SWISS NATIONAL SUPERCOMPUTING CENTRE

To ensure continuous operation of Switzerland's national supercomputing infrastructure, the Swiss National Supercomputing Centre required an innovative cooling system that combines operational reliability, energy efficiency, and long-term sustainability.

To support the significant cooling demands of one of Europe's most advanced supercomputing facilities, Swiss National Supercomputing Centre implemented an innovative and highly energy-efficient water-cooling system designed to reduce overall power consumption while ensuring reliable long-term operation.

Rather than relying on conventional air conditioning systems commonly used in data centres, the facility utilises water sourced directly from Lake Lugano as part of a two-circuit cooling process. External lake water is used to lower the temperature of the internal cooling circuit, providing an environmentally sustainable method of heat management for the center's high-performance computing infrastructure.

This advanced cooling concept required dependable flow control and system protection components capable of operating continuously under demanding conditions. InterApp Aquaria and Desponia butterfly valves, brass ball valves with stem extensions, stainless steel ball valves, Neptunia check valves, and Y-strainers were selected to ensure efficient flow control and reliable system performance throughout the cooling network.

By combining innovative cooling technology with robust flow control infrastructure, CSCS has created a sustainable, future-ready facility capable of supporting Swiss scientific research for decades to come.

Application
Data centre

Challenge
Reliable, energy-efficient cooling for high-performance computing

Solution
- Desponia butterfly valves
- Aquaria plus butterfly valves
- Brass and stainless steel ball valves
- Neptunia check valves
- Y-Strainers


Courtesy by CSCS

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