

User Guide Compact-7 series



Boiler-CH



Calorifier



Combi

Introductory remarks

Congratulations on the purchase of your Kabola Compact 7. Kabola has been a manufacturer of oil-fired heating systems since 1947. This user manual is intended to familiarize the user with use of the COMPACT 7. The user must read this manual before bringing the boiler into use and follow the instructions.

This user manual must therefore be kept safely.

Section 2 covers the safety instructions that you must follow before installing the boiler. Other sections cover safety instructions that you can recognize as shown below.

Tip: A tip gives the user suggestions and advice to be able to carry out certain tasks more easily.

Note: The user is given additional information here.
Any potential problems are also covered.

Warning: Chance of (life-threatening) injuries

You can contact Kabola Heating Systems should you have any remarks, wishes or in the case of any shortcomings. Any suggestion for the improvement of the manual are also always welcome. We wish you every pleasure with your purchase.

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1 Introduction

1.1 General

This user manual is intended for both the installer and the end user of the Kabola COMPACT 7 heating boiler. There is a wide range of COMPACT 7 heating boilers with a broad range of applications. With this purchase you obtain a product of the highest quality due to the practical application of the latest European standards and directives and modern technologies. Kabola Heating Systems BV has been developing and producing heating systems in the Netherlands since 1947.

Use the manual for both installation and while maintaining and replenishing your heating system. Save the manual carefully for future use. You can obtain a digital copy at any time by mailing info@kabola.nl or by downloading from the website www.kabola.nl.

1.2 Area of application

The COMPACT 7 central heating boiler is intended to supply heat to heat water (or coolant) in a central heating system and/or in combination with the Kabola hot air system.

The COMPACT 7 BOILER with boiler control is intended to heat both the heating system and hot water using a boiler vessel.

The COMPACT 7 COMBI boiler is intended to heat the heating system and hot tap water without a boiler vessel.

The boilers are not intended to directly heat the space in which they are installed. Heating only takes place using radiators, a hot air system, underfloor heating and/or any custom-made airco systems in which the Kabola COMPACT 7 is integrated. When using the boilers account must be taken of the dimensions of the spaces to be heated.

So always carry out a capacity calculation beforehand or take advice.

1.3 Description of the boilers

The COMPACT 7 boiler heats the boiler water by means of an oil burner assembled on the boiler. The boilers are supplied as standard as a 230 V design (also see the technical specifications in annex A).

Diesel B7 must be used as fuel. Should you want to use biofuels or mixtures ask for additional advice. These fuels are being developed at speed and have advantages and disadvantages with which account must be taken.

1.4 Technical specifications

You can find the most important specifications on the type plate attached to the right-hand side of the boiler. The address of the manufacturer is also mentioned here. You can find the full technical specifications on pages 20-22.

1.5 Guarantee provisions

We refer you to the guarantee certificate for the guarantee provisions. It is very important that the boiler is brought into use after installation, and that the commissioning protocol (for bringing into use) is returned to Kabola Heating Systems BV in Vianen. You are then covered by the guarantee.

2 Safety

This section includes a summary of points from the manual concerning safety for the procedures you will follow.

2.1 General safety

Warning: Kabola Heating Systems designs and builds its products according to the current best available techniques. However, it is possible that dangers may occur that can result in injuries or damage to the boilers if the safety instructions are not followed.

The user must:

- Have read and understood the 'Safety' section;
- Not carry out any activities that may endanger health;
- Not carry out any activities that may cause damage to the boiler;
- Ensure that the boiler is only used when it is in a technically good condition and has been installed in the correct way;
- Ensure that the safety measures are complied with during use of the boiler.

Note: No changes may be made to the boilers without the explicit written permission of Kabola Heating Systems!

2.2 Safety instructions

The safety instructions specified below must be followed when using the he COMPACT 7 boiler.

MEASURES FOR SAFE INSTALLATION

- Do not place any flammable and/or gaseous substances that may cause danger of explosion or fire in the space where the boiler is or is to be installed.
- Install the boiler in a moisture-free space on a strong, horizontal surface.
- Fasten the boiler with the assembly bolts (M5) supplied for that purpose.
- Ensure sufficient ventilation in the space where the boiler is installed (see § 4.1.1).
- Provide an earthed wall socket (230 V AC) for the connection of the boiler.
- Before you start connecting make sure there is no voltage on the system.
- For the electrical connections and thermostat connections only use multi-core cables with flexible core (minimum 0.75 mm²).

MEASURES FOR SAFE USE

- Never change the burner settings on your own initiative.
- When cleaning the boiler do not use any aggressive cleaning products that may corrode the boiler.
- Have the boiler settings checked each year by a specialist installer.
- Before you start working on the boiler make sure there is no voltage on the system.
- Collect any oil that may be released.
- It is recommended to only have maintenance and repair activities carried out by specialist and Kabola-certified persons.

3 Transport and storage

3.1 Transport

Take the following measures before the boiler is transported:

- Drain off the boiler water.
- Disconnect the fuel system.
- Disassemble the burner if required (see § 4.1.6, burner assembly).

During the transport of the boiler the following points must be observed:

- Make sure that the casing cannot be damaged. Use a blanket for example.
- Transport the boiler upright with the base below.

3.2 Storage

When the boiler is to be stored for longer time one must proceed as follows:

- Make sure that the boiler and accessories are stored in a dry and frost-free place.
- Disassemble the burner if required (see § 4.1.6, burner assembly).
- Make sure that the boiler is placed upright.
- Make sure that the boiler is stable.

4 Installation and bringing into use

In this section you can find instruction and tips for the correct placing and connection of the boiler and the associated equipment.

Warning: Do not place any flammable and/or gaseous substances that may cause danger of explosion or fire in the space where the boiler is or is to be installed.

4.1 Installation

4.1.1 Placing the boiler

- Place the boiler in a moisture-free space.
- Place the boiler on a strong, horizontal surface and fasten it firmly with the angle brackets and M5 bolts supplied.
- Ensure sufficient ventilation in the space where the boiler is to be installed.
- As a general rule for determining the diameter of the ventilation opening you can use 2.5 times the diameter of the flue gas outlet (at least 150 mm).
- Secure the base of the boiler against slipping using an angle bracket with bolts or tack-welding.
- Make sure there is a distance between the outlet and the wall of at least 10-20 mm because of the heat transfer from the flue gas outlet.
- Ensure sufficient space around the boiler for service and maintenance work.
- Provide an earthed wall socket (230 V AC) for the connection of the boiler.

4.1.2 Connection to the central heating system

PIPING

When assembling the piping the following points must be respected:

- Assemble the piping in such a way that the boiler and control panel remain accessible;
- Ensure sufficient ventilation in places where air can accumulate.

Note: Ensure ventilation if the piping does not slope upwards.

EXPANSION TANK

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

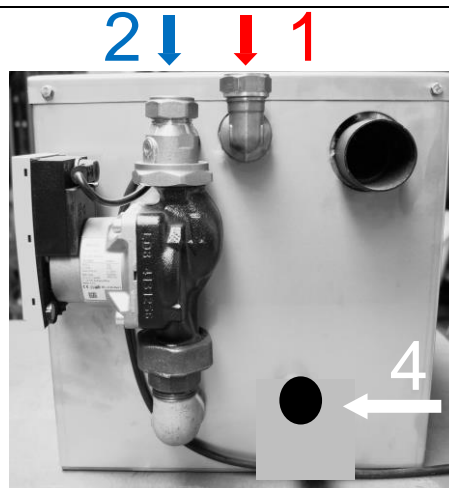
- Always assemble the expansion tank in the return pipe (see fig 2) as near as possible to the boiler.
- The size of the expansion tank is approximately 10% of the total water capacity of the whole system. For example; with a volume of 120 liters, assemble a 12-litre expansion tank.

Compact 7 central heating boiler (figure 1)

Connection of piping to the Compact 7 boiler 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. Fit the separately supplied T-piece with filler valve in the return pipe (2).
4. Assemble the separately supplied filler tap and drain combination at point 4 (see fig 1).

Figure 1



Compact 7 boiler (figure 2)

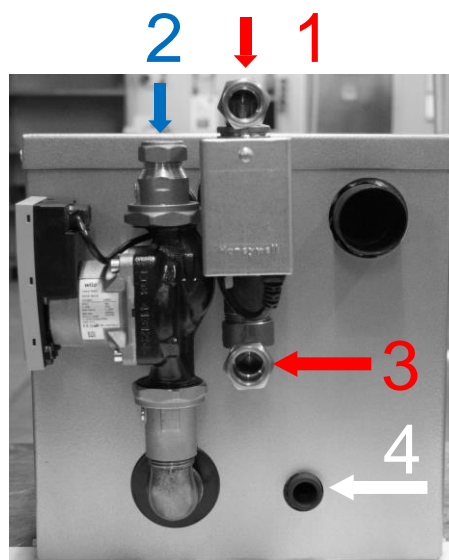
Connection of piping to the Compact 7 boiler takes place as follows:

- 5 Assemble the central heating supply pipe at point 1;
- 6 Assemble the central heating return and boiler pipe at point 2;
- 7 Assemble the boiler supply pipe at point 3;
- 8 Assemble the separately supplied filler tap and drain combination at point 4 (see fig 3).

Note:

A boiler thermostat (9-I025) must always be fitted
(available at Kabola Heating Systems)

Figure 2

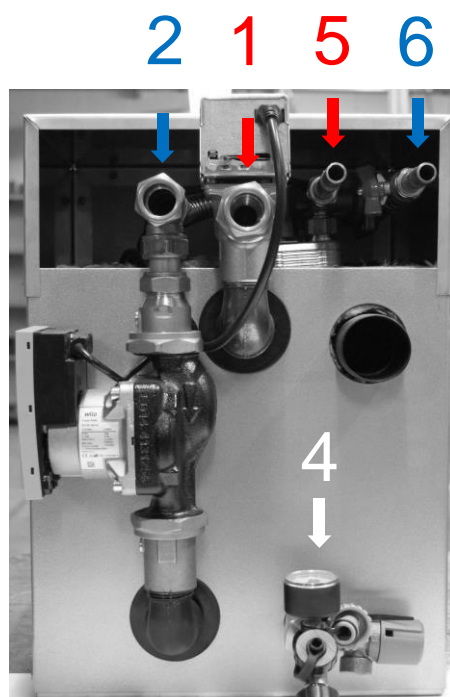


Compact 7 combi boiler (figure 3)

The connection of piping to the Compact 7 combi boiler 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 at point 4;
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 extraction

GENERAL

Flue gas extraction is an essential part of your heating installation.

Flue system shall be made of 316 stainless steel in designation T250-P1-D.

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 50 mm and a maximum length of 3 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.

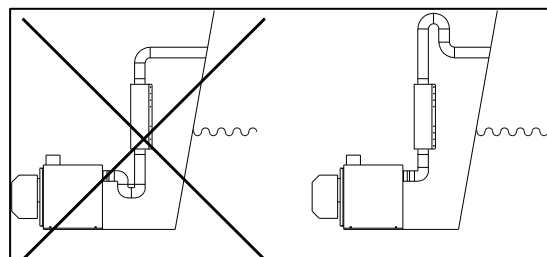


Figure 4

VERTICAL OUTLET

This discharge method is the preferred choice for seagoing vessels and yachts. This is because these vessels can be at large inclinations caused by waves and can list. For this discharge method the following points are important:

- Fit a rain-proof cowl on the end of the pipe (see fig 5).
- Use deck holes to bring the flue duct through the deck and the ceiling.
- Keep the flue gas outlet as vertical as possible.
- Use no more than 3 bends of 90 °.
- Fit a drain piece.
- The maximum permitted length with a vertical system is 5 meters.
- **With a vertical outlet always use a drain!**

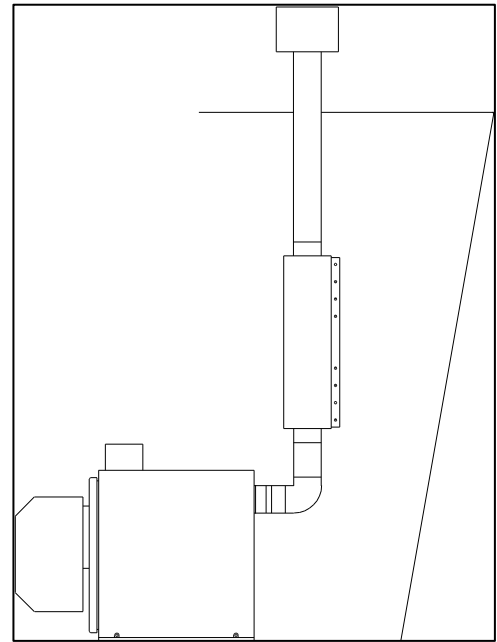


Figure 5

Tip: Kabola can manufacture a deck hole at an angle so the flue is straight as custom work.

FLUE GAS MATERIALS

Kabola can supply all flue gas materials to simplify installation such as:

- Stainless steel cowls;
- Flexible stainless steel flue gas hose;
- Stainless steel discharge pipes (from diameter 70 mm);
- Stainless steel deck holes for ceiling and deck;
- Stainless steel flue gas dampers;
- Drain pieces;
- Hose clips;
- Stainless steel adaptors;
- Skin fittings;
- Insulation sleeves (per meter)

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

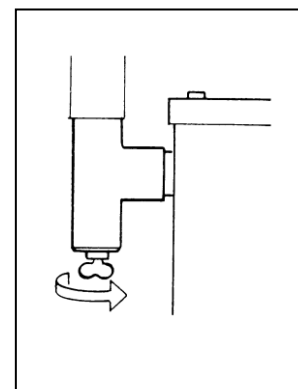


Figure 5.a

4.1.4 Electrical connection

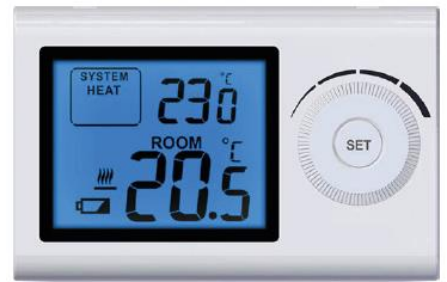
Warning:

Make sure there is no voltage on the system when you start connecting. Only use multi-core cables with flexible core (minimum 0.75 mm²).
The available voltage must of the same quality as normal shoreside power.

Tip:

If you use a transformer we advise using a 900W sine wave transformer.

Do not place the room thermostat near a heat source.



Compact 7 central heating boiler

Connection of the room thermostat (Figure 6)

Use a 2-core 0.75 mm insulated cable for the connection of the room thermostat. Connect the room thermostat as follows:

- Remove the front of the room thermostat;
- Connect the two thermostat wires at point **2** and **3** (see fig 7).

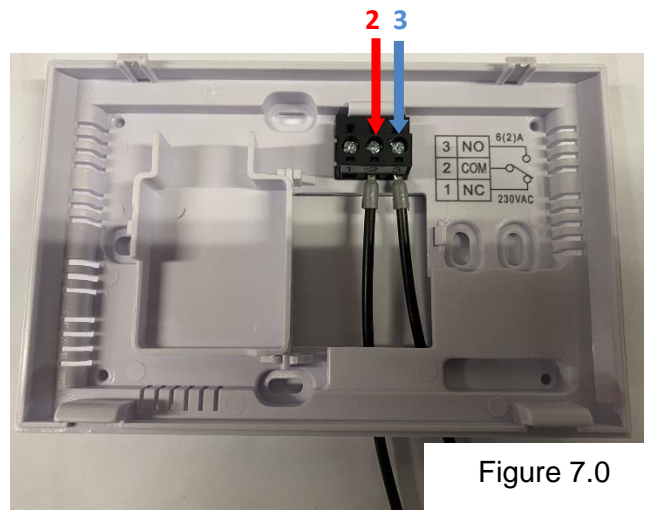
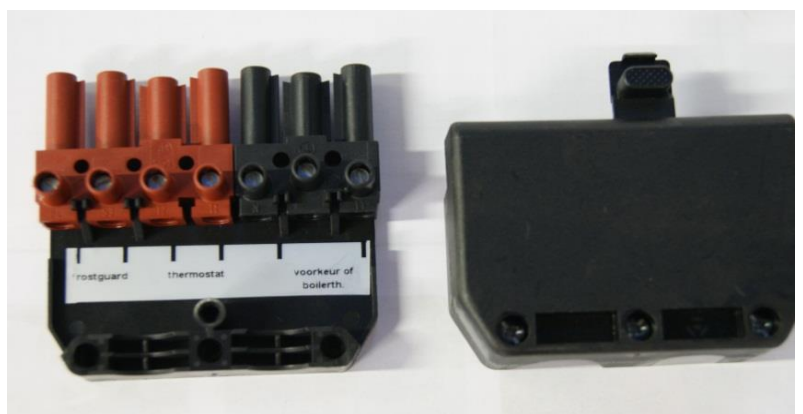


Figure 7.0

To connect the thermostat wires and hot water switch on the Compact 7 Calorifier and Combi

- To connect the room thermostat and hot water switch, use a 4-core insulated wire 0,75 mm².
- Remove the right plug (green arrow) which you can find at the backside of the Kabola dashboard (figure 11).
- Remove the 'bridge' of T1 and T2..
- Connect the 4 wires of the room thermostat at T1 and T2 and S3 and B4 in connection A (figure 12) 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.
- Replace the lid and push the plug back in.



4.1.5 Filling the central heating system

The loose fill and drain combination 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:

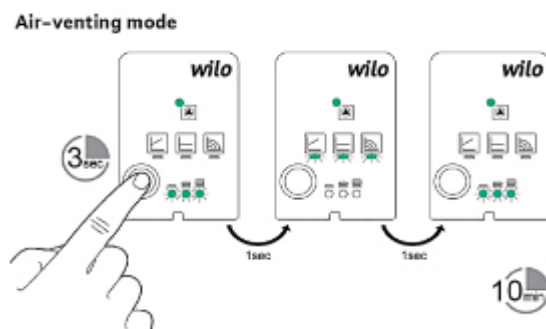
If you do not live permanently on board we recommend to fill the heating system with coolant. The cooling liquid must be suitable for heating systems (pH value 8.5). For more information please contact your dealer or Kabola, Netherlands

- See manual from the circulation pump.

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

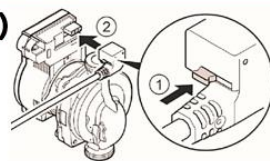
Bleeding the circulation pump

- 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.)

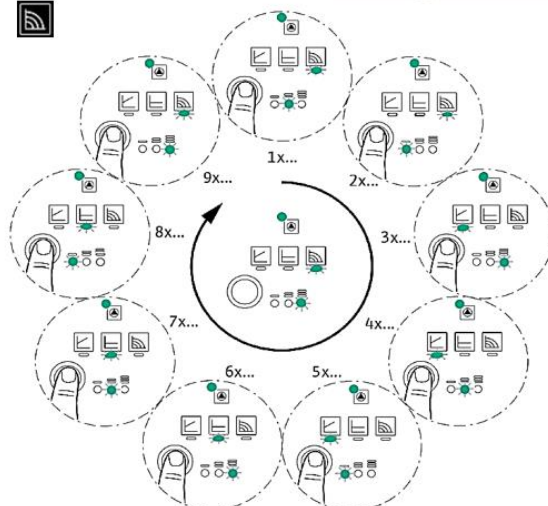


- Press the green button 9 times for settings
- 3 times stand on ^p-c
- 3 times stand on ^p-v
- 3 times fixed speed 1, 2, 3, (RPM)

SC/U (self-control)



wilo



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

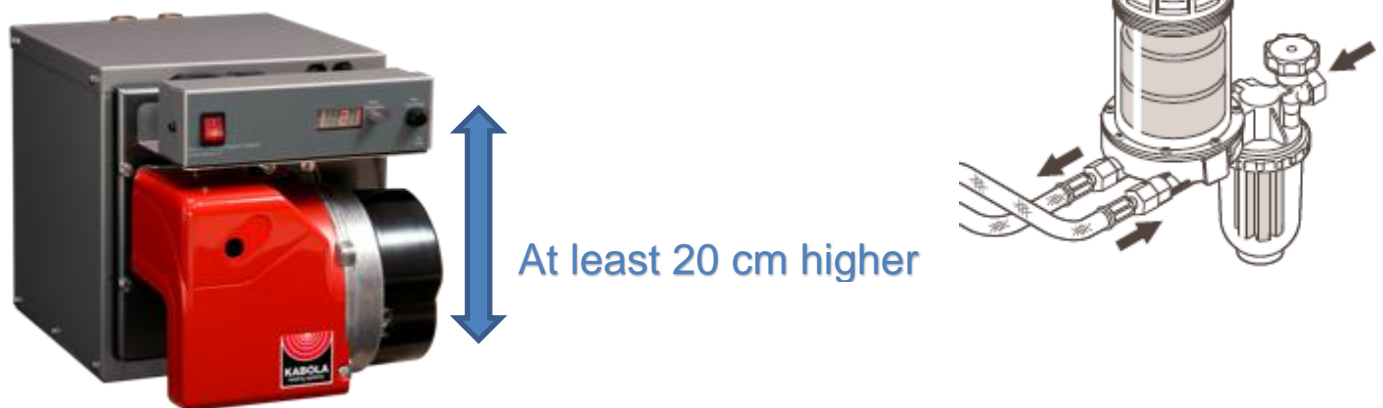


Figure 14

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 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 Bringing the compact 7 series into use

The oil burner is **tested and set** by the manufacturer. Fine-adjustment must take place after installation and depends on the flue gas system. The boiler must have been brought into use by an installer certified by the manufacturer for the guarantee to be applicable.

You can contact **Kabola Heating Systems** to make an appointment for this.

When everything has been installed:

- Insert the plug in the earthed plug socket.
- Switch the boiler on with the on/off switch on the operating panel. When the light in the switch comes on the circuit is live;
- Set the required boiler temperature between 75 and 80 °C with the boiler thermostat (see fig 15);
- Make the room thermostat active by for example setting the temperature 5 degrees higher than the ambient temperature (also see the room thermostat manual);
- Open the fuel tank valve;
- Open the oil filter valve by turning the red button to the left fully open;
- If the red (failure) oil burner light comes on reset it by pressing it. The light goes off and after ± 1.5 minute the burner will start;
- Check that oil appears in the upper glass bowl;
 - The oil must clear
 - No foaming may take place
- If oil is present the burner will burn. If there is no oil present the oil burner displays a failure. Reset the oil burner again by pressing the red light. (Repeat this step a maximum of 5 times);
- Check the steps in section 4.1.6 if no oil appears in the glass bowl;
- When the oil burner is operating check that there are no leaks in any of the oil connections;
- Vent the whole heating system again;
- Check that the boiler switches off when the boiler reaches the set temperature;
- Now turn the pump switch from the zero position to ± 45 degrees (only with the Compact 7 central heating boiler).

If you have **automatic vent filters** (toc80 plastic cap and toc80), 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.

Check the steps of section 4.1.6 if no oil will be placed in the glass bowl;

5 Operation

Compact 7 CH

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 calorifier thermostat 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

Operating panel Compact 7 CH front

Figure 15-16



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) Circulation pump stopped	
1	Room thermostat demands heat. Circulation pump operating	
3	Circulation pump further running time. Circulation pump operates for +/- 3 minutes	
	The figure 19 on the right of the display shows the current boiler water temperature	

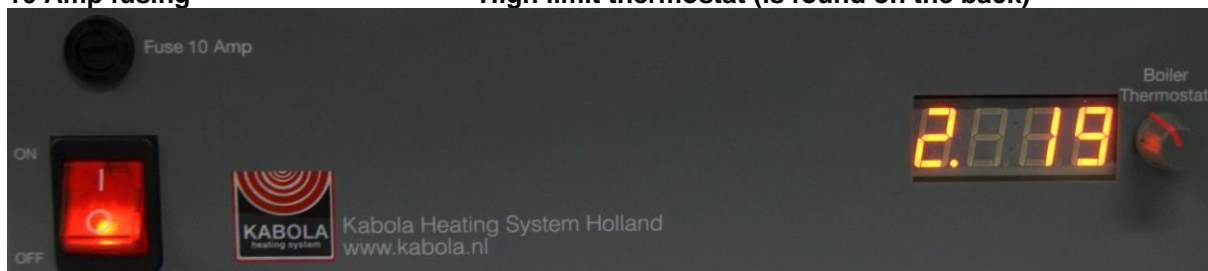
Compact 7 Calorifier

Operating panel Compact 7 Calorifier (front)

Figure 17

10 Amp fusing

High limit thermostat (is found on the back)



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).

Key to the **boiler** display

Numbers	Explanation	Photo
0	Rest position (boiler is on stand-by) Circulation pump stopped	
1	Room thermostat demands heat. Circulation pump operating	
2	Hot water demand from the boiler (boiler thermostat) 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 (19) on the right of the display shows the current boiler water temperature	

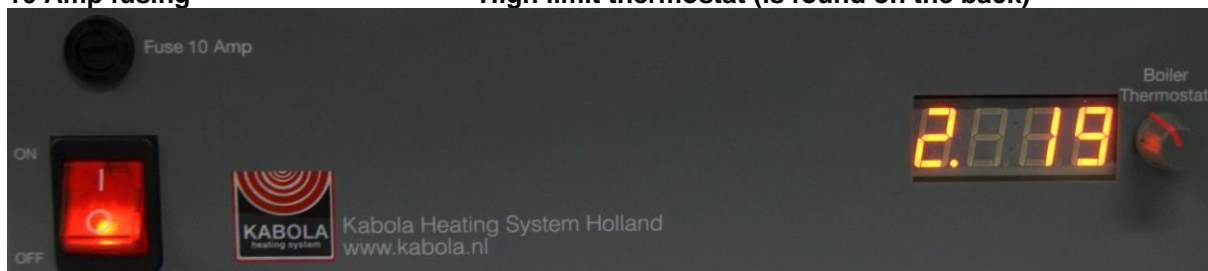
Compact 7 combi

Operating panel Compact 7 combi (front)

Figure 18

10 Amp fusing

High limit thermostat (is found on the back)



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).

Key to the **combi boiler** display

Numbers	Explanation	Photo
0	Rest position (boiler is on stand-by) Circulation pump stopped	
1	Room thermostat demands heat. Circulation pump operating	
2	Hot water is drawn off. Circulation pump operating	
3	Circulation pump further running time. Circulation pump operates for ± 3 minutes	
4	Tap comfort position Boiler kept at temperature	
•	Flashing point = hot water off	
•	Point lit up = hot water stand-by	
	The figure (19) on the right of the display shows the current boiler water temperature	

6 Cleaning and maintenance

6.1 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.

6.2 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.

7 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

Annex A Technical specifications

COMPACT 7

Silent, powerful, super efficient, light, space-saving, fully automatic, quickly achieves a pleasant climate, easy operation, easy installation, long life span

The Kabola COMPACT 7 is the smallest diesel-fired central heating system in the world, supplying 7kW. The COMPACT 7 can be supplied as central heating as calorifier and as combi.

Thanks to its reduced installation size and silent, fully automatic operation, this system is suitable for (small) sailing and motor yachts, holiday homes and campers. Permanent occupation and even hot tap water are possible.



Compact 7
CH



Compact 7
calorifier



Compact 7
combi

SPECIFICATIONS

	COMPACT 7 CH	COMPACT 7 calorifier	COMPACT 7 combi
Type	7	7	7
Capacity (in kW)	330	330	330
Width installation size (mm)*	570	620	620
Depth installation size (mm)*	340	380	445
Height installation size (mm)*	22	22	22
CH connection (mm)	3/8	3/8	15
Drinking water connection (mm)	50	50	50
Oil connection (internal thread)	analogue	digital	digital
Flue gas (diameter in mm)	+	+	+
Dashboard	+	+	+
Energy efficient circulation pump	+	+	+
Pump timer	+	+	+
Siemens room thermostat	+	+	+
Hot water on/off	+	+	+
Oil filter Floctop	+	+	+
Oil filter Toc 80	- (option)	- (option)	- (option)
Oil filter	- (option)	- (option)	- (option)
External air intake	- (option)	- (option)	- (option)
Fill and drain combination	+	+	+
Voltage (A.C.)	230	230	230
Tap water 60° (p.m. in ltrs)	47	49	53
Weight (kg)	>90	>90	>90
Efficiency %	15	15	15
Water content boiler (litres)	diesel	diesel	diesel
Fuel	0.9	0.9	0.9
Fuel consumption L/h	190/220	190/220	190/220
Flue gas temperature °C	0.25/60	0.25/60	0.25/60
Sprayer/Nozzle mm/°	295	295	295
Start capacity 230V (W)	255	255	255
Operational capacity 230V (W)			

*Dimensions include the assembly of central heating pump and oil burner.

COMPACT 7: SMALLEST DIESEL-FIRED CENTRAL HEATING SYSTEM IN THE WORLD



Ideal for central heating with radiators and/or combined with hot air heating by Kabola. Very efficient, silent and powerful.

Kabola developed a system whereby it is not necessary to heat with radiators, by using hot air instead. In addition to the simple and space-saving installation possibilities, our system is unique through its ability to be combined with radiators. This will allow you to select the best possible solution.



Air heater

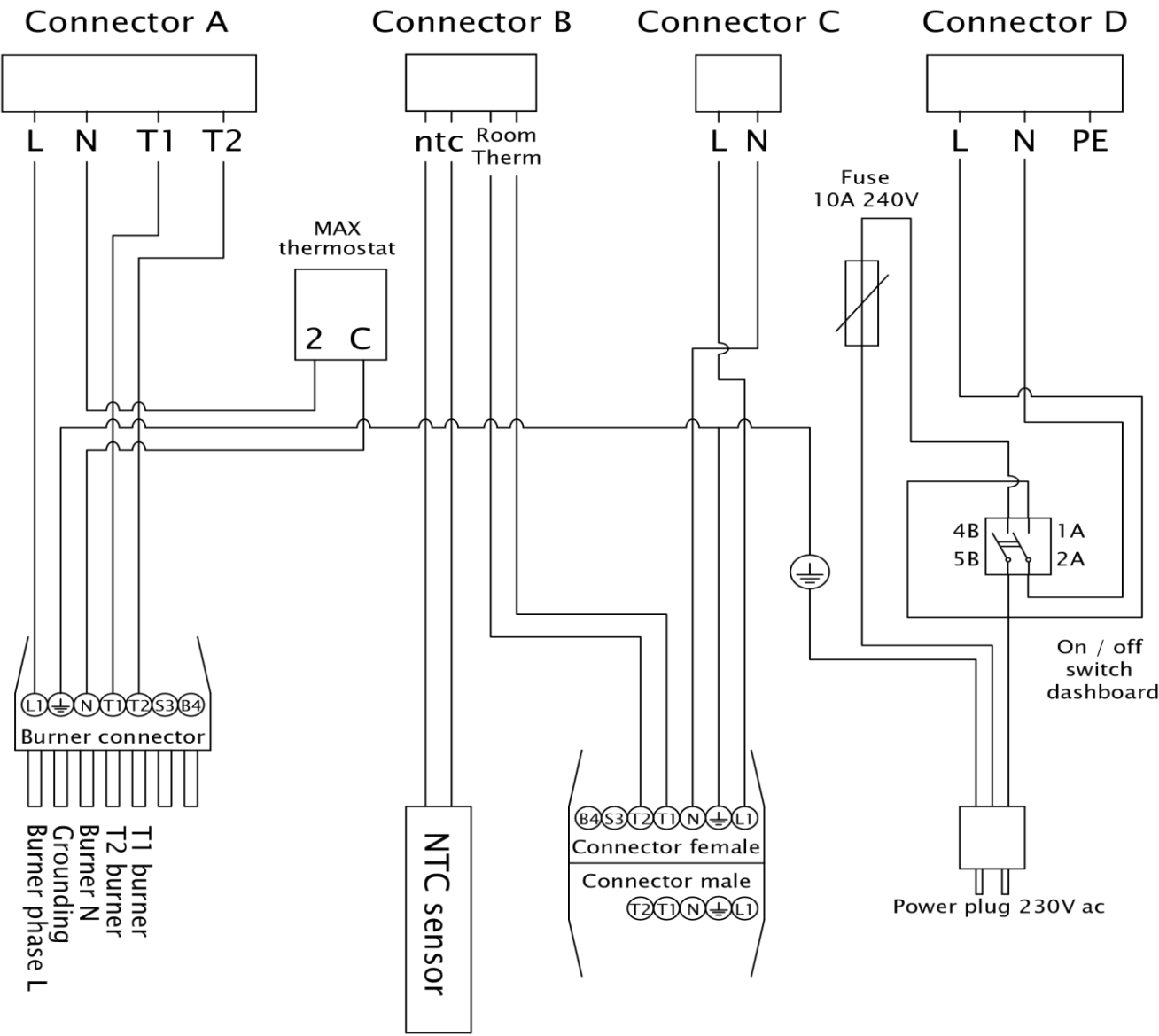
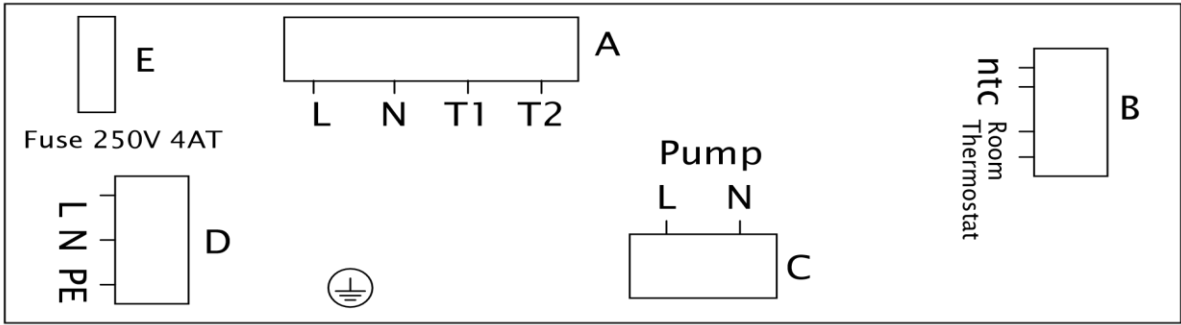
In order to compose an optimum heating system with accompanying central heating boiler, it is important to calculate the exact capacity. The capacity is determined by the volume of the rooms on board, the ship's insulation values and the user's requirements. The sailing season and the area where the ship will sail are also very important. Make sure you are properly advised by a Kabola specialist!

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

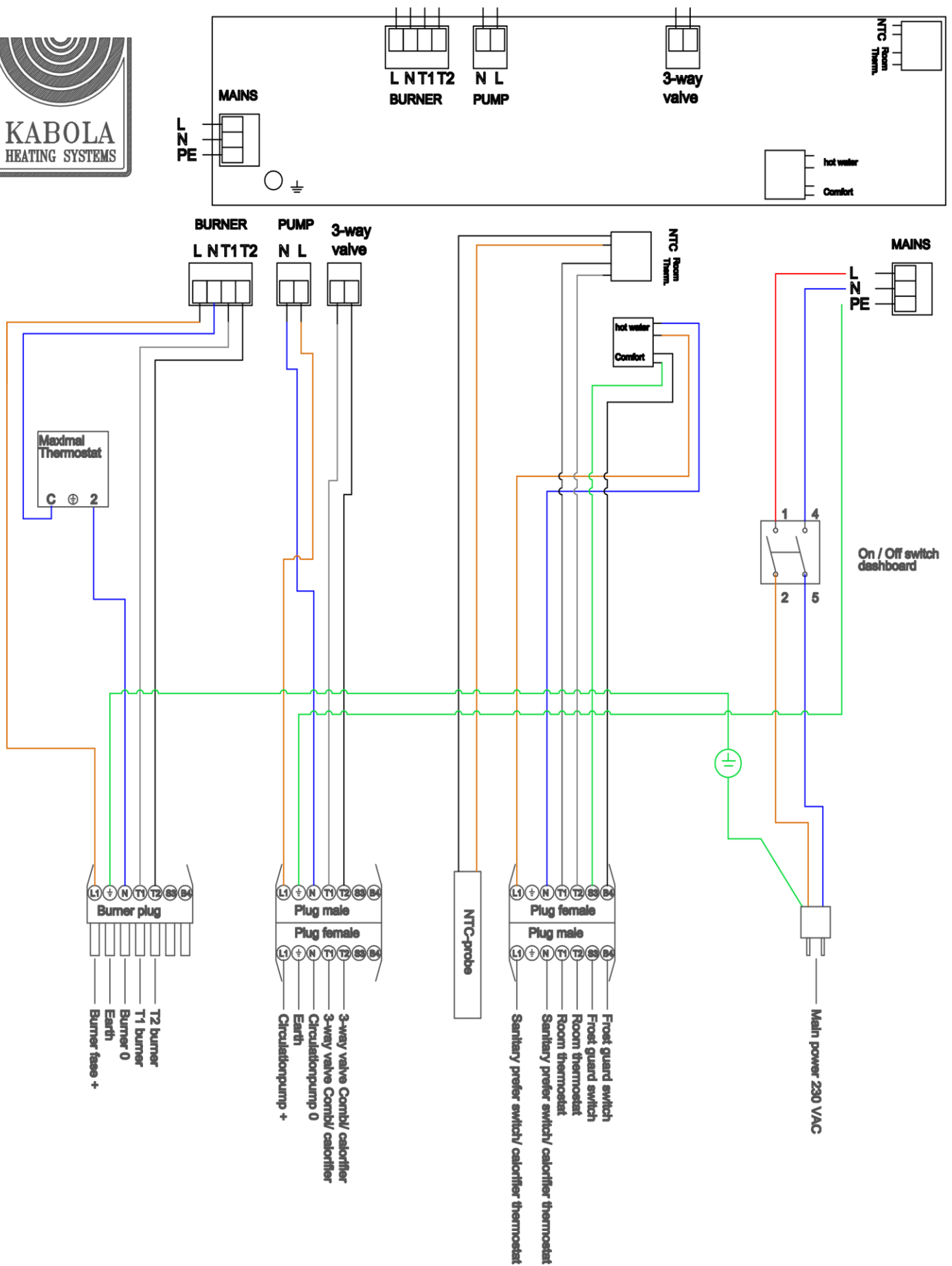


Annex B Electrical diagram 230 V Compact 7 central heating boiler

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



Annex C Electrical diagram 230 V Compact 7 Calorifier and Combi



Annex D Troubleshooting

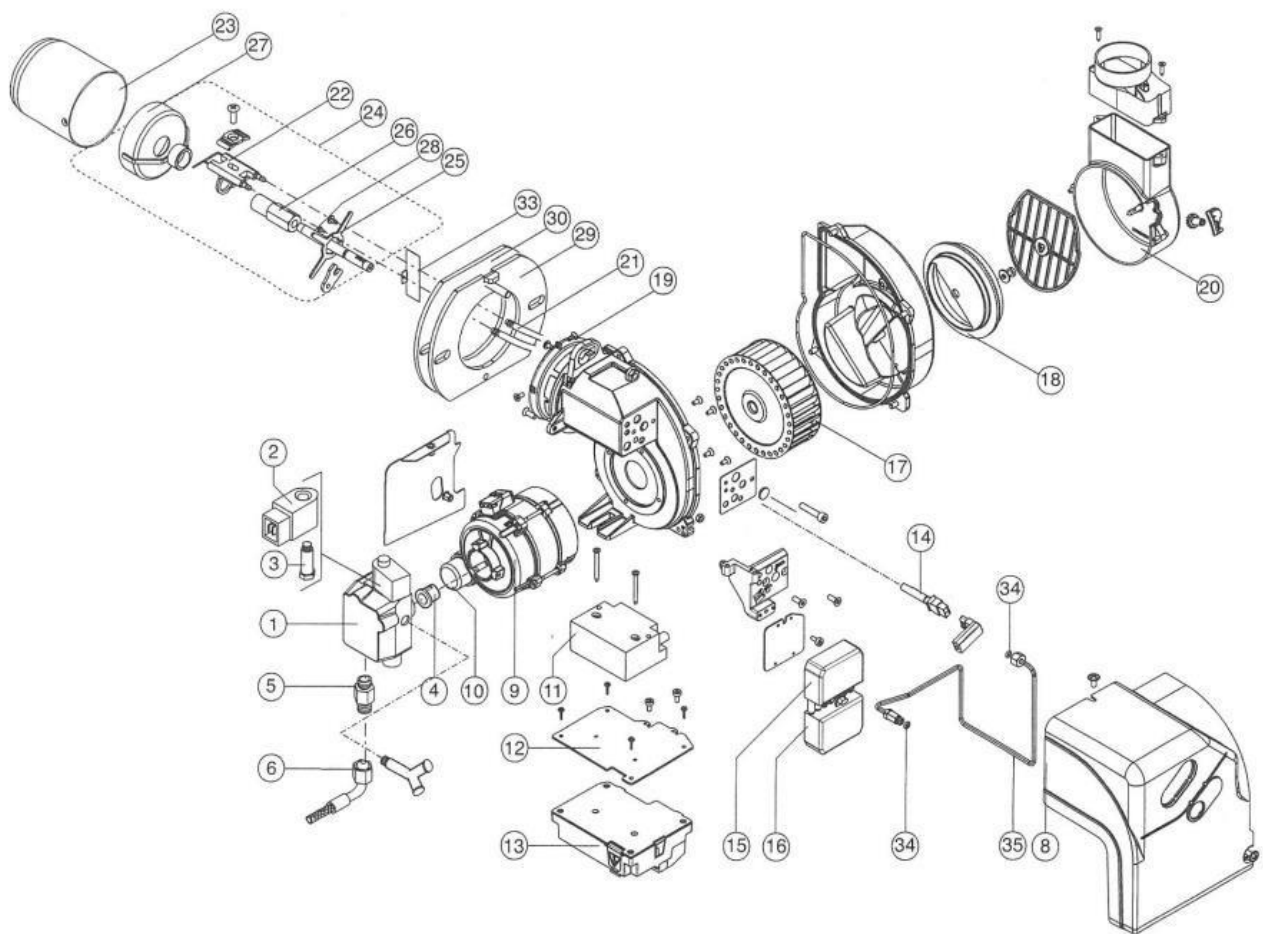
The table below is a list of possible failures, their causes and solutions. If you have problems that are not mentioned in the list you must contact your supplier. **Never try to rectify faults on your own initiative.**

<i>Fault</i>	<i>Possible cause</i>	<i>Possible solution</i>
Burner does not start		
	Power supply failure	Check the fusing on the circuitboard (4-8A)Check the power supply
	High limit thermostat	Reset the high limit thermostat
Burner immediately stops		
	Photocell soiled	Clean photocell glass
	Defective photocell	Replace the photocell
	No oil supply	Vent the oil filter
Burner starts with pulses		
	Circulation affected	Keep flue opening free
	Boiler soiled	Clean the boiler
	Oil supply affected	Vent the oil filter
Burner failure		
	Voltage too low	Check voltage level
	Nozzle defect	Replace the nozzle
Boiler does not respond to room thermostat		
	Room thermostat battery is flat	Replace the battery
	Room thermostat defect	Replace room thermostat
	Three-way valve does not work	Check or replace the three-way valve
Water is not pumped around		
	Air in the system	Vent the system
	Pump switch thermostat defect	Replace pump switch thermostat
	No voltage on the circulation pump	Check the electrical system
	Circulation pump defect	Replace circulation pump
No hot water		
	Incorrect setting	The point is continually on
	Boiler thermostat defect	Check boiler thermostat
	Preferred setting defect	Check preferred setting
	Boiler thermostat defect	Check boiler thermostat
Oil supply affected		Vent the oil filter. Change soiled oil filter. Fill the oil tank

For any continuing problems contact Kabola Heating Systems

Tel.: +31 (0) 347 320 030
Email: info@kabola.nl

Annex E Boiler parts and burner parts



See the next page for our article numbers.

<u>Pos.</u>	<u>Partnumber</u>	<u>Description</u>
1	58-020	Oil pump
2	58-022	Coil pump Suntec
4	58-025	Coupling
5	58-026	not in our system
6	58-026	Oil hose 1/4" 3/8" for Compact burner
8	58-028	Burner cap Compact
9	58-029	Burnermotor 75W Compact
10	58-031	Capacitor 5 uF Simel
11	58-032	Ignition transformer EBI Compact
12	58-033	Mounting Bracket
13	58-034	Burner control box
14	58-035	Flame monitor Ecoflame burner
15	58-036	Connection 7-pole female
16	58-037	Connector 7-pole male
17	58-038	Fan wheel
18	58-039	Air Flap Burner Compact
19	58-040	O-seal for burner Compact/Mounting flange
20	58-041	Air Cabinet burner Compact
21	58-042	Ignition cable TC burner Compact
22	58-056	Electrode block Ecoflam
23	58-057	Flamm Top TC 88,9 x 85 Compact
24	58-048	Nozzle rod TC L-74 with nozzle support Danfoss FPHB 3 Compacytt Burner
25	58-045	Nozzle rod holder support
26	58-046	Nozzle rod Danfoss FPHB 3
27	58-055	Stuwplate Compact 7
29	58-049	Mounting flange Burner Compact
30	58-050	Flange isolation Compact 7
33	58-045	Nozzle rod holder support
34	58-052	Seal Copper oil pipe complete
35	58-053	Copper oil pipe complete

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Important notes

The MAX burners are designed for the combustion of domestic fuel oil EL in accordance with EN267 standards.

Assembly, commissioning and maintenance must be carried out only by authorised specialists and all applicable guidelines and regulations must be observed.

Burner description

The MAX burner is a single-stage, fully-automatic monoblock-type burner. It is suitable for use, within its range of performance, with boilers complying with EN 303 or hot-air generators in line with DIN 4794, DIN 30697 or EN 621. Use for any other application requires the approval of Ecoflam.

The following standards should be observed in order to ensure safe, environmentally sound and energy-efficient operation:

EN 226

Connection of vaporising oil and forced draught gas burners to the heat generator.

EN 60335-2

Safety of electrical equipment for domestic use.

Installation location

The burner must not be operated in rooms containing aggressive vapours (e.g. spray, perchloroethylene, hydrocarbon tetrachloride, solvent, etc.) or tending to heavy dust formation or high air humidity. Adequate ventilation must be provided at the place of installation of the furnace system to ensure a reliable supply with combustion air. Variations may arise as a result of local regulations.

Declaration of conformity for oil burners

We,

Ecoflam Bruciatori S.p.A.

declare under our sole responsibility that the light oil burners named

MAX

conform to the following standards:

EN 267: 2010
EN 60335-1: 2008
EN 60335-2-30: 2006
EN 60335-2-102: 2007
EN 55014-1: 2008 + A1: 2009
EN 55014-2: 1998 + A1: 2001 + A2: 2008

These products bear the CE mark in accordance with the stipulations of the following directives:

2006/95/EEC Low Voltage Directive
2004/108/EEC EMC Directive
2006/42/EC Machinery directive

Resana, 28th June 2011
M. PANIZZON

We can accept no warranty liability whatsoever for loss, damage or injury caused by any of the following:

- Inappropriate use.
- Incorrect assembly or repair by the customer or any third party, including the fitting of non-original parts.

Provision of the system and the operating instructions

The firing system manufacturer must supply the operator of the system with operating and maintenance instructions on or before final delivery. These instructions should be displayed in a prominent location at the point of installation of the heat generator, and should include the address and telephone number of the nearest customer service centre.

Notes for the operator

The system should be inspected by a specialist at least once a year. It is advisable to take out a maintenance contract to guarantee regular servicing.

Annex F EC 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:

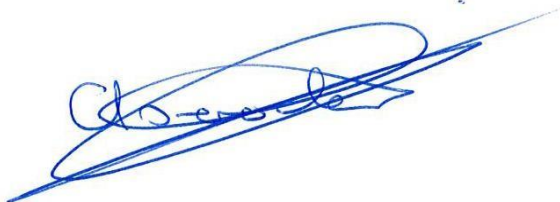
Boiler burner Kabola COMPACT 230 V

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, 2015

A handwritten signature in blue ink, appearing to be 'A.A. van Soolingen', written over a horizontal line.

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

Annex G 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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4131 NL • Vianen (Utr.) • Holland

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F + 31 (0)347 - 355 688

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