

A&B PROCESS SYSTEMS

Fermenters and Bioreactor



Your trusted supplier of Microbial and Cell Culture systems meeting global standards for bio-processing.

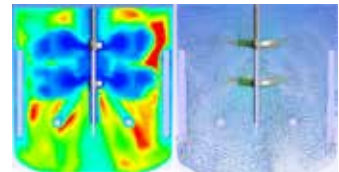
JBT's A&B Process Systems is a manufacturer of custom biologic manufacturing equipment, which includes a large cross-section of custom bioreactors and fermenters. As custom equipment and solution manufacturers, we recognize that every process has different characteristics that require unique solutions. Our BPE Compliant systems volumes range from as small as 20 to 25,000 Liters (Vw) for both microbial and cell culture. Features that we commonly see customize include:

- › Dimple or halfpipe jacketing
- › Control Platforms (Systems, DeltaV, Rockwell)
- › Top/Bottom, Angle Mount, type of agitation
- › Aspect Ratio
- › Additions (Metered, Anti-foam, ...)
- › Instrumentation (pH, DO, PAT, temperature, load cells, level,..)
- › Sparging and Overlay
- › CIP/SIP strategy
- › Layout (e.g. super-skids, separate TCU/GP and vessel, mobile, clean space...)
- › cGMP Turnover Packages)
- › As a custom equipment manufacturer, we recognize our equipment needs to fit into our customer's operational environment. As such, we work with all our customers preferred component suppliers, and where none exist, we can offer our recommendations based upon our vast experience. This includes agitation, instrumentation, and controls among others.

Starting Point

Regardless of where on the project continuum (early phase development to fabrication, installation and qualification) A&B can provide assistance. Some of the services we provide include:

- › Mix studies and CFD
- › Preliminary Design and Budgeting
- › Detailed Design
- › 3D Modelling (standard with all skids)



The JBT Difference

JBT/A&B is a vertically integrated supplier that controls our own supply chain by building our own vessels, integrating our skids, performing our own automation and installing our own systems. This translates to a quality and schedule our customers can rely on.

Complimentary Solutions

- › Clean In Place (CIP)
- › Installation, Startup & Commissioning
- › Media/Buffer Preparation Skids
- › High-Temperature- Short-Time (HTST)
- › Custom Downstream Skids

Existing or used equipment?

Ask JBT how we can assist you in a retrofit or refurbishment for long useful life of your equipment at minimal capital expenditure.



PRoCARE® is an annual service agreement covering your JBT A&B systems and other equipment and/or tanks. It can include any or all of the following: inspection, cleaning and/or leak detection testing, replacement of wear components, and/or instrumentation calibration. We can also include a number of hours for automation and/or emergency service to be utilized as needed, etc. **PRoCARE** from A&B Process gives you scheduled preventive inspections and maintenance of your equipment, along with a range of other benefits - minimizing unexpected and budget-shattering costs for reactive maintenance.

COUNT ON JBT TO HELP PROTECT YOUR INVESTMENT

JBT's greatest value in PRoCARE® services comes from preventing unexpected costs through smart, purposeful, and timely maintenance based on unmatched knowledge and expertise. PRoCARE service packages are offered as a maintenance agreement in various service levels, depending on your production and cost management requirements.



JBT DIVERSIFIED FOOD & HEALTH

FRESH PRODUCE TECHNOLOGIES | FRESH-CUT, ROBOTICS, STEAMING | FRUIT AND VEGETABLE PROCESSING | SECONDARY PROCESSING | ASEPTIC SYSTEMS | FILLING AND CLOSING | IN-CONTAINER STERILIZING | TRAY SEALING | SECONDARY PACKAGING | HIGH-PRESSURE PROCESSING | POWDER PROCESSING | TUNA PROCESSING

JBT PROTEIN PROCESSING

PRIMARY CHILLING | WEIGHING | PUMPING | CUTTING-UP | SKINNING | WATER RE-USING **SECONDARY** BRINE PREPARATION | HOMOGENIZATION | INJECTION INJECTION & RETURN MILLING | MACERATION | MASSAGING | TENDERIZATION | TVI MEAT SLICING | AUTOMATED TRAY LOADING

FURTHER WEIGHING | PORTIONING/TRIMMING | COATING | FRYING & FILTRATION | PROOFING | COOKING | COOLING | CHILLING | FREEZING | REFRIGERATION | CLIPPING & PACKAGING SOLUTIONS | X-RAY TECHNOLOGY | TRAY SEALING | HIGH-PRESSURE PROCESSING

OUR BRANDS



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We're with you, right down the line.™

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