

# RAVENHEAT<sup>®</sup>



## Condensing Boiler

The First CE Certified Boiler In Egypt



**5** YEARS  
WARRANTY\*

**HeatCo**<sup>®</sup>  
International



CE1312





**Built to exacting ISO 9001 standards using quality components, carrying the European CE mark. Each appliance undergoes a rigorous testing and operating procedure before being carefully packed for maximum protection, ready to leave our factory.**

**The HE combination boiler has a high resolution backlit LCD screen, featuring customer friendly buttons for optimum operation, making it easy to use in poor light conditions. This feature enables the user to easily set the heating and hot water temperatures, central heating times and view the system pressure.**

### **Installer Benefits**

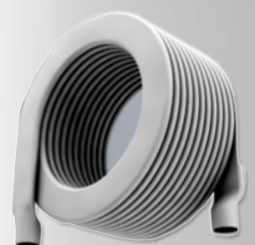
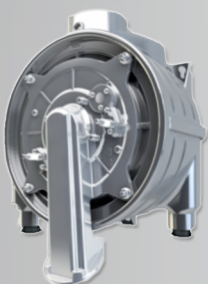
- **Installation approved by British and European law**
- **Brass and Premium Branded Components for Lasting Quality**
- **Stainless Steel main heat exchanger**
- **Fully accessible from the front making service easier**
- **Side clearance of only 1mm required**
- **Easy release control panel allows easy access for servicing nuisance freezing in winter**
- **Multi fix wall hanging bracket available (optional)**
- **Flexible condensation pipe for multi positioning discharge**
- **Lightweight design to aid installation**
- **Removable side panels**
- **Built-in automatic by-pass**
- **Anti-locking pump and valve feature**

### **Customer Benefits**

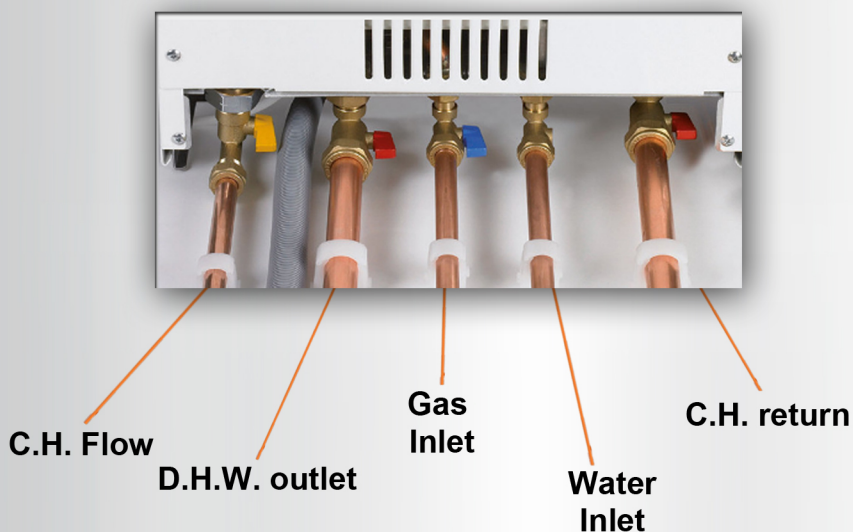
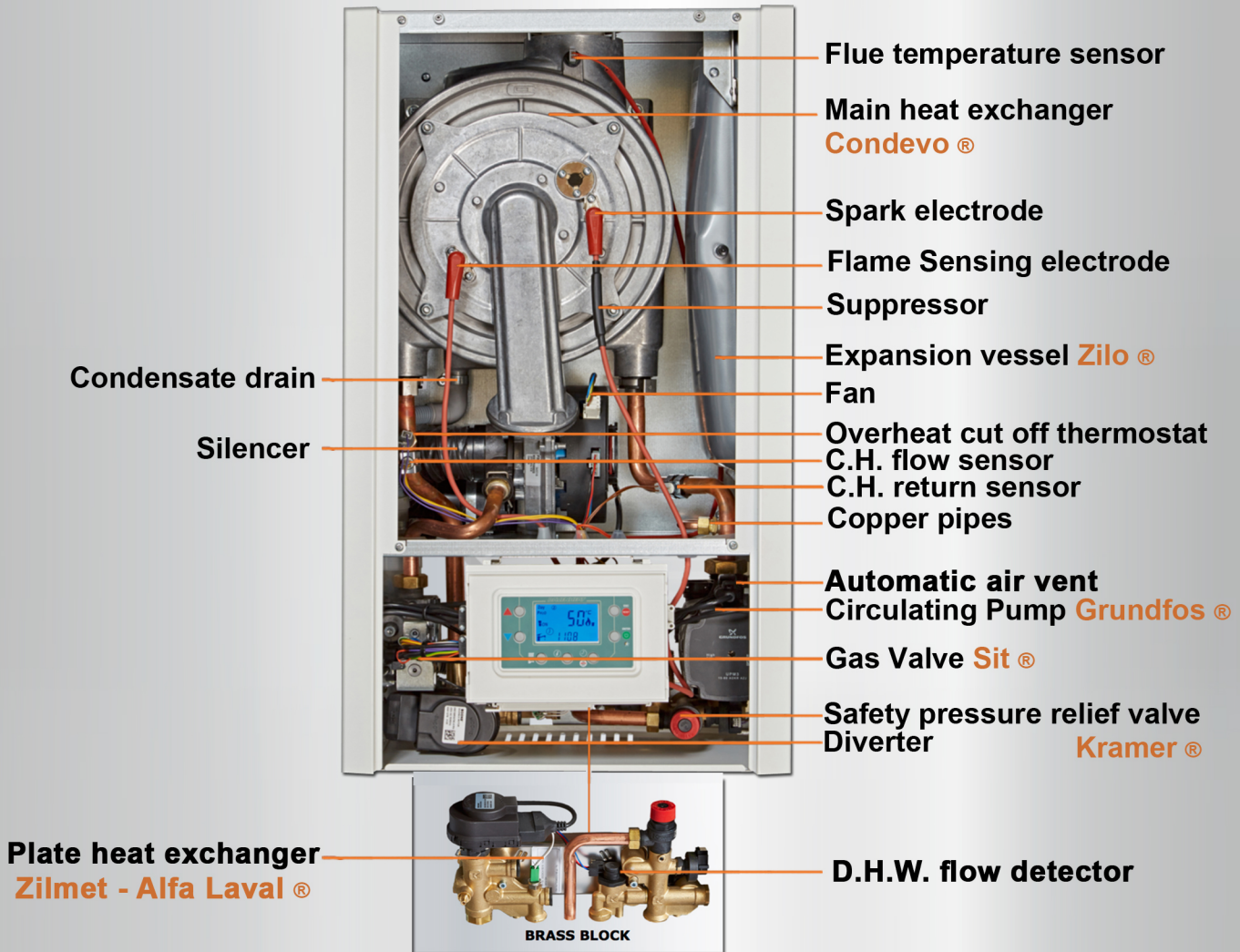
- **SEDBUK A Rate**
- **5 years warranty**
- **Opentherm Compatible**
- **Compact Size – H-700mm, W-400mm, D-250mm**
- **Fully ErP compliant**
- **Backlit LCD**
- **Whisper Quiet in Operation**
- **Built-in frost protection**
- **Integral colour coded valve kit eliminates unsightly valves below the boiler**
- **Less Natural Gas Consumption**
- **User friendly controls, simple and easy to use**
- **High density insulation**
- **DHW pre-heat function**
- **Minimum low power of only 3.7kW further reduces energy cost**

### **Single Stainless Steel Coil Heat Exchanger**

The stainless steel single coil heat exchanger will ensure constant water speeds over a long lifecycle, coupled with this being able to access the heat exchanger from the front facilitates ease of service through the lifecycle of the boiler. The coil itself is designed to have wide water ways which lessens the likelihood of debris build up in the heat exchanger, the absence of manifolds lengthens the life expectancy of the heat exchanger by reducing the number of weld points and the number of seals.



# IT'S WHAT'S ON THE INSIDE THAT COUNTS



# Condensing vs. Non-Condensing Boilers

## A matter of efficiency

The main reason why condensing boilers are “better” than non-condensing ones is that they are at least 25% more efficient. Their level of efficiency is achieved by using waste heat in flue gas to preheat cold water entering the boiler, capturing more heat from the outside rather than the inside of a room. This way, the condensing boiler captures 10-11% more heat than non-condensing ones, can reach up to 90% efficiency and help you save on bills and reduce carbon dioxide emissions.

New non condensing boilers can reach up to 78% efficiency (which is the percentage of heat that is actually usable), while old ones usually don't go over 55-65%. Moreover, condensing combi boilers are more space-efficient since they don't need a water tank and can be stored in a kitchen cupboard.

## Better for the environment

Condensing boilers significantly reduce carbon emissions: you can save up to 1,200kg of carbon a year by installing one in your home. For this reason, they are eligible for grants under the Green Deal, which can help you cover the installation costs.

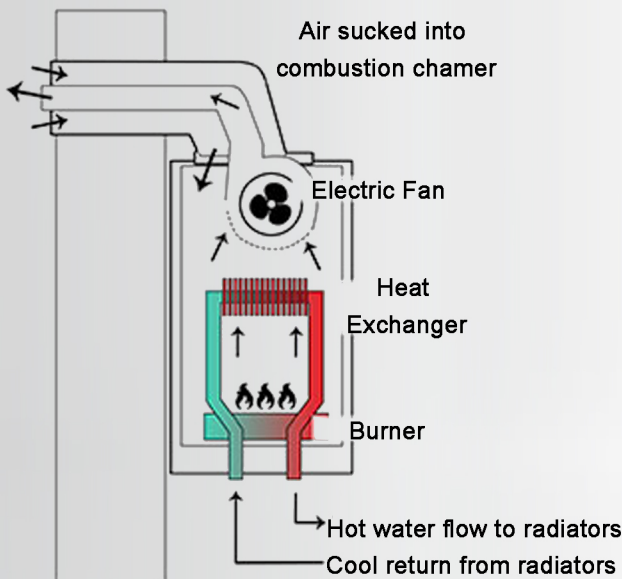
	Condensing	Non - condensing
CE certified	✓	×
Sedbuk rate	A	E
Efficiency	98%	75%
Pump head	Modulating	On/off
Gas consumption	Low	High
Gas valve	Modulating	Not modulating
Condensing heat exchanger for high thermal flue transfer form gas to water	✓	×
Stainless steel plate heat exchanger for domestic hot water	✓	×
Built in frost protection	✓	×
Nox combination boiler	Low	High
Flue gas exhaust temp	Low temp.	High temp.

## Safer for your home

Because condensing boilers are perfectly sealed for heat insulation, and capture air from the outside rather than the room where they're placed, there's basically zero risks of anything being sucked inside. There's also no risk of being in contact with toxic substances because the condensed liquid is disposed of via a pipe connected to the drainage system

## Non - Condensing

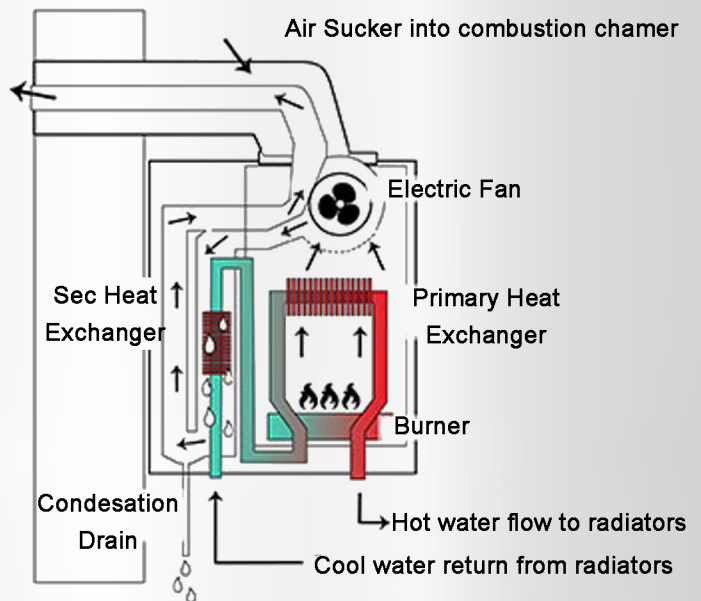
Exhaust gas is very hot and has a characteristic shimmer



Combustion gases pass over exchanger and into flue about 30% of the heat is wasted

## Condensing

Flue - gas is not very hot and has a characteristic plume

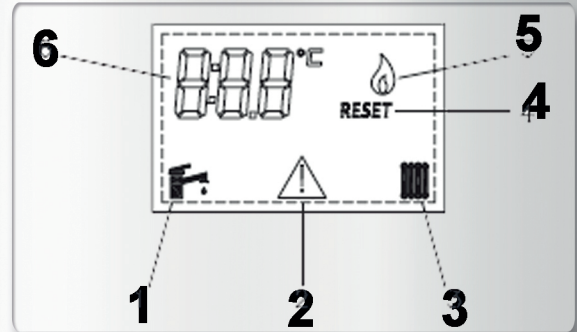


Combustion gases pass over primary heat exchanger and are then directed over secondary heat exchanger as the gases condense on the sides of the exchanger they release their heat

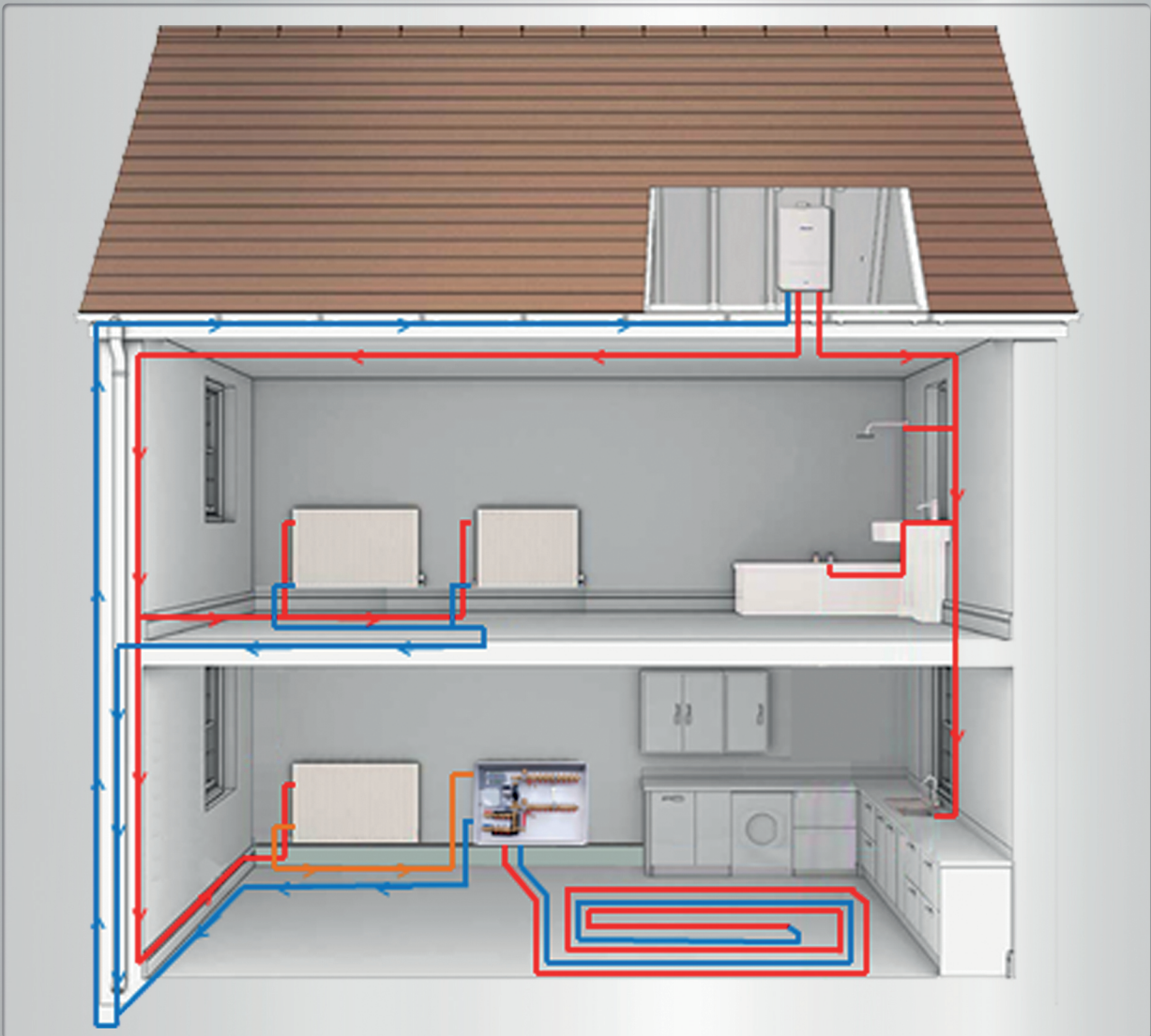
# DIGITAL DISPLAY

## KEY

- 1 - D.H.W. request present / D.H.W. setpoint setting (not used on only heating)
- 2 - Generic error indicator
- 3 - C.H. enabled / C.H. setpoint setting
- 4 - User lockout reset request
- 5 - Flame presence
- 6 - Temperature



# System Diagram



# Boiler Specifications & Dimensions

Boiler Specification	HE 25	HE 40
Central Heating Max/Min Output (Adjustable Modulation)	25- 3.9 kW	40- 4.2kW
Domestic Hot Water Max/Min Output	25 - 3.5 kW	40 - 3.7 kW
Domestic Hot Water		
D.H.W. flow rate 30 °C	11.9 l/min	20.1 l/min
D.H.W. flow rate 35 °C	10.2 l/min	17.3 l/min
D.H.W. flow rate 40 °C	8.9 l/min	15.1 l/min
Expansion Vessel	7L	7L
Maximum Central Heating Temperature	80°C	80°C
Connection		
Gas Supply Connection	3/4"	3/4"
Flow connection C.H.	3/4"	3/4"
Return connection C.H.	3/4"	3/4"
Inlet connection D.H.W.	0.5"	0.5"
Outlet connection D.H.W.	0.5"	0.5"
Flue Connection	100 mm	100 mm
Electrical Main Supply	230V 50HZ	230V 50HZ
NOx Class	5 (24.40mg/kWh)	5 (30.06mg/kWh)

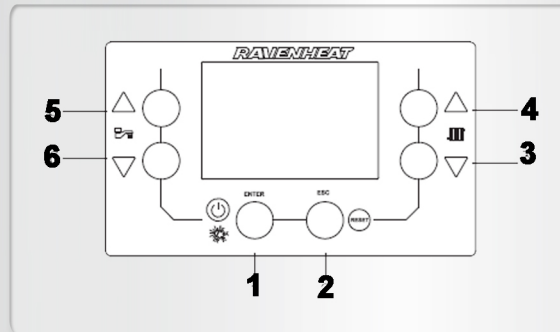
Side View



Front View



# APPLIANCE STATUS INDICATORS



## KEY:

**1 - ON/OFF button.**

Press to turn the boiler ON, summer mode (hot water symbol only), winter mode (hot water and radiator symbol), and OFF.

Press the button also to confirm selections.

**2 - Press to RESET the appliance if ever an error code is displayed or ESC to exit from the boiler menus.**

**3/4 - Temperature and function mode selectors.**

Press the arrow up or the arrow down to increase or decrease the central heating set-point temperature.

Press also to show the boiler values or to show the options program when the digital display is in INFO or in USER PARAMETERS.

**5/6 - Temperature selectors.**

Press the arrow up or the arrow down to increase or decrease the heating hot water outlet temperature.

**2/6 - INFO: press together 2 and 6 buttons for show the boiler values and use the arrow up and arrow down buttons (3/4) to scroll.**

- Flow temperature
- Domestic hot water temperature
- External temperature, if the external problem is present
- % power of modulation.

Press ESC to exit INFO mode.

**- USER PARAMETERS (for service people): press the RESET and the arrow down buttons together (buttons 1 and 3).**

Press the arrow up and arrow down buttons to show the boiler parameters.

- P001: C.H. max fan speed.

- P002: D.H.W. max fan speed.

- P003: Keep hot "0" disabled and "1" enabled

- P004: C.H. High/Low temperature:  
"0" low (max 50°C) / "1" high (max 80°C)

- P005: Climatic curve: default "20" (full instructions are provided with the Outdoor Sensor Kit).

- P006: Enable locking pump "0" disable / "1" enable.

- P007: Test mode: "0" disabled, "1" enable.  
(the function is enable for maximum 15 minutes).  
Press ESC to exit Test mode.

- P008: Weather compensator control.

0= Normal remote control.

1= Ravenheat remote control with D.H.W. selection in boiler.

2= Honeywell remote control.

- P009: Ignition power. Is possible to set the soft start power level (% of max boiler power, range 0:99).

- P010: Boiler power selection

- P011: Boiler type  
("1" instantaneous - "2" only heating). -

- P012: Gas type  
("0" Natural gas - "1" LPG gas).

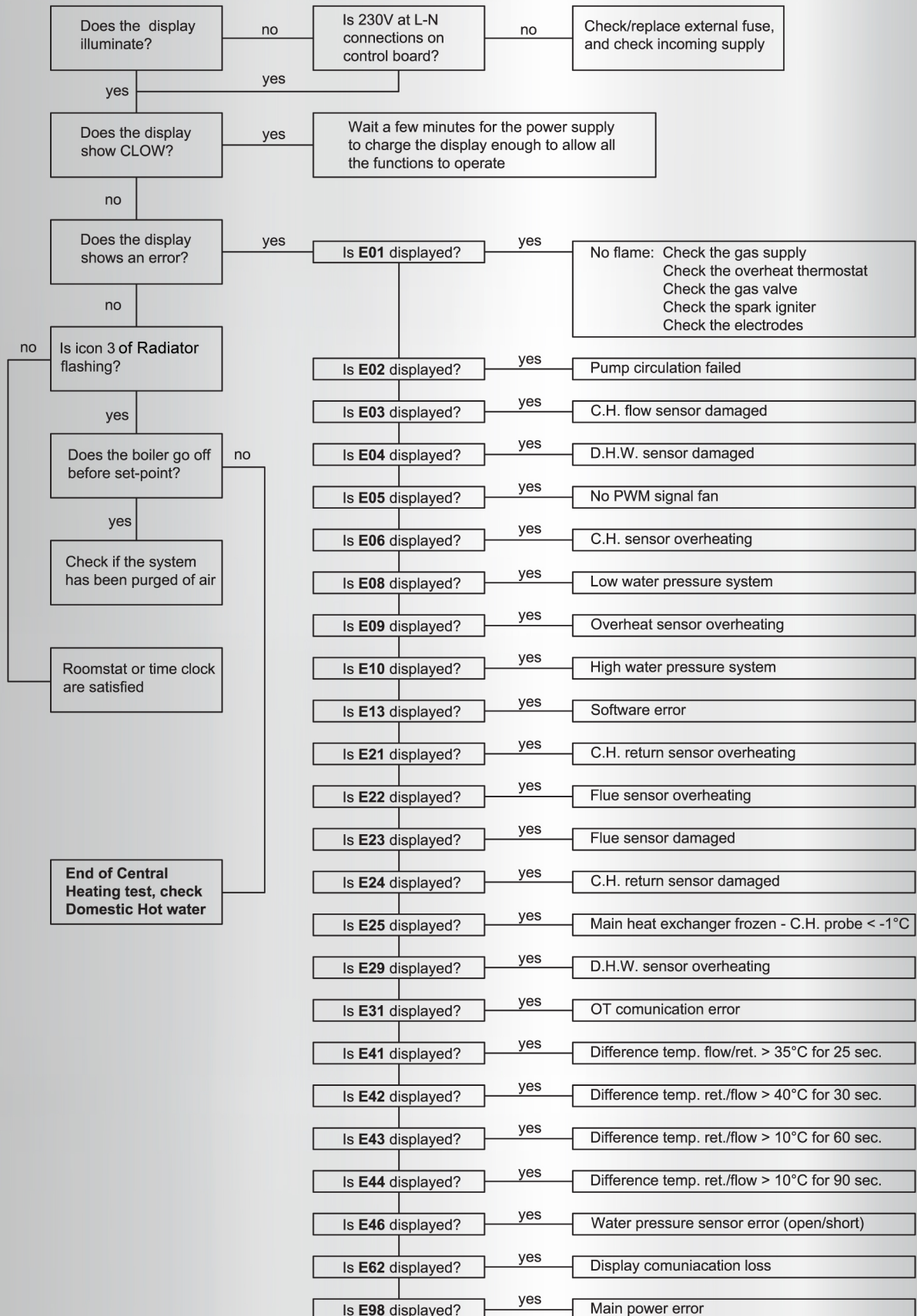
- P013: Modulating pump type selection  
("0" Wilo - "1" Grundfos).

Press ESC to exit USER PARAMETERS mode.

## FAULT FINDING CENTRAL HEATING

Before trying to operate the boiler make sure that: all gas supply cocks are open and the gas supply has been purged of air. The heating system pressure is at least 1 bar min to 1.5 bar max, select winter position on the digital display and set the central heating temperature to maximum.

Ensure external controls are calling for heat (room thermostat/ digital clock) and check the following appliance operations:

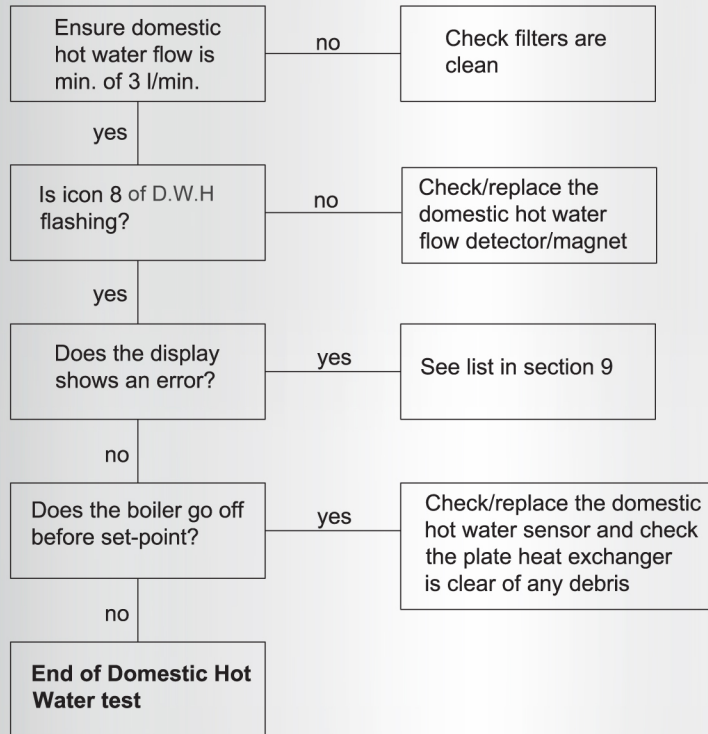




## FAULT FINDING DOMESTIC HOT WATER

After selecting the summer position on the digital display and setting the domestic hot water temperature to maximum.

Open the domestic hot tap and check the following appliance operations:



# Warranty

Client Name : .....

Address / location: .....

Date Of Startup : .....

Model No.: .....

Serial No.: .....

Stamp :

# HeatCo<sup>®</sup>

I n t e r n a t i o n a l

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