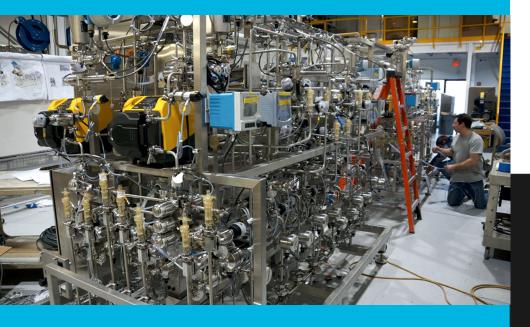
## Continuous Manufacturing Multi Column Chromatography System (MCC)

### **Confidential Client**



### **MANDATE**

Exentec was retained to design & fabricate a multi column chromatography system process skid for a 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

Exentec's main project scope included designing and fabricating two (2) multi-column chromatography systems (MCC)s. The MCC 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 throughout.

Additional challenges included maintaining & managing ported valve configurations for optimal use as some block valves included up to seven (7) weirs.

Please contact our sales department for details or for a quote.

Email: sales@bpesys.com Phone: 978-483-0943

## exentec

BioPharma Solutions

# Pharmaceutical / Biopharmaceutical

SECTOR OF ACTIVITY:
Biopharmaceutical
CLIENT:
Confidential Client
YEAR OF COMPLETION:
2018-2023 (multiple systems)
TOTAL PROJECT COST US \$:
Confidential
EXENTEC PROJECT VALUE US \$:

#### PROJECT EQUIPMENT

- 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 DeltaV

#### SERVICES PROVIDED

Exentec scope of work included:

- Mechanical & design engineering
- Multi-port block valve engineering
- Equipment layout
- Detailed piping design
- Manual & CAD red-lining
- 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 validation