

## Aquasave BIO System

Instantaneous domestic  
hot water generator  
with buffer vessel



The heat exchanger specialists

Reduced boiler capacity

• Fully packaged

• Compact design

• BMS compatible PID Controller



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## Selection chart

## DHWS temperature program 10-60°C

UNIT TYPE ASB- Stainless steel ASG - Glass Lined	Instantaneous heat load @ 82/90°C primary flow temp (kw)	Primary flow @ 82/90°C (l/s)	Secondary instantaneous flow @ 60°C with 82/90°C primary flow temp (l/s)	Secondary max flow @ 60°C based on 10 minute peak with 82°C primary flow temp (l/s)	Recovery time with 82/90°C primary flow (mins)	Secondary max flow @ 60°C based on 10 minute peak with 90°C primary flow temp (l/s)
ASB/ASG313	46 / 64	0.86	0.22 / 0.31	0.72	23 / 17	0.80
ASB/ASG315	55 / 76	0.92	0.26 / 0.37	0.76	19 / 14	0.86
ASB/ASG319	72 / 95	1.03	0.35 / 0.46	0.84	16 / 11	0.95
ASB/ASG323	87 / 116	1.11	0.42 / 0.56	0.91	12 / 9	1.05
ASB/ASG331	110 / 143	1.19	0.53 / 0.69	1.02	10 / 8	1.18
ASB/ASG345	142 / 177	1.25	0.68 / 0.85	1.18	8 / 6	1.34
ASB/ASG513	46 / 64	0.86	0.22 / 0.31	1.05	38 / 28	1.14
ASB/ASG515	55 / 76	0.92	0.26 / 0.37	1.09	32 / 23	1.20
ASB/ASG519	72 / 95	1.03	0.35 / 0.46	1.18	25 / 19	1.28
ASB/ASG523	87 / 116	1.11	0.42 / 0.56	1.25	20 / 15	1.38
ASB/ASG531	110 / 143	1.19	0.53 / 0.69	1.35	16 / 13	1.51
ASB/ASG545	142 / 177	1.25	0.68 / 0.85	1.51	13 / 10	1.67
ASB/ASG713	46 / 64	0.86	0.22 / 0.31	1.47	57 / 41	1.55
ASB/ASG715	55 / 76	0.92	0.26 / 0.37	1.51	48 / 35	1.61
ASB/ASG719	72 / 95	1.03	0.35 / 0.46	1.59	37 / 28	1.70
ASB/ASG723	87 / 116	1.11	0.42 / 0.56	1.66	30 / 23	1.80
ASB/ASG731	110 / 143	1.19	0.53 / 0.69	1.77	24 / 19	1.93
ASB/ASG745	142 / 177	1.25	0.68 / 0.85	1.93	19 / 15	2.09
ASB/ASG1013	46 / 64	0.86	0.22 / 0.31	1.88	76 / 55	1.97
ASB/ASG1015	55 / 76	0.92	0.26 / 0.37	1.93	64 / 46	2.03
ASB/ASG1019	72 / 95	1.03	0.35 / 0.46	2.01	49 / 37	2.12
ASB/ASG1023	87 / 116	1.11	0.42 / 0.56	2.08	40 / 30	2.22
ASB/ASG1031	110 / 143	1.19	0.53 / 0.69	2.19	32 / 25	2.34
ASB/ASG1045	142 / 177	1.25	0.68 / 0.85	2.34	25 / 20	2.51
ASB/ASG1513	46 / 64	0.86	0.22 / 0.31	2.72	114 / 82	2.80
ASB/ASG1515	55 / 76	0.92	0.26 / 0.37	2.76	96 / 69	2.86
ASB/ASG1519	72 / 95	1.03	0.35 / 0.46	2.84	73 / 55	2.95
ASB/ASG1523	87 / 116	1.11	0.42 / 0.56	2.91	60 / 45	3.05
ASB/ASG1531	110 / 143	1.19	0.53 / 0.69	3.02	48 / 37	3.18
ASB/ASG1545	142 / 177	1.25	0.68 / 0.85	3.18	37 / 30	3.34

### OPTION 1

When the Aquasave is fitted in an unvented system, the following components are necessary to be fitted into the cold feed pipework and are available at extra cost:

- Isolating valve
- Strainer
- Pressure reducing valve
- Non return valve
- Expansion vessel
- Expansion relief valve
- PTRV

### OPTION 2

(ASG – Glass lined only)  
Electrically controlled titanium anodes

### OPTION 3

(ASG – Glass lined only)  
Immersion heaters – please refer to table.

### INSULATION OPTIONS

Flexible M1 fire rated standard on glass lined range (M0 available as option)  
50mm thick rockwool type material  
External M1 fire rated flexible PVC film finish  
Wrap around type with zip fastener  
100mm option available at extra cost.

Flexible M0 fire rated standard on stainless steel range (M1 available as option)  
50mm thick rockwool type material  
External M0 fire rated rigid aluminium sheet finish  
Build around type with quick fastening catches  
100mm option available at extra cost.

### ELECTRICAL LOADINGS

240V, 1ph, 50 Hz

Primary pump power rating	Secondary pump power rating	Primary pump type	Secondary pump type
245 Watts 1.05 A	115 Watts 0.5 A	UPS 32-80	UP20-45N

## After sales service

The responsibilities of HRS go beyond the delivery of the equipment. Trained staff are on hand to offer advice concerning spare parts and maintenance, or for arranging service call outs. To assist customers, we offer a total service which includes testing, servicing and repair to *all* heaters and heat exchanger types. The complete after sales service can be summarised as providing the following:

- On-site servicing and maintenance contracts
- Fully supply of spare parts
- Commissioning, training and installations
- Testing, servicing and repair

## Customer services

A dedicated Customer care department has been implemented to help achieve customer satisfaction. All equipment deliveries receive a follow-up courtesy call to ensure that an efficient service has been provided. The customer comments are valued, and will be used to assist HRS in meeting the changing needs of our customers more closely.

HRS personnel are dedicated to delivering total solutions to your heat exchanger requirements.

## The HRS range

The full range of heat exchangers from HRS Hevac includes:

- Plate heat exchangers
- Aquasave dhw generator
- Cetemodule instantaneous water heaters
- Cetecoil vertical tubular heat exchangers
- Brazed plates
- Gas fired water heaters
- Ygnis boilers
- Buffer vessels



The manufacturer reserves the right to alter the design without prior notice in the interest of continual product development.

# Controlled Aquasave System by HRS

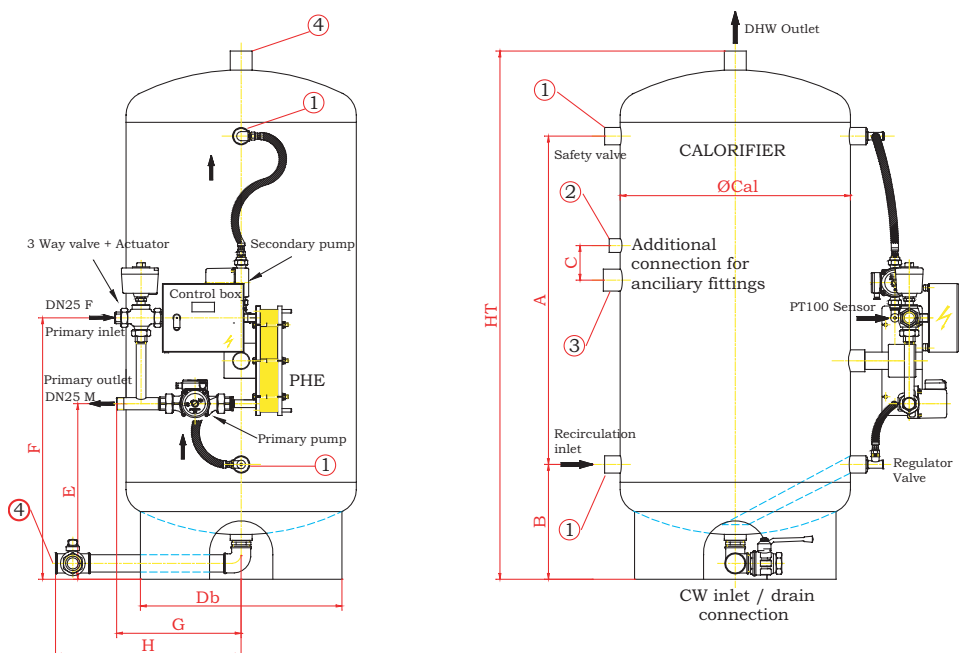
The HRS Aquasave System is designed for heating domestic hot water where demand is not constant and high flow rates occur on a regular basis; for example, hospitals, health & fitness clubs, leisure facilities, hotels, office blocks, old peoples homes and prisons.

The Aquasave effectively reduces the boiler power and the hot water storage volume without reducing the hot water output. The plate heat exchanger transfers the boiler power into instant domestic hot water on demand. Designed as a fully assembled system comprising of:-

The Aquasave offers an efficient economic solution which simplifies project design, materials, planning and installation.



## Stainless steel All dimensions in mm. Design subject to change without prior notice.



Capacity (liters)	ø Cal (mm)	Ht (mm)	A	B	C	Db	E	F	G	H	1	2	3	4	Empty weight
300	550	1570	985	325	120	460	535	835	435	500	DN40	DN32	DN40	DN50	85
500	650	1760	1140	360	120	540	570	870	435	500	DN40	DN32	DN40	DN50	120
750	800	1830	1140	400	120	700	610	910	435	645	DN40	DN32	DN40	DN50	150
1000	800	2380	1695	400	120	700	610	910	435	645	DN40	DN32	DN40	DN50	220
1500	950	2430	1675	430	120	750	640	940	435	645	DN50	DN32	DN40	DN50	250

## 1. Presentation

The AQUASAVE is an instantaneous DHW generator comprising of :

- **Stainless steel or glass lined buffer vessel – 7 Bar maximum secondary working pressure**
- *Glass lined anodes - magnesium (as standard)*
- *Stainless steel Secondary transfer / charging pump – UP 20-45N*
- *Plate heat exchanger with 316 grade Stainless Steel c/w EPDM Gaskets – CT20*
- *Secondary circuit regulating valve*
- *Primary / Secondary Connecting kit*
- *Electronic controller including:*
  - 3-port electric actuated control valve – VXG 48-25
  - Single headed primary pump – UPS 32-80 (**10 bar max**)
  - SQS 65.0-10 volts actuator
  - PID control panel with PT100 temperature sensor
  - PID Controller with volt free contacts & remote enable

The AQUASAVE unit complies with PED regulation, WRAS, ACOPS and is CE marked



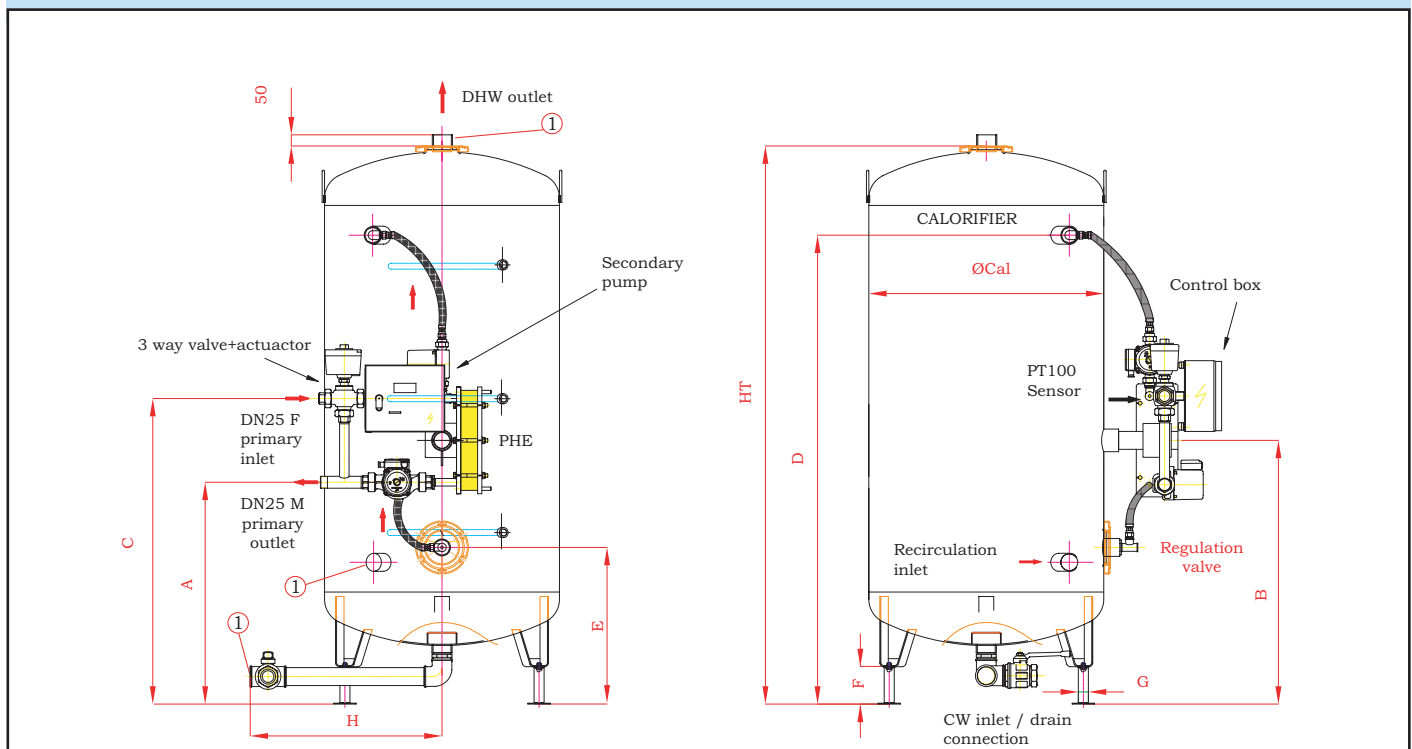
### PACKAGING KIT ON DELIVERY

Calorifier

Insulation

Exchanger kit

**Glass lined** All dimensions in mm. Design subject to change without prior notice.



Capacity (liters)	ø Cal (mm)	Ht (mm)	A	B	C	D	E	F	G	H	1	Empty weight	Imm heater rating kW 3ph
300	550	1668	754	894	1034	1395	534	150	45	500	DN50	155	1x9
500	630	1996	709	849	989	1748	489	150	45	500	DN50	182	1x9
750	790	1901	771	911	1051	1601	551	150	45	645	DN50	278	1x15 or 1x30
1000	790	2254	771	911	1051	1954	551	150	45	645	DN50	308	1x15 or 1x30
1500	1100	2080	870	1010	1150	1700	650	200	76	645	DN50	349	1x15 or 1x30

## 2. Installation

### Water Connections

Fit insulation on the buffer vessel before connecting pipework.

Connect the primary / secondary connecting kit to the buffer vessel.

A recycling circuit is not essential for the operation of the AQUASAVE unit.

Install the Stainless steel flexible pipe at the outlet of the transfer/charging pump.

Connect primary inlet and outlet.

Connect the cold water inlet, the DHW outlet and the recycling pipe on the cold water feed pipe or the recycling connection provided.

**The safety valve is necessary** and its pressure rating should be equivalent to the design maximum working pressure.

**NB: The available free pump pressure on the primary circuit is 5 kPa.**

**Please refer to the specific temperature controller instruction manual.**

## 3. Commissioning

- Flood system with water and bleed the pumps
- Provide electrical supply – 240 Volt
- Set the buffer vessel charging circuit flow rate according to specific project design

## 4. Buffer Vessel Load Setting

Fill vessel with cold water, ensure the primary circuit is at correct working temperature (e.g 82°C), with the correct exchanger power rate available at heat exchanger.

1 – Open regulating valve fully

2 – Ensure the 3-port valve is completely open

3 – Read the exchanger outlet temperature on the controller (not the buffer vessel temperature)

If the outlet temperature from the heat exchanger is lower than the required set temperature (60°C), adjust regulation valve to suit.

**IMPORTANT NOTE: The secondary pump flow rate must be 60% more than the recycling flow rate otherwise vessel charging will be affected.**

## 5. Controller Setting

**Refer to the separate controller operating instructions.**

The controller includes an electronic safety thermostat, which closes the 3-port primary control valve and shuts off the primary pump at high limit (10°C more than set temperature)

The controller will either be manual re-set or automatic re-set by the main controller. (Auto re-set standard supply)

## 6. Maintenance

The semi instantaneous AQUASAVE BIO SYSTEM requires minimum maintenance:

- PHE periodic cleaning depends on water quality and consumption.

## 7. Warranty

Warranty period: 12 months from delivery date.

This warranty period can be extended to 12 months from commissioning date, with commissioning certificate, but can not exceed 18 months from effective delivery, against any material or building defect.

Warranty is limited to replacing the parts accepted as defective.

Warranty extended to 3 years for electronic card.

VOLUTHERM vessels benefit from a warranty covering perforation:

Stainless steel 316 vessel : 3 years.

Glass lined vessel : 5 years

N.B warranty for fittings is 1 year