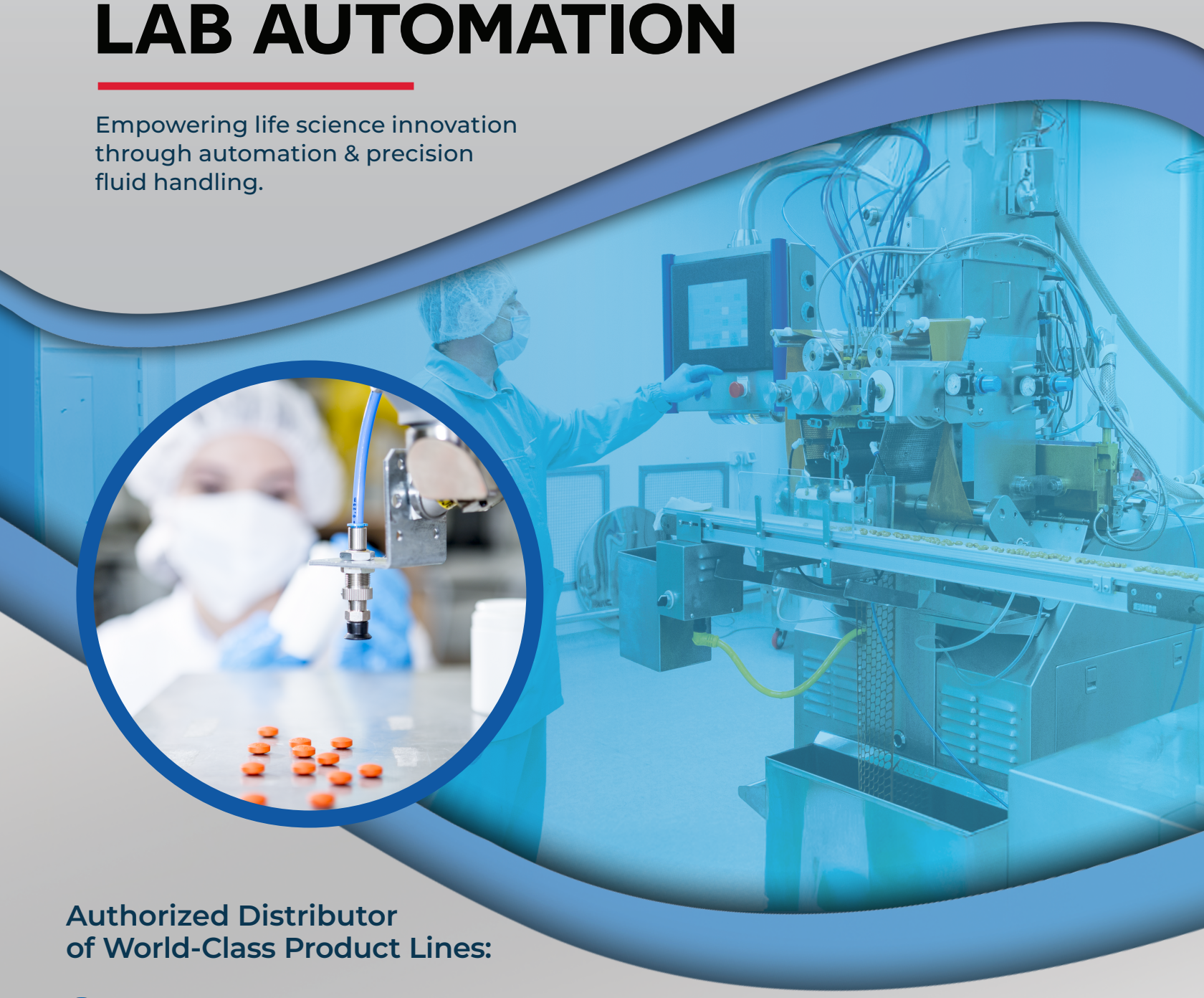
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AUTOMATION HYDRAULICS CONTROLS

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LIFE SCIENCE & LAB AUTOMATION

Empowering life science innovation through automation & precision fluid handling.



Authorized Distributor of World-Class Product Lines:

SMC · Clippard · OMRON · Orientalmotor · Applied Motion Products A MOONS COMPANY

PHOENIX CONTACT · BANNER · EATON · Nordson

+Custom-engineered solutions

INDUSTRIES SERVED

We work closely with integrators, OEMs, and manufacturers in life sciences to provide tailored automation and fluid control solutions that meet industry demands. From **components** to **complete systems**, we help you integrate faster, run smoother, and scale with confidence.







Analyzers & Diagnostics

Precision fluid handling, motion control, and automation solutions, along with subassemblies and components.

Lab Automation

Supporting OEMs with automation solutions for filling, packaging, sterilization, and lab processes, improving efficiency, consistency, and reliability.

Biotechnology

Components and engineering support for bioreactor systems, helping biotech teams scale from research to reliable manufacturing.





Pharmaceuticals

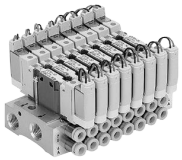
Providing replacement components such as tubing kits, fittings, and other consumables to support consistent, compliant pharmaceutical operations.

Medical Equipment

Supporting equipment, dental systems, and imaging technologies with precision fluid control, motion solutions, and automated components.

SMC

Fluid Control, Automation & Pneumatics



Compact Manifolds

Integrating multiple valves, designed to simplify plumbing and reduce footprint



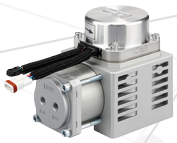
Isolation Valves

2 and 3 port rocker-style isolation valves isolate process fluids from valve internals, minimizing internal volume, delivering precise fluid control with reduced dead volume



Electric Grippers

Electric grippers designed for accurate, controlled gripping in automated handling and assembly applications



Pumps

Precision pumps designed for controlled fluid transfer in applications requiring accuracy and reliability



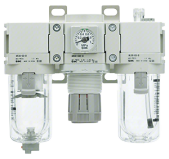
Process Valves

Air piloted and direct operated solenoid valves for air, water, and corrosive materials



Electric Actuators

Compact electric actuators enabling precise, repeatable motion control in fluid handling and lab automation systems



Air Prep

Air preparation units that filter, regulate, and condition compressed air for consistent system performance



Chillers

Maintain stable temperatures for sensitive equipment and process applications

OUR TOP COMPONENTS FOR LIFE SCIENCES

Clippard

Miniature Pneumatics & Fluid Control



Pinch Valves

Controls flow by squeezing tubing, isolating the media from the valve mechanism for contamination-free fluid control (ideal for whole blood and corrosive fluids)



Isolation Valves (PTFE)

Minimal internal volume, allowing safe handling of aggressive or high-purity fluids in analytical instruments



Pressure Controllers

High-precision electronic pressure controllers (e.g., Clippard's Cordis series) that deliver stable, responsive pressure regulation with exceptional accuracy



Zero-leak Miniature Control Valves

High-performance zero-leak valves that ensure tight shutoff and reliable sealing, critical for maintaining system integrity



Precesion Regulators

Compact regulators designed to deliver stable, accurate pressure control for sensitive fluid and pneumatic systems



Manual Control Valves

Durable manual control valves that provide reliable, adjustable flow control with consistent performance

Oriental motor — Motion Control for Lab Automation



Stepper Motors & Drives

High-torque, precision stepper motors with matching drives for accurate, incremental motion control in devices like auto-samplers and lab robots



Industrial & SCARA Robots

Compact, high-precision robotic arms designed for automated lab workflows, such as sample handling, pipetting, and microplate transport

OMRON — Sensing, Vision & Motion Control



Vision Inspection Systems

High-resolution cameras and smart vision software for automated inspection and quality control



Barcode & RFID Scanners

Fast, reliable scanners to track samples and labware - ensuring traceability and data accuracy



PLCs/Motion Controllers

Coordinates lab automation, syncing sensors, robotics, and actuators



Collaborative Robots

Compact and works safely alongside lab staff to automate pipetting, loading, sorting and more



Sensors

Durable, high-performance sensors including proximity, photoelectric and temperature models

Fittings & Connectors

Nordson



High-quality **quick connect** couplings designed to streamline fluid transfer with fast, secure connections and disconnections, minimizing downtime while maintaining reliable, leak-resistant performance

Clippard



Compact **barbed fittings** engineered for simple, secure hose connections, offering dependable sealing and efficient pneumatic flow

SMC



Versatile **push-to-connect** pneumatic fittings that enable fast installation and reliable tube retention, supporting efficient assembly and consistent performance

Parker



Stainless steel fittings built for high-pressure and corrosive environments, delivering superior durability, leak-tight connections, and long service life

ALL **Life Science** BRANDS

Below is a comprehensive list of the life science product lines Airline carries. Please note that certain product lines may not be available in all areas.

- ABB Controls
- Allenair
- All-Flo Pump
- Aventics/Emerson
- Banner Engineering
- Bishop-Wisecarver
- Bosch Rexroth Aluminum Framing
- Bosch Rexroth Conveyors
- Bosch Rexroth Linear Motion
- Butech
- Camozzi
- Clippard
- Copley Controls/Analogic
- Eaton
- E-Drive
- Euchner
- Fortress
- Frame-World
- GAM
- Grace Technologies
- Hammond Manufacturing
- Haskel
- Hiwin Corporation
- Icotek
- IDEC
- Joyce Dayton
- KNF
- Lutze
- Macron Dynamics Inc.
- Maple Systems
- Metal Work
- Molex/Brad/Woodhead
- Murr
- Nason
- NewAge Industries
- Nordson Medical
- Noshok
- Oriental Motor
- Panduit
- Parco
- Parker/Green
- Pepperl & Fuchs
- Phoenix Contact
- Pro-Face
- QC Conveyors
- Reading Technologies
- Rittal
- Robotiq
- Ross Controls
- Schaeffler Group USA Inc.
- Schmersal/Singular Controls
- SMC
- Spartan Scientific
- STC (Sitzo Tech Corp.)
- T-Slots
- TURCK
- Unitronics
- VacuForce
- Werma
- WireCrafters
- Wittenstein/Alpha Gear
- Woehner

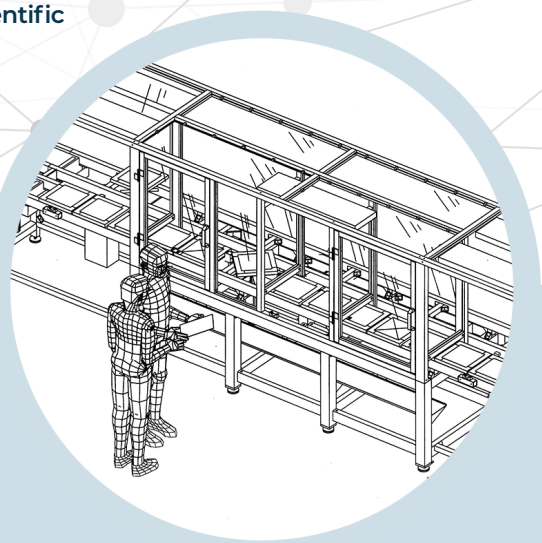
Structural Framing Systems

Strong, clean & flexible structures for lab equipment



Lab Isolation Enclosures

- **Designed to isolate sensitive processes** from environmental contaminants
- Can be equipped with **fume hoods**, HEPA filtration, access ports, negative/positive pressure options & more



Lab Workstations

- **Ergonomically designed** to improve technician comfort and efficiency
- Can include **integrated power, lighting,** and **tool mounting**
- **Custom enclosures** (e.g., gloveboxes) available for **hazardous or sterile** processes

Aluminum Extrusion Brands Include:

rexroth A Bosch Company

PARCO, INC. T-SLOT INNOVATIONS

T S L O T S. BY BONNELL ALUMINUM

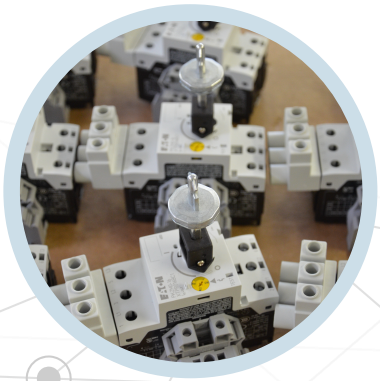
Pneumatic Manifold Assemblies

Streamline fluid control and reduce installation time



Turnkey fluid manifold assemblies that consolidate valves and fittings into **one compact unit.** This reduces leak points and footprint, and arrives pre-tested for **plug-and-play fluid control in instruments.**

- **Consolidated valve assemblies** for simplified fluid control
- **Minimize leak points,** reduce footprint, and simplify installation
- **Assembled** and **pressure-tested in-house** to ensure quality and reliability



Built to Stock Subassemblies

Small Modifications to Your Parts, Big Time Savings

High-volume, precision modifications, such as **adding electrical connections to valves, integrating encoders on motors, and assembling fluid control manifolds.**

- **Reduces on-site installation time**
- Built with high-quality, **lab-grade materials** for reliability and cleanliness
- Designed to meet **tight tolerances** and regulatory requirements

Tubing Kits

Move samples efficiently while protecting their integrity.



Pre-engineered tubing subassemblies designed to streamline system integration and ensure consistent fluid handling performance.

- **Pre-assembled** solutions that reduce installation time and labor
- Designed for **reliable, leak-free** performance in high-purity and critical applications



CUSTOM AUTOMATION SYSTEMS

Automation Solutions for Precision Manufacturing

Custom automation systems designed to enhance automated workflows, increase process efficiency, and ensure **reliable performance** in complex laboratory automation environments

- **Tailored designs** that simplify integration and improve operational consistency
- **Automated solutions** that increase process efficiency
- Built for **dependable performance** in high-pressure and critical environments

Don’t see what you’re looking for? Let’s build it together

Every lab is different. If you don’t see what you need, just ask—we design and build custom systems tailored to your process.

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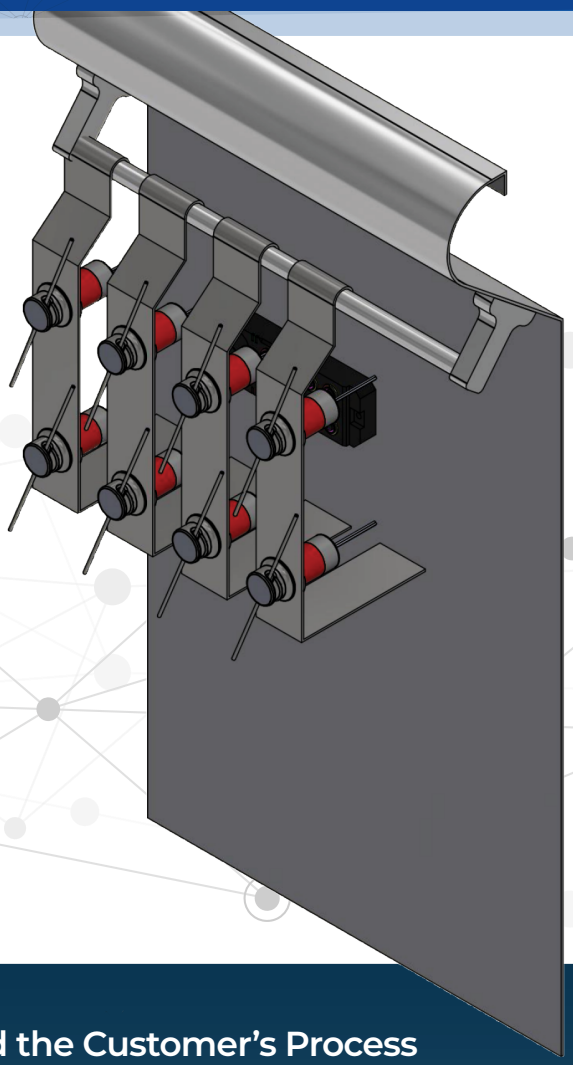
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From **Technology** to Complete **Functionality**

BIOXSAMPLER
AUTOMATED BIOREACTOR SAMPLER

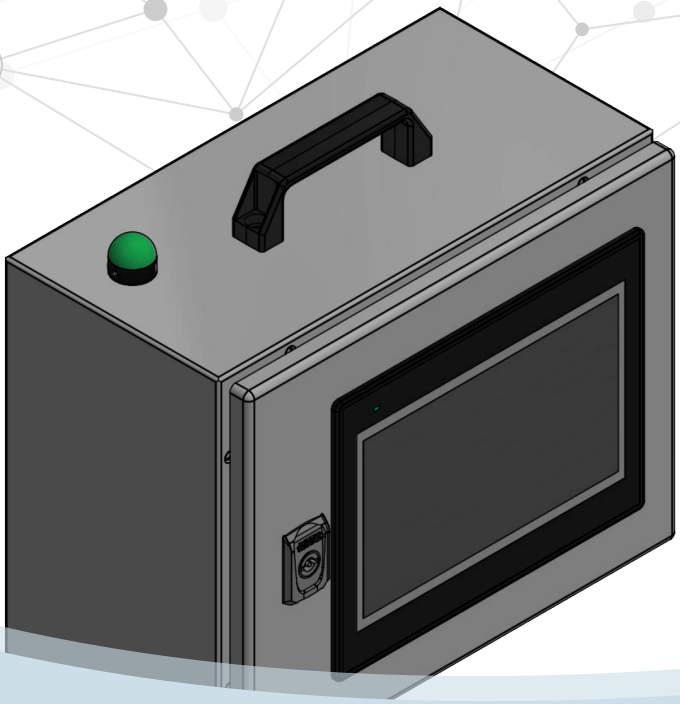
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Custom Engineered Automated Bioreactor Sampling



The BioXSampler II was developed as a custom solution to automate a time-sensitive sampling process. The system actuates a 3-way pinch valve on a programmable schedule, precisely controlling sample volume and flow path while eliminating the need for laboratory staff to perform after-hours or weekend sampling.

The system can run a predetermined sampling schedule without an operator being physically present.



Built Around the Customer's Process

- Automates scheduled sample collection
- Eliminates manual clip and valve adjustments
- Reduces nights and weekend staffing
- Suppports multiple bioreactor configurations
- Improves sampling consistency
- Logs valve activity for better traceability
- Allows remote monitoring and control

Need to Automate a Manual Process?

Work with Airline to develop a custom solution around your application.

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ABOUT AIRLINE

Airline Hydraulics supports manufacturers with automation, pneumatics, machine safety, and framing solutions. Backed by experienced specialists and strong supplier partnerships, Airline delivers reliable products and responsive support to keep critical operations running.



SUPPORTING EVERY STEP OF THE LAB

Whether you build lab equipment or run the lab yourself—we're here to help. We bring the experience and support you need to move projects forward—**on time, on budget, and with confidence.**







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