

PROCESS/PHARMACEUTICAL GROUP



HVAC SHEET METAL & PIPING • COMMISSIONING • RETRO-COMMISSIONING
PLUMBING • BUILDING SERVICES • PROCESS PIPING • ENGINEERING
BIM/3-D MODELING • FABRICATION • BUILDING AUTOMATION SYSTEMS
INDUSTRIAL CONSTRUCTION & PIPING • ENERGY SERVICES • RIGGING



PROCESS/PHARMACEUTICAL GROUP

ACCO Engineered Systems is a mechanical contractor with specialties in process piping, heating, ventilating, air conditioning, refrigeration, plumbing, building automation, industrial construction and service. Through an engineering orientation, we provide these services to the new construction and existing building markets.

ACCO Engineered Systems' Process/Pharmaceutical Group is a compliance-based engineering group with a level of expertise in the design and implementation of critical process facilities. Whether your product is an API, Final Dose, Parenteral or Diagnostic, our team quickly and efficiently develops innovative and cost effective solutions.



Put Our Expertise to Work for You

ACCO's Process/Pharmaceutical Group in Vacaville has worked together for 15 years and boasts more than 500 years cumulative experience working in pharmaceutical and bio-pharmaceutical manufacturing facilities, giving us a deeper knowledge of customer requirements for fabrication, documentation, and service.

Since 1934, owners and builders have selected ACCO Engineered Systems to design, install, and maintain more than 250,000 mechanical projects. ACCO is an employee-owned company dedicated to the design, fabrication, installation, maintenance and service of commercial and industrial HVAC, refrigeration, plumbing, process piping, and building automation systems.

We understand the implications of plant down time at a cGMP manufacturing facility, and can respond to emergencies and warranties in hours instead of days. We are focused on the long term success of your facility and value our long term business relationships.

ACCO Process/Pharmaceutical Group will:

- Minimize project duration through accelerated programming, parallel equipment procurement, pre-construction coordination, and prefabrication
- Manage the project budget with regular milestone estimates during design
- Optimize the complete utility design: mechanical, HVAC, and process systems
- Customize process solutions with consideration given to project budget, future adaptability and practicality of installation and maintenance
- Provide emergency repair/modification services at the drop of a hat....no project is too large or small
- Expedited TOP delivery in as little as 2 hours post project completion
- Custom fabrication of fermentation, CIP, and other skids, washer carts, and material transport and handling systems



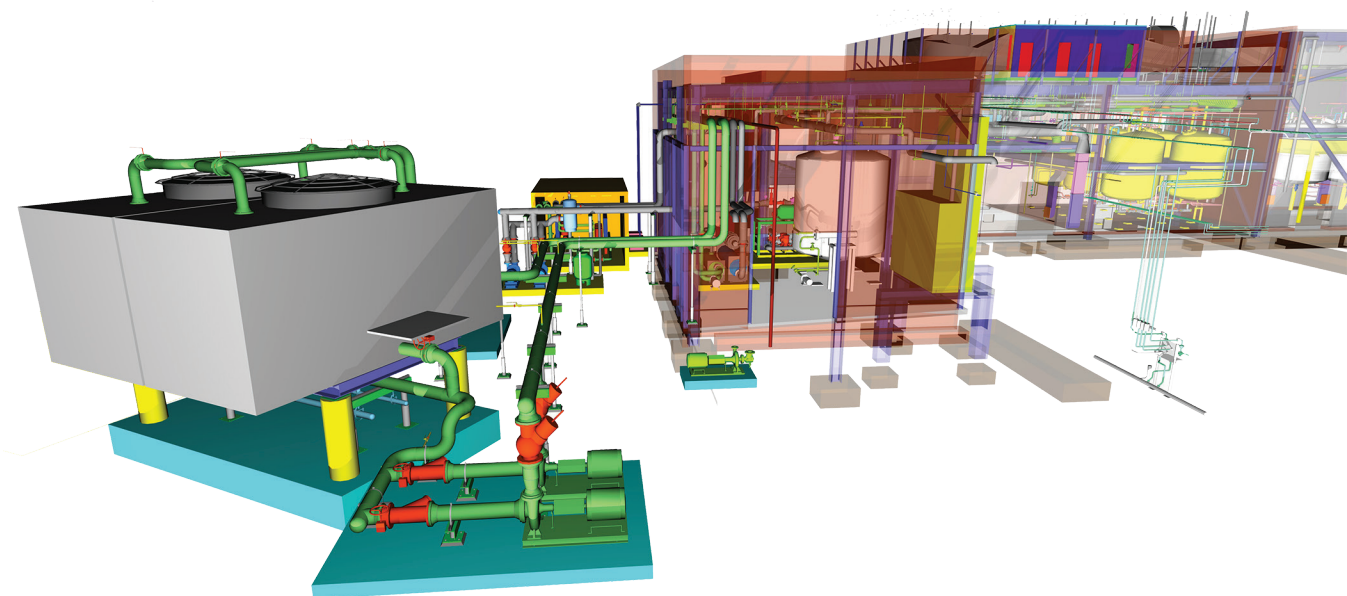
ACCO Stands at the Forefront of Virtual Design and Construction

Virtual Design, Building Information Modeling & Construction

ACCO stands at the forefront of Virtual Design and Construction (VDC), using three-dimensional (3-D) CAD visualization software for pre-construction trade coordination and product fabrication for HVAC, Process and Plumbing projects. Due to the space impact of these systems, ACCO leads the coordination process and works with the General Contractor and subcontractors to facilitate and manage coordination utilizing Navisworks software. ACCO has the capability to facilitate 3-D coordination meetings including creation and management of Clash Detection reports. Coordination meetings can be held in our ACCO offices, facilitated at a jobsite, or hosted electronically utilizing Web Conferencing.

ACCO has years of experience utilizing 3-D CAD software to accelerate our sheet metal and piping fabrication. ACCO uses TSI's CAD-MECH and CAD-DUCT, as well as QuickPen PipeDesigner 3-D software, all of which use an AutoCAD drawing format. Applying Lean Construction principles, our 3-D capability permits significant prefabrication of duct and pipe as well as "just-in-time" delivery.

Our recent experience with challenging coordination projects includes HVAC, Process and Plumbing scopes within laboratories and GMP manufacturing facilities. ACCO brings knowledge and depth to any design and construction team providing a catalyst for successful implementation of Virtual Design and Construction.



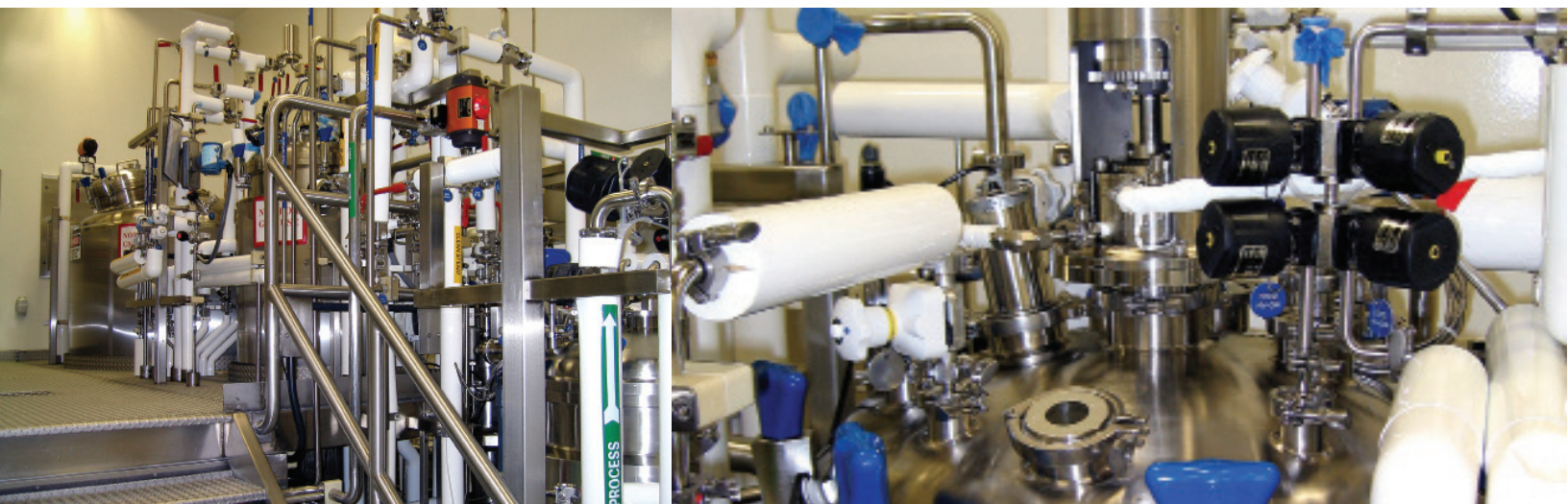
Process Piping Prefabrication

ACCO's process piping prefabrication team has everything needed to complete your project. Our highly qualified craftsmen can tackle any size job, whether its prefabricating a process skid in-house or modifying existing equipment on-site.

The in-house QC Department has a certified weld inspector on staff who performs boroscoping, material inspections and PMI (Positive Material Identification) of our materials and welds. Additionally, the department maintains SOPs, training records, TOP archives, material quarantine, and other related items.

Our prefabrication shop has been successfully audited by Genentech, Novartis, and Bayer.

In addition, ACCO has resident chemical/process & mechanical engineers, project engineers & project managers, and accounting & procurement staff to ensure that your project stays on track, on time, and on budget!



Recent Experience

- BioMarin
- ALZA Corporation
- Novartis
- Mylan
- XOMA
- Genentech Corporation
- Bayer
- Janssen
- Dey Labs
- Life Technologies
- Johnson & Johnson
- Abbott
- Roche Pharmaceutical
- CMC Biologics

Superior cGMP Maintenance

ACCO recognizes the special needs and requirements associated with maintaining and servicing process equipment used within a cGMP Facility.

The ACCO Process/Pharmaceutical Group understands and applies cGMP protocols such as good documentation practices, logbook entry, QA standards, wipedown procedures, and hygiene.

We Provide Mechanical and Technical Support for:

Process Utilities: USP, PW, WFI, clean/plant steam, clean compressed air generation and distribution systems, specialty gas storage and distribution, cryogenics, bulk & containerized chemical storage and distribution, CIP, aqueous waste, process waste, etc.

Process Support Equipment: CIP skids, glass washers, autoclaves, lyophilizers, etc.

Process Equipment: Buffer and media hold vessels, bioreactors, etc.





Extensive Knowledge of cGMP Turnover Package (TOP) Requirements

Working and performing construction activities in active pharmaceutical manufacturing facilities requires a level of precision that goes without saying. However, the accuracy and speed at which the TOP documents are turned over is often times more critical to the execution of the project than the work that was performed. We frequently turn this documentation over to the owner within hours of the final pressure test and passivation being completed. A list of the components that we would typically include in a turnover package for a cGMP facility are: material receiving log, MTRs, Certificates of Conformance, material inspection reports, Niton calibration certificates, signature logs, weld inspector and welder certifications, welding procedures, weld coupon logs, purge gas certifications, isometric and shop drawings, flushing/blow down/pressure test reports, passivation/cleaning & chlorination reports, as built drawings, duct inspection reports, duct cleaning logs, HEPA filter inspections, start up reports for specific equipment, submittals, and others.

Predictive Maintenance

Equipment breakdown causes financial loss through wasted time and more importantly, wasted product runs. ACCO Engineered Systems provides a full service Predictive Maintenance Package; performing vibration analysis, real time vibration monitoring (via in-house BAS systems), laser alignment, and IR scanning.

ACCO LOCATIONS

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Phone: (661) 631-1975

Boise
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Garden City, ID 83714
Phone: (208) 323-7789

Commerce Pipe/Service
6446 E Washington Blvd
Commerce, CA 90040
Phone: (323) 201-0931

Commerce Sheet Metal Shop
3421 Malt Ave.
Commerce, CA 90040
Phone: (800) 769-2226

Fresno
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Fresno, CA 93727
Phone: (559) 251-2226

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