



PRECISION FLUIDICS CUSTOMIZATION & INTEGRATED SYSTEMS



ENGINEERING **YOUR** SUCCESS.

YOUR LEADING FLUIDICS SOLUTIONS PROVIDER

The **Precision Fluidics Division** of Parker Hannifin stands as a premier provider of miniature fluidic components and comprehensive system solutions, playing a crucial role in the global life sciences, life safety, and high technology markets.

Since our inception in 1977, we have consistently grown and broadened our product portfolio through organic development of innovative solutions and the acquisition of multiple organizations, each enhancing our range of offerings.

As innovators who stay ahead of market trends, we can be trusted to add value and enhance the performance of your instruments. Our team is confident in our ability to meet your unique requirements and application needs, ensuring you receive the best possible solutions.

Locations

DIVISION HEADQUARTERS



26 Clinton Dr. Unit 103
Hollis, NH 03049

Valve Center of Excellence



245 Township Line Road
Hatfield, PA 19440

Mass Flow Center of Excellence



149 Crawford Road
Statesville, NC 28625

Pump Center of Excellence

Analytical Chemistry

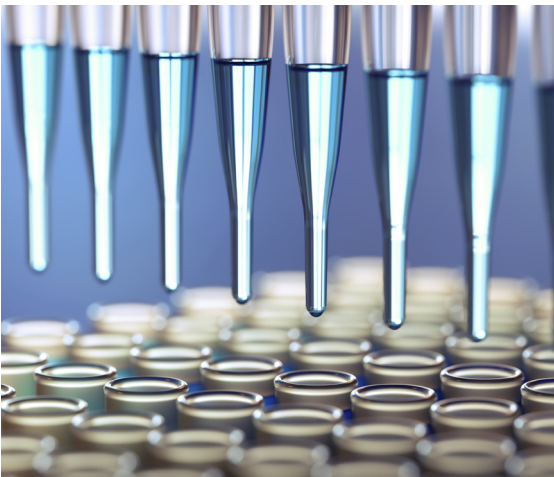
- Gas Chromatography
- Mass Spectroscopy
- Liquid Chromatography
- Atomic Absorption Spectroscopy
- Inductively Coupled Plasma

Clinical Diagnostics

- POCT
- Clinical Chemistry
- Hematology
- Urinalysis

Patient Therapy

- Negative Pressure Wound Therapy
- Compression Therapy (DVT)
- Dialysis
- Surgical Ablation



Enabling Engineering Breakthroughs that Lead to a Better Tomorrow

Respiratory, Anesthesia & Patient Monitoring

- Ventilators
- Anesthesia
- Portable Oxygen Concentrators
- Oxygen Conservers
- Non Invasive Blood Pressure
- Capnography
- Insufflation

Non-Life Sciences

- Scent Dispersion
- Wide-Format and 3D Printing
- Alternative Energy
- Food and Beverage
- Aerospace
- Robotics

OUR CORE TECHNOLOGIES

Our product lineup is engineered to meet the most demanding requirements of modern industries, offering unparalleled **precision, reliability, and versatility**.

Miniature Solenoid Valves



Our miniature solenoid valves excel in managing low flow and high pressure with minimal leak rates and superior cleanliness, meeting strict standards like ROHS, REACH, and biocompatibility in a compact design, showcasing our dedication to innovative and eco-friendly engineering.



Miniature Proportional Valves



Our miniature proportional valves deliver unmatched precision across a broad flow range, all within the industry's most compact design. Experience the pinnacle of clean, low-power, high-resolution gas flow control.



Miniature Liquid Valves



Our miniature liquid valves offer superior microfluidic performance, easily integrating onto manifolds for compact, efficient fluidic circuits in Analytical Chemistry and Clinical Diagnostics.



Miniature Pumps



Our miniature pumps offer a wide range of vacuum and pressure capabilities with precise smart control systems in a compact design, ideal for space-constrained applications. They are built to last up to 15,000 hours, ensuring durability, reliability, and lower maintenance requirements.



Pressure Controllers



Our electronic pressure controllers (EPC) deliver advanced pressure control in ultra-compact designs, maintaining high accuracy for precise process control and improved efficiency.



Mass Flow Controllers & Meters



Our digital mass flow controllers (MFC) and meters (MFM) offer versatility with impressive turn-down ratios for various applications and gases, embodying our dedication to high-performance, low-maintenance, and standard-compliant solutions across multiple industries.



SINGLE-SOURCE FOR SYSTEM NEEDS



At Precision Fluidics, we collaborate with other Parker divisions to expand our resources and solutions for your integrated system needs. This enables us to provide a wide range of options, leveraging Parker's extensive technology and expertise.

Engineered Materials



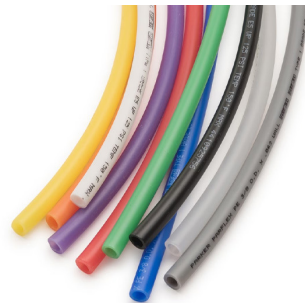
Filters



Fittings and Quick Couplings



Tubing



Sensors



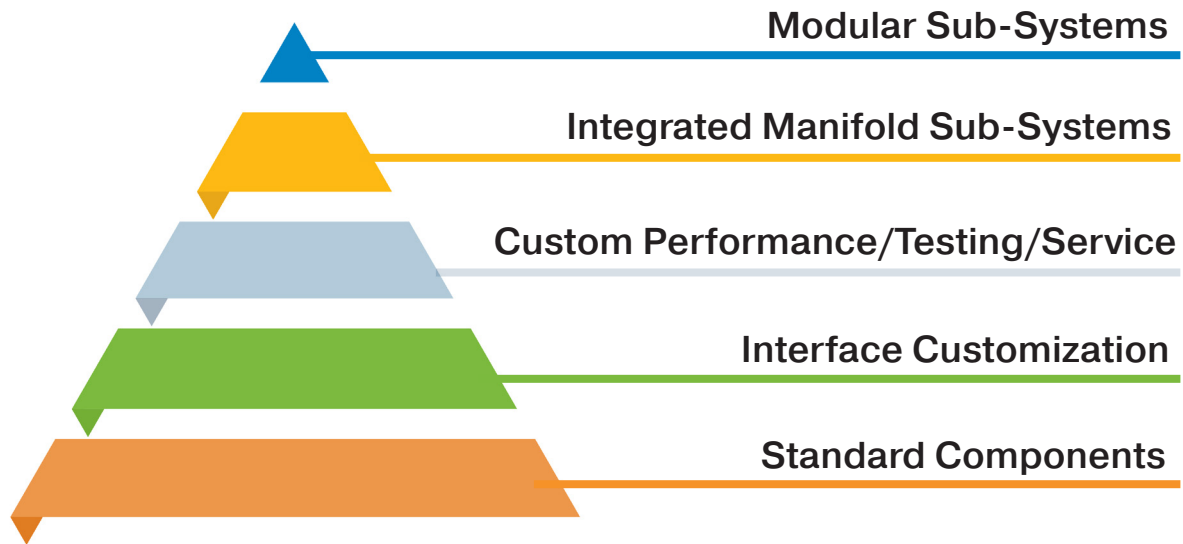
*Please note that the sensors mentioned above are not exclusively manufactured by Parker Hannifin Corporation. Some sensors are produced by Parker, while others are made by affiliated entities. These examples illustrate compatible components for specific systems.

O-Rings



If you have a need for components on this page only, please contact cparker@support.parker.com for further support.

LEVELS OF CUSTOMIZATION



Standard Components

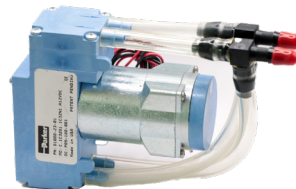
Our comprehensive range of fluidic control components and solutions, including valves, pumps, controllers, and meters, is meticulously designed to cater to the rigorous and evolving needs of the life sciences and various modern industries.



Examples of the standard components we are able to integrate into higher level assemblies.

Interface Customization

- Smart Labeling
- Custom Wire Lead Length
- Electrical Connector
- Filter/Muffler
- Fitting/Adapter
- Mounting Bracket



See custom pump designed with a Parker fitting.



Component designed with a customer specific electrical connector and wire lead length.

Elevating your instrument with personalized value and efficiency.

Custom Performance/Testing/Service

Custom Functional Performance

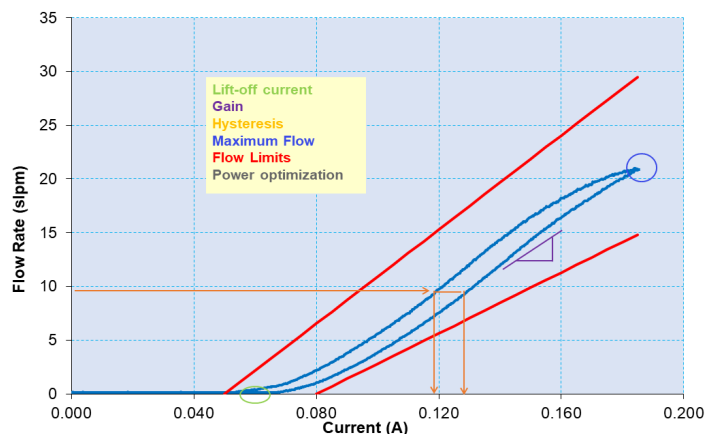
- Optimizing flow/Pressure capability
- Maximizing temperature range
- Power Optimization
- Ensuring leak performance
- Fine-tuning response time

Service

- Custom Cleaning Requirement
- Testing Protocols
- Custom Packaging

Regulatory

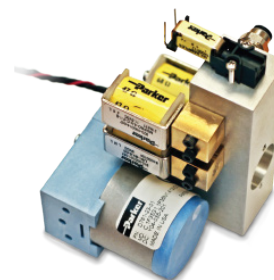
- Biocompatibility (Ex: ISO10993/ISO18562)
- Cleanliness (Ex: ISO15001)
- CE



The above curve illustrates the relationship between flow rate at a particular current input signal at a constant inlet pressure for a proportional valve. The key characteristics measured are shown in the legend.

Integrated Manifold Sub-Systems

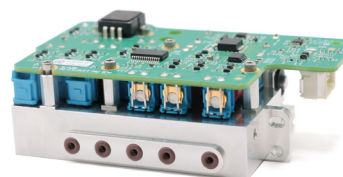
- Create turn-key solution to maximize value
- Reduce complexity and streamline supply chain with custom part number
- Ensure maximum performance to size ratio
- Simplify fluidic circuits to improve manufacturability and drive cost optimization



System designed to control pressure and flow distribution.

Modular Sub-Systems

- Modular Subsystems with Control Capabilities
- Multiplex Actuation
- Closed-Loop Control System



Above is designed to control pressure with multiple outlets.

HOW WE OPTIMIZE YOUR APPLICATION

CONCEPT

- Collaborative Engineering Partnership
- Single Point Of Contact for all Parker Technologies
- Preliminary Proof of Concept
- Rapid Prototyping for Alpha Samples

FEASIBILITY

- FMEA/Characterization Testing/Capability Analysis
- Beta Samples
- Assembly and Test Process Development
- Early Planning and Supplier Involvement

DEVELOPMENT

- Approved Design Specification
- Complete Product Documentation
- Verification/Validation
- Qualified Packaging

QUALIFICATION

- Complete Assembly/Test Process Qualification
- Design Verification/Validation Complete with Report
- Production Cell and Equipment Design Validated
- Pilot Run

LAUNCH

- All Documentation Released
- Pilot Build and Materials in Stock
- Release to Production

Engineered for **peak performance** in **minimal space**.

With **50 years** of microfluidics expertise, our engineering team is ready to collaborate with you to create the perfect customized solution for your next product launch, enhancing system benefits. See below for examples of past projects.



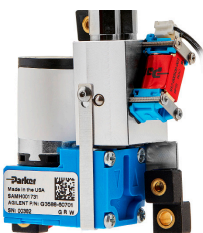
Application: Point-of-Care Testing (POCT)

Function: Pressure Controller with Multiple Outputs



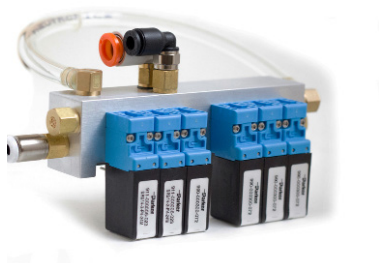
Application: Analytical Chemistry/Mass Spec

Function: Process Gas Control



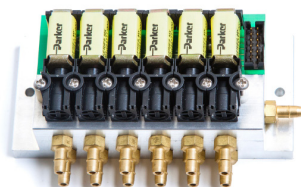
Application: Analytical Chemistry

Function: Sample Management



Application: Clinical Diagnostics

Function: Vacuum Management



Application: Analytical Chemistry

Function: Pneumatic Process Control

WHY PARTNER WITH US



Engineer-to-Engineer

Our design team will collaborate with your engineers enabling the highest performing and most efficient device possible.



One-Stop Shop

We offer a wide range of in-house products and can also leverage products and technologies from over 60 Parker Divisions.



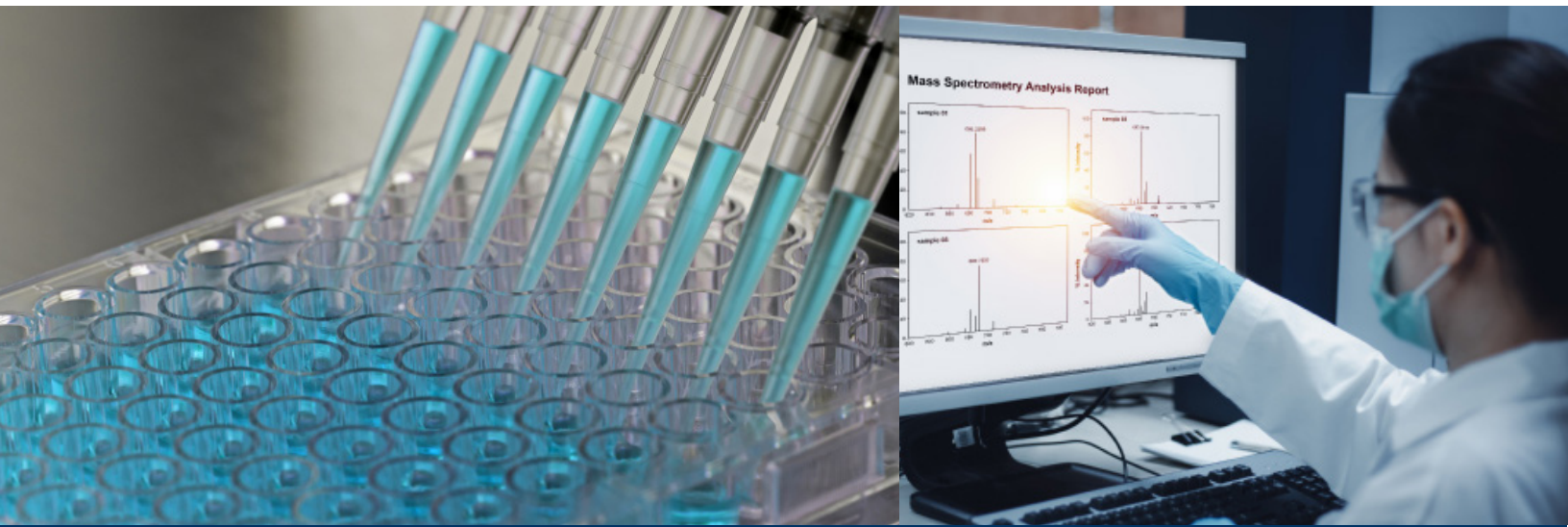
After Sales Support

We prioritize excellence in after-sales support and foster trust and long-term relationships with our customers.



Quality and Reliability

Our products are shipped in qualified packaging that delivers to your facility undamaged and free of contamination.



We are the **fluidics experts** working as an extension of your engineering team, allowing you to focus on optimizing your core technology.





Parker Hannifin Corporation
Precision Fluidics Division
26 Clinton Drive, Unit 103
Hollis NH, 03049
Phone 603 595 150
Fax 603 595 8080
Email ppf.support@support.parker.com
www.parker.com/ppf

PPF Custom Brochure-001

June 2024

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