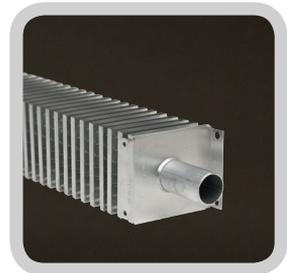


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Alde Compact 3020 HE

Certified for use in recreational vehicles



GB Operating Instructions – Alde Compact 3020 HE



CONSUMER SAFETY INFORMATION

Your safety and the safety of others are very important.

There are many important safety messages in this manual and on your appliance.

Always read and obey all safety messages.



This is the safety alert symbol.

Recognize this symbol as an indication of Important Safety Information!

This symbol alerts you to potential hazards that can kill or hurt you and others.

All safety messages will follow the safety alert symbol and either the word "DANGER," "WARNING," "CAUTION," or "NOTICE."

These words mean:

⚠️ DANGER An imminently hazardous situation that will result in death or serious injury.

⚠️ WARNING A potentially hazardous situation that can result in death or serious injury and/or damage to property.

⚠️ CAUTION A potentially hazardous situation that may result in minor or moderate injury.

NOTICE Attention is called to observe a specified procedure or maintain a specific condition.

SAFETY WARNINGS

⚠️ WARNING FIRE/EXPLOSION HAZARD

- Do not use the LPG operation on the heating system while refueling or when filling a fixed LPG tank.
- Do not use any type of open flame when checking for gas leaks.
- Use genuine Alde parts only.
- LPG tanks must be filled by a qualified gas supplier only.
- Use with LPG only.

⚠️ WARNING CARBON MONOXIDE POISONING

This heating system can produce dangerous carbon monoxide (CO) gas when using the LPG operation if it is not installed and used properly.

To help avoid the risk of asphyxiation, only use the LPG operation on the heating system outdoors to help dissipate the exhaust gases.

Never use in enclosed spaces or breathe in the exhaust gases.

Make sure that the exhaust gas outlet is placed outside, e.g. never under the recreational vehicle's awning.

- Do not use the heating system without adequate ventilation.
- Keep the air inlet and exhaust gas outlet unobstructed.

When cleaning the vehicle, never spray water into the heating, e.g. if using a high-pressure cleaner, do not spray directly into the heating's exhaust gas outlet.

⚠ WARNING HOT WATER HAZARD

Hot water at temperatures above 49 °C can cause serious scalding injuries and in extreme cases even death.

The heating can deliver hot water at temperatures above 85 °C.

- For safe operation, always use a mixing valve set at a temperature no higher than 48 °C.
- **Always check the water temperature before entering a shower or bath.**
- **Hot water can be dangerous, especially for infants, children, the elderly or the infirm.**

How long can skin be exposed to hot water?

Temperature °C	Time before skin becomes scalded	
70	Extreme danger!	< 1 second
66	Very dangerous!	1 – 5 seconds
60	Dangerous!	10 seconds
54	Warning!	30 seconds
52		2 minutes
49		5 – 10 minutes
38	Safe	Safe bathing Temperature

Source: Moritz, A.R. / Herriques, F.C.: Studies of thermal injuries: the relative importance of time and surface temperature in causation of Cutaneous burns A. J. Pathol 1947; 23: 695 - 720.

- Before using the hot water tap or using the shower, allow the hot water to run until the water temperature is safe and stabilized.
- Test the temperature of the water before placing a child in the bath or shower.
- **Do not leave a child or an infirm person in the bath unsupervised.**

NOTICE

- There may be a variation between the temperature delivered from the heating system and the temperature at the tap due to water conditions or the length of the pipe to the heating system.

⚠ CAUTION

- Avoid damage to the heating system and voiding your warranty.
- No alterations! Any alteration to the heating system or its controls can cause unforeseen serious hazards and, in addition, will void the warranty.

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⚠ WARNING

Always read and follow these instructions carefully before operating the heating system. For operating instructions, see the separate instructions.

⚠ WARNING

Use special caution when children are present. Children must not be allowed to play with the product and must not be allowed to perform cleaning and maintenance

INTENDED USE

The Alde Compact 3020 HE heating system consist of a gas-fired vehicle heater and convectors. The system provide heat for the convectors by circulating a glycol fluid which is heated by gas and/or electricity in the heater. These instructions explains the operation of the heating system and control panel and are approved for the Alde Compact 3020 HE heating system fitted in recreational vehicles.

Repairs may only be carried out by an Alde trained professional.
Always comply with national regulations.

This appliance may be used by children from the age of 8, persons with reduced physical or mental capacities or persons lacking in experience and knowledge provided they have been instructed in safe use of the system and understand the risks involved.
Children should not be allowed to play with the appliance. Children must not be allowed to perform cleaning and maintenance unless supervised.

PROHIBITED USE

To be used in recreational vehicles only.

SAFETY FEATURES

This heating system is equipped with the following safety devices:

Flame monitoring

If the flame goes out, the gas supply is switched off by a flame monitoring device.

Low-voltage shutdown

If voltage drops below 10.5 V DC, the gas supply to the burner will be switched off.

Monitoring of the exhaust fan

If there is a failure of the exhaust gas fan, the gas supply to the heating system is switched off.

Monitoring hot water temperature

A water temperature switch helps avoid excessively high water temperatures above 90 °C.
Always use caution before exposing the skin to heated water.

TECHNICAL DATA

• MEASUREMENTS / WEIGHT

Boiler height:	310 mm	
Boiler depth:	340 mm	
Boiler width:	510 mm	
Weight:	14 kg (without fluid)	
Gas:	Propane	Butane
Output 1:	3.3 kW	3.8 kW
- Consumption:	245 g/h	275 g/h
Output 2:	5.5 kW	6.4 kW
- Consumption:	405 g/h	460 g/h
Pressure:	I ₃₊ 28-30/37 mbar	I _{3BP} 30 mbar

• VOLUME/PRESSURE/TEMP

Volume of liquid, radiator water:	3.5L	
Volume of liquid, domestic hot water:	8.4L	
Max pressure radiator water:	0.05 MPa (0.5 bar)	
Max pressure domestic hot water:	0.3 MPa (3.0 bar)	
System temperature (max):	80 °C.	
230–240 V ~		
Output element: (2 or 3 kW)	1 x 1050 W 1 x 2100 W	
12 V DC		
Current consumption:	1.9 A (max)	
Fuse:	3.15 A	

⚠ CAUTION

When this heating system is in operation;
Always be aware of hot surfaces highlighted in orange colour, see Figure 1.

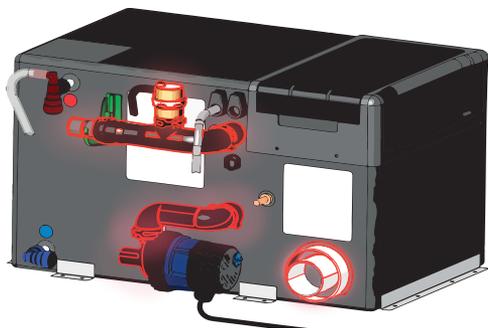


Figure 1. Alde Compact 3020 HE boiler, hot surfaces

1. OPERATING INSTRUCTIONS FOR ALDE COMPACT 3020

These instructions are approved for the The Alde Compact 3020 HE vehicle heater that is CE-marked according to EN-624 for compliance to the Gas Appliance Regulation. For all relevant harmonised standards and technical specifications see declaration of conformity. The appliance is marked with E5 for installation in vehicles in accordance with R122 and R10. Installation and repairs may only be carried out by a specialist. Always comply with national regulations.

CAUTION

Do not drink any alcohol or take any drugs before or during the operation of the heating system and follow the safety instructions carefully.

1:1 CHECKING THE HEATING SYSTEM BEFORE USE

- Check the glycol fluid level in the expansion tank: the level should be approx. 1 cm above the min. line when the system is cold. Ensure that the system is properly bled before it is put into operation.
- Check that the flue is kept free of snow and ice, as induction air enters the boiler via the flue when operated on LPG. Also check that other objects are not obstructing or disrupting flue gases and supply air at the flu.
Tip! A flue extension (part no. 3000 320) is recommended for the roof flue for camping in winter.
- Check the air circulation. Make sure there are no obstructions preventing air circulation (convection). In order to exploit the water-borne heating to the full, it is important that air can circulate freely under bunks, and behind backrests and wall-mounted cabinets. If the vehicle has a fitted carpet, ensure that the carpet does not obstruct the air supply to the convectors. It is just as important that cushions and blankets do not obstruct and prevent the flow of air behind backrests.

1:2 THE FIRST TIME THE HEATING SYSTEM IS STARTED

- Hot water boiler: Always flush the boiler completely before using for the first time or if it has not been used for a long period. Then fill the boiler with water – see the separate instructions for the vehicle. The boiler can equally well be used without any freshwater in the boiler.
- Carry out a check as in section 8.

NOTICE

Hot water from the boiler is not intended as drinking water or for preparing food.

NOTICE

Freshwater in the heater should always be drained when there is risk of frost or there is a risk of the boiler freezing. The warranty does not cover frost damage. A frost control can be installed to reduce the risk of freezing (part no. 3010 430 or 3010 431).

WARNING SCALDING HAZARD

Remember, water in the water heater may be hot.

- Start the boiler as described in section "2:1 Turning the boiler on and off".
- Select language, this appears when the panel is started for the first time, see section "2:11 Tools menu – functions" point 22.
- Check that the right accessories have a check mark next to them in the list of installed functions, see section 2:15.
- Set the clock, see section "2:11 Tools menu – functions" point 4.
- Set the desired operating mode (gas and/or electric) and the desired interior temperature, see sections 2:4, 2:5 and 2:6. The LPG boiler and electric elements can be operated simultaneously, but this should be avoided in newly filled systems due to the risk of air pockets still remaining in the system and that may cause overheating.

1:3 DESCRIPTION OF THE HEATING SYSTEM

The Alde Compact 3020 HE boiler (Figure 2), is designed to provide both heat and hot water.

The heating system includes both an LPG burner and electric heating elements and you can use the system with either LPG, electricity or both.

The heating system consists of the boiler unit as well as an expansion tank, which is installed at the highest point in the vehicle. Check with your vehicle's manual to determine where the expansion tank is installed. The heating system works by circulating hot glycol fluid through pipes and heat convectors, similar to the heating system used in many homes.

The heating system is fitted with a 12-volt electrical circulation pump that is used to circulate the heated fluid. The heat convectors located near the floor of the vehicle allow air to be heated by the hot fluid in the system and then the air rises and circulates to heat the space in your vehicle. The heating system is also fitted with a built-in hot water boiler that has a volume of approx. 8.4 liters of fresh water.

The LPG boiler in the heating system can produce around 12 liters of 40 °C water every half-hour. If the electric heating elements are used instead of gas for powering the heating system, the capacity is slightly less. You may use the heating system to heat the vehicle without filling the hot water boiler.

The control system allows you to select LPG, electricity or both as the energy source.

WARNING HOT WATER HAZARD

Hot water at temperatures above 49 °C can cause serious scalding injuries and in extreme cases even death.

The heating system can deliver hot water at temperatures up to 85°C.

– For safe operation, use a mixing valve set at a temperature no higher than 48 °C.

NOTICE

The Compact 3020 heating system is designed to be used with a thermostat control.

This manual includes instructions for controlling the system using the Alde control panel 3020 113 (see Figure 3).

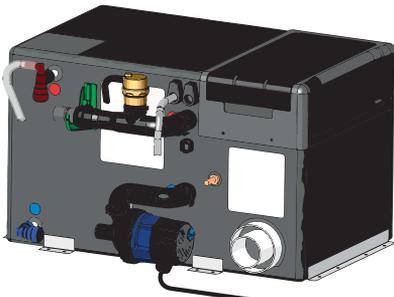


Figure 2. Alde Compact 3020 HE boiler



Figure 3. Alde control panel 3020 113

1:4 HEATING WITH LPG

• ABOUT LPG

LPG is a petroleum product, formally known as “liquid petroleum gas.” It consists primarily of propane and butane gas. The advantage of propane is that it remains gaseous at temperatures as low as -40 °C.

For this reason, propane is used in colder climates.

LPG cylinders contain LPG in both liquid and gaseous forms. When the cylinders are filled, the pressure turns the gas into liquid. When the gas cylinder valve is opened, the liquid becomes a gas again.

⚠ WARNING FIRE/EXPLOSION HAZARD

The risk involved in using LPG is that any leaking gas can ignite and explode. Since LPG is heavier than air, leaking gas will collect at the lowest point in the area where the leak occurs. To make it easier to detect gas leaks, a substance with a distinctly strong smell has been added to the gas.

- For your safety install a gas alarm according to the gas alarm manufacturer’s recommendations.

⚠ WARNING ASPHYXIATION HAZARD

LPG contains no toxic substances, but breathing in concentrated gas may cause suffocation due to lack of oxygen. Incomplete combustion of LPG can produce carbon monoxide (CO) gas, which is a asphyxiation hazard.

- For your safety, install and use a CO detector.

• USING THE LPG HEATING

Refer to the control panel instructions section “2. Operating instructions for Controlpanel”

When LPG operation is selected on the control panel, the LPG burner in the heating system and the pump for circula-

⚠ WARNING BURN HAZARD

The exhaust temperatures from the LPG burner can be up to 200 °C.

- Keep clear of the wall flue when in LPG operation.

⚠ WARNING FIRE/EXPLOSION HAZARD

The exhaust temperatures from the LPG burner can be up to 200 °C.

- Do not place combustible materials and liquids close to the flue.

ting the glycol heating fluid start automatically whenever heat is called for by the thermostat.

The LPG burner keeps operating and the pump keeps circulating until the thermostat reaches the set temperature.

Should the LPG burner go out for any reason, a sensor will be activated and the heating system will attempt to automatically restart (in about 10 seconds).

• SNOWY CONDITIONS

⚠ WARNING ASPHYXIATION HAZARD

To burn properly and safely, the LPG burner in the heating system must have adequate air intake. Inadequate air intake may cause the build-up of CO gas, which is an asphyxiation hazard. The inlet air to the gas burner enters through the flue, which is usually installed on the side of the vehicle near the boiler. While camping during the winter, make sure that the flue is kept clear of snow and ice.

- Do not start the LPG operation on the heating system until the flue is completely free of snow and/or ice.

Tip! A flue extension (part no. 3000 320) is recommended for the roof flue for camping in winter.

1:5 HEATING WITH ELECTRICITY

All Alde Compact 3020 heating systems are fitted with two 230V heating elements (one 1kW element and one 2kW element) in total 3kW.

Refer to the control panel instructions (section 2).

When electrical operation is selected on the control panel, the immersion heating elements are used to heat the heating system. The heating elements and the circulation pump are controlled in the same way as the LPG operation.

NOTICE

Ensure that correct electrical service is available before using the immersion heating.

Campsite power supply differences from a range from 6 A to 10 A and 16 A. Hence, before plugging in, check that the power source is sufficient fused to support the power consumption needed for the immersion heating.

1kW - 6A Fuse

2kW - 10A Fuse

3kW - 16A Fuse

1:6 THE PRINCIPLE OF CONVECTION

Both LPG and electric heating use hot glycol fluid to heat the space in the vehicle.

To achieve the best possible result from the heating, it is important that air can circulate freely under bunks, and behind backrests and wall-mounted cabinets. If the vehicle has a fitted carpet, ensure that the carpet does not obstruct the air supply to the convectors. It is just as important that cushions and blankets do not obstruct and prevent the flow of air behind backrests. (see Figure 4).

NOTICE

Obstruction of the air supply to convectors cause poor or no heating of the vehicle.

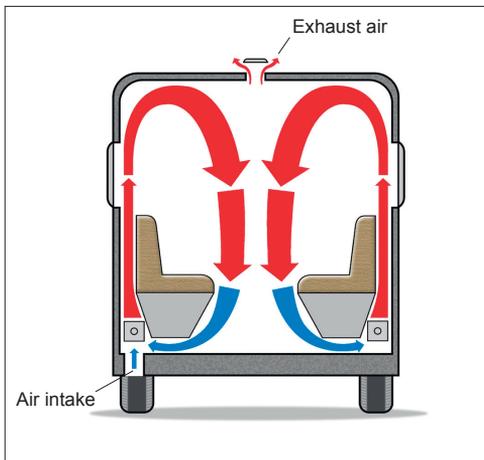


Figure 4. Air circulation

1:7 USING THE HEATING SYSTEM

• DOMESTIC HOT WATER

The Alde Compact 3020 heating system can supply domestic hot water using either LPG or electricity. Please see the control panel instructions (section 2) for details.

NOTICE

Always flush the boiler completely before using for the first time or if it has not been used for a long period.

NOTICE

Hot water from the boiler is not intended as drinking water or for preparing food.

To make hot water with the heating system:

1. Make sure that the vehicle's water tank is filled up with clean, uncontaminated water or connected to a main water supply.
2. Fill the hot water tank in the heating system with clean, fresh water. If the heating system is used for the first time or if the heating system has not been used for some time, flush it out with water by opening any hot water tap in the vehicle and allowing approximately 12 liters to run through the tap.
3. Close all taps and start the heating system using the control panel.

⚠ WARNING HOT WATER HAZARD

Hot water at temperatures above 49 °C can cause serious scalding injuries and in extreme cases even death. The heating system can deliver hot water at temperatures up to 85 °C.

- For safe operation, use a mixing valve set at temperature no higher than 48 °C.

NOTICE

Freshwater in the heater should always be drained when there is risk of frost or there is a risk of the boiler freezing. The warranty does not cover frost damage. A frost control can be installed to reduce the risk of freezing (part no. 3010 430 or 3010 431).

• USING ONLY HOT WATER

NOTICE

There may be a variation between the water temperature delivered from the heating system and the temperature at the tap due to the length of the pipe.

When only hot water is required (for example during the summer), no settings need to be changed. The heating system will handle this function automatically.

Refer to the control panel instructions for details on using hot water.

• AIR CUSHION

The heating system is designed to have an air space, called an air cushion, at the top of the tank. This air cushion is essential for absorbing pressure surges in the heating system. Always renew the air cushion in the heating system after 10 days of use.

This can be done by opening the safety/drain valve on the heating system for a few second.

The air cushion allows expansion to take place and helps protect the heating system against pressure surges from the water pump.

NOTICE

To maintain the air cushion, always renew the air cushion in the heating system after 10 days of use.

• **Draining the hot water tank in the heating system using the combined safety/drain valve:**

⚠ WARNING SCALDING HAZARD

Remember, water in the water heater may be hot.

⚠ WARNING SCALDING HAZARD

Never actuate the drain valve lever as long as the heating system is under water pressure and/or is still warm.

1. Switch off the freshwater pump.
2. Open all water taps.
3. Then, open the safety/drain valve by moving the yellow lever to the vertical position (M) (Figure 6), or, alternatively, turn the knob (K) 90° (Figure 7). The hot water heater will now drain straight out under the vehicle through the safety/drain valve hose.
4. Check that all the water empties out (approx. 7-10 litres). Leave the valve in the open position until the next time the heater is used.

NOTICE

Ensure that the automatic check valve (see Figure 5.21) is open and is allowing air to enter the boiler when it is being drained and that the hose is not blocked.

- For emptying specially-adapted heating systems, as well as any other water systems in the vehicle, please refer to the manufacturer's instructions.

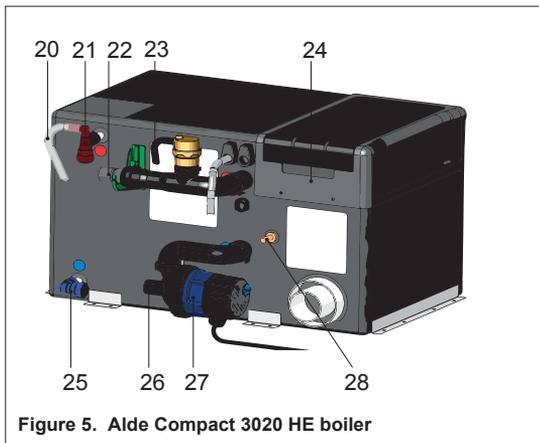


Figure 5. Alde Compact 3020 HE boiler

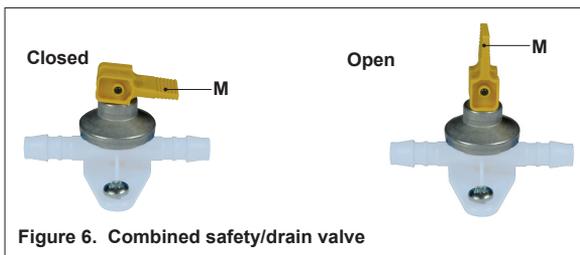


Figure 6. Combined safety/drain valve



Figure 7. Frost Control

1:8 STORAGE AND WINTERIZATION

⚠ CAUTION

The heating system and its plumbing components should always be drained of fresh water when there is a risk of freezing and when the vehicle is not in use.

The warranty does not cover frost damage.

For this reason it is advisable to follow the recommendation(s) below if the heating system is to be stored in a freezing environment or for long periods of time. At the start of the winter season or before traveling to a location where freezing conditions are likely, the heating must be winterized.

Winterize as follows:

- Drain the hot water tank and its plumbing components in the heating system, refer to section 1:7 "Draining the hot water tank in the heating system using the combined safety/drain valve".

Also:

- Turn off the main power supply (12V) to the heating system. The main power supply should always be switched off when the vehicle is not being used.
- Turn off the LPG supply tank.
- When washing the vehicle, take care not to get water in the flue.

1:9 MAINTAINING THE HEATING SYSTEM

Repairs must be performed by a qualified service technician. Verify proper operation after servicing.

1:10 LPG CONNECTIONS AND HOSES

Rubber hoses have a propensity to dry out and crack and therefore LPG hoses must be changed according to national regulations, at least once every 5 years. Check the date stamp on the hose.

⚠ CAUTION

Only specially hoses rated for use with LPG should be installed with this system. The use of other types of hose may result in hose failure and leakage. Hoses must be changed by a trained professional.

NOTICE

The LPG system must be checked regularly (preferably once a year) by a professional to help ensure that there are no leaks from connections or hoses.

1:11 GLYCOL HEATING FLUID

CAUTION

The heating system comes installed with glycol heating fluid. If the fluid level is too low you must fill the system to the right level before operating the heating system. Your warranty may be voided and the heating system may be damaged if you attempt to start it with little or no glycol heating fluid.

NOTICE

Do not mix different types of glycol; this can lead to coagulation of the glycol fluid.

The heating system must be filled with a fluid mixture consisting of distilled water and ethylene glycol. For best results, use high-quality ready-mixed ethylene glycol (with inhibitors) intended for use in aluminium heating systems. The proportions when using concentrated ethylene glycol are 60% distilled water, or water that is free of salts, and 40% ethylene glycol. If the heating system will be exposed to temperatures below -25°C , the ethylene glycol content has to be increased, however, do not exceed 50%. The ethylene glycol mixture has to be changed every other year, since properties such as corrosion protection, deteriorate over time. If Alde Premium Antifreeze is used, the interval for changing the mixture can be extended to max 5 years under normal operating conditions.

NOTICE

Omitting to change the fluid can result in frost damage, corrosion, bacterial growth and/or overheating.

The ethylene glycol system is topped up in the expansion tank. Either manually or using Alde's top-up pump, which both fills and vents the system. During manual filling, pour the ethylene glycol mixture slowly into the expansion tank. When the heating system is cold, the level should be approx. 1 cm above the MIN line, see Figure 8. Bleed the system. Top up with more fluid if the level falls during bleeding. In newly filled heating systems, bleed at regular intervals, see the section "1:12 filling the heating system with glycol fluid".

The glycol content should be checked at the expansion tank using a pH tester before topping up with new liquid to help ensure that the concentration of glycol in the mixture is not too high.

If the fluid level falls for reasons other than evaporation, please check all joints, drain cocks and bleeder screws for leakage, including the bleeder located at the end of the convactor.

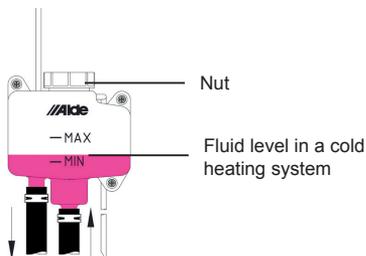
WARNING POISONING HAZARD

Be sure to thoroughly clean up any puddles of leaked glycol. Rinse the area with water and wipe up the excess to prevent accidental ingestion by children or pets.

NOTICE

The glycol mixture should be changed every second year to help ensure maximum corrosion inhibitor effectiveness

Figure 8. Fluid level of heating system



1:12 FILLING THE HEATING SYSTEM WITH GLYCOL FLUID

Fill the heating system through the expansion tank, either manually or using the Alde filling pump, which both tops up and bleeds the system. To purchase a filling pump, contact your Alde dealer. For manual filling, remove the nut (Figure 8) from the expansion tank. Slowly pour the glycol mixture into the expansion tank, the level should be approx. 1 cm above the MIN line, see Figure 8. Bleed the system. Top up with more fluid if the level falls during bleeding. In newly filled heating systems, bleed at regular intervals.

1:13 BLEEDING THE SYSTEM

Depending on how the pipes have been fitted, air pockets may form when the system is filled with ethylene glycol fluid. If the pipes only warm up a metre or so from the boiler, even though the circulation pump is operating, this is a symptom of air trapped in the system.

In newly filled heating system, small air bubbles can form in the expansion tank, creating a gurgling sound. If the circulation pump is stopped for a few seconds, the bubbles will usually disappear; however, if the problem persists, bleed the heating system to remedy the problem.

WARNING SCALDING HAZARD

Remember, the glycol heating fluid may be hot.

Bleed as follows:

1. The boiler has to be switched off.
2. If a bleed screw is fitted to the outgoing pipe of the boiler, open this bleed screw and leave it open until fluid starts coming out. Then, go to point 4.
3. If the boiler is equipped with an automatic air vent, bleeding the boiler takes place automatically. Start the boiler and circulate the fluid in the system until it is vented, top-up with fluid, if needed, according to point 5. If this doesn't help, switch off the boiler and go to point 4.
4. Open the other bleed screws in the system, one by one. Leave the bleed screws open until ethylene glycol fluid starts coming out of them, and then close them.
5. Check the fluid level. Top-up if the level has fallen during venting, the fluid level in the expansion tank has to be approx. 1 cm above the min line in a cold heating system.
6. Start the boiler and let it run for a while. Feel if the pipes and radiators are heating up around the vehicle. If this does not help, use an Alde filling pump.



Figure 9. Automatic Air bleeder

NOTICE

Be sure that the heating system has been thoroughly bled. If this is not the case, there may be a risk of overheating.

Never use full electric or gas capacity before the system has been thoroughly bled. There may be a risk of overheating.

NOTICE

Never open the bleeder screws while the pump is running, because this will induce air into the system.

• PERSISTENT AIR LOCK

If air lock persists, try the following:

Single-axle trailers:

1. Stop the circulation pump.
2. Lower the front of the trailer as far as possible. Leave it in this position for a few minutes to allow the air to travel upward in the heating system.
3. Open the bleeder screw at the highest point. Leave it open until it discharges glycol fluid.
4. Raise the front of the trailer as far as possible and repeat the procedure in this position.
5. Position the trailer horizontally and start the circulation pump.
6. Check that the pipes and convectors around the vehicle are heating up.

Motor-home or twin-axle trailers:

The easiest way to bleed the heating system is to place the vehicle on a sloping surface or to raise one end of the vehicle using a jack. Bleed the heating system as described above. Alternatively, the heating system can be bled using the approved filling pump. To obtain a pump, contact your Alde dealer.

1:14 IMPORTANT INFORMATION

- Always switch off the main isolating switch (12V) for the heating system when the vehicle is not in use.
- The LPG burner must not be in operation when refuelling the vehicle or when filling a fixed LPG tank.
- When washing the vehicle, do not spray water directly towards the flue.
- When camping in winter conditions, ensure that the flue and exhaust air valves are kept clear of snow and ice.
- The vehicle may be heated even if the hot water boiler inside the boiler is not filled with water.
- The LPG burner and electric element may be operated simultaneously.
- Always drain the hot water tank in the heating system when there is a risk of frost and when the vehicle is not being used. Failing to do so could lead to a risk of serious frost damage.
- Always renew the air cushion in the hot water tank after 10 days of use to create a new air cushion. This can be done by opening the safety/drain valve on the heating system for a few seconds.
- Always maintain the proper level of glycol fluid in the heating system.
- The glycol mixture should be changed every other year because certain properties such as corrosion protection deteriorate over time.
Omitting to change the fluid can result in frost damage, corrosion, bacterial growth and/or overheating.
- Sterilisation fluids for water can cause harmful corrosion to the stainless structure of the heating. Always read the data label regarding additives that are used and make sure that the system is flushed of all additives before using the heating system.
- Be aware of hard water: Hard water is water that has a high dissolved-mineral content, particularly calcium. If the boiler is used in a hard water area for prolonged periods, install a water filter. Hard water can lead to a build-up of lime scale that can reduce the functionality of the system.
- Bleed the heating system, see section "1:13 bleeding the system". Top up with more liquid if the level has fallen after bleeding. Bleed a newly filled heating system regularly during the first days the heating system is in operation.

NOTICE

Close the main LPG valve in the following circumstances:

- When a leak in the LPG system is suspected.
- When the vehicle is not intended to be used.
- The national legislation of the country you are in may require you to close the main LPG tap when the vehicle is in traffic.
- When repairing the heating system.

2. OPERATING INSTRUCTIONS FOR CONTROLPANEL

⚠ CAUTION

Do not drink any alcohol or take any drugs before or during operating the heating system and follow the safety instructions in this manual carefully.

2:1 TURNING THE BOILER ON AND OFF

The heating system is switched off.



The heating system is switched on.

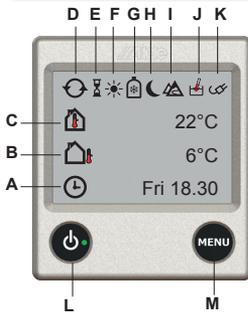


1. To start the boiler, press the On/Off button and the start-up display appears. The boiler starts with the last selected settings. A green LED comes on beside the On/Off button when the panel/heating system is on.
2. To switch off the boiler, press the On/Off button.

2:2 STANDBY

NOTICE

If "Background light" is set to Dark, the display goes out when it enters standby mode, but lights up if you press the screen. See settings in section 2:11, point 8.



- | | |
|----|---|
| A. | Clock. The clock shows the day and time (if activated). To set the clock, see under section 2:11 point 4. |
| B. | *Outdoor temperature. |
| C. | Indoor temperature. |
| D. | Circulation pump. The symbol is displayed when the pump is in operation. |
| E. | Automatic start of the boiler. The symbol is displayed when the function is activated in accordance with section 2:11 point 18. |
| F. | Day mode. The symbol is displayed when the function is on and turns green when activated |

- | | |
|----|--|
| G. | *LPG bottle full/empty. The symbol is displayed when the sensor on DuoControl is connected and activated. If EisEX is installed a snowflake is shown inside the gas bottle.
Green bottle = Bottle full
Red bottle = Bottle empty |
| H. | Night mode. The symbol is displayed when the function is on and turns green when activated. |
| I. | High altitude mode. The symbol flashes if the high altitude mode is activated. |
| J. | The symbol flashes during heat up of *Alde Flow (part no. 3020 161) when set in more hot water mode. |
| K. | 230 volt. The symbol is displayed when 230 V is connected to the boiler. |
| L. | On/Off button. Main switch for boiler. |
| M. | MENU button. Button for settings menu. |

2:3 SETTINGS MENU

Launch the settings menu by pressing the MENU button. The background light comes on and those functions that can be set are displayed. Settings that you make are automatically saved after 10 seconds. The control panel will go to standby automatically after 30 seconds if the screen has not been touched.

The control panel in standby mode.



The control panel in settings menu.



For activated functions, see section 2:9.

For the tools menu, see section 2:10.

Functions marked with a (*) are accessories, which are not installed on all vehicles, refer to the vehicle manufacturer's instructions.

2:4 SET THE DESIRED TEMPERATURE

The temperature can be set between +5°C and +30°C, inclusive, in increments of 0.5°C.



1. The temperature displayed is the temperature which is currently set.
2. Increase the temperature by pressing the "+" button. Reduce the temperature by pressing the "-" button.
3. The settings are now complete and the boiler will work at the set temperature.

NOTICE

If night or day mode is activated (see section 2:11 point 1 and 2) and the time is within the scheduled period a moon or a sun will appear beside the temp setting. The temperature set will be the one of the mode shown below.



2:5 DOMESTIC HOT WATER

The boiler is fitted with a built-in hot water boiler which can hold approximately 8.5 litres. The boiler can equally well be used without there being any freshwater in the boiler. There are three different settings for hot water: no hot water, normal operation and more hot water.



1. No hot water. If domestic hot water is not needed, press the "-" button (symbol becomes empty).

NOTICE

If night, day or antimicrobial mode is activated (see section 2:11 point 1, 2 and 14) and the time is within the scheduled period a moon, sun or the antimicrobial symbol will appear inside the hot water setting. The hot water setting will be the one of the mode shown below.



2. Normal operation. If there is freshwater in the heater and hot water is required, press the "+" button (the symbol will then show half-shaded).

NOTICE

If the pump operation function has been set to Cont., see section 2:11 point 17, this option cannot be selected.

WARNING SCALDING HAZARD

Since the hot water and the glycol heating fluid is heated simultaneously, the hot water can be very hot when a high level of heating is required.



3. More hot water. If you need more hot water, the water temperature can be temporarily increased to around 70°C. Press the "+" button so that the symbol shows fully shaded (black). The boiler returns to normal operation after 30 minutes.
NB. If the pump operation function is set to Cont., see section 2:11 point 17, then the continuous pump operation function is turned off for 30 minutes, before then returning to continuous pump operation.
NB. If an additional hot water tank (*Alde Flow part no. 3020 161) is installed and the panel is in more hot water mode, the hot water function can then be in operation for longer than 30 minutes.

Info! When hot water only is required, during the summer for instance, or when there is no requirement for hot water, no settings need to be made; the boiler looks after this function automatically.



2:6 HEATING WITH ELECTRICITY

Proceed as follows to activate heating with electricity. The more power (wattage) you select, the quicker heating will take. A priority can be set when selecting both electricity and gas, see section 2:11 point 3. The boiler uses no more power than is needed, even if it is set for 3kW.



1. Use the + or - button to switch on the electric heating and toggle between the various power modes (Off, 1 kW, 2 kW or 3 kW) The set value will be displayed on the screen. The activated mode is indicated by the + button changing colour to green. If a *load monitor is installed and set, the boiler will not use more electricity than it is capable of even if 3 kW is selected.
2. The settings are now complete and the boiler is working at the set temperature.
3. To switch off electrical operation, use the - button to toggle to Off.

2:7 HEATING WITH GAS

Proceed as follows to activate heating with gas. A priority can be set when selecting both electricity and gas, see section 2:11 point 3.



1. Start gas operation by pressing the LPG flame symbol. The LPG symbol is activated and changes colour to green.
2. The settings are now complete and the boiler will work at the set temperature.
3. To switch off gas operation, press the LPG flame symbol. It will now change to blue.

2:8 *FULLY AUTOMATIC CLIMATE CONTROL (ACC)

If a Truma AC is connected up to the Alde, then the ACC button is visible and it is possible to control ACC from the panel. This function makes it possible to have fully automated climate control for both heating, cooling and hot water. The button is grey if not installed or if 230 V is disconnected. With an outside temperature sensor (part no. 3010 299) fitted, ACC function is improved: operation of the AC is modified in line with the outdoor temperature.

Figure 1



Figure 2



Figure 3



1. Set the desired temperature.
2. Press the blue ACC button, the button turns green (see fig. 2) and the ACC function is switched on, but is not necessarily in operation. If gas and/or electricity is switched on, AC and the boiler work to deliver the temperature set, regardless of whether heat or cooling is needed in the vehicle. To turn off the ACC function, press the ACC button and it becomes blue.

NB. Temperature sensors that are used when fully automatic climate control is in operation must be positioned so that they are influenced equally by the heat from the Alde heating system and the air from the AC. In certain cases it can be an advantage to use Alde's temperature sensor (part no. 3010 638).

3. To turn AC lighting off and on, press the button rapidly. When the button is kept pressed in, the light changes from dark to light and then back (light to dark) and so on in 8 brightness levels. When the button is released it stays at the current brightness. This button is only visible when an AC* with in-built light is connected.

2:9 ACTIVATED FUNCTIONS A

Activated functions (see figure 2) can be accessed by pressing the A symbol (see figure 1). This screen shows the various functions that are activated. The respective function that is activated can be accessed from here and new settings can be made.

NOTICE

The A symbol is only visible if one of the functions shown below is activated and/or installed.

Figure 1



Figure 2



Below is a description of the different symbols in the Activated Functions menu.

For more detailed description, see section "2:11 Tools menu – functions".

	Night mode is activated. However, it does not have to be within the time/day setting.		* Load monitor is connected and set to limited current.
	Automatic start of the boiler is activated. However, it does not have to be within the time setting.		* Booster is on.
	* This function is used if the heating system is to be operated via an external panel.		High altitude mode is activated.
	* Displayed if one or two external room sensors are connected.		* EisEx is installed but not necessarily turned on.
	Circulation pump in continuous operation.		* DuoControl or DuoComfort is installed and connected to Alde Compact 3020 HE
	Day mode is activated. However, it does not have to be within the time/day setting.		* Timer for engine heater is set but not necessarily within the set time/day.
	* The boiler is set to be started with External start but has not necessarily been activated.		* Underfloor heating is in operation.

2:10 TOOLS MENU

The tools menu can be accessed from the settings menu.

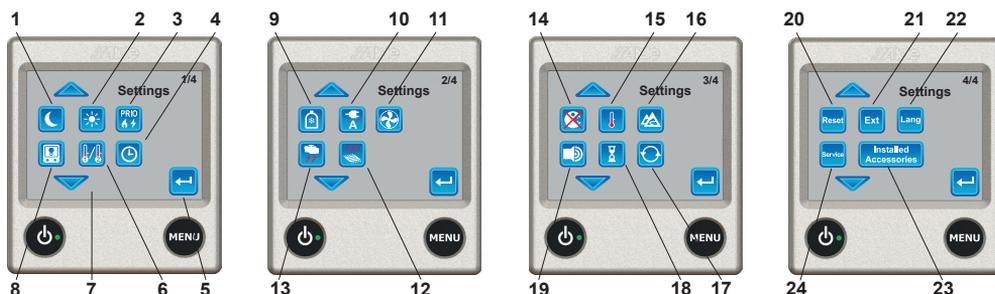


1. The control panel showing the settings menu.
Press the tool symbol to access the tools menu

2:11 TOOLS MENU – FUNCTIONS

The following tools are available from the tools menu.

A grey function button means the function has not been installed and/or activated in "Installed Accessories", see section "2:15 Activation of installed functions".



	<ol style="list-style-type: none"> 1. Night mode Automatically changes certain functions during the night. You can select whether this is to take place every night or a specific night each week. The functions that can be changed are: <ul style="list-style-type: none"> • Temperature • *Change to temperature sensor in sleeping accommodation area. • Invert display • Turn off the domestic hot water • *AC in quiet mode 		<ol style="list-style-type: none"> 4. Clock The clock must be set if engine heater start, night and/or day auto and automatic start are to work. If 12 V power is lost, the clock will stop and will no longer be displayed. Installing *battery backup (part no. 3010 420) will prevent this happening.
	<ol style="list-style-type: none"> 2. Day mode Automatically changes certain functions, e.g. if you are away for a while during the day. Select that it takes place every day or a specific day each week. The functions that can be changed during the day are: <ul style="list-style-type: none"> • Temperature • Turn off the domestic hot water 		<ol style="list-style-type: none"> 5. Return To return to the previous menu, press this symbol.
	<ol style="list-style-type: none"> 3. Prio setting With this function you can choose to priorities (select) electricity or gas as the main alternative. 		<ol style="list-style-type: none"> 6. *Setting room sensor Select which temperature sensor is to be active. Here you can select whether the sensor located in the daytime living area, the sleeping accommodation or in the panel is to be active. If Auto is selected, the sensor in the panel is active and will automatically switch to a room sensor (sofa and/or bed) if one of these is connected. If two room sensors are connected, it will be the one for the daytime living area that is active (sofa).

	<p>7. Arrow symbols Toggle between the various tool fields by using the up/down arrow symbols. Leave the tools menu using the MENU button or the return button.</p>		<p>12. *Under floor heating The function governs the under floor heating pump's operation in intervals, which means that the under floor heating pump is in operation for 5 min and is then off for 5 min when heat is required.</p>
	<p>8. Background light The background light can be set in three different modes, Dark, Bright and Invert.</p> <p>Dark: Turns off background light. Press the screen or the menu button when standby is activated and the screen comes on, but returns to dark after 30 seconds if the panel is not touched.</p> <p>Bright: Background light in standby mode.</p> <p>Invert: Inverted background light in standby mode.</p> <p>Standby is activated automatically after 30 seconds if the panel is not touched.</p>		<p>13. *Engine heater The function makes it possible to use the heating system to heat up the engine in a motor home, bus etc. Engine heater start: Press the button marked Off; the text will change to On and the button will turn green. Then set the required starting time and day. Engine heating starts at the set time and day. The engine heater then runs for 60 minutes before stopping automatically. NB. The clock in the panel must be set for the function to work.</p>
	<p>9. *EisEX, 12 V defroster for gas regulator This is a small heating element that prevents ice forming in the regulator in winter (for Mono Control CS, DuoControl CS, DuoControl and DuoComfort). If DuoControl CS or DuoControl is installed and connected, a snowflake will appear inside the gas bottle symbol when EisEX is switched on.</p>		
	<p>10. *Load monitor The function prevents overload of the fuses on 230 V. If the total current consumption of the vehicle exceeds the set value, the electrical output of the boiler will be reduced automatically. This also applies to Truma Comfort AC if connected to the Alde 3020. Due to voltage fluctuations and tolerances, different regulation levels can be selected (5-17 A). If the fuse blows repeatedly, choose a lower setting. NB. For ACC to function with the load monitor, ACC must be on from the panel and not via the remote control.</p>		<p>14. Antimicrobial mode The boiler will start at 02.00 in the morning (if the clock is set) and run as indicated for "More hot water" for 30 minutes (see section 2:5). This is to reduce the risk of legionella.</p>
	<p>11. *Booster Control of booster in two different speeds. Fan start and stop is controlled from the boiler. If the boiler's circulation pump starts up, the fan on the booster will as well. When the circulation pump stops, the fan will continue to run for another six minutes. It will then stop unless the circulation pump has started up again.</p>		<p>15. Offset (temperature adjustment) If the temperature that is displayed in the panel does not correspond to the actual temperature, it can be adjusted by $\pm 5^{\circ}\text{C}$ in the panel. Applies also to display of external temperature.</p> <p>16. High altitude mode The function should only be used if the boiler will be powered by LPG at a height above 1000 m above sea level.</p> <p>NB. For LPG operation at high altitude, use propane to obtain stable combustion. NB. Variations in operating conditions at high altitudes can mean that the boiler always achieves stage 1 output, but not always stage 2 on LPG operation.</p>

	<p>17. Circulation pump settings Cont. This function limits the supply of hot water, particularly when there is a low heating requirement. Therm: The pump is controlled by the room sensor. This is the normal mode for heat and hot water.</p>		<p>22. Language Switch between different languages. Available languages are English, French and German. However, the service menu is only available in English, see section 2:12.</p>
	<p>18. Automatic boiler start Starting the boiler at a certain time/on a certain day. The boiler will be on every week during the time set, until the function is deactivated. For automatic start to function, the boiler must be turned off.</p>		<p>23. Installed functions The accessories that are installed are activated here, see section 2:15.</p>
	<p>19. Sound Audible signals in various situations:</p> <ul style="list-style-type: none"> • Turn the button sound on and off. • Audible signal on reaching hot water temperature when Alde Flow* is installed and more hot water is selected. • Audible signal on "Gas Failure". • Audible signal on LPG bottle change over if a DuoControl* is installed and activated in "Installed Accessories", see section 2:15. 		<p>24. Service menu This contains the following, amongst others: Glycol temperature Domestic hot water temperature 12 V power to the boiler</p>
<p>To exit the tools menu, press Return or Menu.</p>			
	<p>20. Reset Pressing Reset resets the panel to its factory settings. NB. Settings made in installed functions are not deleted.</p>		
	<p>21. External start The function is used when starting the boiler from outside. When external start has been activated the panel must be turned off. External start has three modes, Off, Ext and 230 V.</p> <p>Off. The function is turned off.</p> <p>*Ext. The function is used when starting the boiler through an external signal. When the Ext. function has been activated, the control panel must be turned off, but 12 V should be connected. The parameters/functions that the boiler is to have when it starts must be set before turning off the control panel. NB. Using this function requires installation of an accessory that can use external start.</p> <p>230 V. The function is used to start the boiler by connecting 230 V to the vehicle. When the 230 V function has been activated the control panel must be turned off, but 12 V should be connected. The parameters/functions that the boiler is to have when it starts must be set before turning off the control panel (230 V connected). Certain vehicles can be equipped with an individual solution (*winter connection).</p>		

2:12 SERVICE MENU

The Service menu is accessed by pressing Service (see fig. 1). The function shows the values from the boiler on the screen (fig. 2 to 4). The values are updated every second.

Figure 1

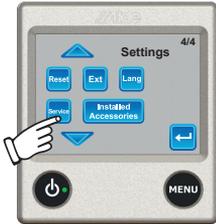


Figure 2



Figure 3



Figure 4



2:13 ERROR MESSAGES

Low battery: If the vehicle has a battery voltage of less than 10.8 V, the boiler will stop. This is reset automatically once the voltage reaches 11 V. If the voltage becomes lower, various error messages may also occur. These are not genuine faults. Ensure that the boiler has the right voltage.

Fan restarts: Incorrect fan speed. New start attempt is made. Repeated faults results in Fan failure. If Fan failure recurs after resetting, contact a dealer. If Fan restarts is displayed, no action is necessary.

Gas failure: The boiler has not managed to ignite the LPG flame. Ensure that gas is available.

Overheat red fail: Overheat protection (red cable) tripped. This fault can arise if the boiler is run at high power at the same time as there are air pockets in the heating system, the heating system should then be bled properly. If the fault remains, contact a dealer. Also check that the fluid level in the expansion tank is at least 1 cm above the min line when cool.

Overheat blue fail: Overheat protection (blue cable) tripped.

Overheat PCB: The boiler's circuit board has overheat protection. If this gets too hot, the protection is tripped. Allow the boiler to cool down before resetting.

* **Window open:** A window is open and the boiler stops running on gas. Gas operation of the boiler will restart once the window is closed. Electrical operation continues to function.

Heater not found: There is a connection fault between the boiler and the control panel. Most probably a problem with the heater's circuit board.

3rd Part Panel C. fail: Communication fault between Alde's panel and Alde Smart Control*.

Panel failure: Fault on the panel. May be caused by excessive moisture.

No match Heater/Panel: The circuit board in the boiler is not intended for the Alde Compact 3020 HE and will not work with the 3020 HE panel.

Red connection fail: Problem with the red cable or red ports. There is no communication with the 3020 heater, AC or iNet.



iNet connection fail: Cannot find the iNet box. Probably a problem with iNet. In the event of "iNet connection fail", this button is displayed. Pressing the button will remove the error.

Yellow connection fail: Problem with the cable between the Alde panel and the CI master panel or its ports.

To reset some of the errors and restart, switch off the boiler from the panel, disconnect 230 V to the vehicle and disconnect 12 V from the boiler.

2:14 RESETTING

Pressing Reset resets the panel to its factory settings. After resetting, the panel will be set as follows: Boiler – Off mode; electrical operation – 1 kW; LPG heating – On mode; indoor temperature – 22°C. Other functions are switched off.



NOTICE

The functions that are checked under Installed functions (see section 2:15) will not be affected by a reset. A reset will also cancel error messages in the error log.

2:15 ACTIVATION OF INSTALLED FUNCTIONS

The first time you use the heating system, check that the right accessories/functions are activated.

This also applies when you supplement the heating system with accessories/functions.

Activate accessories/functions by pressing on Installed Accessories, (see figure 1) and checking the box of the respective function/accessory to activate (see figure 2 to 5).

Figure 1



Figure 2



Figure 3



Figure 4



Figure 5



The relevant box must be checked if you have:			
	Connected an external panel or Alde Smart Control (part no. 3020 057).		Connected a gas bottle changer (DuoComfort or DuoControl).
	Connected a load monitor.		Connected a defroster (EisEx).
	Connected a 12 V pump that can be variably adjusted manually.		Connected a 12 V pump to the under floor heating.
	Connected a PWM controlled 12 V pump that has variable speed control and is set from the panel.		Connected an additional hot water tank to increase the hot water capacity and also obtain continuous hot water (part no. 3020 160).
	Connected a booster.		Connected a 12 V pump for heating the vehicle's engine through the Alde heating system.

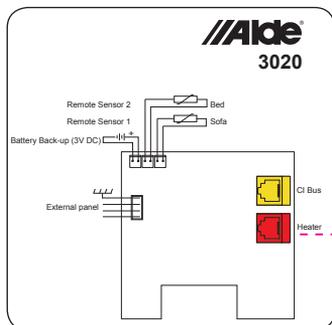
2:16 CABLE CONNECTION COMPACT 3020 HE AND CONTROL PANEL 3020

Connect accessories to the boiler and control panel as shown in the diagram below.

NOTICE

Do not clamp or bind 12 V cables or sensor cables together with 230 V cables. It is preferable not to place the cables close to each other. If the cables are bundled, there is a greater risk of malfunction during operation.

Backside of control panel

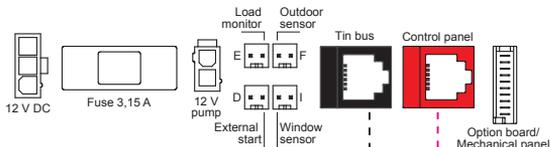


*The automatic climate control functions with:

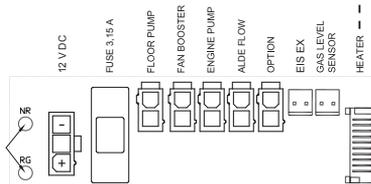
- Truma Aventa comfort
- Truma Aventa eco
- Truma Saphir comfort RC

- Saphir compact (serial no. > 23091001)
Saphir compact needs a Truma adapter 40090-69300

Circuit board on Compact 3020 HE boiler



*Truma AC and iNet Box are connected to the TIN Bus port.



Optional board for Compact 3020 HE



Mechanical panel 3010 214

NOTICE

To protect against malfunction only use original Alde cables, shielded cable for EMC.

3. CARE AND MAINTENANCE

- Checking and changing glycol mixture. Regularly check the heating system's fluid level in the expansion tank. With the heating system cold, the level should be about 1 cm above the minimum mark. The ethylene glycol mixture should be changed every other year, as certain properties such as corrosion protection deteriorate over time. If Alde Premium Antifreeze is used, the interval for changing the mixture can be extended to five years under normal operating conditions. For more information about the glycol heating fluid, see chapter "1:11 glycol heating fluid".
- Checking the LPG system. The LPG system should be checked regularly by a specialist, who will ensure that there are no leaks from connections or hoses. LPG hoses should be changed as indicated on the date stamp, as they tend to dry out and crack, and are liable to leak as a result. For increased safety, we recommend fitting an Alde leak detector, type 4071, as close as possible to the reducing regulator.
- Emptying the hot water heater. Freshwater in the heater should always be drained when there is risk of frost or there is a risk of the boiler freezing. The warranty does not cover frost damage. A frost control can be installed to reduce the risk of freezing (part no. 3010 430 or 3010 431). For more information about the hot water heater, see chapter "1:7 Using the heating system".
- Renew the air cushion. To maintain the air cushion, the hot water tank should be emptied after 10 days of use. For more information about the air cushion, see chapter "1:7 Using the heating system".
- Always flush the boiler completely before using for the first time or if it has not been used for a long period.
- Bleeding the system. Depending on how the pipes have been fitted, air pockets may form when the system is filled with glycol fluid. If the pipes only warm up a metre or so from the boiler, even though the circulation pump is operating, this is a symptom of air trapped in the system. For more information about bleeding the heating system, see chapter "1:12 filling the heating system with glycol fluid".

4. IMPORTANT INFORMATION

- Always switch off the 12 V main switch for the boiler when the vehicle is not in use.
- When washing the vehicle, do not spray water directly towards the flue.
- When camping in winter conditions, ensure the flue and exhaust air valves are kept clear of snow and ice.
- The vehicle may be heated even if the hot water heater is not filled with freshwater.
- The LPG boiler and electric elements may be operated simultaneously.
- Always renew the air cushion in the water heater after 10 days of use.
- Never allow the heating system to stand empty of glycol fluid.
- The ethylene glycol mixture should be changed every other year.
- Sterilisation fluids for freshwater can cause harmful corrosion to the stainless structure of the boiler. Always read the data label on additives that are used and make sure the system is flushed of all additives before you use the boiler.
- Be aware of hard water: Hard water is water that has a high dissolved-mineral content, particularly calcium. If the boiler is used in a hard water area for longer periods, install a water filter.
Hard water can lead to a build-up of lime scale that can reduce the functionality of the system.

NOTICE

Always drain the hot water heater of freshwater when there is a risk of frost and when the vehicle is not being used, otherwise there is a risk of serious frost damage.

WARNING FIRE/EXPLOSION HAZARD

- Do not use the LPG operation on the heating system while refuelling or when filling a fixed LPG tank.
- Do not use any type of open flame when checking for gas leaks.
- Use genuine Alde parts only.
- LPG tanks must be filled by a qualified gas supplier only.
- Use with LPG only.

WARNING FIRE/EXPLOSION HAZARD

Close the main LPG valve in the following situations.

- When the vehicle is not intended to be used.
- The national legislation of the country you are in may require you to close the main LPG tap when the vehicle is in traffic.
- When repairing the boiler.
- When a leak in the LPG system is suspected.

5. TROUBLESHOOTING

Always start by checking any error messages.

If a fault occurs in the system, the cause will be shown on the display. This is only displayed when the control panel is in standby mode, see chapter "2:13 Error messages".

The boiler will not start on gas

NOTICE

If the heating system has not been operated for some time, or if the gas cylinder has been changed, it may take longer than normal to light the LPG burner in the boiler.

- No LPG? Check to make sure that there is gas in the LPG tank. If it is empty, have the tank refilled.
- Is the main tap fully open?
- Check that the type of LPG used is suitable for the prevailing outdoor temperature. Using butane is unsuitable at temperatures lower than +10°C. Use propane instead.
- Check that the 12 V fuse for the boiler has not blown.
- Check that power at 12 V is being supplied to the boiler (> 11 V); the current voltage can be read off from the service menu.
- Check that the exhaust hose is secured properly between the boiler and flue and that it is not damaged or blocked with dirt, condensation or water. NB. The exhaust hose consists of two hoses, an inner one and an outer one.
- Check there is nothing obstructing/blocking the path of the exhaust gases at the flue.
- Check for correct gas pressure. This can be done by starting all hobs on the gas cooker and then starting the boiler on gas operation. If there is a reduction in flame on the cooker, the gas pressure is incorrect.
- If the boiler has not been operated for some time, or if the LPG cylinder is new, it may take longer than normal to light the boiler. Try to restart the boiler.
- If none of the above helps, contact a service workshop.

The electric element is not working

⚠ WARNING SHOCK HAZARD

The 230 V ~ electrical service presents a risk of electrical shock. Do not attempt to service the electric heating element yourself.

- Check that the fuse for the boiler has not blown.
- Check that power at 12 V is being supplied to the boiler (> 11 V); the current voltage can be read off from the service menu.
- Check that 230 V really is being supplied to the boiler. Long and/or thin, flimsy connection cables result in greater voltage drop and the voltage sometimes being lower under certain conditions.
- Check that the power level selected on the panel is high enough, see section "2:6 Heating with electricity".
- Check that the load monitor* (where present) has been correctly installed.
- If none of the above helps, contact a service workshop.

Poor heat or none at all (circulation in the heating system)

- Check that the symbol for the circulation pump is visible in the standby menu when heating is required, see section 2:2.
- Check that the circulation pump is working.
- Check that the correct circulation pump is activated, see section "2:15 Activation of installed functions".
- Check that the heating system has been bled.

*ACC not working satisfactorily

- Ensure that the temperature sensor that is used reacts effectively to the room temperature for both heating and cooling. To increase sensitivity, a more open temperature sensor can be used (part no. 3010 638).
- With an outside temperature sensor (part no. 3010 299) fitted, ACC function is improved: if the outdoor temperature is too low, the AC should not run at all.



6. WARRANTY

Alde International Systems AB (the “Company”) warrants solely to the direct purchaser of the Product (the “Original Owner”) and subject to the below mentioned conditions during the Warranty Period (as defined below), that the Alde Compact 3020 HE boiler (the “Product”) will conform to the Company’s published specifications and will be free of defects in materials or workmanship under normal and intended use. The Company shall be allowed to retain its right to deviate from its published specifications due to the latest innovations of the Product.

This warranty extends to the Original Owner of the Product and is subject to the following conditions:

1. The Product is designed for the sole use in recreational vehicles for the purpose of heating radiators and water as explained in detail in the operating instructions.
2. The Company’s liability hereunder is limited to the replacement or the repair of the Product in whole or in part in the Company’s sole discretion.
3. The foregoing warranty is subject to the proper storage, transportation and use of the Product, and does not include defects due to normal wear and tear or deterioration.
4. The following items are further classified as normal maintenance and are not subject to this warranty:
 - a. adjustment of the gas pressure;
 - b. cleaning or replacement of the burner orifice;
 - c. cleaning or adjustment of the combustion fan;
 - d. cleaning or adjustment of the gas valve;
 - e. bleeding the system due to air pockets in the system;
 - f. adjustment of the pressure relief valve; and
 - g. change of glycol.
5. The Company does not warrant if the Product has been damaged or destroyed by accident or intent, misapplication, unreasonable use or misuse (including but not limited to the failure to seek proper repair services, neglect to maintain the Product properly or neglect to read any of the safety warnings and notices listed in the operating instructions, tampering with the Product, incorrect instalment of the Product in violation of the operating instructions and/or applicable laws, regulations, and local/state/provincial codes), alterations or any other use of the Product without the prior written consent of the Company, acts of God or other causes not arising from defects in materials or workmanship.
6. The Original Owner shall not attempt to repair or replace the Product without the prior written consent of the Company. Any attempt by the Original Owner to repair or replace the Product without the prior written consent of the Company will void this warranty.
7. The Original Owner shall immediately, but in any event no later than five (5) days following delivery of the Product, inspect the Product for conformity and visible defects. The Original Owner shall give the Company immediate written notice of any nonconformists or visible defects regarding the Product. In the event that the Original Owner fails to provide the Company within five (5) days following delivery of the Product with notice of any nonconformists or visible defects, any warranty claims in this regard shall be deemed waived.
8. The “Warranty Period” begins on the date of delivery of the Products to the Original Owner, and continues to be in effect for two (2) years. The “Warranty Period” shall be suspended for the time of repair, or replacement until the repaired or replaced product has been returned to the Original Owner. The Company’s sole obligation under the foregoing warranty is, at the Company’s option and in its sole discretion, to replace or repair the defective Product in whole or in part. The Company will repair the water tank in its entirety if the inner tank of the built-in water heater leaks due to corrosion. This warranty includes all reasonable labour charges. Mere service calls to the Original Owner’s location, however, are not considered part of these charges and are, therefore, the sole responsibility of the Original Owner.

Notwithstanding the foregoing, the warranty period on replacement parts (or replacement of the boiler in its entirety) is the unused portion of the Warranty Period or ninety (90) days, whichever is greater.

The Company does not authorize any person or party to assume or create for it any other obligation or liability in connection with the Product except as set forth herein.

9. In the event of a warranty claim, the Original Owner shall immediately notify the Company in writing of any defects of the Product.
10. Any notices or requests should be directed to:

Alde International Systems AB
Box 11066 • S-291 11 Färlöv • Sweden
Tel: +46 (0)44 712 70
info@alde.se • www.alde.se

The Original Owner shall include its name, address, phone number, warranty registration number (if known), the date of the original shipment, and a description of the claimed defect along with the date the defect was discovered.

The Company will provide notification of any additional information and physical evidence that may be required to process the Original Owner's claim.

Any replaced or repaired Product shall be subject to this warranty, following their replacement or repair.

If the Company has received written notification from the Original Owner, and no defects of the Product could be discovered, the Original Owner shall bear the costs that the Company incurred as a result of the notice. It shall be in the Company's sole discretion to determine if the Product has a defect.

11. Any warranty claim service must be performed directly at an authorized Company Service Center (a list will be provided at no charge).
12. In the event of a Product repair, the defective Product part shall become the sole property of the Company. In the event of a Product replacement in whole or in part, the whole Product or Product part, respectively shall become the sole property of the Company.
13. THE WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES (WHETHER EXPRESS OR IMPLIED), RIGHTS OR CONDITIONS, AND THE ORIGINAL OWNER ACKNOWLEDGES THAT EXCEPT FOR SUCH LIMITED WARRANTY, THE PRODUCTS ARE PROVIDED "AS IS." THE COMPANY SPECIFICALLY DISCLAIMS, WITHOUT LIMITATION, ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, OF ANY KIND, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT, AND THOSE WARRANTIES ARISING FROM A COURSE OF PERFORMANCE, A COURSE OF DEALING OR TRADE USAGE.
14. IN NO EVENT SHALL THE COMPANY BE LIABLE FOR ANY INDIRECT, INCIDENTAL, PUNITIVE, SPECIAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO DAMAGES FOR LOSS OF PROFITS, REVENUE, GOODWILL OR USE, INCURRED BY THE ORIGINAL OWNER OR ANY THIRD PARTY, WHETHER IN AN ACTION IN AGREEMENT, TORT, STRICT LIABILITY, OR IMPOSED BY STATUTE, OR OTHERWISE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. COMPANY'S LIABILITY FOR DAMAGES ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT SHALL IN NO EVENT EXCEED THE PURCHASE PRICE OF THE PRODUCTS. IT IS AGREED AND ACKNOWLEDGED THAT THE PROVISIONS OF THIS AGREEMENT ALLOCATE THE RISKS BETWEEN THE COMPANY AND THE ORIGINAL OWNER, THAT THE COMPANY'S PRICING REFLECTS THIS ALLOCATION OF RISK, AND BUT FOR THIS ALLOCATION AND LIMITATION OF LIABILITY, THE COMPANY WOULD NOT HAVE ENTERED INTO THIS AGREEMENT.

IN JURISDICTIONS THAT LIMIT THE SCOPE OF OR PRECLUDE LIMITATIONS OR EXCLUSION OF REMEDIES OR DAMAGES, OR OF LIABILITY, SUCH AS LIABILITY FOR GROSS NEGLIGENCE OR WILFUL MISCONDUCT OR DO NOT ALLOW IMPLIED WARRANTIES TO BE EXCLUDED, THE LIMITATION OR EXCLUSION OF WARRANTIES, REMEDIES, DAMAGES OR LIABILITY SET FORTH ABOVE ARE INTENDED TO APPLY TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW. THE ORIGINAL OWNER MAY ALSO HAVE OTHER RIGHTS THAT VARY BY STATE, COUNTRY OR OTHER JURISDICTION.

7. HEALTH DECLARATION

EU Health Declaration

We

Company name:	Alde International System AB
Postal address:	Wrangels Allé 90
Postcode and city:	291 75 Färlöv
Telephone number:	+46 (0)44 71270
E-mail adress:	info@alde.se

declare that there is no risk of pollution towards environment with the materials used in the following appliance:

Apparatus model/product:	Compact 3020 HE
Type:	Gas-fired Vehicle Heater
Serial number:	At data plate

The selected materials are appropriate for the specific use according to current state of the art. The materials listed below does not create harmful substances for the environment and follow the recommendations in the directives below.

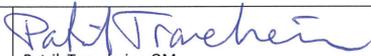
Directive

Materials in contact with food EC 1935/2004
Drinking water directive 98/83/EC
Construction Products Regulation(EU) 305/2011

The following standards and technical specifications have been applied:

Name/Number	Content	Used in
EN 1.4521	Ferritic Steel; Cr 18%; Mo2,5%	Water storage
Ultraform N2320 FC Aqua UN	Polyacetal	Plastic housing/pipe Water connection
EPDM	EPDM	Water connection-sealing
EN AW 6063	99% Al Mg 0,7% Si	Combustion chamber
EN-AB 44 300; SS 4263	EN AB-Al Si12 (Fe)	Burner housing
OHLER FLEXROHR®	Aluminium foil 6 layers	Convey combustion product

Signed for and on behalf of:

Färlöv	2017/10/25	 Patrik Tranenheim, QM
Place of issue	Date of issue	Name, function, signature

8. DECLARATION OF CONFORMITY

EU Declaration of Conformity (DoC)

We

<i>Company name:</i>	Alde International System AB
<i>Postal adress:</i>	Wrangels Allé 90
<i>Postcode and city:</i>	291 75 Färlöv
<i>Telephone number:</i>	+46 (0)44 71270
<i>E-mail adress:</i>	info@alde.se

declare that the declaration of conformity is issued under our sole responsibility and belongs to the following appliance:

<i>Apparatus model/product:</i>	Compact 3020 HE
<i>Type:</i>	Gas-fired Vehicle Heater
<i>Serial number:</i>	At data plate

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

Regulation of Appliance burning gaseous fuels (EU) 2016/426
EMC directive 2014/30/EU, Low voltage directive 2014/35/EU
UNECE R10 EMC for vehicles, UNECE R122 approval of vehicles with regard to their heating system

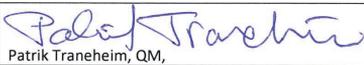
The following harmonised standards and technical specifications have been applied:

<i>Number</i>	<i>Title</i>	<i>Year</i>
SS-EN 624	Specification for dedicated LPG appliances- Room sealed LPG space heating equipment for installation in vehicles and boats	2011
SS-EN 298	Automatic burner control systems for burners and appliances burning gaseous or liquid fuels	2012
EN 61000-6-1:2007	Electromagnetic compatibility (EMC) Generic standards- Immunity for residential, commercial and light-industrial environments	2007
EN 61000-6-3	Electromagnetic compatibility (EMC) Generic standards- Emission standard for residential, commercial and light-industrial environments	2007+ A1:2011
EN 60335-1	Household and similar electrical appliances-Safety-Part 1 General requirements	2012+ A11:2014+ AC1:2014
EN 60335-2-21	Household and similar electrical appliances-Safety-Part 2-21 Particular requirements for storage water heaters	2003 + A1:2005

Notified body:

<i>Guarantee of production quality</i>	
<i>Name of Notified body:</i>	DBI-Certification A/S
<i>4 digit notified body number:</i>	2531
<i>Certificate number:</i>	2531-GAR-CGA10323-17

Signed for and on behalf of:

Färlöv	2017/12/20	
<i>Place of issue</i>	<i>Date of issue</i>	<i>Name, function, signature</i>



Alde International Systems AB
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