



# Industrial Automation

Rail  
Freight Overview

Breakthrough  
engineering for  
a better world



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## Breakthrough engineering for a better world

We create solutions for our customers which enable smarter, safer, more productive and sustainable factories, production lines and warehouse operations. Our pneumatic and electric motion systems help machine builders and end users around the world automate and optimise manufacturing and warehousing processes.

We have partnered with customers in industrial automation for over a century, applying our experience and innovation to create lasting value for their businesses. Our solutions support critical industries such as automotive, food and beverage, pharmaceuticals and even the space industry. We support the automation of precision manufacturing, product assembly, testing and packaging.

We use the latest digital technologies in our automation products and constantly innovate in close partnership with our customers. By applying our deep expertise, we can solve their toughest automation challenges, today and tomorrow. Through increased productivity, efficiency and safety, our customers can serve their own customers better, creating sustainable competitive advantage and delivering growth.

Our world-class product portfolio includes IMI Norgren, IMI Bimba, IMI Bahr and IMI Buschjost.

Breakthrough engineering you can count on.

**NOTE:** Due to our policy of continuous development, we reserve the right to change specifications without prior notice.

# Delivering expertise, solutions and value to the rail sector

For over 45 years, we have delivered robust, reliable and bespoke solutions to the rail sector.

Our products continue to give millions of miles of reliable service across the world's most challenging environments, from the cold of Northern China and Eastern Europe to Australian outback heat.

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 (-40°F) to +80°C (+176°F)
- Voltage tolerances of +/- 30%
- EN 61373 category 1 class A and B vibration resistance
- EN45545-2 Fire and Smoke

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

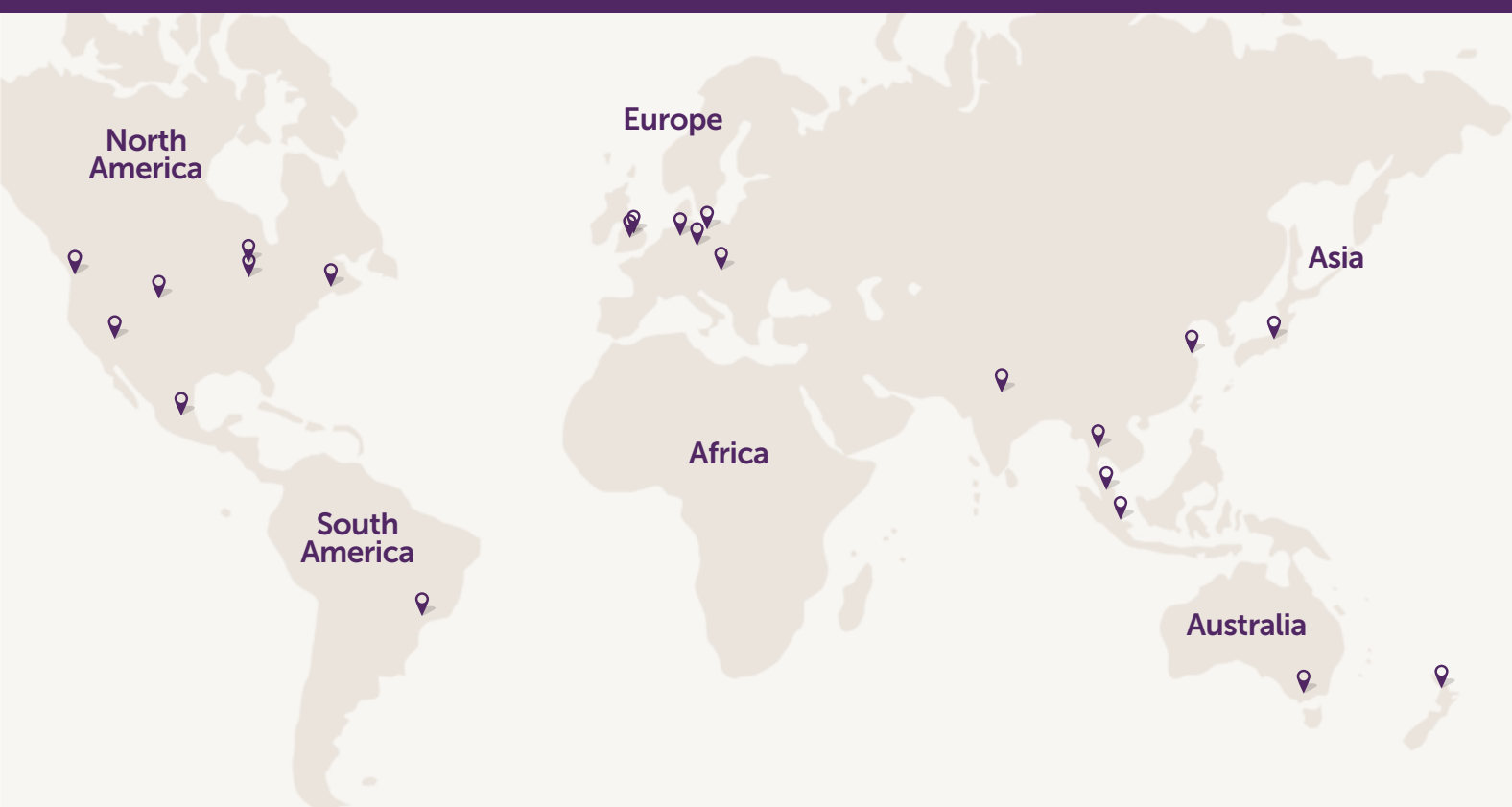
- Air preparation equipment
- Brake sub-systems and components
- Coupling control systems
- Door and step control systems
- Pantograph control systems
- Water control systems
- Freight control and actuation
- Suspension control equipment

By listening and responding to your specific challenges, we help you make significant improvements and savings in terms of cost of ownership, energy efficiency, reduced maintenance and more.

## Global support

We help you achieve your goals by working with you as a partner, not just a supplier. Our dedicated rail team is connected worldwide to ensure close, continuous support no matter what the size and extent of your organisation. We have the reach and capability to work alongside you on complex, global projects or to simply offer local spare part supply.

●● Across manufacturing, sales, innovation centres and offices ●●





# Freight systems

We provide standard and customised products that are purpose-built to perform in heavy duty freight applications, delivering years of reliable operation in the harshest environments.

Designed for the automated control of freight top hatch and bottom doors, our pioneering solutions provide safe, efficient filling and unloading. They provide ease of use and welcome flexibility for your rail operation, as well as helping lower the total cost of ownership.



## Wagon discharge automation systems

- Special pneumatic/electric actuation and control systems
- Safe, reliable and secure operation
- Interlocking and feedback drive systems
- Extended cushioning and increased side load stability
- Entrapment protection
- Many years of proven reliability and safety in Metro, EMU and HST applications globally

## Latching cylinders

- Able to positively lock a cylinder in the 'in stroke' and 'out stroke' position
- Safely and securely hold loads in place in the event of air pressure loss or failure
- Manual override to allow manual operation if compressed air not available
- Require only a single control valve to fulfil all functions
- Reduced components circuitry, installation time and weight
- Easy to install and maintain
- Suitable for applications including freight wagon top hatch and discharge doors, 'clawlock' points control, pneumatic step control

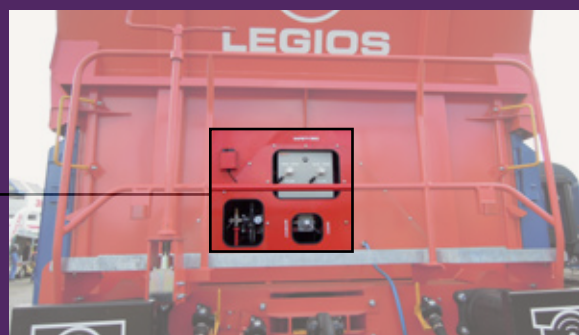
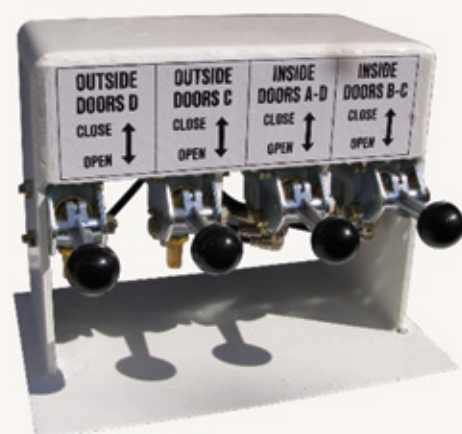
## Locomotives

- Hydrogen fuel cell components
- Shutter cylinders for temperature control
- Pressure switches
- AMT air dryers and filters
- Regulators
- Horn valves
- Sanding system controls

# Freight wagons

IMI Norgren control system solutions are designed for automated control of applications including wagon top hatch and discharge doors.

- Compact and modular control systems
- Bespoke customer manifolds
- Rail validated components
- Robust and reliable operation
- Low temperature range of -40°C
- Shock and vibration tested to EN 61373, Category 1, class A and B
- Global Sales and Technical support







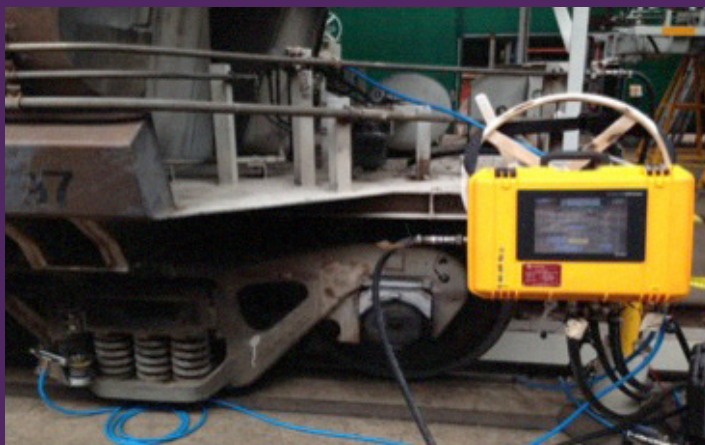
## Freight testing equipment

AUTOSCAT is a single car air tester that can be simply carried by one person to the wagon that needs to be tested. It is connected to the wagon and an air supply, and simply by pressing the start button, the tests are carried out automatically while the operator performs visual checks.

The operator gets a visual indication of test passes or failures on the front of the unit. Once complete, the unit is connected to a PC, the data downloaded, and the information for each test displayed in an easy-to-read report. This allows better understanding and diagnosis of the recorded test information for each wagon.

### Product Highlights

- Accepts multiple power sources
- Unit self tests
- Displays all post test results
- Automatically performs desired test procedures
- Easy to upload and store wagon data
- AUTOSCAT can store up to 10 wagons of data
- Simple software allows easy upload to PC
- Easy to use
- Portable







## Freight Wagon Remote controller

- Heavy duty design
- Adjustable distance setting
- Buttons for control in gloves
- On/Off to power safe
- Scalable solution

### Technical features

**Control range:** Up to 10m scalable down

**Transmission:** IR signal wavelength modulated by data format

**Ambient temperature:** -30 ... +80°C

**Power supply:** On/Off button on remote control

**Scalable solution:** Can be implemented to systems supplied by IMI

### Limiting and safety conditions

- The system uses data format to restrict only the required function to be activated.
- Transmitting a special data format from the transmitter to the receiver, a carrier frequency is used, which is modulated by this data format. This guarantees increased resistance of the transmission path from disturbing ambient light sources (sunlight, discharge lamps, halogen lamps, etc.) and thereby increases reliability.



Our Industrial Automation sector operates four global centres of technical excellence and a sales and service network in 50 countries, as well as manufacturing capability in Europe, Americas and Asia Pacific.

Supported by distributors worldwide.

For further information, scan this QR code or visit

[www.imiplc.com/industrial-automation](http://www.imiplc.com/industrial-automation)



# Industrial Automation

IMI Norgren

IMI Bimba

IMI Bahr

IMI Buschjost

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