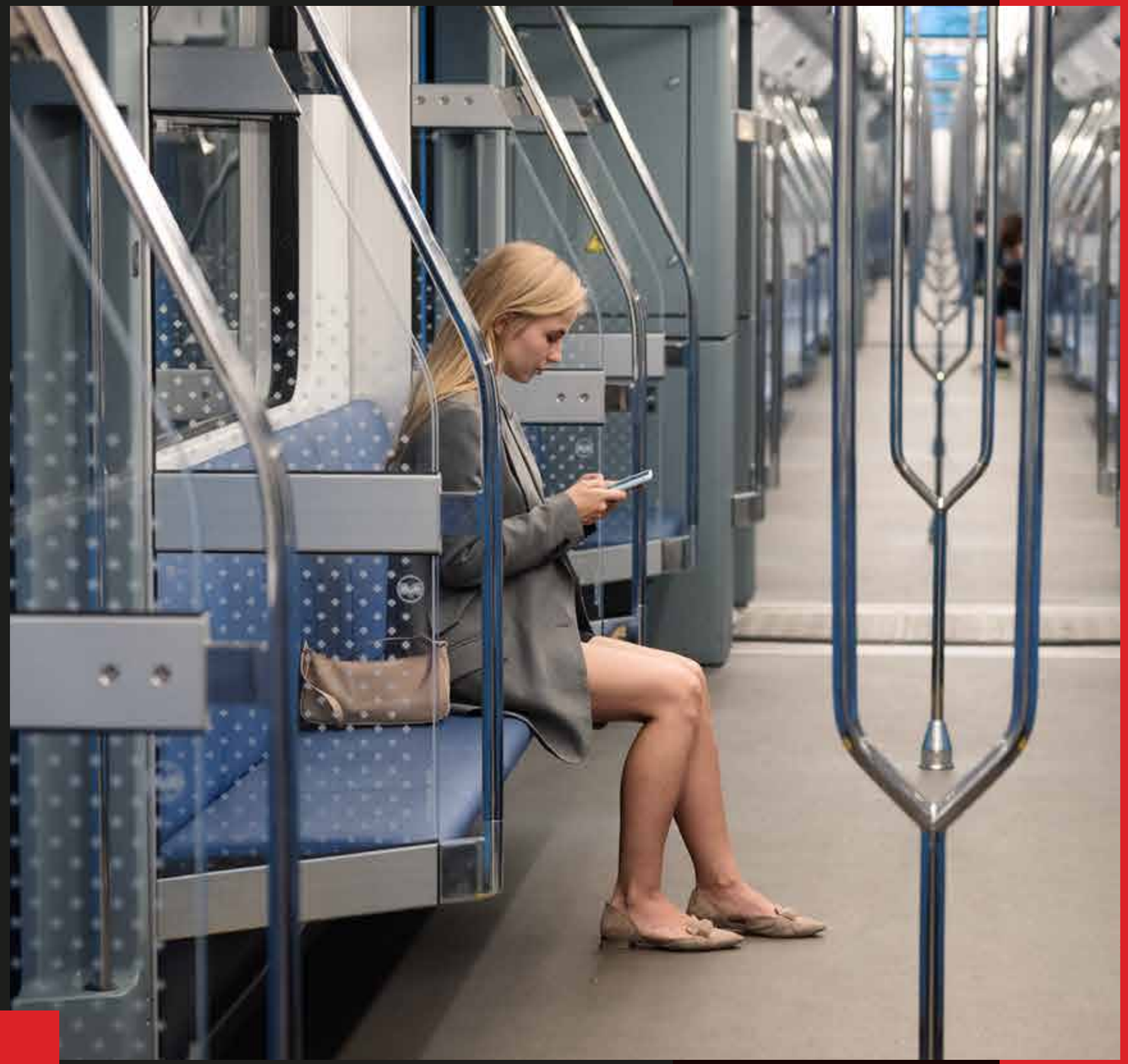

S+D®
INDUSTRIES

TRAIN INTERIOR & EXTERIOR FABRICATED SYSTEMS

Engineered for vibration resistance, passenger safety, structural integrity, and long-term operational durability.

CERTIFICATIONS

Member of AISC | AISC Certified | Member of AWS | HUB - TxCPA | DBE/ACDBE - PANYNJ | MBE - PANYNJ | SBE - PANYNJ | DBE/ACDBE - TxDOT | SBE - TxDOT | DBE/ACDBE - Caltrans | MBE - NYC SBS | NJPW Contractor | MBE - NYC SCA | Cage Code - SBA

Contact Us

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CONTENTS

Train System Products

CEILING SYSTEMS

Integrated Overhead Rail Interior Systems

Ceiling assemblies play a critical role in passenger rail interiors by combining structural support, system integration, and finished aesthetics into a single coordinated overhead solution. Our ceiling systems are engineered to perform in high-vibration environments while maintaining service accessibility and long-term durability. Designed for both new vehicle manufacturing and mid-life refurbishment programs, these assemblies are fabricated to align with carbody geometry, mounting constraints, and interior system layouts.

Performance Priorities

Weight Optimization

Ceiling panels and support members are manufactured using lightweight materials and formed geometries to reduce overall rolling stock mass without compromising structural integrity.

Vibration Resistance

Mounting systems are designed to maintain alignment under cyclic loading conditions common in rail operation.

Service Accessibility

Panels can be configured to allow direct access to lighting systems, HVAC components, wiring runs, and communication equipment.

Interior Continuity

Clean joint lines and concealed fastening methods maintain a uniform visual finish throughout the passenger cabin.

Integration Capabilities

- Linear or recessed lighting
- HVAC ducting and air distribution
- Public address and communication devices
- CCTV and monitoring systems
- Inspection and access zones

Fabrication & Assembly

- Formed aluminum or stainless panels
- Reinforced back panels
- Precision-bent edges
- Concealed clips or mechanical fastening
- Modular panel segmentation

Available Finishes

- Powder-coated surfaces (custom colors)
- Brushed stainless finish
- Anodized aluminum
- Protective anti-graffiti coatings

SIDE WALL SYSTEMS

Interior & Exterior Rail Panel Assemblies

Side wall systems are a core structural and architectural element in rolling stock interiors and exteriors. These assemblies protect the carbody, support passenger interface zones, and provide finished surfaces that withstand heavy daily wear, vibration, and long-term service cycles.

Designed for both new vehicle manufacturing and refurbishment programs, our side wall systems can be produced as full-height assemblies or modular segmented panels to match carbody geometry, access requirements, and OEM layouts.

Performance Priorities

Impact Resistance

Panels are engineered to withstand passenger contact, luggage impact, and repeated service cycles.

Vibration Stability

Mounting and panel geometry are designed to prevent rattle, misalignment, and fatigue over time.

Service Accessibility

Systems can include removable access zones for wiring, equipment, and service components.

Interior Continuity

Clean joint lines and concealed fasteners support a uniform finished appearance.

Integration Capabilities

- Window and door interface zones
- Wiring and conduit routing paths
- Passenger information display framing
- Advertising and map panels
- Service access and inspection panels

Fabrication & Assembly

- Formed aluminum or stainless wall panels
- Modular segmented panel design
- Reinforced backing for rigidity
- Concealed retention and fasteners
- Retrofit compatibility available

Available Finishes

- Powder-coated surfaces (custom colors)
- Brushed stainless finish
- Anodized aluminum
- Protective anti-graffiti coatings

LUGGAGE RACK SYSTEMS

Overhead & Vertical Passenger Storage

Luggage racks must deliver structural reliability while maintaining passenger safety and interior aesthetics. Our rack systems are engineered for high load cycles, vibration resistance, and secure mounting performance in passenger rail environments.

Designed for both OEM and refurbishment programs, rack assemblies can be produced in modular sections for easier replacement and maintenance without disturbing surrounding ceiling or wall panels.

Performance Priorities

Load Capacity

Rack structures are designed for repeated loading without deformation or fatigue.

Passenger Safety

Smooth edges and controlled geometry reduce snag and impact risk.

Vibration Resistance

Reinforced bracket systems prevent rattle, looseness, and long-term movement.

Maintenance Efficiency

Modular designs support replacement with minimal disassembly.

Integration Capabilities

- Overhead passenger storage zones
- Vertical end-wall rack layouts
- Mesh retention or guard panels
- Lighting and trim interface lines
- Retrofit mounting alignment

Fabrication & Assembly

- Stainless steel or aluminum frames
- Reinforced load-bearing brackets
- Welded structural rack assemblies
- Concealed fastener options
- Modular rack segmentation

Available Finishes

- Powder-coated surfaces (custom colors)
- Brushed stainless finish
- Polished stainless finish
- Protective anti-graffiti coatings

HANDRAIL SYSTEMS

Interior & Exterior Passenger Support

Handrails are among the highest-contact components in a railcar and must be engineered for passenger safety, long-term durability, and secure structural anchoring. Our handrail systems are designed for both interior and exterior use, including door zones, vestibules, ADA locations, and passenger cabin layouts.

These assemblies are fabricated for high-cycle service environments where vibration, cleaning chemicals, and constant passenger contact are standard operating conditions.

Performance Priorities

Passenger Safety

Designed for consistent grip and secure support in all riding conditions.

Durability

Engineered for constant contact, cleaning cycles, and long-term service.

Corrosion Resistance

Material selections support interior and exterior exposure requirements.

Ergonomic Consistency

Grip diameter and geometry can be standardized fleet-wide.

Integration Capabilities

- Door-area support zones
- ADA and priority seating layouts
- Wall and panel interface mounting
- Exterior entry and vestibule use
- Anti-slip grip options

Fabrication & Assembly

- Stainless steel tube fabrication
- Aluminum tube options available
- Precision radius bending
- Welded joint reinforcement
- Hidden bracket mounting options

Available Finishes

- Powder-coated surfaces (custom colors)
- Brushed stainless finish
- Polished stainless finish
- Anti-microbial coating options

VERTICAL & HORIZONTAL POLES

Passenger Stabilization Systems

Pole systems are critical in high-density passenger zones where standing riders require stable support during acceleration, braking, and rail movement. These components must withstand high lateral loading while remaining rigid, secure, and vibration-resistant.

Designed for both new-build and retrofit applications, pole systems can be manufactured as single-post assemblies or multi-branch configurations to match interior layouts and passenger flow patterns.

Performance Priorities

Structural Strength

Designed to withstand high passenger loading and repeated force cycles.

Vibration Stability

Mounting systems reduce looseness, movement, and rattle.

Passenger Ergonomics

Grip surfaces and diameters support comfortable use.

Long Service Life

Materials and fastening methods support extended fleet operation.

Integration Capabilities

- Floor-to-ceiling vertical layouts
- Door-area stabilization zones
- Multi-branch pole assemblies
- Overhead horizontal support rails
- Strap hanger provisions (optional)

Fabrication & Assembly

- Stainless steel structural tubing
- Powder-coated steel options
- Reinforced base plate anchoring
- Concealed mounting provisions
- Anti-rotation locking design

Available Finishes

- Powder-coated surfaces (custom colors)
- Brushed stainless finish
- Polished stainless finish
- Anti-graffiti coating options

GRAB BARS

Localized Passenger Support Components

Grab bars provide critical passenger support in seating zones, door areas, vestibules, ADA locations, and washroom compartments. These components must be compact, rigid, corrosion-resistant, and designed for repeated passenger use.

Grab bar assemblies can be fabricated in multiple geometries and mounting styles to match OEM requirements or to replace existing hardware in refurbishment programs.

Performance Priorities

Passenger Safety

Designed for secure grip and stable support during rail movement.

Compact Strength

High rigidity in small assemblies with secure anchoring.

Corrosion Resistance

Material selection supports high cleaning cycles and moisture exposure.

Service Durability

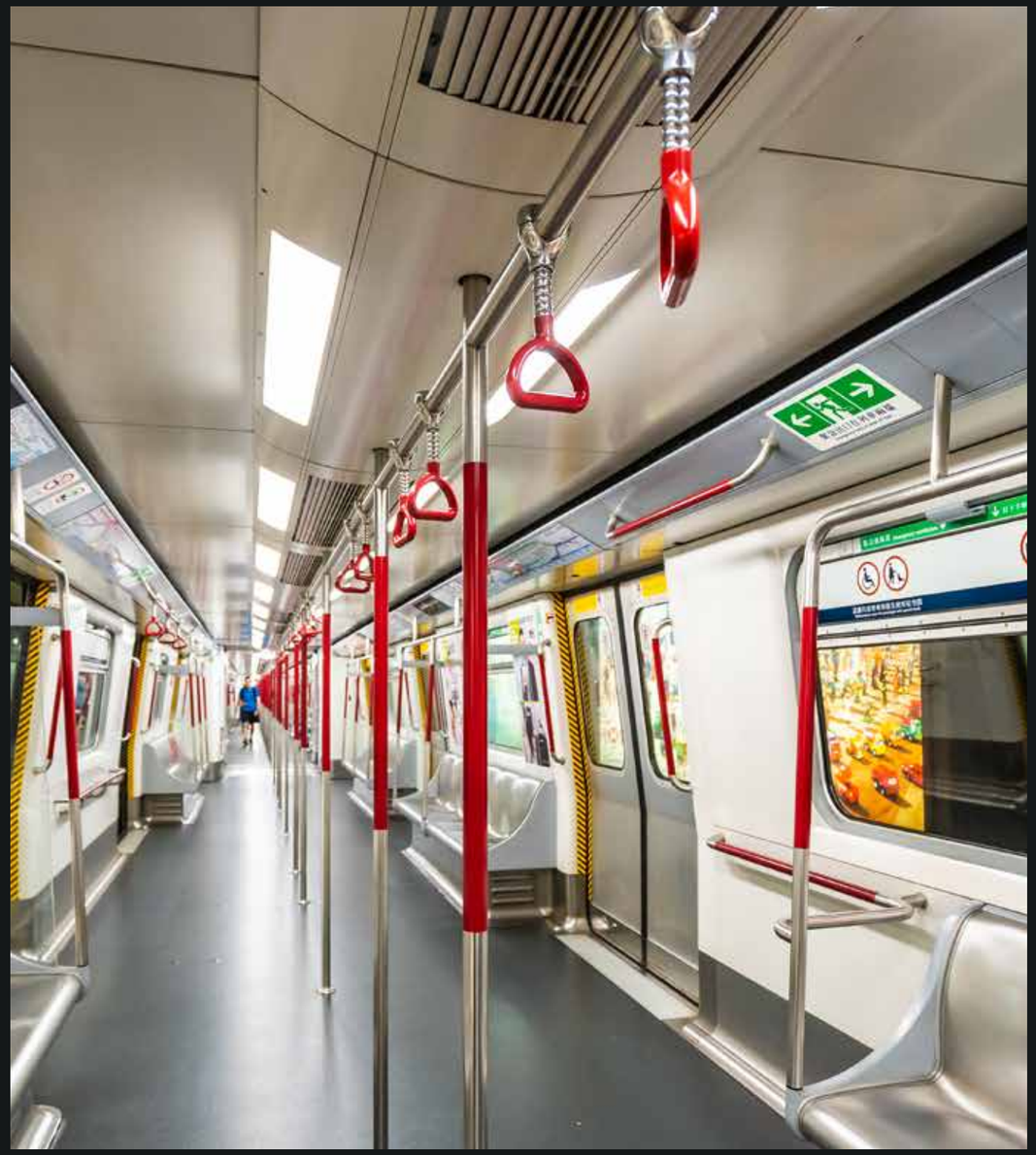
Designed for long-term use in high-contact areas.

Integration Capabilities

- Seat-end support locations
- Door frame support zones
- ADA compliance areas
- Washroom support zones
- Custom curvature and lengths

Fabrication & Assembly

- Stainless steel bar fabrication
- Aluminum options available
- Seamless welded joints
- Reinforced anchor mounting
- Tamper-resistant fasteners



Available Finishes

- Powder-coated surfaces (custom colors)
- Brushed stainless finish
- Polished stainless finish
- Anti-microbial coating options

PASSENGER TABLES

Fixed & Foldable Rail Table Systems

Passenger tables must be designed for vibration resistance, structural stability, and repeated daily use without loosening or fatigue. Our table systems are fabricated for rail environments including commuter, intercity, and specialized cars.

Designed for both OEM production and refurbishment, tables can be manufactured as foldable wall-mounted systems or fixed-mount configurations depending on interior layout and operational requirements.

Performance Priorities

Vibration Resistance

Hinges, brackets, and mounts are designed to remain secure under rail movement.

Passenger Safety

Rounded edges and stable support reduce injury and tipping risk.

High-Cycle Durability

Designed for repeated use without loosening or deformation.

Serviceability

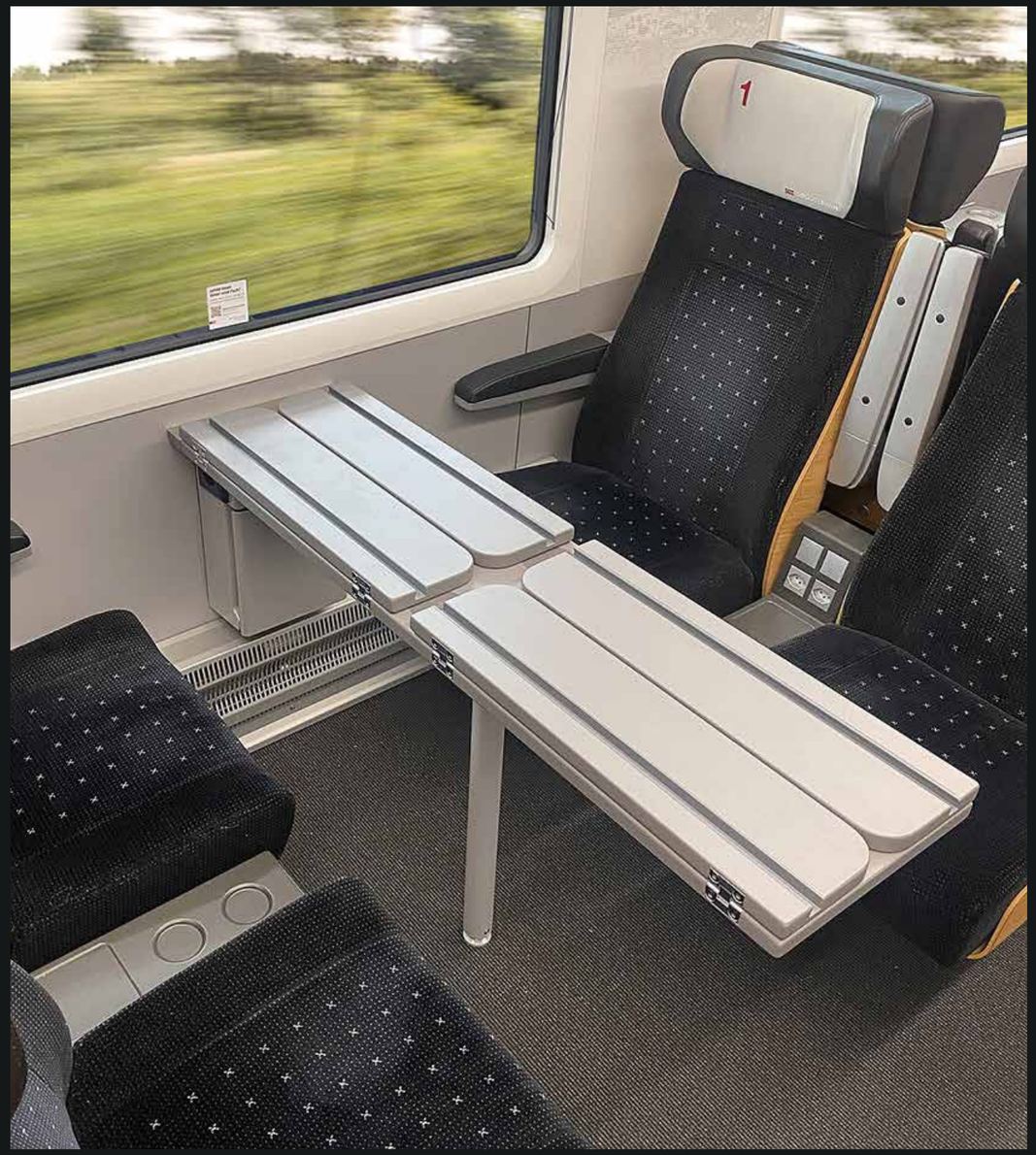
Replaceable hardware and modular construction options available.

Integration Capabilities

- Fold-down wall table layouts
- Fixed compartment mounting configurations
- ADA-compliant table geometry
- Seat-integrated mounting
- Surface finish customization

Fabrication & Assembly

- Reinforced metal frame structure
- High-cycle hinge assemblies
- Locking and retention mechanisms
- Rounded edge safety geometry
- Wall or frame mounting brackets



Available Finishes

- Powder-coated metal frames
- Stainless steel surfaces
- High-pressure laminate surfaces
- Anti-graffiti coating options

TRAIN WINDOW SYSTEMS

Structural Framing & Integration Assemblies

Window systems must deliver structural stability, environmental sealing, and long-term durability while supporting passenger safety and operational requirements. Our window framing systems are fabricated for rail vehicle integration across interior and exterior assemblies.

Designed for OEM and refurbishment programs, window assemblies can be produced to match existing opening geometry or engineered as new framing solutions for upgraded fleets.

Performance Priorities

Weather Protection

Sealing systems support rain, wind, and exterior exposure environments.

Vibration Stability

Frame construction maintains alignment under cyclic loading conditions.

Passenger Safety

Supports integration with safety glass and egress requirements.

Long-Term Durability

Corrosion-resistant materials and hardware options available.

Integration Capabilities

- Fixed window frame assemblies
- Sliding window configurations
- Emergency egress window layouts
- Interior trim interface zones
- Exterior cladding compatibility

Fabrication & Assembly

- Aluminum or stainless frame fabrication
- Reinforced corner joint design
- Sealing and drainage provisions
- Tamper-resistant mounting hardware
- Retrofit alignment capability

Available Finishes

- Powder-coated surfaces (custom colors)
- Brushed stainless finish
- Anodized aluminum
- Anti-graffiti coating options

MANUAL DOORS

Interior & Exterior Rail Door Assemblies

Manual door systems are engineered for reliability, structural integrity, and controlled operation within passenger rail environments. These assemblies are designed for applications where manual access is required, including passenger compartments, operator cabins, equipment enclosures, and inter-car connections.

Manufactured for both OEM production and refurbishment programs, manual doors are fabricated to align with carbody geometry, mounting constraints, and operational durability requirements.

Performance Priorities

Operational Reliability

Designed for smooth opening and closing under repeated daily use.

Structural Integrity

Door panels and frames resist warping, vibration, and long-term fatigue.

Passenger Safety

Edges, latching systems, and handles are designed for controlled and safe operation.

Durability

Materials and hardware selected for high-cycle rail environments.

Integration Capabilities

- Interior compartment access
- Equipment room entry
- Inter-car passage doors
- Observation window inserts
- Locking and latch hardware options

Fabrication & Assembly

- Formed aluminum or stainless door panels
- Reinforced internal frame structure
- Precision-fitted hinges
- Mechanical latch systems
- Retrofit-compatible mounting design

Available Finishes

- Powder-coated surfaces (custom colors)
- Brushed stainless finish
- Anodized aluminum
- Protective anti-graffiti coatings

FINISHES & CUSTOMIZATION

Standardization, Protection, and OEM Matching

Rolling stock components must maintain appearance and performance over long service life while supporting fleet-wide standardization. Our finish and customization options are structured to support both new-build programs and refurbishment upgrades.

Material selection, coating systems, and fabrication geometry can be adjusted to match OEM requirements, authority standards, and maintenance program needs.

Performance Priorities

Corrosion Protection

Finishes selected for long-term exposure resistance.

Appearance Retention

Surfaces designed to maintain visual quality over service cycles.

Fleet Standardization

Repeatable finishes support multi-car consistency.

Maintenance Compatibility

Coatings support cleaning and anti-graffiti requirements.

Customization Options

- Custom color matching
- Anti-graffiti surface protection
- Anti-microbial coating options
- OEM geometry matching
- Modular replacement designs

Standard Surface Treatments

- Powder coating (custom colors)
- Brushed stainless finish
- Polished stainless finish
- Anodized aluminum finishes

Protective Coatings (Optional)

- Anti-graffiti coatings
- High-wear clear coatings
- Chemical-resistant topcoats
- Anti-microbial coatings

QUALITY ASSURANCE

Inspection, Consistency, and Repeatable Production

Rail components require consistent dimensional accuracy, secure assembly, and repeatable production quality across fleet deployments. Our quality approach supports both OEM manufacturing and refurbishment programs with controlled fabrication processes and verification methods.

Inspection and documentation can be aligned to program-specific requirements, including traceability and custom quality checklists when required.

Quality Priorities

Dimensional Accuracy

Fabrication consistency supports repeatable product integration.

Weld Integrity

Welds are inspected for strength and visual quality.

Finish Quality

Surface condition is reviewed for uniform appearance and protection.

Assembly Fitment

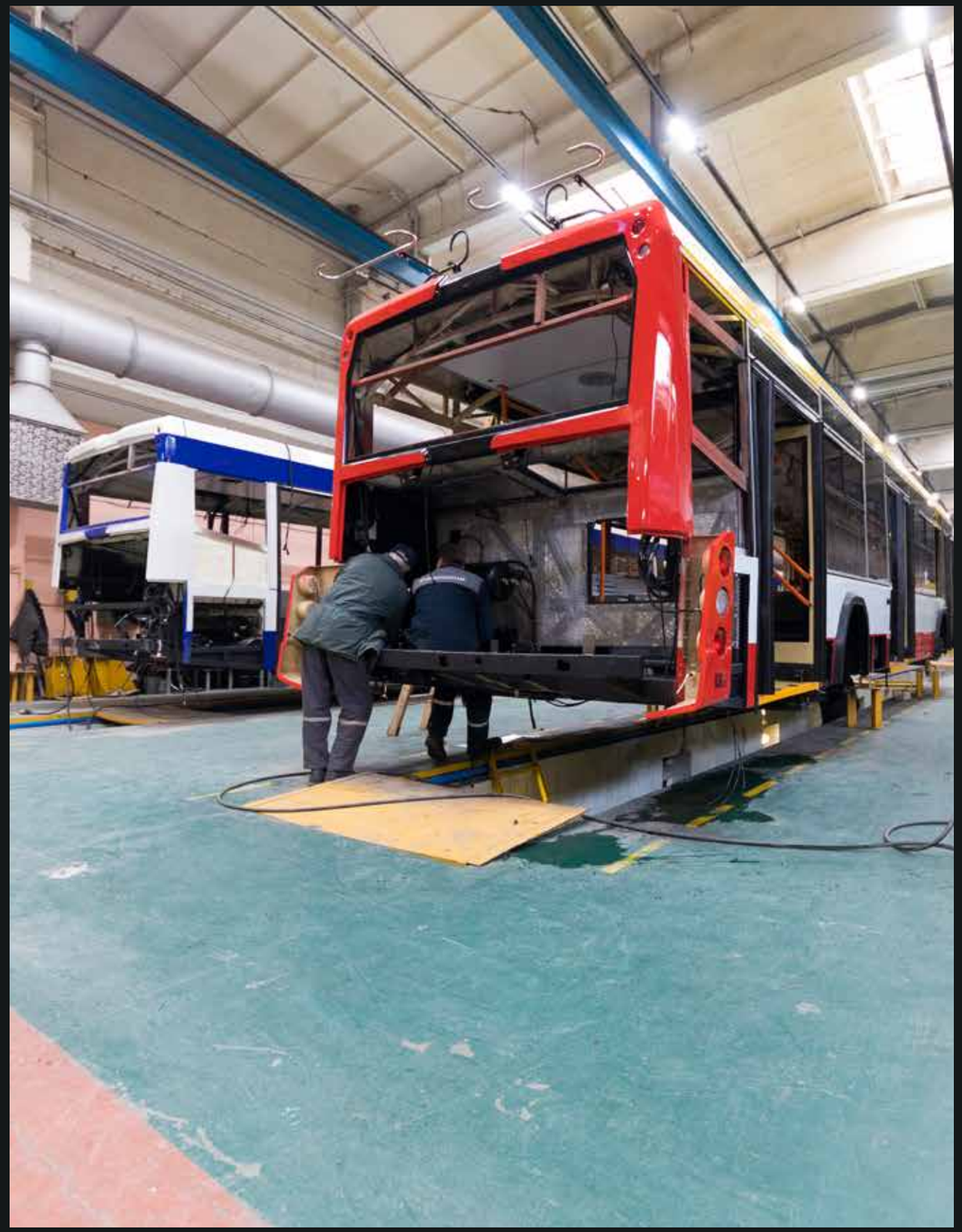
Systems are verified for alignment and integration readiness.

Inspection Methods

- Dimensional verification
- Weld inspection
- Surface finish inspection
- Fit and assembly testing
- Load testing (when required)

Documentation (When Required)

- Material traceability
- Inspection reports
- Custom checklists
- Assembly verification records
- Packaging and protection review



Contact Us

Partner With Us

Let’s talk.

From design to delivery, we’ve got your project covered.

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CERTIFICATIONS

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