



Gangway Systems & Components: **Light Rail Vehicles**

Flexibility

- Bellows compensate for extreme movements on tight curves

Sound insulation

- Excellent acoustic damping for a quiet ride

Easy maintenance

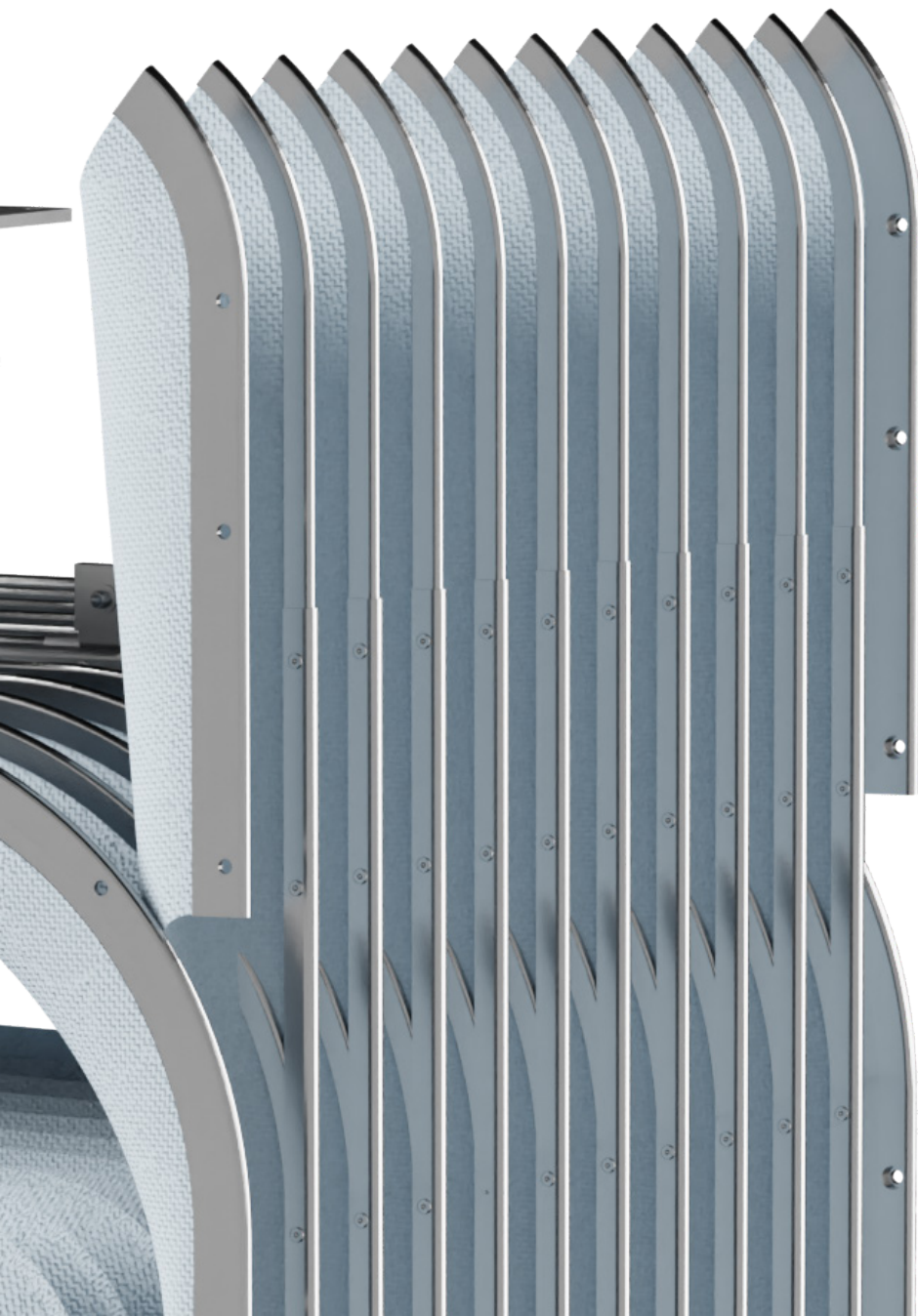
- Segmented turntables and removable floor elements provide quick access to articulation components

High durability

- Robust gangway designs make for long service life in demanding tram operating conditions

Gangway Systems & Components: Light Rail Vehicles

- Handling tight curves: **folding and corrugated bellows** that are designed to meet the needs
- **Upper and lower articulations** can be individually configured to specific customer requirements
- **Turntable guiding concept** – single pre-assembled component
- **Power guidance system** for optimal performance
- Energy cost savings thanks to **optimized air duct design**

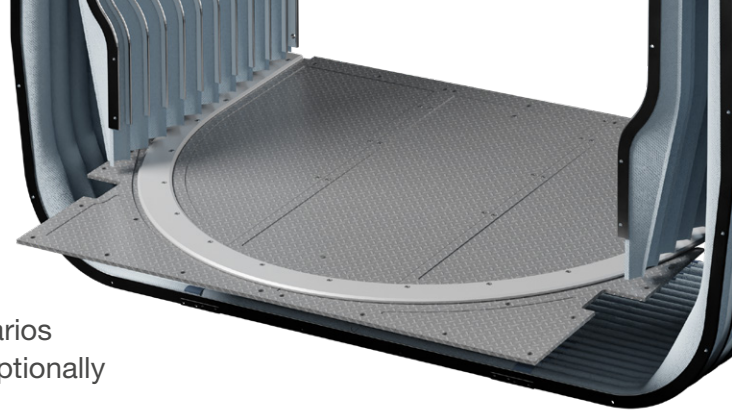


Bellows

- Depending on requirements, bellows are available in single-corrugated, double-corrugated or folding variants
- Folding bellows feature particularly compact and light-weight construction

Turntable Systems

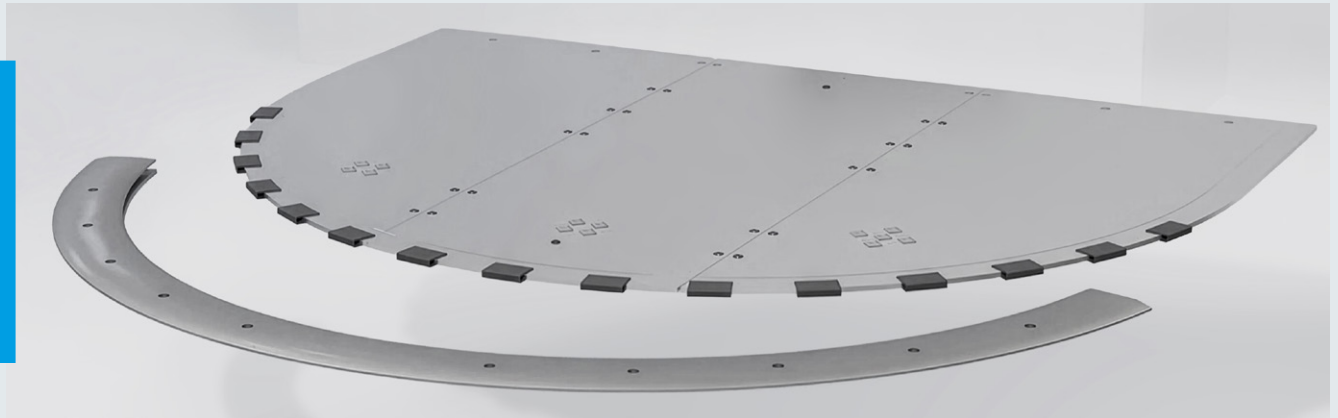
- Available in various designs – with multiple floor covering options or anti-slip tread plates
- Can be flexibly adapted to various application scenarios
- Quick access to components below the turntable; optionally available with quick-release fasteners
- Segmented variants allow for easy installation
- Robust design for high durability



Turntable Guiding Concept

Evolution of the current design

- Made from a bent and continuous aluminum profile
- Replacing numerous stainless-steel components
- Minimizing different wear parts with a universal sliding piece
- Sliding piece can be fixed without screws



Benefits

... in General Use

- Lower weight due to the use of aluminum instead of stainless steel
- High quality appearance thanks to a continuous instead of split guiding
- Lower costs due to standardization and improvements in the manufacturing process
- Reduction in height for improved accessibility

... for Vehicle Manufacturers

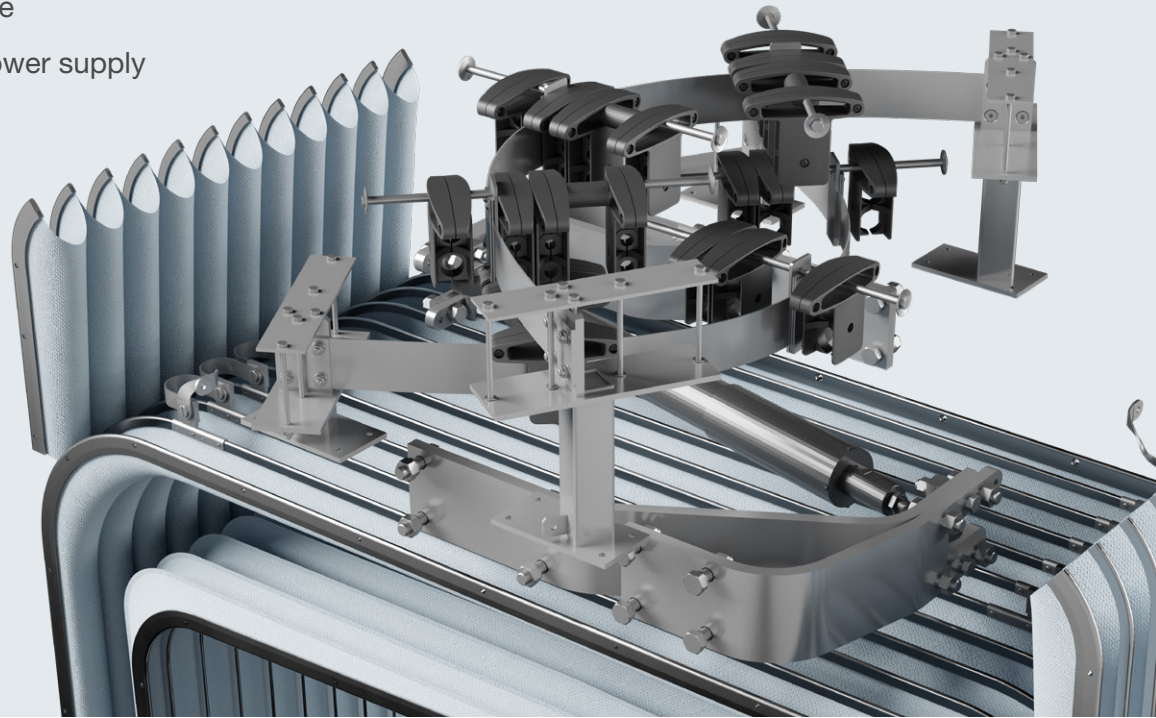
- Delivery of a single pre-assembled component instead of numerous individual parts
- Simplified connection to the vehicle with fewer mounting points

... for Vehicle Operators

- Faster replacement of wear parts thanks to screw-free fixation
- Reduced tie-up of capital in spare parts inventory thanks to a single standardized wear part

Energy Guidance Systems

- Individual adaptation to vehicle cabling for optimal performance
- Safe and reliable power supply

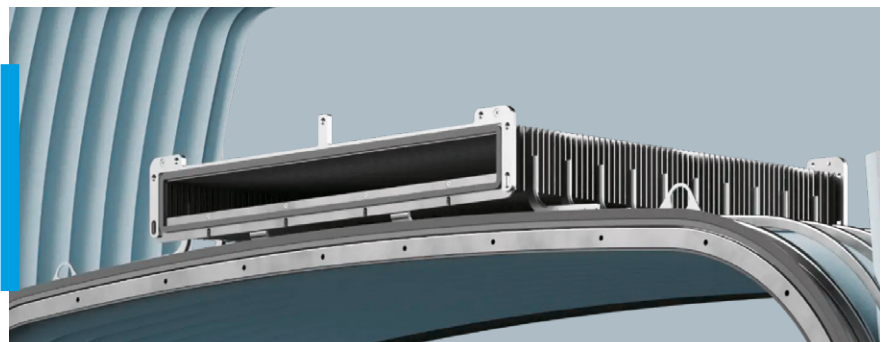


Integrated Air Ducts – Patented HÜBNER Solution

- Air duct system becomes integral part of the gangway's upper section – reducing space requirements and installation effort
- Enables air flow between the segments of the vehicle without additional add-on structure
- Weight of the gangway system reduced by 10% compared to the conventional design
- Contributes to increased vehicle energy efficiency
- With single or multiple chambers available



Patented [HÜBNER Solution](#) with integrated air duct

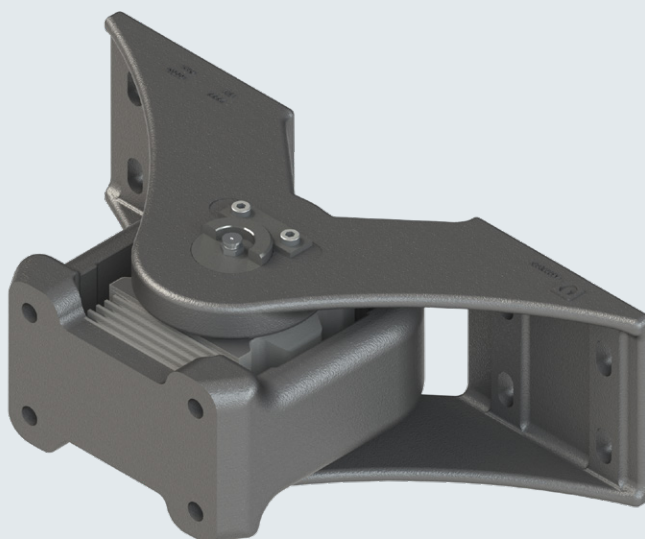


Conventional Solution for Light Rail Gangway

Articulation Systems

Upper Rotary, Roll and Pitch Articulation Systems

[Click here to get detailed information](#)



Lower Articulation System FXpro

[Click here to get detailed information](#)

