

MANIFOLDS

INNOVATIVE SOLUTIONS TO
INCREASE QUALITY AND
REDUCE COST

YOU CAN SEE
OUR THINKING

ENGINEERING ADVANTAGE



CREATING ADVANTAGE WITH PEOPLE, PRODUCTS, INNOVATION AND SERVICES

A WORLD LEADER IN MOTION AND FLUID CONTROL TECHNOLOGIES, NORGREN WORKS CLOSELY WITH CUSTOMERS TO GAIN A DEEPER UNDERSTANDING OF THEIR ENGINEERING NEEDS, AND THEN CONNECTS ITS PEOPLE, PRODUCTS AND EXPERTISE TO GIVE THEIR EQUIPMENT AND THEIR BUSINESS A CLEAR ADVANTAGE. WE CALL THIS ENGINEERING ADVANTAGE.



WITH A SALES AND SERVICE NETWORK IN 75 COUNTRIES – AS WELL AS MANUFACTURING CAPABILITY IN THE USA, GERMANY, CHINA, UK, SWITZERLAND, CZECH REPUBLIC, MEXICO AND BRAZIL – WE HAVE GENUINE GLOBAL CAPABILITY.

We also think local and niche: on focusing our resources on delivering a specific product, solution or service to meet our customers' needs.

As a responsible business, we're committed to working practices which contribute positively to the environments in which we work. Our products – including our brand new IVAC – are setting new standards for efficiency, helping customers reduce air usage and energy costs while improving overall performance. We offer:

- **INNOVATION & TECHNICAL EXCELLENCE** through four global technical centres and the experience of specialist engineering teams. We have a portfolio of patented solutions, and are always developing new and cost-effective technologies
- **HIGH PERFORMANCE PRODUCTS** covering pneumatic actuators, airline preparation, fittings and valves. We can supply these either singly to meet MRO needs, or combined in powerful customised solutions
- **EXCEPTIONAL LOCAL SERVICE** delivered through Key Account Management teams and sector specialists committed to understanding and meeting our customers' engineering challenges, wherever they are

CREATING ADVANTAGE WITH MANIFOLDS

INNOVATION & TECHNICAL EXCELLENCE

Our highly experienced engineering and production teams design and manufacture custom manifolds from Aluminum, Brass, Stainless Steel and a wide range of plastics, from Teflon to Acrylics. Our engineers incorporate the latest techniques and technologies to ensure the best design for your application - whether your unique application requires a simple machined manifold or full integration of a complex fluidic circuit in a multi-layered, multi-channel manifold.

HIGH PERFORMANCE PRODUCTS

With our extensive selection of products, we will be able to design a manifold solution that will deliver some or all of the following advantages.

- Reduce overall solution footprint and weight
- Eliminate potential leak paths
- Integrate multiple discrete components such as fittings, valves, pressure regulators, check valves, restrictors, filters, pressure and flow sensors
- Incorporate complex pneumatic and/or fluidic circuits directly into the manifold
- Allow for the maximum number of components on a given manifold face (high density of fluid circuits)
- Consistently maintain the exact fluidic volume between discrete components
- Eliminates potential dead spaces within the manifold (elimination of dead (static) volumes)
- Improved reliability
- Complex multi-directional flow paths

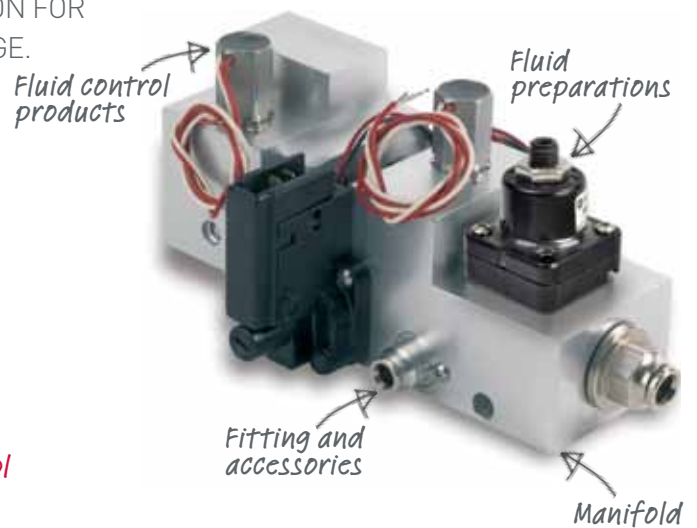
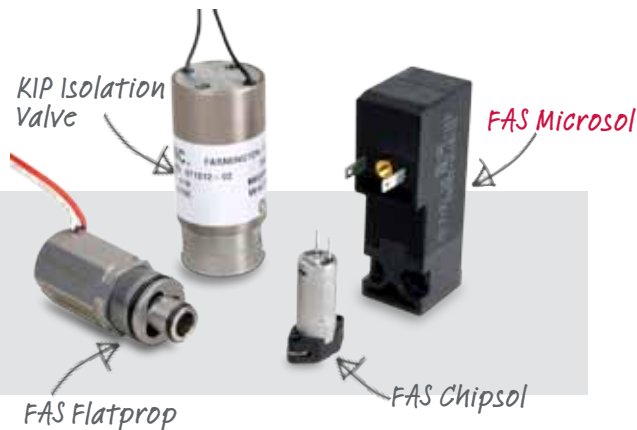
EXCEPTIONAL LOCAL SERVICE

We're a global business with extensive resources, but our focus is always local. Whether you're being helped by a Key Account manager or working directly with one of our design engineers, we will work with you and your team to determine the best solution for your challenge.



CREATING YOUR CUSTOM MANIFOLD

MANIFOLDS ENABLE COMPONENT INTEGRATION FOR A COMPACT, CLEAN, AND MANAGEABLE PACKAGE. THESE PRODUCTS REPRESENT SOME OF THE UNLIMITED COMPONENT POSSIBILITIES.



Fluid Control Products

- High flow proportional controls
- Low watt digital solenoids
- 2/2 and 3/2 Media Separated Valves

Fitting and Accessories

- Cartridge, threaded or coupling designs
- Easily connected
- Check and relief valves

Fluid Preparations

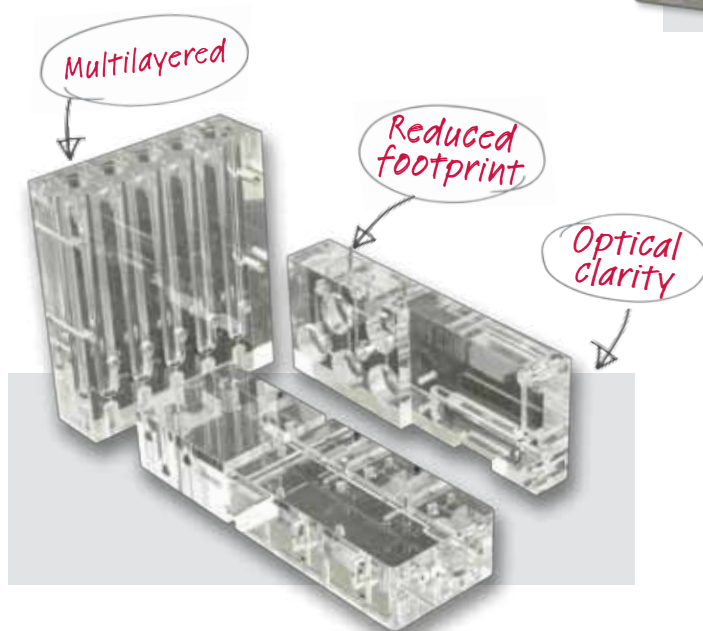
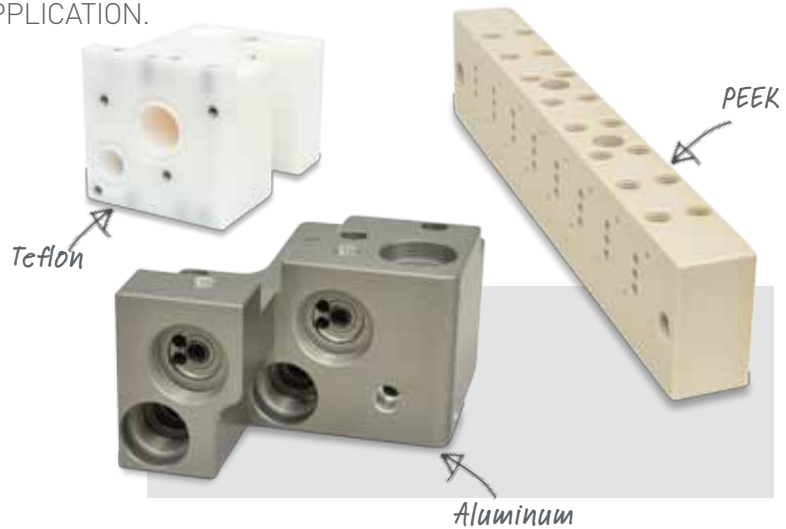
- Precision and manifold mount pressure regulation
- Oxygen compatible
- Filtration down to 0.01 micron

CHOOSE YOUR MANIFOLD

NORGREN OFFERS A VARIETY OF MANIFOLD MATERIALS COMPATIBLE WITH YOUR APPLICATION.

Precision Machined Manifolds

- Robust, compact designs
- Aluminum, SS, Brass, Delrin and Kynar
- Burr free intersections
- NPT straight thread and flat bottom ports



Precision Acrylic Manifolds

- Multi-layered designs
- Custom geometries and volumes
- Complex three dimensional flow paths
- Thermal or Solvent bonded
- Flame and vapor polishing



COMPLETE MANIFOLD SOLUTIONS

NORGREN CAN CONFIGURE MANIFOLDS FOR YOUR CUSTOM SOLUTION



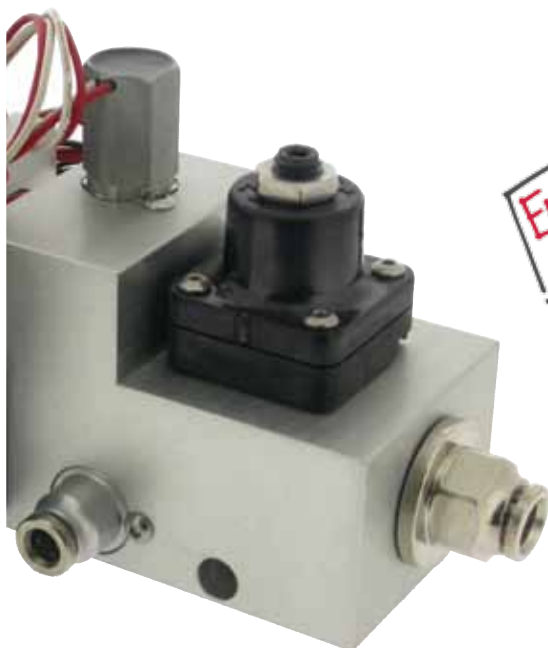
Custom Complete Acrylic Solutions

- Simplified Designs
- Reduced overall foot print
- High density fluid circuitry
- Integrated control components

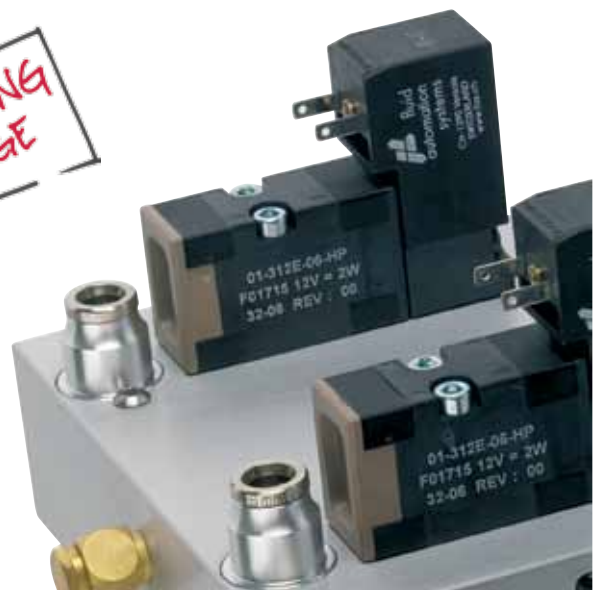


Custom Complete Machined Solutions

- Improved reliability
- Simplified designs
- Reduced complexity
- Out of the box ready



ENGINEERING
ADVANTAGE



CUSTOMER CHALLENGE

RAIL



CUSTOMER CHALLENGE

- Low profile air horn control
- In-field modification

NORGREN SOLUTION

- Low profile for ceiling mounting
- Low pressure drop



ENERGY



CUSTOMER CHALLENGE

- Simple to use system
- Meet certifications levels

NORGREN SOLUTION

- Increased Safety
- Easy serviceability



FOOD & BEVERAGE



CUSTOMER CHALLENGE

- Expandable solutions
- Reduced maintenance

NORGREN SOLUTION

- Easy expandability
- Minimal time scale for



INDUSTRIAL AUTOMATION



CUSTOMER CHALLENGE

- Reduce leaks
- Centralized controls

NORGREN SOLUTION

- Reduced connections
- Reduced footprint



LIFE SCIENCE



CUSTOMER CHALLENGE

- Small envelope
- Ensure precise fluid dispense

NORGREN SOLUTION

- 2-channel syringe pump
- Simplified fluidic circuit



COMMERCIAL VEHICLE



CUSTOMER CHALLENGE

- Consolidate air accessories
- Handling discrete input/output

NORGREN SOLUTION

- Reduction of potential leaks
- Faster installations



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