



PROJECT REPORT

PRJ 60/03

Reliable Performance and Flexibility prescribed for Biotechnology Company

Project Credits:

Owner:

Lonza Biologics, Inc.: Portsmouth, NH

Project Engineer:

Parsons Engineering: Somerset, NJ

Consulting Engineer:

Phoenix Imperative, Inc.: Newark, DE

Mechanical Contractor:

Gilbane Building Co.: Nashua, NH

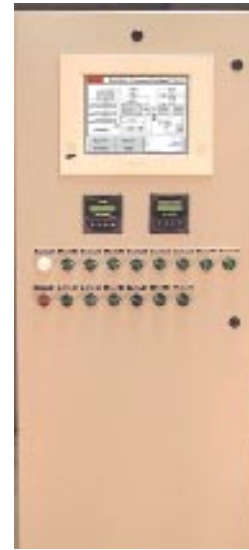
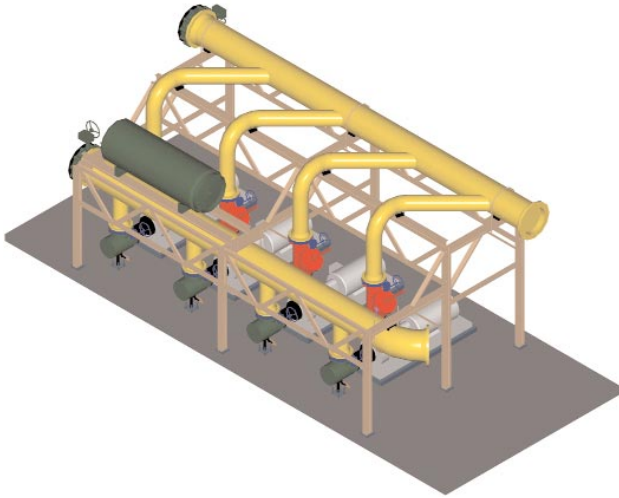


When designing the Large Scale Build Out (LSBO) expansion to their existing manufacturing facility in Portsmouth, NH, Lonza Biologics elected to use Closed Circuit Cooling Towers rather than conventional open cooling towers. The closed circuit units preserve the integrity of the cooling loop by isolating it from contaminants in the outside airstream, while providing cooling for a variety of heat loads including process chillers, HVAC chillers and air compressors. Since the chillers are providing both environmental and manufacturing process cooling, reliable operation of the system is critical to maintaining the stringent requirements of their pharmaceutical customers.

The (3) FXV-364-1QQ and (3) FXV-288-1QP closed circuit cooling towers are sized to cool 11,200 GPM of 30% propylene glycol solution from 95°F to 85°F at 73°F wet bulb temperature. Many factors made these BAC Closed Circuit Cooling Towers the ideal choice for the LSBO project.

- High-performance, combined-flow technology provides the required heat rejection in a limited plan area (79'-3"L x 28'W)
- Multi-cell arrangement allows for continuous internal and external access across all (6) cells to facilitate routine inspection and maintenance activities
- Corrosion-resistant construction – including BAC's BALTIBOND® Corrosion Protection System, Fiberglass Reinforced Polyester (FRP) casing panels and welded 304 stainless steel basin – assures long life
- Dry operation capability inherent to closed circuit cooling towers allows for continued unit operation without water during extreme winter conditions

An important consideration in the selection of FXV units was the ability to provide auxiliary equipment and systems knowledge in a single package. Along with the FXV Closed Circuit Cooling Towers, BAC, together with Custom-Flo, Inc. and Emerson-Swan, Inc., packaged a full pump skid with control panel, chemical treatment system, and an expansion tank with air separator.



Custom-Flo, Inc.

- VV2000 Quadraplex packaged pumping system: (4) ANSI pumps, 2,800 GPM each @ 115' w/125HP
- VFD rated motors
- 10.4" color touch screen HMI controller, including BAS interface and programming
- Chemical treatment system, including pumps and make-up water meter Emerson-Swan, Inc.
- Air Separator and Expansion Tank: 7' x 15' ASME tank, 125psi working pressure, with automatic air vent and pressure relief valve

The combined experience of BAC, Custom-Flo and Emerson-Swan proved to be a valuable asset to the project team, even helping with system components outside of their scope. "Key factors in choosing BAC's system were their ability to offer a completed packaged system, knowing that is a proven system in many industrial plants and BAC's flexibility with Lonza maintenance preferences such as VFD's, gear drives, etc... I have been very pleased with the responsiveness and support we've received from the team of Emerson-Swan, BAC, and Custom-Flo." according to Linda Ranch, Special Projects Engineer for Lonza.

Lonza Group is a Life Sciences driven company headquartered in Switzerland. Lonza Biologics is the world's leading contract manufacturer of monoclonal antibodies and recombinant proteins. Lonza Biologics undertakes highly specialized development and manufacturing services for the pharmaceutical and biotechnology industries. It has nearly 20 years of experience in mammalian cell culture and proprietary technology for large-scale manufacture of innovative biopharmaceutical products.



For more information...contact

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