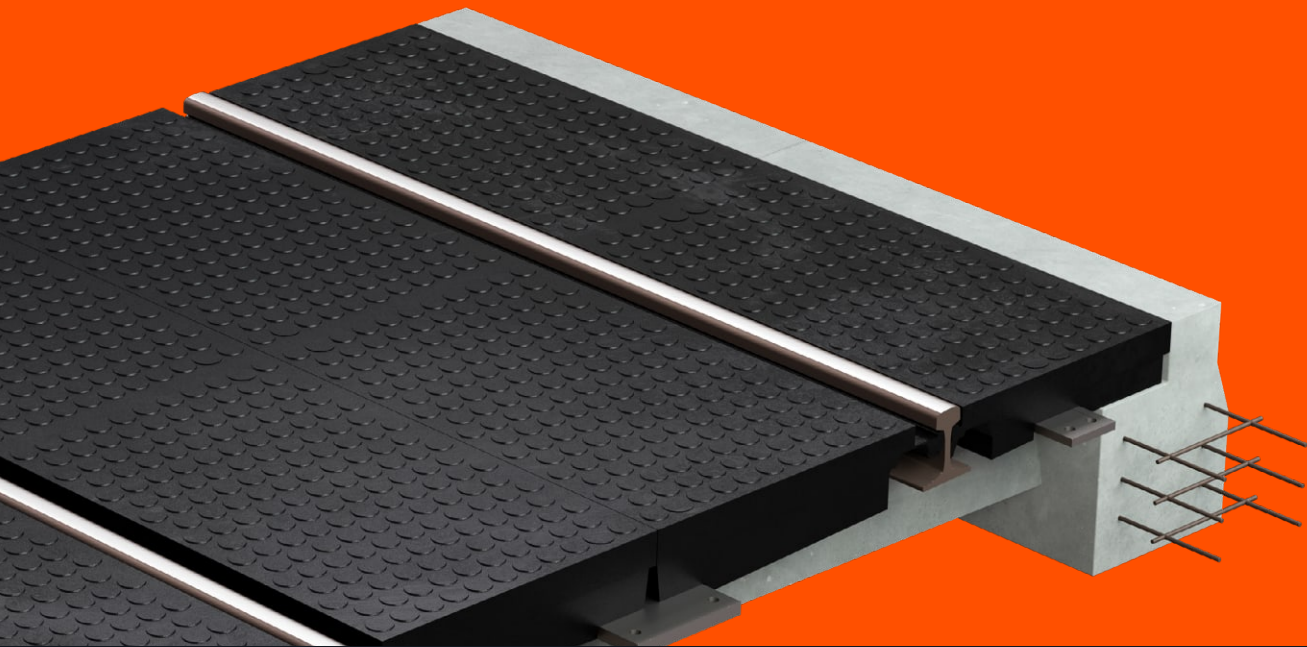


# Level Crossing Systems



**Metro**  
**Main Lines**  
**Depots**  
**Ports**  
**Yards**

# Applications

## Level Crossing Systems

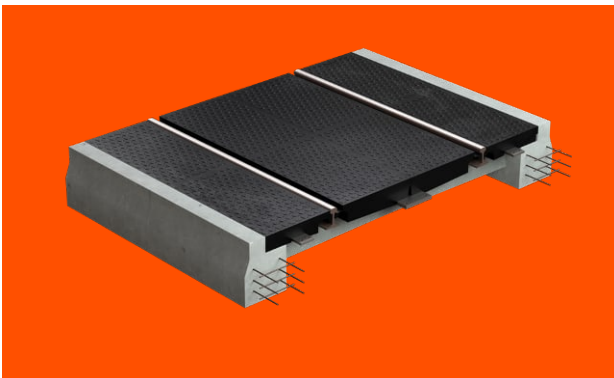
Level crossing products and systems have been part of Tiantie's product offering since the beginning. The company is a recognized industry leader and has received numerous patent awards for product innovation. Designed to handle heavy loads and high-frequency traffic crossings by vehicles of all

types, Tiantie level crossing systems are suitable for most common rail profiles, and a variety of wood and/or concrete sleepers. Applications include main lines, metro lines, port facilities, depots and rail yards.

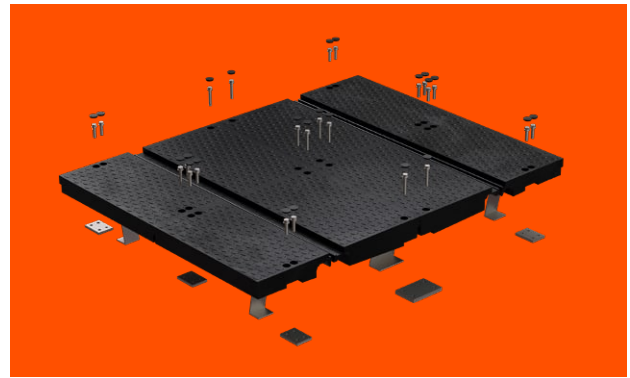
### Technical Product Information

Tiantie level crossing systems consist of inner and outer panels, made from a special rubber compound using recycled SBR. This specialty compound material features high elasticity and is resistant to abrasion. Panels have a long service life, and can be custom designed to fit different types of rail and sleeper applications. Top and bottom reinforced layers of fiberglass offer increased stability and rigidity, which allow broad load transfer to the foundation. Panel surfaces are highly wear-resistant, and skid-resistant. To ensure positioning

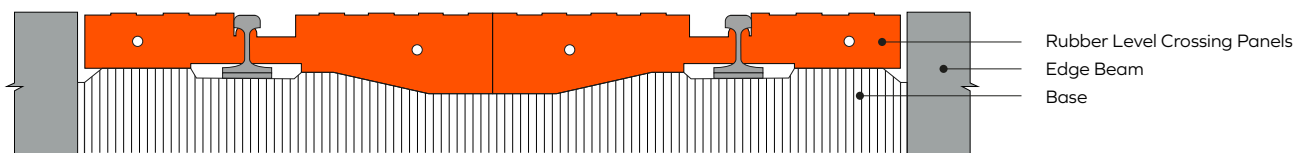
and stability, panels are bolted to sleepers. The Tiantie rubber unity level crossing plate is a new design, based on the common rubber crossing plate, but featuring only a single inner panel, vs. two panels in the common design. The single inner panel design improves the integrity of the connection between the panel and the track structure. This results in greater panel stability, reduces the need for maintenance, and extends the overall crossing plate service life.



Level Crossing System Installed



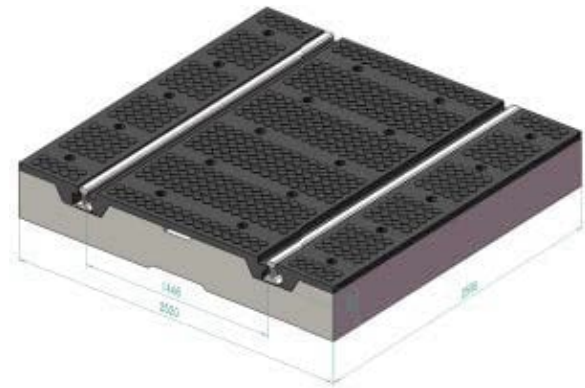
Level Crossing System Design



Crossing-section: Rubber Level Crossing Panels Installation

## Features and Benefits

- Quick and easy installation
- Level crossing vehicle load capacity up to 60 t
- Level surfaces ensure quiet and smooth vehicle crossing
- Standard panel sizes: 471 mm ,and 1476 mm
- Custom panel sizes up to 2996 mm
- Operating temperature: -35° C to 60° C
- Low maintenance
- Stable and secure connection to track
- Service life: up to 20 years



Tiantie Unity Plate (TULC) Dimensions

## Modular Rubber Crossing Plate

Rail type (kg/m)	Type	Description	Dimensions		
			Length	Width	Thickness
43	43-1490-183	Gauge panel	1110	745	162
43	43-1490-183	Non-gauge panel	1110	500	162
50	50-1490-195	Gauge panel	1660	745	174
50	50-500-130	Non-gauge panel	1660	500	174
60	60-1490-215	Gauge panel	2220	745	198
60	60-500-150	Non-gauge panel	2220	500	198

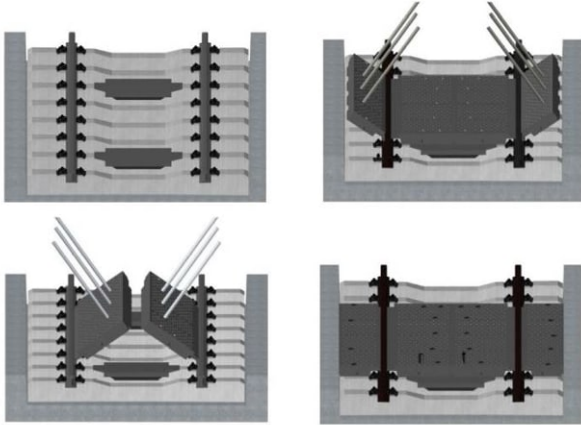
## Tiantie Unity Rubber Crossing Plate (TULC)

Rail type (kg/m)	Type	Description	Dimensions		
			Length	Width	Thickness
43	43-1496-471	1.5 m Non-gauge panel	1496	471	141
43	43-1996-471	2.0 m Non-gauge panel	1996	471	141
43	43-1496-1446	1.5 m Gauge panel	1496	1446	141
43	43-1996-1446	2.0 m Gauge panel	1996	1446	141
50	50-2496-471	2.5 m Non-gauge panel	2496	471	153
50	50-2996-471	3.0 m Non-gauge panel	2996	471	153

## Engineering Services

Tiantie offers numerous level crossing engineering services, including:

- Application-specific design solutions
- Installation services and on-site supervision
- Panel replacement



Installation Steps - Standard level crossing

## Production

Wholly-owned Zhejiang Tiantie production plants are large scale manufacturing facilities. State-of-the-art production equipment and processes ensure highest quality products that meet customer needs,

on-time delivery, as well as regulatory requirements for the protection of the environment. Our level crossing panel production plant has an annual capacity of 50,000 m<sup>2</sup>.



Production plant for Level crossings



## Quality Control

Global markets require compliance with a variety of different standards. Tiantie's Quality Management System ensures that product and process standards

are consistent, in compliance, and documented in accordance with standards. Test reports, certifications and customer testimonials are available on request.



Environmental Management System according to ISO 14001



Quality Management System according to ISO 9001



Occupational Health and Safety System according to ISO 45001

## References

Tiantie has successfully installed over 110,000 m<sup>2</sup> of level crossing materials at Main lines, Metro lines, depots and port facilities.



Luchao Port



Tiantie Level Crossing System: Beijing Olympic Park



Guilin Bei Motor Vehicle Depot

## Selected Tiantie Level Crossing Projects

Project Name	Place	Item No.	Quantity
China Railway No. 5 Engineering Group Co., Ltd No. 6 Engineering Co., Ltd.	Baotou	P60/P50/P43	352m <sup>2</sup>
China Railway No. 3 Engineering Group Co., Ltd. Shanghai Minhang railway freight yard project	Shanghai	T/TD-III	392 m
Yinchuan Railway engineering Co., Ltd.	Tiantai	P43/P50	142 m
Luoyang Refining & Chemical Engineering Co., Ltd.	Luoyang	PM-I	56 m
Angang Group International Economic and Trade Co., Ltd.	Anshan	TD-T-D	79 m
China railway 21 Bureau Group Co., Ltd Xining North Freight center First Project Department of Earthquake Relief Emergency Engineering Command	Xining	P50	800 m <sup>2</sup>
China Railway 24th Bureau Group Co., Ltd. Shanghai-Hangzhou railway Passenger line project	Shanghai	T/TD-IV	3055 m <sup>2</sup>
China Railway Seven Group, Fourth Company Wuhan-Yichang High-speed Railway Hankou depot project	Wuhan	P50/P60	1800 m <sup>2</sup>
Shanghai Railway Rail Transit Development Co., Ltd.	Shanghai	T/GD	187 m <sup>2</sup>
China Railway No.9 Group Co., Ltd. Lanzhou Hub Project	Lanzhou	p50/p60	1600 m <sup>2</sup>
China Railway No. 3 Engineering Group Co., Ltd Line & bridge engineering co.,ltd., Ningbo Metro Tiantong Zhuang Depot	Ningbo	p60	2190 m <sup>2</sup>
The first engineering bureau, New Wulumuqi Passenger station	Wulumuqi	P50/P60	1300 m <sup>2</sup>
NAM VIET INDUSTRIAL EQUIPMENTCO LTD Vietnam	Vietnam	P43	1029 m <sup>2</sup>
Sichuan Tiechuang technology co., ltd	Chengdu	P50	5000 m <sup>2</sup>



Corporate Offices, Tiantai Zhejiang

## Company

Zhejiang Tiantie Science & Technology Co Ltd.

## Founded

2003

## Revenue

\$ 267 Mio. USD (Group) 2021

## Employees

940 (Group)

## Competences

Noise and Vibration Control, Rubber Technology

## Industries

Railway, Buildings, Industry

## Headquarters

Tiantai, China

## Affiliates

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