



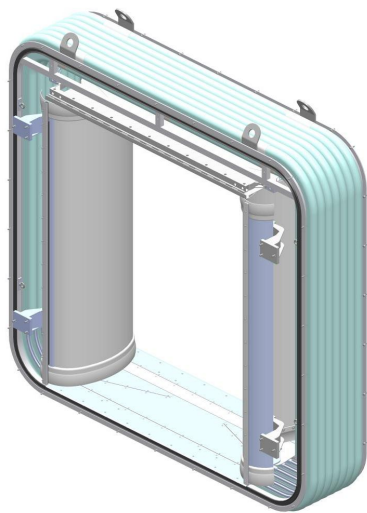
# Gangway System Introduction

Presenter: Li Qiao

**重庆永贵交通设备有限公司**  
**Chongqing Yonggui Traffic Equipment Co., Ltd.**

# 01 / PRODUCTS

Supporting rail transit development as a  
leading gangway system provider

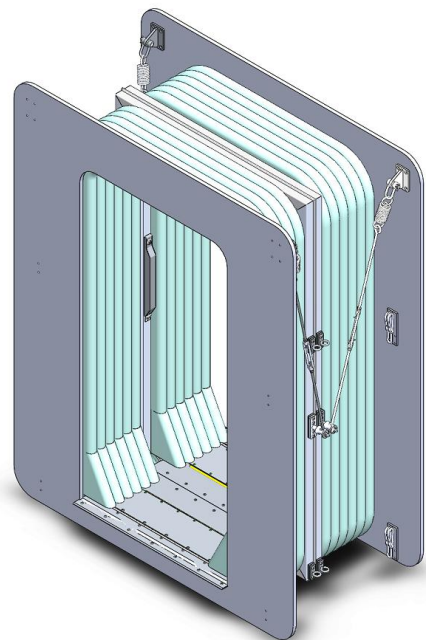


## Gangway for Intercity / Suburban Express Trains

- ◆ Large clear passage width
- ◆ Mostly equipped with interior trim (ceiling and side walls)
- ◆ Sound insulation  $\geq 36$  dB; airtightness required
- ◆ Flame-retardant options: EN 45545, BS 6853, DIN 5510
- ◆ Meets requirements for rapid uncoupling and coupling



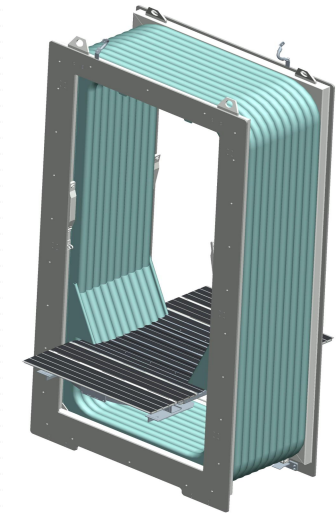
# » Product Introduction (China Railway)



## 160 km/h EMU Vestibule Bellows

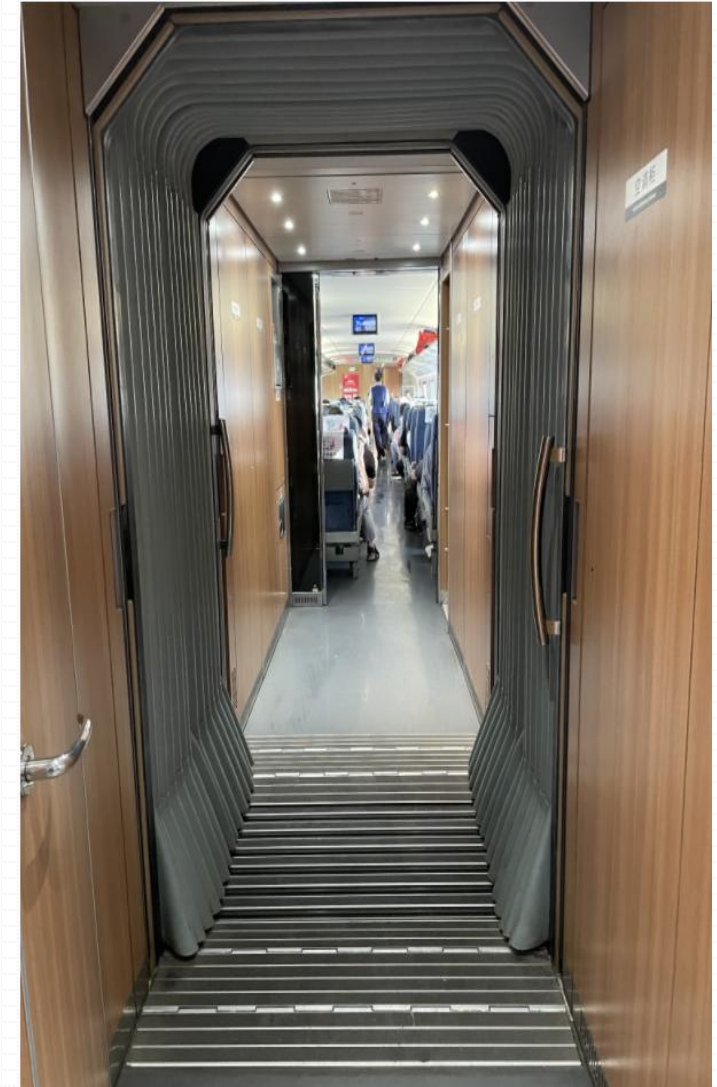
- ◆ Smaller clear passage width
- ◆ Without interior trim panels
- ◆ Sound insulation  $\geq 34$  dB; airtightness required
- ◆ Flame-retardant options: EN 45545, BS 6853, DIN 5510; meets requirements for rapid uncoupling and coupling

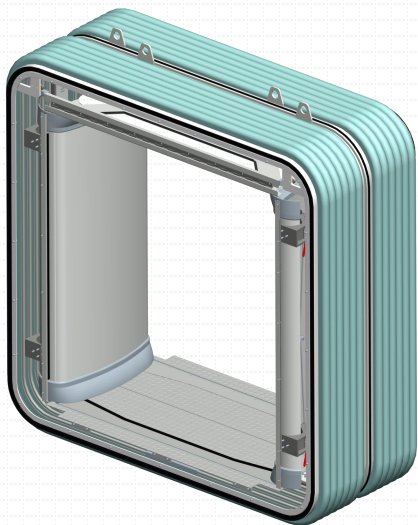




## Gangway for High-Speed EMUs

- ◆ Smaller clear passage width
- ◆ Generally without interior trim (ceiling and side walls)
- ◆ Relatively simple structure
- ◆ High requirements for sound insulation, thermal insulation and airtightness
- ◆ Meets aerodynamic load requirements during high-speed train passing



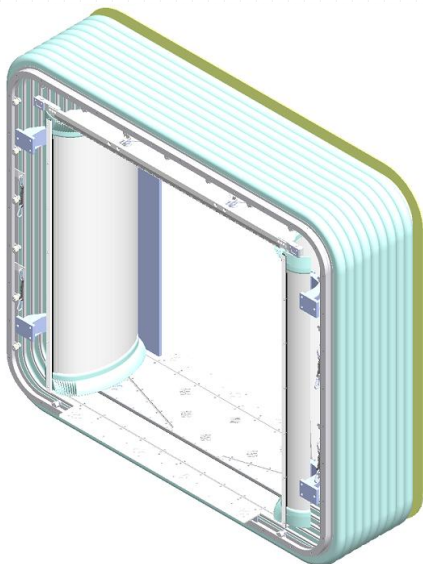


## Split Gangway for Metro Type-A Vehicles

- ◆ Clear passage width: 1500 mm; clear passage height: 1900 mm
- ◆ One-piece or three-piece scuff plate
- ◆ Sound insulation  $\geq 36$  dB; generally no airtightness requirement
- ◆ Flame-retardant options: EN 45545, BS 6853, DIN 5510
- ◆ Meets requirements for rapid uncoupling and coupling



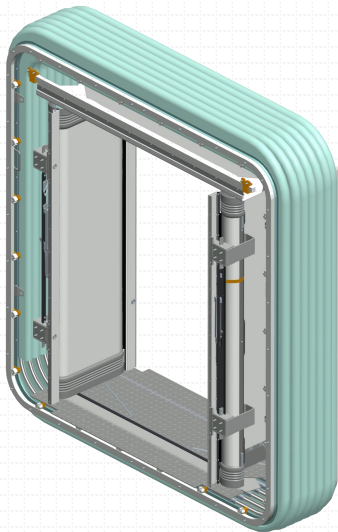
# » Product Introduction (Urban Rail)



## One-Piece Gangway for Metro Type-AS Vehicles

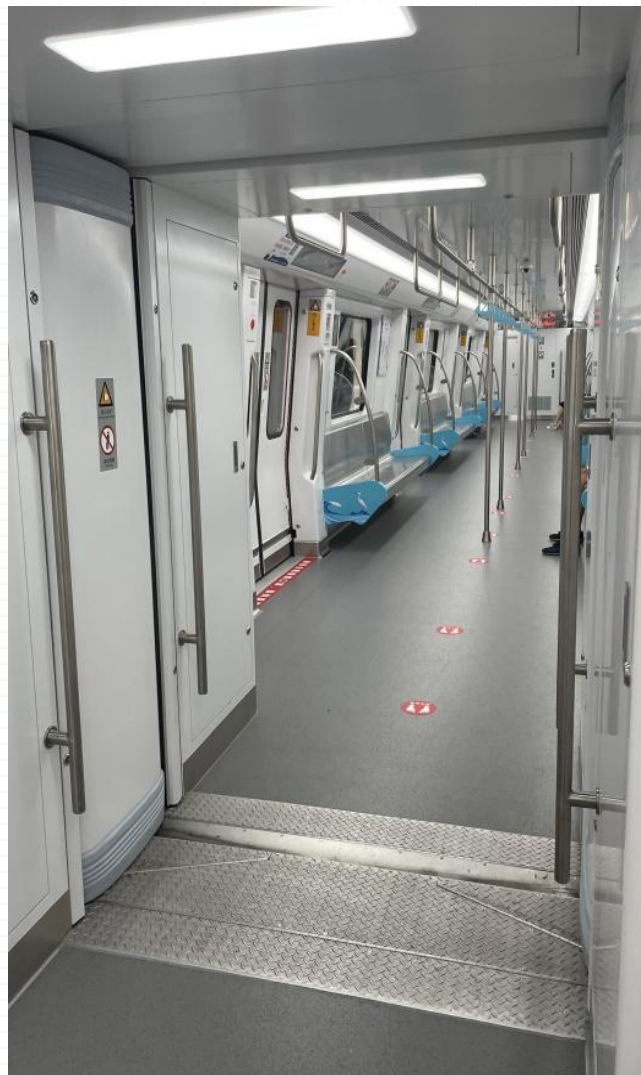
- ◆ Clear passage width: 1500 mm; clear passage height: 1900 mm
- ◆ One-piece scuff plate
- ◆ Sound insulation  $\geq 36$  dB; generally no airtightness requirement
- ◆ Flame-retardant options: EN 45545, BS 6853, DIN 5510
- ◆ Meets requirements for rapid uncoupling and coupling

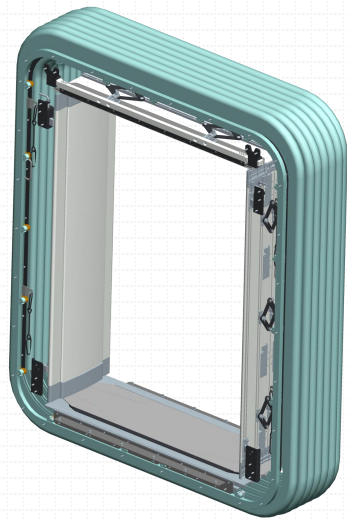




## One-Piece Gangway for Metro Type-B Vehicles

- ◆ Clear passage width: 1300 mm; clear passage height: 1900 mm
- ◆ One-piece scuff plate
- ◆ Sound insulation  $\geq 36$  dB; generally no airtightness requirement
- ◆ Flame-retardant options: EN 45545, BS 6853, DIN 5510
- ◆ Meets requirements for rapid uncoupling and coupling





## Three-Piece Gangway for Metro Type-B Vehicles

- ◆ Clear passage width: 1300 mm; clear passage height: 1900 mm
- ◆ Three-piece scuff plate
- ◆ Sound insulation  $\geq 36$  dB; no airtightness requirement
- ◆ Flame-retardant options: EN 45545, BS 6853, DIN 5510
- ◆ Meets requirements for rapid uncoupling and coupling

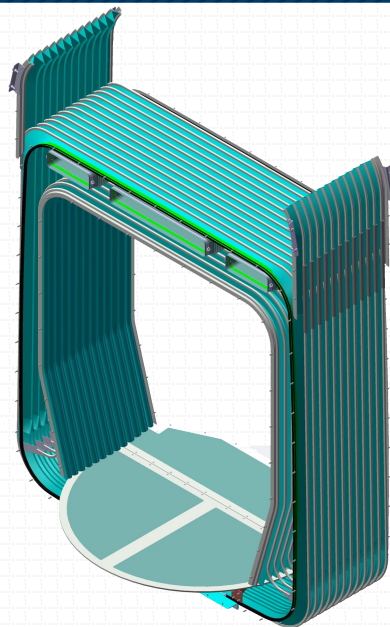


# »Product Introduction (Special Rail)



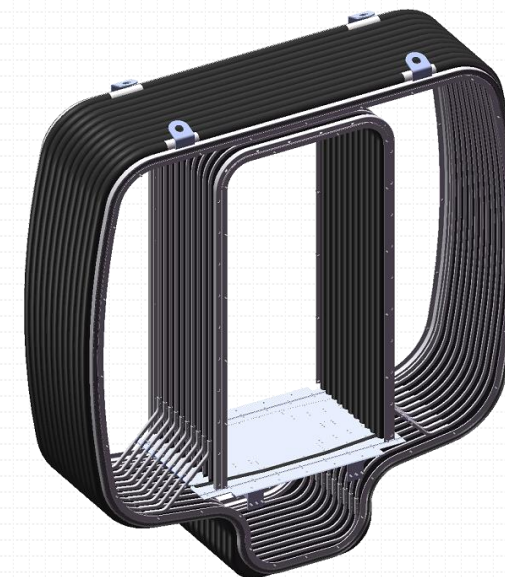
## Trimless Gangway for Monorail / Suspended Rail Vehicles

- ◆ Clear passage width and height customized to customer requirements
- ◆ Without interior trim panels
- ◆ Sound insulation  $\geq 25$  dB; no airtightness requirement
- ◆ Flame-retardant options: EN 45545, BS 6853, DIN 5510
- ◆ Meets requirements for rapid uncoupling and coupling



## Tram Gangway

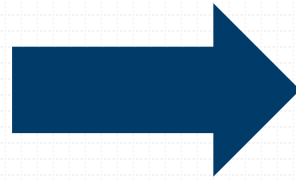
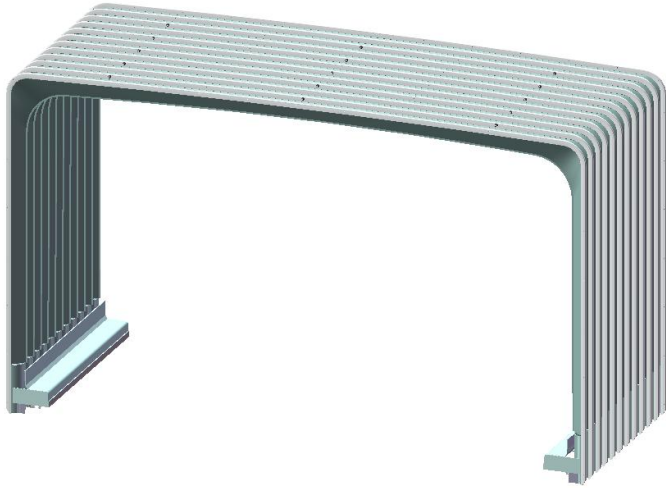
- ◆ Clear passage width and height customized to customer requirements
- ◆ Without interior trim panels
- ◆ Sound insulation  $\geq 35$  dB; no airtightness requirement
- ◆ Flame-retardant options: EN 45545, BS 6853, DIN 5510
- ◆ Supports 100% low-floor configuration



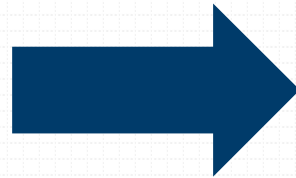
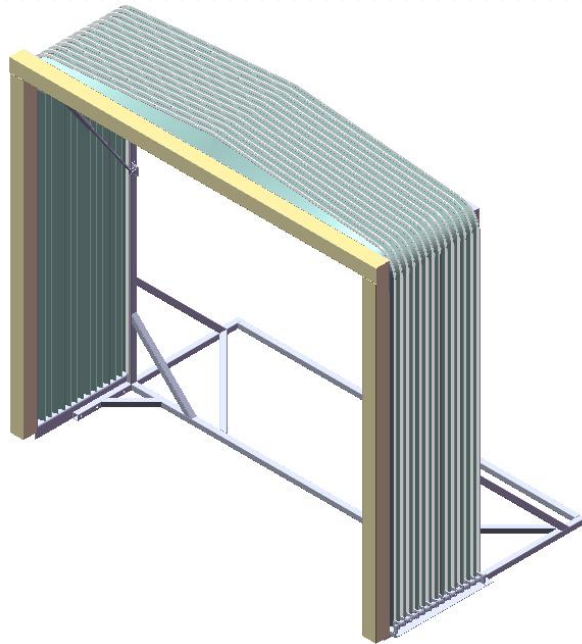
## Maglev Gangway

- ◆ Large clear passage width; external profile generally flush with the carbody
- ◆ Without interior trim panels
- ◆ Sound insulation 12–25 dB; no airtightness requirement
- ◆ Flame-retardant options: EN 45545, BS 6853, DIN 5510
- ◆ Folded bellows design meets small-radius curve requirements

# » Product Introduction (Airstairs, Camping Car, Air Duct)



**Camping Vehicle**



**Boarding Bridge**



Diligence  
Rewarded · Shared  
Success



### 1 Overview

- ★ The passenger boarding bridge bellows is a retractable weatherproof device between the airport boarding bridge interface and the aircraft cabin door. It serves as the primary safe passage for passenger boarding on both sides of the aircraft and is one of the key pieces of airport ground-support equipment.
- ★ The boarding bridge bellows is designed and manufactured by Chongqing Yonggui Traffic Equipment Co., Ltd. It mainly consists of the aircraft-side front frame (steel plate and foam), bellows fabric, profiles, protective bellows assembly (including frame) and sealing structures. **Where required, an extension-platform power unit can be added according to customer requirements.**
- ★ The bellows material provides rain protection, thermal insulation and noise reduction, with weather resistance and fire-retardant properties to ensure long service life under outdoor conditions.



Normal Position of Aircraft Interface



Aircraft Interface Open Position



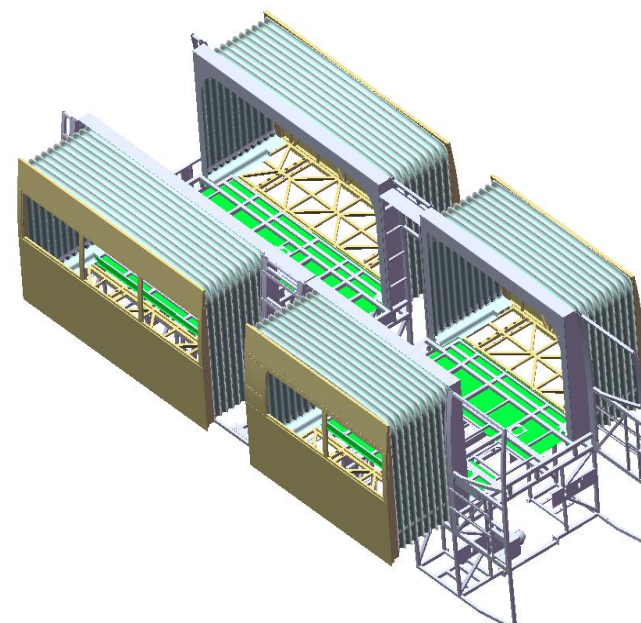
Bellows Operating Position



Bellows Operating Position



- ★ The camping vehicle bellows assembly is the main expansion passage on both sides of large road vehicles. Available in large and small bellows configurations, it enables the driver and passengers to extend sleeping berths for field camping use.
- ★ The camping vehicle bellows assembly is designed by Chongqing Yonggui Traffic Equipment Co., Ltd. It mainly consists of the vehicle-side screw frame, expansion-compartment-side rivet frame, bellows assembly (including frame) and sealing structures.
- ★ The bellows material provides rain protection, thermal insulation and noise reduction, with weather resistance and fire-retardant properties to ensure long service life under outdoor conditions.

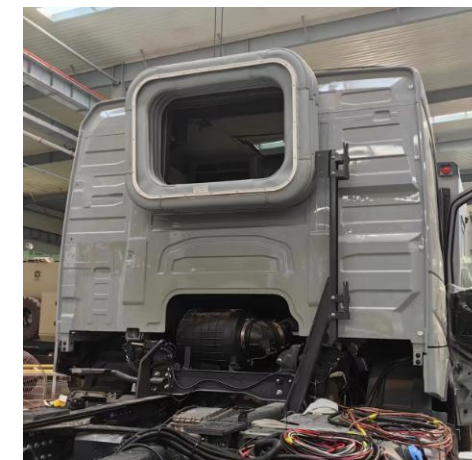




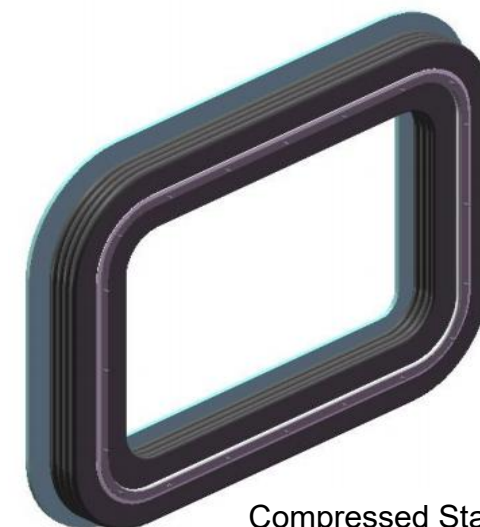
The special- purpose vehicle through- passage connects the cab and carriage for internal passage. The internal cross- section of the through- opening is  $\geq 0.4$  m<sup>2</sup>, allowing crew and passengers to pass through.

Designed by Chongqing Yonggui Transportation Equipment Co., Ltd., this through- passage mainly consists of a vehicle- body mounting frame, folding bellows assembly and other components.

Constructed from materials featuring rainproof, heat- insulating and noise- reducing functions, the product boasts excellent weather resistance, ensuring long- term durability under outdoor natural conditions.



Extended State



Compressed State



1

## Domestic Supply Cities

Hangzhou, Wenzhou, Taizhou, Jinhua-Yiwu, Beijing, Tianjin, Xiamen, Dongguan, Shenzhen, Chongqing, Chengdu, Taiyuan, Shenyang, etc.

2

## Export Supply Countries

Indonesia, Saudi Arabia, South Korea, India and Russia

3

## Rail Vehicle Gangway

High-speed rail, intercity rail, 25T, suburban rail, Metro Type A, Type B, Type AH, Type AS, and various monorail systems

4

## Gangways for Special Applications

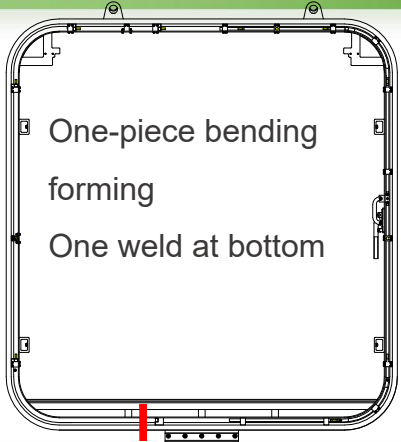
Boarding bridges, RVs and camping vehicles



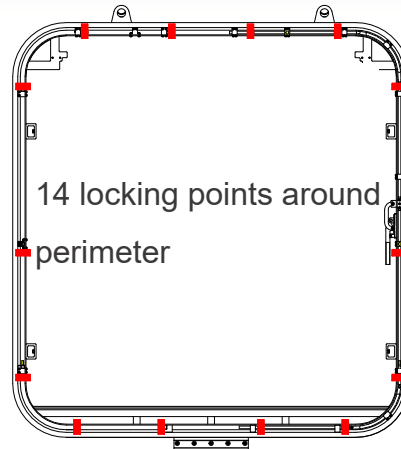
# Gangway for Type-A Vehicles



## Yonggui Gangway

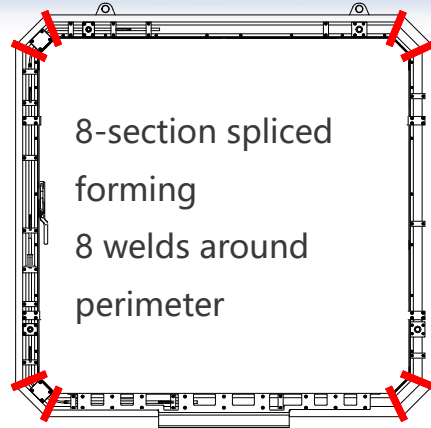


One-piece bending forming  
One weld at bottom

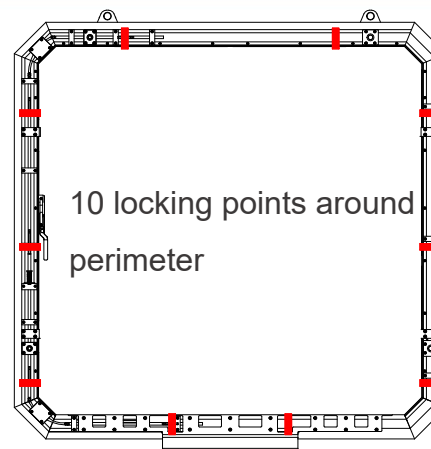


14 locking points around perimeter

## Conventional Industry Gangway



8-section spliced forming  
8 welds around perimeter



10 locking points around perimeter

## Technical Innovation + Green Energy Saving

**Attractive mating-frame profile with stable quality**

One weld at bottom

Most industry designs use 8 welds

**Lightweight design:**

Weight: approx. 600 kg

Most industry designs are over 660 kg

**Airtightness:**

Airtightness  $\geq 100$  s

50 s higher than the new standard requirement

**Sound insulation:**

Sound insulation value  $\geq 40$  dB

**Minimum maintenance interval:**

Maintenance-free within the vehicle overhaul interval

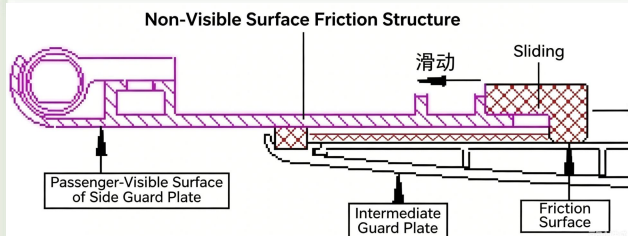
**Reliable docking lock with excellent sealing**

14 locking points in total

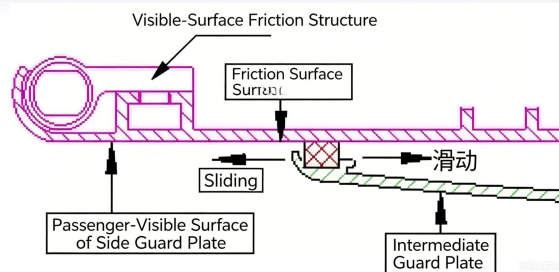
Most industry designs use 10 locking points

# Gangway for Type-B Vehicles

## Yonggui Gangway



## Conventional Industry Gangway



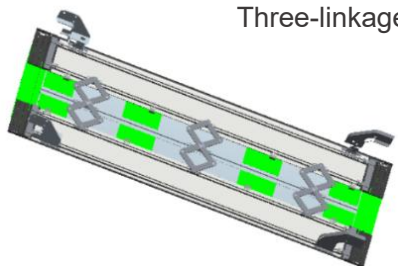
## Technical Innovation + Green Energy Saving

Yonggui three-piece scuff plates use a non-visible-surface friction design to prevent wear on visible surfaces and reduce maintenance requirements throughout the service life. This outperforms the industry's visible-surface friction design.

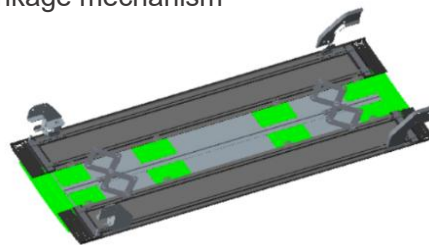
### Metal scuff plates and roof panels:

Formed by integral tooling  
No welding or bonding  
Reduced risk of cracking and detachment

### Three-linkage mechanism



### Two-linkage mechanism

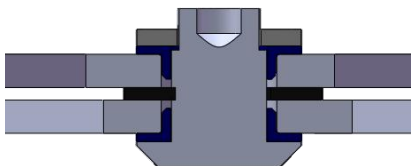


Yonggui three-piece scuff plates use a three-linkage mechanism to reduce gaps between scuff plates during vehicle roll, outperforming the industry's two-linkage mechanism.

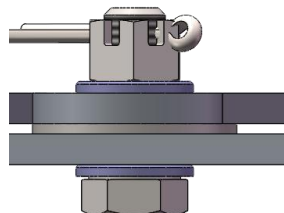
### Airtightness:

Airtightness  $\geq 100$  s  
50 s higher than the new standard requirement

### Press-riveted structure



### Cotter-pin nut structure



Yonggui linkage joints adopt a riveted structure, eliminating abnormal noise caused by cotter-pin nut structures during motion. Maintenance-free throughout service life and superior to the industry's cotter-pin nut structure.

### Sound insulation:

Sound insulation value  $\geq 40$  dB

### Minimum maintenance interval:

Maintenance-free within the vehicle overhaul interval

# » Application References (Installed Product Photos)

One-piece scuff plate for  
Type-AS vehicles



Three-piece scuff plate for  
Type-B vehicles



One-piece scuff plate for  
Type-B vehicles



One-piece scuff plate for  
Type-A vehicles



# » Application References (Installed Product Photos)

Taiyuan Line 2, Beijing Line 3  
One-piece gangway for Type-A vehicles



Hangzhou, Tianjin  
Beijing, Jinhua-Yiwu-Dongyang  
Three-piece gangway for Type-B vehicles



Xiamen Line 3, Shaoxing Line 1  
One-piece gangway for Type-B vehicles



Chongqing Lines 4, 10 and Loop Line  
One-piece gangway for Type-AS vehicles





重庆永贵交通设备有限公司  
Chongqing Yonggui Traffic Equipment., Ltd.



Stock Abbr.: Yonggui Electric  
Stock Code: 300351

# *YONGGUI*

- TECHNOLOGY CONNECTS THE FUTURE •



Diligence  
Rewarded · Shared  
Success