

Steam Based Hot Water Generator

Hot Water Module

Applications

The Aqua heat hot water module is designed to serve as the most efficient and reliable way to supply either hot or superheated water as a heating medium for all types of exchangers.

This specialized module provides continuous heating and circulation of hot water below 100°C and superheated water above 100°C at a constant flow rate and at a constant temperature.

The module is ideal for use in conjunction with food processing installations in which hot water is used as the heating medium. It can also easily be combined with many other types of equipment, such as stand-alone heat exchangers, or be installed as part of a aseptic heat treatment system.

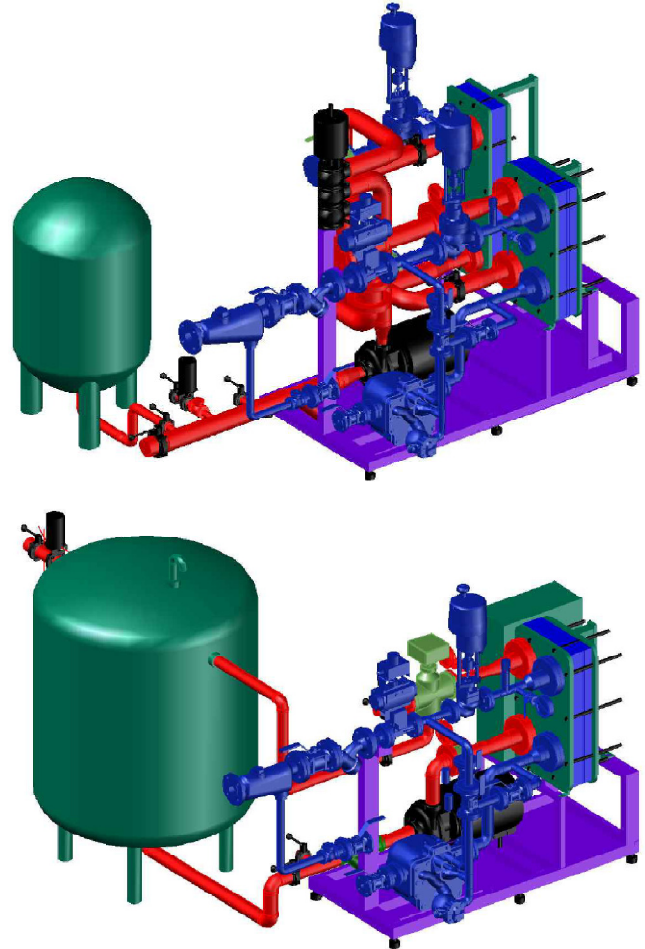
Design

The Aqua heat module is a pre-assembled skid mounted unit designed and built specifically to ensure a steady supply of hot water with only minimal variations in temperature. This supply is Automatically regulated by the combination of the steam regulating valve and the controller unit built into the control panel. The controller are with HMI touch screen for ease of operation. Basic controller are also available

This hot water module includes a plate heat exchanger with stainless steel heat transfer plates, a hot water circulating pump powered by an electric motor as well Steam base pumps, a steam regulating valve and condensate group, the appropriate instruments and internal piping, all installed on a stainless steel frame. Pumps with variable frequency drive with PID controller are also available. Steam control valve are also accompanied by steam stop valve on emergency fail safe system

The hot water module is delivered skid-mounted as a complete pre-assembled unit that is easy to install close to the heat exchanger that uses the hot water, or in a suitable separate utility/boiler room.

This pre-configured set-up makes it easier, quicker and cost-efficient for the customer to ensure a reliable, consistent supply of hot water with pre-determined specifications. It reduces the risk, cost and delays often associated with ad hoc installations using individual items of equipment from different manufacturers. It makes the operation of heat exchangers more efficient and more consistent, thus helping boost quality results and reduces overall operating costs. Aqua heat hot water modules can be customized to suit a wide range of specific operating needs as well as individual customer requirements.



Features

- Compact, modular design
- Can be used in many different combinations and applications
- Time-saving automatic operation
- Control panel fitted with automatic regulators.
- PID controller, HMI touch screen
- Automatic pumping trap
- Pumps with VFD controller
- Wide Gap plate heat exchanger

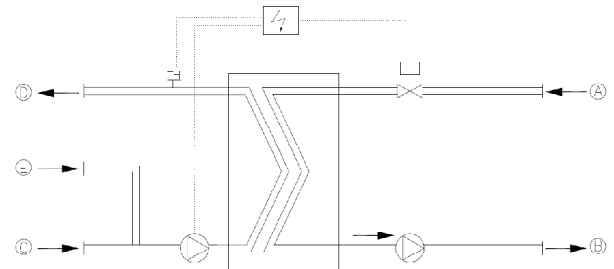
Benefits

- Straightforward installation with low cost of ownership
- Pre-assembled, pre-configured set-up helps eliminate time- wasting and risk
- Space-saving design with a small footprint
- Supplies the correct amount of heating water at the desired temperature. This ensures the best possible exploitation of the heat exchanger's capabilities and performance, and reduces steam consumption
- Reliable operation, due to self-adjusting steam regulation equipment.

Working principle

A circulation pump makes sure the full flow of hot water gets to where it is needed in the heat exchanger. To achieve the required water temperature, steam is used to heat the contents of the plate heat exchanger to the desired set point.

The amount of steam used is determined by a steam regulating valve controlled by a temperature controller, or by the customer's own control panel/PLC system. The set point can either be the temperature of the hot water leaving the actual hot water module, or the outlet temperature from the heat exchanger in which the hot water is used.



A Primary inlet
 B Primary outlet
 C Secondary inlet
 D Secondary outlet
 F Make up inlet

Technical data

Type	Hot water capacity [m ³ /h]	Heating capacity [kW]	Δ t on hot water [°C]	Steam consumption [kg per hour]
Hot water module 1	1.000	31	25	50
Hot water module 2	5.000	91	16	150
Hot water module 3	10.000	156	13	250
Hot water module 4	15.000	250	13	400
Hot water module 5	20.000	313	13	500
Hot water module 6	30.000	469	13	750
Hot water module 7	40.000	625	13	1000
Hot water module 8	60.000	938	13	1500
Hot water module 9	80.000	1250	13	2000

The maximum hot water temperature available from standard-configured Aqua heat hot water modules is 150 °C. If higher temperatures are required, modules can be customized to suit these specific needs

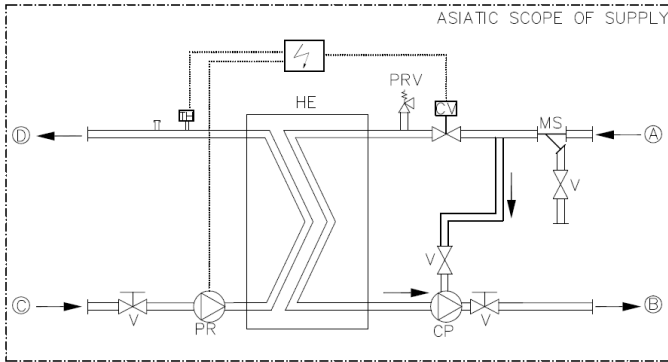
Optional equipment

- Junction box where all electrical connections on the module are collected and terminated, making it easy to link them to external control panel.
- Automatic on/off valve for steam and water connections/ tie-in can be included
- HMI screen
- Pumps with VFD
- Automatic pumping trap

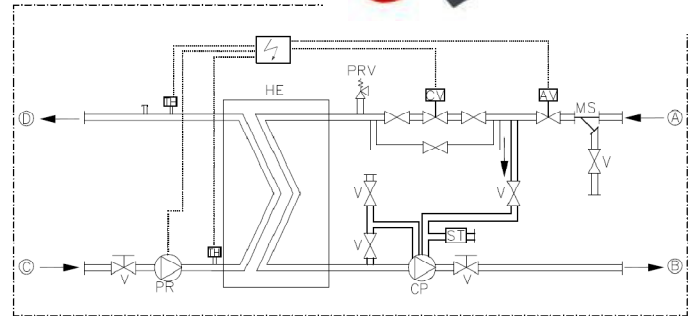
Hydraulic chart



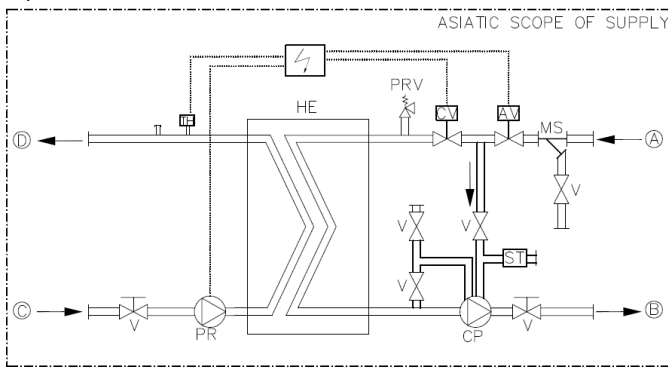
Aqua Heat Basic version



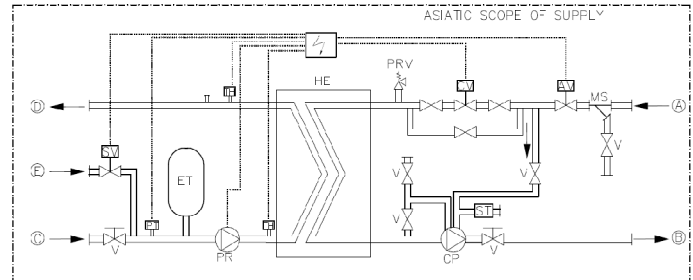
Aqua Heat safe version



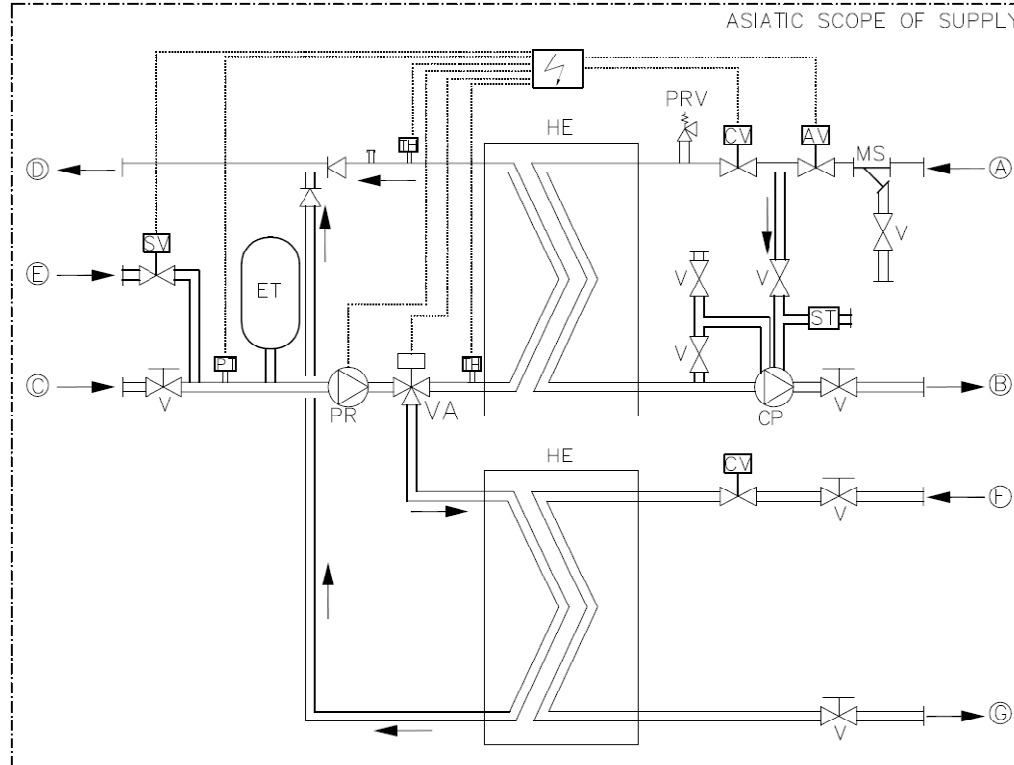
Aqua Heat 2 Port version



Aqua Heat By-pass



Aqua Heat HEATING AND COOLING SYSTEM



- A Primary inlet
- B Primary outlet
- C Secondary inlet
- D Secondary outlet
- E Make up inlet
- F Chilled water inlet
- G Chilled water outlet
- V Butterfly/ball/Gate valve
- CV Control valve
- SV Solenoid valve
- AV Auto on/off valve
- VA Setting valve
- MS Moisture separator
- ST Steam trap
- PRV Pressure relief valve
- PR Cir. pump (option)
- CP Condensate pump
- ET Expansion tank
- Th Safety thermostat
- DC Drain cock

Aqua Heat is assembled, wired and tested prior to shipment.

Partner in Brief

Established in 1974, Asiatic Traders CRISIL rated SME 1B and BEE- Accredited Energy service company (ESCO) which is into efficient turnkey solution provider to liquid and heat transfer requirement

Our pumping Skid systems are engineered to help companies solve process problems while maintaining a high level of quality and efficiency. Many of our customers tell us what they want the system to accomplish along with the basic parameters, and then our team of qualified engineers and technicians do the rest using the latest CAD design software. Customers with precise specifications and drawing packages will be pleased to learn that we do not cut corners and we will meet their exact specifications.

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