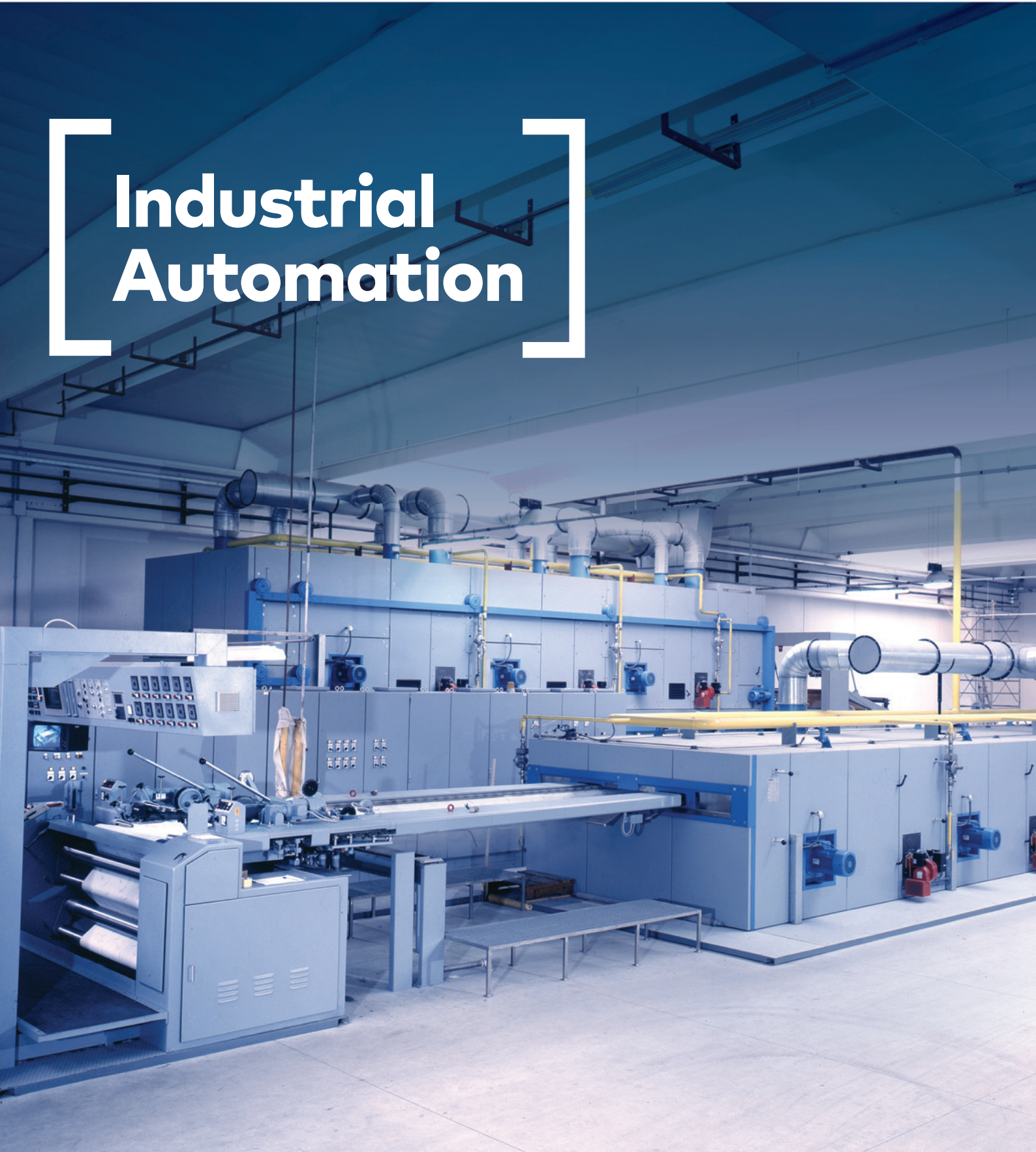


Industrial Automation



CONTENTS

Introduction	02
Industrial Automation Expertise	03
Our Global Reach	04
World-Class Products	05
Industrial Automation	06
Material Handling	07
Food & Beverage	08
Rail	09
Battery Manufacture	10
Norgren.com for everything you need	11
Experts in Customised Control Solutions	12
Products	13

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, Food & Beverage, Process Control, Life Science and Commercial Vehicles.

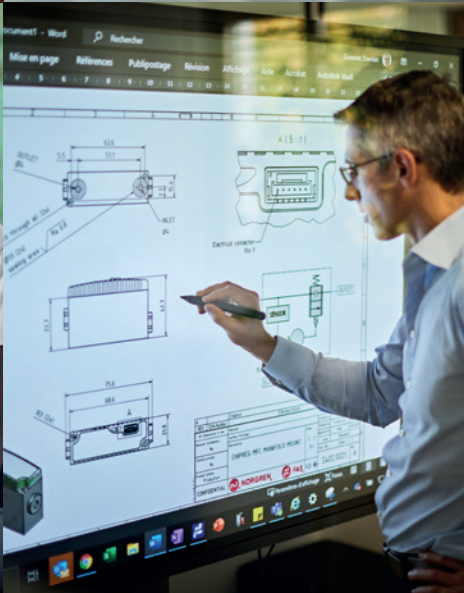
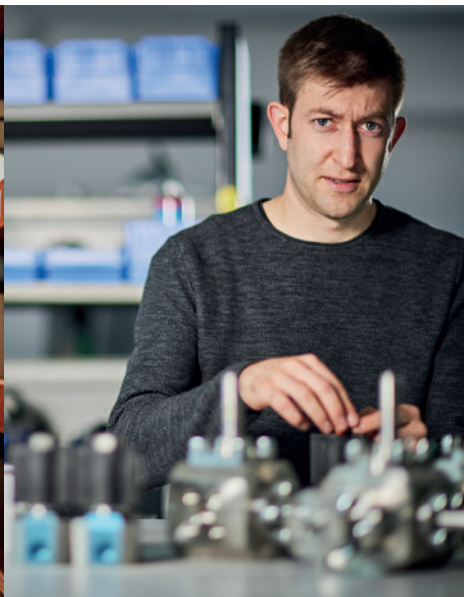
From improving speed, productivity, reliability and efficiency of equipment, to generating significant energy and cost savings, or lowering total cost of ownership across many industries, Norgren's high-quality solutions are designed to help customers pursue progress, achieve new goals and overcome problems.

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



Industrial Automation Expertise

Our high performance products are used across a wide range of sectors including Factory Automation, Food & Beverage and Material Handling.

With over 30 years' experience, we use our deep understanding of the technical challenges and legislative framework to develop pioneering platform products to answer specific needs. Our products improve efficiency and performance, reduce downtime and save energy by simplifying supply chains and reducing machine complexity.

Safety Technology

When it comes to safety, nothing can be left to chance. We offer safety products to help you fully comply with the requirements of ISO 13849.

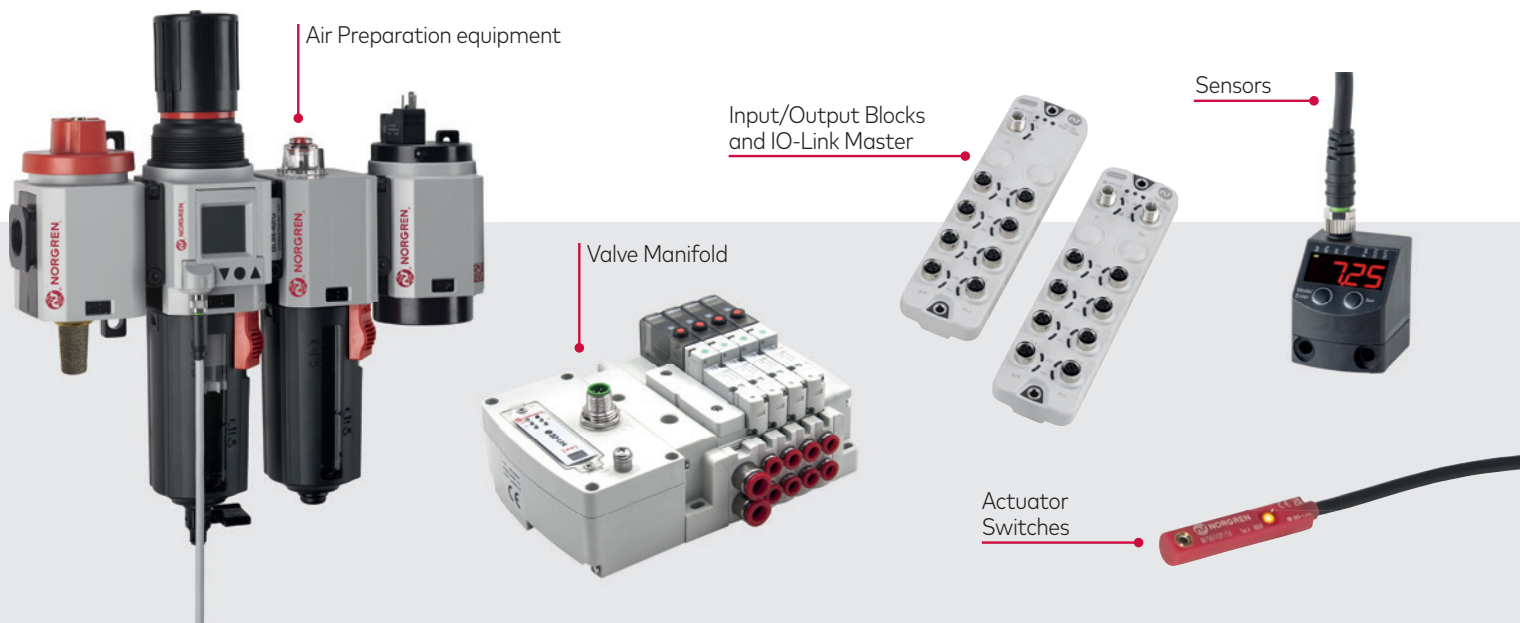
In pneumatic systems, our two hand start unit offers simple installation and maximum performance, whilst conforming to the requirements of ISO 13851, CAT3, PL d.

- » Over 50 years experience in safety applications
 - » Safety applications EN ISO 13849
 - » Competent and professional consulting and system design of safety controls
 - » Very high B10 levels
 - » DGUV certified self-monitored safety valves
- » Important safety features such as:
 - Safe exhaust
 - Safe position
 - Safe stop
 - Reliable reversing
 - Safely limited speed and more



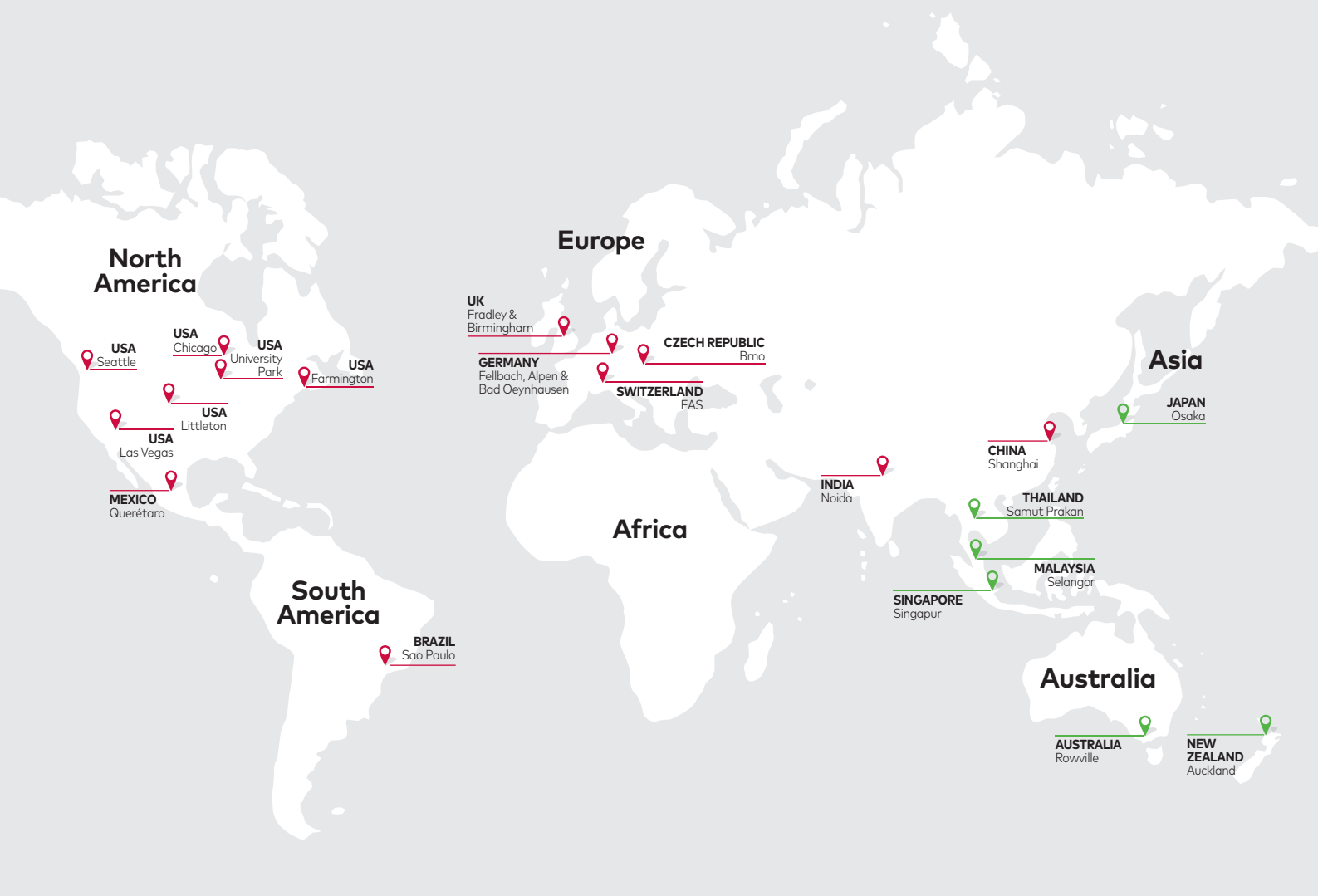
Industrial Internet of Things

As the digital transformation of industry gains pace, we offer high performance, future-proof and product solutions with enhanced, digital capability and connectivity.



Sales & Service

- Norgren sales, manufacturing and technical centres
- Norgren sales locations



Our Global Reach

Delivering products and service reliably, on time and anywhere

We know that precision, speed and engineering reliability are essential - we not only deliver exceptional solutions which improve the productivity and efficiency of our customers' equipment, but the speed of our Express service ensures that we deliver quality products and aftersales service precisely, reliably, in full and on time, anywhere.

All Express products are manufactured to exacting quality standards, are ex-stock and are backed by an industry-leading 2-year warranty.

Our unrivalled stockholding and delivery service are backed by a dedicated support team, fully trained to help you find the product, data or application support you need – fast.

Our skilled teams are available 8.30 am to 5.00 pm Monday to Friday, with access to the web store 24/7, 365 days a year.



Industrial Automation



Our range of solutions pushes factory automation forward, from food and beverage, packaging to textiles.

We apply our expertise to create the precise and innovative components that keep industry moving safely and efficiently.

Key Product Brands



Key Applications

- » Packaging
- » Paper & Print
- » Metal Production
- » Compressed Air
- » Textiles and Machine Automation

Products



» Pneumatic Valves



» Fluid Control Valves



» Rodless Actuators



» Pneumatic Actuators



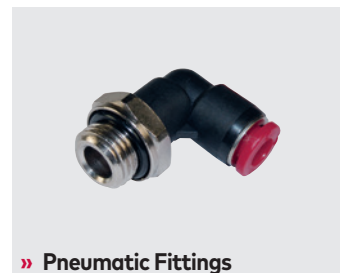
» Electric Motion



» Air Preparation



» Vacuum Products



» Pneumatic Fittings



Material Handling



From robotics, pick and place, conveying, right through to assembly and packaging; material handling sits at the heart of how many industrial organisations operate daily.

With the drive to upscale productivity, cut energy consumption, meet regulations, and drive a more sustainable future, overcoming the challenges of how essential materials and components are handled and transported through production cycles is essential to improve operational efficiency, long-term competitiveness, business resilience and commercial success.

Key Product Brands



Key Applications

- » Pick & Place
- » Sorting
- » Packing
- » Filling
- » Conveying
- » Palletising

Products



» Electric Motion



» Vacuum Generator



» Vacuum Cups



Food & Beverage



We have dedicated over 25 years to meeting the unique needs of the global food and beverage industry, delivering pioneering products and bespoke solutions.

Close collaboration with customers, and a search for innovation that offers real advantage, has resulted in millions of hours of reliable service from our PET bottling, inkjet, processing & packaging, dispense and food service equipment.

Key Product Brands



Key Applications

- » Sorting
- » Protein Processing
- » Adhesive Dispensing
- » Packaging
- » PET Bottling
- » Wine Producing
- » Herd Management
- » Milking Parlours

Products



» Proportional Control



» 40 bar Blowing Blocks



» Stainless Steel Actuators



» IVAC for Optimised Energy Consumption



» Valve Islands (IloT)



» In-Line Valves



» Electric Linear Systems



» Air Preparation Equipments



Rail



We're the motion control specialists developing products and systems that help deliver millions of miles of reliable rail service.

With a true understanding of the daily issues faced by rail operators and original equipment manufacturers, we design for the precise needs of the rail industry, at:

- » Temperatures ranging from -40°C to +85°C (-40°F to +176°F)
- » Voltage tolerances of +/- 30%
- » EN61373 category 1 class A and B vibration resistance

We talk extensively to maintenance professionals and work closely with rail engineers to answer the questions they ask. That means we offer customised, practical solutions to the metro, intercity, high-speed, freight and permanent-way rail industries.

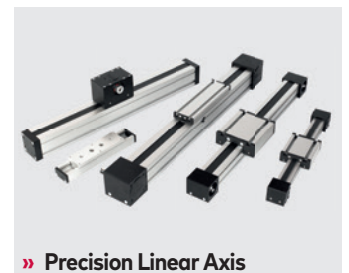
Key Product Brands



Key Applications

- » Pantograph control
- » Brake control
- » Sanding systems
- » Toilet and water systems
- » Step control systems
- » Mirror control
- » Freight systems
- » EN45545 Fire protection on railway

Products



Battery Manufacture



We work in an intriguing world where every industry brings its own challenges. We solve industry problems with bespoke technology – from cell production to module assembly and testing – we'll be with you every step of the way.

With a true understanding of the daily issues faced by the lithium-ion battery manufacturers, we deliver a comprehensive range of reliable, safe and high performing pneumatic and electric motion products.

We address the precise needs of OEMs designing machinery for the battery manufacturing process with:

- » Pneumatic products suited to Clean room Class 7 & 8 according to ISO 14644-1
- » Electric Motion solutions for ISO Cleanroom Classes 1-6. Independently certified by Fraunhofer/IPA.
- » Customisation to meet copper & nickel content requirements based on customer specification
- » Environments:
 - Corrosion-resistant products
 - ATEX approvals
 - Extreme temperature -40°C to +80°C
 - Applicable in Dry room environments

Key Product Brands



Key Applications

- » Mixing
- » Coating & Drying
- » Calendaring
- » Winding & Stacking
- » Formation & Aging

Products



» Electric Linear Systems



» 2/2-way seat valves - Indirectly Operated



» 2/2-way seat valves - Pressure Actuated



» Valve Islands (IloT)



» Pressure Switches



» Industrial comms

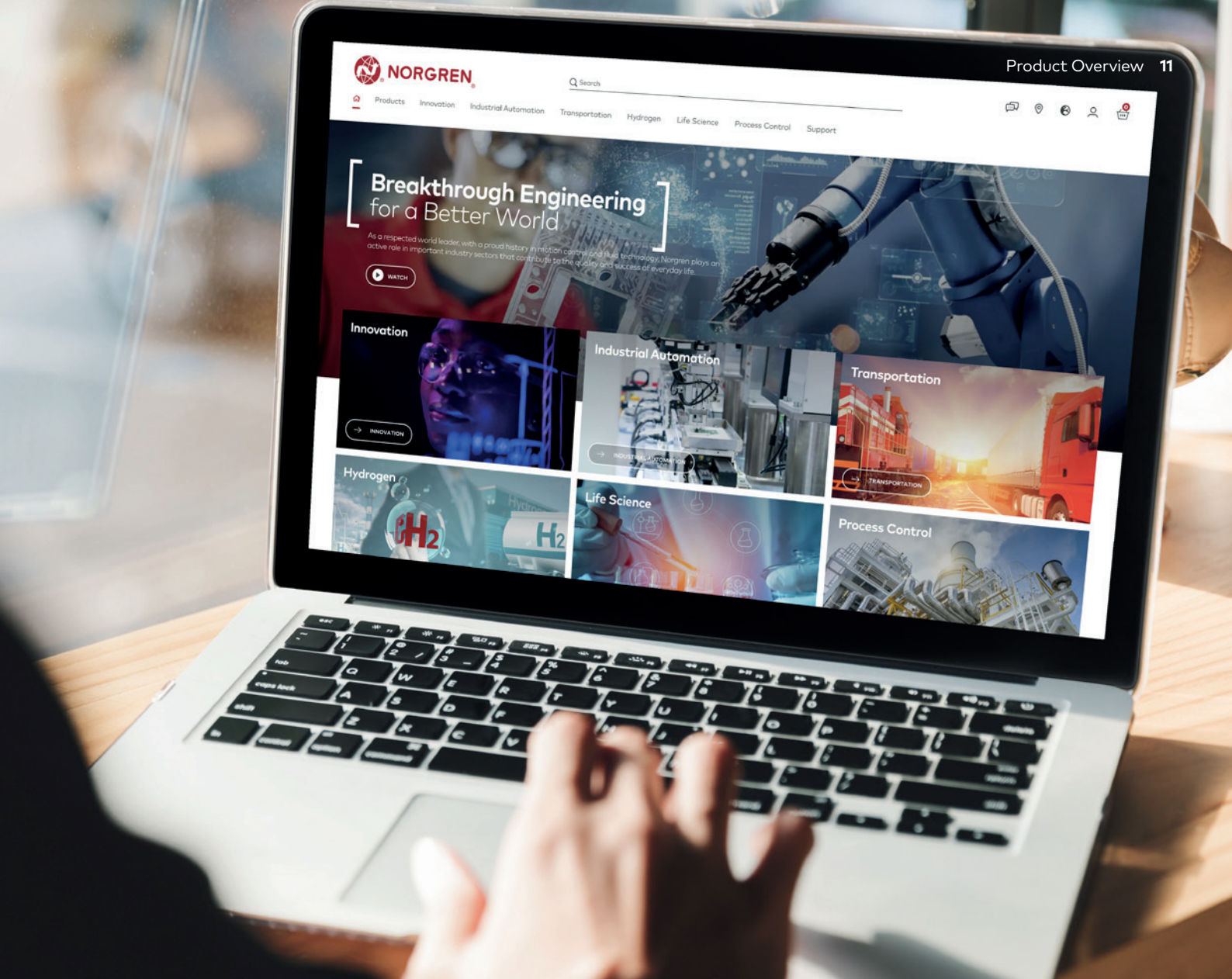


» Air Preparation Equipments



» Proportional Control





Norgren.com for everything you need

World-class products. Technical Excellence. Breakthrough engineering you can count on.

A brand new, upgraded web experience from beginning to end, Simply visit www.norgren.com, and login with your existing Norgren.com email and password - give it a try!

If you need help, or want to discuss the new website, please contact customer services.

Find, Configure & Buy Online 24/7

From configuring a product, to ordering a much-needed part 24/7, or discussing a project with a technical expert, we encourage you to use the wide range of digital solutions we provide to save your time and money.



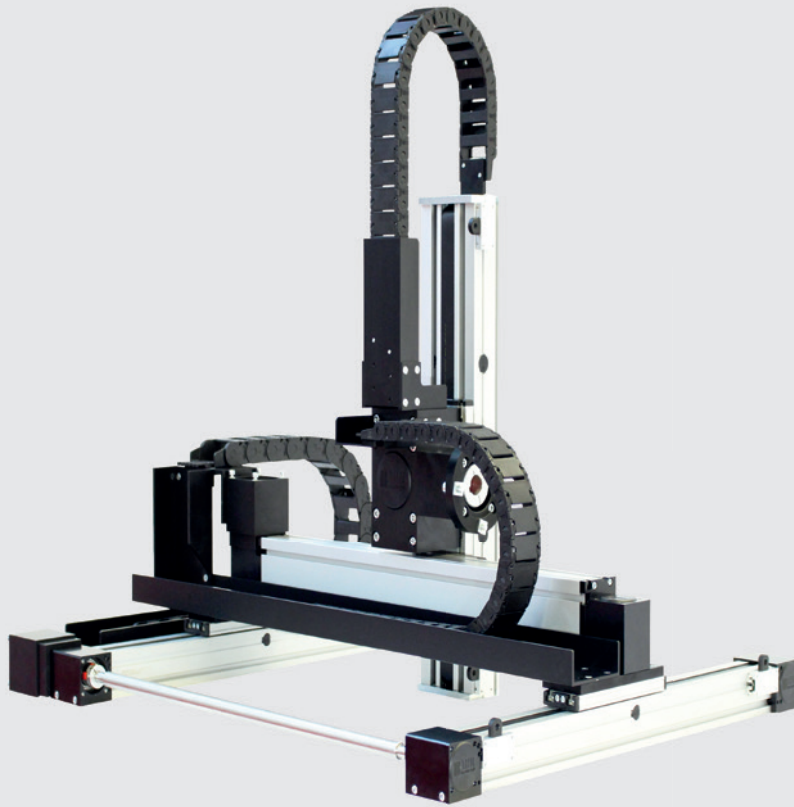
FAST



RELIABLE



100% SECURE



Experts in Customised Control Solutions

Our highly experienced engineering and production teams design and manufacture custom control solutions, incorporating the latest techniques and technologies to ensure the best design for your application. Whether you need a cabinet, panel or manifold solution, we have the technical competence and products available to meet your needs.

- » Excellent technical support
- » Proven quality products
- » Reduced inventory costs
- » Plug-and-play installation on site

Products

Our world-class product portfolio includes Norgren, Buschjost, FAS, Herion, Kloehn, Maxseal and Thompson Valves. Having proven their value over the years, they stand amongst the most trusted manufacturers of pneumatic and fluid control products. Because of this we're able to help our customers solve the world's greatest engineering challenges - reliably, safely and efficiently.



Electric Motion



Air Preparation



Pneumatic Actuators



Pressure Switches



Valve Islands & Industrial Communication



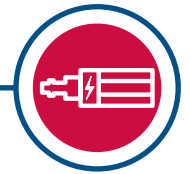
Vacuum



Valves



Fittings, Tubing & Accessories



Electric Motion

Electric Cylinders



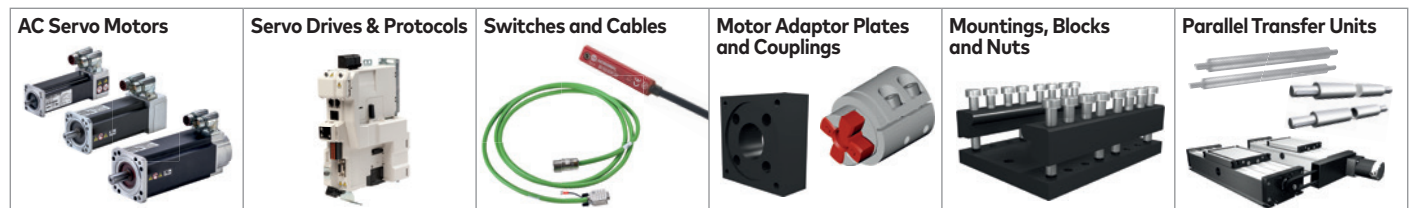
Linear Axis

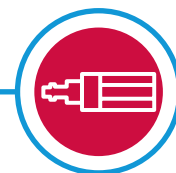


Multi Axis Systems




Accessories





Pneumatic Actuators

Profile Cylinders

<p>PRA/802000/M, RA/802000/M, RA/8000/M ISO 15552 Ø 32 ... 320 mm</p> 	<p>PRA/882000/M IVAC Clean Line Ø 32 ... 63 mm</p> 
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Stainless Steel Cylinders

<p>KA/802000 ISO 15552 Ø 32 ... 200 mm Double acting</p> 	<p>KM/8000/M ISO 6432 Ø 12 ... 25 mm Double acting</p> 	<p>KM/31000 Ø 8 ... 14 1/2"</p> 
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Roundline Cylinders

<p>RM/8000/M ISO 6432 Ø 10 ... 25 mm</p> 	<p>RT/57200/M Ø 10 ... 63 mm</p> 
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Compact Cylinders

<p>RA/192000/MX ISO 21287 Ø 20 ... 50 mm</p> 	<p>RA/192000/MX ISO 21287 Ø 20 ... 50 mm</p> 
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Rotary Actuators

<p>M/60280 Rotation angles 30° ... 270°</p> 	<p>M/162000/MI Ø 32 ... 125 mm</p> 
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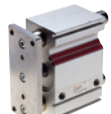
Lintra® Rodless Cylinders

<p>M/146000 Internal Guide Ø 16 ... 80 mm</p> 	<p>M/146100 External Guide Ø 16 ... 80 mm</p> 	<p>M/146200 Precision Roller Guide Ø 16 ... 63 mm</p> 
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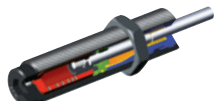

Air Bellows

<p>M/31000 Ø 6 ... 16"</p> 	<p>M/31000 Ø 6 ... 16"</p> 
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Cylinders with Guiding

<p>M/60100/M Ø 10 ... 40 mm</p> 	<p>M/61000/M, M/61000/MR Ø 32 ... 100 mm</p> 
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Shock Absorbers

<p>ACE Shock Absorbers MC Series Self-compensating</p> 	<p>ACE Shock Absorbers MA Series Adjustable</p> 
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Switches

<p>M/50 (Reed and Solid State)</p> 
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- Single Acting
- Double Acting



Vacuum

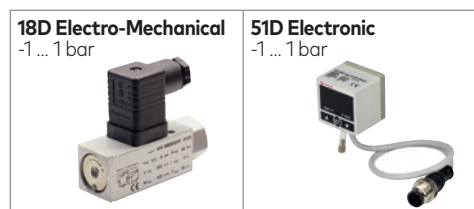
Vacuum Pumps



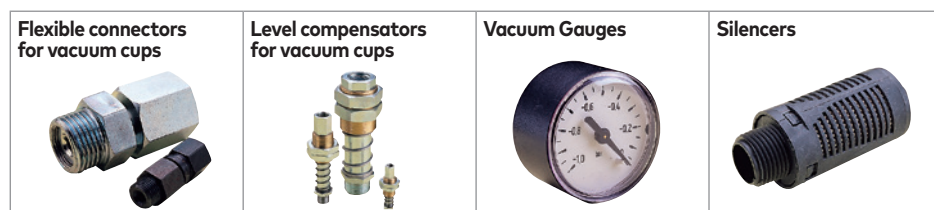
Vacuum Cups & Bellows

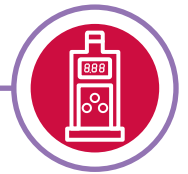


Vacuum Switches



Accessories





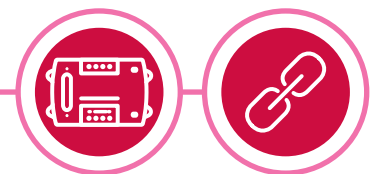
Pressure Switches

Electro-Mechanical Pressure Switches

<p>18D Pneumatic -1 ... 30 bar</p> 	<p>18D Hydraulic 5 ... 420 bar</p> 	<p>20D Low pressure, Allfluid and ATEX 0,5 ... 16 bar</p> 
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Electronic Pressure Switches and Sensors

<p>54D Pneumatic -1 ... 16 bar</p> 	<p>34D Pneumatic/ Hydraulic/Allfluid -1 ... 10 bar</p> 	<p>Q84G 0 ... 10 bar</p> 	<p>51D Pneumatic -1 ... 10 bar</p> 	<p>60D Pneumatic/ Hydraulic/Allfluid 1 ... 400 bar</p> 	<p>60S Pneumatic/ Hydraulic/Allfluid 1 ... 400 bar</p> 
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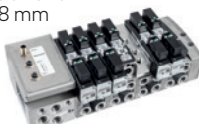
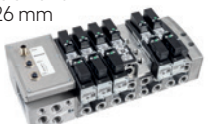
Valve Islands & Industrial Communications

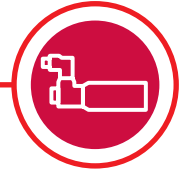
Industrial Communication

NC Series
IO-Link Masters
& I/O Modules






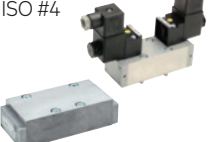
Valve Islands

<p>VR10 5/2, 5/3 & 2 x 3/2 10 mm</p> 	<p>VR15 5/2, 5/3 & 2 x 3/2 15 mm</p> 	<p>VM10 2 x 3/2, 5/2 & 5/3 10 mm</p> 	<p>VM15 2 x 3/2, 5/2 & 5/3 15 mm</p> 	<p>VS18 2 x 3/2, 5/2 & 5/3 ISO 15407-2 18 mm</p> 	<p>VS26 2 x 3/2, 5/2 & 5/3 ISO 15407-2 26 mm</p> 
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Valves

Sub-base Valves

<p>V40/V41 2x 3/2, 5/2 & 5/3 Valve ISO 15407-1/VDMA 24 563 18 mm</p> 	<p>V44/V45 2x 3/2, 5/2 & 5/3 Valve ISO 15407-1/VDMA 24 563 26 mm</p> 	<p>ISO★STAR 5/2 & 5/3 ISO #1 ... ISO #3</p> 	<p>UM/22000 5/2 & 5/3 ISO #4</p> 
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In-line and Manifold Valves

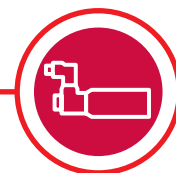
<p>V60 ... 63 3/2, 2x3/2, 5/2 & 5/3 G1/8 ... G1/2</p> 	<p>V50 ... 53 3/2, 5/2 & 5/3 G1/8 ... G1/2</p> 	<p>EXCEL 22, M/49 3/2 G1/8</p> 
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Manual/Mechanical Valves

<p>Super X 3/2, 5/2 & 5/3 G1/8, G1/4</p> 	<p>VHLA 4/2, 4/3 APB G1/4 ... G1/2</p> 	<p>M/1700 5/2, 5/3 G1/4, G1/2</p> 	<p>S/666 3/2 G1/8</p> 
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Special Purpose Valves

<p>Two-hand control unit XSHC04 4 mm PIF</p> 	<p>Safety Valves SCVA 3/2 G1/4, G3/4, G1</p> 	<p>Safety Valves SCVA10 3/2 G1/2</p> 	<p>Safety Valves SCSQ 3/2 G1/2</p> 	<p>Solenoid Actuated Press Safety Valves XSz 3/2 G1/4 ... G2</p> 
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Valves

Proportional Valves

<p>VP10 G1/4</p> 	<p>VP12 G1/8</p> 	<p>VP50 G1/4</p> 	<p>VP50S G1/4</p> 	<p>VP50 IO-Link G1/4</p> 	<p>VP51 G1/4</p> 
<p>140 Failsafe G1/4 or 1/4 NPT</p> 	<p>422 Fail Freeze G1/4</p> 	<p>VP23 G1/4 ... G3/8</p> 	<p>VP60 Proportional Flow G1/4, 1/4 NPT</p> 	<p>100X & 101X Series G1/4, 1/4 NPT</p> 	










Process Industry

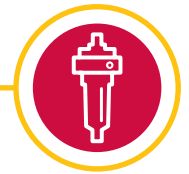
<p>82510 2/2 G1/4 ... G3/8</p> 	<p>82400 2/2 G1/4 ... G2</p> 	<p>84500 2/2 G1/2 ... G2</p> 	<p>95000 2/2 G1/4</p> 	<p>96000 3/2 G1/4</p> 
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Flow Control Valves

<p>C00GE, C00GP Ø 4 ... 12 mm</p> 	<p>T1000 Uni-Directional M5, G1/8 ... G1/2</p> 	<p>T1100 Bi-Directional G1/8 ... G1/2</p> 	<p>M/800 G1/8 ... G1</p> 	<p>T20 M5, G1/8 ... G1/2</p> 
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Other Valves and Accessories

<p>T70, S/511, S/513, S/514 Quick Exhaust Valves G1/8 ... G1/2</p> 	<p>T55 Non-Return Valves M5, G1/8 ... G1/2</p> 	<p>C00GL, C01G, C02G Non-Return Valves Ø 4 ... 12 mm M5, 1/8 ... 1/2</p> 	<p>T50P Non-Return Valves Ø 4 ... 12 mm PIF</p> 	<p>S/520 Non-Return Valves G1/8 ... G1</p> 	<p>T65 Shuttle Valves G1/8 & G1/4</p> 
<p>101GA, 102GA Blocking Valves G1/8 ... G1/2</p> 	<p>T60 Air Fuses G1/4 ... G3/8</p> 	<p>Solenoid Plugs and Cables 15 mm, 22 mm & 30 mm</p> 			



Air Preparation

Excelon® Plus – Standard Modular System

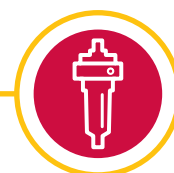
<p>Combination Shut-Off Valve, Filter-Regulators And Lubricators BL82, BL84 G1/4 ... G3/4</p> 	<p>TB82, TB84 Filter-Regulator – Combination G1/4 ... G3/4</p> 	<p>General Purpose Filters F82G, F84G G1/4 ... G3/4</p> 	<p>'Puraire'® High Efficiency Oil Removal Filters F82C, F84C G1/4 ... G3/4</p> 	<p>'Ultraire'® High Efficiency Oil Vapour Removal Filters F82V, F84V G1/4 ... G3/4</p> 	<p>Pressure Regulators R82G, R84G G1/4 ... G3/4</p> 
<p>Filter/Regulators B82G, B84G G1/4 ... G3/4</p> 	<p>Lubricators L82, L84 G1/4 ... G3/4</p> 	<p>Manual Shut-Off Valves T82T, T84T G1/4 ... G3/4</p> 	<p>Solenoid Shut-Off Valves P82C, P84C G1/4 ... G3/4</p> 	<p>Solenoid Shut-Off Valves P82F, P84F G1/4 ... G3/4</p> 	<p>Accessories</p> 

Excelon® Plus – Modular System for harsh environments and extended temperatures

<p>Combination Shut-Off Valve, Filter-Regulators And Lubricators HBL84 G3/8 ... G3/4</p> 	<p>General Purpose Filters HF84G G3/8 ... G3/4</p> 	<p>Extreme Temperature Oil Removal Filters HF84C G3/8 ... G3/4</p> 	<p>Extreme Temperature Oil Vapour Removal Filters HF84V G3/8 ... G3/4</p> 	<p>Pressure Regulators HR84G G3/8 ... G3/4</p> 	<p>Filter/Regulators HB84G G3/8 ... G3/4</p> 
<p>Lubricators HL84M G3/8 ... G3/4</p> 	<p>Shut-Off Valves HT84T G3/8 ... G3/4</p> 	<p>Accessories</p> 			

Olympian Plus – Plug-in, Quick Change System

<p>Combination Shut-Off Valve, Filter-Regulators And Lubricators G3/4 ... G11/2</p> 	<p>General Purpose Filters F68G G3/4 ... G11/2</p> 	<p>High Efficiency Oil Removal Filters F68H G3/4 ... G11/2</p> 	<p>Oil Vapour Removal (Adsorbing) Filter F68V, F68Y G1/2 ... G1</p> 	<p>Pressure Regulators R68G G3/4 ... G11/2</p> 	<p>Filter-Regulators B68G G3/4 ... G11/2</p> 
<p>Lubricators L68M G3/4 ... G11/2</p> 	<p>Pressure Relief Valves V68H G3/4 ... G11/2</p> 	<p>Shut-off & Lockout Valves T68 G3/4 ... G11/2</p> 	<p>Soft Start/Dump Valves P68F G3/4 ... G11/2</p> 	<p>Accessories</p> 	



Air Preparation

Miniature Series, General Purpose

<p>Filter-Regulators and Lubricators P1H G1/8, G1/4</p> 	<p>General Purpose Filters F07 G1/8, G1/4</p> 	<p>Puraire® Oil Removal Filters F39 G1/8, G1/4</p> 	<p>Pressure Regulators R07 G1/8, G1/4</p> 	<p>Filter-Regulators B07 G1/8, G1/4</p> 	<p>Lubricators L07 G1/8, G1/4</p> 
<p>Pressure Relief Valves – Diaphragm Type V07 G1/8, G1/4</p> 	<p>Accessories</p> 				



Large Capacity Series Units

<p>General Purpose Filters F18 G1 1/2 & 2"</p> 	<p>Oil Removal Filters F47 G1 1/2 ... G2</p> 	<p>Pilot Operated and Pilot Regulators 11-808, R18, 11-400 G1/4 ... G2</p> 
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Stainless Steel – General Purpose and Precision

<p>Filters, pressure regulators, lubricators F22, R22, L22 1/2" NPTF</p> 	<p>General purpose filter/regulator B52/B54 1/4" ... 1" ISOG & NPT</p> 	<p>Precision regulator & filter regulator R38, B38 1/4" NPTF</p> 	<p>General purpose regulators & filter regulator R05, B05 1/4" PTF</p> 
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Special Purpose

<p>Pre-Set Regulator R16 G1/4</p> 	<p>Precision and Instrument Regulator 11-818, R27 G1/4</p> 
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Accessories

<p>Gauges</p> 	<p>Auto Drains</p> 	<p>Drip Leg Drains</p> 
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Fittings, Tubing & Accessories

Fittings

<p>Pneufit 10 Push-In Fittings Ø 4 ... 14 mm</p>	<p>Pneufit 12 Push-In Fittings Ø 4 ... 12 m</p>	<p>Pneufit C Push-In Fittings Ø 4 ... 16 mm</p>	<p>Pneufit C Selection Box</p>	<p>Pneufit D Push-In Fittings Ø 4 ... 12 mm</p>	<p>Pneufit M Push-In Fittings Ø 3 ... 6 mm</p>
<p>Pneufit S Push-In Fittings Ø 4 ... 12 mm</p>	<p>24 Series Push-On Tube Fittings Ø 4/2,5 ... 15/12,5 mm</p>	<p>43 Series Compression Fittings – External Nut Ø 4 ... 22 mm</p>	<p>BSP & Hose Fittings M5, 1/8" ... 1" BSP</p>	<p>34 & 36 Series Compression fittings Ø 4 ... 28 mm</p>	<p>97400 Fleetfit Push-In Fittings Ø 6 ... 18 mm</p>

Tubing & Hoses

<p>Nylon Tubing Ø 4 ... 16 mm</p>	<p>Polyurethane Tubing Ø 3 ... 16 mm</p>	<p>Metal Braided Rubber Hose Ø 6 ... 12 mm</p>	<p>Pneuflex Tubing Ø 6 ... 8 mm</p>	<p>Weld Tubing Ø 6 ... 14 mm</p>	<p>Tube Cutter</p>
<p>Tubing Channels & Clips Ø 6 ... 16 mm</p>					



Fittings, Tubing & Accessories

Accessories

<p>233 Series Single and double shut off quick release couplings</p> 	<p>238 Series Single shut off quick release couplings</p> 	<p>234 Series Double shut off quick release couplings</p> 	<p>237 Series Single shut off quick release couplings</p> 	<p>M/S & T45 Series Porous plastic silencers M5, G1/8 ... G1</p> 	<p>T40 Series Sintered Bronze Silencers M5, G1/8 ... G1</p> 
<p>M/1500 Series Exhaust Filters G1/8 ... G1</p> 	<p>MA & MB Series Quietaire Heavy Duty Silencers R1/8 ... R1</p> 	<p>CS & MQ0 Series Coelescing Exhaust Silencers M5, G1/8 ... G1/2</p> 	<p>60 & 61 Series Ball Valves 1/8" ... 1 1/2"</p> 	<p>M/7300 Series Sleeve Valve G1/8 ... G1/2</p> 	<p>BG Series Blow Guns</p> 
<p>Slow Rotating Joints 1/8" ... 3/8"</p> 	<p>Fast Rotating Joints 1/4"</p> 	<p>T65 Shuttle Valves G1/8 ... G1/4</p> 	<p>T70 Quick Exhaust Valves G1/8 ... G1/2</p> 		

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Incorporating

