

Energy Products
International

Aquatherm AE Series

Electric Hot
Water Boilers

Aquatherm AE Series Boiler

The AQUATHERM range of hot water boilers is the result of extensive research, development and many years of experience in the boiler field. This new boiler range retains many of the well proven design concept blended with new innovations using present day technology to improve performance and operation.

One of the most important features of a good hot water boiler is the way the water temperature is controlled. A good temperature control system proportions the input power to the output heat required by selecting the number of heating element steps necessary to maintain the water temperature while supplying the heat demanded by the system. Aquatherm has been an innovative leader in the field of boiler control so that Aquatherm Electric Boilers are currently equipped with the most accurate and sensitive control systems available.

Standard AE Boiler Features

All AE boilers include the following items:

- Main lugs for supply circuits
- Built in magnetic contactors
- Copper sheathed Heating elements
- High-temperature cutouts Low water control
- Temperature control:
 - On-off thermostatic control up to 50kW
 - Step control for 60kW and larger units
- Digital temperature indicator
- Fault light indication
- Pressure relief valve Drain valve



Element Sizes

Standard output capacities include multiples of 10kW elements grouped in banks to suit the number of steps. On request non-standard output capacities and be readily accommodated by combining different element sizes into the same bank to suit the end users requirements.

Temperature Control System

On-Off thermostatic controls are supplied with boilers up to 50kW. Boilers 60kW and larger have our step-type control system. The temperature control system proportions the input power to system demand by varying the number of element groups in use as temperature of the return water changes. The controller features rapid recycling after power interruption. When power is restored the boiler starts with all elements off. To prevent current surges, the step control ensures that only one element group can be switched on at each interval.

Temperature Indication

Digital readout of boiler flow temperature provided as standard.

Fault Indication

Indicator lights showing power on, high temperature and low water indication are provided.



Aquatherm AE Series Boiler

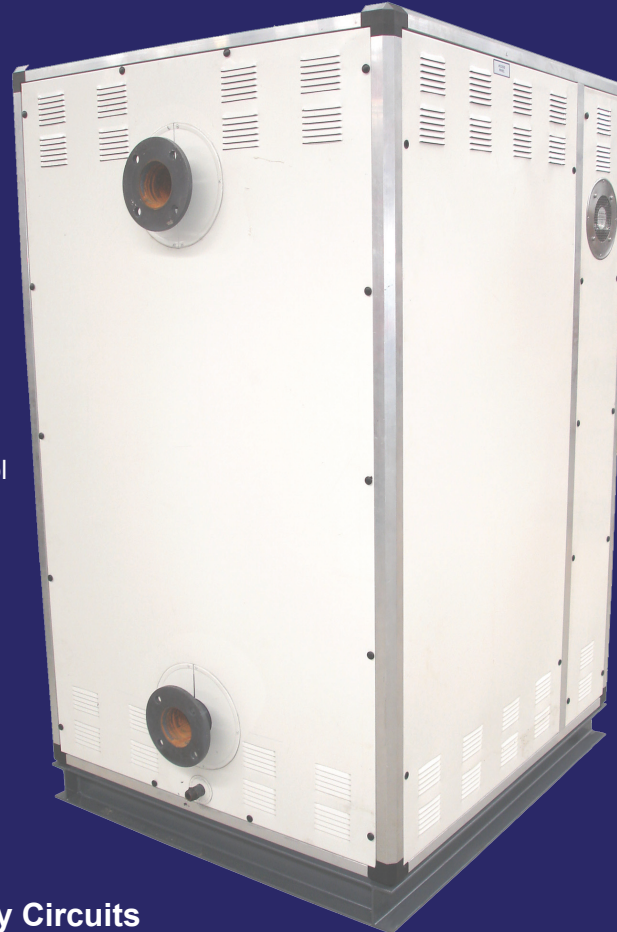
Boiler construction is in accordance with the New Zealand code for unfired pressure vessels. Supply and return tapings are sized to keep the pressure drop through the boiler equal to 4kpa or less. Aquatherm boiler casing are made of 0.75mm Colorsteel and boiler vessel insulated with 50mm foilbacked fibreglass.

Low Water Cutout

An electronic level control switch is provided for low water cutout, which also incorporates an automatic reset feature.

Heating Elements

Three phase copper-sheathed elements are rated at 75 watts per square metre for maximum reliability and long life. They are individually replaceable and loss of a single element does not seriously affect the boiler operation.



External Interlock Connection

Terminals which allow connection to customer control devices, interlocks or other switches. Terminals are 230 VAC.

Magnetic Contactors

Magnetic contactors are provided for element control and sized according to the kilowattage required.

High Temperature Cutout

These controls are normally set as 10°C above operating temperature and are manual reset.

Main Lugs for Supply Circuits

Solderless wire connectors, suitable for copper supply wires, are standard. Wiring should be selected for temperature use with a minimum rating of 75°C

Control Circuits

230 VAC for external control. Internal control voltage is 230 VAC with 24 VAC to step controller.

Optional Extras

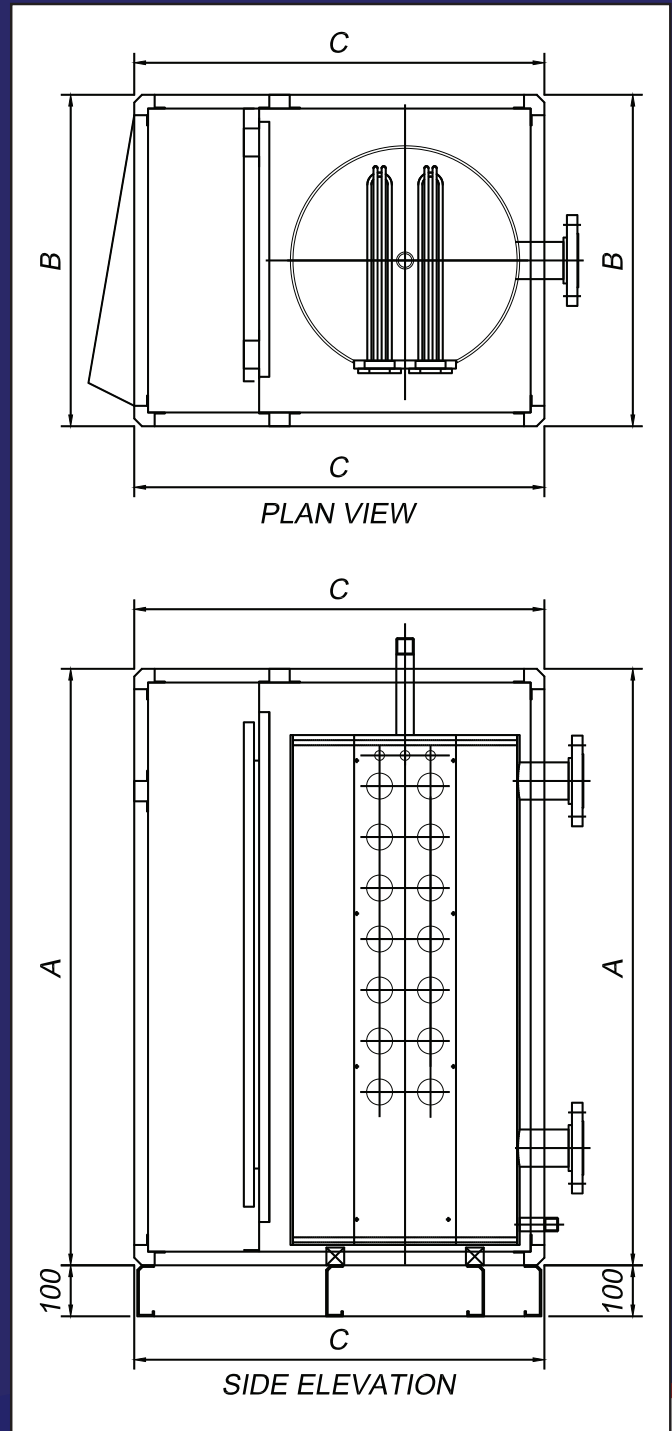
- Elements with other sheath materials are available which special conditions dictate
- Non-standard output capacities can be readily accommodated by combining different elements sites into the same bank to suit the end user requirements
- Higher temperature boilers are available on special order
- 24VAC external control available on request, or external control connection can be provided in conjunction with BMS control systems
- External fault indication if required

Aquatherm AE Series Boiler

Boiler construction is in accordance with the New Zealand code for unfired pressure vessels. Supply and return tapings are sized to keep the pressure drop through the boiler equal to 4kpa or less. Aquatherm boiler casing are made of 1.2mm zintec sheet Steel and boiler vessel insulated with 50mm foilbacked fibreglass. Flanged bases give good weight distribution and simplify bolt-down installation.

Model No.	Standard Output (kW)	Pressure Drop ($\Delta T=10^{\circ}\text{C}$) (kPa)	Number of Steps	Capacity of Steps (kW)	Amperage per Phase (Amps)
AE30	30	0.3	1	1x30	22
AE40	40	0.3	2	2x20	58
AE50	50	0.4	2	1x30, 1x20	73
AE60	60	0.5	3	3x20	87
AE70	70	0.3	3	1x30, 2x20	101
AE80	80	0.3	4	4x20	116
AE90	90	0.4	4	1x30, 3x20	130
AE100	100	0.5	4	2x30, 2x20	145
AE110	110	0.6	4	3x30, 1x20	159
AE120	120	0.7	4	4x30	174
AE130	130	0.7	6	1x30, 5x20	189
AE140	140	0.9	6	2x30, 4x20	203
AE150	150	1.0	6	3x30, 3x20	217
AE160	160	1.2	6	4x30, 2x20	231
AE170	170	1.3	6	5x30, 1x20	246
AE180	180	1.5	6	6x30	260
AE190	190	0.9	15	4x20, 11x10	275
AE200	200	1.0	15	5x20, 10x10	289
AE210	210	1.1	15	6x20, 9x10	304
AE220	220	1.2	15	7x20, 8x10	318
AE230	230	1.3	15	8x20, 7x10	332
AE240	240	1.4	15	9x20, 6x10	347
AE250	250	1.5	15	10x20, 5x10	361
AE260	260	1.6	15	11x20, 4x10	376
AE270	270	1.7	15	12x20, 3x10	390
AE280	280	1.9	15	13x20, 12x20	405
AE290	290	2.0	15	14x20, 1x10	419
AE300	300	2.2	15	15x20	434
AE310	310	2.3	15	1x30, 14x20	448
AE320	320	2.5	15	2x30, 13x20	462
AE330	330	2.6	15	3x30, 12x20	477
AE340	340	2.8	15	4x30, 11x20	491
AE350	350	2.9	15	5x30, 10x20	506
AE360	360	3.1	15	6x30, 9x20	520
AE370	370	3.3	15	7x30, 8x20	535
AE380	380	3.4	15	8x30, 7x20	549
AE390	390	3.6	15	9x30, 6x20	563
AE400	400	3.8	15	10x30, 5x20	578
AE410	410	4.0	15	11x30, 4x20	592

Model No	Height (A) (mm)	Width (B) (mm)	Length (C) (mm)	Water Content (Litres)	Dry Weight (Kg)
AE30 to AE60	800	525	670	41 to 39	140
AE70 to AE120	870	650	805	103 to 100	210
AE130 to AE180	1170	650	805	145 to 142	260
AE190 to AE410	1700	1030	1150	536 to 524	570



Aquatherm Electric hot water boilers are also available in large sizes up to 4000kW
Non - standard element sizes available on request

Energy Products
International
www.energy-products.co.nz

DOC.VER 06/07

Hamilton - Head Office
30 Gallagher Drive
P.O. Box 15 058
Dinsdale
Hamilton 3243
Ph 07 839 2705
Fax 07 834 4212

Auckland
26 Timothy Place
P.O. Box 19 751
Avondale
Auckland 1746
Ph 09 820 6120
Fax 09 820 6140

Wellington
55-57 Cuba Street
P.O. Box 33 070
Petone
Lower Hutt 5046
Ph 04 576 9980
Fax 04 576 9940

Christchurch
35 Byron Street
P.O. Box 7443
Sydenham
Christchurch 8240
Ph 03 366 6611
Fax 03 366 6612