The hydraulic test benches for valves need to be constantly supplied with water. LF Technologies offers a generator providing temperature regulation in a hot water tank and cold water tank. These tanks allow operation in a closed circuit, that reduces the water consumption. With a heating and cooling capacities of 2x30 kW, the HG2D-35 generator provides a mixed flow of 28 liters per minute with a Delta-T° of 50 °C. Thanks to its energy recovery system, this equipment consumes only 35 kW of electricity for a thermal power of 60 kW. Combined with benches equipped with hot and cold water distributors, the energy consumption is reduced to its maximum when the tested faucets are not in the mixing position (see Endurance Tests Full Hot/Full Cold).

**MAIN FUNCTIONS**

The hydraulic test benches for valves need to be constantly supplied with water. LF Technologies offers a generator providing temperature regulation in a hot water tank and cold water tank. These tanks allow operation in a closed circuit, that reduces the water consumption. With a heating and cooling capacities of 2x30 kW, the HG2D-35 generator provides a mixed flow of 28 liters per minute with a Delta-T° of 50 °C. Thanks to its energy recovery system, this equipment consumes only 35 kW of electricity for a thermal power of 60 kW. Combined with benches equipped with hot and cold water distributors, the energy consumption is reduced to its maximum when the tested faucets are not in the mixing position (see Endurance Tests Full Hot/Full Cold).

**APPLICATIONS**

The water generator can feed simultaneously several endurance stations according to the selected tests.

**ENDURANCE TEST BENCH**

The water generator can feed simultaneously several endurance stations according to the selected tests.

**PERFORMANCE TEST BENCH + ENDURANCE TEST BENCHES**

The hot water/cold water generator can simultaneously supply two endurance stations and one performance station, or two production stations (adjustment 38 °C to 12 l/min).

**ADVANTAGES**

- **ENERGY SAVING**
  Energy recovery through the use of a heat pump.

- **CENTRIFUGAL PUMPS**
  All circulations of fluids are made by centrifugal pumps servo-controlled in speed.

- **INSULATED CONTROL TANKS**
  The tanks are made of double skin stainless steel with polyurethane insulation.

- **PC-CONTROLLED SYSTEM**
  The PC has a program that provides temperature control at ± 0.2 °C, regardless of the flow rate.

**OPERATING PROCEDURE**

A chilled water tank is cooled by a heat pump. This heat pump transfers some of the calories “pumped” into the cold reserve to the hot water tank. The control of the cold water vessel is done by controlled exchange with the chilled water vessel. The control of the hot water vessel is finalized by an electrical resistance. The surplus total heat (part not recovered by the heat pump) is discharged by an air heater, that can be offset from the generator to serve as heating in winter for example. Each tank is equipped with several temperature sensors measuring possible temperature stratification, and, in this case, trigger automatic mixing.

**TECHNICAL CHARACTERISTICS**

<table>
<thead>
<tr>
<th>ENVIRONMENTAL PERFORMANCE</th>
<th>HW/CW generator</th>
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<tbody>
<tr>
<td>HW/CW generator</td>
<td>HG2D-35</td>
</tr>
<tr>
<td>Ref: HG2D-35</td>
<td></td>
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<tr>
<td>Thermal heating/cooling</td>
<td>2x30 kW</td>
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<tr>
<td>Continuous mixed water</td>
<td>Flow with Delta-T° 50 °C, 28 l/min</td>
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<tr>
<td>Water max temperature:</td>
<td>75°C</td>
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<tr>
<td>Sea water min temperature:</td>
<td>10°C</td>
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<tr>
<td>Accuracy of temperature</td>
<td>± 0.5°C</td>
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<table>
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<th>OPTION</th>
<th>HW/CW generator</th>
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<tr>
<td>Anti-legionella cycle</td>
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</table>

**HW/CW generator**

**Ref: HG2D-35**

**ENERGY SAVING**

Energy recovery through the use of a heat pump.

**CENTRIFUGAL PUMPS**

All circulations of fluids are made by centrifugal pumps servo-controlled in speed.

**INSULATED CONTROL TANKS**

The tanks are made of double skin stainless steel with polyurethane insulation.

**PC-CONTROLLED SYSTEM**

The PC has a program that provides temperature control at ± 0.2 °C, regardless of the flow rate.

1 - Air heater 2 - Chilled water tank 3 - Control cabinet 4 - Hot water tank 5 - Heat pump 6 - Mixed water hot/mixed water cold return tank 7 - Cold water tank