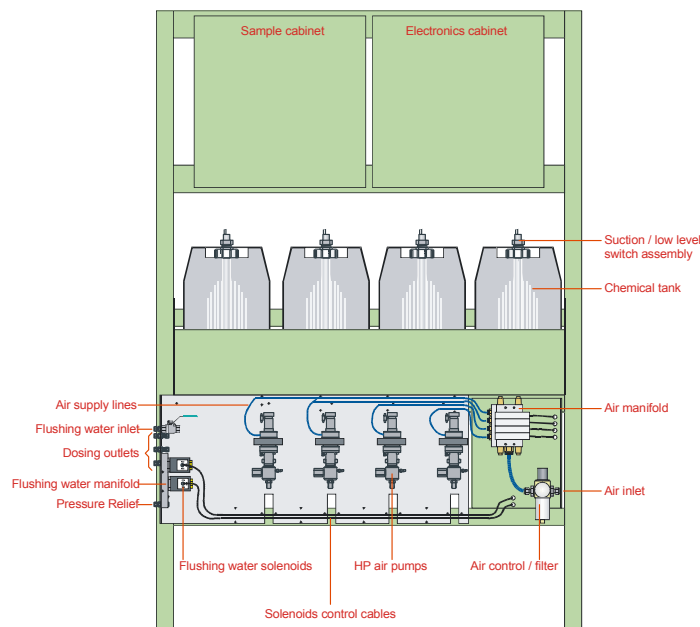


AQ300HP Boiler Water Quality Management System



Designed for High Pressure Applications, the **AQ300HP** accurately monitors and manages the boiler and feed water conditions for up to 3 boilers. It injects exactly the required amount of chemicals and provides auto surface blowdown. It keeps the entire plant within the desired chemical limits, 24 hours a day, regardless of load.

The units can be programmed for different water treatment chemicals.

The system includes pH, conductivity, dissolved oxygen and temperature probes, data comm-unit with software, feed flow meters, auto blowdown valves, test kit and dosing pumps c/w suction assemblies with low level alarm.

The software provides for continuous display of all important readings and pre-formatted 'Management Reports' provide a summary of average readings for any period requested. The unit can be linked to other **AQUANET** systems and all readings are displayed on one monitor.

Installation can be carried out by the customers engineering staff, sub-contractor or **AQUANET** can also install with their own personnel.

Features and Benefits

- Keeps boilers scale and corrosion free = lower operating costs
- Ensures correct chemical levels at all times = no manual control
- Easily reconfigured a new chemical supplier = free choice
- Unique Windows Software, written for networking = ease of use
- Can be used on an existing control room PC = lower capital cost

Specifications

Description

The equipment is supplied pre-wired on a steel tubular frame.

The instrumentation is housed in a split stainless steel cabinet with hinged lockable doors, the left hand section houses the sampling system and probes, the right hand section houses signal conditioning, control and the communications interface.

Dimensions (W) x (H) x (D) mm

Cabinet 1020 x 490 x 250

Frame 1200 x 2100 x 460
(assembled c/w chemical drums)

Colour – RAL 7-001 (dark grey)

Rating - IP66

Power requirements

220/240 Vac 50/60 Hz. 6A Max.

Operating Temperature 50°C max.

Humidity 0-95% RH non condensing

Probes

pH

Range 0 – 14pH

Automatic temperature compensation

Sealed Reference cell

Resolution 0.5% FSD

Conductivity

Range 0-400 uMhos (280 mg/l TDS)

(other ranges available)

Automatic temperature compensation

Resolution 0.5% FSD

Dissolved Oxygen

Range 0 – 2.5 mg/litre

Automatic temperature compensation

Resolution 0.5% FSD

Feed Tank Temperature

Stainless steel pocketed probe

0-110°C scaled as 4-20 mA signal

Communications

RS422 differential line drivers

CRC protected

Links to other **AQUANET** units

Mechanical Flow Meters

Flanged DN25 to DN80 PN16

Hot water 130°C

Ultrasonic Flow Meters

Non penetrating.

Clamps onto outside of existing pipe work.

Transducer maximum operating temperature 200°C

Blowdown Valves

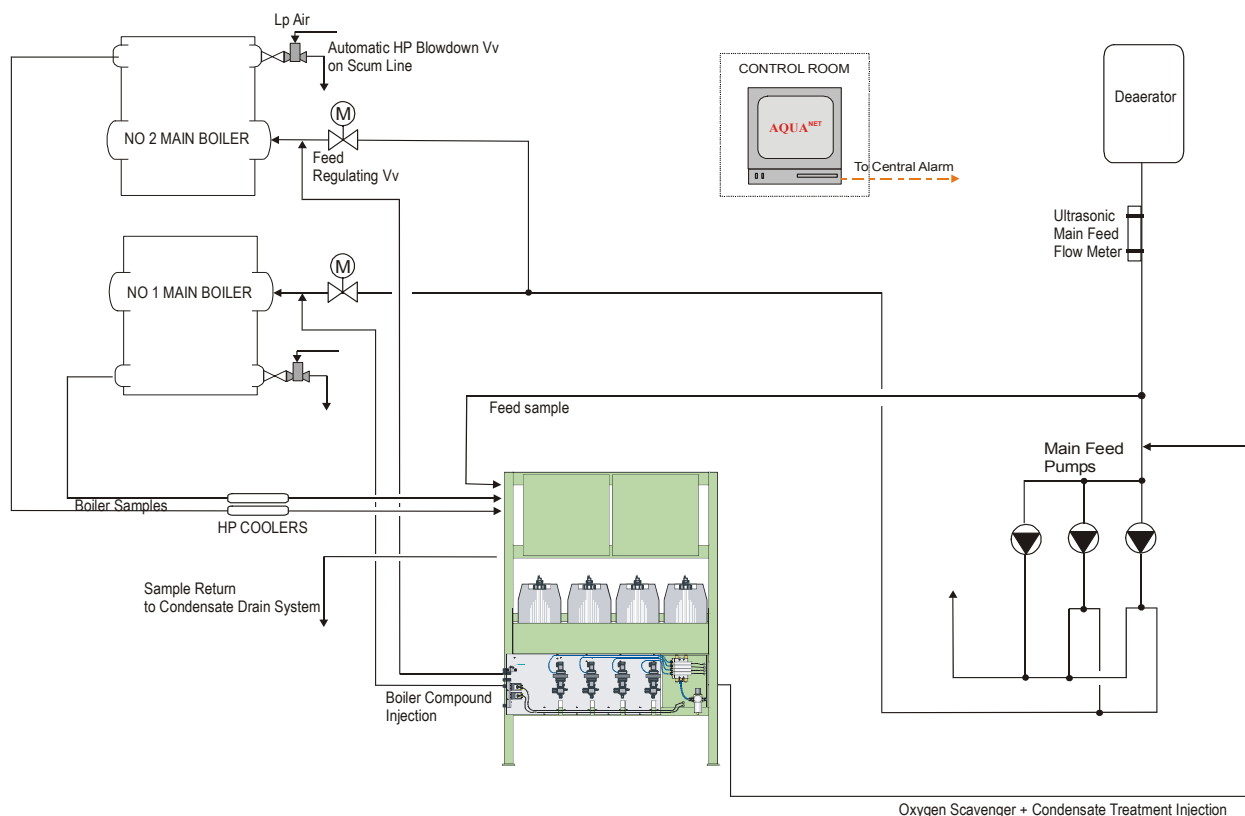
0 to 100 bar max

Piston pumps

Air operated 0.25 litre/hr (590 bar)

Material stainless steel.

General Layout for **AQUANET AQ300HP** Boiler and Feed Water Quality Monitoring and Management Equipment



Description of Operation

A sample from the feed system and each boiler is selected by each controller on a continuous cycle. The samples are cooled, pressure reduced and then passed through the probe block. The samples are analysed and the information is processed by the program, followed by an adjustment of the relevant injection pumps. The boiler water conductivity automatically controls the modulation of the surface blowdown valves, giving timed blowdown periods via a built in orifice. This accurately maintains the water at the ideal density for maximum chemical performance with minimum waste.

Flow Management

The system provides a continuous display for all boilers, feed water, condensate and total main feed. The display can be cumulative, average rate per minute and hour.

This data not only assists in the control of the water chemistry but also provides information indicating the source of feed losses and steam production. A useful maintenance tool.

Chemical consumption

This is also displayed with an indication of the chemical consumption.

User Guide

The **AQUANET** PC comes complete with a comprehensive user guide, which contains on-line copies of the operating, maintenance and fault finding manuals. It includes system drawings both mechanical and electrical and educational text describing water treatment practice.

Event Alarms

Fault and limit alarms are both displayed on the screen and logged. They have a unique feature of a warning box appearing on the screen, which provides practical advice and instructions on corrective action.

Log Reports

Pre-formatted management reports provide a summary of average monthly readings, with comments on those which are persistently out of range. All reports and data can be viewed and printed for any period requested and are also available in various graphic formats. All data is archived for many years.

Auto-Calibrate

All probes are easily calibrated with the test kit provided and via easy to follow, on-screen, step-by-step instructions. It takes only minutes to carry out accurately, preventing the use of incorrect parameters.