EURA

23 E - 28 E

23 SE - 28 SE - 32 SE

Manual Hermann Eura

Instructiuni de instalare si service

Hermann®

GAS BOILERS

WARNING

MANUFACTURER DECLARATION

Hermann boilers have obtained the CE certification (DM dtd. April 2nd 1998, Law 10/91, art. 32) and meet minimum efficiency requirements, both at normal and 30% load, provided by DPR 412/93 (according to Law 10/91, art. 4, sub-section 4). They are in conformity with following Directives: Directive on appliances burning gaseous fuels (90/396), Directive on electro-magnetic compatibility (CE 89/336), Efficiency Directive (CE 92/42), Low Voltage Directive (CE 73/23), and relevant modifications.

ATTENTION

(for EURA 23/28/32 SE)

FOR DIAPHRAGM POSITIONING, CAREFULLY READ THE FLUE SYSTEMS INSTRUCTIONS IN THE "INSTALLATION" CHAPTER.

IMPORTANT

THE FIRST IGNITION OF THE BOILER MUST BE EXECUTED BY AN AUTHORIZED TECHNICIAN ACCORDING TO THE LAW 46/90.

Assigning all the operations for the first ignition to a Hermann Authorized Service Center the particular and exclusive Hermann Conventional Warranty is activated. For further information consult the coupon which you can find in the boiler's documents envelope.

Assigning all the operations for the first ignition to a Hermann Authorized Service Center the particular and exclusive Hermann Conventional Warranty is activated. For further information consult the coupon which you can find in the boiler's documents envelope.

DANGER: All warnings preceded by this symbol MUST be carefully respected so as to avoid any accident of mechanical (e.g. wounds or contusions) or general origin.

DANGER: All warnings preceded by this symbol MUST be carefully respected so as to avoid any accident of ELECTRICAL origin (fulguration).

DANGER: All warnings preceded by this symbol MUST be carefully respected so as to avoid any accident of THERMIC origin (scalds).

Attention: All warnings preceded by this symbol MUST be carefully respected so as to avoid any disfunctioning and/or damage to the appliance or other objects.

The instructions manual is an essential and complementary part of the product and it is supplied together with the boiler.

Carefully read the manual, achieving all important information for a safe installation, use and servicing.

— **Carefully keep the manual for any further consultation you may need.**

— **The installation must be carried out by a qualified technician, in accordance with manufacturer instructions and with the relevant requirements of the current issue.**

— **A qualified technician is a person with a specific technical competence in the field of the heating appliances for domestic use and domestic hot water production, as indicated by the Law *[ID of Your National rule, if any, regarding Technicians competence]*.**

— **Operation that User can perform are limited to those described in "USER INSTRUCTIONS" section.**

— **The manufacturer has no contractual and extra-contractual responsibility for any damage arising from wrong installation, wrong use and non-observance of current laws and instructions given by the manufacturer himself.**

— ***Important:*** *this gas boiler is used to heat the water at a temperature lower than the boiling one, at atmospheric pressure; it must be connected to an heating system and/or to a domestic hot water system, in accordance with its features and power.*

— **Packing items (cartons, nails, plastic bags and so on) must not be left within children easy reach, as they are potentially dangerous.**

— **Before any cleaning or servicing operation, switch off the main electrical switch of the heating system and/or any other suitable switch providing electrical disconnection of the gas boiler.**

— **In case of fault and/or bad operation of the appliance, disconnect it immediately and do not try to repair it by yourselves.**

Boiler servicing and repair must be carried out exclusively by ***[HERMANN Authorized Servicing Centres] [qualified technicians]***, which will use original spare parts. Strictly observe the above requirement, avoiding any risk of compromising the appliance safety.

— If the appliance should be definitively disconnected, remove or cut off any potential dangerous item.

— When selling the appliance or leaving it installed after a removal, make always sure that the instructions manual is close to the boiler for the future use of new owners and/or installers.

— This appliance must be used for its clearly recommended utilization only. Any other utilization must be considered dangerous and incorrect.

— It is strictly forbidden to use the appliance for different purposes than the specified ones.

— This appliance must be installed exclusively to wall.

Service centrale Hermann NON STOP
www.imoca.ro
www.reparatii-centrale-termice-nonstop.ro

INDEX

sections for the user

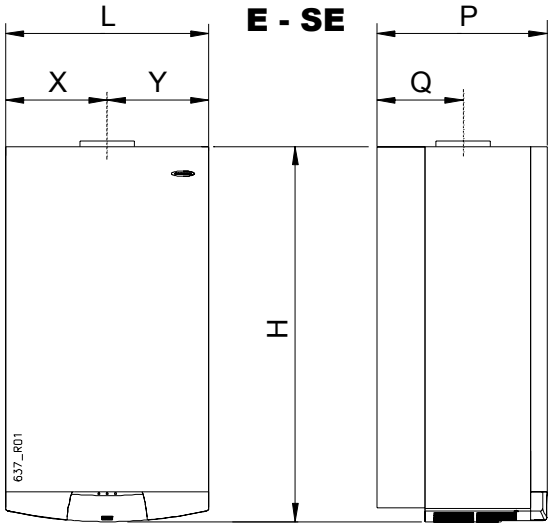
sections for the technician

TECHNICAL DATA

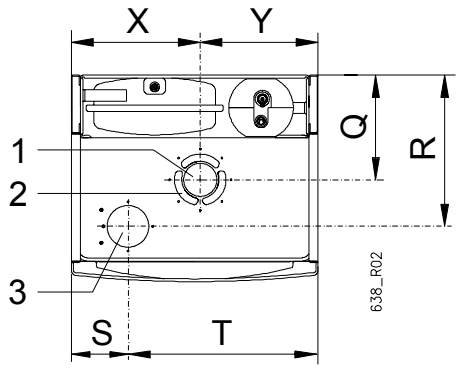
TECHNICAL DATA	U.M.	EURA 23 E		EURA 28 E		EURA 23 SE		EURA 28 SE		EURA 32 SE	
CE certification	n°	0694BL2989		0694BL2989		0694BL2989		0694BL2989		0694BL2989	
Class		II2H3+		II2H3+		II2H3+		II2H3+		II2H3+	
Type		B11/BS				B22 - C12 - C32 - C42 - C52 - C62 - C82					
Gas type		G20	G30/ G31	G20	G30/ G31	G20	G30/ G31	G20	G30/ G31	G20	G30/ G31
Max heat input (Hi)	kW	25.6	25.6	31.0	31.0	25.6	25.6	31.0	31.0	34.5	34.1
Min heat input (Hi)	kW	10.5	10.5	13.2	13.2	10.5	10.5	13.2	13.2	13.5	13.5
Max heat output (Hi)	kW	23.1	23.1	28.0	28.0	23.7	23.7	28.5	28.5	31.7	31.3
Min heat output (Hi)	kW	9.03	9.03	11.4	11.4	9.07	9.07	11.2	11.2	11.4	11.4
NO_x Class		3	1	3	1	3	2	3	2	3	2
Weighted NO_x	mg/kWh	123	235	141	208	137	158	135	161	124	186
CO at nominal input	ppm	40.0	70.0	35.0	62.0	36.0	48.0	25.0	28.0	48.0	39.0
CO_2 at nominal input	%	4.8	5.8	5.1	6.0	6.7	8.0	6.8	7.4	6.3	7.2
EFFICIENCY											
Nominal efficiency	%	90.8		90.7		93.2		92.3		91.8	
Efficiency at 30% load	%	88.1		89.0		90.4		90.0		88.9	
HEATING											
Temperature selection range (min÷max)	°C	30÷80		30÷80		30÷80		30÷80		30÷80	
Expansion vessel	l	8		8		8		8		8	
Expansion vessel pressure	bar	1		1		1		1		1	
Max working pressure	bar	3		3		3		3		3	
Max system temperature	°C	85		85		85		85		85	
HOT WATER											
Flow rate at 30°C temperature rise	l/min	11.0	11.0	13.3	13.3	11.3	11.3	13.6	13.6	15.1	15.0
Min water flow	l/min	2.5		2.5		2.5		2.5		2.5	
Max supply pressure	bar	6		6		6		6		6	
Min supply pressure (for the activation of the priority switch)	bar	0.4		0.4		0.4		0.4		0.4	
Temperature selection range (min÷max)	°C	30÷55		30÷55		30÷55		30÷55		30÷55	
Minitank capacity (heating/hot water)	l	3.2/0.9		3.2/0.9		3.2/0.9		3.2/0.9		3.2/0.9	
ELECTRICAL DATA											
Voltage / frequency	V / Hz	230/50		230/50		230/50		230/50		230/50	
Power consumption (VAP = with high capacity fan)	W	100		130		150 (160 VAP)		170		185	
Level of protection		IPX4D		IPX4D		IPX4D		IPX4D		IPX4D	
DIMENSIONS											
Width - Height - Depth	mm	*Refer to "DIMENSIONS" diagram*									
Weight	kg	41.5		42		46		48		49	
CONNECTIONS (S=Outlet)											
Heating flow / return	Inc	¾"		¾"		¾"		¾"		¾"	
Domestic Water inlet / outlet	Inc	½"		½"		½"		½"		½"	
Gas connection to the boiler	Inc	¾"		¾"		¾"		¾"		¾"	
Gas connection to the gas cock of standard connection kit	Inc	½"		½"		½"		½"		½"	
Flue products outlet Ø	mm	130		140							
Coaxial flue products outlet / air inlet Ø	mm					100/60		100/60		100/60	
Coaxial flue length (horizontal) min/max	m					0,5÷4		0,5÷3		0,5÷3	
Coaxial flue length (vertical) min/max	m					1÷5		1÷4		1÷4	
Separate flue products outlet / air inlet Ø	mm					80		80		80	
Separate flue length min/max	m					2÷30 (max S=20)		2÷25 (max S=20)		2÷20 (max S=12)	
Separate flue length min/max with **high capacity fan**	m					31÷60 (max S=40)					
Separate flue length min/max with pipe splitter	m					2÷14 (max S=13)		2÷10 (max S=7)			
GAS SUPPLY PRESSURE											
Gas type		**G20**	**G30/ G31**	**G20**	**G30/ G31**	**G20**	**G30/ G31**	**G20**	**G30/ G31**	**G20**	**G30/ G31**
Nominal pressure	mbar	20	29/37	20	29/37	20	29/37	20	29/37	20	29/37
Injectors diameter	Ø 1/100mm	120	75/75	120	75/75	120	75/75	120	75/75	130	77/77
GAS CONSUMPTION											
Qmax	mc/h	2.71		3.28		2.71		3.28		3.65	
	kg/h		2.02/ 1.98		2.44/ 2.40		2.02/ 1.98		2.44/ 2.40		2.68/ 2.64
Qmin	mc/h	1.11		1.40		1.11		1.40		1.43	
	kg/h		0.83/ 0.81		1.04/ 1.02		0.83/ 0.81		1.04/ 1.02		1.06/ 1.05

DIMENSIONS

EURA
E - SE



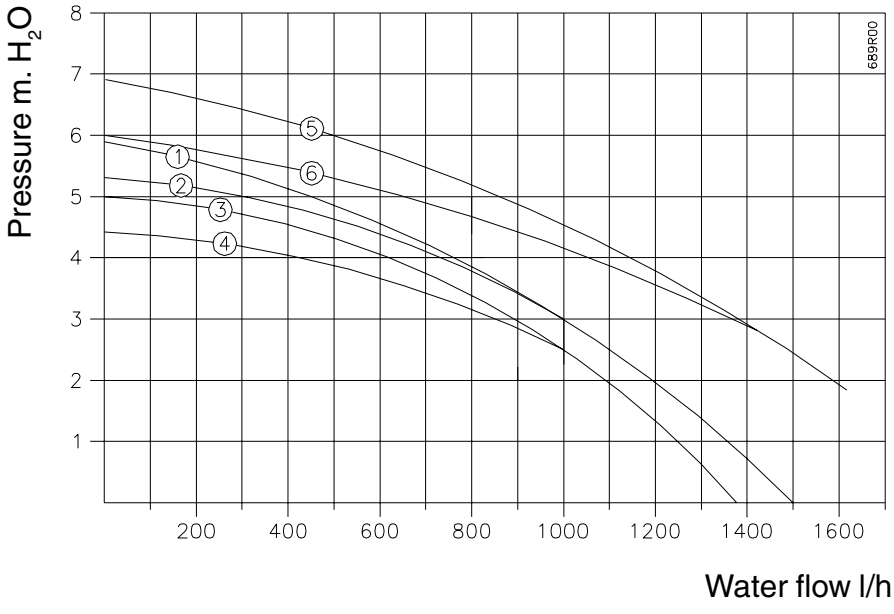
EURA 23-28-32 SE
models only:



Boiler model	L (mm)	H (mm)	P (mm)	X (mm)	Y (mm)	Q (mm)	R (mm)	S (mm)	T (mm)
EURA 23 E	450	833	377	207	243	225			
EURA 28 E	450	833	377	232	218	225			
EURA 23 SE	450	833	377	207	243	191	276	75	375
EURA 28 SE	450	833	377	257	193	191	276	124	326
EURA 32 SE	450	833	377	257	193	191	276	124	326

1	Flue products outlet
2	Air inlet for coaxial system
3	Air inlet for separate system

EURA - AVAILABLE PUMP CAPACITY



1 – **EURA 28** available pump capacity (closed By-pass)
2 – **EURA 28** available pump capacity (automatic By-pass)
3 – **EURA 23** available pump capacity (closed By-pass)
4 – **EURA 23** available pump capacity (automatic By-pass)
5 – **EURA 32** available pump capacity (closed By-pass)
6 – **EURA 32** available pump capacity (automatic By-pass)

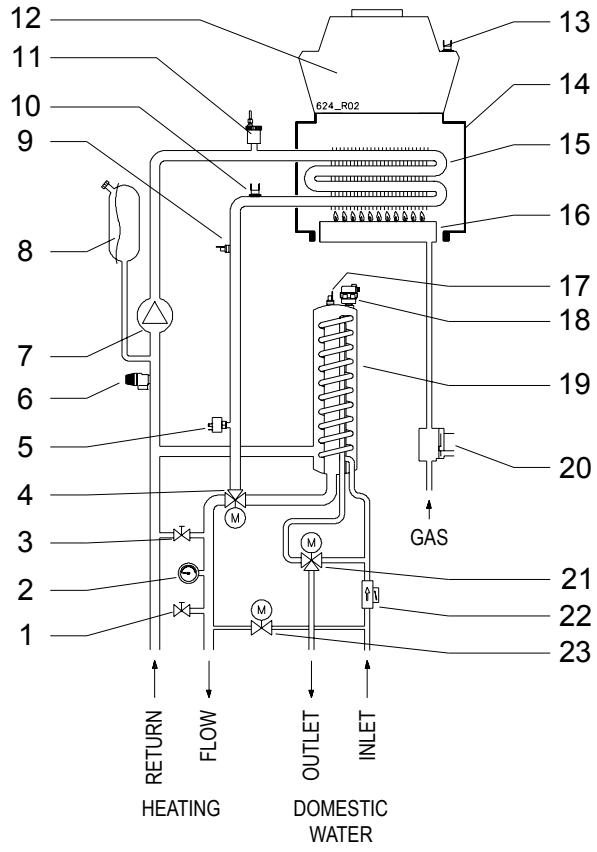
for the technician

BOILER SCHEMATIC

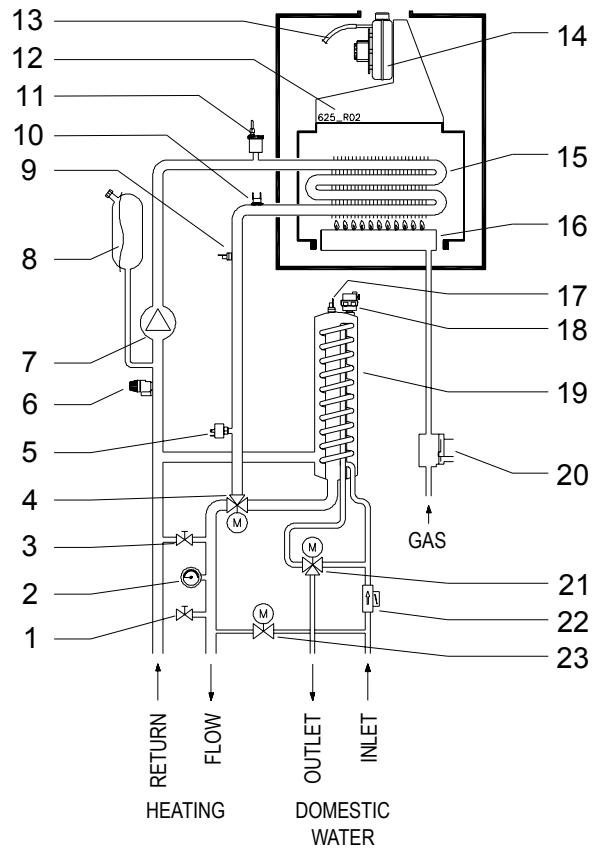
WARNING: This scheme is made for information only. To make boiler hydraulic connection either use fixing jig or the drawing inserted in the section "Installation".

1 Drain valve
2 Manometer
3 By-pass
4 Three way motorised valve
5 Loss of water switch
6 Heating system safety valve 3 bar
7 Pump
8 Expansion vessel
9 Flow temperature sensor
10 High temperature safety switch
11 Automatic air vent
12 Flue hood ("E" and "SE" models)
13 Flue thermostat ("E" models)
Flue pressure switch ("SE" models)
14 Combustion chamber ("E" models)
Fan ("SE" models)
15 Primary heat exchanger
16 Burner
17 Domestic minitank temperature sensor
18 Domestic minitank automatic air vent
19 Domestic heat exchanger
20 Gas valve
21 Motorised mixing valve
22 Priority flowstat
23 Electric filling valve

EURA E



EURA SE



for the technician

INSTALLATION

Safety laws and rules referred to technicians assigned to boilers installation

Place here all necessary advices according to national rules about WORK SAFETY

Exemple:

Law number XXXX

"Actuation of 89/391/CEE; 89/655/CEE, 90/296/CEE, 90/934/CEE, 90/679/CEE, (work safety)"

Law number XXXX

"Actuation of 89/686/CEE (21 Dec 1989)"

Other Law number XXXX (if any)

"Other Law title and/or brief description"

Directives

"Directive title and/or brief description"

Always proceed with caution when handling the boiler and carrying out installation/maintenance work as metal parts may cause injuries such as cuts and abrasions. Wear gloves while doing the above mentioned operations.

Reference norms and laws for installation

Place here all necessary advices according to national rules about BOILER INSTALLATION

Exemple:

Law number XXXX

"Law title and/or brief description"

Boiler location

INSTALLATION ROOM

When having an heat ouput lower than 35 kw (about 30000 Kcal/h), particular features for the installation room are not required. Shortly, all installation rules assuring a safe and regular gas boiler operation, must be strictly respected.

Place here all necessary advices according to national rules about:
- Installation room requirements
- Limitations in power and/or number of boilers and other appliances in the same room

Exemple:

Law number XXXX
"Law title and/or brief description"

INSTALLATION IN ROOMS WHERE TEMPERATURE CAN DROP DOWN TO 0°C:

When the installation place does not guarantee an adequate repair against atmospheric agents, the gas boiler must be completely protected through an adequate coverage as a safety measure against the above agents.

In case of boiler installation in rooms where temperature can drop down to 0°, it is advisable to protect the heating circuit with an antifreeze liquid. See the "System Filling" section.

This appliance is not suitable for outdoor installation.

ROOM VENTILATION (*EURA E* - natural draught)

When a natural draught boiler is installed, permanent ventilation of the installation room is mandatory and extremely important. Ventilation must be made and sized in accordance with Laws and Rules in force.

Fixing the boiler

For the installation proceed as follows:

Appliance size and clearances for maintenance: 50mm from both sides and 300mm from the bottom are reccommended.

— Attach template to the wall (see figure below) with two brackets suitable to carry boiler weight;

— fix up electrical connections and all ducts for heating flow and return, cold water, hot water and gas, as indicated on template;

— remove template and hang boiler;

Remark: The template is only used as a guide to align the pipework.

— **remove plastic caps and their relevant gaskets** from boiler connections. Remove bottom plastic supports by unscrewing their relevant screws. Keep these screws since you will need them to install bottom grid;

Remark: We suggest not to fix grid until the boiler is definitively commissioned.

— Connect boiler to the pipework installing a cold water inlet cock. We also suggest to install cocks on heating flow and return.

Boiler template

GAS — Gas (1/2")

Hot water OUTLET (1/2")

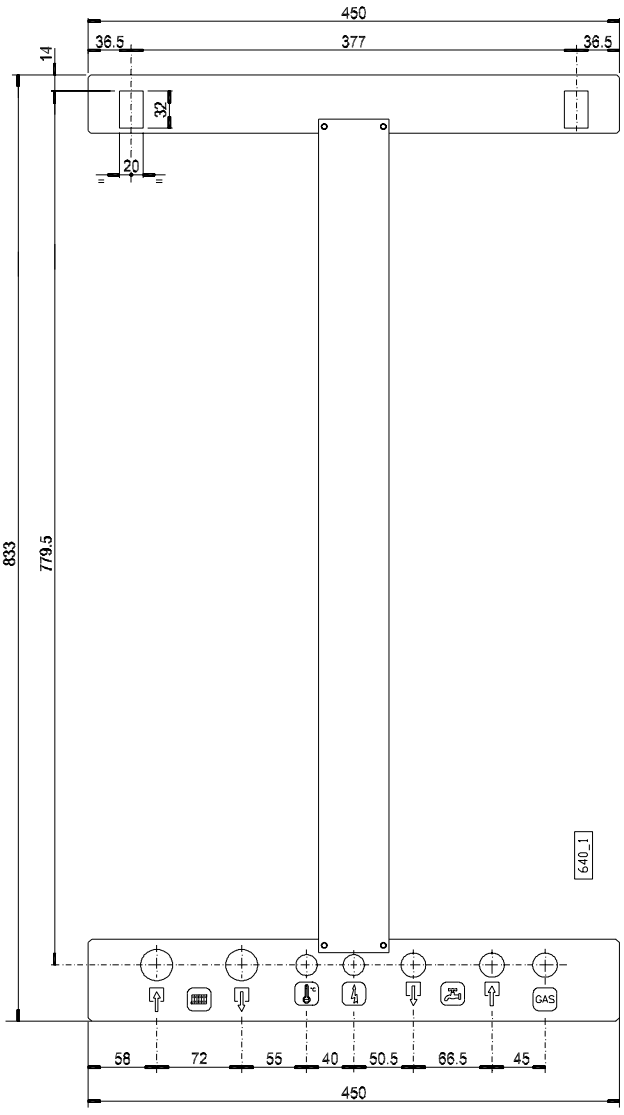
Cold water INLET (1/2")

Heating FLOW (3/4")

Heating RETURN (3/4")

Electrical power supply

Room thermostat



Hydraulic connections

Remark: If gas cock position is foreseen near the WALL, install first gas cock, then water inlet tap.

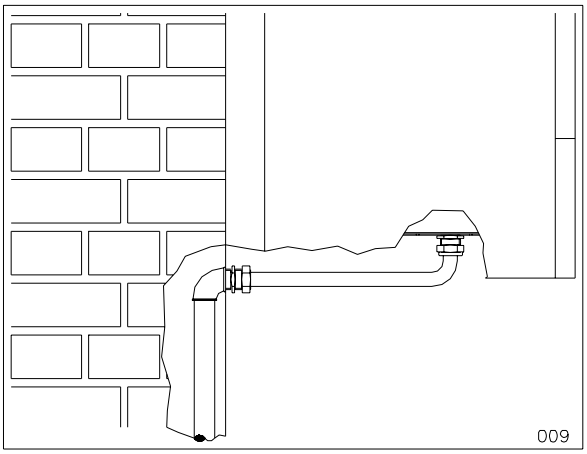
Advices and suggestions to avoid vibrations and noises in the system

— Do not use pipes with reduced diameters;

— Do not use bends with small radius and reductions of important sections;

— ***It is recommended an hot washing of the system*** in order to purge the pipes and the radiators from impurities (in particular oils and fats) that ***could damage the pump.***

CONNECTION EXAMPLE



DOMESTIC WATER SUPPLY

The pressure of entrance cold water inlet pressure must be lower than 6 bar. Furthermore, for an optimal boiler functioning, water pressure should be more than 1 bar. A lower pressure could make difficult to restore correctly the pressure in the heating system, and reduce the flow od hot water available from the boiler.

If pressure is higher, a PRESSURE REDUCER must be fitted upstream the boiler.

The cleaning frequency of the coil exchanger depends on the water supply hardness. Besides, the presence of solid residuals or impurities in the water (for example in case of new systems) could compromise the correct functioning of the boiler.

So, may be necessary to install suitable water treatment device, depending on the water features.

HEATING SYSTEM

— Considering that during boiler operation, the water inside the heating system increases its pressure, make sure that its maximum value does not exceed the maximum hydraulic pressure indicated on the appliance data plate.

— Connect the safety evacuation ducts of the boiler to an evacuation funnel. If safety valves are not connected to an evacuation device, their intervention could flood the room. Hermann cannot be held responsible for any damage arising from that situation.

Make sure that the hydraulic and heating systems ducts are not used as earth connections of the electrical system. They are absolutely NOT SUITABLE for such a use.

System filling

Once the boiler is hydraulically connected, it is possible to fill the system.

Warning: if boiler is installed in a room where temperature can drop below 0°C, it is recommended to fill the heating system with an anti freezing mixture.

While filling, please follow carefully the following phases:

— Open air vent in radiators;

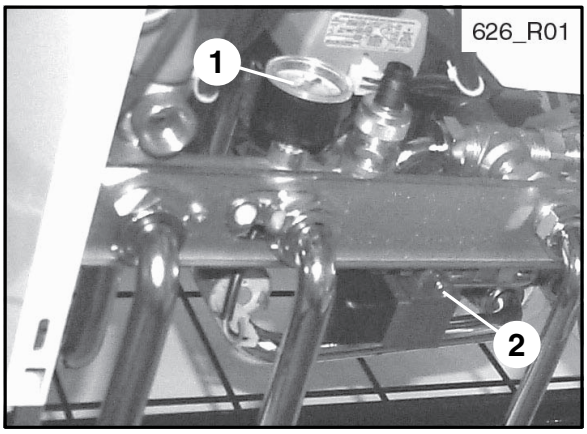
— open filling tap;

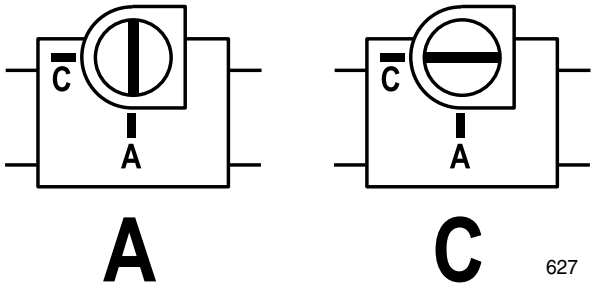
— slowly unscrew screw [2] located in water filling electro-valve, from position "C" to position "A" (see picture), taking care of all air vent installed in the system;

— as soon as water flows out of air vent radiators, close air vents;

— check on the manometer [1] that pressure reaches the optimal value of 1÷1.5 bar (minimum: 0.5 bar), then reset screw [2] in position "C" (closed);

BOILER BOTTOM VIEW





— repeat previous operations until all air in the system has been blown out.

Note: Boiler is equipped with a special automatic filling device, which automatically fills boiler to reset its pressure provided that boiler is electrically fed.

Gas connection

Remark: If gas cock position is foreseen near the WALL, install first gas cock, then water inlet tap.

Boiler installation must be carried out from a qualified technician, [exemple: as indicated by the Law XXXXX] because an incorrect installation can cause damages to people, animals or things, for which the manufacturer cannot be held responsible.

Verify what follows:

a) cleaning of all system gas pipes in order to avoid the presence of residual combustion products that could compromise the correct boiler functioning;

b) gas line and ramp conformity with laws and rules actually in force (exemple: Laws UNI-CIG 7129/01, 7131/99 - DM 12/04/96);

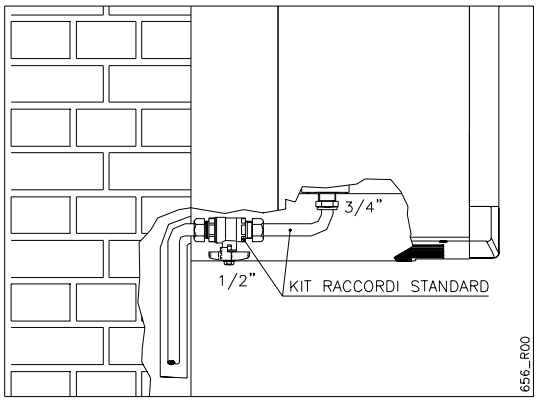
c) internal and external tightness of the gas system and connections;

d) supply pipe must have a section greater than or equal to the boiler one;

e) supply gas must correspond to the one for which the boiler has been regulated; otherwise, call [a HERMANN Service Centre] [a qualified technician] for gas conversion;

f) an interception valve must be installed upstream the appliance;

CONNECTION EXAMPLE



Open the meter valve and purge the air that is inside the system pipes (including all the appliances).

While connecting gas inlet pipe of the boiler to the pipe coming from gas network, it is MANDATORY to insert a TIGHT GASKET, whose dimensions and material must be adequate. Connection is NOT suitable for hemp, teflon strip or similar materials.

Using LPG, it is absolutely necessary to install a pressure reducer upstream the boiler.

Electrical connections

GENERAL WARNINGS

The cable for electrical supply must be connected to an electrical line of 230V-50Hz, respecting the polarities L-N (Live-Neutral) and the earth connection.

PLACE UPSTREAM THE BOILER A BIPOLAR SWITCH in accordance with the rules actually in force.

For the general electrical supply of the appliance, the use of adaptors, multiple taps and extensions is not allowed.

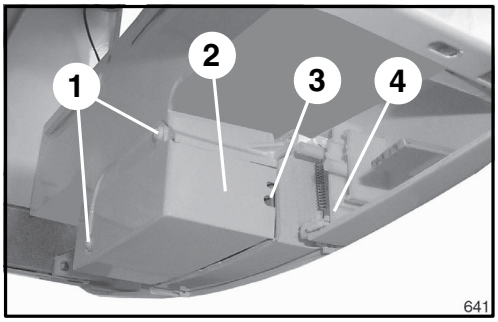
It is mandatory the earth connection in accordance with the CEI rules actually in force.

Electrical safety of the appliance is only achieved when it is well connected to an efficient earthing system, executed as indicated by the safety rules actually in force.

A qualified technician must check that the electrical system is in line with the maximum power allowed by the boiler, indicated on the data plate, with particular attention to the cables section.

Remark: HERMANN Ltd. declines any responsibility for damages to persons, animals or things caused by the non-connection of the boiler earthing and by failure to comply with the rules.

ELECTRICAL CONNECTIONS TO THE BOILER

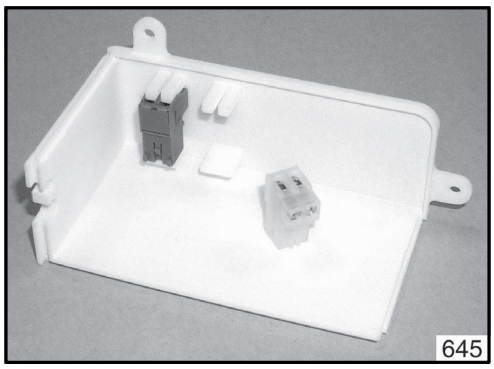


— Unscrew the two screws [1] and remove cover [2];

— extract yellow and white connectors;

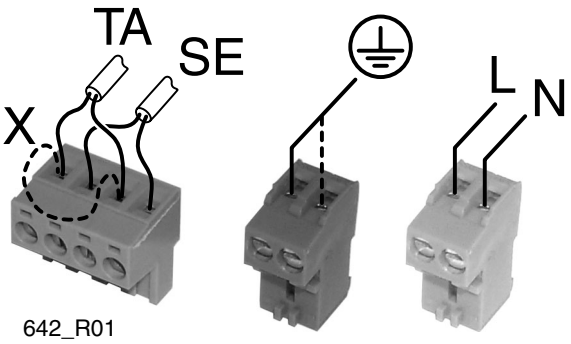
— make electric connections as shown in the picture situated on the other side of the cover:

- connect earth wire to yellow connector;
- connect NEUTRAL cable (N) and PHASE (L) to WHITE connector, precisely as shown in the picture;



If PHASE and NEUTRAL wires are reversed, the boiler will not work.

- when a Room Thermostat or Chrono Thermostat (TA) and/or Outdoor Temperature Probe (SE) are foreseen, unplug GREEN connector from PCB and make connections as shown in the picture. If TA is installed, disconnect jumper [X].



TA and SE terminals on green connector work at low voltage: only connect NON POWERED wires coming from simple contact of Room Thermostat / Chrono Thermostat, and/or Outdoor Temperature Probe. DO NOT connect live wires, for any reason.

Original Hermann remote control (optional kit) must NOT be connected to green connector. Special interface card, supplied in the remote control kit, must be used.

All low-voltage wirings (e.g. TA, SE and original Hermann remote control) must be kept separate from power supply cables, as to avoid boiler malfunctionings due to electrical noise. It is advisable to use separate tubes for them.

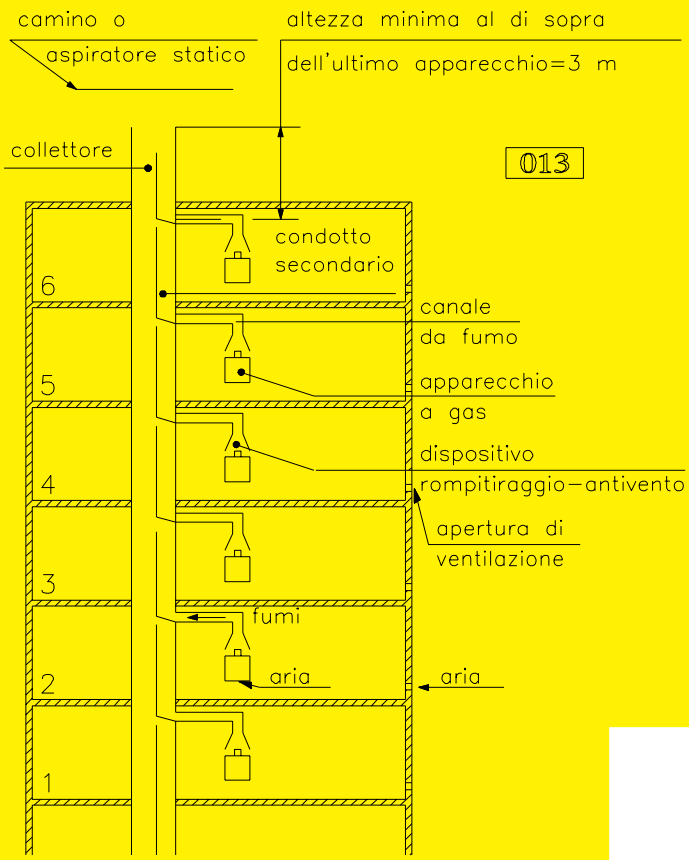
— all the relevant connections must be inserted in modulation PCB, FOLLOWING THE CORRECT COLOURS. They have been provided with special plugs for correctly connect them.

— close cover inserting cables in the provided holes [3] and screw the screws [1];

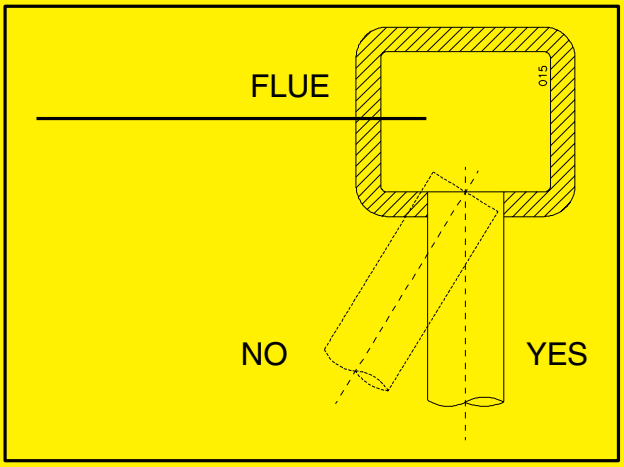
— block cables with the special device [4].

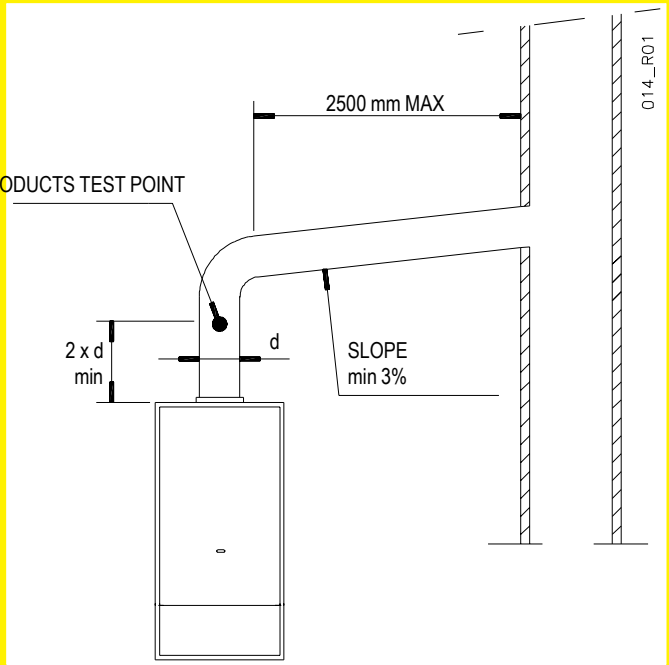
Chimney connections
***EURA E** (natural draught)*

Place here all necessary advices according to national rules about CHIMNEY CONNECTIONS of OPEN chamber boilers



These diagrams are to explain the most important ITALIAN laws concerning chimney connections (for EXAMPLE purpose only)



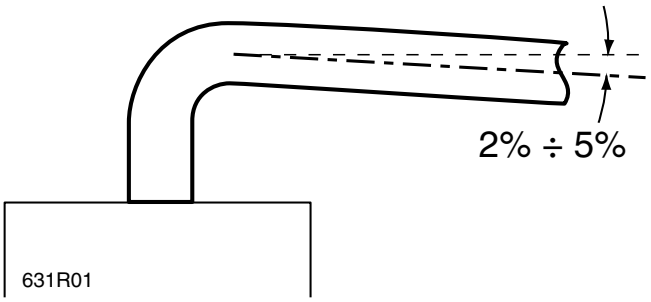


for the technician

Chimney connections
EURA SE (forced draught)

NOTE ON FLUE INSTALLATION

When fitting air inlet and flue outlet horizontal ducts, it is necessary to make sure there is a slope of 2÷5% downwards from the boiler to the outside (see diagram). This is essential to guarantee correct boiler operation and reliability. Air inlet and flue outlet terminals should be protected by suitable approved flue accessories, to avoid environmental elements penetration.



Place here all necessary advices according to national rules about CHIMNEY CONNECTIONS of SEALED chamber boilers

In case of evacuation to wall, the positions indicated in the following drawing and table must be respected:

Positioning of flue terminals for forced draught boilers, depending on their heat input

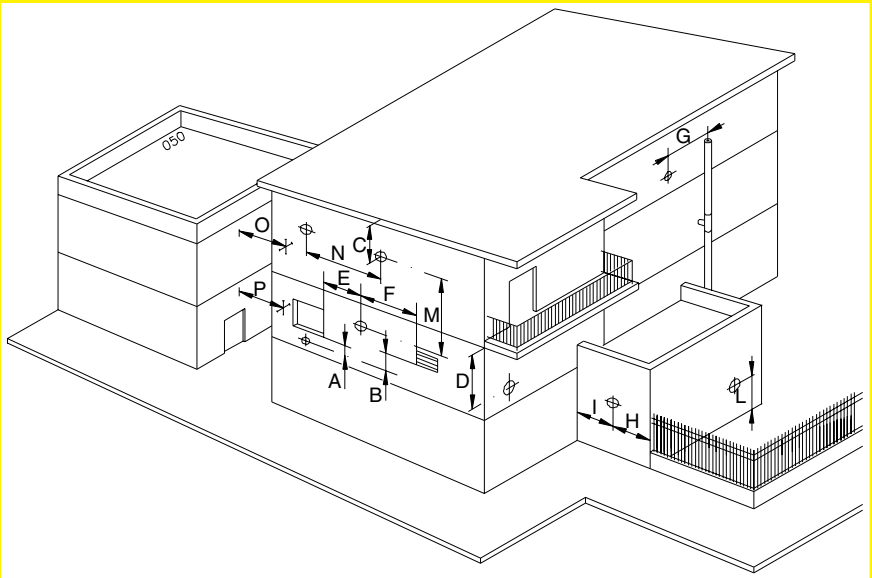
Terminal positioning	Distances	Appliances		
		from 4 kW * to 7 kW mm min.	from 7 kW to 16 kW mm min.	from 16 kW to 35 kW mm min.
Under a window	A	300	500	600
Under an air vent	B	300	500	600
Under a gutter	C	300	300	300
Under a balcony **	D	300	300	300
From an adjacent window	E	400	400	400
From an adjacent air vent	F	600	600	600
From vertical or horizontal evacuation pipes***	G	300	300	300
From a corner of the building	H	300	300	300
From a recess of the building	I	300	300	300
From the ground or from another floor	L	400 ◆	1500 ◆	2500
Between two terminals vertically	M	500	1000	1500
Between two terminals horizontally	N	500	800	1000
From a surface facing another surface, having no openings or terminals within a distance of 3 mts. from the evacuation hole	O	1500	1800	2000
As above, but with openings or terminals within a distance of 3 mts. from the evacuation hole	P	2500	2800	3000

* *Appliances with an heat input lower than 4 Kw are not subjected to any limitation for the terminals positioning, except for the points O and P.*

** *The terminals under a practicable balcony must be positioned in such a way that the total flue run, from the terminal outlet to its own outlet from the external balcony perimeter, included the height of the eventual protection banisters, is no lower than 2000 mm.*

*** *In the terminal positioning, it will be necessary to keep distances not inferior to 500 mm. in case of close proximity to materials sensible to the combustion products action (e.g., plastic gutters and downpipes, wood projections and so on), unless adequate measures of protection have been adopted.*

◆ *The terminals must be designed in such a way that the combustion products flow is as much as possible ascensional and protected from the temperature effects.*



for the technician

High capacity fan
EURA 23 SE

For **EURA 23 SE** (forced draught) it is possible to install, on request, an “high capacity fan”, allowing an higher length of separate flue systems (see table):

Separate flue products outlet / air inlet Ø	mm	80
Separate flue length	m	30 (max 20 scarico)
Separate flue length with high capacity fan	m	60 (max 40 scarico)

ASSEMBLING INSTRUCTIONS

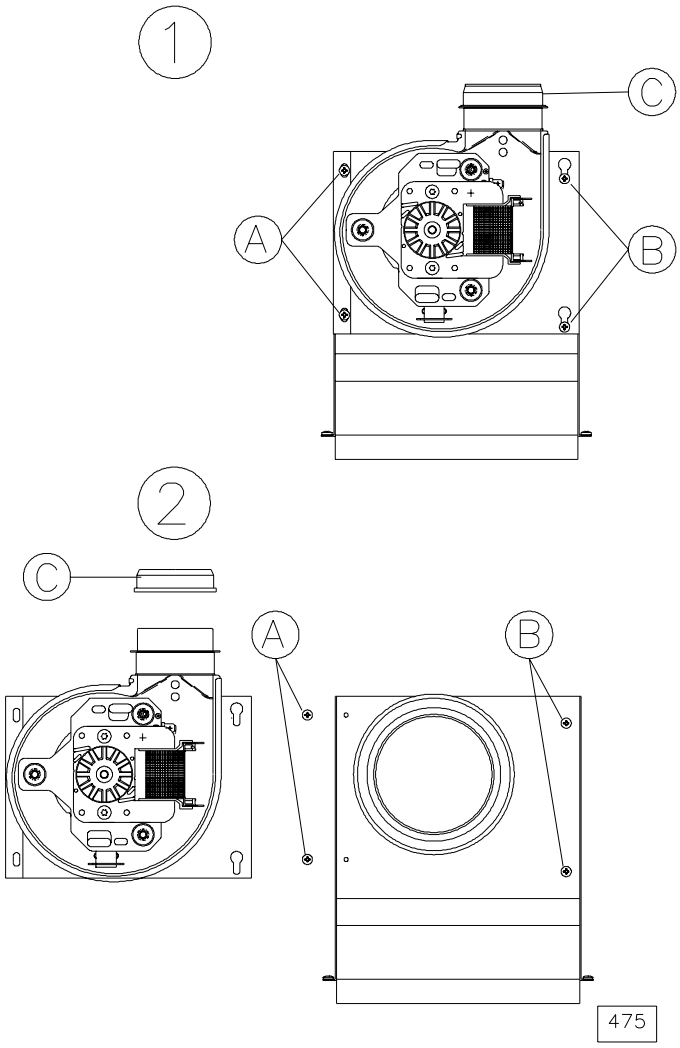
It is advisable to install the high capacity fan, before flue kit, avoiding any possible hindrance during assembling operations.

Provide electrical disconnection of the gas boiler and remove the sealed chamber closing;

1. Take off screws A, loosen screws B (it is not necessary to take off screws B, being the fan bracket provided with button-holes) and remove the standard fan, disconnecting its cables for electrical supply; remove the flue pressure sensor.
2. Remove gasket C from standard fan and insert it on high capacity fan; install the flue pressure sensor, respecting its previous position.

Install the high capacity fan, connect the cables for electrical supply, tighten screws B and reinsert screws A.

Reassemble the sealed chamber closing.

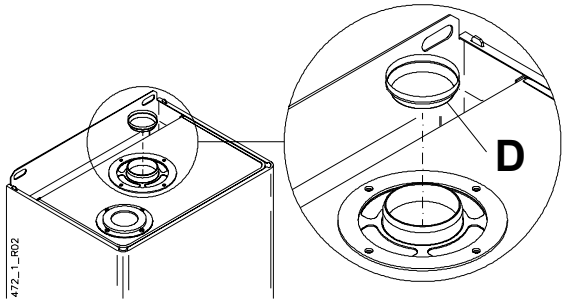


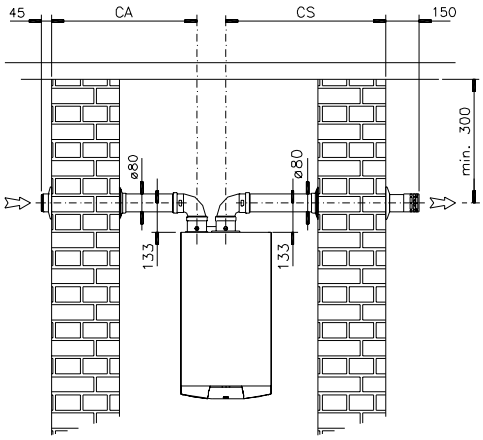
for the technician

Flue options
EURA SE

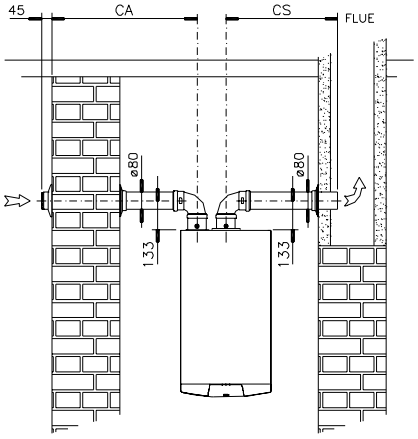
AIR INLET AND PRODUCTS OUTLET THROUGH SEPARATE PIPES

Attention: see table and, if required, install the diaphragm **"D"** as indicated in the figure besides (any additional 90° bend = 0.5 linear meters, 45° bend = 0.25 meters).

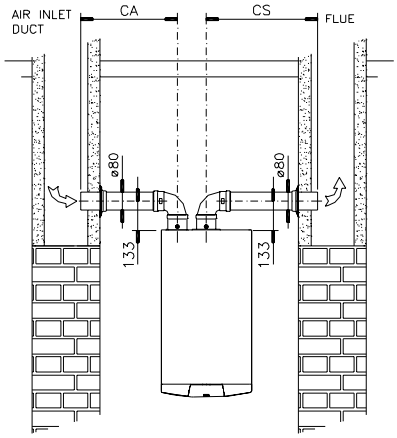




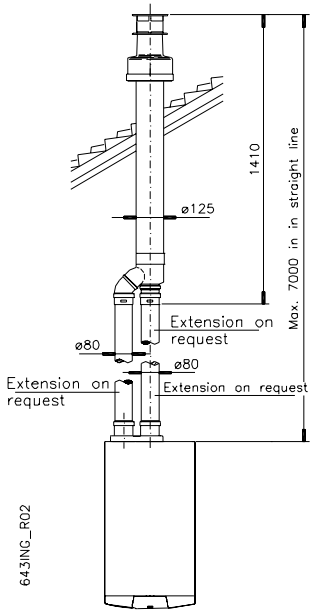
AIR INLET AND FLUE PRODUCTS OUTLET THROUGH WALL



AIR INLET THROUGH WALL AND PRODUCTS OUTLET THROUGH FLUE



AIR INLET THROUGH DUCT PRODUCTS OUTLET THROUGH FLUE

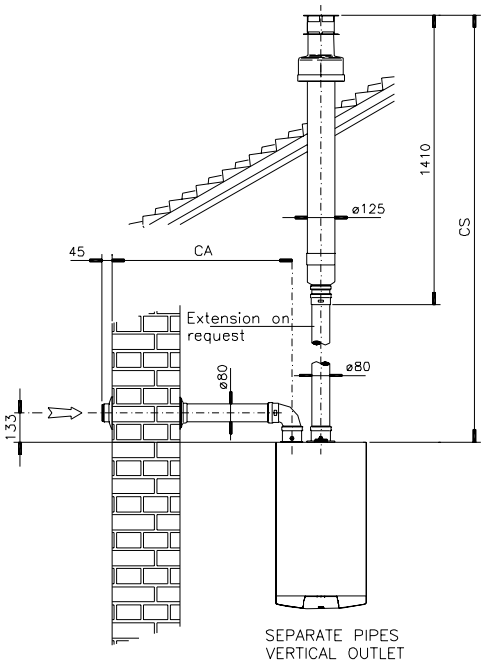


SEPARATE PIPES WITH PIPES-SPLIT VERTICAL OUTLET/INLET

Model	Ø80mm separated ducts			
	CA+CS min÷max (m)	CS max (m)	Diaphragm	
			Length of CA+CS (m)	diameter (mm)
23 SE	2÷30	20	up to 8	(d)
			more than 8	NO
23 SE with high capacity fan	31÷60	40		NO
28 SE	2÷25	20	up to 8	(d)
			more than 8	NO
32 SE	2÷20	12	up to 6	(d)
			more than 6	NO

	Ø80mm ducts with Pipes Splitter on coaxial connection			
23 SE	2÷14	13		NO
28 SE	2÷14	7		NO
32 SE	Not possible			

(d) use the diaphragm supplied with the boiler.



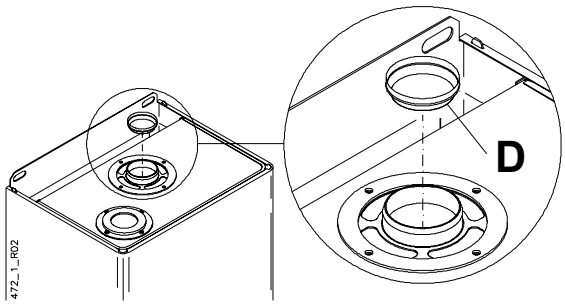
SEPARATE PIPES VERTICAL OUTLET

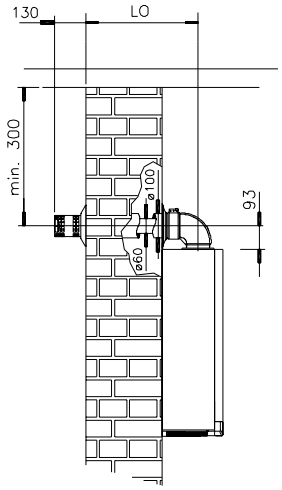
for the technician

Flue options
EURA SE

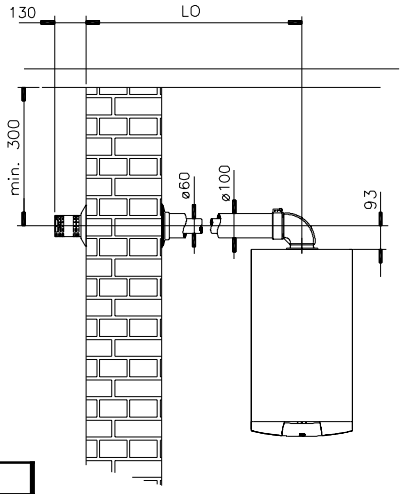
AIR INLET AND PRODUCTS OUTLET THROUGH COAXIAL SYSTEM

Attention: see table and, if required, install the diaphragm **"D"** as indicated in the figure besides (any additional 90° bend = 1 linear meter, 45° bend = 0.5 meters).



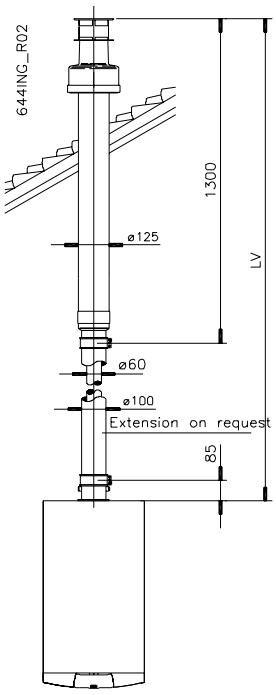


HORIZONTAL COAXIAL SYSTEM

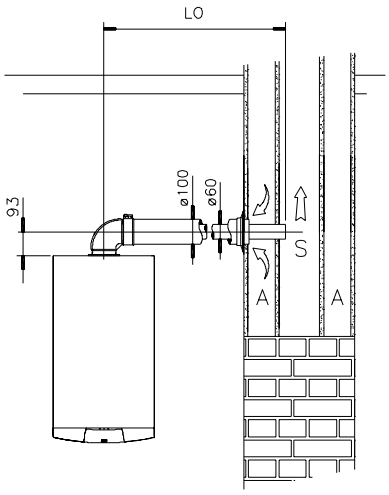


Model	Ø 60/100 coaxial system			
	LO min÷max (m)	LV min÷max (m)	Diaphragm	
			LO or LV length (m)	diameter (mm)
24 SE	0.5÷4	1÷5	up to 1	44 (b)
			1 to 2	(d)
			more than 2	NO
28 SE	0.5÷3	1÷4	up to 1	(d)
			more than 1	NO
32 SE	0.5÷3	1÷4	up to 1	(d)
			more than 1	NO

(d) use the diaphragm supplied with the boiler. (b) available on request.



VERTICAL COAXIAL SYSTEM



HORIZONTAL COAXIAL SYSTEM
PRODUCT OUTLET TO COAXIAL FLUE

for the technician

First firing, regulation and servicing instructions

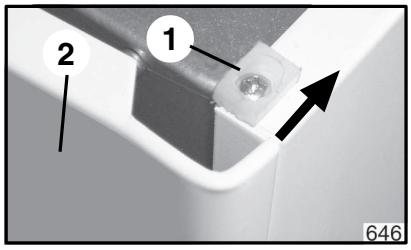
ATTENTION: the operations described below must be carried out only by qualified personnel [authorized by HERMANN].

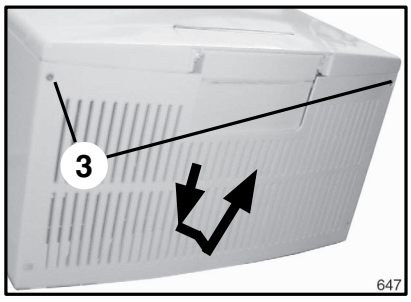
When regulation/measuring is over, remember to tighten pressure tapping point screws and ALWAYS check for gas leaks!

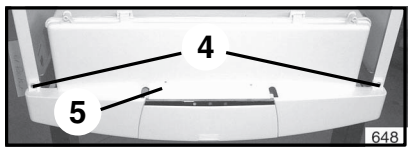
Before boiler ignition, verify that pump is not blocked due to its inactivity: unscrew the plug located in the middle of the cap to gain access to the rotor shaft, and turn it manually using a screwdriver or another suitable tool.

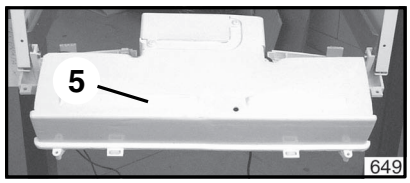
During the first ignition of the brand new boiler, it is necessary that burner works for at least 30 minutes, before performing combustion checks. During this time, the fumes of the eventual residual manufacturing materials are produced, and they could alter the measured values.

Note: When boiler is electrically connected (or is ignited) it is necessary to wait about 90 seconds before having the complete control of the boiler. Such delay can be temporary excluded through programming parameter n° 9 (see "Regulation programming") and it must be activated to guarantee perfect boiler working.









Gaining access to manual regulation devices

1. Unscrew screws located above boiler, shift small blocking plate 1, remove front cover 2 lifting it up.
2. To remove lower grid, if any, unscrew screws [3], push, lower and shift it forward.

Note: lower grid is spare inside packing, not assembled.

3. Unscrew fixing screws [4] and extract control panel [5] forward, rotating it around hinges.
4. Once regulation are over, reverse perform steps from 3 to 1.

Preliminary gas control

All boilers are tested and factory set during manufacture; however, it is advisable to check that the gas type and the burner pressures are correct. Follow the procedures described in this section.

— All connections to boiler (water, gas, heating system and electricity) must work. Green light on, yellow and red light off.

— Open control cover and turn boiler on by pushing ○/| knob. Green light on, on to display symbol appears with its requested (set) domestic water temperature.

— To make gas pressure controls, insert manometer probes in pressure tapping points available on to gas valve (see picture).

Note: To check that gas pressure and flowrate are sufficient to guarantee perfect boiler operations, make such controls while burner is working.

MAX-MIN pressure adjustment on GAS valve

— Unscrew (2-3 rounds) the screw in outlet pressure tapping point [1] on gas valve and plug in manometer probe. On "SE" models, unplug silicon rubber pipe (coming from sealed chamber) from "Vent" plug [3];

— start the boiler at maximum power (not modulating) proceeding *preferably* as described in "Combustion check" paragraph; as alternative, proceed as follows:

- set the domestic hot water temperature to the maximum value;
- open an hot water tap fully (flow rate 10 l/minute, open more than one tap if needed), wait for the stabilization of the pressure (at least 20 seconds);

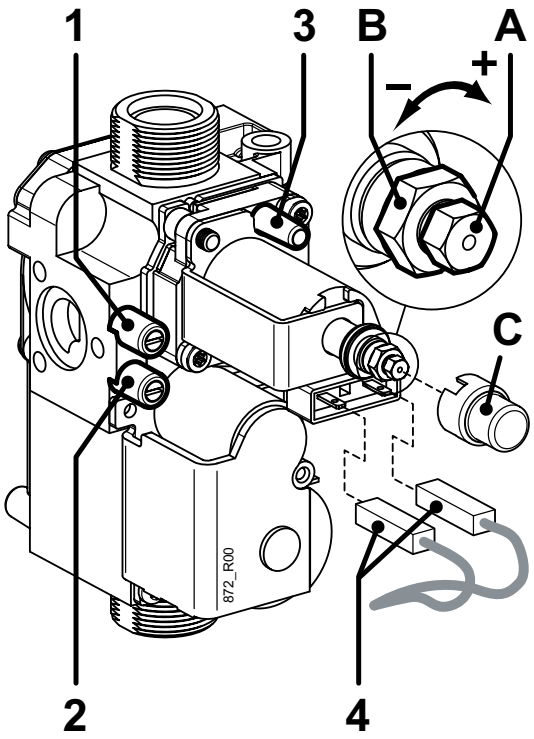
— verify that pressure correspond to the MAX value indicated in the table "BURNER POWER / PRESSURES" (see following pages);

— unplug one of modulation coil supply connectors [4] and check that pressure correspond to the MIN value indicated in the table "BURNER POWER / PRESSURES", then plug the connector back in;

— if it is necessary to adjust settings, proceed as follows, according to the figure:

- remove protection cap [C];
- adjust MAX pressure by turning bigger nut [B] (8 mm). Clockwise to increase pressure, counterclockwise to decrease;
- unplug again one of connectors [4];
- adjust MIN pressure by turning smaller nut [A] (5 mm) while keeping bigger nut [B] stopped. Clockwise to increase pressure, counterclockwise to decrease;
- insert connector [4] again and check that MAX pressure is not changed;
- Fit cap [C];

GAS VALVE



Pressure tapping pionts:
1 = Gas OUT
2 = Gas IN
3 = "Vent" plug (SE models)

Important: lock the adjustment device after any setting operation.

— On “SE” models, plug silicon rubber pipe on “Vent” plug [3] on gas valve. WARNING: after plugging the pipe on “Vent” plug, the value on manometer may decrease due to pressure compensation. This is normal and doesn’t require any further adjustment;

— fully screw outlet pressure tapping point screw [1] and check for gas leaks.

Regulation programming

All these operations must be performed by QUALIFIED TECHNICIANS ONLY. Operations performed by not qualified persons can cause MALFUNCTIONS and/or DAMAGE. **Hermann cannot be considered liable for eventual damages caused by not qualified persons.**

Do not modify default settings if not necessary

GENERAL PROCEDURE

— With control panel in normal position, open its cover and turn off boiler pushing ○/| knob: green light flashes:

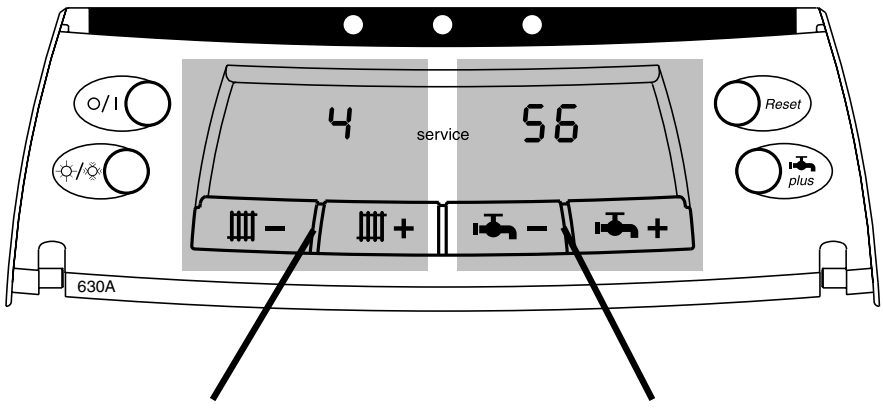
— Keep both knobs ☼/☼ (Summer/Winter) and *plus* pushed for 5 seconds contemporary: display shows “service” with a number on the left (from here on called ‘PARAMETER’) and another number on the right (from here on called ‘VALUE’);

— Select number of PARAMETER to be modified pushing knobs ▥ – and ▥ + ; change VALUE by pushing – and + .

— To STORE a new value push *plus* . If you want NOT to store the value, do NOT push *plus* but simply select another parameter (by pushing ▥ – or ▥ +).

— To quit programming mode push ○/| .

Note: Once quitted program mode, it is necessary to wait about 90 seconds for complete motorised mixing valve calibration. Such delay can be temporary excluded through programming parameter n°9 described here below.



To select the PARAMETER

To edit the VALUE

Parameter numbers, description, available values and default settings:

1 **Gas type:** Natural gas = 0 / LPG = 1. Default setting: 0. See “GAS transformation” for the complete regulation procedure.

2 **Temperature range for heating system:** Normal = 0 / Reduced = 1. Default setting: 0. Leave default setting unchanged.

3 **Gas pressure* during slow opening:** from 00 to 99. See ‘Slow opening regulation’ for default setting (they may be different depending on boiler model and/or gas type) and for complete regulation procedure.

4 **Maximum heating power gas pressure*:** from 00 to 99. Default setting: 99. See ‘Maximum heating power regulation’ for the complete regulation procedure.

** = All values shown on to display are NOT gas pressure values and must be considered for indication only. All correct gas pressure values must be verified through a micro manometer correctly calibrated*

5 **Pump working in Winter mode:** Normal = 0; Always on = 1; Always off = 2. Default setting: 0. See ‘Other boiler programming’ for more info.

6 **Switching on delay after reaching set heating temperature:** from 0 to 7 minutes. Default setting: 3. See ‘Other boiler programming’ for more info.

7 **Temperature difference between heating flow and domestic set:** from 10 to 20 °C. Default setting: 15°C. We advice to leave default setting unchanged.

8 **Minitank temperature setting according to dhw temperature setting:** 0, 1, 2 and 3. Default setting: 0. See “Other boiler programming” for more info.

Parameters 7 and 8 allow to optimise comfort level of the domestic hot water system, according to water hardness. It is recommended to keep these values to default setting, especially in case of hard water, unless a suitable scale reducing device is fitted.

9 **Ignition delay for motorised mixing valve calibration:** Activated = 0 - Excluded = 1. Default setting: 0. See ‘Other boiler programming’ for more info.

It is MANDATORY that parameter n° 9 is set = 0 for normal boiler functioning.

10 **External probe indication** (not modifiable): No probe / disconnected = 0; Probe detected = 1. See ‘Other boiler programming’ for more info.

Slow opening regulation

When boiler is ignited, burner is fed for 8 seconds with a gas at a lower pressure then usual; afterwards pressure increases up to requested values. Such 'slow opening' pressure must guarantee correct and immediate ignition avoiding noises while igniting.

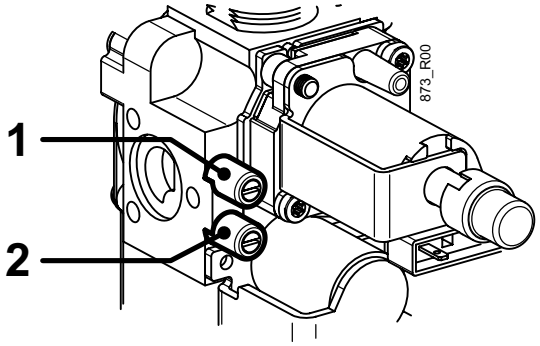
— Loosen (2 – 3 rounds) screw of gas valve pressure hole (part 1 figure 'Gas valve') and connect manometer;

— while boiler is not working (green light flashing), select parameter **3** and push once knob – or + . Burner will ignite allowing slow opening regulation. To correct values shown, push knobs – or + until correct values are reached. (Correct, default values are shown in the here attached table);

— store pressure pushing *plus* ;

— should you regulate heating power (mandatory for first ignition), proceed to next phase. Otherwise, remove gas probe, screw the relevant screws and verify gas leakage.

GAS VALVE



Pressure tapping pionts:
1 = Gas OUT
2 = Gas IN

Slow opening	Natural gas G20			LPG G30/G31		
Boiler model	mbar	mm c.a.	Display value	mbar	mm c.a.	Display value
EURA 23 E	3.5	35	30	8	82	47
EURA 28 E	3.5	35	30	8	82	47
EURA 23 SE	7	71	47	14	143	60
EURA 28 SE	7	71	47	14	143	60
EURA 32 SE	5	51	42	14	143	62

Max heating power regulation

Maximum heating power must be set according to actual heating system design. Please find herewith table with power/gas pressure values. To regulate heating output proceed as follows:

— Actual heating system power must be known according to plant design;

— unscrew (2-3 rounds) screw of gas valve pressure hole (part 1 figure 'Gas valve') and connect manometer;

— while boiler is not working (green light flashing), select parameter 4 and push once knob – or + . Burner will ignite allowing maximum heating power regulation. Push knobs – or + until correct value is reached;

— store pressure pushing *plus* ;

— remove gas probe, screw the relevant screws and verify gas leakage.

BURNER POWER/PRESSURE TABLE — EURA 23 E

HEAT OUTPUT		NATURAL GAS G20		BUTHANE G30		PROPANE G31	
kW	kcal/h	mbar	mmH_2O	mbar	mmH_2O	mbar	mmH_2O
MIN. 9.03	7700	2.2	22	4.5	46	5	51
10	8600	2.6	26	5	51	5.7	58
11	9460	3.0	30	5.7	58	6.7	68
12	10320	3.4	35	6.7	68	7.9	80
13	11180	3.7	38	7.5	77	9	92
14	12040	4.5	46	9	92	12.3	125
15	12900	5	51	10.5	107	14.5	148
16	13760	5.5	56	12.5	127	16	163
17	14620	6.1	62	15	150	18.3	186
18	15480	6.5	66	16.3	166	20.3	207
19	16340	7.2	73	18.6	190	23	234
20	17200	8	9	20	204	25.2	257
21	18060	8.6	88	22	224	27.5	280
22	18920	10	102	25	255	30.5	311
MAX. 23.1	20300	12.3	125	27.5	280	34.5	350

BURNER POWER/PRESSURE TABLE — EURA 28 E

HEAT OUTPUT		NATURAL GAS G20		BUTHANE G30		PROPANE G31	
kW	kcal/h	mbar	mmH_2O	mbar	mmH_2O	mbar	mmH_2O
MIN. 11.0	9630	2.5	25	5	51	6	61
12	10320	3.0	30	7.2	72	8.9	91
13	11180	3.6	37	8.7	89	10	102
14	12040	4.2	43	9.8	100	12.8	130
15	12900	5	51	11	112	14.5	148
16	13760	5.6	57	11.8	120	16	163
17	14620	6.2	63	13	132	17.8	181
18	15480	7	71	14.9	152	20	204
19	16340	7.6	77	16	163	22.5	229
20	17200	8.3	84	17.8	181	24	244
21	18060	9	92	19.5	198	26.5	270
22	18920	9.5	97	20.7	211	28	285
23	20100	10.1	103	21.9	223	29.4	300
24	20640	10.6	108	23.5	239	31.2	318
25	21500	11.2	114	24.8	253	32.6	332
26	22360	11.8	120	25.9	265	34	347
MAX. 28.0	24510	12.6	128	27.5	280	35	357

BURNER POWER/PRESSURE TABLE — EURA 23 SE

HEAT OUTPUT		NATURAL GAS G20		BUTHANE G30		PROPANE G31	
kW	kcal/h	mbar	mmH_2O	mbar	mmH_2O	mbar	mmH_2O
MIN. 9.07	7802	2.2	22	4.9	50	4.9	50
10	8600	2.6	26	5.9	60	5.7	58
11	9460	3.0	30	7.0	71	6.7	68
12	10320	3.4	35	8.2	84	7.9	80
13	11180	3.7	38	9.5	97	9	92
14	12040	4.5	46	10.9	111	12.3	125
15	12900	5	51	12.3	125	14.5	148
16	13760	5.5	56	13.8	141	16	163
17	14620	6.1	62	15.3	156	18.3	186
18	15480	6.5	66	16.9	173	20.3	207
19	16340	7.2	73	18.6	190	23	234
20	17200	8	9	20.3	207	25.2	257
21	18060	8.6	88	22.1	225	27.5	280
22	18920	10	102	23.9	244	30.5	311
MAX. 23.7	20380	12.3	125	27.2	277	34.5	350

BURNER POWER/PRESSURE TABLE — EURA 28 SE

HEAT OUTPUT		NATURAL GAS G20		BUTHANE G30		PROPANE G31	
kW	kcal/h	mbar	mmH_2O	mbar	mmH_2O	mbar	mmH_2O
MIN. 11.2	9630	2.6	26	5	51	6	61
12	10320	3.0	30	7.2	72	8.9	91
13	11180	3.6	37	8.7	89	10	102
14	12040	4.2	43	9.8	100	12.8	130
15	12900	5	51	11	112	14.5	148
16	13760	5.6	57	11.8	120	16	163
17	14620	6.2	63	13	132	17.8	181
18	15480	7	71	14.9	152	20	204
19	16340	7.6	77	16	163	22.5	229
20	17200	8.3	84	17.8	181	24	244
21	18060	9	92	19.5	198	26.5	270
22	18920	9.5	97	20.7	211	28	285
23	20100	10.1	103	21.9	223	29.4	300
24	20640	10.8	110	23.5	239	31.2	318
25	21500	12	122	24.8	253	32.6	332
26	22360	12.5	127	25.9	265	34	347
MAX. 28.5	24510	13.2	134	27.5	280	35	357

BURNER POWER/PRESSURE TABLE — EURA 32 SE

HEAT OUTPUT		NATURAL GAS G20		BUTHANE G30		PROPANE G31	
kW	kcal/h	mbar	mmH_2O	mbar	mmH_2O	mbar	mmH_2O
MIN. 11.4	9760	1.8	18	5.3	54	6.8	69
12	10320	2.0	20	5.7	58	7.3	75
14	12040	2.7	27	7.5	77	9.7	99
16	13760	3.5	36	9.5	97	12.2	125
18	15480	4.4	45	11.7	119	14.9	152
20	17200	5.4	55	14.0	143	17.9	182
22	18920	6.4	66	16.4	167	20.9	213
24	20640	7.6	78	18.9	192	24.1	245
26	22360	8.9	90	21.4	219	27.3	279
28	24080	10.2	104	24.1	246	30.7	313
30	25800	11.6	119	26.8	273	34.1	348
MAX. 31.3	26920	—	—	27.8	284	35.4	361
MAX. 31.7	27240	12.7	129	—	—	—	—

Gas transformation

ATTENTION: the operations described below must be carried out only by qualified personnel [authorized from HERMANN Ltd].

For gas conversion, use the nozzles supplied by boiler manufacturer only.

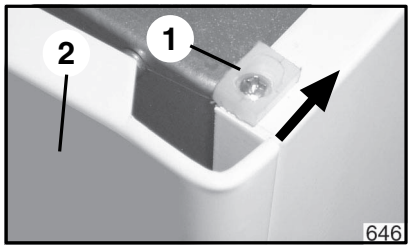
Using LPG, it is absolutely necessary to install a pressure reducer upstream the boiler.

1. while boiler is not working (green light flashing), select parameter 1. Push knobs – or + according to:

   0 for natural gas working

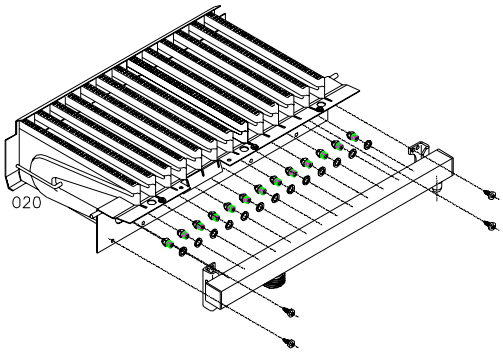
   1 for LPG working

   and store pressure pushing *plus* ;



2. Check that pressure and gas input are enough to guarantee the correct functioning of the appliance.
3. Disconnect the boiler from the supply.
4. Remove front cover: unscrew screws located above boiler, shift small blocking plate [1], remove front cover [2] lifting it up. On “SE” models, open sealed combustion chamber.
5. Disassemble pipe connecting Gas valve with burner.
6. Remove ramp containing nozzles and substitute it with correct one, using a 7mm spanner. Reassemble ramp and pipe, substituting gaskets. On “SE” models, close sealed combustion chamber.

RAMP AND NOZZLES REMOVAL



MODEL	Number of nozzles	NATURAL GAS G20		LPG G30/G31	
		Nozzles Ø (1/100mm)	Gas pressure (mbar)	Nozzles Ø (1/100mm)	Gas pressure (mbar)
EURA 23 E / SE	13	120	20	75	30/37
EURA 28 E / SE	15	120		75	
EURA 32 SE	15	130		77	

7. Check, with burner ON, that there are no gas leaks and that the pressure upstream the boiler is:

   Natural gas: min.17 – max. 25 mbar

   Buthane: min. 25 – max 35 mbar

   Propane: min. 25 – max 37 mbar

8. Repeat the following regulations: gas valve MAX-MIN pressure regulation, Slow Opening and Max Heating Output, carefully following the instructions described in the previous pages.
9. Check that there are no gas leaks.
10. Apply the sticker indicating the type of gas (supplied with the kit) on the suitable area on “WARNING” label inside the boiler.

Combustion check

EURA has a special function for allowing flue checks. During this mode burner works at maximum power regardless room thermostat and sanitary system.

— Prepare instrumentation for flue checking;

— while boiler is working (either in Winter or in Summer mode) keep knobs ‘Reset’ and ○/| pushed for 10 seconds. Boiler will ignite at maximum power and in the center of the display will appear the code “07”. Heating will be flown to heating system;

— to stop burner press ○/| ;

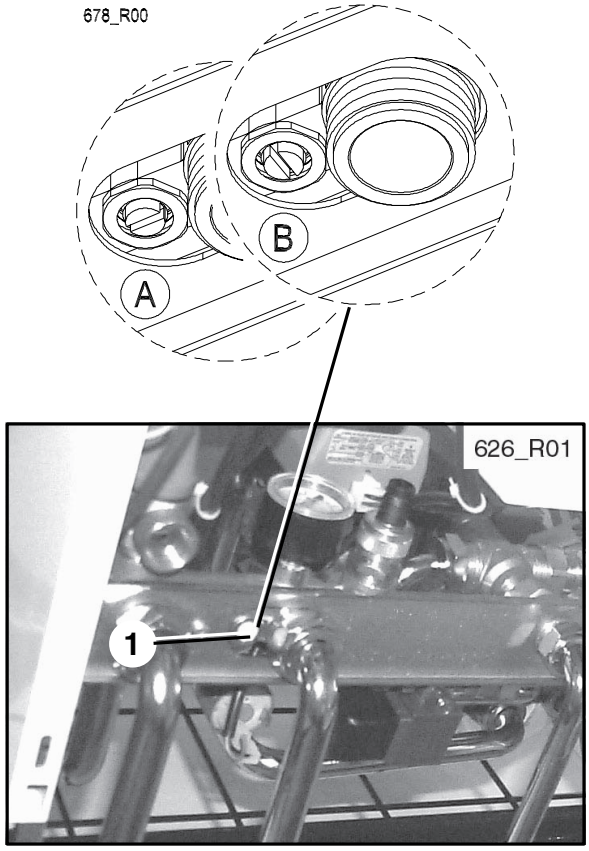
Note: Burner will automatically switch off when heating system inlet temperature reaches 85°C. However, after 15 min boiler will exit ‘programming mode’ and burner will stop.

Excluding automatic by-pass

EURA are equipped with automatic by pass. In case of complete opening, a flowrate sufficient for normal boiler working is guaranteed. However, it is possible to disconnect by pass, proceeding as follows:

1. Switch off boiler by pressing ○/| .
2. Rotate screw located on to by pass (see 1 in the attached picture) until it is in position “B”.

Normal by pass position is “A”.



VISTA DAL BASSO DELLA CALDAIA

Draining EURA boiler

— To correctly drain both heating system and minitank in the sanitary system, it is necessary to manually set three way valve in middle position as described here below:
  - three way valve (item 3) must initially be in 'sanitary' mode (manual control spindle in position 'S'). If it is in position 'R', open a domestic hot water tap to move it to 'S';
  - switch boiler off;
  - manually push spindle towards middle position, where it can be blocked pushing towards inside (position 'C').

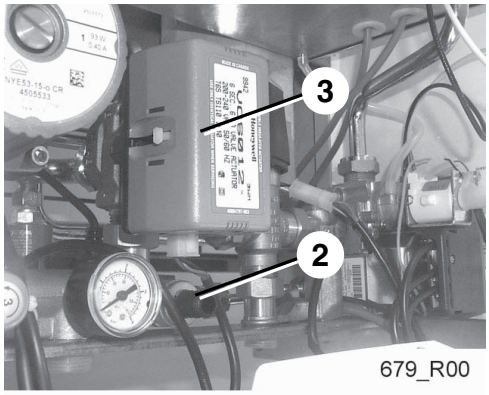
— Connect a rubber pipe to the draining tap [2] terminal;

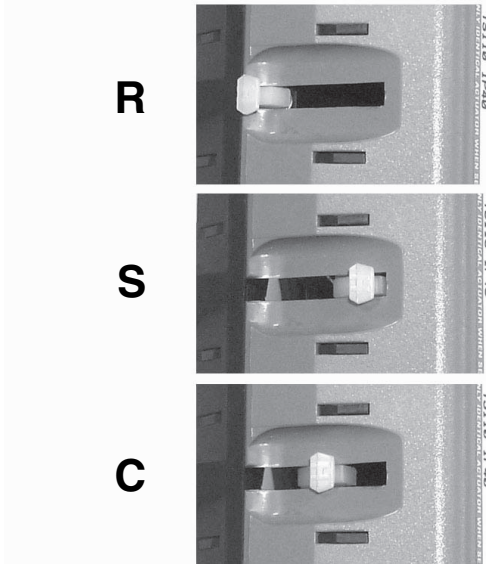
— put the other end of the pipe in a suitable drain or sink;

— open draining tap anticlockwise;

— when water pressure is COMPLETELY drained, you can open radiators air vents, to allow air inlet and complete plant draining;

— when everything is over, close taps and air vents.





Other boiler programme

Above have been described the main regulations, and most of them require some parameters programming by means of control panel.

Control panel allows to modify many other parameters which influences boiler functioning, for perfectly meeting special installation needs.

Do not modify default settings if not necessary

2 Heating system flow temperature range: (default value = 0):

This parameter must always be set at 0

5 Pump working in winter mode: (default setting = 0):

0 NORMAL: pump switches on whenever there is a heating demand and keeps on working for all requested time plus 30 seconds (after circulation).

1 ALWAYS ON: In Winter mode pump continuously works. Use this setting only if it is requested by heating plant.

2 ALWAYS OFF: In Winter mode pump is not activated (it works only if there is a request of sanitary water). Use this setting only if external pump(s) are installed.

6 Delay before re-ignition after reaching heating flow temperature set: (in minutes, default setting = 3):

In heating mode, when boiler reaches set temperature ( ), burner switches off. Then temperature drops down and burner ignites again. This parameter sets the minimum delay time between a switching off (at set) and the following re-ignition. We suggest the following criteria:

0 Setting for fancoil system. During heating, boiler will ignite more frequently.

1…7 Lower values are recommended for small plants and light radiators, higher values for plants having big thermal inertia.

7 Temperature difference between primary system flow and set domestic hot water, in sanitary mode, minitank disconnected (in °C, default setting = 15 °C). We advice to leave default setting unchanged.

8 Minitank temperature setting according to dhw temperature setting, in sanitary mode, minitank connected (default setting = 0):

0 Select 0 to keep minitank temperature in the primary system between 10°C and 15°C higher than dhw temperature set by the user, with a maximum value of +50°C…+55°C.

1 Select 1 to keep minitank temperature in the primary system between 5°C and 10°C higher than dhw temperature set by the user.

2 Select 2 to keep minitank temperature in the primary system between 10°C and 15°C higher than dhw temperature set by the user.

3 Select 3 to keep minitank temperature in the primary system between 45°C and 50°C, regardless dhw temperature set by the user.

It is recommended to select 0 (default setting) or 3, in case of hard water, unless a suitable scale reducing device is fitted.

9 Re-calibration of motorised mixing valve: (default setting = 0)

When boiler is switched on (or after a reset), boiler execute a calibrating cycle of the mixing valve for about 90 seconds which is necessary for the correct sanitary system functioning. During this period any other functions of the boiler are off. To help maintenance and servicing, since during this operation many switching on and off are very common, it is possible to disconnect re-calibration.

0 Calibration cycle ENABLED, for normal boiler operation

1 Calibration cycle DISABLED, to be utilised during maintenance ONLY: ORANGE light FLASHES until value is reset at 0. Pushing 'Reset' or switching boiler off and on it is then possible to ignite burner immediately.

When all regulations are over, IT IS MANDATORY to set this parameter value at 0 again.

For this reason after 20 minutes (with boiler electrically supplied) said parameter is automatically set at 0 (and orange light stops flashing).

10 External probe indicator (not modifiable)

This parameter indicates the presence of an external probe, if any. Said probe should be connected to dedicated connections (optional kit). Please note that, if an external probe is inserted, heating system control is led by probe itself (see instruction manuals attached to optional kit)

0 no external probe (or cut connection);

1 External probe detected.

If an external probe is installed and this parameter is 0 it is likely that probe is defective.

Crypt Warnings for Technical experts

On account of a malfunctioning, boiler can block and shows an alarm code in the middle of the display.

Said alarms are displayed together with 'Service' writing which means that end user cannot reset boiler by himself without a technical expert.

Note: All the alarms that can be reset by end user autonomously are described in section 'User instruction'.

E05 Heating system flow temperature sensor damaged

Cause: Control PCB has verified an anomaly in heating sensor (open or short circuit).

Solution: Disconnect sensor and measure its electric resistance. If it is found open or shorted, replace it, otherwise check cables and electrical connections.

E12 Domestic Mini tank sensor damaged

Cause: Control PCB has verified an anomaly in Domestic Mini tank sensor (open or short circuit).

Solution: Disconnect sensor and measure its electric resistance. If it is found open or shorted, replace it, otherwise check cables and electrical connections.

E19 Filling not completed within available time

Cause: Automatic system filling has not be completed within 4 minutes.

Solution: Before switching boiler off, check water pressure on to the internal manometer: in normal condition, with cold water, it should be 0.4÷0.9 bar. If problem is due to hydraulic system a lower pressure will be found. Switch boiler off by pressing ○/| and disconnect electrical line. Switch boiler on again and check water pressure on the internal manometer during filling.

If there is still a problem, verify water network pressure, automatic valve for filling, air inside heating plant. Check if any drain valve has been opened or if there is a water leakage in the heating system plant and repair it.

E21 Low water pressure in the primary/heating system (3 automatic filling already executed)

Cause: During the last 24 hours boiler has executed 3 automatic filling to reset correct working water pressure without success.

Solution: Before switching boiler off, check water pressure on to the internal manometer: in normal condition, with cold water, it should be 0.4÷0.9 bar. If problem is due to hydraulic system a lower pressure will be found.

Check if any drain valve has been opened or if there is a water leakage in the heating system plant and repair it.

Switch boiler off by pressing ○/| and disconnect electrical line. Switch boiler on again and check water pressure on the internal manometer during filling.

E22 Imprecise data storing

Cause: Mistake while setting data, storing an unlikely value.

Solution: Switch boiler off by pressing ○/| and disconnect electrical line. Switch boiler on again.

If problem still exists, check and NOTE all parameter values. Then set all parameters to DEFAULT values (see "Regulation programming") taking care to press plus to store each value. Switch boiler off and then on again by pressing ○/| and set:

- Heating temperature = 40°C (using – and +);
- Domestic water temperature = 45 °C (using – and +).

This "rewriting default settings" operation should restore boiler functioning. If problem still exists, substitute modulation PCB, set all previously noted values and make usual regulation.

Otherwise, if alarm disappears, try to re-insert all previously noted values, or perform all boiler regulations.

E29 Modulation gas valve coil damaged (short circuit)

Cause: Control PCB has detected a short circuit in Gas modulation valve coil. In this case coil is not fed and boiler works at minimum power.

Solution: Unplug connectors from modulation gas valve coil and measure coil electric resistance (47.7÷52.3 ohm at 20°C). If it is found faulty replace it and regulate boiler, otherwise check cables and electrical connections.

E31 Remote control* (Hermann optional kit only) not working

* This applies to Hermann Remote Control optional kit only, and not to third parties chrono thermostats.

Cause: Control PCB has verified the presence of a remote control but data are not readable.

Solution: Check remote control and its connections.

Remark: *in case of Remote Control malfunctioning, boiler works in DHW only. To make boiler provisionally work in heating, restore TA jumper on main PCB (see "Electrical connections" in Installation section), turn boiler in Winter mode by pressing ☼/※ knob and adjust heating elements' temperature using – and + . DHW temperature will be adjusted manually too, using – and + .*

Servicing warnings

All servicing operations and gas conversions MUST BE CARRIED OUT BY QUALIFIED TECHNICIANS, in accordance with the Law n°46 dtd. 05 March 1990 and with the rules UNI-CIG 7129/01 and 7131/99 and revisions. Moreover, in accordance with art.11 section 4 D.P.R. 412/93 and revisions, SERVICING operations must be carried out, at least once a year, *by [HERMANN?] AUTHORIZED SERVICING CENTRES*, **and must be written in the appliance booklet, as indicated by the laws UNI and CEI presently in force.**

At the end of each heating period, it is necessary to call a qualified technician to check the boiler, in order to keep the system perfectly efficient.

A careful servicing is always a guarantee of safety and saving.

Normally, it will be necessary to execute the following operations:

— Remove any possible oxidization from burners;

— Clean heat exchangers and electrodes;

— Verify the integrity and stability of the ceramic fiber coating panels inside the combustion chamber, and replace them if necessary;

— Check boiler ignition, switching off and operation;

— Check water and gas connections tightness;

— Check gas consumption at the minimum and maximum output;

— Verify that safety devices are correctly working;

— Verify correct functioning of control and adjusting devices;

— Verify periodically good working and efficiency of the combustion product evacuation ducts and/or devices;

— In case of works or servicing of the structures placed near above mentioned ducts and/or devices and their accessories, switch off the boiler;

— Do not leave any inflammable tanks and/or substances in the installation room;

— Do not clean the room where boiler is installed, while it is working.

— Clean casing with soapy water only. Do not clean casing, other painted or plastic surfaces with thinner.

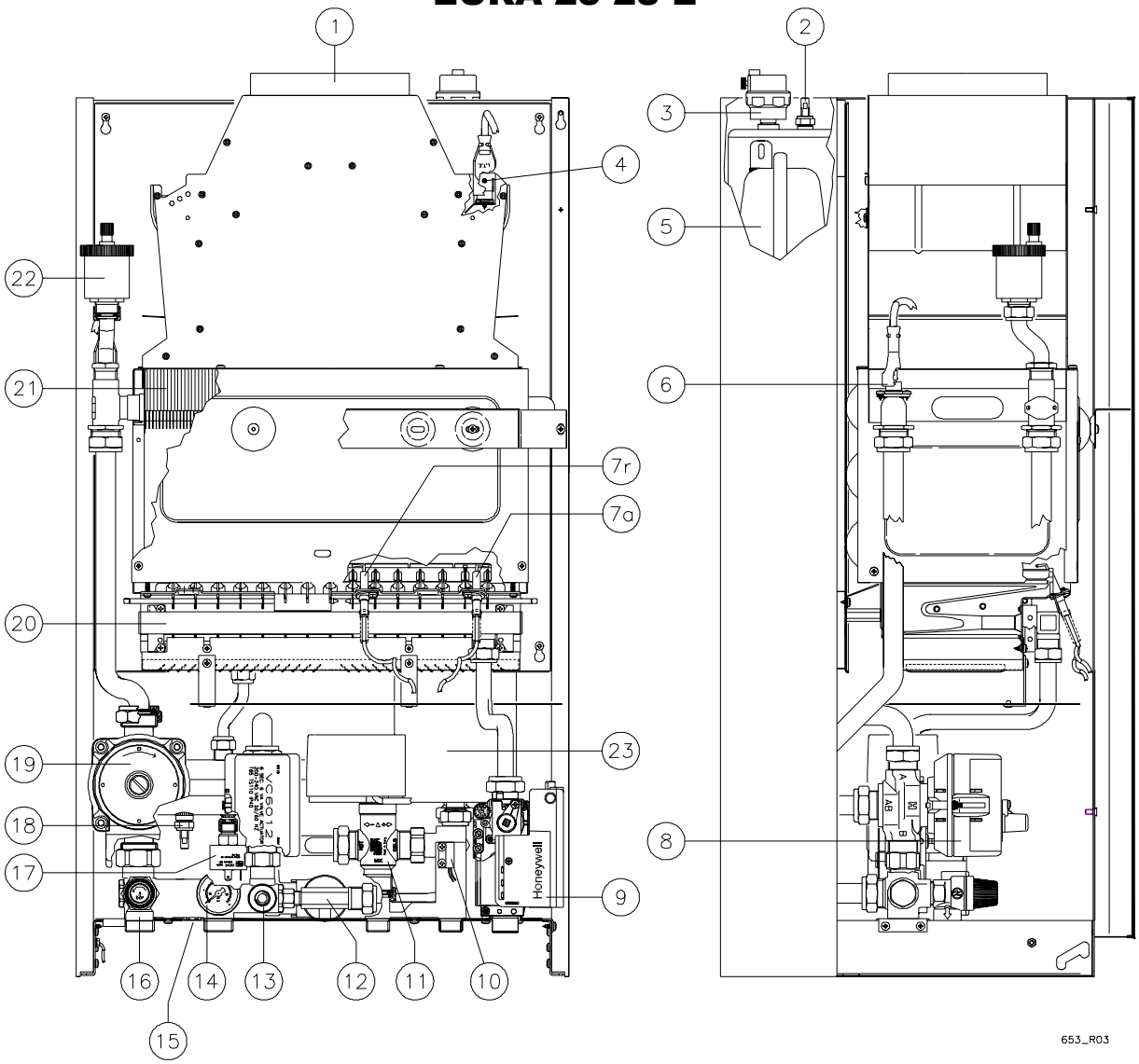
— In any case of parts replacement, it is mandatory to use HERMANN original spare parts.

HERMANN declines any responsibility in case of non-original spare parts utilization.

Once all servicing operations have been carried out, it is mandatory to write a report for the user, that should indicate state of the appliance, servicing interventions and eventual advices and prescriptions. *(D.P.R. 551/99)*

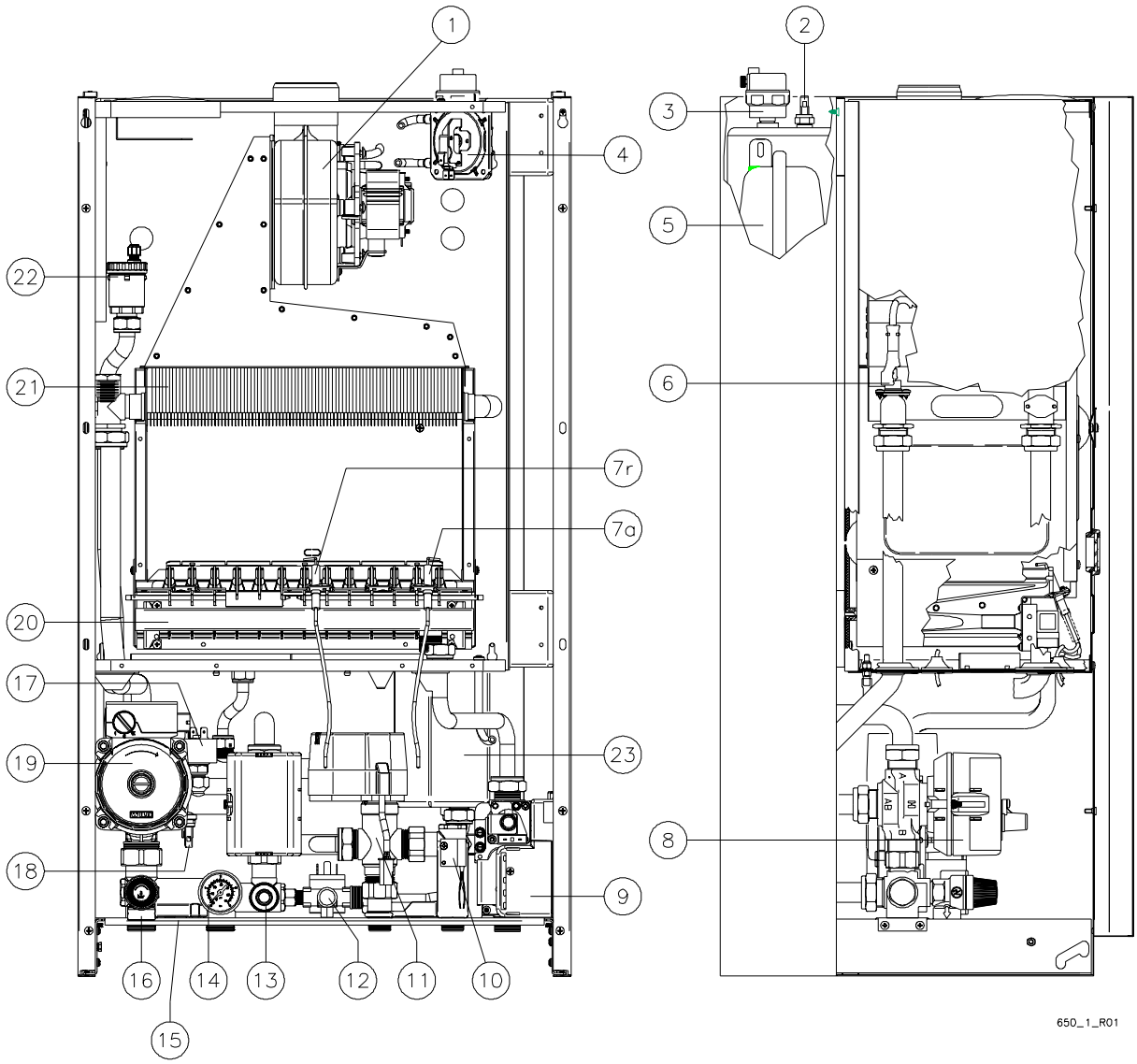
Boiler internal components

EURA 23-28 E



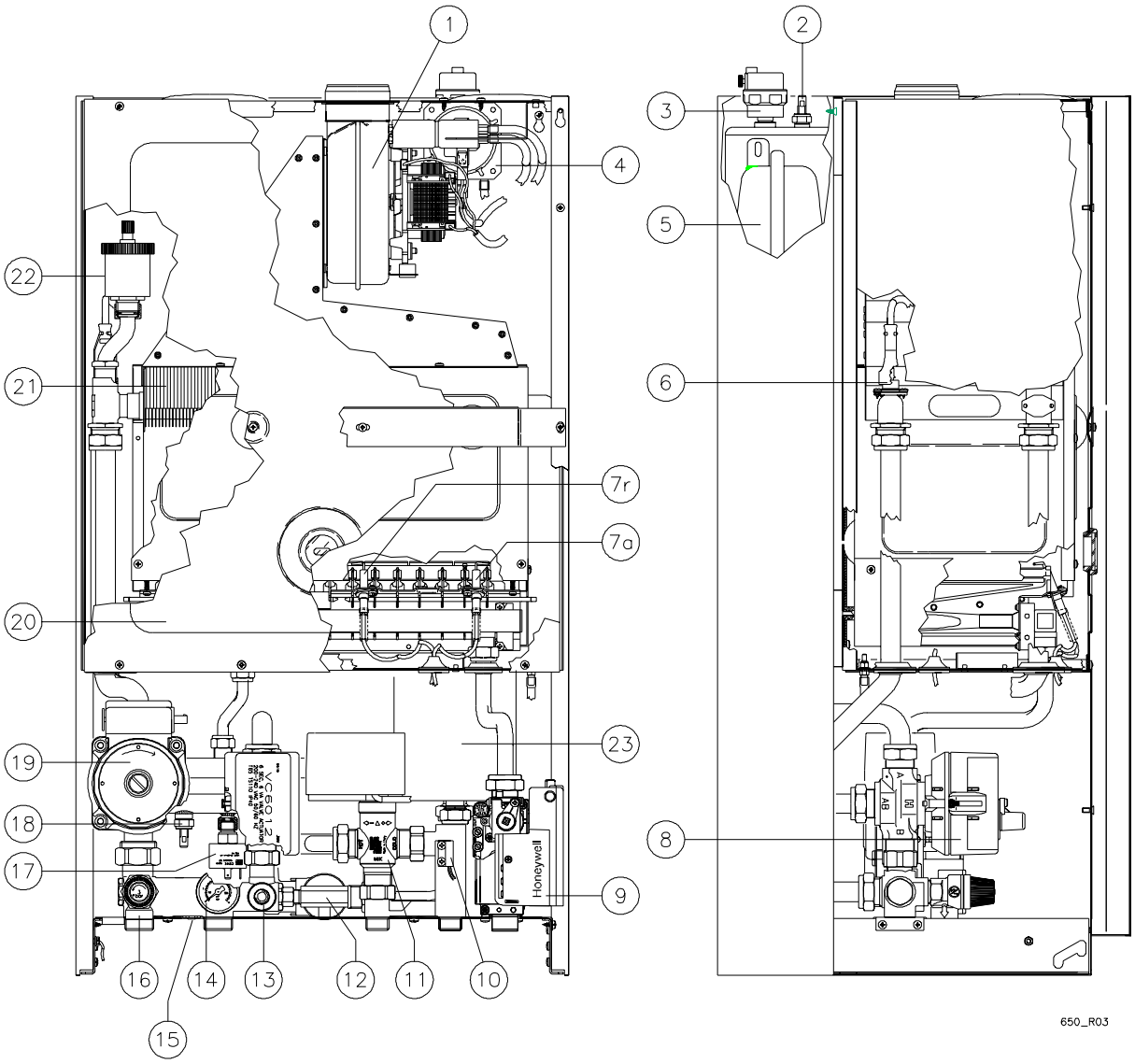
1 Flue hood
2 Domestic minitank temperature sensor
3 Automatic air vent for sanitary minitank
4 Flue thermostat
5 Expansion vessel
6 High temperature safety thermostat
7a Ignition electrode
7r Flame detection electrode
8 Motorised mixing valve
9 Gas valve
10 Priority flowstat
11 Motorised mixing valve
12 Automatic filling device
13 Drain valve
14 Manometer
15 By-pass
16 Safety valve 3 bar
17 Loss of water switch
18 Flow temperature sensor
19 Pump
20 Burner
21 Primary heat exchanger
22 Automatic air vent
23 Micro-storage

EURA 23 SE



1 Fan
2 Domestic minitank temperature sensor
3 Automatic air vent for sanitary minitank
4 Flue pressurestat
5 Expansion vessel
6 High temperature safety thermostat
7a Ignition electrode
7r Flame detection electrode
8 Motorised mixing valve
9 Gas valve
10 Priority flowstat
11 Motorised mixing valve
12 Automatic filling device
13 Drain valve
14 Manometer
15 By-pass
16 Safety valve 3 bar
17 Loss of water switch
18 Flow temperature sensor
19 Pump
20 Sealed combustion chamber
21 Primary heat exchanger
22 Automatic air vent
23 Micro-storage

EURA 28-32 SE



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14 Manometer
15 By-pass
16 Safety valve 3 bar
17 Loss of water switch
18 Flow temperature sensor
19 Pump
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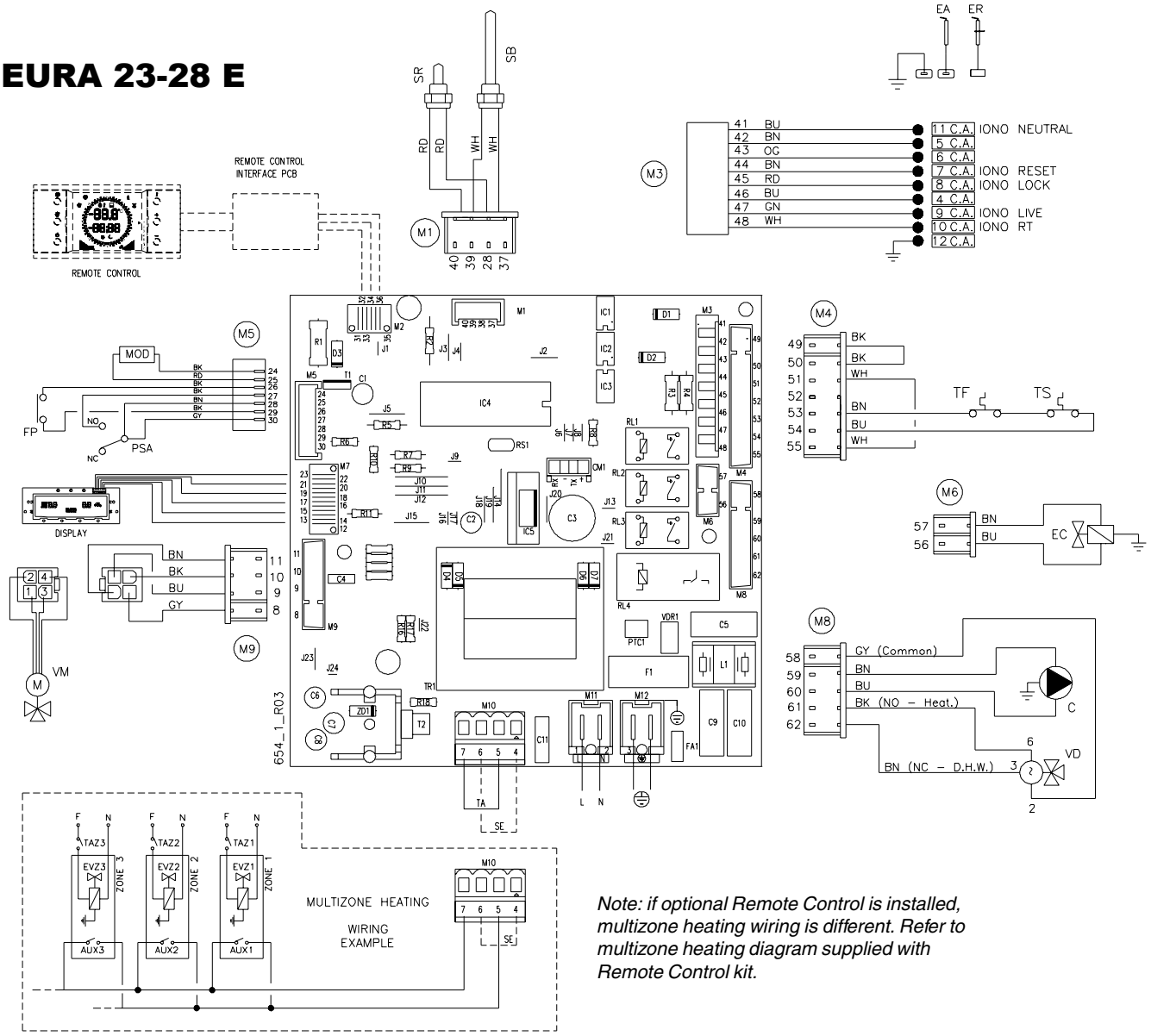
21 Primary heat exchanger
22 Automatic air vent
23 Micro-storage

Electrical diagram

EURA 23-28 E



Note: if optional Remote Control is installed, multizone heating wiring is different. Refer to multizone heating diagram supplied with Remote Control kit.

C	Pump
EA	Ignition electrode
EC	Automatic filling device
ER	Flame detection electrode
FP	Priority flowstat
L	Electrical Phase
MOD	Modulator
N	Electric neutral
PSA	Low water pressure switch (contact “NO” closed = in pressure)
SB	Domestic minitank temperature sensor
SE	External temperature probe
SR	Flow temperature sensor
TA	Room thermostat
TF	Flue thermostat
TS	High temperature safety thermostat
VD	Three way valve
VM	Motorised mixing valve

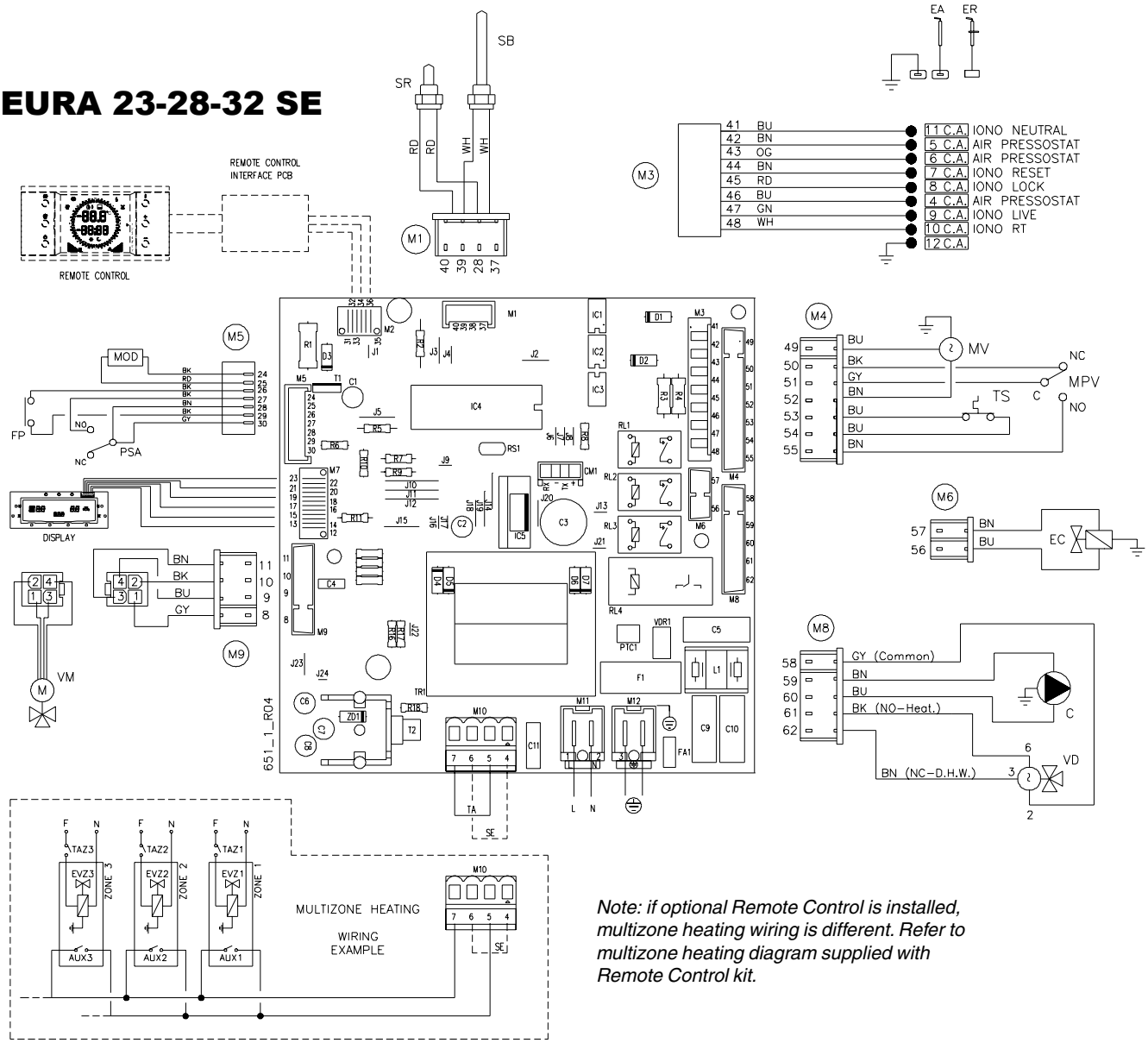
EVZ 1/2/3	Electro-valve zone 1/2/3
AUX 1/2/3	Auxiliary for EVZ 1/2/3
TAZ 1/2/3	Room thermostat for zone 1/2/3

Colours abbreviations:

BK	Black
BN	Brown
BU	Blue
GN	Green
GNYE	Green-Yellow
GY	Grey
OG	Orange
RD	Red
VT	Violet
WH	White

for the technician

EURA 23-28-32 SE



Note: if optional Remote Control is installed, multizone heating wiring is different. Refer to multizone heating diagram supplied with Remote Control kit.

- C Pump
- EA Ignition electrode
- EC Automatic filling device
- ER Flame detection electrode
- FP Priority flowstat
- L Electrical Phase
- MOD Modulator
- MPV Flue microswitch
- MV Fan motor
- N Electric neutral
- PSA Low water pressure switch (contact “NO” closed = in pressure)
- SB Domestic minitank temperature sensor
- SE External temperature probe
- SR Flow temperature sensor
- TA Room thermostat
- TS High temperature safety thermostat
- VD Three way valve
- VM Motorised mixing valve

- EVZ 1/2/3 Electro-valve zone 1/2/3
- AUX 1/2/3 Auxiliary for EVZ 1/2/3
- TAZ 1/2/3 Room thermostat for zone 1/2/3

Colours abbreviations:

BK	Black
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GN	Green
GNYE	Green-Yellow
GY	Grey
OG	Orange
RD	Red
VT	Violet
WH	White

USER INSTRUCTIONS

Warnings for boiler commissioning

First ignition must be carried out by qualified technicians (in example HERMANN Authorized Servicing Centres).

Gas conversion from a specific gas (natural gas or LPG) to another gas, can be made also when the gas boiler is already installed, but only by a qualified technician. The technician will check that:

a) the label technical data of the gas boiler correspond to those of the gas, water and electrical supply lines;

b) the main burner regulation is compatible with the gas boiler output;

c) the chimney works correctly, expelling the combustion products;

d) the air supply and the combustion products evacuation work correctly, in accordance with the requirements in force;

e) the conditions for a correct ventilation are guaranteed, also when the gas boiler is located inside a furniture.

Useful tips

WARNING for "E" models: The boiler is fitted with a safety thermostat for chimney draught, operating in case of combustion products return in the installation room. This device must be always in function, because a combustion products return can cause chronic or acute intoxications with danger of death. If the thermostat must be replaced, use the original spare part only. In case of repeated interventions of the device, check that the Flue Products Outlet System is efficient and made according to the laws in force (see examples in "Chimney connections").

WARNING for "SE" models: The boiler is fitted with a safety flue pressure switch. This device must be always in function. In case of repeated interventions, call a qualified technician. If the pressure switch must be replaced, use the original spare part only. In case of repeated interventions of the device, check that the Air Flue Products Inlet/ Outlet System is efficient and made according to the laws in force (see examples in "Chimney connections" and "Flue options").

INSTALLATION AND SERVICING

All installation, servicing and gas conversion operations MUST BE CARRIED OUT BY QUALIFIED TECHNICIANS authorized by Law n. 46 dtd March 5th, 1990 and in accordance with UNI-CIG 7129/ 01 and 7131/99 requirements and revisions.

Moreover, in accordance with art.11 section 4 of DPR 412/93 and revisions, boiler MAINTENANCE operations must be made at least once a year and following manufacturer's specifications and UNI and CEI rules in force.

APPLIANCE BOOKLET OR CENTRAL PLANT BOOKLET

All appliances, even those installed before August 1st, 1994, must have an appliance booklet (for outputs less or equal 35 kW) or a central plant booklet (for outputs more than 35 kW). All ordinary and special servicing operations and combustion checkings must be written on the booklet, together with the name of the person responsible for servicing.

COMBUSTION CHECKING

Combustion checking is made with a control of the boiler efficiency; this checking must be carried out only by a person with the requirements of the Law 46/90. Boilers that, after the checking, will have efficiency rates lower than the ones required and not changeable with suitable adjustments, must be replaced.

BOILER OPERATION AND SERVICING

The user (owner or tenant of the flat where the boiler is installed) or the administrator of the block of flats (in case of a central heating system) are responsible for the appliance operation and servicing; they can both transfer the responsibility of the servicing and eventually of the operation to another person, which must have the requirements indicated by the Law 46/90. Even if the user or the administrator decide to assume personally this responsibility, ordinary servicing of the warm air heater and combustion checkings must be carried out by a qualified technician.

Warnings

In case of gas smell:

a) **do not press electrical switches, use the telephone or other objects that can provoke sparks;**

b) **open immediately the windows and the doors in order to cleanse the room air;**

c) **close the gas supply taps;**

d) **call a qualified technician.**

Do not obstruct the ventilation openings of the gas boiler room, in order to avoid possible dangerous situations as the creation of poisonous or explosive mixtures.

Disconnect the gas boiler when it is not used for a long time; close then the gas tap and turn off the double pole switch installed on the boiler power supply line.

Warning: if boiler is installed in a room where temperature can drop below 0°C, it is recommended to fill the heating system with an anti freezing mixture.

Otherwise, In case of prolonged absence of the user, call the authorized servicing centre to empty the system.

Gaining access to control panel

To gain access to control panel it is sufficient to softly push in the lower part of control cover, as shown.

Switching on/off and running boiler

SWITCHING ON

— Turn main electrical switch on; green light flashes

— Open gas tap and press ○/| : button: green light is constantly on, indicating that boiler is ready for working either in summer or in winter mode

SWITCHING OFF

— press ○/| : button: green light flashes

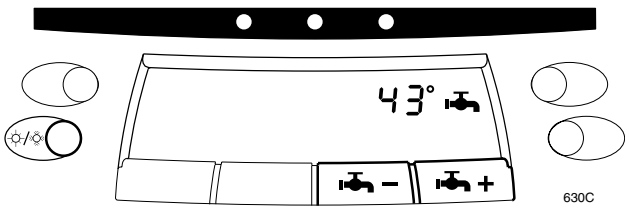
If boiler is unused for a long period of time it is recommended to close gas tap and electrically disconnect boiler

"SUMMER" MODE

Press ☼/☼ knob to work boiler in SUMMER mode. SUMMER mode is recognisable just looking on to display where the symbol appears together with set sanitary temperature (in °C).

Burner automatically switches on whenever there is a domestic hot water demand.

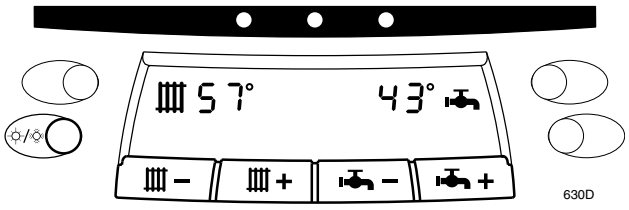
It is possible to change hot water temperature by pressing – or + : new set temperature flashes for few seconds.



"WINTER" MODE

Press ☼/☼ knob to work boiler in WINTER mode. WINTER mode is recognisable just looking on to display where both and symbols appear together with set sanitary and heating temperature (in °C).

Burner automatically switches on whenever there is a request.



It is possible to change sanitary hot water temperature by pressing – or + : new set temperature flashes for few seconds.

It is possible to change heating system water temperature by pressing – or + : new set temperature flashes for few seconds. Afterwards actual (measured) temperature is shown.

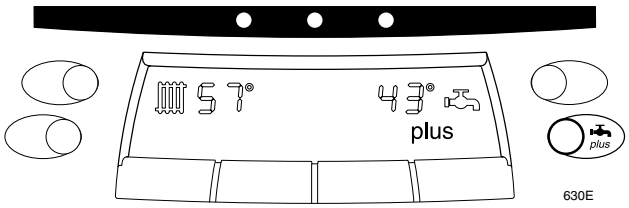
Note: if you have a central heating lead by a third-parties room thermostat (or chrono thermostat), it is adviced to set heating temperature to 65÷70°C

If an external probe has been installed (optional Hermann kit), heating system temperature is automatically controlled by boiler depending on external temperature. Pressing knobs – and + can vary a “dispersion coefficient” (please refer to technical documentation included with said kit).

PLUS FUNCTION

Inserting PLUS function EURA produces hot water in an extremely short time giving same comfort as boiler with a big DHW tank.

To switch PLUS function on (off) it sufficient to press plus knob, both in summer and winter mode. When plus option is on, the writing ‘plus’ is displayed.



REGULATING ROOM TEMPERATURE

We want here to remind you that the room temperature must be regulated through a room thermostat with two temperature levels. This required by law XXXX [Italian reference: DPR 26 Agosto 1993 n°412 and relevant changes].

Please always refer to instruction manual enclosed to room thermostat.

BOILER FILLING

It is not necessary by end user to check water pressure inside boiler since EURA is provided with a special automatic filling device.

In case of anomaly, a special alarm will be displayed. Please refer to paragraph ‘Boiler blocking and alarm codes’.

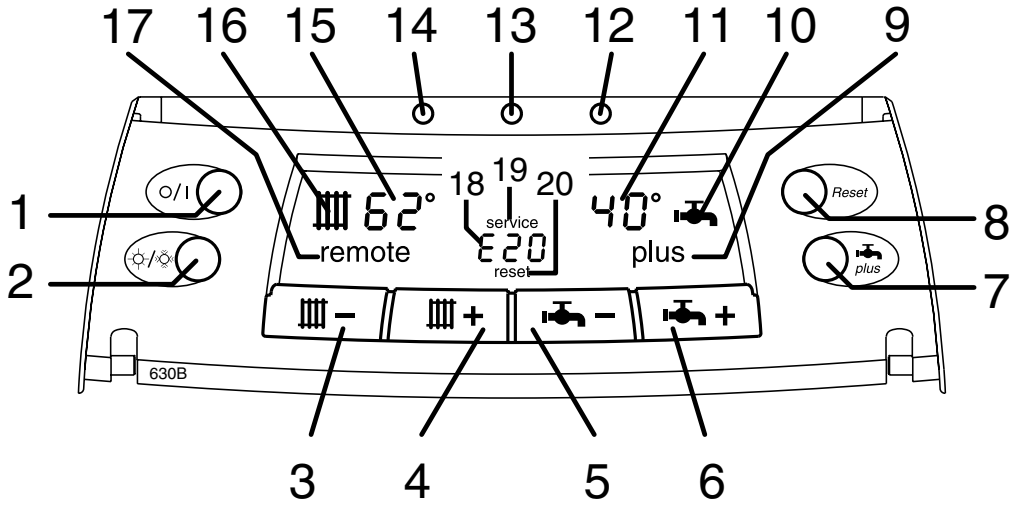
ANTI FREEZING PROTECTION

Eura is equipped with an Anti freezing device, which keeps temperature in heating and domestic system above 5 °C. Such system is enabled also when boiler is ‘OFF’ (green light flashing), provided that boiler is fed by gas and electricity.

In case of gas or electricity failure, boiler can’t turn on and antifreeze protection is performed by pump only, keeping water flowing.

It is important to underline that said anti freezing protection is a preventing device. It is not recommendable to leave boiler unused for long periods where climate is very cold. In this cases please contact a technical centre for either draining all system or inserting an anti freezing solution.

Control panel details



1 ON/STAND BY knob

- Pressing allows switching boiler on (on mode, green light on)
- Pressing once more boiler switches off (stand by mode, green light flashing), leaving anti freezing protection on.

2 SUMMER/WINTER knob

- Pressing allows switching between summer and winter mode. For more details see 'Switching on/off and running boiler'

3 HEATING SYSTEM TEMPERATURE (decrease) knob

4 HEATING SYSTEM TEMPERATURE (increase) knob

- Pressing these knobs allows a decrease/increase of 1°C in Heating flow water. Such knobs work in winter mode only.

  When you realize that room reaches too slowly desired temperature, increase this setting. If room temperature goes over desired temperature, decrease this setting.

5 DOMESTIC SYSTEM TEMPERATURE (decrease) knob

6 DOMESTIC SYSTEM TEMPERATURE (increase) knob

- Pressing these knobs allows a decrease/increase of 1°C in domestic water.

7 PLUS knob

- Pressing this knob enable/disable "plus" function. For more details see "Switching on/off and running boiler".

8 RESET knob

- Before pressing this knob, please refer to “Boiler blocking and alarm codes” to understand what happened and prevent future problems.
- Pressing this knob allows to reset boiler after a failure (that could be reset by end user); when such type of failure occurs, warning writing ‘reset’ is displayed together with alarm code (see 18 and 20 in enclosed picture), and RED light turns CONSTANTLY ON.
- If RED light FLASHES, and an alarm code and ‘service’ appears on to the display (18 and 19), it is necessary to call a technical centre to solve problem; reset knob is NOT working.

9 PLUS symbol

- When plus is displayed, “PLUS” function has been enabled.

10 HOT WATER symbol

- When hot water is ready at set temperature, this symbol is displayed, both in summer and winter mode.
- When this symbol flashes, there is a hot water supply going on.

11 DOMESTIC SYSTEM TEMPERATURE displayed

- Set sanitary water temperature is shown. It flashes for few seconds while changing temperature by pressing – or + .

12 Red light – BOILER BLOCKED

- When red light is off, boiler is normally working.
- When red light is CONSTANTLY on, a boiler failure, which can be reset by end user, happened and ‘reset’ is displayed (18 and 20 in enclosed picture. Please refer to ‘Boiler blocking and alarm codes’ to understand what happened and prevent future problems. Then press ‘reset’ button.
- When red light FLASHES, and an alarm code and ‘service’ appears on to the display (18 and 19), it is necessary to call a technical centre to solve problem.

13 Orange light – BURNER WORKING

- When orange light is CONSTANTLY on, burner is ignited.
- When orange light FLASHES, it means that technical service stopped a particular function of the boiler. After 20 minutes light will stop flashing and boiler will normally work.

14 Green light – BOILER ON/STAND-BY

- When green light flashes, boiler is electrically fed, in stand-by mode.
- When green light is constantly on, boiler is ready to work.

15 HEATING SYSTEM TEMPERATURE displayed

- When indication is CONSTANTLY on, it shows heating system water ACTUAL temperature (flowing out the boiler).
- When temperature (or dispersion coefficient*) is modified pressing knobs – or +, SET heating temperature (or dispersion coefficient*) FLASHES for few seconds.

** if optional external probe is installed.*

16 HEATING symbol

- Boiler in winter mode
- While flashing, boiler is heating radiators.

17 REMOTE displayed

- Remote control has been installed; most of controls are now available on to remote control only. Please refer to remote control instruction manual.

18 ALARM CODE displayed

- An alarm code is displayed after boiler blocking and identifies the type of failure occurred.
- Please refer to 'Boiler blocking and alarm codes' to understand what happened and prevent future problems.

19 SERVICE displayed

- Boiler is blocked and can be reset by technical service only.

20 RESET displayed

- Boiler is blocked.
- Please refer to 'Boiler blocking and alarm codes' to: understand what happened; restore boiler operation; prevent future problems.

Boiler blocking and alarm codes

In this section all alarm codes which can be displayed are described, together with the relevant operations to be carried out by the USER to restore boiler operation.

If, carrying out the described operations, boiler does not work anyway, or blocking happens again, please contact a Hermann Technical Centre.

All alarms displayed with red FLASHING light and 'service' writing on display MUST be solved by a Hermann technical centre only. All technical description of causes and solutions for 'service' alarms are described in "Crypt Warnings for Technical experts".

07 Burner ON for combustion check

Cause: the burner was turned ON at maximum power for combustion check (this may be caused by a wrong pressing of pushbuttons), and this is NOT a function useful for the User.

Solution: Switch off boiler by pressing ○/|, wait some seconds, and then you can turn the boiler on again and use it normally.

E01 No flame

Red light: **constantly on** Alarm type: **reset**

Cause 1: Burner flame has not been successfully ignited or it has suddenly stopped.

Solution: Press 'Reset' button to re-ignite boiler.

If problem occurs again, check boiler and main gas tap, verifying gas network too.

Cause 2: Electrical connections are wrong.

Solution: Press 'Reset' button to re-ignite boiler.

If problem still exists, call a qualified technician to check Live, Neutral and Earth wirings, in particular Live and Neutral must not be reversed. Otherwise, boiler can't detect flame on burner, and blocks.

The problem may be located in electrical distribution network too (unbalanced Neutral).

E02 Safety device interference
Red light: **constantly on** Alarm type: **reset**

Cause 1: Flue has not perfectly evacuated (maybe temporary, maybe on account of sudden strong wind gust)

Solution: Press 'Reset' button to re-ignite boiler. If block insists:

- Check flue chimney

On "E" models:

- Check that the outlet which communicates with the outdoor, compulsory according to the law, is not obstructed by pieces of furniture against the wall or by other objects. It is however normal that the outlet is realized behind a radiator. The outlet must be of the dimension prescribed by the law and must be cleaned inside: some types have an anti-insects net which could have been dirtied by dust or by spider's webs. Call a Qualified Technician when it is necessary. *[place here references to national laws or rules about openings requirements (if any)]*
- If in the room where the boiler is installed there are fireplaces, mantelpieces, stoves, coal stoves or similar, fans for the Air Outlet, such as wall fans, aspiring cowls for cooking boards with outlet pipe, let the technician check that the inlet is correctly OVERSIZED or that there are the ADDITIONAL inlets as prescribed by the laws in force, because, otherwise, these devices interfere with the evacuation of the Boiler's Flue. *[place here references to national laws or rules about this matter]*

On "SE" models:

- Check that the Inlet/Outlet Ducts, the respective terminals and the device for the checking of the correct Flue Outlet (Flue Pressure Switch) are clean and in good condition. During the Installation Process it is necessary to respect the prescriptions included in the national and local regulations and laws, in addition to the slopes and measurement included in the paragraphs "Chimney connections" and "Flue systems".

Cause 2: Boiler is overheated and safety thermostat forced boiler to block.

Solution: Wait 20/30 minutes to cool boiler down then press 'reset'. If block happens again, please contact a [Hermann Technical Centre] [qualified technician].

E05 Heating system flow temperature sensor damaged
Red light: **flashing** Alarm type: **service**

Solution: call a [Hermann Technical Centre] [qualified technician].

E12 Domestic Mini tank sensor damaged
Red light: **flashing** Alarm type: **service**

Solution: call a [Hermann Technical Centre] [qualified technician].

E18 Boiler Filling in progress
Red light: **off** Alarm type: **none**

Cause: Heating system pressure dropped (most likely on account of a water leakage) and boiler is automatically filled with water.

Solution: Wait until alarm code disappears.

If this operation occurs 3 times within 24 hours boiler will be blocked and 'service' will be displayed because a big leakage is present in the heating system (radiators included). Anyway, it is recommended to call a [Hermann Technical Centre] [qualified technician] in case this operation is very usual.

Be careful that if boiler is filled with anti freezing solution, any automatic filling with water will dilute solution.

E19 Filling not completed within available time
Red light: **flashing** Alarm type: **service**

Solution: call a [Hermann Technical Centre] [qualified technician].

E21 Low water pressure in the primary/heating system (3 automatic filling already executed)
Red light: **flashing** Alarm type: **service**

Cause: There is a water leakage inside your heating system

Solution: Switch boiler off by pressing ○/| and disconnect electrical line through main switch. Switch boiler on pressing ○/| again. E18 code may be displayed: it should disappear within 5 minutes otherwise (if E21 code is on again) call a [Hermann Technical Centre] [qualified technician]. Do not try to reset boiler once more.

E22 Imprecise data storing
Red light: **flashing** Alarm type: **service**

Solution: call a [Hermann Technical Centre] [qualified technician].

E29 modulation gas valve coil damaged (short circuit)
Red light: **flashing** Alarm type: **service**

Solution: call a [Hermann Technical Centre] [qualified technician].

E31 Remote control* not working
Red light: **flashing** Alarm type: **service**

* *This applies to Hermann Remote Control optional kit only, and not to third parties chrono thermostats.*

Solution: call a [Hermann Technical Centre] [qualified technician].

In these conditions, boiler can only produce domestic hot water. If necessary, ask the technician to make the boiler provisionally work in manual heating: information for this operation are in “Crypt Warnings for Technical experts” paragraph (refer to alarm code E31).

Eventual problems

BURNER DOES NOT IGNITE

— Verify if green light is constantly on:
  - If green light is off boiler is not electrically connected;
  - If green light flashes boiler is off. Press ○/| to switch it on.

— Verify if red light is constantly on. In this case boiler is blocked: please refer to ‘Boiler blocking and alarm codes’;

— After switching boiler on by pressing ○/| or after a reset it is necessary to wait 90 seconds. During this period of time boiler does not work;

— If a room thermostat is installed, please check if it is regulated at a temperature higher then room temperature and that boiler is in Winter mode (both symbols and must be displayed).

LOW DOMESTIC HOT WATER PRODUCTION

— Check if domestic hot water temperature is enough high; in case increase temperature by pressing +;

— Call a technical service centre to verify gas valve;

— Call a technical service centre to verify domestic heat exchanger.

In case of particular water hardness, a water softener must be installed.

Do not try to repair boiler by yourself.

For any problem related to electric circuit, hydraulic circuit, gas circuit, a Hermann technical centre must be contacted.

All boilers must be equipped with original spare parts.

Hermann cannot be considered liable for eventual damages caused by improper, wrong, irrational use of material not original.

Warning while using

— Check frequently water pressure on the hydrometer and verify that, when the system is cold, water pressure values are in line with the manufacturer instructions.

Do not touch the heated surfaces of the boiler, as the doors, the flue, the chimney pipe, etc., also after the boiler operation because, for a certain time, these surfaces are oveheated. Any contact with them can cause dangerous scalds. It is then forbidden to let children or inexperienced people be close to the boiler, during its operation.

— Do not expose the wall hung gas boiler to water vapours directly coming from gas cookers/ hobs.

— Do not wet the gas boiler with water or other liquids sprinklings.

— Do not put any object on the gas boiler.

— The gas boiler utilization is forbidden to children and to inexperienced people.

— If the gas boiler is going to be definitively unused, call a qualified technician to carry out all required operations, checking in particular disconnection of gas, water and electrical supplies.

— **On EURA E models only:** The installation of aspirators, fireplaces or similar appliances in the boiler room (and in adjacent rooms in case of indirect ventilation), must be made in compliance with all specific safety rules and laws (for example by augmenting the dimensions of ventilation openings), even in case of modifications or additions.

INSTRUCTIONS MANUAL

Make sure that the present manual is ALWAYS with the boiler, for any consultation of the user and servicing personnel.

HERMANN CONVENTIONAL GUARANTEE CONDITIONS

Hermann offers to the customer a particular and exclusive CONVENTIONAL GUARANTEE, which is automatically activated asking the First Ignition to a Hermann Authorized Service Center. The conditions of the HERMANN CONVENTIONAL GUARANTEE don't prejudge nor invalidate the rights indicated by the European Rule 1999/44/CE actuated with Italian Laws by the Decree 02 Februar 2002 N°24 of which the User is the Owner.