# GIALIX MT

## *Wall mounted electric boiler - BC*

- Electronic regulation
- 1 heating circuit controlled by exterior temperature
- 1 domestic hot water circuit

Installation manual




Manual ref. : 1898597
Edition n°: 24.41

***Gialix 6 MT -230 V-***
Ref. 132632

***Gialix 12 MT -230 V-***
Ref. 132631

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***Gialix 12 MT -400 V-***
Ref. 132636

***Gialix 16 MT -400 V-***
Ref. 132637

***Made in France***

CE

# TABLE OF CONTENTS

# 1 - PLEASE READ IMMEDIATELY

## Preservation of documents

This technical installation manual forms part of the appliance which it refers to.

This manual must be safeguarded and passed on to successive users for future reference.

It will be considered as evidence in case of litigation.

In order for the warranty to be valid, the instructions must be read before using the appliance.

## 1.1 - Safety

### Danger of death by electrocution

Touching live electrical wires can cause severe bodily injury.

- Before undertaking any work on the appliance, ensure to switch off the power supply to the appliance.
- Ensure that there is no possibility of the power supply becoming active again.

### Danger due to improper usage

Any work carried out by an unqualified person may result in damage to the installation or in bodily injury.

- Do not perform any maintenance work on this appliance unless you are a qualified professional.

### Applicable areas of use

This appliance is intended for use as an appliance for the production of domestic hot water and heating water in a closed and pressurised circuit.

The intended use of the appliance includes the following points:

- following the instructions for operating, installing and maintaining this appliance and all of its components.
- ensuring the compliance of the appliance to all inspection and maintenance conditions which are listed in this manual.

### Humidity and water splashes

The appliance should be installed in an area where it is not exposed to humidity and without any risk of being splashed by water.

### Rules and regulations (Decrees, laws, and standards)

Once the appliance is installed and switched on, all decrees, directives, technical rules, and standards must be respected in their current version in effect in the country of installation and use.

### Qualification of the user

This appliance should not be used by anyone (including children) with reduced physical, sensory or mental capabilities, or by anyone who has insufficient experience or knowledge of the appliance; unless they are being supervised by someone who is responsible for their safety and in possession of the operating instructions of the appliance.

Children should be supervised to ensure that they do not play with the appliance.

## 1.2 - Important information

Clean and flush the hydraulic heating circuit before connecting the appliance.

**RENDERING THE WARRANTY NULL AND VOID**

**• The appliance can only function when filled with water. Never turn on the appliance if the tank has not been properly filled with water and completely purged of air.**
**Not respecting this clause renders the warranty null and void.**

Always turn off the appliance before performing any maintenance on any electrical components.

Before connecting to the power supply, check that the voltage on the electrical network is the same as that on the rating plate of the appliance. Check that the installation is equipped with a properly sized and connected grounding cable.

Before undertaking any maintenance, handling, or in the case of the appliance not functioning or malfunctioning, always disconnect the electrical supply to the appliance and consult a specialist.

All installation and maintenance work must be carried out with the appliance switched off and by a qualified technician.

The manufacturer cannot be held liable for any damages caused by not respecting the instructions supplied with the appliance, or by improper handling, installation, or use.

This manual may be subject to change without prior notice.

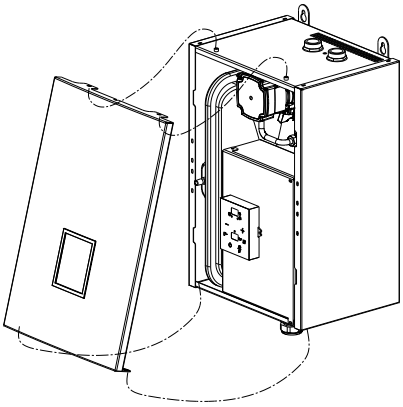
# 2 - INTRODUCTION

## 2.1 - Settings for a low temperature application (underfloor heating only)

The electric boiler is delivered pre-configured for operation on a high temperature network from 22 to 80°C with a high temperature limiter of 100°C ( radiator or underfloor heating with domestic hot water application).

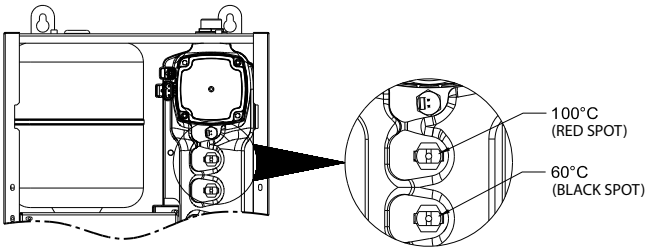
For low temperature operation at 50°C with a high temperature limiter of 60°C:

- Set parameter 02 (TCMA) to a value lower than or equal to 50°C (see § «Setting the regulator»).
- Remove the front panel.



### 2.1.1 - Gialix 6 MT

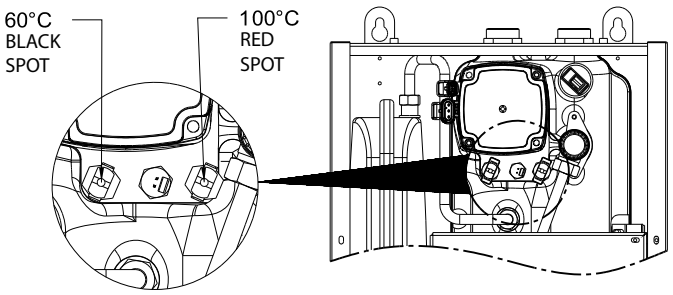
- The 2 safety aquastats are located above the electrical panel (see the figure below).
- Disconnect the 2 wires connected by a double male tab.
- Connect these 2 wires to the 60°C safety aquastat.




**Gialix 6 MT**

### 2.1.2 - Gialix 12 MT and 16 MT

- The 100°C safety aquastat (red spot) is located above the electrical panel.
- The 60°C safety aquastat (black spot) is screwed to the left on the cast iron heating body (see following figure).
- Disconnect the 2 wires from the 100°C aquastat (red spot) and unscrew it.
- Replace it with the 60°C aquastat (black spot) by screwing it into place and reconnecting the 2 wires.
- Place the 100°C aquastat (red spot) to the side.




**Gialix 12 MT and 16 MT**

**Recap of maximum temperature settings**

| Application | Parameter n°02 Maximum boiler temperature (TCMA) | Safety aquastat AQS |
|---|---|---|
| Underfloor heating | 20 - 50°C | 60°C fixed |
| Underfloor heating + DHW production | 20 - 50°C | 100°C fixed* (factory setting) |
| Radiators + DHW production | 22 - 80°C (factory setting) | |

** It is mandatory to install a 65°C underfloor heating temperature limiter with manual reset on the floor outlet and to connect it to terminals 11 and 12 for the Gialix 6 MT and on terminals 12 and 13 for the Gialix 12 and 16 MT.*

## 2.2 - Options

For reference numbers, refer to the pricing guide.

- **Exterior sensor (Ref. 710157)**


- **DHW sensor (Ref. 710029)**

- **Ambient temperature thermostat (TA)**
  For ambient temperature control with automatic adjustment of the boiler's set temperature (see § «Setting the regulator»).
  **(Ref. 710043)**

- **Ambient temperature thermostat radio non-chronoproportional -TH$^{Rnc}$-**
  (on/off type). Wireless, programmable thermostat, transmitting through radio-frequency. Necessary when a wired connection between the boiler and the ambient temperature thermostat is not possible.
  (**Ref. 770001**)

## 2.3 - Technical specifications

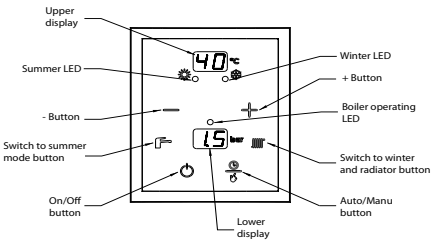
| Designation | Unit | Gialix 6 MT - 230 V single phase | Gialix 12 MT - 230 V single phase | Gialix 12 MT - 400V three phase | Gialix 16 MT - 400 V three phase |
|---|---|---|---|---|---|
| Power | kW | 6 | 12 | 12 | 16 |
| Number of power stages | | 3 | 3 | 3 | 3 |
| Power adjustment by coupling of heating elements | kW | 2; 4; 6 | 4; 6; 8; 10; 12 | 4; 6; 8; 10; 12 | 5.3; 8; 10.7; 13.3; 16 |
| Power adjustment by programming | kW | 2; 4; 6 | 4; 8; 12 | 4; 8; 12 | 5.3; 10.7; 16 |
| Water capacity | litres | 2.2 | 3.6 | 3.6 | 3.6 |
| Diameter of connection | | Outlet + Inlet M3/4" (20/27) | Outlet + Inlet M1" (26/34) | Outlet + Inlet M1" (26/34) | Outlet + Inlet M1" (26/34) |
| Minimum pressure | bars | 0.5 | 0.5 | 0.5 | 0.5 |
| Maximum pressure | bars | 3 | 3 | 3 | 3 |
| Minimum temperature | °C | 20 | 20 | 20 | 20 |
| Maximum temperature | °C | 80 *(factory set)* adjustable to 50 | 80 *(factory set)* adjustable to 50 | 80 *(factory set)* adjustable to 50 | 80 *(factory set)* adjustable to 50 |
| Minimum flow rate | litres/h | 300 | 350 | 350 | 500 |
| Nominal flow rate | litres/h | 350 | 700 | 700 | 900 |
| Maximum flow rate | litres/h | 1000 | 2400 | 2400 | 2400 |
| Weight | kg | 20 | 25 | 25 | 25 |
| Width | mm | 340 | 340 | 340 | 340 |
| Height | mm | 500 | 500 | 500 | 500 |
| Depth | mm | 280 | 280 | 280 | 280 |
| Heat loss | kWh/24h | 1.80 | 2.80 | 2.80 | 2.80 |

### 2.3.1 - EU declaration

This range of products is in compliance with the international standards governing electrical safety CEI 60335-1, CEI 60335-2-21, CEI 60335-2-35. The CE branding on the appliance attests to its compliance with the following Community Directives with which they fulfill the essential obligations:

- Low voltage directive (LVD): 2014/35/UE;
- Electromagnetic compatibility directive : (EMC): 2014/30/UE;
- Directive for the setting of eco-design requirements for energy-related products: 2009/125/CE;
- Restriction of hazardous substances in electrical electronic equipment directive (ROHS): 2011/65/UE.

## 2.4 - Control panel

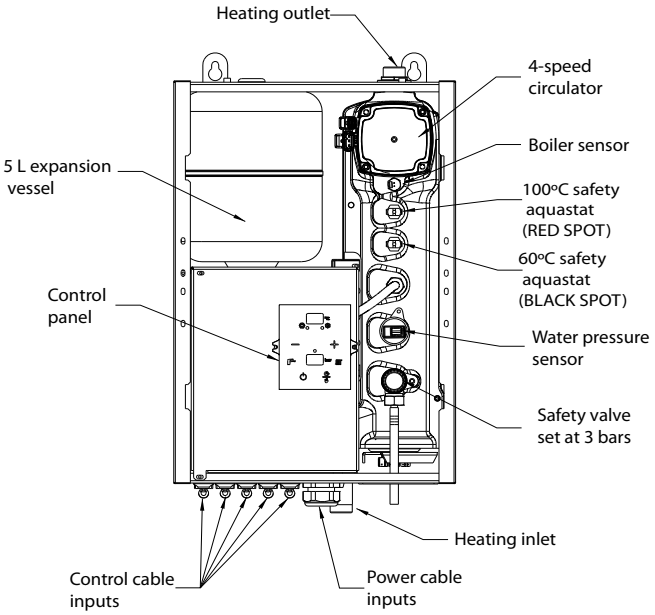



| Button or LED | Name | Function | |
|---|---|---|---|
| 88°C | Upper display screen | ➢Fixed: Display the boiler temperature in °C | |
| | | ➢Flashing: Signals a defect in the sensor connection | |
| | | The ● on the lower right of the number indicates operation in manual mode (without exterior sensor) | |
| __°C | Upper display screen | ➢Signals Frost protection | |
| 88 bars | Lower display screen | ➢Displays the pressure in bars | |
| 0.2 bars | Lower display screen | ➢Flashing: | Signals water pressure under 0.3 bars (re-engaged when over 0.5 bars) |
| | | | Signals faulty sensor code (pressure or temperature) |
| ❄ | Green LED winter mode | ➢Fixed: Signals operation in winter mode (heating + DHW) | |
| | | ➢Flashing: Signals a switch to winter mode in progress | |
| ☼ | Green LED summer mode | ➢Fixed: Signals operation in summer mode | |
| | | ➢Flashing: Signals a switch to summer mode in progress | |
| ⊕ | + button | ➢Increases the value being set | |
| | | ➢Allows the reading of the temperatures of sensors and the setting of ambient temperatures (comfort, eco, or frost protection) only with ambient temperature sensor | |
| ⊖ | - button | ➢Decreases the value being set | |
| | | ➢Allows to return to normal operation when reading the temperatures | |
| | | ➢Cancels on/off time delay for switching of heating modes | |
| ● | Red LED boiler operating | ➢Signals operation of the boiler | |
| | Radiator button | ➢Allows access to setting of the heating temperature in manual mode only | |
| | | ➢Allows to switch to winter mode (press 3 seconds) | |
| | | ➢Forcing of the circulator in standby mode | |
| | Domestic hot water button | ➢Allows access to the setting of the DHW temperature (only with DHW sensor) | |
| | | ➢Allows switch to summer mode (press for 3 seconds) | |
| Auto/Manu | Auto/ Manu button | ➢Choice of operating mode manual or automatic ("automatic mode" only possible with exterior sensor) | |
| ⏻ | On/Off button | ➢Turn on or put heating and DHW circuits in frost protection | |

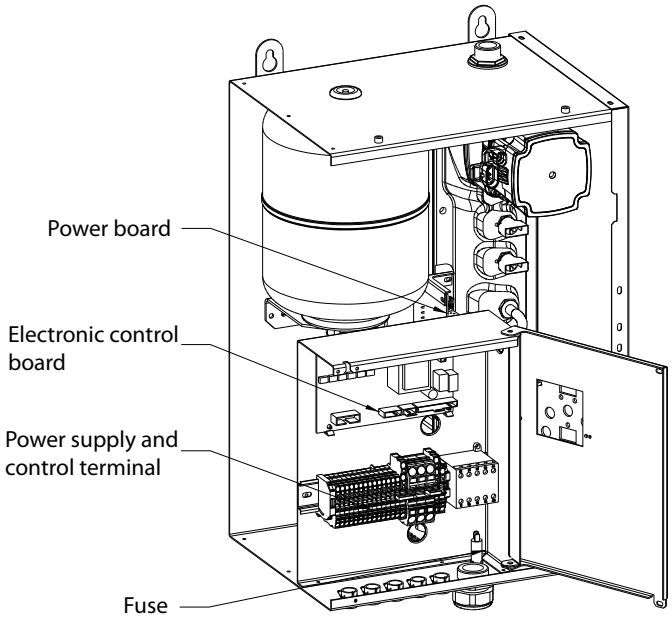
# 2.5 - Description of the boiler

## 2.5.1 - Gialix 6 MT

### Electrical panel closed

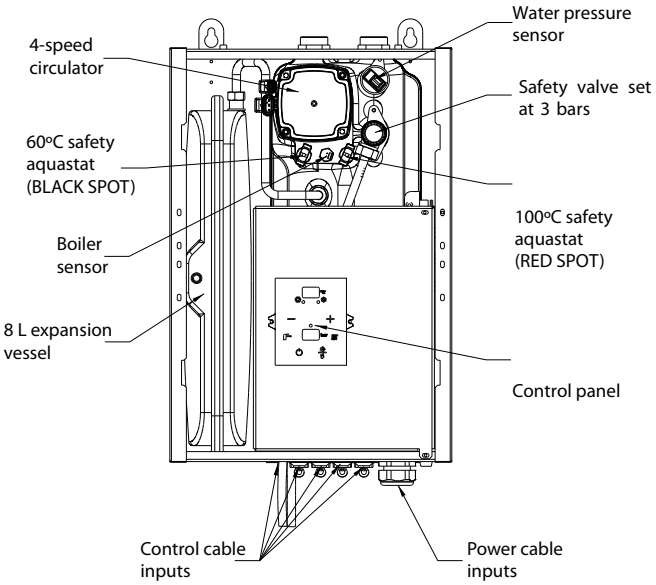



### Electrical panel open

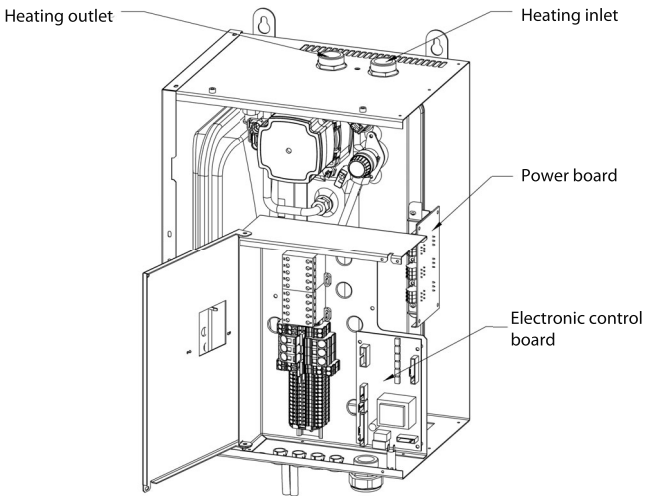



## 2.5.2 - Gialix 12 MT and 16 MT

### Electrical panel closed




### Electrical panel open



# 3 - INSTALLATION

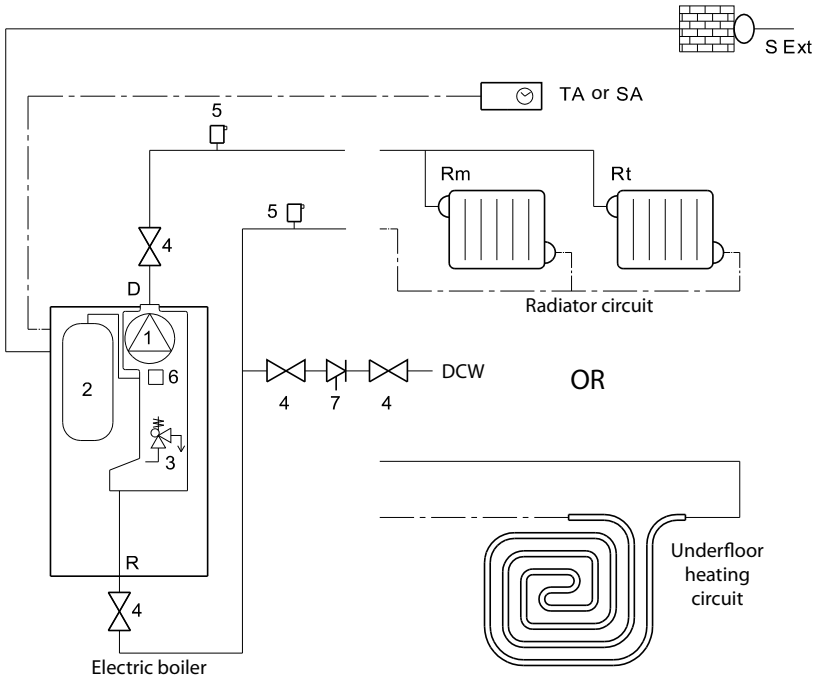
## 3.1 - Hydraulic schematic diagrams

The Gialix electric boiler is designed to work directly on a radiator circuit (100°C safety aquastat and Maximum boiler temperature -TCMA at parameter n°02- at 80°C).

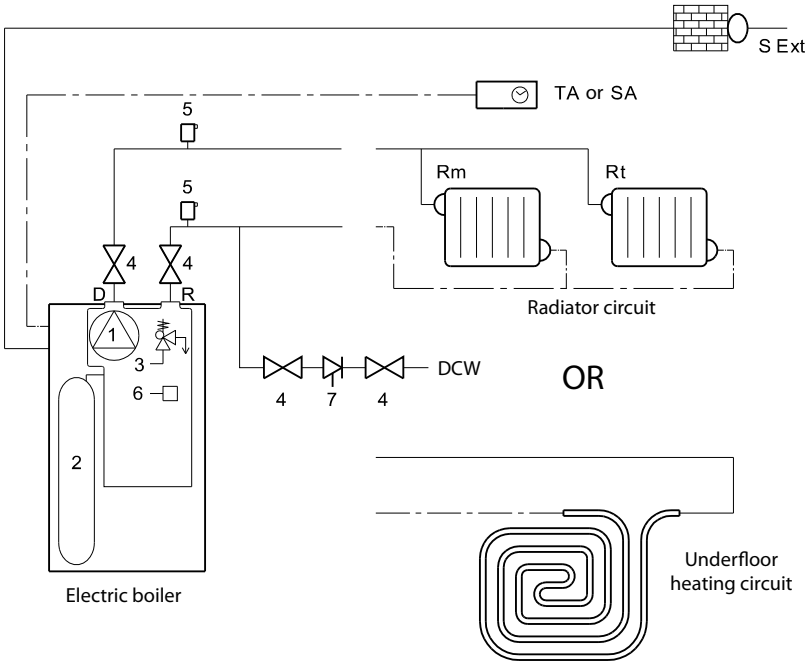
For adjustment for a low temperature underfloor heating circuit: see § «Settings for a low temperature application» et § «Setting the regulator»)

### 3.1.1 - Direct heating circuit

#### 3.1.1.1 - Gialix 6 MT



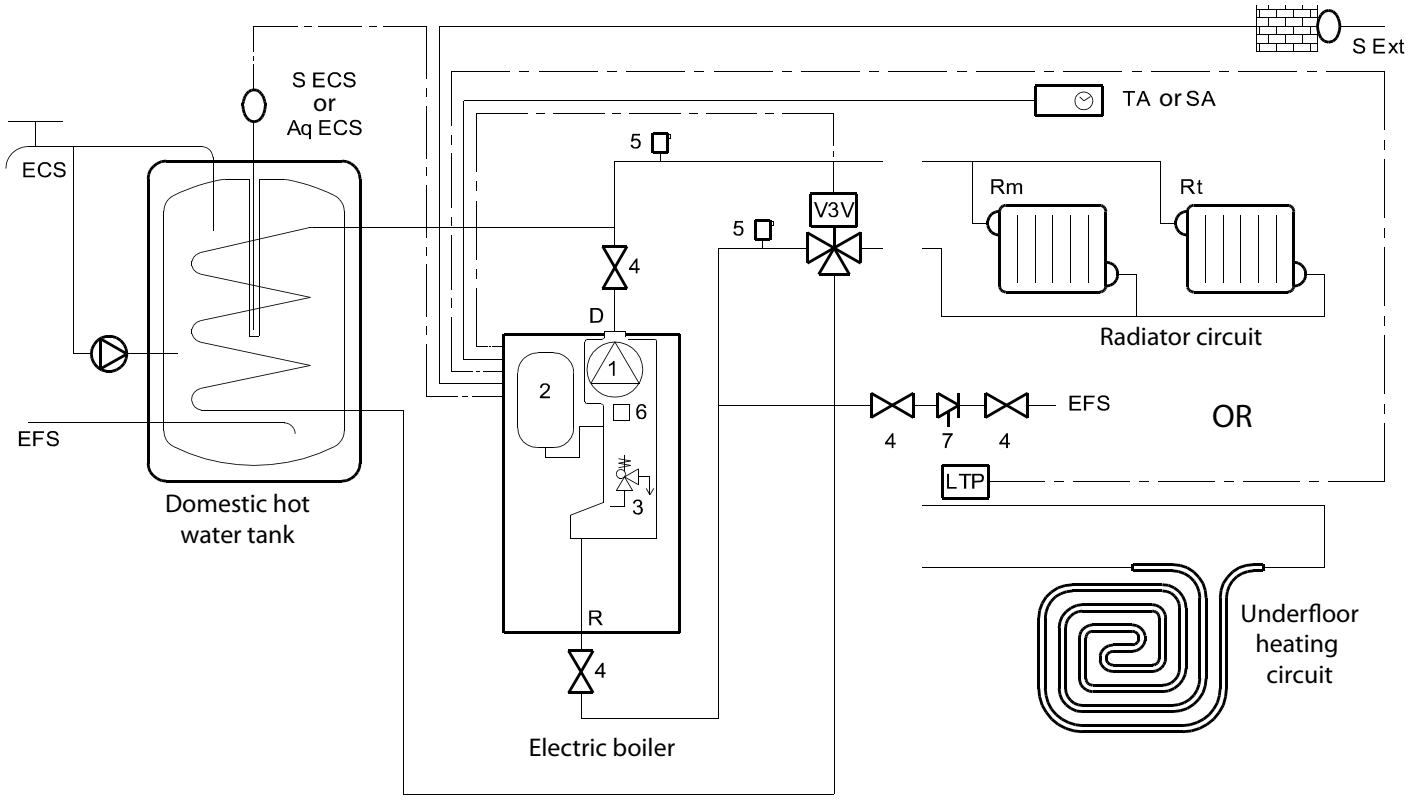

#### 3.1.1.2 - Gialix 12 MT and 16 MT




| | |
|---|---|
| *1* | *: 3-speed circulator* |
| *2* | *: Expansion vessel* |
| *3* | *: Pressure relief valve 3 bar* |
| *4* | *: Stop vavles* |
| *5* | *: Automatic air purgers* |
| *6* | *: Water pressure sensor* |
| *7* | *: Backflow prevention device* |
| *D* | *: Heating outlet 3/4" male* |
| *R* | *: heating inlet 3/4" male* |
| *TA* | *: Ambient temperature thermostat with or without a timer* |
| *SExt (1)* | *: Exterior sensor* |

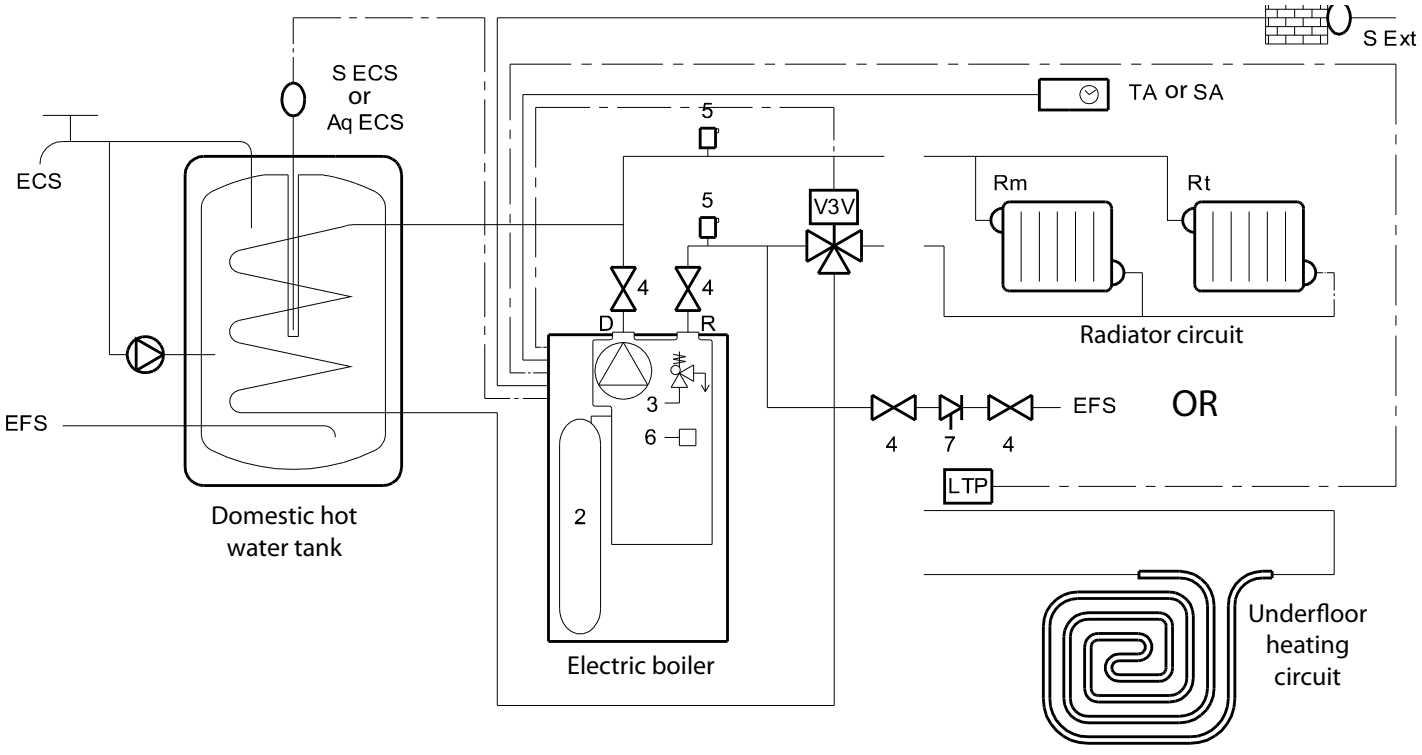
## 3.1.2 - 1 direct heating circuit + 1 DHW circuit

### 3.1.2.1 - Gialix 6 MT




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| *1* | *: 3-speed circulator* | *8* | *: DHW water loop circulator* | *TA* | *: Ambient temperature thermostat with or without timer* | *V3V* | *: 3-way valve with counter spring* |
| *2* | *: Expansion vessel* | *D* | *: Heating outlet* | *SExt [1]* | *: Exterior sensor* | *ECS* | *: Domestic hot water* |
| *3* | *: Pressure relief valve set at 3 bar* | *R* | *: Heating inlet* | *EFS* | *: Domestic cold water* | *LTP* | *: 65°C underfloor heating temperature limiter with manual reset (manual)* |
| *4* | *: Stop valves* | *Rm* | *: Manual valve (piece with ambient temperature thermostat TA)* | *AqECS* | *: Domestic hot water aquastat or* | *[1]* | *: Available as an option for the Gialix MT See § «Setting the regulator»* |
| *5* | *: Automatic air purgers* | *Rt* | *: Thermostatic valve* | *SECS[1]* | *: Domestic hot water sensor* | | |
| *6* | *: Water pressure sensor* | | | | | | |
| *7* | *: Backflow prevention device* | | | | | | |

### 3.1.2.2 - Gialix 12 MT and 16 MT



## 3.2 - Installation recommendations

### Backflow prevention device

French law requires that a backflow prevention device be fitted onto the installation. Please check the current laws and regulations in effect in the country of installation to ensure that the installation is in compliance.
The backflow prevention device must be installed at various non-regulated pressure zones. It serves to prevent incoming heating water from entering the drinking water circuit. The backflow prevention device must be connected to the mains drainage network.

### Cross-sections, marking, and purging of the heating network

A sufficient flow rate must be ensured so that the difference in temperature between the outlet and inlet points is not over 20°C. In an installation with thermostatic valves, this inspection must be done with all valves open.

The power actually needed will determine the heating water flow rate and thus the distribution network calculation.

Adjust the pump speed to the characteristics of the hydraulic circuit using the provided flow rate/pressure curves.

In order for the installation to allow for continuous purging, automatic purgers must be placed at each high point of the installation and manual purgers must be placed on each radiator.

### Desludging tank

Plan for a desludging tank with a sufficient volume at a low point of the installation to be placed on the heating circuit inlet. This tank should be equipped with a drain so it can collect the oxides, particles, and scale which become detached from the internal walls of the heating circuit while the boiler is in operation.

### Safety valve discharge

The connections and piping must be made using materials which are resistant to corrosion.

### Preparing the hydraulic circuit (rinsing)

Before installing the boiler, the installation must be rinsed with an appropriate product. This allows to eliminate all traces of debris such as: soldering waste, joint filler, grease, sludge, metallic particles, etc..., in the radiators, underfloor heating, etc... This prevents the debris from travelling into the boiler's heating body.

### Expansion vessel and safety valve set at 3 bars

**The Gialix boiler is** equipped with an expansion vessel (pre-inflated to 1.5 bar) and a safety valve set at 3 bar. Depending on the pressure head of the installation, it might be necessary to adjust the pre-inflated pressure of the expansion vessel and to check that its capacity corresponds to the total volume of the installation.

**Gialix 6 MT**

| Pressure head of the installation | 2.5 | 5 | 7.5 | 10 | 12.5 | 15 |
|---|---|---|---|---|---|---|
| Pre-inflated pressure (bars)[1] | 0.25 | 0.5 | 0.75 | 1 | 1.25 | 1.5 |
| Maximum volume of water of the installation covered by the 5 litre expansion vessel[2] | 95 | 86 | 78 | 69 | 61 | 52 |
| Expansion factor[3] | 0.05 | 0.058 | 0.064 | 0.072 | 0.083 | 0.096 |

*[1]Deflate and inspect the pressure of the vessel if necessary*
*[2]Count 11 litres per kW of heating capacity for steel radiators*
*13 litres per kW of heating capacity for cast iron radiators*
*17 litres per kW of heating capacity for underfloor heating*
*[3]For installations with a large volume of water, multiply this volume by the expansion factor corresponding to the pre-inflated pressure to obtain the minimum volume of expansion vessel needed. If necessary, add an additional expansion vessel to the expansion vessel already provided in the boiler.*

**Gialix 12 MT and 16 MT**

| Pressure head of the installation | 2.5 | 5 | 7.5 | 10 | 12.5 | 15 |
|---|---|---|---|---|---|---|
| Pre-inflated pressure (bars)[1] | 0.25 | 0.5 | 0.75 | 1 | 1.25 | 1.5 |
| Maximum volume of water of the installation covered by the 5 litres expansion vessel[2] | 140 | 173 | 156 | 139 | 121 | 104 |
| Expansion factor[3] | 0.05 | 0.058 | 0.064 | 0.072 | 0.083 | 0.096 |

*[1]Deflate and inspect the pressure of the vessel if necessary*
*[2]Count 11 litres per kW of heating capacity for steel radiators*
*13 litres per kW of heating capacity for cast iron radiators*
*17 litres per kW of heating capacity for underfloor heating*
*[3]For installations with a large volume of water, multiply this volume by the expansion factor corresponding to the pre-inflated pressure to obtain the minimum volume of expansion vessel needed. If necessary, add an additional expansion vessel to the expansion vessel already provided in the boiler.*

### Frost protection

If the boiler is being switched off for an extended period of time in the winter, (e.g. secondary residence, etc...), it is necessary to have protection from frost or ice in place.

### Underfloor heating

It is mandatory to install a 65°C safety aquastat with manual reset on the underfloor heating outlet. This aquastat must be able to cut the general electricity supply to the boiler.

### Thermostatic valves

These valves should primarily be used in room benefiting from larger amounts of heat gains.
If an installation is equipped with both thermostatic valves and an ambient temperature thermostat, the room where the thermostat is located **must** have the radiator(s) equipped with manual valve(s).

**In the case of an installation with «all thermostatic valves», it is necessary to plan for the use of a bypass function (e.g.: a differential valve)**

It is **imperative** to refer to the installation instructions for the placement and mounting of the ambient temperature thermostat to ensure satisfactory operation.

### Purging

Periodically check that air is being purged from the high points of the hydraulic installation.

## 3.3 - Treatment of the water in the heating circuit

**It is MANDATORY to read the additional document concerning the quality of water used for filling the installation. This document is included with this manual as well as in the packet with the warranty information.**
**This document also contains information which is PERTINENT to the WARRANTY of the material.**

### 3.3.1 - Filling water

The materials used for the production of a heating circuit have differing properties. These properties can create a phenomena of corrosion through the creation of a galvanic bridge in new installations as well as in older ones.

The filling of the water circuit must be done only with water from the domestic water network using untreated water (no softener). **Using water from any other source (well water, rain water, etc..) will render the warranty null and void.**

### 3.3.2 - Treatment of the heating circuit

**Central heating systems MUST BE CLEANED to eliminate debris (copper, fibres, soldering fluxes) related to set-up and installation, as well as to avoid chemical reactions between the metals.**

**It is also important to TO PROTECT THE CENTRAL HEATING SYSTEM AGAINST RISKS OF: CORROSION, LIMESCALE, AND MICROBIAL DEVELOPMENT by using an APPROPRIATE corrosion inhibitor for all types of installations (steel or cast iron radiators, underfloor heating).**

**PRODUCTS USED FOR THE TREATMENT OF HEATING WATER USED MUST COMPLY WITH ALL NATIONAL STANDARDS IN THE COUNTRY OF INSTALLATION.**

We recommend the use of products in the **SENTINEL** range for preventative and curative treatment of the heating circuit.

• **For new installations : (less than 6 months old):**

- Clean the installation with a universal cleaner to eliminate the debris from the installation (copper, fibres, soldering fluxes) *Example:* ***SENTINEL X300*** *or* ***SENTINEL X800***.
- Thoroughly rinse the installation until the water runs clear, with no traces of impurities left.
- Protect the installation against corrosion with a corrosion inhibitor, *example:* ***SENTINEL X100***. Or against corrosion and freezing with an inhibitor with an anti-freeze additive. *Example:* ***SENTINEL X500*** *or* ***SENTINEL R600***.

• **For existing installations:**

- Desludge the installation with a desludging product to eliminate any sludge from the installation. *Example:* ***SENTINEL X400*** *or* ***SENTINEL X800***.
- Thoroughly rinse the installation until the water runs clear, with no traces of impurities left.
- Protect the installation against corrosion with a corrosion inhibitor, *example:* ***SENTINEL X100***. Or against corrosion and freezing with an inhibitor with an anti-freeze additive. *Example:* ***SENTINEL X500*** *or* ***SENTINEL R600***.

**Corrosion inhibitor:**

- protects against the formation of limescale
- prevents «pinhole» type corrosion
- prevents in new installations,the formation of sludge and the proliferation of bacteria (in low temperature networks: algae)
- prevents the formation of hydrogen
- eliminates the sound of the generators

Treatment products from other manufacturers can be used if they guarantee that the product is appropriate for all the materials used in the appliance and offers efficient resistance to corrosion. To find this information refer to their user manual.

### 3.3.3 - Purging the installation

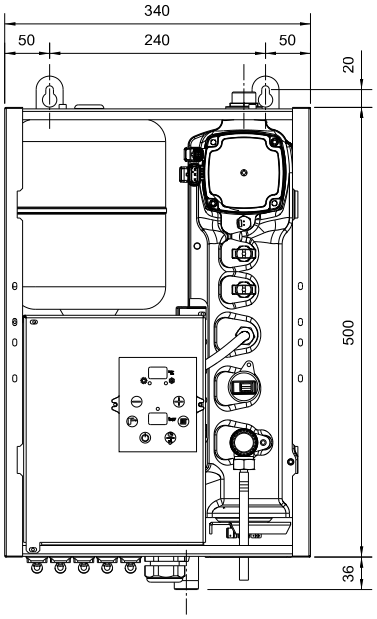
The oxygen present in the air is extremely corrosive. Therefore, for a permanent purging of the installation to be effective, place automatic or manual air purgers at each high point of the installation, and manual purgers on each radiator.

**All deterioration of the appliance due to an inappropriate quality of water and/ or the presence of corrosion in the absence of treatment products as described above, and/or an improper purging of air of the installation will render the warranty null and void.**

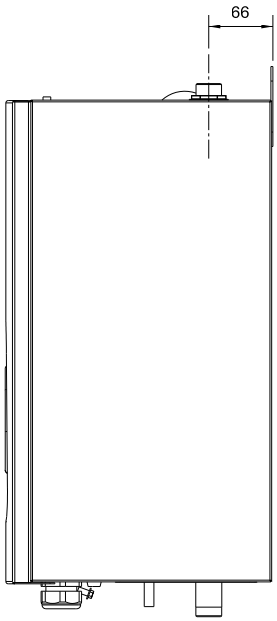
## 3.4 - Placement of the boiler

### 3.4.1 - Dimensions and spacing Hydraulic connections

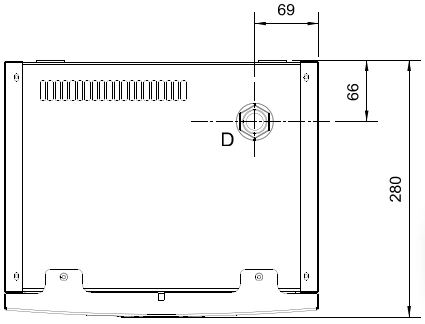
#### 3.4.1.1 - Gialix 6 MT




**View from the front**

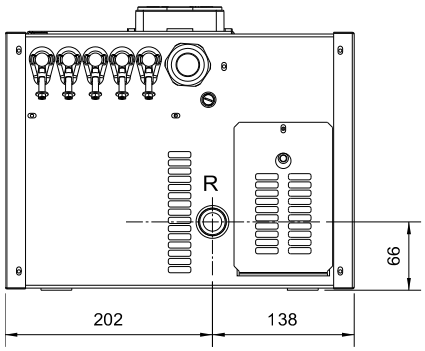



**View from the side**



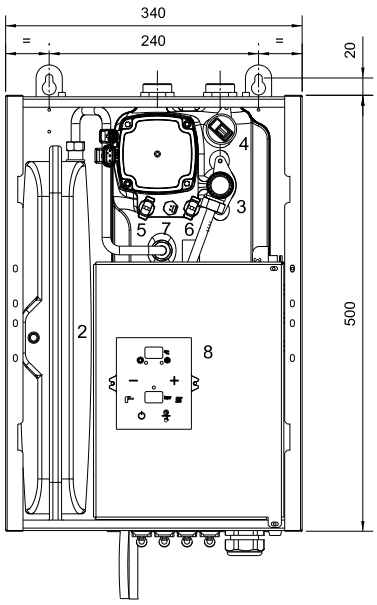

**View from the top**

*D : Heating outlet 3/4" male*
*R : Heating inlet 3/4" male*

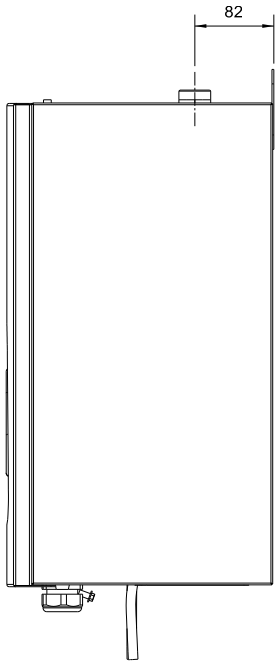



**View from the bottom**

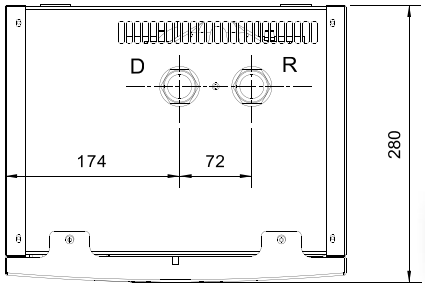
## 3.4.1.2 - Gialix 12 MT and 16 MT




**View from the front**

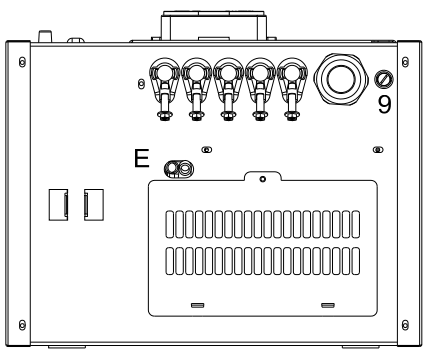



**View from the side**




**View from the top**

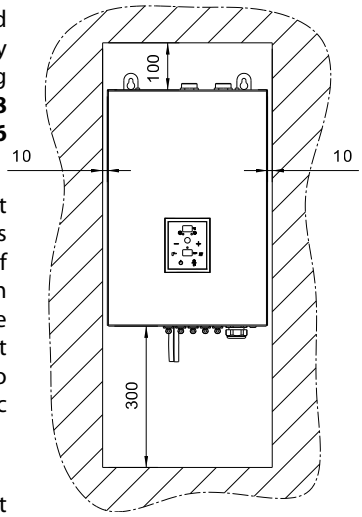
*D : Heating outlet 1" male*
*R : Heating inlet 1" male*




**View from below**

## 3.4.2 - Placement

The **Gialix** wall mounted boiler must be placed vertically against the wall on a strong support using at least **two ∅8 lag bolts** at the top and **a ∅6 lag bolt** at the bottom.

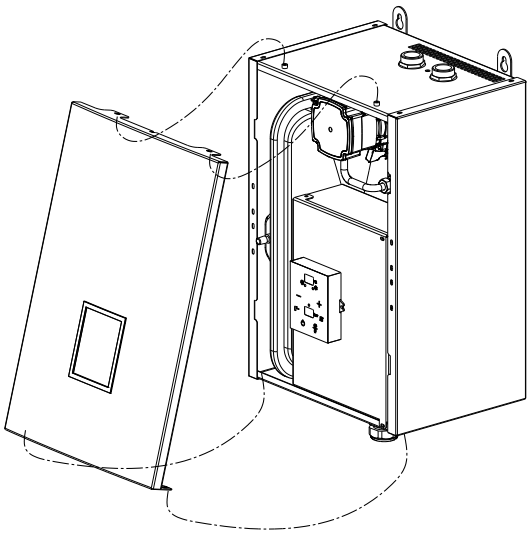



The boiler must be placed at least **300 mm** above any obstacles to allow for the removal of the heating elements from underneath the appliance. The boiler must be placed at least **100 mm** below the ceiling to allow space for the hydraulic connections.

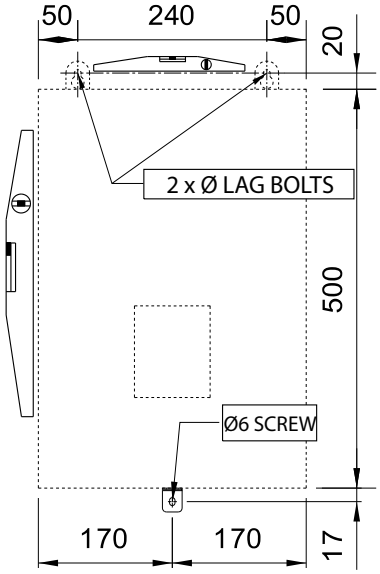
Embedding:
The boiler must be at least **10 mm** away from side walls.

## 3.4.3 - Placement of the boiler

### 3.4.3.1 - Removing the front panel



### 3.4.3.2 - Wall mounting

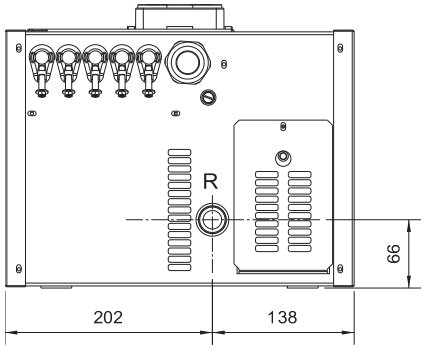


## 3.5 - Hydraulic connections

### 3.5.1 - Gialix 6 MT

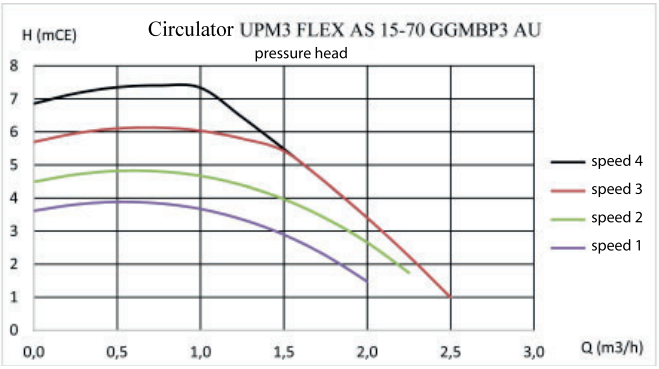
The heating outlet (D) is connected at a high point of the tank.

The heating inlet (R) is connected at a lower point of the tank.



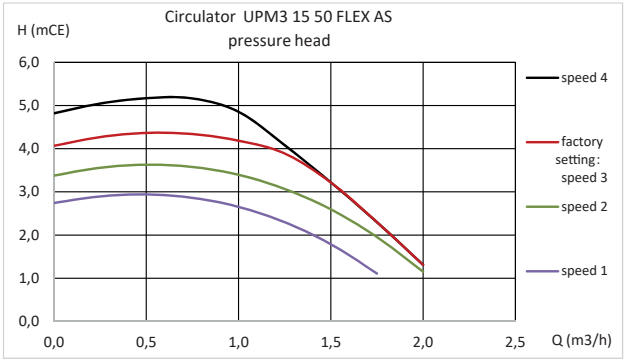

**Do not remove the brass parts which are located on the heating inlets and outlets.**

#### 3.5.1.1 - Circulator UPM3 15-70 FLEX AS



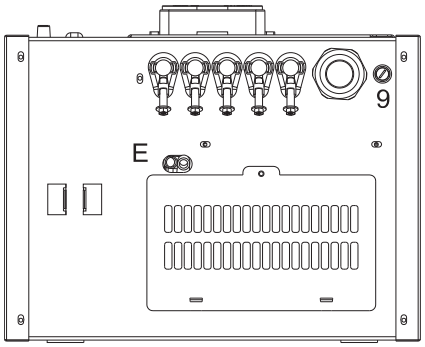

4-speed circulator allows to adjust the the characteristics of the installation.

#### 3.5.1.2 - Circulator UPM3 15-50 FLEX AS



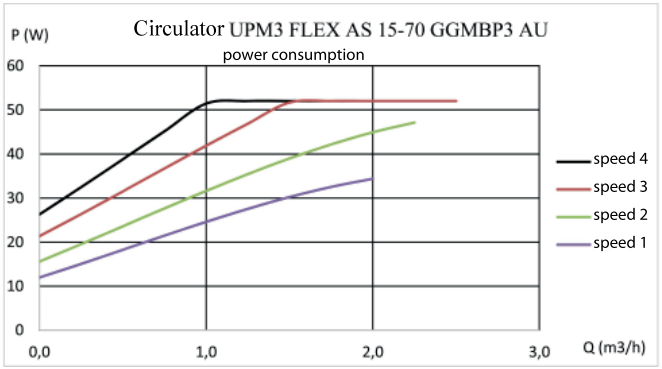

### 3.5.2 - Gialix 12 MT and 16 MT

Both the heating outlet (D) and inlet (R) are connected at a high point of the tank:




**Do not remove the brass parts which are located on the heating inlets and outlets.**

#### 3.5.2.1 - Circulator UPM3 15-70 FLEX AS

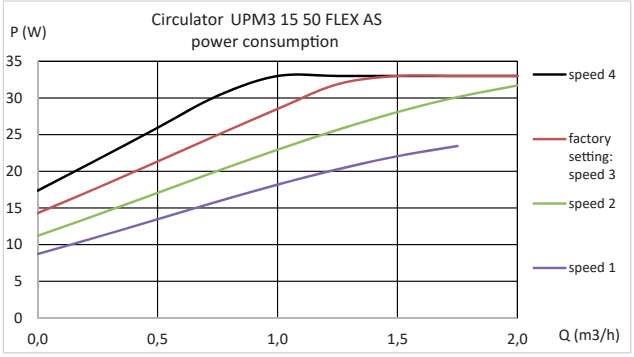



To view which speed is selected, **press the push-button switch for 2 seconds.**

| LED 1 | LED 2 | LED 3 | LED 4 | LED 5 | speed (height in m) |
|---|---|---|---|---|---|
| RED | ORANGE | - | - | - | 1 (4 m) |
| RED | ORANGE | - | ORANGE | - | 2 (5 m) |
| RED | ORANGE | - | ORANGE | ORANGE | 3 (6 m) |
| RED | ORANGE | - | - | ORANGE | 4 (7 m) |

After 2 seconds, the display returns to power consumption mode.

#### 3.5.2.2 - Circulator UPM3 15-50 FLEX AS



## 3.6 - Electrical connections

**Electrical connections could be accidentally loosened during transport.**

**To prevent risks of abnormal heating, it is necessary to check the Faston type connections and to tighten all screw-in connections.**

The **Gialix** electric boilers are delivered completely pre-wired from the factory. It is necessary to connect the following elements to the proper terminals:

- general power supply for the power circuit,
- the different control circuits,

The Gialix electric boiler must be protected by an all-pole protective device (with a minimum contact gap of 3 mm: EN 60 335-1) with fuses or a thermal magnetic circuit breaker which is adjusted based on the heating capacity of the boiler.

### 3.6.1 - Current consumption - Number and cross sections of power supply cables - Fuse size

#### 3.6.1.1 - Current consumption

| Gialix MT | Maximum power | Current requirements per phase | |
|---|---|---|---|
| | | 230V single-phase | 400V three-phase |
| Gialix 6 kW - 230 V single-phase- | 6 kW | 26 A | - |
| Gialix 12 kW -230 V single-phase- | 12 kW | 52 A | - |
| Gialix 12 kW -400 V three-phase- | 12 kW | - | 18 A |
| Gialix 16 kW -400 V three-phase- | 16 kW | - | 24 A |

#### 3.6.1.2 - Number and cross sections of power supply cables

**Rules and regulations in country of installation must be respected (standard C15-100)**

- The electrical supply line for the general power circuit must be done in compliance with all regulations and standards in effect in the country of use (e.g. standard C15-100).
- Standard C15-100 determines the width of the cables to use based on the acceptable currents.
- Standard C15-100 determines the width of the cables based on the following elements:
  - Type of conductor:
    - type of insulation, number of cores, etc...
  - Installation mode
    - influence of groupings of cables and conductors,
    - ambient temperature,
    - installed with gaskets or not,
    - length of cables,
    - etc...

***Example of determination based on standard C15-100:***
*Ambient temperature:..... 20°C*
*Type of cable:..... U1000 R02 V*
*Length: ..... ≤ 15 metres*
*Installation:..... no gaskets, well ventilated cable channel*

| Gialix MT | Maximum power | MINIMUM width per phase in mm² and number of conductors for this example | |
|---|---|---|---|
| | | 230 V single-phase | 400 V three-phase |
| Gialix 6 kW | 6 kW | $6^2$ | - |
| Gialix 12 kW | 12 kW | $16^2$ | - |
| Gialix 12 kW | 12 kW | - | $4^2$ |
| Gialix 16 kW | 16 kW | - | $6^2$ |

| Gialix MT | Maximum power | MAXIMUM width per phase in mm² and number of conductors for this example | |
|---|---|---|---|
| | | 230 V single-phase | 400 V three-phase |
| Gialix 6 kW | 6 kW | $10^2$ | - |
| Gialix 12 kW | 12 kW | $16^2$ | - |
| Gialix 12 kW | 12 kW | - | $6^2$ |
| Gialix 16 kW | 16 kW | - | $10^2$ |

Under no circumstances can the manufacturer be held liable for consequences arising from the incorrect choice of cable widths for the power supply cables or the installation method and specifications used.

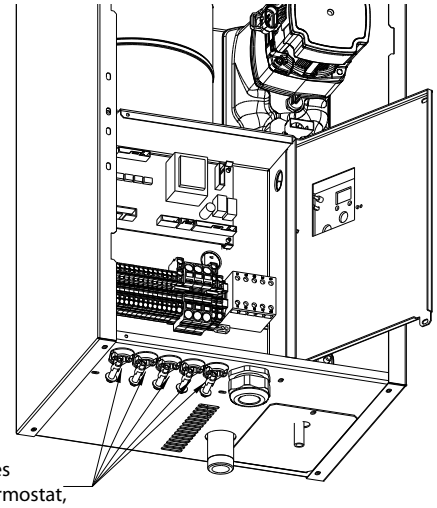
#### 3.6.1.3 - Fuse size

| Gialix MT | Maximum power | Fuse sizes for mains switch | |
|---|---|---|---|
| | | 230 V single-phase | 400 V three-phase |
| Gialix 6 kW | 6 kW | 32 A | - |
| Gialix 12 kW | 12 kW | 63 A | - |
| Gialix 12 kW | 12 kW | - | 25 A |
| Gialix 16 kW | 16 kW | - | 32 A |

### 3.6.2 - Electrical connection terminals

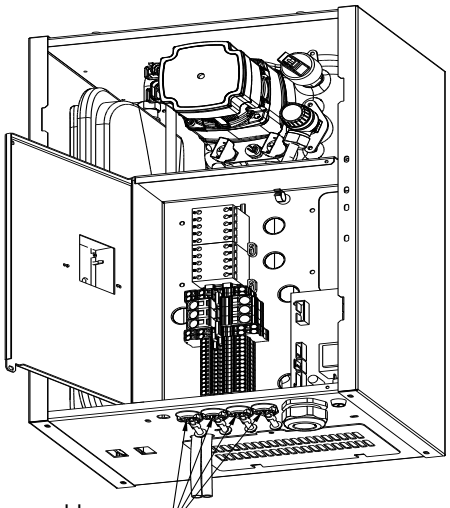
The power supply and control cables are connected to a cable input on the lower part of the tank.

### 3.6.2.1 - Gialix 6 MT



5 entry points per cable clamp for the control cables (ambient temperature thermostat, exterior sensors or domestic water sensors...)

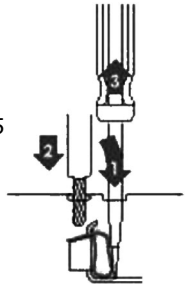
### 3.6.2.2 - Gialix 12 MT and 16 MT



4 entry points per cable clamp for the control cables (ambient temperature thermostat, exterior sensors or domestic water sensors...)

The terminal strips are spring-loaded «Cage Clamps».
For handling, use the following:

- for 2.5 mm² control terminals or 4 mm² - 6 mm² power terminals (tetra), use a 3.5 x 0.5 mm flat-head screwdriver.
- for 10 mm² mains power terminals (single-phase), use a 5.5 x 0.8 mm flat-head screwdriver.



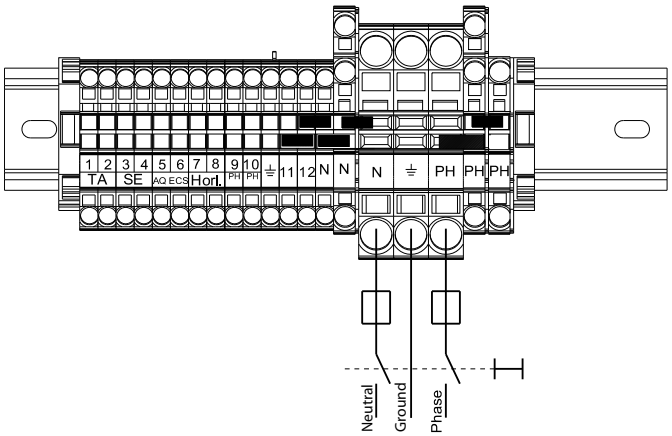

**1** : *Insert the screwdriver into the flap just above or below the identification number.*
**2** : *Insert the wire into the «CAGE CLAMP» once it is open.*
**3** : *Remove the screwdriver.*

**Note:**
The wires must be stripped to the following lengths:
- for the 2.5 mm² control terminals: between 10 and 12 mm.
- for the mains power terminals: between 17 and 20 mm.

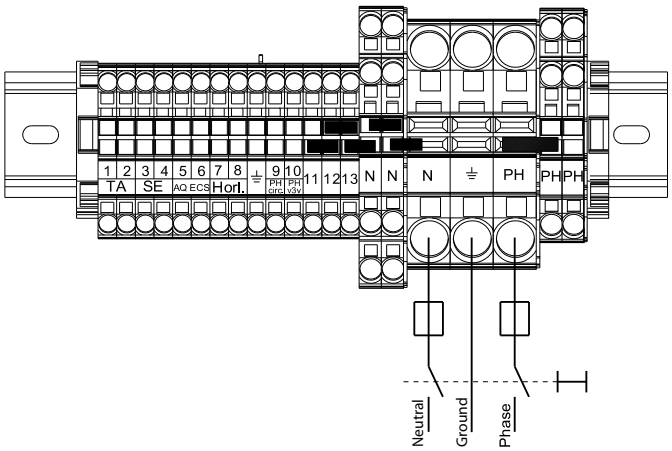
### 3.6.3 - Connecting the cables based on voltage supplied

**See § «Electrical connections» to determine the connection cross-section pour and the size of the ⌶ switch with fuses or thermal magnetic circuit breaker.**

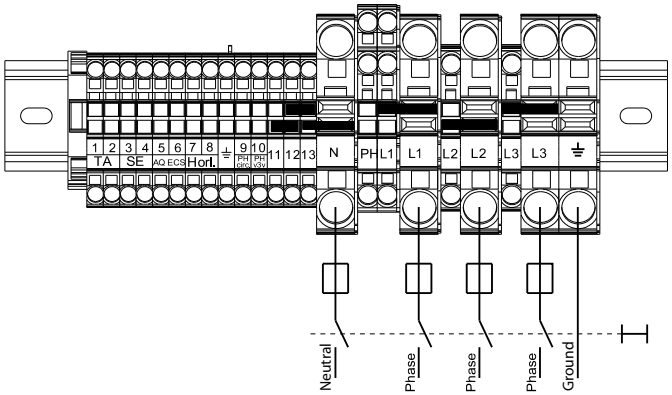
### 3.6.3.1 - Gialix 6 MT -230 V single-phase-




### 3.6.3.2 - Gialix 12 MT -230 V single-phase-

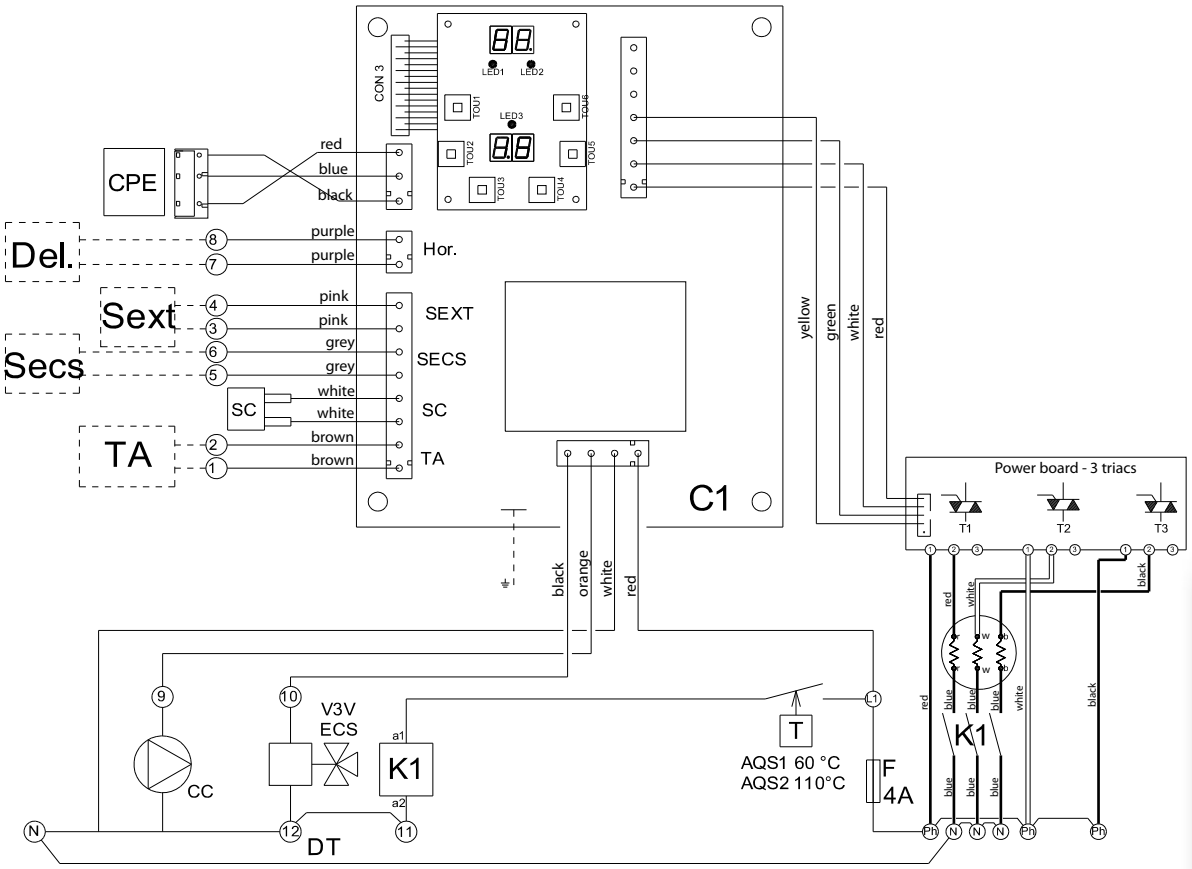



### 3.6.3.3 - Gialix 12 MT and 16 MT -400 V three-phase-



## 3.6.4 - Control circuit schematic diagrams

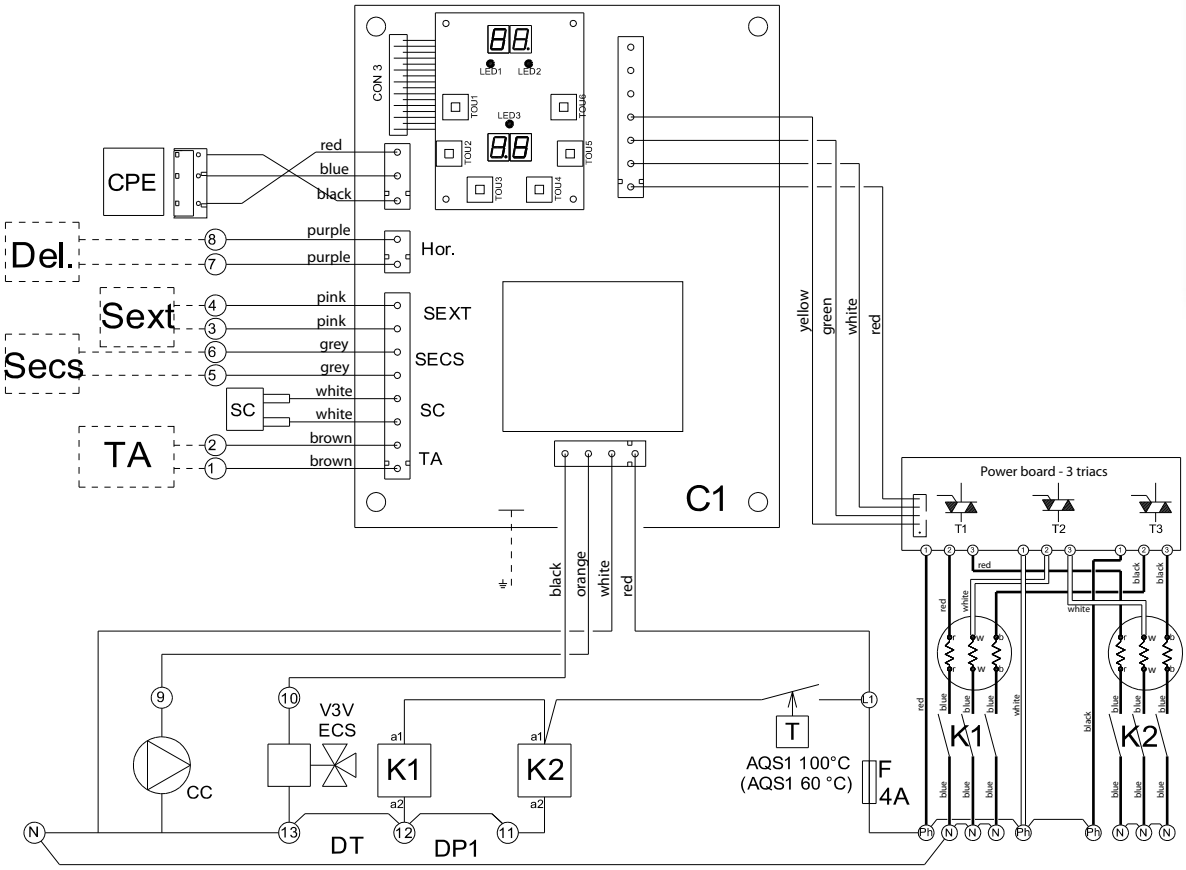
### 3.6.4.1 - Gialix 6 MT -230 V single-phase-



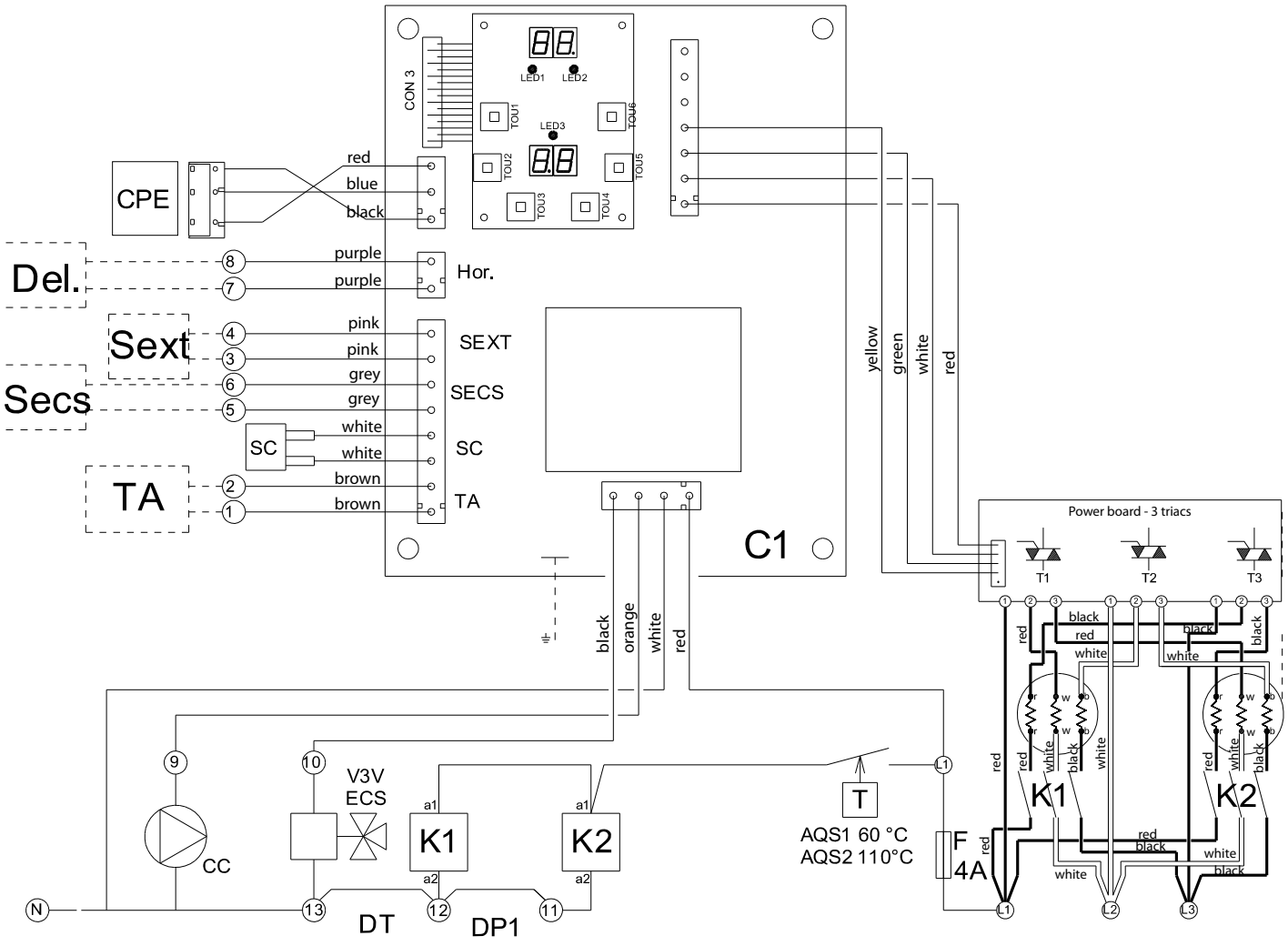

| | |
|---|---|
| *Ph* | *: Phase* |
| *N* | *: Neutral* |
| *F* | *: 4 A fuse, 5 x 20* |
| *C1* | *: Electronic board with display* |
| *CC* | *: 3-speed circulator* |
| *TA* | *: Ambient temperature thermostat* |
| *AqECS or SECS (1)* | *: DHW aquastat or sensor* |
| *SExt (1)* | *: Exterior sensor* |
| *SC* | *: Boiler sensor* |
| *V3V ECS* | *: 3-way valve domestic hot water (counter spring)* |
| *AQS1* | *: 60°C safety aquastat with manual reset* |
| *AQS2* | *: 100°C safety aquastat with manual reset* |
| *T1 to T3* | *: Thyristors 26 A* |
| *DT* | *: Total load shedding (remove the jumper)* |
| *H* | *: Timer or partial load shedding* |

*(1) : Available as an option for the Gialix MT*
*See § «Setting the regulator»*

### 3.6.4.2 - Gialix 12 MT - 230 V single-phase-



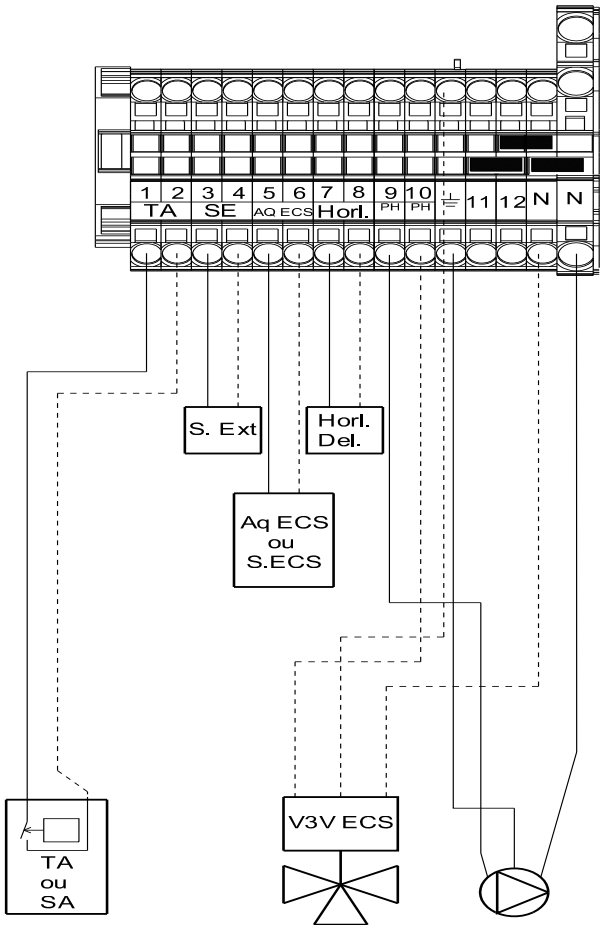
### 3.6.4.3 - Gialix 12 MT and 16 MT -400 V three-phase-




| | |
|---|---|
| *L1 ; L2 ; L3* | *: Phases* |
| *N* | *: Neutral* |
| *F* | *: 4 A fuse, 5 x 20* |
| *C1* | *: Electronic board with display* |
| *CC* | *: 3-speed circulator* |
| *TA* | *: Ambient temperature thermostat* |
| *AqECS or SECS (1)* | *: DHW sensor or thermostat* |
| *SExt (1)* | *: Exterior sensor* |
| *SC* | *: Boiler sensor* |
| *V3V ECS* | *: Domestic hot water 3-way valve (spring return)* |
| *AQS1* | *: 60°C safety aquastat with manual reset* |
| *AQS2* | *: 100°C safety aquastat with manual reset* |
| *T1 to T3* | *: Thyristors 26A* |
| *DT* | *: Total load shedding (remove the jumper)* |
| *DEL* | *: Timer or partial load shedding* |
| *DP1* | *: Partial load shedding (remove the jumper)* |
| *K1 ; K2* | *: Safety contactors* |

## 3.6.5 - Connecting the control circuit

### 3.6.5.1 - Gialix 6 MT



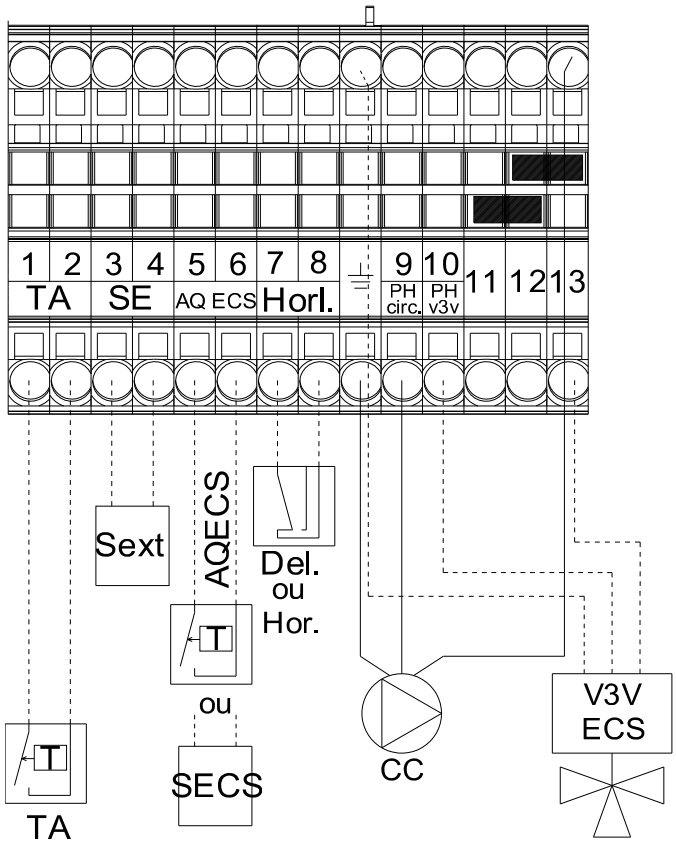

*1 - 2 : Ambient temperature thermostat (TA)*
*3 - 4 : Exterior sensor*
*5 - 6 : Domestic hot water sensor or domestic hot water aquastat*
*7 - 8 : Timer or load shedding (see § «Setting the regulator»)*
*9 - N : Boiler circulator*
*10 - N : 230V power supply for the domestic hot water 3-way valve with counter spring (motor supplied in case of DHW request)*
*11 - 12 : Total load shedding DT (remove the jumper) and/or 65°C underfloor heating temperature limiter with manual reset (mandatory with DHW production with underfloor heating) see § «Introduction»*

**•To prevent disturbances in sensor readings by the regulator, independently wire the cables for the electrical network (raceways, cable channels) and avoid junction boxes.**
**•The conductors must be electrolytic copper (no oxidization of the stripped sections of the cables).**

**•The use of telephone wire is forbidden (multiple strands lead to weaker cable sections and broken connections).**

**•The width of cable sections must between 0.5 and 2.51 mm².**

### 3.6.5.2 - Gialix 12 MT and 16 MT




*1 - 2 : Ambient temperature thermostat (TA)*
*3 - 4 : Exterior sensor*
*5 - 6 : Domestic hot water sensor or domestic hot water aquastat*
*7 - 8 : Timer or load shedding (See § «Setting the regulator»)*
*9 - 13 : Boiler circulator*
*10 - 13 : 230V power supply for the domestic hot water 3-way valve with counter spring (motor supplied in case of DHW request)*
*13 - 12 : Total load shedding DT (remove the jumper) and/or 65°C underfloor heating temperature limiter with manual reset (mandatory with DHW production with underfloor heating) see § «Introduction»*
*12 - 11 : Partial load shedding DP1 (remove the jumper)*

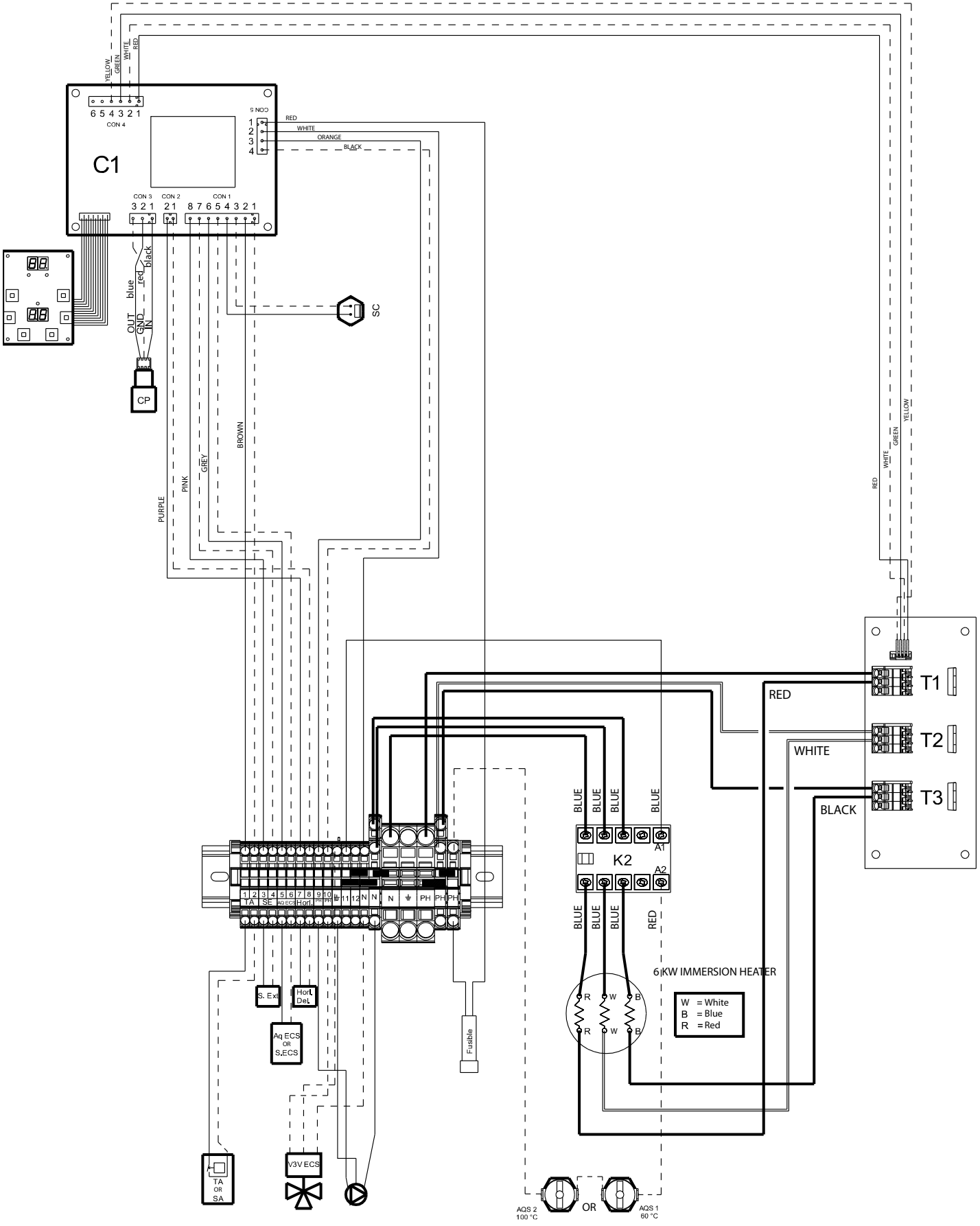
**•To prevent disturbances in sensor readings by the regulator, independently wire the cables for the electrical network (raceways, cable channels) and avoid junction boxes.**
**•The conductors must be electrolytic copper (no oxidization of the stripped sections of the cables).**

**•The use of telephone wire is forbidden (multiple strands lead to weaker cable sections and broken connections).**

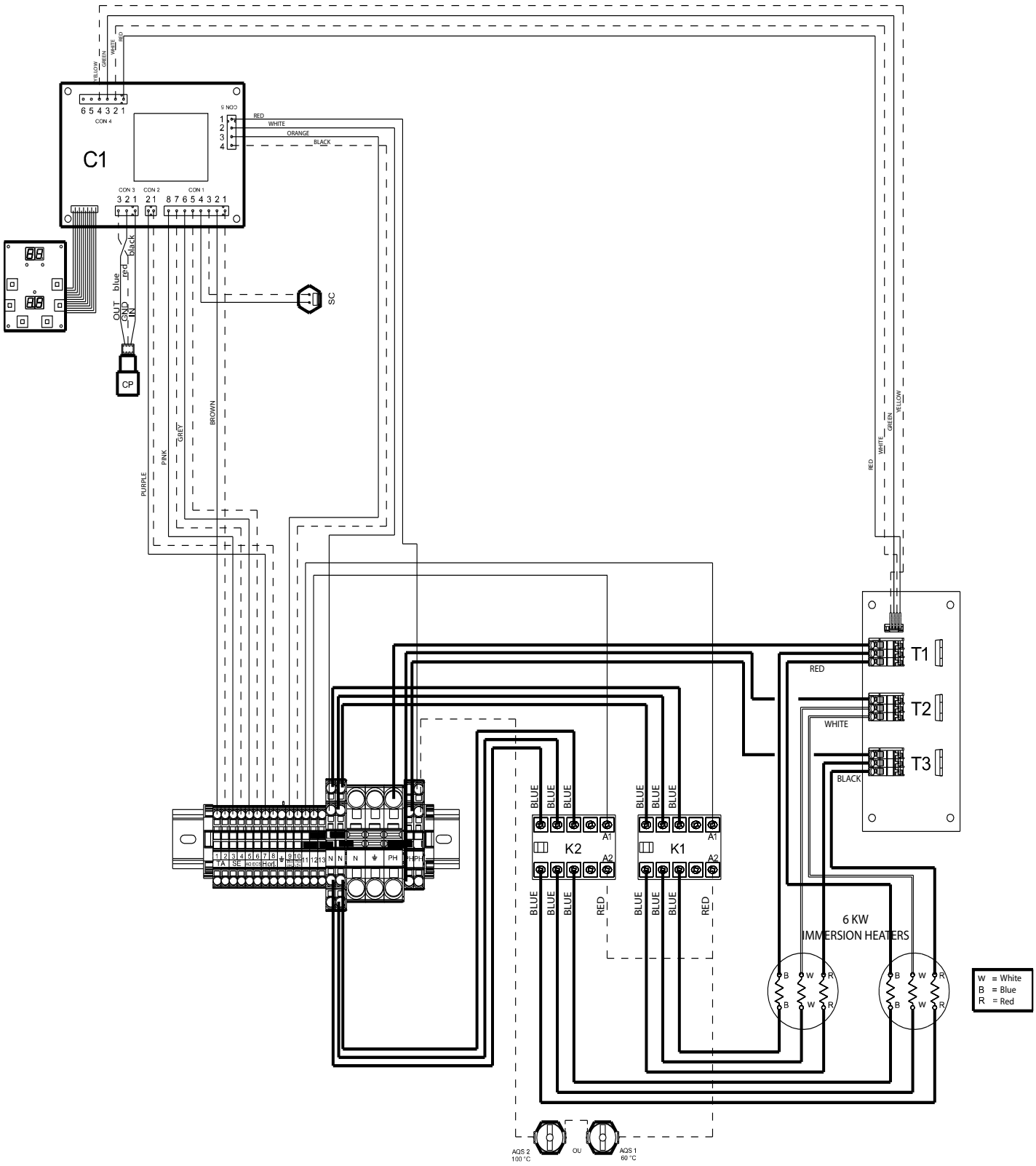
**•The width of cable sections must between 0.5 and 2.51 mm².**

## 3.6.6 - Wiring schematic diagram

### 3.6.6.1 - Gialix 6 MT -230 V single-phase-



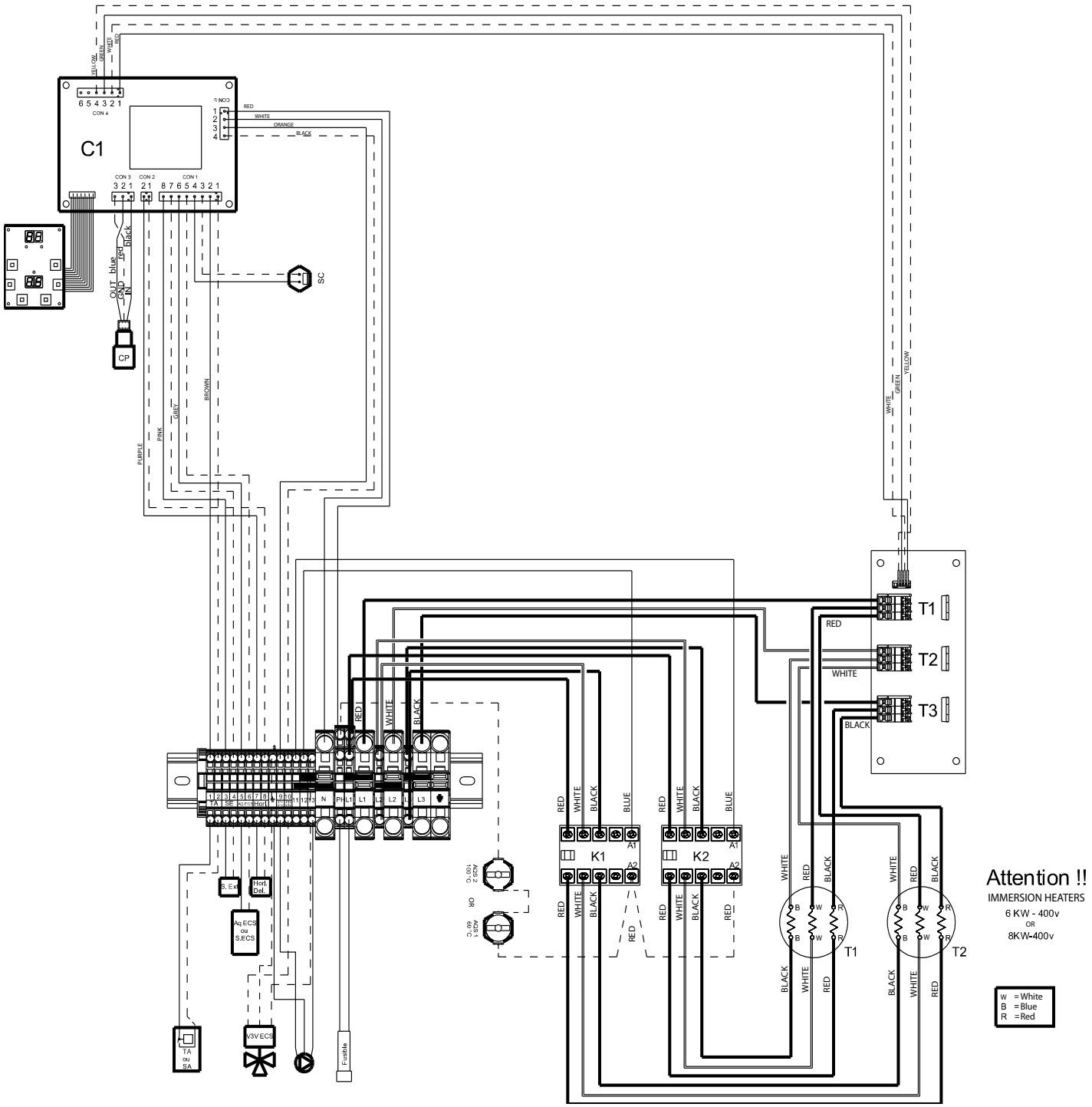
## 3.6.6.2 - Gialix 12 MT -230 V single-phase-




| | | | |
|---|---|---|---|
| *Ph* | *: Phase* | *SExt [1]* | *: Exterior sensor* |
| *N* | *: Neutral* | *SC* | *: Boiler sensor* |
| *F* | *: 4 A fuse, 5 x 20* | *V3V ECS* | *: Domestic hot water 3-way valve (counter spring)* |
| *C1* | *: Electronic board with display* | *AQS1* | *: 60°C safety aquastat with manual reset* |
| *CC* | *: 3-speed circulator* | *AQS2* | *: 100°C safety aquastat with manual reset* |
| *TA* | *: Ambient temperature thermostat* | *T1 to T3* | *: Thyristors 26 A* |
| *AqECS [1]* | *: Aquastat* | *H* | *: Timer or partial load shedding* |
| *or* | | | |
| *SECS [1]* | *: DHW sensor* | | |

*[1] : Available as an option for Gialix MT*
*See § «Setting the regulator»*

## 3.6.6.3 - Gialix 12 MT and 16 MT -400 V three-phase-



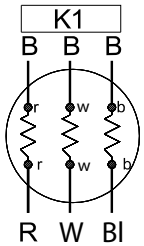

| | | | |
|---|---|---|---|
| *L1 ; L2 ; L3* | *: Phases* | *SExt [1]* | *: Exterior sensor* |
| *N* | *: Neutral* | *SC* | *: Boiler sensor* |
| *F* | *: 4 A fuse, 5 x 20* | *V3V ECS* | *: Domestic hot water 3-way valve (with counter spring)* |
| *C1* | *: Electronic board with display* | *AQS1* | *: 60°C safety aquastat with manual reset* |
| *CC* | *: 3-speed circulator* | *AQS2* | *: 100°C safety aquastat with manual reset* |
| *TA* | *: Ambient temperature thermostat* | *T1 to T3* | *: Thyristors 26 A* |
| *AqECS [1] or SECS [1]* | *: Aquastat : DHW sensor* | *H* | *: Timer or partial load shedding* |
| | | *K1 ; K2* | *: Safety contactors* |

*[1] : Available as an option for Gialix MT See § «Setting the regulator»*

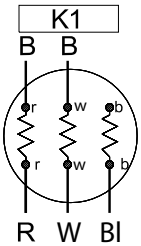
## 3.6.7 - Lowering the boiler's power by disconnecting the electric heating elements

To supply power to the boiler using smaller fuses (see § «Setting the regulator» for setting parameter 22) it is necessary to permanently lower the boiler's power level by disconnecting the heating elements as shown on the following diagrams:

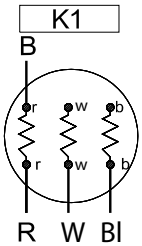
### 3.6.7.1 - Gialix 6 MT -230 V single-phase-




6 kW
Stages:
2 + 2 + 2 kW
Parameter n° 22 = 03




4 kW*
Stages:
2 + 2 + 0 kW
Parameter n° 22 = 02

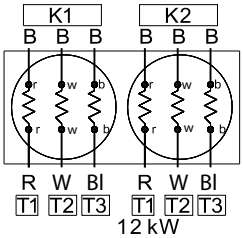



2 kW*
Stages:
2 + 0 + 0 kW
Parameter n° 22 = 01

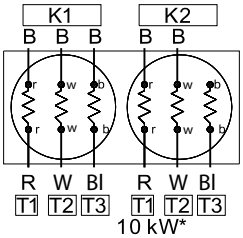
R, r : Red
Bl, bl : Black
W, w: White
B, b : Blue

T1 : triac n°1
T2 : triac n°2
T3 : triac n°3
K1 : Contactor n°1

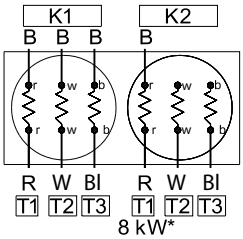
### 3.6.7.2 - Gialix 12 MT -230 V single-phase-



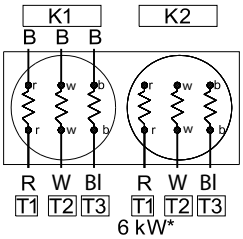

12 kW
Stages: 4 + 4 + 4 kW
Parameter n° 22 = 03



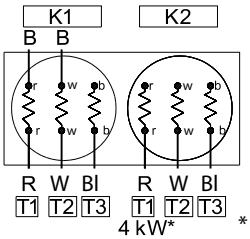

10 kW*
Stages: 4 + 4 + 2 kW
Parameter n° 22 = 03




8 kW*
Stages: 4 + 2 + 2 kW
Parameter n° 22 = 03




6 kW*
Stages: 2 + 2 + 2 kW
Parameter n° 22 = 03



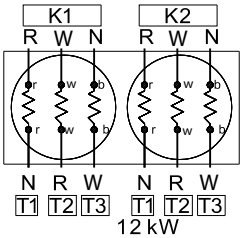

4 kW*
Stages: 2 + 2 + 0 kW
Parameter n° 22 = 02

R, r : Red
Bl, bl : Black
W, w: White
B, b : Blue

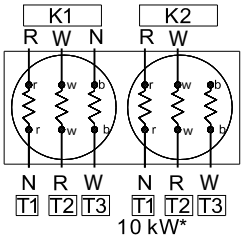
T1 : triac n°1
T2 : triac n°2
T3 : triac n°3
K1 : contactor n°1
K2 : contactor n°2

* The blue wired connections between the contactors and the heating elements shown in the diagram should be completely removed. See § «Dimensions and spacing - Hydraulic connections» for access to the heating elements.

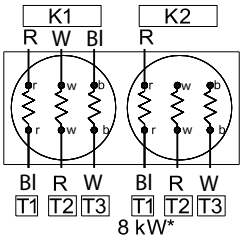
### 3.6.7.3 - Gialix 12 MT -400 V three-phase-



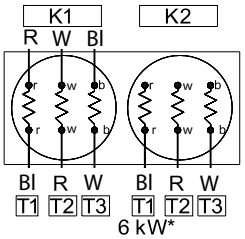

12 kW
Stages: 4 + 4 + 4 kW
Parameter n° 22 = 03



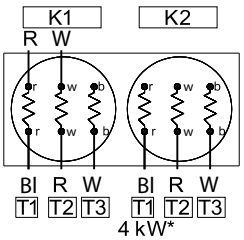

10 kW*
Stages: 4 + 4 + 2 kW
Parameter n° 22 = 03




8 kW*
Stages: 4 + 2 + 2 kW
Parameter n° 22 = 03




6 kW*
Stages: 2 + 2 + 2 kW
Parameter n° 22 = 03

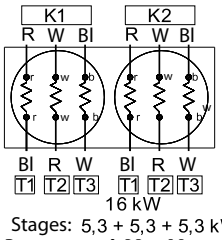



4 kW*
Stages: 2 + 2 + 0 kW
Parameter n° 22 = 02

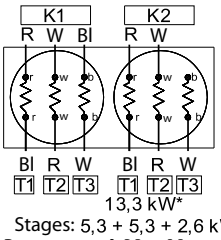
R, r : Red
Bl, bl : Black
W, w: White
B, b : Blue

T1 : triac n°1
T2 : triac n°2
T3 : triac n°3
K1 : contactor n°1
K2 : contactor n°2

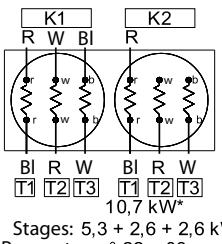
### 3.6.7.4 - Gialix 16 MT -400 V three-phase-



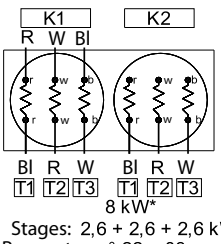

16 kW
Stages: 5,3 + 5,3 + 5,3 kW
Parameter n° 22 = 03



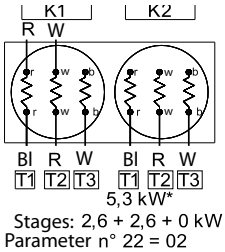

13,3 kW*
Stages: 5,3 + 5,3 + 2,6 kW
Parameter n° 22 = 03




10,7 kW*
Stages: 5,3 + 2,6 + 2,6 kW
Parameter n° 22 = 03




8 kW*
Stages: 2,6 + 2,6 + 2,6 kW
Parameter n° 22 = 03




5,3 kW*
Stages: 2,6 + 2,6 + 0 kW
Parameter n° 22 = 02

R, r : Red
Bl, bl : Black
W, w: White
B, b : Blue

T1 : triac n°1
T2 : triac n°2
T3 : triac n°3
K1 : contactor n°1
K2 : contactor n°2

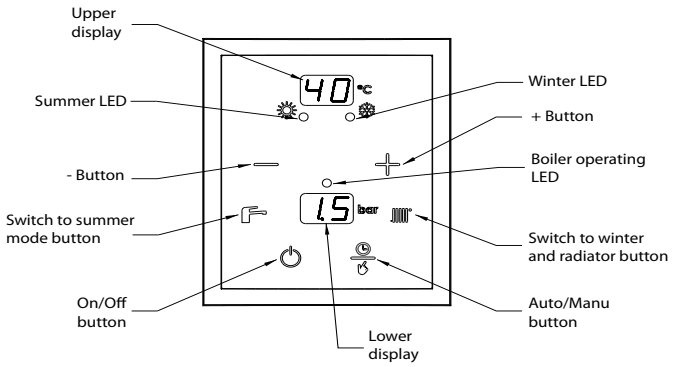
* The red, white or black wired connections between the contactors and the heating elements shown in the diagram should be completely removed. See § «Dimensions and spacing - Hydraulic connections» for access to the heating elements.

## 3.7 - Set-up

### 3.7.1 - Filling the installation

• Fill the boiler.

• Periodically check that the installation is purging at the high points of the installation.




**Before switching on the boiler ensure that it is properly purged.**

•To help in purging the installation while in standby mode, force the circulator to operate for 2 minutes by pressing on ⦅|||⦆.

•Turn on the boiler by pressing ⏻ for 5 seconds, all of the LEDs on the control panel should light up.

Then:

• The temperature of the boiler will appear on the top display (*ex: 12°C*).

• The pressure in bars appears on the bottom display.

•Check that the pressure is above 0.5 bars. If this is not the case, adjust the filling of the boiler without exceeding 3 bars.

### 3.7.2 - Setting the regulator

**Function designed to be used by installer.**

•Press ⊖ **and** ⊕ (3 sec) to switch to programming mode for 4 minutes:
→Display of parameter n° *02* on top display (flashing).

•Press ⊖ **or** ⊕ (0 sec) to select the parameter n°:
→Display of parameter n° *03* and so forth up to parameter n° *23*.

•Press ⦅🚿⦆ **or** ⦅|||⦆ (0 sec) to set the value of the parameter.
→The value of the parameter (*for example* * *50*) will appear on the lower display and will be flashing.

•Press ⊖ **or** ⊕ (0 sec) to change the value of the parameter (on the lower display).

•Press ⦅🚿⦆ **or** ⦅|||⦆ (0 sec) to confirm the value of the parameter.
→The value of the parameter (lower display) becomes fixed and the parameter n°(top display) flashes.

•Press ⊖ **or** ⊕ to select another parameter

or

•Press ⊖ **and** ⊕ (3 sec) to exit programming mode (this option is available at all times).

### 3.7.2.1 - List of parameters

| Condition | Parameter n° | Definition | | Possible values | Factory settings |
|---|---|---|---|---|---|
| | 02 | Maximum set temperature of the boiler (TCMA)(1) | | 21 to 80°C | 80°C |
| | 03 | Minimum set temperature of the boiler (TCMI)(1) | | 21 to TCMA °C | 30°C |
| | 04 | Presence of a thermostat (without = 0; with thermostat = 1) | | 0 or 1 | 0 |
| if 04 = 1 or 2 | 05 | Heating pump in use for ambient temperature control (no=0; yes=1) | | 0 or 1 | 0 |
| | 06 | Automatic adjustment or automatic correction of the heating curve or of the set temperature (no=0; yes=1) | | 0 or 1(2) | 0 |
| | 07 | Exterior sensor? (no=0; yes=1) | | 0 or 1 | 0 |
| if 07 = 1 | 08 | Maximum exterior temperature (TEMA)(1) | | 11 to 25°C | 20°C |
| | 09 | Minimum exterior temperature (TEMI)(1) | | -30 to +10°C | -5°C |
| | 10 | Automatic switch to summer mode? (no=0; yes=1) | | 0 or 1 | 0 |
| | 12 | Domestic hot water production? (no=0; yes=1) | | 0 or 1 | 0 |
| if 12 = 1 | 13 | Domestic water sensor? (no=0; yes=1) | | 0 or 1(3) | 1 |
| if 13 = 1 | 14 | Anti-legionellosis cycle? (no=0; yes=1) | | 0 or 1(4) | 0 |
| | 15 | 1/2 differential of minimum regulation (neutral zone) | | 1 to 3 K | 2 K |
| | 16 | 1/2 differential of maximum regulation (work zone) | | 4 to 12 K | 6 K |
| | 22 | Number of power stages | | 1 to 3 | 3 |
| | 23 | Timer input purpose* | 0 = no purpose | 0 or 1 or 2 or 3 or 4 or 5 | 0 |
| | | | 1 = lowering of set temperature of ECO mode | | |
| | | | 2 = lowering of set temperature of frost protection mode | | |
| | | | 3 = load shedding of 1st triac | | |
| if 22 ≠ 1 | | | 4 = load shedding of 1st + 2nd triacs | | |
| if 22 ≠ 1 or 2 | | | 5 = load shedding of 1st + 2nd + 3rd triacs | | |

*(1) See § "Heating curve" for defining based on the 4 parameters (TCMA, TCMI, TEMA, and TEMI)*

*(2) This function is not allowed with an ambient temperature thermostat with timer (yes=1, is only possible with an ambient temperature thermostat without timer)*

*(3) No = 0 = with electromechanical aquastat (the setting of the desired temperature is carried out on the aquastat itself and not on the control panel. There is no frost protection of the domestic hot water.*
*Yes = 1 = sensor with variable resistance. There is frost protection of domestic hot water.*

*(4) Caution: for the anti-legionellosis protection, the water is raised to 65°C. The placement of a thermostatic mixing valve on the DHW outlet is mandatory to avoid risk of burns.*

*Note: to reset the automatic adjustment to default, set PAR. 06 to 0, and then set it to 1,*
**See § "Designated purpose of timer input".*

### 3.7.2.2 - Programming the boiler for maximum power

**To allow power supply to the boiler and cables and small size fuses (see § «Placement»), it is mandatory to permanently lower the boiler power by disconnecting the heating elements (see «Hydraulic connections»).**

The boiler is delivered at its maximum power of 6, 12 or 16kW (*PAR.22 = 3*).

• Set *PAR.22* to the value defined in the table below to set the maximum power of the boiler:

#### 3.7.2.2.1 - Gialix 6 MT -230 V single-phase-

| Stage n° | 1 | 2 | 3 | Boiler power |
|---|---|---|---|---|
| Power stage when *PAR.22 = 3* | 2 kW | 2 kW | 2 kW | 6 kW |
| Power stage when *PAR.22 = 2* | 2 kW | 2 kW | 0 kW | 4 kW |
| Power stage when *PAR.22 = 1* | 2 kW | 0 kW | 0 kW | 2 kW |

#### 3.7.2.2.2 - Gialix 12 MT -230 V single-phase-

| Stage n° | 1 | 2 | 3 | Boiler power |
|---|---|---|---|---|
| Power stage when *PAR.22 = 1* | 4 kw | 4 kW | 4 kW | 12 kW |
| Power stage when *PAR.22 = 2* | 4 kW | 4 kW | 0 kW | 8 kW |
| Power stage when *PAR.22 = 3* | 4 kW | 0 kW | 0 kW | 4 kW |

#### 3.7.2.2.3 - Gialix 12 MT -400 V three-phase-

| Stage n° | 1 | 2 | 3 | Boiler power |
|---|---|---|---|---|
| Power stage when *PAR.22 = 1* | 4 kW | 4 kW | 4 kW | 12 kW |
| Power stage when *PAR.22 = 2* | 4 kW | 4 kW | 0 kW | 8 kW |
| Power stage when *PAR.22 = 3* | 4 kW | 0 kW | 0 kW | 4 kW |

#### 3.7.2.2.4 - Gialix 16 MT -400 V three phase-

| Stage n° | 1 | 2 | 3 | Boiler power |
|---|---|---|---|---|
| Power stage when *PAR.22 = 1* | 5.3 kW | 5.3 kW | 5.3 kW | 16 kW |
| Power stage when *PAR.22 = 2* | 5.3 kW | 5.3 kW | 0 kW | 10.7 kW |
| Power stage when *PAR.22 = 3* | 5.3 kW | 0 kW | 0 kW | 5.3 kW |

### 3.7.3 - Heating curve

The automatic setting of the boiler's set temperature based on the exterior temperature is only possible with an exterior sensor which is available as an optional extra for the **Gialix MT.**

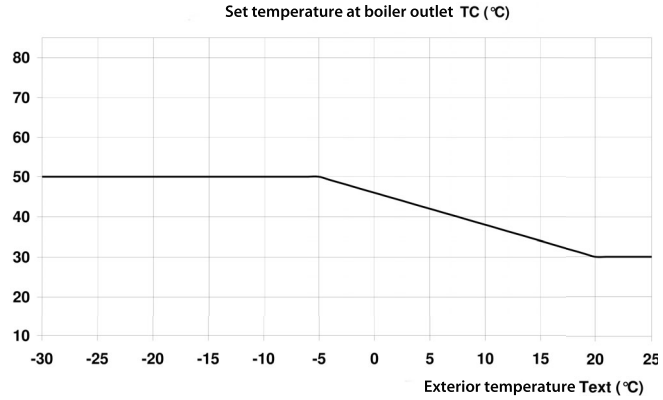
The heating curve is built on the following 4 parameters, see § «Setting the regulator»:

- **TCMA** = Maximum boiler temperature
- **TCMI** = Minimum boiler temperature
- **TEMA** = Maximum exterior temperature or summer / winter temperature changeover
- **TEMI** = Minimum exterior temperature or base exterior temperature

### 3.7.3.1 - Application to underfloor heating

The boiler is delivered for operation with a 100°C safety aquastat; for use with the 60°C safety aquastat: (see § «Settings for low temperature application»)

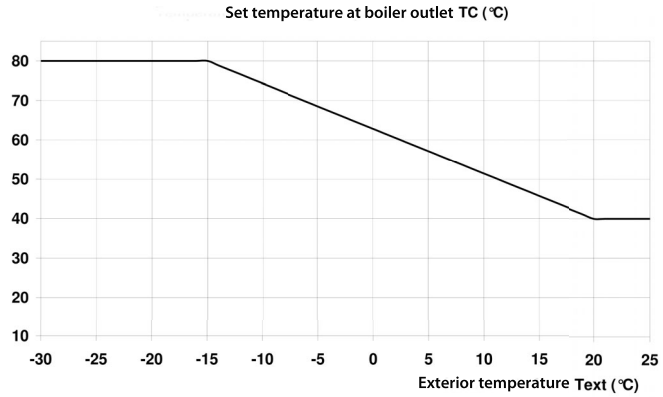
*Example:*



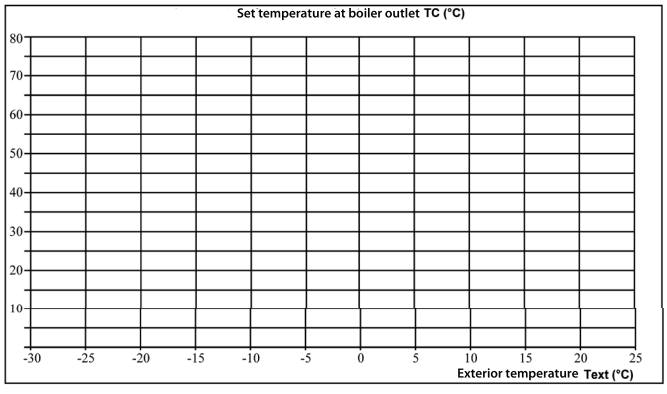

### 3.7.3.2 - Application to radiators

Factory set for operation with a 100°C safety aquastat

*Example:*




### 3.7.3.3 - Heating curve of the installation




### 3.7.4 - Designated purpose of timer input

- By setting *PAR.23* to *01*: the set temperature of the boiler is lowered by 1/8 of its value when the timer input contact is open (terminals 20 - 21).
- By setting *PAR.23* to *02*: the set temperature of the boiler is lowered by 1/4 of its value when the timer input contact is open (terminals 20 - 21 for the Gialix 6 and 12 MT single-phase and terminals 7 - 8 for the Gialix 12 and 16 MT three-phase).
- By setting *PAR.23* to *03*: the 1st stage is used for load shedding when the timer input contact is open (terminals 20 - 21 for the Gialix 6 and 12 MT single-phase and terminals 7 - 8 for the Gialix 12 and 16 MT three-phase).
- By setting *PAR.23* to *04*: the 1st and 2nd stages are used for load shedding when the timer input contact is open (terminals 20 - 21 for the Gialix 6 and 12 MT single-phase and terminals 7 - 8 for the Gialix 12 and 16 MT three-phase).
- By setting *PAR.23* to *05*: all 3 stages are used for load shedding when the timer input contact is open (terminals 20 - 21 for the Gialix 6 and 12 MT single-phase and terminals 7 - 8 for the Gialix 12 and 16 MT three-phase).

### 3.7.5 - • Temperature readings • Status of connected aquastats or thermostats

During normal operation the temperature of the boiler is shown on the upper display.

The readings below are only possible if parameters *04*, *06*, *07* and *12* are set to *01* (see § «List of parameters»).

| Desired value | Button to press | Parameter displayed on upper screen | Value displayed on lower screen | Unit/ Signification |
|---|---|---|---|---|
| Status of ambient temperature thermostat | ⊕ | *TA* | *00*<br>*01* | not requested<br>requested |
| Boiler temperature | ⊕ | *CC* | *72* | |
| Correction of the heating curve | ⊕ | *AU* | *03*<br>*example* | °K<br>If the dot at the bottom right of the value lights up, the value is a negative temperature |
| Exterior temperature | ⊕ | *SE* | *05*<br>*example* | °C<br>If the dot at the bottom right of the value lights up, the value is a negative temperature |
| Timer input | ⊕ | *HR* | *00*<br>*01* | Timer contact open<br>Timer contact closed |
| DHW temperature sensor or Status of DHW aquastat | ⊕ | *SS*<br>*TS* | *60*<br>*example*<br>*00*<br>*01* | °C<br>Not requested<br>requested |
| Status of 1st stage | ⊕ | *T1* | *00*<br>*01* | not engaged<br>engaged |
| Status of 2nd stage | ⊕ | *T2* | *00*<br>*01* | not engaged<br>engaged |
| Status of 3rd stage | ⊕ | *T3* | *00*<br>*01* | not engaged<br>engaged |

Pressing ⊖ at any time returns to normal operation.

## 3.8 - Maintenance and troubleshooting

**IMPORTANT INFORMATION**

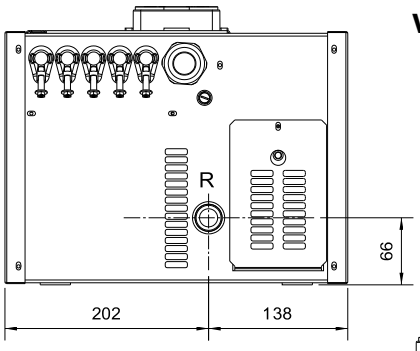
**To avoid permanently blocking the circulator and to allow for the automatic unblocking every 24 hours, it is IMPORTANT TO LEAVE THE BOILER SWITCHED ON (circuit breaker engaged) during any prolonged period of stopping (standby mode or summer mode).**

**If the circulator becomes blocked after not having followed these instructions, the warranty will be null and void.**

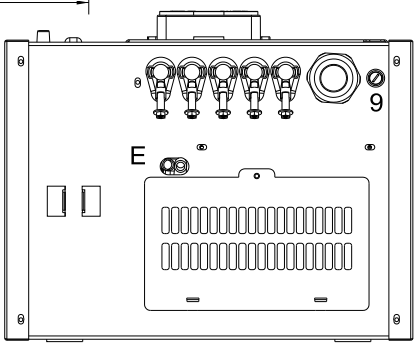
### 3.8.1 - Maintenance

Annual maintenance of the boiler by a qualified professional is advised.

- The pressure in the installation's water circuit should be periodically checked (the value indicated on the manometer must not be lower than 1 bar when cold).
- After several days of operation and at least once per year, check the tightness of all electrical power connections (heating elements).




**View from below -Gialix 6 MT-**




**View from below -Gialix 12 MT- -Gialix 16 MT-**

### 3.8.3 - Operating errors

Operating errors of the temperature sensors or pressure sensors are indicating by the display flashing.

| Errors | Upper display | | Operating mode of the boiler |
|---|---|---|---|
| Pressure sensor | E flashing | 00 flashing | ➠ The boiler is stopped<br>➠ The circulator is stopped |
| Boiler sensor | E flashing | 01 flashing | ➠ The boiler is stopped<br>➠ The circulator is operational |
| Exterior sensor | E boiler temp. flashing | 02 flashing | ➠ The boiler automatically changes to manual mode with set temperature (TCMI + TCMA) /2 |
| DHW sensor | E flashing | 03 flashing | ➠ The boiler automatically switches to heating mode |
| Ambient temperature sensor | E flashing | 04 flashing | ➠ The boiler automatically switches to an operating mode without ambient temperature control |
| Lack of water pressure (under 0.3 bars) | | 02 | ➠ The boiler is stopped<br>➠ Refill the installation to raise the water pressure to a value over 0.5 bars |

### 3.8.2 - Troubleshooting: Errors and solutions

| Error | Cause | Solutions |
|---|---|---|
| • The boiler is not heating<br>• The red indicator light is on | • The 60°C safety aquastat is engaged | **• You have an UNDERFLOOR HEATING application**<br>- Check the boilers settings (see § «Setting the regulator»)<br>- Check the water is circulating properly in the boiler<br>. Open all the valves<br>. Desludge the circuit<br>. Check that the circulator pump is operating properly<br>- Turn back on<br>. Press on the central red button on the safety aquastat until it clicks (see § «Settings for a low temperature application») |
| | • The 100°C safety aquastat is engaged | **• You have a RADIATOR application**<br>- Check that the water is circulating properly in the boiler<br>. Open all the valves<br>. Desludge the circuit<br>. Check that the circulator pump is operating properly<br>- Turn back on<br>. Press the red button in the centre of the safety aquastat until it clicks (see § «Settings for a low temperature application») |
| • Unwanted power failures | • Boiler's circuit breaker defective | - Replace the circuit breaker |
| | • Defect of one (or more) heating elements | - Replace the heating element(s) (see § «Settings for a low temperature application» diagrams)<br>. Turn off the boiler<br>. Drain the boiler<br>. Disconnect the resistances<br>. Remove the flange<br>. Extract the heating element(s) mounted on the toric joint.<br>. Replace the heating element(s)<br>. Switch boiler back on after putting pieces back into place (see § «Hydraulic connections) |
| • Insufficient power | • 1 (or more) heating element(s) are cut-off<br>or<br>• The boiler's parameters are set (*PAR 22*) | - Replace the heating element(s) (see § «Settings for a low temperature application» diagrams)<br>. Turn off the boiler<br>. Drain the boiler<br>. Disconnect the resistances<br>. Remove the flange<br>. Extract the heating element(s) mounted on the toric joint<br>. Replace the heating element(s)<br>. Switch boiler back on after putting pieces back in to place (see § «Hydraulic connections) |

## 3.8.4 - Temperature sensors

### 3.8.4.1 -Boiler sensor (SC) DHW sensor (SECS)

| Temp. °C | Résistance Ω (kOhms) |
|---|---|
| -40 | 412 135 |
| -39 | 383 178 |
| -38 | 356 477 |
| -37 | 331 840 |
| -36 | 309 092 |
| -35 | 288 075 |
| -34 | 268 645 |
| -33 | 250 672 |
| -32 | 234 035 |
| -31 | 218 627 |
| -30 | 204 347 |
| -29 | 191 106 |
| -28 | 178 821 |
| -27 | 167 415 |
| -26 | 156 821 |
| -25 | 146 974 |
| -24 | 137 818 |
| -23 | 129 298 |
| -22 | 121 367 |
| -21 | 113 980 |
| -20 | 107 095 |
| -19 | 100 675 |
| -18 | 94 686 |
| -17 | 89 097 |
| -16 | 83 876 |
| -15 | 78 999 |
| -14 | 74 439 |
| -13 | 70 175 |
| -12 | 66 185 |
| -11 | 62 450 |
| -10 | 58 952 |
| -9 | 55 673 |
| -8 | 52 600 |
| -7 | 49 718 |
| -6 | 47 013 |
| -5 | 44 474 |
| -4 | 42 090 |
| -3 | 39 850 |
| -2 | 37 744 |
| -1 | 35 763 |
| 0 | 33 900 |
| 1 | 32 147 |
| 2 | 30 496 |
| 3 | 28 941 |
| 4 | 27 475 |
| 5 | 26 094 |
| 6 | 24 791 |
| 7 | 23 562 |
| 8 | 22 402 |
| 9 | 21 306 |
| 10 | 20 272 |
| 11 | 19 294 |
| 12 | 18 370 |
| 13 | 17 496 |
| 14 | 16 669 |
| 15 | 15 887 |
| 16 | 15 146 |
| 17 | 14 445 |
| 18 | 13 781 |
| 19 | 13 151 |
| 20 | 12 555 |
| 21 | 11 989 |
| 22 | 11 452 |
| 23 | 10 943 |
| 24 | 10 459 |
| 25 | 10 000 |
| 26 | 9 564 |
| 27 | 9 150 |
| 28 | 8 756 |
| 29 | 8 381 |
| 30 | 8 025 |
| 31 | 7 686 |
| 32 | 7 364 |
| 33 | 7 057 |
| 34 | 6 765 |
| 35 | 6 486 |
| 36 | 6 221 |
| 37 | 5 968 |
| 38 | 5 727 |
| 39 | 5 498 |
| 40 | 5 279 |

| Temp. °C | Résistance Ω (kOhms) |
|---|---|
| 41 | 5 069 |
| 42 | 4 870 |
| 43 | 4 679 |
| 44 | 4 497 |
| 45 | 4 323 |
| 46 | 4 157 |
| 47 | 3 999 |
| 48 | 3 847 |
| 49 | 3 702 |
| 50 | 3 563 |
| 51 | 3 430 |
| 52 | 3 303 |
| 53 | 3 182 |
| 54 | 3 065 |
| 55 | 2 954 |
| 56 | 2 847 |
| 57 | 2 745 |
| 58 | 2 647 |
| 59 | 2 553 |
| 60 | 2 463 |
| 61 | 2 376 |
| 62 | 2 293 |
| 63 | 2 214 |
| 64 | 2 137 |
| 65 | 2 064 |
| 66 | 1 994 |
| 67 | 1 926 |
| 68 | 1 861 |
| 69 | 1 799 |
| 70 | 1 739 |
| 71 | 1 681 |
| 72 | 1 626 |
| 73 | 1 573 |
| 74 | 1 522 |
| 75 | 1 472 |
| 76 | 1 425 |
| 77 | 1 379 |
| 78 | 1 336 |
| 79 | 1 293 |
| 80 | 1 253 |
| 81 | 1 213 |
| 82 | 1 176 |
| 83 | 1 139 |
| 84 | 1 104 |
| 85 | 1 070 |
| 86 | 1 038 |
| 87 | 1 006 |
| 88 | 976 |
| 89 | 947 |
| 90 | 919 |
| 91 | 891 |
| 92 | 865 |
| 93 | 840 |
| 94 | 815 |
| 95 | 792 |
| 96 | 769 |
| 97 | 747 |
| 98 | 725 |
| 99 | 705 |
| 100 | 685 |

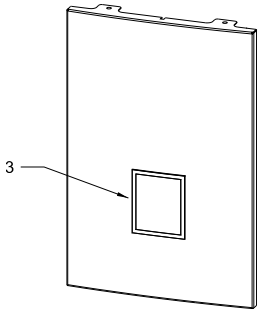
### 3.8.4.2 - Exterior sensor (SExt)

| Temp. °C | Résistance Ω (kOhms) | Temp. °C | Résistance Ω (kOhms) |
|---|---|---|---|
| -30 | 171 800 | 8 | 24 947 |
| -29 | 161 817 | 9 | 23 853 |
| -28 | 152 994 | 10 | 22 800 |
| -27 | 144 697 | 11 | 21 819 |
| -26 | 136 894 | 12 | 20 879 |
| -25 | 129 800 | 13 | 19 986 |
| -24 | 122 646 | 14 | 19 137 |
| -23 | 116 145 | 15 | 18 300 |
| -22 | 110 025 | 16 | 17 565 |
| -21 | 104 261 | 17 | 16 839 |
| -20 | 98 930 | 18 | 16 151 |
| -19 | 93 713 | 19 | 15 500 |
| -18 | 88 888 | 20 | 14 770 |
| -17 | 84 339 | 21 | 14 168 |
| -16 | 80 047 | 22 | 13 590 |
| -15 | 76 020 | 23 | 13 039 |
| -14 | 72 174 | 24 | 12 514 |
| -13 | 68 564 | 25 | 12 000 |
| -12 | 65 153 | 26 | 11 535 |
| -11 | 61 930 | 27 | 11 079 |
| -10 | 58 880 | 28 | 10 645 |
| -9 | 56 004 | 29 | 10 231 |
| -8 | 53 280 | 30 | 9 804 |
| -7 | 50 702 | 31 | 9 460 |
| -6 | 48 263 | 32 | 9 101 |
| -5 | 45 950 | 33 | 8 759 |
| -4 | 43 769 | 34 | 8 434 |
| -3 | 41 699 | 35 | 8 054 |
| -2 | 39 739 | 36 | 7 749 |
| -1 | 37 881 | 37 | 7 456 |
| 0 | 36 130 | 38 | 7 176 |
| 1 | 34 453 | 39 | 6 909 |
| 2 | 32 871 | 40 | 6 652 |
| 3 | 31 371 | 41 | 6 408 |
| 4 | 29 948 | 42 | 6 173 |
| 5 | 28 600 | 43 | 5 947 |
| 6 | 27 317 | 44 | 5 731 |
| 7 | 26 101 | 45 | 5 522 |

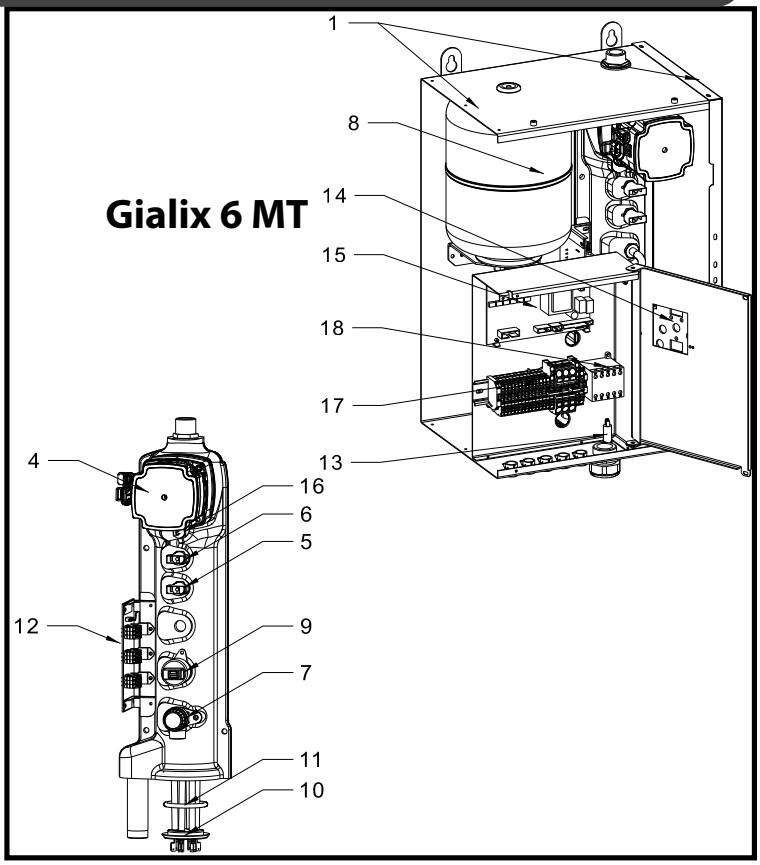
## 3.9 - List of spare parts

| Rep | Designation | Gialix 6 MT single phase | Gialix 12 MT single phase | Gialix 12 MT three phase | Gialix 16 MT three phase |
|---|---|---|---|---|---|
| 1 | Side casing | B4485012 | B4485012 | B4485012 | B4485012 |
| 2 | Front plate | B4992523 | B4992523 | B4992523 | B4992523 |
| 3 | Control panel | B1759110 | B1759110 | B1759110 | B1759110 |
| 4 | UPM3 15-70 circulator<br>UPM3 15-50 circulator | B4993978<br>B4993979 | B4993978<br>B4993979 | B4993978<br>B4993979 | B4993978<br>B4993979 |
| 5 | 60°C high temperature switch | B1239045 | B1239045 | B1239045 | B1239045 |
| 6 | 100°C high temperature switch | B1239012 | B1239012 | B1239012 | B1239012 |
| 7 | 3 bar safety valve | B1239094 | B1239094 | B1239094 | B1239094 |
| 8 | Expansion vessel | B1472710 | B1472534 | B1472534 | B1475234 |
| 9 | Water pressure switch | B1943546 | B1943546 | B1943546 | B1943546 |
| 10 | Heating element | B1243558 | B1243558 | B1244369 | B1243640 |
| 11 | Heating element seal | B1657044 | B1657044 | B1657044 | B1657044 |
| 12 | 3 triac power board | B4992299 | B4992299 | B4992299 | B4992299 |
| 13 | Fuse clip | B1243146 | B1243146 | B1243146 | B1243146 |
| *not shown* | 4 A 5x20 fuse | B1243147 | B1243147 | B1243147 | B1243147 |
| 14 | Display | B1943599 | B1943599 | B1943599 | B1943599 |
| 15 | C1 Triac electronic board | B4944260 | B4944260 | B4944260 | B4944260 |
| 16 | Boiler temperature sensor | B1243534 | B1243534 | B1243534 | B1243534 |
| *not shown* | Exterior sensor* | B1244401 | B1244401 | B1244401 | B1244401 |
| *not shown* | DHW sensor* | B1243578 | B1243578 | B1243578 | B1243578 |
| 17 | Terminal | B1244270 | B1244256 | B1244373 | B1244373 |
| *not shown* | Control wiring | B1244259 | B1244372 | B1244372 | B1244372 |
| *not shown* | Power supply wiring | B1244269 | B1244428 | B1244371 | B1244371 |
| *not shown* | Additional cable | B1244430 | - | - | - |
| 18 | Contactor | B1243561 | B1243561 | B1243561 | B1243561 |

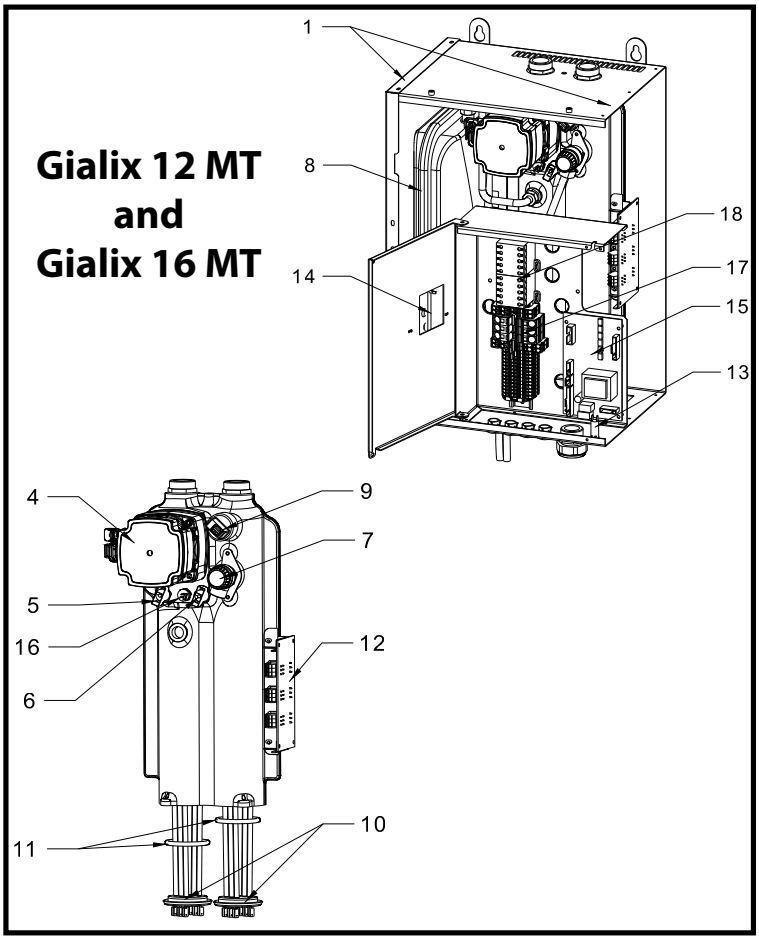
**available as optional extra for Gialix MT*




**Gialix 6 MT**




**Gialix 12 MT and Gialix 16 MT**




**Note**: Spare Parts Availability:
The spare parts of our products are kept available for 10 years, from the date of stop of mass production, except events beyond our control.

# 4 - USER

**IMPORTANT INFORMATION**

**To avoid permanently blocking the circulator and to allow for the automatic unblocking every 24 hours, it is IMPORTANT TO LEAVE THE BOILER SWITCHED ON (circuit breaker engaged) during any prolonged period of stopping (standby mode or summer mode).**

**If the circulator becomes blocked after not having followed these instruction, the warranty will be null and void.**

## 4.1 - Electronic regulation of 2 circuits

Electronic regulation is designed to control two distinct circuits:

- a 1st direct heating circuit (without mixing valve)
  - radiators or underfloor heating
  - with or without exterior sensor
  - with or without ambient temperature control

- a 2nd priority circuit for domestic hot water (DHW)
  - with DHW sensor

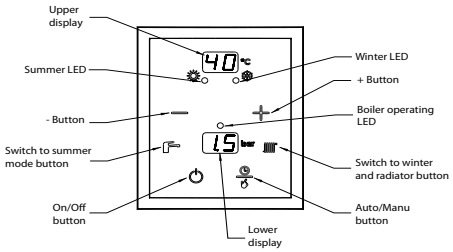
or

  - with DHW aquastat

### 4.1.1 - General functions of electronic regulation

- Operation with or without ambient temperature thermostat
- Operation with or without using the heating circulator controlled by the ambient temperature thermostat's demands
- Manual or automatic operation (with exterior sensor)
- With exterior sensor: automatic summer/winter changeover function or not
- Automatic correction of the heating curve or of the set temperature with the presence of an ambient temperature thermostat without timer or of an ambient temperature sensor.
- Management of the domestic hot water using the DHW sensor or DHW aquastat.
- With DHW sensor: Anti-legionellosis function for the domestic hot water (every 24h the DHW is raised to 65°C for 10 min.).
- Programming the maximum power of the boiler (selection of 1 to 3 power stages from 3 possible stages).
- Post-operation of the heating circulator DHW 3-way valve.
- Unblocking of the heating circulator while in summer mode.
- Frost protection of the heating and domestic hot water circuits when the boiler is stopped.
- Timer input for a lowering of the boiler's set temperature in eco mode (or in frost protection mode) or for remote load shedding of the boiler.

### 4.1.2 - Description of control panel




| Button or LED | Name | Function | |
|---|---|---|---|
| 8.8°C | Upper display screen | ➢Fixed: Display the boiler temperature in °C | |
| | | ➢Flashing: Signals a defect in the sensor connection | |
| | | The ●on the lower right of the number indicates operation in manual mode (without exterior sensor) | |
| __°C | Upper display screen | ➢Signals Frost protection | |
| 88 bars | Lower display screen | ➢Displays the pressure in bars | |
| 0.2 bars | Lower display screen | ➢Flashing: | Signals water pressure under 0.3 bars(re-engaged when over 0.5 bars) |
| | | | Signals faulty sensor code (pressure or temperature) |
| ❄ | Green LED winter mode | ➢Fixed: Signals operation in winter mode (heating + DHW) | |
| | | ➢Flashing: Signals a switch to winter mode in progress | |
| ☼ | Green LED summer mode | ➢Fixed: Signals operation in summer mode | |
| | | ➢Flashing: Signals a switch to summer mode in progress | |
| ⊕ | + button | ➢Increases the value being set | |
| | | ➢Allows the reading of the temperatures of sensors and the setting of ambient temperatures (comfort, eco, or frost protection) only with ambient temperature sensor | |
| ⊖ | - button | ➢Decreases the value being set | |
| | | ➢Allows to return to normal operation when reading the temperatures | |
| | | ➢Cancels on/off time delay for switching of heating modes | |
| ● | Red LED boiler operating | ➢Signals operation of the boiler | |
| | Radiator button | ➢Allows access to setting of the heating temperature in manual mode only | |
| | | ➢Allows to switch to winter mode (press 3 seconds) | |
| | | ➢Forcing of the circulator in standby mode | |
| | Domestic hot water button | ➢Allows access to the setting of the DHW temperature (only with DHW sensor) | |
| | | ➢Allows switch to summer mode (press for 3 seconds) | |
| Auto Manu | Auto/ Manu button | ➢Choice of operating mode manual or automatic ("automatic mode" only possible with exterior sensor) | |
| ⏻ | On/Off button | ➢Turn on or put heating and DHW circuits in frost protection | |

## 4.1.3 - Operation of the electronic regulation of 2 circuits

### 4.1.3.1 - Turning on

The upper display shows [– –], which means that the boiler is on, stopped, and in frost protection mode.

Pressing ⏻ starts the boiler.

### 4.1.3.2 - Standby mode with frost protection

When the boiler is operating, pressing on ⏻ stops the boiler and puts it in frost protection mode.

The upper display shows [– –] and the lower display is off.

When the boiler or domestic hot water temperature falls below 5°C, the boiler's and other relevant circulator pumps (domestic hot water or heating water) are engaged. When the water reaches a temperature of 35°C, the boiler is stopped.

### 4.1.3.3 - Manual or automatic operation

#### 4.1.3.3.1 - Manual operation

The user programs the desired temperature for heating water.

To operate in manual mode, the boiler must be set in consequence:

- Press Auto Manu
- Press Auto Manu again until parameter mA is displayed.
- Press on Auto Manu once more for 3 seconds to confirm the choice.

The boiler is now operating in manual mode.

**Setting the set temperature of heating**

- Press ▥, the set temperature of the boiler appears flashing on the upper display screen.
- Press ⊕ or ⊖ to increase or decrease the set temperature in the set range of TCMI to TCMA (see § «Setting the regulator»).
- Press ▥, to confirm the set temperature.

**Setting the set temperature of domestic hot water**

This setting is only possible with a DHW sensor. Otherwise it is carried out with the DHW aquastat.

- Press 🚿 the set temperature of domestic hot water appears flashing on the upper display screen.
- Press ⊕ or ⊖ to increase or decrease the set temperature within the range of 20 to 65°C.
- Press 🚿 to confirm the setting.

#### 4.1.3.3.2 - Automatic operation

**The heating water temperature is based on the exterior temperature.**

To operate in automatic mode, the Gialix boiler must be connected to an exterior sensor which is set-up in consequence:

- Simultaneously press both ⊕ and ⊖ for 3 seconds until parameter 01 appears flashing on the upper display screen.
- Press ⊕ until parameter 07 appears on the upper display screen.
- Press 🚿 or ▥, to access the settings to modify the value of the parameter. This value appears flashing on the lower display screen.
- Press ⊕ or ⊖ to enter the value 01 on the lower display screen.
- Press 🚿 or ▥ to confirm the parameter settings.
- Simultaneously press ⊕ and ⊖ for 3 seconds to exit settings.

Check that the boiler is set to operate in automatic mode.

- Press Auto Manu .
- Press Auto Manu again until parameter Au is displayed.
- Press on Auto Manu once more for 3 seconds to confirm the choice.

The boiler is now operating in automatic mode.

### 4.1.3.4 - Manual operation - SUMMER or WINTER

#### 4.1.3.4.1 - SUMMER mode operation

- Press 🚿 for 3 seconds.
- The green LED for Summer mode will turn on.

In Summer mode, only the domestic hot water function is provided. Every 24 hours, the pump will run for 1 minute to prevent blocking of the circulator.

#### 4.1.3.4.2 - WINTER mode operation

- Press ▥ for 3 seconds.
- The green LED for Winter mode will turn on.

### 4.1.3.5 - How to set your heating

If your boiler is set for automatic operation, this function is not available.

Set your boiler in manual mode to adjust your heating settings.

Then:

- Press ▥, the boiler's set temperature is displayed flashing on the upper display screen.
- Press ⊕ or ⊖ to set the desired heating temperature.
- Press ▥ to confirm the new heating temperature and to return to the normal boiler display screen (Temperature of outgoing heating water shown on the upper display screen and pressure in bars on the lower display screen).

### 4.1.3.6 - How to set the temperature of domestic hot water

This setting is only possible with a DHW sensor. Otherwise, it is carried out with the DHW aquastat.

- Press the domestic hot water temperature appears flashing on the upper display screen.
- Press ⊕ or ⊖ to increase or decrease the set temperature within the range of 20 to 65°C.
- Press to confirm the setting.

### 4.1.4 - •Temperature readings • Status of connected aquastats or thermostats

During normal operation the boiler's temperature is shown on the upper display screen.

The readings below are possible if parameters 04, 06, 07 and 12 are set at 01 (see § «List of parameters»).

| Desired value | Button to press | Parameter displayed on upper screen | Value displayed on lower screen | Unit/ Signification |
|---|---|---|---|---|
| Status of ambient temperature thermostat | ⊕ | TA | 00<br>01 | not requested<br>requested |
| Boiler temperature | ⊕ | CC | 72 | |
| Correction of the heating curve | ⊕ | AU | 03<br>*example* | °K<br>If the dot at the bottom right of the value lights up, the value is a negative temperature |
| Exterior temperature | ⊕ | SE | 05<br>*example* | °C<br>If the dot at the bottom right of the value lights up, the value is a negative temperature |
| Timer input | ⊕ | HR | 00<br>01 | Timer contact open<br>TImer contact closed |
| DHW temperature sensor or Status of DHW aquastat | ⊕ | SS<br>TS | 60<br>*example*<br>00<br>01 | °C<br>Not requested<br>requested |
| Status of 1st stage | ⊕ | T1 | 00<br>01 | not engaged<br>engaged |
| Status of 2nd stage | ⊕ | T2 | 00<br>01 | not engaged<br>engaged |
| Status of 3rd stage | ⊕ | T3 | 00<br>01 | not engaged<br>engaged |

# 5 - WARRANTY

- The tank is guaranteed against breakage for a period of **twenty (20) years** (for the cast iron heating body) and for **three (3) years** (for the steel heating body). The start date of the warranty is the date of activation of the appliance if the warranty form was returned to the manufacturer. In the absence of this document, the date of manufacture will be used to determine the start date of warranty. If the tank is broken, the whole appliance will be replaced.

- The spare parts (see list included in this document) are guaranteed for a period of **two (2) years** starting from the date of activation of the appliance if the warranty form was returned to the manufacturer. In the absence of this document, the date of manufacture will be used to determine the start date of warranty.

The appliance is guaranteed against all manufacturing defects, provided that it was installed by a qualified professional using the instruction manuals, the C 15-100 standard governing electrical connections, and the hydraulic DTU 60-1 addendum 4 for domestic hot water.

A defective part does not warrant the whole appliance being replaced.

The warranty is limited to parts which we identify as being defective due to manufacturer defect.

If necessary, the part or product should be returned to the manufacturer but only with prior agreement from the manufacturer's technical department. Labour, transport, and packaging costs are the responsibility of the user. Repairs on a device will not result in compensation.

The warranty on any replacement part(s) ends at the same time as the warranty for the appliance.

The warranty only applies to the appliance and its components, and excludes any part or installation external to the appliance: electric or hydraulic.

The warranty will not apply in the absence of, or improper maintenance of the appliance.

Regular maintenance of the appliance by a trained professional is essential for ensuring sustained use and durability. In the absence of regular maintenance the warranty will not apply.

If an appliance is presumed to have been the cause of any damage, the appliance and the damage must be left as they are and not tampered with until an inspection can be carried out.

## 5.1 - Limitations of warranty

### 5.1.1 - General information

The warranty does not apply to defects or damage caused by situations or events such as:

- Misuse (other than domestic use), abuse, negligence, improper handling or storage.
- Incorrect installation or installation which has been carried out according to the installation manual and user guide.
- Insufficient maintenance.
- Modifications or changes carried out on the appliance.
- Impacts from foreign objects, fire, earthquakes, floods, lightning, ice, hailstones, hurricanes, or any other natural disaster.
- Movement, imbalance, collapse or settling of the ground or of the structure where the appliance is installed.
- Any other damage which is not due to defects in the product.

**The boiler** is not guaranteed against:
- Variations in the colour of the appliance or damage caused by air pollution, exposure to chemical products, or changes brought about by adverse weather conditions.
- Dirt, rust, grease, or stains which occur on the surface of the appliance.

### 5.1.2 - Cases (not limited to) for exclusion from warranty

#### 5.1.2.1 - Use

Cases (not limited to) for exclusion from warranty:

- The water supply being other than domestic cold water, (such as rainwater or well water), or domestic cold water which has particularly hostile or abnormal properties which do not comply with the national regulations and current standards in effect.
- The appliance being switched on without first being filled with water (heating when empty).
- Lack of water or improper purging of the appliance.
- Presence of sludge or other foreign particles in the water.

#### 5.1.2.2 - Handling

Cases (not limited to) for exclusion from warranty:

- Any damage sustained by impacts of falls during handling after delivery from the factory.
- Deterioration in the condition of the appliance after handling where the instructions in the manual have not been followed.

#### 5.1.2.3 - Placement

Cases (not limited to) for exclusion from warranty:

- Placing the appliance where it can be subject to frost or other adverse weather conditions.
- Non-compliance with the instructions in the manual when installing the appliance.
- Installing the appliance on a surface which cannot bear its weight when filled with water.

Costs incurred by access difficulties are not the manufacturer's responsibility.

#### 5.1.2.4 - Electrical connections

Cases (not limited to) for exclusion from warranty:

- Faulty electrical connection which does not comply with the current national installation standards.
- Not following the schematic diagrams for connection in the instruction manual.
- Power supply being significantly over- or under- the required voltage.
- Failure to comply with the supply cable standards.
- Absence of, or insufficient electrical protection throughout the appliance (fuses / circuit breaker, grounding...).
- Damage which results from deactivating the safety aquastat, or from not installing the appropriate aquastat for an underfloor heating circuit.

#### 5.1.2.5 - Hydraulic connections

Cases (not limited to) for exclusion from warranty :

- Reversing the inlet/outlet connections.
- Water pressure over 3 bar.
- Absence of, improper mounting of, or obstruction of pressure-relief valves.
- Installation which does not comply with the instructions provided in the installer manual.

#### 5.1.2.6 - Accessories

The warranty does not cover defects resulting from:

- Installation of accessories which do not comply with manufacturer recommendations.
- Use of accessories other than those provided by the manufacturer.

#### 5.1.2.7 - Maintenance

Cases (not limited to) for exclusion from warranty:

- Not maintaining the appliance.
- Abnormal levels of limescale on the heating elements and/or safety devices.
- Not using parts supplied by the manufacturer.
- The protective outer casing being subjected to any external damage.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