

# Cell Culture Bioreactor

**Confidential Client**



**exentec**

BioPharma Solutions

Pharmaceutical /  
Biopharmaceutical

SECTOR OF ACTIVITY:

Biopharmaceutical

CLIENT:

Confidential Client

YEAR OF COMPLETION:

2019

SKID DIMENSIONS:

9' X 6' X 8.5'

PROJECT VALUE:

Confidential Value

## Equipment includes:

- Metanova mixers ZG2 & Zg3
- Alfa Laval pump
- Steriflow POU cooler
- Almatec BIOCOR diaphragm pump
- Micropump
- Custom Exentec stainless bubble trap

## Software / Communications:

- Exentec Process Control Interface (HMI)

## Services provided:

- On-site evaluations
- P&ID development
- Component selection
- Process flowpath development
- Electrical break design considerations
- 3D model reviews
- Component tagging
- Shipment tracking
- Component submittal logs
- Change order logs
- Software demonstrations
- Valve manifold detailed drawings
- Polishing procedures
- TOP review with QA & validation
- Sequence of operation review
- Review of validation protocols
- SIP testing
- Simulation phase testing
- Selective FAT testing
- Passivation
- Custom manifold design
- On-site assembly

## MANDATE

Exentec Biopharma Solutions (EBPS) was retained to design & fabricate a bioreactor process skid for a confidential client as part of an equipment upgrade of an existing skid that has been operational since 1982. Confidential client is part of a veterinarian pharmaceutical group specializing in antibiotics, vaccines, dermatology, antiparasitics, dental hygiene & animal healthcare.

## PROJECT SCOPE

EBPS' main project scope included familiarizing with an existing skid that had a very manual process and integrating the same process requirements into a fully automated system. Project challenges included considering piping and pressure requirements concerning multiple transfer modes from both newer and older, sensitive pieces of equipment. Other challenges included using steam to not only sterilize the equipment, but the product itself, and therefore selecting steam components that can achieve both applications.