

Cylinder Electrical Back-up to HP Connection & Set-up Procedure

Baxi HP40/HP50 Monobloc Heat Pumps &
Baxi ASHP Cylinder

IMPORTANT

Please read & understand this manual before commencing installation
and leave it with the customer for future reference.

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Introduction

The cylinder is a purpose designed unvented water heater. The unit has a stainless steel inner vessel, which ensures an excellent standard of corrosion resistance. The outer casing is a combination of resilient thermoplastic mouldings and plastic coated corrosion proofed steel sheet. All products are insulated with CFC free polyurethane foam to give good heat loss performance.

The unit is supplied complete with all the necessary safety and control devices needed to allow connection to the cold water mains. All these components are preset and not adjustable.

This appliance complies with the requirements of the CE marking directive and is Kiwa approved to show compliance with Building Regulations (Section G3).

The following instructions are offered as a guide to installation which must be carried out by a competent plumbing and electrical installer in accordance with Building Regulation G3, The Building Standards (Scotland) Regulations 1990, or The Building Regulations (Northern Ireland).

NOTE: Prior to installation the unit should be stored in an upright position in an area free from excessive damp or humidity.

IMPORTANT NOTE: FOR DETAILS OF HOW TO INSTALL THE CYLINDER IN ACCORDANCE WITH BUILDING REGULATIONS PLEASE REFER TO THE INSTALLATION & SERVICE MANUAL THAT ACCOMPANIES IT.

General Requirements

IMPORTANT: This appliance can be used by children aged from 8 years and above and persons with reduced physical sensory or mental capabilities or lack of experience and knowledge if they have been given supervisory or instruction concerning use of the appliance in a safe way and understand the hazards involved.

Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.



The HWA Charter's Code of Practice requires that all members adhere to the following:

- To supply fit for purpose products clearly and honestly described
- To supply products that meet, or exceed appropriate standards and building and water regulations
- To provide pre and post sales technical support
- To provide clear and concise warranty details to customers

Baxi HP40/HP50 Monobloc Heat Pumps

Warning

The schematics below are based on the Baxi HP40/HP50 Monobloc Heat Pump range. See manufacturers instructions on how to connect the cylinder wiring to other heat pumps to ensure shut down of all heat sources in the event of a thermal cut out on the cylinder.

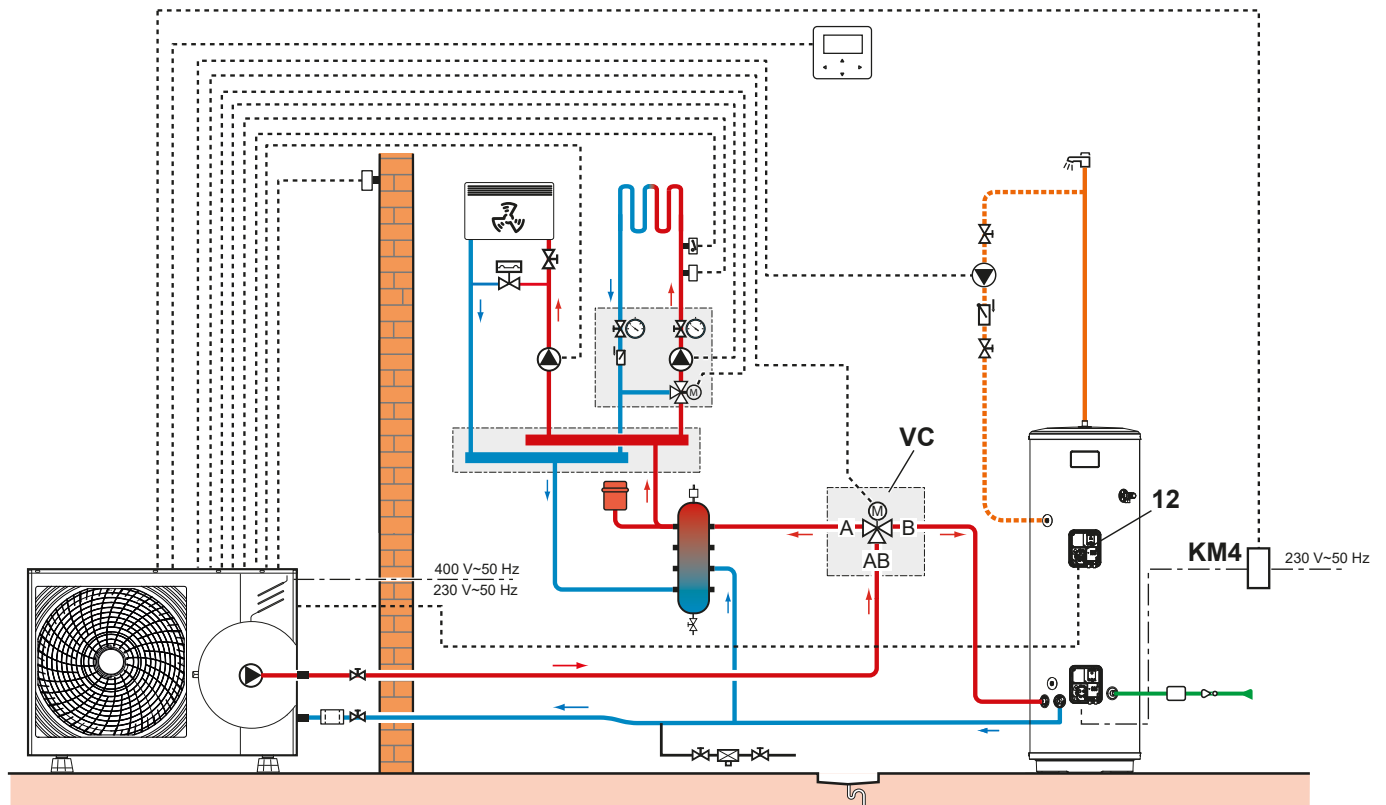


Fig. 1: Hydraulic Schematic.

Notes:

12 - Temperature sensor - 10 m long (supplied with Baxi HP40/HP50 Monobloc Heat Pump)

VC - Diverter valve - 28 mm connections (supplied with Baxi ASHP Cylinder)

Important

A temperature sensor and T5 adaptor (part no. 7750595) are required to enable the kit to operate correctly and to connect the sensor to the PCB. One each of the sensor and T5 adaptor are supplied with the heat pump. If these are already being used for another of the products functions please order part no. 7750595.

Baxi HP40/HP50 Monobloc Heat Pumps

A = Main Hydraulic Control Board

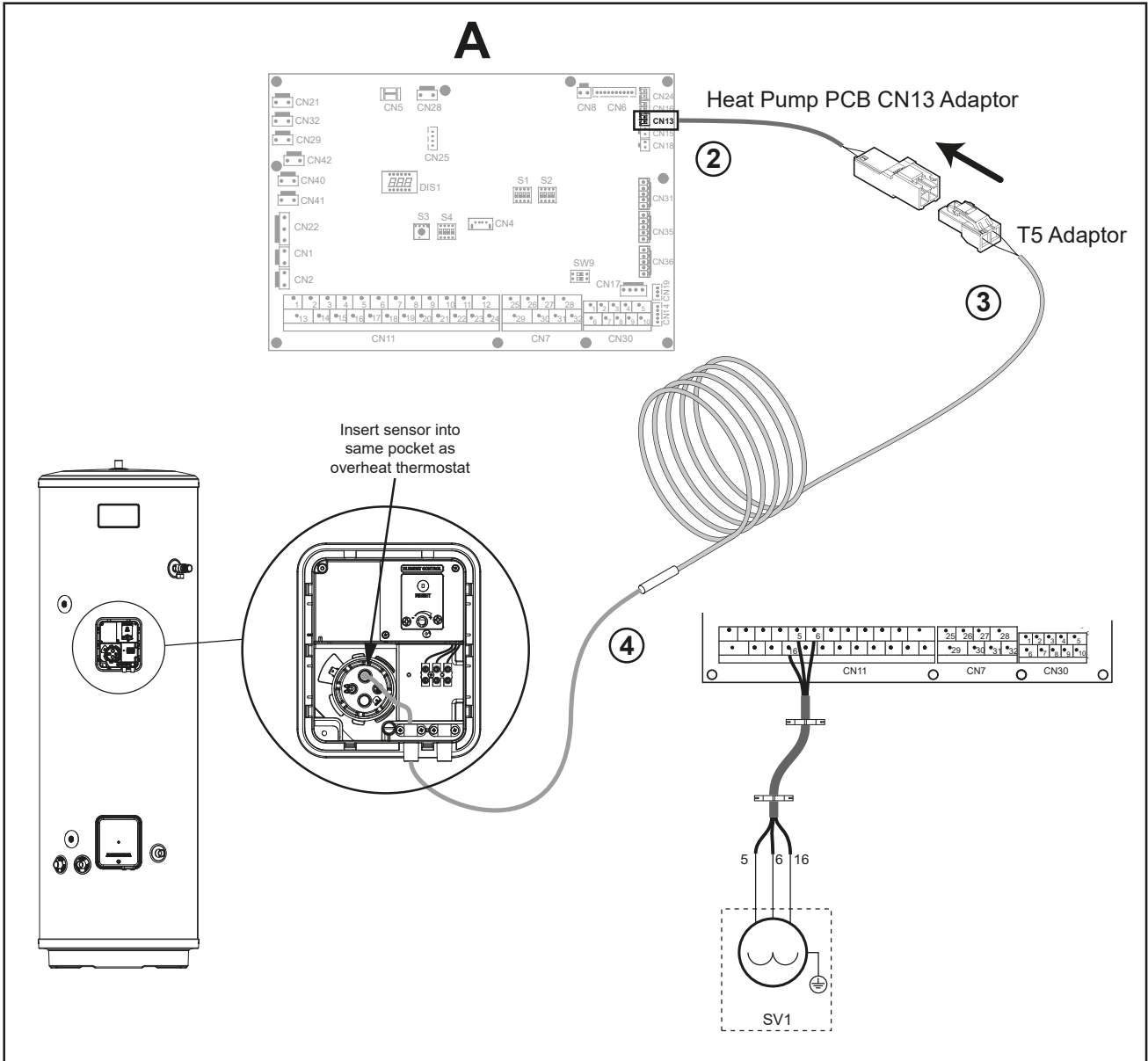
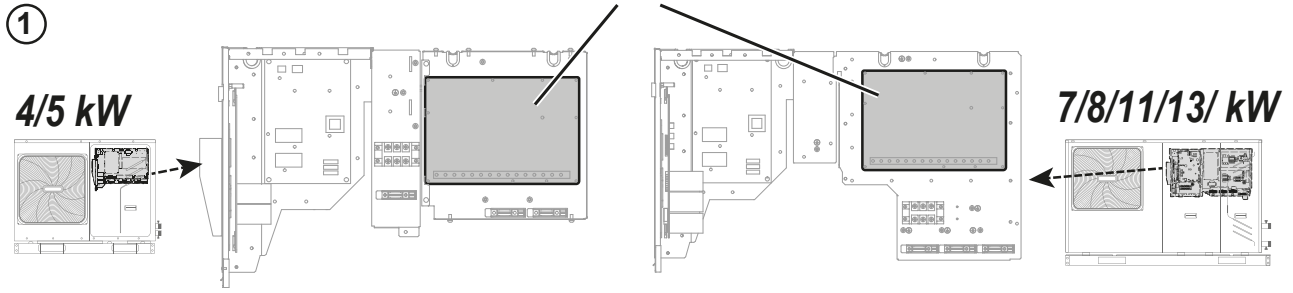


Fig. 2: Connecting the Domestic Hot Water Sensor and the Diverter Valve.

Notes: DHW sensor connection:

1. Identify the output from the heat pump - CN13 on PCB "A" Main Control Board Hydraulic.
2. Route the domestic hot water sensor cable via the low voltage cable feedthrough on the heat pump.
3. Fit the sensor connector onto the T5 adaptor.
4. Insert the sensor into the thermostat pocket.

Notes: Diverter valve connection:

1. Identify the output from the heat pump - CN11 connections 5 & 6 (N=16) on PCB "A" Main Control Board Hydraulic.
2. Route the valve power cable via the high voltage cable feedthrough on the heat pump.
3. Connect the valve power cable to PCB "A" Main Control Board Hydraulic.

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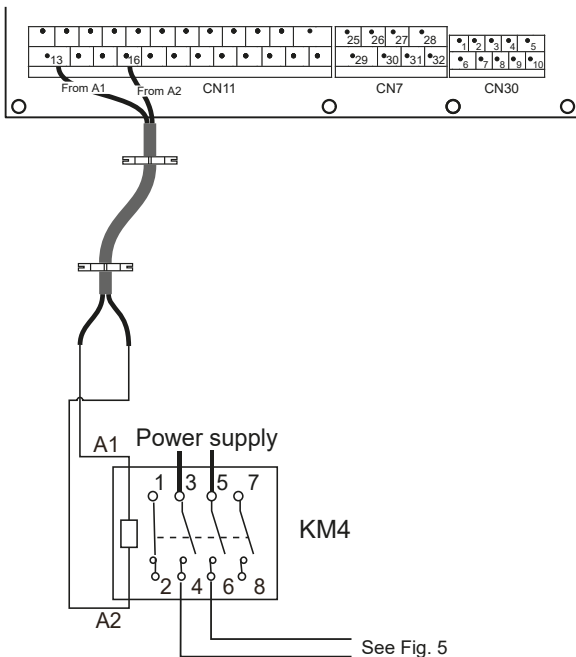
1	2	3	4	5	6	7	8	9	10	11	12	25	26	27	28	1	2	3	4	5
SL1	SL2	H	C	1ON	1OFF	2ON	2OFF	P_c	P_o	P_s	P_d	HT	R2	AHS1	AHS2	A	B	X	Y	E
13	14	15	16	17	18	19	20	21	22	23	24	29	30	31	32	6	7	8	9	10
TBH	IBH1	L1	N	N	N	3ON	3OFF	N	N	N	N	N	R1	DFT2	DFT1	P	Q	E	H1	H2
CN11												CN7				CN30				

Port group	Identifier	Connect to
①	1 SL1	Solar energy input signal
	2 SL2	
②	3 H	Room thermostat input (high voltage)
	4 C	
	15 L1	
③	5 1ON	SV1 (3-way valve)
	6 1OFF	
	16 N	
④	7 2ON	SV2 (3-way valve)
	8 2OFF	
	17 N	
⑤	9 P_c	Pumpc (zone2 pump)
	21 N	
⑥	10 P_o	Outside circulation pump /zone1 pump
	22 N	
⑦	11 P_s	Solar energy pump
	23 N	
⑧	12 P_d	DHW pipe pump
	24 N	
⑨	13 TBH	Tank booster heater
⑩	14 IBH1	Internal backup heater 1
	17 N	
⑪	18 N	SV3 (3-way valve)
	19 3ON	
	20 3OFF	

Port group	Identifier	Connect to
①	1 A	Wired controller
	2 B	
	3 X	
	4 Y	
	5 E	
②	6 P	Outdoor unit
	7 Q	
③	9 H1	Internal machine cascade
	10 H2	

Port group	Identifier	Connect to
①	26 R2	Compressor run
	30 R1	
	31 DFT2	
②	32 DFT1	Defrost or alarm signal
	25 HT	
③	29 N	Antifreeze E-heating tape (external)
	27 AHS1	
	28 AHS2	Additional heat source

Fig. 3: Connection Layout "A" for Baxi HP40/HP50 Monobloc Heat Pumps



Voltage	220-240 V AC
Maximum running current (A)	0.2
Wiring size (mm ²)	0.75
Control port signal type	Type 2

Fig. 4: Immersion Backup Heater for Baxi Mono 2 AWHP.

Note: The heat pump unit only sends an ON/OFF signal to the immersion backup heater. The power source for the heater must be supplied from a fused spur.

Connection of the immersion backup heater cable depends on the application. Only when the cylinder is installed will this wiring be needed. The unit only sends an on/off signal to the backup heater. An additional contactor is supplied and a dedicated terminal is needed to supply power to the backup heater.

The 25 A contactor supplied with the cylinder is ONLY suitable for switching the 3 kW immersion heater in the cylinder. Ensure that the cable is fixed and the strain relief is used.

Procedure

- Connect the cable to the appropriate terminals as shown to connections 13 and 16.
- To prevent strain on the cable secure it with cable ties to the cable tie mountings.

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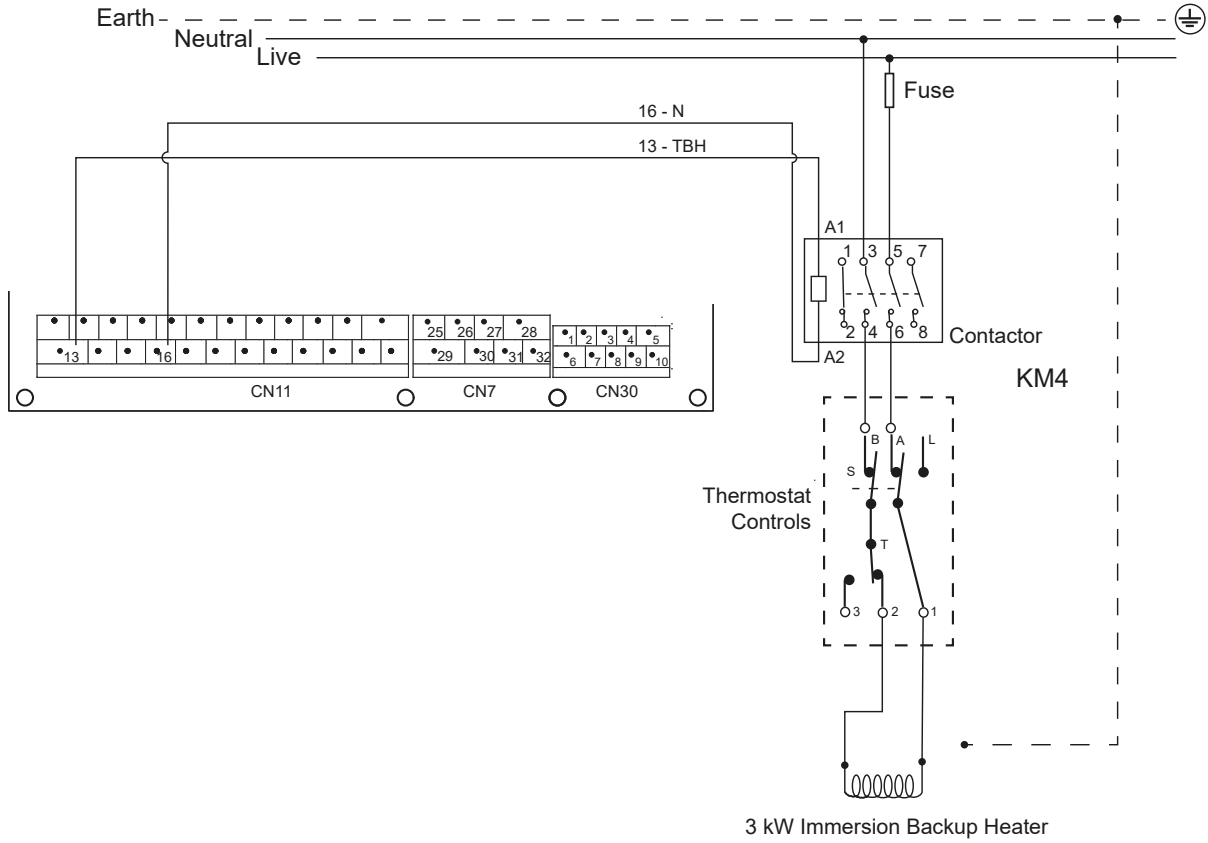


Fig. 5: Immersion Backup Heater

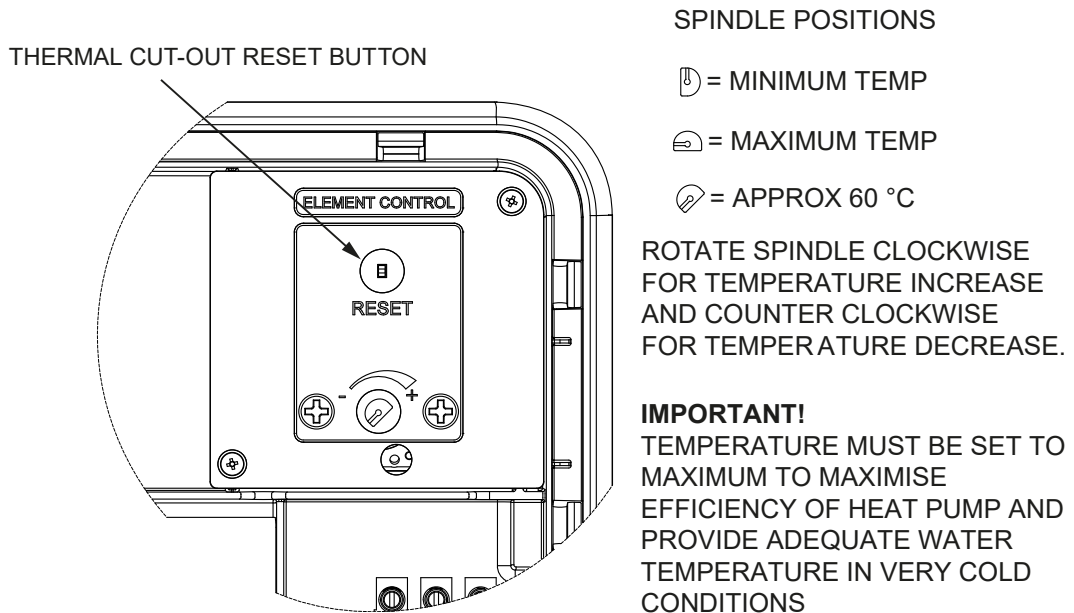


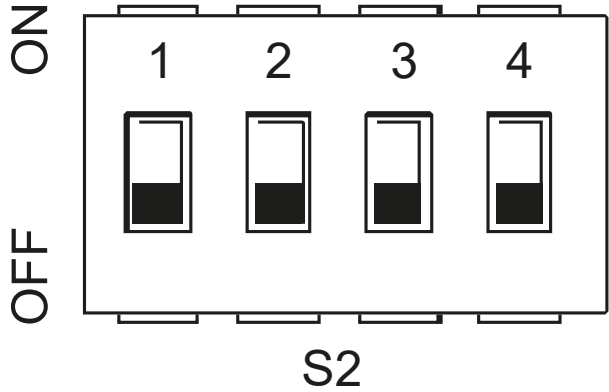
Fig. 6: Immersion Backup Heater Temperature Adjustment (remove lower cover).

Baxi HP40/HP50 Monobloc Heat Pumps

DIP switches are located on the Main Hydraulic Control Board ('A' as shown on page 4) and allow configuration of Immersion Backup Heater.

⚠ WARNING

Switch off the power supply before opening the switch box service panel and making any changes to the DIP switch settings.



DIP switch S2	ON = 1; OFF = 0
1	1 = when inactive for 24 hours, pump's blocking function is disabled - it does not run for 1 minute
	0 = when inactive for 24 hours, pump's blocking function is enabled - it runs for 1 minute
2	1 = without Immersion Backup Heater
	0 = with Immersion Backup Heater
3/4	0/0 = reserved (pump with max head 8.5 m)
	0/1 = reserved (pump with constant speed)
	1/0 = reserved (pump with max head 10.5 m)
	1/1 = pump (with max head 9.0 m)

Table 1: DIP switch settings for heat pump to recognize 3 kW Immersion Backup Heater. Ensure switch S2-2 is in the OFF position.

Note: Make sure settings are to this configuration - these should be factory default settings.

FOR UNITED KINGDOM

**For Baxi Customer Support and
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Opening hours

Monday - Friday, 8.00am-6.00pm

Weekends & Bank Holidays, 8.30am-2.00pm

Please note calls may be recorded for training and monitoring purposes



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