Cooling Water Pump Stations

The pumping station is the heart of any cooling system.

DELIMON Cooling standard pumping stations range in size from 1½" to 8" pipe diameter, with flow rate from 50 to 5500 litres per minute.

Pumping stations are supplied suitably packaged, skid mounted, pressure tested and ready for connection to the customer's piping system.

Large or custom built stations are available to meet individual customer requirements.

Compact range of pumping stations for either closed circuit or open circuit cooling systems.

Closed circuit has pressurised return to prevent air being introduced into the system.

Pre-charged expansion vessel is fitted on closed circuit station to prevent pressure build up due to temperature changes in the total system (equipment and pipework).

Open circuit stations have an adequately sized header tank to accommodate expansion due to temperature changes.

A selection of pumps can be fitted to each size of pump station to produce the necessary head to pump the desired water flow through the cooler, process (heat load to be removed) and pipework.
Technical Data

Flow Rate

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Connection Size</th>
<th>Flow Rate</th>
<th>Litres per Second</th>
<th>Litres per Minute</th>
<th>M³ per Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC15</td>
<td>1½&quot;</td>
<td>1.5 – 3.8</td>
<td>90 – 230</td>
<td>5.4 – 13.8</td>
<td></td>
</tr>
<tr>
<td>DC20</td>
<td>2&quot;</td>
<td>3.3 – 6.2</td>
<td>200 – 370</td>
<td>12 – 22.2</td>
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<tr>
<td>DC30</td>
<td>3&quot;</td>
<td>5 – 15</td>
<td>300 – 900</td>
<td>18 – 54</td>
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<tr>
<td>DC40</td>
<td>4&quot;</td>
<td>15 - 25</td>
<td>900 – 1500</td>
<td>54 – 90</td>
<td></td>
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<tr>
<td>DC60</td>
<td>6&quot;</td>
<td>25 – 55.8</td>
<td>1500 – 3350</td>
<td>90 – 201</td>
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<tr>
<td>DC80</td>
<td>8&quot;</td>
<td>55.8 – 91.7</td>
<td>3350 - 5500</td>
<td>201 - 330</td>
<td></td>
</tr>
</tbody>
</table>

Specification

Pump
Centrifugal pump with close or long coupled motor.
Single or multistage impeller.
Mechanical seal.
2 pole IP55 electric motor 415 volts 3 phase 50 Hz.
Cast iron body and impeller, nitrile seals, stainless steel wear rings and shafts. Pumps with other materials can be fitted if necessary.

Expansion Tank
Cylindrical vessel.
Natural rubber diaphragm.
Pre-charged.
Maximum pressure 10 bar.

Pressure and Flow Control
Flow control butterfly or globe valves fitted to ensure correct output from the pump.
Pressure gauges for pump set-up and system monitoring.
Pressure switch for standby pump start-up on duplex stations.
Safety relief valve to release excessive system pressure on all closed stations.

Air Elimination
Air purge/air vent fitted to all closed stations to remove any entrapped air.
Automatic top-up system on closed stations.
Optional auto Pressurisation unit for closed station with height restrictions.
Header tank fitted to open circuit stations.

Assembly
All the above equipment is assembled on a fabricated steel frame.
Pipework between components are screwed or flanged connections depending on pipe size.
The complete assembly is fully tested and painted before despatch.

Special Pump Stations
Special designs can be made with multistage pumps or for other duties where increased flow is required for part of the cycle.
Stations can also be supplied with special materials to suit adverse environmental conditions or special fluids.
Emergency air pump for continued flow with total power failure.