

Operating Instructions

Compact 3020 HE



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1. DOMESTIC HOT WATER

1.1 Warning!

Alde can accept no liability whatsoever for damage or injury resulting from failure to observe these instructions.

1.2 Specified Use

These instructions are approved for the Alde 3020 Compact HE fitted in caravans, motorhomes or buildings in accordance with CE 0402 no. SC0653-13, and have the E5 mark for installation in vehicles in accordance with ECE R122, no. 00 001 and R10, no. 04 166, for use in central heating and hot water systems.

The system is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and/or knowledge, unless they have been given instruction or are supervised.

The term “specified use” also covers observance of the operating, and installation and service instructions (supplied separately).

The Alde 3020 Compact HE must be installed or repaired by a competent person in accordance with current local regulations.

In the unlikely event that your system develops a fault, switch off the system and contact Alde, or your dealer or installer.

The owner is always responsible for maintenance and arranging inspection.

1.3 System Design

The boiler’s internal heat exchanger consists of three concentric cylinders; the combustion chamber, the central heating cylinder and the hot water cylinder.

The combustion chamber is made from aluminium, and is divided into two halves by a baffle plate, with the burner head located in the top half, and the flue gases venting through the bottom half.

The combustion assembly is fixed to the end of the internal heat exchanger. It consists of the burner, combustion fan, gas valve, air intake and exhaust ducts, and gas line.

Two electric heating elements are sealed inside the central heating cylinder, one for 1 kW, one for 2 kW.

The room thermostat is integrated into the touchscreen control panel and connected to the boiler by a Registered Jack (RJ) cable.

2. DESCRIPTION OF FUNCTIONS

2.1 Gas Heating

When gas heating is set to on, the combustion fan starts to revolve. Once the correct speed is achieved (in rpm), a signal is sent to the PCB for the burner to be lit. The gas valve opens, passing gas, and the ignition module on the PCB generates sparks at the electrode on the burner head.

When the burner ignites, a flame supervision device signals the ignition module to cease sparking. The burner fires until the boiler or room thermostat reach the setpoint.

Should the burner flame out unexpectedly, the FSD detects this and attempts to reignite (for about 10 seconds), before shutting down and raising a fault code.

**TIP!**

Listen carefully to the ignition sequence of the boiler. You should hear the whirl of the combustion fan, the clunk of the gas valve and the tick-tick of the ignition module.

2.2 Electric Heating

When electric heating is set to 1, 2 or 3 kW, relays on the PCB trip, feeding the 230 V supply to the electric heating elements. These are controlled by the same programme as the gas heating.

2.3 Domestic Hot Water

The combi-type boiler automatically produces hot water. Heat is emitted from the central heating cylinder into the hot water cylinder. If the hot water cylinder is empty, the air is heated but no damage can result.

**TIP!**

In a good summer, for example, lower the desired temperature on the control panel to around 10 °C. The central heating will not circulate (unless the temperature drops to 10 °C), but you will still have hot water.

IMPORTANT!



The boiler must not be switched on if there is no heat transfer fluid (HTF) in the system.



Always drain down the fresh water system if there is risk of frost; in winter, for example. You may continue to use the boiler with no fresh water in the system, as required; no damage can result.



Always replace the HTF in accordance with the antifreeze product's lifespan. If in any doubt, replace the HTF after 2 years.



Only sterilise the fresh water system with a product suitable for stainless steel.



Do not place stowage in the boiler compartment.



Do not position awnings, tents or other enclosures around the flue terminal.



Do not obstruct the flue. Be careful not to flood the flue when washing the vehicle.



The gas heating must not be used when refuelling the vehicle at the service station or other fuelling facility.

3. DOMESTIC HOT WATER

Being a combi-type boiler, the Alde 3020 Compact HE has an integrated, stainless steel hot water cylinder that holds approximately 8.4 litres of fresh water.

The boiler can produce around 12 litres of 40 °C warm water per 30 mins (at a cold water temperature of 10 °C). If only the electric heating is used, this capacity is slightly reduced.

Only use potable fresh water. Grey water, desalinated water, or water otherwise unfit to drink is not suitable for use as domestic hot water.

Always flush out the hot water cylinder before use, especially when it has stood empty for some time.

**IMPORTANT!**

Any steriliser products should be suitable for use with stainless steel.

Avoid steriliser products containing sodium hyperchlorite, for example, as these will cause severe corrosion damage to the hot water cylinder, and is not covered under warranty. Read the product label or contact the product manufacturer for details.

When the hot water cylinder is in continuous use, it should be drained and refilled once a month. This recreates the air cushion in the hot water cylinder that absorbs pressure surges.

**TIP!**

If continuously using the hot water cylinder in a hard water area, fit an inline scale inhibitor to minimise the effects of limescale.

Target hot water temperature is greater than 50 °C in normal operation, to prevent the growth of *Legionella*. Over 50 °C, the hot water will be heated to the maximum achievable temperature at the time. This allows the hot water to achieve disinfection temperatures, and increases warm water performance.

If scalding hot water temperatures are a concern – such as with the young, elderly or infirm – thermostatic mixing valves (TMVs) can be fitted, and may be required by local regulations.

**IMPORTANT!**

Always drain down and completely empty the hot water cylinder when there is risk of frost, unless the vehicle is explicitly stated to be self-winterising by the vehicle manufacturer.

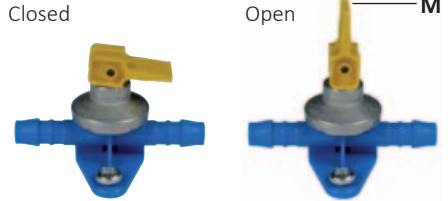
3.1 Draining Fresh Water

1. Switch off the water pump.
2. Open all water taps, showers, etc.
3. Open the safety/drain valve by lifting the yellow tab (Fig 1 [M]), or by turning the blue knob (Fig 1 [K]) 90°.
4. The system will drain directly below the vehicle through the clear plastic hose on the safety/drain valve. Check that all water has emptied out (7–10 litres). Leave the valve in the open position until the next time the hot water cylinder is used.

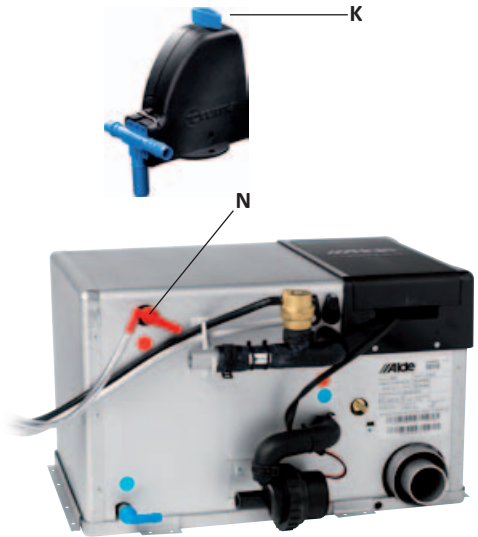
NB: Check that the red breather valve (Fig 1 [N]) is allowing air to enter the hot water cylinder, when it is being drained, and that the clear plastic hose is not obstructed.

Figure 1.

Opening manual safety valve/drain valve



Opening automatic safety valve/drain valve



4. HEAT TRANSFER FLUID

The central heating system must be filled with heat transfer fluid (HTF); a solution of 50% ethylene glycol antifreeze and water.



IMPORTANT!

The boiler must not be switched on if there is no HTF in the system.

The antifreeze manufacturer will have a maximum water hardness recommendation. Read the product label or contact the product manufacturer for details.



TIP!

Alde recommends antifreeze meeting VAG G12++ or G13 specification, and deionised water (0 ppm).

50:50 ethylene glycol antifreeze and water will protect against frost down to -35--37 °C. A refractometer and/or hydrometer can be used to measure the strength of the antifreeze solution.

Corrosion protection will vary depending on the lifespan of the antifreeze. Read the product label or contact the product manufacturer for details.



IMPORTANT!

Always replace the HTF in accordance with the antifreeze product's lifespan. If in any doubt, replace the HTF after 2 years.

The corrosion inhibitors found in ethylene glycol antifreeze may not be cross-compatible. When topping up or replacing the HTF, ensure the new antifreeze is compatible with the current antifreeze product. Read the product label or contact the product manufacturer for details.



TIP!

As a rough guideline, blue and red antifreeze products are **NOT** compatible with each other, but VAG G12++ and G13 spec antifreeze (magenta) is compatible with both.

Failure to fill with suitable HTF may result in severe damage to your Alde system, and is not covered under warranty.

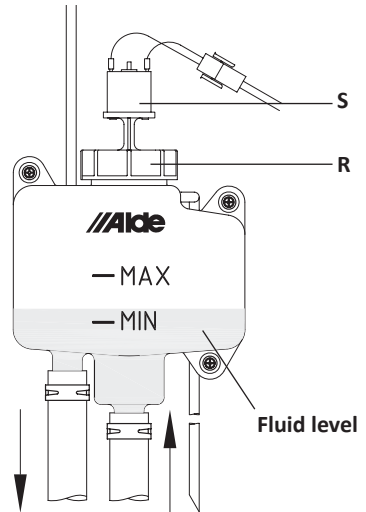
4.1 Filling

The central heating system is filled with HTF through the expansion tank, either by hand, or using the Alde service pump. Any containers used for handling or storing the HTF should be checked first, and must be visibly clean to avoid introducing contaminants or foreign objects into the system.

Alde recommends using the Alde 1900-811 or 839 twin-motor service pump to fill the system.

To fill the system by hand, unscrew the expansion tank cap (Fig 2 [R]), and lift the circulation pump (Fig 2 [S]) out of the tank (if applicable). Carefully pour the HTF into the tank, and repeat until the fluid level is about 1 cm above the MIN mark when cold.

Figure 2.



4.2 Draining

The installer should fit one or more drains in the central heating system to allow draining of the HTF.

Because the pipes step up and down, some HTF will be left in the system after draining.



TIP!

The easy way. Contact an Alde-certified service agent to drain and refill your system.

5. CENTRAL HEATING

The boiler is set to an upper limit temperature of 85 °C, i.e. the temperature of the heat transfer fluid (HTF) as it circulates around the pipes, radiators, convectors, et al.

To ensure the best performance from hydronic heating, air must be able to circulate freely around the back of the furniture (Fig 3). Air vents, cut into the top and bottom of the furniture must be unobstructed by carpets, cushions, or stowage, etc.

The full length of a convector should be ventilated for best performance.



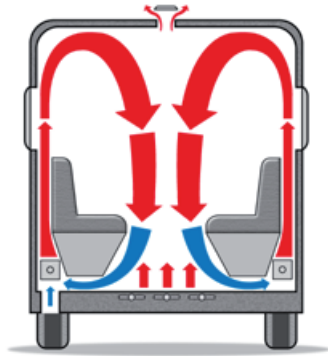
TIP!

Use gas and electric heating simultaneously for the best performance. The boiler will only use as much energy as is needed, and is 93% efficient on a SEDBUK based test.

5.1 Circulation Pump

A pump is used to circulate the HTF around the central heating system. There are three models of Alde circulation pump.

Figure 3.



- 12 V expansion tank circulation pump. This classic pump is ideally suited for traditional holiday-makers, or as a lighter duty, off-grid option for the 230 V inline circulation pump.
- 12 V inline circulation pump. This heavy duty, variable speed pump is designed for full-time motorcamping.
- 230 V inline circulation pump. This heavy duty pump is powered directly by mains electric, suitable for seasonal pitches.

5.2 Bleeding Air

The HTF will contain some air. This is unavoidable. Air bubbles can also be introduced when the system is filled.

In a newly-filled central heating system, you will need to bleed air from the bleed points to ensure best performance. There is an automatic air bleed valve on the boiler. There is also an air vent on the expansion tank.

The installer should fit bleed points elsewhere in the system, especially where the pipes step up and down, and on radiators and towel rails. Air will accumulate at these high points and become trapped.



TIP!

Contact the dealer or installer for details on where the bleed points are in your system, and how to access them.

To bleed the system, set the desired temperature to 30 °C and select gas heating on the control panel.

Set the 12 V inline circulation pump on the side of the boiler to speed 5 (Fig 1 [D]), by turning the blue speed dial clockwise, on the face of the pump motor. NB: Speed is not adjustable if using the 12 V circulation pump fitted in the expansion tank.

After 10 mins, set the pump back to its normal running speed (2 for a caravan, 3 for a motorhome).

Now power off the Alde 3020 Compact HE boiler completely, making sure that the circulation pump is not active.

Follow the flow pipe from the boiler, and bleed the system at each bleed point.

If Alde bleed points have been fitted, these are metal bleed screws mounted on black EPDM rubber connectors (Fig 4). Have a cloth in hand. To open, turn the screw anticlockwise between thumb and forefinger. Air will hiss out. When fluid trickles out, close the bleed screw and mop up fluid with the cloth.

Figure 4.



Move on to the next bleed point and repeat, until all bleed points have been tended to.

5.3 Air Lock

If enough trapped air accumulates at one point, an air lock can result and prevent the circulation of hydronic heating.

A ramp or steep slope can be used to raise one end of the vehicle, causing the trapped air to shift around the system. Repeat the full

bleed procedure. A caravan can be slowly and carefully tilted to reproduce this effect.

To clear a stubborn air lock in under 15 minutes, an Alde-certified service agent can use the Alde 1900-811 or 839 twin-motor service pump.

5.4 230V Electric

The Alde 3020 Compact HE boiler has two 230 V electric heating elements, outputting 1050 W and 2100 W, or 3150 W combined, and drawing 5 A, 9 A, and 14 A respectively (rounded).

230 V breakers, fuses, fused spurs and isolator switches should be rated for 16 A.

Before using electric heating, check the current limit on the electric supply you are hooking up to.

- 6 A limit, only use 1 kW electric heating.
- 10 A limit, use 1–2 kW electric heating.
- 16 A limit, use 1–3 kW electric heating.

NB: If the electric supply has unstable voltage, the amperage will also fluctuate.



TIP!

The optional Alde 3010-246 load monitor allows you to set a limit on the current drawn by the vehicle and the electric heating to automatically accommodate it.

5.5 Liquefied Petroleum Gas

LPG (liquefied petroleum gas) has two main variants, propane and butane gas. The gas heating in your Alde 3020 Compact boiler can use propane or butane gas as fuel. Many LPG fuels contain a mixture of propane, butane and other additives.

BS 5482 Part 1 states, “*For butane cylinders, satisfactory service might not be obtained at temperatures of less than 10 °C; the most suitable temperature range is from 13 to 30 °C. For temperatures less than 13 °C, the use of propane should be considered.*”

For this reason, Alde recommends using propane gas for all year round gas heating.

LPG cylinders contain both gas and liquid forms. When the cylinder is filled, high pressure transforms the gas into liquid. The liquid reverts to gas when the valve on the cylinder is opened.

LPG is a flammable gas. It can be a fire and explosion hazard if stored or used incorrectly. Store cylinders vertically and securely, to prevent them from toppling.

Do not mount your LPG cylinder horizontally or use liquid phase gas cylinders. Liquid–gas explosion may result. Read the product label or contact product manufacturer for details.

LPG is heavier than air. Should a gas leak occur, floor vents in a caravan or motorhome should allow the gas to escape from the vehicle. For this reason, always ensure floor vents are unobstructed.



IMPORTANT!

The boiler compartment contains the gas connection, floor vents and the flue hoses. Do not place storage in the boiler compartment.

In the event of a gas leak, or if you smell gas:

- Extinguish all naked flames
- Open all doors and windows
- Close all gas valves, including the valve on the cylinder.
- Do not smoke.
- Do not operate any electrical appliances or switches.
- Arrange for immediate inspection of the gas system by a competent person in accordance with current local regulations.

LPG from the cylinder is reduced in pressure by a regulator, and is supplied to the boiler at low pressure (30 mbar). Never use an unregulated high pressure supply.

Where oil and dirt in the gas supply are a concern, gas filters should be fitted to prevent blockage of the boiler gas valve.

NB: Gas heating must not be used whilst driving your vehicle unless a safety shut-off device is fitted to the gas system. Current local regulations must be adhered to.

5.5.1 Flue

The burning of LPG produces CO₂ (carbon dioxide), a non-toxic, asphyxiant gas.

Exhaust flue gas can cause possible burns and poisoning. Avoid inhaling exhaust flue gas.



IMPORTANT!

Do not position awnings, tents or other enclosures around the flue terminal.

Air supply is essential for clean combustion. The air intake is located in the flue terminal. For best performance, the flue terminal should be well vented. If leaving the gas heating unused for a period, ensure the flue terminal is covered to prevent pest animals nesting in the flue.



IMPORTANT!

Do not obstruct the flue. Be careful not to flood the flue when washing the vehicle.



IMPORTANT!

Air is sucked into the combustion chamber via the air intake. The gas heating must not be used when refuelling the vehicle at the service station or other fuelling facility.

6. MAINTENANCE

There is no manufacturer’s service requirement for the Alde 3020 Compact HE boiler itself. Current local regulations must be adhered to. The installation of the boiler should be inspected annually for gas safety.

LPG hoses should be regularly checked for signs of damage and should be replaced, at maximum, after 3 years of use.

Bleed air from the system when newly filled, when the vehicle has been standing unused for a period, and before departing on holiday.

The fluid level in the expansion tank should be about 1 cm above the **MIN** mark when cool. The heat transfer fluid (HTF) should be topped up if below this level, to prevent a break in circulation. Only top up with compatible HTF.

NB: Never leave the system empty of HTF.



IMPORTANT!

Always replace the HTF in accordance with the antifreeze product’s lifespan. If in any doubt, replace the HTF after 2 years.

Failure to maintain the condition of HTF may result in frost and/or corrosion damage, and is not covered under warranty.

When the hot water cylinder is in continuous use, it should be drained and refilled once a month. This recreates the air cushion in the hot water cylinder that absorbs pressure surges.

The Alde control panel requires no maintenance, other than cleaning of the screen as needed. Use a microfibre cloth to clean the touchscreen.

Panel radiators and towel rails should be regularly cleaned with a cloth and multi-purpose cleaner.

When shut down, the system has a normal draw on the 12 V leisure battery of approximately 60 mA.

6.1 Winter

When camping in the winter, always ensure the flue terminal remains unobstructed by snow and ice. Extensions for roof flue terminals, and condensate spouts for side flue terminals are available from Alde.

Check the strength of the heat transfer fluid (HTF) with a hydrometer and/or refractometer. It should measure 50% ethylene glycol antifreeze, or -35–-37 °C.

The central heating can still be used with no fresh water in the system. The air in the hot water cylinder is heated but no damage can result.

**IMPORTANT!**

Always drain down and completely empty the hot water cylinder when there is risk of frost, unless the vehicle is explicitly stated to be self-winterising by the vehicle manufacturer.

If camping in temperatures below -10°C , consider carrying spare parts in the event of an emergency. Alde recommends a 12 V circulation pump for the expansion tank (with cabling), a PCB, and 4–5 litres of ready to use antifreeze. These spare parts should be kept well insulated and in the warmest part of the vehicle; for example, in the wardrobe, near to the expansion tank pipes.

If storing the vehicle for winter, ensure the flue terminal is covered to prevent pest animals nesting in the flue. NB: Consider removing the Alde control panel over winter, if the vehicle is to be kept in storage and is susceptible to damp.

If using the lighter duty 12 V circulation pump in the expansion tank, do not leave the central heating on over winter, even with a low desired temperature set.

**TIP!**

Air the vehicle over winter without wearing out the lighter duty pump. Use Delayed Start/Cycle on the Alde control panel to automatically heat the vehicle for 24 hours, once a week.

7. CONTROL PANEL

The Alde 3020 Compact HE control panel has two *hard buttons* and a non-capacitive, colour touchscreen interface. The *soft buttons* displayed on the screen are operated by touching the screen with your finger.



IMPORTANT!

Please read the Alde 3020 Compact HE operating instructions fully before using the system.

7.1 Starting the system



1. Both the control panel and boiler are off.
2. To start the system, press the Power button on the control panel. The Splash Screen is displayed and green LED is lit. The boiler will now start with the previously saved settings (factory settings by default).

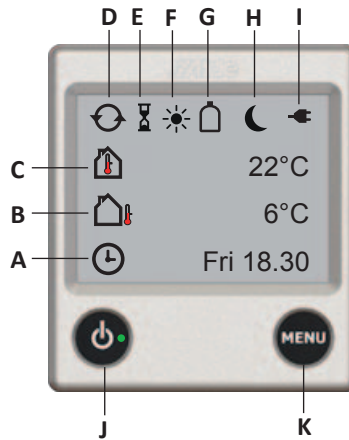
The system will now be drawing variable 0.1–1.5 A of current from the 12 V supply.

7.2 Standby Screen

The Standby Screen is displayed after the Splash Screen. This screen contains useful information about the status of your heating system.

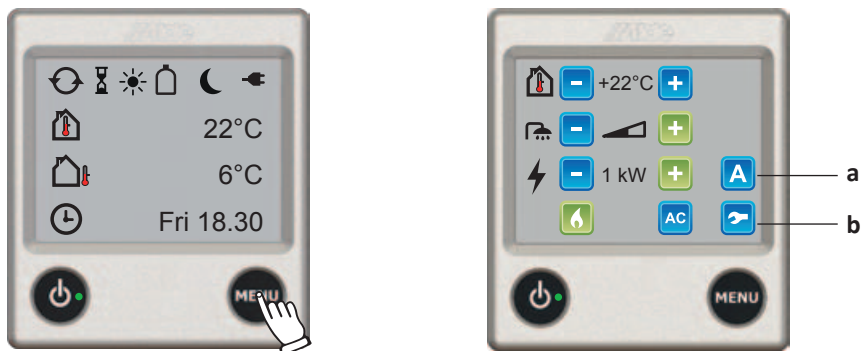
NB: If Standby Screen is set to “Dark” in Backlight settings, the Standby Screen will not be displayed, the screen will be dark unless touched.

- A. Clock is enabled. Day of the week and time shown.
- B. Outdoor temperature. [Optional outdoor temperature sensor required.]
- C. Room temperature. Measured at the control panel. [Optional discrete room temperature sensors available.]
- D. Central heating circulation pump is active.
- E. Delayed Start/Cycle is enabled.
- F. Day Mode active.
- G. Gas cylinder status. Full/empty and EisEx mode shown. [Additional accessories required.]
- H. Night Mode active.
- I. 230 V supply. If not displayed, the boiler is not receiving 230 V supply.
- J. Power button. Press to switch system on-off. Lit green LED indicates system is on.
- K. MENU button. Press to access Main Menu from Standby Screen or Settings Menu.



7.3 Main Menu

Press MENU button to access the Main Menu from the Standby Screen or Settings Menu. The screen will revert to the Standby Screen after 30 secs if untouched.



1. Standby Screen. Press MENU button.
2. Main Menu.
 - a. What's Activated Menu. [Not displayed if no activated functions are detected.]
 - b. Settings Menu

7.3.1 Desired Room Temperature

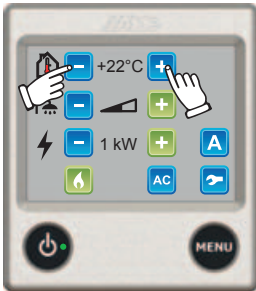
The desired room temperature can be set from 5 to 30 °C, in 0.5 increments.



TIP!

The World Health Organisation recommends a room temperature of 18–24 °C for healthy living.

NB: If Day or Night Mode are active, the temperature cannot be adjusted, the Plus and Minus buttons will be greyed out.



1. The current desired room temperature is displayed.
2. Adjust by pressing Plus or Minus button.

7.3.2 Domestic Hot Water

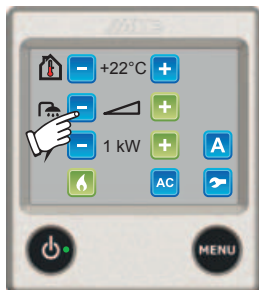
The Alde boiler stores 8.4 litres of hot water as standard. If the hot water cylinder is empty, the air is heated but no damage can result.



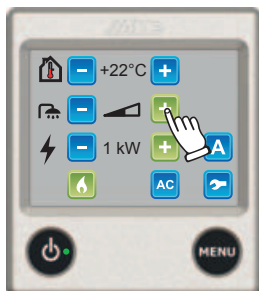
TIP!

In a good summer, for example, lower the desired temperature on the control panel to around 10 °C. The central heating will not circulate (unless the temperature drops to 10 °C), but you can still control hot water.

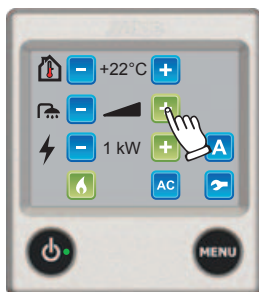
NB: If Day or Night Mode's Hot Water Ignore is active, the hot water cannot be adjusted, the Plus and Minus buttons will be greyed out.



1. **Hot Water Ignore.** Volume bar empty. No attempt is made to heat hot water specifically. This saves energy when the fresh water is drained down.



2. **Hot Water Normal.** Volume bar half-full. Hot water is heated to greater than 50 °C. NB: If Circulation Pump is set to Continuous, this option will not be available.

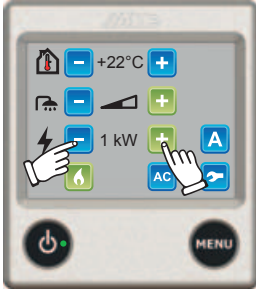


3. **Hot Water Boost.** Volume bar full. Central heating circulation is disabled for 30 mins. Hot water is heated to greater than 65 °C. After 30 mins the system reverts to Hot Water Normal.

4. Adjust by pressing Plus or Minus button.

7.3.3 Electric Heating ⚡

Check that 230 V supply is displayed on the Standby Screen. The Alde boiler is hard-wired to use power economically and there are times when it may use no power at all, even if set to 3 kW.

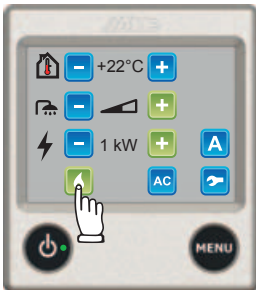


1. Select Off, 1, 2 or 3 kW electric heating. More power equals better performance, but may be restricted by the current (amps) limit on the electric hook-up.
2. Adjust by pressing Plus or Minus button.

Max current draw from 230 V supply is 4.5 A on 1 kW, 9 A on 2 kW, 14 A on 3 kW. If the electricity supply has unstable voltage, the amperage will also fluctuate.

7.3.4 Gas Heating

The Alde boiler is hard-wired to use power economically. The gas burner has two stages, shifting dynamically between low or full flame. There are times when it may use no power at all, even if gas heating is selected.

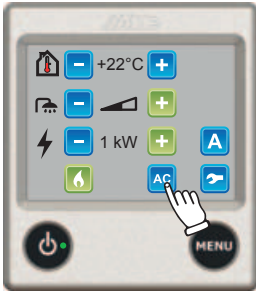


1. Press the Flame button to select gas heating. Green is on, blue is off.

Use both gas and electric heating for best performance.

7.3.5 Climate Control

The AC button is displayed when a Truma Aventa Comfort air-conditioning unit is connected to the Alde control panel. This allows fully automatic climate control, with the heating and air-conditioning working in unison.



1. Set the desired room temperature as normal.
2. Press the AC button. Green is on, blue is off. The heating and air-conditioning will actively maintain the desired room temperature.

Alde recommends using the 3010-238 discrete room temperature sensor for accurate climate control. It should be located where the heating and air-con have a balanced effect on temperature.

7.4 What's Activated Menu

Press the A button to access the What's Activated Menu. This screen shows any functions that are activated and allows direct access to that function by pressing its button. NB: The A button is not displayed if no functions are activated.

Figure 7.4.1.

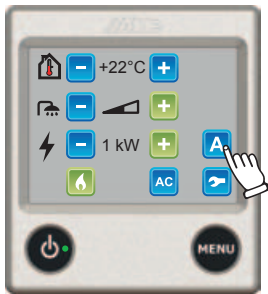


Figure 7.4.2.



7.4.1 Guide to Activated Functions



Night Mode is enabled, but may or may not be active, depending on the time and day.



Circulation Pump is set to Continuous. NB: This will reduce the hot water supply.



Delayed Start/Cycle is enabled, but may or may not be active, depending on the time and day.



Day Mode is enabled, but may or may not be active, depending on the time and day.



Alde Smart-Control or daisy-chained, third party control panel is enabled.



External Switch is enabled, but may or may not be in use.



One or two discrete room temperature sensors are connected.



Load Monitor is enabled and an amp limit is set.



Booster fan is enabled, but may or may not be active.



Truma DuoControl or DuoControl CS regulator is enabled.



Truma Aventa Comfort air-conditioning unit is connected, but may or may not be active.



Engine Pre-Heat is enabled, but may or may not be active.



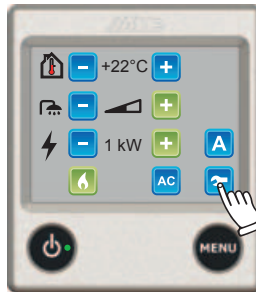
Truma EisEx defroster is enabled, but may or may not be active.



Underfloor Heating is enabled, but may or may not be active.

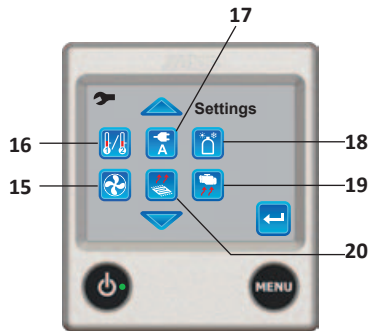
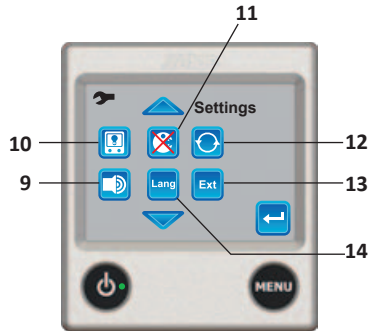
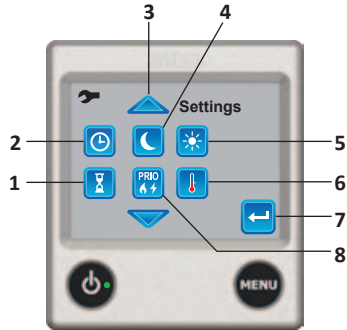
7.5 Settings Menu

Press the Tool Button to access the Settings Menu from the Main Menu. Lower level functions can be accessed by from these screens by pressing the buttons. NB: If a function is not available its button is greyed out.



7.5.1 Settings Menu Functions

To return to the Main Menu, press the MENU button.





Delayed Start/Cycle (requires Clock to be set)

Allows you to programme the boiler to start at a specified time and day, weekly. It will provide heating using the last saved settings for 24 hours, before automatically shutting down again. This is recommended for airing the vehicle over winter if stored locally and hooked up to 230 V power. Once Delayed Start/Cycle is enabled, the system should be shut down by pressing the Power button.



Clock

The clock must be set for programmable functions to activate at the correct time/day. If 12 V power is lost, the clock will reset.



TIP!

The optional Alde 3010-414 battery backup uses two AA batteries and allows the clock memory to be stored even if 12 V power is lost.



Navigation Arrows

There are four screens in the Settings Menu. The up/down arrows allow you to navigate between them.



Night Mode (requires Clock to be set)

Allows you to programme the boiler to automatically change and select settings at night. Set a start and stop time for the night-time period. Set a day of the week, or "All" for the same daily programme. You can also define:

- Desired room temperature
- Invert Standby Screen
- Hot water ignore
- Temperature sensor (if discrete room temperature sensors are connected)
- AC Quiet Mode (if Truma Aventa Comfort air-conditioning unit is connected)

**Day Mode (requires Clock to be set)**

Allows you to programme the boiler to automatically change and select settings during the day. Set a start and stop time for the day-time period. Set a day of the week, or “All” for the same daily programme. You can also define:

- Desired room temperature
- Hot water ignore

**Temperature Offset**

Recalibrate the room temperature displayed by the control panel in 0.5 °C increments. If an outdoor temperature sensor is connected, this can also be recalibrated.

**Return**

Return to the previous menu.

**Prioritise**

Select whether to prioritise gas heating or electric heating, when using both. Less demand will be placed on the non-prioritised fuel.

**TIP!**

If you're hooked up to a site with a flat rate 230 V supply, but still want the extra performance from gas heating, prioritise electric heating to save money on gas.

**Button Sound**

Bleep when a button is pressed.

**Backlight**

The brightness of the Standby Screen can be adjusted from 1–3. The display mode of the Standby Screen can also be set.

Dark. The Standby Screen is deactivated, the control panel may appear dormant except for the power LED. Pressing the screen will activate the Standby Screen for 30 secs. Suited for use in dark/night-time conditions.

Bright. The Standby Screen shows dark characters on a light background. Suited for use in bright/day-time conditions.

Invert. The Standby Screen shows light characters on a dark background. Suited for low light conditions.



Antimicrobial (requires Clock to be set)

Hot Water Boost will automatically activate at 02:00 every morning. This further reduces the risk of *Legionella* bacteria.



Circulation Pump

Select which circulation pump to use for the central heating, depending on what pumps are installed.



Pump Manual 12 V. For the 12 V inline circulation pump with manual 5-speed dial.



Pump Remote 12 V. For the remote-controlled 12 V inline circulation pump. Pump speed can also be set. Speed 2 is recommended. Speed 4–5 should only be used prior to bleeding the system of air.



Optional Pump 12 V. For the optional 12 V circulation pump in the expansion tank.



Pump 230 V. For the 230 V inline circulation pump.

Auto. Automatically selects the 230 V pump when a 230 V supply is detected, or the optional 12 V pump when only 12 V supply is available.

Pump mode can also be set.

Cont. The pump is continuously active. This will reduce the hot water supply. For testing the circulation pump in the summer, if room temperature exceeds 30 °C.

Thermo. The pump is controlled by the room thermostat.

Ext

External Switch

Allows you to use a third party, external switch to start up and shutdown the boiler. When the external switch starts the boiler, it will provide heating using the last saved settings. Once External Switch is enabled, the system should be shut down by pressing the Power button. The external switch then takes control of the boiler.

Ext. When a circuit is made at X18 on the boiler, the boiler is started. When the circuit is broken, the boiler shuts down. For use with a third party rocker or toggle switch, or compatible telematics systems. NB: The Alde 3010-219 adaptor lead is available for connecting an external switch.

230V. When 230 V is detected, the boiler is started. When 230 V supply is lost, the boiler shuts down. No additional accessories required.

Off. External Switch is disabled.



TIP!

Hiring out a vehicle? Your customers can operate the central heating/hot water with a convenient wall switch, whilst the control panel is fitted in a locked maintenance cupboard with a discrete room temperature sensor. On-off, no hassles.

Lang

Language

Select English, French or German language. NB: The Service Menu is English language only.



Booster Speed

If a booster fan convector is installed, this allows you to select speed 1–2. The booster and circulation pump share the same control. However, the booster will run for 6 mins after the pump has gone inactive, and will remain active if the pump reactivates during that time.



Temperature Sensor

If any Alde 3010-238 discrete room temperature sensors are connected, this allows you to select:

- **Control panel.** Temperature is measured at the control panel.
- **Living room.** Temperature is measured at discrete room temperature sensor 1.
- **Bedroom.** Temperature is measured at discrete room temperature sensor 2.
- **Auto.** Temperature is measured at the control panel, but automatically selects a discrete room temperature sensor when connected, prioritising sensor 1. This allows the sensor to be selected with a convenient wall switch.



Load Monitor

If an Alde 3010-246 load monitor is installed, this allows you to set an amp limit from 5–17 A for the vehicle's 230 V power. If the current drawn by the vehicle exceeds the amp limit, the boiler and Truma Aventa Comfort air-conditioning unit (if connected) will automatically reduce power.

This helps avoid tripping the circuit breakers on the electric hook up. The load monitor can be disabled by selecting "Off". NB: AC must be enabled on the control panel for the Truma Aventa Comfort air-conditioning unit to respond to the load monitor.



EisEx Heating

If a Truma EisEx defroster is installed, this allows you to select:

- **Winter.** EisEx heating for the gas regulator is on.
- **Summer.** EisEx heating for the gas regulator is off.

If a Truma DuoControl or DuoControl CS gas regulator is installed, gas cylinder status is also shown.



Engine Pre-Heat (requires Clock to be set)

If an Alde 2755-000 engine pre-heat pump is installed, allows you to use the central heating as a block heater. Once enabled, the engine pre-heat pump will circulate fluid around the engine radiator, via the Alde engine heat exchanger, on the set time and day for a fixed 60 min cycle. NB: If the central heating is cool, the engine will not be pre-heated.



Dedicated Underfloor Heating

If installed, the dedicated underfloor heating pump and circulation pump share the same control. When active, the dedicated underfloor heating pump runs in 5 min intervals. The pump mode can also be set.

Delay. The dedicated underfloor heating pump will run, at intervals, for 15, 30, or 120 mins after the circulation pump has gone inactive. It will remain active if the circulation pump reactivates during that time.

Cont. The dedicated underfloor heating pump will run, at intervals, continuously, irrespective of the circulation pump.



TIP!

Alde recommends not exceeding a floor surface temperature of 29 °C to avoid discomfort.

Off. The dedicated underfloor heating pump is disabled.

7.6 Settings Menu

Press the Tool Button to access the Settings Menu from the Main Menu. Lower level functions can be accessed by from these screens by pressing the buttons. NB: If a function is not available its button is greyed out.

Figure 7.6.1.



Figure 7.6.2.

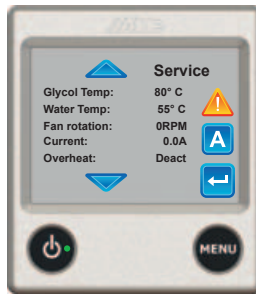


Figure 7.6.3.



7.7 Error Log

Press the Warning button to access the Error Log from the Service Menu. The most recent 20 error messages are displayed. To verify an error message, remove the system from the 12 V and 230 V supply. Wait 10 secs before restoring 12 V and 230 V power to the system.

Figure 7.7.1.

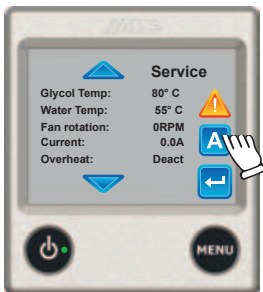


Figure 7.7.2.



7.8 Reset

Press Reset to restore factory default settings, and the Error Log will be cleared. NB: The Main Menu will be set to 22 °C, Hot Water Normal, 1 kW electric heating and gas heating.



IMPORTANT!

Using Reset to restore factory default settings does not clear Installed Accessories.

7.9 Shutting down the system

To save energy, the control panel only updates the boiler after the last adjustment is made. Wait 10 secs before shutting down the system to ensure the boiler is updated.

1. Press the Power button again. The screen goes dark, the green LED is unlit. The system is off.

7.10 Installed Accessories Menu

After fitting an accessory to the Alde 3020 Compact HE, it must be installed in the control panel software by ticking the box for that accessory in the Installed Accessories Menu, unless otherwise noted. Press the Installed Accessories button to access the menu from the Settings Menu.

Figure 7.10.1.



Figure 7.10.2.

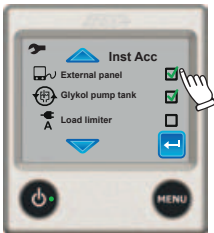


Figure 7.10.3.

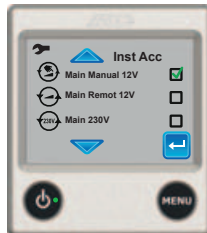


Figure 7.10.4.

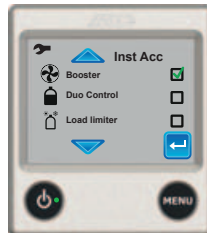


Figure 7.10.5.



The following options are shown as standard. Tick the box to install:

- Alde Smart Control, or third party control panel (connected to JP3 on Alde control panel)
- Optional 12 V circulation pump in expansion tank (connected at X4 on boiler)
- Load Monitor (connected to X5 on boiler)
- 12 V inline circulation pump with manual 5-speed dial
- Remote controlled 12 V inline circulation pump
- 230 V inline circulation pump

With following options are shown when the Alde 3020-023 options dongle is connected. Tick the box to install:

- Booster Fan (connected to JP2 on options dongle)
 - DuoControl gas regulator (connected to JP7 on options dongle)
 - EisEx defroster (connected to JP6 on options dongle)
 - Underfloor heating pump (connected to JP1 on options dongle)
 - Auxiliary hot water tank (connected to JP4 on options dongle)
 - Engine pre-heat pump (connected to JP3 on options dongle)
-

7.11 Setup

How you set up your system will depend on what accessories are installed and your user preferences. To get you started, here's how to setup some of the more common features.

7.11.1 Restore default factory settings

Before using the system for the first time, restore default factory settings. Your control panel may have been tested by the dealer or installer, and some settings may have been changed unintentionally.

1. Press Tool button to access the Settings Menu (bottom right in Main Menu).
2. Press down arrow, until Reset button is displayed.
3. Press the Reset button to proceed.

7.11.2 Setup 12 V circulation pump in expansion tank

To use the 12 V circulation pump in the expansion tank, you must set it up. This is not a default factory setting. NB: This only applies if you have the 12 V circulation pump in the expansion tank.

1. Press Tool button to access the Settings Menu (bottom right in Main Menu).
 2. Press down arrow, until Installed Accessories button is displayed.
 3. Press the Installed Accessories button to access the menu. Find and tick "Optional Pump" by pressing the box. Next, find and untick "Main Manual 12 V".
-

7.11.3 Setup Standby Screen for bedtime

The backlight on the Standby Screen can be disturbing if the control panel is visible from your bed. It can be inverted for white text on black background.

1. Press Tool button to access the Settings Menu (bottom right in Main Menu).
2. Press down arrow, until Backlight button is displayed.
3. Press Backlight button, select Invert to proceed.

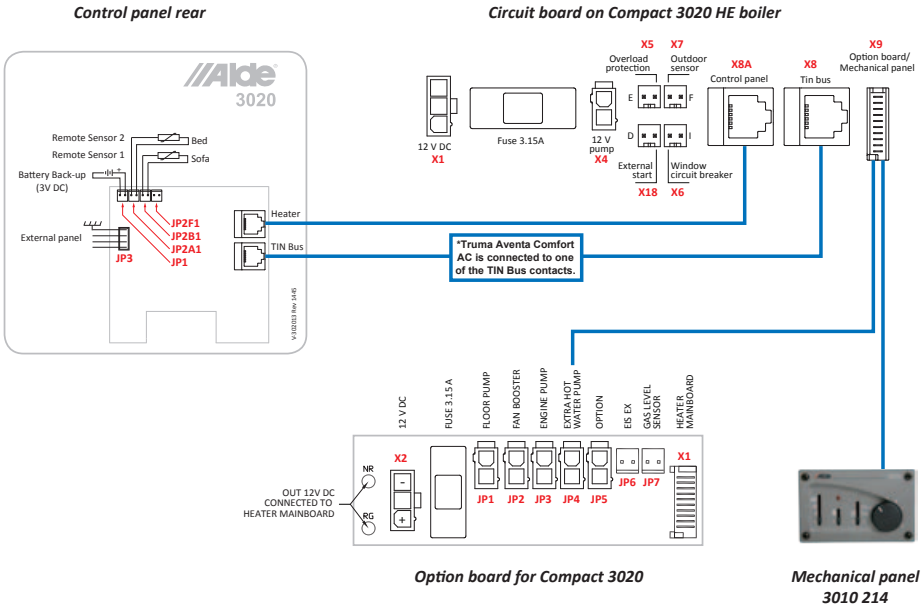
7.11.4 Setup Antimicrobial function

To actively kill *Legionella*, setup the Antimicrobial function. At 2:00 every night, the hot water will be heated to over 65 °C for 30 mins. This further reduces the risk of *Legionella*.

1. Press Tool button to access the Settings Menu (bottom right in Main Menu).
2. Press Clock button, set the time and day. Press Return.
3. Press down arrow, until Antimicrobial button is displayed.
4. Press Antimicrobial button to proceed.

7.12 Interconnecting The System

The diagram below shows how the system is interconnected. To avoid electromagnetic interference, do not bundle 12 V and 230 V cables together. NB: Always use genuine Alde parts.



8. TROUBLESHOOTING

Any error messages will be displayed on the Standby Screen. Error messages can be cleared by removing 12 V supply to the boiler for 10 secs.

The system is completely dead, the control panel is blank

- Check the 20 mm T3.15 Amp glass fuse in the boiler. This is located under the lid of the black plastic service hatch, in a green plastic fuse holder.
- Check the 12 V supply to the boiler, it should be above 12 V.
- Check the 12 V cable is plugged into the boiler. Check the cable is plugged into the Alde control panel.

The boiler will not ignite on gas, but no error message

- The system may not need to use gas heating if also using electric heating.
- The fluids in the boiler may already be at operating temperature.

The boiler will not heat on 230 V electric

- Check the circuit breaker and any 230 V fuses.
- Check that any 230 V isolator switches are on (they will often have an LED indicator and 230 V fuse).
- Check the 230 V supply to the vehicle.
- The fluids in the boiler may already be at operating temperature.

No hot water

- Check that Hot Water Ignore is not activated on the Alde control panel.
- Check that Continuous pumping is not activated on the Alde control panel.
- Check for other conflicting settings on the Alde control panel.
- Check the fresh water supply and water pump.

No central heating

- Bleed the system of air.
- Check the fluid level in the expansion tank.
- Check that the circulation pump is responding.
- Check that hot water boost is not activated on the Alde control panel.
- If electric heating is not being used, set it to “Off” on the Alde control panel.
- Use gas and electric heating for best performance.
- Check that vents in the furniture are not obstructed.
- Check the condition of the heat transfer fluid.
- Most vehicles will reach a comfortable temperature within 40 mins, in non-extreme conditions.

Circulation pump active even though system is off

- 12 V supply to the boiler dropped to 7 V momentarily. Check 12 V supply for stability.

“Panel failure 1” & “Panel failure 2”

- Moisture is trapped in the control panel.
- Remove the Alde control panel from the vehicle and air in a warm, dry place overnight.

“Gas failure”

- Out of gas or gas is not igniting.
- Check the gas cylinder is full. Try a different gas cylinder, ensuring it is propane gas.
- Check the gas regulator and any isolation valves are open and not frozen.

“Overheat red fail” or “Overheat blue fail”

- Bleed the system of air.
- Check the fluid level in the expansion tank. It should be 1 cm above Min mark when cool.
- Check the correct circulation pump is installed, selected and responding.
- 12 V supply to the boiler dropped to 7 V momentarily. Check 12 V supply for stability.
- Wait 15 mins for the fluid to cool down.

“Overheat PCB”

- Failsafe in boiler has triggered.
- Check the fluid level in the expansion tank. It should be 1 cm above the Min mark when cool.
- Check the boiler compartment is ventilated, and that the vents are unobstructed. Do not place stowage in the boiler compartment.

“Fan failure”

- Combustion fan speed too low. Bearing may be stiff after a period of disuse.
- Automatically clears after 5 mins. Please try again.

“Connection failure”

- Loose connection between Alde control panel and boiler.
- Unplug cable at the control panel and boiler, then carefully plug back in.
- Check there is slack on the cable at the control panel, but not excessive weight from free-hanging/unmanaged cable.

“Window open”

- Optional window sensor has triggered, gas heating is suspended. Automatically clears and gas heating resumes when window is closed.

“3rd Party Panel C. Fail”

- Break in comms between Alde control panel and third party control panel.
- Check the cable between the Alde control panel and third party control panel.
- Third party control panel is installed in software but not fitted.
- Untick “Third Party Panel” in Installed Accessories Menu.

“Low battery”

- 12 V supply to boiler has dropped below 10.5 V, possibly causing system brownout.
- Automatically clears when 12 V supply reaches 11 V.

“No match Heater/Panel”

- Control panel is incompatible with boiler PCB.
- Check control panel part number. Control panel 3020-013 is for 3020 A-series boiler, 3020-113 is for 3020 HE-series boiler.

If problems persist, please contact Alde, or your dealer or installer.

For our frequently asked questions, or download all instruction manuals, please visit our web site at: www.alde.co.uk

9. WARRANTY

Alde undertakes to rectify any manufacturing defect or early component failure through normal use that occurs within 2 years of the installation date.

If your Alde boiler develops a fault, your first action should be to contact your dealer or installer, as they will be familiar with your installation and vehicle, and how to make a claim under warranty.

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