Hidrostal’s pumps provide 18 years of success for the Eden Project

For 18 years the Eden Project has been impressing visitors with its flora, plant collections and rainforest features, establishing itself as a world class entertainment and educational attraction.

At the heart of Eden is the Rainforest Biome, the largest indoor rainforest in the world. The forest features a waterfall which is fed by the rainwater that falls on the Biome. This system is driven via the ponds and watercourses that run in a hydraulic circuit with medium pressure pumps delivering the flows to feed the head of the waterfall. Due to the diversity of the plants in the Biome these holding ponds contain a lot of natural “loose leaf litter” which could become entrained in the pump suction. Pumps with a proven solids handling capability were therefore required as the water needs to be reliably circulated 24 hours a day.

Hidrostal pumps were the ideal solution for the project as each pump in the Hidrostal range incorporates the patented low shear single vane screw centrifugal impeller. The geometry of the impeller provides optimum hydraulic performance and very large open passages, ensuring that its ability to pass rags, fibres and other large objects is second to none.

Hidrostal supplied three of their bearing frame end suction pumps for installation at the Eden Project in May 2000. The pumps are installed horizontally into a below ground dry well plant room with its own dedicated suction pipes into an adjacent oceanic lake feature. Two 80mm discharge, 15 kW 2-pole pumps and one 100mm discharge, 30kW 2-pole pump, driven by inverters, discharge into a common manifold that delivers flows up to the top of the waterfall before cascading back into the lake feature. All three pumps operate in a duty/assist/assist mode in the day whilst a single pump operates at night to prevent any stagnant water build up and eliminate any risk of Legionella.

At a Glance

<table>
<thead>
<tr>
<th>Project:</th>
<th>Medium pressure pumps for Eden Project’s Rainforest Biome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer:</td>
<td>Eden Project</td>
</tr>
<tr>
<td>Equipment Installed:</td>
<td>3 Bearing Frame End Suction Pumps</td>
</tr>
</tbody>
</table>

For 18 years the Eden Project has been impressing visitors with its flora, plant collections and rainforest features, establishing itself as a world class entertainment and educational attraction.

At the heart of Eden is the Rainforest Biome, the largest indoor rainforest in the world. The forest features a waterfall which is fed by the rainwater that falls on the Biome. This system is driven via the ponds and watercourses that run in a hydraulic circuit with medium pressure pumps delivering the flows to feed the head of the waterfall. Due to the diversity of the plants in the Biome these holding ponds contain a lot of natural “loose leaf litter” which could become entrained in the pump suction. Pumps with a proven solids handling capability were therefore required as the water needs to be reliably circulated 24 hours a day.

Hidrostal pumps were the ideal solution for the project as each pump in the Hidrostal range incorporates the patented low shear single vane screw centrifugal impeller. The geometry of the impeller provides optimum hydraulic performance and very large open passages, ensuring that its ability to pass rags, fibres and other large objects is second to none.

Hidrostal supplied three of their bearing frame end suction pumps for installation at the Eden Project in May 2000. The pumps are installed horizontally into a below ground dry well plant room with its own dedicated suction pipes into an adjacent oceanic lake feature. Two 80mm discharge, 15 kW 2-pole pumps and one 100mm discharge, 30kW 2-pole pump, driven by inverters, discharge into a common manifold that delivers flows up to the top of the waterfall before cascading back into the lake feature. All three pumps operate in a duty/assist/assist mode in the day whilst a single pump operates at night to prevent any stagnant water build up and eliminate any risk of Legionella.
The engineering team at Eden are delighted with the reliability and longevity of the Hidrostal pumps which have been in operation at the site for over 18 years and have never blocked or suffered a major breakdown. Kevin Bate, the Senior Site Engineering Manager for the Eden Project, confirms:

“The original Hidrostal pumps are still feeding our iconic waterfall in the Rainforest Biome. They are a testament to good pump design – simply brilliant pumps!”