

# STOKVIS ENERGY SYSTEMS

## ECONOPLATE BV Series. Semi Instantaneous Hot Water



### PERFORMANCE GUIDE—based on an 80°C primary

MODEL	BV10/10 /300	BV10/30 /300	BV10/20 /500	BV10/40 /500	BV10/30 /800	BV10/50 /800	BV10/30 /1000	BV10/40 /1000	BV10/50 /1000
CONTINUOUS OUTPUT AT 60°C l/min	17.4	47.4	35.4	59.4	47.4	66	47.4	59.4	66
PEAK OUTPUT l/10min	432	732	786	1026	1187	1373	1365	1485	1551
PEAK OUTPUT l/60min	1302	3102	2556	3996	3557	4673	3735	4455	4851
PRIMARY FLOW RATE l/sec	0.56	1.22	1.02	1.40	1.22	1.49	1.22	1.40	1.49
HEAT LOAD REQUIRED kW	56	166	123	205	166	231	166	205	231
APPROXIMATE RECOVERY TIME # minutes	17	6	14	8	17	12	21	17	15

#(Assuming no draw off)

### INTRODUCTION

The Stokvis Econoplate BV range of packaged hot water units is designed to provide hot water both instantaneously and from storage when required. Unlike traditional cylinders the use of an external heat exchanger and secondary transfer pump allows hot water to be available at the tank outlet within a very short period of time after start up and before the bulk volume within the vessel itself needs to be heated. Additionally very fast recovery times of the vessel itself can be achieved.

The BV range is available in a range of outputs from 56kW to 231kW, (based on a primary temperature of 80°C), coupled to storage vessels from 300 to 1000litres.

They are designed to operate up to a maximum primary operating temperature of 90°C and up to a maximum primary pressure of 8 bar.

Maximum secondary pressure is 8bar.

For larger applications a number of units may be installed in parallel.

Each model designation is defined in the following way

**BV10** = Brazed Heat Exchanger, with Vessel.

.../XX = Number of plates in the heat exchanger.

.../XXX = Nominal volume of the storage vessel

.../XXXEE = Electrical/Electronic Valve & Controls

.../XXXM = Mechanical Temperature Control Valve

.../XXXE = Electrical 24V (0-10V) Control Valve

### STORAGE VESSEL

- Nominal Sizes 300, 500, 800, 1000 litre
- AISI 316 Stainless Steel
- Insulation Rigid Polyurethane foam CFC & HCFC free, 0.025 W/m<sup>2</sup>K.
- PVC white zipped external cover
- Maximum Pressure 8 bar
- Suitable for mains or boosted cold water
- Unvented kits available

### HEAT EXCHANGER KIT

The Econoplate BV heat exchangers are brazed stainless steel units which are WRAS listed. There are 5 different sizes available, 56, 123, 166, 205, 231kW based on a primary temperature of 80°C. Any heat exchanger can be fitted to any size of our storage vessel, although all combinations are not listed.

They are supplied in kit form with the necessary hot water transfer pump, flow commissioning valve and domestic water pipework, isolating valves and unions for connection to the storage vessel.

Site assembly requires little more than connection of the respective unions and electrical plugs which ensures it is both quick and easy.

### CONTROLS KITS

If a more complete package is required we offer 3 primary control options complete with all necessary fittings and pipework ready to assemble to the heat exchanger again via simple pipe unions.

M - 2 port Thermostatic control valve with hot water immersion sensing element

E - 2 port 24V control valve and actuator for external controls with 0-10V signal

EE - 2 port valve with 230V actuator, Primary pump with 6kPa available to overcome external pipe

losses, Econotrol 2100 electronic PID Controller and Pt100 sensor

### ELECTRONIC CONTROLS

The Econotrol 2100 has the following features:

- : Electronic PID temperature controller.
- : 7 day time clock control of 2 temperature settings and/or 1 temperature /night off, per day.
- : Safety extra low voltage circuit for external "clock" control of 2 temperatures or one temperature and off.
- : Safety extra low voltage circuit for external interlock.
- : Adjustable high limit and low limit temperature alarms, temp. alarm lamp, common volt free temp. alarm and selectable high temp. lockout modes.
- : Functional indication of: primary pump enabled, valve opening or closing.
- : LCD Digital display of day and time, and secondary flow temperature and any faults
- : Full menu driven interrogation of parameters and operating modes.
- : 500mA control fuse, 10A output fuse.

### THERMAL STORE DIMENSIONS

- 300 litre vessel : 1685 mm high, 620 mm diameter
- 500 litre vessel : 1690 mm high, 770 mm diameter
- 800 litre vessel : 1840 mm high, 950 mm diameter
- 1000 litre vessel: 2250 mm high, 950 mm diameter
- 300 litre vessel : 60kg empty, capacity 287 l
- 500 litre vessel : 91kg empty, capacity 480 l
- 800 litre vessel : 134kg empty, capacity 792 l
- 1000litre vessel: 157kg empty, capacity 990 l

These weights and dimensions exclude the heat exchanger kit

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