LAIA GTI, GTI-R & GTI-T

E

Grupos Térmicos

Instrucciones de Instalación,
Montaje y Funcionamiento
para el **INSTALADOR**

GB

Heating Units

Installation, Assembly
and Operating Instructions
for the **INSTALLER**

F

Groupes Thermiques

Instructions d'Installation,
de Montage et de Fonctionnement
pour l'**INSTALLATEUR**

D

Heizkessel

Installations-, Montage-
und Betriebsanleitung
für den **INSTALLATEUR**

I

GruppoTermico

Istruzioni per l'Installazione,
il Montaggio e il Funzionamento
per l'**INSTALLATORE**

P

Grupos Térmicos

Instruções de Instalação,
Montagem e Funcionamento
para o **INSTALADOR**

Fig. 1

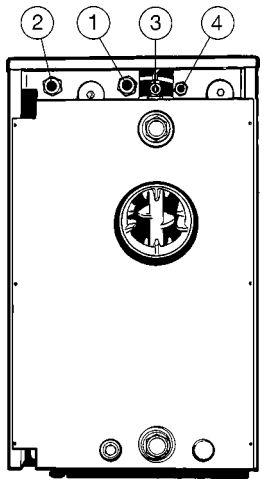
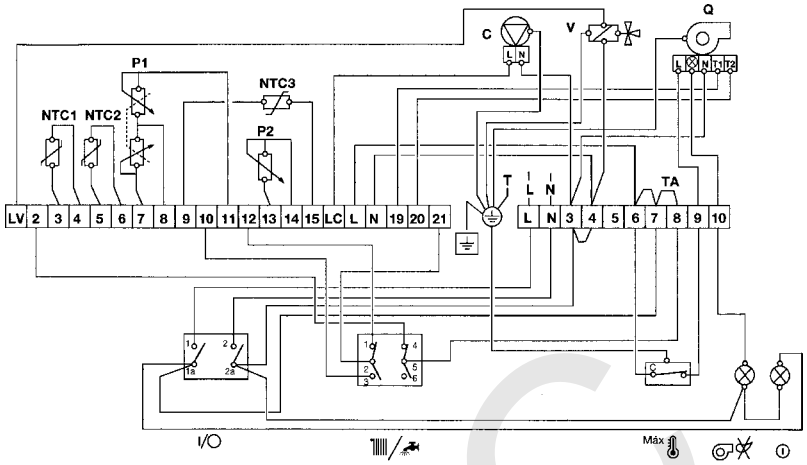
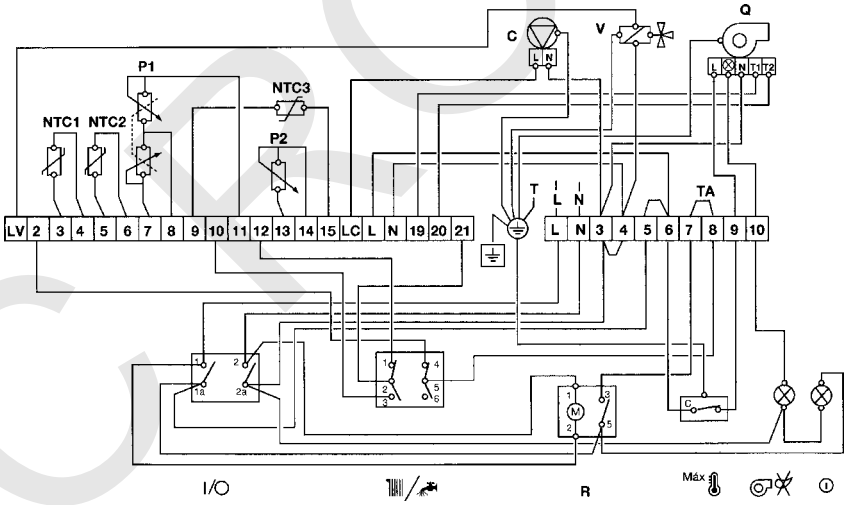


Fig. 2 Esquema de conexionado / Wiring diagram/ Schéma de branchement / Schaltschema / Schema di collegamento / Esquema de conexões

LAIA GTI



LAIA GTI-R



LAIA GTI-T

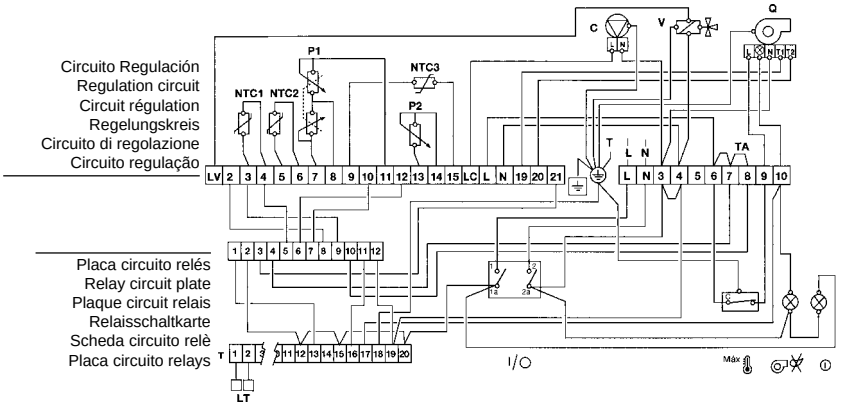
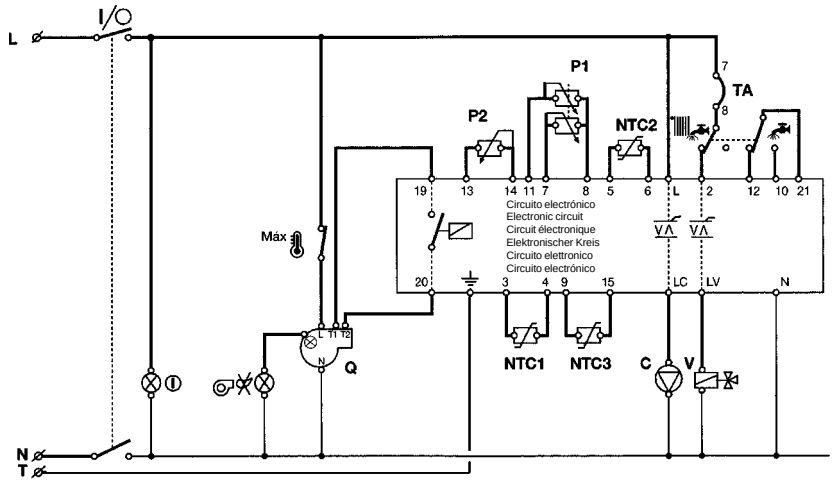
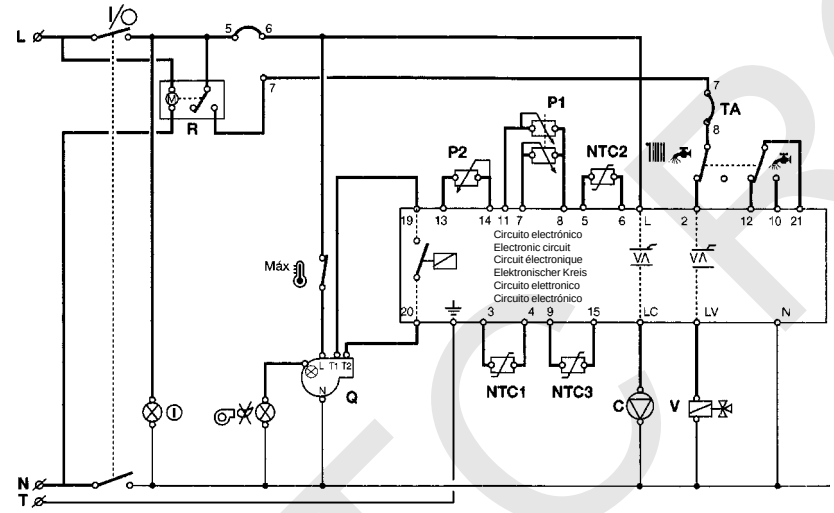


Fig. 3 Esquema de principio / Schematic Diagram / Schéma de principe / Prinzipielles Schema / Schema di base / Esquema de princípio

LAIA GTI



LAIA GTI-R



LAIA GTI - T

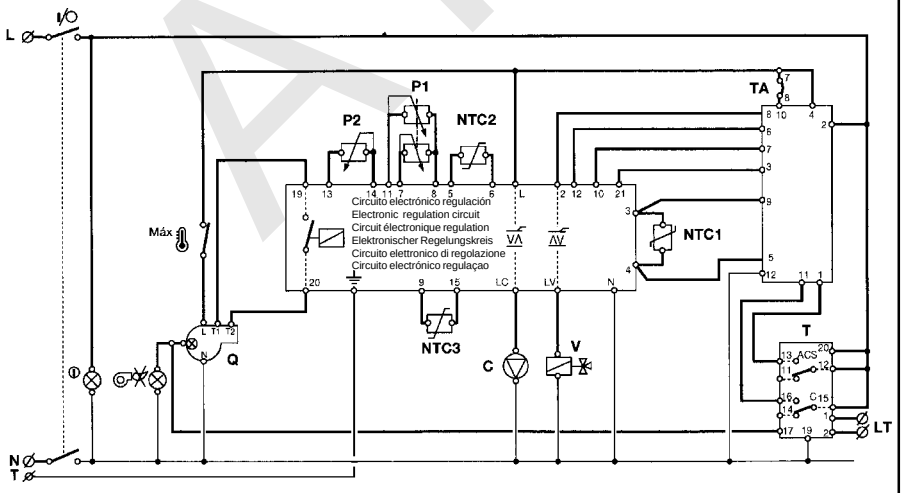


Fig. 4

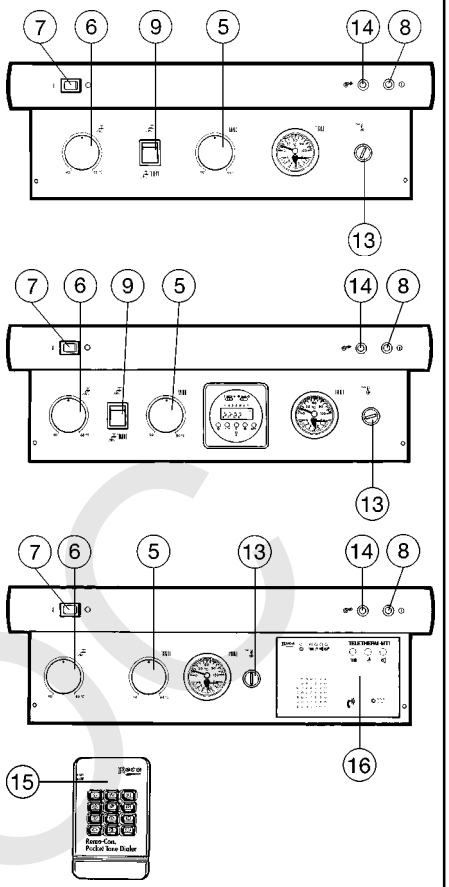


Fig. 5

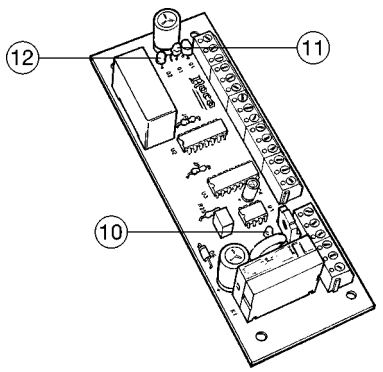
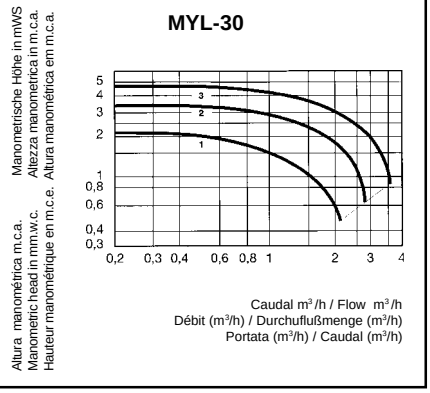
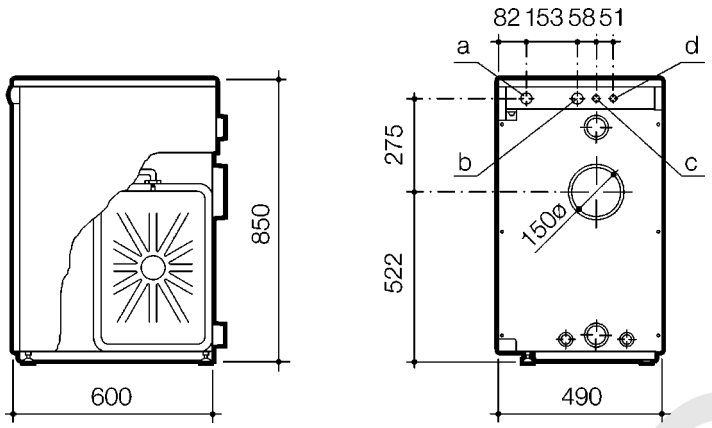


Fig. 6 Características hidráulicas circulador
Hydraulic characteristics of circulator
Caractéristiques hydrauliques circulateur
Hydraulische Merkmale Umwälzpumpe
Caratteristiche idrauliche del circolatore
Características hidráulicas do circulador

MYL-30



Características principales / Main characteristics / Principales caractéristiques
Hauptmerkmale / Caratteristiche principali / Características principais



Grupo Térmico Modelo	Nº. de elementos	Potencia útil		Rendimiento útil	Capacidad de agua, litros	Pérdida de carga circuito agua, mm.c.a.		Pérdida de carga circuito humos, mm.c.a.
Heating Unit Model	Nº of elements	Operating power		Operating performance	Water capacity, litres	Pressure loss water, circuit, mm.w.c.		Pressure loss fume, circuit, mm.w.c.
Groupe Thermique Modèle	Nbre. d´éléments	Puissance utile		Rendement utile	Capacité en eau, litres	Perte de charge circuit d'eau, mm.c.e.		Perte de charge circuit fumées, mm.c.e.
Heizkessel Modell	Anzahl der Heizelemente	Nutzleistung		Nutzungsgrat	Wasserinhalt, liter	Ladeverlust Wasserkreislauf mm WS		Ladeverlust Rauchkreislauf mm WS
Gruppo Termico Modello	N. di elementi	Potenza utile		Rendimento utile	Capacità d'acqua, litri	Perdita di carico circuito acqua, mm.c.a.		Perdita di carico circuito fumi, mm.c.a.
Grupo Térmico Modelo	Nº de elementos	Potência útil		Rendimento útil	Capacidade de água, litros	Perda de carga circuito água, mm.c.a.		Perda de carga circuito fumos, mm.c.a.
		kcal/h	kW	%		Δt=10 °C	Δt=20 °C	
LAIA GTI, GTI-R & GTI-T	3	25.000	29,07	89,4	19	35	8	1,7*

* A potencia nominal y CO_2 = 13% / * At nominal pressure and CO_2 = 13% / * Puissance nominale et CO_2 = 13% / * Bei Nennleistung und CO_2 = 13% / * A potenza nominale e CO_2 = 13% / * A potência nominal e CO_2 = 13%

Ø" Conexiones / Ø"Connections / Ø" Conexions / Ø"Anschlüsse / Ø" Collegamenti / Ø" Conexões										
Grupo Térmico Modelo	Ida	retorno	entrada agua red	consumo de A.C.S.	desagüe	Circulador Modelo	Potencia absorbida (W)	Quemador de gasóleo Modelo	Potencia absorbida máx. (W)	Peso aprox. (Kg)
Heating Unit Model	out	back	Mains Water in	H.W.S. consumption	drain	Pump Model	Power input (W)	Oill burner Model	Power input (W)	Approx. weight (Kg)
Groupe Thermique Modèle	aller	retour	entrée eau réseau	consommation E.C.S.	vidange	Circulateur Modèle	Puissance absorbée, (W)	Brûleur au gazole Modèle	Puissance absorbée (W)	Poids approx. (Kg)
Heizkessel Modell	Vorlauf	Rücklauf	Einlauf Leitungswasser	Heißwasser- verbrauch	Abfluß	Umwälzpumpe Modell	Leistungsauf- nahme (W)	Dieselbrenner Modell	Leistungsaufnahme (W)	Gewicht ca. (Kg)
Gruppo Termico Modello	mandata	ritorno	Entrata acqua rete	consumo di A.C.S.	scarico	Circolatore Modello	Potenza assorbita (W)	Bruciatore a gasolio Modello	Potenza assorbita (W)	Peso apro- ssimativo (Kg)
Grupo Térmico Modelo	ida "b"	retorno "a"	entrada água rede "c"	consumo de A.Q.S. "d"	desaguamento	Circulador Modelo	Potência absorvida (W)	Queimador gasóleo Modelo	Potência absorvida (W)	Peso aprox. (Kg)
LAIA GTI, GTI-R & GTI-T	1	1	1/2	1/2	1/2	MYL-30	90	KT-3RS	140	185

Tensión de alimentación: 220V (+10% -15%), 50Hz
Temperatura maxima de servicio: 100°C
Presion maxima circuito calefaccion: 3 bar
Presion maxima circuito agua sanitaria: 7 bar
Produccion continua: 13,9 l/min con Δt=30°C
Capacidad deposito expansion: 10 litros
Presion llenado deposito expansion: 0,5 bar

Supply voltage: 220V (+10% -15%), 50HZ
Maximum operating temperature: 100°C
Maximum pressure (heating circuit): 3 bar
Maximum pressure (hot water circuit): 7 bar
Continuous production: 13.9 l/min with Δt=30°C
Expansion tank capacity: 10 litres
Expansion tank filling pressure: 0.5 bar

Tension d'alimentation: 220V (+10% -15%), 50Hz
Température maximale de service: 100°C
Pression maximale circuit de chauffage: 3 bar
Pression maximale circuit eau sanitaire: 7 bar
Production continue: 13,9 l/min avec Δt=30°C
Capacité réservoir d'expansion: 10 litres
Pression remplissage du reservoir d'expansion: 0,5 bar

Versorgungsspannung: 220V (+10% - 15%), 50Hz
Maximale Betriebstemperatur: 100°C
Maximaler Betriebsdruck im Heizkreislauf: 3 bar
Maximaler Betriebsdruck im Heißwasserkreislauf: 7 bar Kontinuierliche Erzeugung: 13,9 l/min mit Δt=30°C
Fassungsvermögen Ausdehnunsgefaß: 10 Liter
Fülldruck Ausdehnungsgefäß: 0,5 bar

Tensione di alimentazione: 220V (+10% - 15%), 50Hz
Temperatura massima di servizio: 100°C
Pressione massima di servizio del circuito di riscaldamento: 3 bar
Pressione massima di servizio del circuito di acqua calda dei sanitari: 7 bar
Produzione continua: 13,9 l/min per Δt=30°C
Capacita dei vaso di espansione: 10 litri
Pressione di riempimento del vaso di espansione: 0,5 bar

Tensão de alimentação: 220V (+10% - 15%), 50Hz
Temperatura máxima de serviço: 100°C
Pressão maxima circuito de calefacção: 3 bar
Pressão maxima circuito água sanitária: 7 bar
Produção contínua: 13,9 l/min com Δt=30°C
Capacidade depósito expansão: 10 litros
Pressão enchimento depósito expansão: 0,5 bar

GB

Form of supply

A single package, containing:
- Fully assembled and wired boiler.
- Preregulated burner.
- Circulator

Installation

- Respect the relevant regulations.
- In order to obtain the power indicated on the rating plate, the size of the chute must conform to the minimum height and section indicated:

Minimum height	Minimum square side or diameter
6 m	18 cm

Notes:
* When installing homologated chutes, respect the dimensions indicated by the manufacturer.
* To be able to remove any residues from the chute, it is advisable to install a draught plate at the base for this purpose.
* Anticipate a 220V – 50 Hz single phase socket with earth point close to the definitive location of the Heating Unit, as well as a water supply and drain.

Assembly

Level and height

- Level out the base of the boiler and regulate its height by turning the grimmets. Turning in a clockwise direction will raise the boiler, and vice versa.

Connection to the unit

- Remove the top cover from the jacket after disconnecting the earth point between it and the left side panel.
- Connect to the Out and Back circuit via (1) and (2), as well as to the mains water connection and hot water circuit via (3) and (4). See figure 1.
- Route the purge cock and safety valve discharge to the general drain.

Connection to the chute

- Connect it to the back element of the generator and pack the profile of the joint.

Test for airtightness

- Fill the unit with water and check that there are no leaks from the hydraulic circuit.

Fuel supply

- Make the connection between the burner and the fuel supply line.

Electrical connection

Consult diagrams figure 2.
LAIA GTI
LAIA GTI-R
LAIA GTI-T

Key

C	Circulator
Q	Boiler
V	3-way valve
TA	Ambient thermostat
P1	Hot water potentiometer
P2	Boiler potentiometer
NTC1	Flow detector sensor
NTC2	Hot water sensor
NTC3	Boiler sensor
I/O	General switch
	Heating/hot water service switch
R	Programme clock
T	Teletherm
LT	Telephone line
	Safety thermostat
	Burner blockage indicator
	Voltage indicator

Fix the top cover of the casing on the side panels.

Operation

Operations prior to first use

- Check that the unit is full of water and place the fixed hand of the thermohydrometer in the position corresponding to the manometric head of the unit.
- Purge the air from the unit and from the emitters.
- Fill up with water if necessary, until the mobile hand of the thermohydrometer is slightly higher than the fixed one.

Electrical operation diagrams

See figure 3.
LAIA GTI
LAIA GTI-R
LAIA GTI-T

Note:
* LAIA Heating Units incorporate a burner which ignites for the first time some 6 minutes after the general switch is flicked. Subsequently, ignition is almost instant.
* With regard to the operation of the programme clock of LAIA GTI-R Heating Units, consult the Instructions provided.

LAIA GTI-R Heating Units are issued with connections for programming the heating service. If you wish to programme heating and hot water simultaneously, the jumper between connectors 5-6 must be transferred to connectors 6-7 of the terminal grid.

First use

- Adjust the boiler potentiometer (5) to between 50°C and 90°C. See figure 4.
- Adjust the ambient thermostat (optional) to the level required.
- Adjust the boiler potentiometer for hot water (6) to between 40°C (summer) and 60°C (winter).
- Flick the general switch (7). The pilot (8) will light up.
- Use the switch (9) to select "Heating/Hot Water" or "Hot Water".

Heating/Hot Water

LAIA GTI and GTI-R with switch at (9) / . LAIA GTI-T with Teletherm / functions activated. (See "telephone module".)

A - WITHOUT EXTRACTION OF HOT WATER
- The burner operates under the control of the boiler potentiometer.
- The circulator operates continuously (unless the ambient thermostat overrides it).*
- 3-way valve open to emitters (unless the ambient thermostat overrides it).*

B - WITH EXTRACTION OF HOT WATER ***
- The boiler goes to the maintenance temperature (about 80°C).
- The circulator works under the control of the electronic circuit, in function of the flow and the temperature selected for this service.
- 3-way valve open to the exchanger.

Hot Water

LAIA GTI and GTI-R with switch at . LAIA GTI-T with Teletherm function activated. (See "telephone module".)

A - WITHOUT EXTRACTION OF HOT WATER
- The boiler remains at the maintenance temperature (about 80°C).
- The circulator does not work.
- 3-way valve open to the exchanger.

B - WITH EXTRACTION OF HOT WATER
- The boiler continues at the maintenance temperature.
- The circulator operates under the control of the electronic circuit, in function of the flow and the temperature selected for this service.
- 3-way valve open to the exchanger.

* Red LED (10) of the electronic circuit lit (See Figure 5)
** Yellow LED (11) of the electronic circuit lit.
*** Green LED (12) of the electronic circuit lit.

Notes:
* In / service, from the time extraction of hot water ceases until the heating service is reestablished (the green LED goes out and the yellow one on), approximately 1 minute may elapse.
* In any event, the safety thermostat (13) will disconnect the burner whenever the temperature of the water in the boiler becomes too high. It must be reset manually.
* Any blockage of the burner will cause the pilot (14) to light up.

- Check that the circulator is operating correctly and unblock it, if necessary, by pressing the groove of the shaft and turning at the same time.
- Check the performance of the burner under the control of the potentiometers or the ambient thermostat, if any.

LAIA GTI-T Telephone module

This module is constituted by two elements: a **portable emitter control** (15) which incorporates a service switch, keypad and loudspeaker, and also a **receiver** (16) for connection to the telephone line, mounted at the control panel (See Figure 4).

Remote control

The maximum duration of the telephone call is four minutes; once this time has elapsed, communication is cut off. If the receiver does not receive any tone from the emitter for thirty seconds, communication will be cut off.
- Enter the number where the receiving device is installed. At the eighth tone, the receiver will emit the following message: "Roca Heating. Enter the code". This message can be heard through the earpiece of the phone.
- Bring the emitter up close to the microphone in the speaker and key in the four digits of the access code. The initial access code is "0000".

a) If the code is not correct, the receiver issues the message, "Code incorrect. Enter the code". After five inaccurate attempts, the line is cut off. If less than four digits are entered, the line is cut off after thirty seconds. If more than four are entered, depending on which ones, some special function may be started (if the first four correspond to the correct code and the remaining ones to the function).

b) If the code is correct, the receiver issues the message, "Code correct. Select function", and awaits reception of one of the following digits: 1, 2, ✶ (depending on the function required).

Change of code

- Press the ✶ and 1 keys, in this order. The receiver says, "Enter new code".
- Enter the four digits of the new code (✶ and # may not be included), followed by *. The receiver repeats, "Enter new code".
- Enter the four digits of the code again.

a) If the two series of digits were not the same, the receiver gives the message, "Enter the code" and the steps for changing the code must be repeated from the beginning.

b) If the two series of digits were the same, the receiver says, "Code correct. Select function", and awaits reception of one of the following digits: 1, 2, ✶ (depending on the function required).

Consultation or change of status of the "Heating" service

- By pressing key 1 of the emitter, you will be informed of the status of the heating service. The receiver will state, "Heating on" or "Heating off".

If you wish to change the status, press key 1 again.

Consultation or change of status of the "H.W.S." service

- By pressing key 2 of the emitter, you will be informed of the status of the hot water service. The receiver will state, "Hot water on" or "Hot water off".

If you wish to change the status, press key 2 again.

Operation over the receiver

When the receiver is connected to the supply voltage, the LED remains off and the receiver does not accept any tones emitted via the microphone and does not issue any messages via the loudspeaker (see "off position"). The receiver incorporates three switches: (heating), (HWS) and (loudspeaker).
Once the receiver is receiving supply voltage, the green voltage LED will light up.

"Heating" selection

- Press the key. The LED:
- lights up = the heating service is operating normally.
- does not light up = the heating service is disconnected.

"Hot water" selection

- Press the key. The LED:
- lights up = the HWS service is operating normally.
- does not light up = the HWS is disconnected.

"Loudspeaker" selection

At OFF.
- Press the key. (*)

(*) This is not necessary when connecting the receiver to the mains for the first time.

The LED is off and the receiver:
- Does not admit tones from the emitter via its microphone.
- Does not issue messages via its loudspeaker.
- Admits messages on the phone line at the eighth call.
- Issues messages on the phone line.

At ON
- Press the key. The LED lights up and the receiver:
  - Admits tones from the emitter via its microphone.
  - Issues messages via its loudspeaker.
  - Admits messages on the phone line at the eighth call.
  - The "loudspeaker" LED flashes slowly while a call is being answered by the receiver

Disconnected

- Press the key for 3 seconds. The LED will flash rapidly and the receiver:
  - Is disconnected from the phone line.
  - Does not answer any calls.

Press the key to return to the ON position.

Blockage

The red LED lights up to indicate blockage of the boiler

Direct operation on the microphone of the receiver

All functions performed via telephone may also be performed locally by holding the loudspeaker of the emitter against the microphone of the receiver.
- Put the key in the ON position. The LED will light up.
- Bring the loudspeaker at the back of the emitter up close to the microphone of the receiver.
- Follow the operations described in "Remote Control", remembering:
- The digits of the access code need not be entered.
- Press the 0 key. The following message will be emitted: "Roca Heating. Select function."

If any calls come in on the telephone line while the emitter is being used, the call is given priority and all messages sent via the receiver's microphone are cancelled.

Important recommendations

- In the event that the unit is located in an area prone to freezing, some anti-freeze agent must be added to the water, in proportion to the minimum outside temperature of the place.
- We recommend that the characteristics of the water in the unit should be:
  pH: 7.5 ÷ 8.5
  Hardness: 8 ÷ 12 French degrees *

* One French degree is equivalent to 1 gramme of calcium carbonate contained in 100 litres of water

- In the event that it is essential to add water to the unit, always wait until the generator has cooled down completely before doing so.

EC Compliance

LAIA GTI, GTI-R and GTI-T boilers and heating units conform to European Directive 89/336/EEC on Electromagnetic Compatibility.