

ESP Electric Water Boilers

A new generation of energy-efficient hot water solutions for all applications



ESP AsZN Boiler

The ESP range of electric hot water boilers make an installer's life a breeze. With integrated Grundfos pump, expansion vessel, vent and electronic controller fitting is fast and simple, making for a very neat and professional installation.

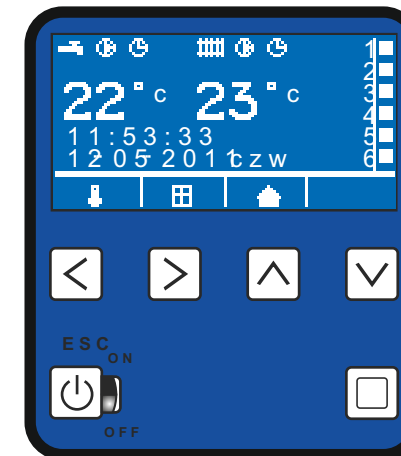
Use them as part of a backup solution for the award winning Ecocent, or for anywhere where hot water is required with the minimum of fuss.



A Microprocessor control system optimises the boiler's operation ensuring it works as efficiently as possible. It uses 'PID' logic - which means it learns as it's used - intelligently stepping up production only when required. Not only does this save energy therefore money, but also ensures there's always hot water just when you need it. Because water isn't heated unnecessarily it also means increased reliability and durability of the boiler.

ESP AsZN-W Boiler

with built-in weather compensation



Features

- ✓ Weather compensation included
- ✓ Built-in room temp. controller (optional)
- ✓ GSM module (optional)
- ✓ Operates independently or as part of system
- ✓ Built-in CH and HUW pump + armature
- ✓ Intelligent Anti Stop system



Boiler insulation mineral (Rockwool) $\lambda 0,042W/mK$



Vent, manometer safety valve and Flamco 8.1 membrane vessel



Grundfos pump industry standard quality



Galvanised sheet case (CNC pressed)

Perfectly matched to work with the Ecocent

Technical data:

- ★ Hanging boiler
- ★ Air temperature adjustment range – depending on the type of room thermostat
- ★ Electronic system fuse – 500 mA
- ★ Hydraulic resistance – negligible, small
- ★ Factory test pressure – 12 at., design pressure – 6at. (safety valve 3 bar, other valve on request)
- ★ Weight: ~22kg (depending on power rating)
- ★ Water volume in tank – 3l
- ★ Efficiency 99.5%
- ★ IPX2, class 1
- ★ Stepless temperature adjustment 5+70°C (floor 5+40°C)

Complies with the following directives:
LVD – low-voltage directive – electric safety,
RoHS – restrictions of hazardous substances

PLEASE NOTE:
ALL OUR BOILERS ARE PRODUCED IN RANGE FROM
4 kW - 24 kW AS ONE AND THREE PHASE TYPE.

Electronic system functions:

- ★ Control: room, floor
- ★ Multi-functional LCD display
- ★ Automatic power selection – by 1/6 (by 1/3)
- ★ Manual power reduction 33-67-100%
- ★ Heater operation time measurement – wear optimisation
- ★ Smooth on/off section switching
- ★ Pump operation time-lag
- ★ Water temperature measurement and stepless adjustment
- ★ Diode boiler operation displays (ESP-AsZN only)
- ★ Compatible with all types of room thermostats (dry contact). Recommendation: Heatmiser

EMC – electromagnetic compatibility,
WEEE – waste electrical and electronic equipment
Inspection for Environmental Protection
register no.: E00017 67W



Proportional-integral-derivative controller

Program non-volatile memory

Protection against increased frequency of boiler activation

Four element protection against overheating

Double energy meter (of ESP boiler)

Pump protection system

WEATHER COMPENSATION

WEEKLY HUW PROGRAMMING

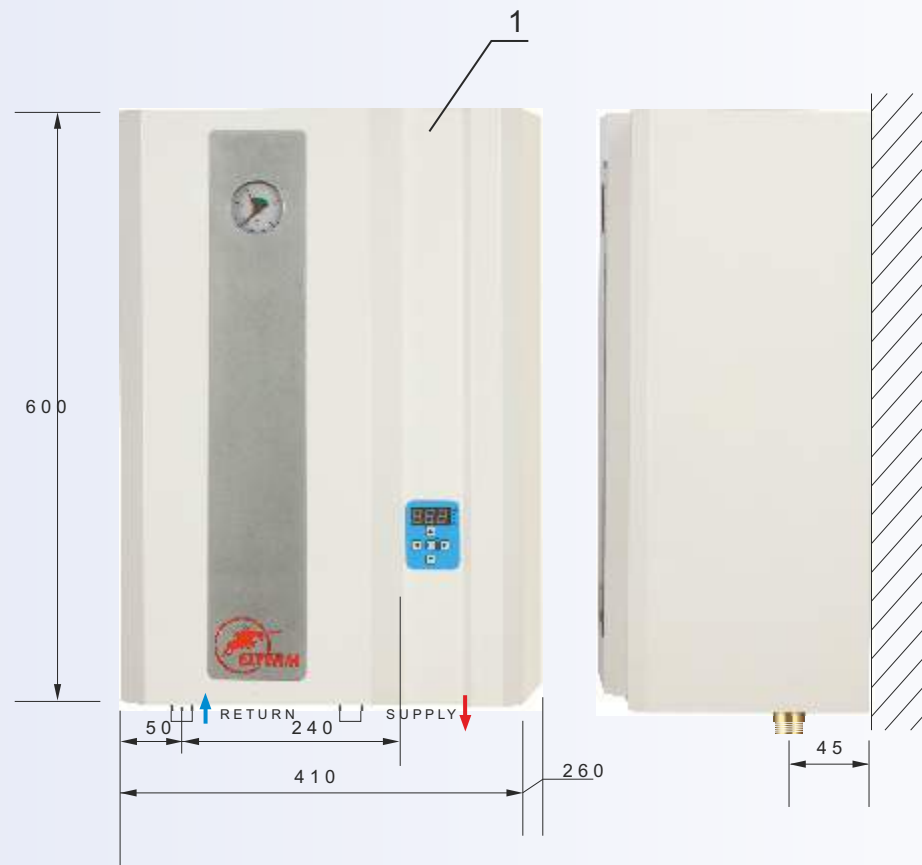
WEEKLY CH PROGRAMMING

GSM MODULE

LCD DISPLAY

Now with WATCH DOG processor control system

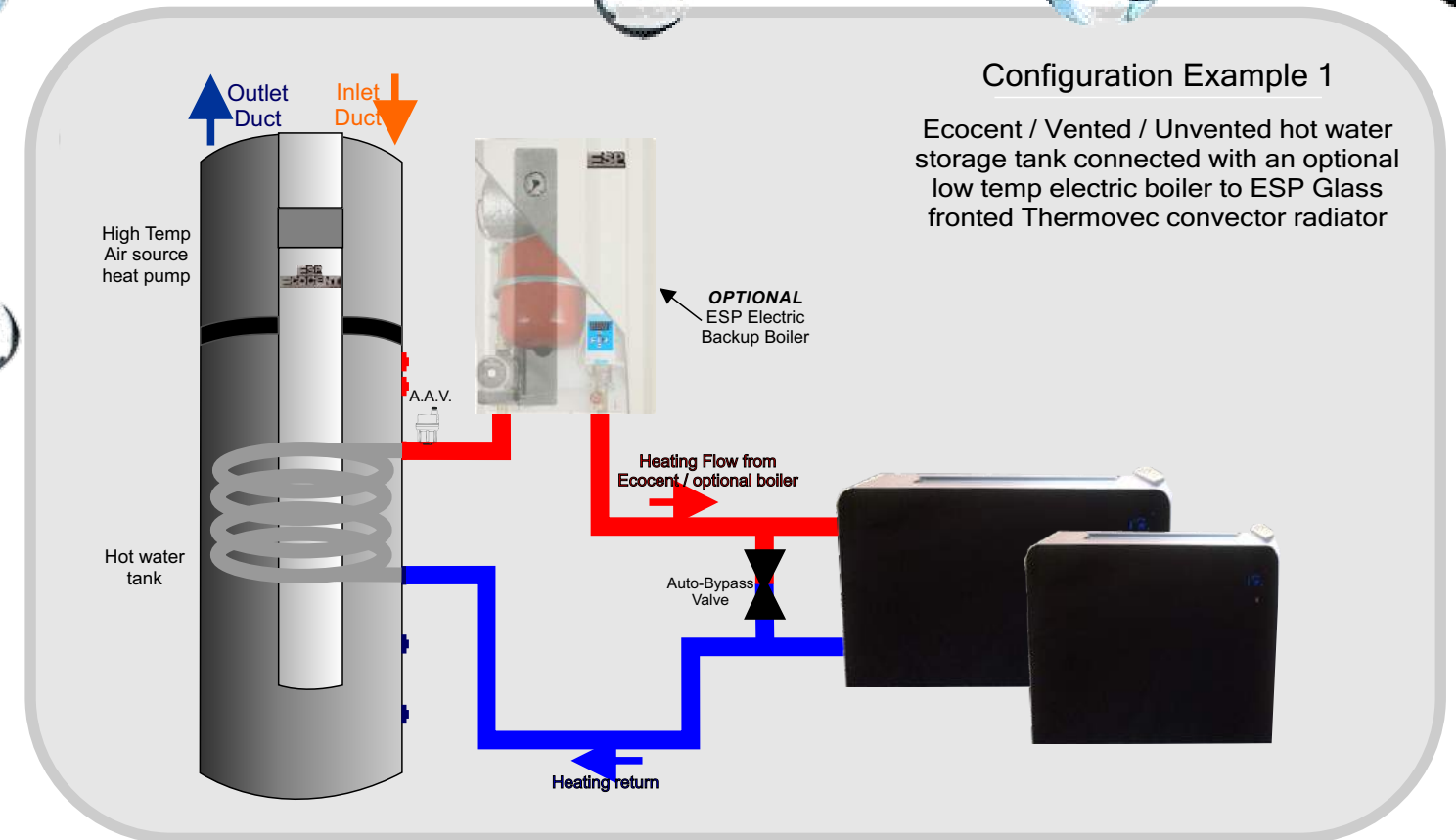
Profiles



Configuration Examples

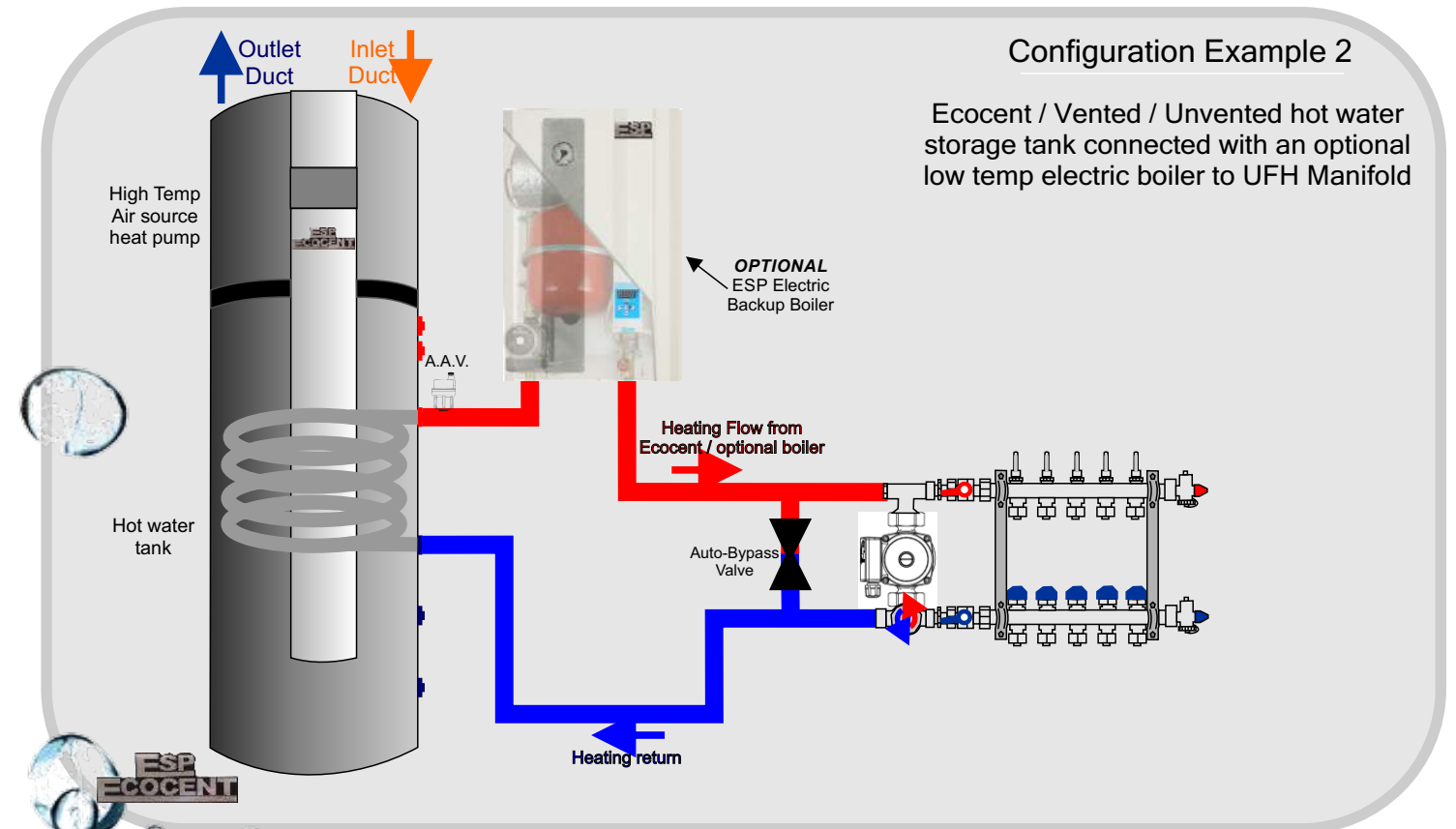
Configuration Example 1

Ecocent / Vented / Unvented hot water storage tank connected with an optional low temp electric boiler to ESP Glass fronted Thermovec convector radiator



Configuration Example 2

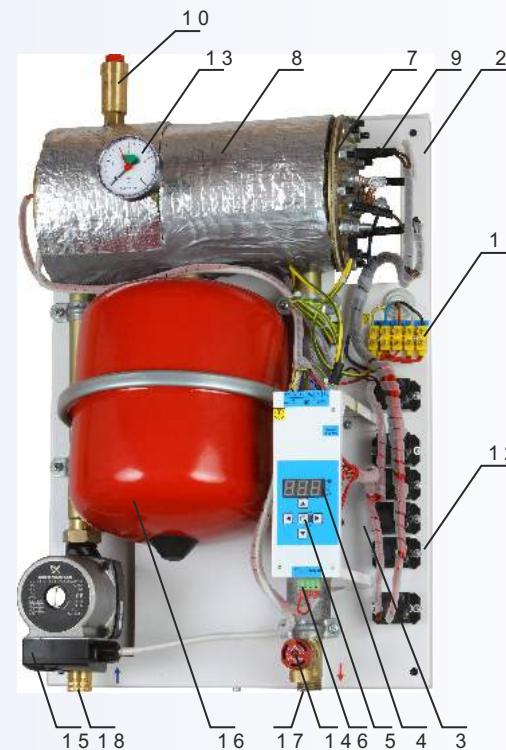
Ecocent / Vented / Unvented hot water storage tank connected with an optional low temp electric boiler to UFH Manifold



Boiler Internals

BOILER EQUIPMENT

1. External case
2. Mounting plate
3. Automatics mounting bracket
4. LED display
5. Control panel
6. Room thermostat terminal strip
7. Boiler body (tank)
8. Boiler insulation
9. Heating unit
10. Automatic vent 3/8" male thread
11. TLZ 16₂ (10₂) terminal strip
12. Relays
13. 4 bar manometers
14. 3 bar safety valve
15. Central heating pump
16. 8 l membrane vessel
17. Supply connector pipe GZ 3/4" male thread
18. Return connector pipe GZ 3/4" male thread



Now with WATCH DOG processor control system

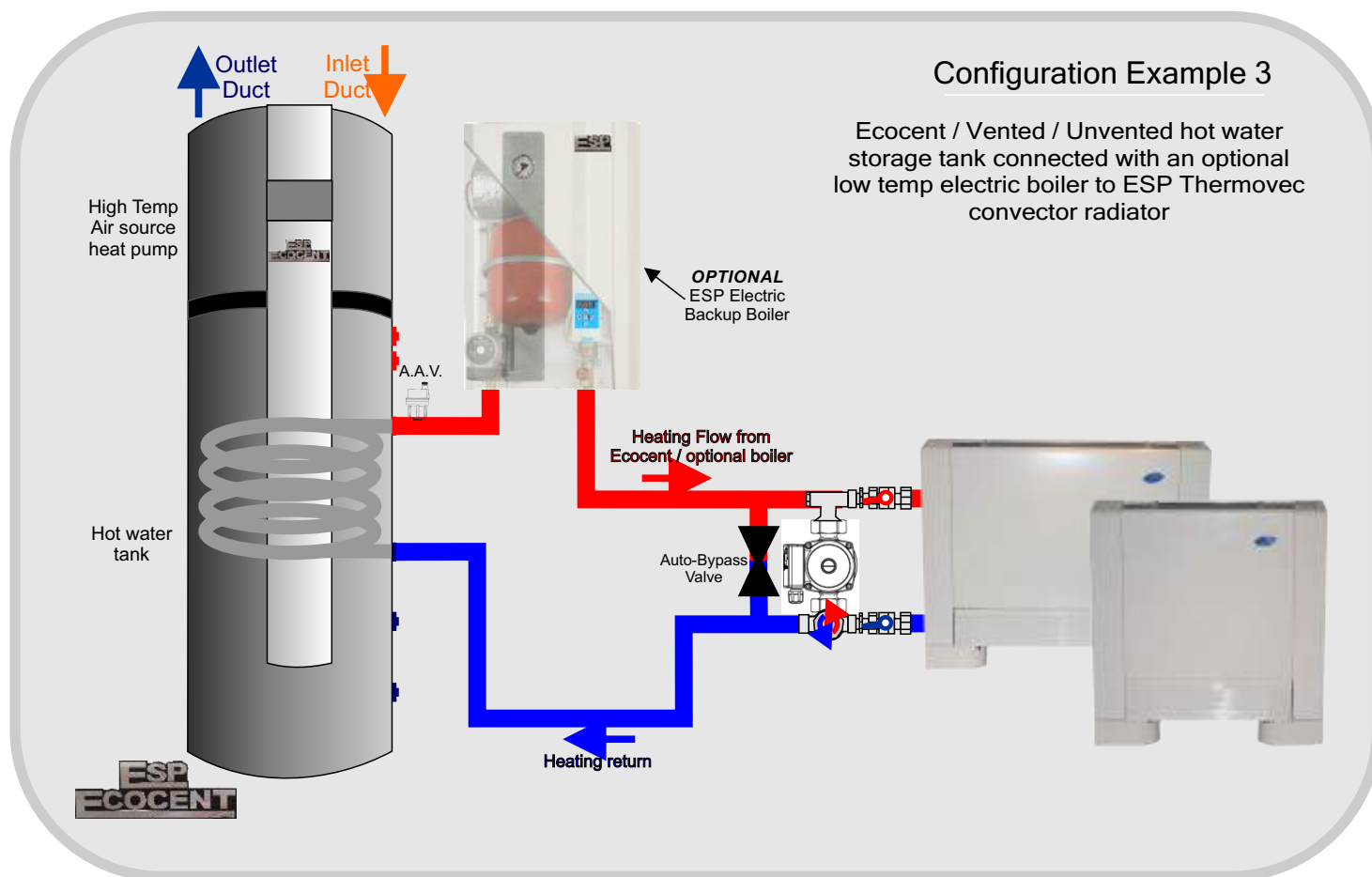
Esp Electric Boilers

There are many many ways of utilising the ESP electric boiler unit, and we have outlined just three possible uses - to supplement the ESP Ecocent in heating roles - supplying the ESP Thermovec fan assisted radiators (Glass fronted or Classic) and also in an under floor heating situation. Please do get in touch if you need more information on how our boilers might be able to work in your project - we have an unparalleled breadth and depth of experience so whatever the scheme - we're guaranteed to know the solution.

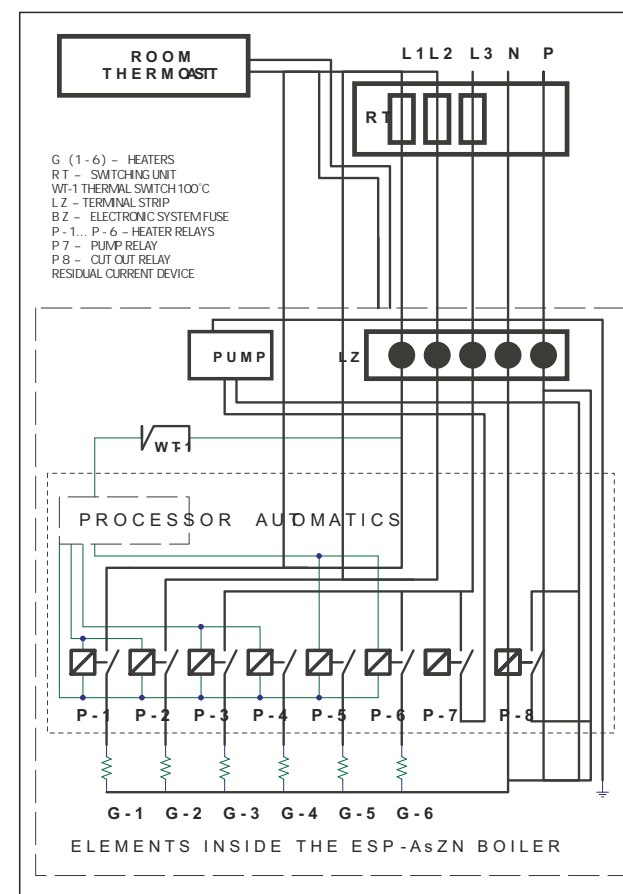
Tech Spec:

Power	Manual power distribution on the boiler	Boiler power electronic modulation	Power supply 230 / 400 V	Fuse safety devices (A)	Power cord in mm ²	Heated area (m ²) height 2,7 m U = 0,3	Alternative heating boiler (m ²)
4 kW	100% - 67% - 33%	by 1/3	1 phase*	1 x 20	3 x 2,5	~ 50	~ 70
4 kW	100% - 67% - 33%	by 1/3	3 phases*	3 x 6	5 x 1,5	~ 50	~ 70
6 kW	100% - 67% - 33%	by 1/3	1 phase*	1 x 32	3 x 4	~ 70	~ 100
6 kW	100% - 67% - 33%	by 1/3	3 phases*	3 x 10	5 x 2,5	~ 70	~ 100
9 kW	100% - 67% - 33%	by 1/6	1 phase*	1 x 40	3 x 6	~ 110	~ 150
9 kW	100% - 67% - 33%	by 1/6	3 phases*	3 x 16	5 x 2,5	~ 110	~ 150
12 kW	100% - 67% - 33%	by 1/6	3 phases	3 x 20	5 x 4	~ 150	~ 210
15 kW	100% - 67% - 33%	by 1/6	3 phases	3 x 25	5 x 4	~ 180	~ 250
18 kW	100% - 67% - 33%	by 1/6	3 phases	3 x 32	5 x 6	~ 220	~ 310
21 kW	100% - 67% - 33%	by 1/6	3 phases	3 x 40	5 x 6	~ 260	~ 360
24 kW	100% - 67% - 33%	by 1/6	3 phases	3 x 40	5 x 10	~ 300	~ 400

* Boilers EKW with 4, 6 and 9 kW are preset to work on 230V. If 400V is essential, the bridge should be removed from the clamp bar protrude bridge out of clamp bar.



ESP AsZN BOILER CIRCUIT DIAGRAM



Earth Save Products do more than just supply Electric Boilers. They have an award winning range of renewable energy heating products including Ecocent EAHP hot water heaters; ESP air source heat pumps; UFH components; expansion vessels; storage tanks and much more besides.

Read more here:
www.esavep.com



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