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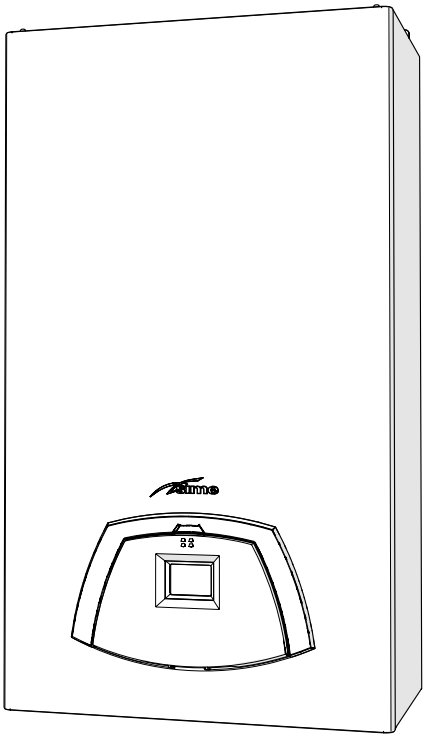
Condensing wall mounted boiler

EDEA T

USER, INSTALLATION AND SERVICING INSTRUCTIONS

ENSURE THAT THESE INSTRUCTIONS ARE LEFT FOR THE USER AFTER COMPLETION OF THE BENCHMARK SECTION

PLEASE READ THE IMPORTANT NOTICE WITHIN THIS GUIDE REGARDING YOUR BOILER WARRANTY



benchmark COLLECTIVE MARK
THE MARK OF QUALITY FOR THE INSTALLATION, COMMISSIONING AND SERVICING OF DOMESTIC HEATING AND HOT WATER SYSTEMS

energy saving trust endorsed product

It is compulsory to read the instructions.

Visit our website:
www.sime.it

UK CA 0359-22

kiwa approved KUKreg4

sime

BOILER DETAILS

please position here a sticker from installation pack

TRANSLATION OF THE ORIGINAL ITALIAN INSTRUCTIONS

RANGE RATED CERTIFICATION

The maximum power, in heating mode, of **Edea T** boilers can be adapted, during the installation, to the thermal needs of the system by modifying the setting of PAR 15 in the **0 .. 100** range.
The setting of PAR 15 = 100 is the factory setting that allows the boiler to deliver its maximum power in heating mode. It can be reduced by modifying the setting of PAR 15 as shown in the table appearing below.

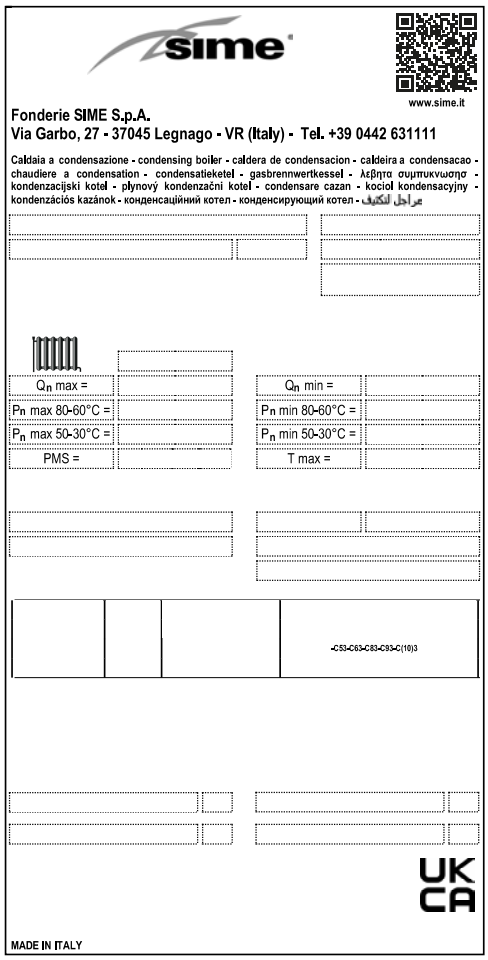
Once the new setting of PAR 15 has been made, the reduced maximum power value (kW) **for models with power above 35 kW** MUST MANDATORILY be applied beside the boiler's data plate. For checks and adjustments after the modification, refer to the new value for the maximum power.

The useful nominal power levels used are those relative to the operating conditions (80-60°C) (Pn min - Pn max).

Example for **Edea 25 T** boiler:
– default heating power range: 2,3 - 24,5 setting of PAR 15 = 100
– "reduced" heating power range: 2,3 - 20,1 setting PAR 15 = 80

DESCRIPTION		Edea T				
		25		35		Setting of PAR 15
		Min	Max	Min	Max	
A - Factory power range (heating)	kW	2,3	24,5	4,2	34,1	**100**
B - Reduced power ranges for maximum power reduction (heating)	kW	2,3	22,3	4,2	31,1	**90**
	kW	2,3	20,1	4,2	28,1	**80**
	kW	2,3	17,8	4,2	25,1	**70**
	kW	2,3	15,6	4,2	22,1	**60**
	kW	2,3	13,4	4,2	19,2	**50**
	kW	2,3	11,2	4,2	16,2	**40**

Boiler technical data plate



IMPORTANT NOTICE

For the first year all of our appliances are protected by our manufacturer's guarantee which covers both parts and labour.
As you would expect from Sime Ltd, it is our aim to provide our valued customers with the best in after sales and service.
To take advantage of any extended warranty offered, all you have to do is to adhere to these 3 simple conditions:

- The installation must be carried out to Manufacturers/Benchmark Standards by a Gas Safe Registered Engineer, and recorded in the installation manual.
- The appliance must be registered with both Sime Ltd and Gas Safe within 30 days of installation.
- The appliance must be serviced every 12 months, within 30 days of the anniversary of the installation date, by either Sime Ltd or a Gas Safe registered engineer- ensuring that the Benchmark service record in the installation manual is completed.

Failure to comply with the above will result in only the 12 month warranty being offered.In the absence of any proof of purchase, the 12 month warranty period will commence from the date of manufacture of the boiler as shown on the appliance data plate.

SAFE HANDLING

This boiler may require 2 or more operatives to move it into its installation site, remove it from its packaging and during movement into its installation location. Manoeuvring the boiler may include the use of a sack truck and involve lifting pushing and pulling.
Caution should be exercised during these operations.

Operatives should be knowledgeable in handling techniques when performing these tasks and the following precautions should be considered:
– Grip the boiler at the base
– Be physically capable
– Use personal protective equipment as appropriate e.g. gloves, safety footwear.

During all manoeuvres and handling actions, every attempt should be made to ensure the following unless unavoidable and/or the weight is light.
– Keep back straight
– Avoid twisting at the waist
– Always grip with the palm of the hand
– Keep load as close to the body as possible
– Always use assistance

WARNING
Caution should be exercised when performing any work on this appliance.
Protective gloves and safety glasses are recommended.
– Avoid direct contact with sharp edges.
– Avoid contact with any hot surfaces.

NOTICE
Please be aware that due to the wet testing of the appliance, there may some residual water in the hydraulic circuit.
– Protect any surfaces, carpets or floorings.
– Use a suitable container to catch any water that escape when removing the protective caps from the connections.

All descriptions and illustrations provided in this manual have been carefully prepared but we reserve the right to make changes and improvements in our products that may affect the accuracy of the information contained in this manual.

Code Of Practice

For the installation, commissioning and servicing of domestic heating and hot water products

Benchmark places responsibilities on both manufacturers and installers.* The purpose is to ensure that customers** are provided with the correct equipment for their needs, that it is installed, commissioned and serviced in accordance with the manufacturer's instructions by competent persons and that it meets the requirements of the appropriate Building Regulations. Installers are required to carry out work in accordance with the following:

Standards of Work

- Be competent and qualified to undertake the work required.
- Install, commission, service and use products in accordance with the manufacturer's instructions provided.
- Ensure that where there is responsibility for design work, the installation is correctly sized and fit for purpose.
- Meet the requirements of the appropriate Building Regulations. Where this involves notifiable work be a member of a Competent Persons Scheme or confirm that the customer has notified Local Authority Building Control (LABC), prior to work commencing.
- Complete all relevant sections of the Benchmark Checklist/Service Record when carrying out commissioning or servicing of a product or system.
- Ensure that the product or system is left in a safe condition and, whenever possible, in good working order.
- Highlight to the customer any remedial or improvement work identified during the course of commissioning or servicing work.
- Refer to the manufacturer's helpline where assistance is needed.
- Report product faults and concerns to the manufacturer in a timely manner.

Customer Service

- Show the customer any identity card that is relevant to the work being carried out prior to commencement or on request.
- Give a full and clear explanation/demonstration of the product or system and its operation to the customer.
- Hand over the manufacturer's instructions, including the Benchmark Checklist, to the customer on completion of an installation.
- Obtain the customer's signature, on the Benchmark Checklist, to confirm satisfactory demonstration and receipt of manufacturer's instructions.
- Advise the customer that regular product servicing is needed, in line with manufacturers' recommendations, to ensure that safety and efficiency is maintained.
- Respond promptly to calls from a customer following completion of work, providing advice and assistance by phone and, if necessary, visiting the customer.
- Rectify any installation problems at no cost to the customer during the installer's guarantee period.

benchmark
COLLECTIVE MARK
THE MARK OF QUALITY FOR THE INSTALLATION, COMMISSIONING AND SERVICING OF DOMESTIC HEATING AND HOT WATER SYSTEMS

*The use of the word "installer" is not limited to installation itself and covers those carrying out installation, commissioning and/or servicing of heating and hot water products, or the use of supporting products (such as water treatment or test equipment).
**Customer includes householders, landlords and tenants.

© Heating and Hotwater Industry Council (HHIC)

The Benchmark Scheme

Sime Ltd is a licensed member of the Benchmark Scheme which aims to improve the standards of installation and commissioning of domestic heating and hot water systems in the UK and to encourage regular servicing to optimise safety, efficiency and performance.
Benchmark is managed and promoted by the Heating and Hotwater Industry Council.
For more information visit www.centralheating.co.uk.
Please ensure that the installer has fully completed the Benchmark Checklist in the use and maintenance section of the installation instructions supplied with the product and that you have signed it to say that you have received a full and clear explanation of its operation.
The installer is legally required to complete a commissioning checklist as a means of complyng with the appropriate Building Regulations (England and Wales).
All installations must be notified to Local Area Building Control either directly or through a Competent Persons Scheme.
A Building Regulations Compliance Certificate will then be issued to the customer who should, on receipt, write the Notification Number on the Benchmark Checklist.
This product should be serviced regularly to optimise its safety, efficiency and performance.
The service engineer should complete the relevant Service Record on the Benchmark Checklist after each service.
The Benchmark Checklist may be required in the event of any warranty work and as supporting documentation relating to home improvements in the optional documents section of the Home Information Pack.

Important Information
IT IS A STATUTORY REQUIREMENT THAT ALL GAS APPLIANCES ARE INSTALLED BY COMPETENT PERSONS, IN ACCORDANCE WITH THE GAS SAFETY (INSTALLATION AND USE) REGULATIONS (CURRENT EDITION). The manufacturer's instructions must not be taken as overriding any statutory requirements, and failure to comply with these regulations may lead to prosecution.

No modifications to the appliance should be made unless they are fully approved by the manufacturer.

GAS LEAKS: DO NOT OPERATE ANY ELECTRICAL SWITCH, OR USE A NAKED FLAME. TURN OFF THE GAS SUPPLY AND VENTILATE THE AREA BY OPENING DOORS AND WINDOWS CONTACT THE GAS EMERGENCY SERVICE ON 0800111999.

benchmark
COLLECTIVE MARK
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Please refer to commissioning instructions for filling in the checklist at the back of this installation guide.
Note: All Gas Safe registered installers carry a ID Card.
You can check your installer is Gas Safe Registered by calling 0800 408 5577

SIME COMBINATION BOILERS
Installer checklist

Please remember to carry out the following checks after installation. This will achieve complete customer satisfaction, and avoid unnecessary service calls. A charge will be made for a service visit where the fault is not due to a manufacturing defect.

- Has a correct by-pass been fitted and adjusted?
- Has the system and boiler been flushed?
- Is the system and boiler full of water, and the correct pressure showing on the pressure gauge?
- Is the Auto Air Vent open?
- **Has the pump been rotated manually?**
- Is the gas supply working pressure correct?
- Is the boiler wired correctly? (See installation manual).
- **Has the D.H.W. flow rate been set to the customer requirements?**
- Has the customer been fully advised on the correct use of the boiler, system and controls?
- Has the Benchmark Checklist in the use and maintenance section of this manual, been completed?



WARNINGS

- After having unpacked the boiler ensure that it is undamaged and complete including the valve pack, hanging bracket and template.
- The appliance must be used as intended. **Sime** declines all responsible for any injury or damage to persons, animals,or property as a result of improper installation, adjustment, maintenance or use.
- In the event of water leaks, disconnect the appliance from the mains power supply, close the water mains and seek help from a qualified engineer.
- Periodically check that the operating pressure of the water heating system when cold is **1-1.2 bar**. If required, increase the pressure or seek help from a qualified engineer.
- If the appliance is not used for a long period of time, the following operations must be carried out:
  - *set the main isolation switch to "OFF";*
  - *close the gas and water valves for the water heating system.*
- To ensure continued efficient operation of the appliance it is recommended that it is serviced regularly, at least once a year. This is also a condition of the boiler warranty. It is the law that any service or repair is carried out by a Gas Safe Registered engineer. Services must be recorded in the maintenance section of this installation guide.
- The system's power connection is of the "Y" type, so the power cable may only be replaced by the manufacturer or the service department.
- The concentration of CO in combustion by-products must always comply with the installation regulations of the country where the appliance is installed.



WARNINGS

- **It is recommended that all operators** read this manual carefully in order to use the appliance in a safe and rational manner.
- **This manual** is an integral part of the appliance. It must therefore be kept for future reference and must always accompany the appliance.
- **Installation and maintenance** of this appliance must be carried out by a qualified company or by a professionally qualified technician in accordance with the instructions contained in the manual. Once the work is complete, the company or technician will issue a declaration of conformity with national and local technical standards and legislation in force in the country where the appliance will be used.
- **Any repairs on the appliance** must be carried out solely by professionally qualified personnel, using original spare parts only. Failure to comply with these instructions can jeopardise the appliance's safety and void the warranty with immediate effect.
- **Fonderie SIME S.p.A.** reserves the right to make improvements to its products at any time without prior notice, without compromising their essential characteristics. The graphic illustrations and/or images in this document may show optional accessories that vary according to the country in which the appliance is used.
- **The installer must explain to the User** the appliance's operation and the safety instructions. Moreover, the installer must hand the use and maintenance instructions to the User after completing the installation.

DO NOT

– To allow children under the age of 8 to use the appliance. The appliance can be used by children no younger than 8 years old, by people with physical or cognitive disabilities, and by people lacking experience or the necessary knowledge, provided that they are supervised or have been instructed on how to use the appliance safely and that they understand the risks associated with it.

– To allow children to play with the appliance.

– To allow unsupervised children to perform user maintenance and cleaning.

– To use electrical devices or appliances such as switches, electrical appliances etc if you can smell gas. If this should happen:
- *open the doors and windows to ventilate the room;*
- *turn the gas off at the meter;*
- *call the emergency service 0800 111999.*

– To touch the appliance with bare feet or with any wet part of the body.

– To carry out any repair, maintenance or cleaning operation before having disconnected the appliance from the mains power by setting the main switch to "OFF", and closing the gas supply.

– To modify the safety or adjustment devices without authorization and instructions from the manufacturer.

DO NOT

– To modify or plug the condensate outlet (if present).

– To pull, detach or twist the electrical cables coming out of the appliance even if the appliance is disconnected from the mains power supply.

– To expose the appliance to the elements. It is suitable for operating in a partially protected area in accordance with the EN 15502 standard, with a maximum ambient temperature of 60 °C and minimum - 5 °C. We recommend installing the appliance under a pitched roof extension, on a balcony or in a protected recess, nonetheless never exposed directly to the elements (rain, hail, snow). The appliance is equipped with a series of anti-freeze functions.

– To block or reduce the size of the ventilation openings of the room where the appliance is installed, if present.

– Remove the mains power and gas supply from the appliance if the external temperature could fall below ZERO (risk of freezing).

– To leave containers with flammable substances in the room where the appliance is installed.

– To dispose of the packaging material irresponsibly as it could be dangerous. Packaging must be disposed of as specified by the legislation in force in the country where the appliance will be used.

– To modify or intervene on sealed components.

Dear Customer,
Thank you for purchasing a **Sime Edea T** boiler, a new-generation condensing modulating device possessing technical and performance characteristics capable of satisfying your heating requirements with the utmost safety and with limited running costs.

RANGE

MODEL	CODE	GAS COUNCIL NUMBER
Edea 25 T	8116910	GC No 41-283-64
Edea 35 T	8116912	GC No 41-283-65

MANUAL STRUCTURE

This manual is organized as follows.

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ANNEXES 81

COMPLIANCE

Our company declares that the **Edea T** appliances conform to the essential requirements of the following directives:
- Gas Appliances EU Regulation 2016/426
- Boiler Efficiency Directive 92/42/EEC
- Low Voltage Directive 2014/35/UUE
- Electromagnetic Compatibility Directive 2014/30/EU
- Ecodesign Directive 2009/125/EC
- Regulation (UE) N. 811/2013 - 813/2013
- Energy labelling Regulation (EU) No. 2017/1369

CE

Please refer to the technical data plate for the serial number and year of manufacture.

SYMBOLS



WARNING
To indicate actions which, if not carried out correctly, can result in injury of a general nature or may damage or cause the appliance to malfunction; these actions therefore require particular caution and adequate preparation.



ELECTRICAL HAZARD
To indicate actions which, if not carried out correctly, could lead to injury of an electrical nature; these actions therefore require particular caution and adequate preparation.



DO NOT
To indicate actions which MUST NOT BE carried out.



CAUTION
To indicate particularly important and useful information.

USER INSTRUCTIONS

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VERY IMPORTANT!

PLEASE MAKE SURE YOUR COMMISSIONING CHECKLIST AND THE SERVICE INTERVAL RECORDS ENCLOSED ARE FILLED IN CORRECTLY.
ALL GAS SAFE REGISTERED INSTALLERS CARRY A GAS SAFE ID CARD.
BOTH SHOULD BE RECORDED IN YOUR COMMISSIONING CHECKLIST AND A SERVICE INTERVAL RECORDS.
YOU CAN CHECK YOUR INSTALLER IS GAS SAFE REGISTERED
BY CALLING ON 0800 408 5500 OR ALTERNATIVELY WWW.GASSAFEREGISTER.CO.UK

1 OPERATING WITH EDEA T

1.1 Control panel

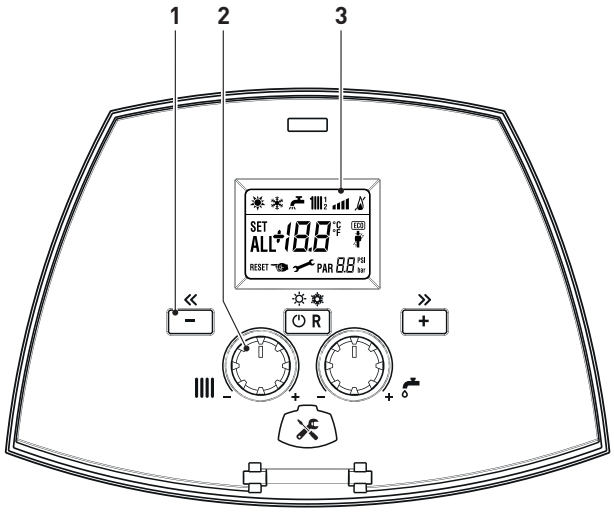


Fig. 1

1 FUNCTIONAL BUTTONS

R If pressed once or more times for at least 1 second during normal operation, this button allows the user to change the appliance's operating mode in a cyclical sequence (Stand-by – Summer – Winter). If the appliance is experiencing a resettable fault, it can be used to unlock it.

– This allows the engineer to scroll through the parameters or decrease the values.

+ This allows the engineer to scroll through the parameters or increase the values.

Programming connector cover plug.

2 KNOBS

The heating knob allows the user to set the flow temperature to between 20 and 80°C during normal operation.

The domestic hot water knob allows the user to set the domestic hot water temperature to between 10 and 60°C during normal operation.

NOTE: *pressing any button for more than 30 seconds causes a fault to appear on the display (ALL 42) without preventing the appliance's operation. The warning disappears when the button is released.*

3 DISPLAY

"SUMMER". This symbol appears when the boiler is operating in "Summer" mode or if only the domestic hot water mode is enabled via the remote control.

"WINTER". The symbol is present in the "Winter" operating mode, or with the remote control if both the domestic hot water and heating modes are enabled. The flashing and symbols signal that the "chimney sweep" function is active.

RESET **"RESET REQUEST"**. The wording indicates that, once the fault has been repaired, the appliance's normal operation can be reset by pressing the R button.

"DOMESTIC HOT WATER". This symbol is present during a DHW request or during the "chimney sweep function" It flashes during the selection of the domestic hot water set point.

"HEATING". This symbol lights up during heating operation or during the "chimney sweep function It flashes during the selection of the heating set point.

"LOCKOUT" DUE TO NO FLAME.

"FLAME LIT".

"POWER LEVEL". Indicates the power level at which the appliance is operating.

PAR **"PARAMETER"**. This indicates when the engineer is in parameter setting/display, or "info" or "counter", or in "activated alarms" (history).

ALL **"ALARM"**. This indicates that a fault has occurred. The number specifies the cause which generated the alarm.

"CHIMNEY SWEEP". This indicates that the "chimney sweep function" has been activated.

bar **"HEATING SYSTEM PRESSURE"**. Display of heating system pressure.

ECO **"ECO", ALTERNATIVE ENERGY SOURCES**. Where active, it indicates that there is a solar system available.

"MAINTENANCE REQUEST". If active, it indicates that it is time to perform maintenance on the appliance.

1.2 Preliminary checks

WARNING

- Should it be necessary to access the areas in the bottom part of the appliance, make sure that the system components and pipes are not hot (risk of burning).
- Before replenishing the heating system, put on protective gloves.

The initial start-up of **Edea T** must be carried out by professionally qualified personnel, after which the appliance can function automatically. It may be necessary for the user to restart the appliance automatically, without contacting the technician; for example, after a holiday.
First of all, check that the gas isolation and water system valves are open.

1.3 Ignition

After completing the preliminary checks, start up **Edea T**:
- set the main system switch to "ON" in order for the display to show the pressure level in the system during refilling
- **check that the operating mode on the display is "Stand-by"** and if necessary select it by pressing the button ⏻ once or twice

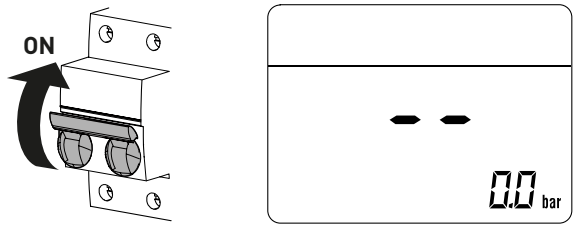
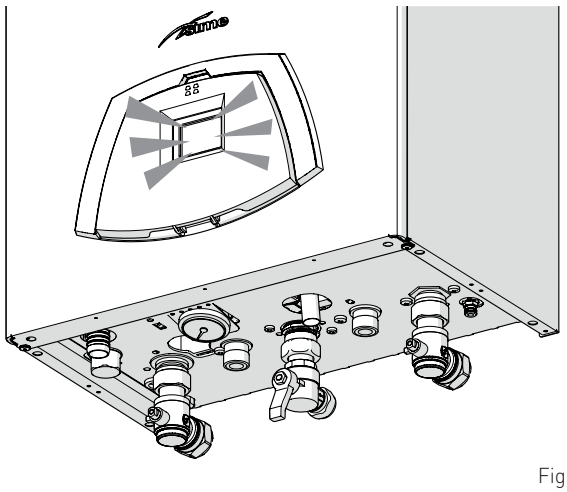
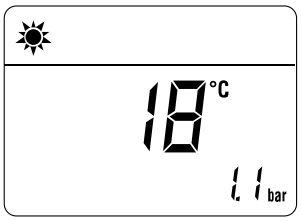


Fig. 2

- check that the pressure in the heating system, when cold, is **1-1.2 bar**. If the pressure is less than this, use the external filling device to repressurise the system to **1-1.2 bar**
- ensure that the filling device is turned off after use

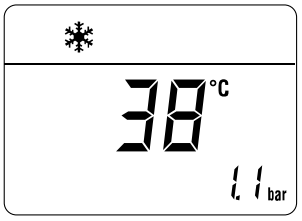

Fig. 3

- select the "SUMMER" ☀ operating mode by pressing and holding the ⏻R button for at least 1 second. The delivery temperature detected at that moment will appear on the display



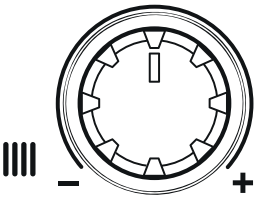
- open one or more hot water taps. **Edea T** will work at its maximum power until the tap or taps are closed.

Once **Edea T** is commissioned in "SUMMER mode" ☀, with the ⏻R button, pressed for at least 1 second, it is possible to choose the "WINTER mode" ❄. The display will show the value of the delivery water temperature measured at that time. In this case it is necessary to adjust the room thermostat(s) at the desired temperature or, if the system is equipped with a timer-controlled thermostat, verify that it is "active" and adjusted.



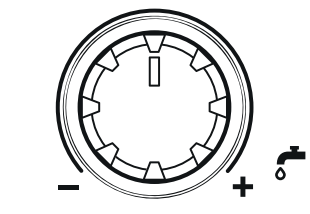
1.4 Adjusting the delivery temperature

To increase or decrease the delivery temperature of **Edea T**, instead of modifying the specific parameter, it is possible to turn knob ▥ on the control panel. The temperature can be set to between 20 and 80°C.


Fig. 4

1.5 Adjusting the domestic hot water temperature

The temperature of the domestic hot water can be adjusted by turning the 🚰 knob on the control panel.


Fig. 5

1.6 Fault / malfunction codes

If, during the operation of **Edea T**, an anomaly/fault occurs, the display will show **"ALL"** followed by the anomaly code.

If you see alarm **"02"** (low water pressure in the system):
- check that the pressure in the heating system, when cold, is **1-1.2 bar**. If the pressure is less than this, use the external filling device to repressurise the system to **1-1.2 bar**
- ensure that the filling device is turned off after use
- press and hold the button ⏻R for more than 3 seconds and check whether normal operating conditions are restored.

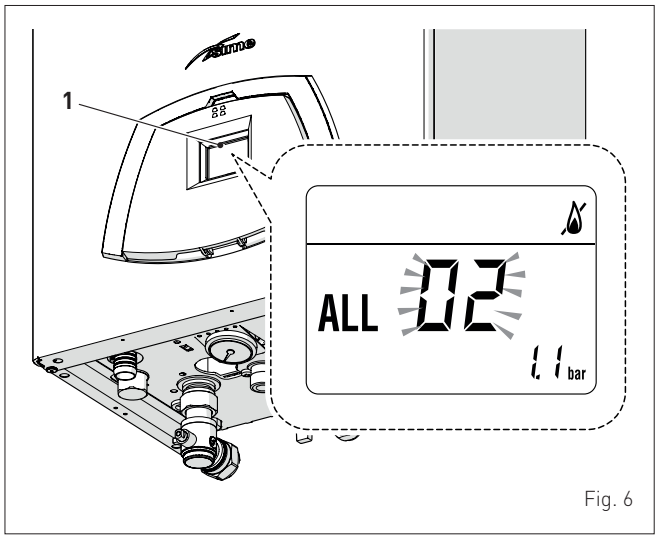
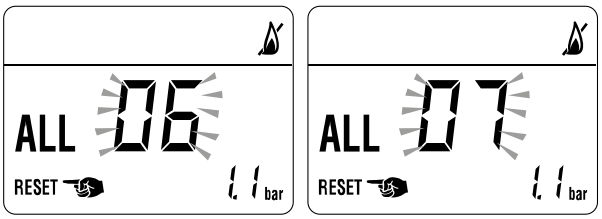
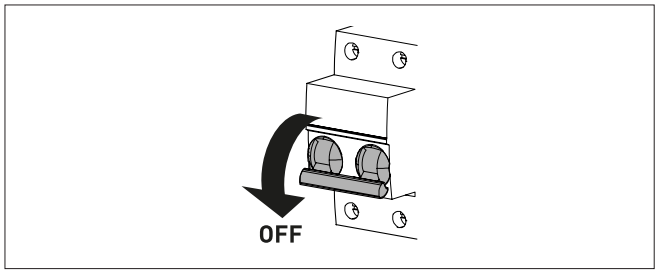


Fig. 6

If you see alarm **"06"** (no flame detected) and **"07"** (safety thermostat intervention):
- press and hold the button ⏻R for more than 3 seconds and check whether normal operating conditions are restored.



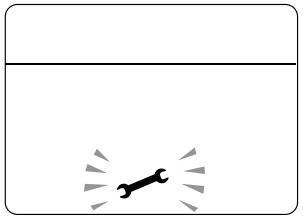
If this operation is not successful, **ONLY ONE MORE ATTEMPT** can be made, therefore:
- close the gas cock
- isolate the power supply
- contact the Qualified Technical Personnel.



CAUTION
Should you see an alarm not described here, contact a qualified technical professional

1.6.1 Maintenance request

When it is time to perform maintenance on the boiler, the 🔧 symbol shows on the display.

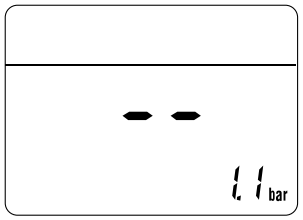


Contact the technical assistance service to organise the necessary work.

2 SHUTDOWN

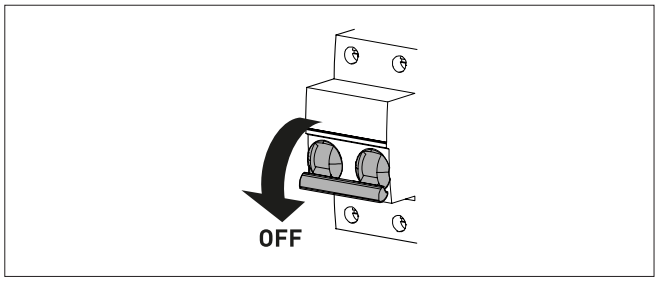
2.1 Temporary shutdown

To temporarily interrupt the operation of **Edea T**, press the ⏻R button for at least 1 second, once from the "WINTER mode" ❄ or twice from the "SUMMER mode" ☀.
"- -" will appear on the display; the boiler will be in STAND-BY. The boiler anti freeze function will be enabled.



ELECTRICAL HAZARD
The boiler will still be powered.

If the user is away temporarily, for a weekend, short trip etc and if the outside temperature is above ZERO:
- press the ⏻R button, once from the "WINTER mode" ❄ or twice from the "SUMMER mode" ☀, to put the **Edea T** in stand-by
- isolate the power supply
- isolate the gas cock.

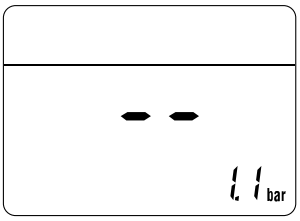


CAUTION
If the outside temperature might fall below ZERO, since the appliance is equipped with an "antifreeze function"
- ONLY PUT THE BOILER INTO STAND-BY
- leave the system's main switch set to "ON" (appliance powered electrically)
- leave the gas cock open.

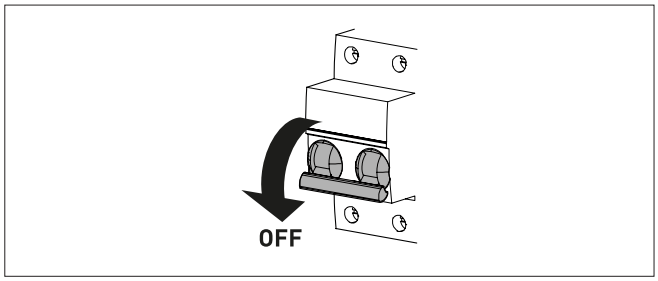
2.2 Shutting down for long periods

If the boiler is to be left unused for a long period, the following operations need to be carried out:

– press the ⏻R button for at least 1 second, once from the "WINTER mode" ❄ or twice from the "SUMMER mode" ☀, to put the **Edea T** in stand-by. The display will show **"- -"**



– isolate the power supply



– isolate the gas cock
– close the heating and domestic hot water isolation valves
– **drain the heating and domestic hot water system if there is the risk of freezing**.

CAUTION
Contact the Qualified Technical Personnel if the procedure described above cannot be easily carried out.

3 MAINTENANCE

3.1 Servicing

As a condition of the warranty and to ensure correct operation and efficiency, it is important that the boiler is serviced every 12 months, within 30 days of the anniversary of the installation date ensure the required information is recorded in the Gas Boiler System Service Interval Record (Benchmark).

CAUTION
Maintenance must ONLY be carried out by qualified professionals who follow the indications provided in the INSTALLATION AND MAINTENANCE INSTRUCTIONS.

3.2 External cleaning

WARNING
– Should it be necessary to access the areas in the bottom part of the appliance, make sure that the system components and pipes are not hot (risk of burning).
– Before performing any maintenance, put on protective gloves.

3.2.1 Cleaning the case

When cleaning the cladding, use a cloth dampened with soap and water or alcohol for stubborn marks.

DO NOT
Do not use abrasive products.

4 DISPOSAL

4.1 Disposal of the equipment (European Directive 2012/19/EU)



At the end of their life span, the appliance and electrical and electronic devices coming from households or classifiable as household waste must be delivered to appropriate waste collection systems, in accordance with the law and with Directive 2012/19/EU. This product was designed and manufactured for minimising its impact on the environment and on human health, but it contains components that could be detrimental if managed improperly. The symbol (crossed-out wheelie bin) depicted here and also appearing on your appliance means that the appliance at the end of its life must be managed in accordance with the law and treated as electrical and electronic waste. Before delivering the appliance for its disposal, consult the applicable provisions of the laws in force in the country where the appliance is used and get information on the authorised waste disposal facilities by contacting the relevant local offices.

DO NOT
dispose of the product with urban waste.

DESCRIPTION OF THE APPLIANCE

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5 DESCRIPTION OF THE APPLIANCE 16
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5.2 Check and safety devices 16
5.3 Symbols on the appliance 16
5.4 Identification 17
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5 DESCRIPTION OF THE APPLIANCE

5.1 Characteristics

Edea T are last generation condensing wall mounted boilers which **Sime** has produced for heating and instant domestic hot water production when combined with a storage tank. The main design choices made by **Sime** for the **Edea T** boilers are:

- the total pre-mix microflame burner combined with a stainless steel heat exchanger with a plaster outer shell, for heating
- room sealed, Type C appliance. Suitable for use on sealed heating systems
- the electronic control and command circuit board with microprocessor, for optimal management of the heating system and modulation of up to 1:10 for the instant production of domestic hot water. It allows for connecting room thermostats, an auxiliary sensor for managing kits, and the external sensor. The presence of the external sensor will make the boiler work at a variable temperature, in other words, the temperature in the boiler will vary in relation to the outdoor temperature, in accordance with the optimal climatic curve selected during the installation phase, resulting in considerable energy and financial savings. Moreover, the command board has an internal connection for inserting an expansion board which is used to control external relays.

Other special features of the **Edea T** boilers are:

- the anti-freeze function which activates automatically if the temperature of the water inside the boiler falls below the threshold of the value set at parameter "PAR 10" and , if there is an external sensor, if the external temperature falls below the threshold of the value set at parameter "PAR 11"
- anti jamming function of the pump and diverter valve, this activates automatically every 24 hours if no request for heat has been made
- the chimney sweep function lasts 15 minutes and makes the job of the qualified technician easier when measuring the parameters and combustion efficiency
- screen display of the operating and self-diagnostic parameters with error code display when the fault occurs. This makes repair interventions easier and allows appliance operation to be restored correctly.

5.2 Check and safety devices

The **Edea T** boilers are equipped with the following check and safety devices:

- thermal safety thermostat 100°C
- 3 bar relief valve
- heating water pressure transducer
- delivery sensor
- hot water tank sensor
- exhaust sensor
- return sensor (SR).



DO NOT
Do not commission or operate the appliance with safety devices which do not work or which have been tampered with.



WARNING
Safety device may only be replaced by professional qualified personnel using **Sime** original spare parts.

5.3 Symbols on the appliance

The appliance is marked with the following symbols:

SYMBOL	DESCRIPTION
	Indicates the presence of particularly dangerous zones in the appliance.
	Indicates the presence of live electrical parts in the appliance.
	Indicates that information concerning the appliance is available, for example the instruction manual.
	Indicates that personnel assigned to perform maintenance on the appliance must operate in accordance with the instruction manual.
	Indicates that the instruction manual must be read.
	Indicates that the appliance must be connected to an earthing system.

5.4 Identification

The **Edea T** boilers can be identified by means of:

1 **Packaging label:** this is located on the outside of the packaging and provides a code, the serial number of the boiler and the bar code.

2 **Energy Efficiency Label:** this is positioned on the outside of the packaging to notify the User of the level of energy savings and reduced environmental pollution produced by the appliance.

3 **Technical Data Plate:** this is located inside the front panel of the boiler and provides the technical data, appliance performance information and any other information required by law in the country where the appliance will be used.

4 **Sticker of product identification**.

CAUTION

Tampering with, removing or failing to display the identification plate or carrying out any other operation which does not allow safe identification of the product or which may hinder installation and maintenance operations.

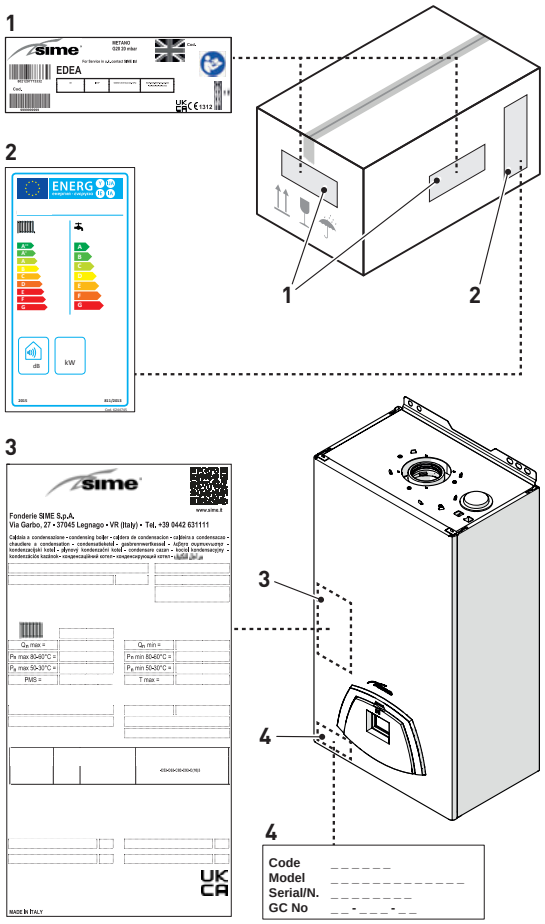


Fig. 7

5.4.1 Technical Data Plate

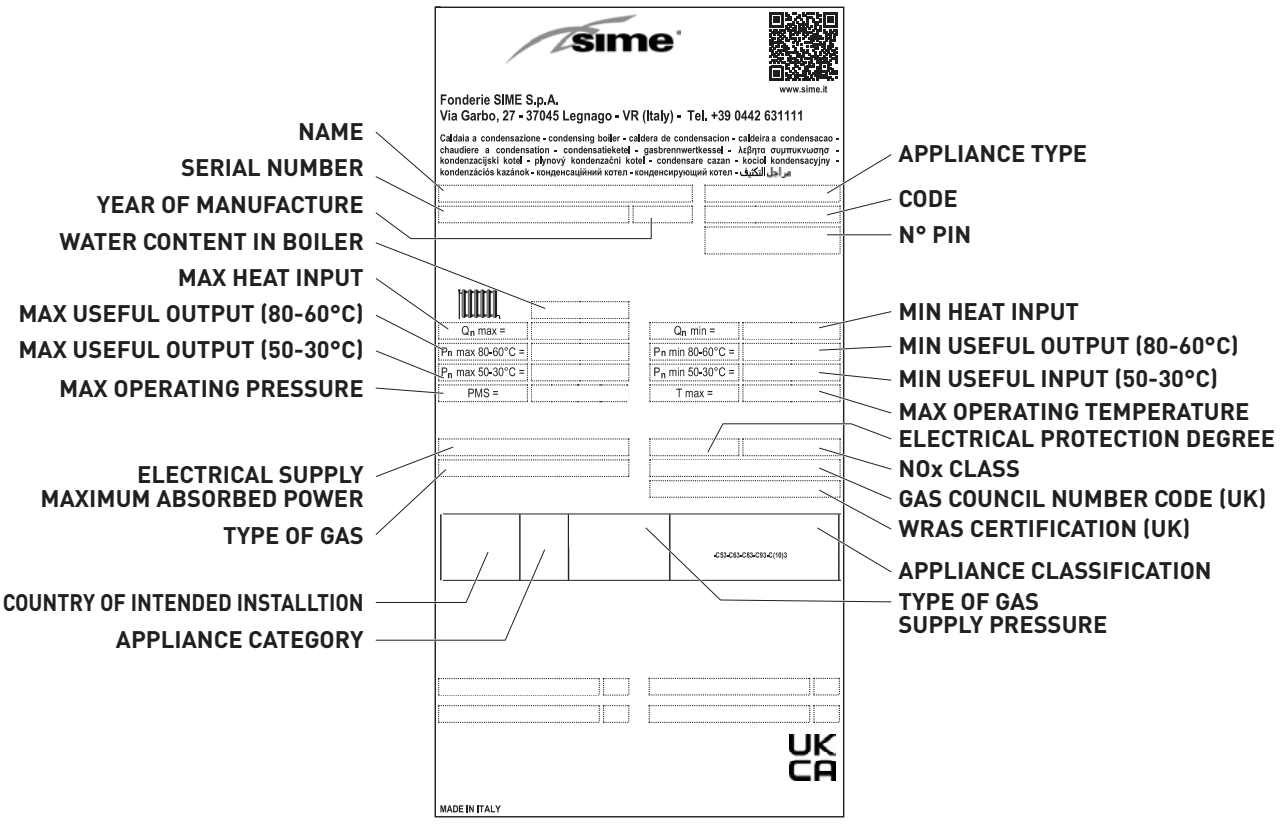
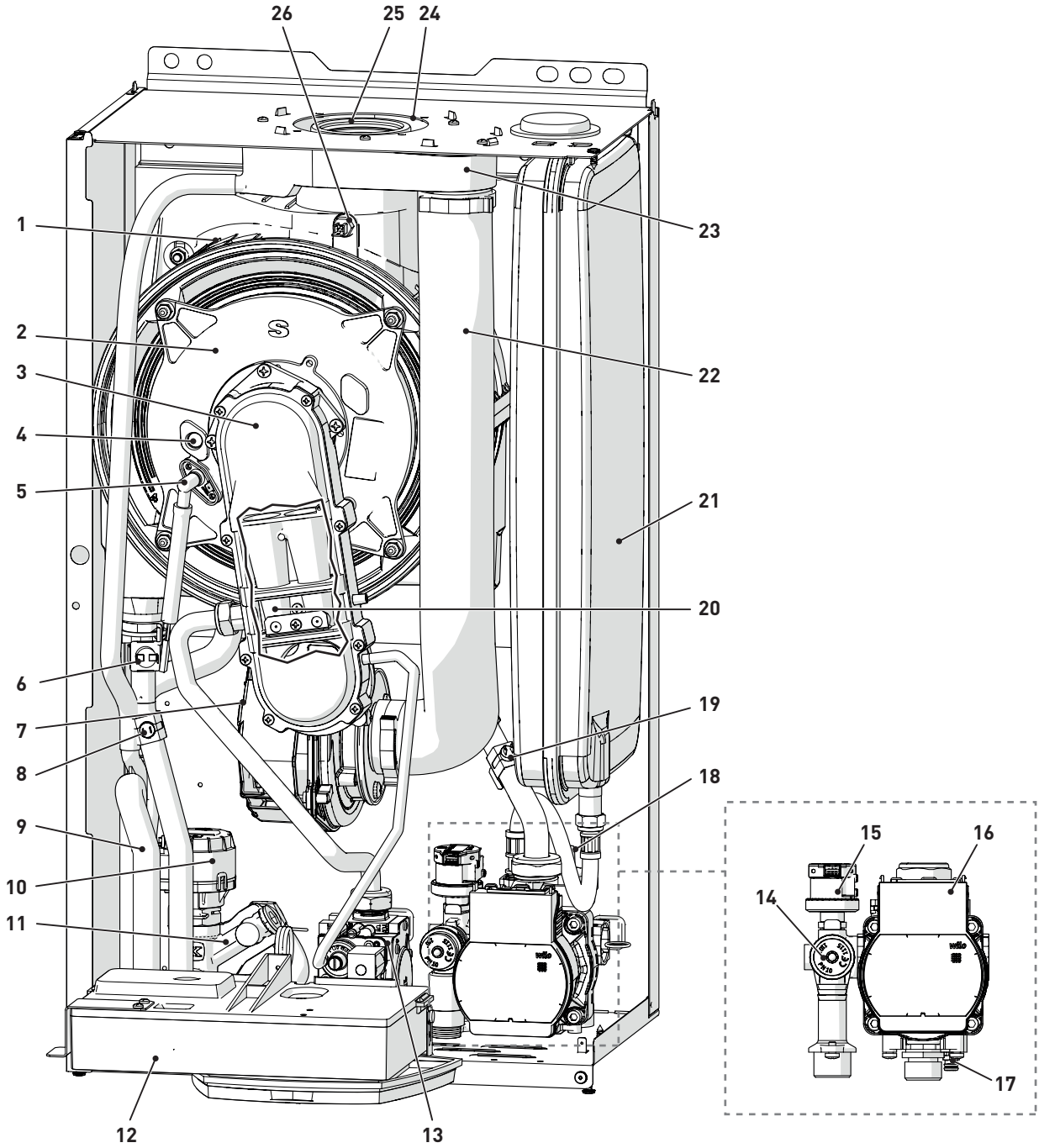


Fig. 8

5.5 Structure



1 *Heat exchanger*
2 *Combustion chamber door*
3 *Air/gas duct*
4 *Flame viewing window*
5 *Ignition/detection electrode* ***(EAR)***
6 *Safety thermostat* ***(TS)***
7 *Fan* ***(V)***
8 *Boiler delivery sensor* ***(SMC)***
9 *Condensate siphon outlet*
10 *Diverter solenoid valve* ***(EVD)***
11 *System filling unit*
12 *Control panel*
13 *Gas valve*
14 *Relief valve* ***(FS)***
15 *Water pressure transducer* ***(TPAC)***
16 *Pump* ***(PI)***
17 *Boiler drain*
18 *Automatic bleed valve*
19 *Boiler return probe* ***(SRC)***
20 *Air-gas mixer*
21 *Expansion vessel* ***(VE)***
22 *Air inlet pipe*
23 *Air-smoke chamber*
24 *Air inlet*
25 *Smoke outlet duct* ***(CSFU)***
26 *Exhaust sensor* ***(SF)***

Fig. 9

5.6 Technical features

DESCRIPTION		Edea T	
		25	35
CERTIFICATIONS			
Country of intended installation		GB	
Fuel		G20; G31	
PIN number		1312CU6393	
Category		II2E3P	
Appliance classification		B23P - B33P - B53P - C13 - C33 - C43 - C53 - C63 - C83 - C93 - C(10)3	
DHW rated useful heat output [4]	kW	0	0
Class NOx [1]		6 (< 56 mg/kWh)	
HEATING PERFORMANCE			
HEAT INPUT [2]			
Nominal flow (Q_n max)	kW	25	34,8
Minimum G20 (Q_n min)	kW	2,5	4,5
Minimum G31 (Q_n min)	kW	3,5	5,5
HEAT OUTPUT			
Nominal (80-60°C) (P_n max)	kW	24,5	34,1
Nominal (50-30°C) (P_n max)	kW	26,4	36,7
Minimum G20 (80-60°C) (P_n min)	kW	2,3	4,2
Minimum G20 (50-30°C) (P_n min)	kW	2,6	4,7
Minimum G31 (80-60°C) (P_n min)	kW	3,3	5,1
Minimum G31 (50-30°C) (P_n min)	kW	3,7	5,7
EFFICIENCY			
Max useful efficiency (80-60°C)	%	98,0	98,0
Min useful efficiency (80-60°C)	%	93,3	93,3
Max useful efficiency (50-30°C)	%	105,8	105,6
Min useful efficiency (50-30°C)	%	104,7	104,2
Useful efficiency at 30% of load (40-30°C)	%	108,8	108,5
Losses after shutdown at 50°C	W	105	115
ENERGY PERFORMANCE			
HEATING			
Heating seasonal energy efficiency class		A	A
Heating seasonal energy efficiency	%	93	93
Sound power	dB(A)	55	56
ELECTRICAL SPECIFICATIONS			
Power supply voltage	V	230	
Frequency	Hz	50	
Absorbed electrical power (Q_n max)	W	93	113
Absorbed electrical power (Q_n min)	W	67	65
Absorbed electrical power in stand-by	W	4	6
Electrical protection degree	IP	X5D	
COMBUSTION DATA			
Smoke temperature at Max/Min flow (80-60°C)	°C	80,0 / 51,8	74,5 / 58,2
Smoke temperature at Max/Min flow (50-30°C)	°C	51,3 / 39,5	52,3 / 44,2
Smoke flow Max/Min	g/s	14,5 / 1,2	16,5 / 2,2
	kg/h	52,2 / 4,32	59,4 / 7,92
CO_2 at Max/Min flow rate (G20)	%	9,2 / 9,2	9,3 / 9,1
CO_2 at Max/Min flow rate (G31)	%	10,2 / 10,2	10,0 / 10,0
NOx measured [3]	mg/kWh	15	34
Gas consumption at Max/Min flow rate (G20)	m^3/h	2,64 / 0,26	3,68 / 0,48
Gas consumption at Max/Min flow rate (G31)	kg/h	1,94 / 0,27	2,7 / 0,43
Gas supply pressure (G20)	mbar	20	
	kPa	2	
Gas supply pressure (G31)	mbar	37	
	kPa	3,7	
NOZZLES - GAS			
Number of nozzles	No.	2	2
Nozzle diameter (G20)	mm	3,2 / 3,4	4 / 4,5
Nozzle diameter (G31)	mm	2,4 / 2,9	2,8 / 3,4
TEMPERATURE - PRESSURE			
Max operating temperature (T max)	°C	85	
Heating adjustment range	°C	20÷80	
Domestic hot water adjustment range	°C	10÷60	
Max operating pressure (PMS)	bar	3	
	kPa	300	
Water content in boiler	l	5,1	5,8

[1] NOx class according to EN 15502-1:2021+A1:2023
[2] Heat input calculated using the lower heat output (Hi)
[3] Calculated with upper calorific value (Hs)
[4] Only in case of combination with an external boiler followed by the power established for atmospheric and condensing boilers (e.g. 25 kW)

Lower Heat Output (Hi):
G20 Hi. *9.45 kW/m^3 (15°C, 1013 mbar) -* ***G31 Hi.*** *12.87 kW/kg (15°C, 1013 mbar)*

5.7 Main water circuit

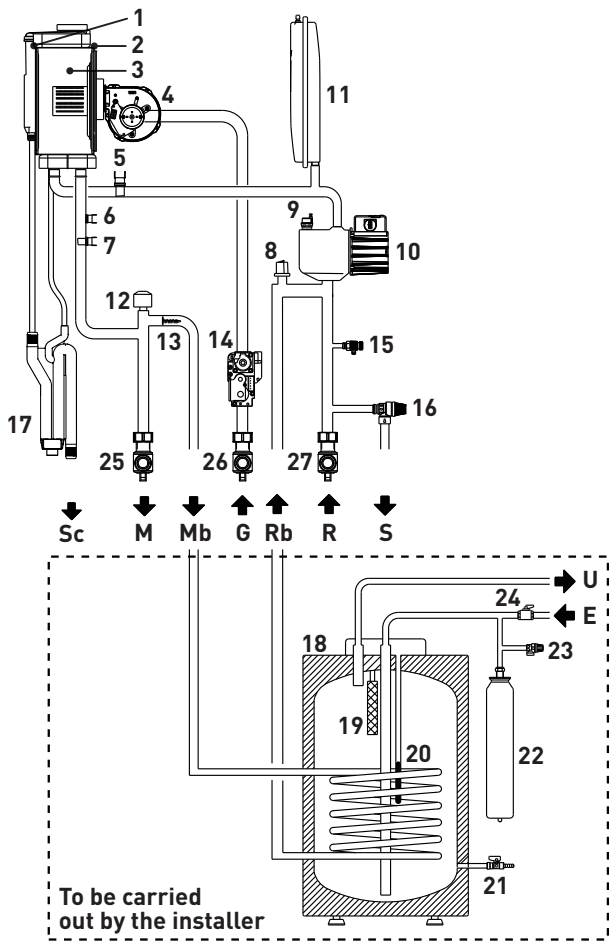


Fig. 10

KEY:

M	*System flow*
R	*System return*
MB	*Hot water tank delivery*
RB	*Hot water tank return*
SVS	*Safety valve outlet*
G	*Gas supply*
U	*Domestic hot water outlet*
E	*Domesti hot water inlet*
SC	*Condensate outlet*

1 *Exhaust sensor **(SF)***
2 *Heat exchanger*
3 *Combustion chamber*
4 *Fan **(V)***
5 *Boiler return probe **(SRC)***
6 *Safety thermostat **(TS)***
7 *Boiler delivery sensor **(SMC)***
8 *Water pressure transducer **(TPAC)***
9 *Automatic bleed valve*
10 *Pump **(PI)***
11 *Expansion vessel **(VE)***
12 *Diverter solenoid valve **(EVD)***
13 *Automatic by-pass*
14 *Gas valve*
15 *Boiler drain*
16 *Relief valve **(FS)***
17 *Condensate siphon outlet*
18 *Storage tank*
19 *Magnesium anode*
20 *Domestic hot water sensor*
21 *Hot water tank drain valve*
22 *Domestic hot water expansion vessel*
23 *Hot water tank relief valve*
24 *Domestic hot water inlet cock*
25 *System flow cock*
26 *Gas cock*
27 *System return cock*

5.8 Sensors

The sensors installed have the following characteristics:
- NTC R25°C (delivery) sensor; 10kΩ β25°-85°C: 3435
- domestic hot water sensor NTC R25°C; 10kΩ β25°-85°C: 3435
- External temperature sensor NTC R25°C; 10kΩ β25°-85°C: 3435

TR	0°C	1°C	2°C	3°C	4°C	5°C	6°C	7°C	8°C	9°C	Resistance R (Ω)
0°C	27279	26135	25044	24004	23014	22069	21168	20309	19489	18706	
10°C	17959	17245	16563	15912	15289	14694	14126	13582	13062	12565	
20°C	12090	11634	11199	10781	10382	9999	9633	9281	8945	8622	
30°C	8313	8016	7731	7458	7196	6944	6702	6470	6247	6033	
40°C	5828	5630	5440	5258	5082	4913	4751	4595	4444	4300	
50°C	4161	4026	3897	3773	3653	3538	3426	3319	3216	3116	
60°C	3021	2928	2839	2753	2669	2589	2512	2437	2365	2296	
70°C	2229	2164	2101	2040	1982	1925	1870	1817	1766	1717	
80°C	1669	1622	1577	1534	1491	1451	1411	1373	1336	1300	
90°C	1266	1232	1199	1168	1137	1108	1079	1051	1024	998	
100°C	973										

Correspondence of Temperature Detected/Resistance
Examples of reading:
TR=75°C → R=1925Ω
TR=80°C → R=1669Ω.

5.9 Expansion vessel

Description	U/M	Edea T	
		25	35
Total capacity	l	9,0	
Prefilling pressure	kPa	100	
	bar	1,0	
Useful capacity	l	5,0	
Maximum system content (*)	l	124	

(*) Conditions of:
Average operating temperature 70°C (with high temperature system 80/60°C)
Start temperature at system filling 10°C.

CAUTION

- For systems with water content exceeding the maximum system content (as indicated in the table) an additional expansion vessel must be fitted.
- The difference in height between the relief valve and the highest point of the system cannot exceed 6 metres. If the difference is greater than 6 metres, increase the prefilling pressure of the expansion vessel and the system when cold by 0.1 bar for each meter increase.

5.10 Circulation pump

The flow-head performance curve available for the heating system is shown in the graph below.

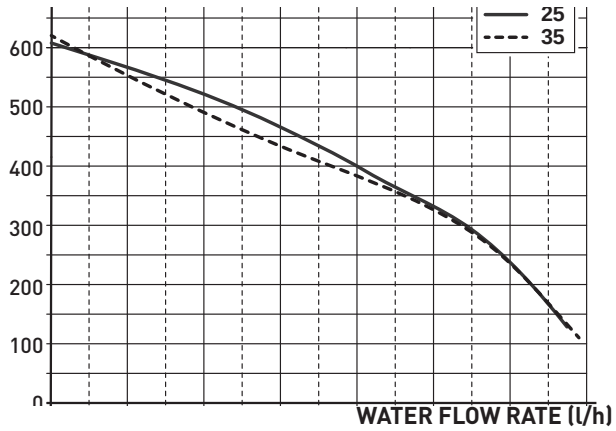


Fig. 11

The flow-head performance curve available for the remote hot water tank coil is shown in the graph below.

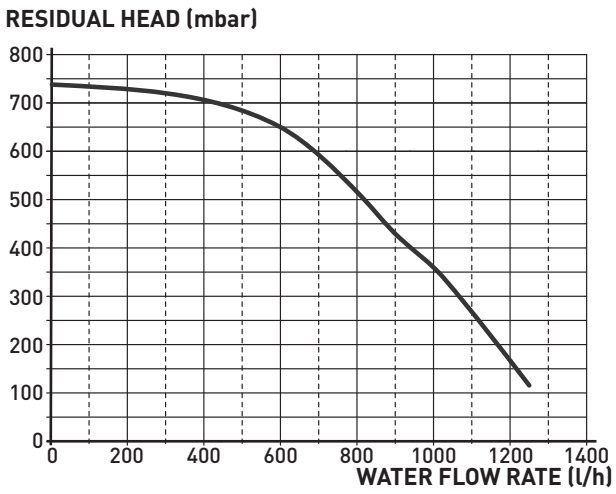


Fig. 12

CAUTION

The appliance is equipped with a by-pass which ensures water circulation in the boiler when thermostatic valves are used in the system. The heating system design should incorporate a room thermostat. Thermostatic radiator valves fitted to all radiators except the room where the room thermostat is fitted. Properties with floor areas exceeding 150squre metres should be zoned.

5.11 Control panel

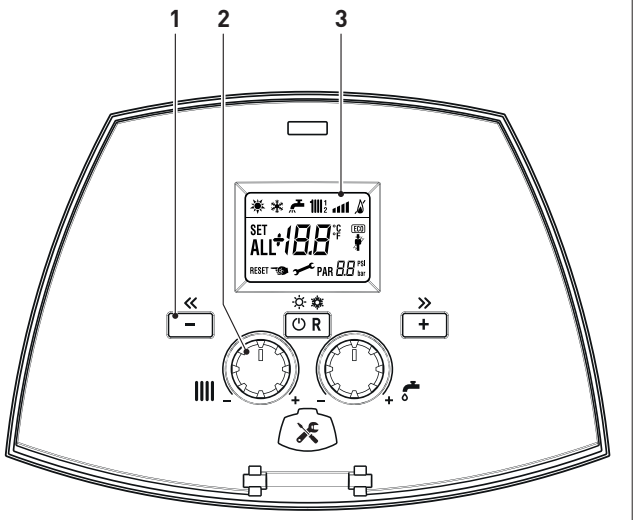


Fig. 13

1 FUNCTIONAL BUTTONS

R If pressed once or more times for at least 1 second during normal operation, this button allows the user to change the appliance's operating mode in a cyclical sequence (Stand-by – Summer – Winter). If the appliance is experiencing a resettable fault, it can be used to unlock it.

– This allows the engineer to scroll through the parameters or decrease the values.

+ This allows the engineer to scroll through the parameters or increase the values.

Programming connector cover plug.

2 KNOBS

The heating knob allows the user to set the flow temperature to between 20 and 80°C during normal operation.

The domestic hot water knob allows the user to set the domestic hot water temperature to between 10 and 60°C during normal operation.

NOTE: *pressing any button for more than 30 seconds causes a fault to appear on the display (ALL 42) without preventing the appliance's operation. The warning disappears when the button is released.*

3 DISPLAY

"SUMMER". This symbol appears when the boiler is operating in "Summer" mode or if only the domestic hot water mode is enabled via the remote control.

"WINTER". The symbol is present in the "Winter" operating mode, or with the remote control if both the domestic hot water and heating modes are enabled. The flashing and symbols signal that the "chimney sweep" function is active.

RESET **"RESET REQUEST"**. The wording indicates that, once the fault has been repaired, the appliance's normal operation can be reset by pressing the R button.

"DOMESTIC HOT WATER". This symbol is present during a DHW request or during the "chimney sweep function" It flashes during the selection of the domestic hot water set point.

"HEATING". This symbol lights up during heating operation or during the "chimney sweep function It flashes during the selection of the heating set point.

"LOCKOUT" DUE TO NO FLAME.

"FLAME LIT".

"POWER LEVEL". Indicates the power level at which the appliance is operating.

PAR **"PARAMETER"**. This indicates when the engineer is in parameter setting/display, or "info" or "counter", or in "activated alarms" (history).

ALL **"ALARM"**. This indicates that a fault has occurred. The number specifies the cause which generated the alarm.

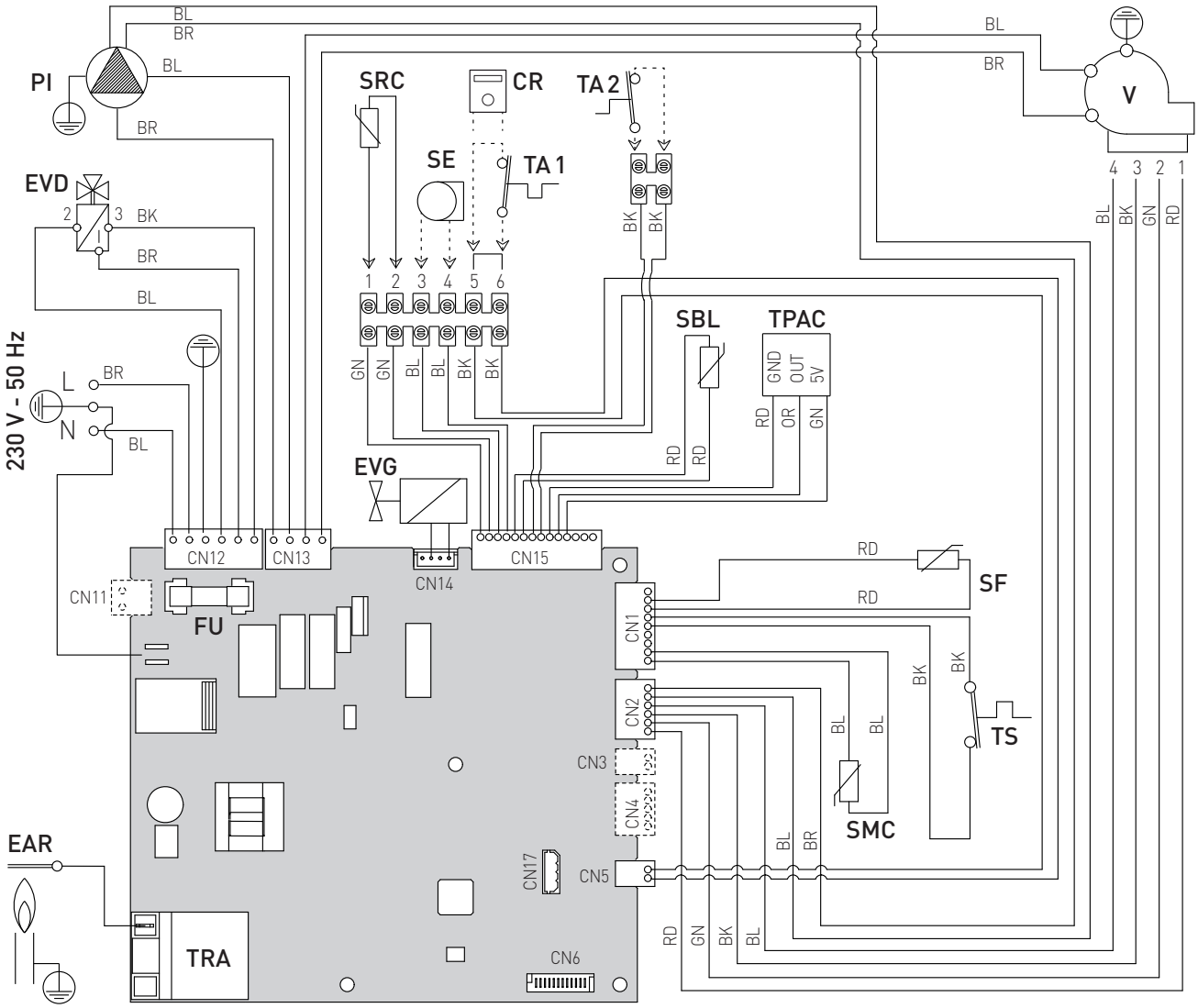
"CHIMNEY SWEEP". This indicates that the "chimney sweep function" has been activated.

bar **"HEATING SYSTEM PRESSURE"**. Display of heating system pressure.

ECO **"ECO", ALTERNATIVE ENERGY SOURCES**. Where active, it indicates that there is a solar system available.

"MAINTENANCE REQUEST". If active, it indicates that it is time to perform maintenance on the appliance.

5.12 Wiring diagram



L	*Live / Live*	***SRC***	*Boiler return probe*	***BL***	*Blue*
N	*Neutral*	***TS***	*Safety thermostat*	***BR***	*Brown*
FU	*Fuse (3.15AT) (3.15AT - 250V)*	***SF***	*Exhaust sensor*	***BK***	*Black*
TRA	*Ignition transformer*	***SBL***	*Hot water tank sensor (SB)*	***G***	*Green*
PI	*Pump*	***EVD***	*Diverter solenoid valve*	***OR***	*Orange*
V	*Fan*	***TPAC***	*Water pressure transducer*	***R***	*Red*
EAR	*Ignition / Detection electrode*	***TA1-TA2***	*Room thermostat*		
EVG	*Gas solenoid valve*	***SE***	*External temperature sensor*		
SMC	*Boiler delivery sensor*	***CR***	*Remote control (instead of TA)*		

Note: Volt free external controls (TA) are connected to terminals 5 and 6 after removal of the link.

Fig. 14

CAUTION
Installer must:

- To mount an omnipolar residual-current circuit breaker conforming to EN standards **that allows for completely disconnecting the system in overvoltage category III conditions (that is, with a gap of at least 3 mm between the open contacts)**.
- Keep power cables always separate from signal cables. To avoid interference problems always use shielded signal cables.
- Respect the connections L (Live) - N (Neutral).
- Connect the earth wire to an effective earthing system.

CAUTION
Installer must:

- The system's power connection is of the "Y" type, so the power cable may only be replaced by the manufacturer or the service department.

CAUTION
Sime declines all responsible for any injury or damage to persons, animals,or property as a result of failure to provide adequate earthing of the appliance.

DO NOT
Do not use water pipes for earthing the appliance.

The Benchmark Scheme

Benchmark places responsibilities on both manufacturers and installers.
The purpose is to ensure that customers are provided with the correct equipment for their needs, that it is installed, commissioned and serviced in accordance with the manufacturer's instructions by competent persons and that it meets the requirements of the appropriate Building Regulations.
The Benchmark Checklist can be used to demonstrate compliance with Building Regulations and should be provided to the customer for future reference.
Installers are required to carry out installation, commissioning and servicing work in accordance with the Benchmark Code of Practice which is available from the Heating and Hotwater Industry Council who manage and promote the Scheme.

INSTALLATION AND SERVICING INSTRUCTIONS

Installer Checklist

Please remember to carry out the following checks after installation. This will achieve complete customer satisfaction, and avoid unnecessary service calls. A charge will be made for a service visit where the fault is not due to a manufacturing defect.
Has a correct by-pass been fitted and adjusted?
Has the system and boiler been flushed?
Is the system and boiler full of water, and the correct pressure showing on the pressure gauge?
Is the Auto Air Vent open?
Has the pump been rotated manually?
Is the gas supply working pressure correct?
Is the boiler wired correctly? (See installation manual).
Has the D.H.W. flow rate been set to the customer requirements?
Has the customer been fully advised on the correct use of the boiler, system and controls?
Has the Benchmark Checklist in the use and maintenance section of this manual, been completed?

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6 INSTALLATION

CAUTION
The appliance must only be installed by the **Sime** Technical Service or by qualified professionals **who MUST wear** suitable protective safety equipment.

6.1 Receiving the product

Edea T appliances are delivered in a single unit protected by cardboard packaging.

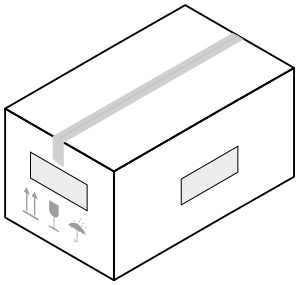


Fig. 15

The plastic bag found inside the packaging contains the following:
- Installation, use and maintenance manual
- Paper template for boiler installation
- Certificate of warranty
- Hydrostatic test certificate
- Hanging Bracket
- Connection pack

DO NOT
To leave packaging material around or near children since it could be dangerous. Dispose of it as prescribed by legislation in force.

6.2 Dimensions and weight

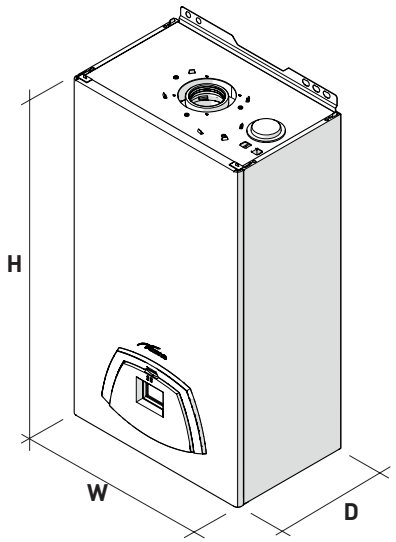


Fig. 16

Description	Edea T	
	25	35
W (mm)	400	
D (mm)	260 (*)	
H (mm)	700	
Weight (kg)	27,4	29,9

(*) Without removable panel.

6.3 Handling

Once the packaging has been removed, the appliance is moved manually by tilting and lifting it, gripping the "solid" parts such as the base and structure as indicated in the figure.

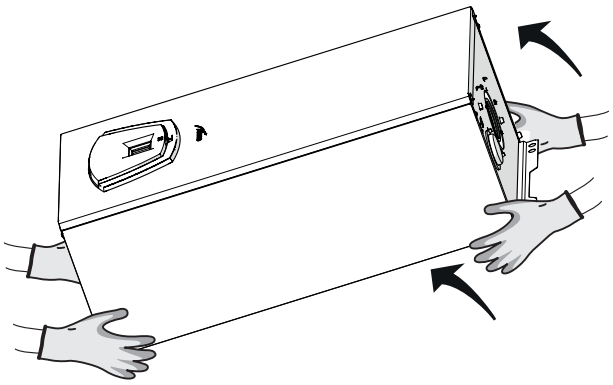


Fig. 17

WARNING
Use suitable tools and personal protection when removing the packaging and when handling the appliance. Observe the maximum weight that can be lifted per person.

6.4 Ventilation requirements

The room where the appliance is to be installed must comply with all applicable technical and legal regulations. It must be equipped with suitably sized vents for a "TYPE B" installation. Moreover, it must be made in a way that prevents noise as far as possible during the appliance's operation.
The minimum temperature of the installation room must NOT be lower than **-5 °C**.

CAUTION

- Make sure that the appliance is protected against direct sunlight, the weather and damp and wet conditions.
- Before assembling the appliance, the installer **MUST** make sure that the wall supports the weight.
- Remember to consider the space needed in order to access the safety/adjustment devices and to carry out maintenance interventions (see Fig. 18).

APPROXIMATE MINIMUM DISTANCES

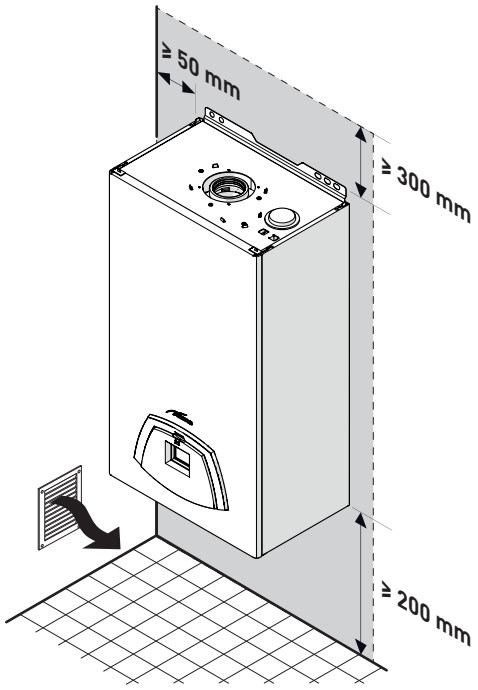


Fig. 18

CAUTION

- For **boilers with coaxial flue ducts**, it is not necessary to maintain minimum distances from flammable walls, as during normal operation of the boiler, the temperature of the duct never reaches high levels (the temperature difference between the wall and the environment never exceeds 60 K).
- For **boilers with separate intake and exhaust ducts**, in the case of flammable walls and penetrations, an insulating protection should be placed between the wall and the flue duct.

6.5 New installation or installation of a replacement appliance

The boiler must be installed in a fixed location and only by specialized and qualified person in compliance with all instructions contained in this manual.
The installation of this boiler must be in accordance with the relevant requirements of the current Gas Safety (installation and use), the local building regulations and I.E.E. wiring regulations. Detailed recommendations for air supply and fluing are given in BS5440.
The following notes are for general guidance: it is not necessary to have a purpose provided air vent in the room or compartment in which the appliance is installed.

CAUTION

It is a condition of the warranty that the boiler is installed in accordance with the instructions in this manual. The boiler must be registered with Gas Safe Register, the Benchmark record must be completed and the boiler is serviced annually and recorded in this manual.

CAUTION

If the domestic water supply is metered or should a water meter be added at a later time, a small expansion vessel should be included in the domestic water pipework.

6.6 Cleaning the system

Before connecting the boiler it is recommended that the system be flushed in accordance to BS 7593, to eliminate any foreign bodies that may be detrimental to the operating efficiency of the appliance.

CAUTION

Failure to flush and add inhibiter to the system may invalidate the warranty.

6.7 Characteristics of feedwater and system treatment

- All recirculatory systems will be subject to corrosion unless an appropriate water treatment is applied. This means that the efficiency of the system will deteriorate as corrosion sludge accumulates within the system, risking damage to pump and valves, boiler noise and circulation problems.
- Before connecting the boiler the associated central heating system must be flushed in accordance with the guidelines given in BS 7593 "Treatment of water in domestic hot water central heating systems".
- **Sime** recommends only the use of FERNOX products for the flushing and final treatment of the system water. This is particularly important in hard water areas. Failure to flush and add inhibitor to the system may invalidate the appliance warranty. Artificially softened water must not be used to fill the heating system. Naturally soft water areas can corrode aluminium heat exchangers. Adding Fernox F1 or Mb-1 will guard against corrosion.
- **Sime** promote the fitting of TF1 System filter with any new boiler installation.
- It is important to check the inhibitor concentration after installation, system modification and annually on a service visit in accordance with the manufacturer's instructions. (Note on benchmark service record this has been complete). Test kits are available from inhibitor stockists; the return of the Fernox test report should be kept with the Benchmark to validate warranty.
- Where Central heating systems are susceptible to freezing a mixture of inhibitor and anti-freeze should be added in accordance with the DWTA code of practice and the Manufactures instructions.
- The addition of sealing agents to system water is not recommended because deposits can be left in heat exchanger causing circulation issues.

6.8 Boiler installation

Edea T boilers leave the factory with a paper template for installation onto a solid wall.
For installation:

- position the paper template (1) on the wall (2) where the boiler is to be mounted
- make the holes, remove the template (1) and insert the expansion plugs (3)
- hook the boiler onto the plugs.

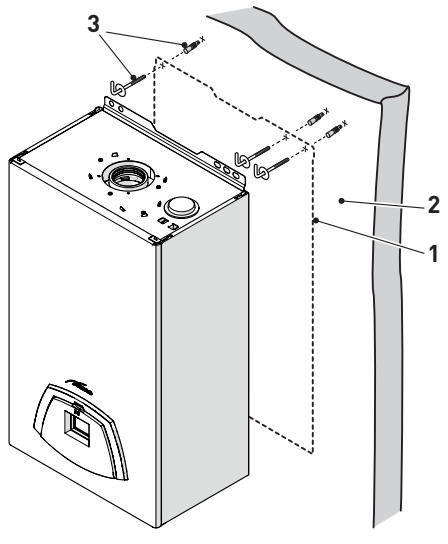


Fig. 19

CAUTION
It is important that the device is perfectly vertical and horizontal. Use a spirit level or other suitable tool to check that it is perfectly vertical and horizontal. Where necessary, insert suitable spacers to install the unit in the correct working position.

CAUTION
The boiler should be located observing the required clearances, and provide safe, adequate service access.

6.9 Plumbing connections

The plumbing connections have the following characteristics and dimensions.

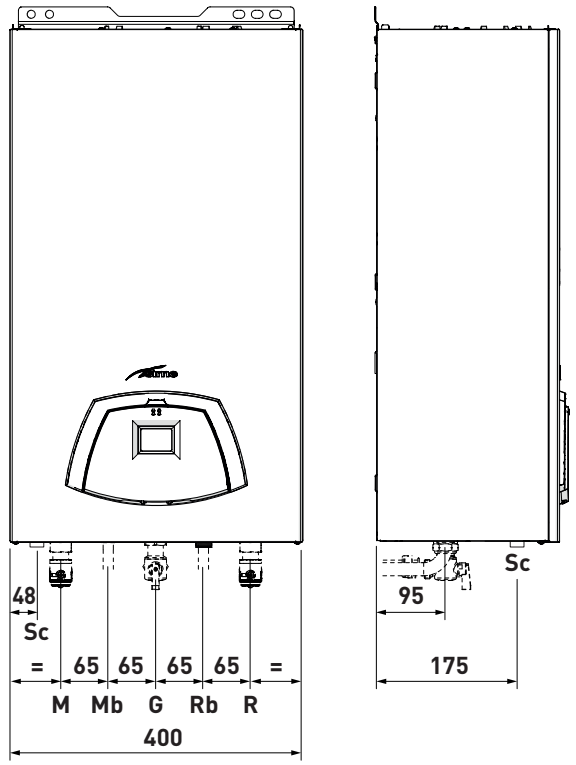


Fig. 20

Description	Edea T	
	25	35
M - System flow	Ø 22 mm	
R - System return	Ø 22 mm	
Mb - Hot water tank delivery	Ø 15 mm	
Rb - Hot water tank return	Ø 15 mm	
G - Gas cock connection	Ø 15 mm	
Sc - Condensate outlet	Ø 20 mm	

WARNING
The discharge outlet of each safety valve installed must be connected to an appropriate collection and evacuation system. The manufacturer shall not be held liable for any flooding or damages to electrical equipment caused by the safety valve's intervention.

6.9.1 Plumbing accessories (optional)

To facilitate plumbing and gas connections to the systems, the accessories as shown in the table below are available and are to be ordered separately from the boiler.

DESCRIPTION	CODE
Installation plate	8075441
Connection protection kit (for models 30-40 kW)	8094530

NOTE: *kit instructions are supplied with the accessory itself or are to be found on the packaging.*

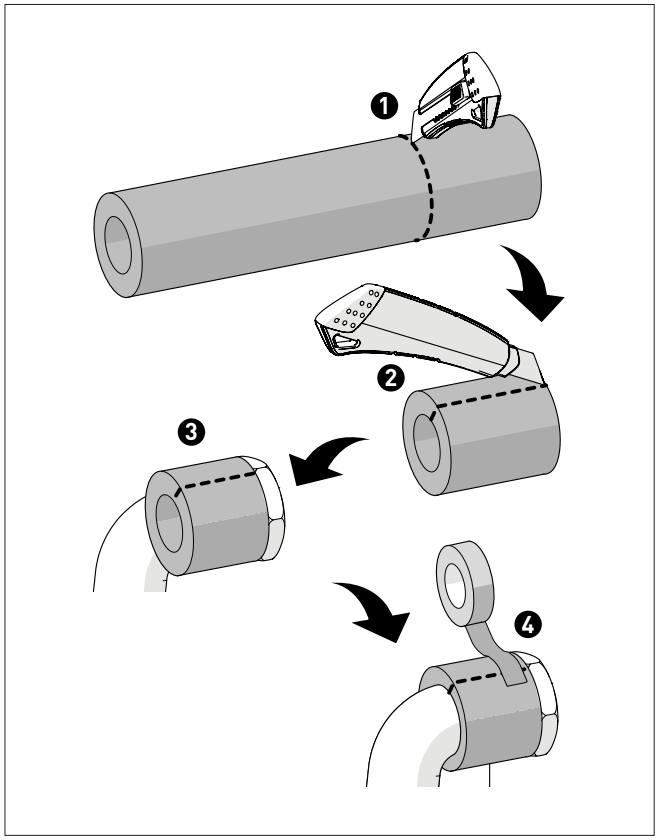
6.10 Condensate outlet/collection

To ensure safe disposal of the condensate produced by the flue gases, reference should be made to BS 6798:2014.
The boiler incorporates a condensate trap which has a seal of 75 mm, therefore no additional trap is required.
The condensate trap can be filled prior to the installation of the flue by carefully pouring 1 litre of water into the exhaust connection.
NOTE: All pipework must have a continuous fall from the boiler and must be resistant to corrosion by condensate, copper or steel is NOT suitable. It should be noted that the connection of a condensate pipe to a drain may be subject to local building control requirements (Dealing with Condensate - see Appendix 1).

WARNING
Using the appliance with an empty siphon may pose a risk of poisoning due to the possible escape of exhaust gases.

6.11 Thermal insulation of pipes

CAUTION
Once the installation operations have been completed, the exposed parts of pipes and fittings must be isolated using a suitably sized thermal insulation pipe.



6.12 Gas supply

Edea T boilers leave the factory configured for G20 gas and can also work with G31 gas. It is necessary to select parameter **"01"** (see "**Parameter setting and display**"), set it on the basis of the type of gas to be used and replace the nozzles (consult the table in the "**Circuit Board Replacement**" paragraph).
If changing the type of gas to be used, carry out the entire appliance **"COMMISSIONING"** phase (page 40).
As a condition of the warranty and to ensure correct operation and efficiency, it is important that the boiler is serviced every 12 months, within 30 days of the anniversary of the installation date ensure the required information is recorded in the Gas Boiler System Service Interval Record (page 54) (Benchmark).
The gas connection must be made using seamless steel or copper tube.
Where the piping has to pass through walls, a suitable insulating sleeve must be provided.
When sizing gas piping, from the meter to the boiler, take into account both the volume flow rates (consumption) in m3/h and the relative density of the gas in question.
The sections of the piping making up the system must be such as to guarantee a supply of gas sufficient to cover the maximum output available from the boiler, limiting pressure loss between the gas meter and any apparatus being used to not greater than 1.0 mbar for family II gases (natural gas).
An adhesive data badge is sited inside the front panel; it contains all the technical data identifying the boiler and the type of gas for which the boiler is arranged.

WARNING
Once installation has been completed, check that the joints are air tight as indicated in the installation Standards.

CAUTION
It is recommended that the gas line has a suitable filter.

CAUTION
If the gas supply is changed from G20 to G31, mark the box on the TECHNICAL DATA PLATE.

G31 - 37 mbar	X ←

6.13 Connecting the flue

CAUTION

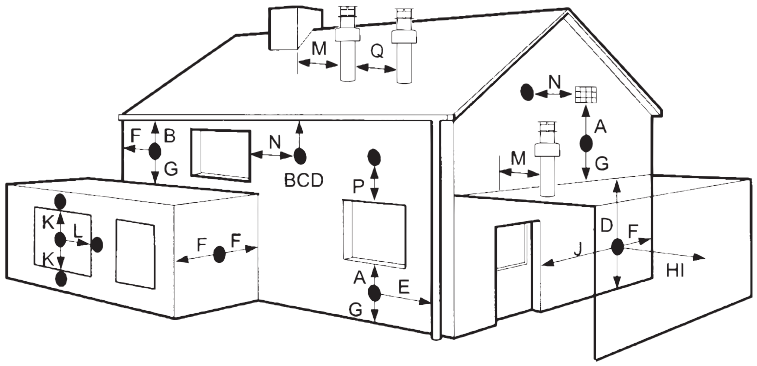
– The appliance must be installed as a room sealed device and unless stated in writing from the manufacturer, in accordance with the current edition of BS 5440-1. The information shown in this manual is for guidance and parts identification.

CAUTION

– Prior to fitting the flue, the condensate trap can be filled by carefully pouring water into the exhaust section of the flue connection.

– The flue ducts can be made of plastic, resistant up to a maximum temperature of 120°C, or stainless steel.

6.13.1 Flue Terminal Positions



Terminal position		Minimum spacing	
A	Directly below an openable window, air vent or any other ventilation opening	300 mm	12 in
B	Below guttering, drain pipes or soil pipes (**)	75 mm	3 in
C/D	Below eaves, balconies or carport roof (*)	200 mm	8 in
E	From vertical drain pipes or soil pipes	75 mm	3 in
F	From internal or external corners	300 mm	12 in
G	Above adjacent ground, roof or balcony level	300 mm	12 in
H	From a boundary or surface facing the boiler	600 mm	24 in
I	From a terminal facing the terminal	1,200 mm	48 in
J	From an opening in the carport (eg door, window into dwelling)	1,200 mm	48 in
K	Vertically from a terminal on the same wall	1,500 mm	60 in
L	Horizont. from a terminal on the same wall	300 mm	12 in
M	Horizont. from a vertical terminal to a wall	300 mm	12 in
N	Horizont. from an openable window or other opening	300 mm	12 in
P	Above an openable window or other opening	300 mm	12 in
Q	From an adjacent vertical terminal	600 mm	24 in

(*) This dimension to be used with ventilated soffits. With unvented soffits this can be reduced to 75 mm and further reduced to 25 mm when a flue shield is used to protect from the effects of heat and condensation.

(**) This can be reduced to 25 mm but it may be necessary to protect the surfaces from the effects of heat and condensation.

– If the terminal discharges into a pathway or passageway check that combustion products will not cause nuisance andthat the terminal will not obstruct the passageway.

– Where the lowest part of the terminal is fitted less than 2 m (78 in) above ground, above a balcony or above a flat roof to which people have access, the terminal MUST be protected by a purpose designed guard.

– The air inlet/outlet flue duct MUST NOT be closer than 10 mm (0.4 in) to combustible material.

– In certain weather conditions the terminal may emit a plume of steam. This is normal but positions where this would cause a nuisance should be avoided.

Fig. 21

6.13.2 Installation of coaxial flues 60/100mm – 80/125mm

Coaxial flue kits that are supplied separately. The diagrams below, illustrate some examples of fluing options allowed and the maximum lengths than can be achieved. It is essential that a flue gas analysis point is made available directly above the boiler.

IMPORTANT:
- The insertion of each additional 90° bend with a diameter of 60/100 (code 8095850) reduces the available section by 1.5 meters.
- The insertion of each additional 90° bend with a diameter of 80/125 (code 8095870) reduces the available section by 2 meters.
- Each additional 45° curve installed a diameter of 60/100 (code 8095950) reduces the available length by 1.0 metres.
- Each additional 45° curve installed a diameter of 80/125 (code 8095970) reduces the available length by 1.0 metres.

HORIZONTAL FLUES MUST BE LEVEL

NOTE: Before connecting accessories, it is always advisable to lubricate the internal part of the gaskets with silicon products. Avoid using oils and greases.

Model	Length of pipe Ø 60/100			Length of pipe Ø 80/125		
	H (m)	V (m)		H (m)	V (m)	
		Min.	Max.		Min.	Max.
EDEA 25 T	6	1.3	8	12	1.2	15
EDEA 35 T	6	1.3	8	12	1.2	15

LIST OF ø 60/100 ACCESSORIES

1a Coaxial duct kit L. 790 code 8096250
1b Telescopic coaxial duct kit L. 695 code 8098605
2a Extension L. 1000 code 8096150
2b Extension L. 500 code 8096151
3 Vertical extension L. 140 with coupling code 8086950
5 Tile for joint code 8091300
6 Terminal for roof exit L. 1285 code 8091212 (includes 8086950)

LIST OF ø 80/125 ACCESSORIES

1 Coaxial duct kit L. 785 code 8096253
2a Extension L. 1000 code 8096171
2b Extension L. 500 code 8096170
3 Adapter for ø 80/125 code 8093150
5 Tile for joint code 8091300
6 Terminal for roof exit L. 1285 code 8091212 (includes 8093150)

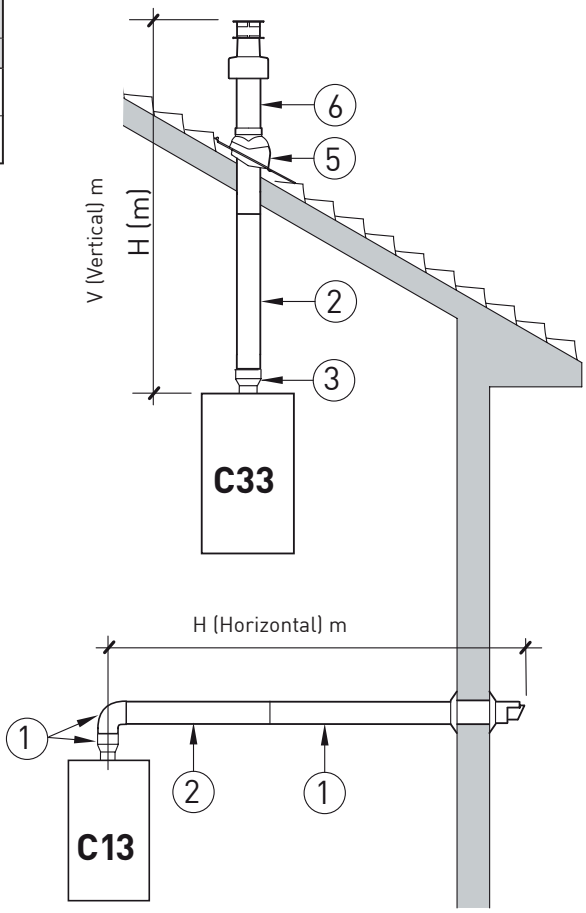
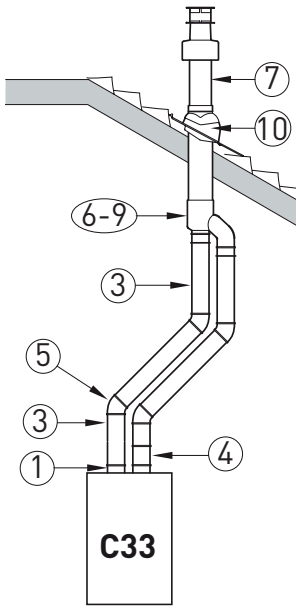
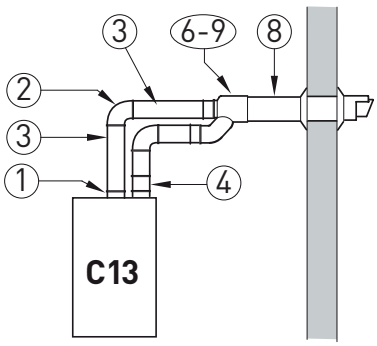


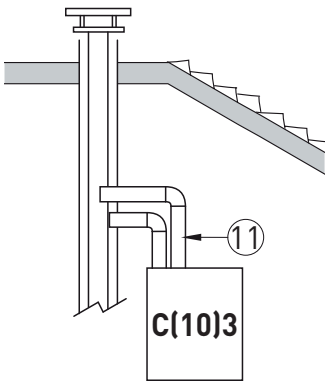
Fig. 22

6.13.3 Installation of separate ducts 80mm

The boiler can be installed with separate air inlet and exhaust ducts. The figure below illustrate some examples of the fluing options allowed and the associated losses of the accessories. The total load loss is the sum of the load losses of the accessories used. The maximum load loss **must not exceed 16.5 mm H20** for **Edea 25 T** and **30.0 mm H20** for **Edea 35 T**. The maximum flue length **must not exceed 25 m** inlet and exhaust.







NOTE:
Before connecting accessories, it is always advisable to lubricate the internal part of the gaskets with silicon products. Avoid using oils and greases.

	EDEA 25 T Load loss - mm H_2O		EDEA 35 T Load loss - mm H_2O	
	Inlet	Exhaust	Inlet	Exhaust
1 Air-flue split pipe system (with take-off point), code 8093050	1,5	0,5	1,9	0,8
2 90° curve M-F (6 pieces), code 8077450	0,20	0,25	0,30	0,4
3a Extension W. 1000 mm (6 pieces), code 8077351	0,15	0,15	0,25	0,25
3b Extension W. 500 mm (6 pieces), code 8077350	0,1	0,1	0,2	0,2
4 Extension W. 135 mm (with take-off point), code 8077304	0,1	0,1	0,1	0,1
5 45° curve M-F (6 pieces), code 8077451	0,15	0,15	0,25	0,25
6 Manifold 80/125, code 8091400	0,3	0,6	0,4	0,7
7 Roof outlet terminal W. 1390 mm, code 8091204 (*)	0,80	0,10	1,5	0,2
8 Inlet/outlet fitting Ø 80/125 mm, code 8091210	1,2	0,8	1,4	1,0
9 Inlet/ exhaust fitting, code 8091401	1,1	0,8	1,5	1,1
10 Tile with joint, code 8091300t	-	-	-	-
11a Duct kit C(10)3, code 6296550	-	1,2	-	-
11b Duct kit C(10)3, code 6296543	-	1,2	-	2,2
(*) This loss includes the losses with use of item 13				

Fig. 23

6.13.4 Coaxial duct (Ø 60/100mm and Ø 80/125mm)

Coaxial accessories

Description	Code	
	Ø 60/100 mm	Ø 80/125 mm
Coaxial duct kit	8096250	8096253
Extension W. 1000 mm	8096150	8096171
Extension W. 500 mm	8096151	8096170
Vertical extension W. 140 mm with smoke analysis take-off point	8086950	-
Adapter for Ø 80/125 mm	-	8093150
Additional 90° curve	8095850	8095870
Additional 45° curve	8095950	8095970
Tile with joint	8091300	8091300
Roof outlet terminal W. 1285 mm	8091205 - 8091212	

Load loss - Equivalent lengths

Model	Leq (linear metres)	
	Ø 60/100 mm	Ø 80/125 mm
90° curve	1,5	2
45° curve	1	1

With a Ø 60/100 mm coaxial outlet duct exceeding 2 metres, remove, by turning it clockwise, the smoke outlet diaphragm (1) positioned as shown in the picture. With a Ø 80/125 mm coaxial outlet duct exceeding 4 metres, remove, by turning it clockwise, the smoke outlet diaphragm (1) positioned as shown in the picture.

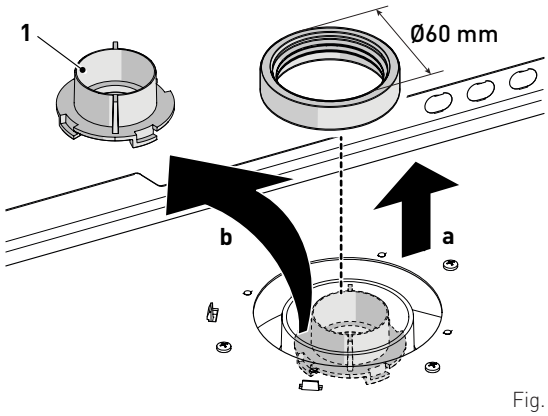


Fig. 24

Minimum-Maximum Lengths

Model	Duct Length Ø 60/100				Duct Length Ø 80/125			
	W Horizontal (m)		H Vertical (m)		W Horizontal (m)		H Vertical (m)	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Edea 25 T	-	6	1,3	8	-	12	1,2	15
Edea 35 T	-	6	1,3	8	-	12	1,2	15

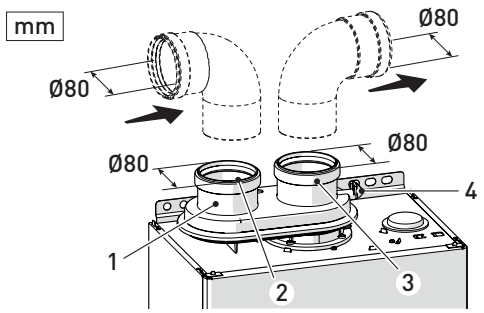
6.13.5 Separate ducts (Ø 60mm and Ø 80mm)

Constructing outlets for separate ducts indicates the use of the "air-smoke split pipe system". This is to be ordered separately from the boiler and when connected to the other accessories, from those listed in the table below, completes the smoke-outlet/ combustion air inlet assembly.

Separate accessories

Description	Code	
	Diameter Ø 60 (mm)	Diameter Ø 80 (mm)
Air-smoke split pipe system (without take-off point)	8093060	-
Air-smoke split pipe system (with take-off point)	-	8093050
90° curve M-F (6 pieces)	8089921	8077450
90° curve M-F (with take-off point)	8089924	-
M-F 60/80 reduction	8089923	-
M-F 80/50 reducer	-	8089941
Extension W. 1000 mm (6 pieces)	8089920	8077351
Extension W. 500 mm (6 pieces)	-	8077350
Extension W. 135 mm (with take-off point)	-	8077304
Wall outlet terminal	8089541	8089501
Internal and external ring nut kit	8091510	8091500
Inlet terminal	8089540	8089500
45° curve M-F (6 pieces)	8089922	8077451
Manifold	8091400	
Tile with joint	8091300	
Roof outlet terminal W. 1390 mm	8091204	
Inlet/outlet fitting Ø 80/125 mm	-	8091210
Inlet/outlet fitting Ø 80/125 mm	-	8091401
Duct kit C(10)3 **Edea 25 T**	-	6296550 (GPL)
	-	6296543 (Methane)
Duct kit C(10)3 **Edea 35 T**	-	6296543

Twin flue adaptor



1 *Twin flue adaptor with flue gas analysis points*
2 *Air inlet*
3 *Exhaust outlet*
4 *Take-off point for smoke analysis*
5 *Ø80/50 reducer*

NOTE: the ducts can be reduced from Ø80 to Ø50 by using the reducer with code 8089941, to be ordered separately.

CAUTION

- **The maximum total length of the ducts**, obtained by adding the lengths of the inlet and outlet pipes, is determined by the load losses of the individual accessories used and **must not exceed 16.5 mm H2O** for **Edea 25 T** and **30.0 mm H2O** for **Edea 35 T**.
- **For all boiler versions, the total extension** must not in any case exceed 25 m (inlet) + 25 m (outlet) for ducts Ø 80 mm. For Ø 60 mm ducts, the total extension must not exceed, respectively, 18 m (suction) + 18 m (discharge) for model **Edea 25 T** and 16 m (suction) + 16 m (discharge) for model **Edea 35 T**, even if the total load loss is below the maximum applicable level.

CAUTION

For model Edea 25 T, beyond a total load loss between discharge and suction of **9 mm H2O**, remove the discharge diaphragm as illustrated in "Fig. 24".
For model Edea 35 T, beyond a total load loss between discharge and suction of **12 mm H2O**, remove the discharge diaphragm as illustrated in "Fig. 24".

Load loss accessory Ø 60 mm

Description	Code	Load loss (mm H_2O)	
		Edea 25 T	
		Inlet	Outlet
Air-smoke split pipe system (without take-off point)	8093060	2,5	0,5
90° curve M-F (6 pieces)	8089921	0,4	0,9
90° curve M-F (with take-off point)	8089924	0,4	0,9
45° curve M-F (6 pieces)	8089922	0,35	0,7
M-F 60/80 reduction	8089923	1,5	1
Extension W. 1000 mm (6 pieces)	8089920	0,4	0,9
Wall outlet terminal	8089541	-	1,2
Inlet terminal	8089540	0,5	-
Roof outlet terminal W. 1390 mm (*)	8091204	0,8	0,1

Description	Code	Load loss (mm H_2O)	
		Edea 35 T	
		Inlet	Outlet
Air-smoke split pipe system (without take-off point)	8093060	2,5	0,5
90° curve M-F (6 pieces)	8089921	0,6	1,4
90° curve M-F (with take-off point)	8089924	0,6	1,4
45° curve M-F (6 pieces)	8089922	0,55	1,2
M-F 60/80 reduction	8089923	1,8	1,2
Extension W. 1000 mm (6 pieces)	8089920	0,6	1,1
Wall outlet terminal	8089541	-	1,6
Wall inlet terminal	8089540	1,1	-
Roof outlet terminal W. 1390 mm (*)	8091204	1,5	0,2

Load loss accessory Ø 80 mm

Description	Code	Load loss (mm H_2O)	
		Edea 25 T	
		Inlet	Outlet
Air-smoke split pipe system (with take-off point)	8093050	0,5	0,5
90° curve M-F (6 pieces)	8077450	0,20	0,25
45° curve M-F (6 pieces)	8077451	0,15	0,15
Extension W. 1000 mm (6 pieces)	8077351	0,15	0,15
Extension W. 500 mm (6 pieces)	8077350	0,1	0,1
Extension W. 135 mm (with take-off point)	8077304	0,1	0,1
Wall outlet terminal	8089501	0,10	0,25
Inlet terminal	8089500	0,10	0,25
Roof outlet terminal W. 1390 mm (*)	8091204	0,80	0,10
Manifold 80/125	8091400	1,2	1,5
Inlet/outlet fitting Ø 80/125 mm	8091210	1,2	1,5
Duct kit C(10)3	6296550	-	1,2
	6296543	-	1,2

Description	Code	Load loss (mm H_2O)	
		Edea 35 T	
		Inlet	Outlet
Air-smoke split pipe system (with take-off point)	8093050	0,7	0,7
90° curve M-F (6 pieces)	8077450	0,30	0,4
45° curve M-F (6 pieces)	8077451	0,25	0,25
Extension W. 1000 mm (6 pieces)	8077351	0,25	0,25
Extension W. 500 mm (6 pieces)	8077350	0,2	0,2
Extension W. 135 mm (with take-off point)	8077304	0,2	0,2
Wall outlet terminal	8089501	0,15	0,50
Inlet terminal	8089500	0,15	0,50
Roof outlet terminal W. 1390 mm (*)	8091204	1,5	0,2
Manifold 80/125	8091400	1,5	1,8
Inlet/outlet fitting Ø 80/125 mm	8091210	1,4	1,7
Duct kit C(10)3	6296550	-	-
	6296543	-	2,2

(*) The losses of the roof outlet terminal at inlet include the manifold code 8091400.
NOTE: for the boiler to operate correctly it is necessary that a minimum distance of 0.50 m of the duct is respected with a 90° inlet curve.

6.13.6 Separate ducts (Ø 50 mm)

The **Edea T** boiler is configured for use in Ø 50 mm discharge flues. To ensure correct boiler operation, parameter PAR31 (long flues) should be set on the basis of the length of the installed flues, as indicated in the table.

PAR 31	Edea 25 T		Edea 35 T	
	Ø 50 mm outlet	Discharge diaphragm	Ø 50 mm outlet	Discharge diaphragm
0	1 x 90° elbow + 6 metres	leave it mounted	1 x 90° elbow + 2 metres	remove
0	1 x 90° elbow + 10 metres	remove	-	-
2	-	-	1 x 90° elbow + 6 metres	remove
4	1 x 90° elbow + 14 metres	remove	1 x 90° elbow + 8 metres	remove
6	1 x 90° elbow + 18 metres	remove	1 x 90° elbow + 10 metres	remove
8	1 x 90° elbow + 22 metres	remove	1 x 90° elbow + 12 metres	remove
10	1 x 90° elbow + 26 metres	remove	-	-
12	1 x 90° elbow + 30 metres	remove	-	-

NOTE: to remove the discharge diaphragm, proceed as illustrated in "Fig. 24".

Example: calculation of the load loss of a **Edea 25 T** boiler.

Accessories Ø 80 mm	Code	Quantity	Load loss (mm H2O)		
			Inlet	Outlet	Total
Extension W. 1000 mm (horizontal)	8077351	7	7 x 0,15	-	1,05
Extension W. 1000 mm (horizontal)	8077351	7	-	7 x 0,15	1,05
90° curve	8077450	2	2 x 0,20	-	0,40
90° curve	8077450	2	-	2 x 0,25	0,50
Wall terminal	8089501	2	0,10	0,25	0,35
TOTAL					**3,35**

(installation permitted since the total of the load loss of the accessories used is less than 15 mm H_2O).

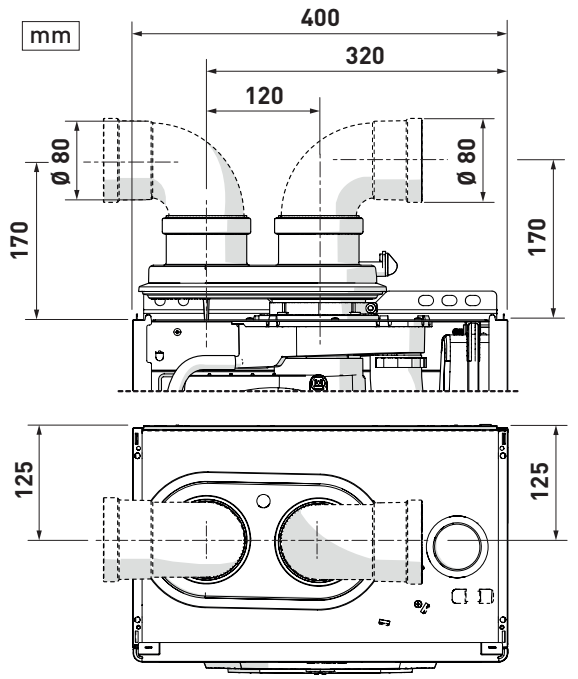


Fig. 25

6.13.7 Separate ducts (Ø 80mm) with duct kit C(10)3

The boiler **Edea T** is designed for use with flue ducts of type C(10)3 and for connection to a collective evacuation system, which maintains a static pressure in the evacuation duct that is 25 Pa higher than that in the combustion air intake duct. The minimum pressure difference between the flue gas outlet and the air intake must be -200 Pa, including the -100 Pa due to wind pressure.

To ensure correct boiler operation, certain parameters should be modified in relation to the power and type of fuel used to power the device.

Set the parameters as specified in the table.

Type	No.	Description	Setting for Edea T			
			25		35	
			METHANE	LPG	METHANE	LPG
PAR	09	Ignition revolutions	-	160	-	110
PAR	21	CH/DHW minimum power	6	12	10	10
Duct kit C(10)3 code			6296543	6296550	6296543	6296543

NOTE: *To modify the parameters in the table, proceed as specified in the paragraph "**Parameter setting and display**". If the kit is installed on the **Edea T** running on LPG, replace the discharge diaphragm with the one present in the kit; to remove the discharge diaphragm, proceed as shown in "Fig. 24".*

The duct kit C(10)3 (pos. 1) can be installed both vertically (A) and horizontally (B).

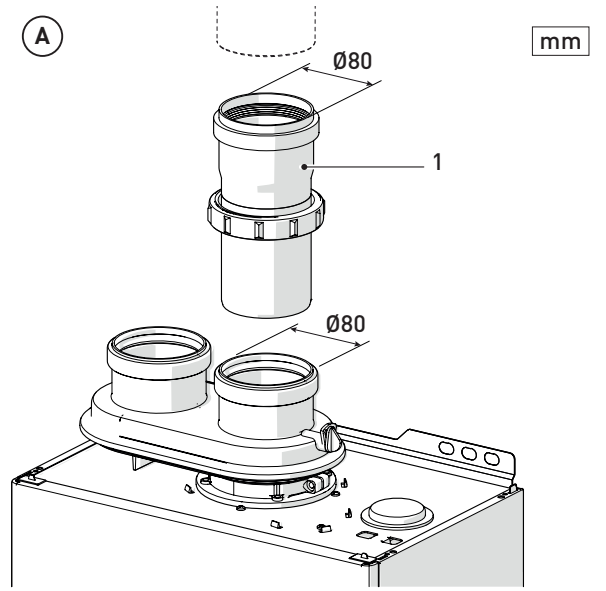


Fig. 26

If it is installed horizontally, when positioning the internal butterfly valve make sure that its fins (2) face upwards, so that they remain closed by effect of their weight. Moreover, it is necessary to remove the siphon (3) and mount the cap (4) supplied with the kit.

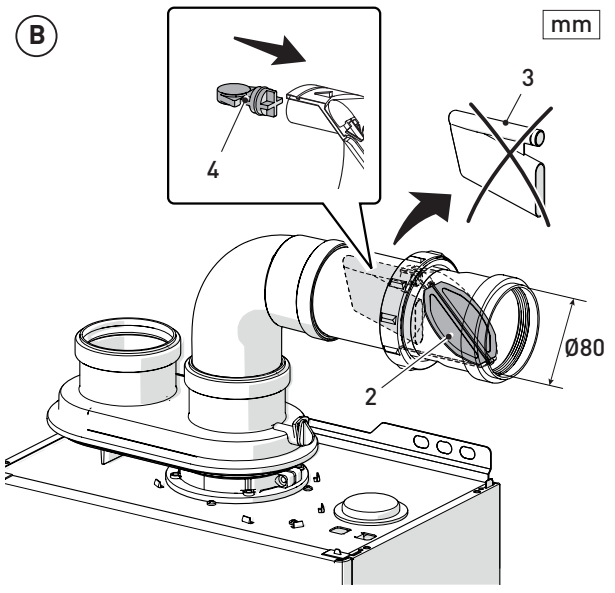


Fig. 27

6.14 Electrical connections and External controls

The boiler is supplied with a mains cable. Connect the boiler to a 230V -50Hz single phase power supply through a fused mains switch, with at least 3 mm spacing between contacts, fused at 3 amps.
If this cable needs to be replaced, an original spare must be requested from **Sime**.
The heating control of the boiler can be achieved by connection of either a volt free room thermostat, room thermostat/timer or a dedicated control (listed below). For connection details see section "External timers and Room Thermostats").

DESCRIPTION	CODE
External sensor kit (ß=3435, NTC 10KOhm at 25°C)	8094101
Remote control HOME (open therm)	8092280
Remote control HOME PLUS (open therm)	8092281

CAUTION
Only qualified persons in compliance with the instructions contained in this manual are permitted to install, commission and maintain this boiler. The installation of this boiler must be in accordance with the relevant requirements of the current Gas Safety (installation and use) Regulation 1998, the local building regulations, and I.E.E. wiring regulations.

CAUTION
It is compulsory:

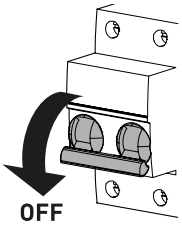
- to use an omnipolar cut-off switch, disconnect switch, in compliance with EN standards (contact opening of at least 3 mm)
- the system's power connection is of the "Y" type, so the power cable may only be replaced by the manufacturer or the service department
- to connect the earth wire to an effective earthing system
- keep power cables always separate from signal cables. To avoid interference problems always use shielded signal cables
- that before any work is done on the boiler, the mains power is disconnected by setting the main system switch to "OFF".

CAUTION
Sime declines all responsible for any injury or damage to persons, animals,or property as a result of failure to provide adequate earthing of the appliance.

DO NOT
Do not use water pipes for earthing the appliance.

WARNING
Before carrying out any interventions described:

- isolate the power supply
- isolate the gas cock
- avoid contact with any hot surfaces.



To make the electrical connections:
– remove the screws (1), pull the front panel (2) forwards and release it from the top by lifting it

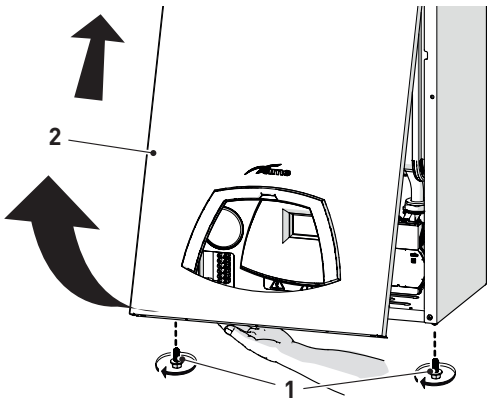


Fig. 28

– remove the screws (3) securing the control panel (4)
– move the panel (4) upwards (a) but keeping it in the side guides (5) to the end of travel
– bring it forwards and down (b) until it is horizontal

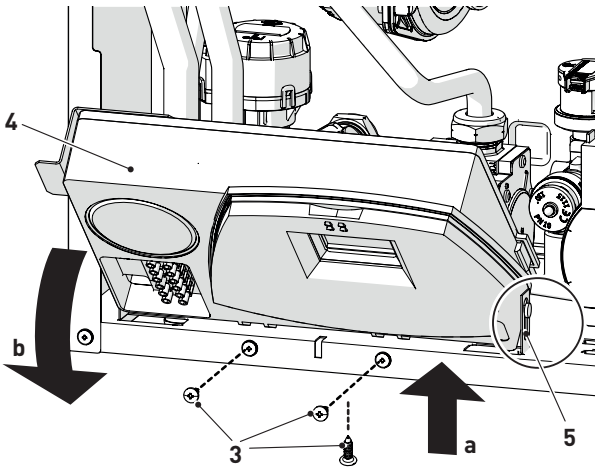


Fig. 29

– insert the connection wires through the grommet (6) and the opening (7) on the control panel

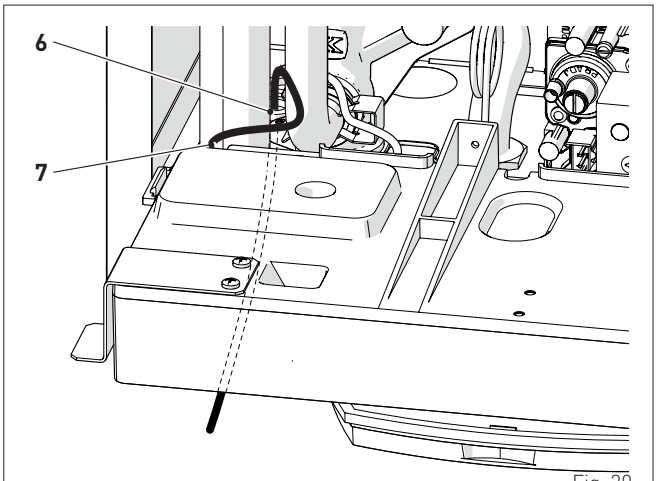


Fig. 30

– bring the control panel (4) to the original position and secure it with the screws (3) which were removed previously
– connect the component wires to the terminal board (8) following the indications provided on the data plate (9) and as shown in section **"Wiring diagram"**.

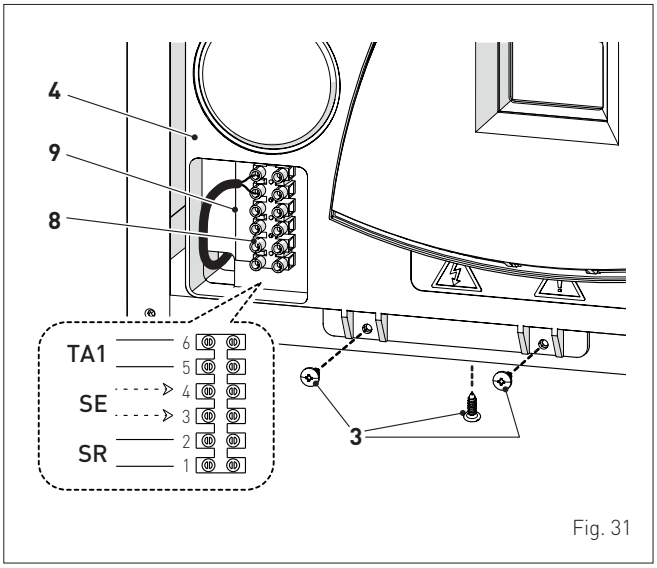


Fig. 31

6.14.1 External temperature sensor

The boiler is designed for connection to an external temperature sensor code 8094101, which will automatically regulate the central heating delivery temperature.
This means that the delivery temperature of the boiler can vary on the basis of the external temperature depending on the climatic curve selected from those shown in the diagram (Fig. 32).
When fitting the sensor on the outside of the building, follow the instructions provided on the packaging of the product itself.

Climatic curve

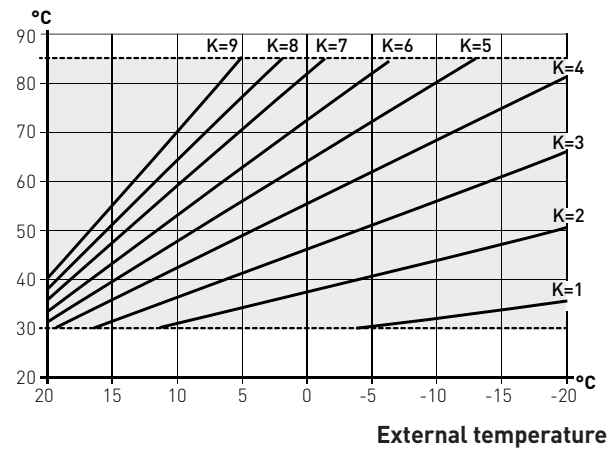


Fig. 32

CAUTION
If there is an external sensor, turn the heating knob until the required curve K has been selected within the range **K=0.0 - K=9.0** in order to select the optimal climatic curve for the system and therefore the delivery temperature based on the external temperature.

CAUTION
The adjustment of the Maximum Heating Temperature is managed by **"PAR 14"** (see paragraph "**List of parameters**").

6.14.2 External timers and Room Thermostats

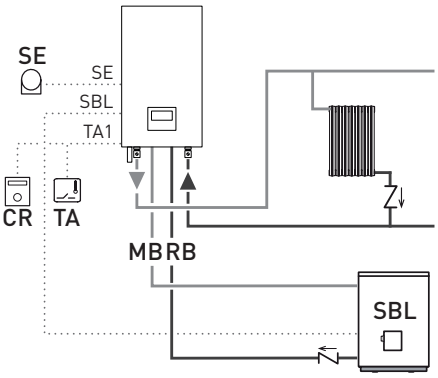
The heat demand can be by a "clean contact" conforming to EN607301 connected to TA (see section **"Wiring diagram"**) or by use of a dedicated Sime Remote Control (Home or Home Plus). The boiler will automatically detect when a dedicated control is connected.

6.14.3 EXAMPLE of use of the command/control device on some types of heating systems

KEY

CR	*Remote control*
SE	*External temperature sensor*
TA	*Room thermostat*
TAZ1÷TAZ3	*Zone ambient thermostat*
EVZ1÷EVZ3	*Zone solenoid valve*
KA1÷KA3	*Zone relays*
PI1÷PI3	*System circulator pump*
SID	*Hydraulic separator*
[*]	*2-relay board mandatory accessory code 8092264*

ONE DIRECT ZONE system and REMOTE HOT WATER TANK, external sensor and room thermostat or, alternatively, remote control.



CAUTION
The boiler is pre-arranged for connection to a remote hot water tank. To use the boiler for HEATING ONLY:
– disconnect the hot water tank sensor (SBL)
– set "PAR 02 = HYDRAULIC CONFIGURATION" to 1.
This operation must only be carried out by Professionally Qualified Personnel during the boiler commissioning phase.

ONE DIRECT ZONE system, external sensor and room thermostat.

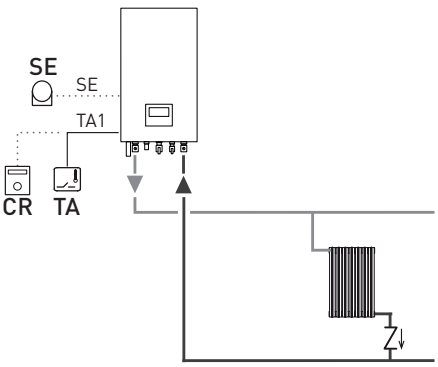


Fig. 33

MULTI ZONE system - with zone valve, room thermostat and external sensor.

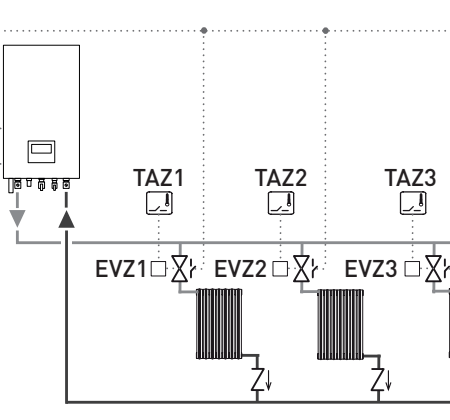


Fig. 34

MULTI-ZONE system - with zone valves, remote control SIME, room thermostats and optional external sensor.

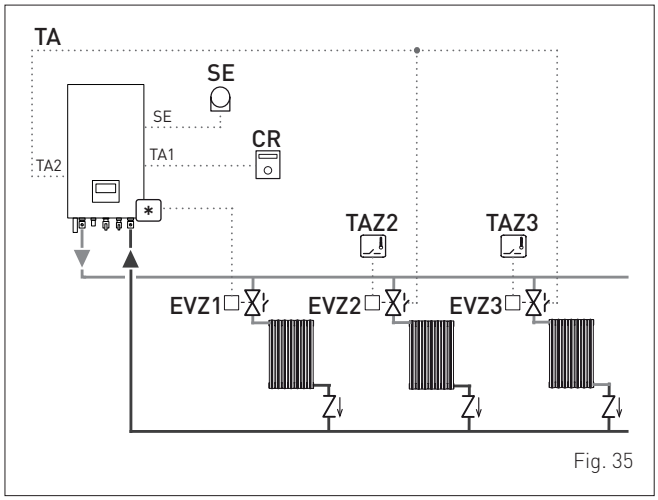


Fig. 35

CAUTION
Set the parameter "tS 17 = DELAY SYSTEM PUMP ACTIVATION to allow the opening of zone valve Vz.

MULTI ZONE system - with pump, room thermostat and external sensor.

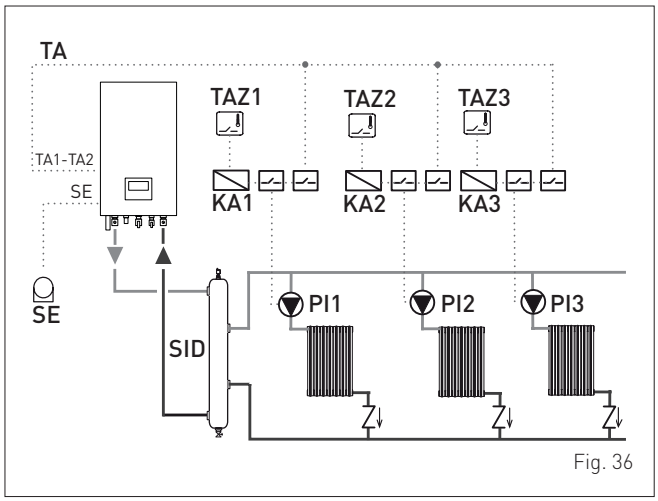


Fig. 36

MULTI ZONE system - with pump, remote control SIME, room thermostat and optional external sensor.

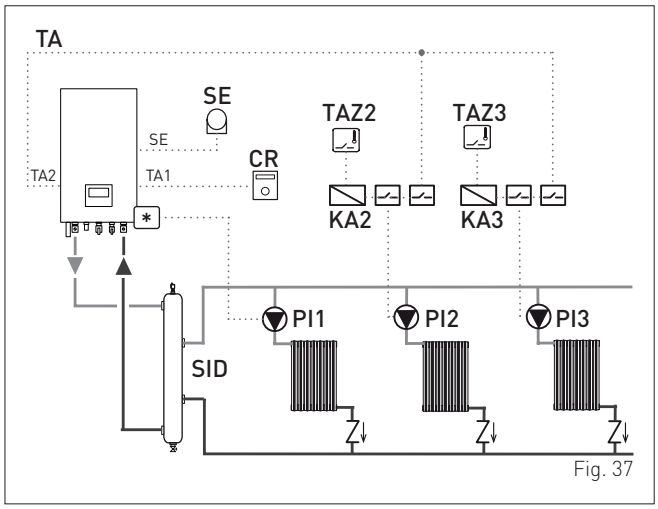


Fig. 37

6.15 Refilling or emptying

Before carrying out the operations described below, make sure that the main system switch is set to "ON" in order for the display to show the pressure level in the system during refilling.
Make sure that the operating mode is set to "Stand-by"; if this is not the case, press the button ⏻R for at least 1 second until this mode has been selected.

6.15.1 Method of filling a sealed system

A sealed system must only be filled by a competent person using a method similar to that shown in figure below.

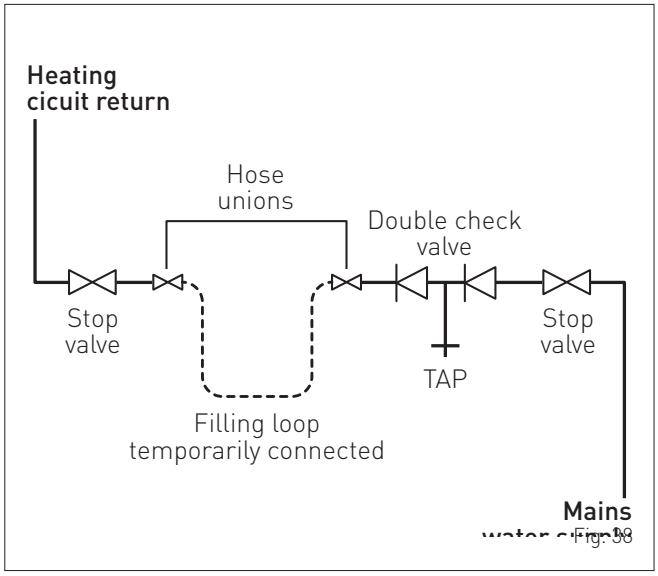


Fig. 38

6.15.2 SYSTEM Filling

The **Edea T** boilers are not equipped with a filling valve which must be prearranged on the system return.

Remove the front panel:
– remove the two screws (1), pull the front panel (2) forwards and release it from the top by lifting it.

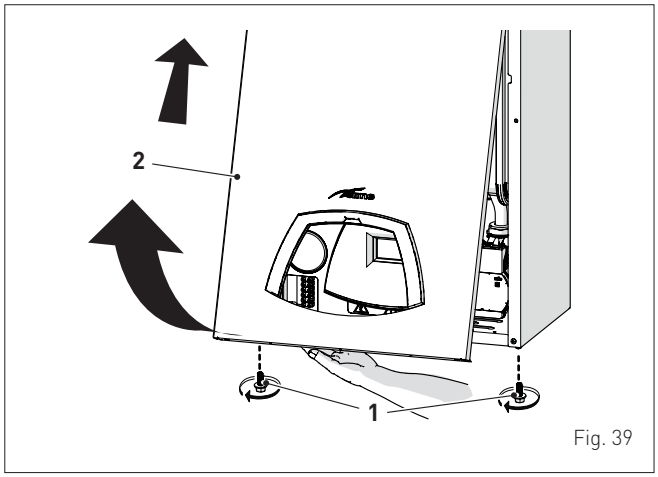


Fig. 39

Domestic hot water circuit (storage tank):
- open the isolation valves of the domestic hot water circuit (if present)
- open each of the DHW taps until air is expelled
- once bleeding has been completed, close the hot water valves.

Heating circuit:
- open the isolation and air bleeding valves in the highest points of the system
- loosen the automatic bleed valve (3)
- open the heating circuit isolation valves (8) and (9)
- activate the filling system "**Method of filling a sealed system**, and fill the heating system until a pressure of **1-1.2 bar** is shown on the pressure gauge (5)
- stop the filling system
- check that there is no air in the system by bleeding all the radiators and the circuit on the high points of the system.

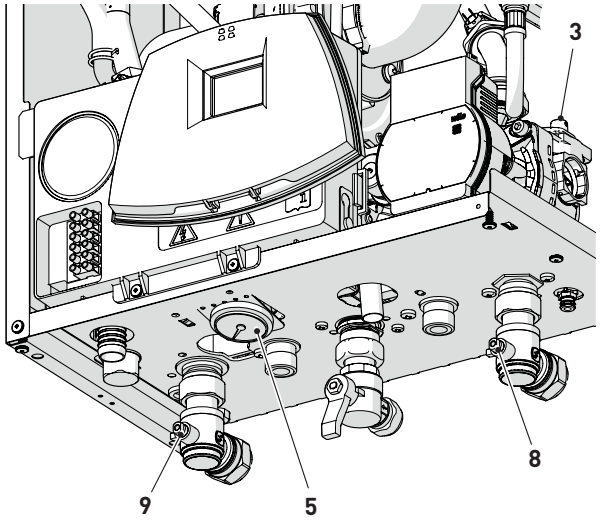


Fig. 40

NOTE: *to completely remove all air from the system, it is recommended that this operation is repeated a number of times.*

- check the pressure on the display, or on the pressure gauge, and, if necessary, top up until the correct pressure reading appears
- close the automatic bleed valve (3)
- fill the siphon by disconnecting it from the pipe or using the smoke take-off point.

Refit the front panel of the boiler hooking it on at the top, pushing it forwards and securing it with the screw (1) which was removed previously.

6.15.3 EMPTYING operations

Domestic hot water circuit (storage tank):
- close the domestic hot water circuit isolation valve (prearranged in installation)
- open one or more than one hot water taps and drain the domestic hot water circuit.

Heating circuit:
- loosen the automatic bleed valve (3)
- close the heating circuit isolation valves (8) and (9)
- connect a rubber hose to the boiler drain valve (7) and open it
- when it has fully emptied, close the drain valve (7)
- close the automatic bleed valve (3).

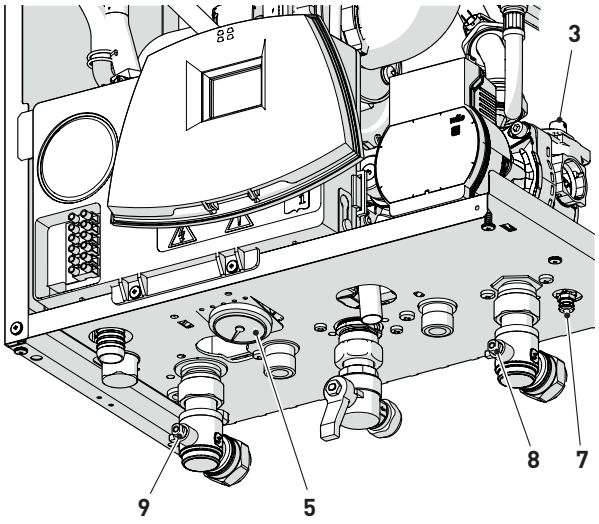


Fig. 41

7 COMMISSIONING

7.1 Preliminary operations

WARNING

- Should it be necessary to access the areas in the bottom part of the appliance, make sure that the system components and pipes are not hot (risk of burning).
- Before replenishing the heating system, put on protective gloves.

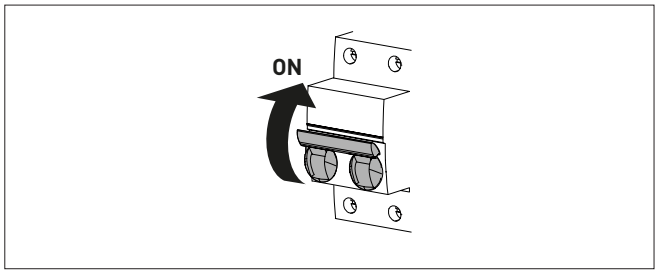
CAUTION

Only qualified persons in compliance with the instructions contained in this manual are permitted to install, commission and maintain this boiler. Suitable protective safety equipment **MUST be worn**. The installation of this boiler must be in accordance with the relevant requirements of the current Gas Safety (installation and use), the local building regulations, and I.E.E. wiring regulations.

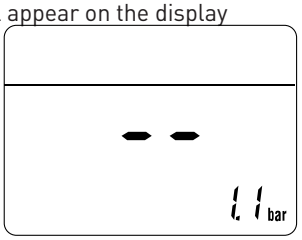
Before commissioning the appliance, check that:
- the type of gas is correct for the appliance
- the gas isolation valves for the heating system and the water system are open
- the system pressure as shown on the pressure gauge when the system is cold , is between **1 and 1.2 bar**
- the pump impeller rotates freely
- the siphon has been filled
- the flue is fitted correctly.

7.2 Before commissioning

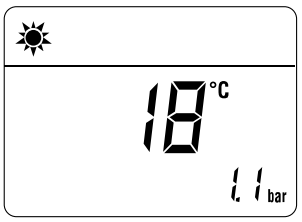
After having carried out the preliminary operations, proceed as follows:
- set the main system switch to "ON"



- the type of gas for which the boiler has been calibrated, **"nG"** (methane) or **"LG"** (LPG,) will appear followed by the power. Finally **"- -"**will appear on the display



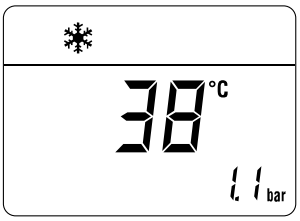
- check that the system pressure as shown when the system is cold , is between **1 and 1.2 bar**
- press the ⏻R button twice to select "WINTER mode" ❄. The value of the delivery sensor detected at that moment will appear on the display



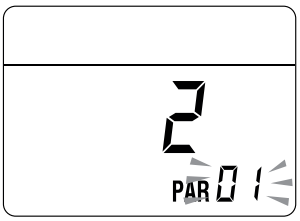
7.3 Parameter setting and display

To go into the parameter menu:

– from the selected mode (eg. WINTER)



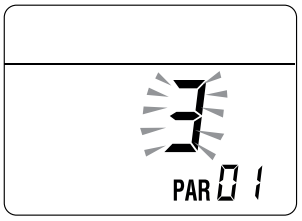
– turn dials and to the maximum
– simultaneously press the + and – buttons (~ 5 s) until **"PAR 01"** (parameter number) appears on the display along with the set value (0÷12) (consult the table in the "**Circuit Board Replacement**" paragraph)



– press the button + to scroll up the list of parameters and then – to scroll down the list

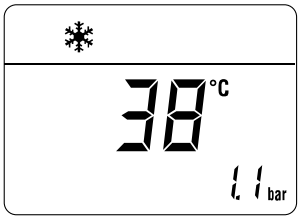
NOTE: *holding the buttons + or – increases the speed of the scrolling movement.*

– once the required parameter has been reached, press the button ⏻R for approximately 3 seconds to confirm and access the set value which will then flash and can then be modified



– to modify the value in the permitted range, press the buttons + to increase it or – to decrease it
– once the required value has been reached, press the button ⏻R to confirm.

Once all the desired parameter values have been modified, **simultaneously** press, for ~ 5 s, the + and – buttons to exit the parameters menu, until the home page reappears.



7.4 List of parameters

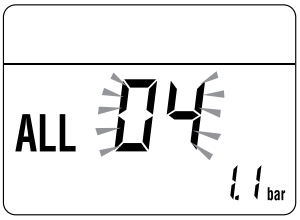
WARNING
To set parameter PAR 01 correctly, check the fan model on the technical data plate and set the parameter according to the installed model:

- **(*)** = with fan model "ebmpapst nrg118"
- **(**)** = with fan model "sit NG40-E".

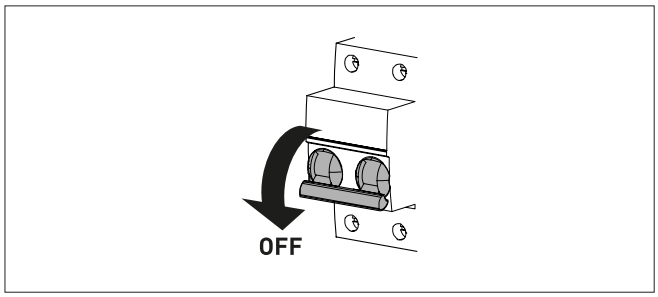
Type	No.	Description	Range	U/M	Step	Default
CONFIGURATION						
PAR	01	Index showing boiler power in kW	0 = 25 kW (G20) ** 1 = 25 kW (G20) * 5 = 35 kW (G20) 6 = 25 kW (G31) ** 7 = 25 kW (G31) * 11 = 35 kW (G31)	-	1	0, 1, 5, 6, 7 or 11
PAR	02	Hydraulic configuration	0 = combi 1 = system 2 = N/A 3 = N/A 4=instant with solar power input 5 = open vent 6 = Kit Hybrid 9 = Hybrid Wall 10 = Hybrid Wall "T" hot water tank boiler 11 = Kit Hybrid hot water tank boiler "T"	-	1	2
PAR	03	Gas type selection	Do not edit	-	-	-
PAR	04	Combustion configuration	0 = combustion control	-	1	0
PAR	07	Thermal gradient for Hybrid Wall defrosting aid	0 .. 30	°C/min	1	10
PAR	08	External sensor value correction	-5 .. +5	°C	1	0
PAR	09	Ignition fan speed	80 .. 160	RPMx25	1	128
DOMESTIC HOT WATER - HEATING						
PAR	10	Boiler Antifreeze Threshold	0 .. +10	°C	1	3
PAR	11	External Sensor Antifreeze Threshold -- = Disabled	-9 .. +5	°C	1	-2
PAR	12	Heating Curve Incline	0 .. 80	-	1	20
PAR	13	Minimum Heating Temperature Adjustment	20 .. PAR 14	°C	1	20
PAR	14	Maximum Heating Temperature Adjustment	PAR 13 .. 80	°C	1	80
PAR	15	Maximum power in CH mode	0 .. 100	%	1	100
PAR	16	Heating Post-Circulation Time	0 .. 99	seconds x 10	1	3
PAR	17	Heating Pump Activation Delay	0 .. 60	seconds x 10	1	0
PAR	18	Heating Re-ignition Delay	0 .. 60	Min	1	3
PAR	19	Domestic Hot Water Modulation with Flow meter	0 = Disabled 1 = Enabled	-	1	1
PAR	20	Maximum power domestic hot water	0 .. 100	%	1	100
PAR	21	Minimum power heating/domestic hot water (premixed)	0 .. 100	%	1	0
PAR	22	Domestic hot water preheating enabling	0 = OFF 1 = ON	-	1	0
PAR	23	External relay 1 function	0 = not used 1 = remote alarm NO 2 = remote alarm NC 3 = zone valve 4 = automatic filling 5 = external request 6 = recirculation pump 7 = zone valve with OT 8 = relaunch pump 9 = boiler with heat pump (circulator)	-	-	0
PAR	24	External relay 2 function	0 = not used 1 = remote alarm NO 2 = remote alarm NC 3 = zone valve 4 = automatic filling 5 = external request 6 = recirculation pump 7 = zone valve with OT 8 = relaunch pump 9 = boiler with heat pump (circulator) 13 = management of the heat pump for Hybrid Wall	-	-	0

Type	No.	Description	Range	U/M	Step	Default
PAR	25	Auxiliary TA function	0 = according to TA 1 = TA Antifreeze 2 = domestic hot water disabled	-	1	0
PAR	26	Zone Valve / Pump Relaunch Delay	0 .. 99	Min	1	1
PAR	28	DHW activation delay with solar power	0 .. 30	Min	1	0
PAR	29	Anti-legionella Function (Only hot water tank) -- = Disabled	50 .. 80	-	1	--
PAR	30	Maximum domestic hot water temperature	10 .. 67	°C	1	60
PAR	31	Long chimney	0 .. 50	-	1	0
PAR	35	Digital / analogue Pressure switch	0 = water pressure switch 1 = water pressure transducer (with ALL 09) 2 = water pressure transducer (without ALL 09)	-	1	1
PAR	39	Modulating pump minimum speed	20 .. 100	%	1	30
PAR	40	Modulating Pump Speed	-- = No modulation AU = Automatic 30 .. 100	%	10	AU
PAR	41	ΔT Modulating pump delivery/Return	10 .. 40	°C	1	20
PAR	42	Select heat pump or boiler convenience (only if PAR 02 = 6,9,10)	-20 .. 30	°C	-	5
PAR	43	Heat pump boiler aid activation delay (only if PAR 02 = 6,9,10)	1 .. 60	Min	-	20
PAR	44	Hybrid Wall heat pump delivery safety device	0 .. 80	°C	1	55
PAR	47	System pump forcing (only in winter mode)	0 = Disabled 1 = Enabled	-	1	0
RESET						
PAR	48	INST Parameter set to default	0 .. 1	-	-	0

In the event of a fault/malfunction the message **"ALL"** will appear on the display with the alarm number eg. **"ALL 04"** (Domestic Hot Water Sensor Fault).



Before repairing the fault:
– disconnect the appliance from the mains power by setting the main switch to "OFF"



– as a precautionary measure, close the gas isolation valve.

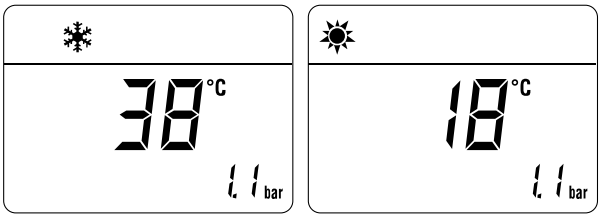
Resolve the problem and start-up the boiler again.

NOTE: *after having repaired the fault, when the alarm number appears on the display together with the message* **RESET** *(see figure), press the button* **R** *for approximately 3 seconds to start the appliance up again.*

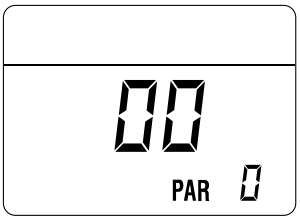


7.5 Display of operating data and counters

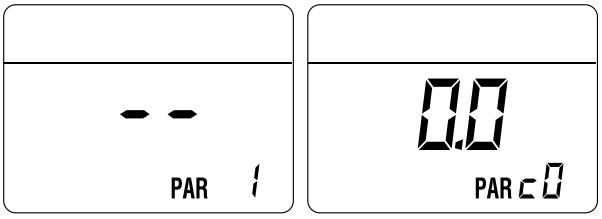
Once the boiler is operating a qualified technician can view the operating data and the counters as follows:>.
From the operating screen in the mode enabled at that moment (WINTER ❄ or SUMMER ☀):



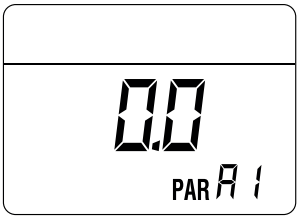
– turn the heating and hot water knobs to the minimum
– simultaneously **press**, for more than 3 s, the **+** and **–** buttons.



From this point, the technician has 2 options:
– pressing the **+** button will scroll the list of **"information (PAR)"** and of the **"counters (PARc)"**. The scrolling sequence is as follows



– pressing the **–** button will show the **"alarms occurred" (PARa)**



– move within the displayed items using the **–** or **+** buttons
– once the desired values have been displayed, to exit the menu press the ⏻ **R** button until the home page appears.

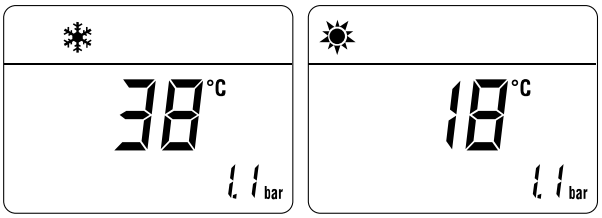


TABLE OF INFORMATION DISPLAYED

Type	No.	Description	Range	U/M	Step
PAR	00	SW version			
PAR	01	External temperature sensor	- 9 .. 99	°C	1
PAR	02	Delivery sensor temperature	- 9 .. 99	°C	1
PAR	03	Exhaust temperature (SF)	- 9 .. 99	°C	1
PAR	04	Domestic hot water sensor temperature	- 9 .. 99	°C	1
PAR	05	AUX auxiliary sensor	- 9 .. 99	°C	1
PAR	06	Actual heating SET temperature	Par. 13 ... Par. 14	°C	1
PAR	07	Power level	0 .. 99	%	1
PAR	08	DHW Flow rate	0 .. 99	l/min	0.1
PAR	09	Water pressure transducer reading	0 .. 99	bar	0.1
PAR	10	Actual speed fan number	0 .. 99	RPM x 100	1

TABLE OF COUNTER DISPLAYED

Type	No.	Description	Range	U/M	Step
PAR	c0	total no. of boiler operating hours	0 .. 99	h x 1000	0.1; from 0.0 to 9.9; 1; from 10 to 99
PAR	c1	total no. of burner operating hours	0 .. 99	h x 1000	0.1; from 0.0 to 9.9; 1; from 10 to 99
PAR	c2	total no. of burner ignitions	0 .. 99	h x 1000	0.1; from 0.0 to 9.9; 1; from 10 to 99
PAR	c3	total no. faults	0 .. 99	x 1	1
PAR	c4	total no. of times installer parameters "ALL"accessed	0 .. 99	x 1	1
PAR	c5	total no. of times OEM parameters accessed	0 .. 99	x 1	1
PAR	c6	Countdown to the next service	1 .. 199	months	1

TABLE OF ACTIVATED ALARMS/FAULTS

Type	No.	Description
PAR	A0	Last activated alarm/fault
PAR	A1	Last but one activated alarm/fault
PAR	A2	Third from last activated alarm/fault
PAR	A3	Previous activated alarm/fault
PAR	A4	Previous activated alarm/fault
PAR	A5	Previous activated alarm/fault
PAR	A6	Previous activated alarm/fault
PAR	A7	Previous activated alarm/fault
PAR	A8	Previous activated alarm/fault
PAR	A9	Previous activated alarm/fault

7.6 Checks

7.6.1 Chimney sweep function and gas valve calibration

The chimney sweeper function is used by the qualified maintenance technician to check the mains gas pressure, detect the combustion parameters and to measure the combustion efficiency. A combustion analysis should not be conducted until a satisfactory inlet working pressure test has been completed.

This function lasts 15 minutes and is activated by proceeding as follows:

– if the panel (2) has not already been removed, remove the two screws (1), pull the front panel (2) forwards and release it from the top by lifting it

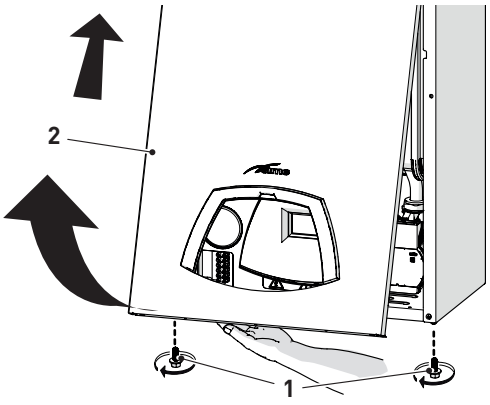


Fig. 42

– remove the screws (3) securing the control panel (4)
– move the panel (4) upwards (a) but keeping it in the side guides (5) to the end of travel
– bring it forwards and down (b) until it is horizontal

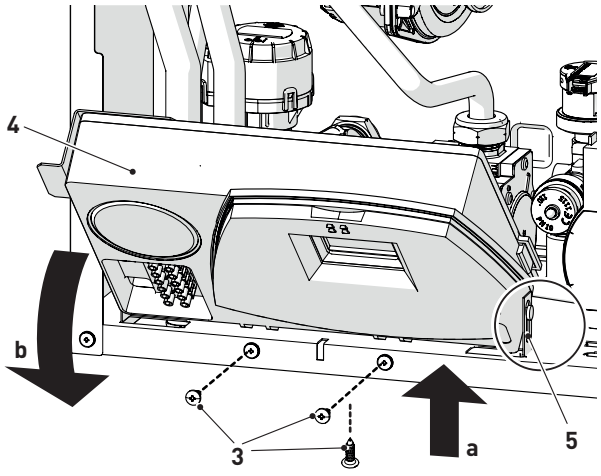


Fig. 43

– isolate the gas cock
– loosen the screw of the "mains pressure" point (6) and connect a pressure gauge

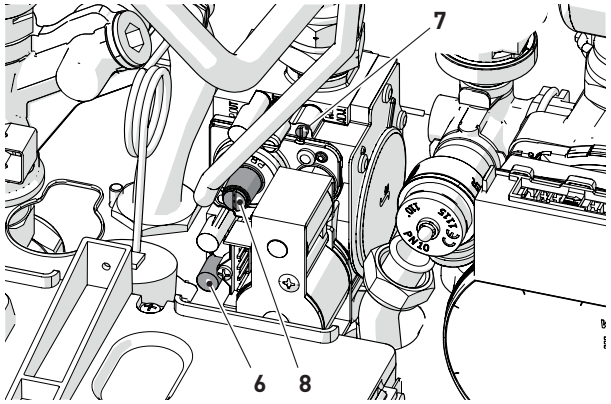
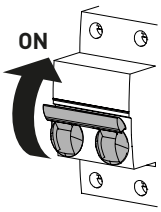


Fig. 44

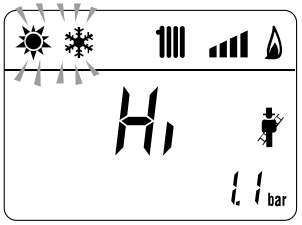
– open the gas cock
– power the boiler by setting the main switch to "ON"



– press the button ⏻R for at least 1 second until "SUMMER" mode ☀ has been selected

CHECKING THE DELIVERY PRESSURE

– simultaneously press the ⏻R and + buttons, for ~ 10 s, to start the procedure, until "Hi" appears steady on the display and the ☀ and ❄ symbols flash

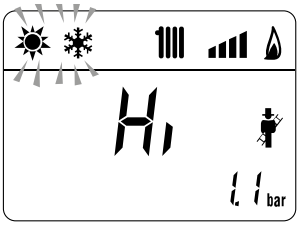


– press the button + to make the boiler operate at maximum power "Hi" and check that the mains gas pressure value on the pressure gauge is correct.
– check that the gas supply pressure is as shown in the table below

Type of gas	G20	G31
Pressure (mbar)	20	37

CHECKING AND CALIBRATING COMBUSTION AT THE MAXIMUM HEAT INPUT

– simultaneously press the ⏻R and + buttons, for ~ 10 s, to start the procedure, until "Hi" appears steady on the display and the ☀ and ❄ symbols flash

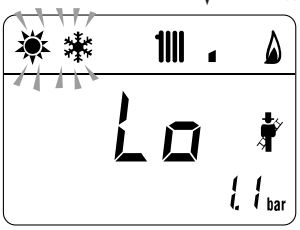


– press the + button to run the boiler at maximum power "Hi"
– measure the combustion gas values and verify that they match the values shown in the table. If not, turn the "(7) adjuster screw (splitter)" of the gas valve until you obtain the values shown in the table:
  - turn the screw clockwise to decrease the CO_2 value
  - turn the screw anti-clockwise to increase the CO_2 value
– take any other necessary readings

Edea T	CO_2 (G20)	CO_2 (G31)
	Qmax (%)	Qmax (%)
25	9,0 - 9,4	10,0 - 10,4
35	9,0 - 9,4	10,0 - 10,4

CHECKING AND CALIBRATING COMBUSTION AT THE MINIMUM HEAT INPUT

– press the button − to make the boiler operate at minimum power "Lo". The message **"Lo"** will appear on the display together with the flashing symbols ☀ and ❄



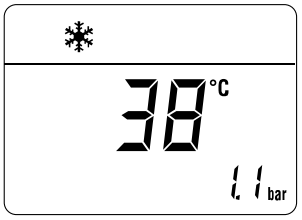
– measure the combustion gas values and verify that they match the values shown in the table. If not, turn the "adjuster screw (offset)" (7) of the gas valve until you obtain the values shown in the table:
  - turn the screw clockwise to increase the CO_2 value
  - turn the screw anti-clockwise to decrease the CO_2 value

take any other necessary readings

Edea T	CO_2 (G20)	CO_2 (G31)
	Qmin (%)	Qmin (%)
25	9,0 - 9,4	10,0 - 10,4
35	8,8 - 9,2	9,8 - 10,2

FINAL OPERATIONS

– press the button ⏻R to exit the "Chimney sweeper Procedure". The boiler water delivery temperature will appear on the display



– disconnect the pressure gauge, carefully close the pressure point (6), test for gas tightness, put the control panel back to the original position and refit the front panel (2). Now conduct a flue gas analysis as detailed in APPENDIX 2.

CAUTION

During the annual check of the appliance, the maximum CO must be below 700 ppm (0% O_2). If the CO value is higher, perform maintenance. Also check the CO limit in accordance with national legislation.

7.7 Gas conversion

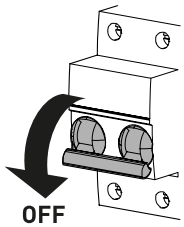
The **Edea T** models can be transformed from G20 to G31-based operation by installing the "Nozzle kit for G31", which must be ordered separately from the boiler, and by editing **"PAR 01"** as specified in the table.

Edea T	G31	
	Kit code	PAR 01
25 (*)	5185153	6 or 7
35	5185156	11

*(*) To set parameter PAR 01 correctly, check the fan model on the technical data plate and set the parameter according to the installed model as described in the paragraph "**List of parameters**".*

CAUTION
Conversion may ONLY be carried out by Professionally Qualified Personnel.

WARNING
Before carrying out any interventions described:
- isolate the power supply
- isolate the gas cock
- avoid contact with any hot surfaces.



7.7.1 Preliminary operations

To carry out the conversion:
- remove the screws (1), pull the front panel (2) forwards and release it from the top by lifting it

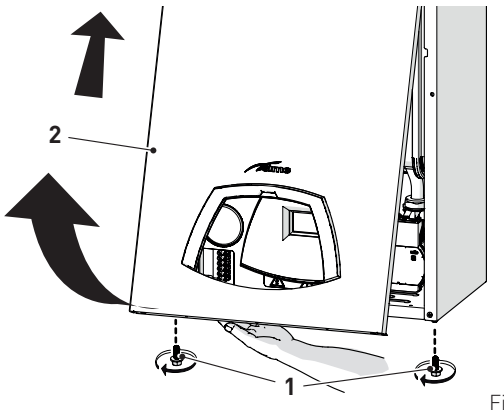


Fig. 45

- loosen the eight screws (3) and remove the cover (4)
- unscrew the screw (5) and remove the plate (6)

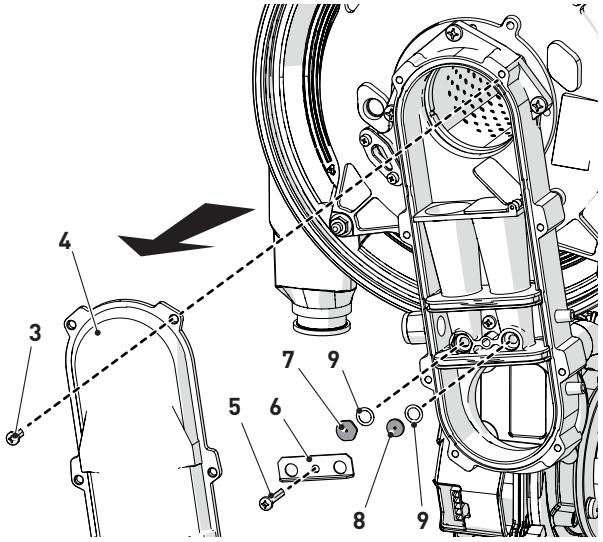


Fig. 46

- replace the two distinct nozzles (7) and (8) and the related O-ring (9) with those provided in the conversion kit. Having two distinct nozzle heads avoids them being inverted during assembly
- refit the plate (6) and cover (4) following the above instructions in reverse order
- replace the smoke outlet diaphragm, if present in the transformation kit, as illustrated in "Fig. 24"
- access the installer parameters and modify parameter PAR 01 on the basis of the power and gas used, as indicated in the table in the "**Circuit Board Replacement**" paragraph
- perform the procedure described under the paragraph "**Chimney sweep function and gas valve calibration**" to correctly set the valve for using the new gas then mount the front panel (2) back on, fastening it with the two screws (1).

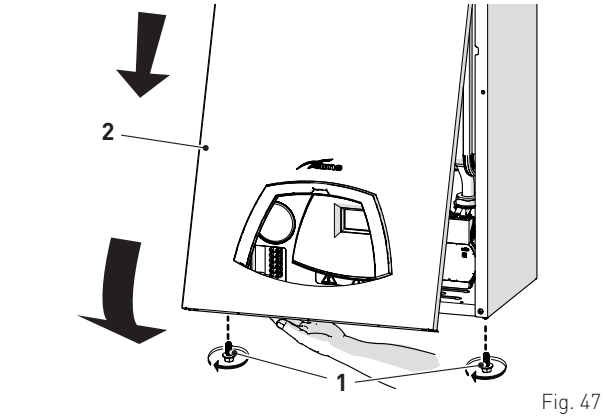


Fig. 47

CAUTION
If the gas supply is changed from G20 to G31, mark the box on the TECHNICAL DATA PLATE.

G31 - 37 mbar	X

CAUTION
If converting back to the original gas category, contact the Authorised Service Centre to update the documentation with a new label.

8 MAINTENANCE

8.1 Servicing

As a condition of the warranty and to ensure correct operation and efficiency, it is important that the boiler is serviced every 12 months, within 30 days of the anniversary of the installation date ensure the required information is recorded in the Gas Boiler System Service Interval Record (Benchmark).

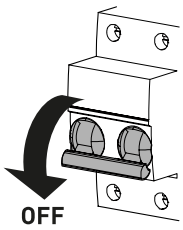
CAUTION

- Only qualified persons in compliance with the instructions contained in this manual are permitted to install, commission and maintain this boiler. Suitable protective safety equipment **MUST be worn**. The installation of this boiler must be in accordance with the relevant requirements of the current Gas Safety (installation and use), the local building regulations, and I.E.E. wiring regulations.
- Make sure that the system components and pipes are not hot (risk of burning).

WARNING

Before carrying out any interventions described:

- isolate the power supply
- isolate the gas cock
- avoid contact with any hot surfaces.



8.2 External cleaning

8.2.1 Cleaning the case

When cleaning the cladding, use a cloth dampened with soap and water or alcohol for stubborn marks.

DO NOT

Do not use abrasive products.

8.3 Burner Inspection

8.3.1 Burner access

To access the internal parts of the boiler:

- remove the screws (1), pull the front panel (2) forwards and release it from the top by lifting it

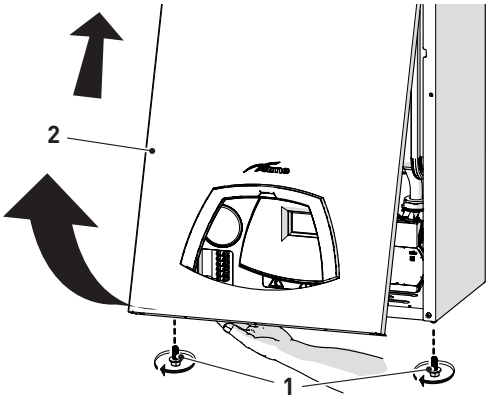


Fig. 48

- remove the screws (3) securing the control panel (4)
- move the panel (4) upwards (a) but keeping it in the side guides (5) to the end of travel
- bring it forwards and down (b) until it is horizontal

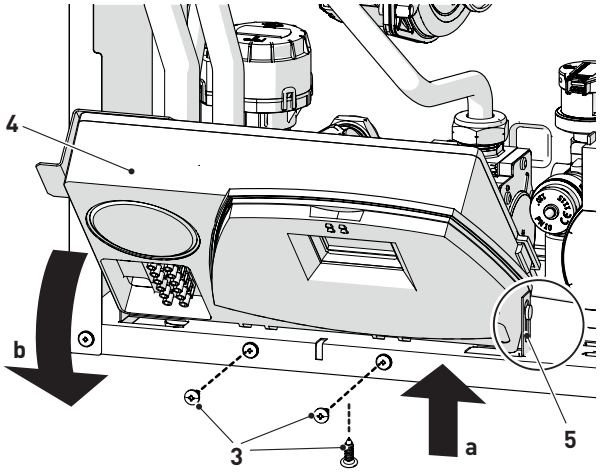


Fig. 49

- loosen the clips (6) and extract the air inlet pipe (7)
- loosen both the ring nuts (8)
- extract the connectors (9) from the fan and disconnect the electrode cable (10)
- remove the silicone tube (11) from the air/gas duct

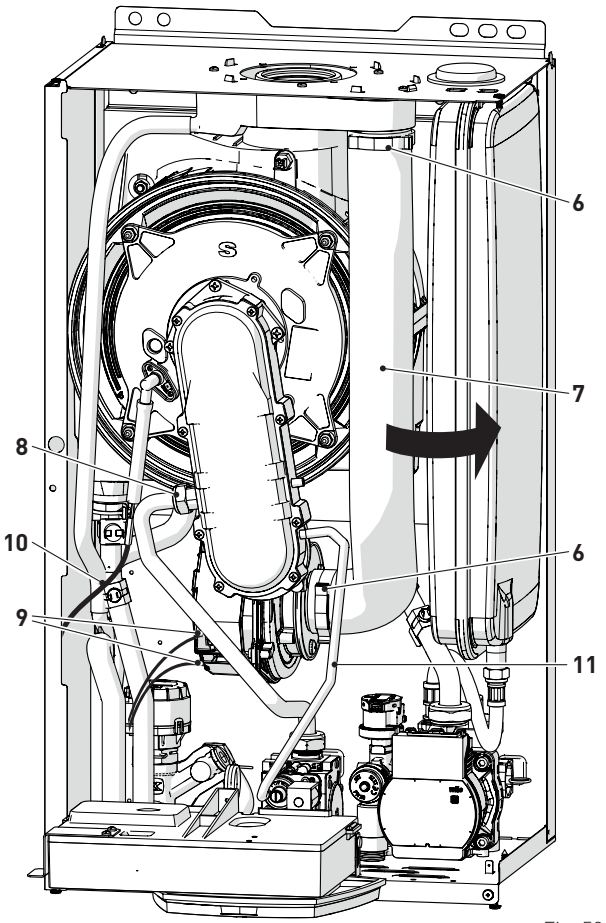


Fig. 50

- Unscrew the four nuts (12) securing the combustion chamber door (13)
- pull the fan/sleeve/door unit (14) forwards and remove it.

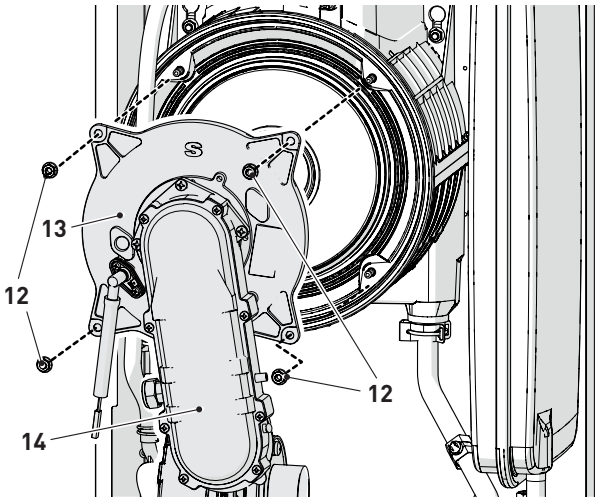


Fig. 51

CAUTION
Work carefully when removing the assembly (14) to prevent any damage occurring to the internal insulation of the combustion chamber and the door seal.

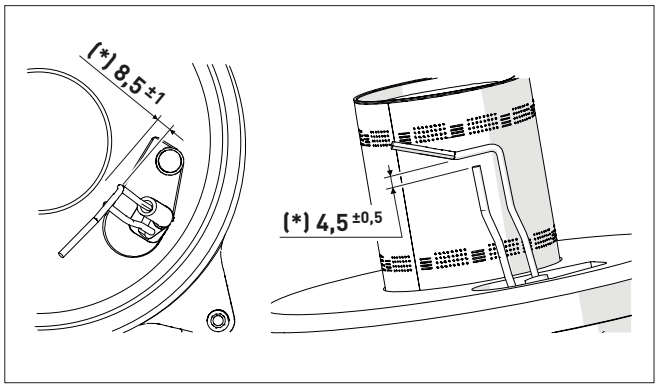
8.3.2 Cleaning the burner and the combustion chamber

The combustion chamber and the burner do not require any particular maintenance. Simply brush them with a soft brush.

8.3.3 Checking the ignition/detection electrode

Check the state of the ignition/detection electrode and replace if necessary. Check the measurements as per the drawing whether the ignition/detection electrode is replaced or not.

CAUTION
(*) The positions must be checked with the electrode mounted on the door (13) of the combustion chamber.



8.3.4 Final operations

After having cleaned the combustion chamber and the burner:
- remove any carbon residue
- check that the seal and the insulation of the door (13) to the combustion chamber are undamaged. Replace if necessary
- refit the assembly by carrying out the same operations for removal but in the reverse order and tighten the screws (12) of the door to the combustion chamber
- reconnect the connections to the fan and the electrode.

8.4 Checks

8.4.1 Checking the flue

Check that the flue is undamaged and complete.

8.4.2 Checking the expansion vessel pressure

It is recommended that the expansion vessel on the water side is drained and that the prefilling pressure is not less than **1 bar**. If this is not the case, pressurize it to the correct value (see section "**Expansion vessel**").

8.4.3 System Inhibiter concentration

Check and if required correct the inhibiter concentration.

Once the checks described above have been completed:
- refill the boiler as described in section "**SYSTEM Filling**"
- check that the siphon has been filled correctly
- start the boiler, complete fully the "**Chimney sweep function and gas valve calibration**" phase, described in the relevant paragraph, and perform the flue gas analysis and/or the combustion performance measurement
- refit the front panel securing it with the two screws which were removed previously.

8.5 Circuit Board Replacement

Should the circuit board be replace, the engineer **MUST set the parameters** as indicated in this table and in the sequence shown.

Type	No.	Description		Setting for Edea T	
				25 (*)	35
PAR	01	Index showing for boiler power in kW	G20	0 or 1	5
			G31	6 or 7	11
PAR	02	Hydraulic configuration 0 = combi 1 = system 2 = N/A 3 = N/A 4=instant with solar power input 5 = open vent 6 = Kit Hybrid 9 = Hybrid Wall 10 = Hybrid Wall "T" hot water tank boiler 11 = Kit Hybrid hot water tank boiler "T"		2	

*(*) To set parameter PAR 01 correctly, check the fan model on the technical data plate and set the parameter according to the installed model as described in the paragraph "**List of parameters**".*

To enter "**Parameter setting and display**" refer to the indications provided in the specific section.
If the **gas valve** are replaced, the user must still carry out the entire phase of "**Chimney sweep function**" described in the specific section.

8.6 Malfunction codes and possible solutions

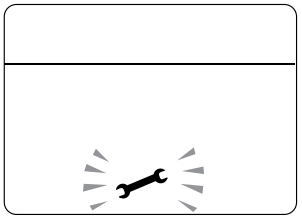
LIST OF MALFUNCTION/FAULT ALARMS

Type	No.	Fault	Solution
ALL	02	Low water pressure in system	- Restore pressure - Check for any leaks in the system
ALL	03	High water pressure in system	- Empty the system via the drain valve on the hydraulic assembly and bring the pressure to approximately 1.2 bar
ALL	04	Domestic hot water sensor fault (return sensor fault for T models)	- Check connections - Check the sensor is working
ALL	05	Delivery sensor fault	- Check connections - Check the sensor is working
ALL	06	No flame detection	- Check the integrity of the electrode and check that it is not grounded - Check gas availability and pressure - Check the operation of the gas valve
ALL	07	Safety thermostat intervention	- Check the thermostat connections - Deaerate the system - Check the bleed valve - Replace the thermostat - Check that the pump impeller is not blocked
ALL	08	Fault in the flame detection circuit	- Check the integrity of the electrode and check that it is not grounded - Check the operation of the gas valve
ALL	09	No water circulating in the system	- Check the rotation of the pump rotor - Check the electrical connections - Replace the pump
ALL	10	Auxiliary sensor fault	- Check PAR 02 "hydraulic configuration" - Check the electrical connection
ALL	11	Gas valve modulator disconnected	- Check the electrical connection
ALL	12	Domestic hot water sensor fault in tank mode	- Replace boiler probe - Check parameters - Contact the Technical Assistance Centre
ALL	13	Exhaust sensor intervention	- Check the sensor is working - Replace the smoke probe
ALL	14	Exhaust sensor fault	- Replace the smoke probe - Check the electrical connection of the smoke probe - Contact the Technical Assistance Centre
ALL	15	Fan check cable disconnected	- Check the connection cable between the fan and the board
ALL	18	Condensate level fault	- Check for any clogging in the pipe which takes the condensate to the siphon - Check that the siphon is not clogged
ALL	28	Maximum number of consecutive resets reached (6)	- Wait 1 hour and try unblocking the board again - Contact the Technical Assistance Centre
ALL	30	Return sensor fault (boiler sensor fault for T models)	- Replace the return probe - Check parameters - Contact the Technical Assistance Centre
ALL	37	Fault due to low network voltage	- Check the voltage - Contact your network provider
ALL	40	Incorrect supply frequency detected	- Contact your network provider
ALL	41	Flame loss more than 6 consecutive times	- Check the ignition/ detection electrode - Check the gas supply (open valve) - Check mains gas pressure
ALL	42	Button fault	- Check that buttons are working
ALL	43	Open Therm communication fault	- Check the OT electric connection
ALL	44	Gas valve timeout fault without flame	- Check gas valve and board
ALL	72	Incorrect positioning of the delivery sensor	- Check delivery sensor operation and position
ALL	80	Fault on the valve control logic line/valve cable damaged	- Check gas valve and board
ALL	88	Internal error (board component protection)	- Check the board is working - Replace board
ALL	95	Flame signal micro interruptions error	- Check electrode - Check board - Check electric power supply - Check gas calibration

Type	No.	Fault	Solution
ALL	98	SW error, board start-up	- Contact the Technical Assistance Centre
ALL	99	General board error	- Contact the Technical Assistance Centre
-	-	Frequent relief valve intervention	- Check circuit pressure - Check expansion vessel
-	-	Limited production of domestic hot water	- Check the diverter valve - Check domestic hot water circuit valve

8.6.1 Maintenance request

When it is time to perform maintenance on the boiler, the symbol shows on the display.



Contact the technical assistance service to organise the necessary work.

Benchmark Commissioning & Warranty Validation Service Record

It is a requirement that the boiler is installed and commissioned to the manufacturers' instructions and the data fields on the commissioning checklist completed in full.

To instigate the boiler warranty the boiler needs to be registered with the manufacturer within one month of the installation. The warranty rests with the end-user (consumer), and they should be made aware it is ultimately their responsibility to register with the manufacturer, within the allotted time period.

It is essential that the boiler is serviced in line with the manufacturers' recommendations, at least annually. This must be carried out by a competent Gas Safe registered engineer. The service details should be recorded on the Benchmark Service and Interim Boiler Work Record and left with the householder. Failure to comply with the manufacturers' servicing instructions and requirements will invalidate the warranty.

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This Commissioning Checklist is to be completed in full by the competent person who commissioned the boiler as a means of demonstrating compliance with the appropriate Building Regulations and then handed to the customer to keep for future reference.

Failure to install and commission according to the manufacturers' instructions and complete this Benchmark Commissioning Checklist will invalidate the warranty. This does not affect the customer's statutory rights.

* All installations in England and Wales must be notified to Local Authority Building Control (LABC) either directly or through a Competent Persons Scheme. A Building Regulations Compliance Certificate will then be issued to the customer.

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GAS BOILER SYSTEM COMMISSIONING CHECKLIST & WARRANTY VALIDATION RECORD

Address:							
Boiler make and model:							
Boiler serial number:							
Commissioned by (PRINT NAME):				Gas Safe registration number:			
Company name:				Telephone number:			
Company email:				Company address:			
					Commissioning date:		
Heating and hot water system complies with the appropriate Building Regulations?						Yes	
Optional: Building Regulations Notification Number (if applicable):							
Time, temperature control and boiler interlock provided for central heating and hot water						Yes	
Boiler Plus requirements (tick the appropriate box(s))							
Boiler Plus option chosen for combination boiler in ENGLAND				Weather compensation		Smart thermostat with automisation and optimisation	
				Load compensation		Flue Gas Heat Recovery	
Time and temperature control to hot water				Cylinder thermostat and programmer/timer		Combination boiler	
Zone valves	pre-existing			Fitted		Not required	
Thermostatic radiator valves	pre-existing			Fitted		Not required	
Automatic bypass to system	pre-existing			Fitted		Not required	
Underfloor heating	pre-existing			Fitted		Not required	
Water quality							
The system has been flushed, cleaned and a suitable inhibitor applied upon final fill, in accordance with BS7593 and boiler manufacturers' instructions						Yes	
What system cleaner was used?				Brand:		Product:	
What inhibitor was used?				Brand:		Product:	
Primary water system filter	pre-existing			Fitted		Not required	
CENTRAL HEATING MODE measure and record (as appropriate)							
Gas rate (for combination boilers complete DHW mode gas rate)				m^3/hr	or	ft^3/hr	
Central heating output left at factory settings?				Yes		No	
If no, what is the maximum central heating output selected?						kW	
Dynamic gas inlet pressure						mbar	
Central heating flow temperature						°C	
Central heating return temperature						°C	
System correctly balanced/rebalanced?						Yes	
COMBINATION BOILERS ONLY							
Is the installation in a hard water area (above 200ppm)?				Yes		No	
Water scale reducer/softener	pre-existing			Fitted		Not required	
What type of scale reducer/softener has been fitted?				Brand:		Product:	
Water meter fitted?				Yes		No	
If yes- DHW expansion vessel	pre-existing			Fitted		Not required	
Pressure reducing valve	pre-existing			Fitted		Not required	
DOMESTIC HOT WATER MODE Measure and record							
Gas rate				m^3/hr	or	ft^3/hr	
Dynamic gas inlet pressure at maximum rate						mbar	
Cold water inlet temperature						°C	
Hot water has been checked at all outlets				Yes		Temperature	°C
CONDENSATE DISPOSAL							
The condensate drain has been installed in accordance with the manufacturers' instructions and/or BS5546/BS6798						Yes	
Point of termination				Internal		External (only where internal termination impractical)	
Method of disposal				Gravity		Pumped	
ALL INSTALLATIONS							
Record the following	At max rate:	CO	ppm	CO_2	%	CO/CO_2	Ratio
	At min rate (where possible)	CO	ppm	CO_2	%	CO/CO_2	Ratio
Where possible, has a flue integrity check been undertaken in accordance with manufacturers' instructions, and readings are correct?						Yes	
The operation of the boiler and system controls have been demonstrated to and understood by the customer						Yes	
The manufacturers' literature, including Benchmark Checklist and Service Record, has been explained and left with the customer						Yes	
Commissioning Engineer's signature							
Customer's signature (To confirm satisfactory demonstration and receipt of manufacturers' literature)							

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SERVICE & INTERIM BOILER WORK RECORD

It is recommended that your boiler and heating system are regularly serviced and maintained, in line with manufacturers' instructions, and that the appropriate service / interim work record is completed.

Service provider

When completing a service record (as below), please ensure you have carried out the service as described in the manufacturers' instructions. Always use the manufacturers' specified spare parts.

SERVICE/INTERIM WORK ON BOILER delete as appropriate					Date:	
Engineer name:				Company name:		
Telephone Nº:				Gas Safe registration Nº:		
Max rate	CO	ppm	CO_2 %	CO/CO_2		
Min rate	CO	ppm	CO_2 %	CO/CO_2		
Where possible, has a flue integrity check been undertaken in accordance with manufacturers' instructions, and readings are correct?"				yes		
Gas rate:	m^3/h		OR	ft^3/h		
Were parts fitted?delete as appropriate			Yes	No		
Parts fitted:						
System inhibitor concentration has been checked and appropriate action taken, in accordance with BS 7593 and boiler manufacturers' instructions. *				yes	n/a	
Comments:						
Signature:						

*A System inhibitor efficacy test is required on every annual service in accordance with the manufacturers' instructions and BS 7593. It is only acceptable to not have undertaken this if the service engineers attendance visit was in between annual services to attend a non-water facing component.

SERVICE/INTERIM WORK ON BOILER delete as appropriate					Date:	
Engineer name:				Company name:		
Telephone Nº:				Gas Safe registration Nº:		
Max rate	CO	ppm	CO_2 %	CO/CO_2		
Min rate	CO	ppm	CO_2 %	CO/CO_2		
Where possible, has a flue integrity check been undertaken in accordance with manufacturers' instructions, and readings are correct?"				yes		
Gas rate:	m^3/h		OR	ft^3/h		
Were parts fitted?delete as appropriate			Yes	No		
Parts fitted:						
System inhibitor concentration has been checked and appropriate action taken, in accordance with BS 7593 and boiler manufacturers' instructions. *				yes	n/a	
Comments:						
Signature:						

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Engineer name:				Company name:		
Telephone Nº:				Gas Safe registration Nº:		
Max rate	CO	ppm	CO_2 %	CO/CO_2		
Min rate	CO	ppm	CO_2 %	CO/CO_2		
Where possible, has a flue integrity check been undertaken in accordance with manufacturers' instructions, and readings are correct?"				yes		
Gas rate:	m^3/h		OR	ft^3/h		
Were parts fitted?delete as appropriate			Yes	No		
Parts fitted:						
System inhibitor concentration has been checked and appropriate action taken, in accordance with BS 7593 and boiler manufacturers' instructions. *				yes	n/a	
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Telephone Nº:				Gas Safe registration Nº:		
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Min rate	CO	ppm	CO_2 %	CO/CO_2		
Where possible, has a flue integrity check been undertaken in accordance with manufacturers' instructions, and readings are correct?"				yes		
Gas rate:	m^3/h		OR	ft^3/h		
Were parts fitted?delete as appropriate			Yes	No		
Parts fitted:						
System inhibitor concentration has been checked and appropriate action taken, in accordance with BS 7593 and boiler manufacturers' instructions. *				yes	n/a	
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Engineer name:				Company name:		
Telephone Nº:				Gas Safe registration Nº:		
Max rate	CO	ppm	CO_2 %	CO/CO_2		
Min rate	CO	ppm	CO_2 %	CO/CO_2		
Where possible, has a flue integrity check been undertaken in accordance with manufacturers' instructions, and readings are correct?"				yes		
Gas rate:	m^3/h		OR	ft^3/h		
Were parts fitted?delete as appropriate			Yes	No		
Parts fitted:						
System inhibitor concentration has been checked and appropriate action taken, in accordance with BS 7593 and boiler manufacturers' instructions. *				yes	n/a	
Comments:						
Signature:						

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Engineer name:			Company name:		
Telephone No:			Gas Safe registration No:		
Max rate	CO	ppm	CO_2 %	CO/CO_2	
Min rate	CO	ppm	CO_2 %	CO/CO_2	
Where possible, has a flue integrity check been undertaken in accordance with manufacturers' instructions, and readings are correct?"				yes	
Gas rate:	m^3/h		OR	ft^3/h	
Were parts fitted? delete as appropriate			Yes	No	
Parts fitted:					
System inhibitor concentration has been checked and appropriate action taken, in accordance with BS 7593 and boiler manufacturers' instructions. *				yes	n/a
Comments:					
Signature:					

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SERVICE/INTERIM WORK ON BOILER delete as appropriate				Date:	
Engineer name:			Company name:		
Telephone No:			Gas Safe registration No:		
Max rate	CO	ppm	CO_2 %	CO/CO_2	
Min rate	CO	ppm	CO_2 %	CO/CO_2	
Where possible, has a flue integrity check been undertaken in accordance with manufacturers' instructions, and readings are correct?"				yes	
Gas rate:	m^3/h		OR	ft^3/h	
Were parts fitted? delete as appropriate			Yes	No	
Parts fitted:					
System inhibitor concentration has been checked and appropriate action taken, in accordance with BS 7593 and boiler manufacturers' instructions. *				yes	n/a
Comments:					
Signature:					

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SERVICE/INTERIM WORK ON BOILER delete as appropriate				Date:	
Engineer name:			Company name:		
Telephone No:			Gas Safe registration No:		
Max rate	CO	ppm	CO_2 %	CO/CO_2	
Min rate	CO	ppm	CO_2 %	CO/CO_2	
Where possible, has a flue integrity check been undertaken in accordance with manufacturers' instructions, and readings are correct?"				yes	
Gas rate:	m^3/h		OR	ft^3/h	
Were parts fitted? delete as appropriate			Yes	No	
Parts fitted:					
System inhibitor concentration has been checked and appropriate action taken, in accordance with BS 7593 and boiler manufacturers' instructions. *				yes	n/a
Comments:					
Signature:					

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SERVICE/INTERIM WORK ON BOILER delete as appropriate				Date:	
Engineer name:			Company name:		
Telephone No:			Gas Safe registration No:		
Max rate	CO	ppm	CO_2 %	CO/CO_2	
Min rate	CO	ppm	CO_2 %	CO/CO_2	
Where possible, has a flue integrity check been undertaken in accordance with manufacturers' instructions, and readings are correct?"				yes	
Gas rate:	m^3/h		OR	ft^3/h	
Were parts fitted? delete as appropriate			Yes	No	
Parts fitted:					
System inhibitor concentration has been checked and appropriate action taken, in accordance with BS 7593 and boiler manufacturers' instructions. *				yes	n/a
Comments:					
Signature:					

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SERVICE/INTERIM WORK ON BOILER delete as appropriate				Date:	
Engineer name:			Company name:		
Telephone No:			Gas Safe registration No:		
Max rate	CO	ppm	CO_2 %	CO/CO_2	
Min rate	CO	ppm	CO_2 %	CO/CO_2	
Where possible, has a flue integrity check been undertaken in accordance with manufacturers' instructions, and readings are correct?"				yes	
Gas rate:	m^3/h		OR	ft^3/h	
Were parts fitted? delete as appropriate			Yes	No	
Parts fitted:					
System inhibitor concentration has been checked and appropriate action taken, in accordance with BS 7593 and boiler manufacturers' instructions. *				yes	n/a
Comments:					
Signature:					

*A System inhibitor efficacy test is required on every annual service in accordance with the manufacturers' instructions and BS 7593. It is only acceptable to not have undertaken this if the service engineers attendance visit was in between annual services to attend a non-water facing component.

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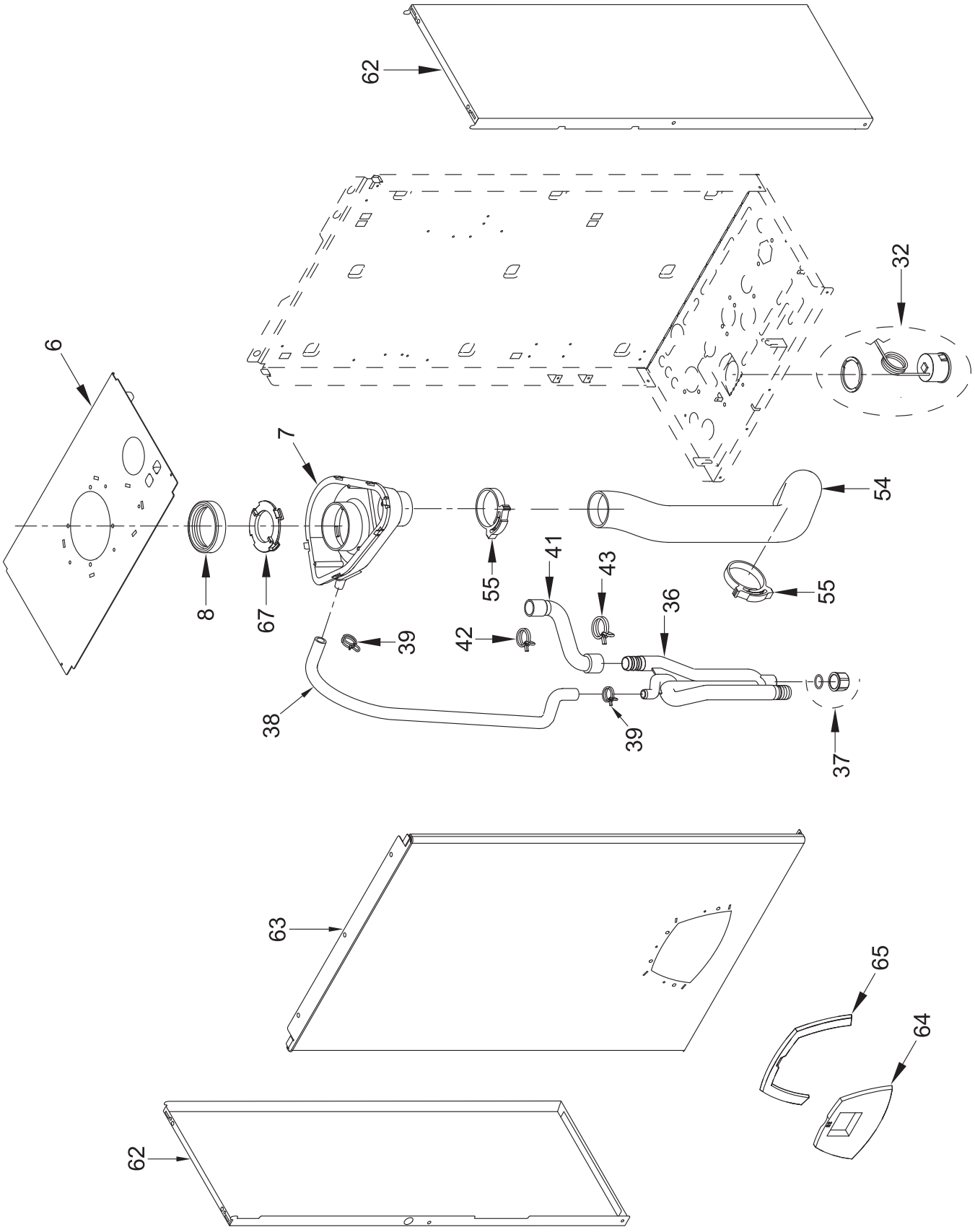
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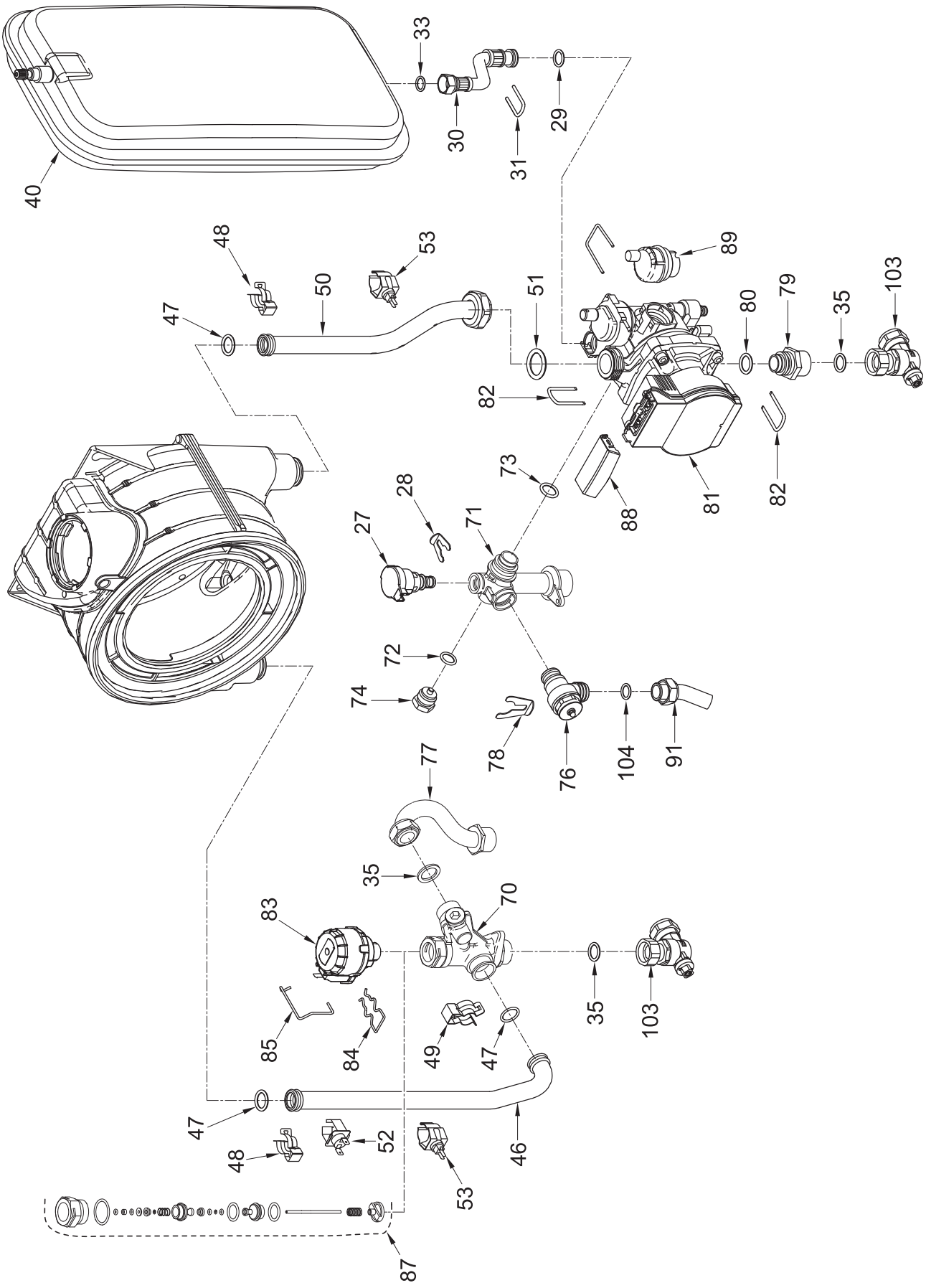
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EXPLODED VIEWS

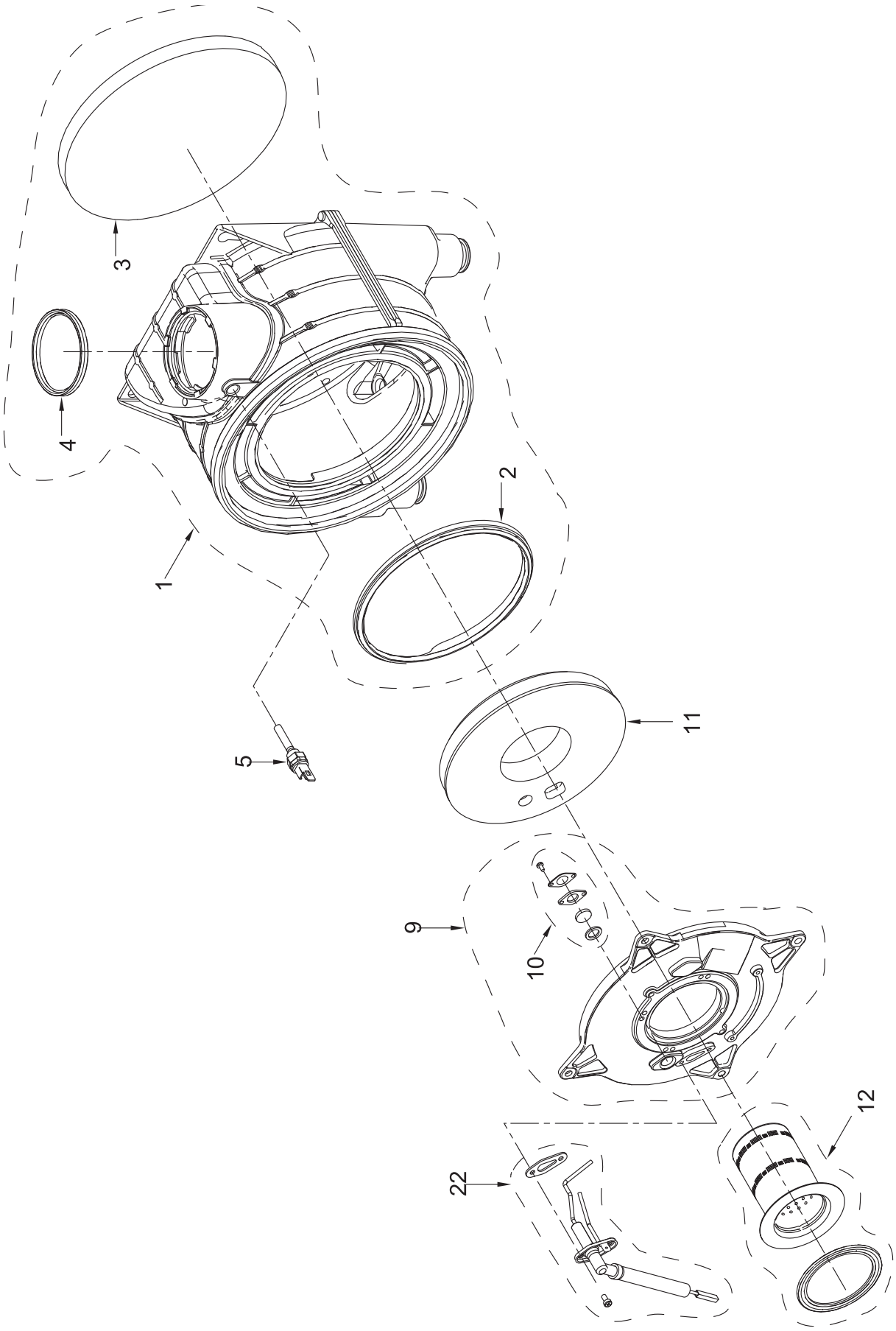
Frame



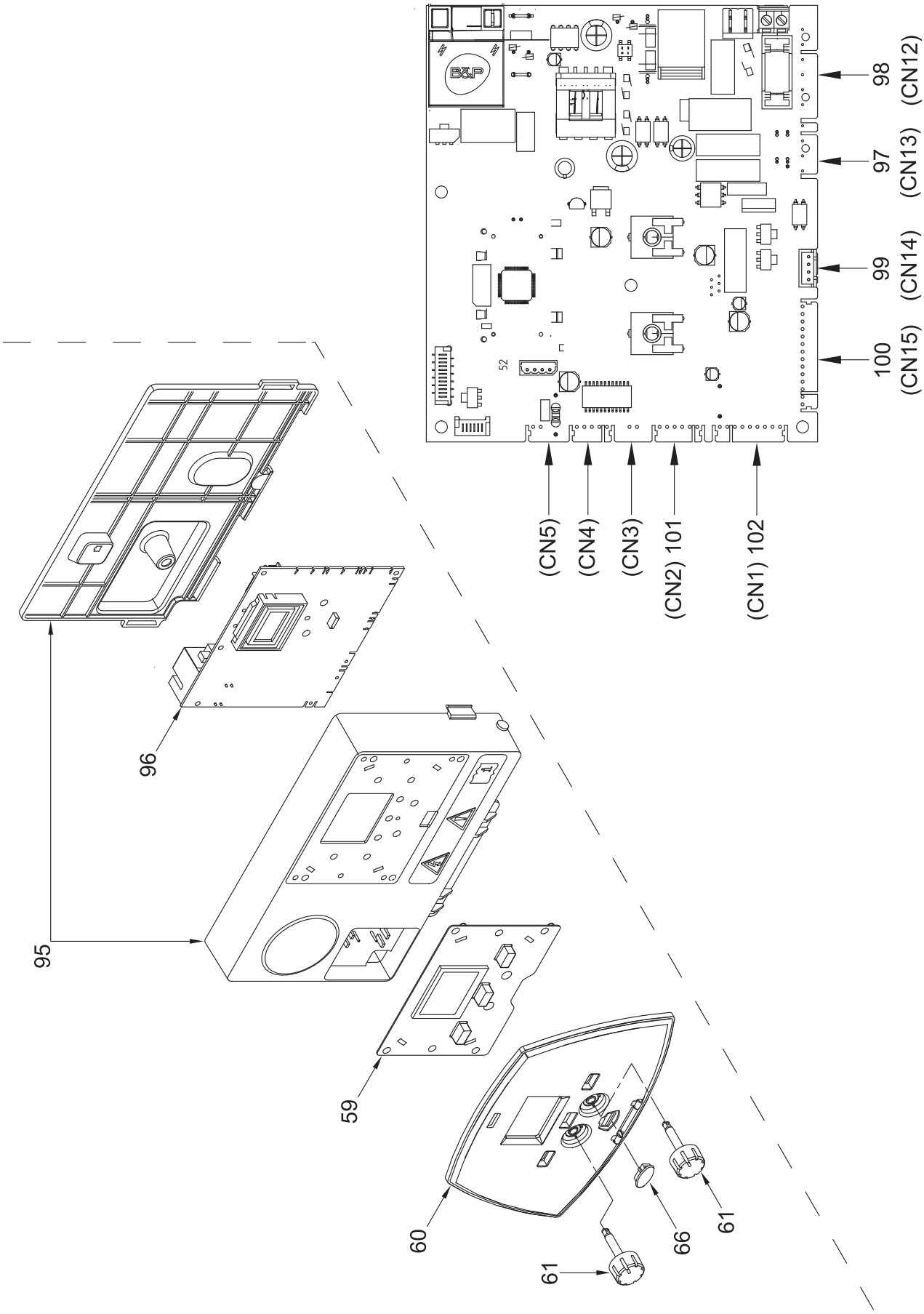
Hydraulic assembly



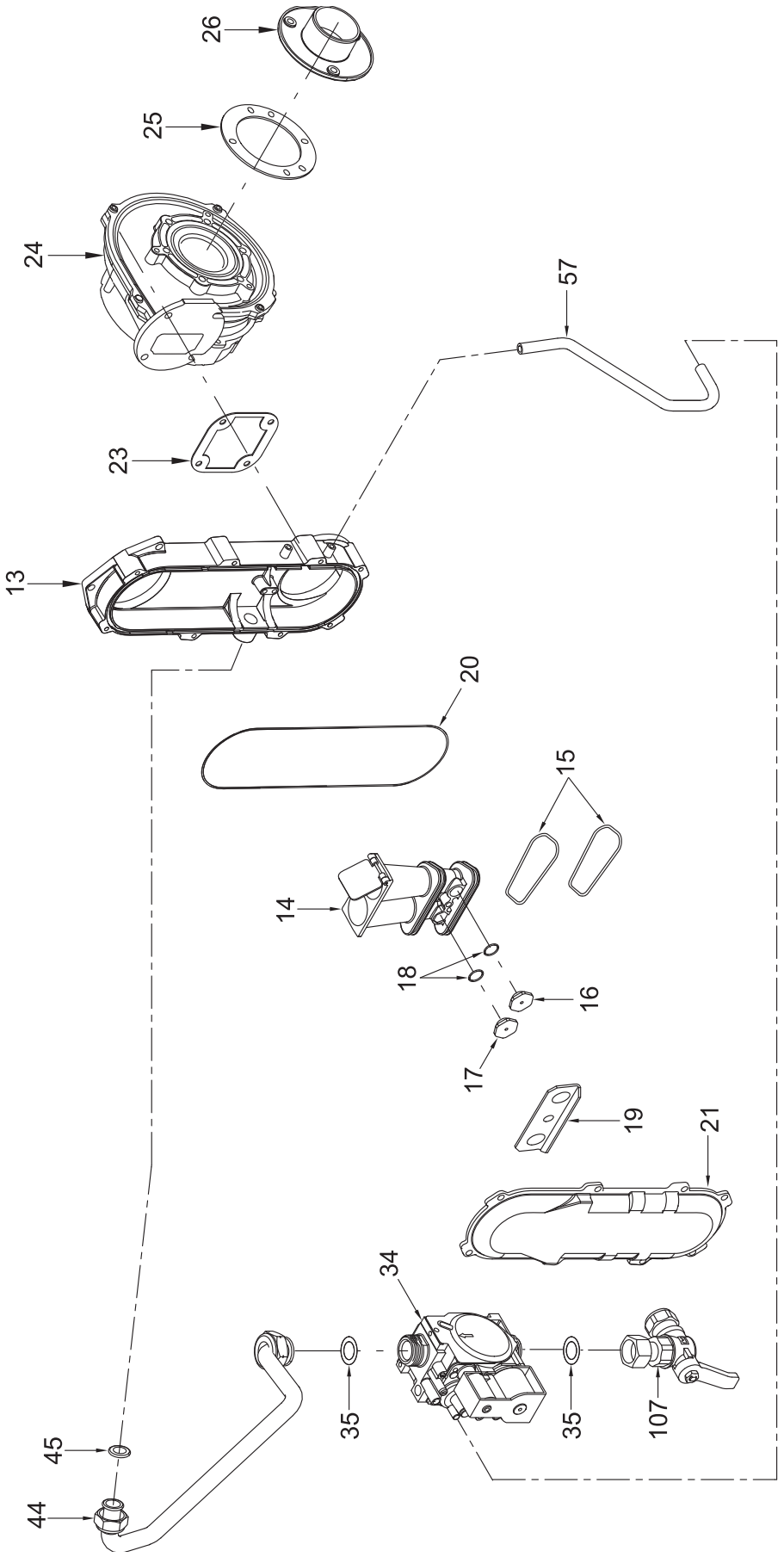
Exchanger / Combustion



Control panel



Gas valve / Air/gas duct / Fan



Edea 25 T

Pos.	Code	Description	Advised parts
001	6278971	Heat exchanger gas-water	C
002	6326953	Sealing	C
003	6326951	Rear insulation + springs	
004	6248876	Smoke outlet gasket ø80 mm	C
005	6277130	Probe NTC D.4X40	A
006	6291162	Upper protection shield	
007	6278706	Smoke chamber	
008	6248855	P.C. inlet/oulet smokes gasket	C
009	5188364	Main exchanger door	
010	6211794	Peephole kit + gasket	C
011	6269034	Insulation	
012	8076125	Burner + gasket kit	
013	6278813	Air-gas hose lower side	
014	5200303	Air/gas mixer assembly	
015	6226470	ORing 52,07 x 2,62	C
016	6322310	Round nozzle Ø 3,20	
017	6322359	Hexagonal nozzle Ø 3,40	
018	6226403	O-ring 2031	C
019	6267119	Nozzle locking bracket	
020	6226465	O-ring Ø 183,83x2,62	C
021	6278812	Air-gas hose upper side	
022	6281609	Ignit.-ionis.electrode +gasket	B
023	6174816	Gasket for fan flange	C
024	6261408	Fan	A
025	6028703	Gasket for duct flange	C
026	6083056	Duct flange 50	
027	6273608	Water pressure transducer	A
028	6226639	Spring clip	
029	6226476	ORing diam.15x2	C
030	6017405	Flexible pipe M.F. 3/8" L=300	
031	6226643	Pipe fixing spring	
032	6281716	Hydrometer + spring	B
033	2030226	Gasket Ø 10,2x14,8x2	C
034	6243840	Gas valve	A
035	2030228	Gasket Ø 17x24x2	C
036	6277211	Water trap	C
037	5171635	Cap + gasket for water trap kit	C
038	1010215	Rubber pipe dia. 15x2,5 L=0,5 m	
039	2051120	Clamp diam. 17,3	
040	5183729	Rectang. expans.vessel 9 l. 3/8	C
041	6034155	Condensate drainage pipe	
042	2051122	Clamp	
043	2051123	Clamp diam.	
044	6277479	Pipe connecting gas valve	
045	2030255	Gasket Ø 12,5x18,5x3	C
046	6227486	Flowing pipe to C.H. system	
047	6226412	O-ring 3068	C
048	6226619	Spring for heat exchanger conne	
049	6226601	Spring for heat exchanger conne	
050	6227548	Return pipe from C.H. system	
051	2030267	Piracriten gasket Ø 30x17x2	C

Pos.	Code	Description	Advised parts
052	6146729	100¢C safety stat	A
053	6231372	Temperature sensor	A
054	6001174	Air intake pipe 55	
055	2051252	Hose clamp Ø 53-57	
057	1010209	Silicon pipe Ø 8x1.5 L=0,3 m	
059	6329900	Rubber button	C
060	6329800	Interface panel	
061	6290170	Knob Ø 20	
062	6304480	casing left/right side panel	
063	6304251	Casing front panel	
064	6281730	Door for front panel	
065	6299760	Frame for front panel	
066	6329960	Rubber cap	
067	6028663	Smoke exhaust diaphragm D.34	
070	6265890	Flowing to C.H. system manifold	C
071	6265880	C.H. return manifold	C
072	2030225	Gasket Ø 5,5x11x2	
073	6226475	ORing diam.18,64x3,53	C
074	6147401	Plug 1/4"	
076	6040225	Pressure relief valve 1/2" 3 ba	C
077	6265022	D.H.W. storage tank flow pipe	
078	6226645	Spring clip	
079	6120560	Pump nipple 3/4"	
080	6226475	ORing diam.18,64x3,53	C
081	6330401	Modulating circulating pump	B
082	6226644	Spring clip for rotating connec	
083	6087332	Motor for diverting valve	B
084	6226636	D.H.W. elektrovalve fix.spring	
085	6226638	Divertor valve motor spring cli	
087	6319645	Three-way plates group	B
088	6319647	Circulateur top cover	
089	6013182	Automatic air vent	C
091	6157660	Pressure relief valve drain pip	
095	6304720	Control panel	
096	6324982	Main P.C.B	A
097	6329610	4 pole cable connector CN13	B
098	6323875	6 pole cable connector CN12	B
099	6329611	4 pole cable connector CN14	B
100	6325813	14 pole cable connector CN15	B
101	6329457	6 pole cable connector CN2	B
102	6325671	9 pole cable connector CN1	B
103	6177505	Ball cock 3/4" x 22	C
104	2030227	Gasket Ø 12x18x2	C
109	2030249	Gasket Ø 24x17x3	C
110	6177530	Gas cock 3/4" F x 15	
700	5202583	Complete control panel	A
701	6231331	D.H.W. tank sensor	A
702	5184818	Fitting cocks kit	
705	5185153	L.P.G. conversion kit	
706	5185160	Conversion kit for natural gas	

A Spare parts for minimum fittings

A+B Spare parts for basic safety fittings

A+B+C Spare parts for extended safety fittings

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Pos.	Code	Description	Advised parts
001	6278972	Heat exchanger gas-water	C
002	6326953	Sealing	C
003	6326951	Rear insulation + springs	
004	6248876	Smoke outlet gasket ø80 mm	C
005	6277130	Probe NTC D.4X40	A
006	6291162	Upper protection shield	
007	6278706	Smoke chamber	
008	6248855	P.C. inlet/oulet smokes gasket	C
009	5188364	Main exchanger door	
010	6211794	Peephole kit + gasket	C
011	6269034	Insulation	
012	8076127	Burner + gasket kit	C
013	6278813	Air-gas hose lower side	
014	5200312	Air/gas mixer assembly	
015	6226470	ORing 52,07 x 2,62	C
016	6322305	Round nozzle Ø 4,0	
017	6322355	Hexagonal nozzle Ø 4,50	
018	6226403	O-ring 2031	C
019	6267119	Nozzle locking bracket	
020	6226465	O-ring Ø 183,83x2,62	C
021	6278812	Air-gas hose upper side	
022	6281609	Ignit.-ionis.electrode +gasket	B
023	6174816	Gasket for fan flange	C
024	6261405	Fan	A
025	6028703	Gasket for duct flange	C
026	6083056	Duct flange 50	
027	6273608	Water pressure transducer	A
028	6226639	Spring clip	
029	6226476	ORing diam.15x2	C
030	6017405	Flexible pipe M.F. 3/8" L=300	
031	6226643	Pipe fixing spring	
032	6281716	Hydrometer + spring	B
033	2030226	Gasket Ø 10,2x14,8x2	C
034	6243840	Gas valve	A
035	2030228	Gasket Ø 17x24x2	C
036	6277211	Water trap	C
037	5171635	Cap + gasket for water trap kit	C
038	1010215	Rubber pipe dia. 15x2,5 L=0,5 m	
039	2051120	Clamp diam. 17,3	
040	5183730	Rectang. expansion vessel L.10	C
041	6034155	Condensate drainage pipe	
042	2051122	Clamp	
043	2051123	Clamp diam.	
044	6277479	Pipe connecting gas valve	
045	2030255	Gasket Ø 12,5x18,5x3	C
046	6227486	Flowing pipe to C.H. system	
047	6226412	O-ring 3068	C
048	6226619	Spring for heat exchanger conne	
049	6226601	Spring for heat exchanger conne	
050	6227548	Return pipe from C.H. system	
051	2030267	Piracriten gasket Ø 30x17x2	C

Pos.	Code	Description	Advised parts
052	6146729	100¢C safety stat	A
053	6231372	Temperature sensor	A
054	6001174	Air intake pipe 55	
055	2051252	Hose clamp Ø 53-57	
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700	5202583	Complete control panel	A
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705	5185156	L.P.G. conversion kit	
706	5185163	Conversion kit for natural gas	

A Spare parts for minimum fittings

A+B Spare parts for basic safety fittings

A+B+C Spare parts for extended safety fittings

APPENDIX 1 (GUIDANCE HHIC)

Manufacturer's Instructions

The latest manufacturer's instructions shall be followed for the correct connection of the condensate discharge pipe from the boiler as this may vary due to the design of the boiler. For example, a trap is not required in the condensate discharge pipework if there is a trap with a minimum condensate seal of 75 mm incorporated into the boiler.

Internal Condensate Pipe Discharge Termination

Internal condensate discharge pipework shall be a minimum of 19mm ID (typically 22mm OD) plastic pipe or as per manufacturer's instructions and this should "fall" a minimum of 45mm per metre away from the boiler, taking the shortest practicable route to the termination point.
(45mm as per BS6798, 52mm per metre as per industry practice is specified in the following diagrams)

To minimise the risk of freezing during prolonged sub-zero conditions, an internal "gravity discharge point" such as an internal soil stack (preferred method), internal kitchen, utility room or bathroom waste pipe e.g. from a sink, basin, bath or shower shall be adopted, where possible.

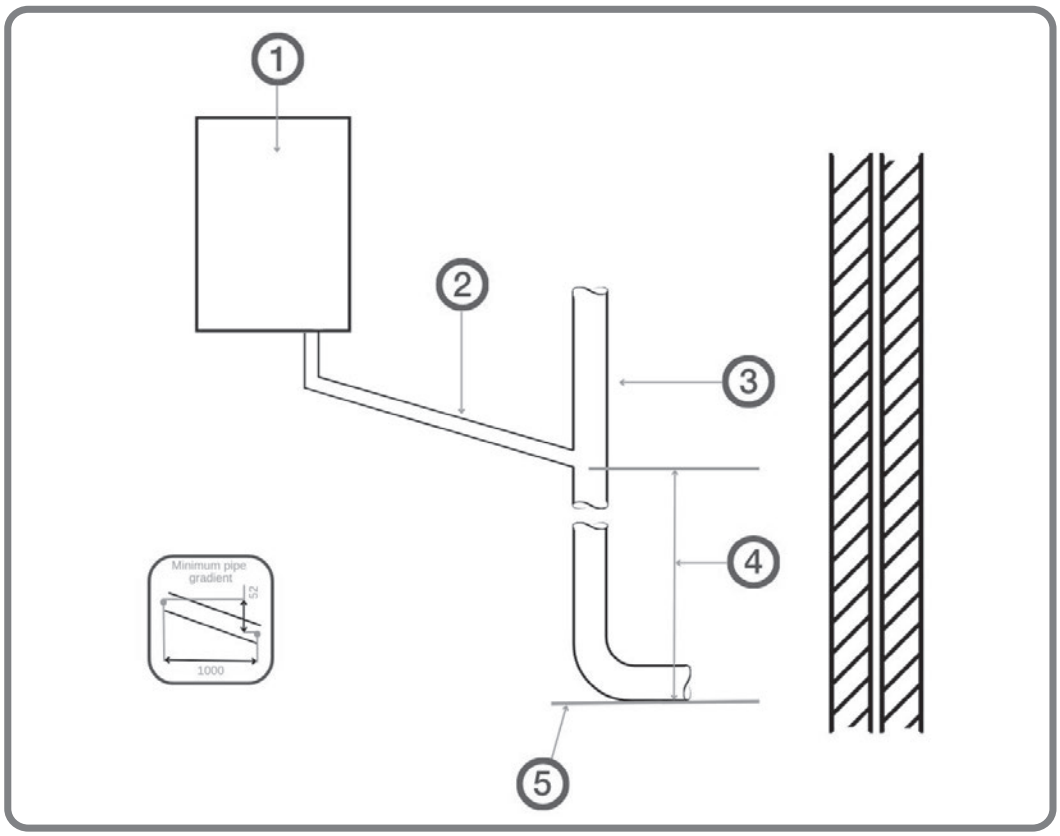
Note - Use a suitable permanent connection to the foul waste pipe. Figures 1, 2(a), 2(b) show appropriate connection methods.

Manufacturers Instructions shall be referred to when installing boiler condensate discharge pipes

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Figure 1 – Connection of condensate discharge pipe to internal soil and vent stack.
Note – Refer to manufacturer's instructions.

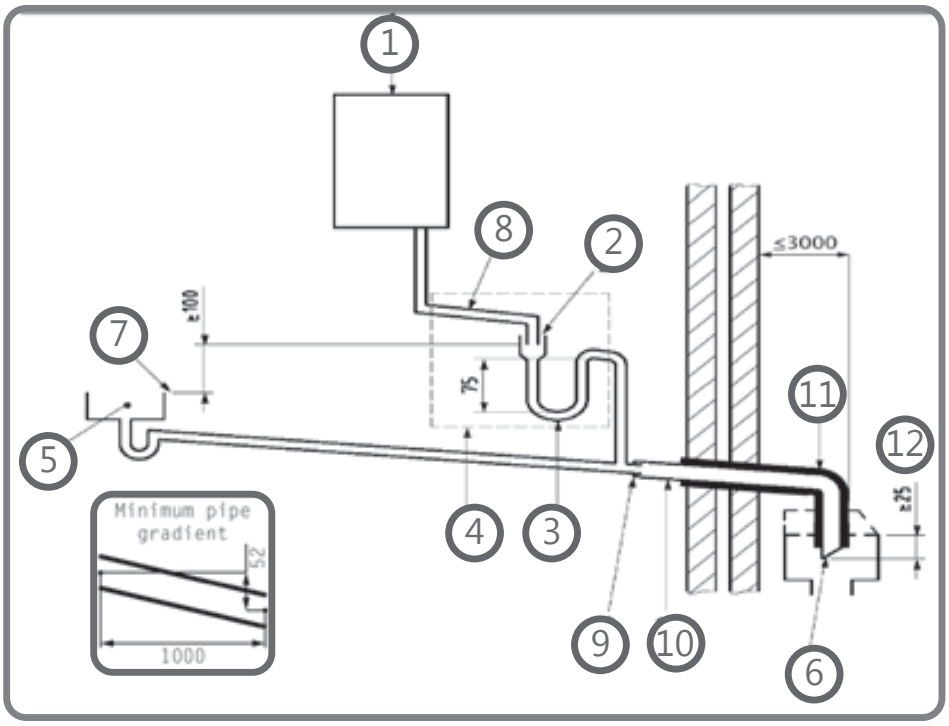


Key

1 Boiler
2 Minimum internal diameter 19mm
3 Soil and vent stack
4 450 mm minimum up to three storeys
5 Invert

Internal Condensate Pipe Connection with External Termination

Figure 2(a) – Connection of a condensate discharge pipe downstream of a sink, basin, bath or shower waste trap.
Note – Check manufacturer's instructions to see if an air break or trap is required.

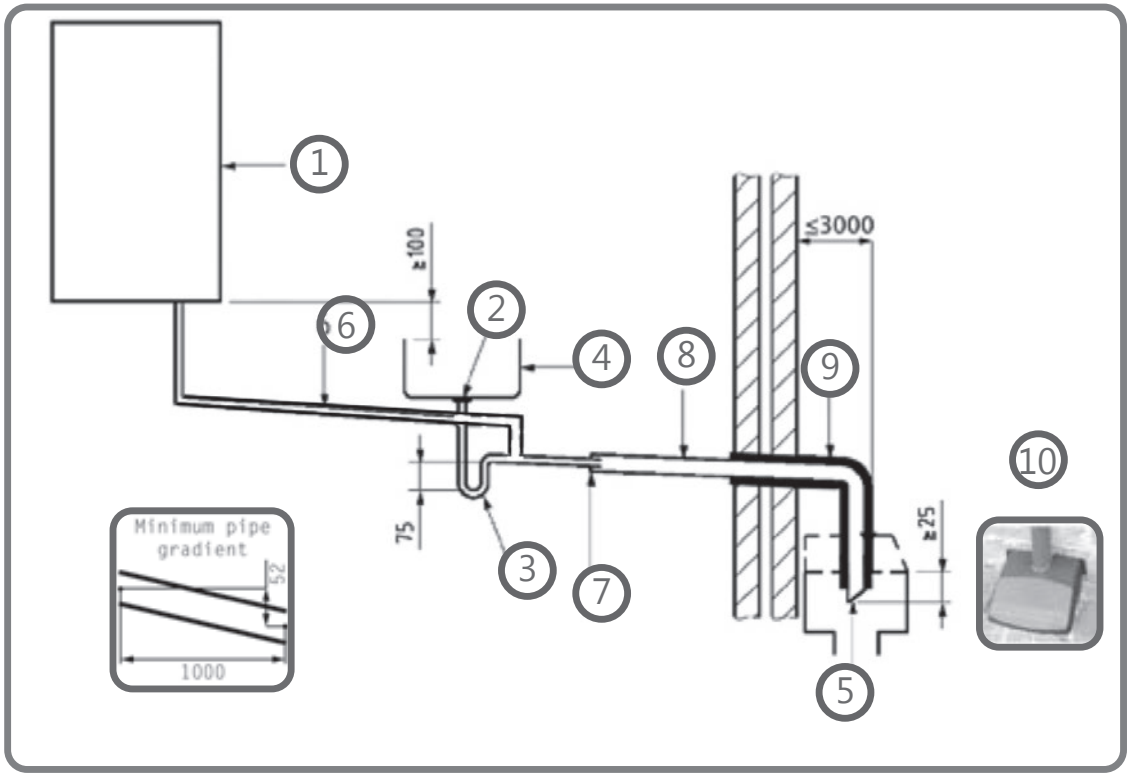


Key
1 Boiler
2 Visible air break
3 75 mm trap
4 Visible air break and trap not required if there is a trap with a minimum condensate seal of 75 mm incorporated into the boiler. In this case the 100 mm is measured to the trap in the boiler.
5 Sink, basin, bath or shower
6 Open end of condensate discharge pipe direct into gully 25 mm min below grating but above water level; end cut at 45 °
Note – the maximum external condensate discharge length is 3 metres
7 Sink lip
8 Minimum internal diameter 19 mm
9 Pipe size transition
10 Minimum internal diameter 30 mm taken to the outside
11 UV resistant, Water/weather proof insulation
12 Drain cover/leaf guard

Manufacturers Instructions shall be referred to when installing boiler condensate discharge pipes

Internal Condensate Pipe Connection with External Termination

Figure 2(b) – Connection of a condensate discharge pipe downstream of a sink, basin, bath or shower waste trap



Key
1 Boiler
2 Visible air break at plug hole –
3 75 mm sink, basin, bath or shower waste trap
4 Sink, basin, bath or shower with integral overflow
5 Open end of condensate discharge pipe direct into gully 25 mm min below grating but above water level; end cut at 45 °
Note – the maximum external condensate discharge length is 3 metres
6 Minimum internal diameter 19 mm
7 Pipe size transition
8 Minimum internal diameter 30 mm taken to the outside
9 UV resistant, Water/weather proof insulation
10 Fit drain cover/leaf guard

Internal Condensate Pipe Discharge Termination

When connecting to existing pipework it is critical to review the existing installation to ensure the existing pipework is appropriate for condensate discharge having been run correctly and fully insulated and sealed if this is an external or internal termination.

The possibility of waste pipes freezing downstream of the connection point shall be considered when determining a suitable connection point - e.g. a slightly longer pipe run to an internal soil stack may be preferable to a shorter run discharging directly through the wall to an external drain.
Note - Where "gravity discharge" to an internal termination is not physically possible (e.g. the discharge point is above the appliance location, or access is obstructed by a doorway), or where very long internal pipe runs would be required to reach a suitable discharge point, then a condensate pump shall be used.

External waste pipework shall be:

- Only used to take the condensate waste away and no other waste must be connected to keep the pipework free from restrictions or blockages
- Insulated with waterproof UV resistant material.
- All joints sealed correctly stopping water getting between the insultation and waste pipe
- Terminated below the grid but above the water line and a drain/leaf guard fitted.
- Cut at 45 degrees where it terminates into the grid and insulated to the tip of the pipe.
- A minimum thickness of 13mm insulation is recommended for minimum 32mm OD solvent pipe work and fittings
- Where the insulation passes through the wall with a flexible seal for expansion and contraction is required, to stop any moisture getting between the insulation and waste pipe. This also stops any moisture penetrating through the wall, providing seal supporting energy efficiency



Condensate Pump

Use of a Condensate Pump to an Internal Termination
Condensate can be removed using a proprietary condensate pump, of a specification recommended by the boiler or pump manufacturer. In order to minimise the risk of freezing during prolonged sub-zero spells, the preferred method is internal to the property for terminating the boiler condensate pump to a foul water discharge point should be adopted such as an internal soil stack (preferred method) All waste pipework must be as vertical as possible to take condensate water as fast and as hot as possible to the internal soil stack Any waste pipework being fitted in an unheated area must be enlarged to 32mm OD, insulated and sealed correctly (solvent weld pipe and fitting). UV is not required as fitted internally

Manufacturers Instructions shall be referred to when installing boiler condensate discharge pipes

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External Connections

Only fit a correctly insulated external boiler condensate drain connection if an internal gravity or pumped connection is **impractical** to install.

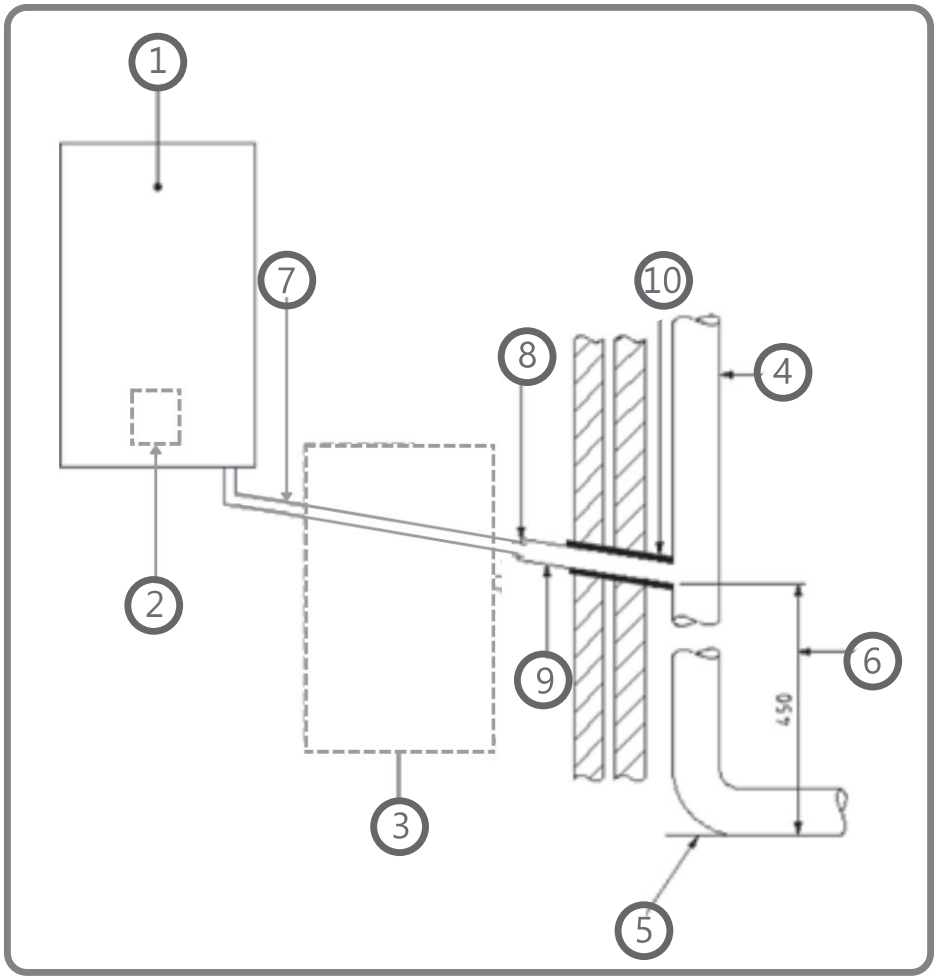
The pipe work from the boiler shall be of a minimum 19mm ID or if in an unheated area increased to 30mm ID (typically 32mm OD) solvent weld of as per manufacturer's instructions and the condensate discharge pipe shall be run in a standard drainpipe material, e.g. poly (vinyl chloride) (PVC), un-plasticized poly (vinyl chloride) (PVC-U), acrylonitrile butadiene-styrene (ABS), polypropylene (PP) or chlorinated poly (vinyl chloride) (PVC-C).

Note - Fixing centres for brackets should be a maximum of 300mm for flexible pipe and 500mm for solid pipe and manufacturer's recommendations should be followed.

The condensate pipe should be run internally as far as possible before going externally and the pipe diameter shall be increased to a minimum of 30mm ID (typically 32mm OD) if not already, if in an unheated, area before it passes through the wall. The angle of the pipe shall slope downwards by at least 3 degrees as it passes through the wall to assist in maintaining a good velocity as the condensate exits the building.

The external pipe run shall be kept as short as possible to a maximum of 3 metres, taking the most direct and "most vertical" route to the discharge point, with no horizontal sections in which condensate might collect. The external condensate and pipework inside the cavity wall must be insulated to manufacturers instructions

Figure 3 – Connection of condensate discharge pipe to external soil and vent stack



Key
1 Boiler
2 Internal Trap
3 Visible air break and trap not required if there is a trap with a minimum condensate seal of 75mm incorporated into the boiler.
4 Soil and vent stack
5 Invert
6 450mm minimum up to three storeys
7 Minimum internal diameter 19 mm
8 Pipe size transition point
9 Minimum internal diameter 30mm taken to the outside
10 UV Resistant, Water/weather proof insulation

Manufacturers Instructions shall be referred to when installing boiler condensate discharge pipes

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Connecting to a rain water downpipe/External Soil Stack

When a rain water downpipe is used as the termination (NB only permissible if this downpipe passes to a combined foul and rainwater drainage system) an external air break shall be installed between the condensate discharge pipe and the downpipe to avoid reverse flow of rainwater into the boiler should the downpipe itself become blocked, flooded or frozen.

Figure 4 shows a suitable connection method. Pipe insulation should be fitted.

External Termination of the Condensate Pipe

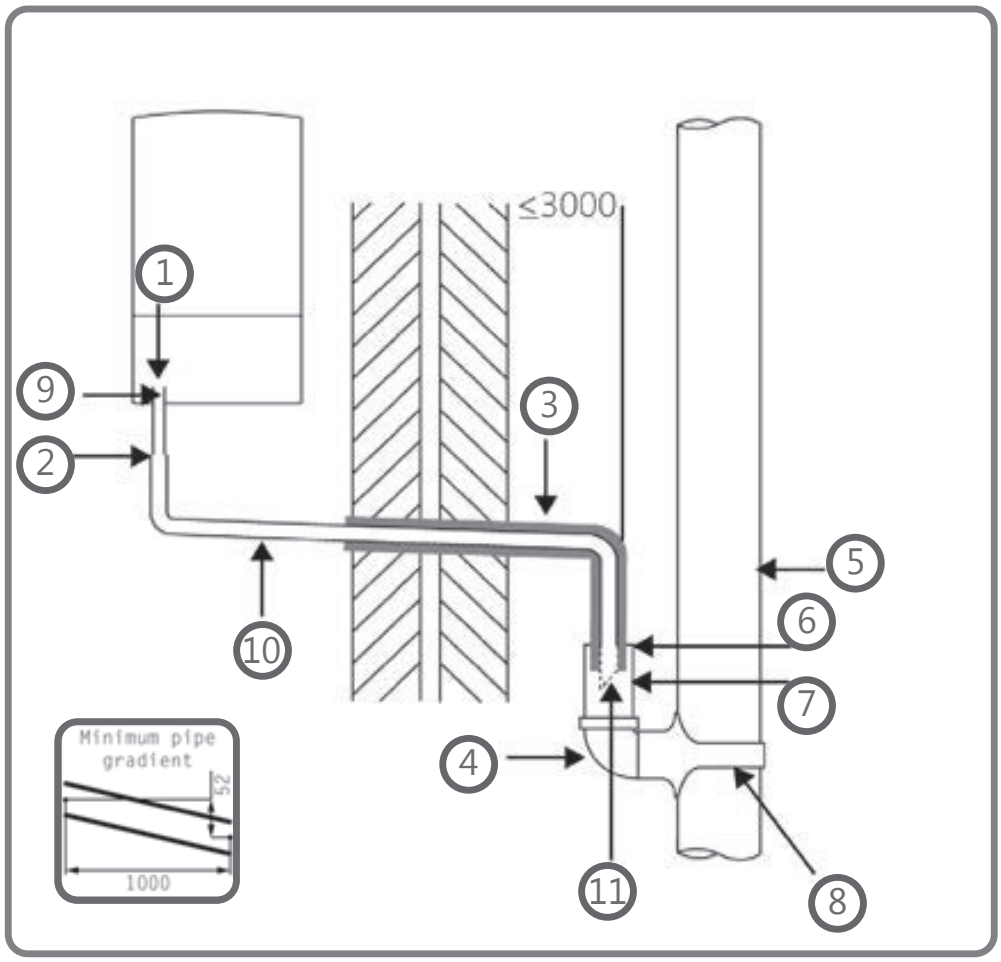
Where the condensate discharge pipe is terminated over an open foul drain or gully, the pipe should terminate below the grating level, but above water level, in order to minimise "wind chill" at the open end. Pipe drainage and resistance to freezing will be improved if the termination end of the condensate pipe is cut at 45 degrees as opposed to a



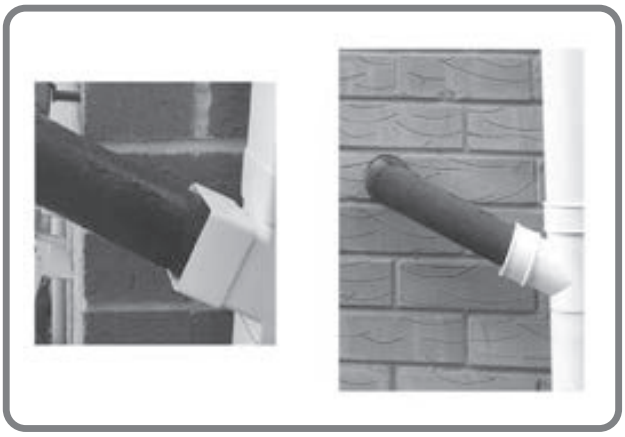
The use of a drain cover (such as those used to prevent blockage by leaves) shall be fitted to offer further protection from wind chill. Figure 4 (following page) shows a suitable connection method. Where the condensate drain pipe terminates in a purpose-designed soakaway any above-ground section of condensate discharge pipe should be run and insulated as described above. Figure 6 (following page)

External Connections

Figure 4 – External termination to rainwater downpipe (NB only combined foul/rainwater drain)



Key
1 Condensate discharge pipe from boiler
2 Pipe size transition point
3 Water/weather proof, UV resistant insulation
4 43mm 90° male/female bend
5 External rain water pipe into foul water
6 External air break
7 Air gap
8 68mm PVC strapon fitting
9 Minimum internal diameter 19mm
10 Minimum external diameter 30mm and through the wall
11 End cut at 45°

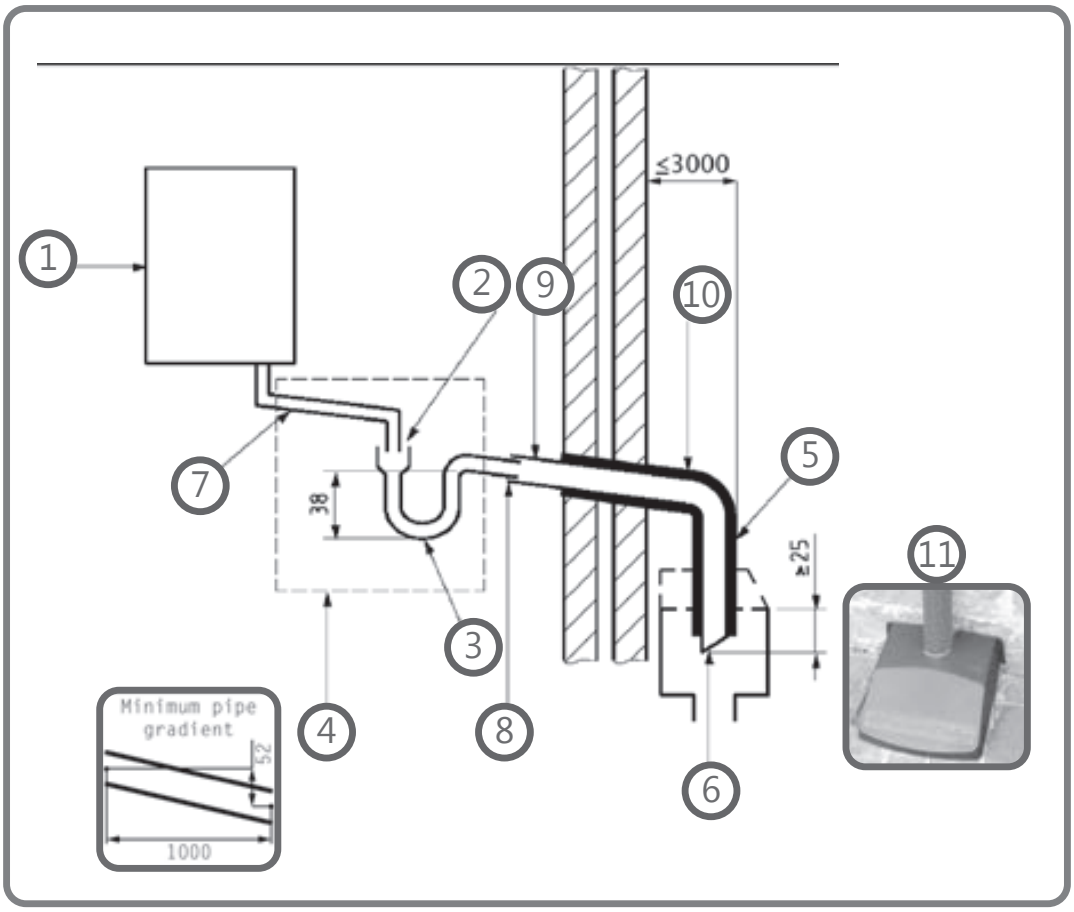


Manufacturers Instructions shall be referred to when installing boiler condensate discharge pipes

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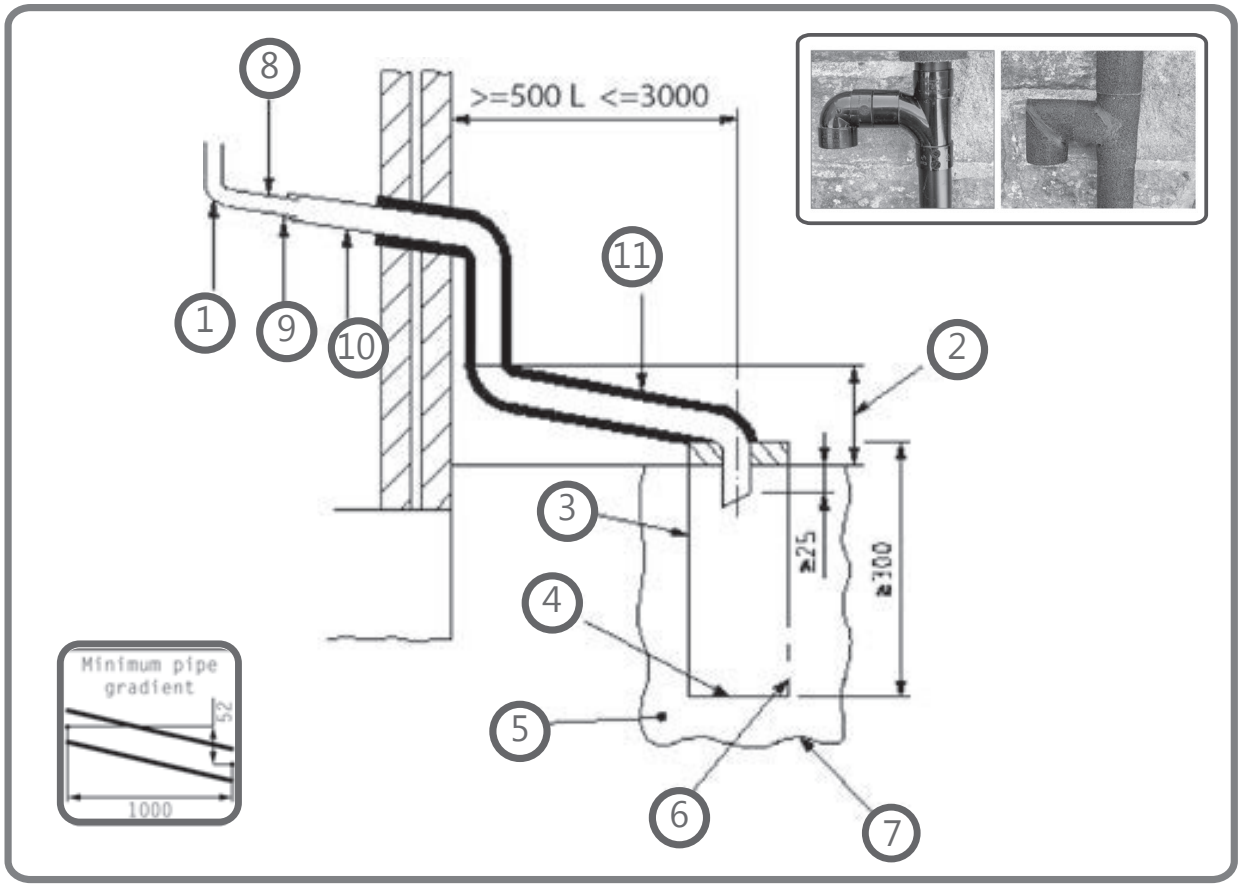
External Connections

Figure 5 – Preferred Method: External drain, gully or rainwater hopper



Key
1 Boiler
2 Visible air break
3 38mm minimum trap
4 Visible air break and trap not required if there is a trap with a minimum condensate seal of 38 mm incorporated into the boiler – refer to manufacturer's instructions
5 External length of pipe 3 m maximum
6 Open end of condensate discharge pipe direct into gully 25 mm min below grating but above water level; end cut at 45 °
7 Minimum internal diameter 19mm increased to a min of 30mm ID (typically 32mm OD) in an unheated area
8 Pipe size transition point
9 Minimum internal diameter 30mm to the outside
10 Water/weather proof and UV resistant insulation
11 Fit drain cover/leaf guard

Figure 6 – Example of a purpose made soakaway



Key
1 Condensate discharge pipe from boiler
2 Ground (this section of the condensate discharge pipe may be run either above or below round level); End cut at 45°
3 Diameter 100 mm minimum plastic tube
4 Bottom of tube sealed
5 Limestone chippings
6 Two rows of three 12 mm holes at 25 mm centres, 50 mm from bottom of tube and facing away from house
7 Hole depth 400 mm minimum by 300 mm diameter
8 Minimum internal diameter 19 mm
9 Pipe size transition point
10 Minimum external diameter 30 mm
11 Water/weather proof and UV resistant insulation

Other considerations

Unheated Areas in Buildings

Internal condensate drainage pipes run in unheated areas such as lofts, basements and garages shall be treated as external connections and insulated accordingly. Weather proof materials may not be necessary but where separate sections of insulation join together, including elbow joints then these should be connected, insulated and sealed correctly to prevent them coming apart with a suitable material to help prevent freezing.

Insulation Materials

Insulation used for external condensate pipes, shall have an outer coating that is weather proof, and UV resistant. Use a minimum of 13mm thick insulation for 32mm external pipes. Ensure all pipework is insulated and sealed correctly

Use of Air Breaks In Condensate Discharge Pipes

Heating engineers should follow manufacturer's instructions on the use of air breaks in condensate discharge pipes. An air break is normally required for both rainwater and soak away connections. Refer to manufacturer's instructions for further details on for air break requirements.

Soakaway

If a soakaway is the only alternative to discharge the condensate an external insulated and sealed air break is required. This will allow water to be discharged from the condensate pipe should the soakaway become saturated, and will allow the boiler to continue to operate. Note: If water is discharged from this 'overflow', then increasing the volume of the soakaway pit should be considered.



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Manufacturers Instructions shall be referred to when installing boiler condensate discharge pipes

Cold weather protection

Cold weather protection methods approved or endorsed by boiler manufacturers and/or service organisations may be adopted if these are considered suitable by the parties involved. It is the responsibility of the manufacturer of these products to ensure they have completed the necessary testing or calculations to ensure the product offers suitable protection to prevent the condensate pipe from freezing. The product manufacturer should provide information as to what level of external temperature and for what time period the product can protect against sub-zero temperatures, i.e. -15°C for 48 hours.

Electric Trace Heating

Trace heating with an external thermostat can be fitted to the external condensate pipe to raise the temperature of the condensate pipe in freezing conditions. Trace heating takes the form of an electrical heating element run in physical contact along the length of the condensate pipe. The pipe still needs to be insulated and sealed correctly to retain heat losses from the pipe. Heat generated by the element then maintains the temperature of the pipe. If such a system is used then the installation instructions of the trace heating manufacturer and any specific recommebdations regarding pipe diameter, insulation, etc. should be followed. All other relevant guidance on condensate discharge pipe installation should also be followed.

Auxiliary Syphon – Fitted Internally

Auxiliary siphons fitted inside the premises assist with the siting of the boiler where an external condensate pipe must be fitted. The storage capacity of the auxiliary siphon increases the volume of condensate discharge reducing the risk of freezing. A further reduction in the potential for the pipe to freeze is achieved when combined with the external insulation requirements and sealing correctly. The aim is to keep the condensate discharge running as fast and as hot as possible, this heats the waste pipe and prevents freezing.

Annex A

Note – Annex A details remedial actions for householders which can be taken if a condensate discharge pipe freezes. This may result in requests for alteration to condensate discharge pipework, in which case the guidance above should be followed.

Frozen Condensate Information Leaflet –Our customer information guide on frozen boiler condensate discharge is also available for download. It includes a condensate assessment form, for engineers to complete and advice to customers during extreme cold weather conditions. www.hhic.org.uk/resources.

Dear Householder,

Your heating engineer has noted that your boiler condensate discharge pipe may be at risk of freezing in prolonged, and extreme cold weather conditions. In recent years we have seen temperatures as low as -20*c in some parts of the UK.
The concern is that your pipe runs externally or in an unheated space for at least some of its length and is liable to freeze in these extreme temperatures as it is not installed in line with the latest guidance, to help guard against freezing. If your pipe freezes, it will cause your boiler to go into “shut off” at a time when you need your heating and hot water the most.

Your heating engineer will advise you on the solutions available to reduce the risk of your pipe freezing, including running the discharge pipe to an internal drainage point (the preferred method if you have an internal soil stack), or installing one of the available products designed to give you added protection against freezing conditions. They will also clearly identify the external conden sate discharge pipe for your future reference and may apply an identification label or tape.

Annex A

Your Engineer has identified the potential for your boiler to freeze in extreme conditions as the following:

Risk category	Explanation	Engineer selection
RED	High risk of freezing- TAKE ACTION	☐
AMBER	Medium risk of freezing- Strongly advise action to be taken	☐
GREEN	Low risk but some improvement required	☐

Work required:

Name: _____

Company: _____

Telephone: _____

Email: _____

Manufacturers Instructions shall be referred to when installing boiler condensate discharge pipes

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Annex A

Thawing Frozen Condensate Pipes

Below is an explanation of what you would need to do to resolve the problem in the event that the pipe was to freeze. We would highly recommend getting a professional to assess the situation and resolve the problem by upgrading the condensate. If you do try to unfreeze your condensate, please take care as there are risks due to the related weather conditions.

1. Locate the blockage

The Condensate discharge pipe usually freezes at the most exposed points outside, such as the open end of the pipe, at a bend or elbow, or where there is a dip in the pipe where condensate can collect. (If the condensate has no insulation there may be an extensive frozen area)

2. Thaw the Frozen Pipe

The Condensate can be thawed in a number of ways. By applying a hot water bottle, a microwaveable heat packs around the blockage or by pouring warm water onto the pipe. Do not use boiling water. Do not use water if your condensate discharge pipe is not easily reached from ground level, Do not put yourself at any undue risk. Seek assistance and engage a professional heating engineer. Be aware that if you are pouring water onto the pipe this can also quickly freeze on the ground, causing a slip hazard.

3. Reset/ Restart the boiler

Once the frozen blockage has been cleared, the boiler will usually need to be reset, and advice on how to do this can be found in the user instructions manual for your boiler. Normally this will involve simply pressing a reset button on the front of the boiler, or in some cases by isolating the electrical supply to the boiler and switching it back on

APPENDIX 2

FLOWCHART FOR CO AND COMBUSTION RATIO CHECK ON COMMISSIONING A CONDENSING BOILER

PRIOR TO CO AND COMBUSTION RATIO CHECK

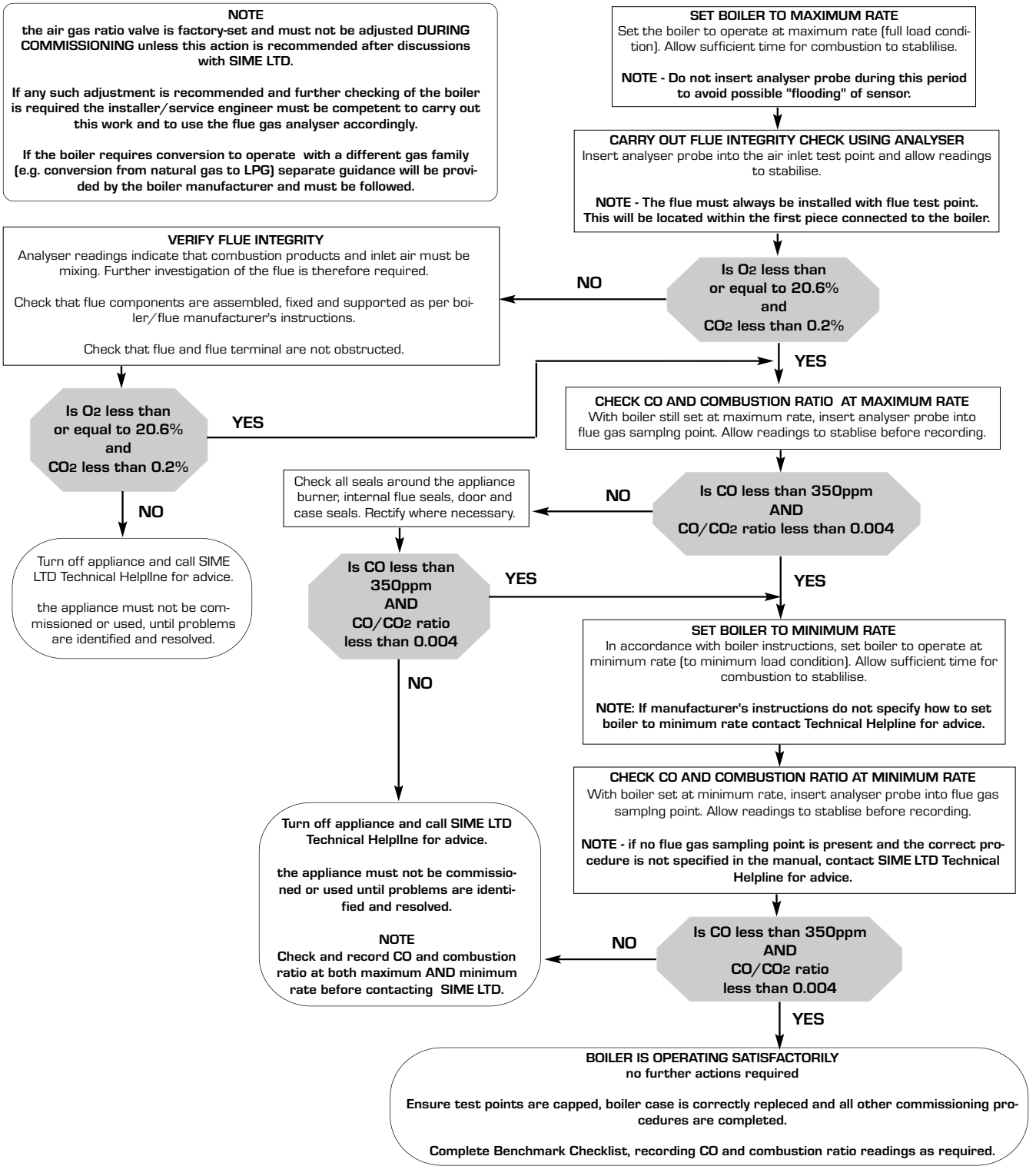
The installation instructions should have been followed, gas type verified and gas supply pressure/rate checked as required prior to commissioning.

As part of the installation process, **ESPECIALLY WHERE A FLUE HAS BEEN FITTED BY PERSONS OTHER THAN THE BOILER INSTALLER**, visually check the integrity of the whole flue system to confirm that all components are correctly asembled, fixed and supported. Check that manufacturer's maximum flue lengths have not been exceeded and all guidance has been followed (e.g. Gas Safe Technical Bulletin TB008).

The flue gas analyser should be of the correct type, as specified by BS 7967

Prior to its use, the flue gas analyser should have been maintained and calibrated as specified by the manufacturer. The installer must have the relevant competence for use of the analyser.

Check and zero the analyser IN FRESH AIR as per analyser manufacturer's instructions.



ANNEXES

PRODUCT DATA SHEET EDEA T

EDEA	25 T	35 T
C.H. energy efficiency class	A	A
Heat output (kW)	25	34
C.H. seasonal energy efficiency (%)	42	60
C.H. annual energy consumption (GJ)	93	93
Sound power dB(A)	55	56

Specific precautionary measures to be adopted at the time of assembly, installation or maintenance of the equipment are contained in the boiler instruction manual

Conforming to Annex IV (item 1) of the Delegated Regulations (EU) No. 811/2013 which supplements Directive 2010/30/EU

BOILER TECHNICAL SHEET EDEA 25 T

Information requirements for boiler space heaters, boiler combination heaters							
Model(s):	EDEA 25 T						
Condensing boiler:	Yes						
Low-temperature boiler:	Yes						
B11 boiler:	No						
Cogeneration space heater:	No			Equipped with a supplementary heater:	No		
Combination heater:	Yes						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Nominal heat output for space heating	P_n	25	kW	**Seasonal space heating energy efficiency**	ηs	93	%
For boiler space heaters and boiler combination heaters: useful heat output				For boiler space heaters and boiler combination heaters: useful efficiency			
At nominal heat output and high-temperature regime [a]	P_4	24,5	kW	At nominal heat output and high-temperature regime (*)	η4	87,9	%
At 30% of nominal heat output and low-temperature regime [b]	P_1	8,2	kW	At 30% of nominal heat output and low-temperature regime (*)	η1	97,8	%
Auxiliary electricity consumption				Other items			
At full load	el_{max}	0,032	kW	Standby heat loss	Pstby	0,105	kW
At part load	el_{min}	0,017	kW	Ignition burner power consumption	Pign	0	kW
In standby mode	PSB	0,004	kW	Emissions of nitrogen oxides	NOx	14	mg/kWh
For combination heaters:							
Declared load profile	-			**Water heating energy efficiency**	ηwh	-	%
Daily electricity consumption	Qelec	-	kWh	Daily fuel consumption	Qfuel	-	kWh
Contact details	Sime Ltd - 1a Blue Ridge Park - Thunderhead Ridge - Glasshoughton, Castleford, WF10 4UA						

a. High-temperature regime means 60°C return temperature at heater inlet and 80°C feed temperature at heater outlet.
b. Low-temperature regime means for condensing boilers 30°C, for low-temperature boilers 37°C and for other heaters 50°C return temperature.

(*) The yield data have been calculated using the higher heating value.

Conforming to Annex IV and Annex VII of the Delegateci Regulation (EU) N.811/2013 which supplements European Regulation EU 2017 /1369

BOILER TECHNICAL SHEET EDEA 35 T

Information requirements for boiler space heaters, boiler combination heaters							
Model(s):	EDEA 35 T						
Condensing boiler:	Yes						
Low-temperature boiler:	Yes						
B11 boiler:	No						
Cogeneration space heater:	No			Equipped with a supplementary heater:		No	
Combination heater:	Yes						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Nominal heat output for space heating	P_n	34	kW	**Seasonal space heating energy efficiency**	ηs	93	%
For boiler space heaters and boiler combination heaters: useful heat output				For boiler space heaters and boiler combination heaters: useful efficiency			
At nominal heat output and high-temperature regime [a]	P_4	34,1	kW	At nominal heat output and high-temperature regime (*)	η4	87,9	%
At 30% of nominal heat output and low-temperature regime [b]	P_1	11,3	kW	At 30% of nominal heat output and low-temperature regime (*)	η1	97,7	%
Auxiliary electricity consumption				Other items			
At full load	el_{max}	0,032	kW	Standby heat loss	Pstby	0,115	kW
At part load	el_{min}	0,015	kW	Ignition burner power consumption	Pign	0	kW
In standby mode	PSB	0,006	kW	Emissions of nitrogen oxides	NOx	34	mg/kWh
For combination heaters:							
Declared load profile		-		**Water heating energy efficiency**	ηwh	-	%
Daily electricity consumption	Qelec	-	kWh	Daily fuel consumption	Qfuel	-	kWh
Contact details	Sime Ltd - 1a Blue Ridge Park - Thunderhead Ridge - Glasshoughton, Castleford, WF10 4UA						

a. High-temperature regime means 60°C return temperature at heater inlet and 80°C feed temperature at heater outlet.
b. Low-temperature regime means for condensing boilers 30°C, for low-temperature boilers 37°C and for other heaters 50°C return temperature.

(*) The yield data have been calculated using the higher heating value.

Conforming to Annex IV and Annex VII of the Delegateci Regulation (EU) N.811/2013 which supplements European Regulation EU 2017 /1369



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