



PROBLEMS SOLVED

ABEC SERVICES
TURNING PROBLEMS INTO SOLUTIONS

engineered solutions and services for biotech manufacturing





A GLOBAL SERVICE TEAM WITH GLOBAL REACH

MAXIMIZING CUSTOMER PRODUCTIVITY, CONTROLLING OPERATING COSTS AND MITIGATING RISK

ABEC's service team is highly trained and experienced, working for customers to maximize productivity, control operating costs and mitigate risk.

In every way, we strive to eliminate unscheduled shutdowns, while bearing in mind all factors associated with maintaining and improving bioprocess production operations and equipment.

Our expertise and capability to solve your problems, make us the first choice for bioprocess services, no matter the location, the scale of the task, or the original manufacturer.

COMPREHENSIVE BIOPROCESS SERVICES PORTFOLIO

SITE SERVICES

ROUTINE SERVICES

Preventative Maintenance

Routine scheduled maintenance including replacement of check valves and filters, elastomers, diaphragms, seals, all product-contact materials and gearbox oil changes

Shutdown Support

Supplemental labor to support and compress facility/suite/equipment shutdown time. Solution tailored to manage your entire shutdown

Spare Parts

On-demand, on-hand spare and replacement parts
Sourced from a large network of audited global vendors securing best quality, price and delivery

Customized Fabricated Parts

Designed and engineered parts specifically for your process needs, such as; seal housings, agitator shafts, impellers, spargers and sprayballs
Built to order or inventoried

Decommissioning

Prep equipment for a de-active "dormant" state; decontaminate, disconnect electrical, cap off open lines, eliminate moisture, dismantle
Perform dormant-maintenance in deactivated state

Recommissioning

Bring equipment to life again ensuring equipment and systems operate optimally
Support and maintain the equipment through the entire life cycle

Installation & Commissioning

ABEC fabricated equipment or sourced equipment: design reviews, match marking, adherence to P&ID and mechanical drawings; trained resources, tools and machinery for small to large scale projects; product transfers, whether in the same room or a different continent

Electropolishing & Mechanical Polishing

Full-service cleaning and polishing on vessels of all sizes

UPGRADE SERVICES

Automation Services

Expert equipment and process analysis identifying improved functionality with development, integration, modifications and upgrades to equipment control systems, hardware and software

Vessel Modifications & Upgrades

Equipment enhancements to meet process / product changes and improve efficiency

Equipment Upgrades & Retrofits

Changes to equipment for modified functionality or footprint

Fully documented and compliant

EMERGENCY SERVICES

Site Emergency Services

Troubleshooting & Repairs

24/7 x 365 Technical Support

Expert equipment and process analysis

Root cause identification; problem solving solutions

Maintain maximum production uptime, while minimizing equipment downtime

On site remediation

Full documentation

Available support anytime, anywhere

COMPLIANCE SERVICES

Vessel & Equipment Inspection

Expert analysis of vessel & equipment condition on any equipment from any provider

Output includes inspection record, map / identification of findings; qualification and audit support for your records and regulatory inspections

Training & Education

Training at customer's site or in-house at ABEC facilities for vessel inspection training, operator training, maintenance training or any other bioprocess need

cGMP Documentation

Full cGMP documentation included with all services and products



CONSULTING SERVICES

Consulting

Engineering design and project management for process / hardware modification, scale-up, technology transfer, optimization, etc

Qualification Support

Preparation and / or execution of test plans for IQ / OQ, equipment commissioning, etc

Reactor Performance Characterization

Assessment of mixed vessel performance via theoretical calculations, computational/ laboratory modeling and/or actual scale testing

FULL-TIME SUPPORT SERVICES

Personnel Augmentation

Skilled personnel working full-time on short or long-term assignments, within your team, at your site

Managed Process Services

Full responsibility, providing appropriate and defined personnel to support the customer manufacturing goals, achieved through utilizing innovative equipment technology and maintenance techniques

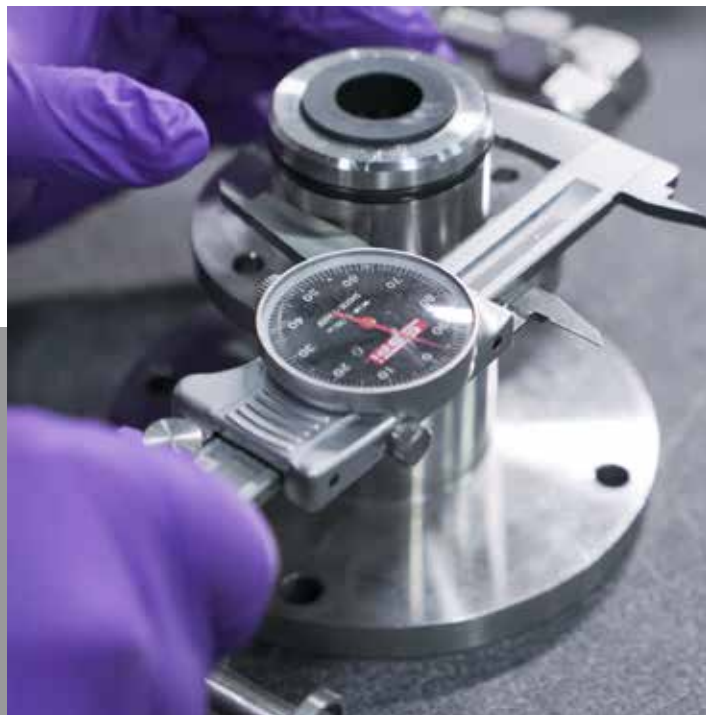
WHY ABEC? WE ARE UNIQUE IN THE INDUSTRY

GLOBAL, FLEXIBLE & EXPERIENCED

- A large global team, responsive & flexible to your production schedule
- Process technology & engineering experts
- Design and manufacture new, upgraded and retrofit equipment
- Certified bioprocess equipment technicians
- Access to 3,000+ suppliers of bioprocess components

CREDIBLE, PROVEN & RELIABLE

- Supporting the world's biopharmaceutical manufacturers
- Thousands of critical and complex service projects completed on time
- Fixed price, fully scoped projects
- Quality focused, results driven, safety certified
- 24/7/365 technical support delivered by ABEC SME's



Since 1974, ABEC has been a leader in delivering engineered process solutions and services for manufacturing in the biotech industry. The majority of the world's pharmaceutical and biotech companies are ABEC customers; with many of today's leading therapies manufactured by processes and equipment engineered, manufactured, installed and serviced by ABEC.

ABEC's unique value is based on long experience, complete in-house capabilities, a custom, flexible approach, and long-term credibility. Whether adding capacity or improving existing facilities, ABEC's turn-key solutions and support reduce overall cost and time to market while delivering maximum productivity.

To learn more about ABEC, visit abec.com or email info@abec.com.

