

Continuous Manufacturing Multi Column Chromatography System (MCC)

Confidential Client

Pharmaceutical and
Biopharmaceutical

MANDATE

Biopharm Engineered Systems LLC (BPES) was retained to Design & Fabricate a Multi Column Chromatography System process skid for Confidential Client as part of an expansion. Confidential Client specializes in rare diseases, multiple sclerosis, oncology, and immunology & specializes in producing orphan biologics.

PROJECT SCOPE

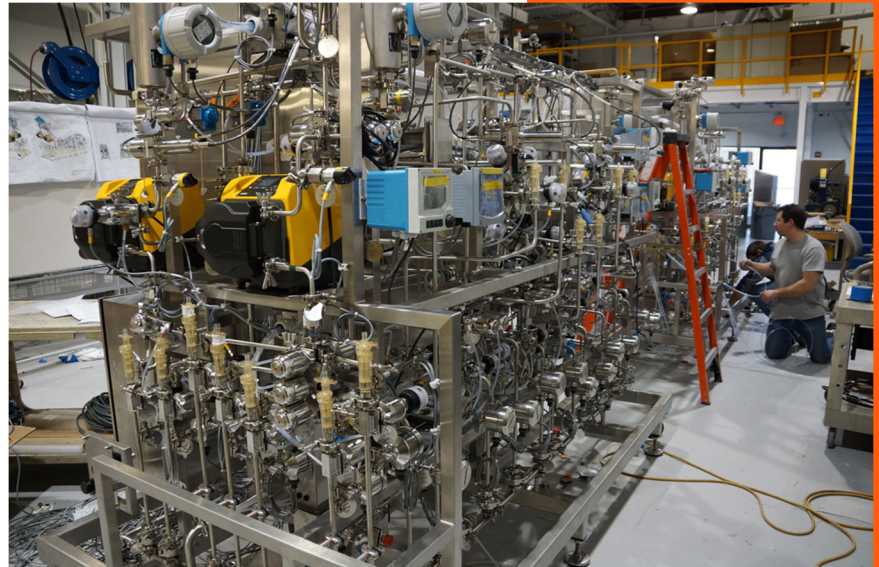
BPES's main project scope included designing and fabricating two (2) Multi-Column Chromatography systems (MCC)s. The PCC skid is a fully integrated packaged system with sanitary piping, automated valves, supply pumps and multiple single-use columns that facilitate continuous processing of filtered bioreactor harvest material, as well as CIP and SIP operations. Project challenges included keeping the three flow paths respective of each skid the same length to maintain same inlet pressures throughout. Additional challenges included maintaining & managing ported valve configurations for optimal use as some block valves included up to seven (7) weirs.

PROJECT EQUIPMENT

(Including but not Limited to)
Disposable Columns
Clean Steam Sample Coolers
Bubble Traps
Recirc Pumps
UV Detection
pH/ Conductivity
05-07 Block Valves

SOFTWARE / COMMUNICATIONS

Control Bus with Remote Host Delta V



SERVICES PROVIDED

BPES scope of work included the following:

- Mechanical & Design Engineering
- Multi-port block valve engineering
- Equipment Layout
- Detailed Piping Desig
- Manual & CAD Red-linging
- Relief Device Calculations
- Flow Meter Sizing Calculations
- Software / Programming
- DeltaV Interface Components
- Control System Architecture
- Electrical Panel Layout
- Electrical Distribution Diagram
- Each unit pre-piped and prewired
- MTR Documentation Review
- Pre-FAT Automation Assistance
- FAT Execution
- Passivation
- Equipment Rigging
- Control System Vaildation

SECTOR OF ACTIVITY
Biotechnology

CLIENT
Confidential Client

YEAR OF COMPLETION
2018-2023 (Multiple Systems)

TOTAL PROJECT COST
US \$ Confidential

BPES PROJECT VALUE
US \$ Confidential

