INNOVATIVE QUALITY
GLOBALLY SHARED

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July 2026 Edition

UNIROC

STOCK CODE (920174)

COMPLETE SOLUTIONS FOR PC&RC BRIDGE CONSTRUCTION

UNIROC

Group Profile

UNIROC (Stock Code: 920174) is an intelligent equipment enterprise serving global infrastructure construction and mining industries. Grounded in real engineering scenarios, UNIROC continuously deepens the synergistic innovation between equipment technology and construction applications, with business covering six major fields: bridges, tunnels, energy infrastructure, underground mining, ports & terminals, and industrial construction.

Company Profile

UNIROC Bridge is the Group's core business unit dedicated to precast concrete (PC) and reinforced concrete (RC) construction for transportation infrastructure. UNIROC Bridge comprises two subsidiaries: Hunan Wuxin Intelligence Technology Co., Ltd. and Sichuan Wuxin Intelligent Equipment Co., Ltd.

With over 20 years of dedication and innovation, UNIROC Bridge has built a complete product system covering bridge precast concrete production lines, cantilever form travellers, precast box girder formworks, segmental beam formworks , and precast pier and pier cap formworks, etc. We are committed to providing global clients with complete sets of efficient, safe and intelligent equipment and integrated solutions for precast and cast-in-situ construction.

2005
Brand Founded

2700+
Global Employees

6
Core Business Sectors

7000+
Global Engineering Projects



Seven Major Industrial Parks · Serving Global Customers

Positioned with a global vision across seven major industrial parks,
empowered by advanced manufacturing and superior service,
committed to creating lasting value for our global clients.



01 Changsha Industrial Park



02 Liuyang No. 1 Industrial Park



03 Liuyang No. 2 Industrial Park



04 Huaihua Industrial Park



05 Chengdu Industrial Park



06 Nantong Industrial Park



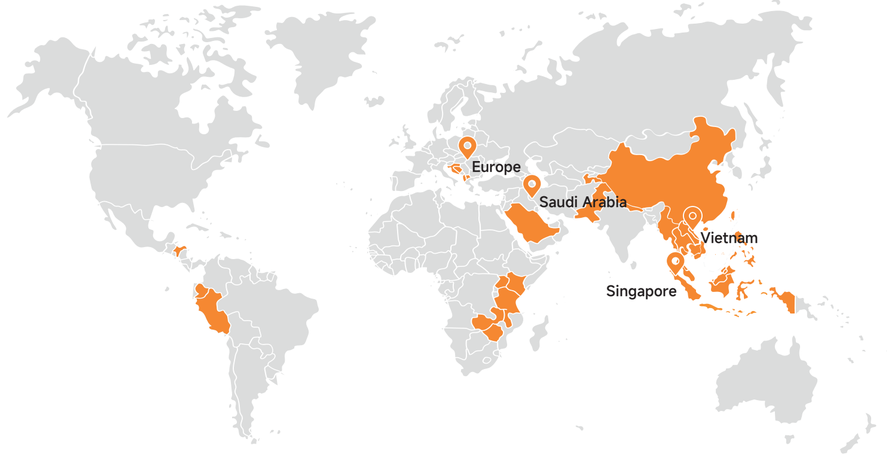
07 Miluo Industrial Park

20+

Countries and Regions Served

4+

Overseas Subsidiaries/Offices
(in Saudi Arabia, Singapore, etc.)



Asia
Deeply Rooted in Southeast Asia & Surrounding Markets
With extensive project coverage

Middle East
Deeply positioned in the Gulf region's infrastructure market

Africa
Serving key infrastructure projects in Africa contributing to regional development

Europe
Supporting bridge construction and infrastructure upgrades

Latin America
Expanding into emerging markets with steadily growing influence

Intelligent Manufacturing

Equipped with CNC gantry machining centers, automatic laser cutters, welding robots, and digital automated warehouses — industry-leading hardware.

A full-process digital intelligent manufacturing system: from 3D digital design, flexible cutting, welding, machining and assembly, to multi-system collaborative PLM — delivering a comprehensive upgrade in smart manufacturing capabilities.

Precision Machining | Intelligent Welding | Equipment Manufacturing | Quality Control

Large-Scale Manufacturing Capability

120,000+

tons / year

Total Annual Production Capacity for Bridge Formwork and Steel Components







Global Partners

中国中铁 | 中国铁建 | 中国交建 | 中国建筑 | 中国电建 POWERCHINA | 中国能建

VINGROUP | 蜀道集团 SDIG | 浙江交工 | 隧道股份 | 安徽建工 | NPS

保利长大 | 贵州路桥 | 湖南路桥 | 江西交工 | 青海交控集团 | 甘肃路桥

Honors & Qualifications

Patents & Copyrights **325**

Invention Patents **42** Items

- National Specialized, Refined, Unique & Innovative Enterprise
- National High-tech Enterprise
- National Enterprise with Intellectual Property Advantages
- Recipient of Special Government Allowance from the State Council
- China Patent Excellence Award Winner
- Co-editor of Technical standard for cast-in-place cantilever method of bridge
- Co-editor of Multiple National Standards
- National Single Champion in Manufacturing
- Top 10 Most Influential Professional Contractor Brand in China's Construction Materials Leasing & Contracting Industry
- Professional Formwork Engineering Research Institute accredited as Provincial-level Enterprise Technology Center
- The "Complete Set of Automatic Hydraulic Box Girder Formwork " was appraised by the Hunan Provincial Department of Science and Technology as having reached the "Domestic Leading Level".
- The "Flexible Rail Transit Box Girder Formwork System Based on Intelligent Control" was appraised by the Hunan Provincial Institute of Science and Technology Information as filling a domestic gap.


UDC

中华人民共和国行业标准 CJJ

CJJ/T 281－2018

P 备案号 J 2531－2018

桥梁悬臂浇筑施工技术标准

Technical standard for cast-in-place cantilever method of bridge

2018－04－10 发布 2018－10－01 实施

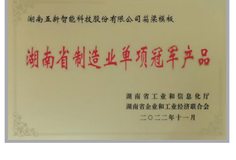
中华人民共和国住房和城乡建设部 发布


专精特新 "国家级"小巨人企业

湖南五新智能科技股份有限公司

工业和信息化部

有效期：2024年7月1日-2027年6月30日


湖南五新智能科技股份有限公司盖梁模板

湖南省制造业单项冠军产品

湖南省工业和信息化厅

湖南省企业和工业经济联合会

二〇二二年十一月


国家知识产权局

中国专利优秀奖

国家知识产权局


湖南五新智能科技股份有限公司桥梁模板装备工业设计中心

湖南省工业设计中心

（2023年—2026年）

湖南省工业和信息化厅

二〇二二年十一月


高新技术企业

证书


湖南省混凝土桥梁成型智能装备

工程技术研究中心

湖南省科学技术厅

2023TP2043

Precast Box Girder Formwork



Product Advantages

Globally Trusted

Over 5,000 sets delivered cumulatively, serving 600+ girder precasting yards

Durable & Reliable

600+ Precast girders produced per set, demonstrating high utilization and turnover efficiency.

High Residual Value

Maintains higher resale value than the market average, demonstrating strong industry recognition.

Scope of Application

Suitable for full-span precast box girder casting for high-speed railways, mixed passenger-freight railways, intercity railways, municipal rail transit, expressways, urban viaducts, sea-crossing bridges, etc.

Key Technical Parameters

Overall Machine Parameters (Taking Standard 2322-3.0 as an example)

Overall Dimensions	34190*16750*5196 mm (External Formwork) / 34800*5624*2888 mm (Internal Formwork)
Operating Temperature Range	-10°C to 50°C
Standard Precasting Pedestal Height	800mm
Opening & Closing Mode of Internal Formwork	Hydraulic Actuation with Mechanical Locking
Travelling Mode of Internal Formwork	Automatic Longitudinal Travelling Type / Traction Type

Intelligent Attached Vibrator System (Optional)		**Internal Formwork Travelling Trolley (Optional)**	
Vibrator Arrangement	Staggered Arrangement	Overall Dimensions	7180*1100*2100 mm
Vibration Duration	Max. 60 s	Precasting Pedestal Height Range	800 mm – 950 mm
Simultaneous Operating Sets	4 groups, 8 viborators	Spacing Between Precasting Pedestals	≤ 81.2 m
Vibration Mode	Single viborator / Single-side / Double-side	Operation Mode	Wireless Remote Control + Wired Hand Controller
Operation Mode	Touchscreen / Strap-Type Remote Controller	Traction Speed	≤ 5 m/min

Segmental Beam Formwork



Product Advantages

High Adaptability

Covers construction of complex bridge types including small-radius curved girders, variable cross-section girders and twisted girders

Fast Matching Speed

Flexible and precise movement of bottom formwork trolleys ensures quick positioning and matching.

High Forming Accuracy

Flexible lap joints prevent concrete leakage; while curved and twisted girders are formed to precisely match designed geometry

Scope of Application

Suitable for prefabrication of segmental girders for high-speed railways, mixed passenger-freight railways, intercity railways, municipal rail transit, expressways, urban viaducts and sea-crossing bridges, etc.

Key Technical Features

Type	Parameters
Bottom Formwork Trolley Structure	Three-layer Type
Adjustment Functions of Bottom Formwork Trolley	Longitudinal Travelling, Transverse Travelling, Rotation, and Lifting
Available Adjustment Mode	Manual Type / Fully Automated (Optional)
Longitudinal Travelling Rail for Bottom Formwork (Optional)	Rail-mounted Type / Dedicated Type

Cantilever Form Traveller (CFT)



Model

CFT-A

Product Advantages

Ultimate Safety

Real-time stress monitoring and early warning for main load-bearing components;

Self-synchronizing during travelling and jacking operations ensures zero overturning risk.

Dedicated project supervisors conduct regular on-site inspections for timely hazard identification;

100% inspection of components after returning to factory to guarantee structural safety and reliability;

Comprehensive protection system ensures worry-free on-site operations

Rapid Delivery

Three warehousing bases located in Hunan, Sichuan and Anhui, with a total service capacity for over 1,000 T-frame equipment units, enabling rapid response to project demands

Scope of Application

Suitable for cantilever casting construction of railway, highway and municipal projects, etc.

Key Technical Parameters

Type	Technical Parameters	
Scope of Application	Max. Segment Length	6 m
	Max. Segment Weight	500 t (for single-cell box girder condition)
	Number of Box Cell	Single-cell box girder, multi-cell box girder
	Max. Applicable Longitudinal Gradient	4%
	Wireless Remote Transmission Range	5 km
Safety Features	Force Balancing Method	Self-anchored and well-balanced, low/no overturning risk
	Anchorage Safety Factor	⩾ 2
	Anti-overturning Safety Factor	⩾ 2
	Total Installed Power	11 kW
Operational Convenience	Applicable Range of Main Members	Suitable for 95% of cast-in-place cantilever bridges
	Travelling Speed	0.1 m/min, one-touch hydraulic travelling

Underslung Form Traveller

Pioneering in China



Model

CFT-D

Product Advantages

Worry-free Safety

Full-process guarantee for construction safety;

Self-balanced travelling design, with no risk of overturning

Real-time stress monitoring and early warning for main load-bearing components;

Equipped with comprehensive working platforms

Leading Efficiency

Innovative structure with unobstructed space above girder segments. Combined with pre-tied reinforcement process, segment construction circle can be shortened by 2-3 days

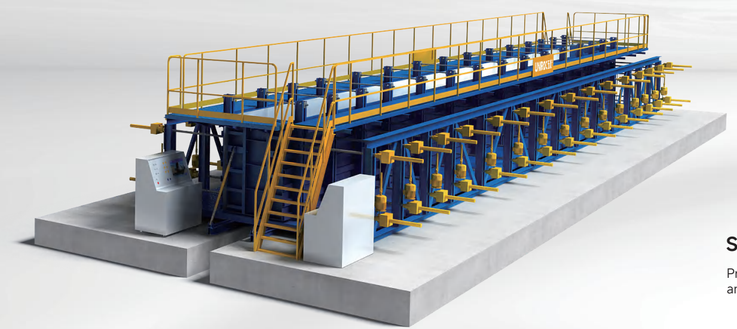
Scope of Application

Suitable for cast-in-place construction of railway cantilever bridges

Key Technical Parameters

Type	Technical Parameters	
Scope of Application	Max. Segment Length	6 m
	Max. Segment Weight	450 t
	Number of Box Cell	Single-cell Box Girder
	Max. Applicable Longitudinal Gradient	4%
	Wireless Remote Transmission Range	5 km
Safety Features	Force Balancing Method	Self-balanced, no overturning risks
	Anchorage Safety Factor	≥ 2
	Anti-overturning Safety Factor	≥ 2
	Total Installed Power	31.5 kW
Operational Convenience	Applicable Range of Main Members	For the same longest segment, main spans ranging from 72 m to 135 m
	Travelling Speed	0.1 m/min, one-touch hydraulic Travelling
	Longitudinal Travelling Speed of Internal Formwork	5~8 m/min, one-touch electric Travelling

Monorail Track Beam Formwork System



Scope of Application

Precast concrete monorail track beams and maglev monorail track beams


Qingyuan Maglev Line

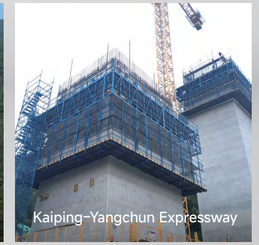

Changsha Maglev Express


Huangshan Tourism Monorail Line T1

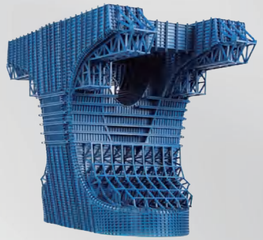
Self-Climbing Formwork System for High Piers



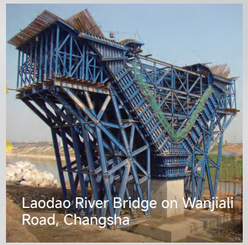

Guangzhou-Lianzhou Expressway


Kaiping-Yangchun Expressway

Cast-in-place Pier Formwork




Beijing-Xiong'an High-speed Railway


Laodao River Bridge on Wanjiali Road, Changsha

Precast Pier and Pier Cap Formwork



Product Advantages

Full-scenario Customization

Supports prefabrication of various types of piers and pier caps

Excellent Forming Quality

Fitted with stainless steel panels to achieve a fair-faced concrete finish

Durable & Reliable

Withstands over 200 turnover cycles without deformation, ensuring a long service life for the tooling.

Scope of Application

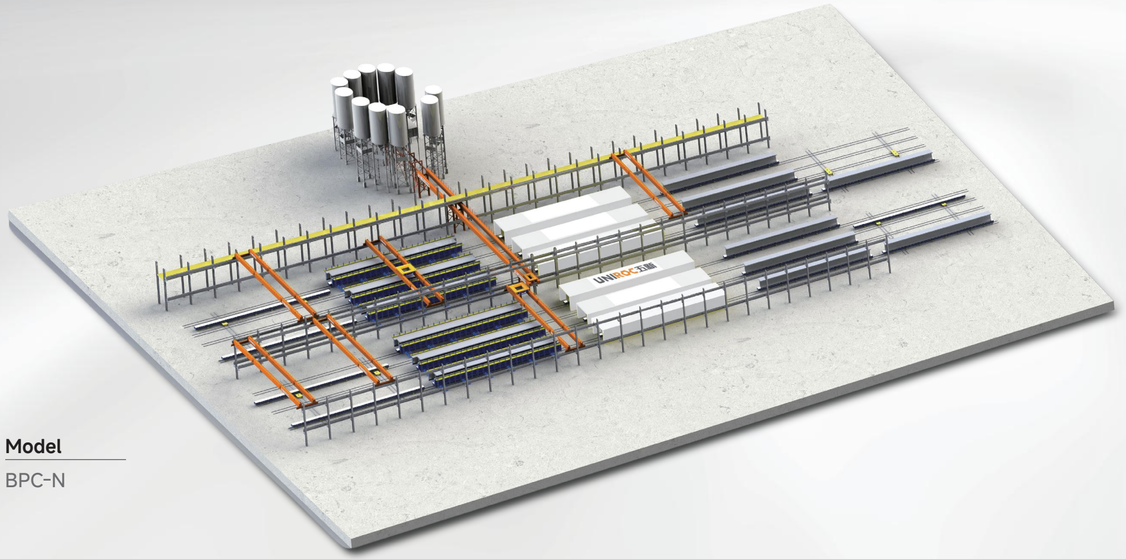
Suitable for factory prefabrication of bridge substructures for high-speed railways, expressways, urban viaducts, municipal works, rail transit, sea-crossing bridges, etc.

Key Technical Features

- Customizable complete equipment configuration solution
- One-stop supply, complete with full range of accessories, including reinforcement jigs, turnover frames, positioning pedestals, reinforcement cage lifting gears, positioning frames, etc.
- Equipped with comprehensive working platforms and protection systems

Bridge Precast Concrete Production Line

One-stop **Intelligent Factory** Solutions



Model

BPC-N

Product Advantages

Rapid Formwork Changeover

Girder length or angle adjustment can be completed within 2 hours in average

Automated Operations

Full-process automatic workflow including automatic mold opening/closing, synchronized concrete distribution and intelligent steam curing, boosting efficiency by approximately 40%

Digital Twin

Real-time production scheduling via BIM+GIS platform for clear visibility of production status

Full Traceability

Real-time monitoring and early warning of key parameters. Each girder can be assigned a unique ID code for full quality traceability

Scope of Application

Widely adaptable to highway, railway, municipal bridges, large centralized prefabrication yards and mass production for project clusters

Key Technical Parameters

Selection Table		
Standard Girder Length \ Girder Type	T-Girder	Box Girder
25m	BPC-NT25	BPC-NX25
30m	BPC-NT30	BPC-NX30
40m	BPC-NT40	/

Type	Name	Technical Parameters	
Concrete Conveying & Distribution System	Concrete Conveying System	Capacity	3 m^3
		Max. Gradeability	2.5%
		Travelling Speed	0–60 m/min
	Concrete Distribution System	Number of Distributor Gates	4
		Distributor Outlet Lifting Stroke	0.7m
		Concrete Discharge Rate of Distributor	0.5–2 m^3/min
		Travelling Speed of Distributor	0–25 m/min
Production Line Formwork System	Hydraulic Formwork System	Panel Material	201 Stainless Steel / Q235
		Synchronization Accuracy	±3 mm
	Attached Vibrator System	Vibration Frequency	0–200 Hz
	Movable Pedestal	Travelling Speed	0–7.5 m/min
		Power Supply	Cable Reel / Battery
		Max. Gradeability	1%
	Production Line Control System	Max. Travelling Power	15 kW (Reel Power Supply)
Steam Curing System	Steam Curing Chamber	Thermal Insulation Material	75mm Silica Insulation Board
		Temperature Control Accuracy	±1°C
	Steam Curing Equipment	Curing Mode	Steam Generator / Air-source Heat Pump
Transverse Transfer Shuttle System	Transverse Transfer Shuttle	Travelling Speed of the Shuttle	0–20 m/min
		Power Supply	Battery

Bridge Precast Concrete Production Line (In-mold Steam Curing)

Ultimate Efficiency

Stable daily output of **4** girders per production line



Model

BPC-I

Product Advantages

Land & Labor Saving

Compact layout — saves 30-50% of occupied area compared to conventional production lines; High automation — reduces labor costs significantly

Multi-girder Compatibility

Quick switching between precast girder types via mold replacement, supporting diversified bridge precasting tasks

Fast Pedestal Turnover

Direct in-mold steam curing reduces the casting station time to just 3 hours and the curing station time to 15 hours, achieving a 4× increase in turnover rate compared to conventional lines.

Weather-Independent

Indoor enclosed production line enables stable and efficient manufacturing even in winter

Scope of Application

Suitable for mass prefabrication of box girders, T-girders, hollow-slab girders, special-shaped municipal girders, etc; suitable for harsh conditions including extreme cold, large temperature fluctuations, and tight deadlines.

Key Technical Parameters

Selection Table		
Standard Girder Length \ Girder Type	T-Girder	Box Girder
25m	BPC-IT25	BPC-IX25
30m	BPC-IT30	BPC-IX30
40m	BPC-IT40	/

Type	Name	Technical Parameters	
Concrete Conveying & Distribution System	Concrete Conveying System	Capacity	3 m^3
		Max. Gradeability	2.5%
		Travelling Speed	0-60 m/min
	Concrete Distribution System	Number of Distributor Gates	4
		Distributor Outlet Lifting Stroke	0.7m
		Concrete Discharge Rate of Distributor	0.5-2 m^3/min
		Travelling Speed of Distributor	0-25 m/min
Circulating Precast Girder Transfer Shuttle	Hydraulic Formwork System	Panel Material	201 Stainless Steel / Q235
		Synchronization Accuracy	±3 mm
	Attached Vibrator System	Vibration Frequency	0-200 Hz
	In-Mold Movable Pedestal	Travelling Speed	0-9 m/min
		Power Supply	Battery
		Max. Gradeability	1%
Steam Curing System	Steam Curing Chamber	Thermal Insulation Material	75mm Silica Insulation Board
		Temperature Control Accuracy	±1°C
	Steam Curing Equipment	Curing Mode	Steam Generator / Air-source Heat Pump
Transverse Transfer Shuttle System	Transverse Transfer Shuttle	Travelling Speed of the Shuttle	0-9 m/min
		Power Supply	Drag Chain

Smart Construction Management Software

One-Stop Platform Software + Equipment + Services



Data Security & Integration

Combines local supervision system and cloud IoT data center to guarantee data security, eliminate data silos and realize integrated management of multiple subsystems.

Efficient Management

Integrates project management, production scheduling, resource management and other functions to streamline operational workflows and optimize production efficiency and cost control.

BIM Digital Twin Visualization System

Adopts real-scene BIM electronic sand table and digital twin technology to deliver intuitive display and real-time monitoring of production environment, enhancing visual management of the whole production process.

AIoT Intelligent Safety Monitoring

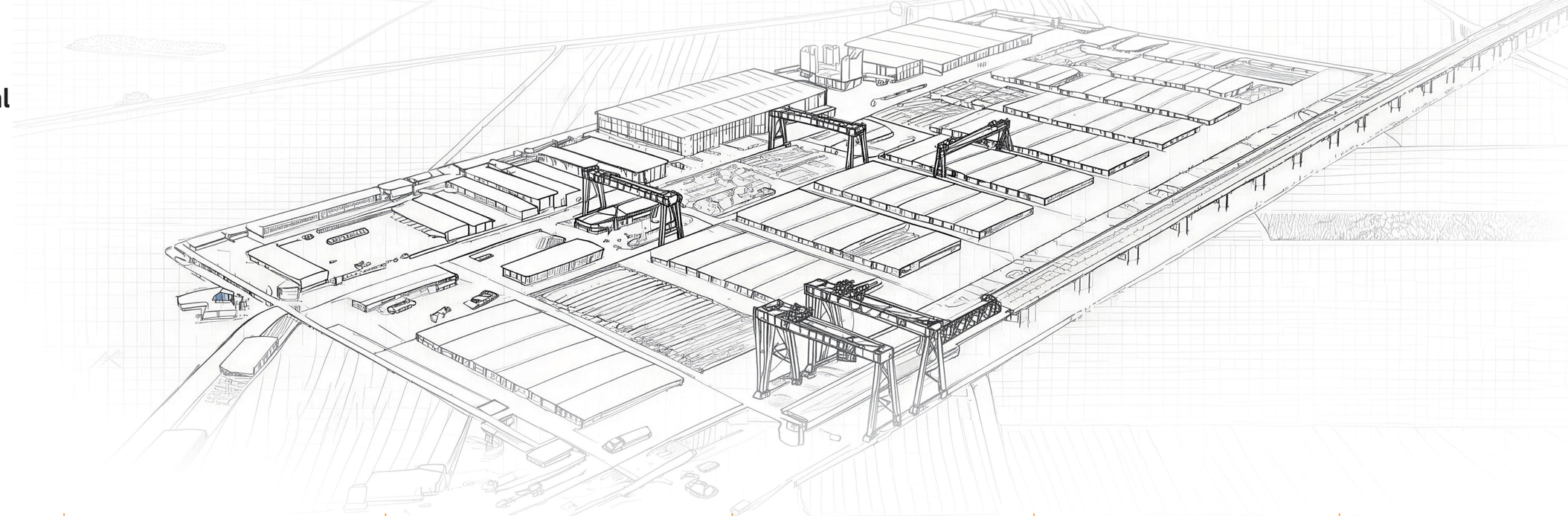
Provides all-round monitoring of on-site environmental safety. Intelligent identification and early warning system improves response efficiency for irregular incidents and ensures green and safe production.

Multi-terminal Collaborative Work

Accessible via large display screens, PCs, mobile phones and other terminals, enabling collaborative work anytime and anywhere.

Full Lifecycle Technical Consulting Services

Covers the full cycle of planning, design, construction and standardization, delivering scientific, efficient and reliable technical support for projects.



01 Consultancy on Prefabrication Yard Planning & Construction

- Overall planning and functional zoning
- Specialized design and construction assessment
- Construction consultancy and implementation guidance

02 Core Process Technology Control

- Focus on the whole prefabrication workflow
- Process planning and optimization
- Technical verification and quality control

03 Compilation & Review of Construction Schemes

- Preparation of construction organization plans
- Planning and optimization of special schemes
- Technical review and economic analysis

04 On-Site Technical Support Service

- On-site technical support and coordination
- Quality risk control and improvement
- Ensure smooth and efficient project progress

05 Technical Standardization

- Development of standardized process systems
- Standardized output of technical schemes
- Improvement of internal quality and collaboration

Overall Solutions for Precast Yards

01 Reinforcement Processing


Fully Automatic Horizontal Reinforcement Shearing & Bending Production Line


Fully Automatic Position Mesh Welding Machine


CNC Rebar Cutting Production Line


CNC Rebar Straightening & Cutting Machine


CNC Rebar Stirrup Bending Machine


CNC Integrated Rebar Straightening, Cutting & Bending Machine


CNC Two-axis Vertical Rebar Bending Center


CNC Four-axis Vertical Rebar Bending Center


CNC Spiral Rebar Machine


Rebar Thread Rolling Machine

02 Reinforcement Cage Binding & Lifting


Reinforcement Binding Jig


Reinforcement Cage Lifting Hanger

03 Concrete Preparation & Supply


Concrete Batching Plant


Automatic Spraying Dust Suppression System for Material Silos

04 Concrete Casting


Intelligent Vibrator System


Concrete Trailer Pump


Laser Girder Surface Vibrating & Leveling Machine


Concrete Distributor

05 Girder Curing


Reclaimed Water Recycling & Treatment System


Automatic Spraying Curing System

06 Prestressing Construction


Intelligent Tensioning Trolley


Duct Extraction Machine


Automatic Prestressing Tensioning System for Railway Bridges


Prestressing Duct Extraction & Strand Threading Trolley for Railway Bridges


Automatic Grouting System for Railway Bridges

07 Inspection & Monitoring


Static Load / Destructive Test System

08 Transportation & Erection Works

Service & Support

UNIROC Bridge consistently adheres to the service philosophy of "Creating Value for Customers". Guided by customer requirements, we establish a full-lifecycle service system covering pre-sales, sales and after-sales phases, delivering professional, efficient and timely one-stop service support to our customers.

Pre-sales Services

- Project planning consultancy
- Product selection recommendation
- Customization of technical schemes
- Optimization of engineering layout

Sales Services

- On-site construction guidance and scheme support
- Equipment installation guidance
- Installation and commissioning service
- Operation training service

After-sales Services

- Regular inspections and follow-up visits
- Prompt response for component demands
- Dedicated technical support
- Relocation and upgrade support

Our Service Standards

Customers First

Always customer- focused, creating greater value for our clients.

Rapid Response

Nationwide service network has been established to respond promptly to customer demands.

Win-win Collaboration

Build long-term partnerships with customers to create value jointly.

Continuous Improvement

Listen to customers' feedback and constantly optimize service procedures and service quality.

Professional Service

Full support provided by professional technical teams to deliver systematic solutions.





Megaproject References

We have served

99%

of China's High-Speed Rail Construction Projects



Hong Kong-Zhuhai-Macao Bridge –
The World's Longest Sea-crossing Bridge



Shiziyang Channel
Bridge Precast Concrete Production Line



Shaoxing City Investment Precasting Base
Bridge Precast Concrete Production Line (In-mold Steam Curing)



Nayong - Qinglong Expressway
Cantilever Form Traveller(CFT)



Hefei-Wuhan High-Speed Railway
Cantilever Form Traveller (CFT)



Chongqing-Wanzhou High-Speed Railway
Underslung Form Traveller



Pingdingshan-Luohe-Zhoukou High-speed Railway
Underslung Form Traveller



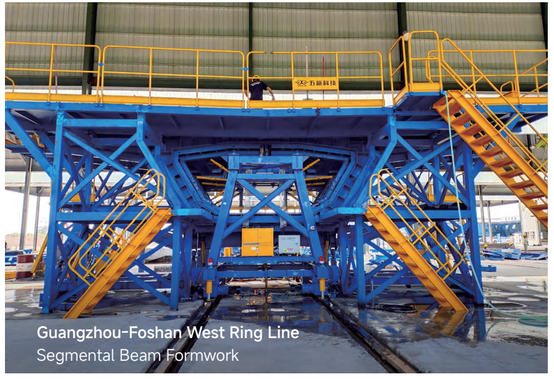
Jakarta-Bandung High-Speed Railway, Indonesia
Precast Box Girder Formwork



Hefei-Wuhan High-Speed Railway
Precast Box Girder Formwork



Ningbo-Zhoushan Port Main Channel
70 m Full-span Precast Box Girder Formwork



Guangzhou-Foshan West Ring Line
Segmental Beam Formwork



Shanghai S4 Expressway Huangpu River Crossing Bridge
Segmental Beam Formwork



Zhengzhou-Jinan Railway
Precast Pier and Pier Cap Formwork



Ningbo-Zhoushan Port Main Channel
Precast Pier and Pier Cap Formwork



Green and Low-carbon

UNIROC advances green manufacturing, green products and environmental responsibility, embedding low-carbon principles across R&D, manufacturing and engineering applications to support sustainable industry development.

Green Manufacturing

We use energy-efficient equipment and eco-friendly processes to reduce manufacturing impacts. Solar power, renewable electricity, low-VOC coating and ISO 14001 support greener factory operations.

Green Solutions

Lifecycle-based eco-design reduces energy consumption and environmental impact during construction. Optimised processes and equipment upgrades enable greener infrastructure.

Green Responsibility

We contribute to water conservancy and pumped-storage projects, advance green supply chains and support the development of green industry standards—helping drive a low-carbon, sustainable future.

Social Responsibility

Alongside business growth, UNIROC remains committed to creating social value, fulfilling its corporate responsibilities, and contributing to sustainable development.



Rural Revitalisation

Supporting rural development and helping increase farmers' incomes through agricultural product promotion and market access initiatives.

Education Support

Providing tuition, books, and other educational support to students in need, helping them pursue their studies.

Skills Development

Providing professional training for equipment operators and developing skilled professionals for the industry.

Corporate Governance

A Career Worth Building
—For Every Employee

Three Career Paths

Technical, managerial and skilled-trade career paths provide every employee with clear opportunities for growth and advancement.

Employee Ownership

Employees hold over 40% of the company's equity—well above the industry average—sharing in its growth and long-term success.

Family Support

Educational support, parent-child activities, family open days, milestone benefits and hardship assistance extend employee care to their families.

Physical and Mental Well-being

Annual health checks, safety training, fitness facilities and recreational activities help employees stay healthy, active and resilient.

