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汉江重工



中国铁建



## 提运架设备产品手册

Bridge Construction Equipment

中铁十一局集团汉江重工有限公司

Hanjiang Heavy Industry Co., Ltd of China Railway 11th Bureau Group

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# 公司简介 Company profile

Hanjiang Heavy Industry (hereinafter referred to as the company) is subordinate to China Railway 11th Bureau Group and evolves from repair detachment of No.1 Division of Railway Corps. In 1984, the detachment was wholly transferred into the repair shop of the 11th Engineering Bureau along the No.1 Division of Railway Corps and renamed into Machinery Factory of CRCC 11th Engineering Bureau then.

At present, the company possesses four manufacturing bases, including the production area in Aeronautic and Astronautic Industrial Park, Laohekou Machinery Factory, Longyou Machinery Factory, Xinjiang steel structure manufacturing branch, which cover a total land area of 480mu and production area of 120,000m<sup>2</sup>. Now the company has gathered 380 technicians and 460 employees with various certificates. Its annual output exceeds 400 sets with annual product value more than RMB 1.5 billion Yuan.

Moreover, the company has been granted licenses of crane production, installation, maintenance and reconstruction, manufacture license of 900t bridge erecting machine, grade-I general contracting qualification of electric and mechanical installation and other market threshold certificates. Besides, it is accredited as a hi-tech enterprise of Hubei Province and has passed and implemented GB/T9001, GB/T24001 and GB/T28001.

In recent years, the company has been committed to developing itself into a domestic top equipment manufacturer, deepening the technological innovations, expanding production scale, promoting quality of all products and improving service network under the direction of strategy of CRCC and CRCC Limited to promote industrial sectors. Accordingly, the company has witnessed fast development in R&D and production of railway transportation, hoisting and frame equipment, high-capacity hoisting equipment, bridge construction equipment, light rail construction equipment and other products. Now the number of core customer is increasing for the company, enjoying a strong influence in CRCC and markets in and out of road construction fields.

The company is carrying forward excellent corporate culture and paying more attention to favorable outcomes of modern civilization all the time. By adhering to the corporate value outlook of sincerity and innovation for ever, quality and character at once and the business philosophy of facilitating all customers and creating a better life for people, the company promotes the technological innovations and always devotes itself into constant progress o construction equipment technology in an all-round way. It has evolved into a diversified and integrated modern enterprise focusing on the R&D and production of heavy equipment. Now, it is looking forward to providing high quality and all-round solutions for various working conditions and also serving all customers sincerely.

中铁十一局集团汉江重工有限公司隶属于中铁十一局集团，前身为1959年创建的铁道兵第一师修理营，1984年随铁一师兵改工集体转业为铁道部第十一工程局修理厂，后又更名为中铁十一局机械厂。

目前，汉江重工拥有航空航天工业园产区、老河口机械厂、龙佑机械厂、新疆钢结构分公司四个制造基地，占地面积480亩，生产场地12万平方米，各类技术人员380人，各类持证人员460人，年产重型装备400台/套以上，年生产能力15亿元以上。

公司拥有A级桥、门式通用起重机制造资质，A级桥、门式起重机安装、改造、维修许可证、超大型起重机械制造许可证、机电安装工程总包壹级资质、钢结构工程专业承包壹级资质、矿山工程施工总包壹级资质等市场准入证书，是湖北省高新技术企业，通过并实施了GB/T9001、GB/T24001、GB/T28001管理体系。

近年来，在集团公司、中国铁建股份公司做强做大工业板块的战略指引下，汉江重工以打造国内一流的装备制造企业为目标，通过深化技术创新，扩大生产规模，提高产品质量，健全服务网络，公司在矿山施工设备、铁路提运架设备、大型起重设备、桥梁施工设备、轻轨施工设备、市政环保设备、钢结构制造安装等产品的研发和制造方面发展迅速，核心客户日益增多，在中国铁建系统、路内和路外市场具有较强的影响力。

传承优良企业文化，凝结现代文明结晶，汉江重工践行“诚信、创新永恒，精品、人品同在”的企业价值观念，秉承“让客户工作更方便，让人们生活更美好”的经营理念，全面推动科技创新发展战略，始终致力于施工装备技术的不断进步，已逐步发展成为一家以重型装备研发制造为主体，多元化综合性现代企业，为各种工况下的机械施工提供高品质、全方位的解决方案，竭诚为广大客户服务。

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● YLC900 运梁车  
YLC900 Girder Transporter



Main Technical Features

YLC900 type girder transporters are "mechanical-electrical-hydraulic" products with high technical content. The complete vehicle uses hydraulic drive, hydraulic suspension, hydraulic lift, mechanical-electrical-hydraulic coordination controlled multi-axle steering system and implements the movement modes including straight running, oblique running, splayed steering and half-splayed steering, etc. The finished vehicle can be operated very maneuverably and flexibly, the functions of various systems can be controlled, coordinated and implemented through micro-electro system, thus to solve the problems of "differential force and differential speed" and "slipping" during the running, enabling each tyre to implement "pure rolling" movements and basically implement slippage-free or less-slippage running. The finished vehicle can implement the functions of "whole lifting and whole descending" and "single point lifting and descending", meeting the precise alignment requirement of girder transporter during automatic leveling and girder feeding.

主要技术特点

YLC900型运梁车系高技术含量的“机-电-液”一体化产品。全车采用液压驱动、液压悬挂、液压升降、机-电-液协调控制多轴线转向系统，实现直行、斜行、八字转向、半八字转向等运动模式。整机运行非常机动、灵活，通过微电系统来控制、协调和实现各系统的功能，解决了行驶时“差力差速”和“打滑”问题，使各轮胎实现“纯滚动”走行，基本可实现无滑移或少滑移行驶。整车可实现“整升整降”和“单点升降”功能，满足了运梁车自动调平和喂梁时精确对位要求。

YLC900 运梁车主要技术参数  
Main technical parameters of YLC900 Girder Transporter

序号 S/N	项目 Item	参数 Parameters
1	额定装载质量 Rated loading capacity	900,000 kg
2	总质量 (按额定装载质量计) Total weight (calculated according to rated loading capacity)	≤1,170,000 kg
3	工程轮胎 (驱动) 规格/数量 Specification/number of engineering tyres (drive)	26.5R25 /22
	工程轮胎 (制动、从动) 规格/数量 Specification/number of engineering tyres (brake, driven)	26.5R25 / 42
	轮胎充气压力 Tyre inflation pressure	0.95±0.5 Mpa
4	车速 Vehicle speeds	
	空载、平地 Unloaded, flat ground	0 - 10.0 km/h
	满载、平地 Fully loaded, flat ground	0 - 5.0 km/h
	满载、爬坡 Fully loaded, slope	0 - 2.0 km/h
	微动 Micro movement	0.18 km/h
5	适应坡度 Applicable slopes	
	纵坡 Longitudinal slope	±5.0 %
	横坡 (人字坡) Cross (gable) slope	±4.0 %
6	液压系统最大工作压力 Max. working pressure of hydraulic system	32 Mpa
7	最小转弯半径 Min. turning radius	最小内回半径 : 26.3m Min. inner turning radius: 26.3 m 最小中心线回半径 : 32.9m Min. centerline turning radius: 32.9 m 最小外回半径 : 39.8m Min. outer turning radius: 39.8 m
8	动力机组 Power units 发动机功率/数量 Power/number of engines 发电机功率/数量 Power/number of alternators	400kW/2台 400 kW/2 engines 8kW/1台 8 kW/1 alternator
9	整车外形尺寸(2驾驶室均不摆转) Overall dimensions of finished vehicle (both of 2 cabs are not swinging) 空载 : 长×宽×高 Unloaded: L×W×H 满载 : 长×宽×高 Fully loaded: L×W×H	40,680×6,600×3,550 mm 40,680×6,600×3,450 mm

## ● TY900 型运梁车 TY900 Type Girder Transporter

### Introduction to TY900 Type Girder Transporter

As the engineering construction of high-speed rails moves westwards, the engineering bridges under west and southwest high-speed rail lines, etc. are connected with frequent design features: in order to meet the requirements of working conditions for the bridge erection machines and girder transporters to cross the tunnels smoothly, and to solve the technical difficulties of girder erecting and transporting construction for transporting and erecting equipments to get into and out of the tunnel portals during the construction, Hanjiang Heavy Industry of China Railway 11th Bureau Group developed TY900 type through-tunnel bridge erection machine and TY900 type girder transporter to meet the requirements of the transportation of existing high-speed rail full-hole and double-line box girders in 350 km/h and 250 km/h tunnels and the erection of box girders at tunnel portals.

TY900 type girder transporter is used in conjunction with TQ900 type bridge erection machine, as this bridge erection machine uses fixed-point lifting mode, the girder transporter is not provided with a girder carrying trolley, thus to further reduce the girder feeding height in tunnels and improve the trafficability in tunnels.



### TY900 型运梁车简介

随着高铁工程建设的西移，西部、西南等高铁线下工程桥隧相连频繁的设计特点；为了满足架桥机和运梁车均顺利通过隧道的工况要求，解决施工过程中运架设备进出隧道口架梁、运梁的施工技术难题，中铁十一局汉江重工有限公司研制了TQ900型过隧道架桥机和TY900型运梁车。可满足现有高铁整孔双线箱梁350km/h、250km/h隧道内的运输和隧道口箱梁的架设。

TY900型运梁车配套TQ900型架桥机使用，由于该架桥机采用定点起吊方式，运梁车不设置驮梁小车，可进一步降低隧道内喂梁高度，提高隧道内的通过性。

### TY900 型轮胎式运梁车主要技术参数

#### Main technical parameters of TY900 tire-type girder-transporting vehicle

额定运载量：900t  
Rated carrying capacity: 900 t

空载高度：2200±200mm  
Unloaded height: 2,200±200 mm

适应最大坡道：5%  
Applicable max. slope: 5%

接地比压：<0.6MPa  
Ground pressure: <0.6 MPa

空载运行速度：0-10km/h  
Unloaded running speed: 0-10 km/h

轴间距：1720mm  
Wheelbase: 1,720 mm

轮距：4700/1100mm  
Track width: 4,700/1,100 mm

整机功率：2×420KW  
Finished vehicle power: 2×420 KW

接近角：19°  
Approach angle: 19 degrees

离地角：6°  
Ground departure angle: 6 degrees

外形尺寸(长×宽×高):44.79×6.72×2.2  
Overall dimensions (L×W×H): 44.79×6.72×2.2

整车重量：306t  
Finished vehicle weight: 306 t

重载运行速度：0-5km/h  
Running speed with heavy load: 0-5 km/h

爬坡重载运行时：30MPa  
When running with heavy load on slopes: 30 MPa

隧道内运梁最低高度：1950mm  
Min. girder transportation height in tunnels: 1,950 mm

最小转弯半径：34.2m(外侧)，29.5m(内侧)  
Min. turning radius: 34.2 m (outer side), 29.5 m (inner side)

轮轴轴数(总轴数/主动轴数)：20/7轴  
Number of wheel axles (total axle number/driving axle number): 20/7 axles

系统工作压力：平道重载运行时：21MPa  
Working pressure of system: when running with heavy load on flat roads: 21 MPa

