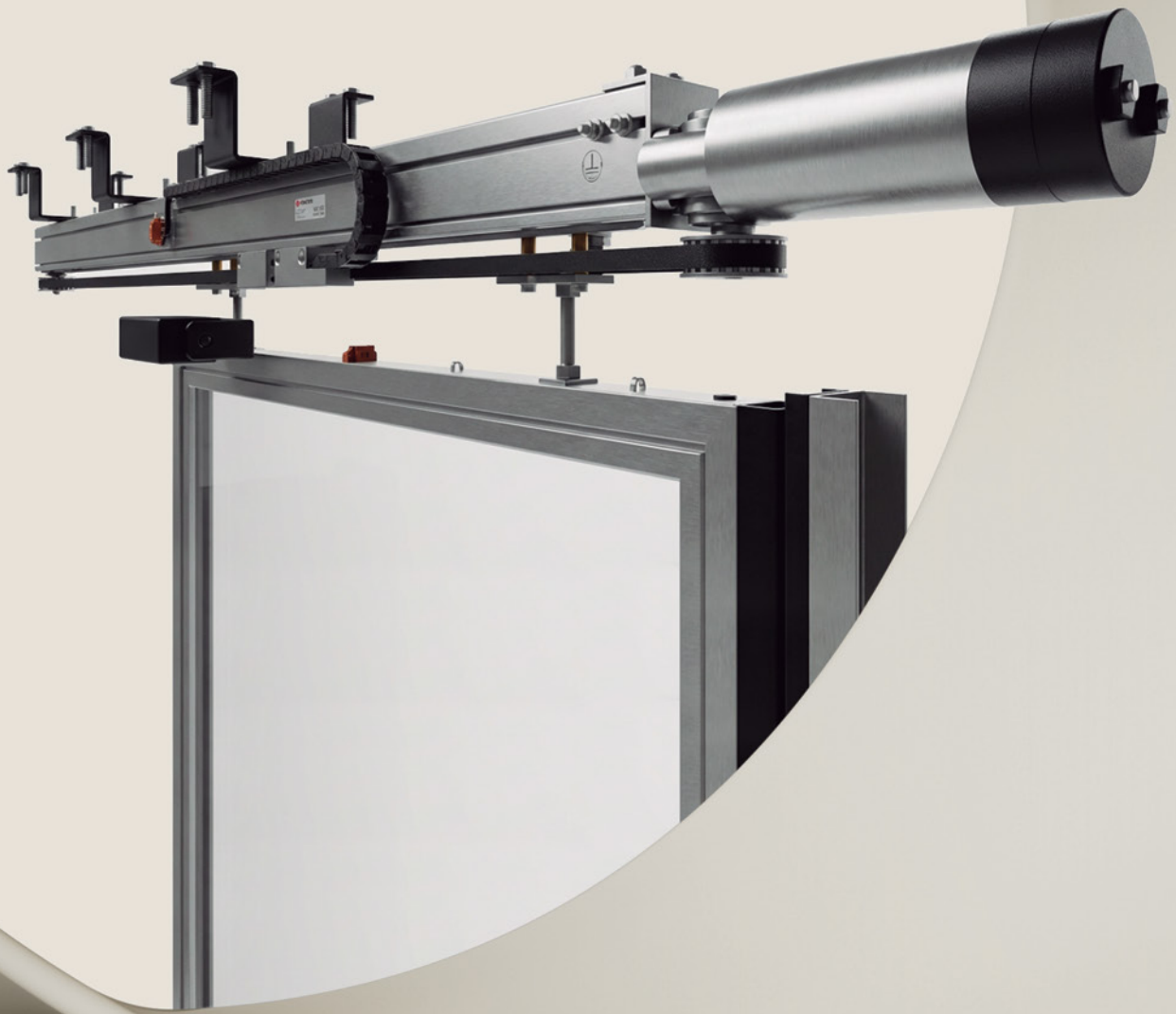
Industrial Automation

IMI Norgren

Customised Rail Door Actuation and Control Systems



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.*

Customised Door Actuation and Control Solutions

Delivering innovation and reliability to the global rail industry since 1987.

We specialise in tailored door systems that meet the highest standards of safety and performance. Our expertise spans:

- Complete pneumatic and electrical door systems
- Advanced door actuators and control technologies
- Global refurbishment and overhaul services

From design to deployment, we bring decades of experience to every project ensuring seamless operation and long-term value.

Quality assurance you can rely on:

- Wide temperature range -40°C to +80°C
- Environment humidity: 95%
- System life time: >30 years
- Shock and Vibration: EN 61373
- Fire and smoke: DIN 5510, NF F16-101, EN 45545
- Voltage: 24 to 110 VDC +/- 30%
- Door closing time: 4 sec
- Door opening time: 2 sec

- EN 50121-3-2
- IEC 61508
- EN 14752
- EN 50125-1
- EN 50155
- EN 50126
- EN 50128
- EN 50129
- EN 60529
- TSI/PRM

Electrical Single and Double Leaf Sliding Doors

Electrical internal door drives are engineered to meet the evolving demands of today's rail networks. Designed for reliability, safety, and smooth operation, these systems ensure optimal passenger experience and compliance with international standards.

Main features

- Compact modular design for quick installation and easy maintenance
- Microprocessor controlled system with built-in safety features for reliable and secure operation
- Lightweight construction with minimal space footprint for flexible placement and integration
- Engineered for durability with a 30-year operational lifespan
- Delivers smooth, whisper-quiet performance for enhanced comfort and minimal disruption

Technical specifications

- Mechanism weight: 10 to 12,5 kg
- Max. door leaf weight: 80 kg (SL) or 2 x 55 kg (DL)
- Opening time: adjustable 2,5 to 6 sec.
- Closing time: adjustable 3,5 to 8 sec.
- Nominal reversing force according to EN14752
- Operating temperature: - 25 to + 50°C
- Storage temperature: - 40 to + 70°C
- Operating voltage: 24/36/72/110 VDC
- Control unit according to EN 50155
- Equipped with open, close locking functions for secure and versatile operation

Pneumatic Single and Double Leaf Sliding Doors

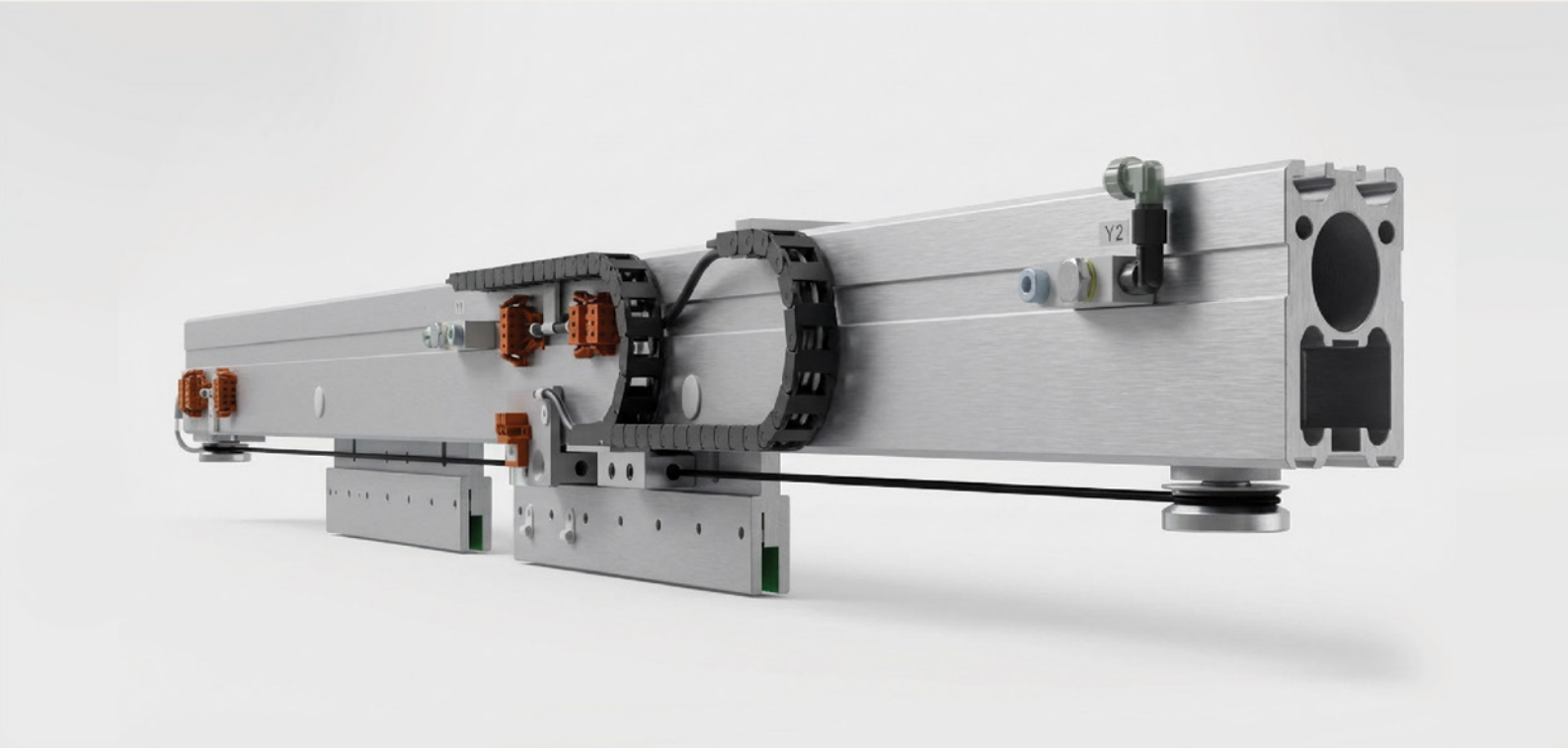
Pneumatic internal door drives deliver robust, low-maintenance solutions for rail operators seeking reliability and simplicity. With decades of experience in rail pneumatics, these systems are trusted worldwide for their durability and compliance with stringent safety standards.

Main features

- Compact modular design for quick installation and easy maintenance
- Electro-Pneumatic controls
- Lightweight construction with minimal space footprint for flexible placement and integration
- Engineered for durability with a 30-year operational lifespan
- Delivers smooth, whisper-quiet performance for enhanced comfort and minimal disruption

Technical specifications

- Mechanism weight: 10 to 12,5 kg
- Max. door leaf weight: 80 kg (SL) or 2 x 55 kg (DL)
- Opening time: adjustable 2,5 to 6 sec.
- Closing time: adjustable 3,5 to 8 sec.
- Nominal reversing force according to EN14752
- Operating temperature: - 20 to + 50°C
- Storage temperature: - 40 to + 70°C
- Operating pressure: 4-10 bar
- Equipped with open, close locking functions for secure and versatile operation



Fire Barrier Doors

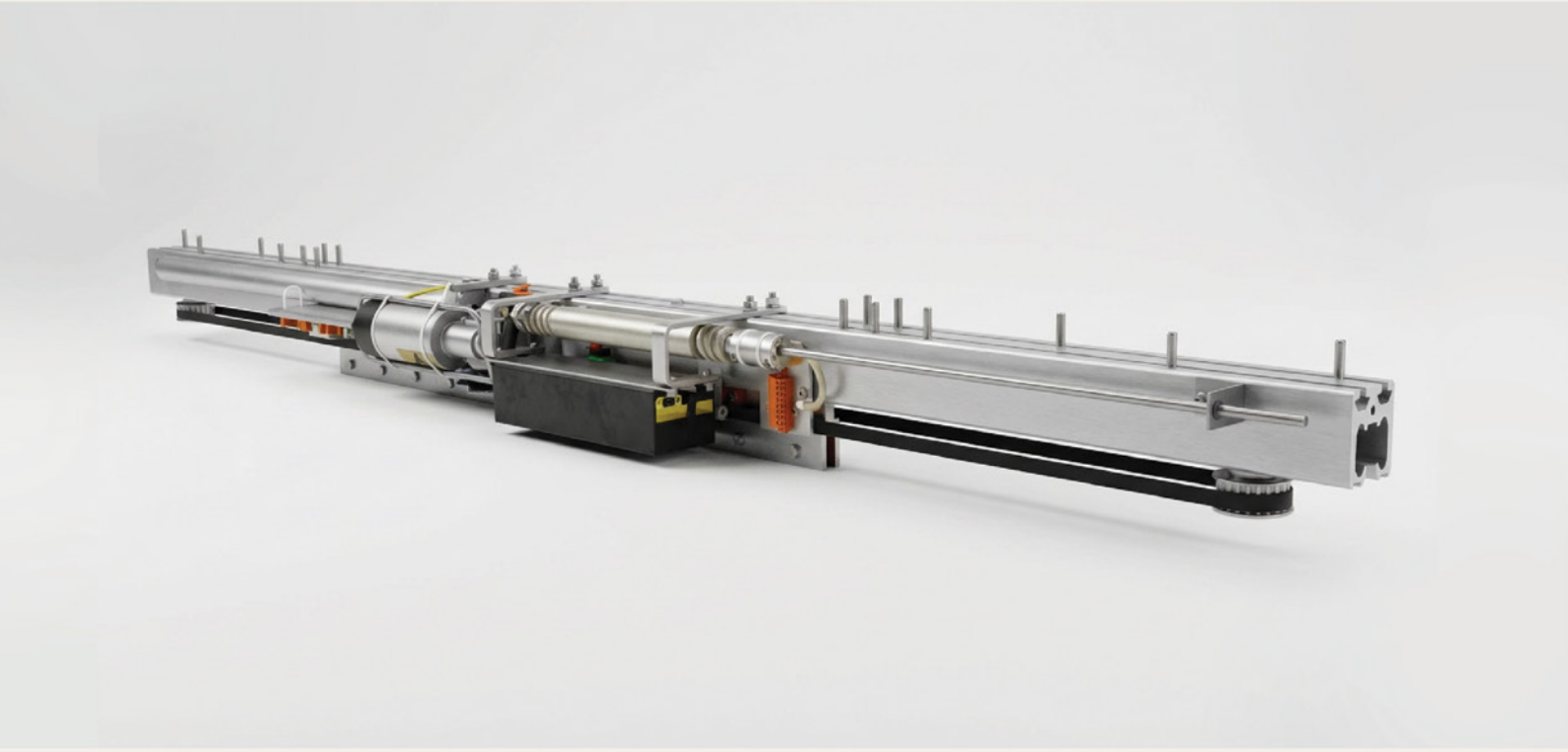
With over 25 years of experience designing fire doors systems that inhibit flame spread in rail vehicles. Our expertise is built on extensive testing, deep technical knowledge, and long-term commitment to safety. Each door is engineered to meet specific project requirements, ensuring optimal performance and compliance. We deliver value through precision, reliability, and close collaboration with our customers.

Main features

- Compact modular design for quick installation and easy maintenance
- Microprocessor controlled system with built-in safety features for reliable and secure operation
- Lightweight construction with minimal space footprint for flexible placement and integration
- Engineered for durability with a 30-year operational lifespan
- Delivers smooth, whisper-quiet performance for enhanced comfort and minimal disruption
- EW/EI 15 – 30 minutes available

Technical specifications

- Mechanism weight: 10 to 12,5 kg
- Max. door leaf weight: 80 kg (SL) or 2 x 55 kg (DL)
- Self-closing mechanism: Spring loaded
- Opening time: adjustable 2,5 to 6 sec.
- Closing time: adjustable 3,5 to 8 sec.
- Nominal reversing force according to EN14752
- Manual opening force: 80 N – 150 N
- Operating temperature: - 25 to + 50°C
- Storage temperature: - 40 to + 70°C
- Operating voltage: 24/36/72/110 VDC
- Control unit according to EN 50155
- Equipped with open, close locking functions for secure and versatile operation



Curved Doors Systems

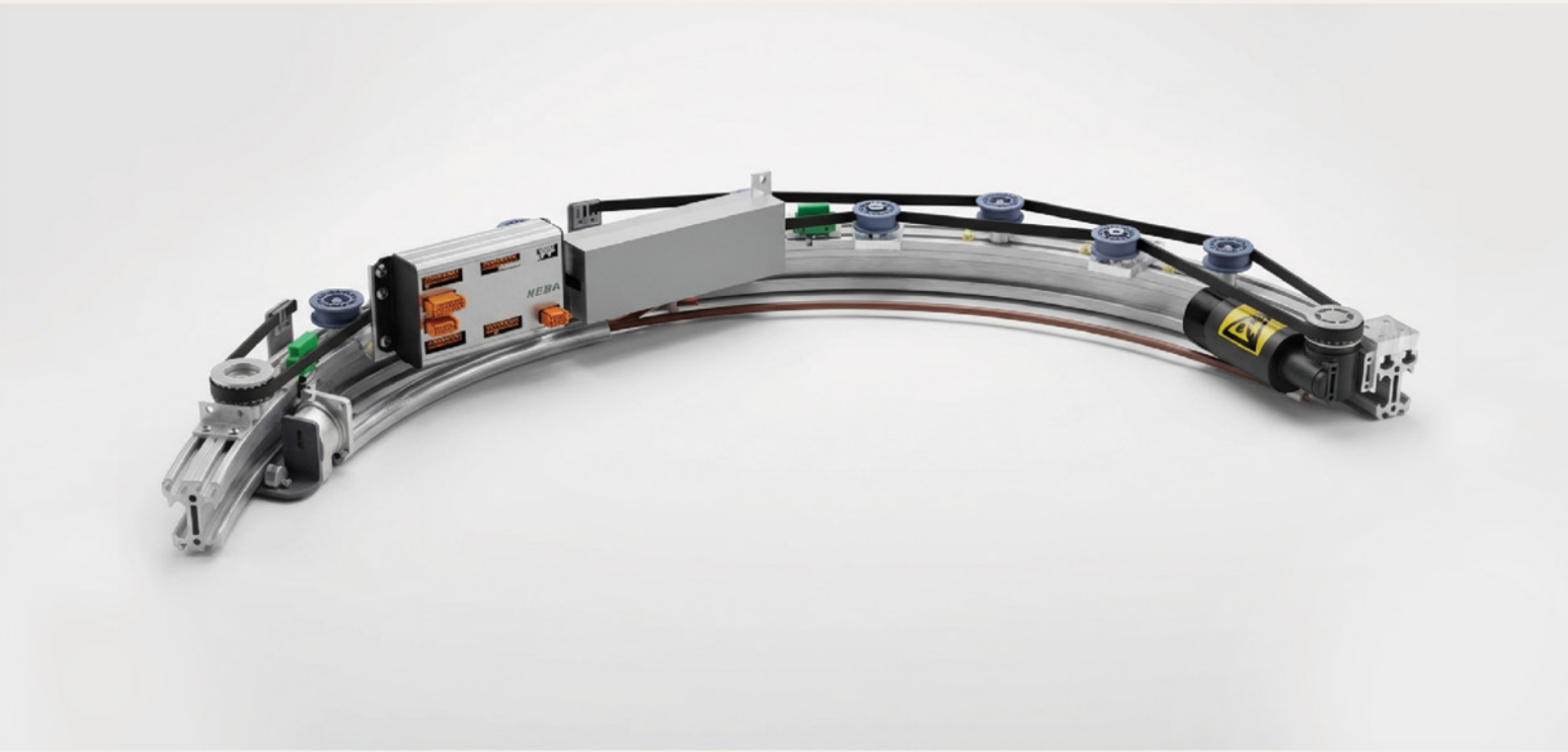
The advanced curved actuation system delivers synchronised, telescopic door movement—electrically or pneumatically powered. Featuring integrated locking, emergency override, and obstacle detection, it meets all rail door standards while enhancing accessibility. The expanded door aperture improves wheelchair access, and intuitive push-button controls ensure ease of use for disabled passengers, fully aligning with current and future accessibility legislation.

Main features

- Electric and pneumatic curved actuator system
- Curved guiding profile
- Maximises limited space with telescopic, synchronised opening
- Field serviceable design
- Locking system and emergency access override
- Robust guiding, low maintenance costs and easy replacement
- Meets TSI PRM legislative requirements for disabled access

Technical specifications

- Mechanism weight: 10 to 12,5 kg
- Max. door leaf weight 60 kg
- Curve Radius min. 749mm
- Opening time: adjustable 2,5 to 6 sec.
- Closing time: adjustable 3,5 to 8 sec.
- Nominal reversing force according to EN14752
- Operating temperature: - 25 to + 50°C
- Storage temperature - 40 to + 70°C
- Operating voltage: 24/36/72/110 VDC
- Control unit according to EN 50155



External Pneumatic Reduce Force Door Actuation

Reduced Force Pneumatic Actuators deliver precision control and dependable performance for external train doors. Designed to minimise closing force while maximising passenger safety, these robust systems operate flawlessly in extreme conditions. With modular construction, low maintenance needs, and compliance with international rail standards.

Key Benefits of Reduced-Force Train Door Actuators

Passenger Safety & Compliance

- Minimises injury risk by reducing closing force.
- Meets EN14752 standards for obstruction detection and reversal.

Reliability in Harsh Conditions

- Operates in extreme temperatures (-25°C to +50°C).
- Resistant to vibration and environmental stress.

Operational Efficiency

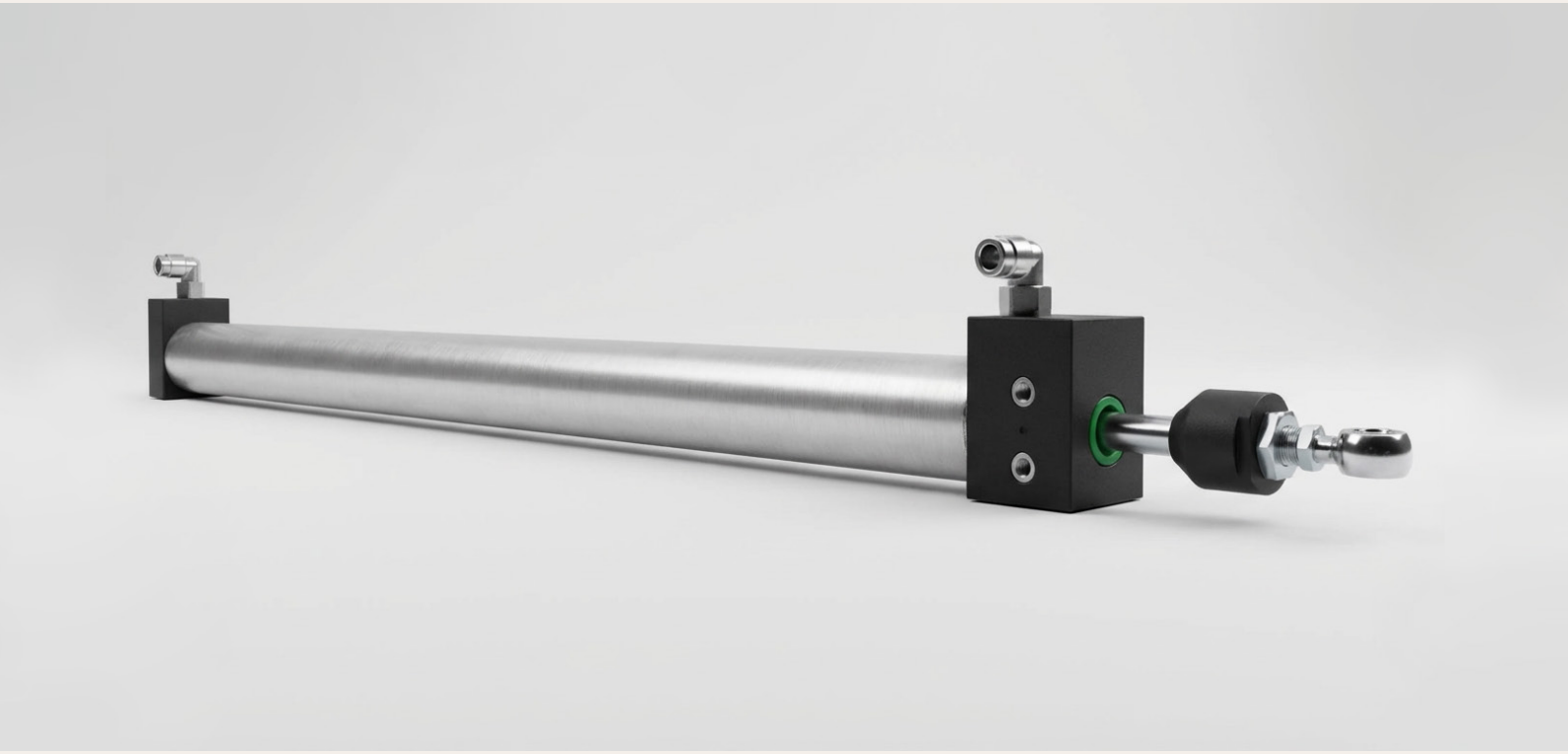
- Ensures uniform door closure for timely departures.
- Reduces dwell time variability, improving schedule adherence.

Low Maintenance & Longevity

- Modular design simplifies servicing.
- Robust pneumatic/electric systems extend life cycle and reduce costs.

Energy Efficiency

- Controlled force application lowers energy consumption.



External Swing Door Conversion (Pneumatic)

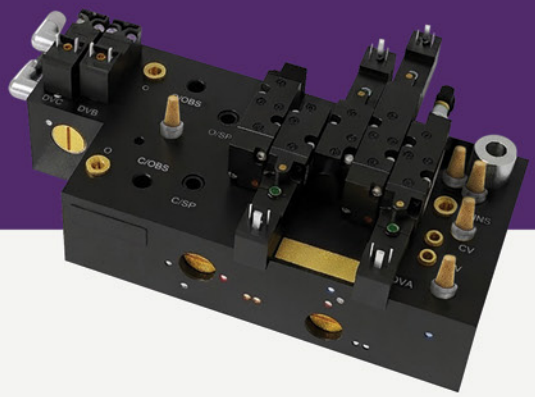
Our unique conversion system transforms manual external swing doors into an automatic, intelligent, and secure part of the train. Designed with passenger safety as the top priority, this system ensures every journey starts with confidence.

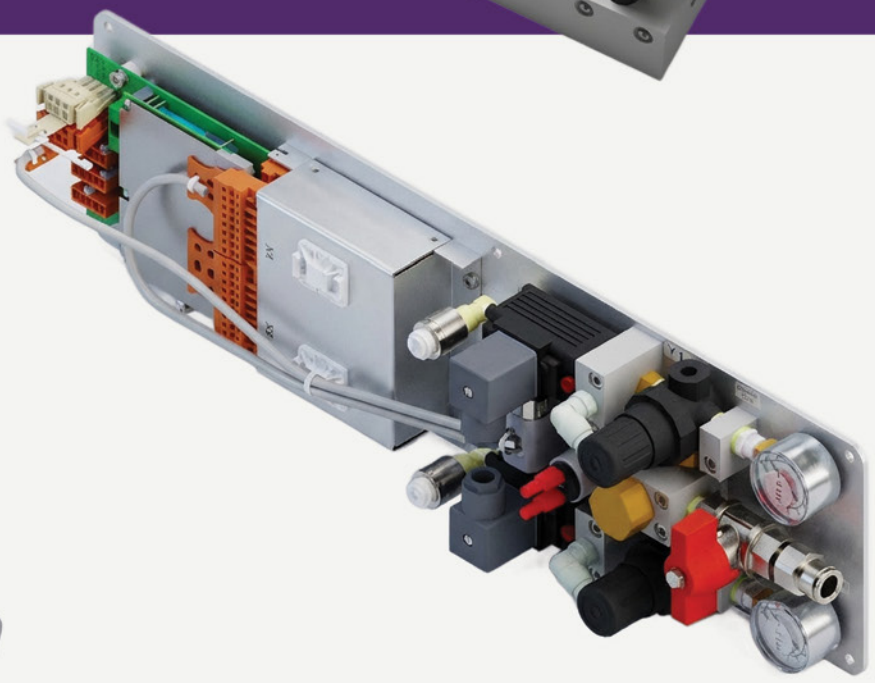
Key Benefits of External Swing Door Conversion (Pneumatic)

- Dual communication line between Master & Slave
- Communication redundancy
- Individual door controls available at Master level
- Power consumption per door Max 30Watt
- Fault Monitoring display allows easy to identify the fault location in the train as well as the type of fault
- Meeting all Rail Standards EN50155, EN 14752, EN 61373, EN 45545, EN 50128
- Network inbuilt with Ethernet provides high speed update of data to the HMI Screen.

Pneumatic Door Control

We provide pneumatic control systems for train doors, drawing on over four decades of experience in the rail industry. Our solutions prioritise safety, efficiency, and reliability, with specialised components designed to withstand the demanding conditions of the rail environment.





Need the perfect solution? We'll work together to help you reach your goals.

We work closely with maintenance professionals and rail engineers to deliver practical, custom solutions to the metro, intercity, high-speed, freight, and permanent-way rail industries. By listening and responding to specific customer challenges, we help make significant improvements and savings – so you can save money, reduce maintenance, and drive energy efficiency.

45+ years of expertise for the global rail sector

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

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