

Large Scale Cell Culture Single Pass Tangential Flow Filtration

Confidential Client

Pharmaceutical and
Biopharmaceutical

MANDATE

Biopharm Engineered Systems LLC (BPES, a CPS Group Company) was retained to Design & Fabricate a Single Pass Tangential Flow Filtration process skid for Confidential Client as part of a large expansion project encompassing around (2) 10,000L bioreactors including both upstream and downstream equipment. Confidential Client specializes in pharmaceutical medicines, vaccines and consumer healthcare products & has the broadest portfolio in the vaccines industry including pediatric, adolescent, adult and traveller vaccines.



PROJECT SCOPE

BPES's main project scope included merging both a Tangential Flow Filtration (TFF) process and a Single Pass Tangential Flow Filtration (SPTFF) process all onto one skid. Project challenges included interlacing three individual systems onto one skid as well as designing a skid break to accommodate accessibility into the suite. This included meticulous consideration of instrument placement, minimizing tri-clamp placement, designing a hinged ladder & considering routing paths for the breakage of electrical and pneumatic wireways.

Process Equipment (Including but not Limited to)

500L Tulip Vessel
Magnetically Coupled Agitator
2 TFF Feed Pumps
TFF Retentate Vessel CIPR Pump
TFF Recirculation Pump
2-High Ultrafilter Holder (20-40 m2 capacity)
(4) SPTFF holders - (8-20 m2 total capacity)

Software / Communications

CHARMS I/O

Equipment / Services Provided (Including but not Limited to):

- Mechanical Engineering
- TFF Retentate Vessel & Agitator
- Tangential Flow Filtration Skid
- Single Pass Tangential Flow Filtration
- Filter Housing
- Multi-port block valve engineering
- Hangers and Supports
- Vibrations and Seismic Control
- Hygienic System Specialties
- Piping Systems
- Low Voltage Induction Motors
- Pumps
- Electrical Engineering
- Variable Frequency Controllers
- Basic IC Reqs and PCS Controls
- Pneumatic Instrument Tubing
- Instrument Calibration & Commissioning
- Instrument and Control Panels
- Factory Acceptance Testing (FAT)
- Tagging and Identification
- Enhanced Turnover Package
- GMP Documentation

SECTOR OF ACTIVITY

Biopharmaceutical

CLIENT

Confidential Client

YEAR OF COMPLETION

2018

SKID DIMENSIONS

~ 16' x 7' x 12'

BPES PROJECT VALUE

Confidential Value



BioPharm Engineered Systems
A Critical Process Systems Group Company