

Connect BASE MIX 1 conforms to:

- Low Voltage Directive 73/23/EEC
- Electromagnetic Compatibility Directive 89/336/EEC



## CONNECT BASE MIX 1

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This instruction manual is an integral part of the manual for the boiler to which the Connect BASE unit is connected. See the latter manual for GENERAL WARNINGS and BASIC SAFETY RULES and other specific information on the functioning of the boiler.

The following symbols are used at some points in the manual:



**WARNING** – for actions that call for particular caution and adequate training.



**FORBIDDEN** – for actions that **MUST NOT** be carried out under any circumstances

## WARNINGS FOR THE USER:


This device does not require any setting or checking by the user.


Opening the front cover on the device is therefore forbidden.


Check the water pressure in the system from time to time. If necessary, alter the pressure as indicated in the instruction manual.


If the pressure drops frequently, call in professionally trained personnel to check the status of your system.


## WARNINGS AND SAFETY DEVICES


 The boilers made in our factories are all built with care being taken over each individual component in order to protect both the user and the installer from any accidents. We therefore urge trained personnel to be particularly careful with the electrical connections on completion of each job done on the product, especially as far as the bare parts of the conductors are concerned. These must not stick out of the terminal board in any way, so as to avoid any possibility of contact with live parts of the conductor itself.


 Both this instruction manual and the user's manual are an integral part of the product. Make sure that they always remain with the machine, even if it is sold to another owner or user, or if it is transferred to another plant. If it should get damaged or lost, ask your local Technical Assistance Service for another copy.


 Installing the boiler and any other assistance and maintenance work must be carried out by qualified personnel in compliance with the relevant laws and current standards.

 We recommend that the installer instruct the user on how the equipment works and on basic safety standards.

 The boiler must only be used for the purposes for which it was expressly made. The manufacturer does not accept any contractual or extra-contractual responsibility for any damage caused to people, animals, or property, due to incorrect installation, setting, or maintenance, or due to improper use.


 On removing thè packing, check the integrity and completeness of the contents. Should any discrepancies be found, contact the dealer that sold you the equipment.


 The drain from the equipment's safety valve must be connected to an adequate collection and removal system. The manufacturer of this equipment is not responsible for any damage caused by the safety valve opening.


 During installation the user must be informed that:


- Should any water flow out, they are to shut off the water supply and contact the Technical Assistance Service immediately.
- The working pressure for the plumbing system must be between 1 and 2 bar, and must not exceed 3 bar. Where necessary, professionally qualified personnel from the Technical Assistance Service must be called in.
- If the boiler is not to be used for a lengthy period of time, we recommend calling in the Technical Assistance Service to carry out the following operations:
  - Switch the main switch for the equipment and the main switch for the entire plant to "off".
  - Close the taps on the water and the fuel supplies, for both the heating and the hot water systems.
  - Empty the heating and hot water systems if there is any risk of freezing.
- Maintenance must be carried out on the boiler at least once a year, and appointments must be made timeously with the Technical Assistance Service.


For your safety, remember that:


 The boiler should not be used by children or people that are unable to use it properly.


 It is dangerous to activate devices or electrical equipment such as switches, domestic appliances, etc. if you smell any fuel or burning.


 Should a gas leak occur, ventilate the room by opening the doors and windows, shut the main gas valve, call in professionally qualified personnel from the Technical Assistance service immediately.


 Do not touch the boiler when barefoot or when parts of your body are wet or damp.


 Before cleaning, disconnect the boiler from the electricity mains by switching the bi-pole switch for the plant and the main switch on the control panel to "OFF".

 Any modifications to the safety and regulating devices without prior authorisation or instructions from the manufacturer are forbidden.

 Do not pull on, disconnect, or twist the electrical cables that come from the boiler, even when it is disconnected from the electricity mains.

 Do not block up or reduce the size of ventilation openings in the room in which the unit is installed.

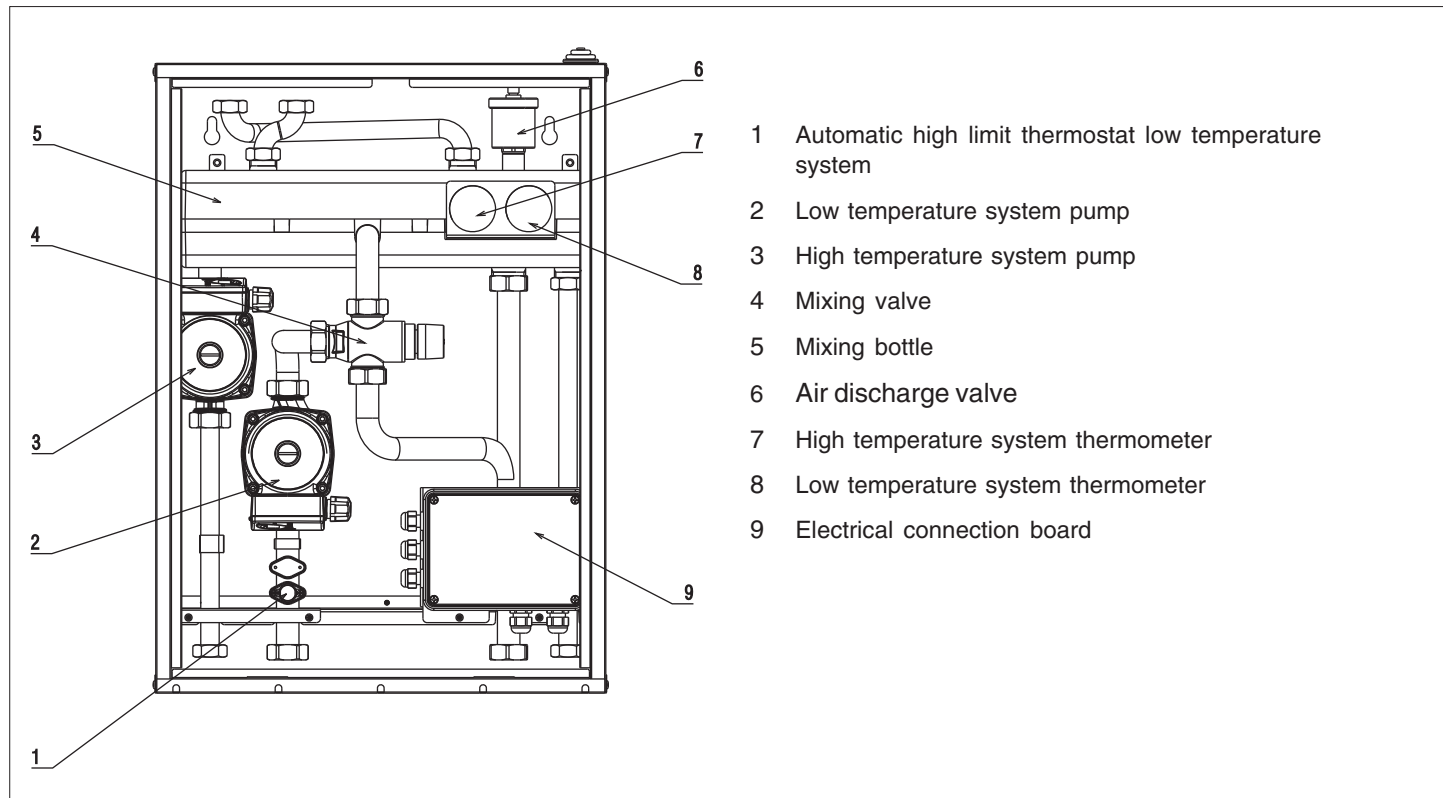
 Do not leave containers or inflammable substances in the room in which the equipment is installed.

 Do not leave any part of the packing within reach of children.

## DESCRIPTION OF THE EQUIPMENT

The Connect BASE is a water separator that is to be used with every boilers, where it separates the water in the generator and in the plant, when the latter is characterised by high flow rates that exceed those developed by the generator itself.

It can also be used to manage mixed low and high temperature heating systems (radiators / fan coils and radiant panels). The Connect BASE unit can be built into the wall, thereby avoiding any protrusion, or it can be wall-mounted.

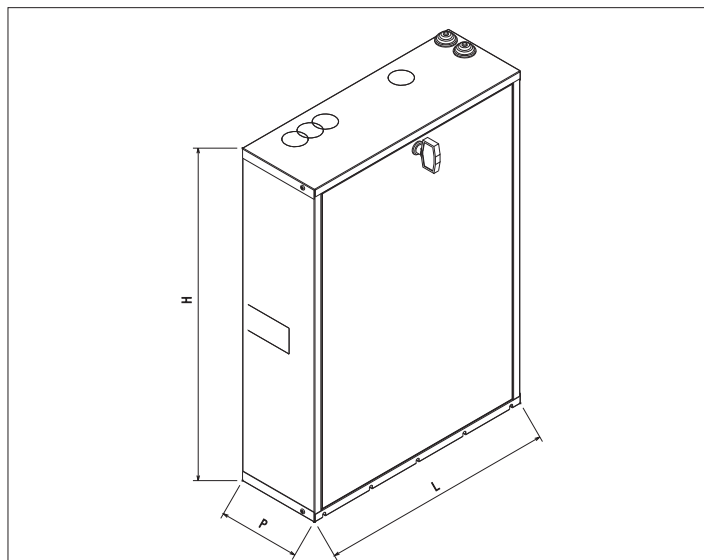


## TECHNICAL DATA

Electrical power supply	230(±10%)-50	V-Hz
Maximum power absorbed by the Connect BASE	220	W
Temperature range for the mix valve	20 ÷ 60	°C
Working temperature	0 ÷ +90	°C
Electrical protection level wall-mounted installation	IP10D	
Electrical protection level "built-in" installation	IPX4D	
Maximum pressure	3	bar

## DIMENSIONS AND WEIGHT

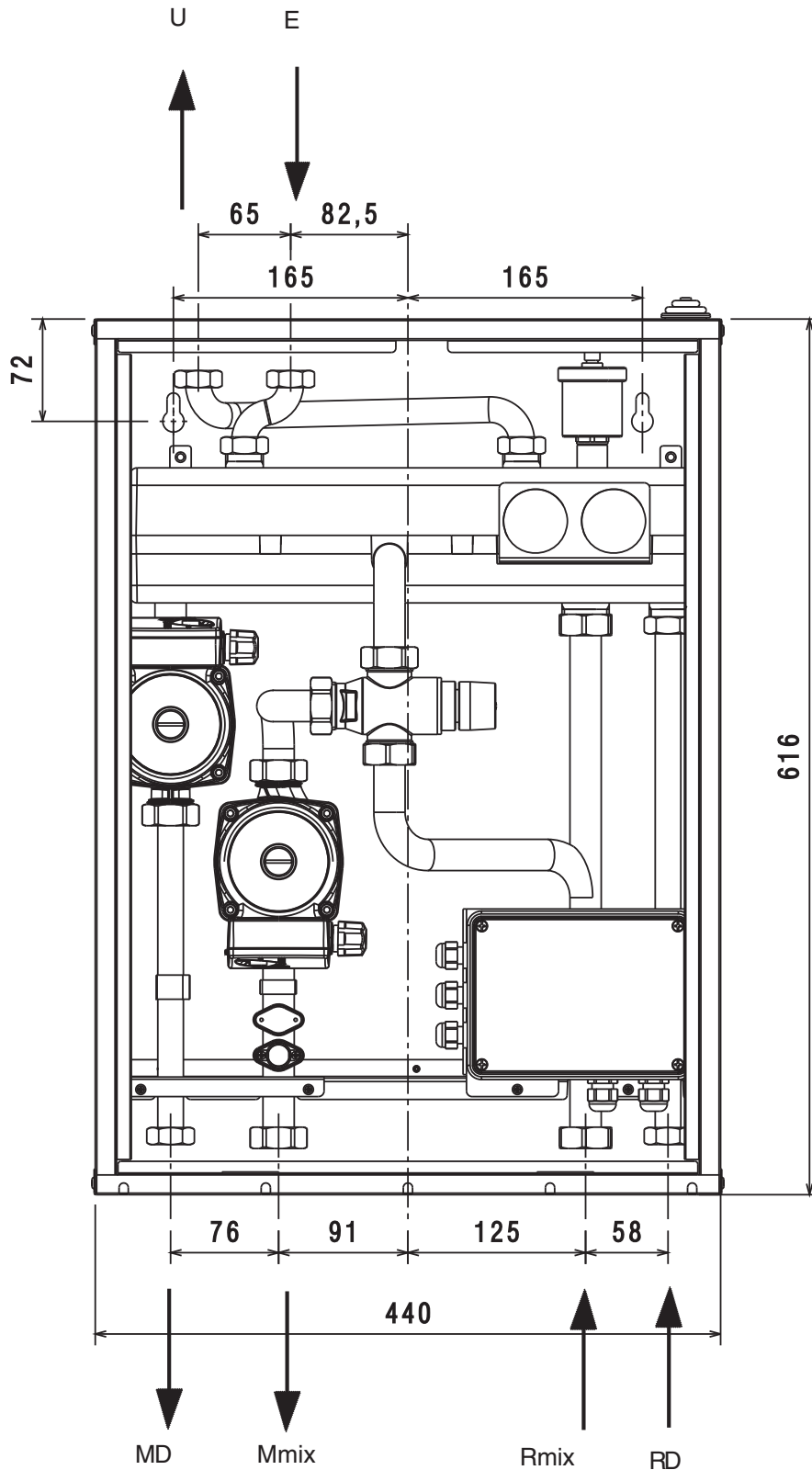
DESCRIPTION		
L	440	mm
P	160	mm
H	616	mm
NET WEIGHT	16	Kg



# HYDRAULIC CIRCUIT

- E - Inlet (3/4")
- U - Outlet (3/4")
- MD - Delivery, direct system (3/4")
- Mmix - Delivery, mixed system (1")
- Rmix - Return, mixed system (1")
- RD - Return, direct system (3/4")

⚠ The maximum length of plumbing connections between the boiler and the Connect AT/BT unit must not exceed 15 m.



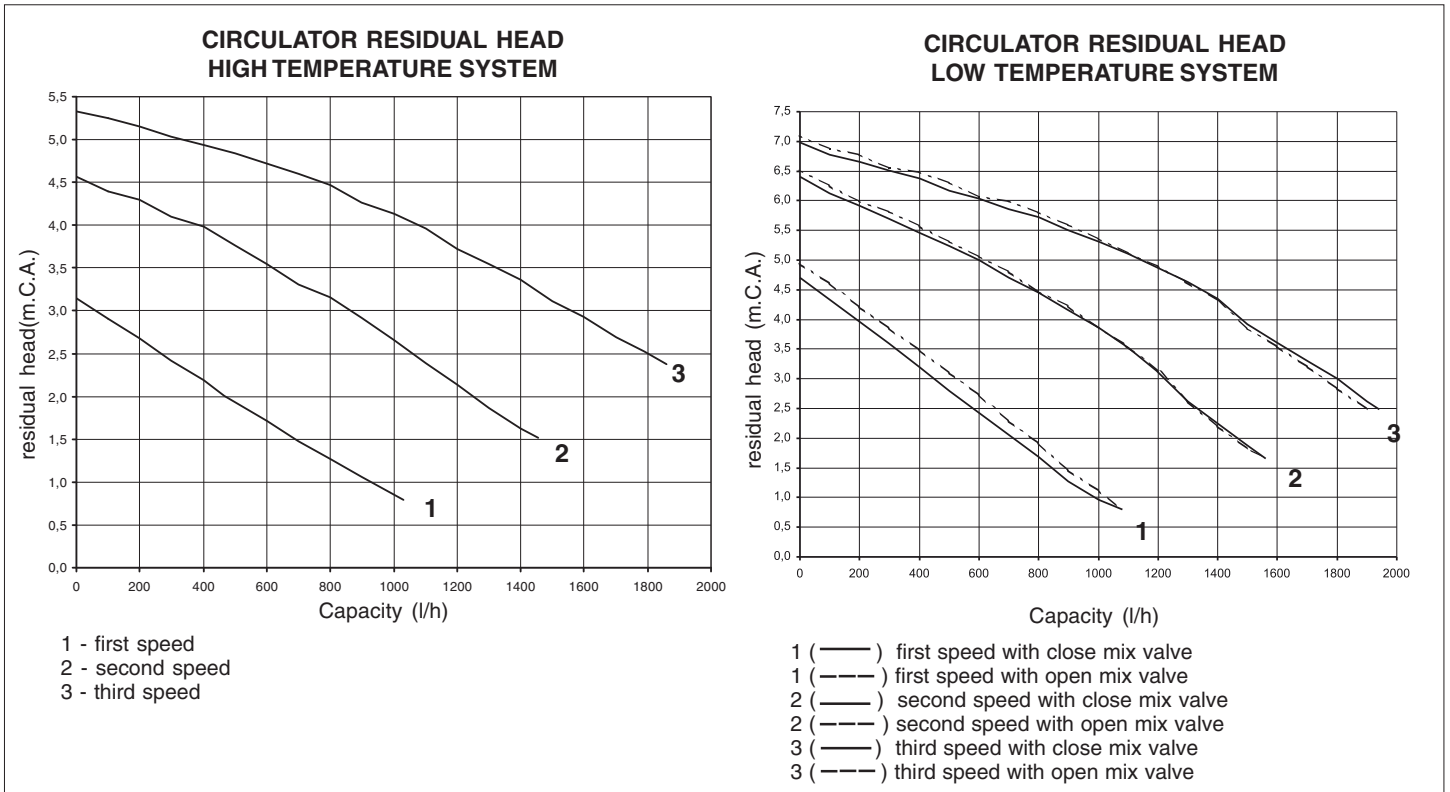
## CIRCULATION UNIT

The Connect BASE is fitted with two circulation units, the performance data to be used to size the system, is shown in the graph.

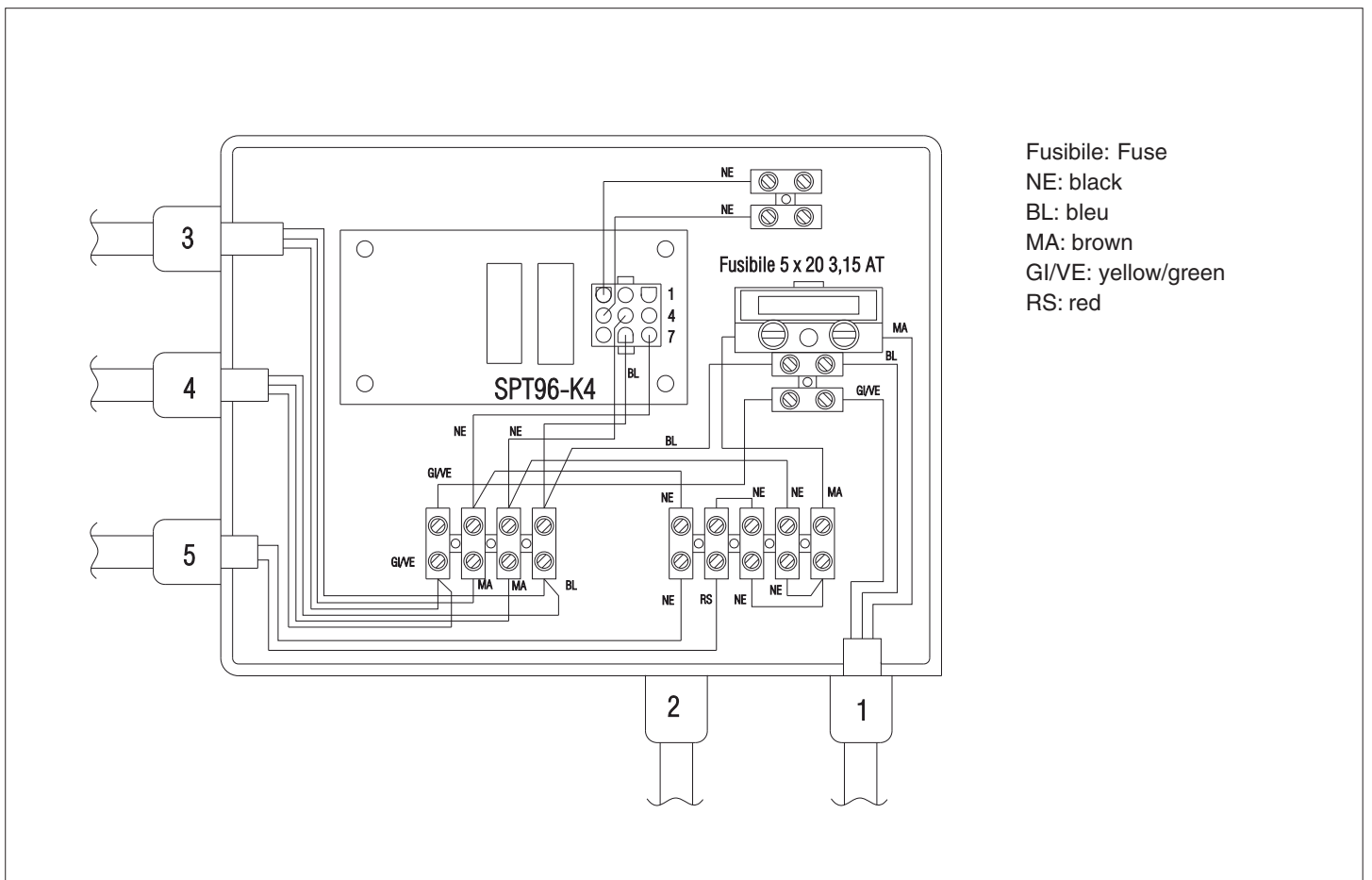
⚠ When starting up for the first time, and at least once a year, it is advisable to check the pump units shaft rotate. This is necessary because, especially after lengthy periods of inactivity, deposits and/or residue may stop it rotating freely.

⚠ Do not run the circulation units without water.

⚠ Where present in low system flo regulator devices (thermostatic electrical or motorized zone valves) it is better to inster a by pass on the low temperature system collector.



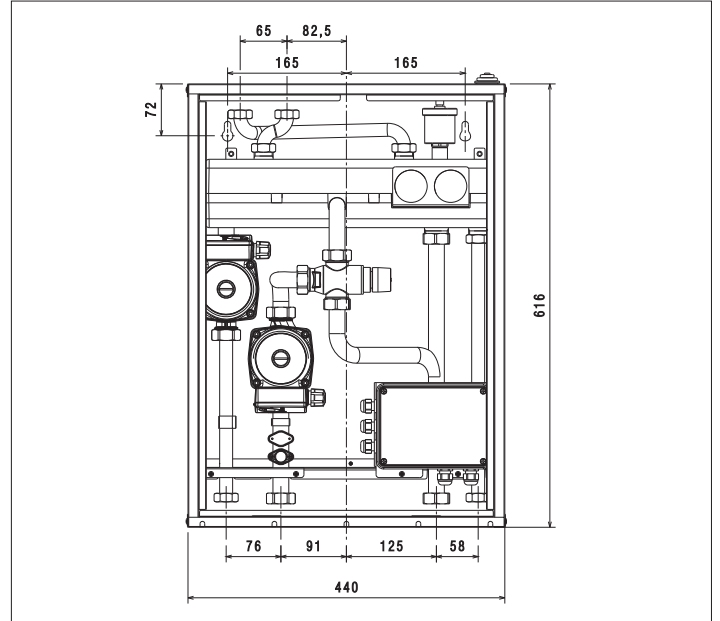
## WIRING DIAGRAMS



## INSTALLATION OF THE APPLIANCE

The Connect BASE can be wall-mounted or “built-in”, and can be located near the boiler or at a distance, provided the length of the plumbing and electrical connections between the boiler and the Connect BASE unit do not exceed 15 metres.

The Connect BASE can be installed in positions exposed to the weather (rain, sun, ice, etc.) only if in “built-in” installation.



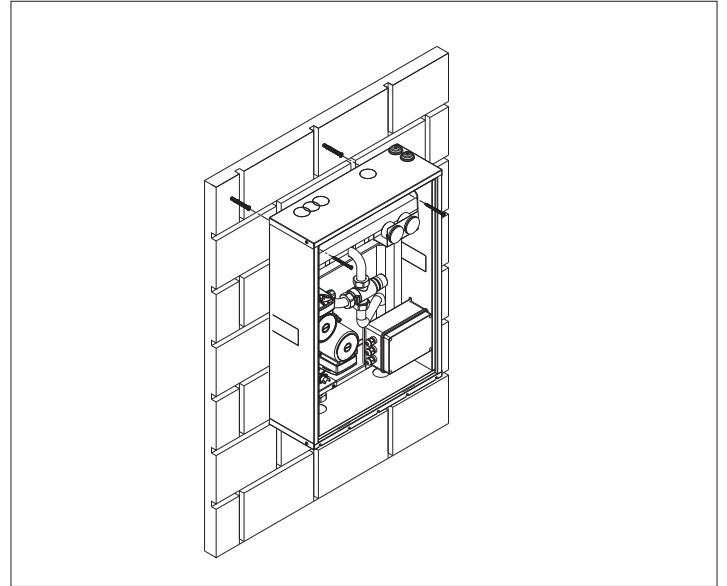
### Wall-mounted installation

When the Connect BASE is wall-mounted it must be supported by two expanding wall anchors (supplied) that are suitable for the type of wall and weight of the equipment.

We recommend using pipe sleeves built into the wall in order to limit the infiltration of water.

These pipe sleeves are not supplied with the unit.

Electrical protection level IP10D.



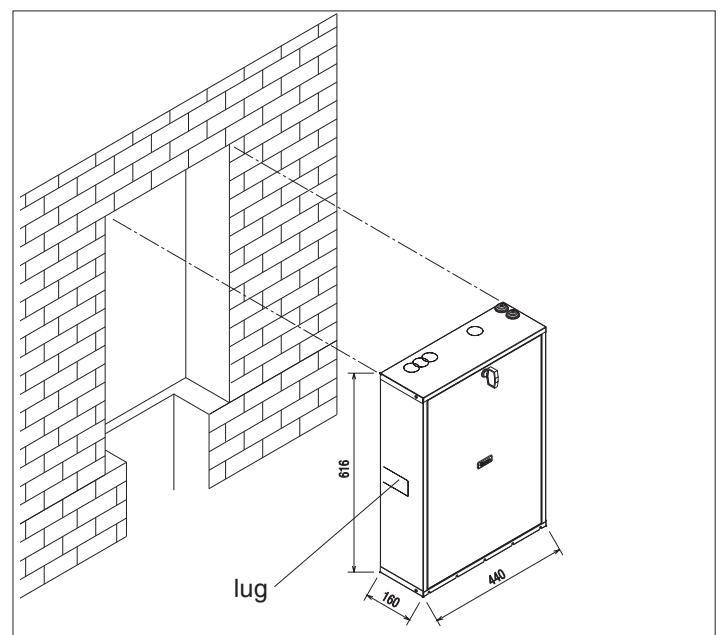
### “Built-in” installation

When the Connect BASE unit is built-in:

- Provide the building work, complete with a niche of suitable size for the Connect BASE, to suit the thickness of the wall (minimum indicative dimensions shown in the figure).
- Position the Connect BASE in position, and remember to open out the two support lugs to fix it more securely.
- Protect the side edges and front while building in the device.

Since the plumbing and electrical connections between the system and the Connect BASE must be contained within the overall size of the device itself, first position the Connect BASE and then the entry and exit pipes for the system and the conduiting for the electric cables.

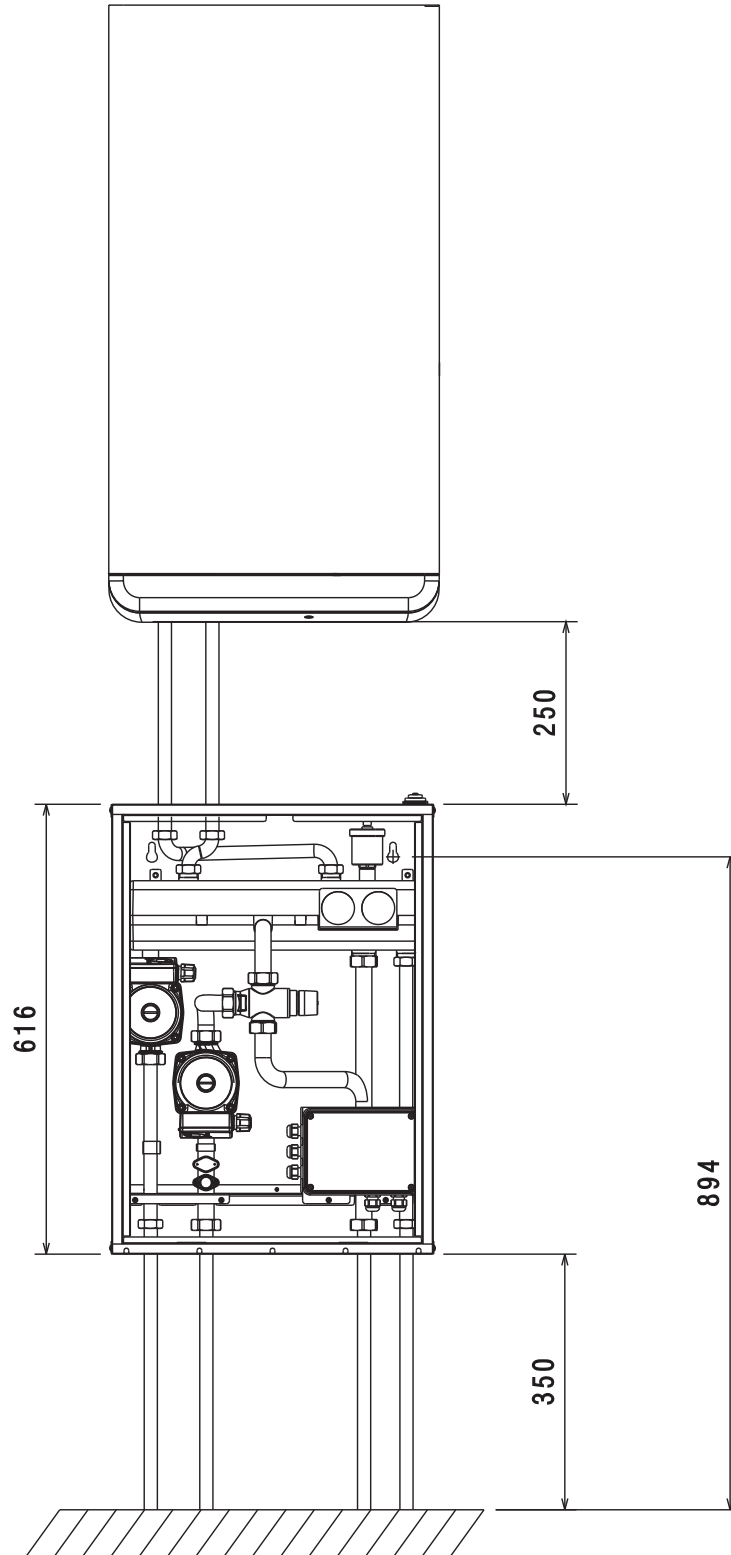
Electrical protection level IPX4D.



## TYPICAL INSTALLATION LAYOUT

The figure alongside shows a possible way of installing the Connect BASE.

**NOTE:** To allow for installing taps (not supplied) a niche must be formed of sufficient size to allow them to be fitted below the Connect BASE itself.




## HYDRAULIC CONNECTIONS

Before forming the connections all the piping must be thoroughly flushed to remove any residue that could compromise the proper functioning of the Connect BASE.

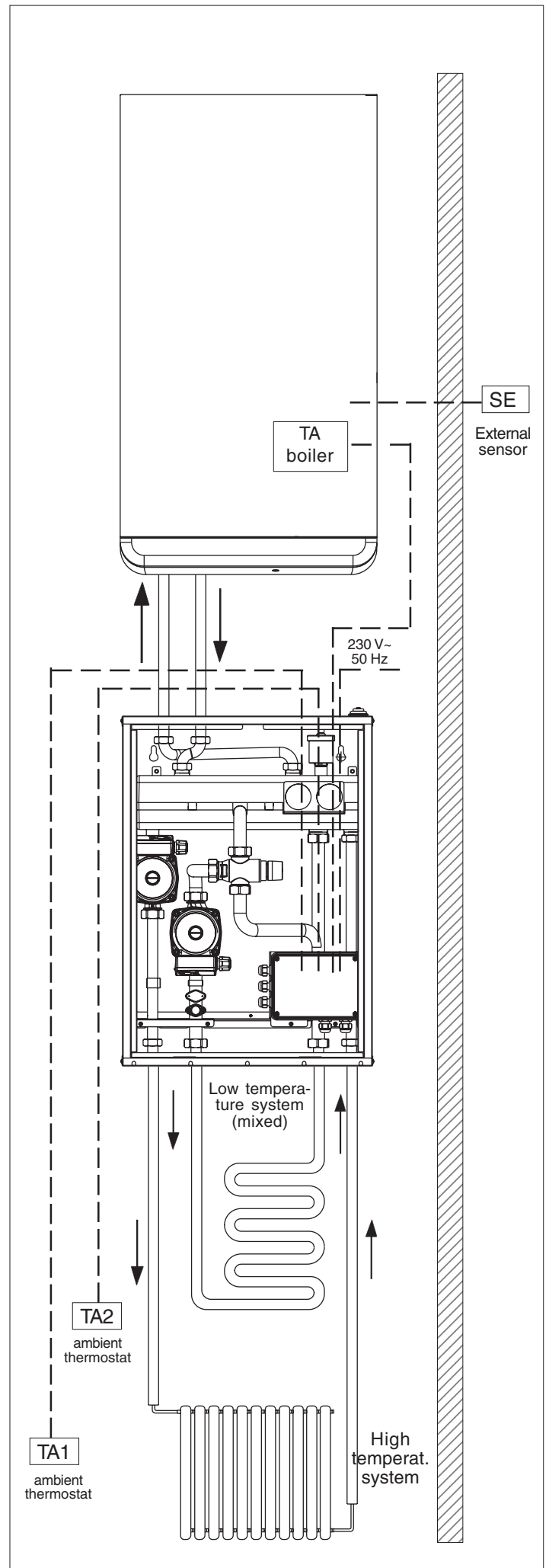
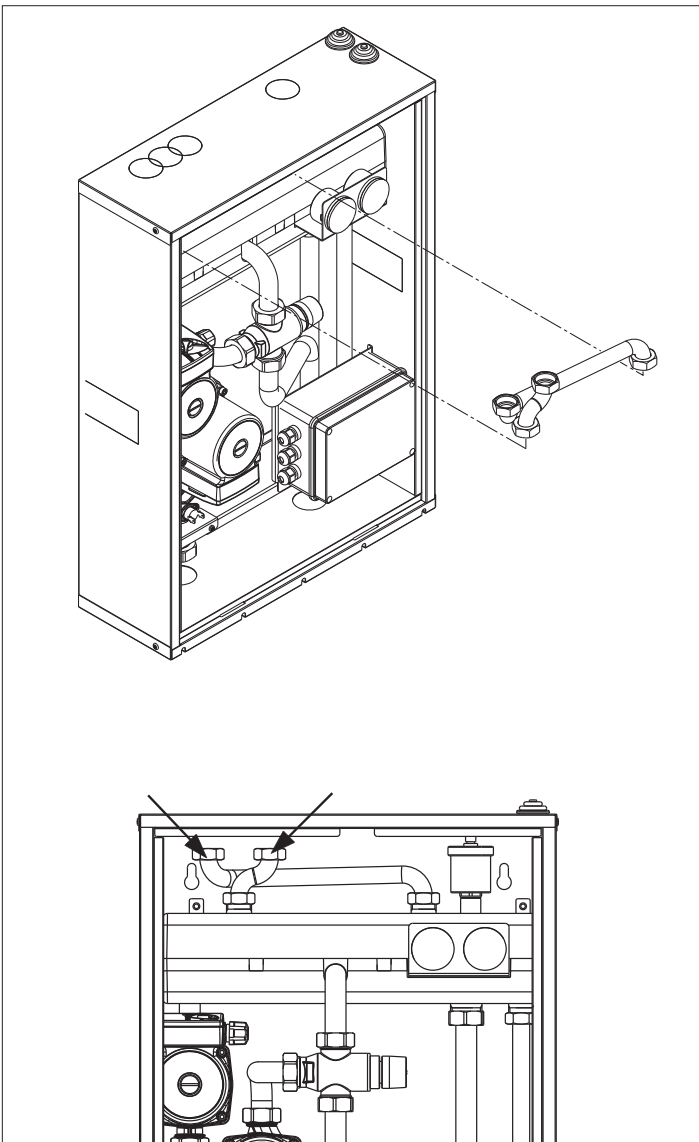
The plumbing connections to the boiler and the system must be carried out rationally, as indicated in the figure.

Direct connections can be formed using the female couplings on the delivery and return pipes for the Connect BASE, or taps (not supplied) can be fitted on the lines for shutting off the lines.

These taps are very useful when maintenance is carried out, as they allow the Connect BASE to be drained without having to drain the entire system.

 Check that the expansion vessel on the boiler has sufficient capacity for the size of the system.

Once the Connect BASE has been installed, the 2 ramps supplied (along with their seals) that interface with the boiler centres (see drawing) must be fitted inside the Connect BASE.





## ELECTRIC CONNECTIONS

To form the electrical connections for the Connect BASE, access must be obtained to the Connect BASE and the boiler card.

To gain access to the Connect BASE:

- Remove the front cover panel from the Connect BASE (fig. 1).

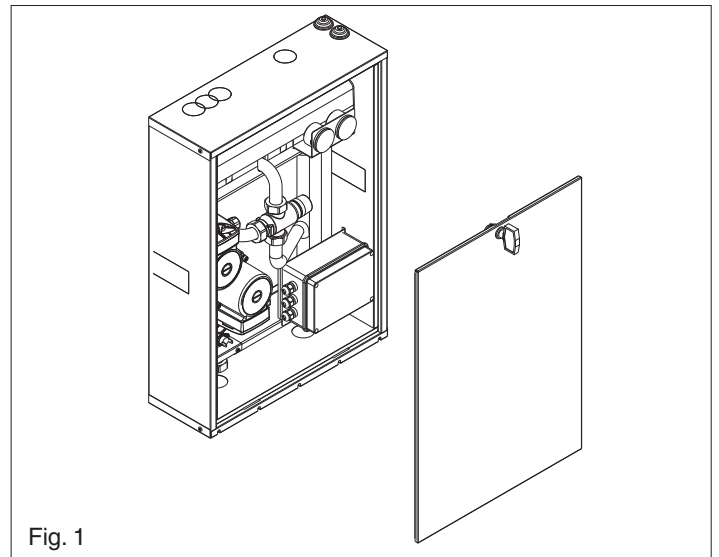


Fig. 1

### CONNECTING THE CONNECT BASE TO THE ELECTRICITY MAINS

Connect BASE unit to the electricity mains (phase /neutral / earth) using the cable supplied.

- ⚠ Drawing the power supply for the Connect AT/BT from the boiler is absolutely forbidden as the boiler's fuse is not sized to take the electrical loads associated with the Connect AT/BT.

### CONNECTING THE AMBIENT THERMOSTATS (TA)

The TAs for the low and high temperature system must be directly connected to the CONNECT BASE (fig. 2) using a cable with minimum section 1 mm<sup>2</sup>. H2 - Low, H1 - High C - Common.

The pump power load will be directly supported by the related TA, therefore the TA connection must be adequately designed for this application and compatible with the electrical features of the pumps (it is recommended not lower than 230 Vac 50 Hz 6A).

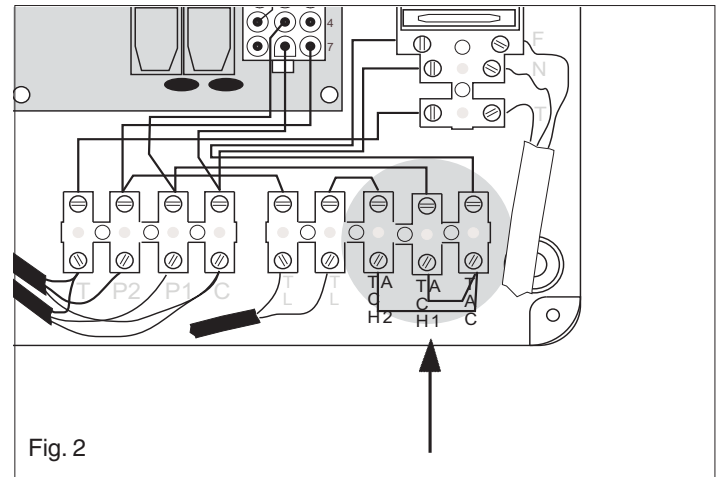


Fig. 2

### CONNECT BASE CONNECTION TO THE BOILER

Connect the Connect BASE socket B-B (fig. 3) to boiler TA socket using a min 2x0,5 mm<sup>2</sup> cable (refer to the electric diagram on the boiler instruction manual). Connection 24V.

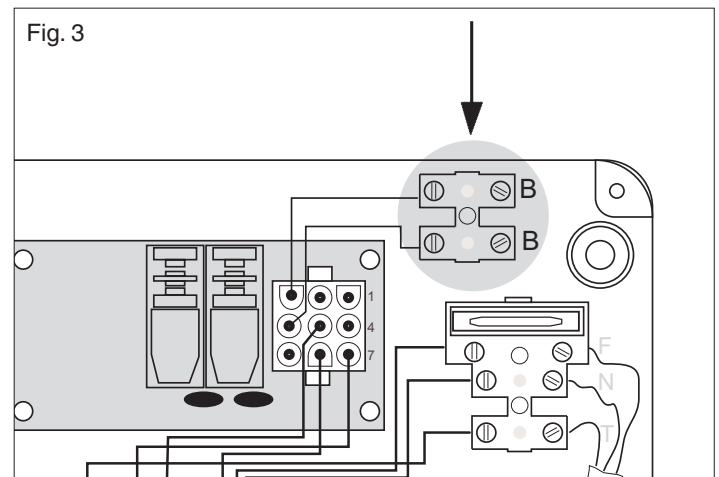


Fig. 3

- ⚠ When using a phase-phase power supply, use a tester to determine which of the two wires has the greater potential compared to the earth and connect it to the L terminal. Connect the remaining wire to the N terminal.

- ⚠ For floating power supplies, that is, those that have no earth connection, an insulation transformer must be used, with a secondary unit connected to the earth.

- ⚠ The following are obligatory:
  - A multi-pole trip-switch must be used to disconnect the line, that conforms to the CEI-EN standards (contact opening at least 3 mm).
  - Use cables with a 1,5 mm<sup>2</sup> section and respect the L (Phase)

- N (Neutral) connection.
- The amperage on the switch must be adequate for the boiler's electrical power rating – see the technical data to check the electrical power rating for the model installed.
- Connect the equipment to an efficient earthing system.
- The power socket must be inaccessible after installation.

- ⊘ The use of gas or water pipes to earth this equipment is forbidden.

- ⚠ The manufacturer does not accept any responsibility for any damage caused due to the lack of a proper earth or failure to comply with the wiring diagram.

## FIRST STARTING UP

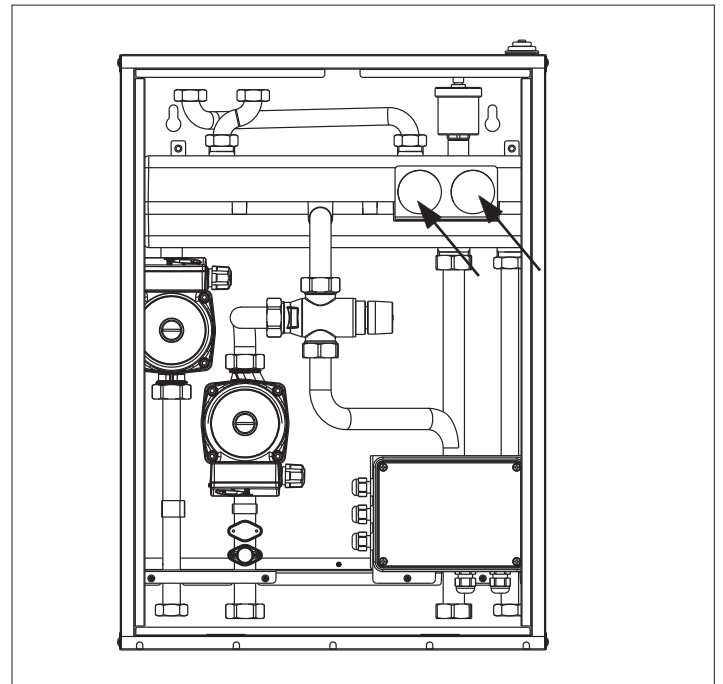
Before switching the Connect BASE on, check that the electrical and plumbing connections have been formed correctly.  
During testing, the temperatures can be checked due to the two thermometers shown in the figure.

## CIRCULATION PUMPS

The Connect BASE is supplied with circulation units with a three-speed control.  
Choose the best speed to suit the specific characteristics of the systems.

### RELEASING THE PUMPS IF NECESSARY

If the unit has been inactive for a lengthy period of time and the circulation units are stuck, unscrew the caps on the front and turn the shaft for the circulation unit motor using a screwdriver.  
Do this extremely carefully so as not to damage the components themselves.



## LOW TEMPERATURE APPLIANCE SETTING

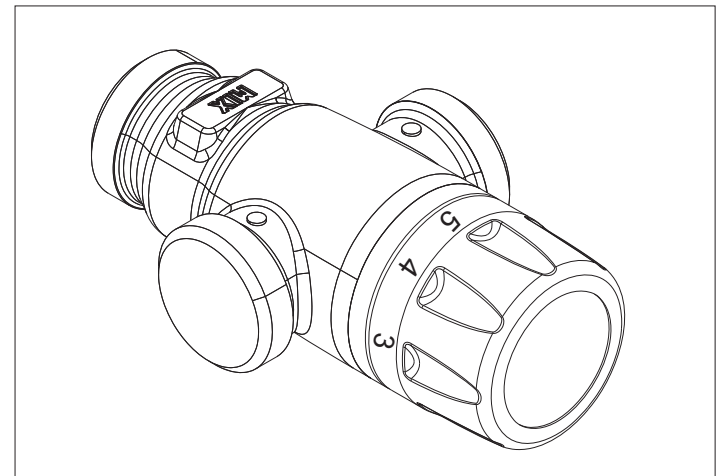
Fix low appliance's flow temperature regulating the mix valve manually referring to the following table :

POS	MIN	1	2	3	4	5	6	7	MAX
T (°C)	20	25	30	35	40	45	50	55	60

Ref. with inlet mix valve temperature= 80°C

## HIGH TEMPERATURE APPLIANCE SETTING

Fix the boiler central heating knob to the high temperature appliance desired value.



## CHECKS AFTER INSTALLATION

- Check that the heating system is pressurised.
- Check that the main switch for the plant works.
- Check the plumbing circuits for leaks.
- Check that the plumbing and electrical connections are correct.
- To call for heat from a mixed system, check that the mixing valve opens and closes correctly.

If even one of these checks provides a negative result, the system must not be started up.

## CLEANING

Before cleaning the Connect BASE in any way disconnect the mains power supply by switching the main switch to "OFF".  
The panels must be cleaned with a cloth, using soap and water.  
If stubborn stains are found, use a cloth with a 50% water and denatured alcohol mixture, or use specific products.  
Once cleaning is complete, dry carefully.  
Do not use abrasive products, benzene, or trichloroethylene.