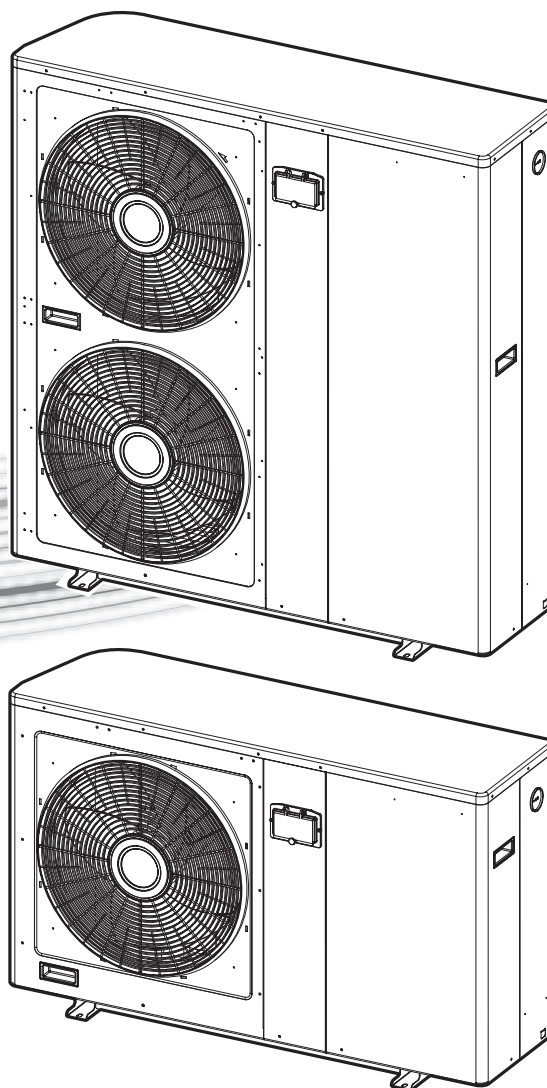


BAXI

User's Operating Instructions



Ambiflo™ Heat Pump System 7kW to 10.5kW Inclusive

Air to Water Heat Pump
for
Outdoor Installation

CE Marking

This product is CE marked and conforms to the essential requirements of the following Directives:

- Low voltage no. 73/23 EEC, modified 93/68 EEC.
- Electromagnetic Compatibility no. 89/336 EEC, modified 92/31 and 93/68 EEC.

Electrical equipment is in accordance with standard EN 60 335-2-40

The following standards and directives should also be considered when installing this unit.

Current Wiring Regulations BS 7671

HVAC TR/30 Guide to good practice - Heat pumps

BS EN 15450: 2007 Heating systems in buildings - Design of heat pump heating systems

EC Regulation No 842/2006 on certain fluorinated greenhouse gases: Supplementary guidance for stationary refrigeration air conditioning and heat pumps

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1.1 Introduction

I. Thank-you for purchasing the Baxi Ambiflo™ Heat Pump. This booklet explains how the unit functions and gives details of how to operate it to give the optimum comfort levels. It also contains some important information regarding safety of operation, and so please take time to read it carefully.

1.2 Warranty Details

I. The Baxi Ambiflo™ system includes a one year parts and labour guarantee. The buffer vessel, where fitted, comes with a 2 year parts warranty. The cylinder's stainless shell has a 25 year warranty.

1.3 Installation and Handover

I. When your Baxi Ambiflo™ heat pump was commissioned, the engineer should have explained the system, its function and controls including:

- **Heating by Heat Pump** - How the heat pump heats the property, either on its own or in conjunction with an Electrical Heater.
 - **Heating by Auxiliary Source** - The operation of any auxiliary heating source used in conjunction with the heat pump, whether automatic or manual.
 - **Operation of the Heat Pump Controller** - A demonstration of the basic operation of the unit and an explanation of the controller's icons and functions.
 - **Defrosting of the Unit** - Occasionally, frost will form on the rear of the unit across the finned heat exchanger. This is a normal function of the Heat Pump's operation and should not cause concern to the user. This function is performed automatically by the unit as and when necessary. During the defrosting phase, water vapour may be seen around the unit as the frost melts. The unit will return to the heating mode automatically when the defrost phase is completed.
 - **System Malfunction** - What to do in the event of a system fault including how to isolate the electrical supply or water supply.
 - **System Maintenance** - The Baxi Ambiflo™ Heat Pump requires regular maintenance to ensure its continued safe and efficient operation. The service intervals and any maintenance required to keep the unit in good working order.
 - **Literature** - This should have been left with the user by the commissioning engineer. These instructions explain a number of the above points and should be retained as a reminder of how to operate the Baxi Ambiflo™ heating system. If you are in any doubt, please ask your installer for clarification, or contact the Baxi Technical Enquiry Line, Telephone 0844 871 1568.
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2.0 Introduction

2.1 Description

1. Your Baxi Ambiflo™ heat pump system consists of several component parts that work together to heat your central heating system water.

2. A heat pump is a device which uses a little electrical energy to take heat energy from the low temperature outside air and convert it to useful high temperature heating in your home. For every unit of electrical energy used, several units of heat are delivered. So, relating the energy purchased to the energy delivered, heat pumps are extremely efficient.

2.2 Domestic Hot Water

1. Please note that an auxiliary source of heat is required for your domestic hot water, such as an electric immersion heater for example.

2.3 Electrical Heater

1. When the outside temperature is extremely low, an auxiliary electrical heater in the Baxi Ambiflo™ Heat Pump system will operate to maintain a satisfactory comfort level in your home.

3.0 Operating the Appliance

3.1 Operating Settings

1. Your commissioning engineer should have set up the operating settings of your Baxi Ambiflo™ Heat pump.
2. For the system to operate correctly and efficiently these settings should not be altered. This section details the user controls, which your installer should familiarise you with during commissioning the system. These controls are used to set room temperatures and operating times.
3. If you are in any doubt please contact your installer or a qualified heat pump installation engineer. Alteration of some settings could adversely affect the operation of the Baxi Ambiflo™ system and may also affect the warranty of the unit.
4. As with any heating system there are certain aspects that will require regular checking and/or maintenance. Any maintenance or servicing should only be carried out by qualified personnel.
5. If the Ambiflo™ has been shut down for a period and turned off at the isolator, it is important to check the system water pressure prior to switching the isolator back on. The water pressure gauge on the right hand side of the unit should show a minimum of 1 bar pressure. If the pressure is below this, top up the system using the filling point provided. If you are unsure of its position, or cannot identify it, contact your installer who fitted the Heat Pump.

3.2 Operating the Time and Temperature Controller

1. The Baxi Ambiflo™ Heat Pump has been configured to work at its optimum efficiency by your commissioning engineer and the external settings should not be altered.
2. The heating settings are controlled via the Aquaset Controller which is fitted in your property. Your installer should have shown you its location and functions.
3. The controller's icons are shown in Figs 1 and 2 and a description of the unit's functions is given below. Fig 1 shows the display and the user buttons; Fig 2 shows a key of the control icons and their meaning.

3.3 Time and Date Setting

1. Set the dial to 'Time and Date' (Fig. 2 Item 7) to display the time.
2. Press the '+' button once and the small numbers on the left hand side of the display will flash. These are the days of the week shown as 1 to 7. Set the day by using the '+' and '-' buttons then press 'OK'.
3. The time will now flash. Set the time using the '+' and '-' buttons then press 'OK'.

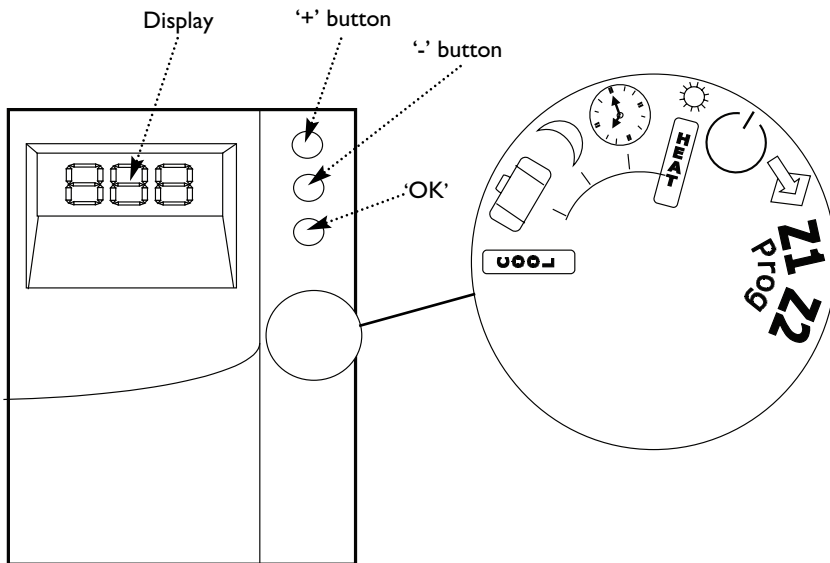
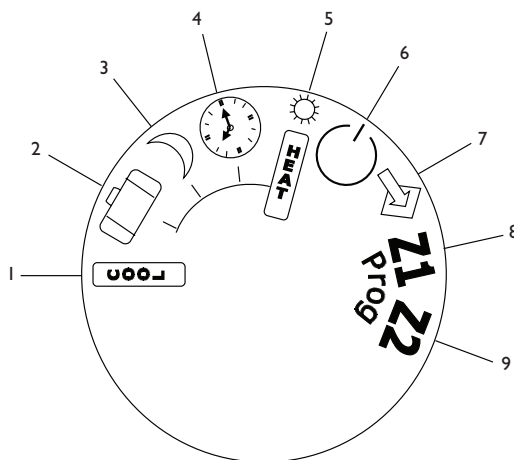


Fig. 1 Aquaset Controller



Key to symbols

1	Not applicable for U.K.
2	Holiday mode
3	Set back mode
4	Clock
5	Heat mode
6	Off
7	Time and date settings
8	Zone 1 programme
9	Zone 2 programme

Fig. 2

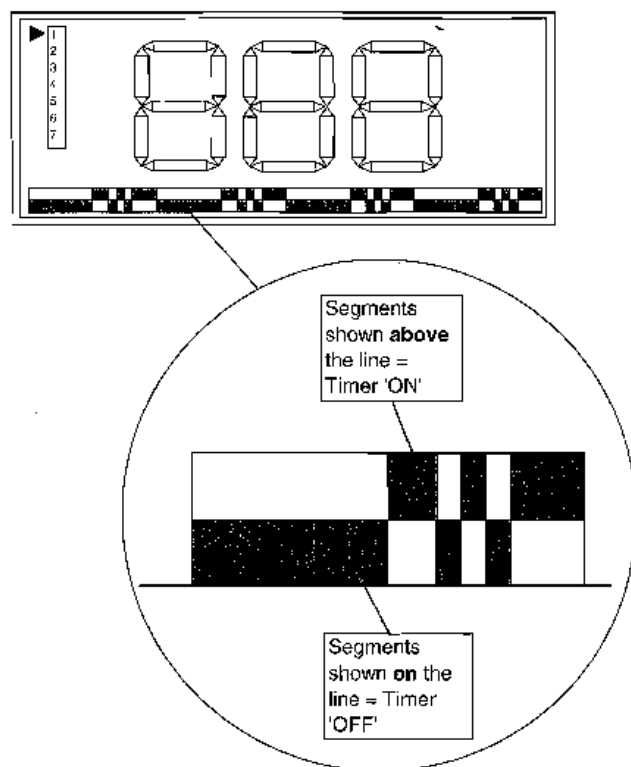


Fig. 3 Timer segments

3.0 Operating the Appliance

3.4 Setting the Ambient Room Temperature

1. To set the required ambient room temperature set the Aquset dial to 'Heat' mode (Fig. 2 item 5) and adjust the temperature using the '+' and '-' buttons.
2. Rotate the Aquset dial to 'Clock' (Fig. 2, item 4) to display the temperature. The day of the week is shown at the left hand side and the programme timing is shown along the bottom of the display with the current time segment flashing.

3.5 Setting the Programme in the Heating Zones

To set Zone 1.

1. Turn the Aquset dial to 'Z1' (Fig. 2, item 8) and 'PrG 1' will be displayed.
2. Repeated pressing of 'OK' will toggle between 1 to 7 for the day of the week.
3. Along the bottom of the display is a 24 hour clock shown in half hour segments.
4. There is one 24 hour timescale and two rows programmable.
5. The '+' button sets the 'ON' periods shown by the top row (Fig. 3). The '-' button sets the 'OFF' periods shown by the bottom row.

IMPORTANT: A reduced room temperature setting (set-back - see Section 3.7) will be maintained during off periods, maximising efficiency and comfort.

6. Press 'OK' to confirm the settings then select the next day. Repeat as required for the 7 day period and then press 'OK'. The days need to be individually set as the timings cannot be copied across.
7. If a second heating zone is part of the system, turn the Aquset dial to 'Z2' (Fig. 2, item 9) and repeat the above procedure for heating Zone 2.

3.6 Adjustment of the Return Water Temperature to compensate for excessive heating or cooling

1. Turn the dial on the Aquset controller to the 'OFF' position (Fig 2, item 6)
2. Press and hold the '+' and '-' buttons (Fig 1) simultaneously for approximately 5 seconds until 'Para' is shown.
3. Press the '-' button to move the small arrow on the left hand side of the display down to '2' (Fig 3) and press 'OK'. '0000' will now be displayed, with the left hand zero flashing.
4. Use the '+' and '-' buttons to enter the password 1958. The '+' button increases the value shown and the '-' button decreases the value. To move between the four zeros press the 'OK' button.
5. When the number is complete, press 'OK'
6. 'P20' will now be displayed. Scroll up using the '+' button to go to parameter P30. This is used to alter the system return water temperature setting.
7. Press 'OK'
8. Use the '-' button to reduce the temperature, or the '+' button to increase the temperature on the display depending on the system requirements.
9. Press 'OK' to confirm the temperature and P30 will be displayed again.
10. Return the Aquset dial to the 'Heat' position (Fig 2, item 5).

NOTE: Following any adjustments, several hours of running may be required before any effect is noticed.

3.0 Operating the Appliance

3.7 Off Setting

1. **Do not use this setting.** For overnight periods use the Set Back function and for holiday periods use the Holiday function as described below. For a complete shut down the isolator adjacent to the unit should be used.

3.8 Set Back Function

1. Set back is used to maintain an overnight temperature and will have been set by your commissioning engineer.

3.9 Holiday Function

1. This is set to avoid freezing and will maintain a temperature of 12°C when set in this mode.

3.10 Cool Function

1. This function is not available.

3.11 System Parameters

1. Certain system parameters may be viewed by the user if necessary. From any of the available Aquaset Controller dial positions (Fig 1), press the '+' and '-' simultaneously for approximately 5 seconds until 'PArA' is shown in the display.

2. To the left of the word 'PArA' there is a small arrow head and a list of numbers from 1 to 7 (Fig 4). Select the number '1' to access the user values using the '+' and '-' buttons.

3. Press 'OK' to access the first user parameter and 'P01' will be displayed. Pressing 'OK' again will display the current value of the selected parameter (e.g. 14°C). Press 'OK' again to return to the parameter number 'P01'.

4. Use the '+' or '-' buttons to access the other parameters and view the settings using the 'OK' button as described above.

5. See Table 1 for the user values. Please note that the values shown in this table are dependent on the type of system installed, so not all the values given will be accessible.

6. To exit the parameter menu, press and hold the 'OK' button for 5 seconds.

3.12 Alarms

1. Table 2 shows a list of alarm codes which may be displayed by your Heat Pump if a fault condition occurs. If an alarm code is shown please contact your Service & Maintenance engineer.

NOTE: Under certain conditions, the display may show either 'Gr' or 'PPE' flashing. These are temporary operating conditions and do not indicate a fault.

A flashing display without an alarm code indicates that the water return temperature is below the minimum safe value. Contact Heateam if the problem persists.

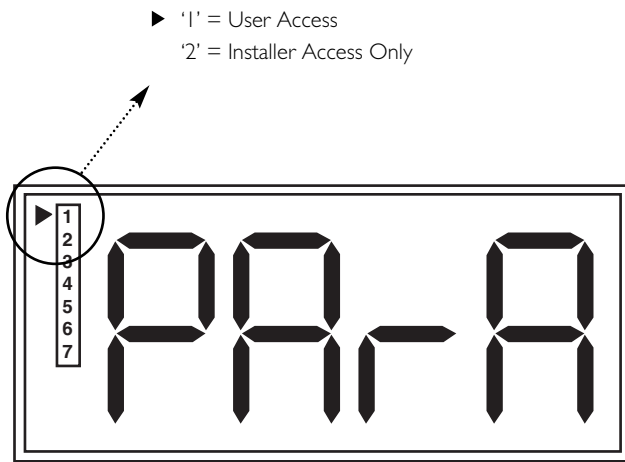


Fig. 4 User Access to System Parameters

P01	Outside temperature
P02	Installation water return temperature
P03	Installation water outlet temperature
P04	Result water temperature setpoint, zone 1
P05	Result water temperature setpoint, zone 2
P06	Water temperature, zone 1
P07	Water temperature, zone 2
P08	Ambient temperature, zone 1
P09	Ambient temperature, zone 2 (floor)
P10	Generator output status
P11	Generator mode output status (h/c)(I=h)
P12	Outlet status, support heater elec - 1
P13	Outlet status, support heater elec - 2
P14	Outlet status, support heater elec - 3
P15	Outlet status - water pump zone 1
P16	Outlet status - water pump zone 2
P17	Outlet status - water control zone 1
P18	Outlet status - valve control zone 2 (floor)

Table 1 - Parameter Settings Accessible to User

The units displays 	Temporary generator condition. In heating mode, the generator fault causes the installation to switch to Frost Protection mode. It is possible to restart in heating mode by pressing and holding OK. The symbol is displayed. Attention, in this case, heating is provided only by the supplementary electric heating.	The units displays 	Ext. air probe fault
	Heater fault		Ambient probe fault Z1
	Installation water return probe fault		Ambient probe fault Z2 (in the case of 2 zones only)
	Output water probe fault installation		Communication or system fault
	Water probe fault, zone 1 (in the case of 2 zones only)		Communication fault with zone 1 board
	Water probe fault, zone 2 (in the case of 2 zones only)		Communication fault with zone 2 board
	High water temperature fault *		Circulating pumps stopped due to no demand. (Temporary condition).

Table 2 - Alarm Codes

* Manual reset by stopping the device (OFF). Contact your Service & Maintenance engineer.

4.0 Other Information

4.1 Tariffs

There are a variety of electricity tariffs on offer to suit this type of appliance. Baxi suggest contacting your local energy supplier for the details of these tariffs. It may also be advisable to investigate alternative energy suppliers to compare the costs.

4.2 Important safety notes

1. If fluid or vapour is discharged from the Pressure Relief Valve or from the Heat Pump itself, isolate the power supply to the Baxi Ambiflo™ Heat Pump and contact Heateam or a qualified heat pump engineer.
 2. Familiarise yourself with the controls and instructions supplied with the Heat Pump and follow manufacturer's instructions in the event of a fault.
 3. The pipework between the heat pump and the property can be hot. The installer should have insulated these pipes. This insulation is important for the safe operation of the unit so in the event of any damage contact your installer to arrange a repair. Do not stand on the pipes around the Heat Pump unit as injury or damage may occur.
 4. If the electrical supply for the heat pump system is interrupted it will not operate. When the power supply is re-established it may be necessary to reset the clock, for details of this, please refer to Section 3.3 'Time and Date Setting'. Programme settings are stored by the controller and should not need resetting when power is restored.
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4.3 Guarding

IMPORTANT - This unit contains electrical components, high temperatures, pressure, and moving parts. Where young children or animals are concerned, Baxi recommend a barrier or guard to avoid tampering.

4.0 Other Information

4.4 Servicing and Maintenance

1. To ensure the continued safe and efficient operation of your Baxi Ambiflo™ heat pump it is essential that it is checked and serviced regularly by an approved qualified Heat Pump engineer.
 2. The servicing interval may vary depending on the location of the unit. Servicing may need to be carried out more frequently. Your installer should be able to advise about the service interval.
 3. In the event of a warranty claim it will be necessary to show that the routine maintenance has been carried out in accordance with the requirements specified in the Installation Instructions. Failure to maintain the system may invalidate your warranty.
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4.5 Disposal

1. This unit must not be crushed or incinerated.
 2. The Baxi Ambiflo™ Heat Pump contains a number of components that must be disposed of under controlled conditions. Under no circumstances should this unit be disposed of at any Local Authority refuse site without first identifying the special components to the site operatives or manager. If you are in any doubt about disposing of this unit at the end of its lifecycle, contact the Local Authority, Baxi, or your installer.
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All descriptions and illustrations provided in this leaflet have been carefully prepared but we reserve the right to make changes and improvements in our products which may affect the accuracy of the information contained in this leaflet. All goods are sold subject to our standard Conditions of Sale which are available on request.

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