



**Installation - Maintenance – Operation**  
**(IU-0010-EN-201202)**

**ELECTRIC HOT WATER BOILER  
FOR CENTRAL HEATING**

**ENERGIS**

## **SUMMARY**

<b>WARNING .....</b>	<b>3</b>
<b>WARRANTY .....</b>	<b>4</b>
<b>GENERAL INFORMATION.....</b>	<b>5</b>
<b>CHARACTERISTICS.....</b>	<b>6</b>
<b>INSTALLATION.....</b>	<b>10</b>
<b>CONTROLLER .....</b>	<b>13</b>
<b>WEB SERVER .....</b>	<b>18</b>
<b>USE AND MAINTENANCE ADVICE .....</b>	<b>19</b>
<b>DECLARATION OF CONFORMITY.....</b>	<b>20</b>
<b>CERTIFICATE OF HYDRAULIC TESTING.....</b>	<b>21</b>



## **WARNING!**

Note concerning the elaboration and publication of this manual:

This manual was elaborated and published under the direction of LACAZE ENERGIES.

It covers the most recent features and descriptions of the products.

The manual content and the products features may be modified without prior notice.

The company LACAZE ENERGIES reserves the right to modify without prior notice the features and elements contained in the following pages. The company LACAZE ENERGIES will not be responsible for any damage (including consecutive damage) caused by reliance on the presented elements. This includes, but is not limited to, typing mistakes and other errors linked to the publication.

© LACAZE ENERGIES

### ***Please read carefully.***

- This instruction manual is an integral part of the product and must be given to the final user.
- The appliance was manufactured for the production of hot water, used in closed circuit. Any other use shall be considered as inappropriate and dangerous.
- The appliance must not be installed in humid locations (H.R.  $\leq$  80%). Protect the appliance from water or other liquid splashes to prevent damage to the components.
- The installation must be carried out in conformity with the rules, regulations and standards currently in force, respecting the instructions of the manufacturer, by a qualified professional.
- In the case of the equipment being sold or transferred to another user, this manual must accompany the equipment, so that the new user can consult it.
- If the equipment is not being used, during a period of below-freezing conditions, it should be entirely drained. The manufacturer will not be responsible for any damage due to frost.
- We recommend that these instructions be read carefully, and advise the exclusive use of spare parts supplied by the manufacturer, in order to get the best service from the product and the acknowledgement of the appliance warranty.

## WARRANTY

LACAZE ENERGIES guarantees that the tank of the boiler will be leak free for **two (2)** years from the date of purchase of the appliance. The warranty is in force for as long as the purchaser is the owner of the appliance. In the case where a leak due to a fault in manufacture or materials occurs during the warranty period, this must be certified by an authorized representative of LACAZE ENERGIES, who will repair or replace the defective unit with the most similar device or appliance available at the time of replacement.

The owner of the appliance is responsible for all costs of collection and reinstallation, transport and handling for return to and from the manufacturer during the warranty period.

Electrical material and accessories are guaranteed for **one (1)** year against manufacture or material defects.

### Warranty exclusions

This warranty is invalid in case of:

- Vice or malfunctioning resulting from installation, repair, maintenance or operation not in conformity with the directives given in the operating manual;
- Vice or malfunctioning resulting from installation, repair, maintenance or operation not in conformity with the regulations in force;
- Vice or malfunctioning resulting from negligent installation, repair, maintenance or operation or as a result of breakage caused by the owner (incorrect maintenance, bad usage, accident or modification);
- Installation without safety valve, or with a defective or under dimensioned valve, or valve not connected directly to the boiler (without accessories between valve and boiler);
- Installation where the liquid in the tank does not circulate in a closed circuit, or circulates in pipes which leak;
- Installation where the water quality does not comply;
- Bad electrical or hydraulic connection of the boiler;
- Installation without air vent, without expansion or compensation system for the expansion of water on heating;
- Installation with a service pressure superior to the maximum service pressure of the boiler (7 bars);
- Operation with an ambient temperature superior to 35°C.

## General information

### Data plate

All boilers are identified by a data plate situated on one of the sides of the boiler.

 <b>Lacaze Energies</b> <small>GROUPE CAHORS</small>	<b>BP 2 - ZI - 46120 LEYME (France)</b> Tél. 05 65 40 39 39 - Fax. 05 65 40 39 40 Email : info.lacaze-energies@groupe.cahors.com	
	<b>RESERVOIR TYPE</b> <input type="text"/>	
<b>CAPACITE (L) :</b> <input type="text"/>	<b>PRESSION (Ps) :</b> <input type="text"/>	
<b>TEMPERATURE :</b> <input type="text"/> <small>(continue)</small>	<b>TEMPERATURE :</b> <input type="text"/> <small>(maxi en pointe)</small>	
<b>EQUIPEMENT :</b> <input type="text"/>	<b>N° SERIE :</b> <input type="text"/>	
<b>PUISSANCE :</b> <input type="text"/>	<b>FABRICATION :</b> <input type="text"/>	
<b>DATE MES :</b> <input type="text"/>	<b>ALIMENTATION :</b> <input type="text"/> <small>(Régime)</small>	


 **Warning:**

*For any request made to our After Sales Service, the above material references will be asked for!*

### Transport / Inspection on reception:

If LACAZE Energies can provide the transportation of the appliance, with its own delivery vehicles, the packaging being assured by us.

If delivery is made by a third party, the boiler is fixed onto a wooden pallet.

 **Inspect the boiler on reception for any damage in transport. The manufacturer's responsibility is limited to the delivery in good condition to the transporter. The receiver must make his claim for damage, non delivery or incomplete delivery to the transporter as soon as possible.**

## CHARACTERISTICS

### 1. Body

There are two families of electric hot water boilers:

#### V series - "VERTICAL":

The VERTICAL cylindrical body is made of first quality steel S235JRG2, without inner lining, destined only for the temperature holding of a closed circuit heating loop. The power range is from 36 to 288 kW.

#### H series - "HORIZONTAL"

The HORIZONTAL cylindrical body is made of first quality steel S235JRG2, without inner lining, destined only for the temperature holding of a closed circuit heating loop. The power range is from 315 to 1400 kW.

### 2. Thermal insulation

- Rock wool 40 kg/m<sup>3</sup>, thickness 60 mm, fire rating M0.
- Protective casing in painted steel.

### 3. Electric heating elements

The heating elements are armored electric heating elements (INCOLOY pins).

For the vertical boilers, the heating elements have a unitary power of 12 kW, on a threaded plug R1"1/2. The supply voltage is 230/400 V (star coupling).

For the horizontal boilers, the heating elements have a unitary power of 35 kW, on a threaded plug M77. The supply voltage is 400 V (triangular coupling) with the exception of non standard models and/or modified models where the 400V in star or the 700V in triangle is sometimes used.

### 4. Power and control box

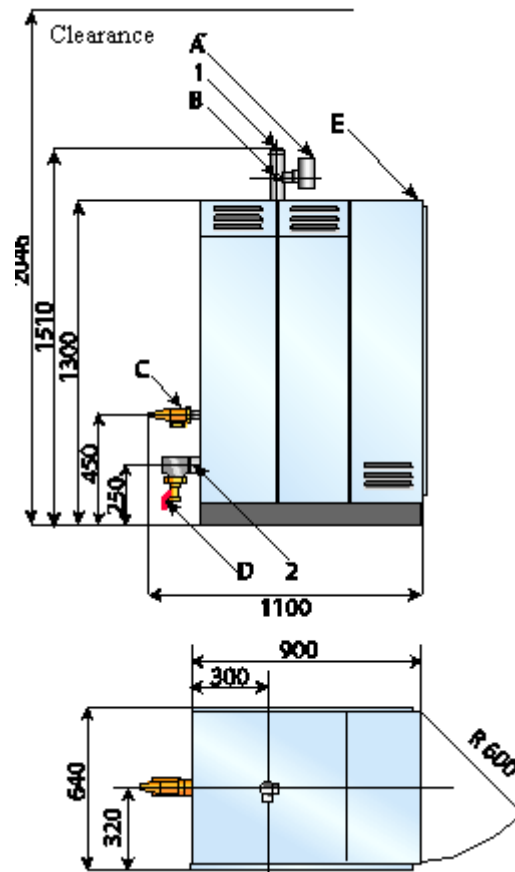
This is fixed onto the boiler and is an integral part of the bodywork. It normally comprises:

- A master switch (there will be no section isolator for >1015kW boilers)
- Power contactors.
- Fuse protection for the heating elements or groups of elements.
- An electronic regulation in 3 or 6 stages.
- Forced ventilation.
- Indicator (warning) lights.

The control box is accompanied by a complete electrical diagram with explanatory key.

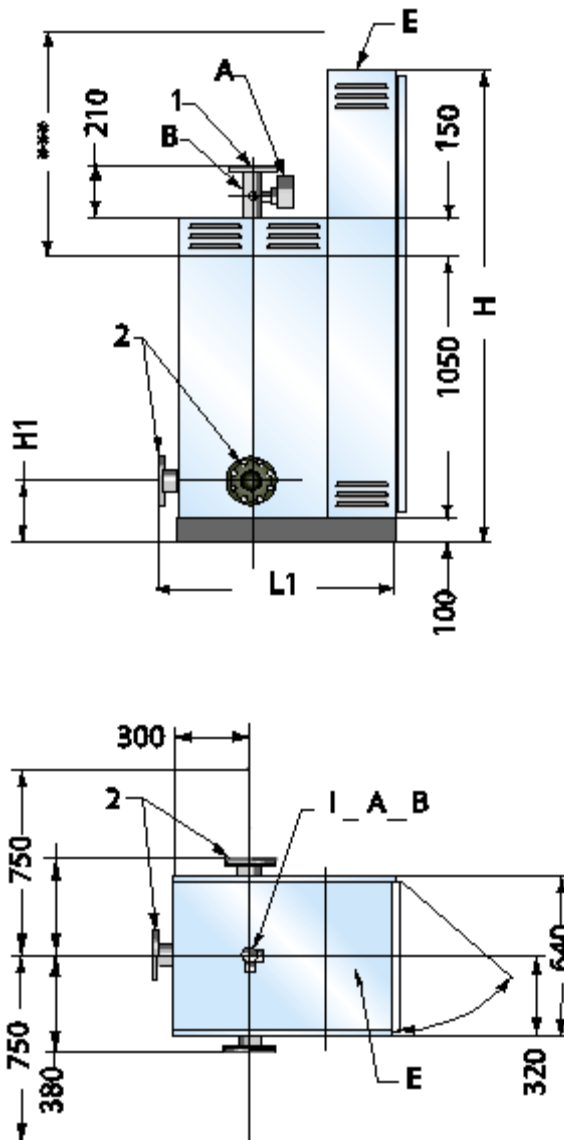
## 5. Appliance dimensions (indicative)

Vertical boilers (from 36 to 72 kW):



REFERENCE	DESIGNATION	DIMENSION
A	Flow controller (optional)	Coupling 1" DN25
B	Pressure control (optional)	Coupling ½" DN15
C	Safety valve (optional)	Male union 1" DN25
D	Drainage valve (optional)	DN20
1	Loop departure	Male union DN50
2	Loop return	Male union DN50

### Vertical boilers (from 84 to 288 kW):

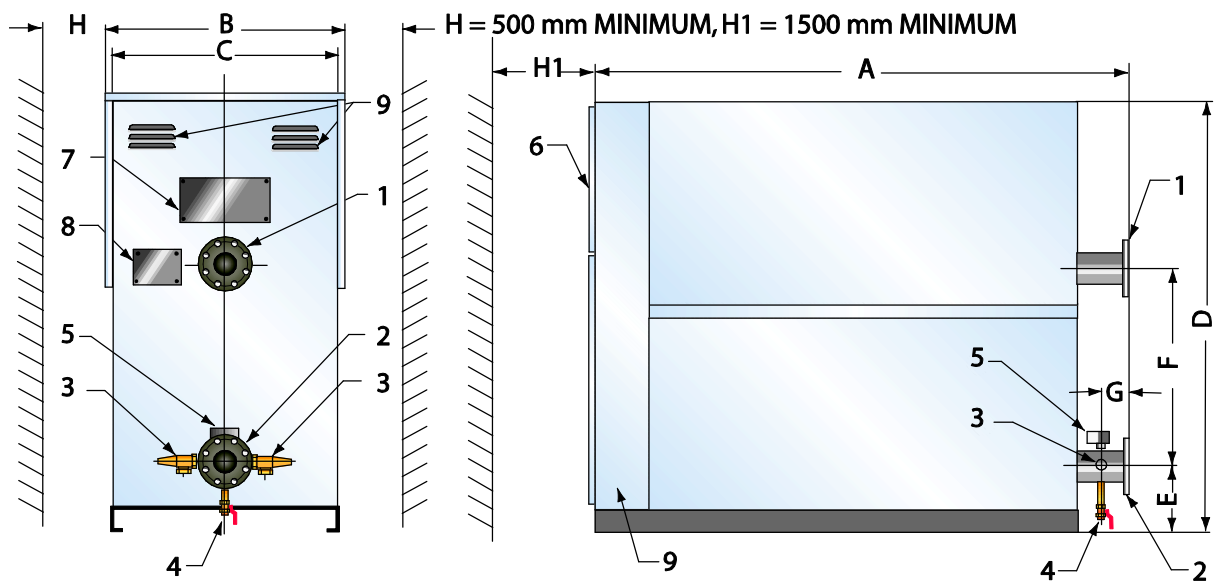


REFERENCE	DESIGNATION	DIMENSION
A	Flow controller (optional)	Coupling 1" DN25
B	Pressure control (optional)	Coupling ½" DN15
	Safety valve (optional)	Male union 1" DN25
	Drainage valve (optional)	DN20

POWER	H	L1	1	2
84 to 144 kW	1900	1050	Loop departure DN65	Loop return DN65
156 to 288 kW	1900	1050	Loop departure DN80	Loop return DN80



## Horizontal boilers:



REFERENCE	DESIGNATION	DIMENSION
1	Loop departure	according to power
2	Loop return	according to power
3	Safety valve (optional)	DN32
4	Drainage valve (optional)	DN20
5	Flow control (optional)	

POWER	VOLUME	A	B	C	D	E	F	G	I, II
315 - 560 kW	550	2375	860	800	1710	300	680	122	100
595 - 980 kW	850	2375	1060	1000	1930	305	870	124	125
1015 - 1400 kW	1300	2425	1260	1200	2010	270	1055	124	150

## INSTALLATION

### 1. Hydraulic

The boiler must be installed on a horizontal floor, in a clean, dry location. The boiler and its connection pipes must be protected from frost.

The boiler has two orifices of entry/exit to be connected according to the configuration (respect the sense of circulation of fluid). For reasons of security and of energy conservation, the piping must be thermally insulated.


On the loop departure, allow for an efficient air vent system and a non-return valve if the system uses a single pump, in order to minimize the circulation of water by gravity outside heating periods.

Protect the boiler and the system by putting in place safety valves limiting the maximum service pressure of the boiler (7 bars). The power dissipated by the valve must also be equal or superior to the nominal power of the boiler.

An expansion system or a pressure maintaining system must be installed to compensate for the variations in water volume with temperature.

A clearance zone for the electric heating elements must be allowed for. For the horizontal boilers, the heating elements are situated on the front (opposite the entry and exit orifices). The necessary clearance is 1200 mm minimum.

In case of a steel-copper connection, use dielectric unions (insulating) to protect the boiler and piping.

 *The boiler must not be installed where there is a risk that adjacent structures or lower floors may be damaged in case of a water leak (e.g. leaky connection, valve release..). If such a location is unavoidable, install a tray or a non-inflammable retention basin to collect and drain the leaked water.*

**Reminder:** the boiler must only operate in a closed circuit for under pressure heating water, without renewal of the water.


**If the liquid is not water, it is imperative that we are consulted in order to verify that the liquid doesn't present any risk of degradation to the equipment of the boiler.**

#### Water quality:

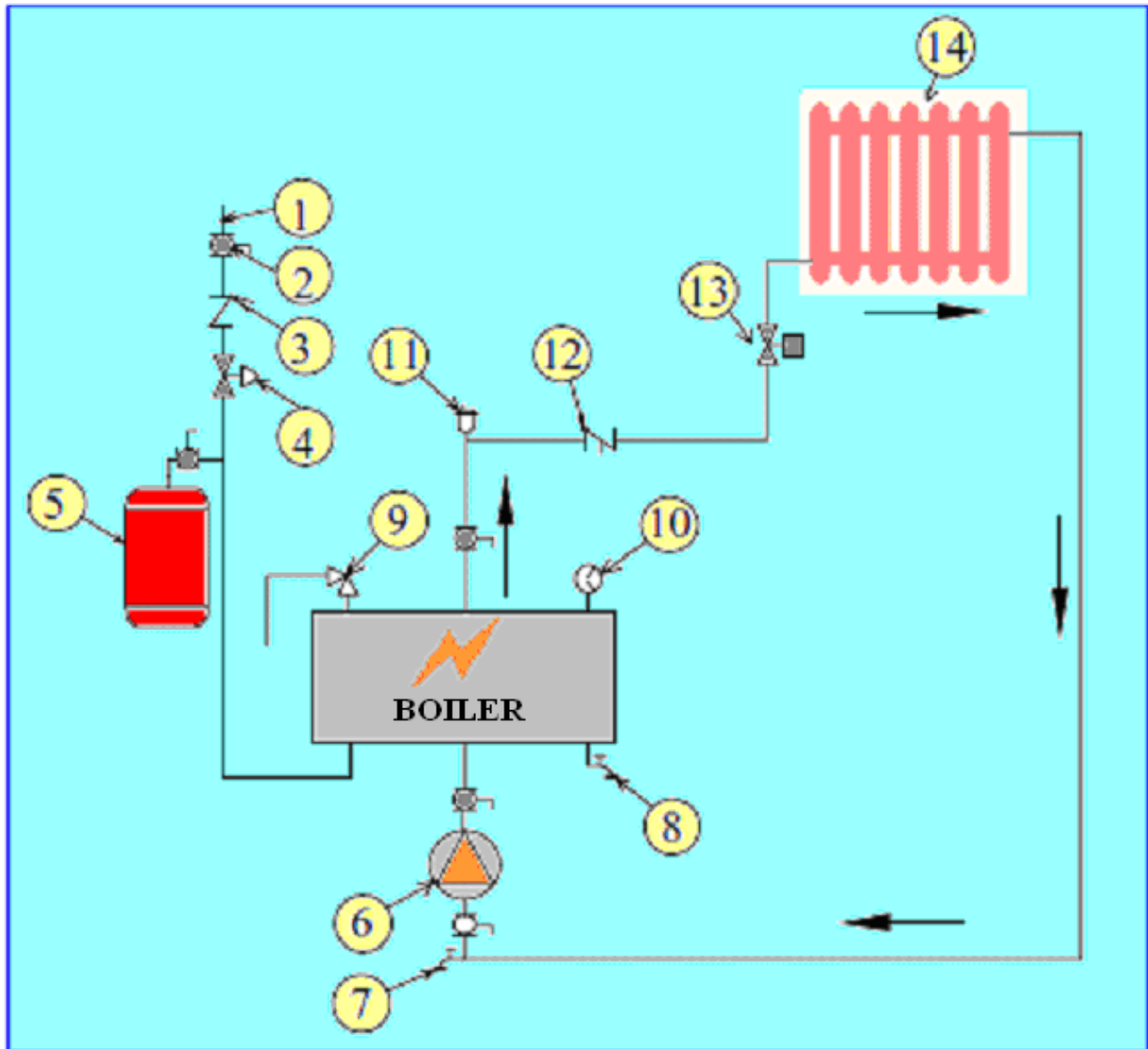
The refill water for the installation must be controlled and treated, to have the following quality:

- TH  $\leq 1^\circ\text{F}$
- pH  $\geq 9.6$
- Chlorines  $\leq 70\text{mg/L}$
- Excessive oxygen level reducer.

According to the recommendations of the National Association for the Exploitation of Thermal Equipment and HVAC (SNEC) regarding heating circuits with water temperature below 110°C.

 ***In all cases, a control of back-up water must be provided.***

### Installation example



Reference	Designation
1	Cold water supply
2	Isolation valve
3	Non return valve
4	Pressure limiter
5	Expansion tank
6	Circulation pump
7	Air bleed tap
8	Drainage
9	Safety valve
10	Thermostat / thermometer
11	Automatic de-gasser
12	Non return valve
13	Regulation valve
14	Heating circuit

## 2. Electrics

Before any intervention on the boiler, it is imperative to ensure the electricity supply is disconnected.

An electrical connection adapted to the power of the boiler must be provided and equipped with a line protection in conformity with local regulations (**refer to the electrical diagram provided**). In the standard configuration, the boiler does not have a circuit breaker. It is imperative that this is installed on the electrical supply to the boiler.



### **Warning:**

*Sometimes certain pieces of equipment in the control panel are alimented from below instead of above as is usually the case.*

*Sometimes the electric elements are fitted with a fuse protection after the contactors.*

## 3. Commissioning

Once all the connections are made, fill the boiler with water. Ensure that the air is evacuated completely. Warning: the heating elements must not operate without water.

Verify the tightening of the electrical connections before switching on the power.



*The boiler must not be switched on before it is completely filled with water. Also, the boiler must not be switched on if the water supply tap is closed.*

Adjust the safety and control devices, particularly the thermostat, and check that it functions correctly. Note that this adjustment is only approximate and that final readjustment might be needed to obtain the desired temperature.

For first commissioning, it is preferable to remove the power fuses in order to control the correct functioning of the remote control and the different safety devices. Set the switches to ARRET (OFF). Connect the electric control panel of the boiler to power, the indicator light SOUS TENSION (POWER ON) comes on. Check the different tensions (400V, 230V, 24V, according to the diagram).

Program the temperature control; adjust the safety thermostats, about 10°C above the set value, without exceeding 105°C. Then check the successive engagement of the power stages.

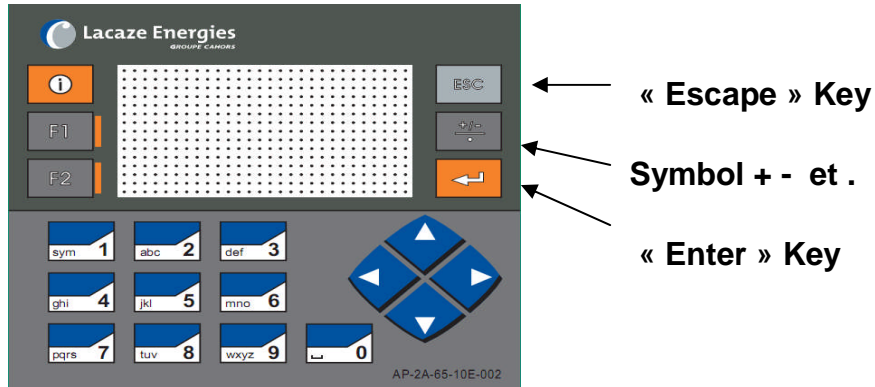
After checking the control circuit, cut the electrical supply to the boiler. Reset the power fuses then reconnect the power. Position the switches to obtain the starting up of the boiler, and check the intensity absorbed by each heating element.

In all cases, refer to the electrical diagram which comes with the boiler and to the specific document relating to each component.

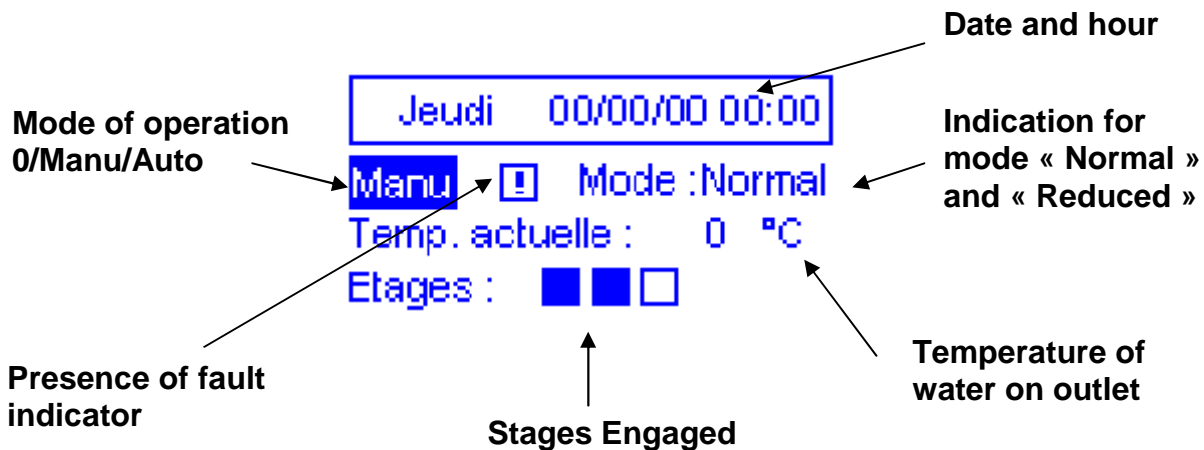
## CONTROLLER

### Command :

#### Front vue



#### The display for home page



*Nota : on display, the white squares represent the stages not working, in blue are stages in service. There are versions of regulation with 3 to 6 stages.*

*To change between 0/Manu/Auto (heating activated by a remote command on input I3) you must press « Enter » and then the up arrow to scroll through the modes and confirm with "Enter".*

*Mode 0 : heating stopped*

*Mode Manu : normal heating*

*Mode Auto : a remote command is expected for commencing heating*

*If entry I3 is activated, there is heating.*

To access the menu from the homepage, press the down arrow.

To return to the home page press ESC

To confirm, or enter a submenu, press Enter.

To move to a sub menu, use the ← and →.

To move from one field to another, use the ↑ and ↓.

For an input value, always press "Enter" to open the writing field, type the value and confirm with "Enter" key.

The letters are obtained by repeatedly pressing the corresponding key. Example: for the letter C you have to press 3 times the button 2/ABC

## Menu Tree

<b>Main Menu</b>	<b>Secondary Menu</b>
<b>Calendar</b>	<b>Day</b> <b>Thresholds</b>
<b>Instructions</b>	<b>Mode Normal/Reduced</b>
<b>System</b>	<b>New Password</b> <b>P.I.D</b> <b>Tempo defaults</b> <b>Delta T°C</b> <b>Pumps</b> <b>Outputs</b> <b>Factory default settings</b> <b>Mail Rondier</b> <b>Email send time</b> <b>Reference curve by exterior temperature</b>
<b>Manufacturer</b>	
<b>Date and hour</b>	
<b>Defaults</b>	<b>In Progress</b> <b>Historical</b>
<b>Languages</b>	<b>French or English</b>
<b>Ethernet</b>	<b>IP Addresses</b> <b>Mail Server</b> <b>Login</b> <b>Sender email address</b> <b>Receiver email address</b>

## Menu Structure :

### Date and hour

To enter the date and time, select the field to edit with ↑ or ↓. Open field by pressing "Enter". Enter the value and confirm by pressing "Enter".

### Defaults

First page: Scrolling active faults.  
Press →.  
Visualization of the last 8 faults in pressing ↓

Faults are also saved to a file. Csv file that is recoverable (depending on model) via web browser or on the SD card.

Note that if defects are activated without the presence of the SD card they will automatically be copied to it at its next reintroduction.

### Languages

To change the display language, press Enter and the arrow ↓ to scroll through the languages and then press enter to validate.

### Calender

Allows you to create time slots instructions in normal mode and reduced during each day. It is possible to program two time slots for reduced thresholds.

*The first page lets you choose the day. Press the right arrow to access the second page to set the time and mode (Normal, Reduced)*

*Confirm settings by pressing the "ENTER".*

*Note: instead of disabling the thresholds of each day it is best to set the mode instruction reduced to the same value as the normal mode.*

### Instructions

Select the arrows to change the set point, confirm the choice with the Enter key, enter the value and confirm with Enter.

The reduced temperature must be inferior or at least equal to normal temperature.

The value "TA" is a locker an automatic instruction at the time of instruction adjustment according to the outside temperature (depending on model).

### Manufacturer

Reserved for the manufacturer and requires the manufacturer password.

### System

To enter the password, press the **Enter** key, enter the code then validate. (Default 0)

### Structure of Menu System :

**PID Parameters**

**Change the User Password**

**Time Delay**

**Value of the delta high and low alarm**

**Mode cut the outputs**

**Return to factory defaults**

**Text of email rondier**

**Time of sending of default emails**

**Reference curve by exterior temperature (2 pages)**

## PID Parameters

### Possible modification of the controller parameters:

Press the ↑ and ↓ to move on the page. Press "Enter" to open the field. Type the value and confirm with "Enter". Change values to adjust the speed of increase in temperature and control accuracy.

Go to the next page by pressing → or ESC to exit.

### To change the user password (Menu System and Ethernet)

Validate to open the writing field, enter the new 4-digit code and validate.

Go to the next page by pressing → or ESC to exit

### Time delay

Wait time before the onset of the alarm. This avoids the repeated display of the same alarm.

Go to the next page by pressing → or ESC to exit

### Value of the delta high and low alarm

Sets the high and low threshold for the alarm on the water by defining the deviation from the setpoint. To set the low threshold, the value is subtracted from the threshold value. For the upper threshold, the value is added.

Go to the next page by pressing → or ESC to exit

### Mode cut the outputs

Allows cutting the outputs of the controller during maintenance.

## Return to factory defaults

Allows to find the initial values of the configuration preset at the factory.

### Text of the warning email

Allows you to customize the automatically generated message by pressing F1 then F2 after 1 second.

To enter the text, press "Enter", type the text and confirm with "Enter".

This email is called "mail rondier" and allows to check if the mail function is correctly configured and report the presence of an operator on site.

### Time of sending of default emails

To set the sending time of the daily summary of non-critical defects. (see fault management in the chapter web page)

### Reference curve by exterior temperature (2 pages)

Depending on model or option.

To define a curve for setting automatically the set boiler according to the outdoor temperature.

To enter values, use the ↑ and ↓ to move the fields. Press "Enter" to enable the field to edit and enter the value and confirm with "Enter"



## **Ethernet (depending on model and option)**

To enter the password, press the Enter key, enter the code (0 default) and confirm.

### **Structure Ethernet Menu:**

**IP Addresses**

**Mail Server**

**Identifying**

**Sender email address**

**Receiver email address**

**Name of the controller**

### **IP Addresses**

To enter the IP address of the controller press "Enter", then type the address and confirm with "Enter".

Do the same for the address of the subnet mask and gateway.

Go to the next page by pressing → or ESC to exit

### **Mail Server**

To enter the server IP address, port socket, press "Enter", then type the address and confirm with "Enter".

### **Login**

To enter the user name and password for the account, press "Enter", then type the address and confirm with "Enter".

### **Sender email address.**

To enter the email address, press "Enter", then type the address and confirm with "Enter".

The email address is divided into two parts, the top field is the part before @. The bottom field must begin with @.

Example:

On the top field: info. Lacaze

On the bottom field:

@ group-cahors.com

*Note: the. and - are obtained by pressing the key below the ESC key. The other symbols are obtained by pressing the 1 key.*

### **Receiver email address**

Do the same as in the previous paragraph.

### **Name of the controller**

To enter the name of the controller, press "Enter", then type the address and confirm with "Enter".

The entered text will appear in emails sent by the controller (PLC).

Management for sending emails is via the web browser by entering the IP address of the PLC. (See chapter web page / defects)

### **SD CARD (as option)**

You must use a specially formatted SDCard for that use. It is advisable to make a copy of files so you can put them back on the SDCard when problems arise.

File size is limited to 5 M0 and the recording is every 20 minutes.

***Note: Please download the data regularly and delete the file after its recovery.***

Thus the controller will create a new file.

## Web server (depending on model /option)

The controller has an integrated web server which allows the reading of operating parameters in real time, changing of instructions and visualization of defects. Access to the content is protected by a username and password (default name: "admin" Password: "admin")

### 4 pages are accessible with 2 levels of security :

Level 1 : read only ; level 2 : supervisor (1111 by default)

#### State of variables

Summary of inputs and outputs of the Controller and their status.

Download of the file recording the operating parameters.

Resetting to 0 of the file for recording the temperature (protected by password supervisor)

Changing of the set value (protected by password)

#### Faults

List of active faults.

Fault history.

Download the fault history.

Management of the rules for sending email alerts. (Protected by supervisor password))

#### System

Changing of the passwords

#### Help

Service contacts


Literature (Table ModBus)

Version of the program

*Nota : 2 types of emails can be set :*

**Critical:** *one email / day at the moment when the fault occurs. If the fault reappears on the same day there will be no new mail that day unless you simultaneously press the F1 and F2 of the PLC to clear the fault.*

**Non-critical:** *one email / day at a time specified by the user summarizing all non-critical defects of the day.*

<p>Home Page of the Web server</p> <div style="text-align: center;"> <h2>Lacaze Energies</h2> <h3>CEEC ENERGIS</h3> <p>Choix de la langue:  <input type="button" value="Français"/> <input type="button" value="Validation"/></p> <p>Tapez votre nom d'utilisateur et votre mot de passe          Cliquez sur Connexion pour confirmer</p> <p>Nom d'utilisateur: <input type="text"/></p> <p>Mot de passe: <input type="password"/></p> <p><input type="button" value="Connexion"/></p> <p><a href="#">Lacaze Energies</a></p> </div>	<p>Name of application</p> <p>Choice of language</p> <p>Secure access with login and password (default name: admin / password: admin)</p> <p>Link to the company website</p>
<p>Menu</p> <div style="text-align: center;">  <h2>CEEC ENERGIS</h2> <hr/> <p> <a href="#">Etats des variables</a>             <a href="#">Historique des défauts</a>             <a href="#">Système</a>             <a href="#">Aide</a> </p> <hr/> <p><a href="#">Retour vers Mot de passe et Langues</a></p> <p><a href="#">Lacaze Energies</a></p> </div>	

Page Etat des variables / Page state of variables:																												
<p style="text-align: center;"><u>Entrées de l'automate :</u></p> <p>I0= Thermostat de sécurité: OFF</p> <p>I1= Contrôleur de débit: OFF</p> <p>I2= Pressostat: OFF</p> <p>I3= Commande à distance: OFF</p> <p style="text-align: center;"><u>Sorties de l'automate :</u></p> <p>O0 = Etage 1: OFF</p> <p><b>O1 = Etage 2: OFF</b></p> <p>O2 = Etage 3: OFF</p> <p>O3 = Etage 4: [OB3,OFF,ON]</p> <p>O4 = Etage 5: OFF</p> <p>O5 = Etage 6: OFF</p> <p>O32 = Pompe 1: OFF</p> <p>O33 = Pompe 1 bis: OFF</p> <p>O34 = Sortie défaut général: OFF</p>	<p>Show the status of inputs / outputs and temperatures</p> <p>Link to download the .csv file for recording of temperatures, water and energy meters and the value of sunlight.</p> <p>Link to the edit page for instructions (default 0000)</p>																											
Page Historique des défauts																												
<p style="text-align: center;">Historique des défauts</p> <table border="1" data-bbox="197 1462 871 1843"> <thead> <tr> <th>Date</th> <th>Heure</th> <th>Type du défaut</th> </tr> </thead> <tbody> <tr> <td>03/02/11</td> <td>09:46:26</td> <td>Pas de sonde</td> </tr> <tr> <td>26/01/11</td> <td>12:03:40</td> <td>Th sécurité</td> </tr> <tr> <td>07/01/11</td> <td>17:40:21</td> <td>Alarme °C basse</td> </tr> <tr> <td>06/12/10</td> <td>12:04:10</td> <td>Alarme °C basse</td> </tr> <tr> <td>[ST1012,PPPPPPPP]</td> <td>19:13:50</td> <td>Pas de sonde</td> </tr> <tr> <td>02/11/10</td> <td>12:46:48</td> <td>Th sécurité</td> </tr> <tr> <td>02/11/10</td> <td>12:46:18</td> <td>Alarme °C basse</td> </tr> <tr> <td>29/10/10</td> <td>08:12:24</td> <td>Pas de sonde</td> </tr> </tbody> </table> <p style="text-align: center;">Télécharger le fichier d'archive des défauts (.csv)</p> <p style="text-align: center;"><a href="#">Gestion des défauts</a></p>	Date	Heure	Type du défaut	03/02/11	09:46:26	Pas de sonde	26/01/11	12:03:40	Th sécurité	07/01/11	17:40:21	Alarme °C basse	06/12/10	12:04:10	Alarme °C basse	[ST1012,PPPPPPPP]	19:13:50	Pas de sonde	02/11/10	12:46:48	Th sécurité	02/11/10	12:46:18	Alarme °C basse	29/10/10	08:12:24	Pas de sonde	<p>List of the last 8 faults</p> <p>Link to download the fault history in csv.format.</p> <p>Link for fault management by mail.</p>
Date	Heure	Type du défaut																										
03/02/11	09:46:26	Pas de sonde																										
26/01/11	12:03:40	Th sécurité																										
07/01/11	17:40:21	Alarme °C basse																										
06/12/10	12:04:10	Alarme °C basse																										
[ST1012,PPPPPPPP]	19:13:50	Pas de sonde																										
02/11/10	12:46:48	Th sécurité																										
02/11/10	12:46:18	Alarme °C basse																										
29/10/10	08:12:24	Pas de sonde																										

## Page Gestion des défauts

Numéro	Variable	Désignation	Condition de défaut	Envoi email	Critique	Notes complémentaires
1	I0	Th de sécurité	I0=1	Non	Non	
2	I1	Contrôleur de débit	I1=1	Non	Non	
3	I2	Pressostat	I2=1	Non	Non	
4	I4	Défaut pompe 1	I4=1	Non	Non	
5	I5	Défaut pompe 2	I5=1	Non	Non	
6	I6	Défaut complémentaire 6	I6=1	Non	Non	
7	I7	Défaut complémentaire 7	I7=1	Non	Non	
8	I8	Défaut complémentaire 8	I8=1	Non	Non	
9	I9	Défaut complémentaire 9	I9=1	Non	Non	
10	MI1020	Défaut sonde départ	MI1020<10	Non	Non	
11	MI1022	Défaut sonde extérieure	MI1022<10	Non	Non	
12	MB177	Alarme haute	MB177=1	Non	Non	
13	MB178	Alarme basse	MB178=1	Non	Non	
14	MB179	Défaut régulation	MB179=1	Non	Non	
15	SB217	Carte SD absente	SB217=0	Non	Non	
16	MB3846	Fichier ARCHIVE saturé	MB3846=1	Non	Non	[ST1115,PPPPPPPPPP]
17	MBXX	Défaut réservé constructeur 1	MBXX	Non	Non	[ST1116,PPPPPPPPPP]
18	MBXX	Défaut réservé constructeur 2	MBXX	Non	Non	[ST1117,PPPPPPPPPP]
19	MBXX	Défaut réservé constructeur 3	MBXX	Non	Non	
20	MBXX	Défaut réservé constructeur 4	MBXX	Non	Non	

List of 20 defects that can generate mails with a priority (critical or not) and personalized with a text of 10 characters.

To enable a default, click on the corresponding number (left of picture)

### Faults:

Thermostat: temperature too high

Pressure switch: lack of water

T° boiler water: temperature too high or too low at the output of hot water

Sensor failure: indicates a defective PT100 sensor

SD card not present: no card in the Controller (no records)

Saturated file: .Csv backup file too large, save it on your computer and then delete it.

## Réglage d'un défaut

CEEC

Numéro	Variable	Désignation	Condition de défaut	Envoi email	Critique	Notes (10 caractères max.)
1	I0	Th de sécurité	I0=1	Non	Non	

Validation

[Retour vers Tableau des défauts](#)

[Retour vers Menu Principal](#)


Lacaze Energies

Enable or not the sending of email

Criticality of the fault:  
 Critical one email / day at the time of onset. Correcting the error by pressing F1 + F2. If the fault reappears another mail is sent.

Non-critical: if the fault is active, one mail per day is activated, at a time adjustable in the controller.

10 characters of text that appears in the mail.

<p><b>Page : Système</b></p> <hr/> <h2 style="text-align: center;">CEEC ENERGIS</h2> <hr/> <p style="text-align: center;">Modification du compte Utilisateur + mot de passe:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">Utilisateur</td> <td style="text-align: center;">Mot de passe</td> </tr> <tr> <td style="text-align: center;"><input type="text" value="admin"/></td> <td style="text-align: center;"><input type="text" value="admin"/></td> </tr> </table> <p style="text-align: center;"><input type="button" value="Validation"/></p> <p style="text-align: center;">Mot de passe Superviseur (4 chiffres):</p> <p style="text-align: center;"><input type="text" value="1111"/></p> <p style="text-align: center;"><input type="button" value="Validation"/></p> <hr/> <p style="text-align: center;"><a href="#">Retour vers Menu Principal</a></p> <p style="text-align: center;"><a href="#">Lacaze Energies</a></p>	Utilisateur	Mot de passe	<input type="text" value="admin"/>	<input type="text" value="admin"/>	<p style="text-align: center;">Changeme user name and the 2 passwords.</p>
Utilisateur	Mot de passe				
<input type="text" value="admin"/>	<input type="text" value="admin"/>				
<p><b>Page : Aide</b></p> <hr/>  <h2 style="text-align: center;">CEEC</h2> <hr/> <p style="text-align: center;">Version du Web Serveur: 3 Version du programme automate: 6</p> <p style="text-align: center;"><a href="#">Envoyer un mail au S.A.V.</a></p> <p style="text-align: center;">Coordonnées Lacaze Energie:</p> <p style="text-align: center;">S.A.S. LACAZE ENERGIES Zone industrielle – BP 2 46120 LEYME (FR) Tel. : +33.(0)5.65.40.39.39 Fax : +33.(0)5.65.40.39.40</p> <p style="text-align: center;"><a href="#">Télécharger le fichier de documentation (.pdf)</a></p>	<p style="text-align: center;">Version of web serveur and programme</p> <p style="text-align: center;">Service Mail Adresse</p> <p style="text-align: center;">Company's address</p> <p style="text-align: center;">Modbus table file</p>				

## Tableau récapitulatif des paramètres usine

Paramètres	Réglages d'usine	Réglages utilisateur										
Threshold Normal/Reduced	6h00 Normal 22h00 Reduced 00h00 Normal 00h00 Reduced											
Access Code Ethernet System	0000 0000											
Regulation	<i>Proportional Band</i> (in % :25 ) <i>Integral Time</i> (in sec. :2 ) <i>Deriveative Time</i> (in sec. :1 )											
Fault Alarm	45 sec											
Delta Alarm High Low	10°C 10°C											
Primary Pump Secondary Pump Switch Time	0 0 00h00											
Compensation by the outside temperature	<table border="1"> <thead> <tr> <th>T° Outside</th> <th>T° Set Value</th> </tr> </thead> <tbody> <tr> <td>-6°C</td> <td>90°C</td> </tr> <tr> <td>0°C</td> <td>70°C</td> </tr> <tr> <td>10°C</td> <td>50°C</td> </tr> <tr> <td>20°C</td> <td>10°C</td> </tr> </tbody> </table>	T° Outside	T° Set Value	-6°C	90°C	0°C	70°C	10°C	50°C	20°C	10°C	
T° Outside	T° Set Value											
-6°C	90°C											
0°C	70°C											
10°C	50°C											
20°C	10°C											

## USE AND MAINTENANCE ADVICE

Regular maintenance of the boiler will assure its good and trouble-free functioning for years. It is recommended that a maintenance program is established and followed. Each component can be eventually subject to breakage. Use of incorrect spare parts can reduce the level of security of the boiler and diminish its life expectancy.

- Periodically check the tightening of the electrical connections.
- Check the hydraulic parts and the closed heating circuit for leaks.
- De-sludge the boiler in case of frequent top-ups of water, and in all case during the month following commissioning.
- Check the correct functioning of the safety devices (valves, thermostats, etc.).
- Check the voltage absorbed by each of the electric elements.
- The ambient temperature must not exceed 35°C.



### **DANGER:**

***Before manually activating the safety valve, ensure that nobody is exposed to splashing of hot water from the valve. The escaping water must be directed to a floor siphon to prevent injury and damage.***



### **Limit the addition of water to the circuit**

In adding water to the boiler, there is a risk of introducing calcium and aggressive oxygen. These elements contribute to the deterioration by corrosion of the whole installation: degradation of the pipe work, the taps, the heating body, the boilers; production of sludge and blockage of the valves; blockage of the exchangers, boilers, etc. This deterioration can occur rapidly.

In addition, the scaling of the boilers constitutes an insulation which hinders the transmission of heat. It results in an excessive heating up of the materials and an over consumption which can be considerable, according to the thickness of the coat of scale.

It is therefore important to find the cause of the lack of water and to rectify it as quickly as possible.



# **EC DECLARATION OF CONFORMITY**

The company LACAZE Energies hereby attests that the electric hot water boilers,  
vertical or horizontal (CEEV / CEEH range):

of power comprising between 36 and 288 kW (vertical boilers)  
of power comprising between 315 and 1400 kW (horizontal boilers)

of capacity comprising between 115 and 155 litres (vertical boilers)  
of capacity comprising between 550 and 1300 litres (horizontal boilers);

operating at maximum service pressure of 7 bars;

conform to the essential requirements of the following European directives:

- **97/ 23/CE** "Pressure Equipment Directive"
- **89/ 336/CEE** "Electromagnetic Compatibility "
- **73/ 23/CEE** "Low Voltage Directive"

## Certificate of hydraulic testing

The company LACAZE Energies systematically carries out leak tests on all its boilers and delivers a certificate of hydraulic testing. The pressure applied during the test is 1.43 times the maximum service pressure.

Example of a hydraulic certificate:

## Certificate of hydraulic testing

The company LACAZE Energies hereby attests that the electric hot water boilers, vertical or horizontal (CEEV / CEEH):

Of power comprising between 36 and 288 kW (vertical boilers)  
Of power comprising between 315 and 1400 kW (horizontal boilers)

Of capacity comprising between 115 and 155 litres (vertical boilers)  
Of capacity comprising between 550 and 1300 litres (horizontal boilers);

operating at maximum service pressure of 7 bars;

have been subjected to hydraulic testing at a pressure of 10 bars in order to check the water tightness of the tank and accessories, and the quality of the welds.

Dated the \_\_\_\_\_, at \_\_\_\_\_, by \_\_\_\_\_.



**ELECTRIC HOT WATER BOILER  
FOR CENTRAL HEATING  
ENERGIS**

**INSTRUCTION MANUAL**

**(IU-0010-EN-201102)**