



RAILWAY TECHNOLOGIES

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>> We listen to our customers and work closely with them to provide engineering solutions with added value.

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UGL Rail

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“We can respond quickly and positively to a customer’s unique need”

Norgren has a proven track record in creating competitive advantage for customers in many industries. We work harder to understand our rail customers’ business and technical needs to give them smarter engineering solutions.

Norgren’s global engineering infrastructure enables us to respond quickly and positively to a customer’s unique needs. To develop high-quality proprietary engineering solutions for target markets as well as products to satisfy the general needs of the pneumatic industry, we have 20 sites world wide with engineering design capabilities, 5 of which are centres of excellence with specific focus on the rail industry.

After more than 30 years of experience in the rail industry we have developed a core set of products. These core products have been designed to encompass the environmental needs of this sector. All the products in this catalogue meet three fundamental environmental specifications, unless otherwise noted:

- » Temperature from -40°C to +80°C
- » Voltage tolerance of +/- 30%
- » EN61373 Category 1 Class A and B vibration resistance

Go to page 36 for details on our extensive range of pneumatic and fluid control products meeting the above standards.

Norgren’s global presence, expertise, capabilities and extensive Railine product portfolio makes us ideally suited for developing custom application solutions. Go to page 6 and you will find examples of solutions developed by our Engineering teams worldwide.



“Sales and manufacturing facilities in 75 countries give us the global reach, understanding and capabilities that customers look for”

Norgren’s global footprint

Specialist technical centres are located in China, England, Germany and the USA

We have a global network of technical centres close to our key markets where skilled and experienced design and development engineers produce custom-built solutions to give our customers competitive advantage



With established manufacturing facilities globally Norgren has the manufacturing and support capabilities to be able to cope with the most demanding international projects. Drawing on many years of experience of handling major projects across national boundaries, Norgren can harness global resources to match its customers’ own operations.

»» GLOBAL REACH World leading pneumatic and fluid control technologies

‘Global manufacturing and support’

With an established sales and service network in 75 countries, we have the reach and capability to ensure continuity of supply and local support where it is needed for customers involved in export markets or multi-site operations. Front-line sales and technical support engineers share our knowledge and skills with customers around the world.

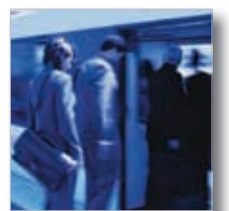
For details and information visit norgren.com



APPLICATIONS

APPLICATIONS

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Specialised multi-stage filtration system



» CUSTOMER APPLICATION

Oil free compressed air for auxiliary rail systems, brakes and door equipment

» NORGREN SOLUTION

Special 4 stage filtration system

» ENGINEERING ADVANTAGE

- » Special filter to remove excess water and carbon particles
- » Low temperature filter to remove water and filter to 5 micron
- » Fine particle removal filter to give a final air quality of 0.01 micron
- » Oil and particles removed from downstream - ISO 8573-1
- » Dry door and brake valves, improved reliability for couplings & pantographs
- » Easy installation and maintenance
- » Cost effective over the full life cycle

Specialised multi-stage filtration system



» CUSTOMER APPLICATION

Compressed air filtration for auxiliary rail systems, brakes and door equipment

» NORGREN SOLUTION

Specialised 3-stage filtration system

» ENGINEERING ADVANTAGE

- » Excellent filtration performance ensures reliability of downstream components and systems
- » Large high-flow elements ensure maximum element change out intervals with minimum system pressure drop
- » Independent or modular 1, 2 or 3 stage filtration
- » Complete pre-assembled package minimises installation time
- » Special internal components and large metal bowls ensure reliability
- » Optional visual or electric service life indicator
- » Manual or automatic drains for filters and condensate tanks. Automatic units can be electrically operated or pilot operated.

Braking System Components



» CUSTOMER APPLICATION

Train braking system components

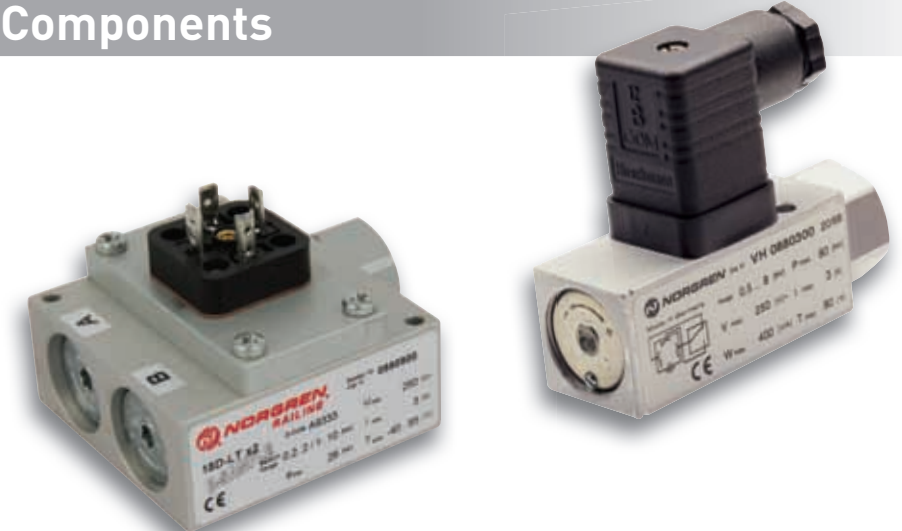
» NORGREN SOLUTION

Special solenoid valves & regulators

» ENGINEERING ADVANTAGE

- » Ability to function at both high and low temperatures
- » +/- 30% voltage tolerance and surge suppression eliminate damage from power peaks
- » Compact high performance valve
- » High vibration resistance
- » Rapid response time and long life
- » Customised manifold solutions

Braking System Components



» CUSTOMER APPLICATION

Train braking system pressure monitoring

» NORGREN SOLUTION

Special pressure switches

» ENGINEERING ADVANTAGE

- » -40°C to +100°C temperature range
- » Gold plated contacts for high cycle life
- » Vibration resistance to 15g
- » High repeatability & accuracy
- » Robust construction

Coupling Systems



» CUSTOMER APPLICATION

Carriage coupling / uncoupling for Metro and Mainline cars

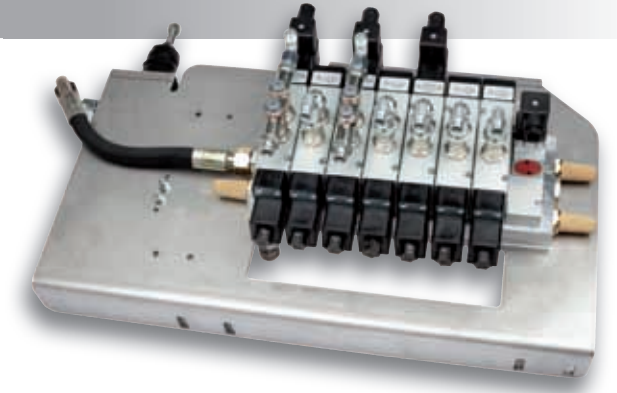
» NORGREN SOLUTION

Special pneumatic cylinder, heavy duty limit sensing valves and fittings
 » High spring force and high load rod bearing ensure reliable operation

» ENGINEERING ADVANTAGE

- » Engineered to integrate to existing design
- » Compact design
- » Simplified installation

Coupling Systems



» CUSTOMER APPLICATION

Locomotive coupling / uncoupling with retractable nose cone for High Speed trains

» NORGREN SOLUTION

Special pneumatic cylinder with integrated position sensing, and customised compact valve manifold with unique manual over ride function

» ENGINEERING ADVANTAGE

- » Compact, light weight valve manifold solutions
- » Standard or customised actuators
- » Heavy duty limit valves
- » Solenoid valves proven in railway applications over many years
- » Designed to save space, weight and installation time