ADVECO HOT WATER SPECIALISTS

Packaged Hot Water System Specification:
PPR0008 with Air Source Heat Pump and Electric Boiler

1. System Description

The system will be a packaged plantroom comprising a GRP housing containing two 210-litre hot water calorifiers fitted with indirect heating coils served by electric heat sources to provide a reliable and low-carbon electric hot water system, and will be supplied pre-fitted complete with all internal pipework including lagging, unvented system equipment, pumps, valves, gauges, controls, and internal mechanical and electrical connections.

Each hot water tank will be constructed from stainless steel and contain a single 1.4m^2 low-level indirect heating coil connected to an electric heat source. The two tanks will be connected in series in a preheater-afterheater arrangement to ensure the system operates in the most efficient manner by allowing the air source heat pump to operate under ideal conditions. The afterheater tank will additionally be fitted with a reserve direct electric immersion heater to serve as a backup heat source.

An air source heat pump will connect to provide low grade renewable heat into the coil of the preheat tank. The air source heat pump will be mounted externally and provide 9.50 kW of heat input at 7°C outdoor temperatures and 6.95 kW at -7°C outdoor temperatures. The air source heat pump will use low-GWP refrigerant to minimise the environmental impact of the installation while extracting ambient heat from the outdoor air to preheat the incoming cold mains water in the preheat tank to approximately 50°C.

An electric boiler will connect to the coil of the afterheater tank to provide up to 12 kW of high-grade heat to bring the water in the hot water tank up to the desired use and storage temperature. The electric boiler will use a sealed primary loop to greatly reduce the common issues of element wear and limescale build-up in the hot water tank.

Mains cold water will enter the base of the preheat tank and will first be heated indirectly by the air source heat pump, and will then pass into the afterheater tank to be topped up by the electric boiler to reach its final storage and use temperature. The system will be supplied with a wall-mounted control panel to provide power and switching to the installation, ensuring a seamless integration of all components as well as a GSM-based fault output system to alert store and maintenance services in the event of a primary appliance fault. In such an eventuality, the panel will additionally and automatically activate the backup direct electric immersion heater in the afterheater tank, providing a reserve level of hot water to prevent the system from running cold. The panel will include a timeclock connected to a destratification pump to periodically sterilise the entire system twice per week as a method of automated legionella prevention.

The electrical supply to the system shall be 38A. This is sufficient to operate the ASHP and the electric boiler, including all controls and ancillaries. The ASHP draws up to 19A single phase, leaving an available load of 19A per phase for the 12 kW electric boiler and all ancillary components. This will provide a total system heat input of 21.50 kW in warm weather and 18.95 kW in cold weather.

Adveco will supply the plant equipment to site and provide commissioning following the completion of works. Final placement of the packaged system following delivery, as well as external electrical and plumbing connections between the building and plant, will be the responsibility of the installer.

Heat Pump Model	ADVS10W	Heat Pump Power	10 kW
Boiler Model	P12	Boiler Power	12 kW
Tank Model	2x ATSI 210	Storage Volume Total	420 Litres
Backup Immersion Model	EB0038	Backup Immersion Power	6 kW
Recovery Time	1 Hour	House Full Weight	1605 kg
Amperage Supply to Control Panel (ASHP + Boiler)	38A/ph	House Clearance for Airflow / Footprint	5050 x 3400 x 1400 mm


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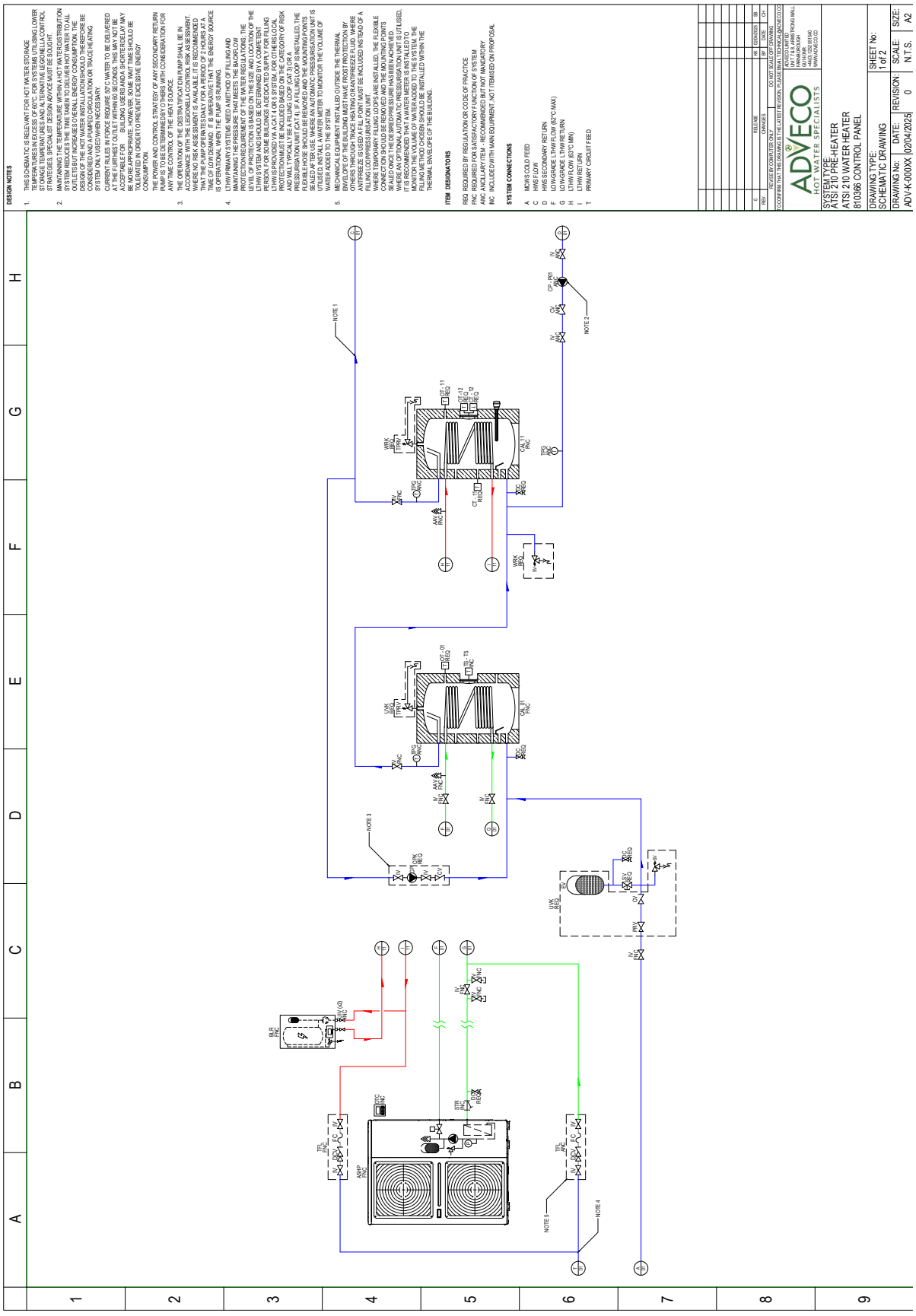
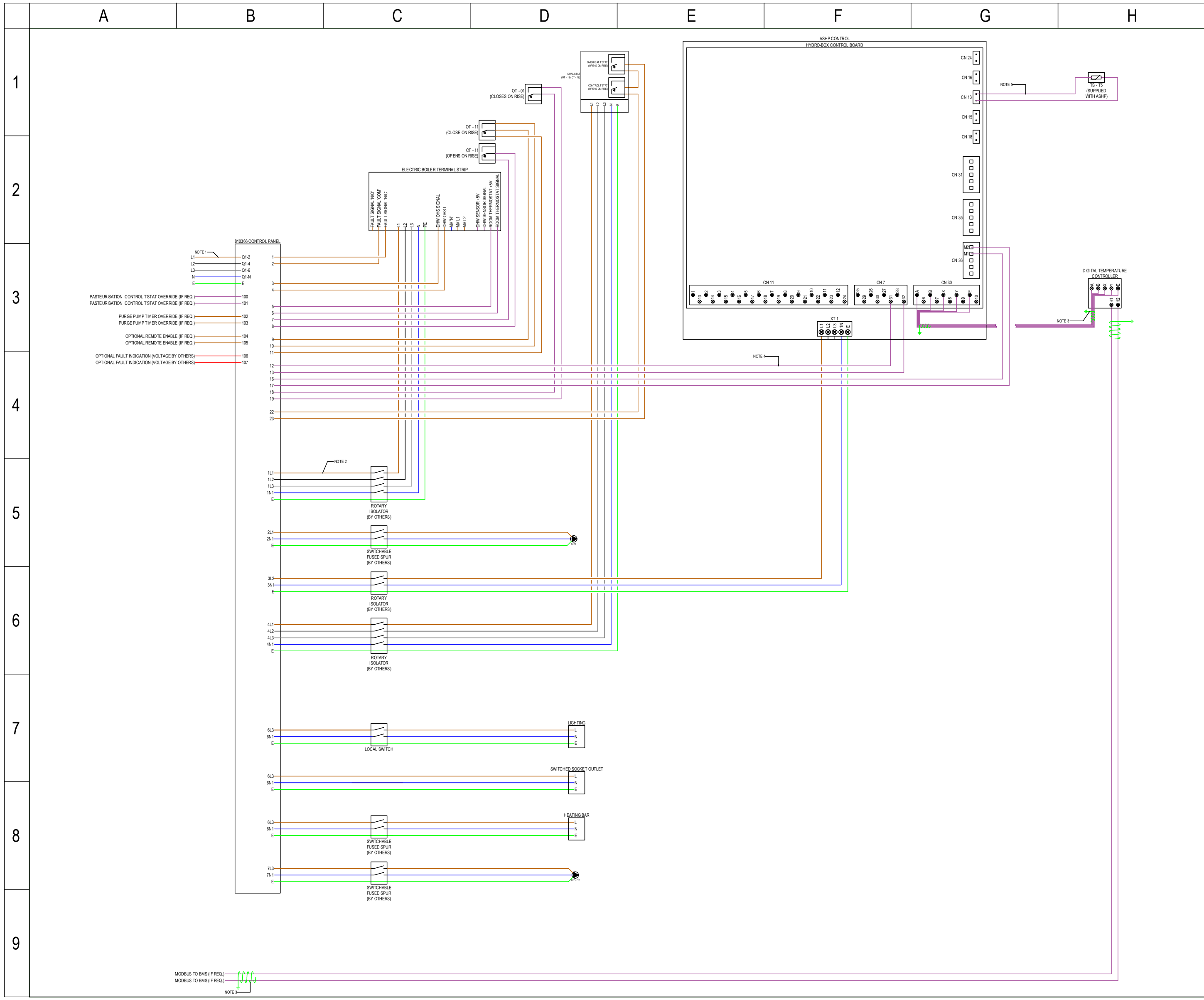
2. System Schematics





DESIGN NOTES

WARNING: THIS LAYOUT USES CONTROL PANEL WIRING DRAWING NUMBER WEP21462 ISSUE C AND IS NOT COMPATIBLE WITH ANY OTHER DRAWING NUMBER OR ISSUE. IF YOU HAVE A DIFFERENT CONTROL PANEL OR ISSUE DO NOT USE THIS DRAWING UNTIL VERIFYING ACCURACY WITH ADVECO TECHNICAL ON TECHNICAL@ADVECO.CO OR 01252 551 540

1. SIZE THE SUPPLY CABLE TO THE ADVECO CONTROL PANEL BASED ON THE CIRCUIT BREAKER LOCATED IN THE SITE DISTRIBUTION BOARD. THE CIRCUIT BREAKER SHOULD BE SELECTED BASED ON THE FULL LOAD CURRENT OF THE ELECTRIC BOILER AND THE LARGER OF THE AIR-SOURCE HEAT PUMP OR IMMERSION, BUT SHALL BE NO LARGER THAN 63A. REFER TO INDIVIDUAL APPLIANCE LOADS BELOW.

Full Load Amps		Boiler P12	Boiler P24
FPi32-6	No Immersion	28.4	46.2
	6 kW Immersion	28.4	46.2
	9 kW Immersion	30.5	48.3
	12 kW Immersion	34.8	52.6
FPi32-9	No Immersion	32.4	50.2
	6 kW Immersion	32.4	50.2
	9 kW Immersion	32.4	50.2
	12 kW Immersion	34.8	52.6
FPi32-12	No Immersion	35.4	53.2
	6 kW Immersion	35.4	53.2
	9 kW Immersion	35.4	53.2
	12 kW Immersion	35.4	53.2
ADVS10W	No Immersion	36.4	54.2
	6 kW Immersion	36.4	54.2
	9 kW Immersion	36.4	54.2
	12 kW Immersion	36.4	54.2
Independent ASHP Supply	No Immersion	20.4	38.2
	6 kW Immersion	29.1	46.9
	9 kW Immersion	33.5	51.3
	12 kW Immersion	37.8	55.6

2. CABLING BETWEEN THE ADVECO CONTROL PANEL AND THE ELECTRIC BOILER MUST BE ADEQUATELY SIZED BASED ON FUSE RATING IN THE PANEL.
3. USE SCREENED CABLE FOR MODBUS COMMUNICATION AND DIGITAL CONTROLLER CONNECTION. ENSURE THAT THE SCREENING IS EARTHED.
4. ASHP FAULT SIGNAL ONLY ACTIVE WHEN ASHP CONTROL PARAMETER 15.12 = 1.
5. IF THE CABLE FOR THE SUPPLIED TEMPERATURE SENSOR IS TOO SHORT, THE CABLE CAN BE EXTENDED USING AN APPROPRIATE METHOD, RETAINING THE PCB CONNECTOR PLUG.

REV.	CHANGES	BY	DATE	CH
0	RELEASE	KK	02/04/2025	SB

REVISE BY COMPUTER ONLY — DO NOT SCALE OFF DRAWING

TO CONFIRM THAT THIS DRAWING IS THE LATEST REVISION, PLEASE EMAIL TECHNICAL@ADVECO.CO

ADVECO HOT WATER SPECIALISTS

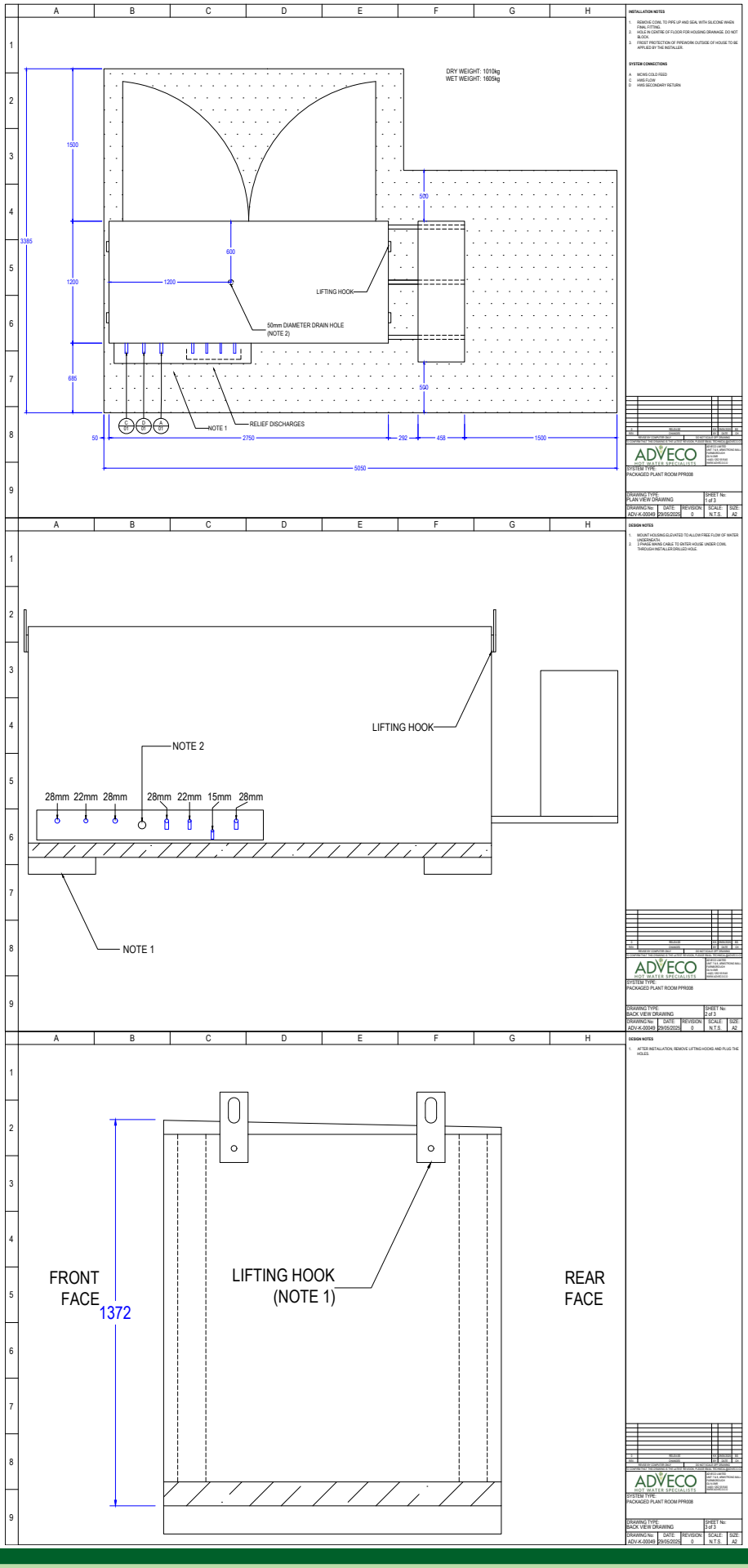
ADVECO LIMITED
UNIT 7 & 8, ARMSTRONG MALL
FARNBOROUGH
GU14 0NR
+44(0) 1252 551540
WWW.ADVECO.CO

SYSTEM TYPE:
ATSI 210 PRE-HEATER
ATSI 210 WATER HEATER
810366 CONTROL PANEL

DRAWING TYPE: WIRING DIAGRAM

SHEET No: 2 of 2

DRAWING No:	DATE:	REVISION:	SCALE:	SIZE:
ADV-K-000XX	02/04/2025	0	N.T.S.	A2


DRY WEIGHT: 1010kg
WET WEIGHT: 1605kg
LIFTING HOOK
50mm DIAMETER DRAIN HOLE (NOTE 2)
NOTE 1
RELIEF DISCHARGES
LIFTING HOOK
NOTE 2
28mm 22mm 28mm 28mm 22mm 15mm 28mm
NOTE 1
FRONT FACE
1372
LIFTING HOOK (NOTE 1)
REAR FACE

ADVECO HOT WATER SPECIALISTS

ADVS10W–16W / ADV16W–ADV30W

10–30kW Monobloc Air Source Heat Pump Range

The ADV air to water heat pump range includes models from 10 to 30 kW, bringing quality and efficiency to commercial heating and hot water systems.

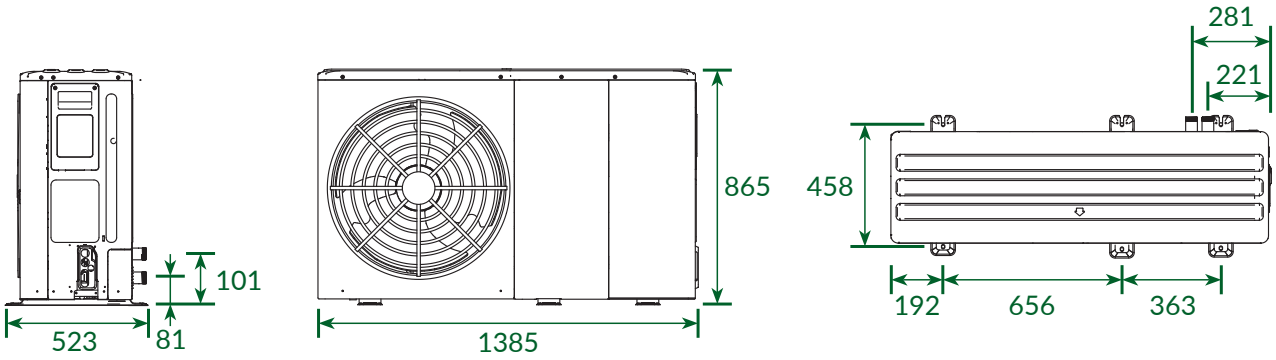
Designed to extract heat from the ambient air using an environmentally friendly R32 refrigerant circuit, the air source heat pumps provide low carbon heat to a building and its hot water system through an integrated plate heat exchanger and pump, all contained within a modern and simple to install external monobloc unit.

Effective with ambient air temperatures as low as -25°C, the ASHP is capable of providing hot water at up to 60°C throughout the year while significantly reducing building emissions. The heat pump is ideal for installation as part of a hybrid hot water system, ensuring the highest degree of efficiency without compromise to overall performance or reliability.

FEATURES

- Single phase (10–16kW) and three phase (16–30kW) models available to suit every building
- Sleek and compact monobloc design
- High seasonal efficiency A+ to A+++ ErP Energy Rating
- Low GWP R32 refrigerant reduces environmental impact
- Low noise impact
- Maximum flow temperature 60°C
- Designed for UK climate conditions, maintaining a high efficiency down to -7°C
- Includes low voltage enable and fault signals, MODBUS support, built-in external pump and cascade controls, and a remote digital control interface as standard
- Low loss headers and external pumps available
- Available with warranty up to 5 years with scheduled annual servicing

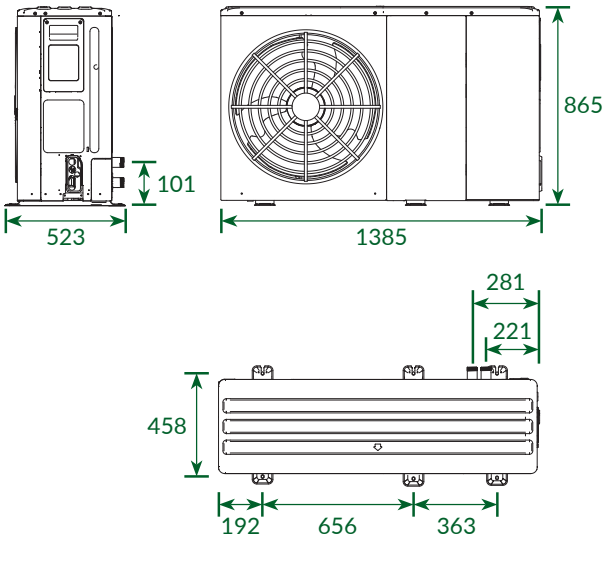
ADVS10–16W: 10–16kW Single Phase ASHP



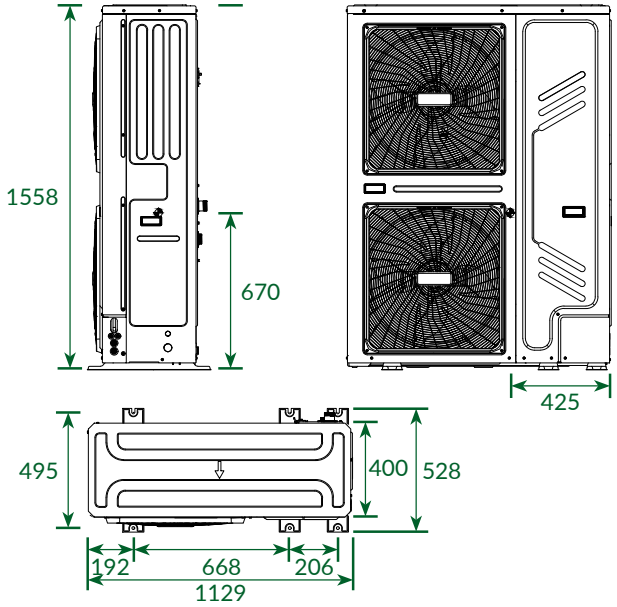
ADVS10–16W

Technical Specifications		ADVS10W	ADVS12W	ADVS16W
Heating Performance Water outlet temperature: 35°C Ambient temperature: 7°C	Maximum heating capacity (kW)	10.00	12.10	15.90
	Rated input (kW)	2.02	2.44	3.53
	COP	4.95	4.95	4.50
Heating Performance Water outlet temperature: 55°C Ambient temperature: 7°C	Maximum heating capacity (kW)	9.50	13.8	16.00
	Rated input (kW)	3.06	4.68	5.61
	COP	3.10	2.95	2.85
Heating Performance Water outlet temperature: 55°C Ambient temperature: -7°C	Maximum heating capacity (kW)	6.95	10.59	12.48
	Rated input (kW)	3.53	5.25	6.15
	COP	1.97	2.02	2.03
SCOP Average climate conditions	Water outlet temperature: 35°C Water outlet temperature: 55°C	5.20 3.47	4.81 3.45	4.62 3.41
Seasonal Space Heating Energy Efficiency Class	Water outlet temperature: 35°C Water outlet temperature: 55°C	A+++ A++	A+++ A++	A+++ A++
Power Supply	V/Ph/Hz	220–240/1/50		
	Full Load Amps (A)	19	30	30
	Amps Protection (A)	25	35	35
Dimensions	Appliance (mm)	1385 x 865 x 523		
	Packaging (mm)	1465 x 1120 x 560		
Refrigerant	Type	R32	R32	R32
	Charged Volume (kg)	1.40	1.75	1.75
	Throttle Type	Electronic Expansion Valve		
Water Temperature Output Range	DHW (°C)	12 to 60		
	Heating (°C)	12 to 60		
	Cooling (°C)	5 to 25		
Ambient Air Temperature Range	DHW (°C)	-25 to 43		
	Heating (°C)	-25 to 35		
	Cooling (°C)	-5 to 43		
Noise Data	Sound Power Level (dB)	60	65	69
	Sound Pressure @1m (dB(A))	51	53	58
Compressor	Type	Twin Rotary DC Inverter		
	Rated Load Amps (A)	15.50	23.50	25.50
Fan	Type	Brushless DC Motor		
	Rated Motor Output (W)	170	170	170
	Full Load Amps (A)	1.5	1.5	1.5
Internal Water Pump	Max. head (m)	8.7	8.7	8.7
Rated Water Flow	m^3/h	0.40–2.10	0.70–2.50	0.70–3.00
Water Connections	Inch	1¼" BSP	1¼" BSP	1¼" BSP
Water Circuit Pressure Range		1 to 3 bar	1 to 3 bar	1 to 3 bar
Appliance Mass	Empty/Filled (kg)	105/132	129/155	129/155

ADV16–30W: 16–30kW Three Phase ASHP



ADV16W



ADV22W - ADV30W

Technical Specifications		ADV16W	ADV22W	ADV30W
Heating Performance Water outlet temperature: 35°C Ambient temperature: 7°C	Maximum heating capacity (kW)	15.90	22.00	30.10
	Rated input (kW)	3.53	5.00	7.69
	COP	4.50	4.40	3.91
Heating Performance Water outlet temperature: 55°C Ambient temperature: 7°C	Maximum heating capacity (kW)	16.00	22.00	30.00
	Rated input (kW)	5.61	8.30	13.04
	COP	2.85	2.65	2.30
Heating Performance Water outlet temperature: 55°C Ambient temperature: -7°C	Maximum heating capacity (kW)	12.48	18.00	21.00
	Rated input (kW)	6.15	11.61	14.00
	COP	2.03	1.55	1.50
SCOP Average climate conditions	Water outlet temperature: 35°C Water outlet temperature: 55°C	4.62 3.41	4.53 3.22	4.19 3.14
Seasonal Space Heating Energy Efficiency Class	Water outlet temperature: 35°C Water outlet temperature: 55°C	A+++ A++	A+++ A++	A++ A+
Power Supply	V/Ph/Hz	380–415/3/50		
	Full Load Amps (A)	14	28	28
	Amps Protection (A)	16	32	32
Dimensions	Appliance (mm)	1385 x 865 x 523	1129 x 1558 x 528	
	Packaging (mm)	1465 x 1035 x 560	1220 x 1735 x 565	
Refrigerant	Type	R32	R32	R32
	Charged Volume (kg)	1.75	5.00	5.00
	Throttle Type	Electronic Expansion Valve		
Water Temperature Output Range	DHW (°C)	12 to 60	30 to 60	
	Heating (°C)	12 to 60	25 to 60	
	Cooling (°C)	5 to 25	0 to 25	
Ambient Air Temperature Range	DHW (°C)	-25 to 43	-25 to 43	
	Heating (°C)	-25 to 35	-25 to 35	
	Cooling (°C)	-5 to 43	-10 to 46	
Noise Data	Sound Power Level (dB)	69	73	77
	Sound Pressure @1m (dB(A))	58	59	63
Compressor	Type	Twin Rotary DC Inverter		
	Rated Load Amps (A)	11.15	14.00	21.00
Fan	Type	Brushless DC Motor		
	Rated Motor Output (W)	170	340	340
	Full Load Amps (A)	1.5	3	3
Internal Water Pump	Max. head (m)	9.0	12.0	12.0
Rated Water Flow	m^3/h	4.00	3.78	5.18
Water Connections	Inch	1¼" BSP	1¼" BSP	1¼" BSP
Water Circuit Pressure Range		1 to 3 bar	1 to 3 bar	1 to 3 bar
Appliance Mass	Empty/Filled (kg)	144/172	177/206	177/206

Adveco Ltd. Unit 7&8 Armstrong Mall, Southwood Business Park, Farnborough, Hampshire GU14 0NR
Company Reg : 09493966 T : 01252 551 540 E : enquiries@adveco.co I : www.adveco.co

ADVECO HOT WATER SPECIALISTS

Adveco Ardent 9–36 kW

Indirect Electric Wall-Hung Boilers

The Adveco Ardent range of wall-hung electric boilers are designed to provide a high capacity, reliable, and compact solution to a building's hot water and central heating demands.

The Adveco Ardent electric boiler range features multiple electric heating elements immersed into an integrated water storage tank to provide a rapid and reliable source of thermal energy to serve a heating system or indirect water heater.

Available as a compact wall-hung appliance with outputs from 9 to 36 kW, the Ardent electric boiler range includes stepped power control to provide optimum heating output and economically adjust the heating load when approaching the set point temperature, and range rating to tailor the boiler power to suit the application. The Ardent range is available in two model ranges:

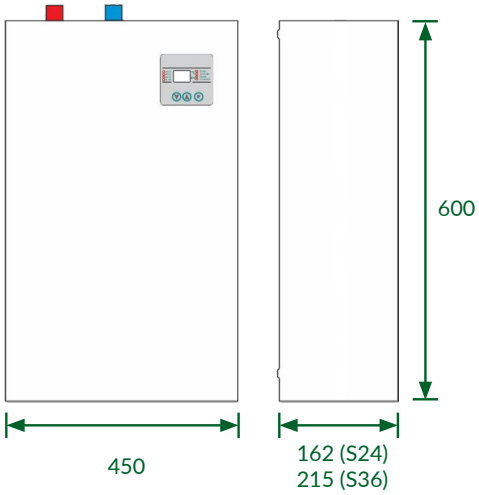
S Range: The Ardent Standard range features three heating elements with thermostat input and output control to an external pump.

P Range: The Ardent Premium range features six to nine heating elements and an integrated expansion vessel, relief valve, and circulation pump. The Premium range features all controls of the Standard range in addition to controls for a 3-port valve and fault output.

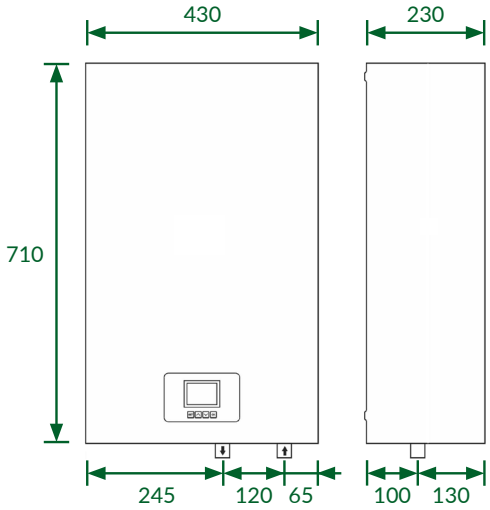
All boilers feature a front mounted LCD display and protective IP20 or IP40-rated outer shell as well as integrated overheat safety protection. The Ardent range is ideal for integration with heat pump systems to provide a high temperature energy source in the coldest period of the year.

FEATURES

- Indirect hot water system design eliminates scale build-up common on direct electrical immersion heaters.
- Multiple heating elements per unit provide inbuilt redundancy.
- Stepped element control to reduce start-up current and excessive or uneven wear on heating elements.
- Compact wall-hung arrangement.
- Simple integration into existing systems.
- Modern electric-only operation avoids reliance on gas energy supplies.



Ardent Standard: S24–S36



Ardent Premium: P9–P24

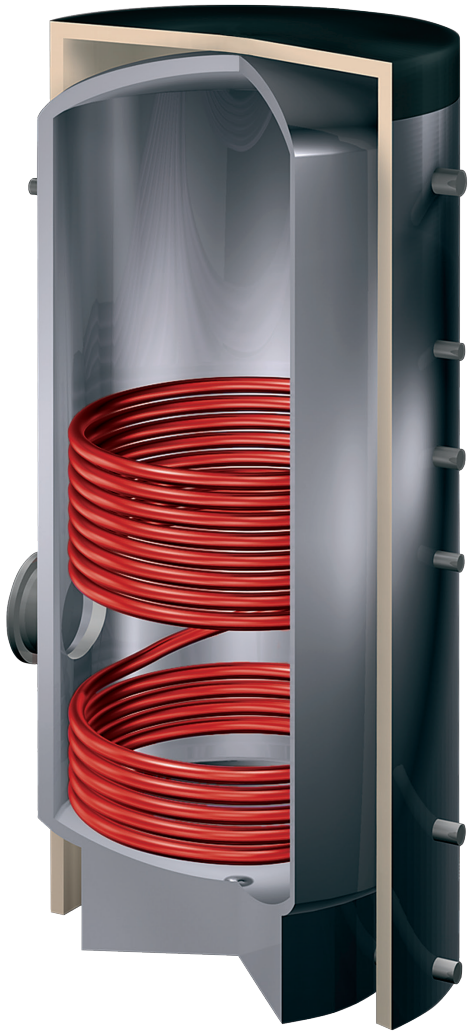
Ardent Standard: Technical Specifications	S24	S36
Heat output range (kW)	24.0	36.0
Element configuration	3 × 8.0	3 × 12.0
Power supply (V_{AC} / Phases / Hz)	400 / 3 phase / 50	
Full load current per phase (A)	34.8	52.2
Inlet and outlet connections	1" (DN25)	
Boiler water content (l)	14.2	21.0
Maximum operating temperature (°C)	80	
Operating pressure range (bar)	0.5 – 3.0	
Energy efficiency class	D	
Sound power level (dB)	46	
Housing protection	IP20	
Dimensions H × W × D (mm)	600 × 450 × 162	600 × 450 × 215
Dry mass (kg)	13.5	17.2

Ardent Premium: Technical Specifications	P9	P12	P24
Heat output range (kW)	9.0	12.0	24.3
Element configuration	6 × 1.5	6 × 2.0	9 × 2.7
Power supply (V_{AC} / Phases / Hz)	240 / 1 phase / 50 or 400 / 3 phase / 50	400 / 3 phase / 50	
Full load current per phase (A)	38 (1 phase) 13 (3 phase)	17.4	35.2
Inlet and outlet connections (inch)	G 3/4"	G 3/4"	G 3/4"
Boiler water content (l)	12.5	12.5	12.5
Expansion vessel water content (l)	7.0	7.0	7.0
Maximum operating temperature	80	80	80
Operating pressure range (bar)	0.8 – 2.2	0.8 – 2.2	0.8 – 2.2
Energy efficiency class	D	D	D
Sound power level (dB)	32	32	32
Housing protection	IP40	IP40	IP40
Dimensions H × W × D (mm)	700 × 430 × 230	700 × 430 × 230	700 × 430 × 230
Dry mass (kg)	25	25	25

ADVECO HOT WATER SPECIALISTS

ATSI 200-1000

Stainless Steel Indirect Cylinders for DHW Applications



The Adveco ATSx range of stainless steel hot water tanks serve as buffer vessels and indirect hot water calorifiers suitable for use with high pressure applications.

The ATSI is a high quality indirect water heater constructed from corrosion resistant AISI 316Ti and 316L stainless steel. Each vessel features a single internal fixed heating coil at low level as well as multiple connection points and a clean-out access flange.

All tanks are designed, manufactured, and tested to the requirements of the Pressure Equipment Directive (97/23/EC) and EN 12897.

FEATURES

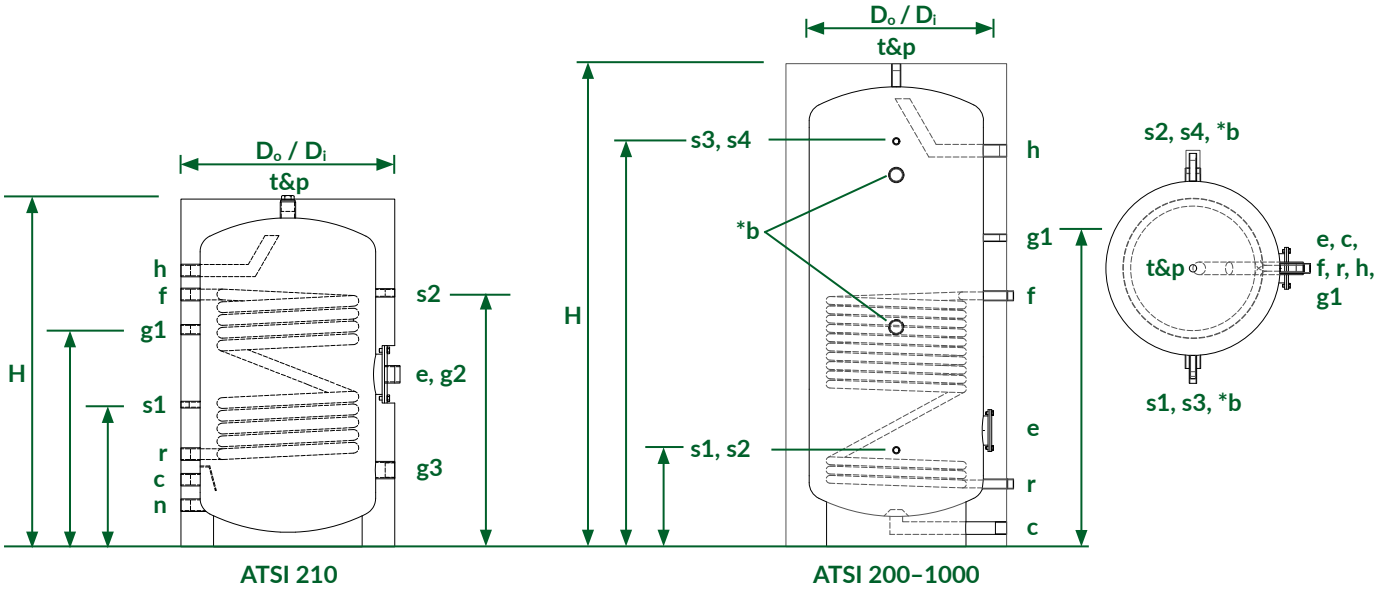
- Available with 200 - 1000 litre capacities
- Produced from high quality 316Ti and 316L stainless steel
- Bracket options for boiler mounting on 300–750 tanks
- 100 mm removable insulation for improved energy efficiency
- Suitable for vented or unvented installation
- 10 bar / 95°C max. working pressure/temp (tank)
- 25 bar / 200°C max. working pressure/temp (coil)

OPTIONS & ANCILLARIES

- E0008/0-95C: Control Thermostat with 0-95°C range
- E0011: Overheat thermostat
- E0009.5: Chrome thermostat pocket
- Immersion heater options from 3–12 kW
- MB0001: Destratification pump kit
- Unvented Kits: Contact Adveco for options and details

kiwa approved

UK WATER REGULATION 4



Specifications

Description		200	210	300	400	500	580	750	1000
Storage volume (l)		212	212	289	411	490	575	756	990
Standing losses (W) / Energy efficiency class		52 / B	63 / B	63 / B	72 / B	79 / B	102 / C	116 / C	135 / C
Coil surface area (m^2)		0.9	1.4	1.4	1.7	1.7	1.8	2.4	2.4
Output capacity (kW) (80/60:10/60)		19.1	29.7	29.7	36.1	36.1	38.3	51.0	51.0
Nominal primary flow rate (m^3/h)		0.82	1.27	1.27	1.55	1.55	1.64	2.19	2.19
Nominal coil pressure drop (mbar)		36.2	124.7	124.7	209.9	215.2	250.1	83.7	82.5
Continuous DHW flow rate (l/h) (80/60:10/60)		327.8	509.7	509.7	619.5	619.5	657.2	875.2	875.2
Peak draw off capacity (l) (80/60:10/60)	30 min.	306	382	444	587	650	734	969	1157
	60 min.	472	640	702	901	964	1067	1413	1600
	120 min.	798	1146	1208	1516	1579	1720	2282	2469
Dry mass (kg)		54	60	64	76	90	95	142	173

Connections

Label	Description	200	210	300	400	500	580	750	1000
c, h	Water inlet and outlet	¾"	1"	1"	1"	1"	1½"	1½"	2"
f, r	Heat exchanger flow and return	1"	1"	1"	1"	1"	1"	1¼"	1¼"
t&p	T&P relief valve connection	1"	¾"	1"	1"	1"	1"	1"	1"
g1	Additional connection	½"	1½"	¾"	¾"	¾"	¾"	¾"	1"
g2	Additional connection	--	1½"	--	--	--	--	--	--
g3	Additional connection	--	1¼"	--	--	--	--	--	--
s1, s2, s3, s4	Sensor pockets	¾"	½"	¾"	¾"	¾"	¾"	¾"	¾"
e	Clean-out flange (mm)	Ø180/120	Ø180/120	Ø180/120	Ø180/120	Ø180/120	Ø180/120	Ø180/120	Ø180/120
n	Drain	--	1"	--	--	--	--	--	--

***b:** Left and right side 2" mounting brackets included on models 300–1000 only.

Dimensions

Label	Description	200	210	300	400	500	580	750	1000
H	Height including insulation	1480	1100	1740	1735	1990	1990	2080	2080
D_o D_i	Outer diameter with insulation Inner diameter without insulation	Ø700 Ø500	Ø750 Ø550	Ø700 Ø500	Ø800 Ø600	Ø800 Ø600	Ø850 Ø650	Ø950 Ø750	Ø1050 Ø850
g1	Additional connection	960	680	1120	1060	1305	1305	1330	1330
s1, s2	Sensor pockets	430 (2x)	445	380 (2x)	405 (2x)	545 (2x)	405 (2x)	415 (2x)	555 (2x)
s3, s4	Sensor pockets	1180 (2x)	795	1415 (2x)	1440 (2x)	1695 (2x)	1690 (2x)	1745 (2x)	1745 (2x)

All threaded connections are BSPT female unless otherwise stated. Coil connections BSPT male. All dimensions in mm.

Adveco Ltd. Unit 7&8 Armstrong Mall, Southwood Business Park, Farnborough, Hampshire GU14 0NR
Company Reg : 09493966 T : 01252 551 540 E : enquiries@adveco.co I : www.adveco.co

ADVECO HOT WATER SPECIALISTS

810366(K) Control Panel

ASHP and Electric Auto-Changeover Wiring Station

Adveco provide a range of tailored prewired hot water control solutions. The 810366 is a complete wiring station for use with packaged electric hot water systems such as the Adveco FUSION.

The 810366 is designed to provide power and controls to all elements of a packaged electric hot water system, including options for air source heat pumps, electric boilers, pumps, and automatic activation of backup immersion heaters in the event of a primary appliance fault. The panel additionally includes overload protection and volt free contacts for complete BMS integration and monitoring via fault output. The 810336K kit adds an integrated mobile GSM module to provide email or SMS fault alert notifications.

The panel features an accessible front-mounted rotary system isolation point and two status lamps to clearly display the operational condition of the system at a glance. All components are protected within an IP65-rated wall mountable enclosure.

Specifications

Order code	Control panel only: **810366** Control panel kit with GSM: **810366K**
Incoming supply voltage(s)	415 V / 3 phase / 50 Hz
Output supply voltage(s)	415 V / 3 phase/ 50 Hz 230 V and 110 V / 1 phase / 50 Hz 12 V and 24 V DC
Max. incoming supply breaker size	63 A
Max. supported electric boiler power	24 kW
Max. supported ASHP current	20 A / 1phase when powered from 810366 panel Higher output ASHP supported when using independent ASHP power supply
Max. supported immersion power	12 kW / 3 phase. Automatically activated upon fault from boiler or ASHP as standard.
Included time controls	1× Hot water system control 1× Thermal disinfection cycle control
Included pump support (Power and controls)	1× Secondary return pump 1× Thermal disinfection/destratification pump 1× Low loss header pump
Communication	Volt-free contacts for BMS integration for remote control of: • Hot water system enable and disable • Thermal disinfection and high-temperature pasteurisation • Fault signal outputs
Additional outputs for packaged plant rooms	Kiosk lighting and 120W electric space heater 1× 240 V power socket
Panel dimensions H × W × D	600 mm × 400 mm × 200 mm (600 mm door open)
Mounting configuration	Wall mounted (brackets included)
Mass	5 kg

In the event of a fault status on the electric boiler or air source heat pump, the control panel will automatically activate the backup immersion heater to cover part of the system demand. By removing a link wire in the panel, the immersion heater can be prevented from activating on ASHP fault in order to restrict the maximum control panel power draw for sites with limited supplies. The connected air source heat pump must be configured locally to deliver a fault output to the panel.

For further details about connected appliances, refer to the respective product technical data sheets and the control panel wiring diagram available from Adveco.

Final connections within the panel should be completed by a fully qualified engineer during the installation and comissioning of the system. All control relays, incoming, and outgoing supply cables must be appropriately sized. All communication and digital controller connections must use screened and earthed cabling.

Only one supply is required for the air source heat pump. Heat pumps not listed below require an independent power supply from a local distribution board. Individual appliance loads for typical Adveco packaged electric hot water systems can be seen below.

Full Load Amps for Adveco Packaged Electric Hot Water Systems

ASHP Model	Backup Immersion Model	Electric Boiler Models	
		P12	P24
FPi32-6	No Immersion	28.4 A	46.2 A
	6 kW Immersion	28.4 A	46.2 A
	9 kW Immersion	30.5 A	48.3 A
	12 kW Immersion	34.8 A	52.6 A
FPi32-9	No Immersion	32.4 A	50.2 A
	6 kW Immersion	32.4 A	50.2 A
	9 kW Immersion	32.4 A	50.2 A
	12 kW Immersion	34.8 A	52.6 A
FPi32-12	No Immersion	35.4 A	53.2 A
	6 kW Immersion	35.4 A	53.2 A
	9 kW Immersion	35.4 A	53.2 A
	12 kW Immersion	35.4 A	53.2 A
ADVS10W	No Immersion	36.4 A	54.2 A
	6 kW Immersion	36.4 A	54.2 A
	9 kW Immersion	36.4 A	54.2 A
	12 kW Immersion	36.4 A	54.2 A
Independent supply to other ASHP	No Immersion	17.4 A	35.2 A
	6 kW Immersion	26.1 A	43.9 A
	9 kW Immersion	30.5 A	48.3 A
	12 kW Immersion	34.8 A	52.6 A

PRODUCT DATA SHEET
TR200102.r1

ADVECO
EXPERTLY ENGINEERED FOR YOU

EB0038 6 kW Immersion Kit

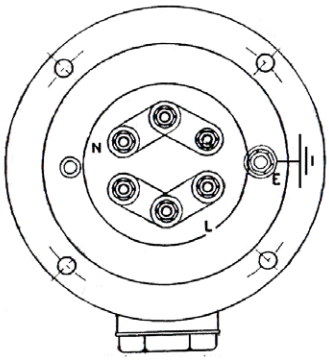
Electric Immersion Heater Kits for Indirect Cylinders

The Adveco EB0038 electric immersion heater kit is designed for use as a supplementary element to grant a reliable level of reserve heating capacity in the event of a primary heat source failure.

Using an electric immersion heater as a backup source of water heating is a practical alternative to installation of an entire secondary heating unit, and is both unobtrusive to existing systems and easily maintained.

The immersion heater features a 1.5" screwed connection and integrated dual control and overheat thermostat contained within the immersion housing. The element is suitable for working temperatures up to 90°C and working pressures of up to 6 bar.

EB0038 Terminal Layout

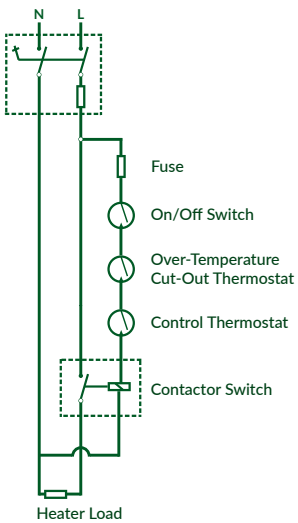


Suggested Wiring Layouts:

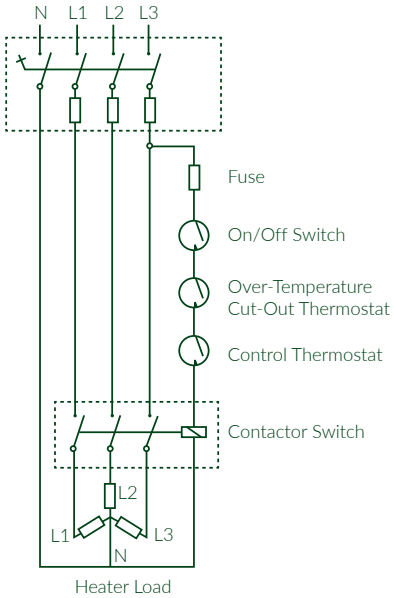
Note that fuses, contactors, isolators, and on/off switches must be supplied separately.

This appliance must be earthed.

Single phase:



Three phase:



Technical Specifications	EB0038
Capacity	6 kW
Supply	240 V / 1 phase / 50 Hz Suitable for 3ph conversion
Wiring (single phase)	L, N, E
Wiring (three phase)	L1, L2, L3, N, E
Power (single phase)	26 A
Power (three phase)	9 A/phase
Max. operating pressure	6 bar
Max. operating temperature	90°C
Heat intensity	10.1 W/cm^2
Immersed length	510 mm (20")
Cold zone	100 mm (4")
Integrated dual control and overheat thermostat	Control range: 25-65°C Overheat set: 80°C
Compatible range	GLE
Boss connection size	1.5"
Immersion heater part no.	E0071
Ancillaries	Integral control and overheat thermostat via contactor

Adveco Ltd. Unit 7&8 Armstrong Mall, Southwood Business Park, Farnborough, Hampshire GU14 0NR
Company Reg : 09493966 T : 01252 551 540 E : enquiries@adveco.co I : www.adveco.co

ADVECO HOT WATER SPECIALISTS

M0007 / MB0001 Single Head Pump

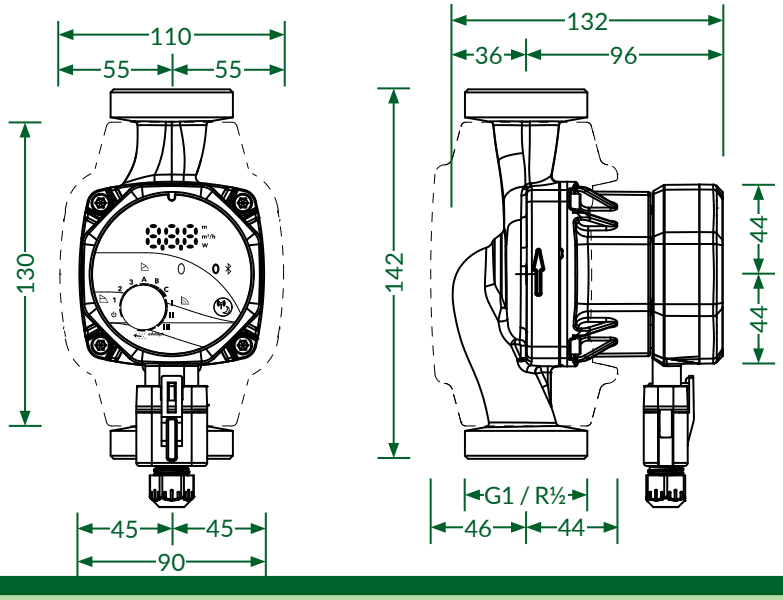
DHW Circulation Pump for Destratification and Return

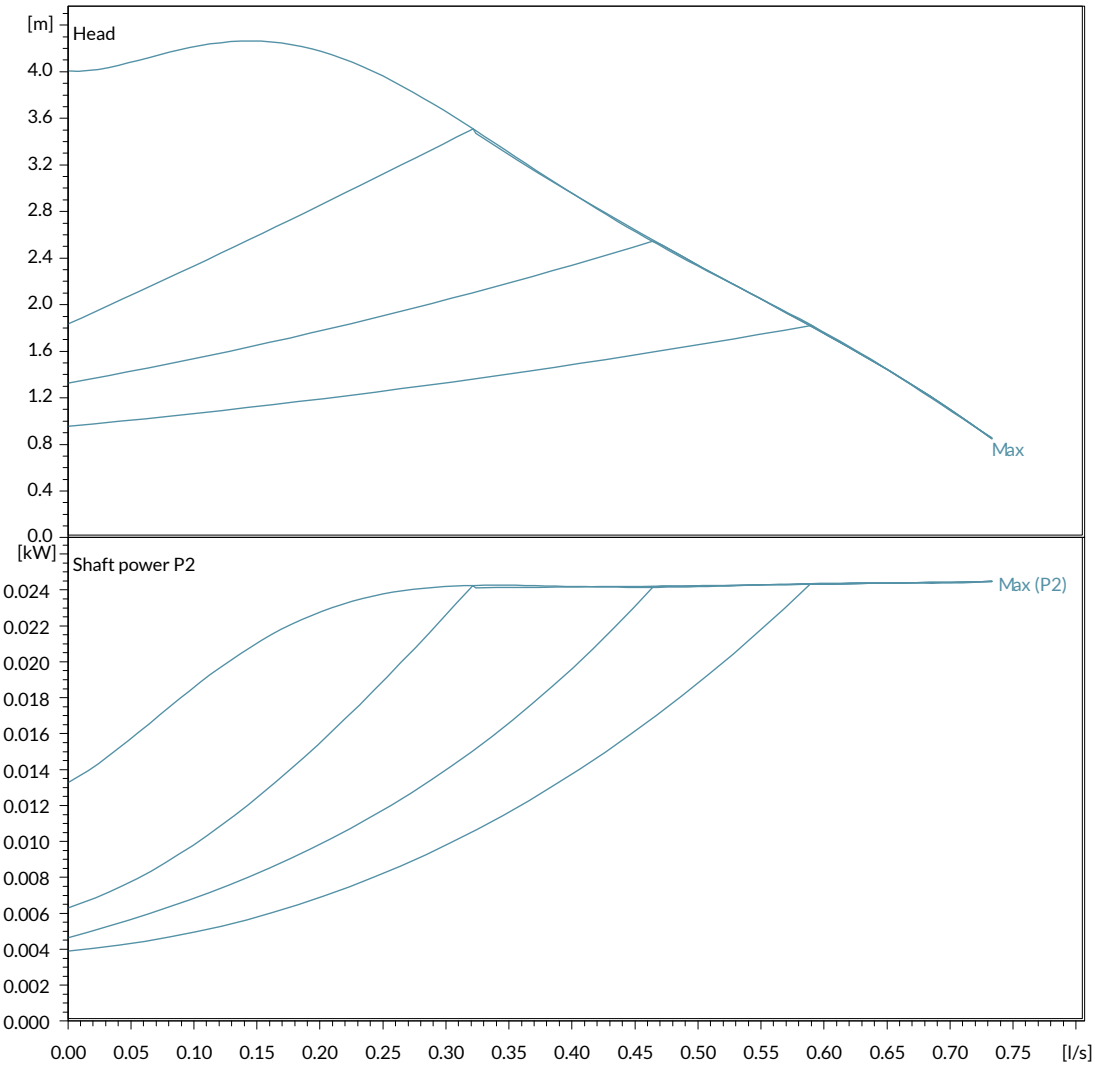
Pump Specifications

Medium	Water
Nominal pressure	10 bar (PN 10)
Specific EEI	≤ 0.15
Rated voltage / frequency	230 V / 50 Hz
Rated current	0.5 A
Degree of protection	IP44
Insulation class	F
Sound pressure level	≤ 43 db(A)

Materials

Pump body	Stainless steel AISI 304
Motor housing	Aluminium
Impeller	PPE/PS-I Composite
Shaft	Alumina ceramic
Thrust bearing housing	EPDM
Thrust bearing	Graphite
O-ring	EPDM
Wear ring	Stainless steel AISI 304
Rotor can	Stainless steel AISI 316L
Rotor plastic	PPS composite
Rotor sleeve	Stainless steel AISI 304
Control box	PC composite
Front bearing housing	Stainless steel AISI 304





Performance according to ISO 9906:2012 – Grade 3B

Power datas referced to:

Water, pure [100%] ; 4°C; 1000kg/m³; 1.57mm²/s