

**Polar BWT Boiler water treatment.
A cost effective alternative to chemical treatment.**

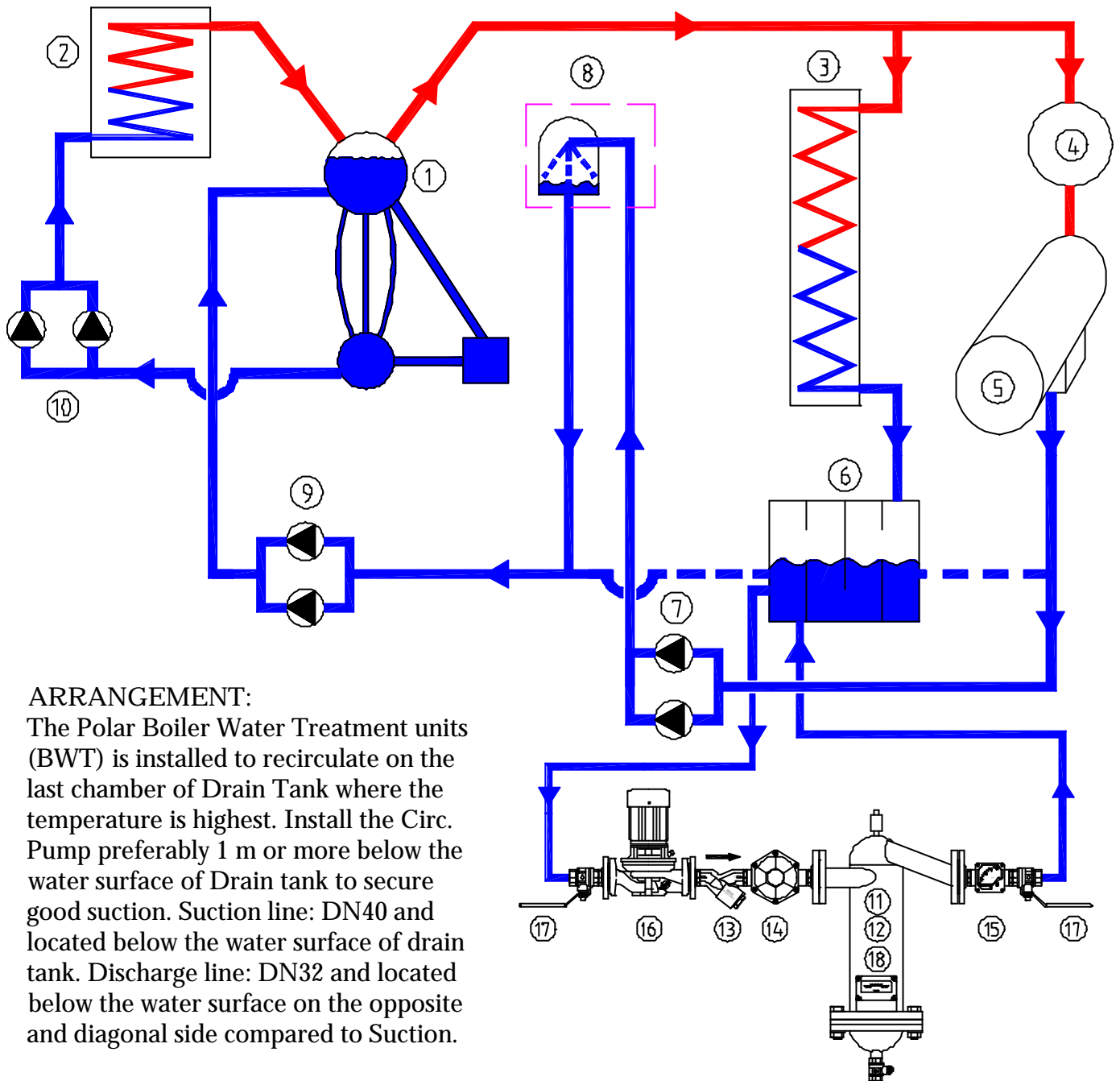
The quality of the make up water is an important parameter for the maintenance of a good water system.

To achieve good oxygen control, it is important to keep the hotwell as close to the boiling point as possible.

Polar BWT package consists of:

- Polar dirt separator (item 11) separates all particles (down to 2-3 micron) continuously from the water with a total efficiency of more than 95%.
- Polar protection unit (item 12) with a battery of magnesium alloy consumes oxygen and rises pH in an electrolysis process. The basic treatment is to maintain a pH of 10.5 to 11 in the boiler and to remove oxygen and carbon dioxide.
- Polar rust and scale dissolving unit (item 14) with sacrificial anode will continuously dissolve existing deposits of rust and scale. Removed scale and corrosion products are bottom blown from the boiler.
- Polar magnetic strainer (item 13) will continuously attract fine magnetic particles from the water.
- The flow indicator (item 15) will continuously show the actual flow. Correct flow is vital for the efficiency of Polar.

Monthly report / log sheets to Polar marine div. for follow up.

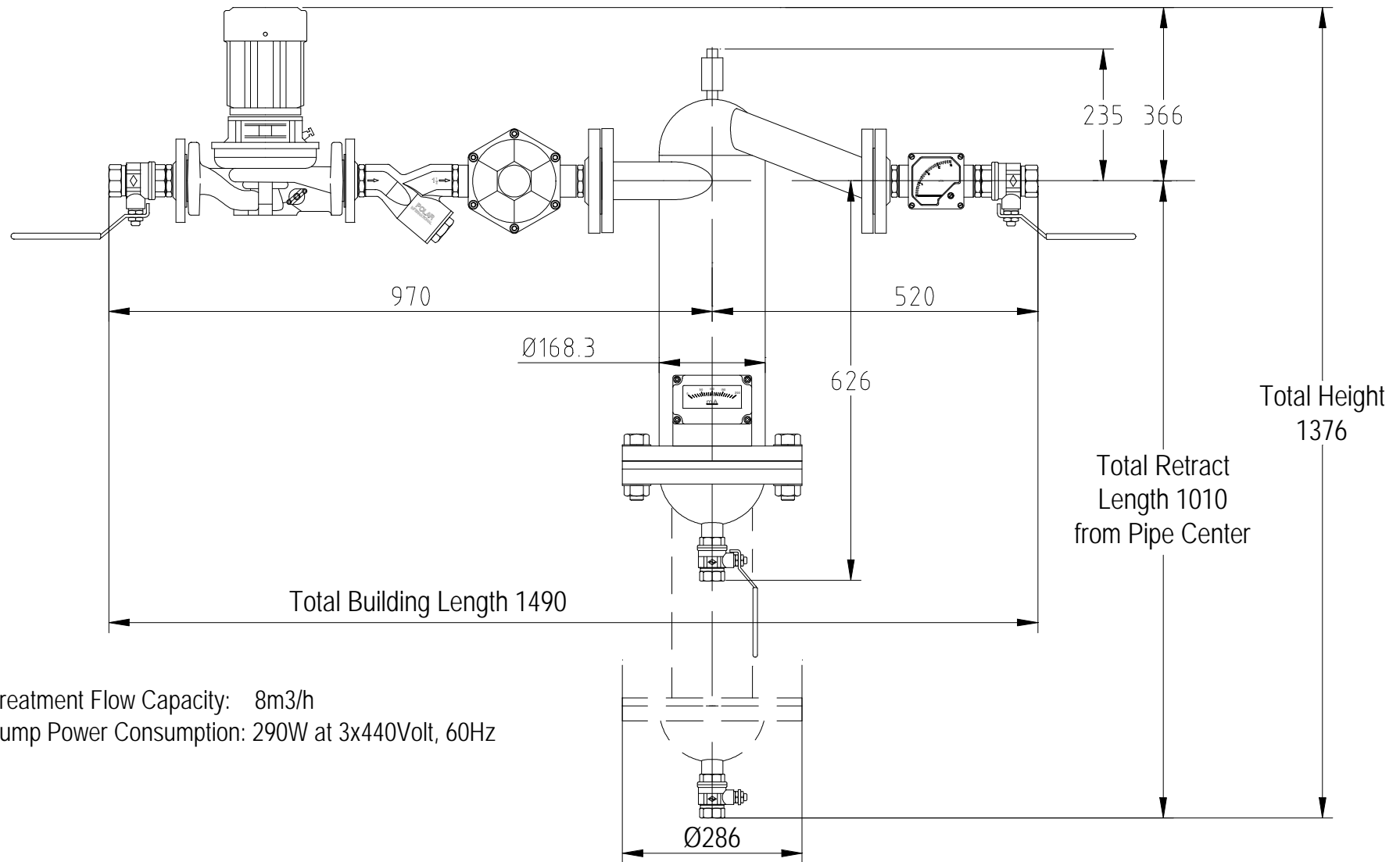


ARRANGEMENT:

The Polar Boiler Water Treatment units (BWT) is installed to recirculate on the last chamber of Drain Tank where the temperature is highest. Install the Circ. Pump preferably 1 m or more below the water surface of Drain tank to secure good suction. Suction line: DN40 and located below the water surface of drain tank. Discharge line: DN32 and located below the water surface on the opposite and diagonal side compared to Suction.

INDEX:

- | | |
|--|--|
| 1. Boiler(s). | 11. Polar dirt separator |
| 2. Exhaust Gas Boiler(s), Economizer(s). | 12. Polar protection unit |
| 3. Heaters, Heating Coils etc. | 13. Polar magnetic strainer |
| 4. Machinery. | 14. Polar Scale and Rust dissolving unit |
| 5. Condenser(s). | 15. Flow Indicator |
| 6. Drain Tank (Hotwell, Cascade). | 16. Circulation Pump(s) |
| 7. Condensate Pumps. | 17. Shut off Valve |
| 8. De-aerator (if any). | 18. Galvanometer |
| 9. Boiler Feed Pumps. | |
| 10. Exh. Gas Boiler Circulation Pumps. | |



Treatment Flow Capacity: 8m³/h
Pump Power Consumption: 290W at 3x440Volt, 60Hz

