

User Manual B-serie ENG



**B-CH**



**B-Calorifier**



**B-COMBI**

## Preface

### General Introduction.

Congratulations with your purchase of this Kabola boiler. This user-manual covers the B-Series central heating boilers. The B-Series central heating boilers cover a wide range of boilers with a broad range of application. By purchasing this boiler you have acquired a product, which is of high quality through the application of the latest European standards and directives.

**Therefore, this manual must be kept with the boiler.**

In chapter 2, the safety instructions are detailed, which have to be complied with, when installing and using the boiler. In other chapters you will find safety instructions that can be identified in the following way.

**Hint:** This gives the user suggestions and advises to facilitate the execution of certain tasks.

**Attention:** Additional information is supplied to the user, and possible problems are indicated.

**Warning:** Watch out for possible (life-threatening) injuries.

For any remarks, wishes or omissions you can contact Kabola Heating Systems. We also welcome any remarks to improve this manual. We wish you a lot of pleasure from your purchase.

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# **1. Introduction**

## **1.1 General introduction**

This user-manual is written to enable the safe operation of the B-Series central heating boilers. The user must read this manual before installation of the boiler and must follow the instructions within this manual.

## **1.2 Range application**

The B-Series boilers are designed to generate heat for the heating of water for a central heating system. The dimensions of the rooms to be heated, have to be taken into consideration.

These boilers are not designed for direct heating of the rooms in which they are installed.

## **1.3 Product description**

The B-Series boilers heat the central heating water by means of a pressure jet burner, which is installed on front of the boiler. The standard boilers operate from a 230 volt AC Supply. Boilers up to type B45 can also be supplied to operate on a 240 volt DC Supply. All B-Series boilers work in the same way, the only difference is the dimensions and the capacities of the boilers (see also the technical specifications in Appendix A).

As fuel, diesel oil or kerosene has to be used.

At special request there is also a model available which operates on petroleum.

## **1.4 Technical specifications**

The most important technical specifications are listed on the plate on the front of the boiler. More technical details are listed in Appendix A.

## 2. Safety

In this chapter we emphasise the safety-related points for operating the boiler.

### 2.1 General safety

**Warning:** Although Kabola Heating Systems designs and produces its products according to the current safety standards, it is possible that dangers may occur, which could lead to injuries or damage to the boiler, if the safety instructions in this manual are not complied with.

The user must:

- Have read and understood the chapter “safety”
- Avoid any actions which may lead to hazards to his health or others
- Avoid any actions which may lead to damage to the boiler.
- Ensure that the boiler is only used when the boiler is in sound technical condition.
- Ensure that the safety regulations are observed whilst operating the boiler.

**Attention:** No alterations to the boilers may be done without the explicit written consent of Kabola Heating Systems!

### 2.2 Safety instructions

The safety instructions listed below must be complied with when operating the B-Series boilers.

#### Measures for a safe installation

- Don't store any flammable and/or gaseous products in the room where the boiler is installed to avoid explosions and fires.
- Install the boiler in a non-humid environment on a firm horizontal base.
- Ensure that there is sufficient ventilation in the room where the boiler is installed (See also 4.1.1)
- Make sure, before you start connecting the boiler, that the system is disconnected from the power supply.
- Only use multiple-stranded wire for electrical connections.

#### Measures for a safe operation

- Never change the settings of the burner.
- Don't use any aggressive solvents which may affect the boiler (like gas or turpentine)
- Don't damage the fire bricks.
- Make sure that the boiler and burner are checked annually by a skilled expert.
- Make sure that before you start any work on the boiler that the system is disconnected from the power supply.
- Make sure that any surplus oil is collected in case of oil spillage.
- We advise you to have any maintenance or repairs carried out by skilled experts.

## **3. Transport and storage**

### **3.1 Transport**

Take following precautions before transporting the boiler:

- Drain the water from the boiler
- Uncouple the fuel system
- Remove the burner (see 4.1.5, replacing the burner)

While transporting the boiler, take following precautions:

- Don't damage the boiler, use a blanket to cover the boiler.
- Transport the boiler lying down on its back
- For the boiler models B-25 onwards use the hoisting eye to move the boiler. This hoisting eye is located below the top of the boiler cover.

### **3.2 Storage**

Take the following precautions when the boiler is stored for a longer period of time:

- Store the boiler and accompanying parts in a dry place.
- Dismount the burner
- Store the boiler standing up.
- Store the boiler on a firm horizontal base.

## 4 Installing and preparing for first use

In this chapter you will find directions and hints for a correct placement and fitting of the boiler and accompanying parts.

**Warning:** Don't store any flammable and gaseous substances in the room where the boiler is installed. This is to ensure that no explosions or fires can occur.

### 4.1 Installation

#### 4.1.1 Fitting the boiler

- Install the boiler in a dry place.
- Install the boiler on a firm horizontal base.
- Make sure there is sufficient supply of fresh air in the room where the boiler is installed (see hint below)

**Hint:** As a rule of thumb for the ventilation openings, take 2,5 times the diameter of the flue gas outlet.

- To avoid movement secure the base of the boiler by means of spot-welds or with nuts and bolts.
- Keep a minimum distance of 250mm behind the boiler for the flue-gas outlet (see figure 1)
- Use an earthed plug socket for connecting the 230 V AC versions to the power supply.

#### 4.1.2 Connection of the Central heating system

##### Piping

Take note of the following points, when installing the piping:

- Install the piping in such a way, that the boiler (cover and dashboard) remains accessible.
- Provide enough bleeding points in places where air might collect.

**Attention:** Install an automated or normal bleeding valve near the boiler

##### EXPANSION TANK

An expansion tank must always be assembled with a closed central heating system (pressure system).

- Always assemble the expansion tank in the return pipe (see fig 2) as near as possible to the boiler.
- The size of the expansion tank is approximately 10% of the total water capacity of the whole system. For example; with a volume of 120 liters, assemble a 12-litre expansion **tank**.

### B-serie CH (figure 1)

Connection of piping for the B-serie CH takes place as follows:

1. Assemble the central heating supply pipe at point 1;
2. Assemble the central heating return pipe at point 2;
3. Assemble the separately supplied filler tap and drain combination.

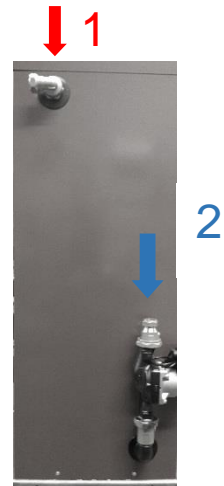


Figure 1

### B-serie Calorifier (figure 2)

Connection of piping for the B-series Calorifier takes place as follows

1. Assemble the central heating supply pipe at point 1
2. Assemble the central heating return and Calorifier vessel return at point 2;
3. Assemble the Calorifier vessel supply at point 3;
4. Assemble the separately supplied filler tap and drain combination.
5. The letters B and A are marked on the 3 way valve.

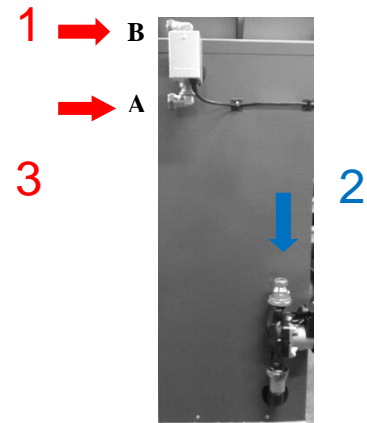


Figure 2

### Note:

**A boiler vessel thermostat must always be fitted (available from Kabola Heating Systems)**

### B-serie combi ketel (figure 3)

The connection of piping to the B-serie Combi takes place as follows:

1. Assemble the central heating supply pipe at point 1
2. Assemble the central heating return pipe at point 2
3. Assemble the separately supplied filler tap and drain combination.
4. Assemble the hot sanitary water pipe at point 5 (output);
5. Assemble the cold sanitary water pipe at point 6 (input)

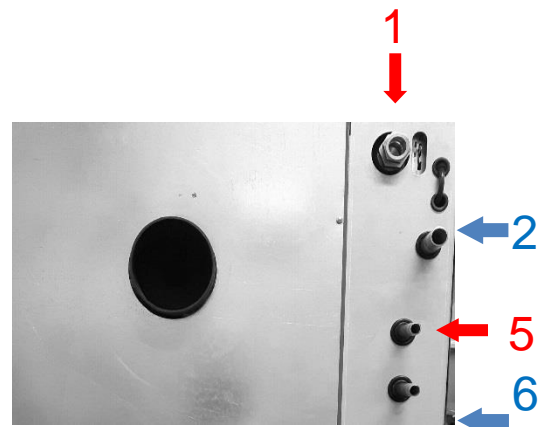


Figure 3



### 4.1.3 Flue gas outlet

#### GENERAL

Flue gas extraction is an essential part of your heating installation. Well-assembled flue gas extraction considerably extends the working life of your heating boiler and has a positive effect on heating efficiency.

**Warning:** Because in most cases the flue gas temperature is higher than 180 °C, it is desirable to insulate the outlet with heat-resistant material in places where contact with body parts is possible. These are available from Kabola Heating Systems B.V.

- Ensure the correct length/diameter proportions. We advise assembling a flue gas outlet with a diameter of 60 mm with a maximum length of 5 meters.
- On sailing and seagoing vessels we advise using a vertical flue gas discharge system (see fig 5).

#### AUTOMOTIVE APPLICATION

With the installation of the heating system for an application not for use on water, one can decide to keep the flue gas outlet as short as possible.

#### HORIZONTAL OUTLET WITH SKIN FITTING

It is possible to bring the flue gas outlet horizontally from the boiler through the wall. The following points must then be respected:

- The maximum permitted length without bends is 3 meters.
- Make sure that the outlet is amply above the water level. If this is not possible use a curved construction (a swan neck as pictured on the right in figure 4).
- Use a skin fitting (single- or double-walled) to bring the flue gas outlet through the wall.
- Use as few as possible bends, no more than 3 bends of 90 °.

**Tip:** If with the existing assembled flue gas outlet you have a larger diameter than the diameter of the flue gas outlet from the boiler, we recommend assembling a flexible flue gas outlet (50 mm diameter) in the existing flue gas outlet. The necessary adaptors and auxiliary parts are available from Kabola Heating Systems B.V.

**Warning:** When using a flue gas outlet longer than prescribed it is possible that condensation water may originate in the outlet. It is very important that the condensation water does not form a water trap with the flue duct becoming blocked (as pictured on the left in figure 4).

Using a swan neck (as pictured right in figure 4) prevents water from entering the flue duct from outside.

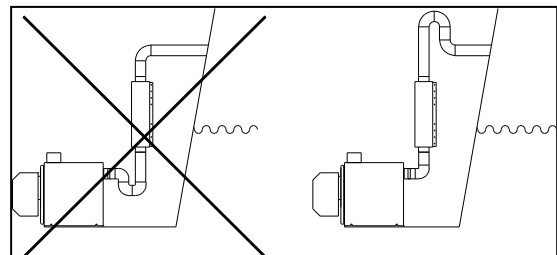


Fig. 4

## VERTICAL FLUE GAS OUTLET

This way of installation is preferable for seagoing boats and sailing boats, because these boats encounter large angles of heel through waves and under sail. For this kind of flue gas outlet, the following points are important:

- Install a proper storm cowl on top of the chimney (this must stop rain from entering) (figure 4).
- Install deck fittings for installing the flue through a deck.
- Install a water trap, to drain possible water caused by condensation
- Keep the chimney as vertical as possible.
- Don't use more than 4 elbows 90°.
- The maximum allowed length is 10 meters. At more than 10 meters in length, always contact Kabola for advice.
- Every elbow of 90° is equivalent to 1 meter straight pipe.
- Use outside double walled chimney pipe
- **With a vertical outlet always use a drain!**

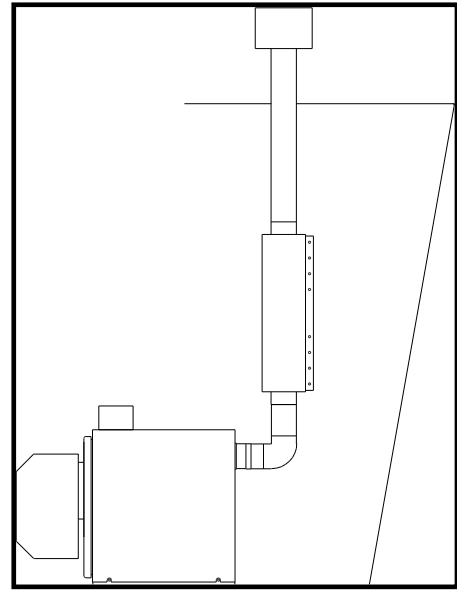


Fig. 5

**Always install a drain with tap directly on the boiler**  
(See Figure 5.a)

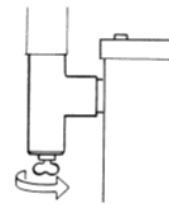


Fig. 5.a

**Hint:** To reduce the noise from flames, it is wise to install a silencer in the exhaust.

Your Kabola supplier can provide you with all components which may be required for installation such as:

- Cowls;
- Flexible piping;
- Single and double walled chimney pipes;
- Hull and deck fittings;
- Silencers;
- Water traps;
- Insulation.

#### 4.1.4 Electrical connection

##### Warning:

Disconnect the power supply from the boiler before you start the installation. **The quality of 230 VAC power supply to the boiler should be as good as the power supply from a land line.**

##### TIP:

If you are using an inverter, we recommend a 900W sine wave inverter.

**Do not place the room thermostat near a heat source!**

#### To connect the room thermostat on the HR CH version:

- Remove the cover of the thermostat
- Connect the two thermostat wires to point 2 and 3 (figure 6.2)

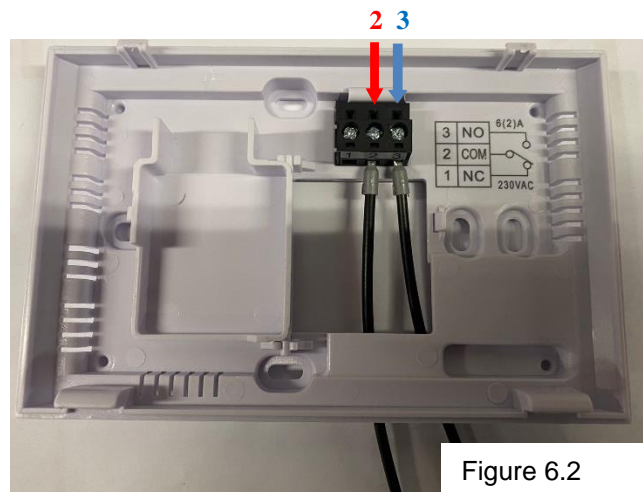
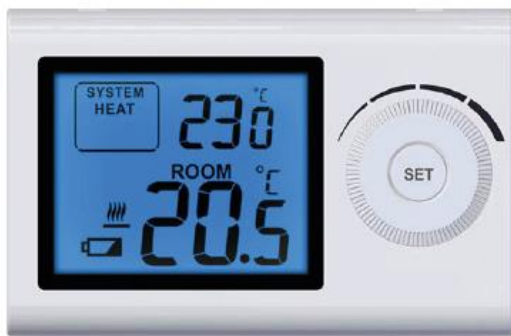


Figure 6.2

#### B-series - CH

#### To connect the thermostat wires on the B-series Boiler

Remove the 7-pin connector at the rear left side of the front panel (see Figure 8).  
Remove the lid from the 7-pin connector  
Remove the 'bridge' of T1 and T2, connect here the thermostat wires (see sticker)

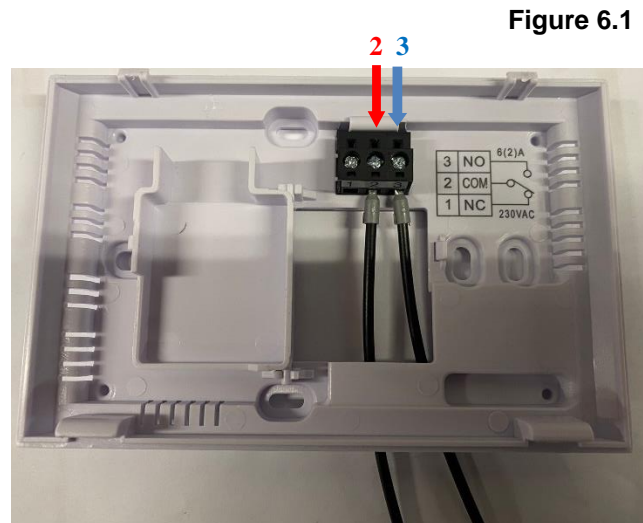
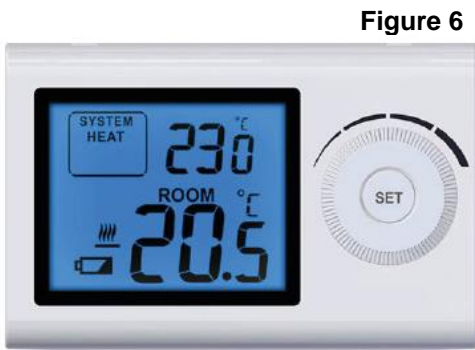


Figure 8

## B series – CH , Calorifier and Combi

### Connection of the room thermostat and the function warm water on / off

- Before you connect the room thermostat with Frost Guard, use a 4-core insulated wire 0,75 mm<sup>2</sup>.
- Remove the right plug which you can find at the bottom of the Kabola dashboard.
- Connect the 4 wires of the room thermostat at T1 and T2 and S3 and B4 in connection A (figure 11) at the backside of the dashboard as shown on the sticker inside the connector.
- Connect the T1 and T2 wires inside the room thermostat (Fig. 6.1) to **2** and **3**
- Connect the hot water on / off function (S3 & B4) on a connect and disconnect switch. When the wires are not connected, the hot water function in on.



### 4.1.5 Filling the central heating system for the B-series

The loose fill and drain combination with pressure relief valve (max 3 bar) is mounted at point 4 (see figure 2, page 8). Connect your hose on to open the fill and drain combination black button. Open tap the left and put the kettle on 2 bar pressure (see pressure gauge). Vent the entire heating system and put the heating system is between 1.5 and 2 bar pressure.

Add 230 volt voltage to the system by inserting the plug into the earthed electrical socket.

#### Tip:

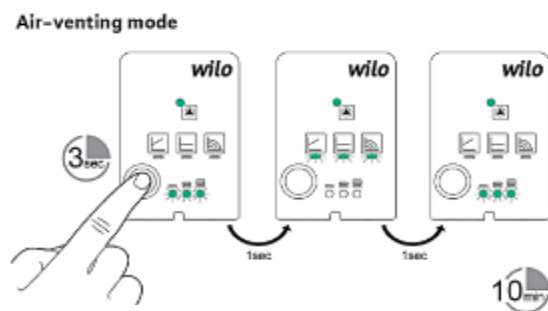
If you do not live permanently on board we recommend to fill the heating system with coolant. The cooling liquid must be suitable for heating systems (pH value 8.5). For more information please contact your dealer or Kabola, Netherlands

- See manual from the circulation pump.

**Attention:** When locking pump couplings are supplied with the boiler, the adjusting grooves must point towards the pump.

### Bleeding the circulation pump

- Adjust the temperature of the room thermostat higher than the ambient temperature (for example, 5 degrees higher);
- Set the on / off switch (button lights);
- Put the circulation pump on automatic venting position. This will take 10 minutes.
- Check the entire system for air and check the working pressure (Top up if necessary.)

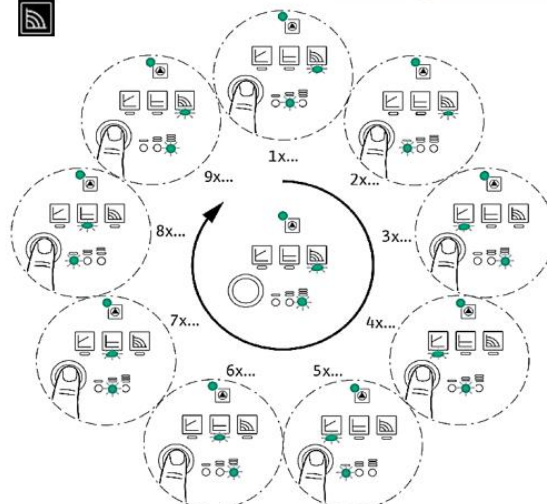
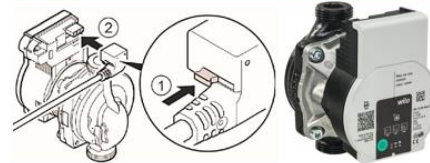


wilo



### User manual para SC/U (self-control)

- Press the green button 9 times for settings
- 3 times stand on ^p-c
- 3 times stand on ^p-v
- 3 times fixed speed 1, 2, 3, (RPM)



#### 4.1.6 Connecting of the filter at the oil burner (oil pump)



Figure 14

For the connection of the oil filter the following operations have to be carried out (see figures above).

- Connect the oil line directly from the fuel tank, to the filter (no branch from other users oil). **NOTE: The maximum suction depth of the oil line is 3.5 meters**
- Connect the two oil hoses from the burner to the oil filter. Pay attention to the arrow indications, make sure the arrow directions of the pump and the oil filter match, supply and return (see figure 14.)
- **Install the oil filter 20 cm higher than the oil pump. If this is not done, the filter will not work correctly!**

4-D218 Oil filter type 80  
with a plastic cover is  
supplied as standard



4-D133 Oil filter  
TOC80 can be ordered  
optionally



## 4.2 Starting your system

**After the room thermostat is connected, the following steps:**

- Insert the plug into the grounded socket for 230 volt version.
- Switch the boiler on, at the on / off switch on the control panel. The lamp in the switch indicate that the system is on.
- Put the boiler temperature between 75°and 80°C with the boiler thermostat.
- Set the room thermostat in demand by putting the temperature (for example) 5 degrees higher than the ambient temperature (see also the instructions of the room thermostat);
- Open the valve on the fuel tank;
- Turn the valve on the oil filter through the red knob counter clockwise completely open;
- Open airscrew D by turning left (see Figure 15). Keep repeating this until there are clear oil comes out of the hose:
- If the red (fault) light of the oil burner lit, reset it by pushing it;
- If oil is present the burner will start. If no oil is present the oil burner will give a malfunction. Reset the oil burner by pressing the red light. (Repeat up to 5 times);
- Check all oil connections for leaks when the burner is working;
- Bleed the entire heating system again;
- Check if the boiler turns off when the boiler has reached the set temperature;

If you have **automatic vent filters**, follow the same steps as above

- Check for oil will enter the upper glass bowl;
  - the oil has to have a light colour
  - No foaming may occur

## 6. Operating the boiler

When the boiler has been started and adjusted according to 4.2, operation of the boiler is very simple.

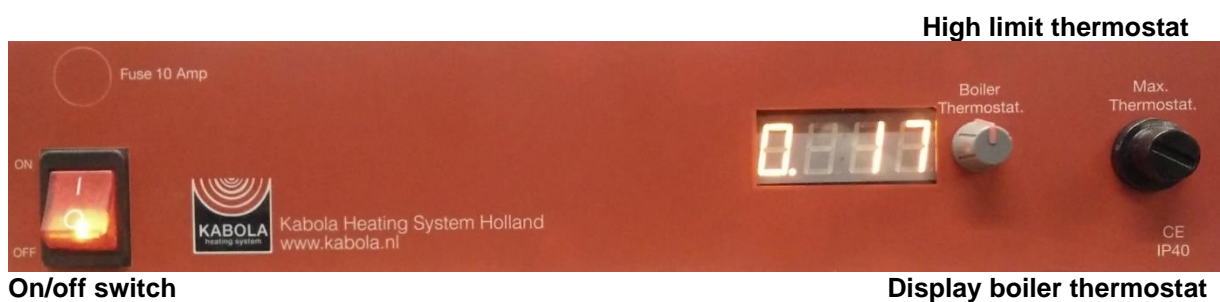
The required temperature is set with the room thermostat, which controls the boiler. The operation of the room thermostat is explained in the manual of the room thermostat.

If problems arise with the operation of the boiler, you will find a list of possible problems and solutions in Appendix C.

### Operating the room thermostat

Please refer to the manual thermostat

Figure 15 Operating panel B-CH



On/off switch

Display boiler thermostat

### Explanation of the operating panel

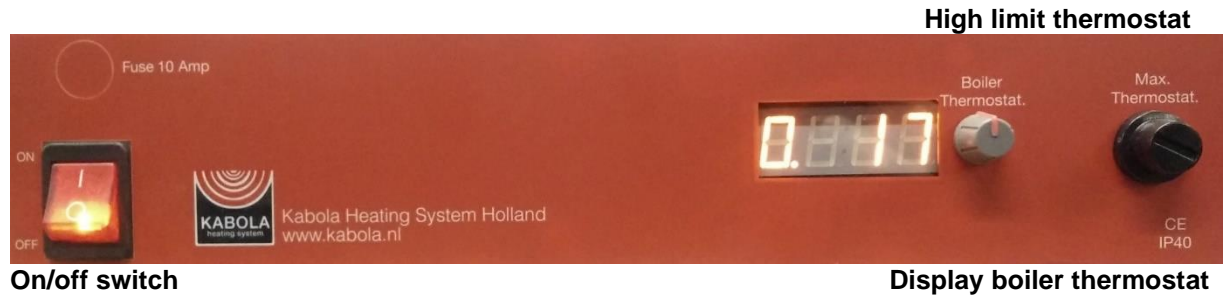
**Set the boiler temperature to 80 degrees Celsius (press boiler thermostat button in and turn).**

| Numbers | Explanation  | Photo |
|---------|--|-------|
| 0       | Rest position (boiler is on stand-by)<br>Circulation pump stopped                      |       |
| 1       | Room thermostat demands heat.<br>Circulation pump operating                            |       |
| 3       | Circulation pump further running time.<br>Circulation pump operates for ± 3 minutes    |       |
|         | The figure (17) on the right of the display shows the current boiler water temperature |       |



## Operating panel B-Calorifier (front)

Figure 16



Explanation of the operating panel

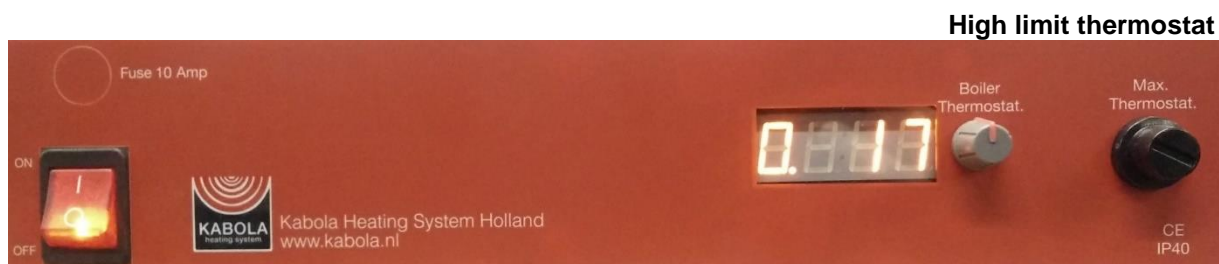
Set the boiler temperature to 80 degrees Celsius (press boiler thermostat button in and turn).

### Key to the boiler display

| Numbers | Explanation  | Photo |
|---------|--|-------|
| 0       | Rest position (boiler is on stand-by)<br>Circulation pump stopped                      |       |
| 1       | Room thermostat demands heat.<br>Circulation pump operating                            |       |
| 2       | Hot water demand from the boiler (boiler thermostat)<br>Circulation pump operating     |       |
| 3       | Circulation pump further running time 0 seconds  |       |
| •       | Flashing point = hot water off   |       |
| •       | Point lit up = hot water stand-by  |       |
|         | The figure (17) on the right of the display shows the current boiler water temperature |       |

## Operating panel B-series Combi boiler (front)

Figure 17



### On/off switch

Explanation of the operating panel

Set the boiler temperature to 80 degrees Celsius (press boiler thermostat button in and turn).

| Numbers | Explanation  | Photo |
|---------|--|-------|
| 0       | Rest position (boiler is on stand-by)<br>Circulation pump stopped                      |       |
| 1       | Room thermostat demands heat.<br>Circulation pump operating                            |       |
| 2       | Hot water is drawn off. Circulation pump operating                                     |       |
| 3       | Circulation pump further running time.<br>Circulation pump operates for ± 3 minutes    |       |
| 4       | Tap comfort position<br>Boiler kept at temperature                                     |       |
| •       | Flashing point = hot water off   |       |
| •       | Point lit up = hot water stand-by  |       |
|         | The figure (17) on the right of the display shows the current boiler water temperature |       |

## 7. Cleaning and maintenance

### a. Points for attention

Replacement parts must be ordered from Kabola Heating Systems. Only original replacement parts may be used for the guarantee to be applicable. Mention the type and serial number when ordering. Kabola Heating Systems can then supply the correct parts. Annex E includes a summary of the parts.

### b. Cleaning and maintenance

**Warning:** Carry out maintenance and repair activities when the boiler is switched off because the boiler could unexpectedly start up. Remove the plug from the wall socket.

**Warning:** Maintenance and repair activities must be carried out by an accredited installer or a service technician from Kabola Heating Systems.

#### Annually

1. Clean the boiler;
  - 1.1. Remove the oil burner;
  - 1.2. Remove the boiler door;
  - 1.3. Remove the boiler gasket.
  - 1.4. Clean the inside of the boiler using a pipe cleaner;

**Note:** Do not use any aggressive cleaning products when cleaning.

- 1.5. Suck the heating boiler empty with a vacuum cleaner;
  - 1.6. Replace the boiler gasket;
  - 1.7. Replace the boiler door;
2. Clean the flue if necessary.
3. Replace the oil filter cartridge;
4. Clean the burner (see burner manual).
5. Replace the nozzle;
6. Replace the electrode block if required;
7. Replace the photocell if older than 5 years;

**Note:** The old oil filter cartridge must be processed as chemical waste.

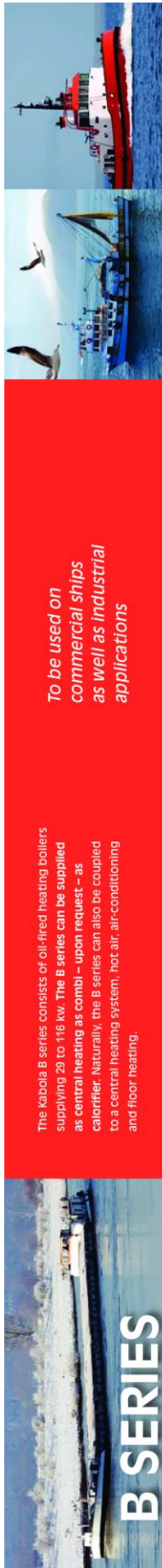
It is advised to have the burner settings inspected and adjusted each year by a service technician certified by Kabola Heating Systems.

## 8. Disposal

When disposing of the boiler the following points are important for reasons of safety:

- Dispose of the oil filter and the oil hoses as chemical waste;
- Separate the metal parts and plastic parts and dispose of them separately;
- Dispose of any oil in an environmentally friendly way;
- Transport the discarded boiler according to the instructions in section 3;
- Dispose of this manual with waste paper.

# Appendix A Technical specifications



To be used on commercial ships as well as industrial applications

The Kabola B series consists of oil-fired heating boilers supplying 29 to 116 kW. The B series can be supplied as central heating as combi – upon request – as calorifier. Naturally, the B series can also be coupled to a central heating system, hot air, air-conditioning and floor heating.



Kabola B series  
**CH**



Kabola B series  
**calorifier**



Kabola B series  
**combi**



**KABOLA B SERIES: STRONG, DURABLE AND SUITABLE FOR DEMANDING WORK**

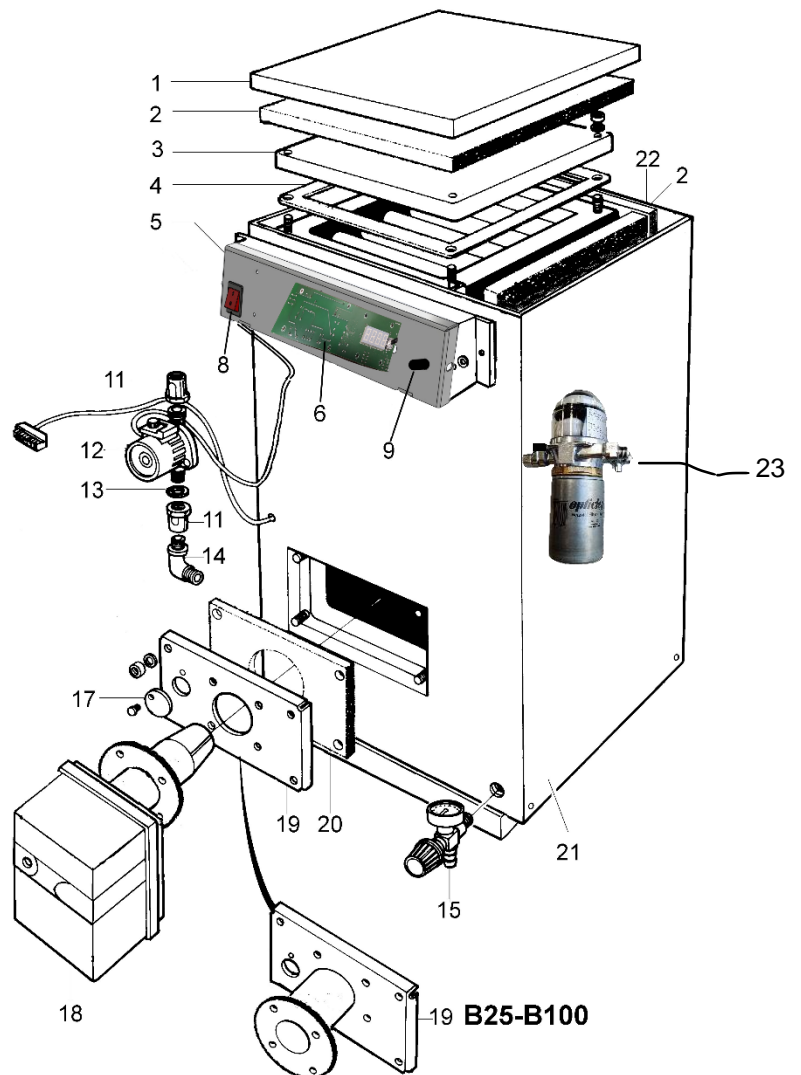
For more information:  
Tel: +31(0)347 320 030  
info@kabola.nl  
www.kabola.nl

| SPECIFICATIONS                      | B25        | B35        | B45        | B55        | B70        | B80        | B80        | B80        | B100       | B100       |
|-------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Type                                | CH         | CH         | combi      | CH         | combi      | CH         | combi      | CH         | combi      | CH         |
| Capacity (in kW)                    | 29         | 41         | 52         | 64         | 81         | 81         | 93         | 116        | 116        | 116        |
| Width installation size (mm)*       | 466        | 468        | 488        | 498        | 508        | 508        | 508        | 498        | 498        | 498        |
| Depth installation size (mm)*       | 396        | 503        | 593        | 708        | 708        | 708        | 858        | 1058       | 1058       | 1058       |
| Height installation size (mm)*      | 969        | 970        | 970        | 970        | 1165       | 1165       | 1126       | 1165       | 1165       | 1165       |
| Depth installation size burner (mm) | 300        | 300        | 300        | 300        | 300        | 300        | 300        | 300        | 300        | 300        |
| CH connection (mm)                  | 1"         | 1"         | 1"         | 1.5"       | 2"         | 2"         | 2"         | 2"         | 2"         | 2"         |
| Drinking water connection (mm)      | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 15         | 15         |
| Oil connection (mm)                 | 3/8        | 3/8        | 3/8        | 3/8        | 3/8        | 3/8        | 3/8        | 3/8        | 3/8        | 3/8        |
| Oil connection (internal thread)    | 100        | 130        | 150        | 150        | 180        | 180        | 180        | 200        | 200        | 200        |
| Flue gas (diameter in mm)           | 100        | 130        | 150        | 150        | 180        | 180        | 180        | 200        | 200        | 200        |
| Dashboard                           | digital    | digital    | digital    | digital    | digital    | digital    | digital    | digital    | digital    | digital    |
| Energy efficient circulation pump   | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          |
| Pump timer                          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          |
| Siemens room thermostat             | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          |
| Hot water on/off                    | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          |
| Oil filter Floctop                  | - (option) | - (option) | - (option) | - (option) | - (option) | - (option) | - (option) | - (option) | - (option) | - (option) |
| Oil filter Top 80                   | - (option) | - (option) | - (option) | - (option) | - (option) | - (option) | - (option) | - (option) | - (option) | - (option) |
| Oil filter                          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          |
| External air intake                 | - (option) | - (option) | - (option) | - (option) | - (option) | - (option) | - (option) | - (option) | - (option) | - (option) |
| Fill and drain combination          | +          | +          | +          | +          | +          | +          | +          | +          | +          | +          |
| Voltage (A.C.)                      | 230        | 230        | 230        | 230        | 230        | 230        | 230        | 230        | 230        | 230        |
| Tap water 60° (p.m. in ltrs)        | 9          | 11         | 14         | 22         | 28         | 28         | 33         | 41         | 41         | 41         |
| Weight (kg)                         | 118        | 140        | 155        | 178        | 178        | 270        | 309        | 445        | 445        | 445        |
| Efficiency %                        | 90         | 90         | 90         | 90         | 90         | 90         | 90         | 90         | 90         | 90         |
| Water content boiler (litres)       | 18         | 23         | 26         | 36         | 36         | 55         | 68         | 82         | 82         | 82         |
| Fuel                                | diesel     | diesel     | diesel     | diesel     | diesel     | diesel     | diesel     | diesel     | diesel     | diesel     |
| Fuel consumption                    | 3.3        | 3.8        | 5.5        | 6.1        | 7.1        | 7.1        | 9.1        | 10.3       | 10.3       | 10.3       |
| Flue gas temperature                | 230/250    | 230/250    | 230/250    | 240/260    | 240/260    | 240/260    | 250/270    | 260/280    | 260/280    | 260/280    |
| Nozzle/apprayer                     | 0.75/60    | 0.85/60    | 1.25/60    | 1.50/60    | 1.75/60    | 1.75/60    | 2.25/60    | 2.50/60    | 2.50/60    | 2.50/60    |
| Start capacity 230V (W)             | 740        | 740        | 740        | 740        | 740        | 740        | 740        | 740        | 740        | 740        |
| Operational capacity 230V (W)       | 250        | 250        | 250        | 250        | 250        | 250        | 250        | 250        | 250        | 250        |

\*dimensions exclude the assembly of central heating pump and oil burner

## Appendix B Boiler parts

1. Boiler top cover
2. Insulation
3. Cover of boiler
4. Boiler gasket
5. Dashboard
6. Print board
- 7.
8. On/ Off switch
9. Maximum thermostat
- 10.
11. Pump coupling
12. Circulation pump
13. Pump coupling seal
14. Knee inner- x outer thread
15. Pressure valve/ pressure gauge/ fill drain cock
- 16.
17. Fire inspection opening
18. Oil Burner
19. Burner mounting plate
20. Gasket for mounting plate
21. Boiler cover side/front
22. Boiler cover back
23. Automatic de-aerating oil filter



|                     | <b>B25</b>   | <b>B35</b>   | <b>B45</b>   | <b>B55</b>   | <b>B70</b>   | <b>B80</b>   | <b>B100</b>  |
|---------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>1</b>            | topcover     | topcover     | topcover     | topcover     | topcover     | topcover     | topcover     |
| <b>2</b>            | rockwool     | rockwool     | rockwool     | rockwool     | rockwool     | rockwool     | rockwool     |
| <b>3</b>            | Cover boiler | Cover boiler | Cover boiler | Cover boiler | Cover boiler | Cover boiler | Cover boiler |
| <b>4</b>            | 9-I019       | 9-I019       | 9-I019       | 9-I019       | 9-I019       | 9-I019       | 9-I019       |
| <b>5</b>            | 9-I008       | 9-I008       | 9-I008       | 9-I008       | 9-I008       | 9-I008       | 9-I008       |
| <b>6 Ch</b>         | 9-I032       | 9-I032       | 9-I032       | 9-I032       | 9-I032       | 9-I032       | 9-I032       |
| <b>6 Calorifier</b> | 9-I114       | 9-I114       | 9-I114       | 9-I114       | 9-I114       | 9-I114       | 9-I114       |
| <b>6 Combi</b>      | 9-I114       | 9-I114       | 9-I114       | 9-I114       | 9-I114       | 9-I114       | 9-I114       |
| <b>8</b>            | 9-I002       | 9-I002       | 9-I002       | 9-I002       | 9-I002       | 9-I002       | 9-I002       |
| <b>9</b>            | 9-I092       | 9-I092       | 9-I092       | 9-I092       | 9-I092       | 9-I092       | 9-I092       |
| <b>11</b>           | 9-I023       | 9-I023       | 9-I023       | 9-I023       | 9-I028       | 9-I028       | 9-I028       |
| <b>12</b>           | 9-I134       | 9-I134       | 9-I134       | 9-I167       | 9-I167       | 9-I167       | 9-I167       |
| <b>13</b>           | 9-I160       | 9-I160       | 9-I160       | 9-I160       | 9-I160       | 9-I160       | 9-I160       |
| <b>14</b>           | 18-S062      | 18-S062      | 18-S062      | 18-S062      | 18-S062      | 18-S062      | 18-S062      |
| <b>15</b>           | 9-I015       | 9-I015       | 9-I015       | 9-I015       | 9-I015       | 9-I015       | 9-I015       |
| <b>17</b>           |              |              |              |              |              |              |              |
| <b>18</b>           | 2-B003       | 2-B004       | 2-B005       | 2-B006       | 2-B020       | 2-B021       | 2-B021       |
| <b>19</b>           | 9-I226       | 9-I226       | 9-I226       | 9-I226       |              |              |              |
| <b>20</b>           | 9-I073       | 9-I073       | 9-I073       | 9-I073       | 9-I069       | 9-I069       | 9-I069       |
| <b>21</b>           | Iso cover    | Iso cover    | Iso cover    | Iso cover    | Iso cover    | Iso cover    | Iso cover    |
| <b>22</b>           | Iso back     | Iso back     | Iso back     | Iso back     | Iso back     | Iso back     | Iso back     |
| <b>23</b>           | 4-D218       | 4-D218       | 4-D218       | 4-D218       | 4-D218       | 4-D218       | 4-D218       |



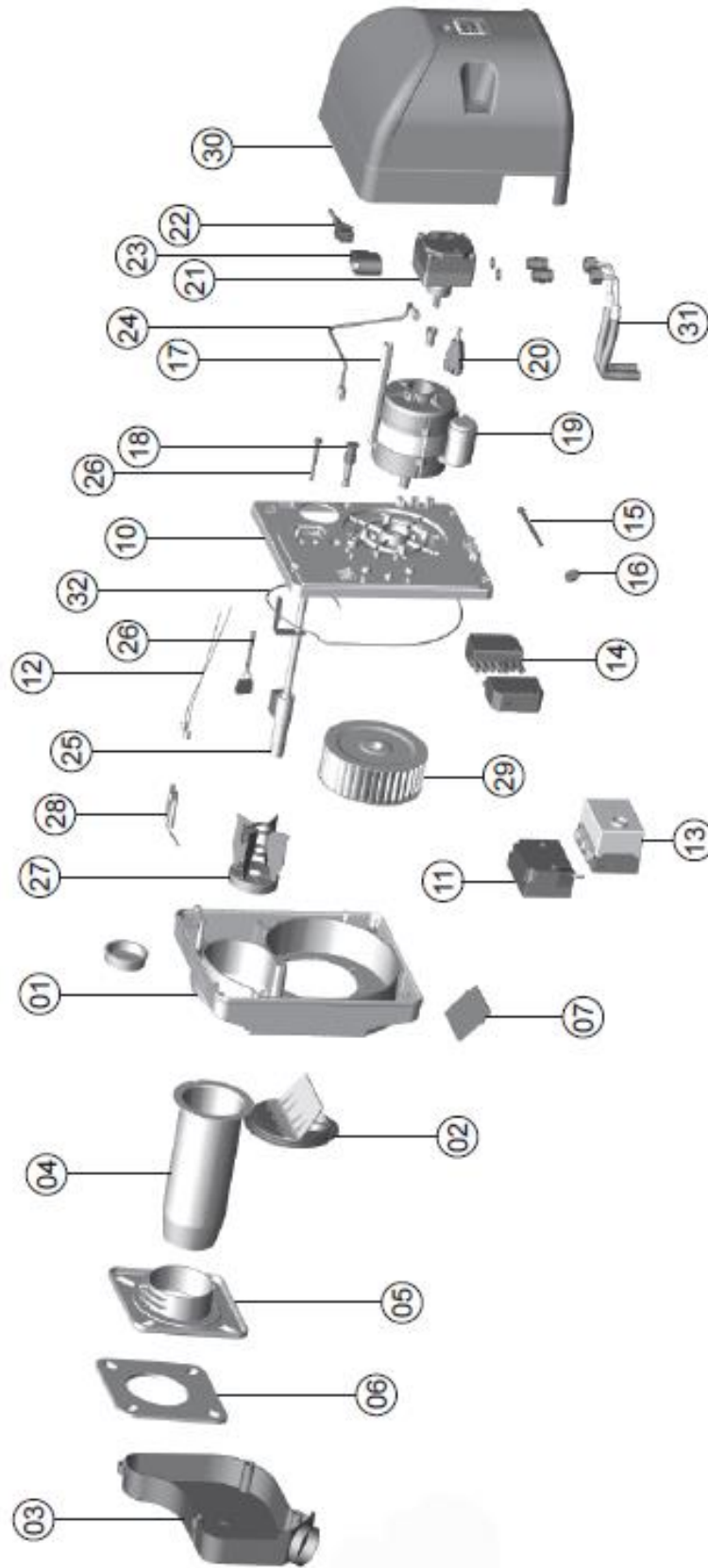
## Intercal SLV100 parts



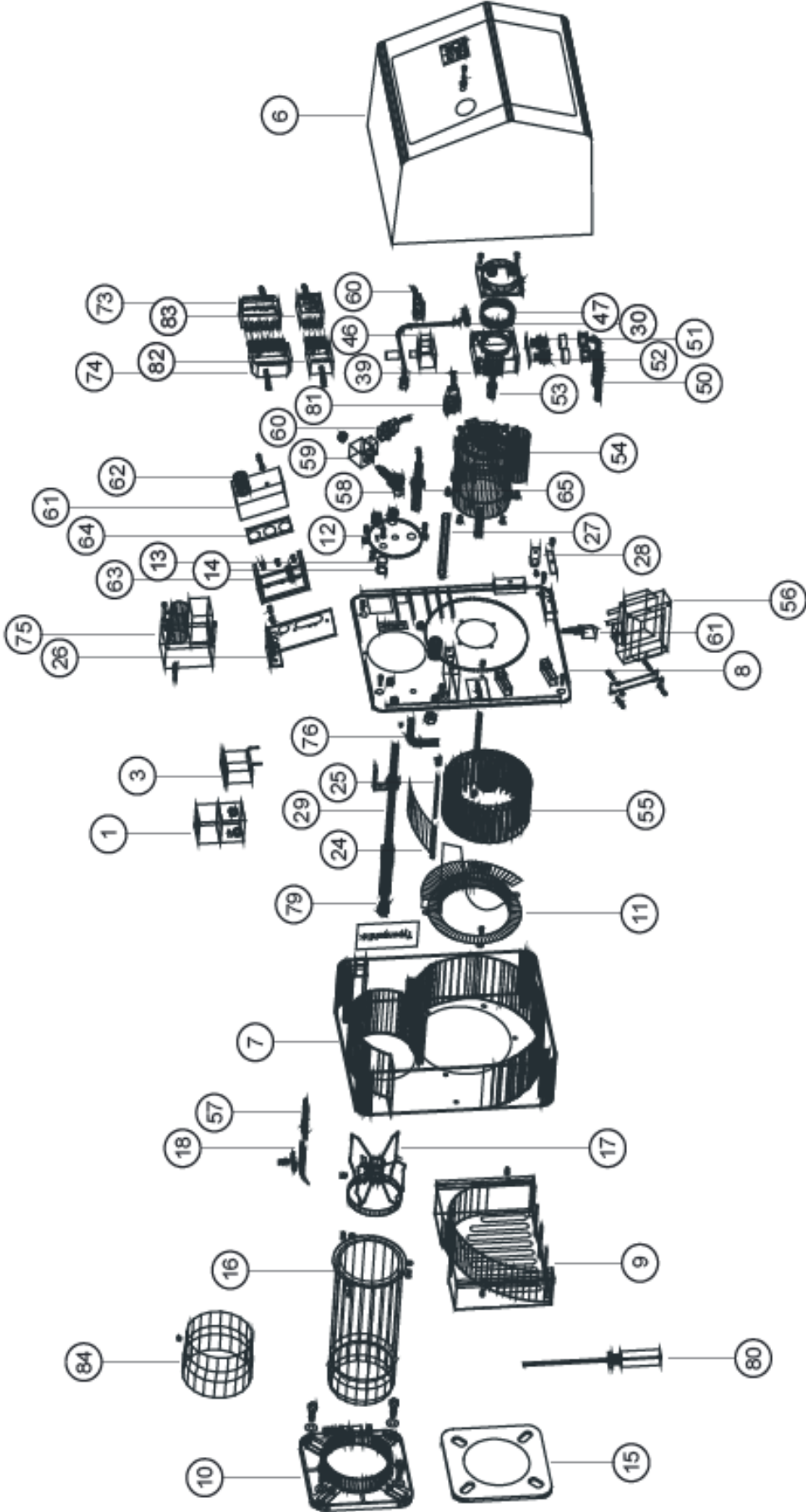
|    |   |        |
|----|---|--------|
| 3  | Intercal airbox 100                             | 35-071 |
| 4  | Burnertube                                      | 35-031 |
| 5  | Burner fixing flange Kabola SLV100B 84039090    | 35-053 |
| 6  | Isolation burner Kabola SLV10/SLV100B           | 35-007 |
| 7  | Airflap SLV100B/200                             | 35-061 |
| 11 | Footprint burner control LMO64                  |        |
| 12 | Ignition cable 530mm 4/6 mm                     | 35-023 |
| 13 | Burner control LMO 64                           | 4-D306 |
| 14 | Connection 7-pole female                        | 4-D164 |
| 15 | Air throttle adjusting screw M5x55              |        |
| 16 | Knurled nut                                     |        |
| 17 | Canopy bolt                                     |        |
| 18 | Flame detector QRB4B SLV                        | 4-D304 |
| 19 | Motor   | 35-021 |
| 20 | Motor connection cable                          | 4-D095 |
| 21 | Oil pump Kabola SLV10B-SLV100B, Danfoss BFP21L3 | 35-015 |
| 22 | Plug cable for solenoid valve                   | 4-D093 |
| 23 | Solenoid valve                                  | 35-016 |
| 24 | Pressure copper pipe                            | 35-014 |
| 25 | Nozzle rod Kabola                               | 35-032 |
| 26 | Plug with cable for oil pre heating             | 4-D029 |
| 27 | Baffle plate SLV100                             | 35-037 |
| 28 | Double ignition electrode                       | 35-010 |
| 29 | Impellor  | 35-022 |
| 30 | Cover SLV 100 /110                              | 35-062 |
| 31 | Oil tubes 2x3/8" RED                            | 35-018 |
| 31 | Oil tubes 2x3/8" GREEN                          | 35-055 |



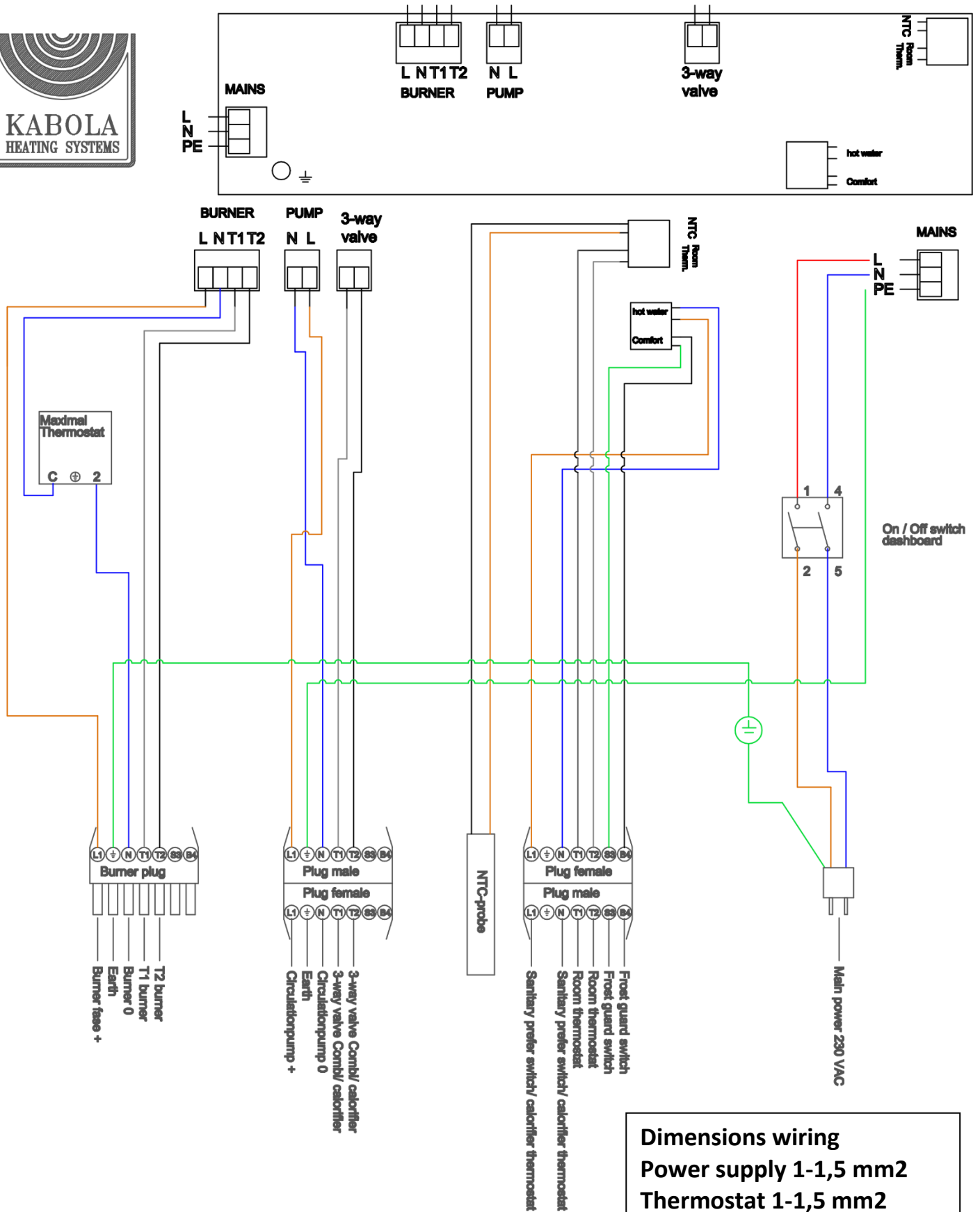
## Appendix burnerparts B-45,B-55 and B-70 Kabola Intercal SLV110B



**Appendix burnerparts B-80 / B-100  
Kabola Intercal SL44**

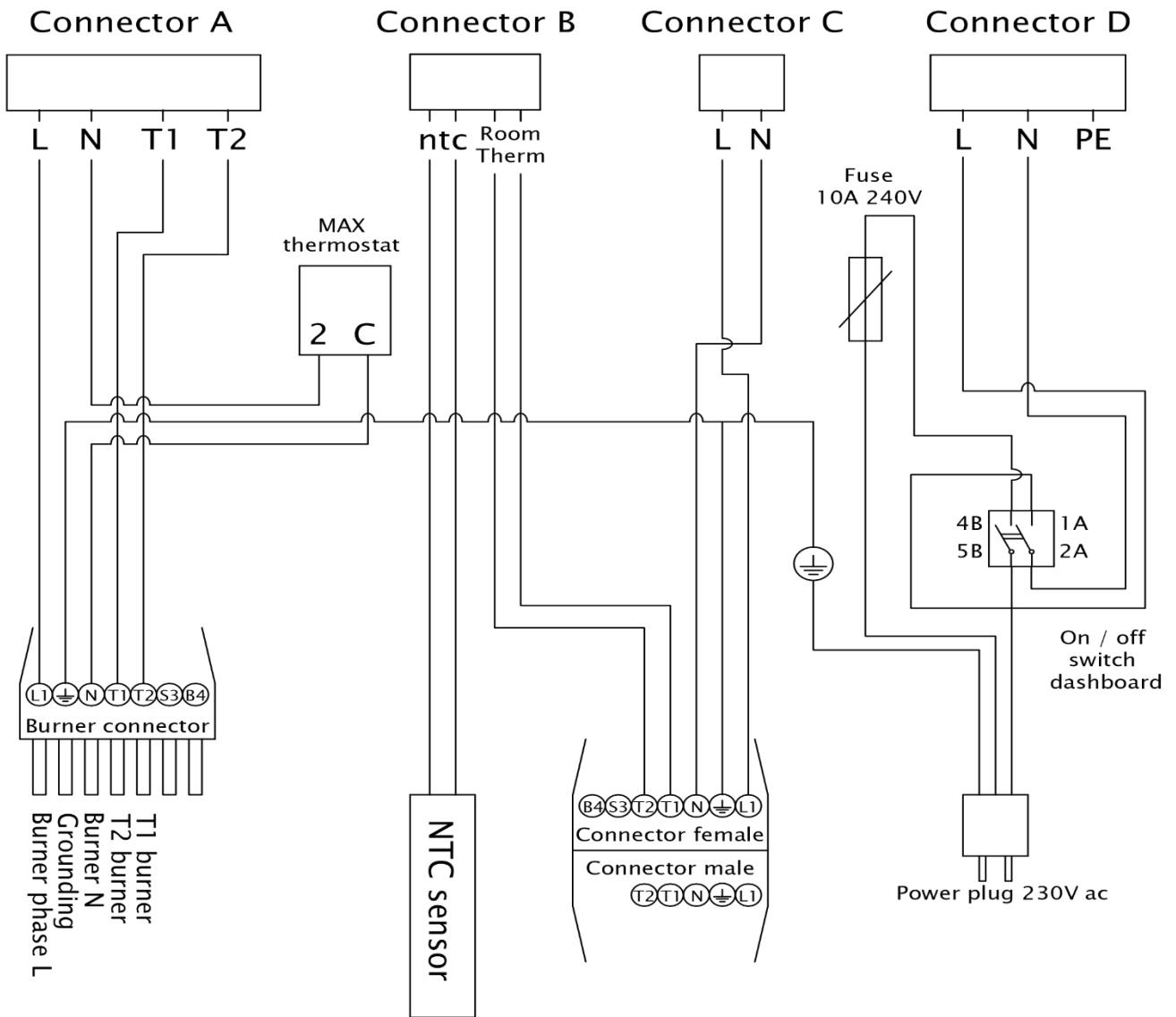
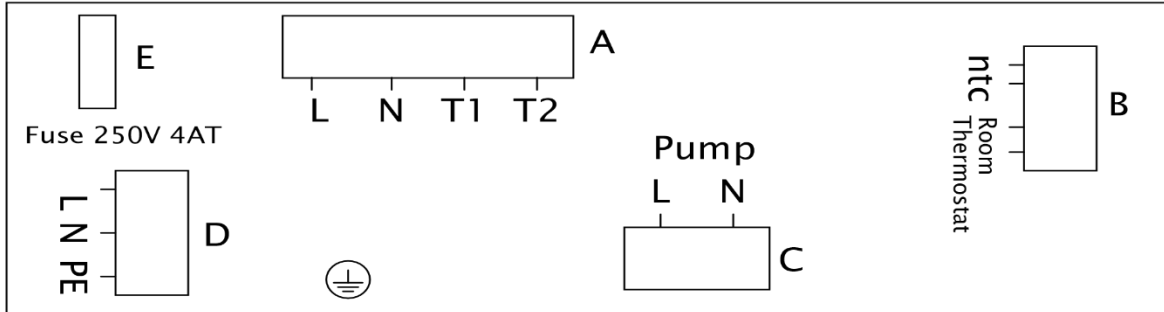


# Appendix C Electrical diagram B Calorifier and Combi 230V



Appendix C Electrical diagram B – CH 230V

Electrical diagram 230V KB/HR/Compact-7 series



## Appendix D Troubleshooting

Listed below you will find a list with possible problems, their reasons and solutions. When you encounter problems not listed, you should contact your dealer. **Never try solve problems on your own.**

| Problem                             | Possible reason   | Possible solution   |
|-------------------------------------|---|---|
| Burner won't start                  | Oil supply interrupted  | Bleed the oil filter<br>Change contaminated filter element<br>Fill the oil tank                                 |
|                                     | Power supply interrupted                                      | Check the fuses on the circuit board (4-8A)<br>Check the power supply<br>Check the max. thermostat at dashboard |
| Burner stops                        |   | Reset burner (once)   |
|                                     | Flame protection dirty (photo cell)                           | Clean glass of flame protection   |
|                                     | Flame protection defect (photo cell)                          | Replace flame protection  |
| Burner starts pulsing               | Flue glass flow interrupted                                   | Clear chimney opening   |
|                                     | Boiler dirty  | Clean boiler  |
|                                     | Oil supply interrupted  | See above   |
|                                     | Nozzle defect   | Replace nozzle  |
| Burner shows error                  |   | Reset burner  |
|                                     | Low voltage   | Check voltage level   |
|                                     | Oil supply interrupted  | See above   |
| Boiler does not react to thermostat | Wire in main connector has not been removed (room thermostat) | Remove wire from main connector   |
|                                     | Boiler thermostat incorrect adjusted                          | Adjust boiler thermostat  |
|                                     | Battery of room thermostat empty                              | Replace battery   |
| Water is not pumped                 | Pump couplings are closed                                     | Open pump couplings   |
|                                     | Pump not connected to power supply                            | Connect pump  |
|                                     | Rotor of pump is stuck  | Turn pump with your hand (see manual pump)  |

Maximum thermostat reset:



1. Remove the black cover anti clock wise
2. Push the little white pin until its flat with the lower part

When problems with the boiler will not disappear, call an engineer from Kabola.

## Appendix E CE-declaration.

### EC declaration of conformity

We,

Kabola Heating Systems BV  
Placotiweg 1 E  
4131 NL Vianen (Utr.)  
The Netherlands

declare entirely under our own responsibility that the product:

**Boiler burner Kabola B-series 25/35/45/55/70/80/100 - 230V**

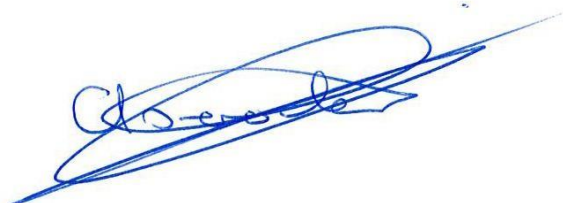
to which this declaration relates, conforms with the following standards:

**EN 303-1, EN 303-2, EN 304, EN 50081-1, EN 50082-1. EN 61010**

according to the provisions of directives

73/23/EEC,  
89/336/EEC,  
92/42/EEC,  
amended by 93/68/EEC.

Vianen, 2017



A.A. van Soolingen,  
Managing Director  
Kabola Heating Systems BV

## Appendix F Warranty conditions

Certificate of Guarantee

### Guarantee conditions:

1. The scope of this guarantee is restricted to the obligations of Kabola Heating Systems B.V. described on the front page of this document. Secondary damages are specifically excluded.
2. The guarantee period for materials and/or construction defects in the construction of the boiler body is five years. For materials and/or other goods supplied by Kabola Heating Systems B.V., a guarantee period of one year applies.
3. If, during the guarantee period it appears that a material or construction defect in a part cannot be repaired, then the relevant part will be replaced free of charge, and if after replacement, it appears that operation can no longer be guaranteed the entire appliance will be replaced. The above is exclusively at the discretion of Kabola Heating Systems B.V.
4. In the event of the repair of defective parts within the guarantee period, a new guarantee period of 1 year applies.
5. Investigation and repair work will usually be carried out by Kabola Heating Systems B.V. at the location stated by the purchaser.

**Travel and accommodation costs are charged at all times, labour costs are to be borne by Kabola Heating Systems B.V.**

If the boiler must be returned to the factory the transport costs are to be borne by the purchaser. Repaired boilers are delivered on an ex-factory basis. The costs of removing the boiler from the heating system and the installation of the boiler are to be borne by the purchaser

6. A claim against the guarantee will not succeed in the event that:
  - the guarantee certificate has been incorrectly or insufficiently completed, or has been altered
  - No purchase receipt showing the date of purchase can be provided for this guarantee certificate;
  - The appliance has been inexpertly repaired, modified or installed;
  - The appliance has not been installed by a Kabola Heating Systems B.V. dealer or by a Kabola Heating Systems B.V. approved installation contractor,
7. In the event of faults please contact the supplier of your Kabola heating appliance. When doing so, please give your name, address, telephone number, type and serial number of your heating appliance.



## Kabola Heating Systems B.V.

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