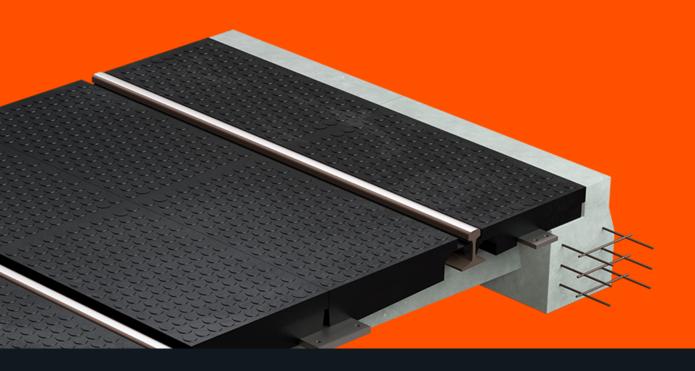
Level Crossing Systems



Metro

Main Lines

Depots

Ports

Yards



Applications

Level Crossing Systems

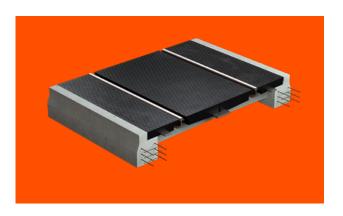
Level crossing products and systems have been part of Tiantie's product offering since the beginning. The company is a recognized industry leader and has received numerous patent awards for product innovation. Designed to handle heavy loads and high-frequency traffic crossings by vehicles of all

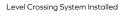
types, Tiantie level crossing systems are suitable for most common rail profiles, and a variety of wood and/or concrete sleepers. Applications include main lines, metro lines, port facilities, depots and rail yards.

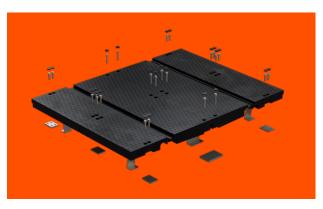
Technical Product Information

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 wearresistant, and skid-resistant. To ensure positioning

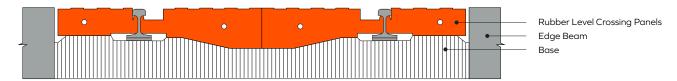
and stability, panels are bolted to sleepers. The Tiantie rubber unity level crossing plate is a new design, based on the common rubber crossing plate, but featuring only a single inner panel, vs. two panels in the common design. The single inner panel design improves the integrity of the connection 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.





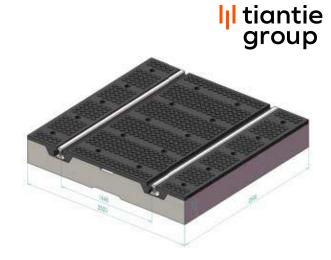


Level Crossing System Design



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)	Туре	Description		Dimensions	
			Length	Width	Thickness
43	43-1490-183	Gauge panel	380	48	84
43	43-1490-183	Non-gauge panel	400	48	84
50	50-1490-195	Gauge panel	440	48	84
50	50-500-130	Non-gauge panel	380	57	85
60	60-1490-215	Gauge panel	400	57	85
60	60-500-150	Non-gauge panel	440	57	85

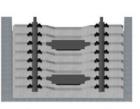
Tiantie Unity Rubber Crossing Plate (TULC)

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

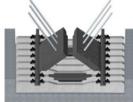


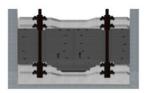
Engineering Services

Tiantie offers numerous level crossing engineering services, including:









Installation Steps - Standard level crossing

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

Production

Wholly-owned Zhejiang Tiantie production plants are large scale manufacturing facilities. State-oftheart 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 $50,000~\text{m}^2$.



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

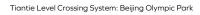
References

Tiantie has successfully installed over 90,000 m² of level crossing systems at Main lines, Metro lines, depots and port facilities.



Luchao Port







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	352m²
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 m²
China Railway 24th Bureau Group Co., Ltd. Shanghai-Hangzhou railway Passenger line project	Shanghai	T/TD-IV	3055 m ²
China Railway Seven Group, Fourth Company Wuhan-Yichang High-speed Railway Hankou depot project	Wuhan	P50/P60	1800 m ²
Shanghai Railway Rail Transit Development Co., Ltd.	Shanghai	T/GD	187 m²
China Railway No.9 Group Co., Ltd. Lanzhou Hub Project	Lanzhou	p50/p60	1600 m²
China Railway No. 3 Engineering Group Co., Ltd Line & bridge engineering co.,ltd., Ningbo Metro Tiantong Zhuang Depot	Ningbo	p60	2190 m²
The first engineering bureau, New Wulumuqi Passenger station	Wulumuqi	P50/P60	1300 m²
NAM VIET INDUSTRIAL EQUIPMENTCO LTD Vietnam	Vietnam	P43	1029 m²
Sichuan Tiechuang technology co., ltd	Chengdu	P50	5000 m ²





Corporate Offices, Tiantai Zheijang

Company

Zhejiang Tiantie Industry Co Ltd.

Founded

2003

Revenue

\$ 140 Mio. USD (Group)

Employees

918 (Group

Competences

Noise and Vibration Control, Rubber Technology

Industries

Railway, Buildings, Industry

Headquarters

Tiantai, China

Affiliates

10



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