

Fluidic Subassemblies for Life Science & Medical Applications



From blueprint
to brilliance

CONTENTS

Introduction	02
Why Choose Norgren Subassemblies?	04
Discover the Benefits of Working with Us: Engineering Expertise	06
Discover the Benefits of Working with Us: Manufacturing Advantage	07

Breakthrough Engineering
for a Better World

Norgren is part of global engineering organisation IMI plc. IMI is at the forefront of delivering the solutions we need in a changing world and is focused on **creating tremendous value by solving key industry problems** in attractive markets and employing the best.

Norgren has a proud history of creating innovative engineering solutions in precise motion control and fluid technology, and we collaborate with our customers across more than 50 countries in critical areas such as Factory Automation, Material Handling, Rail, Energy, Process Control, Life Science and Commercial Vehicles.

From improving speed, productivity, reliability and efficiency of equipment, to generating significant energy and cost savings, or lowering total cost of ownership across many industries, Norgren's high-quality solutions are designed to help customers pursue progress, achieve new goals and overcome problems.

With market-leading industry expertise, we offer the capability, resources, engineering intelligence and global support infrastructure to tackle the largest project demands.

Our world-class portfolio of fluid and motion control products include Norgren, Bimba, Buschjost, FAS, Herion, Kloehn and Maxseal. Supplied either individually or combined into powerful customised solutions to meet customer needs.

Breakthrough engineering you can count on.



Breakthrough
Engineering
for a Better World



Norgren Subassemblies

Find out more
norgren.com

Great engineering starts with a solid foundation. If your fluidic needs require precise fluid transfer, challenging flow paths, in a compact design, Norgren delivers market leading precision fluidic and motion control components and subassemblies for diagnostic, medical, biotech, and analytical instruments, backed by 40 years of engineering expertise.

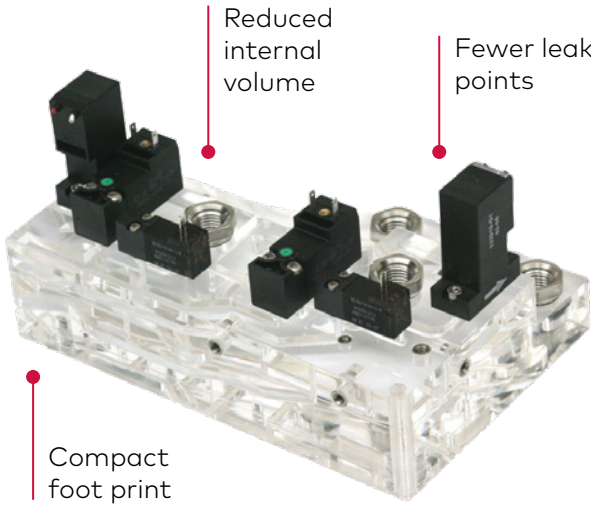
Wherever precision, speed and engineering reliability are essential, our global footprint, problem-solving capability and portfolio of high performance products enables us to deliver **GREAT solutions** which help customers tackle the world's most demanding engineering challenges.

Superior Subassemblies

Unlike designing a system with separate tubing and fittings, Norgren subassemblies provide an all-in-one, compact flow path for more reliable design with easier system integration and service. Subassembly design and engineering often enables lower reagent consumption, and easier instrument assembly and service when compared to discrete piping designs.

Norgren subassemblies deliver:

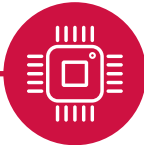
- » Fully integrated components (solenoid valves, pressure and flow sensors, check valves, regulators, control electronics) into a manifold, for one complete fluidic assembly. This approach enables optimized instrument reliability and operational efficiency through:
- » Single plug and play assembly for easier and faster manufacturability and serviceability for both simple and complex pneumatic and/or fluidic circuits.
- » Rapid prototyping to accelerate your time from design to production.
- » Wide range of wetted path materials for superior chemical compatibility.
- » Multilayer manifold technology that allows for complicated flow path design capabilities, and precisely controlled fluid movements.



Fully Tested



Clean Room Production



PCB Integration

Available manifold body materials:

» Plastics

For applications requiring more complex flow paths with superior chemical resistance, thermal conductivity, optical clarity, and lowest carryover

- PVC
- CPVC
- Acrylic
- Polycarbonate
- Polyetherimide
- PEEK
- ULTEM
- and more

» Metals

For applications requiring high pressure or harsh environments

- Aluminum
- Stainless steel
- Hastelloy®
- Brass



Discover the Benefits of Working with Norgren

Find out more
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Engineering Expertise

At Norgren, we already deliver the highest standard of quality subassemblies for diagnostic and medical devices — diagnostics, biotech, medical and analytical devices. So why not let our expert engineers work with you to design that same precise, reproducible, and robust technology for your instrumentation?

Our engineers serve as experts across a broad range of applications such as point of care microfluidic devices, liquid biopsy, hematology, urinalysis, gas and liquid chromatography as well as medical devices such as insufflation, ventilation, anesthesia, dental applications, and hospital beds. We thoroughly understand the latest market trends, challenges, and regulatory standards to deliver complete, OEM-specific, integrated platforms that deliver value.

Our engineering expertise extends beyond design and into production through a variety of manifold body bonding methods that deliver the highest quality integrated subassemblies. From cutting-edge laser and thermal diffusion bonding methods to more traditional solvent and adhesive processes, our production expertise ensures superior and secure bonding no matter the application.

Approvals & Certificates:

- » ISO 9001
- » Class 10000 Clean Rooms
- » Rohs, REACH, CE, UL, CSA Compliant
- » LEAN Certificates
- » Free of Conflict Materials
- » Made in America



Laser bonding and flame polishing



Vapor polishing



Solvent bonding



Diffusion bonding

Manufacturing Advantage

As a single source for manifolds and components, our integrated manufacturing process can take your flow path design from blueprint to brilliance, reducing your time and cost associated with supplier research and management. This is value you can translate into a successful product launch.



Fluidic system ideation

Expert engineers provide technical support to guide custom subassembly designs through manufacturing and offer innovative solutions



System design

From defining and designing your fluidic flow path, our valves, regulators, fittings, and filters deliver flexibility to meet any application need



Rapid 3D prototyping

Rapid 3D printing provides prototypes that shorten development time from months to just days



Review AND revise feedback loop

Prototype feedback, adjustments, and stress tests for performance specs ensure seamless integration and quality



Short run of assemblies

Short-run production of working prototypes can deliver small batch (10 to 30) or up to 100 units for immediate quality tests and long-term cost-effective development



Production

Our 22 manufacturing sites and global production network that spans across 75 countries guarantee reduced assembly time and faster time to market

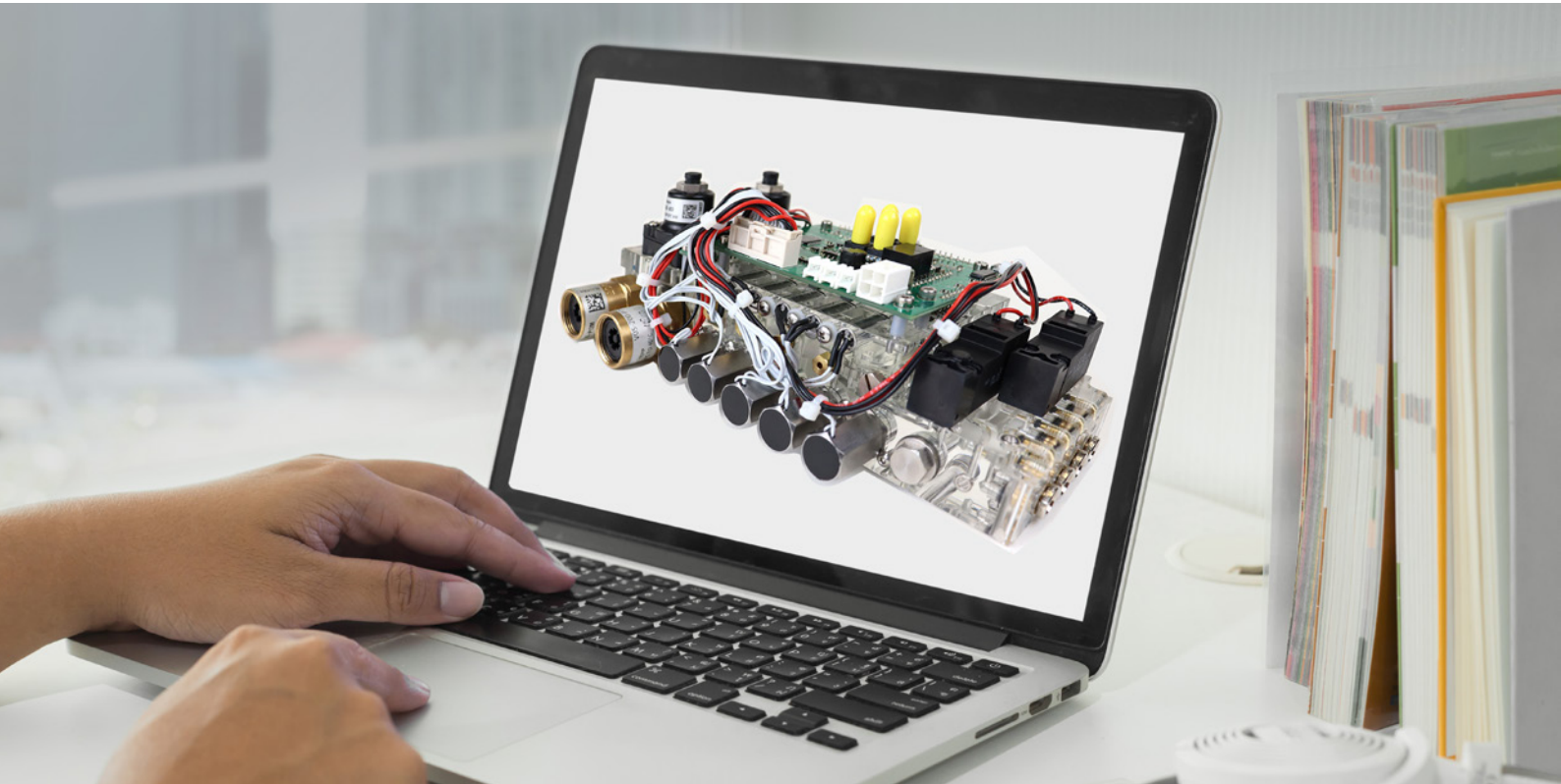


Ongoing technical support

Ongoing technical support to guide you through market trends, engineering challenges, and regulatory standards

Are you ready to take your fluidic system design from blueprint to brilliance?
Contact a fluidic pioneer today

Phone: 1-860-677-0272
or visit: <http://programs.norgren.com/subassemblies>



Norgren operates four global centres of technical excellence and a sales and service network in 50 countries, as well as manufacturing capability in Brazil, China, Czech Republic, Germany, India, Mexico, UK and the USA.

For information on all Norgren companies visit

www.norgren.com

Supported by distributors worldwide.

For further information, scan this QR code or visit
www.norgren.com



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Due to our policy of continuous development, Norgren reserve the right to change specifications without prior notice.

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Incorporating



IMI