

**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**

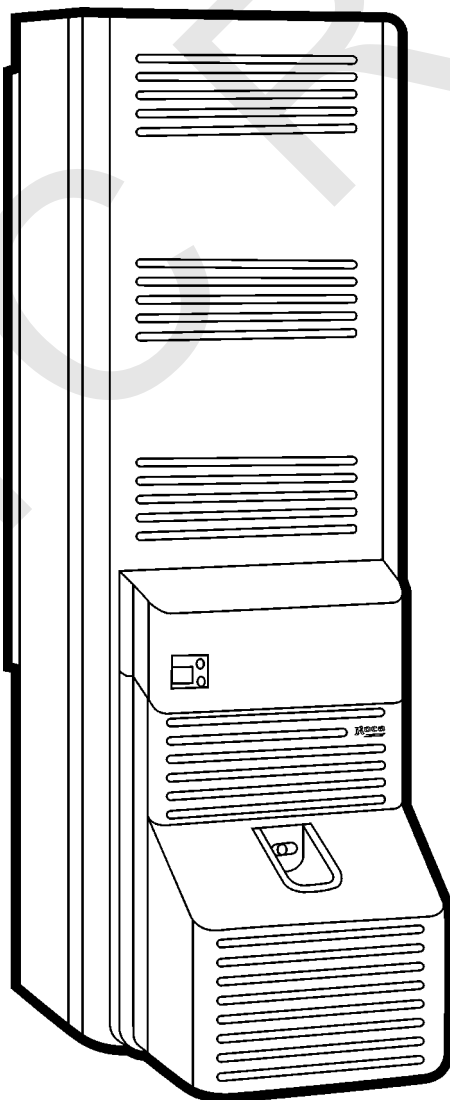
## GruppoTermico

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

**P**

## Grupos Térmicos

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



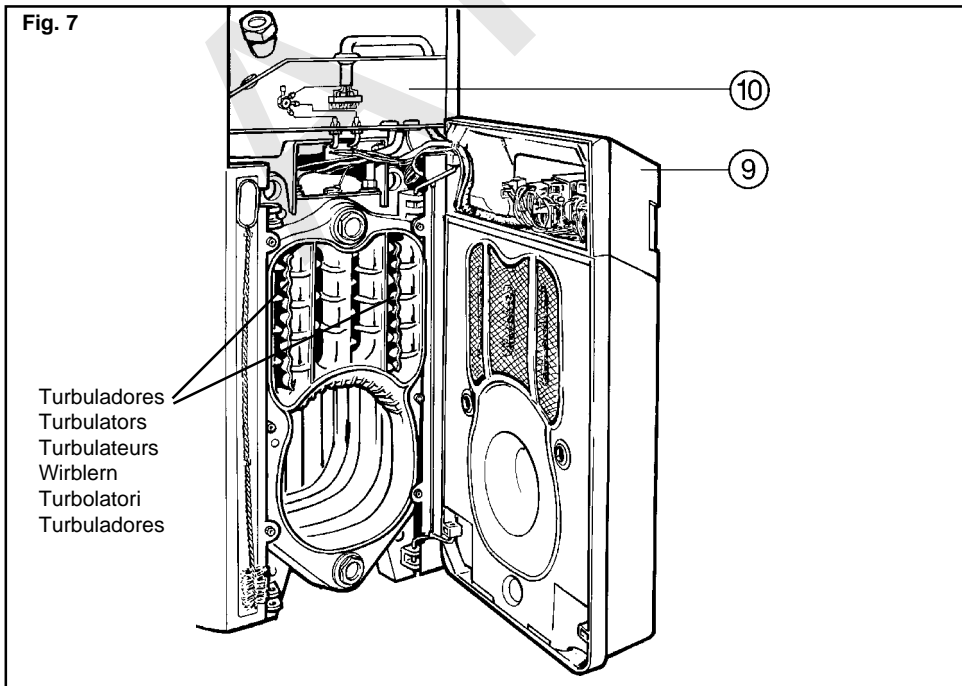
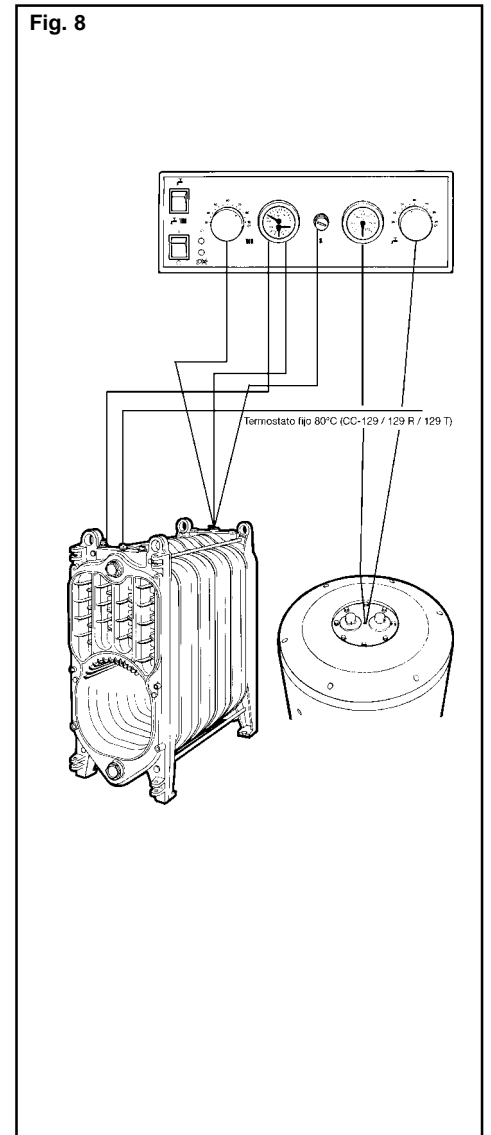
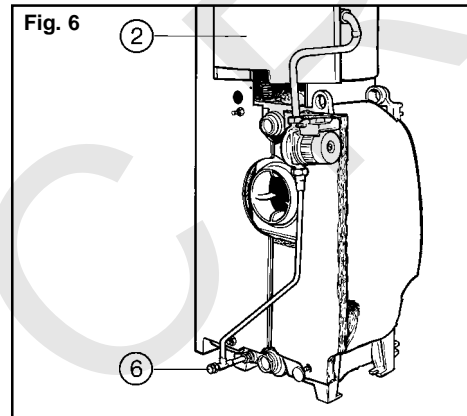
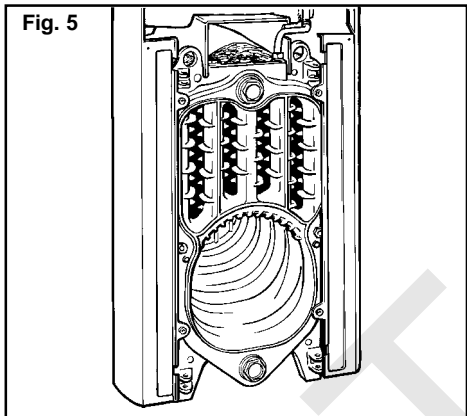
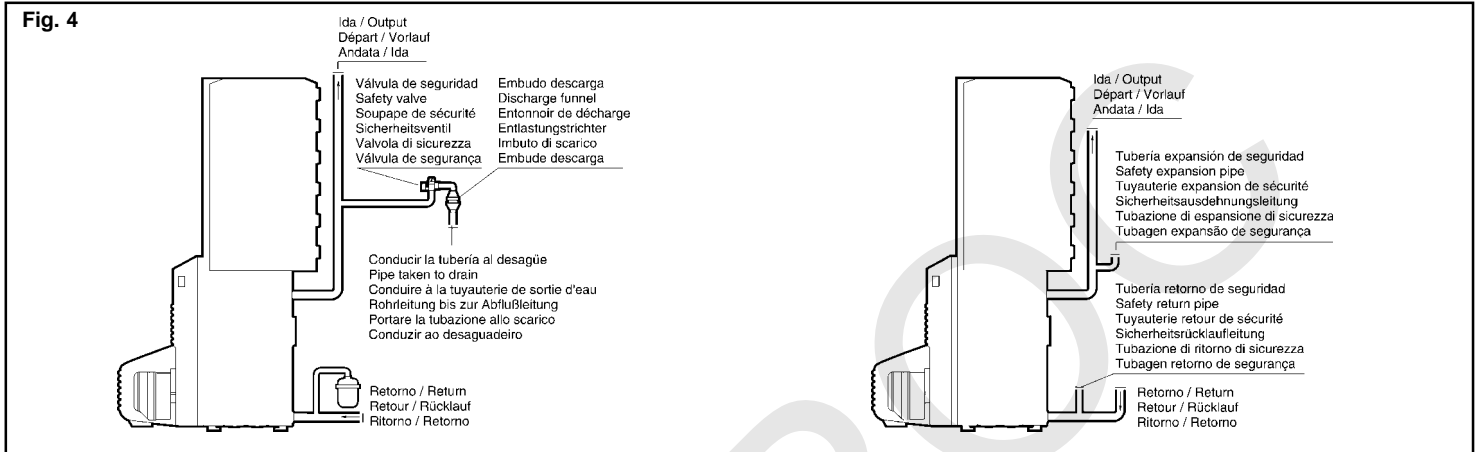
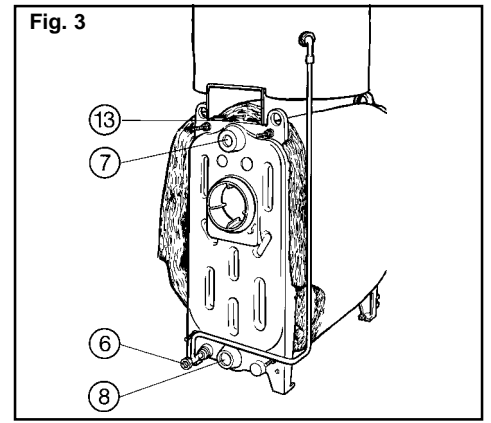
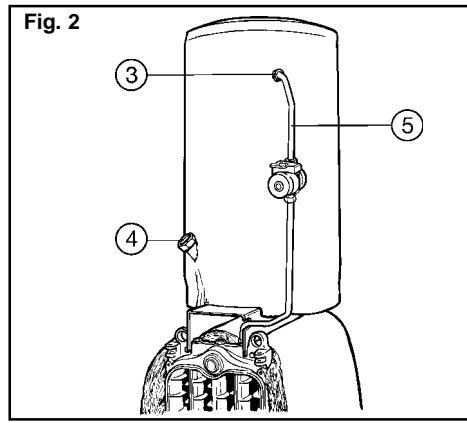
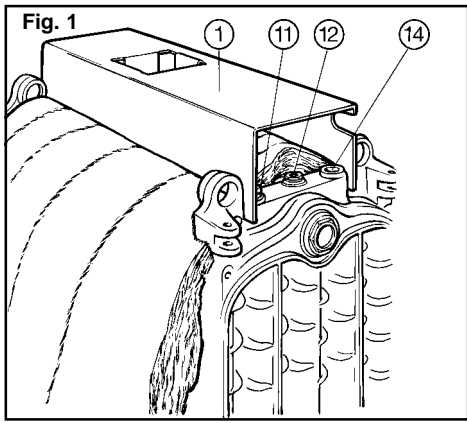
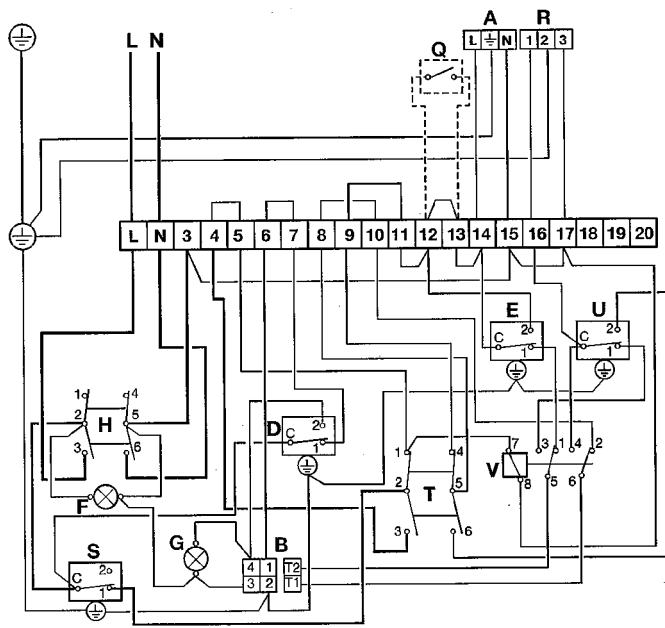
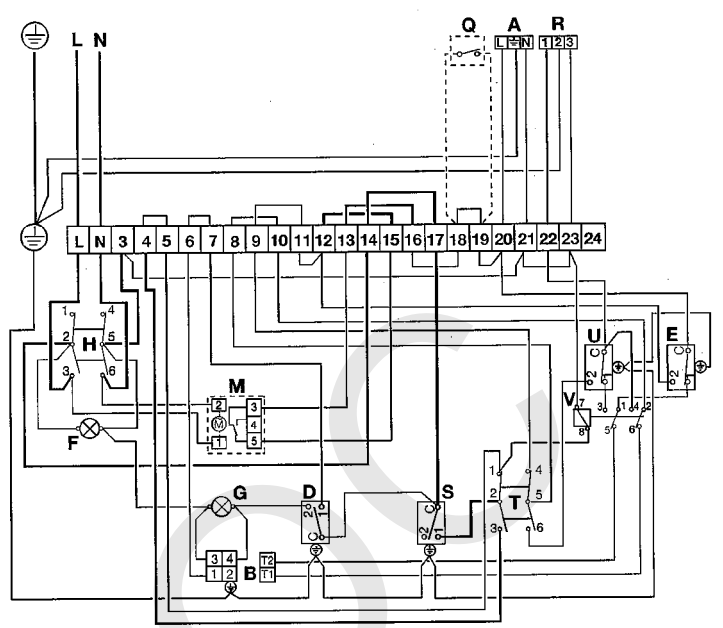


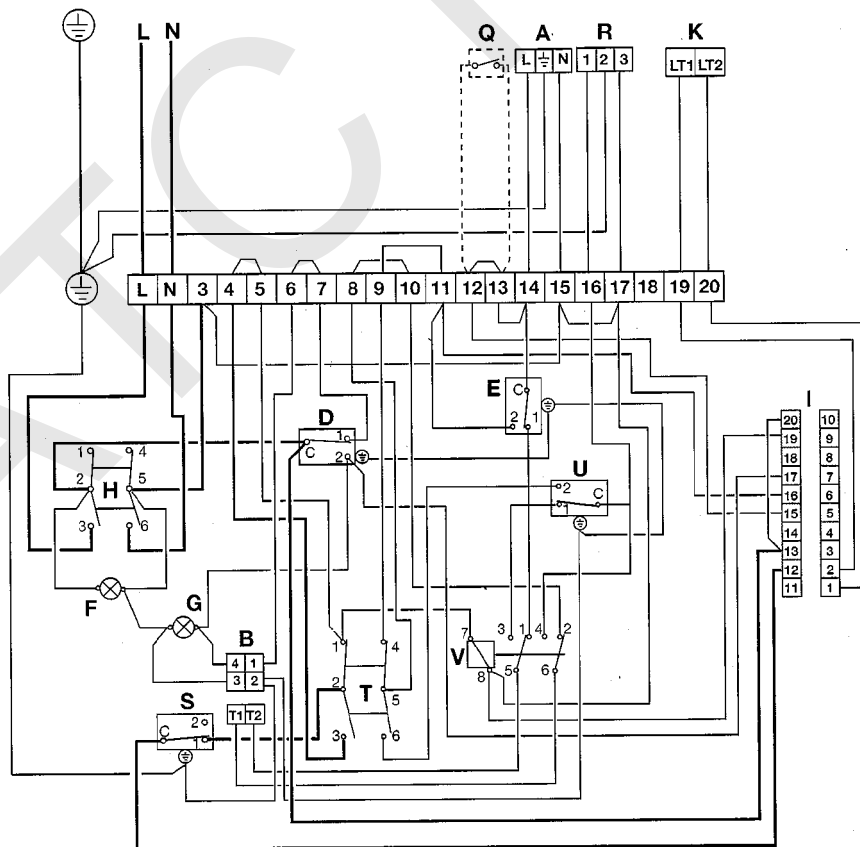
Fig. 9



CC-129

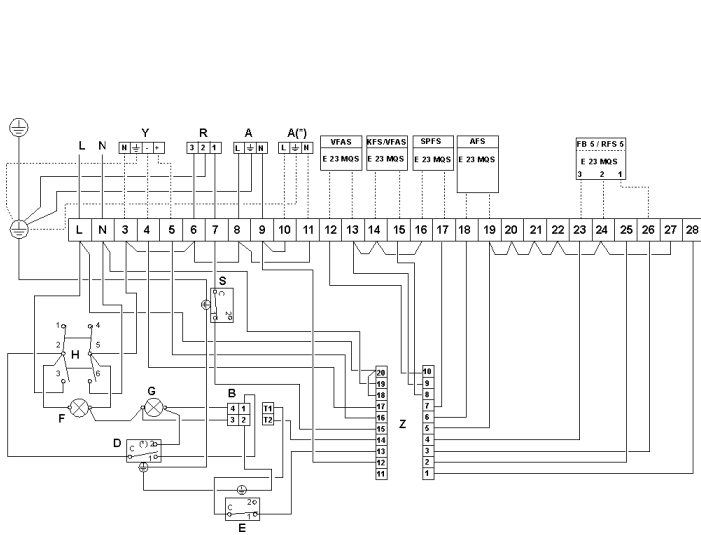


CC-129 R



CC-129 T

Fig. 9



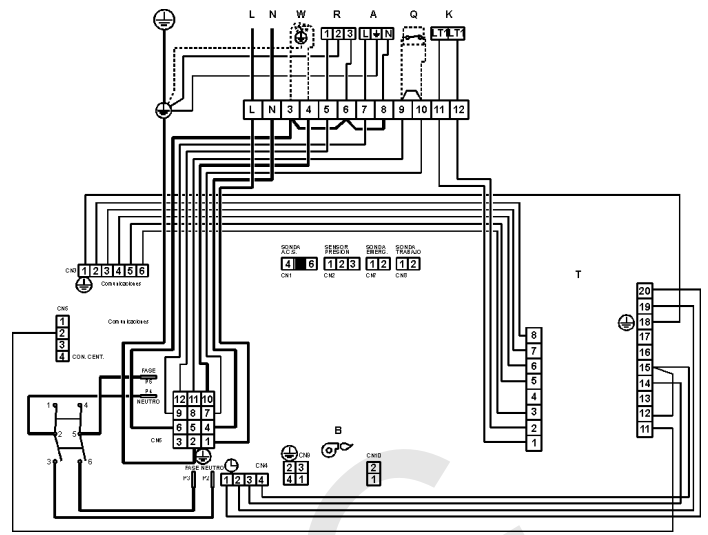
CC-129 C

- A Circulador
- A(\*) Circulador segundo circuito de Calefacción
- B Quemador
- D Termostato de seguridad
- E Termostato de regulación
- F Señalización tensión
- G Señalización bloqueo quemador
- H Interruptor general
- I/T Teletherm
- K Línea telefónica
- M Reloj programador
- O Central regulación
- Q Termostato de ambiente opcional
- R Circulador Agua Caliente Sanitaria
- S Termostato regulación Agua Caliente Sanitaria
- T Interruptor Invierno/Verano
- U Termostato mantenimiento 80°C
- V Relé
- W Resistencia eléctrica opcional
- Y Servomotor válvula 3 vías
- Z Zócalo central regulación

- A Circulating pump
- A(\*) Pump for Heating Circuit 2
- B Burner
- D Safety limit thermostat
- E Control thermostat
- F Power "on" indicator lamp
- G Burner lockout indicator lamp
- H Main switch
- I/T Teletherm
- K Telephone line
- M Timer
- O Control Centre
- Q Ambient thermostat (optional)
- R DHW pump
- S DHW control thermostat
- T Winter/Summer Switch
- U Fixed thermostat 80°C
- V Relay
- W Electric heater (optional)
- Y Motorized 3-way valve
- Z Control centre base

Para conectar termostato de ambiente retirar puente entre bornes: - 8 y 9 en cuadro CC-129 - 15 y 16 en cuadro CC-129R - 10 y 11 en cuadro CC-129T - 9 y 10 en cuadro CCE-130T  
 Para conectar resistencia retirar puente entre bornes: - 4 y 5 en cuadros CC-129 y CC-129T, y conectarla entre 3 y 4 - 10 y 11 en cuadro CC-129R, y conectarla entre 9 y 10.  
 El reloj M está preparado de origen para el control de Calefacción. Para el control de Calefacción y Agua Caliente Sanitaria, retirar puentes 3-4, 5-6 y 7-8 y realizar puentes entre 3-6, 4-7 y 5-8.  
 El trazado grueso corresponde a cables de 2,5 mm de sección, mientras que el fino corresponde a cables de 1 mm de sección.

To connect the ambient thermostat, remove the jumper plug between terminals:  
 - 8 and 9 in Control Panel CC-129 - 15 and 16 in Control Panel CC-129R - 10 and 11 in Control Panel CC-129T - 9 and 10 in Control Panel 130T  
 To connect the electric heater, remove the jumper plug between terminals:  
 - 4 and 5 in Control Panels CC-129 and CC-129T and wire it across terminals 3 and 4 - 10 and 11 in Control Panel CC-129R and wire it across terminals 9 and 10  
 Timer 'M' is factory-set for Heating control. For both Heating and domestic Hot Water Control, remove jumpers 3-4, 5-6 and 7-8 and put a jumper wire across terminals 3-6, 4-7 and 5-8.  
 The thick line refers to 2.5 mm cross-section wires, while the thin line refers to 1 mm cross-section wires.



CCE-130 T

- A Circulateur
- A(\*) Circulateur du second circuit de Chauffage
- B Brûleur
- D Thermostat de sécurité
- E Thermostat de régulation
- F Voyant de tension
- G Voyant de blocage brûleur
- H Interrupteur général
- I/T Télétherm
- K Ligne téléphonique
- M Horloge programmable
- O Centrale de régulation
- Q Thermostat d'ambiance
- R Circulateur Eau Chaude Sanitaire
- S Thermostat de régulation Eau Chaude Sanitaire
- T Interrupteur Hiver/Été
- U Thermostat fixe à 80°C
- V Relais
- W Résistance électrique (Option)
- Y Servomoteur vanne 3 voies
- Z Socle centrale de régulation

- A Umwälzpumpe
- A(\*) Umwälzpumpe für den zweiten Heizkreislauf
- B Brenner
- D Sicherheitsthermostat
- E Regelthermostat
- F Anzeige Spannung
- G Anzeige Brennerblockierung
- H Hauptschalter
- I/T Teletherm
- K Telefonleitung
- M Schaltuhr
- O Regelwarte
- Q (Auf Wunsch geliefert) Raumthermostat
- R Umwälzpumpe Heißwasser
- S Regelthermostat Heißwasser
- T Wählschalter Sommer/Winter
- U Auf 80°C eingestellter Wartungsthermostat
- V Relais
- W (Auf Wunsch gelieferter) Heizwiderstand
- Y Servomotor 3-Wege-Ventil
- Z Sockel Regelwarte

Pour connecter un thermostat d'ambiance, retirer le pont entre les bornes:  
 - 8 et 9 du tableau CC-129 - 15 et 16 du tableau C-129R - 10 et 11 du tableau CC-129T - 9 et 10 du tableau CCE-130T  
 Pour connecter une résistance, retirer le pont entre les bornes: - 4 et 5 des tableaux CC-129 et CC-129T, et connecter la entre 3 et 4 - 10 et 11 du tableau CC-129R, et connecter la entre 9 et 10.  
 L'horloge M est préparée d'origine pour le contrôle du Chauffage. Pour le contrôle du Chauffage et de l'Eau Chaude Sanitaire, retirer les ponts 3-4, 5-6 et 7-8 et faire les ponts entre 3-6, 4-7 et 5-8.  
 Le trait gras correspond à des câbles de 2,5 mm de section, tandis que le fin correspond à des câbles de 1 mm section.

Entfernen Sie für den Anschluß des Raumthermostats die Brücke zwischen den Klemmen:  
 - 8 und 9 bei Schalttafel CC-129 - 15 und 16 bei Schalttafel CC-129R - 10 und 11 bei Schalttafel CC-129T - 9 und 10 bei Schalttafel CCE-130T  
 Entfernen Sie für den Anschluß des Heizwiderstands die Brücke zwischen den Klemmen:  
 - 4 und 5 bei den Schalttafeln CC-129 und CC-129T. Bringen Sie die Brücke zwischen Klemme 3 und 4 an. - 10 und 11 bei Schalttafel CC-129R. Bringen Sie die Brücke zwischen Klemme 9 und 10 an.  
 Die Schaltuhr M ist ab Werk auf Heizbetrieb eingestellt. Entfernen Sie für Heiz- und Warmwasserbetrieb die Brücken 3-4, 5-6 und 7-8 und verlegen Sie diese auf 3-6, 4-7 und 5-8.  
 Die dicke Strichführung entspricht Kabeln mit einem Durchmesser von 2,5 mm, die dünne Strichführung entspricht Kabeln eines Durchmessers von 1 mm.

- A Circulatore impianto
- A(\*) Circulatore secondo circuito di Riscaldamento
- B Bruciatore
- D Termostato di sicurezza
- E Termostato di regolazione
- F Led sotto tensione
- G Led blocco bruciatore
- H Interruttore generale
- I/T Teletherm (comando telefonico)
- K Linea telefonica
- M Orologio programatore
- O Centralina di termoregolazione
- Q Termostato ambiente (optional)
- R Circulatore circuito sanitario
- S Termostato regolazione Acqua Calda Sanitaria
- T Interruttore Inverno/Estate
- U Termostato di mantenimento 80°C
- V Relé
- W Resistenza elettrica (optional)
- Y Servomotore valvola a tre vie
- Z Zoccolo centralina di termoregolazione

- A Circulador
- A(\*) Circulador segundo circuito Aquecimento central
- B Queimador
- D Termostato de segurança
- E Termostato de regulação
- F Sinalização de tensão
- G Sinalização de bloqueio do queimador
- H Interruptor geral
- I/T Teletherm
- K Linha telefónica
- M Relógio programador
- O Central de regulação
- Q Termostato ambiente (opcional)
- R Circulador Água Quente Sanitaria
- S Termostato regulação Água Quente Sanitaria
- T Interruptor Verão/Inverno
- U Termostato manutenção 80°C
- V Relé
- W Resistência eléctrica (opcional)
- Y Servomotor Válvula de 3 vias
- Z Base central regulação

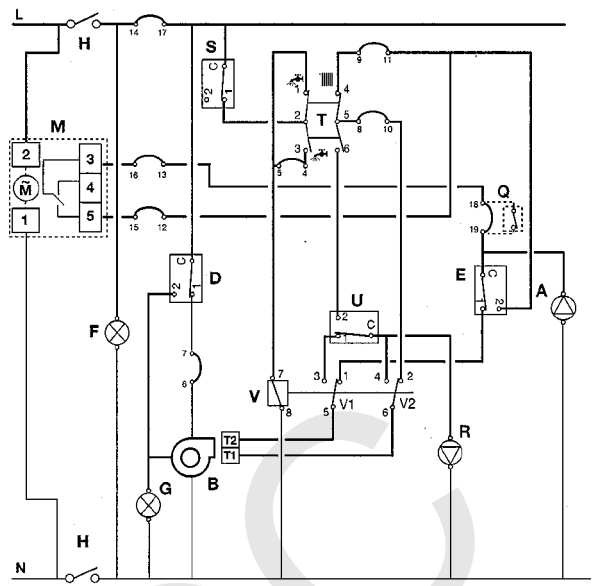
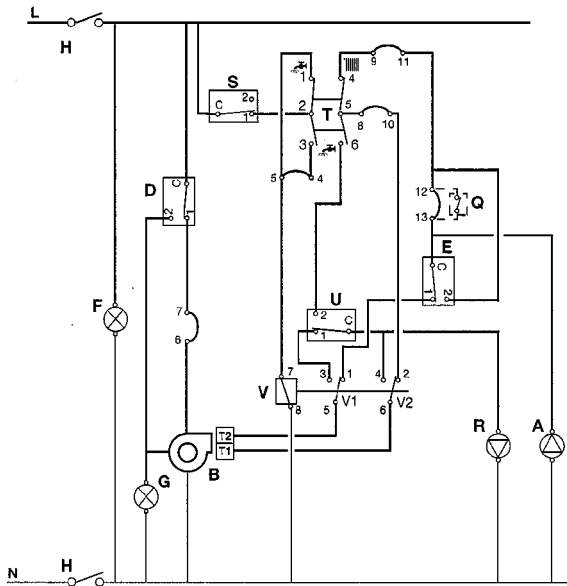
Per collegare il termostato ambiente rimuovere i ponti tra i morsetti: - 8 e 9 nel Quadro CC-129 - 15 e 16 nel Quadro CC-129R - 10 e 11 nel Quadro CC-129T - 9 e 10 nel Quadro CCE-130T  
 Per collegare la resistenza elettrica rimuovere i ponti tra i morsetti: - 4 e 5 nel Quadro CC-129 e CC-129T e spollarlo tra 3 e 4 - 10 e 11 nel Quadro CC-129R e spollarlo tra 9 e 10  
 L'orologio programatore M è in origine preparato per il controllo del Riscaldamento.  
 Per il controllo del Riscaldamento e Acqua Calda Sanitaria, rimuovere i ponti 3-4, 5-6 e 7-8 e spollarli tra 3-6, 4-7 e 5-8.  
 Lo schema elettrico è rappresentato con le linee in grassetto per cavi da 2,5 mm di sezione, mentre le linee normali corrispondono a cavi da 1 mm di sezione.

Para fazer a ligação do termostato ambiente eliminar a ponte entre os bornes:  
 - 8 e 9 no quadro CC-129 - 15 e 16 no quadro CC-129R - 10 e 11 no quadro CC-129T - 9 e 10 no quadro CCE-130T  
 Para ligar a resistência retirar a ponte entre os bornes: - 4 e 5 nos quadros CC-129 e CC-129T, e ligá-los entre 3 e 4 - 10 e 11 no quadro CC-129R, e ligá-lo entre 9 e 10  
 O relógio M está preparado de origem para o controlo do Aquecimento.  
 Para o controlo de Aquecimento e Água Quente Sanitaria, retirar as pontes 3-4, 5-6 e 7-8 e fazer pontes entre 3-6, 4-7 e 5-8. O traço grosso corresponde a cabos de 2,5 mm de secção e o fino a cabos de 1 mm de secção.

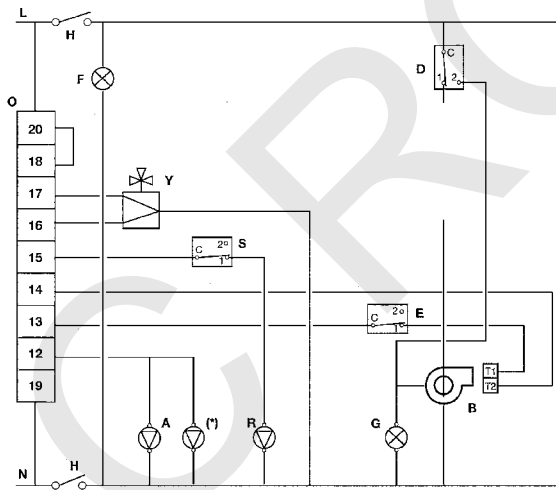
Fig. 11

CC-129

CC-129 R



CC-129 C



CC-129 T

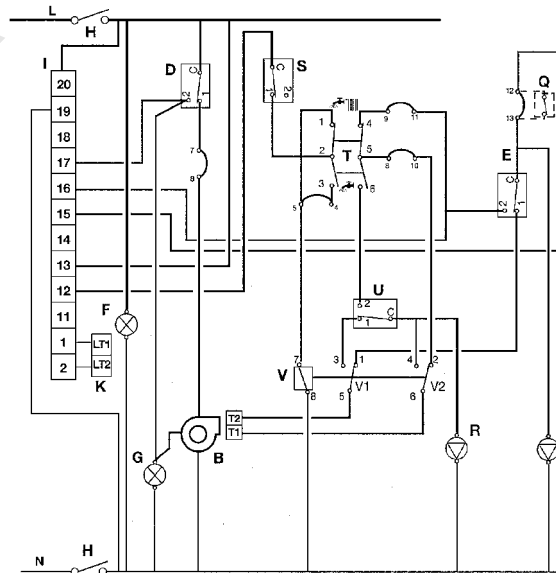


Fig. 10

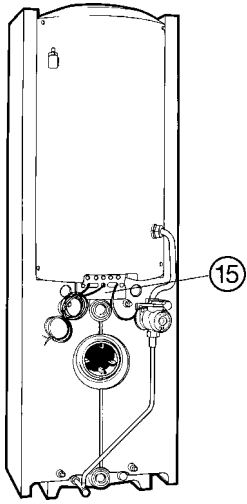
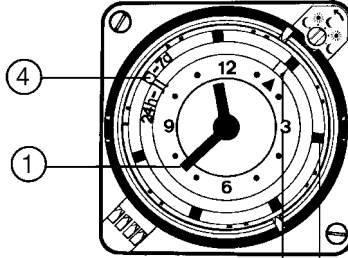


Fig. 15



Encaje diario (24 horas)  
Day slide (24 hours)  
Encoche quotidienne (24 heures)  
Tägliche Einrastung (24 Stunden)  
Caletta programma giornaliero (24 ore)  
Encaixe diário (24 horas)

Encaje semanal (7 días)  
Week slide (7 days)  
Encoche hebdomadaire (7 jours)  
Wöchentliche Einrastung (7 Tage)  
Caletta programma settimanale (7 giorni)  
Encaixe semanal (7 dias)

Fig. 12

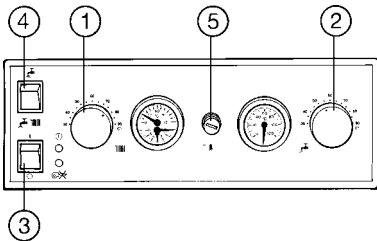


Fig. 13

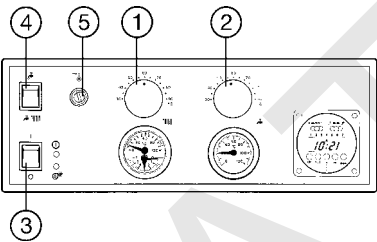


Fig. 14

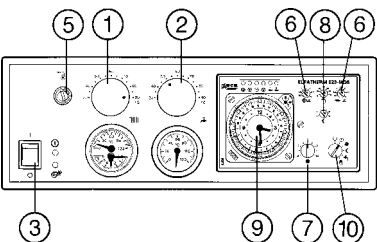


Fig. 16

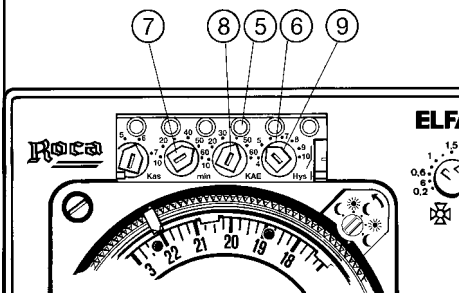


Fig. 17

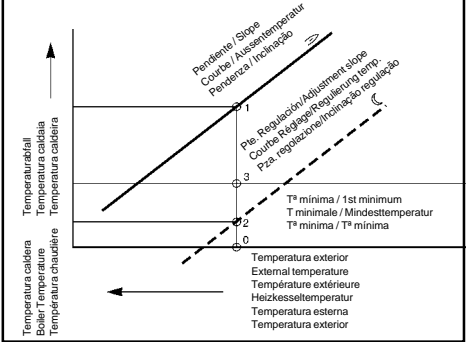


Fig. 18

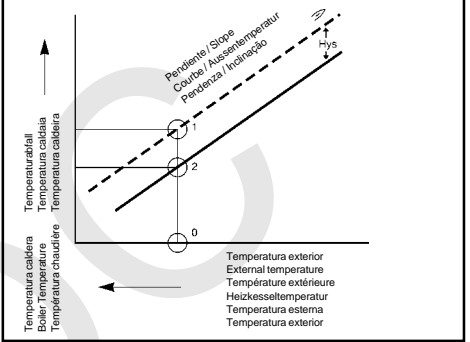


Fig. 19

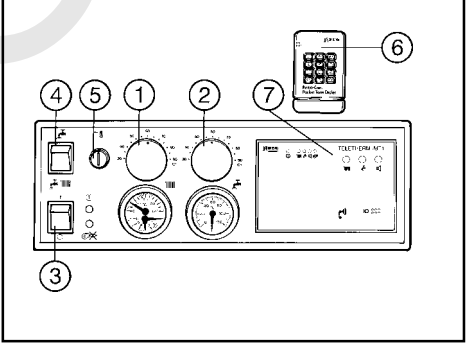


Fig. 20

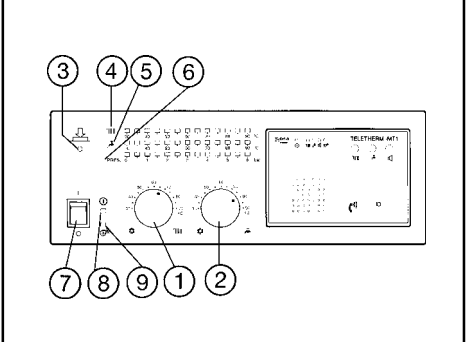
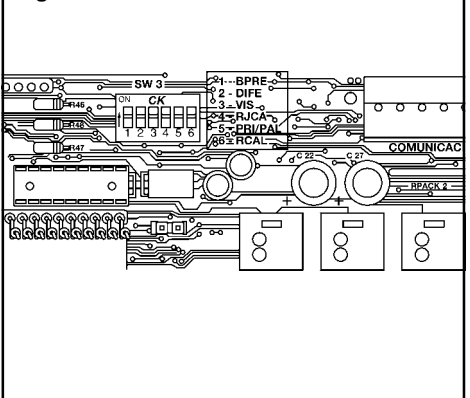


Fig. 21



# Características principales / Main Feature / Caractéristiques principales / Hauptmerkmale Caratteristiche principale / Características principais

Características eléctricas:  
 Electrical characteristics:  
 Caractéristiques électriques: 220-230V ~ 50 Hz  
 Elektrische Daten:  
 Caratteristiche elettriche:  
 Características eléctricas:

|                   | Potencia nominal máxima / Maximum nominal output / Puissance nominale maximale<br>Maximale Nennleistung / Potenza massima nominale / Potência nominal máxima<br>(W) |   |  |   |
|-------------------|---|---|--|---|
|                   | Caldera<br>Boiler<br>Chaudière<br>Kessel<br>Caldaia<br>Caldeira   | Quemador<br>Burner<br>Brûleur<br>Brenner<br>Bruciatore<br>Queimador | Circulador<br>Pump<br>Circulateur<br>Umwälzpumpe<br>Circolatore impianto<br>Circulador | Circulador Agua Caliente Sanitaria<br>DHW Pump<br>Circulateur Eau Chaude Sanitaire<br>Heißwasser-Umwälzpumpe<br>Circolatore Acqua Calda Sanitaria<br>Circulador Água Quente Sanitária |
| <b>LAIA 25 GT</b> | 460   | 290   | 85   | 85  |
| <b>LAIA 30 GT</b> | 460   | 290   | 85   | 85  |
| <b>LAIA 45 GT</b> | 485   | 290   | 115  | 85  |

| Grupo Térmico<br>Heating Unit Model<br>Groupe Thermique<br>Heizkessel<br>Gruppo Termico<br>Grupo Térmico | Nº. de elementos<br>Nº of sections<br>Nº d'éléments<br>Anzahl der Heizelemente<br>N. di elementi<br>Nº de elementos | Potencia útil<br>Heat output<br>Puissance utile<br>Nutzleistung<br>Potenza utile<br>Potência útil | Rendimiento útil<br>Net Efficiency<br>Rendement utile<br>Nutzungsgrad<br>Rendimento utile<br>Rendimento útil | Capacidad agua<br>Water content<br>Capacité en eau<br>Wasserinhalt<br>Contenuto acqua<br>Capacidade água |
|--|---|---|--|--|
|  |   | kcal/h<br>kW  | (%)  | (l)  |
| <b>LAIA 25 GT</b>  | 3   | 24.000<br>27,9  | 90,4   | 19   |
| <b>LAIA 30 GT</b>  | 4   | 28.000<br>32,6  | 90,5   | 26   |
| <b>LAIA 45 GT</b>  | 6   | 43.000<br>50,0  | 90,9   | 39   |

|                                 |        |   |       |
|---------------------------------|--------|---|-------|
| Temperatura máxima de trabajo:  | 100 °C | Presión máxima de trabajo caldera:      | 3 bar |
| Max. working temperature:       | 100 °C | Boiler max. working pressure:           | 3 bar |
| Température max. de travail:    | 100 °C | Pressión max. de travail chaudière:     | 3 bar |
| Maximale Betriebstemperatur:    | 100 °C | Maximaler Betriebsdruck Kessel:         | 3 bar |
| Temperatura massima di lavoro:  | 100 °C | Pressione massima lato impianto:        | 3 bar |
| Temperatura máxima de trabalho: | 100 °C | Pressão máxima de trabalho da caldeira: | 3 bar |

| Grupo Térmico Modelo<br>Thermal Unit Model<br>Groupe Thermique Modèle<br>Heizkessel Modell<br>Gruppo Termico Modello<br>Grupo Térmico Modelo | Peso aprox.<br>Approx. weight<br>Poids approx.<br>Gewicht<br>Peso appross.<br>Peso aprox. | Perdida carga circuito agua (mm.c.a.)<br>Waterside Pressure Drop (mm.w.g.)<br>Pertes de charge circuit eau (mm.c.e.)<br>Ladeverlust Wasserkreislauf (mm WS)<br>Perdita di carico lato acqua circuito Riscald. (mm.c.a.)<br>Perda de carga circuito água (mm.c.a.) |
|--|---|---|
|  | (kg)  | $\Delta t = 10\text{ °C}$<br>$\Delta t = 20\text{ °C}$  |
| <b>LAIA 25 GT</b>  | 245   | 35<br>8   |
| <b>LAIA 30 GT</b>  | 310   | 75<br>15  |
| <b>LAIA 45 GT</b>  | 402   | 145<br>38   |

\* Con turbuladores y silenciador. / With turbulators and silencer. / \* Avec turbulateurs et piège à son. / \* Mit Wirblern und Schalldämpfer  
 \* Con turbulatori e silenziatore. / \* Com turbuladores e silenciador.

| Grupo Térmico      | Circulador              | Quemador de gasóleo  | Grupo hidráulico            | Pérdida de carga (mm.c.a.)             |       |     |
|--------------------|-------------------------|----------------------|-----------------------------|--|-------|-----|
| Modelo             | Potencia absorbida (W)  | Modelo               | Potencia absorbida máx. (W) | Circuito de humos*                     |       |     |
| Heating Unit       | Pump                    | Oil burner           | Hydraulic Unit              | Smoke Circuit* Pressure Drop (mm.w.g)* |       |     |
| Model              | Power input (W)         | Model                | Power input (W)             | Model                                  |       |     |
| Groupe Thermique   | Circulateur             | Brûleur au gazole    | Groupe hydraulique,         | Pertes de charge (mm.c.e.)             |       |     |
| Modèle             | Puissance absorbée, (W) | Modèle               | Puissance absorbée (W)      | Modèle                                 |       |     |
| Heizkessel         | Umwälzpumpe             | Dieselbrenner        | Hydraulik-Aggregat,         | Ladeverlust (mm WS)                    |       |     |
| Modell             | Leistungsaufnahme (W)   | Modell               | Leistungsaufnahme (W)       | Modell                                 |       |     |
| Gruppo Termico     | Circolatore             | Brucciatoe a gasolio | Gruppo idraulico,           | Perdita di carico (mm.c.a.)            |       |     |
| Modello            | Potenza assorbita (W)   | Modello              | Potenza assorbita (W)       | Modello                                |       |     |
| Grupo Térmico      | Circulador              | Queimador gasóleo    | Grupo hidráulico            | Perda de carga (mm.c.a.)               |       |     |
| Modelo             | Potência absorvida (W)  | Modelo               | Potência absorvida (W)      | Modelo                                 |       |     |
| <b>LAIA 25 GTA</b> | MYL-30-15               | 94                   | CRONO-3L                    | 290                                    | GH-16 | 1,5 |
| <b>LAIA 30 GTA</b> | PC-1025                 | 94                   | CRONO-3L                    | 290                                    | GH-17 | 0,7 |
| <b>LAIA 45 GTA</b> | PC-1035                 | 117                  | CRONO-5L                    | 290                                    | GH-15 | 2,5 |

\* A potencia nominal y CO<sub>2</sub> = 13% / \* Nominal Output and CO<sub>2</sub> = 13% / \* A puissance nominale et CO<sub>2</sub> = 13%  
 \* Bei Nennleistung und CO<sub>2</sub> = 13% / \* A potenza nominale e CO<sub>2</sub> = 13% / \* A potência Nominal e CO<sub>2</sub> = 13%

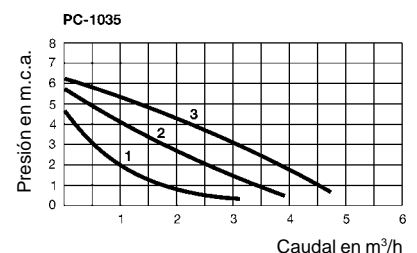
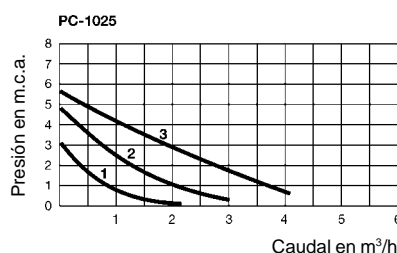
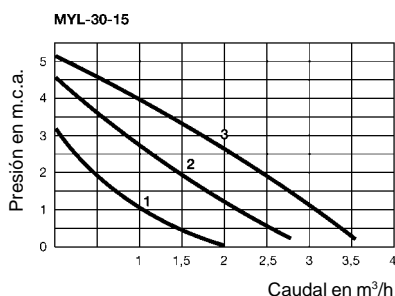
| Grupo Térmico      | Capacidad        | Depósito acumulador*                           | Resistencia opcional          | Circulador Agua Caliente Sanitaria |
|--------------------|------------------|--|-------------------------------|------------------------------------|
| Heating Unit       | Capacity         | Primario Secundario                            | Optional Elec. Heat           | Potencia absorbida                 |
| Model              | Capacity         | Storage Tank* Max. Pressure (bar)              | Optional Elec. Heat           | DWH Pump Power Input               |
| Model              | Capacity         | Primary Secondary                              | Optional Elec. Heat           | DWH Pump Power Input               |
| Groupe Thermique   | Capacité         | Préparateur* Pression max. (bar)               | Résistance Option             | Circulateur Eau Chaude Sanitaire   |
| Modèle             | Capacité         | Primary Secondary                              | Résistance Option             | Puissance absorbée                 |
| Heizkessel         | Fassungsvermögen | Speicherbehälter* Maximaler Druck (bar)        | Heizwiderstand (Auf Wunsch)   | Heißwasser-Umwälzpumpe             |
| Modell             | Fassungsvermögen | Primär Secundär                                | Heizwiderstand (Auf Wunsch)   | Leistungsaufnahme                  |
| Gruppo Termico     | Capacità         | Depósito Accumulatore* Pressione massima (bar) | Resistenza elettrica optional | Circolatore Acqua Calda Sanitaria  |
| Modello            | Capacità         | Primario Secundario                            | Resistenza elettrica optional | Potenza assorbita                  |
| Grupo Térmico      | Capacidade       | Depósito acumulador* Pressão Maxima (bar)      | Resistência opcional          | Circulador Água Quente Sanitária   |
| Modelo             | Capacidade       | Primário Secundário                            | Resistência opcional          | Potência absorvida                 |
|                    | (l)              |  | (W)                           | (W)                                |
| <b>LAIA 25 GTA</b> | 100              | 3 7  | 2.000                         | 94                                 |
| <b>LAIA 30 GTA</b> | 150              | 3 7  | 2.500                         | 94                                 |
| <b>LAIA 45 GTA</b> | 150              | 3 7  | 2.500                         | 94                                 |

\* Equipo de protección catódica EPC GM-1-2 para cada capacidad. / \* Cathodic protection unit EPC GM-1-2 for each capacity.  
 \* Equipement de protection cathodique EPC GM-1-2 pour chaque capacité. / \* Kathodenschutz EPC GM-1-2 für jedes Fassungsvermögen.  
 \* Gruppo di protezione catodica EPC GM-1-2 seconda capacità. / \* Equipamento de protecção catódica EPC GM-1-2 para cada capacidade.

## Características hidráulicas circuladores / Pump Hydraulic Features

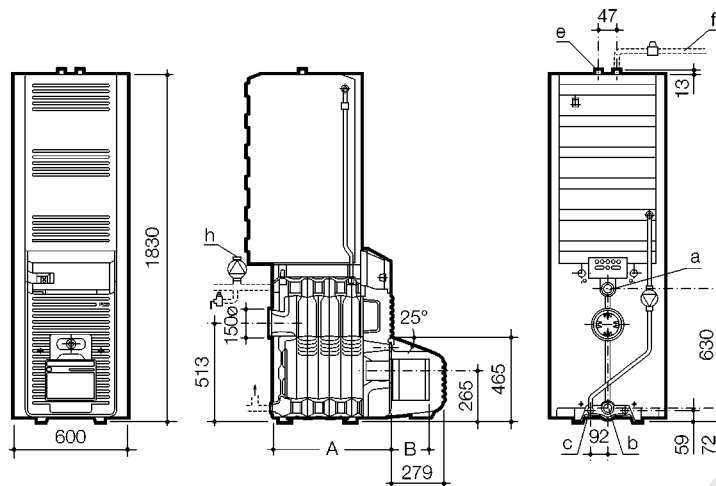
### Caractéristiques hydrauliques circulateur / Hydraulische Daten der Umwälzpumpen

### Caratteristiche idrauliche dei circolatori / Características Hidráulicas dos circuladores





# Dimensiones / Dimensions / Dimensions / Abmessungen / Dimensioni / Dimensões



| Cotas / Dimensions / Dimensions<br>Maße / Dimensioni / Cotas                                       |         |         |         | Conexiones / Connections / Connections<br>Anschlüsse / Connessioni / Ligações |          |          |                |                      |             |  |
|--|---------|---------|---------|---|----------|----------|----------------|----------------------|-------------|--|
| Grupo Térmico<br>Heating Unit<br>Groupe Thermique<br>Heizkessel<br>Gruppo Termico<br>Grupo Térmico | A<br>mm | B<br>mm | C<br>mm | Ida   | Retorno  | Desagüe  | Consumo        | Entrada agua fría    | Circulador  |  |
|  |         |         |         | Flow  | Return   | Drain    | Outlet to taps | Cold Water Inlet     | Pump        |  |
|  |         |         |         | Départ  | Retour   | Decharge | Cons. eau ch.  | Entrée eau froide    | Circulateur |  |
|  |         |         |         | Vorlauf   | Rücklauf | Abfluß   | Verbrauch      | Kaltwasser-Einlauf   | Umwälzpumpe |  |
|  |         |         |         | Mandata   | Ritorno  | Scarico  | Uscita A.C.S.  | Entrata acqua fredda | Circolatore |  |
|  |         |         |         | Ida   | Retorno  | Esgoto   | Consumo A.Q.S. | Entrada água fria    | Circulador  |  |
|  |         |         |         | a   | b        | c        | e              | f                    | h           |  |
| <b>LAIA 25 GT</b>  | 505     | 200     | 125     | 1"  | 1"       | 1/2"     | 3/4"           | 3/4"                 | 1"          |  |
| <b>LAIA 30 GT</b>  | 625     | 200     | 125     | 1 1/4"  | 1 1/4"   | 1/2"     | 3/4"           | 3/4"                 | 1 1/4"      |  |
| <b>LAIA 45 GT</b>  | 865     | 185     | -       | 1 1/4"  | 1 1/4"   | 1/2"     | 3/4"           | 3/4"                 | 1 1/4"      |  |

## Forma de suministro / Delivery / Forme de livraison Lieferform / Forma di fornitura / Forma de fornecimento

### En nueve bultos:

- Cuerpo de caldera montado.
- Envoltente:
  - Aislante cuerpo caldera
  - Aislante posterior
  - Soporte depósito
  - Boquilla para quemador
  - Cepillo limpieza
  - Accesorios para montaje
- Puerta
- Depósito acumulador
- Grupo hidráulico
- Quemador
- Circulador calefacción
- Cuadro de control
- Cubierta insonorizante quemador

### In nine packages:

- Boiler body, fully assembled.
- Casing:
  - Boiler body insulating blanket
  - Back insulation
  - Tank cradle
  - Burner nozzle
  - Cleaning brush
  - Assembly accessories
- Door
- Storage tank
- Hydraulic unit
- Burner
- Heating pump
- Control panel
- Burner silencer cover

### En neuf colis:

- Corps de chaudière monté.
- Jaquette:
  - Isolant corps de chauffe
  - Isolant arrière
  - Support préparateur
  - Gliceur pour brûleur
  - Brosse de nettoyage
  - Accessoires pour montage
- Porte
- Préparateur
- Groupe hydraulique
- Brûleur
- Circulateur chauffage
- Tableau de contrôle
- Capot insonorisant

### Neun separate Verpackungen:

- Fertig montierter Kesselkörper.
- Kesselmantel:
  - Isolierung Kesselkörper
  - Hintere Isolierung
  - Behälterauflage
  - Brennerdüse
  - Reinigungsbürste
  - Montagezubehör
- Tür
- Speicherbehälter
- Hydraulik-Aggregat
- Brenner
- Umwälzpumpe Heizbetrieb
- Schalttafel
- Schalldammende Brennerabdeckung

### In nove confezioni:

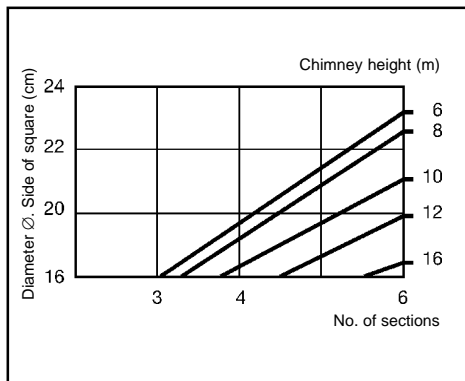
- Corpo caldaia assemblato.
- Mantello:
  - Isolante corpo caldaia
  - Isolante posteriore
  - Supporto accumulatore
  - Ugello bruciatore
  - Scovolo per pulizia
  - Accessori per il montaggio
- Porta
- Deposito accumulatore
- Gruppo idraulico
- Bruciatore
- Circolatore impianto
- Quadro di controllo
- Cuffia insonorizzante bruciatore

### Em nove volumes:

- Corpo de caldeira montado.
- Envoltente:
  - Isolamento do corpo da caldeira
  - Isolamento posterior
  - Suporte do depósito
  - Boquilha para queimador
  - Escova de limpeza
  - Acessórios de montagem
- Porta
- Depósito acumulador
- Grupo hidráulico
- Queimador
- Circulador do circuito de aquecimento central
- Quadro de controlo
- Caixa insonorizadora do queimador

## Installation

- Observe current Regulations.
- Check that there is sufficient clearance between the back section and the wall to permit future maintenance operations.
- The minimum clearance between the side panel, on the hinge side of the door, and the wall should be 30 cm, and 10 cm on the opposite.
- Ensure there is a 220V-50Hz single-phase, earthed power point as well as a water supply and drain near the installation site of the unit.
- To obtain the output shown on the data nameplate, please note that the size of the chimney should conform with the graph.



### N.B:

- When approved chimneys are being fitted, the maker's dimensions should be adhered to.
- To remove possible residue deposited in the chimney, it is advisable to have a handhole in the base for this purpose.

## Assembly

- To facilitate transporting the boiler to its final position, the front and back sections have lifting rings which allow for pipes of up to 3/4" to be inserted through them.
- Check that the boiler is level on its future operating plinth.

## Outdoor AFS sensor, VFAS Flow Sensor, Remote Control FB5 or Ambient Sensor RFS5 (with Control Panel CC-129C only)

The last two devices are optional and so they are not supplied as standard unless otherwise stated.

- Proceed as described in the Instructions that come with the Control Centre.

## LAIA GTA Heating Units

- In the top left-hand tapping in the front section screw in the temp./altitude gauge check valve of the Control Panel (except where a CCE-130T model is being installed).
- Cover the boiler body with the insulating blanket, passing it between the lower tie-rods and the boiler body itself.
- Rest the tank cradle (1) on the front and back sections. The notched end should rest on the front section. [Figure 1](#).
- Where LAIA 25 GTA and LAIA 30 GTA units are being installed, fit the back plastic cover (2) on the tank and secure it in place by means of the 4 Fischer plugs supplied, introducing them in the tank insulating material. [Figure 6](#).
- Fit the FLEXVENT-H automatic floatvent supplied with the hydraulic unit in the tapping for this purpose located at the top back side of the tank.

- Rest the tank on the cradle in such a way that the tapping (3) for connecting the "tank flow" is situated on the upper right-hand side. The lower edge of the insulation will fit into the cradle. [Figure 2](#).
- In tanks designed to accept an electric heater, this will be screwed into the tapping (4) with a nut and locking plate. Please refer to the "Electrical connections" section with regard to the safety limit thermostat supplied with it.
- Make the connection between the tank and the boiler through the hydraulic unit provided in the way shown in [figures 2 and 3](#).

### Note:

The hydraulic unit shown in [figures 2 and 3](#) belongs to LAIA 45 GTA. For LAIA 25 GTA ([Fig. 6](#)) and LAIA 30 GTA ([Fig. 10](#)), the pump is fitted between the top return connecting pipe and the bottom one. The pipe lagging (insulation) has not been drawn in the above-mentioned figures so as to get a clearer view of components.

Put gaskets on all the joints.

The check valve is located inside the "boiler flow connection" (5), at the top.

The arrow on the pump body at the back of LAIA 25 GTA and LAIA 30 GTA units must point down, while that on the pump at the front of LAIA 45 GTA units must point up. However, the terminal box has to be at the top.

If no drain cock (optional) has been installed in the tapping (6), screw in a 1/2" gasketed plug.

- Connect the tank to the water mains and to the installation through the upper tapplings, observing their destination; cold water inlet = blue protection; consumption = red protection.

- Make the flow and return connections of the installation at m and (8), respectively. [Figure 3](#).

- In the "mains water inlet" connection before the tank, install the FLEXBRANE safety unit in accordance with the instructions that come with it. Route the discharge to the general drain.

- The safety valve must be installed in such a way that it is directly connected to the boiler, as close as possible and without any obstacles or closing elements between them.

- Fit the specific safety devices for sealed or open vented system installations in accordance with the respective diagram ([Figure 4](#)). In any case, the diameters of the safety conduits shall conform to the dimensions given for them in the current Regulations.

- Put the insulating material on the back of the boiler.

- Connect the chimney and carefully pack round the joint.

- Fill the tank and heating circuit with water, necessarily in this order, and check the hydraulic circuit for leaks.

- Secure the side casing panels to the boiler: to the front section by means of 4 screws M8x12 and 4 washers A8.4 and to the tie-rods back end, inserting the spreaders of 25 (top) and 13 (bottom) with 4 washers B 13 and 4 hex nuts M12. [Figures 5 and 6](#).

- Place the top casing cover on the tank, so that the round shape coincides with the flange and the opening facing the back side. Secure it to the sides by means of M6 screws and A 6.4 washers.

- Raise the door together with the pivots and insert them in the right or left hand hinge-holes of the front section, according to the direction of door opening chosen.

- Hang the cleaning brush on the front side opposite the direction of door opening.

- Lower the control panel cover (9) of the door. [Figure 7](#).

- Introduce the terminal strip holder bracket (10), the cables and capillaries of the control panel through the rectangular opening in the door.

- Fix the control panel fascia to the door using 4 blued self-tapping screws B3.5 x 13.
- Rest the terminal strip holder bracket onto the casing side panel brackets and fasten it with the two nuts and bolts provided for this purpose. [Figure 7](#).
- Pass the wiring harness for connection between the control panel and terminal strip up the back side of the terminal strip holder bracket and fasten it with the accessories provided for this purpose.

## Position of valves, bulbs and sensors

### Control Panels CC-129 range

- In the check valve (11) of the front section, screw the temp./altitude gauge pressure test sensor. [Figure 1](#).

- In the front section centre pocket (12) insert the bulb of the 80°C fixed thermostat (Control Panels CC-129, CC-129R and CC-129T)

- Insert the bulbs of the thermometer and DHW control thermostat in the tank pocket. The capillaries will go through the grommet in the casing top cover.

- In the back section centre pocket (13, [figure 3](#)) insert the bulbs of the control and limit thermostats and that of the heating service thermostat ([figure 8](#)). The capillaries will pass under the tank cradle.

- Fasten the capillaries with the pocket clips.

### Control Panel CC-130T

- Screw the pressure transducer in the top right-hand tapping (14) in the front section after removing the respective metal plug. [Figure 1](#).

- Connect the transducer cable connector to the connector marked "S. Pres" on the top left end of the plate.

- In the back section centre pocket (13, [figure 3](#)) insert the two labelled temperature sensors.

- Insert the labelled sensor into the tank pocket.

- Fasten the capillaries with the pocket clips.

## Electrical connections

The installation should include a switch, a circuit breaker or other omnipolar disconnect switch to isolate all power supply lines to the unit.

The maximum power (W) that the components not supplied with the boiler can consume is as follows:

|              | CC-129 | CC-129R | CC-129C | CC-129T |
|--------------|--------|---------|---------|---------|
| Burner       | 850    | 850     | 350     | 850     |
| Heating pump | 1750   | 1750    | 350     | 1750    |
| DHW PUMP     | 1750   | 1750    | 350     | 1750    |
| 3-way valve  | -      | -       | 350     | -       |
| Storage tank | 2800   | 2800    | -       | 2800    |

The connection of external appliances not supplied with the boiler should be done through approved wiring harness type ES- N05VV5-F, with the number of conductors and size indicated on the electrical wiring diagrams, [figures 9](#).

- Connect the mains and the different components at the terminal strip provided for this purpose, as shown in the relevant diagrams of [figures 9 \(CC-129\), \(CC-129R\), \(CC-129T\), \(CC-129C\)](#) and ([CCE-130T](#)) and in accordance with the control panel installed. Insert their respective leads through the cable entries in the lower profile of the terminal strip holder bracket and pass those from the Heating Unit through the holes in the cable outlet cover (15). [Figure 10](#).

Where the tank incorporates an electric heater, the limit thermostat provided should be fitted on the terminal strip holder bracket. The Heating Unit incorporates the wiring for connection of the burner, pumps and telephone line (the telephone line only where a CC-129T or CC-130T control panel has been installed).

- Secure the cable outlet cover (15) to the casing by means of 2 M6 screws and washers Ø6.3. **Figure 10.**
- Fit the front casing cover introducing the lower lugs into their housings in the side panels profile and screw it through the top.
- Bring the door near the front section, parallel to it, until the sealing strip comes into contact with the section rib.
- Hold the door fast by tightening the screw nearest the hinge first and then the opposite one.
- Remove the protector from the burner opening and fix the flange supplied with it to the door.
- Fit the nozzle on to the burner.
- Secure the burner to the flange in accordance with the instructions that come with it, and connect the fuel supply.
- Make the electrical connection of the burner to the control panel by means of the fitted connector.
- Alternatively, secure the respective bracket onto the door by means of two B3.5 x 13 screws and hang the burner silencer cover on it.

### Changing the direction of door opening (optional)

- Remove the bolts that fix the front cover to the sides of the casing, using the Allen key housed inside the cover of the control panel.
- Detach the front cover from the boiler.
- With the Allen key, loosen the two bolts that hold the door to the front section and open it.
- Raise the door together with the pivots and insert them in the left hand hinge-holes of the front section in order to hang it.
- Replace the front cover and bolt it in place.
- Hang the cleaning brush on the right-hand front panel.
- Bring the door near the front section, parallel to it, until the sealing strip comes into contact with the section rib.
- Hold the door fast by tightening the screw nearest the hinge first and then the opposite one.

### Operation

Please refer to the schematic diagrams in **figures 11 (CC-129), (CC-129R), (CC-129T), (CC-129C).**


#### Operations prior to the first lighting

- Check that the installation is full of water and put the fixed pointer of the combined temp./altitude gauge (control panels CC-129) in the position that corresponds to the static head of the installation.
- Check that the plug on the Flexvent-H automatic floatvent is not tight.
- Check that the cold water inlet cock (black wheel) in the Flexbrane safety unit is open.
- Open a hot water tap in order to bleed the air in the circuit.
- Bleed the air from the installation and radiators.
- In installations with a closed expansion vessel, top up with water, if necessary, until the mobile pointer of the temp./altitude gauge is slightly higher than the fixed one. Where there is an open expansion vessel, top up until the mobile pointer levels off with the fixed one.


#### First lighting with Control Panel CC-129

- Set the boiler control thermostat (1) to about 80°C. **Figure 12.**
- Set the ambient thermostat (optional) to the required temperature.
- Set the DHW control thermostat (2) to about 55°C.
- Turn on the main On/off switch (3). The green pilot lamp will light up.
- Use switch (4) to select either "Heating/DHW" or "Domestic Hot Water".


#### Heating / Domestic Hot Water Service

- Put the service switch (4) in position 
- A - With no demand for Domestic Hot Water
  - Burner operation is governed by the boiler control thermostat and the ambient thermostat, if any.
  - The heating pump runs continuously.
  - Check for correct operation of both. If it were necessary, unlock the pump by pressing a screwdriver into the slot on the shaft-end and, at the same time, turn it.
  - Should the burner lock out, the red pilot lamp will light up.
  - Adjust the burner in accordance with the instructions enclosed with it and check its safety devices.
  - When the safety limit thermostat (5) has been triggered, remove its guard and press the button.
  - Under normal operating conditions, vent the system and check that all radiators reach the required temperature.
  - Ensure that there are no leaks of flue gases
- B - With demand for Domestic Hot Water
  - Even if the tank incorporates an electric heater, it will not come into operation.
  - Burner operation is governed by the 80°C set thermostat.
  - The HWS pump is governed by the DHW control thermostat.
  - The heating pump does not operate.

#### Domestic Hot Water Service (without electric heater)

- Put the service switch (4) in position 
- A - With no demand for Domestic Hot Water
  - Neither the burner nor the pumps operate.
- B - With demand for Domestic Hot Water
  - Burner operation is governed by the 80°C set thermostat.
  - The HWS pump is governed by the DHW control thermostat.
  - The heating pump does not operate.

#### Domestic Hot Water Service (with electric heater)

- Put the service switch (4) in position 
- The electric heater comes into operation, governed by the DHW control thermostat.

#### Note:

In any case, the limit thermostat will switch off the burner whenever the temperature of the water in the boiler becomes too high. It must be reset manually.

#### First lighting with Control Panel CC-129R

**Figure 13.** Carry out the same operations described for control panel CC-129R.

#### Timer

The timer comes into operation when the main On/off switch (3) is turned "on".

- Please refer to the instructions that come with the control panel.

#### First lighting with Control Panel CC-129C

**Figure 14.** Carry out the same operations described for control panel CC-129; with regard to the control centre, please proceed as described below:

#### Control Centre

- 6 - Slope selector
- 7 - Sun selector
- 8 - Moon selector
- 9 - Timer
- 10 - Program selector

#### Slope Selector

Place it on the resultant value for the installation in question, based on design temperatures.  
Max. flow temp. - 30°C

$$\text{Slope} = \frac{\text{Max. flow temp.} - 30^\circ\text{C}}{\text{Ambient temp.} - \text{Outside temp.}}$$

#### Evaluation example

Calculate the slope of an installation for:

- Max. water flow temperature = 80°C
- Room temperature = 20°C
- Outside temperature = -5°C

$$\text{Slope} = \frac{80 - 30}{20 - (-5)} = \frac{50}{25} = 2$$

#### Sun Selector

Put it in the position corresponding to the required ambient temperature, according to the Table.

| Position SUN | Reduction/Increase in ambient temp. |
|--------------|-------------------------------------|
| -4           | -8 °C                               |
| -2           | -4 °C                               |
| 0            | 0 °C                                |
| +2           | +4 °C                               |
| +4           | +8 °C                               |

#### Moon Selector

Put it in the position corresponding to the required reduction in ambient temperature with respect to that selected on the Sun Selector, according to the Table.

| Position MOON | Reduction in ambient temp. |
|---------------|----------------------------|
| 0             | 0 °C                       |
| -2            | 4 °C                       |
| -4            | 8 °C                       |
| -6            | 12 °C                      |
| -8            | 16 °C                      |

With the incorporation of an ambient sensor, the relationship between the position of your Moon Selector and the reduction in ambient temperature is shown in the Table.

| Position MOON | Reduction in ambient temp. |
|---------------|----------------------------|
| 0             | 0 °C                       |
| -2            | 2,5 °C                     |
| -4            | 5 °C                       |
| -6            | 7,5 °C                     |
| -8            | 10 °C                      |

#### Timer

**Figure 15.** It has a power backup of about 50 hours.

- 1 - Daily Programme
  - It is factory-set. The red and blue cams should be moved on the rotary ring to the times chosen for the start of the Sun and Moon programs.
  - To set the time on the clock, turn the hand (1) until the symbol ▲ coincides with the present time. The rotary indicator (2) should show the programme that has been set.
- 2 - Weekly programme
  - Remove the rotary ring (3), press-fitted to the dial.
  - Turn the hand (1) until the pin (4) on the green ring can move to a groove on the yellow one.
  - Turn the rotary ring and snap it on the dial so that the ▲ symbol coincides with the present day of the week (1 = Monday) and the time of day (turn the minute hand if necessary).
  - Set the weekly program with the cams provided.

Changing from weekly program to daily.

- Remove the rotary ring from the dial.

- Turn the minute hand until the pin (4) on the yellow ring moves to fit the notch on the green one.
- Turn the rotary ring and snap it on the dial.
- Set the clock at the correct time and establish the daily programme.

## Programme selector

The Control Centre does not regulate but the timer is working. For outside temperatures below 0°C, the Moon programme starts automatically to protect the installation from the risk of freezing.

Regulation according to the alternate Sun-Moon programmes established

Permanent Sun regulation.

Permanent Moon regulation

Position prior to combustion analysis.



Adjust the boiler thermostat to 90°C. The pump is "on" and the burner is working at full capacity.

In case of malfunction of the regulating equipment, adjust the boiler temperature through the thermostat; pump "on"

## Service indicator lamps and regulators

Figure 16. When indicator lamps (5) and (6) are lit, it means that both the pump and the burner are running.

With the control "min" (7) you can set the minimum temperature of the water in the boiler for switching off the burner during a Moon program. Adjustable from 10°C to 60°C; it is factory-set at 50°C. Figure 17.

- 0 - Outside temperature considered. Burner start.
- 1 - Boiler temperature regulation  Burner 'off'.
- 2 - Boiler temperature regulation  Burner 'on'.
- 3 - Minimum boiler temperature selected. Burner 'off'.
- 2-3- Boiler temperature differential between burner 'on' and 'off' during the Moon regulation.

With the "KAE" control (8), full running of the installation is optimized on starting up or on passing from a Moon program to a Sun program. Whilst the boiler temperature does not reach the required value, the burner keeps running but not the pump.

Adjustable from 10°C to 60°C; it is factory-set at 10°C. It should be set 5°C below the minimum temperature selected on fitting the KSF sensor.

With the "Hys" control (9) you can set the value of the difference that will exist, with the installation under normal working conditions, between the temperatures of the water in the boiler when the burner is switched 'on' or 'off'. Adjustable from 4°C to 10°C; it is factory-set at 5°C. Figure 18.

- 0 - Burner start-up
- 1 - Disconnection ('off')
- 2 - Connection ('on')

### Note:

The adjustments made with "min" and "KAE" have priority over the "Hys" differential.

## First lighting with Control Panel CC-129T

Figure 19. Carry out the same operations described for control panel CC-129.

With regard to the telephone module, please proceed as described below:

## Telephone module

It is made up of two parts: a portable transmitter (6) with service switch, keypad and loudspeaker and a separate receiver (7) mounted on the control panel for connecting to the telephone line.

## Country selection

To select the country where the telephone module has been installed, proceed as follows:

- Place the transmitter on the receiver's microphone, key in the sequence " \* # 0 \* " and then the digit of the required country, in accordance with the table below:

| Digit | Country where installed | Language   |
|-------|-------------------------|------------|
| 1     | Spain                   | Spanish    |
| 2     | France                  | French     |
| 3     | Italy                   | Italian    |
| 4     | Belgium                 | French     |
| 5     | Portugal                | Portuguese |
| 6     | Germany                 | German     |
| 7     | United Kingdom          | English    |
| 8     | Other countries         | Tone Code  |

The receiver will give message 10 "Select Function" in the language of the country that has been selected. In the case of "other countries", the message will be: two short tones (the first, high-pitched).

From this moment, synthesized messages will be given in the language of the selected country, or through a Tone Code (\*) for "other countries", and the electrical operation will be adapted to the requirements of the country's current regulations. The original configuration of the module is for its installation in Spain.

The selected country holds until a new one is selected, regardless of power cuts.

- (\*) List of messages transmitted as Tone Codes.
  - A) Long tone (half a second) = "Dial the Code", "Dial New Code" or "Right Code".
  - B) A very low tone = "Wrong Code" or "Blocked Boiler".
  - C) A low tone = "Out of Work"
  - D) A medium-pitched tone = "Heating"
  - E) Two medium-pitched tones (D + D) "Domestic Hot Water"
  - F) A high-pitched tone = "In Service"
  - G) Two short tones (the first, higher-pitched) "Select Function"

The combination of tones is equivalent to numbered messages, according to the following list:

- Message 1 = "Roca" + A
- Message 2 = A + G
- Message 3 = B + A
- Message 4 = A
- Message 5 = A
- Message 6 = D + F
- Message 7 = D + C
- Message 8 = E + F
- Message 9 = E + C
- Message 10 = G
- Message 11 = Scale of three short tones, gradually lower
- Message 12 = Scale of three short tones, higher-pitched
- Message 13 = B + D + C
- Message 14 = B + E + C

## Remote control operation

The maximum length of a telephone call is four minutes; after this time the call is interrupted. If the receiver does not receive any tone from the transmitter within 30 seconds, the call will also be interrupted.

- Dial the telephone number where the receiver is installed; at the eighth signal this will transmit message 1 "Roca Heating; Dial the Code", which will be audible in the telephone ear-piece.

- Bring the transmitter near to the mouthpiece of the telephone and key in the four digits of the Access Code. The factory-set Access Code is 0000.

- a) If the keyed in code is not correct, the receiver gives message 3 "Wrong Code; Dial the code". After five failed attempts, communication will be interrupted. If less than four digits are keyed in, the communication will be broken; and if more digits are keyed in, depending on what they are, it is possible that some function will be started (when the first four numbers coincide with the correct code and the others with some function).
- b) If the keyed in code is correct, the receiver gives message 2 "Right code; Select Function" and waits to receive digits 1, 2 or \*, according to the required mode.

## Changing the code

Press " \* " and 1 in that order. The receiver gives message 5 "Dial New Code".

- Key in the four digits of the new code and then " \* ". The receiver says again: "Dial New Code".
- Again key in the four digits of the new code.
  - a) If the two series of digits are not the same, the receiver gives message 4: "Dial the Code" and the procedure for changing the code must be repeated from the start.
  - b) If the two series of digits were the same, the receiver says: "Right Code. Select Function" and waits to receive one of these digits: 1, 2 or " \* ", according to the required mode.

## Consulting or changing the "Heating" service

On pressing key No. 1 on the transmitter, the receiver gives out message 6 "Heating Working" or message 7 "Heating out of Work". To change the service status, press key No. 1 again.

## Consulting or changing the "Domestic Hot Water" service

When key No. 2 is pressed on the transmitter, the receiver gives message 8 "Hot Water Available", or message 9 "Hot Water Unavailable". To change the status, press key No. 2 again

## Receiver configuration



The "standard" configuration is for a storage tank with no electric heater. The "alternative" configuration is for a storage tank with electric heater, in which case, should the boiler fail to operate because of some fault, it will still be possible to get hot water with the electric heater on.

When key No. 1 is pressed on the transmitter, the receiver gives message 13 "Blocked Boiler; Heating out of Work". On pressing No. 2, the receiver says: "Hot Water Available" or "Hot Water Unavailable". To switch back to the Hot Water Service, press 2 again.

With the "standard" configuration, should the boiler fail to operate because of some fault, when No. 1 is pressed on the transmitter, the receiver gives message 13 "Blocked Boiler; Heating Out of Work". On pressing No. 2, the receiver gives message 14 "Blocked Boiler; Hot Water Out of Work".

- Key in \* , # = , 3 and \* in that order. The receiver gives message 11 "Standard Configuration" (factory-set) or message 12 "Alternative Configuration". The configuration now selected will hold until the above series is keyed in again, when the receiver will change and will give the message which corresponds to the new configuration.

## Receiver Operation

When the receiver is connected to the mains, the green LED  lights up and the  LED remains unlit. The receiver will not admit tones from the transmitter through the mouthpiece nor send messages through the loudspeaker.

The receiver has three buttons: "Heating", "Domestic Hot Water" and "Loudspeaker".

### "Heating" selection

Press . The LED :

- Lights up = Heating Service operating normally.
- Does not light up = Heating Service "off".

### "Domestic Hot Water" Service

Press . The LED :

- Lights up = DHW Service operating normally
- Does not light up = DHW Service "off".

### "Loudspeaker" selection

1 - Position "OFF".

Press (except when connecting the receiver to the mains for the first time).

The LED is unlit and the receiver:

- Does not admit incoming tones from the transmitter through its loudspeaker.
- Does not send out messages through its loudspeaker.
- Admits telephone messages at the eighth signal.
- Gives messages through the telephone line.

2 - Position "ON"

Press . The LED lights up and the receiver:

- Admits incoming tones from the transmitter through its mouthpiece
- Sends out messages through its loudspeaker
- Admits telephone messages at the eighth signal.
- The "loudspeaker" LED flashes slowly while there is a call which is being answered by the receiver.

3 - Position "OFF"

Press for three seconds. The LED flashes rapidly and the receiver:

- Is disconnected from the telephone line.
- Does not answer any call.

Press to return to the "ON" position.

### Lockout

The red LED lit up means that the boiler has "locked out".

### Direct operation on the receiver microphone

All the functions that can be done by telephone can also be done by resting the transmitter's loudspeaker on the receiver's microphone.

- Put the key in the "ON" position. The LED lights up.
- Bring the loudspeaker on the back of the transmitter close to the receiver's microphone .
- Follow the steps described in the "Remote Control Operation" section, keeping in mind that:
  - It is not necessary to key in the digits of the access code.
  - Press 0. The message "Roca Heating"; Select Function" is given.

If, during these operations, a telephone call is received, it is given priority, cancelling the orders given through the receiver's microphone.

### First lighting with Control Panel CCE-130T

Figure 20. The Control Panel CCE-130T incorporates a telephone module whose characteristics and operation are similar to those of Control Panel CC-129T.

### Control thermostats

Two controls (1) and (2) to set the setpoint temperature of the water in the boiler, i.e. from 50°C to 90°C, and the water in the tank, i.e. from 30°C to 60°C (factory-set limitation), respectively.

### Anti-freeze mode

It protects the installation from the effects of low temperatures.

Set the knob of the control thermostat at its minimum value; the 30°C LED flashes slowly indicating that the service in question has been interrupted.

By selecting the anti-freeze mode on the heating thermostat, the operation of an optional ambient thermostat is overridden.

The anti-freeze mode process is as follows:

1 - Initial stand-by position

- The temperature of the water in the boiler and storage tank are continuously measured. When the water temperature drops below 8°C a "pump cycle" is initiated.

2 - Pump cycle

- Pumps run for 30-minute cycles, which are repeated until:

All temperatures measured during a cycle exceed 8°C, in which case the stand-by position is resumed.

A temperature below 4°C is sensed, in which case a "burner cycle" is initiated.

3 - Burner cycle

The burner runs for 30-minute cycles, with a water temperature differential of 8°C between "on" and "off" and 50°C setpoint temperature.

The pumps run simultaneously.

These cycles are repeated until all measured temperatures exceed 4°C at any one cycle, and then a pump cycle is initiated.

### Ambient thermostat (optional)

If an ambient thermostat were to be installed, it should be wired across terminals 9 and 10 after removing the existing jumper. Please refer to the wiring diagram in figures 9.

#### Note:

At the beginning of a burner stop, caused by the ambient thermostat, a 30-minute timedelay is initiated, at the end of which the heating pump will stop.

### Anti-Legionella Mode

Every 20 demands for heat in the DHW system, the temperature of hot water rises to 70°C, which eliminates possible bacteria in the installation.

### Maintenance of pumps

Pumps run one minute every 24 hours from the time the boiler starts operating. The DHW pump starts first and then the heating pump.

### Safety circuit

Electronic safety circuit that operates automatically when a fault which may lead to a hazardous operating condition for the boiler is detected, either because of overheating or because of some fault in the control board.

### Unlocking button

(3). It must be pressed once the normal operating conditions have been restored, when a manual reset lockout condition has occurred. Please refer to the "Troubleshooting Table".

### Temperature display

During operation, the temperature of the water in the boiler and in the tank is shown by the lighting of specific LEDs (4) and (5) every 5°C. The 30°C LEDs are lit all the time.

### Pressure display

During operation, the lighting of specific LEDs (6) shows the relative pressure in the boiler in relation to the atmospheric pressure, every 0.5 bar, from 0 bar to 4 bar. The 0-bar LED is lit all the time.

### Combined operation of control thermostats

Depending on whether the position of controls for governing the temperature of water in the boiler (1) or in the tank (2) is on anti-freeze mode (OFF) or temperature selection (ON), operation can be as follows:

A - Thermostat (1) OFF and thermostat (2) OFF

- No Heating service available
- No Domestic Hot Water service available
- Anti-freeze mode on stand-by.

B - Thermostat (1) ON and thermostat (2) OFF

- Heating service available
- No Domestic Hot Water service available
- Tank anti-freeze mode on stand-by.

C - Thermostat (1) OFF and thermostat (2) ON

- No Heating service available
- Domestic Hot Water service available through the burner or electric heat operation, according to the position of selector switch 6 "RCAL" (see "Selector Switches").
- Anti-freeze mode on stand-by.

D - Thermostat (1) ON and thermostat (2) ON

- Heating service available and domestic hot water through burner operation. During demand for Domestic Hot Water, the boiler temperature is automatically set at 80°C.
- When the DHW control thermostat activates the DHW pump, the Heating pump will either stop or keep on running, according to the position of switch 5 "PRI/PAL" (see "Selector Switches").

### Selector Switches for operating options

Fig. 21. Located at the back of the control panel. It is factory-set at "ON".

#### Switch 1 (BPRES)

The original setting limits the operating pressures between 0.3 bar and 3.8 bar. For pressure values other than these, the boiler will "lock out". Changing the position of the switch overrides this limitation (safety for pressure).

#### Switch 2 (DIFE)

The factory setting fixes at 8°C the energizing/de-energizing differential of the boiler and tank control thermostats. The change of position sets the same differential at 4°C.

#### Switch 3 (VIS)

The factory setting belongs to the fault signalling for the User. The change of position offers signalling for the Installer; in this case, the fault LED flashes slowly even if there are no faults. Please refer to the "Troubleshooting Table".

#### Switch 4 (RJCA)

In their factory setting, the timers (optional) for heating and domestic hot water control their services only. Changing the position, the heating timer controls both services

#### Switch 5 (PRI/PAL)

Its factory setting establishes priority for the domestic hot water over heating. The change of position overrides this priority.

#### Switch 6 (RCAL)

Keep it in its original setting when the tank is not fitted with an electric heater. The change of position will be necessary when the tank is fitted with an electric heater.

## Troubleshooting Table

| Cause  | Stoppage of  | User's signal  | Installer's signal   | To restore service   |
|--|--|--|--|--|
| Boiler water overheating (>100°C)                  | Burner and electric heater.                        | <ul style="list-style-type: none"> <li>Fault LED flashes rapidly.</li> <li>90°C boiler LED flashes.</li> </ul>     | <ul style="list-style-type: none"> <li>Fault LED flashes slowly.</li> <li>Only 90 °C boiler LED flashes.</li> </ul>  | <ul style="list-style-type: none"> <li>Press unlocking button when boiler temp. ≤ 80°C.</li> <li>Change position of switch 3 if necessary.</li> </ul>  |
| Control / safety sensor failure.                   | Burner, pumps and electric heater.                 | <ul style="list-style-type: none"> <li>Fault LED lit permanently.</li> <li>All temp. LEDs off.</li> </ul>          | <ul style="list-style-type: none"> <li>Fault LED flashes slowly.</li> <li>Only 60, 70, 80 y 90°C boiler LEDs flashing = Safety sensor fault.</li> <li>Only 30, 40 and 50°C boiler LEDs flashing = Control sensor fault.</li> <li>All boiler temp. LEDs flashing = diff. between sensors &gt; 10°C .</li> </ul> | <ul style="list-style-type: none"> <li>Press unlocking button when readings in both sensors are correct (see ohmic resistance values).</li> <li>Change position of switch 3 if necessary.</li> </ul>             |
| Overpressure.                                      | Burner and electric heater.                        | <ul style="list-style-type: none"> <li>Fault LED flashes rapidly.</li> <li>4-bar LED flashes.</li> </ul>           | <ul style="list-style-type: none"> <li>Fault LED flashes slowly.</li> <li>4-bar LED flashes.</li> </ul>  | <ul style="list-style-type: none"> <li>Press unlocking button as pressure dropped down to 3 bar or move switch 1 to OFF.</li> <li>Change position of switch 3 if necessary.</li> </ul>                           |
| Lack of pressure.                                  | Burner, pumps and electric heater.                 | <ul style="list-style-type: none"> <li>Fault LED flashes rapidly.</li> <li>0-bar LED flashes.</li> </ul>           | <ul style="list-style-type: none"> <li>Fault LED flashes slowly.</li> <li>0-bar LED flashes.</li> </ul>  | <ul style="list-style-type: none"> <li>Press unlocking button as pressure increases up to 0.7 bar or move switch 3 to OFF.</li> <li>Change position of switch 3 if necessary.</li> </ul>                         |
| Pressure sensor failure.                           | Burner, pumps and electric heater.                 | <ul style="list-style-type: none"> <li>Fault LED lit permanently.</li> <li>Pressure LEDs off.</li> </ul>           | <ul style="list-style-type: none"> <li>Fault LED flashes slowly.</li> <li>All pressure LEDs flashing.</li> </ul>   | <ul style="list-style-type: none"> <li>Press unlocking button to obtain the correct pressure in the pressure sensor (see ohmic resistance values).</li> <li>Change position of switch 3 if necessary.</li> </ul> |
| Fault during self-check of burner lockout circuit. | Burner, pumps and electric heater.                 | <ul style="list-style-type: none"> <li>Fault LED lit permanently.</li> <li>Temp. and pressure LEDs off.</li> </ul> | <ul style="list-style-type: none"> <li>Fault LED flashes slowly.</li> <li>Temp. and pressure LEDs flashing.</li> </ul>   | <ul style="list-style-type: none"> <li>Press unlocking button as internal fault condition which caused the lockout was not detected.</li> <li>Change position of switch 3 if necessary.</li> </ul>               |
| Burner internally locked.                          | Temp. control (unchanged).                         | <ul style="list-style-type: none"> <li>Fault LED flashes rapidly.</li> </ul>                                       | <ul style="list-style-type: none"> <li>Fault LED flashes slowly.</li> </ul>  | <ul style="list-style-type: none"> <li>Press burner unlock button.</li> <li>Change position of switch 3 if necessary.</li> </ul>   |
| DHW sensor failure.                                | DHW service burner, DHW pump, and electric heater. | <ul style="list-style-type: none"> <li>Fault LED lit permanently.</li> <li>DHW temp. LEDs off.</li> </ul>          | <ul style="list-style-type: none"> <li>Fault LED flashes slowly.</li> <li>DHW temp. LEDs flashing.</li> </ul>  | <ul style="list-style-type: none"> <li>Press unlocking button when the correct reading in the DHW sensor is obtained.</li> <li>Change position of switch 3 if necessary.</li> </ul>                              |
| DHW overheating.                                   | DHW service burner, DHW pump, and electric heater. | <ul style="list-style-type: none"> <li>Fault LED flashes rapidly.</li> <li>90°C DHW LED flashes.</li> </ul>        | <ul style="list-style-type: none"> <li>Fault LED flashes slowly.</li> <li>90°C DHW LED flashes.</li> </ul>   | <ul style="list-style-type: none"> <li>Press unlocking button as DHW temperature dropped.</li> <li>Change position of switch 3 if necessary.</li> </ul>  |

Carry out the following operations:

- Set the controls on the panel to the value that corresponds to the installation and required operation. Set the ambient thermostat (optional) to the required temperature.
- Turn on the main switch (7). The green LED (8) lights up.
- Check that the pumps and burner are running correctly. Adjust the burner in accordance with the instructions that come with it.
- Bleed the air, and with the system running under normal conditions, check that the radiators reach the required temperature.
- Check that there are no leaks of flue gases.
- Check the burner safety devices. The red LED (9) "on" means that the burner has "locked out".

| Approx. Ohmic resistance values  |                    |  |                 |      |
|--|--------------------|--|-----------------|------|
|  | Temperature sensor |  | Pressure sensor |      |
| -20 °C   | 123,5Ω             |  | 0 bar           | 320Ω |
| -10 °C   | 73,5Ω              |  | 0,5 bar         | 276Ω |
| 0 °C   | 45,1Ω              |  | 4 bar           | 86Ω  |
| 10 °C  | 28,5Ω              |  |                 |      |
| 20 °C  | 14,9Ω              |  |                 |      |
| 30 °C  | 12,3Ω              |  |                 |      |
| 40 °C  | 8,3Ω               |  |                 |      |
| 50 °C  | 5,8Ω               |  |                 |      |
| 60 °C  | 4,1Ω               |  |                 |      |
| 70 °C  | 2,9Ω               |  |                 |      |
| 80 °C  | 2,1Ω               |  |                 |      |
| 90 °C  | 1,6Ω               |  |                 |      |
| 100 °C   | 1,2Ω               |  |                 |      |
| 110 °C   | 0,9Ω               |  |                 |      |
| 120 °C   | 0,7Ω               |  |                 |      |
| 125 °C   | 0,6Ω               |  |                 |      |
| Resistance values >123,5 kΩ and <0,6 kΩ are indicative of fault in sensor                    |                    |  |                 |      |
| Resistance values ≤276 Ω and ≥86 Ω mean lockout for lack of or excess pressure, respectively |                    |  |                 |      |

## Important recommendations

- If the installation is located in an area with risk of freezing, some anti-freeze product should be added to the water in proportion to the minimum outside temperature of the place.
- We recommend that the properties of the water in the system be:
  - pH: 7,5 ÷ 8,5
  - Hardness: 8 ÷ 12 French degrees (\*)
- (\*) One French degree is equivalent to 1 gram of Calcium Carbonate per 100 litres of water.
- If it were absolutely necessary to add water to the system, wait until the boiler is completely cold before doing so.

### Note:

Characteristics and performance qualities subject to change without notice.

## CE Marked

The LAIA/GTA Heating Units comply with the European Directives 89/336/CEE on Electromagnetic Compatibility and 73/23/CEE on Low Voltage.