



43

Key (Fig. 43):

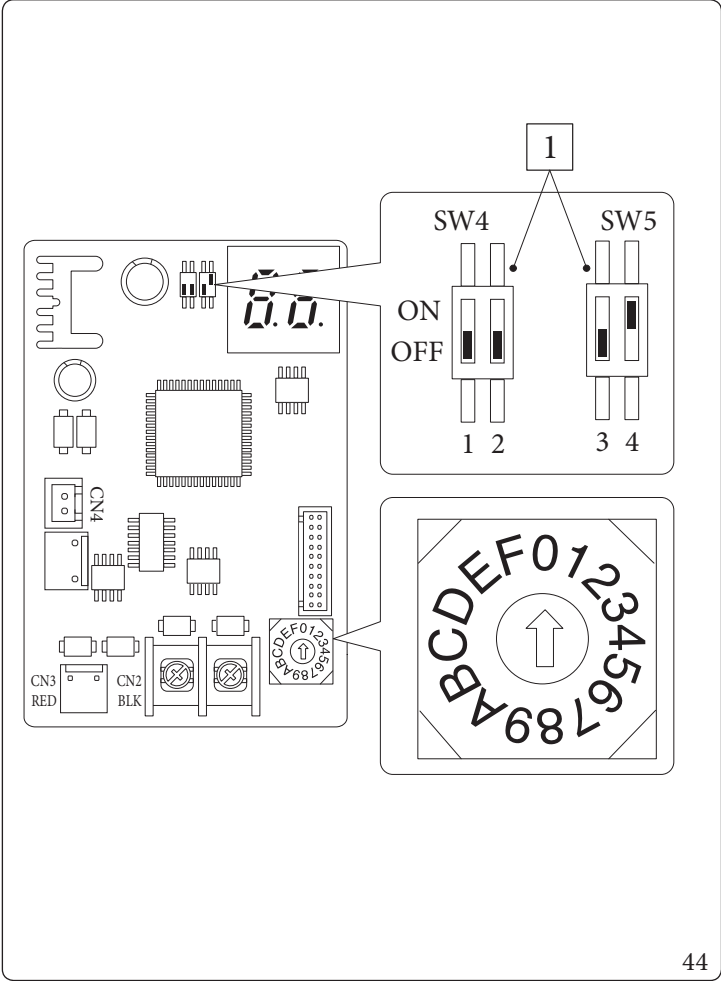
- A15-3 - Expansion zone 3
- A16-3 - Zone 3 dehumidifier (optional)
- B3-3 - Zone 3 flow probe
- E7-3 - Zone 3 Safety thermostat (low temperature)
- E16-3 - Zone 3 external system integrative resistance (optional)
- K16-3 - Zone 3 system integration resistance relay (optional)
- K51-3 - Zone 3 air conditioning control relay
- M10-3 - Zone 3 circulator pump
- M31-3 - zone 3 mixing valve

- S20-3 - Zone 3 room thermostat (optional)
- S36-3 - Zone 3 humidistat (optional)
- S42-3 - Zone 3 dehumidifier alarm (optional)
- 1 - Main panel
- 2 - Optional kit panel
- 3 - Control panel
- 4 - Closed
- 5 - Open
- 6 - Common

- G - Green
- R - Red
- BL - Blue
- BR - Brown
- CY - Cyan
- BK - Black
- GY - Grey
- W - White
- OR - Orange
- P - Purple
- Y - Yellow
- G/Y - Yellow/Green



Interface board - settings switch



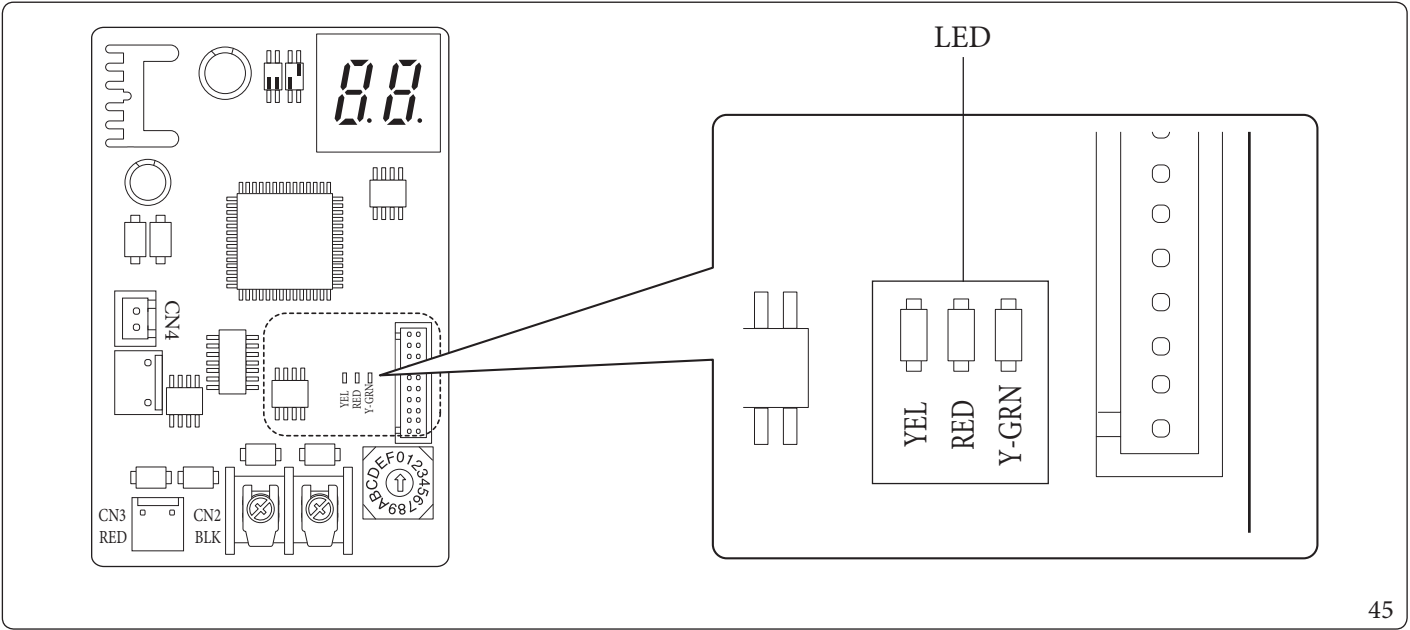
Key (Fig. 44):  
1 - Factory setting: do not change

**For Indoor Unit:**  
From the serial number **1001615720** onwards, which can only be identified on the indoor unit, the interface board will be set by default with switches 1, 2, 3 set to OFF and 4 to ON, whereas all other appliances with a serial number prior to this, will have the old interface board fitted, set with all 4 switches set to OFF.

**For Outdoor Unit:**  
From the serial numbers (indicated in the following table) onwards, exclusively identifiable on the Outdoor Units, the appliances will be newly manufactured.

Description	Serial Number
UE AUDAX PRO 12 V2	1001568120
UE AUDAX PRO 14 V2	-
UE AUDAX PRO 16 V2	-
UE AUDAX PRO 12 V2 T	1001581787
UE AUDAX PRO 14 V2 T	-
UE AUDAX PRO 16 V2 T	1001581969



Interface board - indicator LED





Key (Fig. 45):  
Red LED flashing = Communication between interface board and P.C.B. valid  
Green LED flashing = Communication between interface board and Outdoor Unit valid  
Yellow LED = Not Used

**Interface board - 7-segment display**

During normal operation, the display shows "A0" for 1 second, followed by "30" for 1 second:

	SEGMENTS
VALID COMMUNICATION	 ▷ 

In case of an error of the Outdoor Unit, a sequence of two digits at a time is displayed: "E" plus Outdoor Unit error code:

ERROR CODES	SEGMENTS
E101	 ▷ 



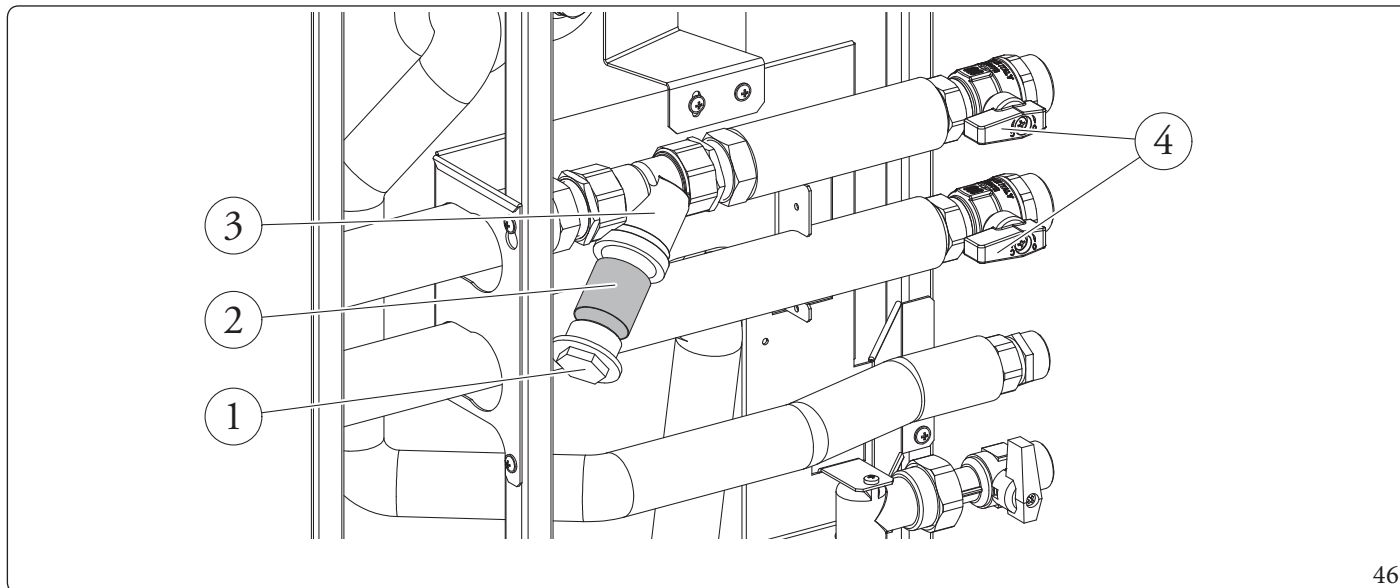
## 4.7 SYSTEM FILTER

The appliance has a filter on the system return pipe to keep the system in good operating conditions.

Periodically and when necessary, the filter can be cleaned as described below (Fig. 46).

Close the taps (4), drain the water contents in the indoor unit using the draining valve (Det. 35, Fig. 27).

Open the cap (1) and clean the filter (2).



## 4.8 TROUBLESHOOTING



Maintenance operations must be carried out by an authorised company (e.g. Authorised After-Sales Technical Assistance Centre).

### Noise due to air in the system.

Check opening of the special air vent valve cap (Part. 12, Fig. 27).

Make sure the system pressure and expansion tank factory-set pressure values are within the set limits.

The factory-set pressure values of the expansion vessel must be 1.0 bar, the value of system pressure must be between 1 and 1.2 bar.



## 4.9 FIRST IGNITION PARAMETER SETTING

During the first activation of the appliance, it is necessary to customise the following parameters, which concern the generator operation, the type of Outdoor Unit and the type of system connected to the appliance.

In the menu

### Support / Heat pump / Powers

it is necessary to set "HP Model", which corresponds to the power of the outdoor unit.

In the menu

### Support / Heat pump / Timers

You can customise the device's restart delay by modifying the parameter "Anti-cycle time" and, in the presence of delayed opening systems, you can modify the parameter "Req. delay time TA".

In the menu

### Support / Heat pump / Pump

it is possible to modify the heat pump circulator speed by modifying the parameter "Max pump speed".

It is necessary to adjust the pump speed according to the appliance power, to improve the operating efficiency of the machine.

It is suggested to set the following values:

- Magis Hercules Pro 12 I/12 T I: Speed = 65%
- Magis Hercules Pro 14 I/14 T I: Speed = 75%
- Magis Hercules Pro 16 I/16 T I: Speed = 100%

It is also necessary to adjust the speed of the zone pumps according to the type of system present.

This operation must be carried out directly on the relative zone pump (see Par. 1.20).

The heat pump is equipped with a sanitary electric resistance as standard.

The standard supplied electrical resistance is disabled as a precaution (it is necessary for the resistance to be activated only in the presence of Domestic hot water in the storage tank). If necessary enable the electrical resistance editing the following parameters.

### Integration / Enable DHW integr.

you decide whether to activate only the heat pump or the heat pump and integrative electric resistance to perform the DHW function defining its mode alternative or simultaneous by modifying the parameter "**DHW integration mode.**".

The "Int" integration only option cannot be set on this model.

Modifying the parameter

### Integration / DHW integration mode.

after having enabled the DHW integrative resistance, you decide whether to activate the heat pump and the resistance in alternative or simultaneous mode.

Modifying the parameter

### Integration / DHW wait time

after having enabled the DHW integrative resistance, you decide whether to activate the heat pump and the resistance in alternative or simultaneous mode.

Modifying the parameter

### Integration / DHW wait time

you decide the time after which the electrical resistance is activated at the same time as the heat pump if the set DHW setpoint is not reached.

With alternative integration mode, the wait time does not affect the functioning algorithm.



In normal operation, the integration resistance is only activated when the outdoor temperature is below the parameter

#### **Special parameters / Parameter 5:**

- with alternative mode, only the resistance is activated;
- with simultaneous mode, the resistance and heat pump are activated simultaneously after the heating wait time.

Regardless of activation of Temperature control, the flow temperature upper and lower limit must be set, adapting them to the specific requirements of the system to which the "" system is connected.

Check the following parameters and adjust them if needed:

**Zone / Configuration / Thermoreg. CH / Max flow set**

**Zone / Configuration / Thermoreg. CH / Min flow set**

**Zone / Configuration / Thermoreg. Cool. / Max flow set**

**Zone / Configuration / Thermoreg. Cool. / Min flow set**

Any set temperature with or without corrections, cannot exceed these limits.

The first served operating mode, in case of contemporaneity, is decided with the parameter:

#### **Configuration / Priority**

The DHW Mode can have a maximum duration, settable with the parameter

**Configuration / Max time DHW**

beyond which the alarm is signalled.

The heat pump can manage up to 3 distribution pumps.

To activate the correct number of distribution pumps, modify the parameter:

#### **System definition / Number of zones**

It is possible to customise the operation of each individual zone.

Each zone can be enabled for a single operating mode, modifying the parameter

#### **Configuration / Enablings / Mode**

The system request for each zone can be made from a room thermostat, which must be enabled in the menu

#### **Configuration / Enablings / Enable room thermostat**

In case a remote device is used to control the requests, it is necessary to modify the parameter

#### **Configuration / Enablings / Enable remote contr.**

If a dehumidifier is present, it is necessary to modify the parameter

#### **Configuration / Enablings / Enable dehumidifiers**

It may happen that the dehumidifier has problems with receiving a very high supply temperature. For this reason, dehumidifier ignition can be prevented until the flow water drops below the desired level.

We suggest installing the dehumidifier only in mixed zones.

If more than one zone is enabled and the dehumidifier is installed on a direct zone, the NTC 10K B3435 flow probe must be installed in that zone.

#### **Configuration / Enablings / Max dehum. temp.**

Furthermore, if the setpoint calculated for the dehumidification is too high to carry out a request, the alarm is signalled and the dehumidifier is stopped. This value can be edited through the parameter:

#### **Configuration / Enablings / Dehum. alarm set**

In case a humidistat is used to control the dehumidification requests, it is necessary to modify the parameter

#### **Configuration / Enablings / Enable humidistat**

In the presence of a floor system, it is necessary to avoid the formation of condensate in the floor by enabling the use of the dew temperature calculation, provided a zone remote panel or a temperature/humidity probe has been installed:

#### **Configuration / Enablings / Enable dew point**

It is possible to enable the flow temperature control via the thermoregulation with external probe, by modifying the parameter

#### **Configuration / Enablings / Ext. probe modul.**

To improve system efficiency in certain types of installations, provided a zone remote panel or a temperature/humidity probe has been installed, it is possible to enable flow temperature control by modulation with a room probe, by modifying the parameter

#### **Configuration / Enablings / Room. probe modul.**



The system flow temperature drops (it rises in case of cooling) when the room temperature approaches the room setpoint. Modulation with room probe can only be enabled in the presence of a zone remote device.



## 4.10 DHW (DOMESTIC HOT WATER) BOOST

In order to activate the DHW (Domestic hot water) BOOST function, it is necessary to enable the DHW (Domestic hot water) electrical resistance by changing the parameter:

### Integration / Enable DHW integr.

The activation of this function requires the setting of the DHW electrical integration mode as SIMULTANEOUS by means of a specific parameter only visible with "Service" log-in.

## 4.11 ANTI-LEGIONELLA

The indoor unit is equipped with a function to perform a thermal shock on the storage tank.

This function brings the appliance temperature to the maximum allowed with DHW integrative resistance enabled.

The function is enabled via the menu

### DHW / Anti-legionella

The function is activated at the time set via the menu

### Anti-legionella / Anti-legion.cycle time

on the week day set on the menu

### Anti-legionella / Anti-legion.cycle day

it is possible to activate the all day function through the "Anti-legionella" menu.

The maximum allowed duration of the function corresponds to the value set in the parameter:

### Anti-legionella / Max antilegion. time

if the function is not completed within the maximum allowed time, an alarm will be triggered.



It is possible to activate the function only with DHW el. resistance and eventually a thermostatic valve must be installed at the DHW outlet to prevent burns.

## 4.12 DOMESTIC HOT WATER PUMP (OPTIONAL)

The DHW recirculation function provides the greatest possible comfort in domestic hot water supply by constantly circulating the water. The DHW recirculation function activates the pump in the time slots set with the recirculation program and in the time between these slots, it automatically switches the pump on and off to maintain the same DHW set temperature or a lower temperature corrected by means of the DHW recirculation offset function.

Recirculation can also be activated at the end of the anti-Legionella function for 1 hour, so as to extend thermal treatment to the recirculation circuit as well.

To enable the DHW recirculation function, it is necessary to:

- install the recirculation pump and recirculation probe, included in the optional kit, connect the pump to the terminals of the two relays kit (optional), and enable the function by editing the parameter:

### Special parameters / Enable recirculation = On

- To correct the recirculation temperature, which when reached stops the pump, the DHW recirculation offset must be set at a value other than zero.
- For example, DHW set 45°C, recirculation offset -5°C, the pump will stop when the temperature read by the recirculation probe reaches a value of 40°C.
- To set it, adjust the parameter:

### Special parameters / Parameter 6

- It is possible to activate the anti-Legionella function on the DHW recirculation circuit at the end of the anti-Legionella function. The mixing valve should be present with this configuration.
- To enable the function, adjust the parameter:

### Special parameters / Parameter 7

The operation of the circulator can be further reduced by setting the time slots as desired in the menu:

### Menu / Clock and programs / Recirculation Program



#### 4.13 PUMP ANTI-BLOCK

The indoor unit has a function that starts the pump at least once every 24 hours for the duration of 30 seconds in order to reduce the risk of the pump becoming blocked due to prolonged inactivity.

#### 4.14 THREE-WAY ANTI-BLOCK

The indoor unit has a function that activates the motorised three-way unit 24 hours after the last time it operated by running a complete cycle in order to reduce the risk of the three-way blocking due to prolonged inactivity.

#### 4.15 SYSTEM SETPOINT CORRECTION

In the presence of hydraulic disconnections on the system downstream of the appliance distribution circuit, it is possible to activate a function that makes it possible to correct the request setpoint to the generator to approach the set zone setpoint as much as possible.

The corrections can be made either in central heating or in cooling mode and, if enabled, apply to all active zones.

To activate this FUNCTION also in direct zone 1 it is necessary to install the flow probe for zone 1 B3-1 (optional) connected to the terminal block of the control panel as shown in figure 9 and enable it with "Parameter 1 = 1" in "Parameter 1" in Menu / Support / Special parameters".

Activation takes place by setting the parameters

**System definition / Max CH adjust**

**System definition / Max Cool. adjust**

with a value  $> 0^{\circ}\text{C}$ .

Following a demand, the correction begins after a time equal to

**System definition / Activation time**

and continue with a  $1^{\circ}\text{C}$  every time interval of

**System definition / Increase time**

minutes.

#### 4.16 PHOTOVOLTAIC

If the photovoltaic contact (contact "S 39" Fig. 8) is closed, the accumulated DHW is heated to the highest settable temperature (without electrical resistance) through heat pump operation.

In case of simultaneous DHW (Domestic hot water) and system request, the system will decide which service to satisfy, in order to ensure the best comfort.





## 4.17 INTEGRATION WITH SYSTEM INTERNAL ELECTRICAL RESISTANCE

The heat pump can be added with a system electrical resistance (optional) to be installed inside the appliance, to have an alternative source of energy available for use in central heating mode.

Enabling the electrical resistance is done via a single parameter.

Modifying the parameter

### **Integration / Enable heat.integr.**

you decide whether to activate only the heat pump or the heat pump and integrative electric resistance to perform the central heating function defining its mode alternative or simultaneous by modifying the parameter "CH integration mode".

The "Int" integration only option cannot be set on this model.

Modifying the parameter

### **Integration / CH integration mode**

after having enabled the central heating integrative resistance, you decide whether to activate the heat pump and the resistance in alternative or simultaneous mode.

Modifying the parameter

### **Integration / CH wait time**

you decide the time after which the electrical resistance is activated at the same time as the heat pump if the set flow setpoint is not reached.

If simultaneous mode is selected, there is another parameter

### **Integration / Integration band**

with which to lower the setpoint temperature limit that must be reached by the heat pump within "CH wait time" before activating the integrative electric resistance.



With alternative integration mode, the wait time does not affect the functioning algorithm.

In normal operation, the integration resistance is only activated when the outdoor temperature is below the parameter

### **Integration / Min. CH integr.temp.:**

- with alternative mode, only the resistance is activated;
- with simultaneous mode, the resistance and heat pump are activated simultaneously after the heating wait time.

The first served operating mode, in case of contemporaneity, is decided with the parameter:

### **Configuration / Priority**

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



## 4.18 INTEGRATION WITH SYSTEM EXTERNAL ELECTRICAL RESISTANCES

System electrical resistances can be (optionally) installed outside the appliance for each zone.  
For electrical connections, please see the relevant references in the wiring diagrams.  
To enable the operation of resistances, it is necessary to edit the parameter by which

### **Integration / Enable heat.integr.**

it is decided whether to activate only the heat pump, or only the resistance, or both, to perform the Central heating mode.  
Enabling the external electrical resistances is an alternative to enabling the internal ones, therefore it is not possible to simultaneously manage both on a single product. Enabling the external resistances mandatorily requires the installation of the flow probe for zone 1 called B3-1 (optional) connected to the terminal block of the control panel as shown in figure 9.  
To enable the external integration resistance it is necessary to set:

### **Special parameters / Enab.ext. CH resistance = 1**

Modifying the parameter

### **Integration / CH integration mode**

it is decided whether to activate the heat pump and the resistance in an alternate or simultaneous manner.

Modifying the parameter

### **Integration / CH wait time**

decide the time that needs to lapse before activating the electrical resistance.

When the outside temperature is lower than:

### **Integration / Min. CH integr.temp.**

the electrical resistance activates automatically.

The first served operating mode, in case of contemporaneity, is decided with the parameter:

### **Configuration / Priority,**

in the "DHW" menu:



Electrical resistances inside and outside the appliance cannot be connected at the same time.

## 4.19 ZONE 2/3 SAFETY THERMOSTAT

In case of zone 2 or zone 3 installation, a control on the zone flow temperature is enabled which prevents the distribution of water above a certain temperature.

It is possible to modify these limits through the parameters

**Special parameters / Safety therm. Zone 2**

**Special parameters / Safety therm. Zone 3**

## 4.20 CONJUNCTION MODE

In case of simultaneous DHW (Domestic hot water) and system request, the system decides which to service to perform on the basis of an alternating logic determined by the system.

It is possible to modify this logic, so that the system simultaneously deals with both services, using the generators available.

Operation in this mode can be activated by editing the following parameters:

**System definition / Concomitant mode**

Moreover, also the DHW electrical resistance needs to be enabled:

**Integration / Enable DHW integr.**

## 4.21 HEAT PUMP DISABLING FUNCTION

If this function is enabled, no request from the heat pump will be fulfilled, except for the safety functions.

**HP / Powers / HP power off = Yes**

**User / Disable HP = Yes**

One can then choose whether to activate the disabling according to a schedule by setting time slots in the menu:

**User / Start hourly HP disab.**

**User / End hourly HP disab.**

or with an external contact (contact "S43" Fig. 8).

## 4.22 SILENT MODE FUNCTION

To enable this noise reduction function of the Outdoor Unit, you must configure the board of the Outdoor Unit as described in the EU manual and adjust the parameters:

**User / Enab. Silent func. = Yes**

**Heat pump / Powers / Enab. Silent func. = Yes**

One can then choose whether to activate the noise reduction function according to a schedule by setting time slots in the menu:

**User / Start Silent func.**

**User / End Silent func.**

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



#### 4.23 DIVERTER VALVE MANAGEMENT (SUMMER / WINTER)

The unit electronics has a 230V outlet to manage the summer / winter diverter valves.  
The voltage output is active when the appliance is in SUMMER mode with Cooling.

#### 4.24 EXTERNAL PROBE SETTING

To activate the optional external probe, it is necessary to modify the parameter:

##### System definition / External probe

If the temperature probe is particular far from the indoor unit, it is possible to correct its value by modifying

##### System definition / External probe corr.

#### 4.25 MANUAL DRIVES

In the menu

##### Support / Manual drives

it is possible to manage all the main appliance loads in manual mode.

These parameters must be used in case of system troubleshooting.

To correctly activate the functions, it is necessary to set the system in "stand-by".

#### 4.26 OUTDOOR UNIT TEST MODE FUNCTION

When using the Outdoor Unit's test mode (see outdoor condensing unit instruction manual), the Indoor Unit must be set to an operating mode other than 'Stand-by'.

The alarm 183 is triggered during the test, meaning "Test mode" in progress.

#### 4.27 OUTDOOR UNIT PUMP DOWN

If the pump down function is used (see outdoor condensing unit instruction booklet) the indoor unit must be set in "Stand-by".

The function can only be activated if the appliance is not under alarm.

#### 4.28 SNOW ACCUMULATION PREVENTION FUNCTION

If the outdoor unit is installed in areas subject to heavy snow falls, in addition to setting up the appropriate external protections, the specific snow accumulation prevention function can also be enabled inside the outdoor unit.

To activate the function, you must configure the board of the Outdoor Unit as described in the EU Audax Pro 6/9 V2 manual.

#### 4.29 SUPERVISION DEVICE CONFIGURATION

The appliance can be configured so that it can be controlled by the external supervision devices such as Dominus or other types of home automation systems (not supplied by Immergas).

For the configuration, it is necessary to modify the parameter

##### System definition / System supervision



It is not possible to configure both devices simultaneously.

#### 4.30 ADDITIONAL DHW STORAGE TANK FUNCTION (OPTIONAL)

The ADDITIONAL DHW STORAGE TANK function allows you to manage a second DHW storage tank installed in series outside the indoor unit, thus increasing the total amount of domestic hot water available.

The following optional kits are required:

- expansion kit
- DHW recirculation kit and a DHW storage tank probe (Fig. 9 ref. B2-S, type NTC 10K B3435).

To enable this function, it is necessary to adjust the parameter:

**Special parameters / Parameter 13 = 1.**

Enabling this function is an alternative to the DHW recirculation function.

The set of the additional storage tank is Main DHW set - 1°C.

The re-ignition hysteresis of the additional storage tank function can be changed with the parameter

**Special parameters / Parameter 14**

The set value represents the temperature multiplied by 10, e.g. 10 means hysteresis 1°C compared to the additional storage tank set.

The value indicated represents the temperature multiplied x 10, e.g.: 10 means hysteresis 1°C compared to the main DHW set.

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



#### 4.31 DEHUMIDIFICATION BOOST FUNCTION

If there is a Immergas remote control, zone remote panel or modbus temperature - humidity probe and a Immergas dehumidifier, it is possible to configure the device to increase the cooling capacity of the zone by activating the dehumidifier in cooled air mode if the ambient temperature read by the probe exceeds the set value by 2°C by modifying the parameter

**Special parameters / Parameter 4 = 1**

#### 4.32 DEHUMIDIFICATION FUNCTION

The dehumidification function with dehumidifiers (optional) can be carried out based on two different modes (neutral air or cooled air) and based on three different types of devices:

- 1) Zone remote panel or zone remote control;
- 2) Humidity sensor.
- 3) Humidistat.

##### **Neutral air mode.**

With the first and second type of devices, only the dehumidification request is activated if the humidity value detected by the panel/humidity sensor exceeds the value set in the "Set" menu.

In the third case, as soon as the humidistat On/Off contact is closed.

The dehumidification request in neutral air means starting up the Immergas dehumidifier so as to reduce the humidity without modifying the room temperature.

##### **Cooled air mode.**

With the first device, Cooled Air mode starts up if, both the humidity and temperature read by the panel/remote control are higher than the set values.

With the second device, the Cooled Air mode starts up if, in addition to the humidity read by the probe is greater than the set value, the On/Off contact of the thermostat also closes.

In the third case it is activated when both On/Off contacts of the zone humidistat and thermostat are closed. The cooled air dehumidification request means activating the Immergas dehumidifier in a different mode that adds an additional room cooling capacity, in addition to dehumidification.

Cooled Air Dehumidification mode can only be activated in alternative mode or on zone 1 or on zone 2.



### 4.33 CASING REMOVAL

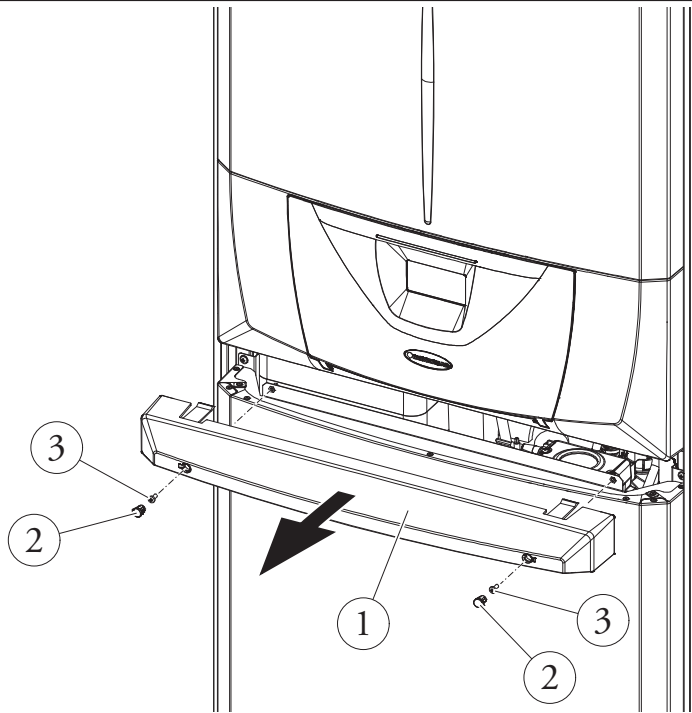
To facilitate indoor unit maintenance the casing can be completely removed as follows:

#### Aesthetic profile (1) (Fig. 47).

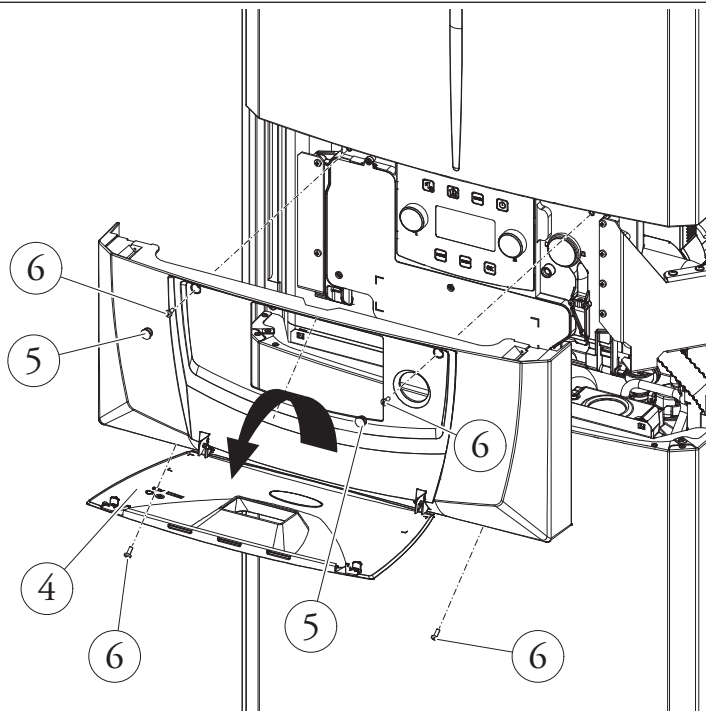
- Remove the plastic protection caps (2) and loosen the screws (3) to remove the aesthetic profile (1).

#### Cover disassembly (4) (Fig. 48).

- Open the cover door (4) to make it tilt.
- Remove the rubber protection caps (5), loosen the two upper front screws and the lower screws (6) to remove the cover (4).



47



48

INSTALLER

USER

CONTROL PANEL

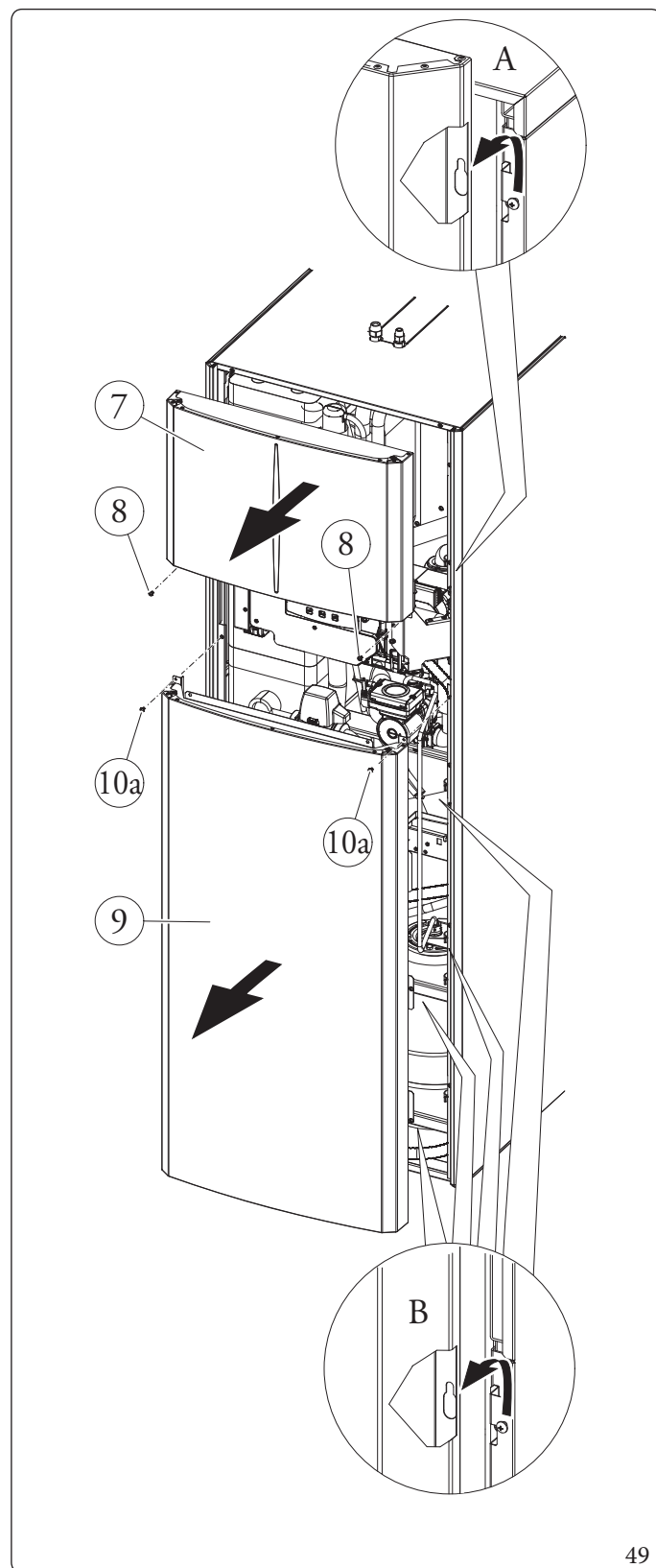
MAINTENANCE TECHNICIAN

TECHNICAL DATA

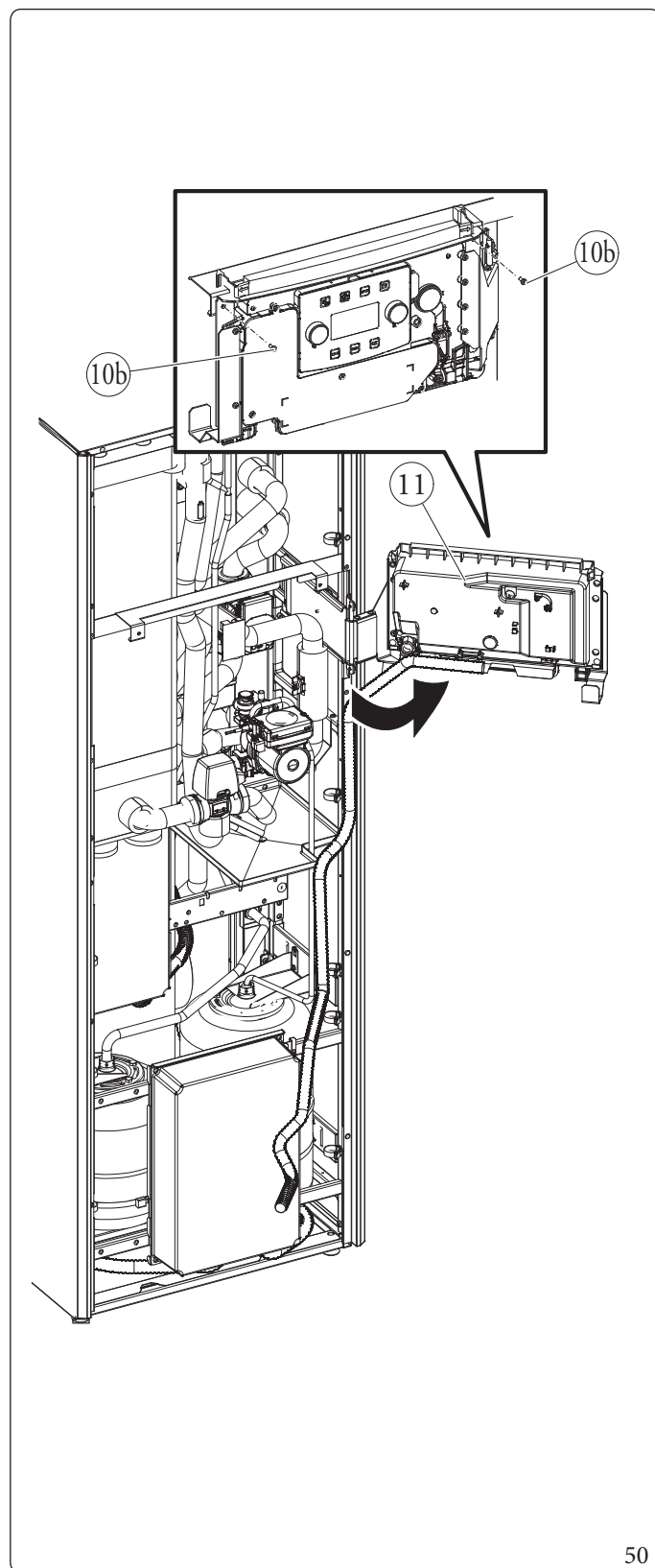


### Disassembly of the upper front (7), lower front (9) (Fig. 49)

- Disassemble the upper front (7) by loosening the two screws (8) and pushing it upwards in order to free it from the fixing slots and pulling it towards yourself (Det. A).
- Disassemble the lower front (9) by loosening the 2 screws (10a) and pushing it upwards in order to free it from the fixing slots, pulling it towards yourself (Det. B).
- Unscrew the 2 (10b) fixing screws on the control panel.
- After which, pull the control panel (11) towards yourself and turn it as shown in the figure 50.



49



50



### Right side door disassembly (15) (Fig. 51)

- Open the door (15) making it turn by at least 90° outwards.
- Remove the screw (12) in the top corner of the door (15).
- Release the door (15) from the bracket (13) just released from the screw (12) tilting it outwards and removing it from the lower pin (14).



51

INSTALLER

USER

CONTROL PANEL

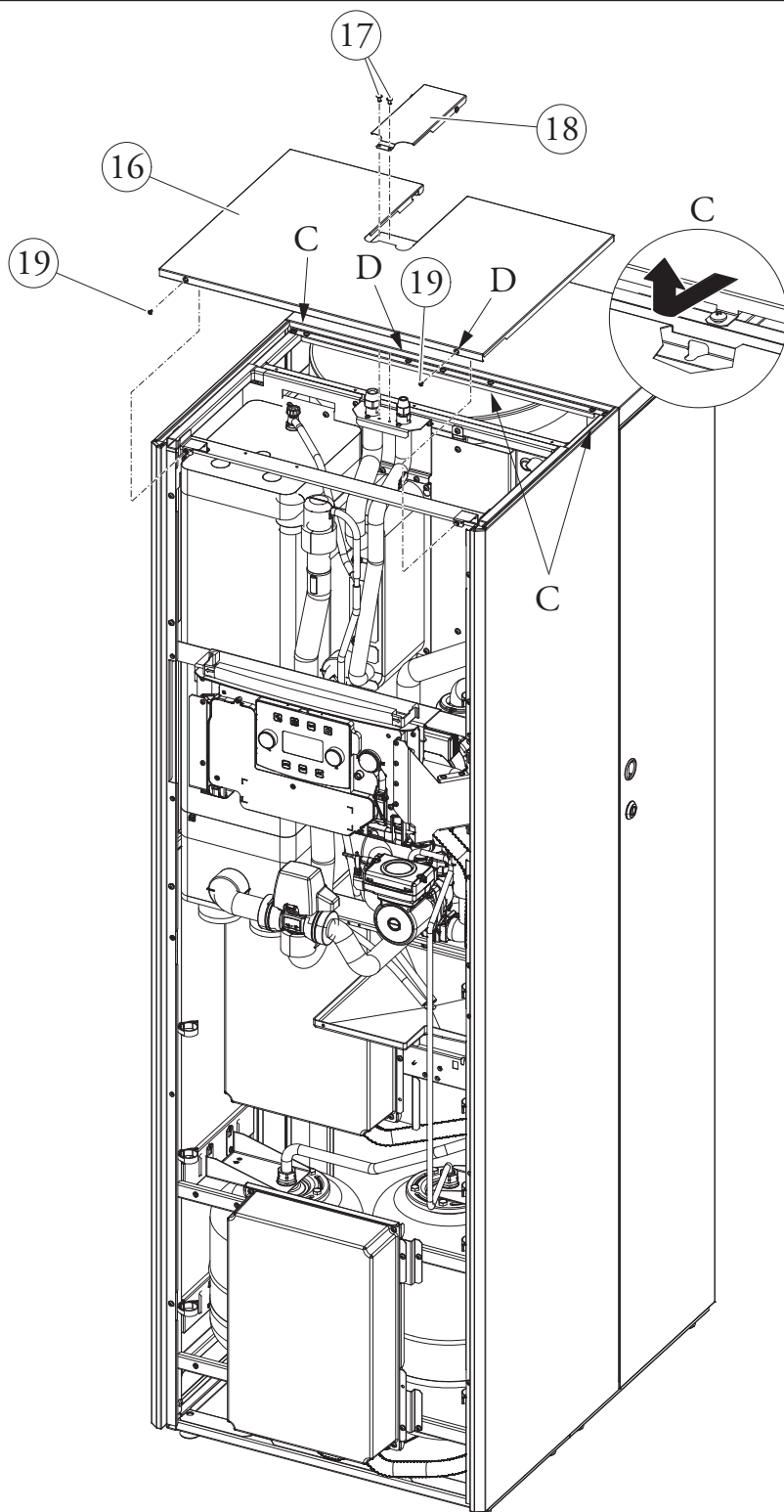
MAINTENANCE TECHNICIAN

TECHNICAL DATA



**Upper covers disassembly (16 and 18) (Fig. 52)**

- Undo the fixing screws (19), pull the front cover towards you (16) to release it from the screws with the stop placed at the rear (Det. C) (see detail).
- Undo the fixing screws (17), pull the cover towards you (18) to release it from the screws with the stop placed at the rear (Det. D) (see detail).

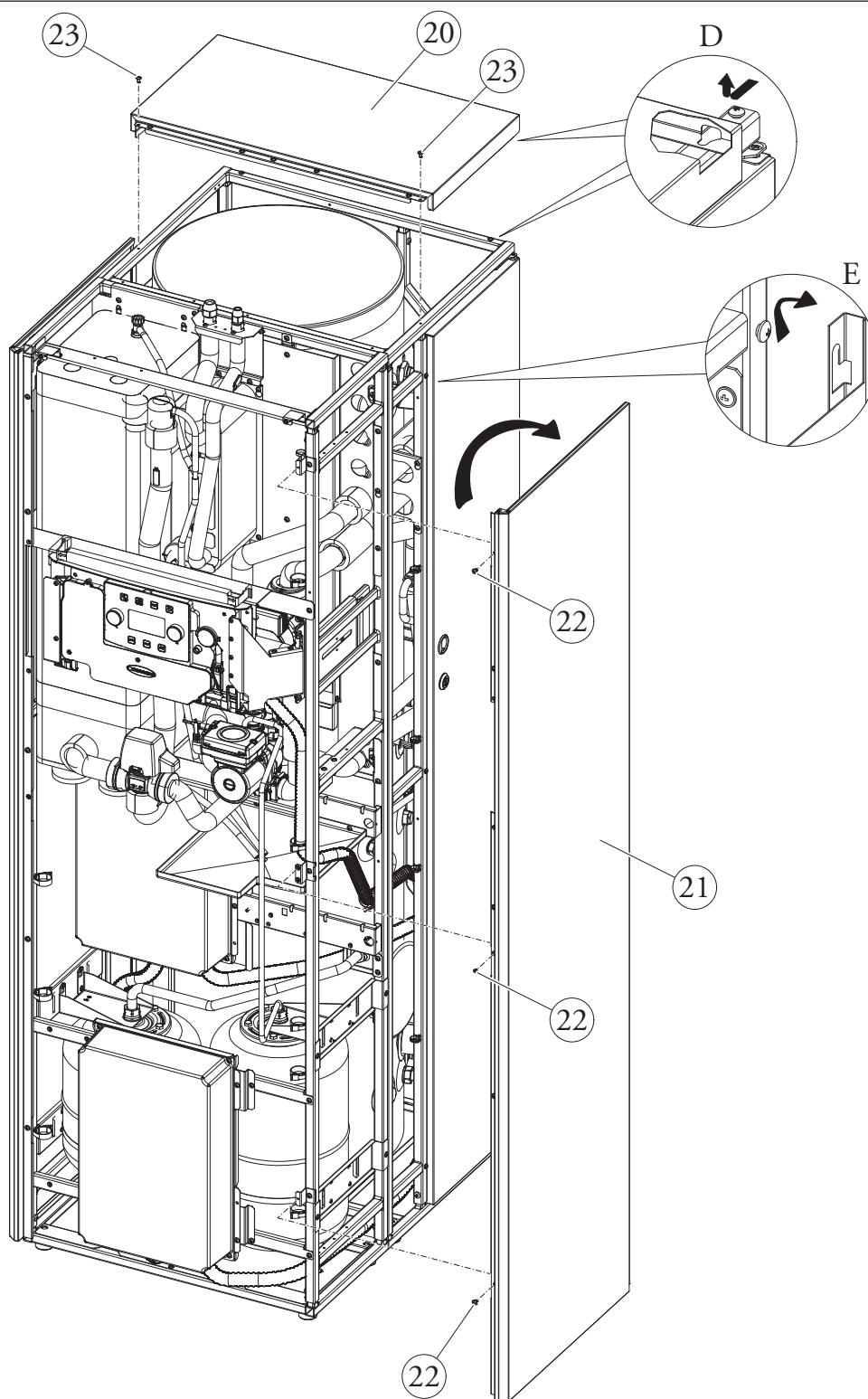


### Rear cover disassembly (20) (Fig. 53)

- Undo the fixing screws (23), pull the rear cover towards you (20) to release it from the screws with the stop placed at the rear (Det. D).

### Right side disassembly (21) (Fig. 53)

- Remove the right side (21) loosening the screws (22) present, then lightly push upwards in order to release the side from its seat and pull it outwards (Det. E).



53

INSTALLER

USER

CONTROL PANEL

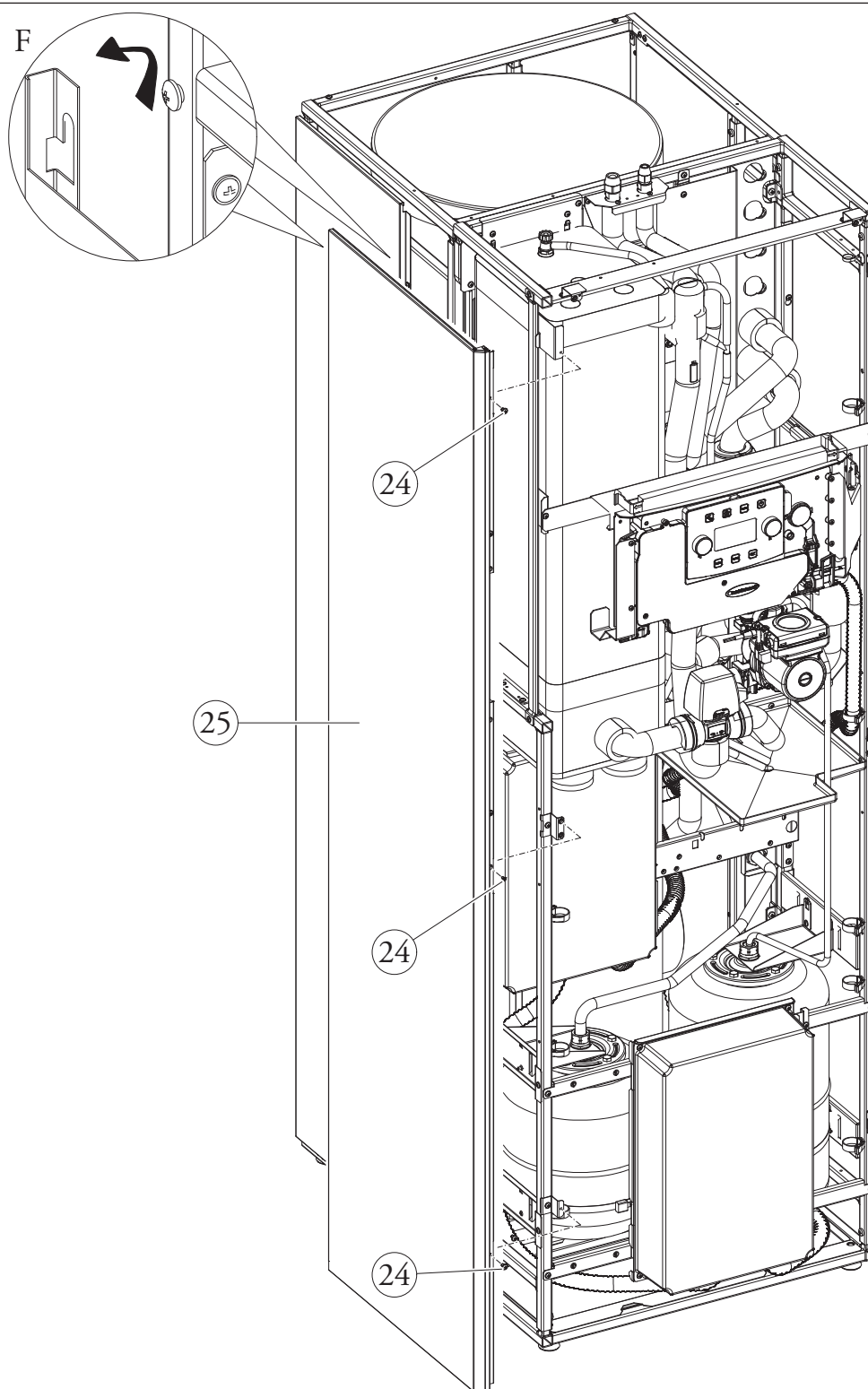
MAINTENANCE TECHNICIAN

TECHNICAL DATA



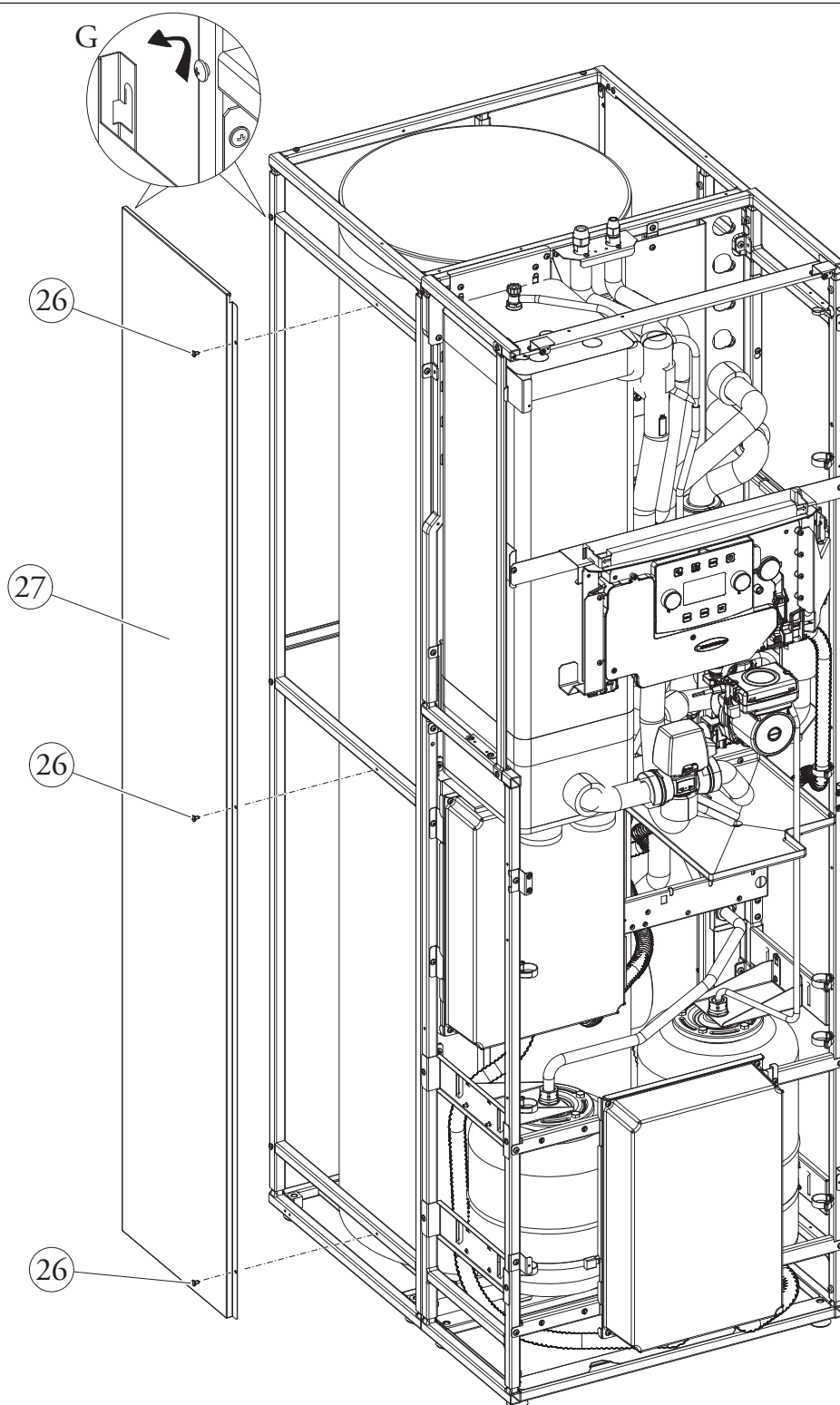
**Front left side disassembly (25) (Fig. 54)**

- Remove the front left side panel (25) by undoing the screws (24) and then slightly push the side panel upwards in order to release the side panel from its seat and pull it outwards (Det. F).



### Rear left side disassembly (27) (Fig. 55)

- Remove the rear left side panel (27) by undoing the screws (26) and then slightly push the side panel upwards in order to release the side panel from its seat and pull it outwards (Det. G).



55

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

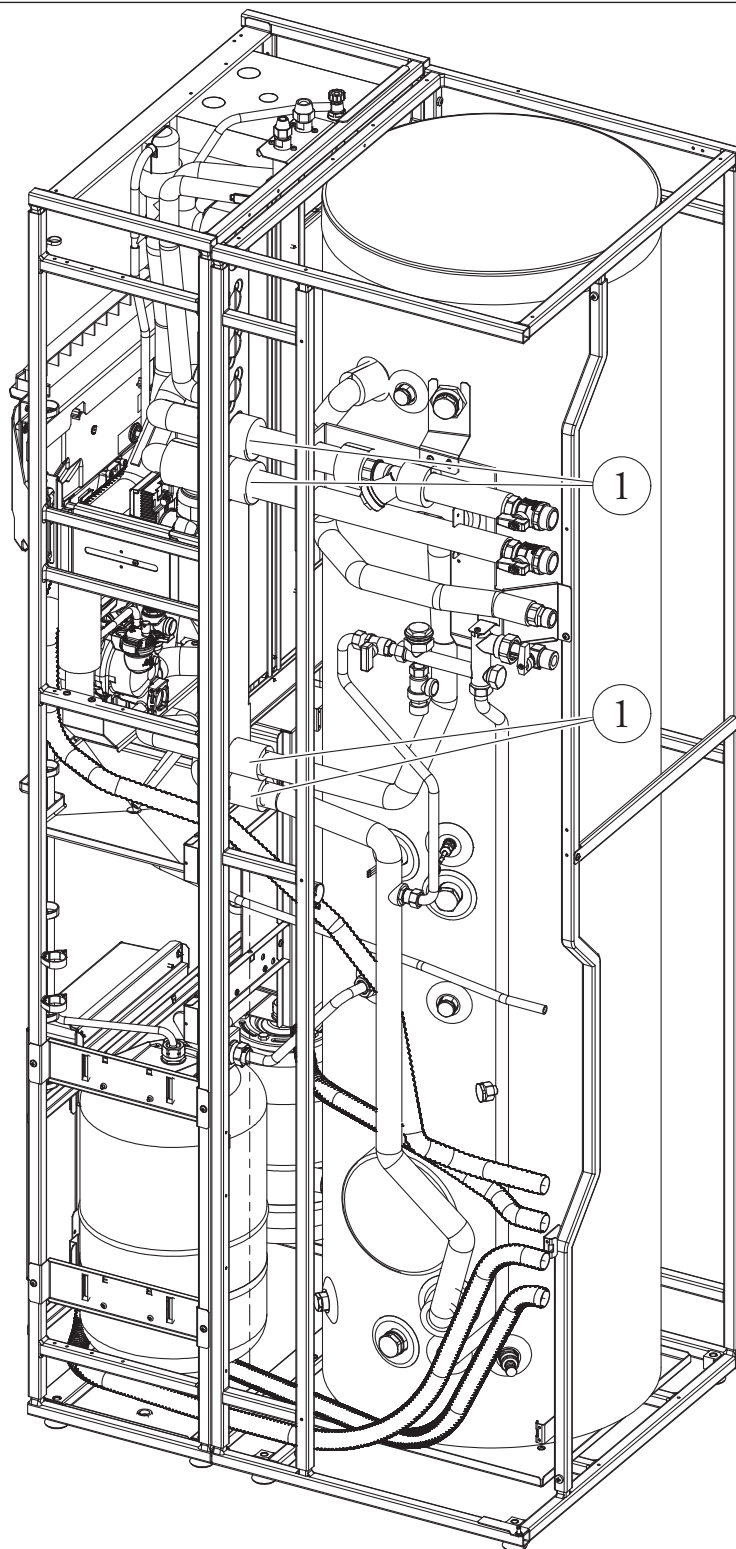
TECHNICAL DATA



#### 4.34 INDOOR UNIT SEPARATION

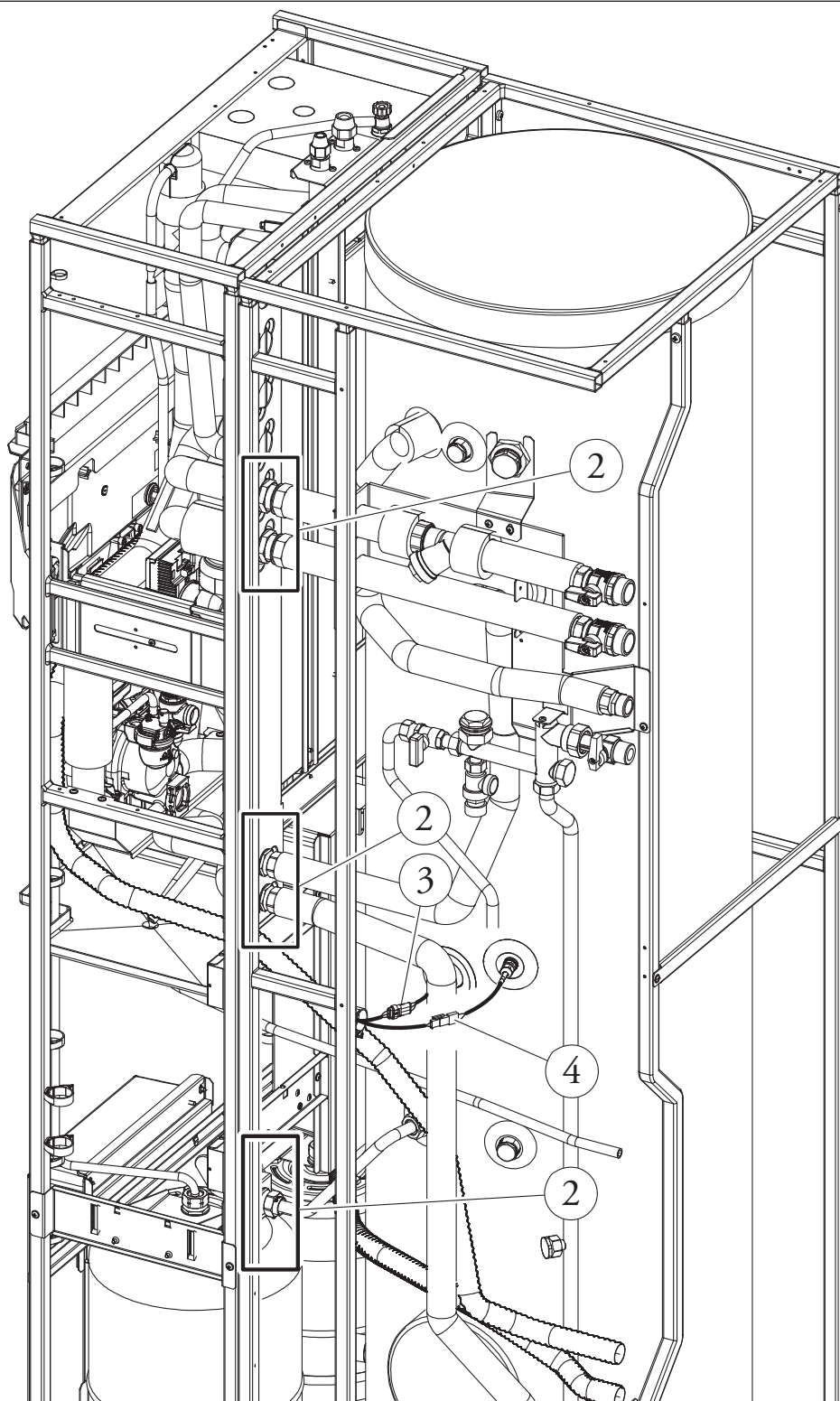
To ease transport the indoor unit can be separated into two detached modules. To do this one must follow the instructions below and completely disassemble the casing as described in Par. 4.33.

- Remove the insulation from the fittings (1) (Fig. 56).





- Unscrew the fittings (2) being careful to keep the gaskets present aside.
- Disconnect the connectors (3 and 4) (Fig. 57).



57

INSTALLER

USER

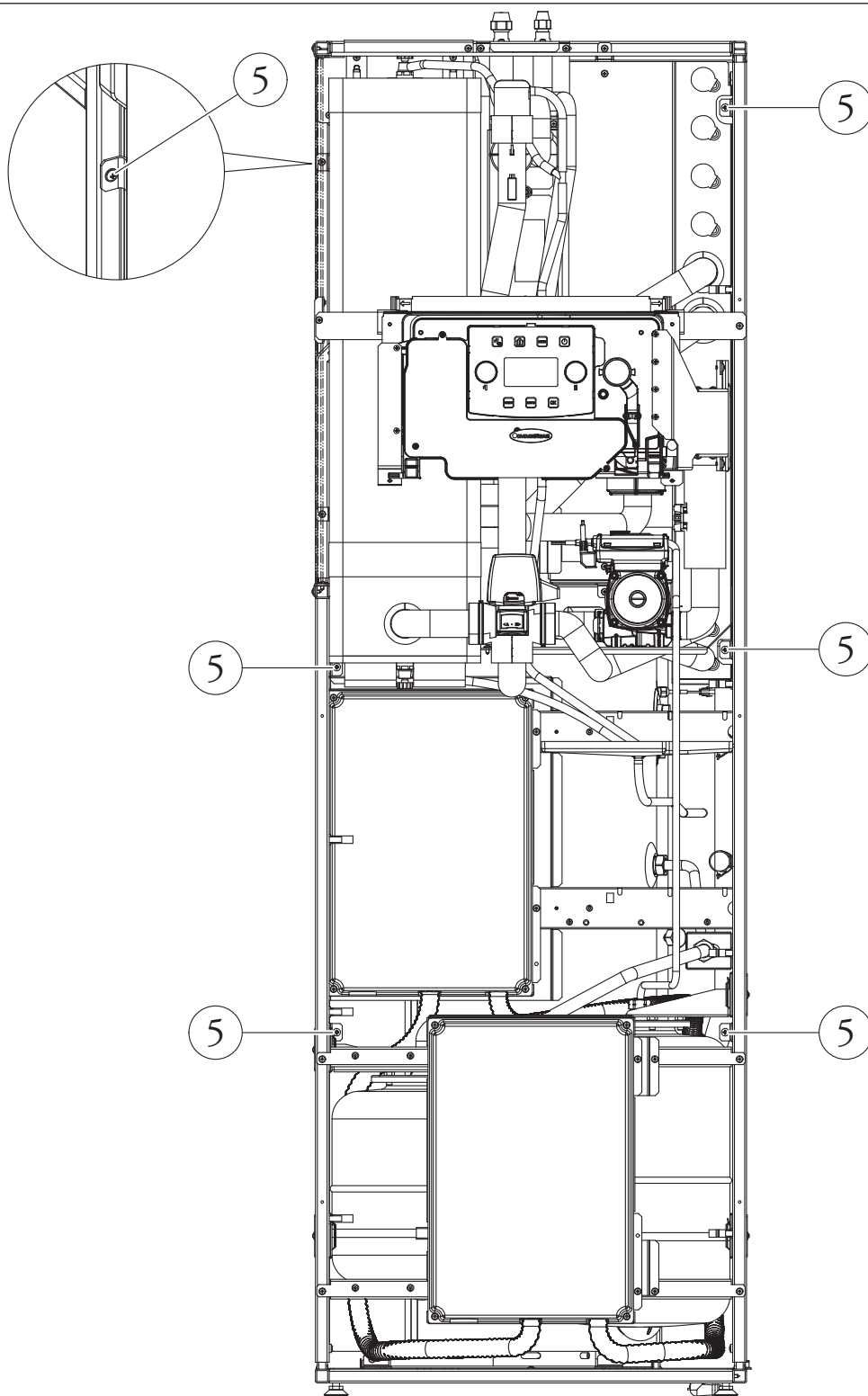
CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA

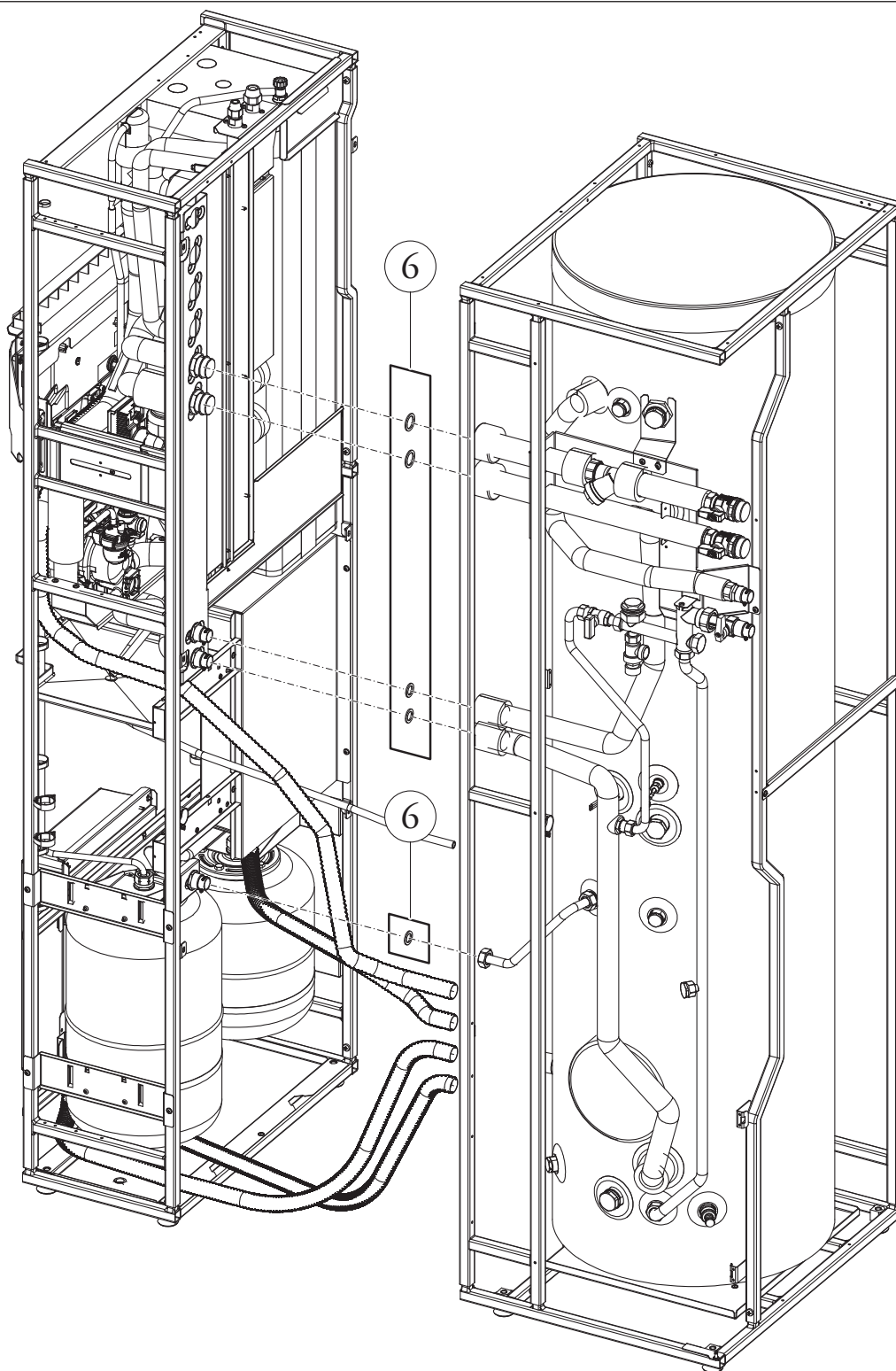


- Undo the frame fixing screws (5) (Fig. 58).





- At this point one can separate the indoor unit into two parts, be careful not to lose the gaskets (6) (Fig. 59).



59

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



5

TECHNICAL DATA

5.1 TECHNICAL DATA TABLE (SINGLE-PHASE)

Nominal heating performance

		MAGISHERCULES PRO 12I	MAGISHERCULES PRO 14I	MAGISHERCULES PRO 16I
Outside Air Temperature 7°C/6°C - Water Temperature 30°C/35°C				
Output power	kW	12,01	14,00	16,00
Absorbed power	kW	2,72	3,33	3,90
COP		4,42	4,2	4,1
Outside Air Temperature 7°C/6°C - Water Temperature 40°C/45°C				
Output power	kW	11,50	13,00	15,30
Absorbed power	kW	3,23	3,75	4,54
COP		3,56	3,47	3,37
Outside Air Temperature 7°C/6°C - Water Temperature 47°C/55°C				
Output power	kW	10,70	12,28	14,05
Absorbed power	kW	3,75	4,35	5,02
COP		2,85	2,82	2,8
Outside Air Temperature 2°C/1°C - Water Temperature 30°C/35°C				
Output power	kW	11,00	12,00	13,70
Absorbed power	kW	3,16	3,61	4,20
COP		3,48	3,32	3,26
Outside Air Temperature 7°C/8°C - Water Temperature 30°C/35°C				
Output power	kW	11,30	12,50	12,50
Absorbed power	kW	4,10	4,60	4,60
COP		2,76	2,72	2,72

Nominal cooling performance

		MAGISHERCULES PRO 12I	MAGISHERCULES PRO 14I	MAGISHERCULES PRO 16I
Outside Air Temperature 35°C - Water Temperature 23°C/18°C				
Output power	kW	12,01	14,00	15,00
Absorbed power	kW	3,10	3,80	4,14
EER		3,87	3,68	3,62
Outside Air Temperature 35°C - Water Temperature 12°C/7°C				
Output power	kW	9,00	10,50	11,20
Absorbed power	kW	3,10	3,75	4,00
EER		2,90	2,80	2,80



## Indoor Unit data

		UIMHP API (UE AUDAX PRO 12 V2I)	UIMHP API (UE AUDAX PRO 14 V2I)	UIMHP API (UE AUDAX PRO 16 V2I)
<b>Weight and dimensions</b>				
Weight of internal unit containing water	kg	502,0		
Empty indoor unit weight	kg	212,0		
Dimensions (LxHxD)	mm	650x1970x908		
<b>Water connections</b>				
System side water connections - inlet	inches	1		
System side water connections - outlet	inches	1		
Water connections with outdoor unit - inlet	inches	-		
Water connections with outdoor unit - outlet	inches	-		
Water connections (DHW) - inlet	inches	3/4		
Water connections (DHW) - outlet	inches	3/4		
Storage tank unit water connections - inlet	inches	-		
Storage tank unit water connections - outlet	inches	-		
<b>Primary circuit</b>				
Nominal water volume	l	56,0		
Expansion vessel: Total volume	l	15,8		
Expansion vessel: Useful volume	l	10,3		
Expansion vessel: Pre-charge	kPa (bar)	100 (1)		
Maximum operating pressure (System safety valve)	kPa (bar)	300 (3)		
Maximum operating temperature	°C	60		
<b>Refrigerant gas connections</b>				
Refrigerant gas connections - liquid phase line	inches	3/8		
Refrigerant gas connections - gas line	inches	5/8		
<b>Weight and dimensions of Unit with packaging</b>				
Weight of indoor unit with packaging	kg	-		
Dimensions of indoor unit with packaging (LxHxD)	mm	-		
<b>Power supply electrical features 1 (by standard)</b>				
Electrical connection		230V ~ 50Hz		
Rated absorbed power	W	2480		
Rated absorbed current	A	11,20		
Absorbed power without integration resistance	W	230		
Absorbed current without integration resistance	A	1,70		
Integration resistance absorbed power (DHW EH1)	W	2250		
Integration resistance absorbed current (DHW EH1)	A	9,5		
Absorbed power integration resistance (CH EH1)	W	-		
Absorbed current integration resistance (CH EH1)	A	-		
<b>Other electrical data</b>				
Protection class		IPX5D		
Outdoor unit operating range	°C	0..+35		
Outdoor unit operating range (with antifreeze kit)	°C	-		
Primary pump rated power	W	140		
Primary pump rated current	A	1,05		
EEI primary pump		≤0,23 - Part. 3		
Pump rated power Zone 1	W	75		
Pump rated current Zone 1	A	0,66		
Pump EEI Zone 1		≤0,21 - Part. 3		

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



		UIMHP API (UEAUDAX PRO 12 V2I)	UIMHP API (UEAUDAX PRO 14 V2I)	UIMHP API (UEAUDAX PRO 16 V2I)
<b>DHW Tank Data</b>				
DHW Storage Tank - Useful Volume	l	224,0		
DHW maximum operating temperature	°C	90		
Maximum DHW operating pressure (DHW safety valve)	kPa (bar)	800 (8)		
Expansion vessel: Pre-charge	kPa (bar)	250 (2,5)		
<b>Sound power and pressure</b>				
Sound power	dB	56		



## Product data

		MAGISHERCULES PRO 12I	MAGISHERCULES PRO 14I	MAGISHERCULES PRO 16I
<b>Central heating</b>				
Adjustable central heating temperature (operating field)	°C	+20 ÷ +55		
Central heating / C.H. outdoor temperature (operating field)	°C	-25 ÷ +35		
Heating adjustable temperature with enabled integration (working range)	°C	+20 ÷ +55		
Heating external temperature with enabled integration (working range)	°C	-25 ÷ +35		
<b>Cooling</b>				
Cooling adjustable temperature (operating field)	°C	+5 ÷ +25		
Cooling outdoor temperature (operating field)	°C	+10 ÷ +46		
<b>DHW</b>				
DHW adjustable temperature without integration (working range)	°C	+10 ÷ +50		
DHW external temperature without integration (working range)	°C	-25 ÷ +35		
DHW adjustable temperature with enabled integration (working range)	°C	+10 ÷ +65		
DHW external temperature with enabled integration (working range)	°C	-25 ÷ +46		

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



5.2 TECHNICAL DATA TABLE (THREE-PHASE)

Nominal heating performance

		MAGISHERCULES PRO 12 TI	MAGISHERCULES PRO 14 TI	MAGISHERCULES PRO 16 TI
Outside Air Temperature 7°C/6°C - Water Temperature 30°C/35°C				
Output power	kW	12,01	14,00	16,00
Absorbed power	kW	2,72	3,33	3,90
COP		4,42	4,2	4,1
Outside Air Temperature 7°C/6°C - Water Temperature 40°C/45°C				
Output power	kW	11,50	13,00	15,30
Absorbed power	kW	3,23	3,75	4,54
COP		3,56	3,47	3,37
Outside Air Temperature 7°C/6°C - Water Temperature 47°C/55°C				
Output power	kW	10,70	12,28	14,05
Absorbed power	kW	3,75	4,35	5,02
COP		2,85	2,82	2,8
Outside Air Temperature 2°C/1°C - Water Temperature 30°C/35°C				
Output power	kW	11,00	12,00	13,70
Absorbed power	kW	3,16	3,61	4,20
COP		3,48	3,32	3,26
Outside Air Temperature 7°C/8°C - Water Temperature 30°C/35°C				
Output power	kW	11,30	12,50	12,50
Absorbed power	kW	4,10	4,60	4,60
COP		2,76	2,72	2,72

Nominal cooling performance

		MAGISHERCULES PRO 12 TI	MAGISHERCULES PRO 14 TI	MAGISHERCULES PRO 16 TI
Outside Air Temperature 35°C - Water Temperature 23°C/18°C				
Output power	kW	12,01	14,00	15,00
Absorbed power	kW	3,10	3,80	4,14
EER		3,87	3,68	3,62
Outside Air Temperature 35°C - Water Temperature 12°C/7°C				
Output power	kW	9,00	10,50	11,20
Absorbed power	kW	3,10	3,75	4,00
EER		2,90	2,80	2,80



## Indoor Unit data

		UIMHP API (UE AUDAX PRO 12 V2 TI)	UIMHP API (UE AUDAX PRO 14 V2 TI)	UIMHP API (UE AUDAX PRO 16 V2 TI)
<b>Weight and dimensions</b>				
Weight of internal unit containing water	kg	502,0		
Empty indoor unit weight	kg	212,0		
Dimensions (LxHxD)	mm	650x1970x908		
<b>Water connections</b>				
System side water connections - inlet	inches	1		
System side water connections - outlet	inches	1		
Water connections with outdoor unit - inlet	inches	-		
Water connections with outdoor unit - outlet	inches	-		
Water connections (DHW) - inlet	inches	3/4		
Water connections (DHW) - outlet	inches	3/4		
Storage tank unit water connections - inlet	inches	-		
Storage tank unit water connections - outlet	inches	-		
<b>Primary circuit</b>				
Nominal water volume	l	56,0		
Expansion vessel: Total volume	l	15,8		
Expansion vessel: Useful volume	l	10,3		
Expansion vessel: Pre-charge	kPa (bar)	100 (1)		
Maximum operating pressure (System safety valve)	kPa (bar)	300 (3)		
Maximum operating temperature	°C	60		
<b>Refrigerant gas connections</b>				
Refrigerant gas connections - liquid phase line	inches	3/8		
Refrigerant gas connections - gas line	inches	5/8		
<b>Weight and dimensions of Unit with packaging</b>				
Weight of indoor unit with packaging	kg	-		
Dimensions of indoor unit with packaging (LxHxD)	mm	-		
<b>Power supply electrical features 1 (by standard)</b>				
Electrical connection		230V ~ 50Hz		
Rated absorbed power	W	2480		
Rated absorbed current	A	11,20		
Absorbed power without integration resistance	W	230		
Absorbed current without integration resistance	A	1,70		
Integration resistance absorbed power (DHW EH1)	W	2250		
Integration resistance absorbed current (DHW EH1)	A	9,5		
Absorbed power integration resistance (CH EH1)	W	-		
Absorbed current integration resistance (CH EH1)	A	-		
<b>Other electrical data</b>				
Protection class		IPX5D		
Outdoor unit operating range	°C	0..+35		
Outdoor unit operating range (with antifreeze kit)	°C	-		
Primary pump rated power	W	140		
Primary pump rated current	A	1,05		
EEI primary pump		≤0,23 - Part. 3		
Pump rated power Zone 1	W	75		
Pump rated current Zone 1	A	0,66		
Pump EEI Zone 1		≤0,21 - Part. 3		

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



		UIMHP API (UEAUDAX PRO 12 V2 TI)	UIMHP API (UEAUDAX PRO 14 V2 TI)	UIMHP API (UEAUDAX PRO 16 V2 TI)
<b>DHW Tank Data</b>				
DHW Storage Tank - Useful Volume	l		224,0	
DHW maximum operating temperature	°C		90	
Maximum DHW operating pressure (DHW safety valve)	kPa (bar)		800 (8)	
Expansion vessel: Pre-charge	kPa (bar)		250 (2,5)	
<b>Sound power and pressure</b>				
Sound power	dB		56	





## Product data

		MAGISHERCULES PRO 12 TI	MAGISHERCULES PRO 14 TI	MAGISHERCULES PRO 16 TI
<b>Central heating</b>				
Adjustable central heating temperature (operating field)	°C	+20 ÷ +55		
Central heating / C.H. outdoor temperature (operating field)	°C	-25 ÷ +35		
Heating adjustable temperature with enabled integration (working range)	°C	+20 ÷ +55		
Heating external temperature with enabled integration (working range)	°C	-25 ÷ +35		
<b>Cooling</b>				
Cooling adjustable temperature (operating field)	°C	+5 ÷ +25		
Cooling outdoor temperature (operating field)	°C	+10 ÷ +46		
<b>DHW</b>				
DHW adjustable temperature without integration (working range)	°C	+10 ÷ +50		
DHW external temperature without integration (working range)	°C	-25 ÷ +35		
DHW adjustable temperature with enabled integration (working range)	°C	+10 ÷ +65		
DHW external temperature with enabled integration (working range)	°C	-25 ÷ +46		

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



### 5.3 PRODUCT FICHE MAGIS HERCULES PRO 12I (IN COMPLIANCE WITH REGULATION 811/2013)

A	Supplier's name or trademark		-	Immergas
B	Supplier's model identifier		-	MAGISHERCULES PRO 12I
C	For space heating	Application temperature	-	Average temperature
	For water heating	Stated load profile	-	XL
D	Seasonal energy efficiency class of room heating	Average temperature	-	A++
		Low temperature	-	A+++
	Energy efficiency class of water heating		-	A
E	Nominal heat output (average climate condition)	Average temperature	kW	11
		Low temperature	kW	11
F	Annual energy consumption for room heating (average climate condition)	Average temperature	kWh	6966
		Low temperature	kWh	4974
	Fuel annual energy consumption for water heating (average climate condition)		GJ	-
G	Annual energy consumption for water heating (average climate condition)		kWh	-
H	Seasonal energy efficiency of room heating (average climate condition)	Average temperature	%	127
		Low temperature	%	180
	Energy efficiency of water heating (average climate condition)		%	-
I	Lwa sound power level indoors		dB	56
J	Operation only during dead hours		Yes\No	No
K	Specific precautions		-	-
L	Nominal heat output (colder climate condition)	Average temperature	kW	8
		Low temperature	kW	11
	Nominal heat output (warmer climate condition)	Average temperature	kW	8
		Low temperature	kW	11
	Annual energy consumption for room heating (colder climate condition)	Average temperature	kWh	7217
		Low temperature	kWh	6256
M	Annual energy consumption for room heating (warmer climate condition)	Average temperature	kWh	2783
		Low temperature	kWh	2318
	Annual energy consumption for water heating (colder climate condition)		kWh	-
	Annual energy consumption for water heating (warmer climate condition)		kWh	-
N	Seasonal energy efficiency of room heating (colder climate condition)	Average temperature	%	106
		Low temperature	%	164
	Seasonal energy efficiency of room heating (warmer climate condition)	Average temperature	%	158
		Low temperature	%	260
N	Lwa sound power level outdoors		dB	58



## 5.4 TABLE 2 REGULATION 813/2013 (MAGIS HERCULES PRO 12 I)

Model				MAGISHERCULESPRO 12I			
Air/water heat pump			YES	Low temperature heat pump			NO
Water/water heat pump			NO	With Supplementary heater			NO
Brine/water heat pump			NO	Mixed central heating device with heat pump:			YES
The parameters are declared for average temperature application, except for low temperature heat pumps. The parameters for low temperature heat pumps are declared for low temperature application							
The parameters are declared for average climatic conditions							
Element	Symbol	Value	Unit	Element	Symbol	Value	Unit
Rated heat output (*)	<i>Prated</i>	11	kW	Room central heating seasonal energy efficiency	$\eta_s$	127	%
Central heating capacity declared with a partial load and indoor temperature equivalent to 20°C and outdoor temperature T <sub>j</sub>				Performance coefficient declared or primary energy index for partial load it, with indoor temperature equivalent to 20°C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = - 7 °C	P <sub>dh</sub>	10,3	kW	T <sub>j</sub> = - 7 °C	COP <sub>d</sub>	2,1	-
T <sub>j</sub> = + 2 °C	P <sub>dh</sub>	6,4	kW	T <sub>j</sub> = + 2 °C	COP <sub>d</sub>	2,9	-
T <sub>j</sub> = + 7 °C	P <sub>dh</sub>	4,1	kW	T <sub>j</sub> = + 7 °C	COP <sub>d</sub>	4,4	-
T <sub>j</sub> = + 12 °C	P <sub>dh</sub>	4,6	kW	T <sub>j</sub> = + 12 °C	COP <sub>d</sub>	7,7	-
T <sub>j</sub> = bivalent temperature	P <sub>dh</sub>	10,3	kW	T <sub>j</sub> = bivalent temperature	COP <sub>d</sub>	2,1	-
T <sub>j</sub> = operating limit temperature	P <sub>dh</sub>	11	kW	T <sub>j</sub> = operating limit temperature	COP <sub>d</sub>	1,8	-
for air/water heat pumps: T <sub>j</sub> = - 15 °C (se TOL < - 20 °C)	P <sub>dh</sub>	-	kW	for air/water heat pumps: T <sub>j</sub> = - 15 °C (se TOL < - 20 °C)	COP <sub>d</sub>	-	-
Bivalent temperature	T <sub>biv</sub>	-7,0	°C	For air/water heat pumps: Operating limit temperature	TOL	-10	°C
Central heating capacity cycle intervals	P <sub>ych</sub>	-	kW	Cycle intervals efficiency	COP- ych	-	-
Degradation coefficient (**)	C <sub>dh</sub>	0,9	-	Water heating temperature operating limit	WTOL	55	°C
Different mode of energy consumption from the active mode				Additional heater			
OFF mode	P <sub>OFF</sub>	0,010	kW	Rated heat output (*)		P <sub>sup</sub>	0,0      kW
Thermostat mode off	P <sub>TO</sub>	0,010	kW	Type of energy supply voltage		electric	
Standby mode	P <sub>SB</sub>	0,010	kW				
Guard heating mode	P <sub>CK</sub>	0,000	kW				
Other items							
Capacity control	variable			For air/water heat pumps: air flow rate to outside		-	5940      m³\h
Indoor/outdoor sound level	L <sub>WA</sub>	56 / 58	dB	For water\water or brine\water heat pumps: nominal flow of brine or water, outdoor heat exchanger		-	-      m³\h
Emissions of nitrogen oxide	NO <sub>X</sub>	-	mg\kWh				
For mixed central heating appliances with a heat pump							
Stated load profile	XL			Water central heating energy efficiency		$\eta_{wh}$	94      %
Daily electrical power consumption	Q <sub>elec</sub>	8,51	kWh	Daily fuel consumption		Q <sub>fuel</sub>	-      kWh
Annual electrical power consumption	AEC	1774	kWh				
Contact information: Immergas S.p.A. via Cisa Ligure n.95							
(*) For heat pump appliances for space heating and heat pump mixed heating appliances, the nominal heat output P <sub>nominal</sub> is equal to the design load for central heating P <sub>design</sub> and the nominal heat output of an additional heater P <sub>sup</sub> is equal to the additional central heating capacity sup(T <sub>j</sub> ).							
(**) If C <sub>dh</sub> is not determined by a measurement, the degradation coefficient is C <sub>dh</sub> =0,9.							

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



## 5.5 PRODUCT FICHE MAGIS HERCULES PRO 12 TI (IN COMPLIANCE WITH REGULATION 811/2013)

A	Supplier's name or trademark		-	Immergas
B	Supplier's model identifier		-	MAGISHERCULES PRO 12 TI
C	For space heating	Application temperature	-	Average temperature
	For water heating	Stated load profile	-	XL
D	Seasonal energy efficiency class of room heating	Average temperature	-	A++
		Low temperature	-	A+++
	Energy efficiency class of water heating		-	A
E	Nominal heat output (average climate condition)	Average temperature	kW	11
		Low temperature	kW	11
F	Annual energy consumption for room heating (average climate condition)	Average temperature	kWh	6966
		Low temperature	kWh	4974
	Fuel annual energy consumption for water heating (average climate condition)		GJ	-
G	Annual energy consumption for water heating (average climate condition)		kWh	-
H	Seasonal energy efficiency of room heating (average climate condition)	Average temperature	%	127
		Low temperature	%	180
	Energy efficiency of water heating (average climate condition)		%	-
I	Lwa sound power level indoors		dB	56
J	Operation only during dead hours		Yes\No	No
K	Specific precautions		-	-
L	Nominal heat output (colder climate condition)	Average temperature	kW	8
		Low temperature	kW	11
	Nominal heat output (warmer climate condition)	Average temperature	kW	8
		Low temperature	kW	11
	Annual energy consumption for room heating (colder climate condition)	Average temperature	kWh	7217
		Low temperature	kWh	6256
M	Annual energy consumption for room heating (warmer climate condition)	Average temperature	kWh	2783
		Low temperature	kWh	2318
	Annual energy consumption for water heating (colder climate condition)		kWh	-
	Annual energy consumption for water heating (warmer climate condition)		kWh	-
N	Seasonal energy efficiency of room heating (colder climate condition)	Average temperature	%	106
		Low temperature	%	164
	Seasonal energy efficiency of room heating (warmer climate condition)	Average temperature	%	158
		Low temperature	%	260
N	Lwa sound power level outdoors		dB	58



## 5.6 TABLE 2 REGULATION 813/2013 (MAGIS HERCULES PRO 12 TI)

Model				MAGISHERCULESPRO 12 TI			
Air/water heat pump			YES	Low temperature heat pump			NO
Water/water heat pump			NO	With Supplementary heater			NO
Brine/water heat pump			NO	Mixed central heating device with heat pump:			YES
The parameters are declared for average temperature application, except for low temperature heat pumps. The parameters for low temperature heat pumps are declared for low temperature application							
The parameters are declared for average climatic conditions							
Element	Symbol	Value	Unit	Element	Symbol	Value	Unit
Rated heat output (*)	<i>Prated</i>	11	kW	Room central heating seasonal energy efficiency	$\eta_s$	127	%
Central heating capacity declared with a partial load and indoor temperature equivalent to 20°C and outdoor temperature T <sub>j</sub>				Performance coefficient declared or primary energy index for partial load it, with indoor temperature equivalent to 20°C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = - 7 °C	P <sub>dh</sub>	10,3	kW	T <sub>j</sub> = - 7 °C	COP <sub>d</sub>	2,13	-
T <sub>j</sub> = + 2 °C	P <sub>dh</sub>	6,4	kW	T <sub>j</sub> = + 2 °C	COP <sub>d</sub>	2,95	-
T <sub>j</sub> = + 7 °C	P <sub>dh</sub>	4,1	kW	T <sub>j</sub> = + 7 °C	COP <sub>d</sub>	4,36	-
T <sub>j</sub> = + 12 °C	P <sub>dh</sub>	4,6	kW	T <sub>j</sub> = + 12 °C	COP <sub>d</sub>	7,69	-
T <sub>j</sub> = bivalent temperature	P <sub>dh</sub>	10,3	kW	T <sub>j</sub> = bivalent temperature	COP <sub>d</sub>	2,13	-
T <sub>j</sub> = operating limit temperature	P <sub>dh</sub>	11,1	kW	T <sub>j</sub> = operating limit temperature	COP <sub>d</sub>	1,78	-
for air/water heat pumps: T <sub>j</sub> = - 15 °C (se TOL < - 20 °C)	P <sub>dh</sub>	-	kW	for air/water heat pumps: T <sub>j</sub> = - 15 °C (se TOL < - 20 °C)	COP <sub>d</sub>	-	-
Bivalent temperature	T <sub>biv</sub>	-7	°C	For air/water heat pumps: Operating limit temperature	TOL	-10	°C
Central heating capacity cycle intervals	P <sub>ych</sub>	-	kW	Cycle intervals efficiency	COP <sub>ych</sub>	-	-
Degradation coefficient (**)	C <sub>dh</sub>	0,9	-	Water heating temperature operating limit	WTOL	55	°C
Different mode of energy consumption from the active mode				Additional heater			
OFF mode	P <sub>OFF</sub>	0,010	kW	Rated heat output (*)		P <sub>sup</sub>	0,0      kW
Thermostat mode off	P <sub>TO</sub>	0,010	kW	Type of energy supply voltage		electric	
Standby mode	P <sub>SB</sub>	0,010	kW				
Guard heating mode	P <sub>CK</sub>	0,000	kW				
Other items							
Capacity control	variable			For air/water heat pumps: air flow rate to outside	-	5940	m³\h
Indoor/outdoor sound level	L <sub>WA</sub>	56 / 58	dB	For water\water or brine\water heat pumps: nominal flow of brine or water, outdoor heat exchanger	-	-	m³\h
Emissions of nitrogen oxide	NO <sub>X</sub>	-	mg\kWh				
For mixed central heating appliances with a heat pump							
Stated load profile	XL			Water central heating energy efficiency	$\eta_{wh}$	94	%
Daily electrical power consumption	Q <sub>elec</sub>	8,51	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh
Annual electrical power consumption	AEC	1774	kWh				
Contact information: Immergas S.p.A. via Cisa Ligure n.95							
(*) For heat pump appliances for space heating and heat pump mixed heating appliances, the nominal heat output P <sub>nominal</sub> is equal to the design load for central heating P <sub>design</sub> and the nominal heat output of an additional heater P <sub>sup</sub> is equal to the additional central heating capacity sup(T <sub>j</sub> ).							
(**) If C <sub>dh</sub> is not determined by a measurement, the degradation coefficient is C <sub>dh</sub> =0,9.							

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



## 5.7 PRODUCT FICHE MAGIS HERCULES PRO 14I (IN COMPLIANCE WITH REGULATION 811/2013)

A	Supplier's name or trademark		-	Immergas
B	Supplier's model identifier		-	MAGISHERCULES PRO 14I
C	For space heating	Application temperature	-	Average temperature
	For water heating	Stated load profile	-	XL
D	Seasonal energy efficiency class of room heating	Average temperature	-	A++
		Low temperature	-	A+++
	Energy efficiency class of water heating		-	A
E	Nominal heat output (average climate condition)	Average temperature	kW	11
		Low temperature	kW	11
F	Annual energy consumption for room heating (average climate condition)	Average temperature	kWh	6966
		Low temperature	kWh	4974
	Fuel annual energy consumption for water heating (average climate condition)		GJ	-
G	Annual energy consumption for water heating (average climate condition)		kWh	-
H	Seasonal energy efficiency of room heating (average climate condition)	Average temperature	%	127
		Low temperature	%	180
	Energy efficiency of water heating (average climate condition)		%	-
I	Lwa sound power level indoors		dB	56
J	Operation only during dead hours		Yes\No	No
K	Specific precautions		-	-
L	Nominal heat output (colder climate condition)	Average temperature	kW	8
		Low temperature	kW	11
	Nominal heat output (warmer climate condition)	Average temperature	kW	8
		Low temperature	kW	11
	Annual energy consumption for room heating (colder climate condition)	Average temperature	kWh	7217
		Low temperature	kWh	6256
M	Annual energy consumption for room heating (warmer climate condition)	Average temperature	kWh	2783
		Low temperature	kWh	2318
	Annual energy consumption for water heating (colder climate condition)		kWh	-
	Annual energy consumption for water heating (warmer climate condition)		kWh	-
N	Seasonal energy efficiency of room heating (colder climate condition)	Average temperature	%	106
		Low temperature	%	164
	Seasonal energy efficiency of room heating (warmer climate condition)	Average temperature	%	158
		Low temperature	%	260
N	Lwa sound power level outdoors		dB	58



## 5.8 TABLE 2 REGULATION 813/2013 (MAGIS HERCULES PRO 14I)

Model				MAGISHERCULESPRO 14I			
Air/water heat pump			YES	Low temperature heat pump			NO
Water/water heat pump			NO	With Supplementary heater			NO
Brine/water heat pump			NO	Mixed central heating device with heat pump:			YES
The parameters are declared for average temperature application, except for low temperature heat pumps. The parameters for low temperature heat pumps are declared for low temperature application							
The parameters are declared for average climatic conditions							
Element	Symbol	Value	Unit	Element	Symbol	Value	Unit
Rated heat output (*)	<i>Prated</i>	11	kW	Room central heating seasonal energy efficiency	$\eta_s$	127	%
Central heating capacity declared with a partial load and indoor temperature equivalent to 20°C and outdoor temperature T <sub>j</sub>				Performance coefficient declared or primary energy index for partial load it, with indoor temperature equivalent to 20°C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = - 7 °C	P <sub>dh</sub>	10,3	kW	T <sub>j</sub> = - 7 °C	COP <sub>d</sub>	2,13	-
T <sub>j</sub> = + 2 °C	P <sub>dh</sub>	6,4	kW	T <sub>j</sub> = + 2 °C	COP <sub>d</sub>	2,95	-
T <sub>j</sub> = + 7 °C	P <sub>dh</sub>	4,1	kW	T <sub>j</sub> = + 7 °C	COP <sub>d</sub>	4,36	-
T <sub>j</sub> = + 12 °C	P <sub>dh</sub>	4,6	kW	T <sub>j</sub> = + 12 °C	COP <sub>d</sub>	7,69	-
T <sub>j</sub> = bivalent temperature	P <sub>dh</sub>	10,3	kW	T <sub>j</sub> = bivalent temperature	COP <sub>d</sub>	2,13	-
T <sub>j</sub> = operating limit temperature	P <sub>dh</sub>	11,1	kW	T <sub>j</sub> = operating limit temperature	COP <sub>d</sub>	1,78	-
for air/water heat pumps: T <sub>j</sub> = - 15 °C (se TOL < - 20 °C)	P <sub>dh</sub>	-	kW	for air/water heat pumps: T <sub>j</sub> = - 15 °C (se TOL < - 20 °C)	COP <sub>d</sub>	-	-
Bivalent temperature	T <sub>biv</sub>	-7	°C	For air/water heat pumps: Operating limit temperature	TOL	-10	°C
Central heating capacity cycle intervals	P <sub>ych</sub>	-	kW	Cycle intervals efficiency	COP- ych	-	-
Degradation coefficient (**)	C <sub>dh</sub>	0,9	-	Water heating temperature operating limit	WTOL	55	°C
Different mode of energy consumption from the active mode				Additional heater			
OFF mode	P <sub>OFF</sub>	0,010	kW	Rated heat output (*)		P <sub>sup</sub>	0,0      kW
Thermostat mode off	P <sub>TO</sub>	0,010	kW	Type of energy supply voltage		electric	
Standby mode	P <sub>SB</sub>	0,010	kW				
Guard heating mode	P <sub>CK</sub>	0,000	kW				
Other items							
Capacity control	variable			For air/water heat pumps: air flow rate to outside	-	6480	m³\h
Indoor/outdoor sound level	L <sub>WA</sub>	56 / 58	dB	For water\water or brine\water heat pumps: nominal flow of brine or water, outdoor heat exchanger	-	-	m³\h
Emissions of nitrogen oxide	NO <sub>X</sub>	-	mg\kWh				
For mixed central heating appliances with a heat pump							
Stated load profile	XL			Water central heating energy efficiency	$\eta_{wh}$	91	%
Daily electrical power consumption	Q <sub>elec</sub>	8,78	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh
Annual electrical power consumption	AEC	1832	kWh				
Contact information: Immergas S.p.A. via Cisa Ligure n.95							
(*) For heat pump appliances for space heating and heat pump mixed heating appliances, the nominal heat output P <sub>nominal</sub> is equal to the design load for central heating P <sub>design</sub> and the nominal heat output of an additional heater P <sub>sup</sub> is equal to the additional central heating capacity sup(T <sub>j</sub> ).							
(**) If C <sub>dh</sub> is not determined by a measurement, the degradation coefficient is C <sub>dh</sub> =0,9.							

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



## 5.9 PRODUCT FICHE MAGIS HERCULES PRO 14 TI (IN COMPLIANCE WITH REGULATION 811/2013)

A	Supplier's name or trademark		-	Immergas
B	Supplier's model identifier		-	MAGISHERCULES PRO 14 TI
C	For space heating	Application temperature	-	Average temperature
	For water heating	Stated load profile	-	XL
D	Seasonal energy efficiency class of room heating	Average temperature	-	A++
		Low temperature	-	A+++
	Energy efficiency class of water heating		-	A
E	Nominal heat output (average climate condition)	Average temperature	kW	11
		Low temperature	kW	11
F	Annual energy consumption for room heating (average climate condition)	Average temperature	kWh	6966
		Low temperature	kWh	4974
	Fuel annual energy consumption for water heating (average climate condition)		GJ	-
G	Annual energy consumption for water heating (average climate condition)		kWh	-
H	Seasonal energy efficiency of room heating (average climate condition)	Average temperature	%	127
		Low temperature	%	180
	Energy efficiency of water heating (average climate condition)		%	-
I	Lwa sound power level indoors		dB	56
J	Operation only during dead hours		Yes\No	No
K	Specific precautions		-	-
L	Nominal heat output (colder climate condition)	Average temperature	kW	8
		Low temperature	kW	11
	Nominal heat output (warmer climate condition)	Average temperature	kW	8
		Low temperature	kW	11
	Annual energy consumption for room heating (colder climate condition)	Average temperature	kWh	7217
		Low temperature	kWh	6256
M	Annual energy consumption for room heating (warmer climate condition)	Average temperature	kWh	2783
		Low temperature	kWh	2318
	Annual energy consumption for water heating (colder climate condition)		kWh	-
	Annual energy consumption for water heating (warmer climate condition)		kWh	-
N	Seasonal energy efficiency of room heating (colder climate condition)	Average temperature	%	106
		Low temperature	%	164
	Seasonal energy efficiency of room heating (warmer climate condition)	Average temperature	%	158
		Low temperature	%	260
N	Lwa sound power level outdoors		dB	58





## 5.10 TABLE 2 REGULATION 813/2013 (MAGIS HERCULES PRO 14 TI)

Model				MAGISHERCULESPRO 14 TI			
Air/water heat pump			YES	Low temperature heat pump			NO
Water/water heat pump			NO	With Supplementary heater			NO
Brine/water heat pump			NO	Mixed central heating device with heat pump:			YES
The parameters are declared for average temperature application, except for low temperature heat pumps. The parameters for low temperature heat pumps are declared for low temperature application							
The parameters are declared for average climatic conditions							
Element	Symbol	Value	Unit	Element	Symbol	Value	Unit
Rated heat output (*)	<i>Prated</i>	11	kW	Room central heating seasonal energy efficiency	$\eta_s$	127	%
Central heating capacity declared with a partial load and indoor temperature equivalent to 20°C and outdoor temperature T <sub>j</sub>				Performance coefficient declared or primary energy index for partial load it, with indoor temperature equivalent to 20°C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = - 7 °C	P <sub>dh</sub>	10,3	kW	T <sub>j</sub> = - 7 °C	COP <sub>d</sub>	2,13	-
T <sub>j</sub> = + 2 °C	P <sub>dh</sub>	6,4	kW	T <sub>j</sub> = + 2 °C	COP <sub>d</sub>	2,95	-
T <sub>j</sub> = + 7 °C	P <sub>dh</sub>	4,1	kW	T <sub>j</sub> = + 7 °C	COP <sub>d</sub>	4,36	-
T <sub>j</sub> = + 12 °C	P <sub>dh</sub>	4,6	kW	T <sub>j</sub> = + 12 °C	COP <sub>d</sub>	7,69	-
T <sub>j</sub> = bivalent temperature	P <sub>dh</sub>	10,3	kW	T <sub>j</sub> = bivalent temperature	COP <sub>d</sub>	2,13	-
T <sub>j</sub> = operating limit temperature	P <sub>dh</sub>	11,1	kW	T <sub>j</sub> = operating limit temperature	COP <sub>d</sub>	1,78	-
for air/water heat pumps: T <sub>j</sub> = - 15 °C (se TOL < - 20 °C)	P <sub>dh</sub>	-	kW	for air/water heat pumps: T <sub>j</sub> = - 15 °C (se TOL < - 20 °C)	COP <sub>d</sub>	-	-
Bivalent temperature	T <sub>biv</sub>	-7	°C	For air/water heat pumps: Operating limit temperature	TOL	-10	°C
Central heating capacity cycle intervals	P <sub>ych</sub>	-	kW	Cycle intervals efficiency	COP- ych	-	-
Degradation coefficient (**)	C <sub>dh</sub>	0,9	-	Water heating temperature operating limit	WTOL	55	°C
Different mode of energy consumption from the active mode				Additional heater			
OFF mode	P <sub>OFF</sub>	0,010	kW	Rated heat output (*)		P <sub>sup</sub>	0,0      kW
Thermostat mode off	P <sub>TO</sub>	0,010	kW	Type of energy supply voltage		electric	
Standby mode	P <sub>SB</sub>	0,010	kW				
Guard heating mode	P <sub>CK</sub>	0,000	kW				
Other items							
Capacity control	variable			For air/water heat pumps: air flow rate to outside		-	6480      m³\h
Indoor/outdoor sound level	L <sub>WA</sub>	56 / 58	dB	For water\water or brine\water heat pumps: nominal flow of brine or water, outdoor heat exchanger		-	-      m³\h
Emissions of nitrogen oxide	NO <sub>X</sub>	-	mg\kWh				
For mixed central heating appliances with a heat pump							
Stated load profile	XL			Water central heating energy efficiency		$\eta_{wh}$	91      %
Daily electrical power consumption	Q <sub>elec</sub>	8,78	kWh	Daily fuel consumption		Q <sub>fuel</sub>	-      kWh
Annual electrical power consumption	AEC	1832	kWh				
Contact information: Immergas S.p.A. via Cisa Ligure n.95							
(*) For heat pump appliances for space heating and heat pump mixed heating appliances, the nominal heat output P <sub>nominal</sub> is equal to the design load for central heating P <sub>design</sub> and the nominal heat output of an additional heater P <sub>sup</sub> is equal to the additional central heating capacity sup(T <sub>j</sub> ).							
(**) If C <sub>dh</sub> is not determined by a measurement, the degradation coefficient is C <sub>dh</sub> =0,9.							

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



## 5.11 PRODUCT FICHE MAGIS HERCULES PRO 16I (IN COMPLIANCE WITH REGULATION 811/2013)

A	Supplier's name or trademark		-	Immergas
B	Supplier's model identifier		-	MAGISHERCULES PRO 16I
C	For space heating	Application temperature	-	Average temperature
	For water heating	Stated load profile	-	XL
D	Seasonal energy efficiency class of room heating	Average temperature	-	A++
		Low temperature	-	A++
	Energy efficiency class of water heating		-	A
E	Nominal heat output (average climate condition)	Average temperature	kW	14
		Low temperature	kW	14
F	Annual energy consumption for room heating (average climate condition)	Average temperature	kWh	8995
		Low temperature	kWh	6721
	Fuel annual energy consumption for water heating (average climate condition)		GJ	-
G	Annual energy consumption for water heating (average climate condition)		kWh	-
H	Seasonal energy efficiency of room heating (average climate condition)	Average temperature	%	126
		Low temperature	%	169
	Energy efficiency of water heating (average climate condition)		%	-
I	Lwa sound power level indoors		dB	56
J	Operation only during dead hours		Yes\No	No
K	Specific precautions		-	-
L	Nominal heat output (colder climate condition)	Average temperature	kW	10
		Low temperature	kW	13
	Nominal heat output (warmer climate condition)	Average temperature	kW	10
		Low temperature	kW	13
	Annual energy consumption for room heating (colder climate condition)	Average temperature	kWh	8984
		Low temperature	kWh	7360
M	Annual energy consumption for room heating (warmer climate condition)	Average temperature	kWh	3383
		Low temperature	kWh	2690
	Annual energy consumption for water heating (colder climate condition)		kWh	-
	Annual energy consumption for water heating (warmer climate condition)		kWh	-
N	Seasonal energy efficiency of room heating (colder climate condition)	Average temperature	%	107
		Low temperature	%	164
	Seasonal energy efficiency of room heating (warmer climate condition)	Average temperature	%	161
		Low temperature	%	263
N	Lwa sound power level outdoors		dB	59



## 5.12 TABLE 2 REGULATION 813/2013 (MAGIS HERCULES PRO 16I)

Model				MAGISHERCULESPRO 16I			
Air/water heat pump			YES	Low temperature heat pump			NO
Water/water heat pump			NO	With Supplementary heater			NO
Brine/water heat pump			NO	Mixed central heating device with heat pump:			YES
The parameters are declared for average temperature application, except for low temperature heat pumps. The parameters for low temperature heat pumps are declared for low temperature application							
The parameters are declared for average climatic conditions							
Element	Symbol	Value	Unit	Element	Symbol	Value	Unit
Rated heat output (*)	<i>Prated</i>	14	kW	Room central heating seasonal energy efficiency	$\eta_s$	126	%
Central heating capacity declared with a partial load and indoor temperature equivalent to 20°C and outdoor temperature T <sub>j</sub>				Performance coefficient declared or primary energy index for partial load it, with indoor temperature equivalent to 20°C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = - 7 °C	P <sub>dh</sub>	11,1	kW	T <sub>j</sub> = - 7 °C	COP <sub>d</sub>	1,89	-
T <sub>j</sub> = + 2 °C	P <sub>dh</sub>	7,0	kW	T <sub>j</sub> = + 2 °C	COP <sub>d</sub>	2,98	-
T <sub>j</sub> = + 7 °C	P <sub>dh</sub>	4,5	kW	T <sub>j</sub> = + 7 °C	COP <sub>d</sub>	4,54	-
T <sub>j</sub> = + 12 °C	P <sub>dh</sub>	4,6	kW	T <sub>j</sub> = + 12 °C	COP <sub>d</sub>	7,39	-
T <sub>j</sub> = bivalent temperature	P <sub>dh</sub>	11,1	kW	T <sub>j</sub> = bivalent temperature	COP <sub>d</sub>	1,89	-
T <sub>j</sub> = operating limit temperature	P <sub>dh</sub>	11,5	kW	T <sub>j</sub> = operating limit temperature	COP <sub>d</sub>	1,79	-
for air/water heat pumps: T <sub>j</sub> = - 15 °C (se TOL < - 20 °C)	P <sub>dh</sub>	-	kW	for air/water heat pumps: T <sub>j</sub> = - 15 °C (se TOL < - 20 °C)	COP <sub>d</sub>	-	-
Bivalent temperature	T <sub>biv</sub>	-7	°C	For air/water heat pumps: Operating limit temperature	TOL	-10	°C
Central heating capacity cycle intervals	P <sub>ych</sub>	-	kW	Cycle intervals efficiency	COP <sub>ych</sub>	-	-
Degradation coefficient (**)	C <sub>dh</sub>	0,9	-	Water heating temperature operating limit	WTOL	55	°C
Different mode of energy consumption from the active mode				Additional heater			
OFF mode	P <sub>OFF</sub>	0,010	kW	Rated heat output (*)		P <sub>sup</sub>	2,5 kW
Thermostat mode off	P <sub>TO</sub>	0,010	kW	Type of energy supply voltage		electric	
Standby mode	P <sub>SB</sub>	0,010	kW				
Guard heating mode	P <sub>CK</sub>	0,000	kW				
Other items							
Capacity control	variable			For air/water heat pumps: air flow rate to outside	-	7080	m³\h
Indoor/outdoor sound level	L <sub>WA</sub>	56 / 59	dB	For water\water or brine\water heat pumps: nominal flow of brine or water, outdoor heat exchanger	-	-	m³\h
Emissions of nitrogen oxide	NO <sub>X</sub>	-	mg\ kWh				
For mixed central heating appliances with a heat pump							
Stated load profile	XL			Water central heating energy efficiency	$\eta_{wh}$	88.9	%
Daily electrical power consumption	Q <sub>elec</sub>	9,01	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh
Annual electrical power consumption	AEC	1884	kWh				
Contact information: Immergas S.p.A. via Cisa Ligure n.95							
(*) For heat pump appliances for space heating and heat pump mixed heating appliances, the nominal heat output P <sub>nominal</sub> is equal to the design load for central heating P <sub>design</sub> h and the nominal heat output of an additional heater P <sub>sup</sub> is equal to the additional central heating capacity sup(T <sub>j</sub> ).							
(**) If C <sub>dh</sub> is not determined by a measurement, the degradation coefficient is C <sub>dh</sub> =0,9.							

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



### 5.13 PRODUCT FICHE MAGIS HERCULES PRO 16 TI (IN COMPLIANCE WITH REGULATION 811/2013)

A	Supplier's name or trademark		-	Immergas
B	Supplier's model identifier		-	MAGISHERCULES PRO 16 TI
C	For space heating	Application temperature	-	Average temperature
	For water heating	Stated load profile	-	XL
D	Seasonal energy efficiency class of room heating	Average temperature	-	A++
		Low temperature	-	A++
	Energy efficiency class of water heating		-	A
E	Nominal heat output (average climate condition)	Average temperature	kW	14
		Low temperature	kW	14
F	Annual energy consumption for room heating (average climate condition)	Average temperature	kWh	8995
		Low temperature	kWh	6721
	Fuel annual energy consumption for water heating (average climate condition)		GJ	-
G	Annual energy consumption for water heating (average climate condition)		kWh	-
H	Seasonal energy efficiency of room heating (average climate condition)	Average temperature	%	126
		Low temperature	%	169
	Energy efficiency of water heating (average climate condition)		%	-
I	Lwa sound power level indoors		dB	56
J	Operation only during dead hours		Yes\No	No
K	Specific precautions		-	-
L	Nominal heat output (colder climate condition)	Average temperature	kW	10
		Low temperature	kW	13
	Nominal heat output (warmer climate condition)	Average temperature	kW	10
		Low temperature	kW	13
	Annual energy consumption for room heating (colder climate condition)	Average temperature	kWh	8984
		Low temperature	kWh	7360
M	Annual energy consumption for room heating (warmer climate condition)	Average temperature	kWh	3383
		Low temperature	kWh	2690
	Annual energy consumption for water heating (colder climate condition)		kWh	-
	Annual energy consumption for water heating (warmer climate condition)		kWh	-
N	Seasonal energy efficiency of room heating (colder climate condition)	Average temperature	%	107
		Low temperature	%	164
	Seasonal energy efficiency of room heating (warmer climate condition)	Average temperature	%	161
		Low temperature	%	263
N	Lwa sound power level outdoors		dB	59



## 5.14 TABLE 2 REGULATION 813/2013 (MAGIS HERCULES PRO 16 TI)

Model				MAGISHERCULESPRO 16 TI			
Air/water heat pump			YES	Low temperature heat pump			NO
Water/water heat pump			NO	With Supplementary heater			NO
Brine/water heat pump			NO	Mixed central heating device with heat pump:			YES
The parameters are declared for average temperature application, except for low temperature heat pumps. The parameters for low temperature heat pumps are declared for low temperature application							
The parameters are declared for average climatic conditions							
Element	Symbol	Value	Unit	Element	Symbol	Value	Unit
Rated heat output (*)	<i>Prated</i>	14	kW	Room central heating seasonal energy efficiency	$\eta_s$	126	%
Central heating capacity declared with a partial load and indoor temperature equivalent to 20°C and outdoor temperature T <sub>j</sub>				Performance coefficient declared or primary energy index for partial load it, with indoor temperature equivalent to 20°C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = - 7 °C	P <sub>dh</sub>	11,1	kW	T <sub>j</sub> = - 7 °C	COP <sub>d</sub>	1,89	-
T <sub>j</sub> = + 2 °C	P <sub>dh</sub>	7,0	kW	T <sub>j</sub> = + 2 °C	COP <sub>d</sub>	2,98	-
T <sub>j</sub> = + 7 °C	P <sub>dh</sub>	4,5	kW	T <sub>j</sub> = + 7 °C	COP <sub>d</sub>	4,54	-
T <sub>j</sub> = + 12 °C	P <sub>dh</sub>	4,6	kW	T <sub>j</sub> = + 12 °C	COP <sub>d</sub>	7,39	-
T <sub>j</sub> = bivalent temperature	P <sub>dh</sub>	11,1	kW	T <sub>j</sub> = bivalent temperature	COP <sub>d</sub>	1,89	-
T <sub>j</sub> = operating limit temperature	P <sub>dh</sub>	11,5	kW	T <sub>j</sub> = operating limit temperature	COP <sub>d</sub>	1,79	-
for air/water heat pumps: T <sub>j</sub> = - 15 °C (se TOL < - 20 °C)	P <sub>dh</sub>	-	kW	for air/water heat pumps: T <sub>j</sub> = - 15 °C (se TOL < - 20 °C)	COP <sub>d</sub>	-	-
Bivalent temperature	T <sub>biv</sub>	-7	°C	For air/water heat pumps: Operating limit temperature	TOL	-10	°C
Central heating capacity cycle intervals	P <sub>ych</sub>	-	kW	Cycle intervals efficiency	COP <sub>ych</sub>	-	-
Degradation coefficient (**)	C <sub>dh</sub>	0,9	-	Water heating temperature operating limit	WTOL	55	°C
Different mode of energy consumption from the active mode				Additional heater			
OFF mode	P <sub>OFF</sub>	0,010	kW	Rated heat output (*)		P <sub>sup</sub>	2,5 kW
Thermostat mode off	P <sub>TO</sub>	0,010	kW	Type of energy supply voltage		electric	
Standby mode	P <sub>SB</sub>	0,010	kW				
Guard heating mode	P <sub>CK</sub>	0,000	kW				
Other items							
Capacity control	variable			For air/water heat pumps: air flow rate to outside		-	7080 m³\h
Indoor/outdoor sound level	L <sub>WA</sub>	56 / 59	dB	For water\water or brine\water heat pumps: nominal flow of brine or water, outdoor heat exchanger		-	- m³\h
Emissions of nitrogen oxide	NO <sub>X</sub>	-	mg\ kWh				
For mixed central heating appliances with a heat pump							
Stated load profile	XL			Water central heating energy efficiency		$\eta_{wh}$	88.9 %
Daily electrical power consumption	Q <sub>elec</sub>	9,01	kWh	Daily fuel consumption		Q <sub>fuel</sub>	- kWh
Annual electrical power consumption	AEC	1884	kWh				
Contact information: Immergas S.p.A. via Cisa Ligure n.95							
(*) For heat pump appliances for space heating and heat pump mixed heating appliances, the nominal heat output P <sub>nominal</sub> is equal to the design load for central heating P <sub>design</sub> and the nominal heat output of an additional heater P <sub>sup</sub> is equal to the additional central heating capacity sup(T <sub>j</sub> ).							
(**) If C <sub>dh</sub> is not determined by a measurement, the degradation coefficient is C <sub>dh</sub> =0,9.							

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA



## 5.15 PARAMETERS FOR FILLING IN THE PACKAGE FICHE

Should you wish to install an assembly starting from the Magis Hercules Pro I package, use the package fiche shown in (Fig. 61). For correct compilation, enter in the appropriate spaces (as shown in the facsimile overview sheet Fig. 60) the values given in the tables in the paragraph "Parameters to fill in the average temperature package fiche (47/55)". The remaining values must be obtained from the technical data sheets of the products used to make up the assembly (e.g. solar devices, integration heat pumps, temperature controllers). Use board (Fig. 61) for "assemblies" related to the central heating mode (e.g.: heat pump + temperature controller).



Since the product is standard supplied with a temperature controller, the package fiche must always be completed.

### Facsimile for filling in the package fiche for room central heating systems.

Room central heating seasonal energy efficiency of the heat pump

'I' %

Temperature control  
From temperature  
control board

Class I = 1 %, Class II = 2 %,  
Class III = 1.5 %, Class IV = 2 %,  
Class V = 3 %, Class VI = 4 %,  
Class VII = 3.5 %, Class VIII = 5 %

+  %

Supplementary boiler  
From boiler board

Seasonal central heating energy efficiency of the room (%)

(  - 'I' ) x "II" = -  %

*Solar contribution*

*From the board of the solar device*

Dimensions of the  
manifold (in m<sup>2</sup>)

Volume of the  
tank (in m<sup>3</sup>)

Efficiency of the  
manifold (in %)

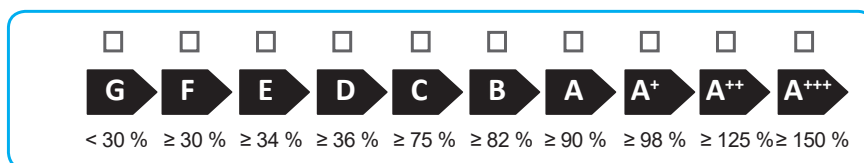
Classification of the  
tank  
A\* = 0.95, A = 0.91,  
B = 0.86, C = 0.83,  
D-G = 0.81

( 'III' x  + 'IV' x  ) x 0.45 x (  / 100 ) x  = +  %

Room central heating seasonal energy efficiency of the assemble in average  
climate conditions

%

Room central heating seasonal energy efficiency class of the assemble in average  
climate conditions



Room central heating seasonal energy efficiency in colder and hotter climate conditions

Colder:

- 'V' =  %

Hotter:

+ 'VI' =  %

*The energy efficiency of the set of products indicated in this sheet may not reflect the actual energy efficiency after installation since such efficiency is affected by additional factors, such as the heat loss in the distribution system and the size of the products compared to the size and features of the building.*

## Parameters to fill in the average temperature package fiche (47/55)

### Magis Hercules Pro 12 I

Parameter	Colder zones	Average zones	Hotter zones
	■	■	■
"I"	106	127	158
"II"	*	*	*
"III"	3,34	2,43	3,34
"IV"	1,31	0,95	1,31

### Magis Hercules Pro 14 I

Parameter	Colder zones	Average zones	Hotter zones
	■	■	■
"I"	106	127	158
"II"	*	*	*
"III"	3,34	2,43	3,34
"IV"	1,31	0,95	1,31

### Magis Hercules Pro 16 I

Parameter	Colder zones	Average zones	Hotter zones
	■	■	■
"I"	107	126	161
"II"	*	*	*
"III"	2,67	1,91	2,67
"IV"	1,05	0,75	1,05

### Magis Hercules Pro 12 T I

Parameter	Colder zones	Average zones	Hotter zones
	■	■	■
"I"	106	127	158
"II"	*	*	*
"III"	3,34	2,43	3,34
"IV"	1,31	0,95	1,31

### Magis Hercules Pro 14 T I

Parameter	Colder zones	Average zones	Hotter zones
	■	■	■
"I"	106	127	158
"II"	*	*	*
"III"	3,34	2,43	3,34
"IV"	1,31	0,95	1,31

### Magis Hercules Pro 16 T I

Parameter	Colder zones	Average zones	Hotter zones
	■	■	■
"I"	107	126	161
"II"	*	*	*
"III"	2,67	1,91	2,67
"IV"	1,05	0,75	1,05

\* to be determined according to Regulation 811/2013 and transient calculation methods as per Notice of the European Community no. 207/2014.

INSTALLER

USER

CONTROL PANEL

MAINTENANCE TECHNICIAN

TECHNICAL DATA





## Room central heating system package fiche.

Room central heating seasonal energy efficiency of the heat pump

 %Temperature control  
From temperature  
control boardClass I = 1 %, Class II = 2 %,  
Class III = 1.5 %, Class IV = 2 %,  
Class V = 3 %, Class VI = 4 %,  
Class VII = 3.5 %, Class VIII = 5 %+  %Supplementary boiler  
From boiler boardSeasonal central heating energy efficiency of the room  
(%)(  -  ) x  = -  %

## Solar contribution

From the board of the solar device

Dimensions of the  
manifold (in m<sup>2</sup>)Volume of the  
tank (in m<sup>3</sup>)Efficiency of the  
manifold (in %)Classification of the  
tank  
A\* = 0.95, A = 0.91,  
B = 0.86, C = 0.83,  
D-G = 0.81(  x  +  x  ) x 0.45 x (  / 100 ) x  = +  %

Room central heating seasonal energy efficiency of the assemble in average climate conditions

 %

Room central heating seasonal energy efficiency class of the assemble in average climate conditions

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>G</b>	<b>F</b>	<b>E</b>	<b>D</b>	<b>C</b>	<b>B</b>	<b>A</b>	<b>A<sup>+</sup></b>	<b>A<sup>++</sup></b>	<b>A<sup>+++</sup></b>
< 30 %	≥ 30 %	≥ 34 %	≥ 36 %	≥ 75 %	≥ 82 %	≥ 90 %	≥ 98 %	≥ 125 %	≥ 150 %

Room central heating seasonal energy efficiency in colder and hotter climate conditions

Colder:

 -  =  %

Hotter:

 +  =  %

The energy efficiency of the set of products indicated in this sheet may not reflect the actual energy efficiency after installation since such efficiency is affected by additional factors, such as the heat loss in the distribution system and the size of the products compared to the size and features of the building.









**Immergas S.p.A.**

42041 Brescello (RE) - Italy

Tel. 0522.689011

**immergas.com**

Cod. 1.050492ENG - rev. ST.008703/002 - 07/25



This instruction booklet is made of  
ecological paper.

