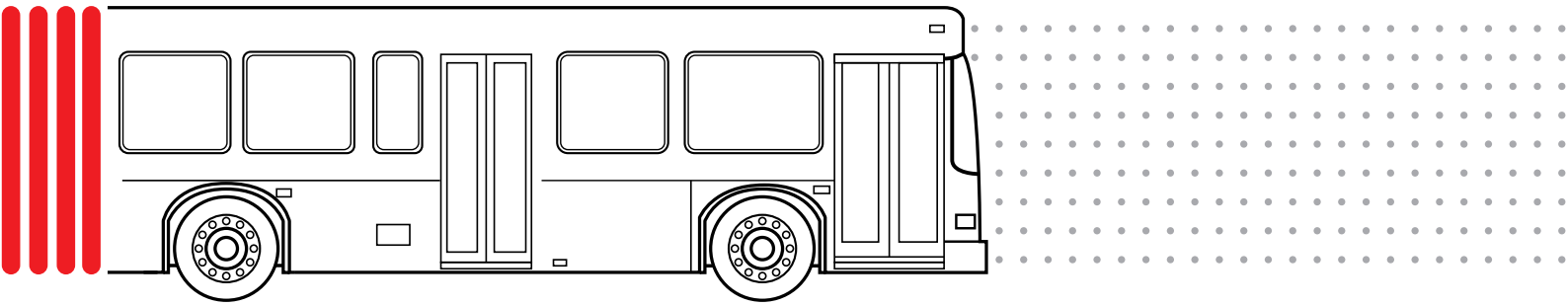
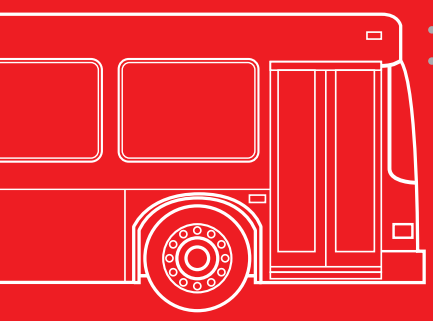
PEI MOBILITY

Performing gangway

Interconnection Solutions

PRODUCT CATALOG 22



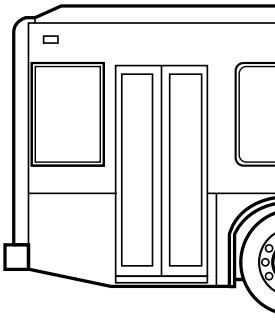


PEI MOBILITY
Performing gangway

ABOUT US

Writing our history since 1980.

PEI Mobility is a **brand** of **P.E.I Srl**, a **leading** company - based in Bologna, **Italy** - which has been working in the field of dynamic protection systems for machine tools since **1980**.
With **420 employees** located in **7 production sites between Italy and abroad, 70 international patents**, and a sales network that covers all of Europe and much of the rest of the world, PEI Group is renowned for its propensity to **innovate** and for its **technology research**.
Located in **Emilia Romagna**, in the heart of Italy's **Motor Valley**, **PEI Mobilty** was born in a context of **excellence** and over the years has developed a **wide range** of products for **interconnection**, becoming a **key partner** for leading manufacturers of **articulated buses.**
PEI Mobility offers **bespoke solutions** that **meet customers' needs** and **guarantee maximum safety, endurance, and ease of maintenance.**
Flexibility and efficiency are ensured by **extensive engineering experience, advanced R&D, quality certifications** and **stringent testing procedures.**



BELLOWS FOR BUSES

Made with the most advanced materials, our bellows feature patented systems that ensure optimum fastening to the carriage body, guaranteeing ultra-smooth movement, greater reliability and increased on-board comfort.
Flexibility and efficiency are also guaranteed by extensive engineering expertise, IATF automotive certification, stringent tests and calculation procedures, together with continuous research and development activities.

CUSTOMISATION

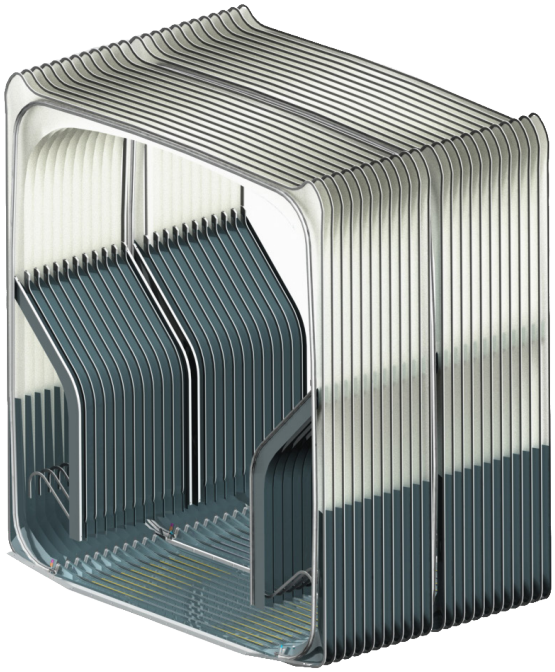
PEI Mobility bellows are made of **UV-resistant copolymer** that complies with the highest safety regulations in the automotive field.
Extensive customisation: in addition to the traditional grey, our bellows are also available in a **wide range of colours**.
The **translucent fabric** option makes the vehicle's interior more luminous, which **greatly improves passenger's comfort.**

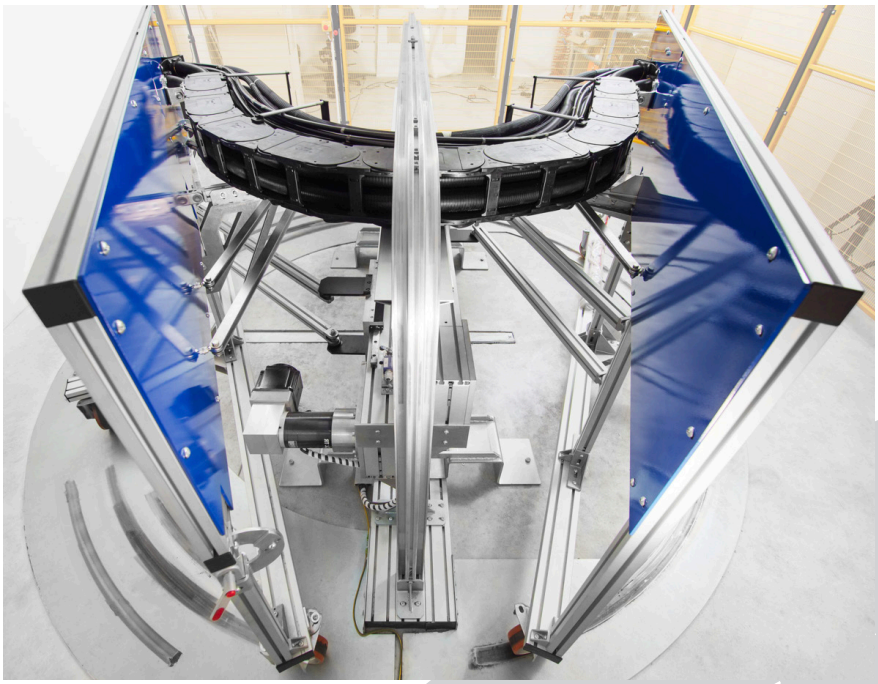
INNOVATION

Our innovative **patented system for fastening** the bellows to the bus carriage offers an **ease of installation that is unique on the market** and requires also extremely **low maintenance.**

Assembly, inspection, and servicing are further facilitated by the **bellows' removable bottom.**

Durable and customised systems feature (quick and easy to use) results in an excellent sealing system **to keep the patented mechanical parts protected**.





HGS: Hoses Guiding System

Complete range of options for routing **various kinds of cables** and lines (i.e. high and low voltage electrical cables, data cables, pneumatic and hydraulic lines, climate control lines, etc...) during vehicle movement.

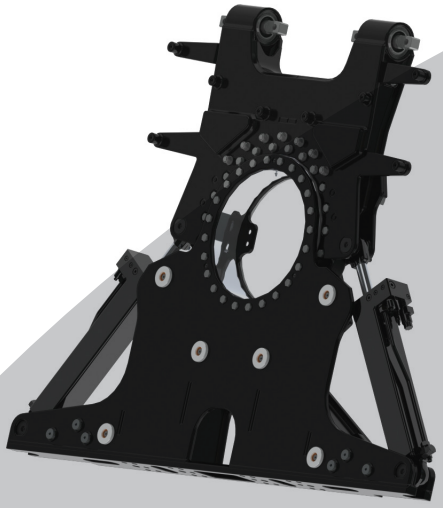
Plug&Play system, complete with fixing brackets, ready for running cables and lines between the carriages (installable in or outside the vehicle).

ARTICULATION JOINTS FOR BUSES

PEI Mobility articulation joints are designed to guarantee safe on-road operation and excellent driving comfort.

FULL STEEL Forward Axis

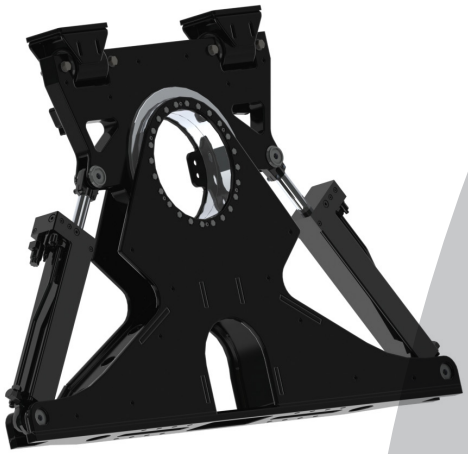
STEEL ARTICULATION JOINT WITH FORWARD PITCH



- **Welded sheet metal** articulation joint: extensive range of customisation options offered to meet **all market requirements**.
- Innovative, **patent-protected bearing fastening system** ensures **more efficient** operation and consequently a **lighter structure**.
- Independent shock absorbers ensure better vehicle stability control.
- Elastic joints offer **better vibration damping**, resulting in greater passenger **comfort**.
- Suitable for both low-and high-floor buses.
- Fastening systems featuring sliding pads guarantee platform a **long working life**.
- Special fastening systems for self-lubricated cylinders mean **low maintenance**.
- Weight: **550 kg.**

FULL STEEL Backward Axis

STEEL ARTICULATION JOINT WITH BACKWARD PITCH



- **Welded sheet metal** articulation joint: extensive range of customisation options offered to meet **all market requirements**.
- Compact version, with smaller slewing ring.
- **Independent shock absorbers** ensure better vehicle stability control.
- Elastic joints offer **better vibration damping**, resulting in greater passenger **comfort**.
- Suitable for both low-and high-floor buses.
- Fastening systems featuring sliding pads guarantee platform a long working life.
- Special fastening systems for self-lubricated cylinders mean **low maintenance**.
- Weight: **495 kg.**

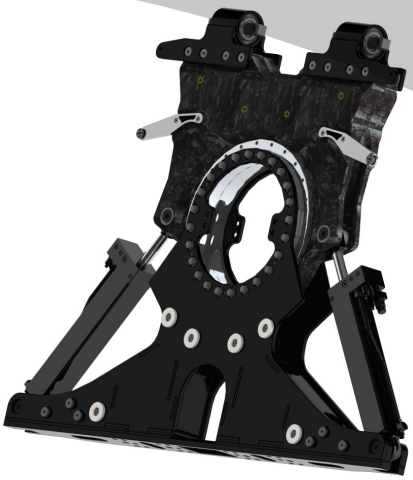
LOOKING AHEAD

PEI Mobility OFFERS LIGHTEST ARTICULATION JOINTS ON THE MARKET

The **PEI Mobility R&D** department has embarked on a journey into the future, through technology and production, heading for **sustainability, efficiency, and innovation.**
The **latest innovation** mainly concerns the use of **SMC** (**sheet moulding compound**) technology in the design and construction of articulation joints.
The use of **carbon fibre** means joints are significantly lighter, which translates into **lower fuel consumption**, **greater fuel autonomy**, and **less pollution.**
The technology of these joints, **which are currently in the prototype stage**, is based on the combined use of carbon and steel.

FRONT CARBON Forward Axis

CARBON FIBRE AND STEEL ARTICULATION JOINT WITH FORWARD PITCH



- Use of **carbon fibre** together with conventional materials means joint **offers unparalleled lightness** and **exceptional performance.**
- Carbon fibre structure is assembled using **certified structural adhesive.**
- **Independent shock absorbers** ensure better vehicle **stability control.**
- Elastic joints offer **better vibration damping**, resulting in greater passenger **comfort.**
- Suitable for both low-and high-floor buses.
- Fastening systems featuring sliding pads guarantee platform a **long working life.**
- Special fastening systems for self-lubricated cylinders mean **low maintenance.**
- Weight: **170 kg lighter than equivalent products.**

REAR CARBON Backward Axis

CARBON FIBRE AND STEEL ARTICULATION JOINT WITH BACKWARD PITCH

- Use of **carbon fibre** together with conventional materials means joint **offers unparalleled lightness** and **exceptional performance.**
- Carbon fibre structure is assembled using **certified structural adhesive.**
- **Independent shock absorbers** ensure better vehicle **stability control.**
- Elastic joints offer **better vibration damping**, resulting in greater passenger **comfort.**
- Suitable for both low-and high-floor buses.
- Fastening systems featuring sliding pads guarantee platform a **long working life.**
- Special fastening systems for self-lubricated cylinders mean **low maintenance.**
- Weight: **50 kg lighter than equivalent products.**

LIGHTNESS IN MOTION

What if the articulation joint was made entirely of carbon fibre?
And the raw material was lightness itself?

PEI Mobility's new concept is based on advanced technology, an articulation joint MADE ENTIRELY OF CARBON FIBRE

New concept

Advanced technology

FULL CARBON Forward Axis

STEEL ARTICULATION JOINT WITH FORWARD PITCH

- Featuring a predominantly **carbon fibre** structure, this joint is currently **the lightest on the market**.
- Carbon fibre structure is assembled using **certified structural adhesive**.
- **Independent shock absorbers** ensure better vehicle **stability control**.
- Elastic joints offer **better vibration damping**, resulting in greater passenger **comfort**.
- Suitable for both low-and high-floor buses.
- Fastening systems featuring sliding pads guarantee platform a **long working life**.
- Special fastening systems for self-lubricated cylinders mean **low maintenance.**
- Weight: **285 kg lighter than equivalent products**.

FOCUS

CARBON FIBRE PRODUCTION TECHNOLOGY

Innovative **SMC** (sheet moulding compound) technology combines the advantages of carbon fibre, such as **lightweight design and strength**, with those of a fast, industrialisable process like press moulding. Use of short fibres allows the creation of **components with complex shapes** keeping low costs and ensuring more efficient use of material. The automated process guarantees products that remain the same over time, in terms of both shape and performance.

CONCEPT

SMC combines the advantages of composite materials, such as lightness, with the needs of industrial production of standardised goods.

Certified structural adhesive.

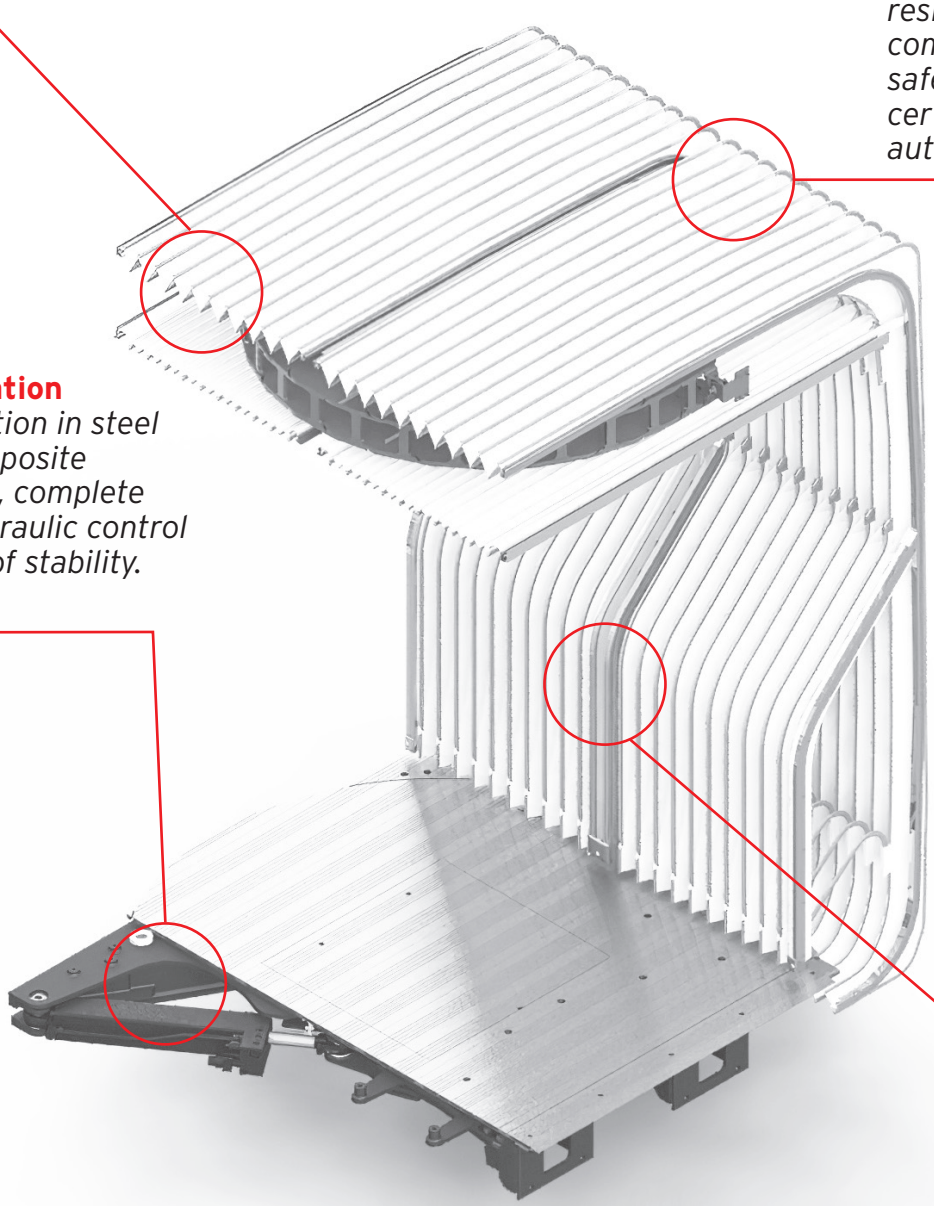
The hydraulic damping system guarantees vehicle stability and safety. Working from numerical simulation models, we can design bespoke systems and adjustments for any kind of vehicle.

COMPLETE GANGWAY

Complete technologically advanced interconnection system to increase the overall efficiency of the articulated bus.

HGS : Hoses Guiding System
Internal hose guiding system complete system with fixing brackets ready for assembly of all cables between carriages.

Fabric
Bellows made of UV-resistant copolymer, complying with the highest safety and application certificates in the automotive field.



Articulation
Articulation in steel and composite material, complete with hydraulic control system of stability.

Upright - *made of self-supporting extruded aluminium and featuring an ergonomic design and patented internal quick-fit system.*

CUSTOMISATION • EASY TO INSTALL
SAFE AND RELIABLE • EASY TO MAINTAIN

PEI Mobility brand of P.E.I. Srl

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