

Life Cycle Support

Lab-based R&D

benchtop sensors, instruments, and analyzers

Mass flow & pressure controllers · Alicat
Syringe pumps, peristaltic pumps & BioSilicone tubing · Longer Pump
Spectrometers, light sources, optical fibers & fixturing · Ocean Insight

Process development & scale-up equipment & solutions for all setups

Single-use solutions with high turndown and control ranges
Single-use valves & backpressure regulators · Alicat
BioSilicone low-shear tubing · Longer Pump
Spectral systems & probes · Ocean Insight
Multi-use components with time-tested customization
Sanitary valves & backpressure regulators · Alicat
Peristaltic pumps · Longer Pump
Fully cleanable rupture discs · OsecoElfab

Custom & turnkey solutions designed in partnership with your engineering team

Flow, pressure & gas mixing · Alicat
Peristaltic pump setups · Longer Pump
Raman & NIR spectroscopy for key chemistries · Ocean Insight

Regulatory considerations for compliance with global agencies

ASME BPE-2016 compliant single- and multi-use systems, standard or available where applicable
USP and TSE conformant materials and systems

Metrology & maintenance to meet the needs of your facility's SOPs

Portable flow meters for cleanroom calibrations · Alicat
ISO radiometrically-calibrated spectrometers · Ocean Insight
Rouge monitors to minimize derouging & passivation procedure spend · Cosasco

Lifetime support global service centers & sales/distribution networks for ongoing project support

Rapid response & support from applications & sales engineers
Customized solutions from OEM & application teams

Alicat Scientific

Contact: 1 (888) 290-6060 · info@alicat.com

Learn more:

alicat.com/industries/bioprocessing-bioreactor

Products referenced: MC-Series · Bio-Series · Whisper meter · PCU

Certifications & Regulatory: ASME BPE materials · IP67 · IS · CE

Cosasco

Contact us: 1 (800) 635-6898 · sales@cosasco.com

Learn more: cosasco.com

Products referenced: Wireless Rouge Monitoring System

Certifications & regulatory: ASME BPE materials · IP66 · C1D2

Crowcon

Contact us: 44 (0)1235 557700 · sales@crowcon.com

Learn more: salesusa@crowcon.com

Learn more: crowcon.com

Products referenced: Xgard Bright · IRmax · Gasman · Gas-Pro

Diba Industries / Bio-Chem Fluidics

Contact us: 1 (973) 263-3001 · sales@biochemfluidics.com

Learn more: biochemfluidics.com · 1 (203) 744-0773 · info@dibaind.com

Learn more: biochemfluidics.com · dibaind.com

Products referenced: Click-N-Seal · Omni-Lok
Omnifit Labware

Certifications and regulatory: ASME BPE materials

Longer Pump

Contact us: 86 (312) 3110087 · longer@longerpump.com

Learn more: longerpump.com

Learn more: longerpump.com

Products referenced: Peristaltic pump · BioSilicone tubing · Lab syringe pump

Certifications & regulatory:

USP Class VI · 21 CFR Part 11 · 21 CFR 177.2600 · NSF 51 · CE (TUV)

Ocean Insight

Contact us: oceaninsight.com/contact-us · info@oceaninsight.com

Learn more:

oceaninsight.com/solutions/industries/pharma

Products referenced: LTMS · NIR · UV-VIS · Raman · Custom spectroscopy systems

Certifications & Regulatory: IP67

OsecoElfab

Contact us: 1 (918) 258-5626 · info@oseco.com

Learn more: osecoelfab.com/industries/biotech

Products referenced: Pure-Gard · Opti-Gard

Certifications & regulatory:

ASME BPE materials · BS4825-3 · BS6362 · DIN32676 · ISO1127 · ISO2037 · ISO2852 · SMS3008 · SMS3017

UV Group

Contact us: (980) 256-5700 · sales@aquionics.com

Learn more: weuvcare.com

Products referenced: PharmaLine

Certifications & regulatory: Pharmacopoeia for Ultraviolet Disinfection



Process Automation Solutions that Scale

*for pharmaceutical manufacturing
from lab to commercialization*

QA

Lab R&D

Upstream Processing

Downstream Processing

Final Product

Microflow Delivery
Cell & nutrient injections using **syringe pumps** and **mass flow controllers** for steady, high-precision delivery.

ALICAT
LONGER



Incoming Material Inspection
Quality control via **NIR spectroscopy** for non-invasive optical monitoring.

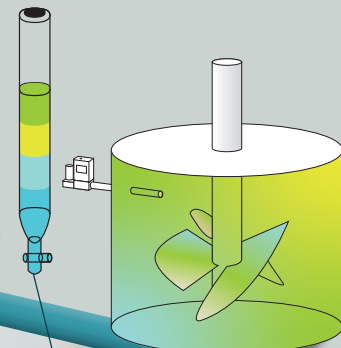
Ocean Insight

Trace Materials Monitoring
Absorbance monitors placed directly inline of wastewater outflows do not interrupt processing.

Ocean Insight

Fluid Transfer
Peristaltic pumps and **Biosilicone tubing** introduce culture media, anti-foaming agents, and other mixtures into the bioreactor.

LONGER

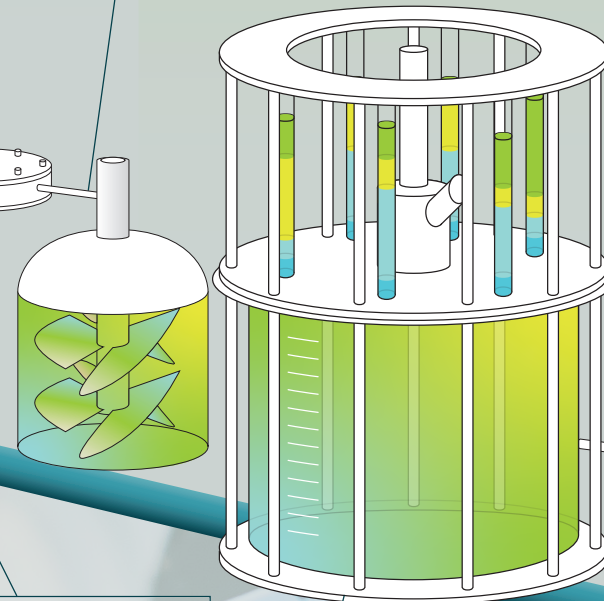


Overpressure Protection
Single-piece & gasket-free **rupture discs** protect bioreactors and allow discs to go through SIP for reuse.

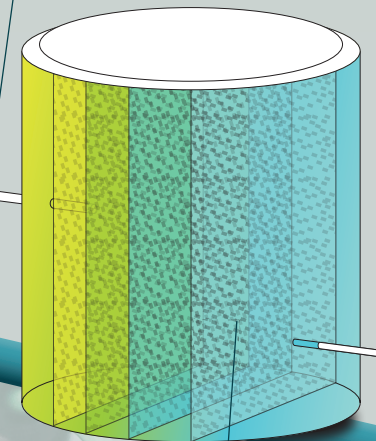
OsecoElfab

Low-Shear Product Transfer
Non-contacting **peristaltic pumps** and cleanable **Biosilicone tubing** eliminate cross contamination risks or product damage.
Sanitary valves & pumps dampen pulses and prevent bubbles for stable flows in streamlined wetted path.

ALICAT **LONGER**

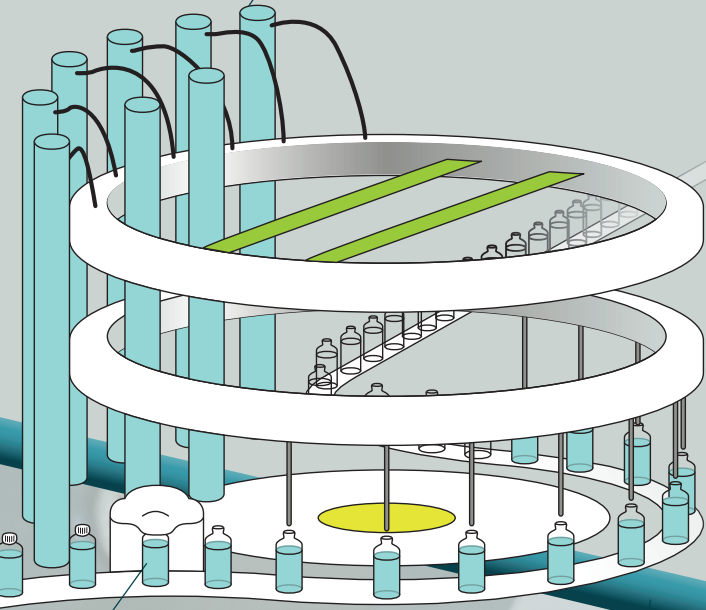


Water Quality
Pathogen inactivation using **UV lamp technology** with variable electronic ballasting ensures water purity, as UV doses are achieved even given changing process variables.



Gas Detection
Personnel & equipment protected from gas leakages in boiler rooms and storage areas for flammable fluids using long-life **flammable gas detection MPS sensors** with maintenance-free detection.
Oxygen detectors ensure safe monitoring of cryogenic rooms and equipment with inert gas blanketing, and support integration with external automated systems.

CROWCON



Chromatography
Chemically inert **lab chromatography columns** compatible with a wide range of systems and process conditions.

Diba **Omnifit**

Bioreactor Control & Monitoring
Critical process parameter control in seed & production bioreactors using **gas mass flow controllers** which are multivariate and highly scalable & repeatable.
Optical environmental sensing of DO pH, turbidity & nutrient level via **spectroscopic monitoring**.
Local & addressable **gas detectors** for oxygen monitoring.

ALICAT **Ocean Insight** **CROWCON**

Single Use Component Testing
Fast, highly sensitive **leak checking** at point of use to confirm no damage during handling or installation.

ALICAT

Chromatography Control
Precise buffer flows using **sanitary valves** reduce waste and reach target blends faster by blending eluents based on real-time feedback.
Backpressure regulators protect the chromatography column by preventing degassing and controlling pressure, creating a smooth transition from column inline to column bypass.

ALICAT

Process Line Minimization
High-turndown **sanitary valves** rapidly ramp flow rates for low-flow dosing and high-flow CIP, with constant WFI pressure given varying downstream demand.

ALICAT

Filtration
Fluids driven across filtration membrane using **pressure controllers** with rapid response times to maintain constant transmembrane pressure even as filter fouls.

ALICAT

Fill and Finish
Final QC with **Raman spectroscopy** for product verification.
Peristaltic pumps and **BioSilicone tubing** robust, low-shear precision dispensing in filling machinery.

LONGER **Ocean Insight**

Rouge Monitoring
Quantitative analysis of high-purity water systems using **battery-powered portable rouge monitors** avoids unnecessary cleaning cycles and downtime due to de-rouging and passivation procedures.

COSASCO