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IE

**IMPORTANT**

FOLLOW COMMISSIONING INSTRUCTIONS  
OBSERVE THE WARRANTY CONDITIONS  
READ THE WHOLE MANUAL CAREFULLY  
NO SAFETY DISCHARGE TO BE REDUCED IN SIZE.  
CONDENSE TO BE 32 mm PVC

## SERVICING

*Gas conversion  
Maintenance  
Operating faults  
Options  
Parts lists*



**THI 2-17 B 120**

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**GEMINOX**

**B O I L E R S**

**High technology heating**



T30.36388.05

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# I - FLOW AND SERVICE PRESSURE CONTROL

Check that the boiler is properly adapted to the gas used.



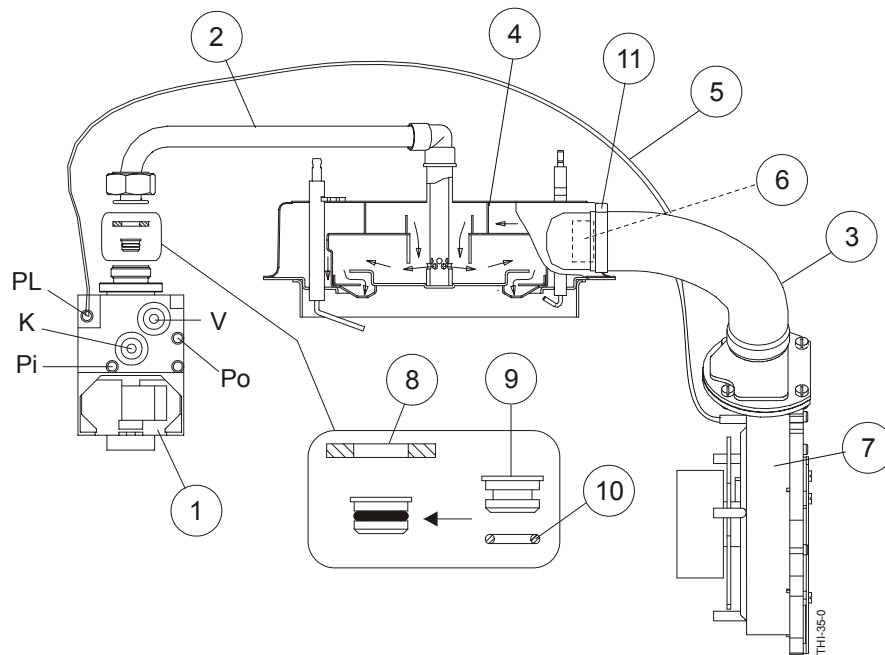
**This operation must be carried out by a qualified person equipped with a calibrated combustion analyser.**

Prior to any servicing cut the electrical and gas supplies.

The boiler is preset in the factory for natural gas H (G20) 20 mbar.

Check the gas circuit for leak tightness after each intervention on the boiler.

Fig. 1

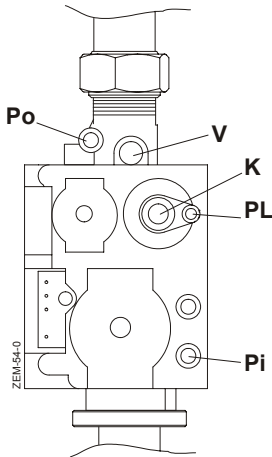


- |                          |   |
|--------------------------|---|
| 1) Gas unit              | 7) Fan  |
| 2) Gas pipe              | 8) Flat seal                                  |
| 3) Air fan hose          | 9) Gas reducer                                |
| 4) Burner                | 10) Gas reducer o-ring                        |
| 5) Air/Gas servo-control | 11) Fan/burner air sleeve hose fastening clip |
| 6) Brass air reducer     |   |

1 - GAS/CO<sub>2</sub>/CO/NO<sub>x</sub> FLOW CONTROL AND SERVICE PRESSURE CONTROL

Fig. 2

SIEMENS/LANDIS  
GAS VALVE  
ref : VGU87A0236



$P_i$  = Gas network pressure  
Natural gas H (G20): 20 mbar,

$P_o$  = Gas outlet pressure to the burner.

PL = Air pressure auto. control (fan- gas valve)

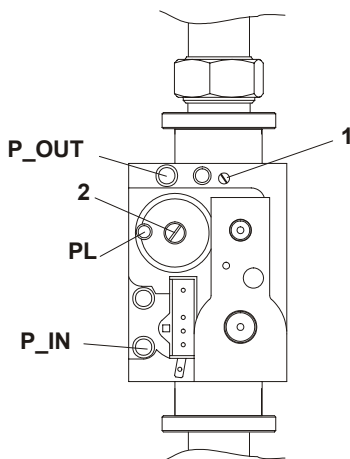
V = Adjustment of the slope of the air/gas ratio characteristic when the burner **is at maximum rate**. This setting is performed in factory for type H natural gas (G20) or propane (G31). It can be used to correct the pressure  $P_o$  to obtain the required gas flow (section 1.2 - page 6 - chapter I - FLOW AND SERVICE PRESSURE CONTROL - SERVICING MANUAL).



**Turn to increase the gas flow**

K = Adjustment of the parallel offset only when the burner **is at minimum rate**. This screw is preset in the factory. Its setting must not normally be changed. If necessary, perform this operation with a small scale manometer 0-10 mmCE, and a CO<sub>2</sub>, CO analyser. **Turn to increase the gas flow**

SIT GAS VALVE  
ref.: 848 SIGMA



$P_{IN}$  = Gas network pressure  
Natural gas H (G20): 20 mbar,

$P_{OUT}$  = Gas outlet pressure to the burner.

PL = Air pressure auto. control (fan- gas valve)

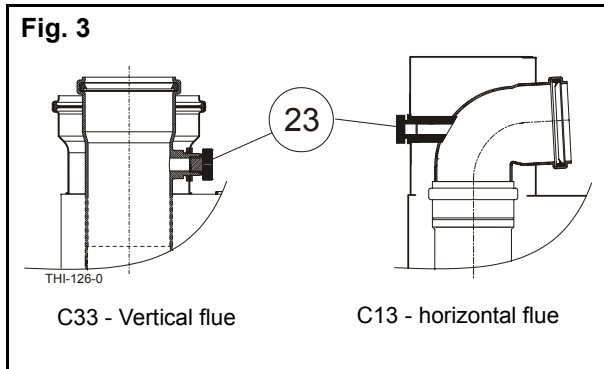
1 = Adjustment of the slope of the air/gas ratio characteristic when the burner **is at maximum rate**. This setting is performed in factory for type H natural gas (G20) or propane (G31). It can be used to correct the pressure  $P_{OUT}$  to obtain the required gas flow (section 1.2 - page 6 - chapter I - FLOW AND SERVICE PRESSURE CONTROL - SERVICING MANUAL).



**Turn to decrease the gas flow**

2 = Adjustment of the parallel offset only when the burner **is at minimum rate**. This screw is preset in the factory. Its setting must not normally be changed. If necessary, perform this operation with a small scale manometer 0-10 mmCE, and a CO<sub>2</sub>, CO analyser.

To modify the setting, if necessary, remove the protective screw, then **turn to increase the gas flow**. When the settings are made replace the protective screw.



B<sub>23</sub> chimney flue :

- Combustion control is carried out on the combustion product outlet system external and directly at the boiler outlet (with the boiler unit assembled). This opening must be closed again after checking

C<sub>13</sub> - C<sub>33</sub> balanced flue :

- Combustion control is carried out on the boiler through the opening (23) provided for this purpose after the cap is removed. This opening must be closed again after checking.

### 1.1 - Surveillance procedure

- To commission the burner:
  - Activate the regulator shut-down function - service key (6) (section 3.11 - page 18 - chapter III - OPERATION - INSTALLATION MANUAL) :
    - the code 88 00 flashes on the display screen (13),
- Gradually position the d.h.w. potentiometer (3) to the maximum on the right:
  - the burner switches to max. rate,
- Gradually move the **V or 1** adjustment screw of the gas unit (fig. 2 - page 4 - chapter I - FLOW AND SERVICE PRESSURE CONTROL - SERVICING MANUAL) to obtain a stable flame.
- Check the CO<sub>2</sub>/CO ratio (see setting table section 1.2 - page 6 - chapter I - FLOW AND SERVICE PRESSURE CONTROL - SERVICING MANUAL),
- Set the d.h.w. potentiometer (3) to the maximum on the left:
  - the burner switches to the minimum rate,
- Check the CO<sub>2</sub>/CO ratio (see setting table section 1.2 - page 6 - chapter I - FLOW AND SERVICE PRESSURE CONTROL - SERVICING MANUAL),
- If necessary:
  - adjust screw **K or 2** (fig. 2 - page 4 - chapter I - FLOW AND SERVICE PRESSURE CONTROL - SERVICING MANUAL)

TROL - SERVICING MANUAL) (tightening and untightening increases and decreases gas flow).



**Before starting the minimum rate setting (V or 1 and K or 2 screws), wait for a stable CO<sub>2</sub>/CO analyser read-out. Repeat switching from the minimum rate to the maximum rate several times to ensure that the setting has been done properly.**

- to return to normal operation, press on the sweep key (6) for 3 seconds then release it.

Note:

- Remember to reposition the d.h.w. potentiometer (3) to its initial value to return to the required d.h.w. setting.

## 1.2 - Setting table

Models			THI 2-17 B120
<b>Natural gas burner type</b>			<b>X07.36235</b>
Heat output	30/50 °C	kW	2,6/18,3
	60/80 °C	kW	2,3/16,9
Heat input		kW	2,5/17,4
∅ Gas reducer	Gaz Nat H	mm	4,20
∅ Air reducer	Gaz Nat H	mm	18,2
Gas flow (15°C, 1013 mbar)	Gaz Nat H	m <sup>3</sup> /h	0,26/1,84
Gas pressure P <sub>o</sub> / P_OUT (gas unit to burner)	Gaz Nat H	mbar	0,3/6,5
Servo-system air pressure (PL)		Pa	40/810
CO <sub>2</sub> Emission	Gaz Nat H	%	8,0-8,5/9,0-9,5
CO Emission	Gaz Nat H	ppm	0/20

- Combustion product evacuation outlet back pressure: 0 mmCE.
- **P<sub>o</sub> / P\_OUT** = Gas pressure at the gas valve regulator outlet.
- **PL** = Servo-system air pressure (fan - gas unit).
- The P<sub>o</sub> / P\_OUT and PL values may be more or less high according to whether back pressure is greater or smaller.

## II - MAINTENANCE

The annual inspection of the boiler and of the combustion product outlet is compulsory and validates the warranty. It must be carried out by a qualified person.

Spare parts must be ordered by using the references listed in chapter V - PARTS LISTS - page 19 - SERVICING MANUAL, and specifying the type and serial number of each part.



**Before any servicing, cut the power supply. Close the gas inlet of the boiler and the isolation valves if required.**

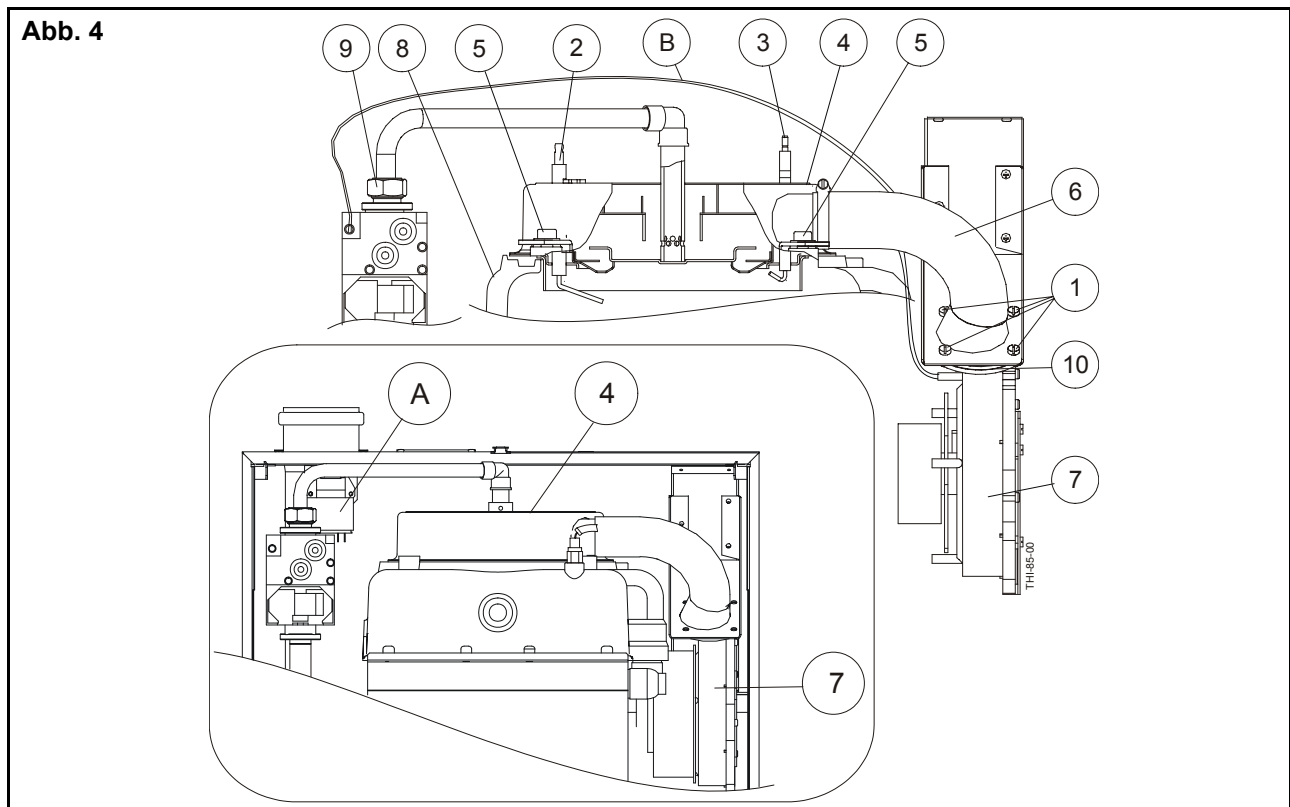
**If the boiler is removed, provide a port at the end of the gas piping.**



**Remove the front panel (item G) from the boiler and disconnect the earth wire (item O).**



### 1 - SERVICING THE FAN AND THE BURNER



Check the state of the ventilator and the burner and clean them if necessary (following their service instructions).

**Disassembling the burner/fan unit:**

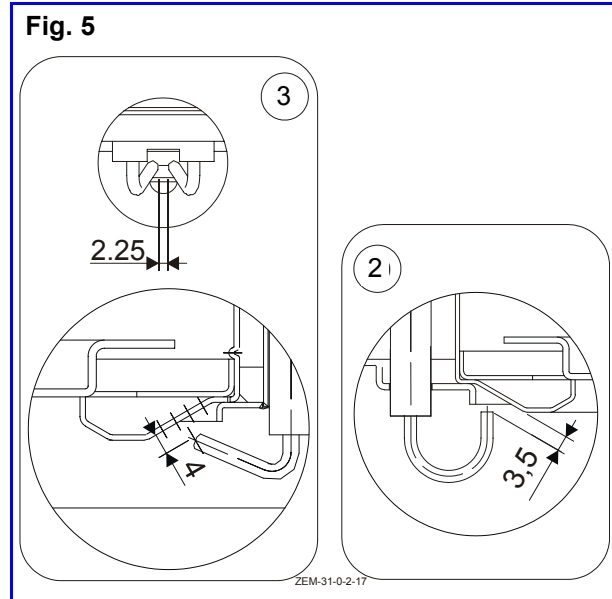
- Electrically disconnect the burner/fan unit:
  - remove the 2 cable lugs connecting the ignition electrode (3) to the ignition transformer (A),
  - remove the cable lug connecting the ionising electrode (2) to the X2-05 terminal of the boiler control panel,
  - remove the fan (7):
    - from the connector of the fan power cord,
    - from the connector of the fan's PWM signal,
- disconnect the air/gas servo-system (B) from the gas valve,

**Disassembling the fan:**

- Unscrew the four screws (1) fixing the fan (7) to the burner's air sleeve (6),
- Clean it using a domestic vacuum cleaner by placing the suction device over the air inlet and outlet successively.

**Disassembling the burner:**

- Unscrew the four screws fixing (5) the burner (4) to the boiler shell (8),
- Disassemble the nut (9),
- Clean the burner (4) using a domestic vacuum cleaner by placing the suction device over the air inlet and the gas inlet successively,
- Check the ignition electrodes (3) and the ionisation electrodes (2).



**When fitting back the burner/fan unit:**

- Replace the seal at the level of the nut (9) and check that there are no gas leaks,
- when fitting the fan back onto the boiler:
  - check that the fan/burner seal (10) is correctly positioned,
  - check that there is no leakage at this seal and replace it if necessary.
- check that the burner (4) and boiler shell (8) have no leaks - replace the seal if necessary.

**2 - SERVICING THE HEAT EXCHANGER OF THE BOILER SHELL**

- The heat exchanger must be cleaned once the burner has been disassembled (section 1 - page 7 - chapter II - MAINTENANCE - SERVICING MANUAL).
- Sprinkle the heat exchanger with water. The water is evacuated through the condensate evacuation siphon,
- when reassembling the burner onto the boiler shell check the correct positioning of the gasket.

**3 - TANK MAINTENANCE**

- The stainless steel hot water tank is resistant to lime scale. Nevertheless, the access flap gives access to the tank and the exchanger.

Note :

- See section 5.2 - page 34 - chapter IV - INSTALLATION - INSTALLATION MANUAL



## 4 - CHECKING ACCESSORIES

- Check that the safety and control devices (3 bar safety valve, air bleed, safety control box, etc.) are operating properly.
- Clean the condensate drain siphon and then fill it with water.
- Also check that neither the installation nor the boiler present any water or fuel leaks (leaks may

produce a risk for safety and shorten the lifespan).

- When it is frequently necessary to add water to maintain pressure in the installation, even though no leaks have been discovered, perform an expansion vessel check (section 5 - page 9 - chapter II - MAINTENANCE - SERVICING MANUAL).

## 5 - EXPANSION VESSEL PRE-INFLATION PRESSURE CHECK

- Drop the pressure in the heating installation by opening the drain cock or the safety valve (pressure gauge reading under 0.5 bar).
- Check the pressure in the expansion vessel and if necessary bring it back up to pressure, or replace it if the membrane is punctured (water present in the inflating valve).
- To optimise the efficiency of the vessel:

- adjust its pre-inflation pressure in line with the installation. It must correspond to the static height of the installation (H) expressed in bars (height between the highest point of the installation and the expansion vessel, with 10 metres = 1 bar),
- adjust the filling pressure of the installation to a value of over 0.2 bar above the pre-inflation pressure of the vessel (after totally bleeding the air from the installation).

## 6 - COMBUSTION PRODUCT CONDUITS (FLUE)

- Check the combustion product evacuation conduit and the air inlet conduit at least once a year

(airtightness of the parts that may be disassembled - conduits not obstructed).

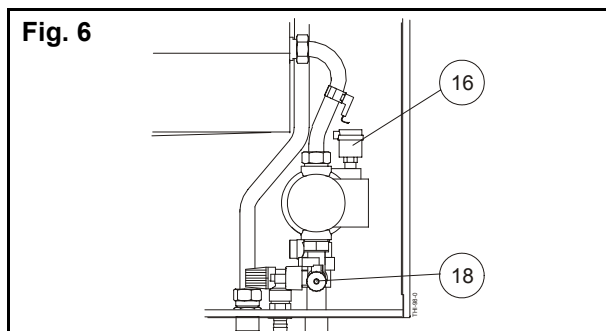
## 7 - DRAINING

### 7.1 - Draining the boiler

- Cut the power supply,
- turn off the gas cock,
- turn off the heating flow/return valves (if they are fitted),
- connect the drain valve (18) to the sewage system,
- open the drain valve.

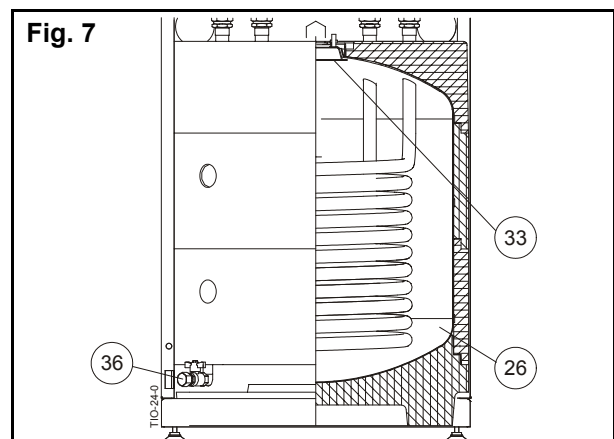


**Ensure that the air bleed (item. 16) is open, as soon as the pressure gauge indicates a zero pressure to allow air to enter the boiler shell.**



### 7.2 - Draining the hot water tank

- Close the hot water supply valve of the network,
- open a hot water tap to make the pressure drop,
- remove the access flap (33) to allow air to enter the tank (26),
- connect the drain valve (36) to the sewage system,
- open the drain cock (36) at the bottom of the tank.



## 8 - SENSOR RESISTANCES

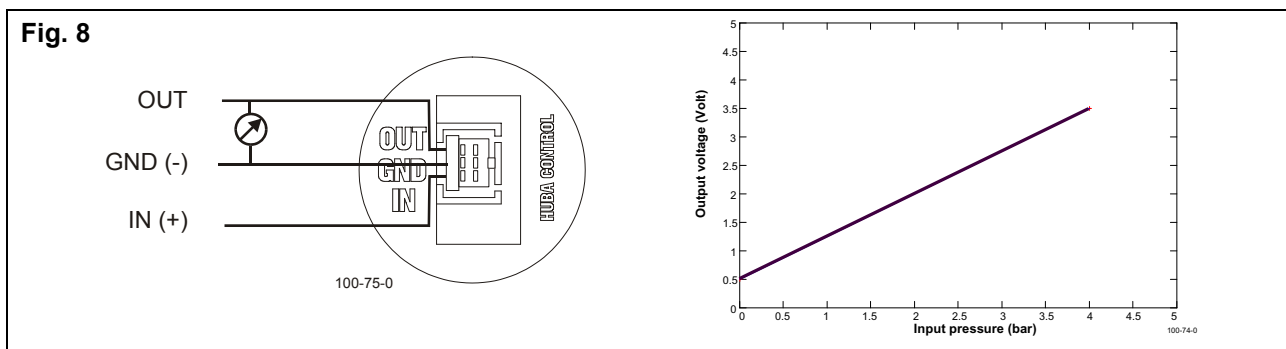
The resistance of the sensors must be measured after they have been disconnected from the control panel.

Resistance values of the sensors	
Temperature	Heating outlet sensor Boiler return sensor Domestic hot water sensor Flue gas sensor
0.00 °C	32624
10.00 °C	19897
15.00 °C	15711
20.00 °C	12493
25.00 °C	10000
30.00 °C	8056
40.00 °C	5324
50.00 °C	3599
60.00 °C	2483
70.00 °C	1748
80.00 °C	1252
90.00 °C	912

Resistance values of the sensors	
Temperature	Outside sensor
-20.00 °C	7578
-15.00 °C	5861
-10.00 °C	4574
-5.00 °C	3600
0.00 °C	2857
5.00 °C	2284
10.00 °C	1840
15.00 °C	1492
20.00 °C	1218
25.00 °C	1000
30.00 °C	826,8
35.00 °C	687,5

## 9 - PRESSURE SENSOR

The output voltage on the water pressure sensor is measured between the terminals GND (-) and OUT.



## III - OPERATING FAULTS

### 1 - OPERATING FAULTS LIST

Display A0	Description	Solution
10	Outside sensor fault	Check that the sensor is correctly fitted and connected
20	Boiler sensor 1 fault	Check that the sensor is correctly fitted and connected
28	Flue gas detector fault	Check that the sensor is correctly fitted and connected
32	Flow sensor 2 fault	Check that the sensor is correctly fitted and connected
40	Return sensor 1 fault	Check that the sensor is correctly fitted and connected
50	Domestic hot water sensor 1 fault	Check that the sensor is correctly fitted and connected
61	Room device 1 faulty	Check the boiler connections
62	Room device 1 error or radio clock error	Check compatibility of the room device or clock
78	Water pressure sensor fault	Check the connections of the pressure sensor
81	Short-circuit on LPB or no voltage	Check the wiring
82	Two identical addresses on the LPB	Check the addressing
91	Loss of data in the EEPROM	Change the LMU
92	Component fault in the LMU	Change the LMU
88 00	Two master clocks (only one normally), programming problem	Check parameter 96 of the QAA73 (only one device can have the message "QAA73")
88 05	Maintenance alarm	Check the maintenance code value, QAA 73 setting 726 (section 2 -page 13 - chapter III - OPERATING FAULTS - SERVICING)
88 10	STB (boiler overheating safety) activated	Check that shunt X3-01 is present and whether the installation water flow is sufficient (circulating pump, isolation valve, etc.)
88 11	Response of the safety thermostat	Check whether the installation water flow is sufficient (circulating pump, isolation valve, etc.)
88 13	Flue gas alarm displayed (problem of the flue gas temperature being too high)	Check whether the boiler is not on thermal overload or that the exchanger is not clogged
88 17	Water pressure too high	Check and adjust the pressure level if necessary with $P < 4$ bar
88 18	Water pressure too low	Check and adjust the pressure level if necessary with $P > 0.4$ bar

Display A0	Description	Solution
88 28	Flame failure while the boiler is operating	Check and adjust the gas valve, check the ionisation electrode and the connections, possible live-neutral inversion of the transformer supply
88 29	Poor air supply	Check the ventilator and the air inlet
88 30	Maximum flue gas temperature exceeded	Check whether the boiler is not on thermal overload or that the exchanger is not clogged
88 32	Safety device activated	Check that shunt X10-03 is present and that the wires are properly connected
88 33	No flame formed after the safety time period	Check that the gas reaches the boiler (Pi), check the condition of the gas valve, if there is a major adjustment fault on the gas valve, check the condition of the transformer, cables, ignition electrode, ionisation current value
88 40	Segment number or unauthorised addressing on LPB or LMU	Check the addressing consistency
88 48	Incompatibility between the LMU and LPB	Check the addressing consistency
88 51	New LMU configuration	Check the b0 internal code
88 52	LMU setting error	Check the b0 internal code
88 53	The boiler is blocked	Press Reset to clear the message
88 54	Violation of the plausibility criteria (STB related criteria)	Check the value of the criteria related to the boiler overheating security
88 60	The minimum speed threshold of the fan is not reached	Check the wiring of the fan and LMU, ensure that the fan is turning correctly
88 61	The maximum speed threshold of the fan is exceeded	Check the mains supply and the fan cable connections
88 80	The service function is active	-
88 81	The regulator shut-down function is active	-
88 83	The boiler is in setting mode	This appears after one or more settings are loaded either by the QAA73 or by the PC TOOL. This means that a reset is necessary to validate the new setting(s) and for the boiler to return to normal operating.
88 84	Modem function is active	-
88 85	"Controlled screed drying" function is active	-

## Note :

- The **last 5 working faults** are accessible through the QAA 73, from LMU version 3.00, lines 728 /

729 / 730 / 731 / 732. The last saved fault code is displayed at line 728.

## 2 - MAINTENANCE

Maintenance alarms can be automatically triggered, indicating that maintenance jobs are due. The following reasons for maintenance alarms can be delivered:

- Interval of burner hours run since last regular service visit exceeded.
- Interval of the number of startups since last regular service visit exceeded.
- Number of months since last regular service visit exceeded.

The alarm displayed is always the maintenance alarm that occurred first.

There is no storage for the maintenance alarms since all pending alarms can be checked at any time via the counter readings or the relevant parameters.

### 2.1 - Maintenance alarm

If a maintenance alarm occurs, an error code "105 maintenance" appears on the display of the boiler and / or room unit.

This code does not give precise information on maintenance but is only a general maintenance note.

These maintenance alarms are a priority lower than that of the error codes to ensure the error codes prevail.

The maintenance alarm is sent until the enduser has acknowledged the message or the heating engineer has rectified the fault.

### 2.2 - Maintenance code

The maintenance alarm does not provide detailed information about the reason for the fault. Details can be displayed using parameter "WartungsCode" (QAA 73 setting : 726).

The maintenance code can also be viewed on the display of the boiler (b0).

### 2.3 - Coding of maintenance alarms

Maintenance alarm	Maintenance code	Internal error code b0	Meaning
-	0	-	No maintenance alarm
105	1	560	Burner hours run
105	2	561	Startups
105	3	562	Months-service

### 2.4 - General activation of maintenance alarms

Parameter "WartungsEinstellungen" (QAA 73 setting : 630) permits or suppresses the generation of maintenance alarms.

The subdivision of parameter "WartungsEinstellungen" by bit is shown in the following table :

Bit0	1 = general activation of maintenance alarms
Bit1	1 = single reset of hours run maintenance alarm
Bit2	1 = single reset of startup maintenance alarm
Bit3	1 = single reset of months- service maintenance alarm
Bit6	1 = total reset for all maintenance alarms

## 2.5 - Activation of the individual maintenance alarm

Every cause can be individually activated or deactivated by entering the associated limits.

### - **Burner hours run :**

Burner hours run maintenance is activated by setting parameter "BetrStdWartGrenz" (QAA 73 setting : 625) to a value other than "0".

This value represents the target number of hours run. When this limit is reached, a maintenance alarm will be delivered (interval since last service visit).

### - **Number of startups:**

Startup maintenance is activated by setting parameter "InbetrSetzWartGrenze" (QAA 73 setting : 626) to a value other than "0".

This value represents the target number of startups. When this limit is reached, a maintenance alarm will be delivered (interval since last service visit).

### - **Months (service):**

Service maintenance is activated by setting parameter "MonatWartGrenze" (QAA 73 setting : 627) to a value other than "0".

This value represents the target number of months. When this limit is reached, a maintenance alarm will be delivered (interval since last service unit).

Note :

- The month counter is only active when the device is connected to power.

## 2.6 - Acknowledgement of maintenance alarms

The acknowledgement sets the internal error code "b0" and the fault statut message to "0", but the maintenance code still gives the precise reason for the maintenance alarm.

### 2.6.1 - Acknowledgement via QAA 73

For the parameter "WartungsQuittierung" (QAA 73 setting : 629) (default value: 0), to acknowledge the maintenance alarm the heating engineer (or the enduser) enters the value of "1".

If no repetition is required, all maintenance alarms after this acknowledgement will be locked, even if other reasons for maintenance occur. In that case, parameter "WartungsQuittierung" remains constantly at 1.

### 2.6.2 - Activation of the repetition after acknowledgement

If required, a timer (duration of repetition) can be started, that is, the maintenance alarm will reappear on the display after a certain period of time. An acknowledgement can also be made then. This period of time starts after each acknowledgement.

The repetition can be set via parameter «WartungsRepetitionsDauer» (QAA 73 setting 633).

Contents of parameter «WartungsRepetitionsDauer» is the desired period of time (in days) until the maintenance alarm appears again.

If a value other than «0» is entered there, a repetition is made within the entered duration of the repetition time.



**During this period of time, no more maintenance alarms will appear, even if other reasons for maintenance occur.**

## 2.7 - Resetting the maintenance alarms

Resetting can take place at any time, and after acknowledgement or during the repetition sequence.

A reset can be made in 1 of 2 ways:

### - **Total reset :**

Here, all maintenance alarms can be reset at the same time. If, in parameter «WartungsEinstellungen» (QAA 73 setting 630), «1» is entered, all maintenance counters will be set to «0» when the parameter is saved.

The maintenance counters of the hours run, startups and months maintenance alarms will be newly started.

### - **Individual reset of a certain maintenance alarm :**

Individual maintenance alarms can also be reset. In that case, parameter «WartungsEinstellungen» (QAA 73 setting : 630) will again be addressed bit by bit.

There is a bit available for each maintenance alarm via which this maintenance alarm can be reset (section 2.4 - page 13 - chapter III - OPERATING FAULTS - SERVICING). It is thus possible to also reset other reasons for maintenance although they have not yet occurred.

When resetting the maintenance alarm, the maintenance code and the internal error code (b0) will automatically also be reset.

Note : Only the QAA 73 can the maintenance alarms be activated, the reasons for the maintenance alarms be checked and a reset via parameter be made.

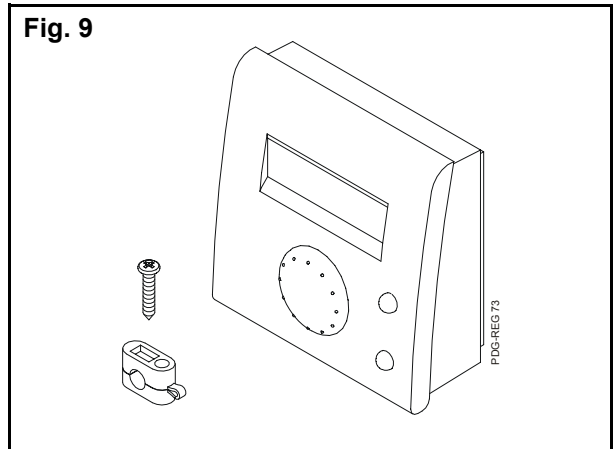
## IV - OPTIONS

### 1 - SET-UP TAKING ROOM TEMPERATURE INTO ACCOUNT (REG 73)

The REG 73 is a multifunctional digital room sensor for one or two heating circuits and for the control of domestic hot water.

Refer to the kit installation instructions.

Fig. 9



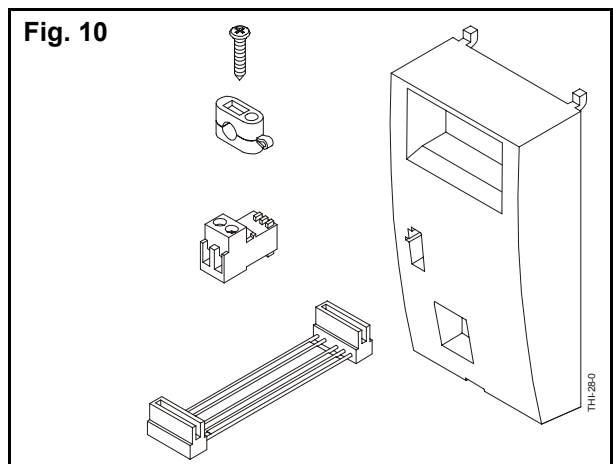
### 2 - LPB COMMUNICATION CLIP-IN KIT (REG 130)

The LPB communication clip-in kit is used to connect the LMU control unit to different units or accessories of the type:

- RVA 46: zone regulator
- RVA 47: cascade regulator
- + others (distance management etc.)

Refer to kit installation instructions.

Fig. 10

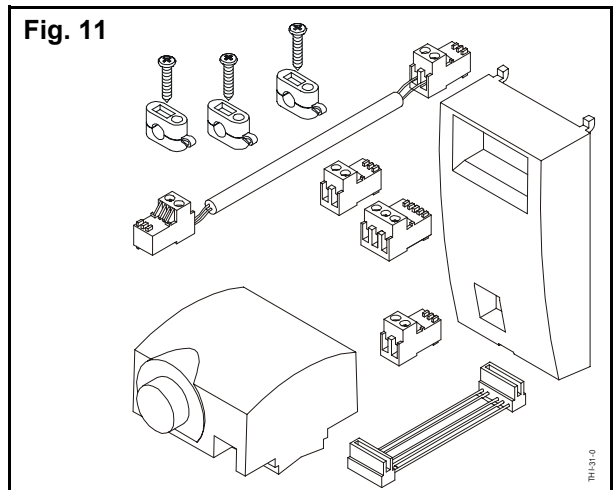


### 3 - 2ND HEATING CIRCUIT CLIP-IN KIT

The 2nd heating circuit clip-in kit is used when a second heating circuit is connected to the boiler. It allows the communication between the boiler's LMU control unit and the various accessories of the secondary circuit.

Refer to kit installation instructions.

Fig. 11

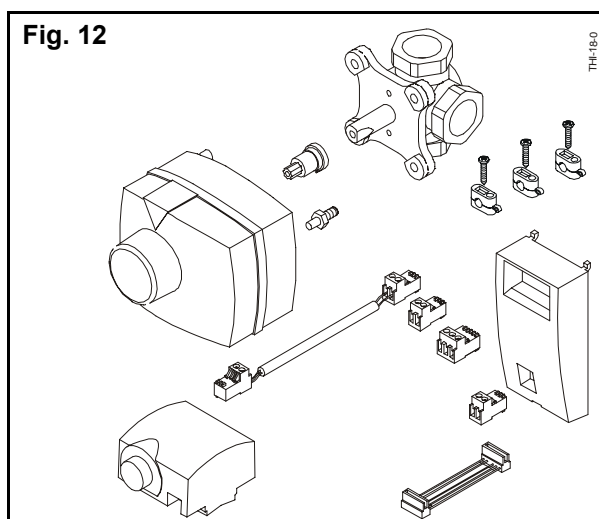


#### 4 - DOUBLE CIRCUIT KIT (REG 125)

The double circuit kit is used whenever a second heating circuit is connected to the boiler:

- The 2nd circuit clip-in ensures communication between the boiler's LMU management unit; the 2nd circuit pump control and also the mixing valve motor (accessories supplied with the kit).

Refer to kit installation instructions.



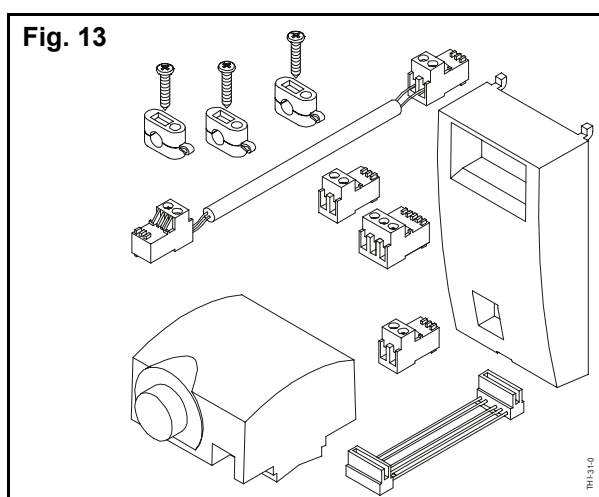
#### 5 - PROGRAMMABLE RELAY CLIP-IN KIT (REG 127)

The programmable relay clip-in kit (sensor inlet)

enables:

- a 2nd heating pump to be controlled in parallel with the boiler pump in the case of operation using a header.
- with the flow sensor positioned at the outlet of the header, the heating outlet can be controlled after the header.
- an external safety gas solenoid to be connected,
- an alarm to be connected.

Refer to kit installation instructions.

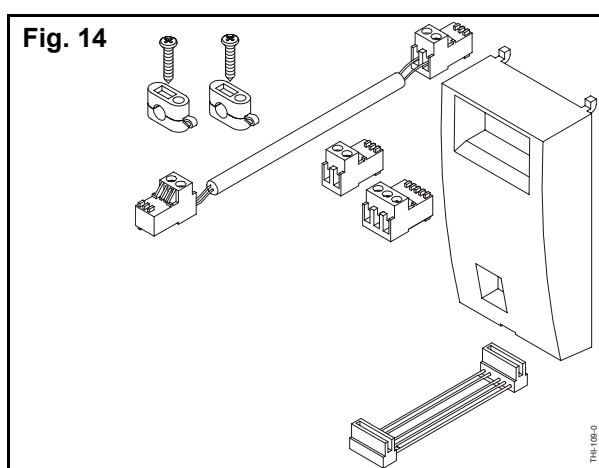


#### 6 - PROGRAMMABLE RELAY CLIP-IN KIT (WITHOUT SENSOR) (REG 134)

The programmable relay clip-in kit (without sensor) enables, for example:

- a domestic hot water circulation pump to be controlled,
- an outside gas safety solenoid valve to be connected.

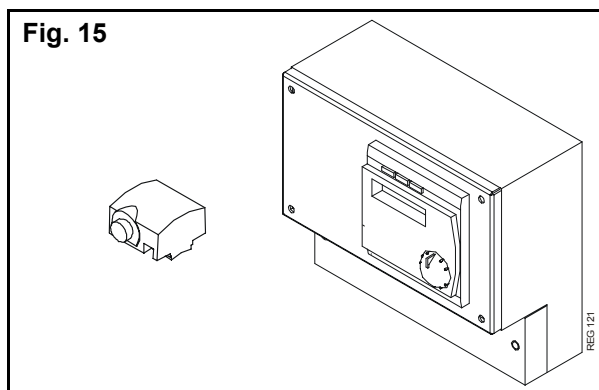
Refer to the assembly instructions for the kit.





## 7 - ZHTi 46 CONTROL UNIT (REG 129)

The control unit ZHTi 46 enables an additional heating circuit to be controlled. (Required from 3 heating circuits - refer to technical specifications of the ZHTi 46).



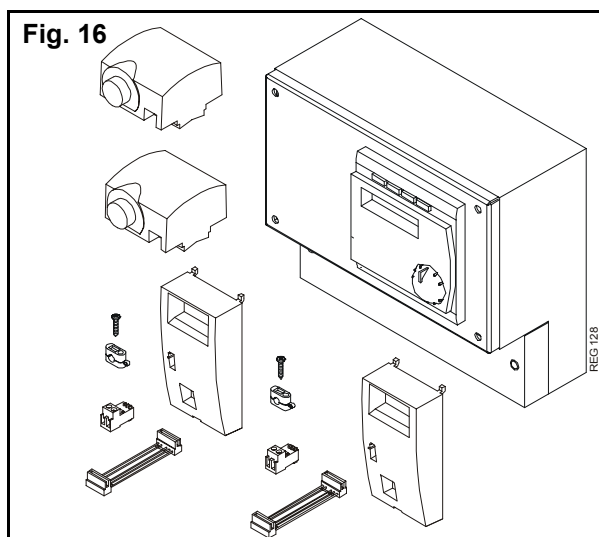
## 8 - ZHTi 47 CONTROL UNIT (REG 128)

The control unit ZHTi 47 manages 2 cascading boilers.

Note:

- For multiple boiler management, use clip-in kits LBP (130).

Refer to ZHTi 47 technical specifications.



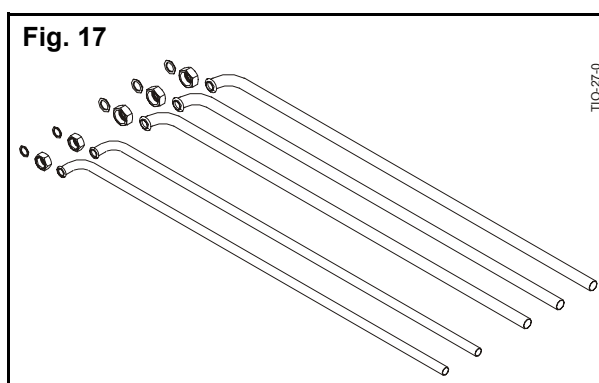
## 9 - 1<sup>ST</sup> CIRCUIT CONNECTION KIT

1st circuit connection kit used for a multi-directional assembly of the pipes:

- gas inlet,
- heating flow-return,
- domestic hot water inlet/outlet

at the rear of the boiler.

Refer to the installation instructions of the kit.



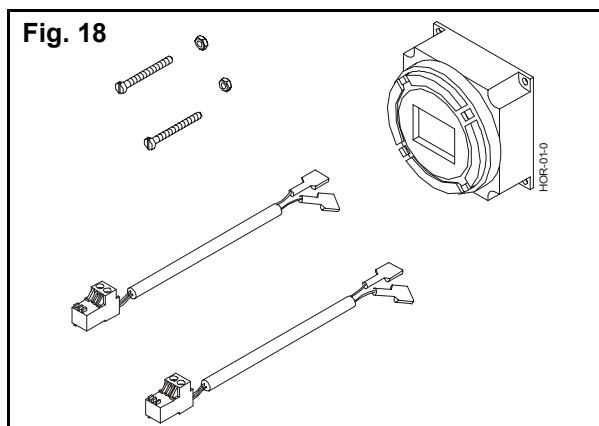
## 10- TIMER KIT

The timer kit is fitted to the boiler's control panel and controls an installation only possessing one heating circuit.

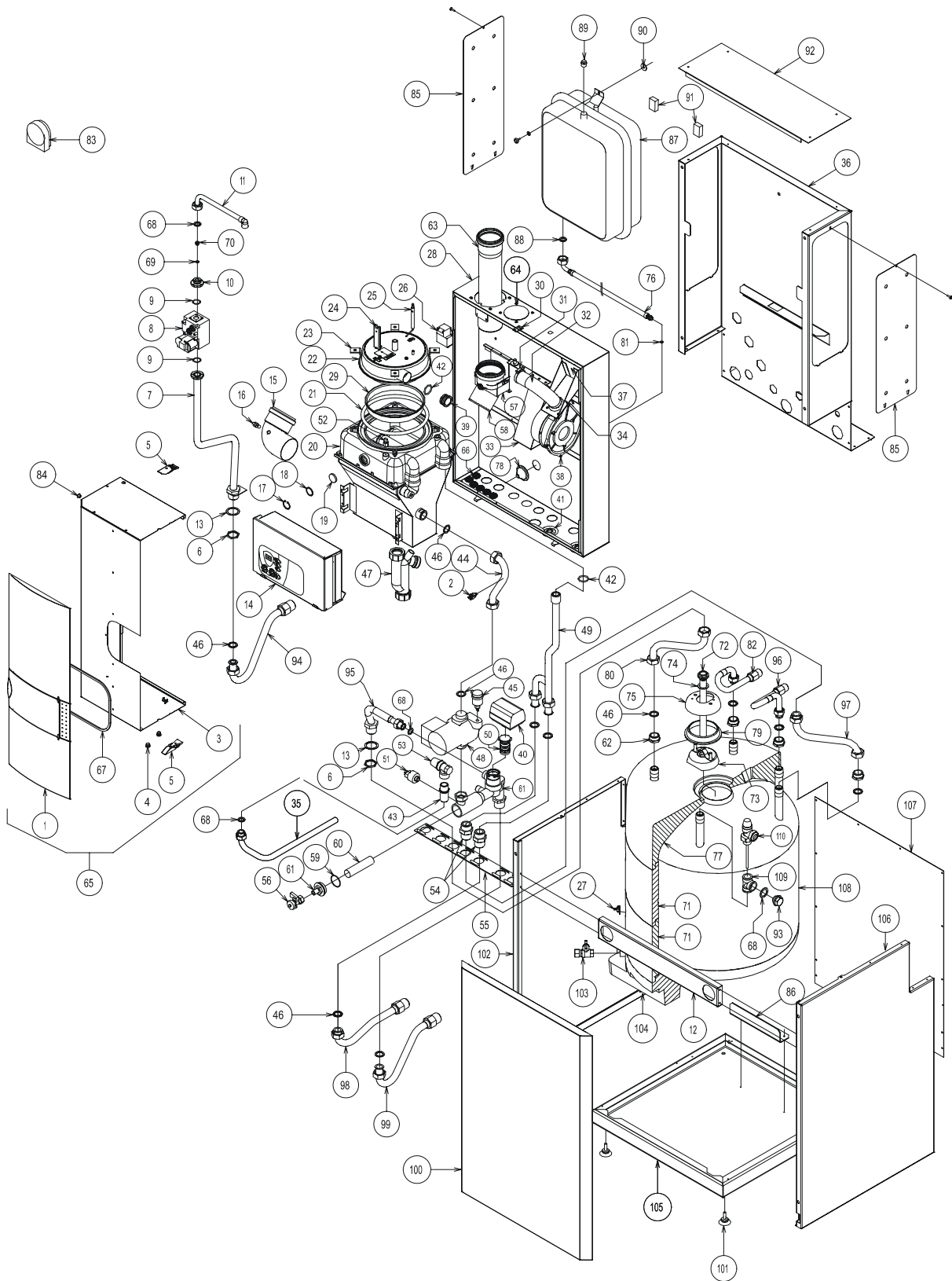


**Fitting a clip-in to the boiler's LMU management unit will not work with this timer.**

Refer to kit installation instructions.



## THI 2-17 B 120



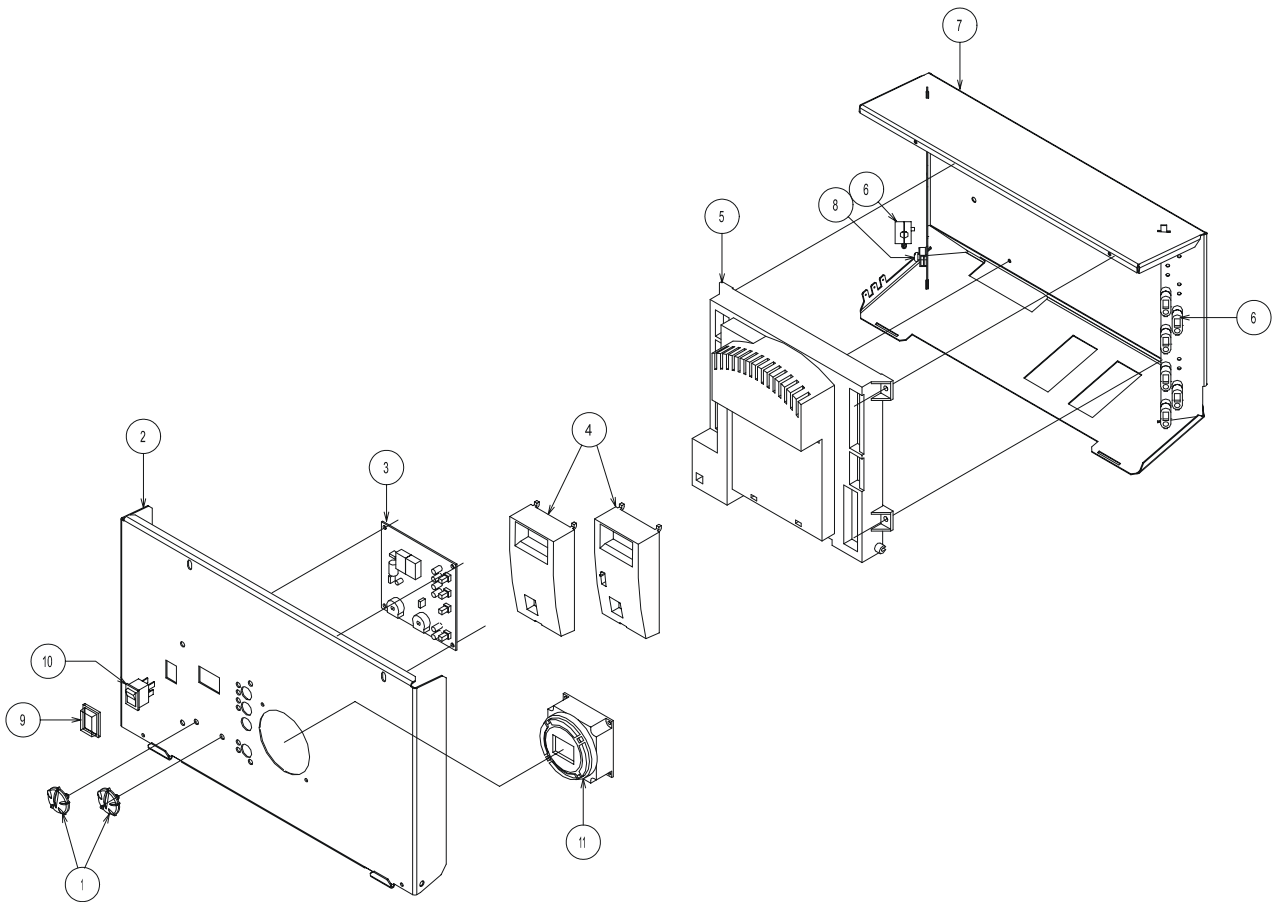
PLT1043191

Rep.	Référence	Désignation
1	H20.32834	FRONTPANEL GREY
2	L20.31471	SENSOR T7335D1024B
3	Y90.35802	MONOBLOC COVER, ASSEMBLED THRI B120 + STICKER
4	A00.03141	COLORLESS PLASTIC CAP
5	T25.31875	FIXING PART; UPPER COVER
6	I20.21452	MESSING LOCK NUT 1
7	U07.31501	GAS SUPPLY ; GREY ; THISION
8	V90.33616	WIRED SIT GAS VALVE SET
8	V90.37322	GAS VALVE SIEMENS VGU 87
9	L10.10607	HONEYWELL O'RING 22 X 2,5
10	L10.33774	FLANGE G 3/4" FOR SIT VALVE
11	U07.31527	GAS PIPE BURNER THISION
12	V07.34600	REINFORCING PART ; WHITE
13	V00.21491	PROTECTING RING 1
14	W07.35314	PROGRAMMED CONTROL BOX ; WIRING 2-17 B120
15	U07.31498	90° ELBOW ; D.80 DRILLED
16	L20.31496	SENSOR TASSERON NTC SENSOR D10X20 10K
17	T40.01051	INSIDE CIRCLIPS D.30 YELLOW BICHROMATE
18	B59.00692	STAINLESS STEEL WASHER 30,4X25,5X0,3
19	T20.00582	SIGHTGLASS PYREX D.30X5
20	V07.31526	STAINLESS STEEL BOILER SHELL THISION
21	F00.26572	GLASS BRAID RING D. 12 LG. 685
22	X00.21867	BURNER FOR THR 2-13
23	U00.03505	FIXING BRACKET FOR BURNER MZ/THR
24	L00.16673	IGNITION ELECTRODE SHORT 74,5 AV CABLE
25	L00.25959	IONISATION ELECTRODE BURNER 1-10
26	C90.31466	IGNITION TRANSFORMER ANSTOSS ZAG 2XV 01/10
27	L20.32178	SURFACE TEMP. SENSOR T7335D1073B
28	Y07.34192	CASING OF BOILER ; EQUIPPED
29	X00.12864	REMOVABLE PROTECTION FOR BURNER (580 X 30 X 1,5)
30	Y00.14139	FASTENING HOOK
31	B00.18392	PIPE RING 41,1/44
32	O90.16681	PIPE BURNER / FAN (THR)
33	Y00.13849	BACK STOP PLATE FOR MZ (3355X80,4X1,5)
34	Y00.17570	FLANGE FOR WHITE STAND FOR THR FAN
35	U07.34025	CONNECTING PIPE
36	Y07.35653	UPPER CHASSIS ; WHITE
37	Y00.17569	WHITE STAND FOR THR FAN
38	C50.31464	FAN MVL-EBM RG 128/1300-3612
39	I20.34522	AIR ADJUSTMENT RING D. 18,2
40	W07.31704	MOTOR; SELECTIVE VALVE WITH CABLE
41	E20.23654	EXTENSIBLE SEALING D. 18 / RED SILICONE
42	E00.01005	O' RING DIA DIA 29,32 X 3,6
43	I20.13579	BRASS NIPPLE MAL3/4-MAL3/4(LONG)
44	U00.19252	SUMP INLET THRC/S GREY
45	L90.24635	AUTOMATIC AIR VALVE WATTS WITH ISOLATED VALVE
46	E20.03889	SEALING AFM34D 30X21X3
47	V07.34187	SIPHON + CAP
48	L30.31467	CIRCULATING PUMP GRUNDFOS UPS 15-50 CACAO
49	U07.34610	HEATING FLOW PIPE ; GREY
50	V90.33015	SELECTOR VALVE KIT
51	L50.35152	PRESSURE SENSOR HUBA TYPE 505.91540
51	V90.35156	REPLACEMENT SET OF IMIT SENSOR BY HUBA SENSOR
52	L20.31470	SENSOR TASSERON NTC SENSOR M5 TSA-TYPE
53	L90.24178	SAFETY VALVE
54	I20.21441	MESSING SEALED CONNECTION "OLIVE" 22/1

Rep.	Référence	Désignation
55	V07.33499	LOW BLOCK FLANGE
56	K50.24473	DRAIN COCK / RETURN UNIT
57	Y00.10807	FIXING SYSTEM FOR FLUE PIPE
58	U00.20366	ELBOW D. 80 45°
59	E00.24496	SEALING / O'RING INT. D. 39,45
60	L40.24495	STAINLESS STEEL FILTER / HEATING RETURN
61	U90.28983	HEATING RETURN UNIT
62	K20.13777	MALE/FEMALE MESSING REDUCER M1 - F 3/4
63	N40.16810	REDUCED FLUE OUTLET PIPE F75/M80 L360
64	A00.19467	GREY PLASTIC CAP MALE 75
65	Y07.36366	MONOBLOC COVER ; EQUIPPED
66	C91.03071	WIRE CARRIER
67	V07.32114	RING FOR BOILER COVER L685
68	E20.03890	SEALING AFM34 D 24X17X3
69	E00.03424	NITRILE O'RING D. 8 X 2 80 SHORE
70	I20.17832	UNION REDUCER D.12 D. 4,20
71	D20.33079	INTERMEDIATE ISOLATION
72	K50.18085	ANODE + CAP +SEALING 3/4-D.22X230 MAGNESIUM
73	V90.19984	ANODE CLEANING DOOR
73	V90.26382	CLEANING DOORD (WITHOUT ANODE)
74	E20.18103	SEALING AFM34 D.36X26X2
75	I10.29477	FLANGE FOR CLEANING DOOR
76	O00.34006	FLEXIBLE FOR EXPANSION VESSEL MU 1/4"-CB 1/2"
77	D20.33049	UPPER ISOLATION
78	E20.24772	O'RING FOR SILICONE PIPE D.14/18
79	E20.10187	SEALING / CLEANING DOOR
80	U07.35657	PRIMARY INLET PIPE ; ISOLATED
81	E20.03901	SEALING QUALITY AFM34 D.11X4X3
82	U07.35662	BRAZED DHW PIPE
83	W07.32303	OUTSIDE SENSOR .QAC34/101 THRI
84	A00.19059	PLASTIC STOPPER MAL 9 WHITE
85	Y07.34103	TRAP TO EXPANSION VESSEL ; WHITE
86	V07.34213	STOP PLATE FOR ISOLATION
87	V07.35479	EXPANSION VESSEL SET THI B120
88	E20.06892	SEAL AFM34 D. 18,6 X 12 2 MM THICKNESS
89	K11.03278	CAST IRON - STOPPER; BLACK M3/8
90	F01.00588	MINERAL CARBOARD WASHER D. 25X8,5X3
91	E10.12850	FOAM LD29 40*26*15
92	Y07.34594	UPPER CASING ; WHITE
93	K20.33078	BRASS STOPPER M3/4"SE 120
94	U07.34529	BRAZED GAS PIPE
95	U00.23957	TANK RETURN; GREY; THR
96	U07.35666	BRAZED COLD WATER PIPE
97	U07.35656	PRIMARY OUTLET PIPE ; ISOLATED
98	U07.34186	OUTLET PIPE ; 1ST CIRCUIT ; BRAZED
99	U07.34412	INLET PIPE ; 1ST CIRCUIT ; BRAZED
100	Y07.34933	FRONT PART ; TANK ; EQUIPPED
101	A90.28142	FIXED PLUNGER D.40 ; BLACK (M8*25)
102	Y07.35693	LEFT HAND SIDE ; WHITE
103	K50.33064	COCK F1/2" - M1/2" WITH CAP
104	D20.33051	BOTTOM ISOLATION
105	V07.34598	WHITE BASE
106	Y07.35690	RIGHT HAND SIDE ; WHITE
107	Y07.35694	BACK CASING WHITE
108	V07.34624	ISOLATED TANK THRI M120
109	K20.19420	BRASS T-PIECE F3/4

Rep.	Référence	Désignation
110	L90.37687	VALVE PTEM 575 901 3/43 22MM 7 BAR
*	A00.28827	PLASTIC CAP MALE 1/4
*	C09.31469	CABLE WITH RECTIFIER VDU GAS VALVE
*	C09.33608	CABLE 0.960.401+CONNECT. GAS VALVE SIT 848 SIGMA
*	E00.10822	EPDM LIP SEAL D. 80 75 SHORE
*	E10.12503	EPDM STICKING SEAL PIPE 6/9 LENGTH 18
*	E20.24399	GASKET DN 80; BLACK POUR LES RÉFÉRENCES (U00.12053) ET (U00.20366)
*	I20.00913	BRASS HINGE BOLT
*	K20.12704	BRASS CAP F3/4
*	T31.34824	STICKER
*	T31.34934	STICKER
*	U00.11405	VERSILIC SLEEVE 4X8 LENGTH 640
*	U00.29149	RING PIPE D.25 LG1300
*	U01.25694	VERSILIC 6*10 LG 450MM
*	V00.24191	MOUNTING KEY; HONEYWELL
*	V52.33086	COMPLETE INSULATION SE 120
*	X00.05193	FIXING BRACKET FOR IONISATION PROBE
*	X90.30472	IGNITION ANGLE WITH SCREW

# CONTROL BOX



PLW0731542

Rep.	Reference	Designation
1	H20.31449	CONTROL BUTTON
2	Y07.31525	CONTROL PANEL + STICKER
3	W07.31892	INTERFACE; EQUIPPED; AGU2.303A136
4	L20.31476	COMMUNICATION MODULE CLIP-IN LPB (VOIR OPTION W07.30832)
4	L20.31477	MODULE CIRCUIT 2 CLIP-IN (VOIR OPTION W07.30833)
4	L20.31499	SUB-MODULE RELAIS CLIP-IN AGU2.511A109 (VOIR OPTION W07.30515)
5	L20.36214	ELECTRONIC CONTROL UNIT LMU64.010D136 V3.03
6	A90.27098	CABLE GRIP D=6,5 MM BLACK
6	C91.38454	CABLE FASTENING TWIST LOCK
7	Y07.31507	ELECTR. BOX
8	C19.32006	SCREW EARTH CONNECTION
9	C20.12490	TIGHT CAP FOR SWITCH
10	C20.12487	BIPOLAR SWITCH; BLACK/LIGHTNING/GREEN
11	L25.17432	TIMER GRASSLIN 230 V FM - DIGI20
*	C09.31469	CABLE WITH RECTIFIER VDU GAS VALVE
*	C09.33608	CABLE 0.960.401+CONNECT. GAS VALVE SIT 848 SIGMA
*	C09.37989	IONISATION CABLE Ø 2,5 LG 1020 MM
*	C09.37989	IONISATION CABLE Ø 2,5 LG 1020 MM
*	C90.31497	COVER KEY-TOP 4X4 THISION
*	W07.31478	WIRING OF THE CONTROL BOX
*	W07.31479	WIRING OF THE CONTROL BOX; 10-50 MODEL
*	W07.31492	CONNECTING CABLE LG LMU64/AGU2
*	W07.31508	ELECTR. CONTROL BOX + WIRING 2-13 THISION
*	W07.31542	ELECTRICAL TERMINAL BOX
*	W07.31558	ELECTR. CONTROL PANEL + WIRING 0,9-9 THISION
*	W07.31562	CONTROL BOX PROGRAMMED THRI/THI 10-50C (DT)
*	W07.32380	CONTROL BOX ; WIRED ; PROGRAMMED THI 5-25 S DT
*	W07.32381	CONTROL BOX ; WIRED ; PROGRAMMED THI 2-13 M 75 DT
*	W07.32382	CONTROL BOX; WIRED; PROGRAMMED THI 5-25 M75 DT
*	W07.32899	CONTROL BOX ; WIRED ; PROGRAMMED THRI5-25SEP(DT)
*	W07.32995	WIRING - TIMER THRI
*	W07.34114	WIRED PROGRAMMED BOX THI 5-25/28 SEP GB/DK
*	W07.34211	CONTROL BOX, PROGRAMMED, WIRED
*	W07.34228	WIRED, PROGRAMM. CONTROL BOX THI 5-25 M75H DC
*	W07.34974	PROGRAMMED ; CONTROL BOX WIRING
*	W07.35261	CONTROL BOX ; PROGRAMMED WIRING THI 2-17
*	W07.35314	PROGRAMMED CONTROL BOX ; WIRING 2-17 B120
*	W07.35319	PROGRAMMED CONTROL BOX ; WIRING 2-17 B120 DC
*	W07.36535	WIRED & PROGRAMMED CONTROL BOX THI 5-25 B120 GB
*	W07.36536	WIRED & PROGRAMMED CONTROL BOX THI 5-25 B120 DC
*	W07.36930	CONTROL BOX ; WIRED ; PROGRAMMED
*	W07.37986	SUPPLY CABLE 230V THRI
*	W07.37991	CABLE TRANSFORMER+MASS THRI BURNER
*	W07.37992	SWITCH CABLE THRI
*	W07.37995	FAN CABLE THRI
*	W07.37996	FAN CABLE THRI
*	W07.37998	MASS CABLE THRI COVER
*	W07.38000	SENSORS CONNECTION THRI
*	W07.38001	CABLE PWM FOR THRI FAN
*	W07.38002	FAN PWM CABLE THRI 10-50C
*	W07.38004	SENSORS CONNECTION THRI 10-50 C
*	W07.38379	FAN CABLE THRI/THISION/THI 10-50
*	W09.37943	WIRING DHW SENSOR ZEM B120/SEP/M50