

Water-Manager

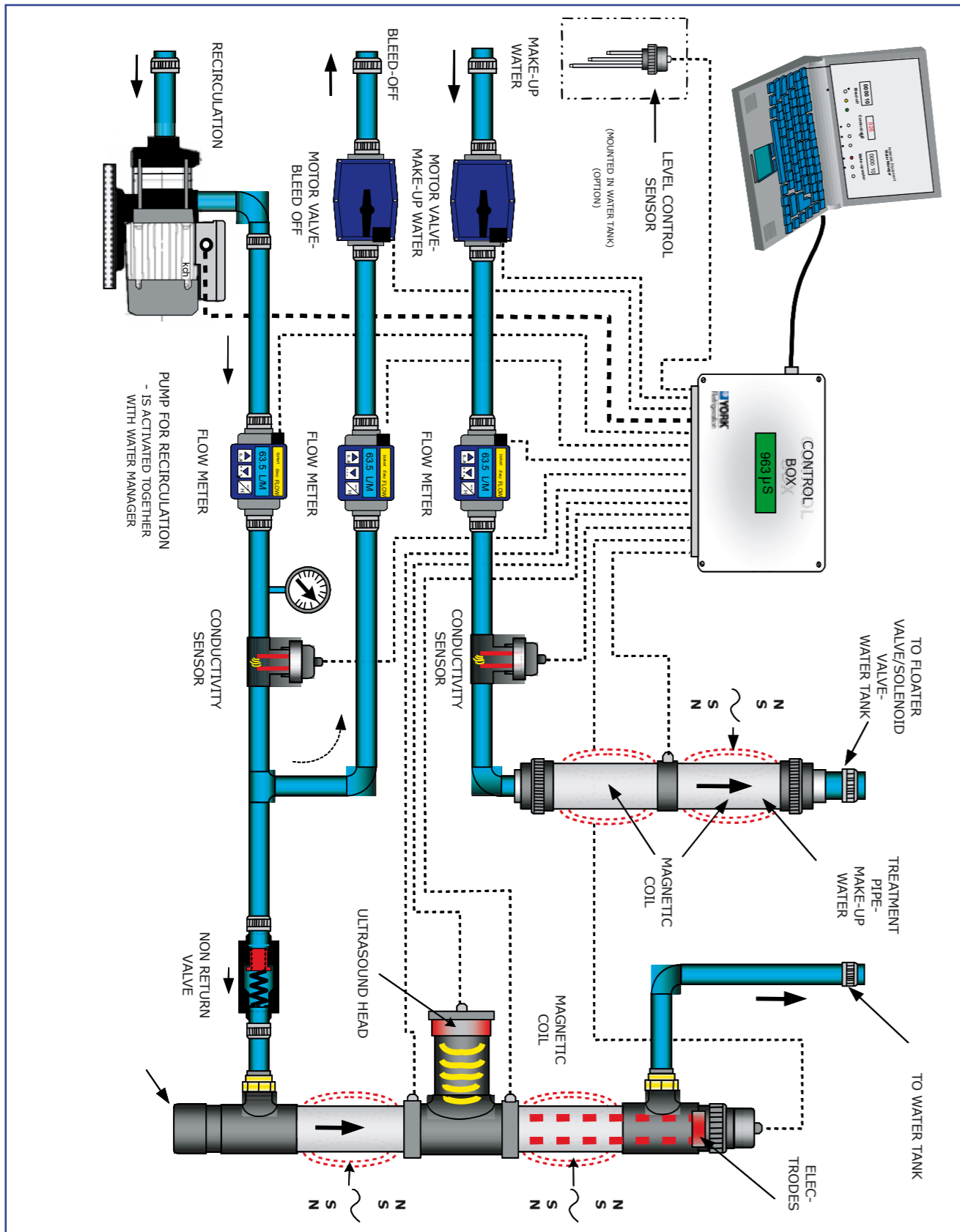
Physical Water Treatment for
Condensers and Cooling Towers

Prevents
Scale

Reduces
Bacteria

Less power consumption
Less maintenance
Longer lifetime
Avoiding aggressive cleaning mechanicals
Healthy environment

Schematic Outline of the Water Manager System



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Refrigeration Antiscale Water Manager For Evaporative Condensers and Cooling Towers

Why Water Manager?

- Calcium carbonate scale is converted to fine slurry, which is bleed off.
- Bacteria levels are kept at low levels reducing the risk of Legionella.
- No corrosion by keeping the calcium in the cooling water
- No use of chemicals in the condenser, leading to lower costs.
- Equipment efficiency increased due to reduction of scale.
- Lower energy costs due to the increased efficiency of the equipment.
- Intensive monitoring of the condenser running by PC programme.
- No handling of aggressive chemicals.

What is the Water Manager?

A system for the total management of condensers and cooling tower water.

It is supplied with motorised valves, flow meters and sensor for monitoring and control of water level and conductivity.

The Water Manager itself consists of 2 treatment pipes, 1 ultra sound head and a control box. The 2 treatment pipes (PVC), one for the make-up water and one for the recirculation water, are laid with copper coils. Inside the recirculation pipe is a pair of electrodes placed to provide needle-formed pulses. An outer pipe protects the treatment pipes. One ultrasound head is also part of the system. In the control box are the dynamic pulses generated for the copper coils, the electrode and the ultra sound head.

It monitors and controls the condenser water level utilising a three rod sensor. If an floater type inlet valve is employed, the Water Manager records the water inlet.

It monitors the conductivity level of the make-up and cooling water using 2 separate sensors, which stays clean through a unique pulsing system. The EC sensors are calibrated automatically by the system
It drains water automatically cooling water according to preset conductivity levels or percentages of the make-up water.

Models

The Water manager is supplied in two different model sizes. 2 inch 5000 kW and three inch 10000 kW. The Control Box is made of steel with IP64 standard. The system sits on a stand 150 cm high and 160 cm wide. The system only needs 110-220 volt power and pipe connections to be operational.

For computer and remote control has a PC computer program been developed. It allows full control of all functions from the computer, as well as changing of drain levels.

Installation

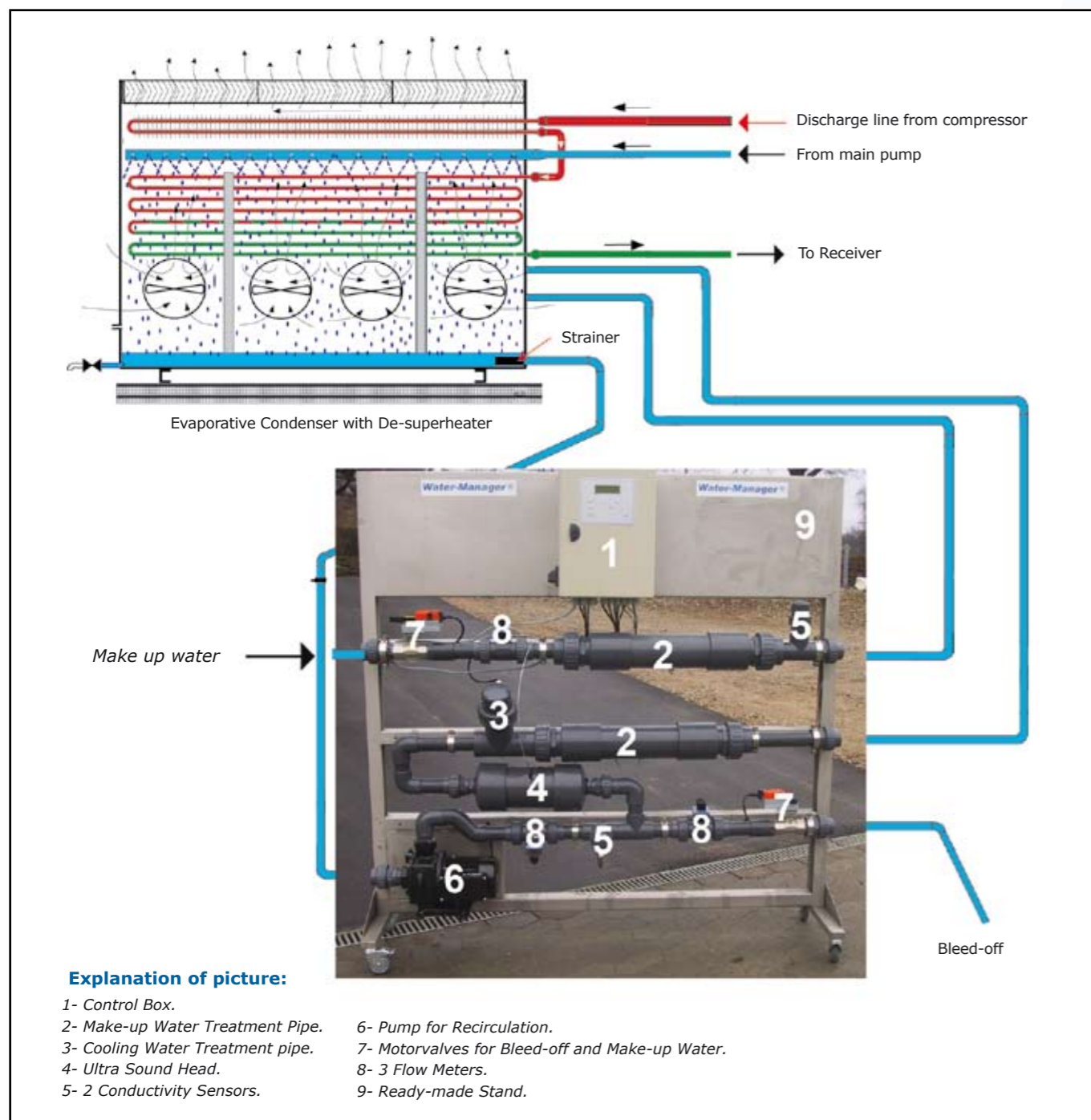
The Water Manager is installed so that the make-up water and the cooling water is circulated through it. Where two condensers use a common reservoir for the cooling water they can share one Water Manager. The unit is placed beside the reservoir tank or the condenser. Re-circulation is achieved with a separate pump. Valves and flow meters are placed on both make-up and bleed off pipes. Drainage levels are between 15 and 30% depending on the water quality. The Water Manager can operate as stand alone with standard settings (25% drain). By connecting to a PC, the function of the Water Manager can be observed, and the settings be changed.

The Water Manager is delivered preassembled.

Motor valves, 230 V AC, 50 and 60 Hz full bore with electrical actuators mark Belimo.

The 3 flow meters are supplied by the Bürkert Company. Full bore DN32.

For the circulation of the reservoir water is the CH-4-20 pump from Grundfos used.



With an Water Manager on your condenser you can achieve:

- Removal and prevention of scale
- Reduction of bacteria to prevent Legionella
- No corrosion in the condenser
- Management of bleed-off using drain percentages or conductivity
- Control of make-up water inlet
- Monitoring of the operation by PC programme