

KINO 科南
CRANES®

欧式桥式起重机设备手册

EUROPEAN STYLE OVERHEAD
CRANE EQUIPMENT MANUAL

EUROPEAN
DESIGN

欧式起重机制造专家

EUROPEAN CRANE MANUFACTURER

Focus On Crane Technology Development



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S I N O K O C R A N E S

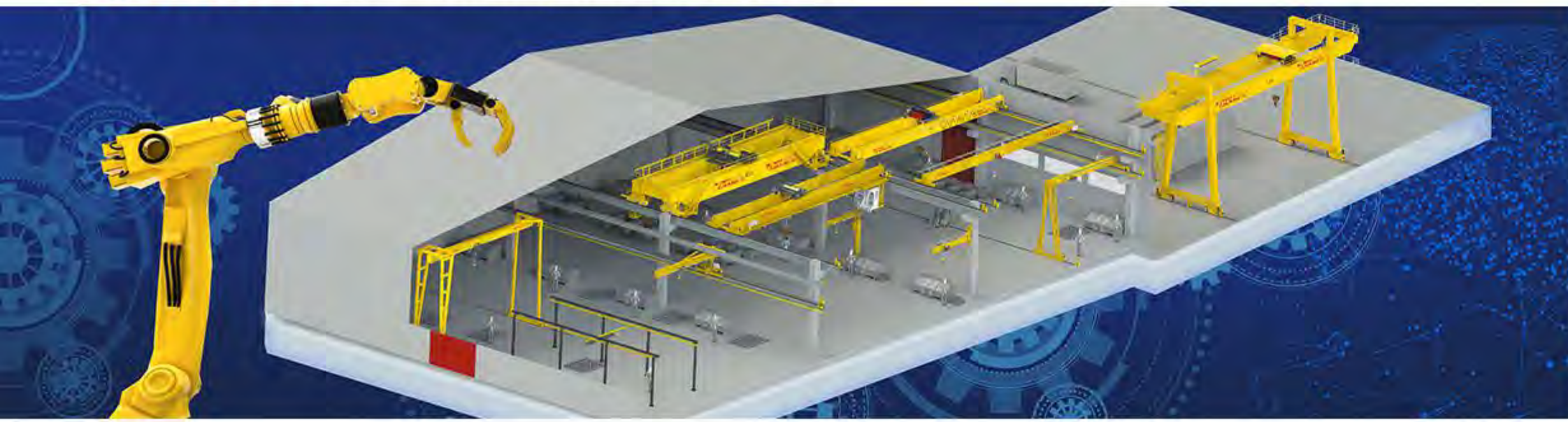
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公司简介 COMPANY PROFILE

Kinocranes is professional overhead crane and gantry crane solution provider. We integrate crane research & development, manufacturing, sales, installation and service. our products include European design double girder overhead crane, European design single girder overhead crane, European design suspension overhead crane, European design double girder gantry crane, European design single girder gantry crane, European design semi gantry crane, European design wall travelling crane, European design jib crane, European design double girder gantry light duty crane and general propose cranes, etc. Moreover, we have rich experience and are good at fully automatic intelligent cranes, metallurgical cranes, explosion-proof cranes, special cranes for upper aero-engine transportation, special cranes for aircraft maintenance, special cranes for nuclear power plants, special cranes for paper making, power plant cranes, and

We have laser cutting machine, CNC plasma cutting system, box beam forming production line, automatic submerged arc welding system, complete machine pre-assembly platform, whole beam shot blasting processing line, automatic spray painting and other main beam production equipment, as well as CNC boring and milling machine, CNC Gantry milling, CNC lathe, CNC wire cutting, vacuum dipping system and other parts production equipment.

We also have various monitoring instruments, such as laser range finder, total station, ultrasonic weld non-destructive flaw detector, magnetic particle flaw detector, paint film thickness gauge, hardness meter, ultrasonic steel thickness gauge, theodolite, roughness detector, Dynamometer, motor dedicated testing center, etc., the well-trained professional production team is a strong guarantee for Kinocranes high-quality cranes.

Based on crane optimized design and variable frequency drive technology, our cranes are small in size, light in weight, good in maintenance-free performance, high work continuity, and optimized configurations, such as galvanized high-strength steel wire ropes, disc brakes, hard tooth surface reducers, programmable Lifting limit, ductile iron rope guide, large diameter welding drum, etc., are innovative products in the domestic crane field.

we have exported our cranes to more than 30 countries and regions. We have established long term cooperation relationship with each customer. We have a professional and thoughtful sales and service team, and strive to provide customers with customized products.

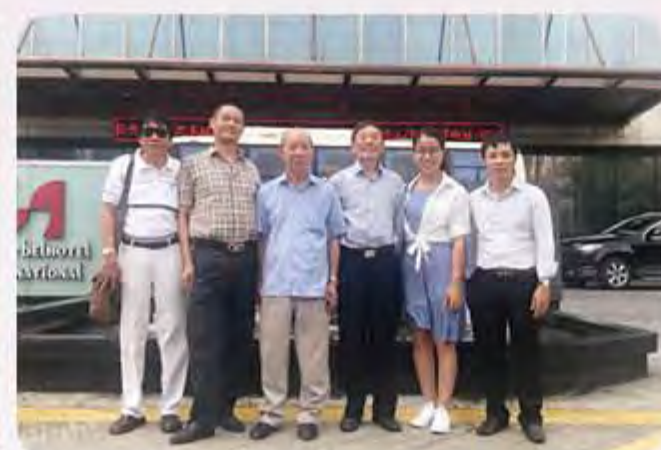
We treat customers sincerely; we trust and respect the individual; we rely on teamwork to achieve common goals; we adhere to honesty and integrity in our business activities!

资质荣誉 QUALIFICATION HONOR



客户来访

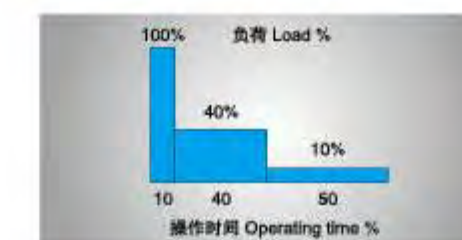
CUSTOMER VISIT



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 Application

» FEM WORKING DUTY
 新型起重机FEM工作制度



Overhead Cranes

欧式单梁桥式起重机

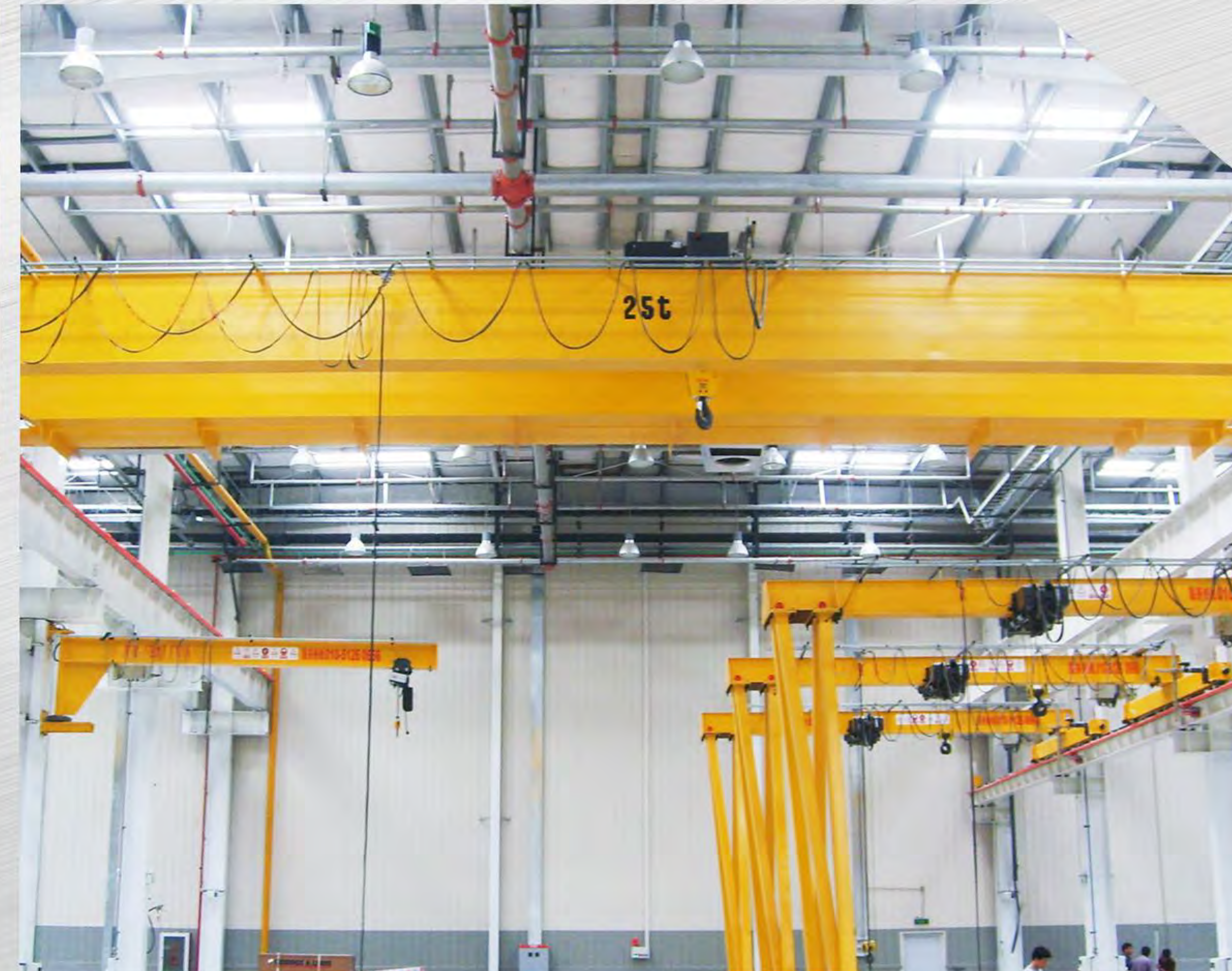
起重量SWL (t)	跨度 (Span)	起升高度HOL (m)	工作等级Class
0.5t - 12.5t	5m - 30m	3m - 60m	A3 - A6
12.5t - 40t	< 20m	< 30m	A3 - A5

主要特点 Main Features

变频无极调速
 硬齿面减速机
 防护等级IP55
 重级制电机，持续率60%ED
 电磁盘式制动器，防尘
 不漏油，自调式刹车
 高强镀锌钢丝绳
 紧凑型优化设计
 体积小、自重轻、轮压小
 控制模式：地操/ 遥控/ 驾操
 免维护

Stepless control
 Harden gear
 Ingress protection class IP55
 Heavy duty motor, 60% ED rating
 Electromagnetic disk brake, dust proof
 No oil leakage, self-adjustable brake
 Heavy duty galvanized wire rope
 Outperforming reliability designing
 Smaller size, lighter wheel load
 Control mode: pendant/ remote/ cabin
 Maintenance free





Double Girder Overhead Cranes

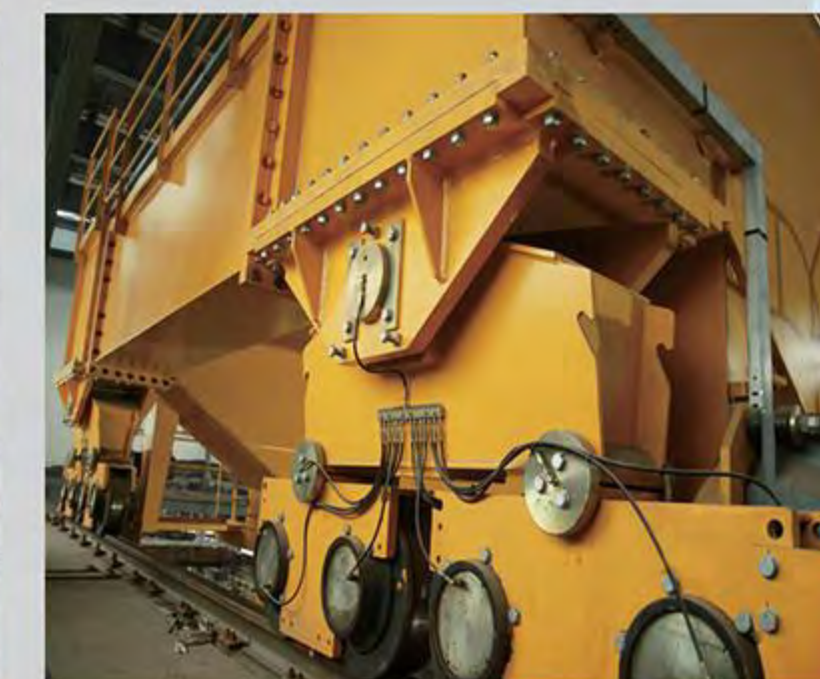
欧式双梁桥式起重机

起重量SWL (t)	跨度 (Span)	起升高度HOL (m)	工作等级Class
3.2t - 80t	5m - 60m	3m - 90m	A3 - A8
100t - 400t	< 36m	< 30m	A3 - A7

主要特点 Main Features

变频无极调速
 硬齿面减速机
 防护等级IP55
 重级制电机，持续率60%ED
 电磁盘式制动器，防尘
 不漏油，自调式刹车
 高强镀锌钢丝绳
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Stepless control
 Harden gear
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起重机工作等级计算方法及各国对照表 SERVICE CLASSIFICATION OF HOIST

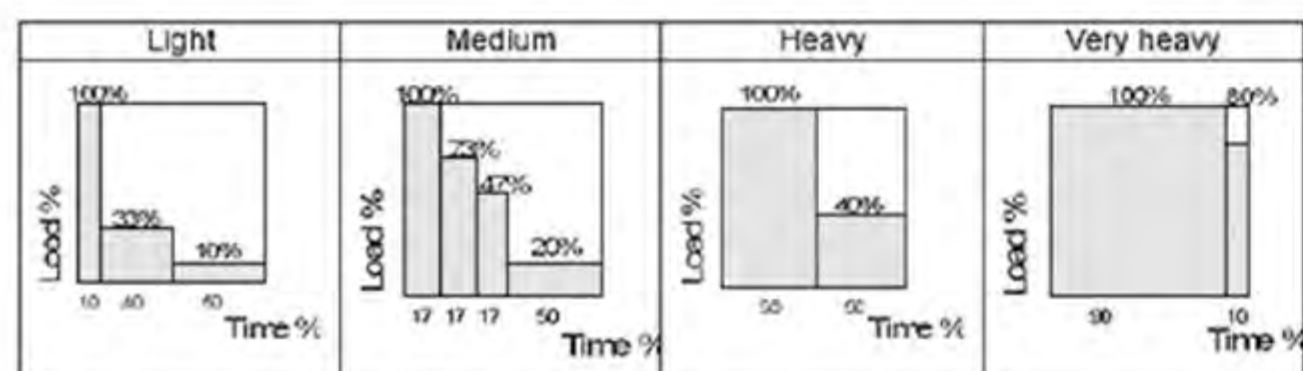
起升机构的安全运行周期取决于是否按特定的工作等级正确使用。根据欧洲搬运协会标准 FEM9.511 和中国国家相关标准规定，起重机的起升机构工作等级由载荷谱和日均运行当量时间确定。

Safe and effective operation of the hoist is dependent on correct classification of the hoist's operation group. According to FEM9.511 and China standard the hoist's operating group can be determined from load spectrum and average Daily operating time.

▶▶ 载荷谱 Load Spectrum

载荷谱可以根据下面表格确定

The load spectrum can be determined from the table below



轻级	中级	重级	超重级
偶尔吊满载 经常吊轻载 固定载荷轻	偶尔吊满载 经常吊轻载 固定载荷半载	重复吊满载 经常吊半载 固定载荷重	几乎全吊满载 固定载荷超重
Light	Medium	Heavy	Very Heavy
Occasional full load Usually light load Small fixed load	Occasional full load Usually light load Average fixed load	Repetitive full load Usually average load Heavy fixed load	Usually almost full load Very heavy fixed load

▶▶ 日均当量使用时间 Average daily operating time

日均当量使用时间可以根据实际使用时间按统计方法测算，参考公式如下：

The average daily operating time of the hoist can be calculated from the running time of the hoisting machinery (Hours/day):

$$t = \frac{2 \times N \times H \times T}{V \times 60}$$

H = 平均起升高度 average hoisting height (m)

N = 平均每小时工作循环次数

number of work cycles per hour (cycles/h)

T = 日均工作时间 daily working time (h)

V = 起升速度 hoisting speed (m/min)

▶▶ 工作级别确定 Determining the operating group of the hoist

当载荷谱和日均当量使用时间确定后，可以根据下面表中数据查出工作级别：

When the load spectrum and the average daily operating time of the hoist are identified, the hoist's operating group is obtained from the table below:

载荷谱 Load Spectrum	日平均当量使用时间 Average daily operating time ISO(GB) / FEM (小时 / 天 hours per day)					
	≤ 0.5	≤ 1	≤ 2	≤ 4	≤ 8	≤ 16
轻级 Light			M3 1Bm	M4 1Am	M5 2m	M6 3m
中级 Medium		M3 1Bm	M4 1Am	M5 2m	M6 3m	M7 4m
重级 Heavy	M3 1Bm	M4 1Am	M5 2m	M6 3m	M7 4m	
超重级 Very Heavy	M4 1Am	M5 2m	M6 3m	M7 4m		

例子：

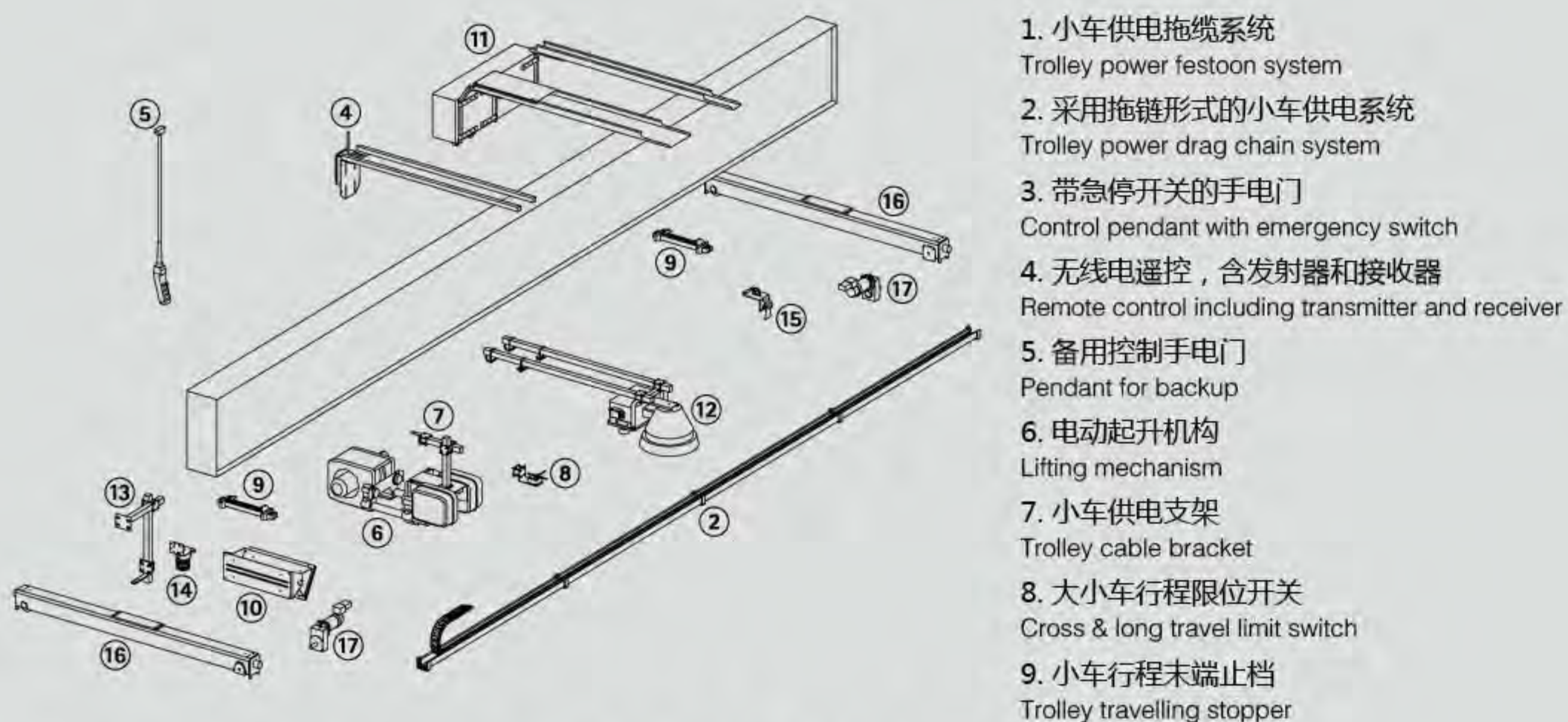
某用户的起重机载荷谱为中级，起升速度 V=5m/min，平均工作起升高度 H=3m，平均每小时工作循环 N=5 次，两班制日工作时间 T=16 小时，计算得出当量工作时间 t=1.6，从上表中查得工作级别为中国国家标准 M5（等同于欧洲标准 2m）。

▶▶ 起重机工作等级比较表 Comparing of crane class

ISO/BS/DIN	工作等级 Duty Code					
	M3	M4	M5	M6	M7	M8
GB	A3	A4	A5	A6	A7	A8
FEM	1Bm	1Am	2m	3m	4m	5m
CMAA	A	B	C	D	E	F
HMI	H2	H3	H4	H5	H5	H6

	对应的起升当量工作周期 Hoist Standard Value (小时 Hr)					
	400	800	1,600	3,200	6,300	12,500
安全工作周期 SWP(h)	400	800	1,600	3,200	6,300	12,500
持续率 Duty %ED	25	30	40	50	60	60
启动次数 Starts (s/h)	150	180	240	300	360	360
运行时间 Run Time(h)	3,200	6,300	12,500	25,000	50,000	100,000
启动次数 Starts	480,000	1,134,000	3,000,000	7,500,000	18,000,000	42,000,000
超载次数 Overloads	1,000	1,000	1,000	1,000	1,000	1,000

STRUCTURAL DESIGN 科南起重机机构设计

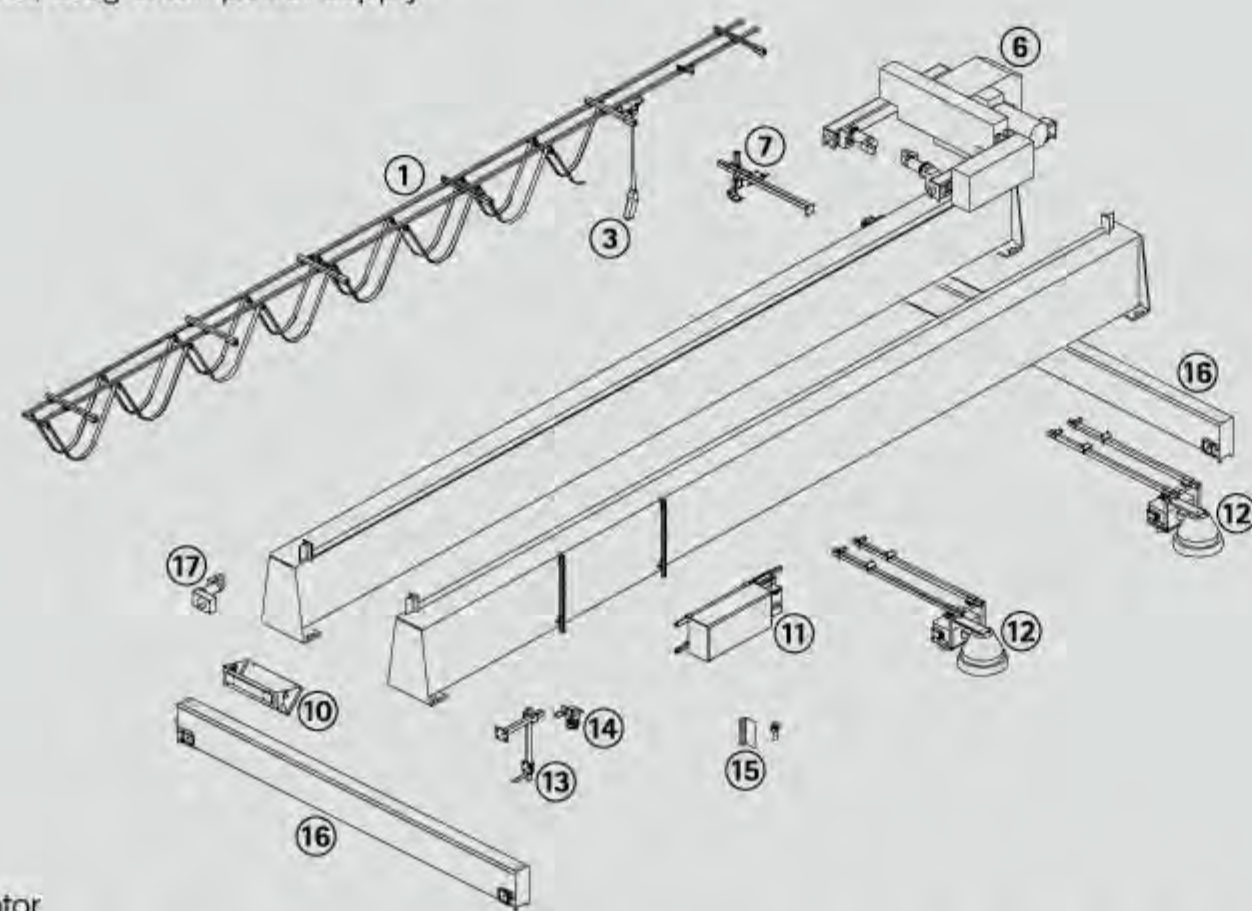


1. 小车供电拖缆系统
Trolley power festoon system
2. 采用拖链形式的小车供电系统
Trolley power drag chain system
3. 带急停开关的手电门
Control pendant with emergency switch
4. 无线电遥控, 含发射器和接收器
Remote control including transmitter and receiver
5. 备用控制手电门
Pendant for backup
6. 电动起升机构
Lifting mechanism
7. 小车供电支架
Trolley cable bracket
8. 大小车行程限位开关
Cross & long travel limit switch
9. 小车行程末端止档
Trolley travelling stopper

采用无线电遥控, 拖链供电的单梁桥式起重机

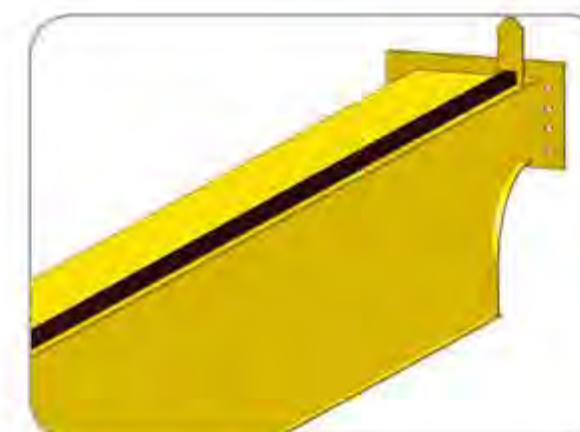
Single girder overhead crane of remote control, drag chain power supply

10. 吊重显示屏
Load display screen
11. 大车电箱
Long travelling cabinet
12. 桥下照明灯
Lighting under beam
13. 大车供电支架
Long travelling power cable bracket
14. 闪灯
Alarm light
15. 喇叭
Speaker
16. 端梁
End carriage
17. 大车运行驱动三合一
Long travelling three-in-one driven gear motor



采用手电门控制, 拖缆供电的双梁桥式起重机

Double girder overhead crane of pendant control, festoon power supply



主梁
Main girder



双梁桥式起重机上使用的端梁
End beam for double girder EOT crane



单梁桥式起重机上使用的端梁
End beam for single girder EOT crane

▶ 主梁采用偏轨箱型结构, 与端梁采用高强度螺栓连接, 便于运输。专业化加工设备确保主端梁联接精度, 使起重机运行平稳。

The main beam adopts bias-rail box-type structure and connects with end beam by high-strength bolt ensuring easy transportation. The professional processing equipments ensure the connection accuracy of main end beam, making crane run steadily.

▶ 起重小车为开放式紧凑型卷扬结构, 中小吨位也可采用新型葫芦小车。

Trolley of crane uses open compact winching structure, of which with medium and small tonnage also can use new hoist trolley.

▶ 大、小车运行机构采用欧洲技术三合一驱动形式, 硬齿面减速器, 结构紧凑, 噪声小, 不漏油, 使用寿命长。

Long crane & cross trolley travelling mechanism adopt Europe three in one drive type, harden tooth surface gear box, good performance in compact structure, low noise, none oil leakage and longer service life.

▶ 因采用新型紧凑型小车及高强度材料, 整机外形尺寸小, 重量轻, 相对传统起重机, 在相同起升高度条件下, 厂房高度均可降低, 有效减少厂房造价。

As using new compact trolley and high-strength material, it has small overall dimension and light weight, compared with traditional crane, which can decrease the height of factory building and reduce the cost.

▶ 模块化设计, 设计周期短, 通用化程度高, 提高零部件的利用率。

Modular design has short design period and high generalization, which can improve the utilization of components.

▶ 结构紧凑, 低净空, 外形尺寸小, 工作范围大, 有效提高生产效率。

With compact structure, low clearance, small dimension and large application scope, it can improve production efficiency.

▶ 全变频控制, 运行平稳, 无冲击, 重载慢速, 轻载快速, 节能减耗。

Full variable-frequency control runs steadily without any impact. Run with heavy load at low speed and light load at high speed, it can save energy and reduce consumption.

主梁/端梁：

★主梁为偏轨箱形梁或H型钢梁，钢板材料为Q345-B；垂直挠度为L/800；所有钢板进行抛丸预处理，达到Sa2.5级标准；焊接前仔细检查和清洁钢材，通常由自动焊机进行焊接（MIG）或半自动焊；所有焊缝均进行射线无损探伤；双梁起重机在沿主梁方向大车驱动侧布置维修平台（维修走道）。

★端梁为矩形钢管或焊接成型在数控机床一次定位加工成型，钢材材料Q345-B；每个端梁配有双轮缘的车轮组、缓冲器和防出轨保护装置。

★主梁与端梁采用高强度螺栓连接，方便运输与安装，确保整机精度和运行平稳。

Main Beam / End Carriages:

★ The main beam is a partial rail box beam or H type steel beam, steel plate material is Q345-B; vertical deflection is L / 800; all steel plates are pretreated with shot blasting to Sa2.5 Class; the steel are inspected and cleaned well before welding (MIG) or semi-automatic welding; all welds are ray-free nondestructive testing; double-beam cranes are equipped with maintenance platforms (maintenance walkways) along the main vehicle driving side.

★ End carriages are the rectangular steel pipe and welding molding in a CNC machine tool positioning processing, steel material Q345-B; each end carriage is equipped with a double wheel rim wheel group, buffer and anti-derailment protection device.

★ The main beam and the end carriages adopts high strength bolts to facilitate the transport and installation to ensure that the whole crane operates accurately and smoothly.



维修平台：

在沿起重机主梁方向，大车驱动侧布置维修平台，便于维修操作。

Maintenance Platform:

Along with the outside of driving main beam, maintenance platform set for easy maintenance.

安全监控器：

公司为SM型双梁小车专门研制的安全监控单元，它根据用户的要求实现多种功能：

- ★ 计算起升机构剩余的安全工作周期
- ★ 累计起升工作时间
- ★ 累计超载次数
- ★ 累计起升电机启动次数
- ★ 起升电机过热保护及报警
- ★ 过载保护及报警
- ★ 刹车片厚度报警
- ★ 显示故障信息及检修提示



公司专用的起升和运行变频器可实现实时通讯，通过有效的设置，可以真正成为葫芦的控制中心。

The dedicated frequency converter for hoisting and travelling mechanism enables real-time communication, and becomes a hoist control center through the device.

Safety Monitoring

Sinokranes company develops safety monitoring unit specially for the SM type double girder overhead trolley, which achieves a variety of functions according to the demand of users.

- ★ To calculate the remaining safety working circle of hoisting mechanism
- ★ To accumulate lifting working hours
- ★ To accumulate overload times
- ★ To accumulate lifting motor start times
- ★ Overheat protection and alarm for lifting motor
- ★ Overload protection and alarm
- ★ To alarm for brake plate thickness
- ★ To display fault information and maintenance tips

起重机主、端梁连接方式：

主、端梁采用高强度螺栓进行连接，确保起重机的安全及平稳运行，使运输、安装、维修简单化。

Crane Joint Design Between Main Girder And End Carriage:

Main girder and end carriage are connected by high strength screw to ensure safe and stable running of crane and make transportation, installation and maintenance easy.

优化的结构设计，充分利用各式厂房空间 Optimized structural design, maximize the space of different workshops.



标准连结

Standard connection

低位连结

Low headroom connection

中位连结型

Intermediate connection type I

中位连结II型

Intermediate connection type II

中位连结III型

Intermediate connection type III

过载保护：

起升机构核心部件——电子压力传感器，采用德国进口产品。精确可靠的电子式过载保护可有效防止操作过程中的超载现象，增强了设备的安全性。过载保护装置与控制电路有效配合，在发生超载时能阻止载荷的进一步提升，并确保载荷可以安全的下降。



Overload Protection:

Core components of hoisting mechanism – electronic pressure sensor, imported originally from germany. Accurate and reliable electronic overload protection can prevent overloading effectively during operation and enhance the safety of the equipment. The overload protection device cooperates well with the control circuit, to prevent further load increasing and ensure that the load can be declined safely.

起重机具有安全规范要求的保护功能：



★控制电路由变压器输出，控制电压48V，此控制电压器保证当起升和大车、小车运行同时发生时，具有足够的功率输出。

★控制箱保护等级IP55，有防水保护功能；环境温度：<45℃，湿度<90%；起重机的主电源为三相四线380V（±10%），50Hz（±5%）。

The Crane Has A Safety Specification Required For The Protection Function:

★ Circuit control is outputed by the transformer, with control voltage of 48v, this ensures sufficient power output when the hoisting, cross travelling and long travelling mechanisms runs at the same time.

★ Control box protection class is IP55, with waterproof protection; ambient temperature: <45 °C, humidity <90%; the main voltage supply for crane is 380v (± 10%), 50hz (± 5%) a.C. 3Phases.

变频控制可以实现：

★ 确保载荷精确定位 ★ 加速度可调 ★ 制动平稳 ★ 减少重物晃动 ★ 扩大速度范围 ★ 操作方便

Frequency Converter Control/ VVVF :

★ Ensure accurate positioning of the load ★ Adjustable acceleration ★ Smoothly braking ★ Anti-swing ★ Expand the speed range ★ Easy operate

小车拖链系统：

小车拖链系统包括拖链、导槽及底座。

- ★ 电缆布线整齐、紧凑
- ★ 安装在主动侧方梁上，方便检修

小车拖缆系统：

小车拖缆系统包括：弹性扁电缆、拖缆小车(带托架)、滑轨；扁电缆采用具有良好弹性的橡胶绝缘，电缆固定并悬挂在拖缆小车的小车托架上，拖缆小车在滑轨中移动，C型滑轨通过支撑杆与主梁连接，小车托架使在任何情况下拖缆电缆不会相互干涉。

Trolley Drag Chain System:

Trolley drag chain system includes: cable chain, trunking and base .

- ★ Cable wiring neat and compact.
- ★ Installed in the main driven side of the beam, convenient maintenance

Trolley Festoon System:

Trolley festoon system includes: flexible flat cable, cable trolley (with bracket), sliding rail; the flat cables adopt rubber with good elasticity. The cable is fixed and hung on the bracket of cable trolley, the cable trolley travel in the sliding rail, c type sliding track is connected to main girder through support bracket. The cable trolley bracket makes the cable not interfere with each other in any case.



ADVANTAGES 新型起重机优点

自重轻

公司自己开发的设计软件，结合三维造型及有限元分析，从起升机构、钢结构到附件均采用最合理的结构，再加上高强度材料的大范围应用，提高了承载能力，降低了自身重量，较传统起重机自重轻、轮压小。

Light Self-Weight

Design software developed by the company combines with three-dimensional modeling and finite-element analysis, apply the reasonable structure to lifting mechanism, steel construction and accessories, together with wide use of high-strength material, it increases load capacity, decreases self-weight and has lower weight and wheel pressure than that of traditional crane.

占用空间小

吊钩至两侧的极限距离小，工作范围大，轨道面以上高度尺寸小，有效利用厂房空间。

Small Space Occupy

Shorter hook limit distance to both sides, larger working range, with lower body height above the rail, maximize workshop space.



运行维护成本低

由于轮压小、外形尺寸小，可降低厂房等前期工程投资，同时照明、取暖等设施也能节省一部分费用。且产品性能可靠，经久耐用，使后期产品在使用过程中所需的附加费用降至最低。选配的高质量、高性能零部件使维护、维修的工作量大为减小，总装机功率有所降低，使用成本得以节约。

Low Cost Of Running And Maintaining

As with low wheel pressure and small dimension, it reduces investment of previous construction including factory building, and also reduces illumination and heating expense. The reliable performance and durability also minimizes the additional charges for the use of product at the later stage. Selected components with high quality and performance lower the maintenance and repair. The total power consumption is reduced, which achieves cost savings.



工作性能高

采用变频技术，重载慢速，轻载快速，调速范围 1:10，起重机运行平稳，减小对厂房的冲击。结合防摇摆技术，可实现吊运物品的高精度定位。

High Performance

Use variable-frequency technology, run with heavy load at low and light load at high speed. The adjustable speed ranges in 1:10, which ensures crane run steadily and reduces impact on factory building. Combination of swing-proof technology achieves a high accuracy position of lifting items.

操作简便

采用多种符合人体工程学的悬挂式控制器，用于控制起重机的运行。带有液晶显示的悬挂式控制器可与安全与性能控制系统进行交互式通讯，在提升重物时，持续显示重量信息。

也可选配无线遥控系统（分按钮式和摇杆式），为在苛刻复杂的环境下使用起重机，提供了最佳的控制解决方案。



Easy To Operate

It applies many ergonomic hanging controllers to run crane. The hanging controller with liquid crystal display conducts interactive communication with safety and performance control system and continuously displays weight while lifting item.

It also can use wireless remote control system (including buttons and rocker), which provides the best solution of control for running crane under a demanding and complex environment.

安全可靠

具有联锁、超载保护、零位保护、限位保护等多项保护措施，保证起重机安全可靠的运行。

起升卷筒为钢制卷筒，钢丝绳偏角小，有效避免磨损。

起升电机带有独立的风冷系统，含有热敏保护功能，防护等级 IP54。

带有独立的制动系统，具有自动磨损补偿功能。如有特殊要求，可配备两个制动系统。

具有先进的 PLC 自动检测和友好的人机界面，对起重机的性能、安全性和作业状况进行测量、计算和监控，使物品输送更安全可靠。

Safety And Reliable

It's provided with many protections including linkage, overload protection, zero protection and limit protection in order to ensure reliable running of crane.

Hoisting reel uses steel reel, steel rope has small deflection, which prevents from abrasion.

Motor of hoisting mechanism has separate air-cooling system containing thermal protection function, with protection level IP54.

It has separate brake system which has the function of automatic abrasion compensation. If any special requirements, it can be supplied with two brake systems.

It's provided with advanced PLC automatic detection and friendly man-machine interface, which can perform measurement, calculation and monitoring to the performance, safety and working condition in order to ensure more safe and reliable transportation of items.

绿色制造技术

采用绿色设计理念，高强度材料的大范围应用，主梁无缝下料、自动化焊接技术以及激光切割技术，实现了生产过程中的节能环保，减低了对环境的污染破坏。

Eco-friendly Technology

It applies eco-friendly design principle, widely uses high-strength material. The main beam employs seamless blanking, automatic welding technology and laser cutting technology, by which accomplishes energy conservation and environmental protection in the process of production and reduces pollution and destruction to environment.

定位快捷

变频系统的引入，解决了以往实际操作中，速度可控性差，以及单速机构运行中，大车或小车开过或不到的情况，从而提高了物品的吊运周期，频繁作业时，效果尤为明显。防摇摆技术的采用，更是提高了吊运物品的定位精度。

Fast And Easy Positioning

Introduction of variable-frequency system resolves the problems including bad speed controllability and traveling crane or trolley excessively or insufficiently during traveling of single-speed mechanism occurred in the past actual operation, and then improve the circle of lifting items especially in while frequent working. Application of swing-proof technology greatly improves the accuracy of positioning lifting items.

PLC 可编程控制器 + 人机界面 (选配)

每个应用过传统起重机的用户都曾经在发生一些常见故障后，爬上爬下排查各种原因，工作繁琐效率低下。采用 PLC+ 人机界面后，简化了复杂的电控系统，提高了系统稳定性，降低了设备故障率，对于出现的设备故障可以自我诊断，通过显示屏提示给操作或维修人员，以最快速度解决问题。

PLC+ Human-computer Interaction (Optional)

Traditional crane users have to try hard to troubleshoot various faults after common failure occurred. They do trivial works and low efficiency. By using PLC-Human-computer Interaction interface, it simplifies the complicated electric control system and improves the stability of system and reduces the faults. The system will perform self-diagnosis and display happened faults to operator through the screen for quick troubleshooting.

安全监控系统 (选配)

PLC 与触摸屏结合使用，利用触摸屏强大的人机交互功能，可以对起重机的实时运行情况进行监控和故障显示，及时显示起重机的状态



Safety Monitoring System (Optional)

The PLC combines touch screen. By powerful function of Human-computer Interaction of touch screen, it can monitor the real-time working condition of crane and show the faults timely.

XKD TYPE EUROPEAN ELECTRIC HOIST XKD型欧式电动葫芦

卓越品质 一流服务

Superior Quality First-class Service

性能描述 Performance Description



- ★ 定制化服务：个性定制，满足国内外各种客户需求；
- ★ 世界级标配：SEW、ABM三合一运行，施耐德电气；
- ★ 使用寿命长：工作级别可达A6，重量轻高度低故障少。

- ★ Customized services: Tailor-made, meeting customers' specific demands all over the world
- ★ Standard world-renowned brands: SEW, ABM three-in-one motor, Schneider Electric parts
- ★ Long using life: Working duty up to A6, light weight, smart feature structure, low failure rate



起升减速器 Lifting Mechanism Gear Box

减速器壳体采用铝合金材料，重量轻，耐腐蚀。全密封的箱体内半油脂状的润滑剂使得所有齿轮能得到充分的润滑，在设计安全使用周期内无需更换润滑油。每一个经过表面硬化及高精度研磨处理的齿轮确保减速器平稳的运行。

- ★ 体积小，重量轻
- ★ 运行平稳，噪音低
- ★ 耐腐蚀，免维护

Shell of reducer uses aluminum alloy material, with light weight and corrosion resistance. Semi-grease lubricant in full sealed box gets all gears lubricated fully and should not be changed within the design circle for safety service. Each gear which gets the process of surface hardening and high-precision grinding ensures stable running of gear box.

- ★ It has small size and light weight
- ★ Running smoothly and steadily, low noise
- ★ Corrosion resistance and maintenance-free



起升减速机



双碟电磁盘式制动器

起升制动器 Lifting Mechanism Brake

起升电机配备了双碟电磁盘式制动器。制动器集成在电机的末端，当电机断电时制动器会自动闭合，防止负载滑落。制动器的刹车间隙在首次设定好后无需人工调节（间隙可通过刹车弹簧自行调节），当刹车片厚度低于设定值时，通过附加的监控开关可以自动报警，提示用户进行更换。德国原装进口双碟电磁盘式制动器安全可靠，制动次数可达100万，在安全使用周期内无需维护。

根据安全规范，新科公司选用的制动器的制动力矩不小于电机额定扭矩的1.8倍。

- ★ 动作快，可靠性高
- ★ 免维护，自调节
- ★ 防尘设计，使用寿命长

The hoisting mechanism motorequipped with double-disc electromagnetic brake. Brake integration locates at the end of motor. The brake will automatically close if the motor powers off in order that avoid load slipping off. The brake clearance does not need to be manually regulated(which can be regulated automatically by brake spring) after being initially set; if the thickness of brake pad is lower than the setting, it will automatic alarm through additional monitor switch in order to remind user to replace it. Double-disc electromagnetic brake is safe and reliable; the number of braking up to 1,000,000 times and it does not need maintenance in the safety service circle.

According to the safety regulations, SINOKO CRANE adopts the braking force of the brake higher than 1.8 times of the rated torque.

- ★ Fast movement and high reliability
- ★ Maintenance-free and self-regulated
- ★ Dustproof design and longer service life

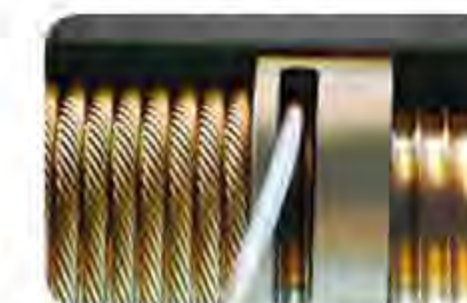
卷筒、钢丝绳、导绳器

Drum, Steel Wire Rope, Rope Guide

★ 卷筒由高品质无缝钢管通过数控机床加工而成，精加工后卷筒上的绳槽配合导绳器可有效防止松绳和乱绳现象的发生。

★ 钢丝绳采用抗拉强度为2160N/mm²的高强度进口钢丝绳，安全性好，使用寿命长。

★ 标准的导绳器由耐磨性强和自润滑性能好的工程塑料加工而成，大幅降低了钢丝绳这一主要受力安全部件的磨损，从而增加了起升机构的安全性。同时，针对不同的使用状况，也可提供球墨铸铁生产制造的重级制导绳器。



高强耐磨导绳器

★ The drum is made from high-quality seamless pipes and processed by numeral control CNC machine, after finish machining, the rope groove on drum works coordinately with rope guide to efficiently prevent rope loose and tangling.

★ Steel wire rope adopts high strength 2160N/mm² imported wire rope, which has super safety performance and longer service life.

★ Standard rope guide is processed from engineering plastics, with strong abrasion resistance and good self-lubricating performance, which greatly reduces the wear of steel rope as main force safety components and then enhances hoisting mechanism safety. Meanwhile, according to different work condition, we also provide the heavy-grade rope guide made of nodular cast iron.

运行机构 Travelling Mechanism

多年的经验证明新科公司的小车运行机构能适应各种不同的工作环境，比如电压不稳定甚至更糟糕的工况。变频小车运行机构是新科XKD钢丝绳葫芦的标准配置，变频调速大大降低了吊重物在运行过程中的摇晃，增强了操作的安全性，同时减少了操作周期所需要的时间，提高了生产效率。

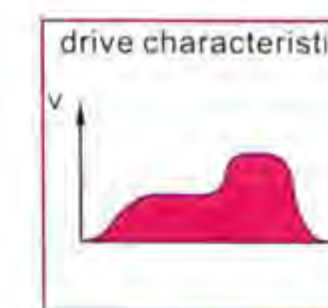
★ 针对不同的工况，公司提供了两种解决方案：G-系列和F-系列“三合一”运行驱动，均采用德国ABM公司产品。

Fact proves that Sinoko Crane trolley travelling mechanism can adapt different working conditions, Such as voltage instability or worse conditions. Frequency converter control(VVVF) trolley has been Sinoko Crane's XKD type hoist standard configuration, The VVVF greatly reduces the shaking of the lifting material during operation, enhances the operation safety, also reduce the operating cycle time and increase the productivity.

★ Consider different conditions, Sinoko Crane provides two solutions: G-series and F-series "three in one" travelling drive, both Germany ABM brand.

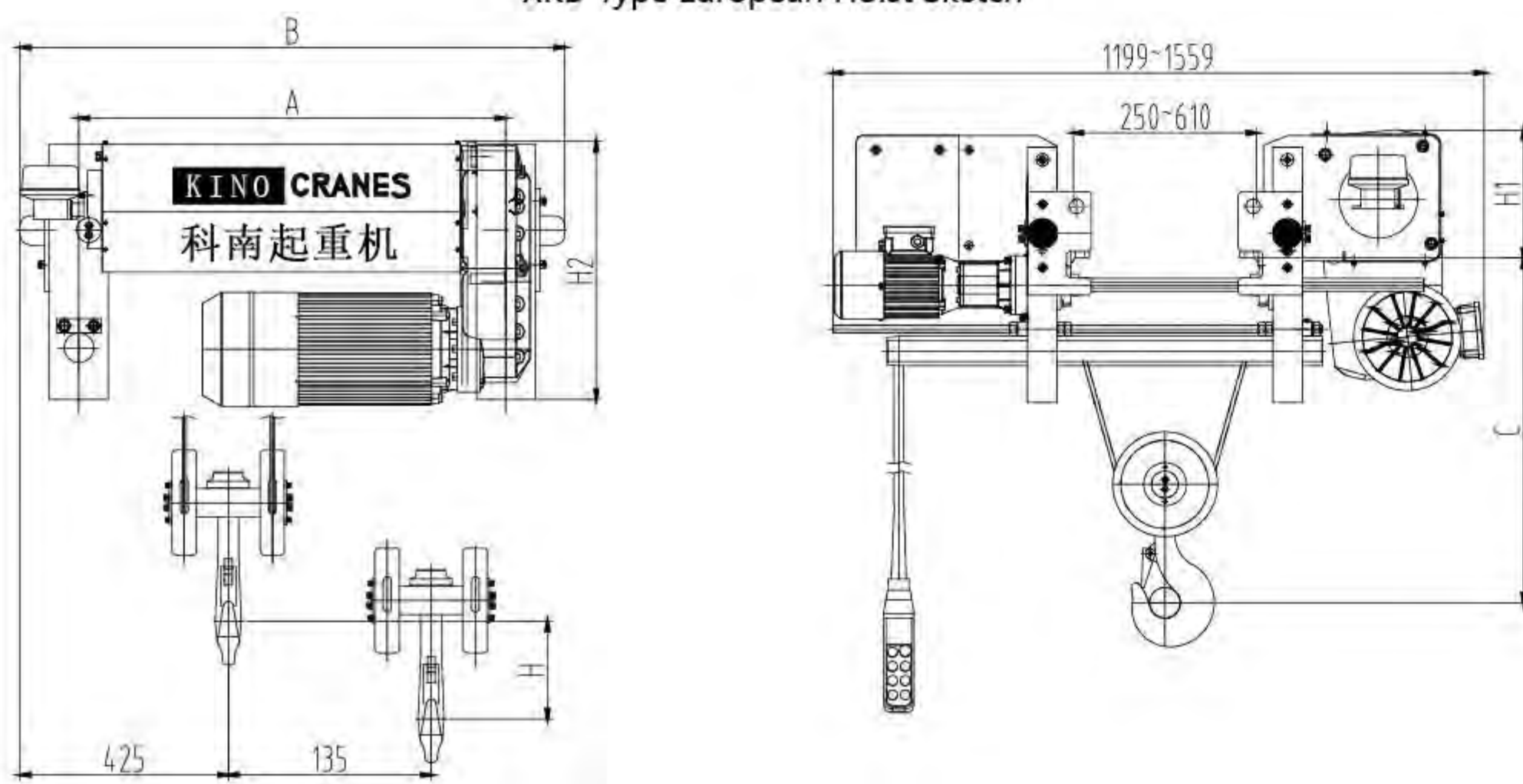


G-系列

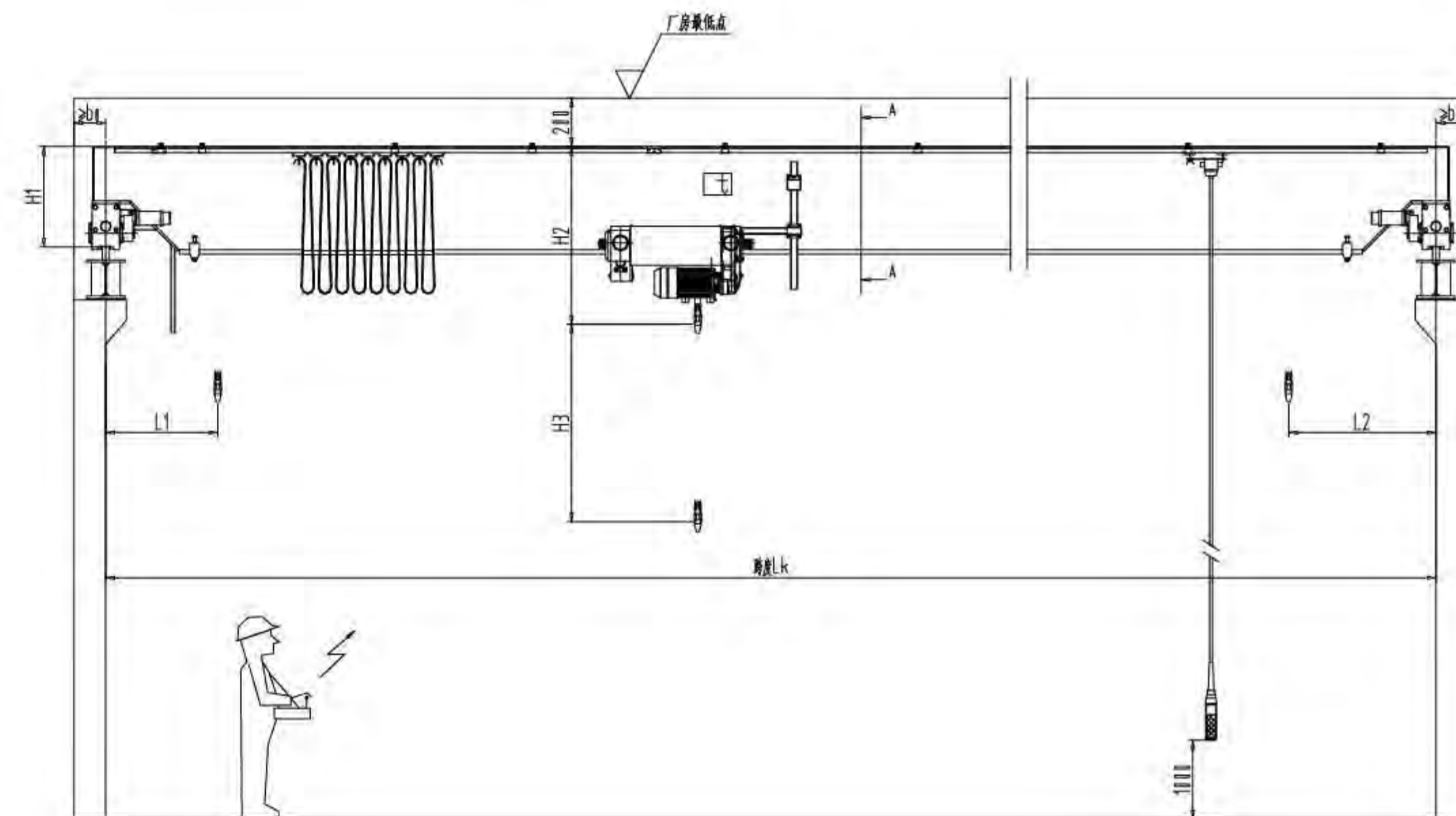


F-系列

XKD型欧式电动葫芦简图
 XKD Type European Hoist Sketch

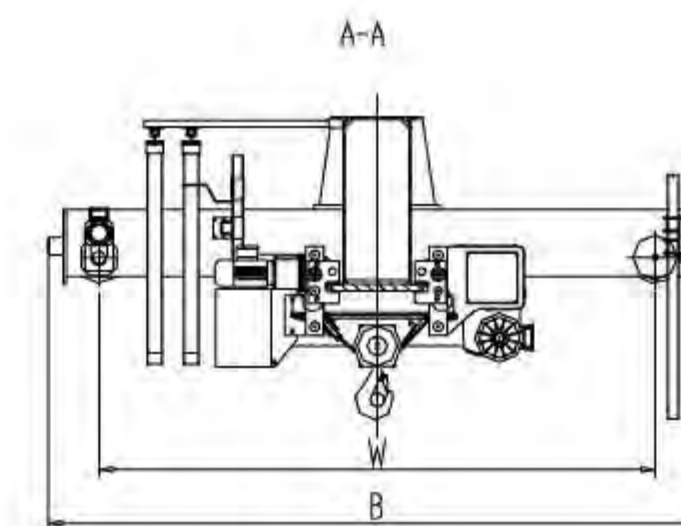


CXTD型单梁桥式起重机简图 (配XKD型电动葫芦)
 CXTD Single Girder Bridge Crane Sketch (With XKD Hoist)



技术参数表 TECHNICAL DATA SHEET

起重量 Capacity kg	起升高度 Lifting Height(H) m	起升速度 Lifting speed m/min	运行速度 Traveling speed m/min	H1 mm	H2 mm	C mm	A mm	B mm	最大轮压 Max. Wheel load kN	整机功率 Total Power KW	自重 Dead weight Kg
3200	6	5/0.83 双速 Double Speed	20/5 变频双速 VVVF Double Speed	235	528	680	513	923	8.5	3.84	363
	9						693	1103	8.7		379
	12						863	1273	9		395
	15						1043	1453	9.2		411
	18						1213	1623	9.4		424
5000	6	5/0.83 双速 Double Speed	20/5 变频双速 VVVF Double Speed	280	546	705	513	923	13.5	5.54	468
	9						693	1103	13.7		502
	12						863	1273	13.8		535
	15						1043	1453	14		569
	18						1213	1623	14.2		636
10000	6	5/0.83 双速 Double Speed	20/5 变频双速 VVVF Double Speed	271	640	740	685	1125	26.3	10.46	562
	9						865	1305	26.5		601
	12						1035	1475	26.8		637
	15						1215	1655	27.2		675
	18						1385	1825	27.5		711



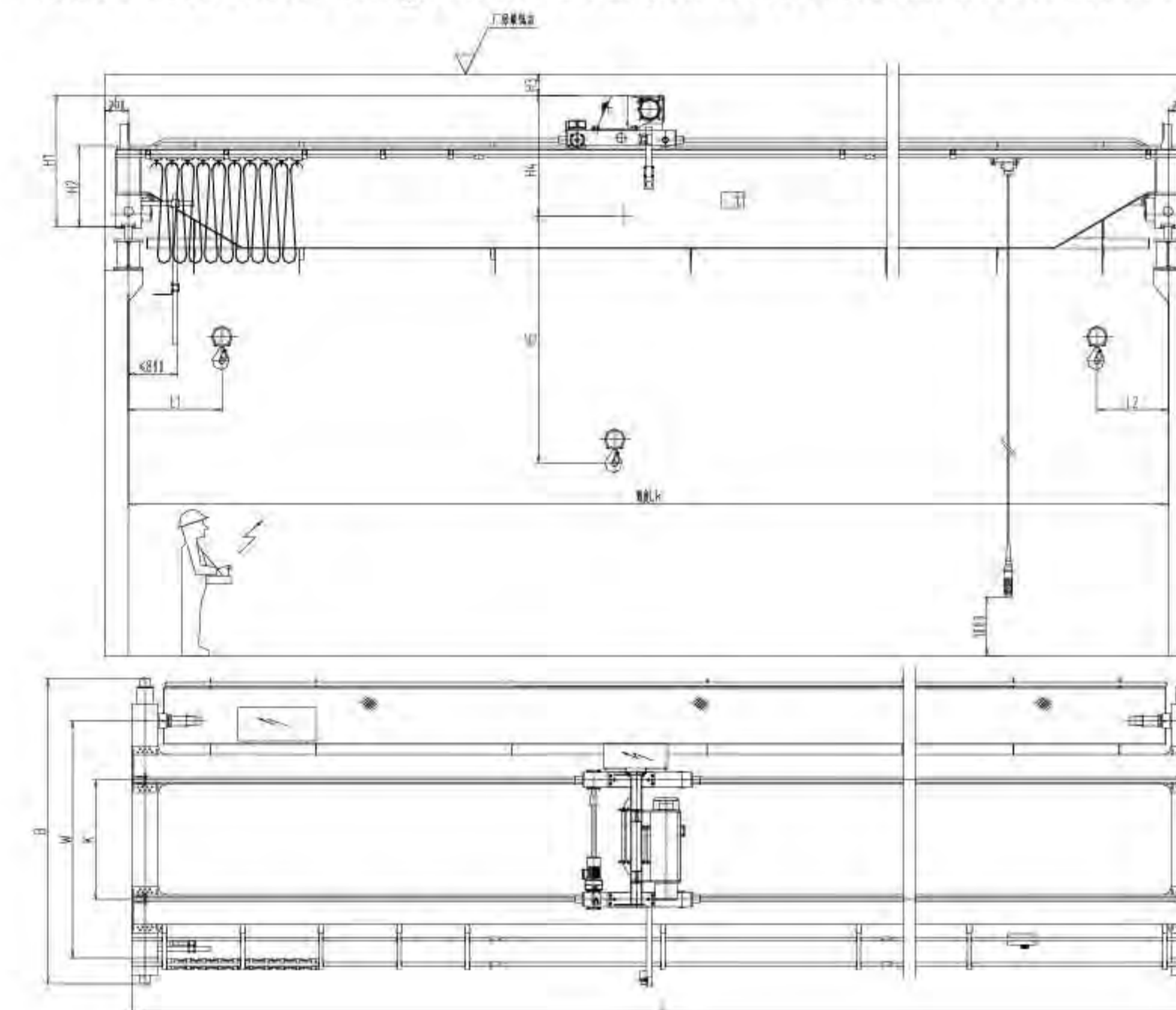
技术参数表 TECHNICAL DATA SHEET

起重量 Lifting Capacity kg	跨度 Span (LK) m	起升高度 Lifting Height (H3) m	起升速度 Lifting Speed m/min	H1 mm	H2 mm	L1 mm	L2 mm	W mm	B mm	b ₀ mm	最大轮压 Max. wheel load KN	大车轨道 Crane Rail Recommended (荐)	整机功率 Total Power KW	整机自重 Dead weight t		
2000	7.5	9	5/0.83	705	750	540	460	1800	2460	180	14	P18 50×30	2.7	1.5		
	10.5										15.5			1.85		
	13.5										16.2			2.2		
	16.5										18.5			3		
	19.5			530	1050	800	770	2200	2860		19.9	P24	3	3.5		
	22.5			590	1100						22.5			4.8		
	25.5			700	1380						24			5.8		
	28.5			796	1490						28.5			7.6		
3200	7.5	9	5/0.83	705	750	540	460	1800	2460	180	18.5	P18 50×30	4.5	1.6		
	10.5										19.8			2		
	13.5										20.9			2.3		
	16.5										23.4			3.3		
	19.5			530	1050	800	770	2200	2860		24.6	P24	4.5	3.8		
	22.5			590	1100						28			5.2		
	25.5			700	1380						29.9			6		
	28.5			796	1490						34.4			7.8		
5000	7.5	9	5/0.83	780	950	620	610	1800	2460	180	25.2	P24	5.5	2		
	10.5										27.6			2.7		
	13.5										30.2			3.2		
	16.5										32.6			4		
	19.5			1260	900	870	2200	2860	35		P24	5.9	5			
	22.5			884					1380				38	6		
	25.5			1530					42.5				7.3			
	28.5			1630					3100				3760	200	46	6.2
8000	7.5	9	5/0.83	810	1020	620	610	1800	2460	180	43.5	P24	10.6	2.6		
	10.5										45.6			3.1		
	13.5										48			4		
	16.5										722			1150	1280	2200
	19.5			772	1150	1280	2700	3360	54		6.5					
	22.5			942	1610	3100	3760	57.8	P38		12.1	7.7				
	25.5			1032	1575			62				8.8				
	28.5			1102	2010	1270	1350	3100	3760		230	66.5	10.6			
10000	7.5	9	5/0.83	812	1020	620	690	1800	2460	180	50.5	P24	10.9	2.6		
	10.5										54.5			3.2		
	13.5										57			4.25		
	16.5										772			1270	1070	1140
	19.5			832	1440	1070	1140	2700	3360		63.8	6.7				
	22.5			942	1610	1170	1240	3100	3760		70	P38	12.1	8.15		
	25.5			1032	1575	73	9.25									
	28.5			1102	2010	1270	1350	3100	3760		230	77.8	12.1	11.9		

CXTS型3-80t欧式电动葫芦桥式起重机性能配置
CXTS 3-80t European Hoist Overhead Crane Performance Configuration

- 起升机构采用我公司XKS产品。
Lifting mechanism adopts XKS Model.
- 小车端梁与滑轮连接梁及小车端梁与起升驱动梁均采用刚性连接，具有调节小车“三条腿”功效。
The connection between trolley end carriage beam and pulley connecting beam, the one between trolley end carriage beam and lifting driving beam are rigid type. This design will avoid three leg problems.
- 驱动装置：变频电机，硬齿面减速器（HRC58-62），免维护设计。
Driven device: inverter motor, hardened surface reducer (HRC58-62), free maintenance.
- 操纵方式：地面有线操作IP65（防护等级）寿命（50万次）、无线遥控操纵、司机室操纵（太空舱设计，有冷暖空调可配选）几种。
Control type: Ground pendent control with IP65 protection class, life time 500000 times, wireless remote control, cabin control with space capsule design and industrial air conditioner for users' choice.
- 电机防护等级IP55，F级绝缘，高强度镀锌钢丝绳，大小车变频调速方式，运行平稳，防止摇摆措施的优化设计。
Motor protection class IP55, F class insulation, high strength galvanized wire rope, inverter controlled travelling speed, steady speed running, anti-swing optimized design.
- 整机工作制为2m（A5），各机构的工作制为2m（M5），整机工作制可达到3m（A6）。
Overall working duty is FEM 2m (ISO-A5), individual mechanism class 2m (M5), higher overall working class can be made up to 3m (A6)
- 配置为公司标准配置，如果不能满足使用要求，请与公司技术部联系。
Configuration as per Sinokocrane standards, if higher demand needed, please contact us.
- 小车运行标配速度20/5m/min（变频控制）；大车运行标配速度40/10m/min（变频控制）。
Cross travelling standard speed 20/5m/min (VVVF control); Crane travelling standard speed 40/10m/min (VVVF control).

CXTS型双梁桥式起重机简图（配XKS型葫芦双梁小车）
CXTS Double Girder Bridge Crane Sketch(With XKD Calabash Double Beam Trolley)



技术参数表 TECHNICAL DATA SHEET

起重量 Lifting Capacity kg	跨度 Span (LK) m	起升高度 Lifting Height (H3) m	起升速度 Lifting Speed m/min	H1 mm	H2 mm	H3 mm	H4 mm	L mm	L1 mm	L2 mm	W mm	B mm	K mm	b ₀ mm	最大轮压 Max. wheel load KN	大车轨道 Crane Rail Recommended (荐)	整机功率 Total Power KW	整机自重 Dead weight t
5000	10.5	9	5/0.83	790	460	200	651	10730	590	590	2700	3360	1200	150	36.8	P24	5.5	3.9
	13730							5.8							4.9			
	16730							5.9							6.3			
	19730							6.2							8.8			
	22730			3100	3760			180			54.3	P38		6.2	11			
	25750										7.2			13.8				
	28750										7.2			16				
	31750										7.2			19.6				
10000	10.5	9	5/0.83	1030	610	200	841	10730	650	650	2700	3360	1400	150	64	P24	10.5	5.8
	13730							10.8							6.6			
	16730							10.8							8.3			
	19730							11.7							10.2			
	22730			3100	3760			180			79.5	P38		11.7	12.6			
	25753										11.7			14.9				
	28750										12.2			17.5				
	31750										12.2			20.8				
16000	10.5	10	5/0.83	1228	805	200	1288	10750	670	720	3100	3760	1700	180	100	P24	18.1	6.8
	13750							18.1							8.45			
	16750							18.1							10.3			
	19800							18.1							12.7			
	22800			3800	4480			200			123	P38		18.1	16			
	25800										18.1			18.4				
	28800										19.5			21.8				
	31800										19.5			25.8				
20000	10.5	10	5/0.83	1203	780	200	1288	10750	670	720	3100	3760	1700	180	112	P38	21.1	7.4
	13750							21.1							9.1			
	16750							21.1							11.5			
	19800							21.1							13.7			
	22800			3800	4480			200			140.8	P43		21.1	16.3			
	25800										22.5			19.2				
	28800										24.9			23.8				
	31800										24.9			28.3				
25000	10.5	10	5/0.83	1505	815	200	1639	10800	900	910	3100	3760	2000	210	150	P38	21.5	9.3
	13800							21.5							11.1			
	16840							21.5							13			
	19840							21.5							15.9			
	22840			3800	4480			230			175	P43		21.5	18.3			
	25840										22.9			22.3				
	28840										25.3			25.7				
	31840										25.3			30.2				

技术参数表 TECHNICAL DATA SHEET

起重量 Lifting Capacity kg	跨度 Span (LK) m	起升高度 Lifting Height (H3) m	起升速度 Lifting Speed m/min	H1 mm	H2 mm	H3 mm	H4 mm	L mm	L1 mm	L2 mm	W mm	B mm	K mm	b ₀ mm	最大轮压 Max. wheel load KN	大车轨道 Crane Rail Recommended (荐)	整机功率 Total Power KW	整机自重 Dead weight t								
32000	10.5	9	4/0.67	1625	935	200	1855	10840	900	910	3800	4480	2000	230	191	P43	29	10.2								
	13840							205							12											
	16840							210							14.2											
	19840							219							17.5											
	22840			3900	4580			2400			230	113.5		P43	30.4	20.55										
	25840											118.5			24.7											
	28840											123			28.3											
	31840											128.8			32.8											
	40000			10.5	9			3.2/0.5			1625	935		200	1855	10840	900	910	3800	4480	2000	230	232	P43	29	11
				13840												237							13			
16840		212.5	15.4																							
19840		125	18.2																							
22840		3900	4580	2400		230	130.5		P43	30.4	22.6															
25840							135.5			26.8																
28840							138			28.8																
31840							146			32.8																
50000		10.5	9	2.5/0.4		1616	899		200	2071	10800	930	950			3300			3780	2000		230	142	P43	31.2	12.9
		13800									146												15.1			
	16800	150			18.2																					
	19800	154.2			21.4																					
	22860	4030			4580	2400	250	160			P43			33.6	25.9											
	25860							165.5						30.25												
	28860							170.5						34.6												
	31860							180.5						42.6												
	63000	10.5			9	2.5/0.4	1698	946			200			2162	10860	930	1000	3630	4340		2000	250	179	P43	42	14.3
		13860													183								16.9			
16860		187.2	20.2																							
19860		192.6	24.5																							
22860		4030	4940	2400			250	198.2	P43	42		29.1														
25860								204.5		34																
28860								211		39.3																
31860								220.5		46.9																
80000		10.5	9	2/0.3			1698	946	200	2162		10860	930		1000			3630	4340	2000		250	225	P43	42	17
		13860										229											19.9			
	16860	234			24.1																					
	19860	237			26.2																					
	22860	4030			4940	2400	250	244			P43	43.2		31.6												
	25860							249				36.3														
	28860							258				42.8														
	31860							267				50.3														

NOVA WIRE ROPE ELECTRIC LIFTING MECHANISM 公司NOVA钢丝绳电动起升机构

优点：效率最高，最大限度利用空间

Advantage: High Efficiency, Maximum Space Using



- ★ 最大限度利用空间
- ★ 精确操作
- ★ 维护成本低
- ★ 故障停机时间缩短
- ★ 最小的吊钩水平位移、最小的钩间距离

- ★ Maximum Space Using
- ★ Precise Operation
- ★ Low Maintenance Cost
- ★ Less Fault Downtime
- ★ Minimum Hook Limit Space & Distance



我们生产的起重机配备SWF公司生产制造的NOVA钢丝绳电动起升机构和SM重级制卷扬小车。

Our crane use NOVA wire rope hoist from SWF Company and SM heavy type open winch trolley.



起升机构为60% ED的双速变极电机和低噪音的硬齿面减速机，整个机构为免维护设计。

Lifting mechanism has inverter driven double speed motor of 60% duty cycle and low noise hardened surface reducer, the overall structure design is maintenance free.



驱动机构为密封的三合一驱动，带有自润滑、免维护设计，变频控制，运行稳定、可靠，噪音低。

Drive mechanism is sealed three-in-one type, self-lubricating, maintenance free, inverter control, stable running, reliable quality, low noise.



高强度镀锌钢丝绳

- ★ 抗拉强度：2160N/mm²
- ★ 表面镀锌，免维护
- ★ 自润滑
- ★ 寿命长
- ★ 防旋转

High strength galvanized wire rope

- ★ Tensile strength: 2160N/mm²
- ★ Galvanized, maintenance free
- ★ Self-Lubricating
- ★ Long service life
- ★ Anti-winding

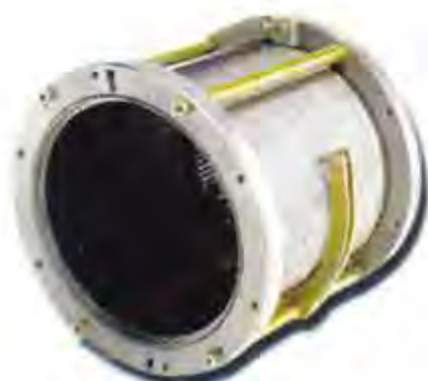


大小车运行机构集中润滑，减少维护成本。

Centralized lubrication for Cross and long travelling mechanism, saving maintenance cost.



专为起重机行业设计的重级制动器，且可自由调节间隙。
 Special designed heavy type brake for crane industry, easy adjustment of torque gap



卷筒按照大直径设计，减少钢丝绳的弯曲率，最大程度上延长了钢丝绳的使用寿命。
 Drum design use large diameter; reduce the rope curving, maximized the rope life time



安全监控单元为起重机提供了更加可靠的安全保护和人性化的监控界面。通过安全监控单元能够导出起重机的重要数据，也方便维护人员维护。
 Safety monitoring module give cranes a more reliable protection and humanized monitoring interface. The module will save and export crane running data for maintenance.



摇杆式遥控器+备用手操
 Joystick remote control+pendent for backup

- ★ 操作环境好
- ★ 人性化设计，无须专业技能
- ★ 更少部件，更少损耗和维修
- ★ 精简操作人工数量，降低成本
- ★ 备用手操，确保起重机不间断作业

- ★ Good working condition
- ★ Humanized design, easy to handle
- ★ Less components, less worn out and maintenance
- ★ Less operators, reduce cost
- ★ Backup control to ensure crane's continuous working



用于起重机行业的专业变频器
 Specialized inverter for crane industry

- ★ 5行LED显示屏，参数可上传下载
- ★ QUICK程序模式，设定基本参数即可运行
- ★ 使用脱卸式控制回路，在接线状态下就能轻松更换单元
- ★ 能记录显示累计运行时间，冷却风扇运行时间
- ★ 物件精确定位功能（可选）
- ★ 物件防摇摆功能（可选）

- ★ 5 Rows indicating LED display, date can be uploaded and downloaded.
- ★ QUICK Program model, running upon the simple data setup
- ★ Using detachable control circuit, units are easy changed in connecting condition
- ★ Recording and displaying cumulative working time, cooling fan working time
- ★ Load accurate positioning function(optional)
- ★ Anti-swing function (optional)

CXSM TYPE EUROPEAN WINCH TROLLEY CXSM型第三代欧式卷扬小车

比肩国际 遥遥领先 International Class, Supreme Quality



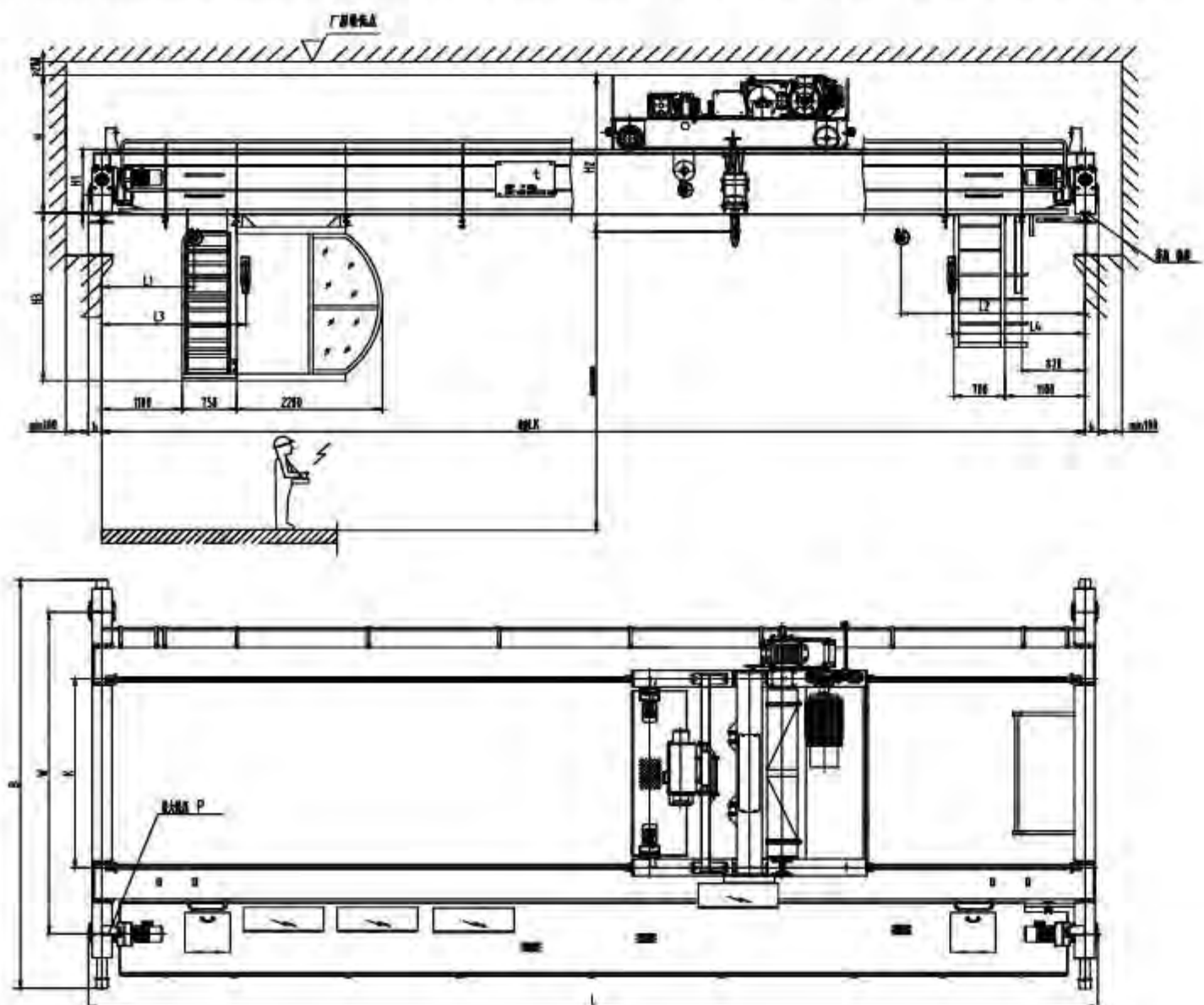
性能描述 Performance Description

- ★ 安全双保险：双联双根绳绕绳系统，改变传统单根钢丝绳绕绳方式，全方位杜绝重物坠落；
- ★ 技术领先者：欧洲标准，全车变频，工作级别可达A8；
- ★ 五大新功能：电子防摇摆、触摸屏状态监控、自动定位、微动、寸动。
- ★ Double security: Dual connection and dual quantity rope winding design, different from single rope winding design, avoiding any load falling accident.
- ★ Advanced Tech: European standard, all mechanism controlled by inverters, working class up to A8
- ★ 5 New functions: Electrical anti-swing, touch screen monitor, automatic positioning, micro-motion, inch-motion.



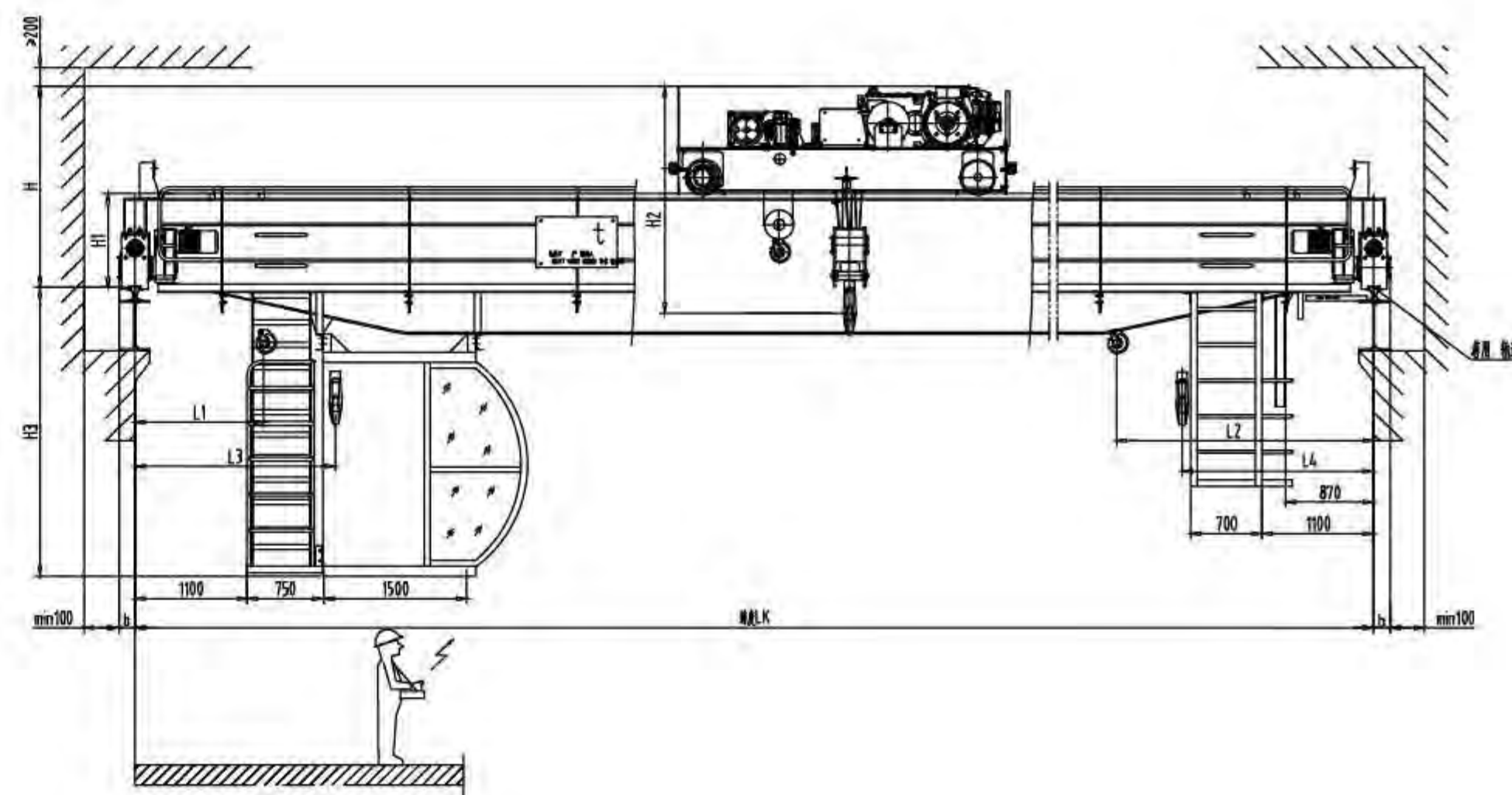
CXSM型5-10吨第三代欧式起重机简图及参数

The Third Generation CXSM Model 5-10T European Crane Sketch And Specification



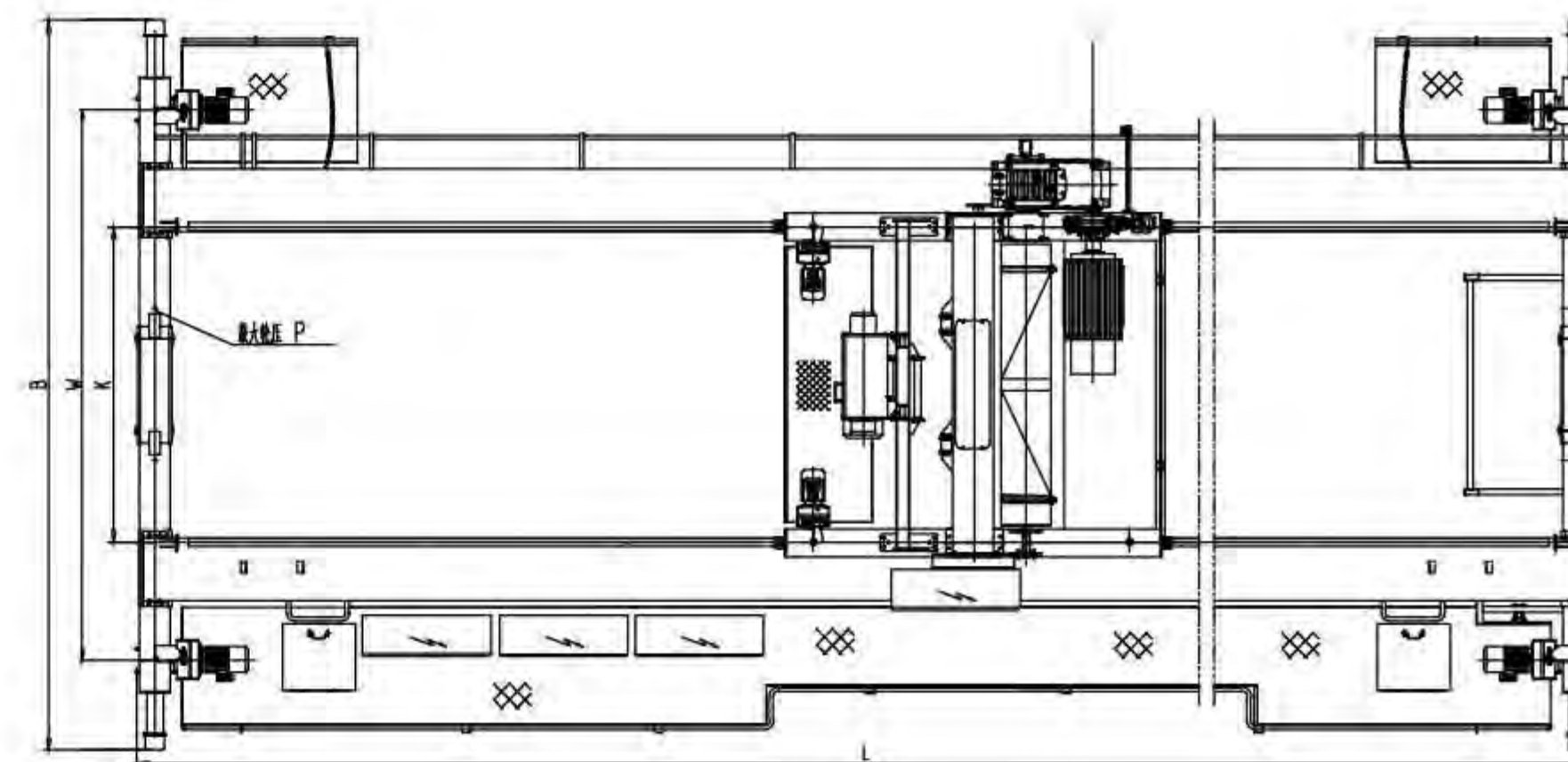
CXSM型16-50吨第三代欧式起重机简图及参数

The Third Generation CXSM Model 16-50T European Crane Sketch And Specification



技术参数表 TECHNICAL DATA SHEET

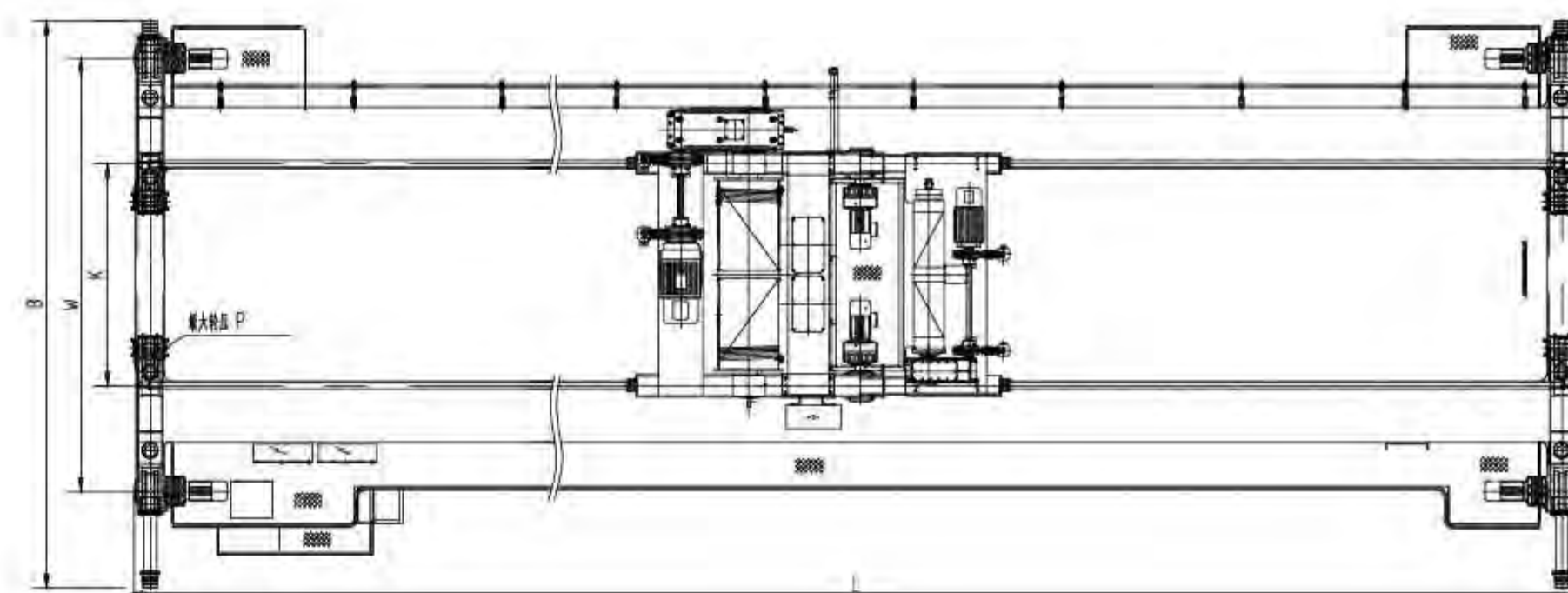
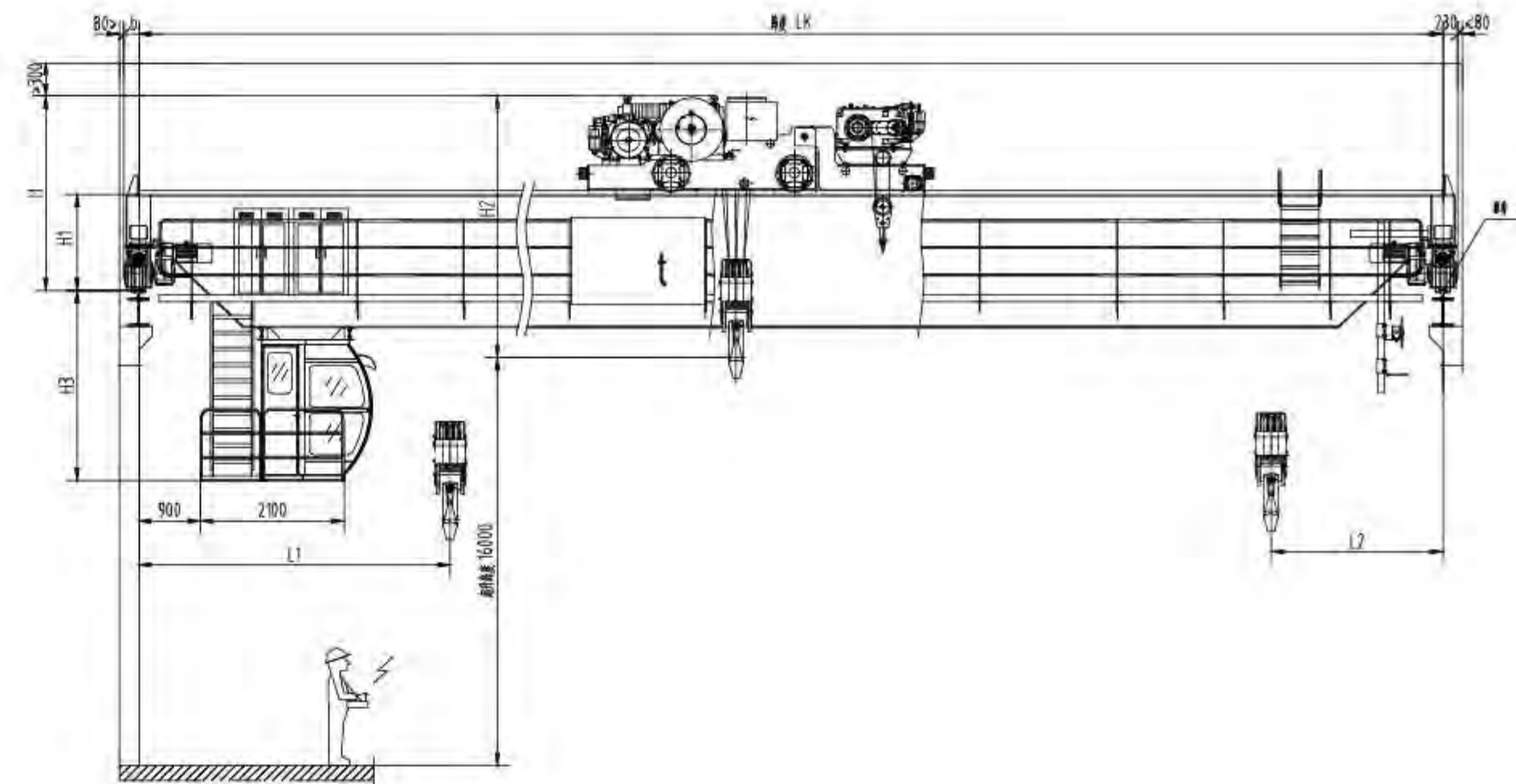
起重量 Lifting Capacity kg	跨度 Span (LK) m	起升高度 Lifting Height (H5) m	起升速度 Lifting Speed m/min	H mm	H1 mm	H2 mm	H3 mm	L mm	L1 mm	L2 mm	B mm	W mm	K mm	b mm	最大轮压 Max. wheel load kN	大车轨道 Crane Rail Recommended (荐)	整机功率 Total Power KW	整机自重 Dead weight t
5	10.5	12	0-9	1388	588	1369	2446	10820	1015	1405	4070	3100	1400	160	44.3	P38 或 P43	12.6	7.2
	13.5						13820	47.4							8.2			
	16.5						2566	16820							52			9.5
	19.5						2676	19820							56.3			11.1
	22.5			1432	632	2724	25794	62.4	13.1									
	25.5			1492	692	2724	25794	68.5	15.5									
	28.5			1492	747	2769	28794	73.2	18.4									
	31.5			1587	787	2769	31794	81	21.3									
10	10.5	12	0-8	1470	588	1782	2436	10770	950	1400	4050	3100	1400	135	70.7	P43	22.9	7.9
	13.5						2556	13770							75.6			9.1
	16.5						2617	16788							80			10.9
	19.5						2707	19788							86.1			13.6
	22.5			1579	697	2807	22788	91.7	15.6									
	25.5			1579	697	2809	25788	98	17.9									
	28.5			1739	857	2799	28796	99.6	21.2									
	31.5			1789	907	2869	31796	113.3	23.7									



技术参数表 TECHNICAL DATA SHEET

起重量 Lifting Capacity kg	跨度 Span (LK) m	起升高 度 Max Lifting Height (H5) m	起升速 度 Lifting Speed (Standard) m/min	H mm	H1 mm	H2 mm	H3 mm	L mm	L1 mm	L2 mm	L3 mm	L4 mm	B mm	W mm	K mm	b mm	最大轮 压 Max. wheel load KN	大车轨道 Crane Rail Recommended (荐)	整机功 率 Total Power KW	整机自 重 Dead weight t	
16/3.2	10.5	12	0-7	1584	653	2081	2513	10800	950	2220	1640	4696	3800	150	2000	150	97.8	P43	36.85	9.9	
	13.5			1573	633		2623	13800											105.4	11.2	
	16.5			1683	763		2661	16802											112.7	14.1	
	19.5						2763	19802											118.3	15.8	
	22.5			1723	803		2873	22802											125.8	18.4	
	25.5						2826	25802											130.8	20.4	
	28.5			1779	930		2937	28826											142.5	24.6	
	31.5			1739			3017	31826											163	26.8	
20/5	10.5	12	0-6	1637	711	2081	2449	10802	950	2260	1680	4790	3800	151	2000	151	114.5	P43	39.3	10.4	
	13.5			2559			13802	120.3											11.5		
	16.5			1697			2647	16802											128.3	13.9	
	19.5			1800			880	2749											19802	137.6	16.3
	22.5							2770											22826	146.8	19.6
	25.5			1850			930	2870											25826	153.5	21.8
	28.5							2821											28826	164.8	27.3
	31.5			1852			932	2998											31826	170.7	28.1
32/5	10.5	12	0-5.3	1780	784	1885	2522	10820	1200	2320	2020	1500	5288	4200	2400	182	177.5	QU70	52.1	14.3	
	13.5			844	2582		13820	188.5											16.6		
	16.5			1940	945		2585	16864											188	19.7	
	19.5						2737	19864											209	22.5	
	22.5			2000	1005		2795	22864											218	25.5	
	25.5						2925	25864											218	28.9	
	28.5			1920	925		3077	28820											118	32.1	
	31.5			2020	1025		31820	5896											126	36.7	
50/10	10.5	12	0-4	1953	899	2488	2415	10858	1270	1953	1970	1830	5908	4599	2700	160	315	73.4	68.4	18	
	13.5			2541			13858	1957					320.5	21.2							
	16.5			1888			2854	16820					1888	191			24.2				
	19.5			1980			2834	19820					1980	195			27.3				
	22.5			2458			2984	22820					2458	200			30.4				
	25.5							2510					25820	2510			207		33.8		
	28.5			2245			1199	2907					28858	2245			214		40.6		
	31.5			2245				3087					31858	2245			220		45.5		

CXSM型75-125吨第三代欧式起重机简图及参数
 The Third Generation CXSM Model 75-125T European Crane Sketch And Specification

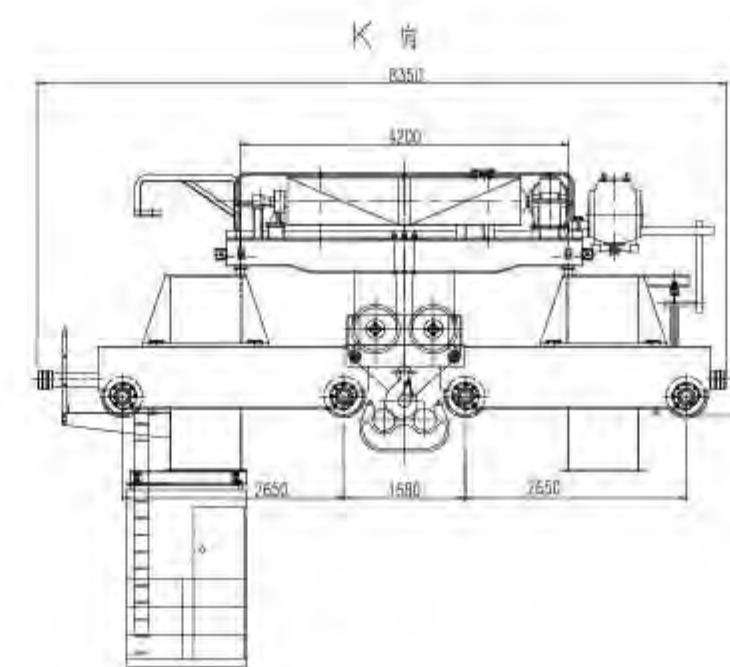
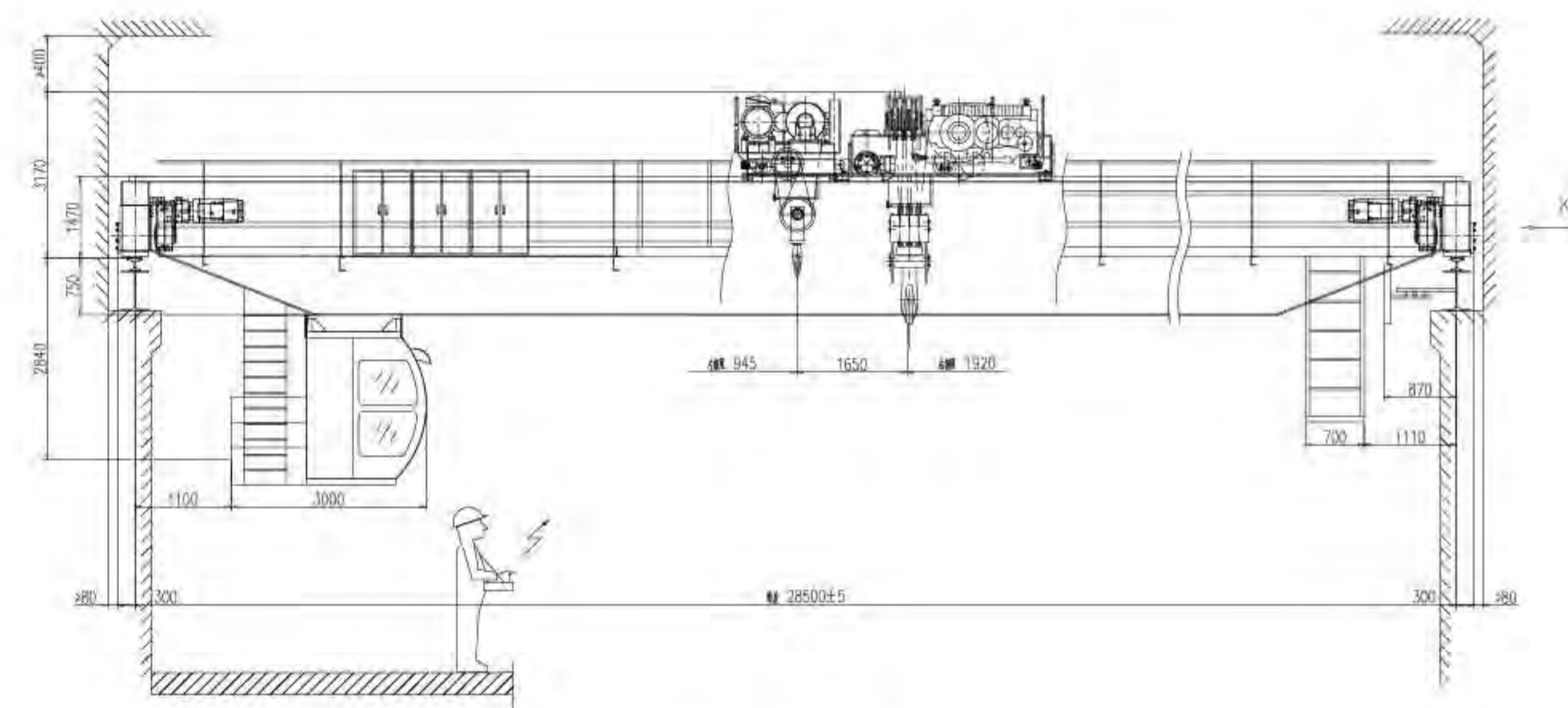


技术参数表 TECHNICAL DATA SHEET

起重量 Lifting Capacity kg	跨度 Span (LK) m	起升高 度 Max Lifting Height (H5) m	起升速 度 Lifting Speed (Standard) m/min	H mm	H1 mm	H2 mm	H3 mm	L mm	L1 mm	L2 mm	B mm	W mm	K mm	b mm	最大轮 压 Max. wheel load KN	大车轨道 Crane Rail Recommended (荐)	整机功 率 Total Power KW	整机自 重 Dead weight t		
75/20	13.5	0-4	0-4	2540	1350	3255	2440	13960	2150	3300					227	QU80	115	44.4		
	16.5														2540			16960	237.5	47.1
	19.5														2590			19960	249	51.3
	22.5			2590	1400		2590	22960							290			61		
	25.5			2640	1450		2640	25960							297.5			67		
	28.5			2790	1600		2650	31960							314			71.8		
	31.5																			
100/20	13.5	12	0-3.1	2800	1460	2782	2540	13960	2300	3800	7340	5510	3000	230	339	QU80	126	50.3		
	16.5														2540			16960	344	54.3
	19.5														19960			350	59.3	
	22.5			22960	2300		3800	356							64.3					
	25.5			25960	362		69.3													
	28.5			28960	368		74.5													
	31.5			31960	371		77													
125/20	16	0-2.6	0-2.6	2800	1460	3255	2540	16460	2300	3800					369	QU80	144	56.5		
	19														19460			375	63	
	22														22460			380	66.1	
	25			25460	390		70.2													
	28			2690	28460		400	77.4												
	31			31460	414		84.7													
	34			3000	1660		2790	34460							435			101.5		

CXSM型150/32吨第三代欧式起重机简图及参数

The Third Generation CXSM Model 150/32T European Crane Sketch And Specification

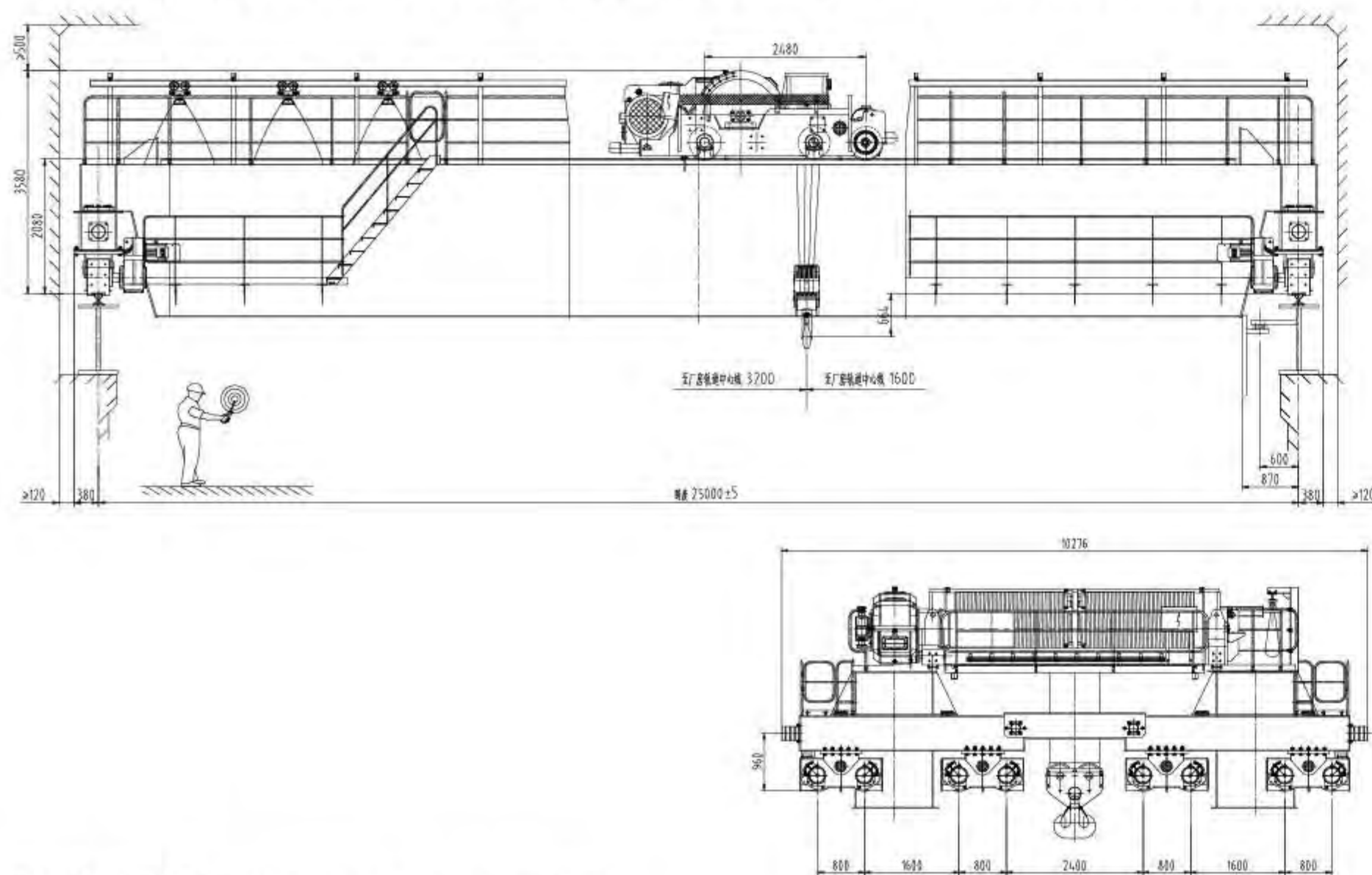


技术参数表 TECHNICAL DATA SHEET

载荷 Capacity	150/32t
跨度 Span	28.5m
起升高 度 Max Lifting Height	13m
起升速 度 Lifting Speed	主钩0-2.5 副钩0-5.2 m/min变频 Main Hook 0-2.5 Auxiliary Hook 0-5.2 m/min (VVVF)
小车速度 Cross Traveling Speed	20/5 m/min变频 (VVVF)
大车速度 Long Traveling Speed	40/10 m/min变频 (VVVF)
起升电机功率 Lifting Motor Power	主钩 Main Hook 75kW
小车运行电机功率 Crossing Traveling Motor Power	2 × 15KW
大车运行电机功率 Long Traveling Motor Power	4 × 15KW
小车自重 Trolley Dead Weight	24.3t
桥架重量 Bridge Dead Weight	64.7t
供电电压 Power Source	380V/48V/50Hz
起重机工作级别 Crane Working Class	FEM A5
小车运行 Cross Traveling	FEM 2m(M5)
大车运行 Long Traveling	FEM 2m(M5)
整机功率 Total Power	155kW
最大轮压 Max. Wheel Loading	469KN

CXSM型320吨第三代欧式起重机简图及参数

The Third Generation CXSM Model 320T European Crane Sketch And Specification

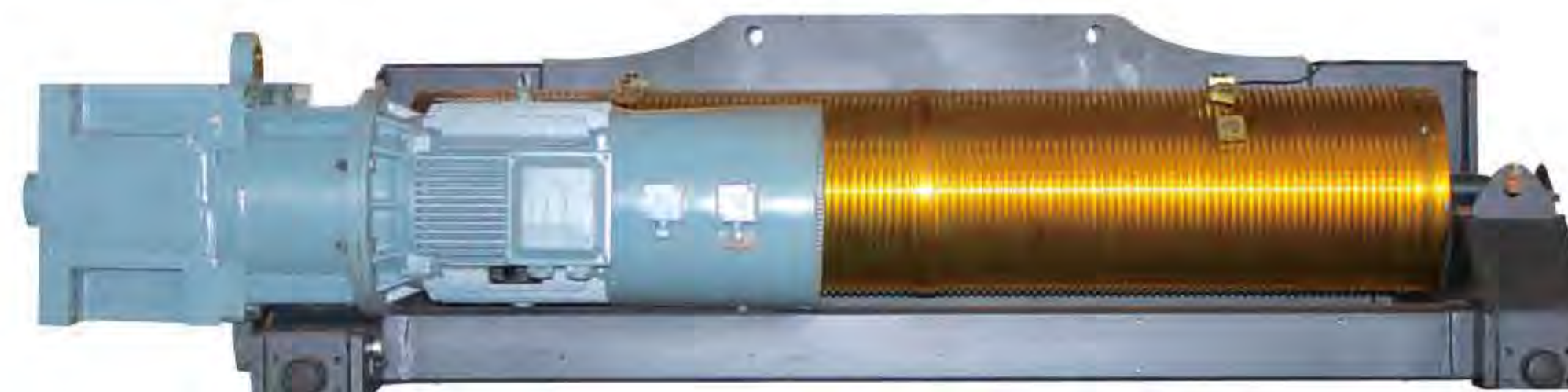


技术参数表 TECHNICAL DATA SHEET

载荷 Capacity	320t
跨度 Span	25m
起升高度 Max Lifting Height	20m
起升速度 Lifting Speed	主钩0-1.2变频 Main Hook 0-1.2 VVVF
小车速度 Cross Traveling Speed	20/5 m/min变频 VVVF
大车速度 Long Traveling Speed	40/10 m/min变频 VVVF
起升电机功率 Lifting Motor Power	主钩 Main Hook 75kW
小车运行电机功率 Crossing Traveling Motor Power	2 × 15KW
大车运行电机功率 Long Traveling Motor Power	4 × 15KW
小车自重 Trolley Dead Weight	40.3t
桥架重量 Bridge Dead Weight	105t
供电电压 Power Source	380V/48V/50Hz
起重机工作级别 Crane Working Class	FEM A5
小车运行 Cross Traveling	FEM 2m(M5)
大车运行 Long Traveling	FEM 2m(M5)
整机功率 Total Power	165kW
最大轮压 Max. Wheel Loading	526KN

EXTREME LOW CLEARANCE LIFTING TROLLEY 极限低净空小车

专注专业 创领世界 Passion on Profession, Leading Technology

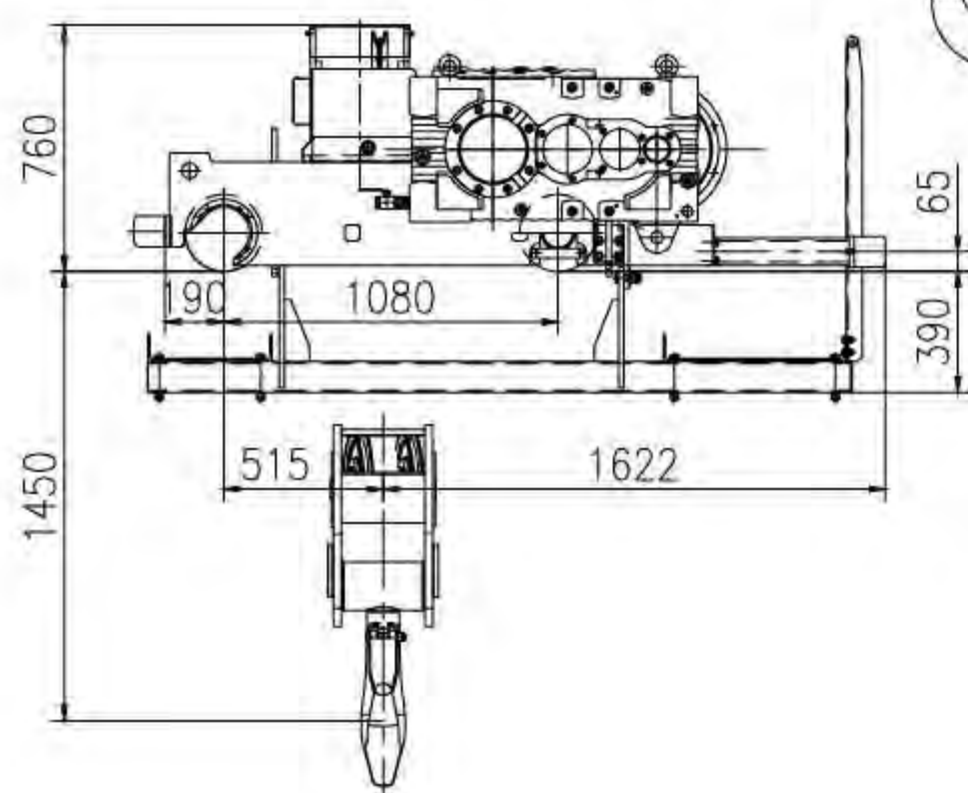
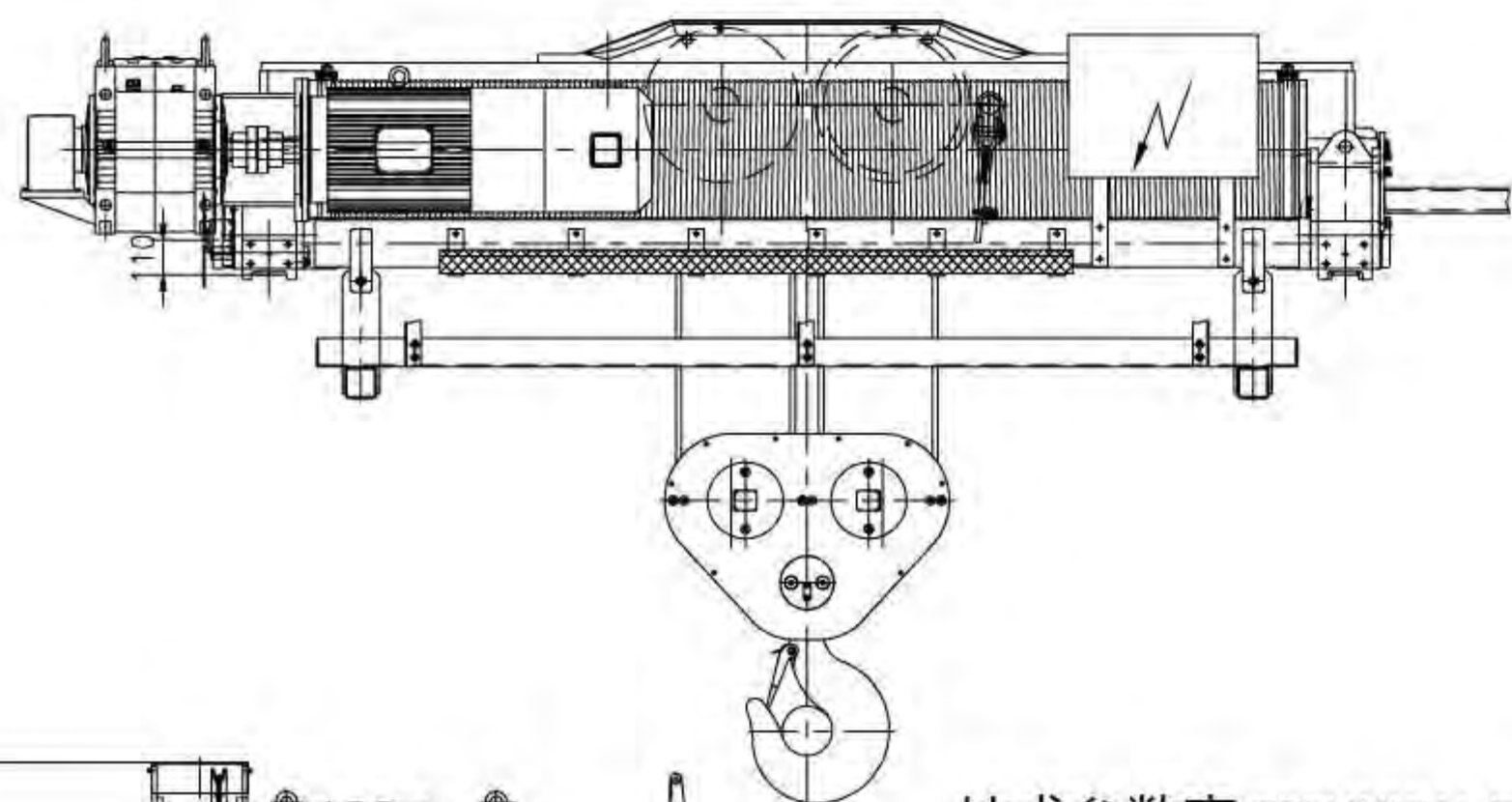


性能描述 Performance Description

- ★ 低净空，世界领先的专业技能!超静音，50分贝以下；
- ★ 寿命长，柔性连接，全车变频，消除小车载荷时应力，延长小车使用寿命；
- ★ 超安全，安全系数领先国标实现2.1，国标系数1.8。
- ★ Low clearance room, world-leading professional skills! Ultra-quiet, below 50 decibels
- ★ Long service life, flexible connection, VVVF control, eliminate stress of trolley load, extend the trolley using life.
- ★ Ultra-secure, the safety factor achieve to 2.1 ahead of national standard, which the national standard factor is 1.8

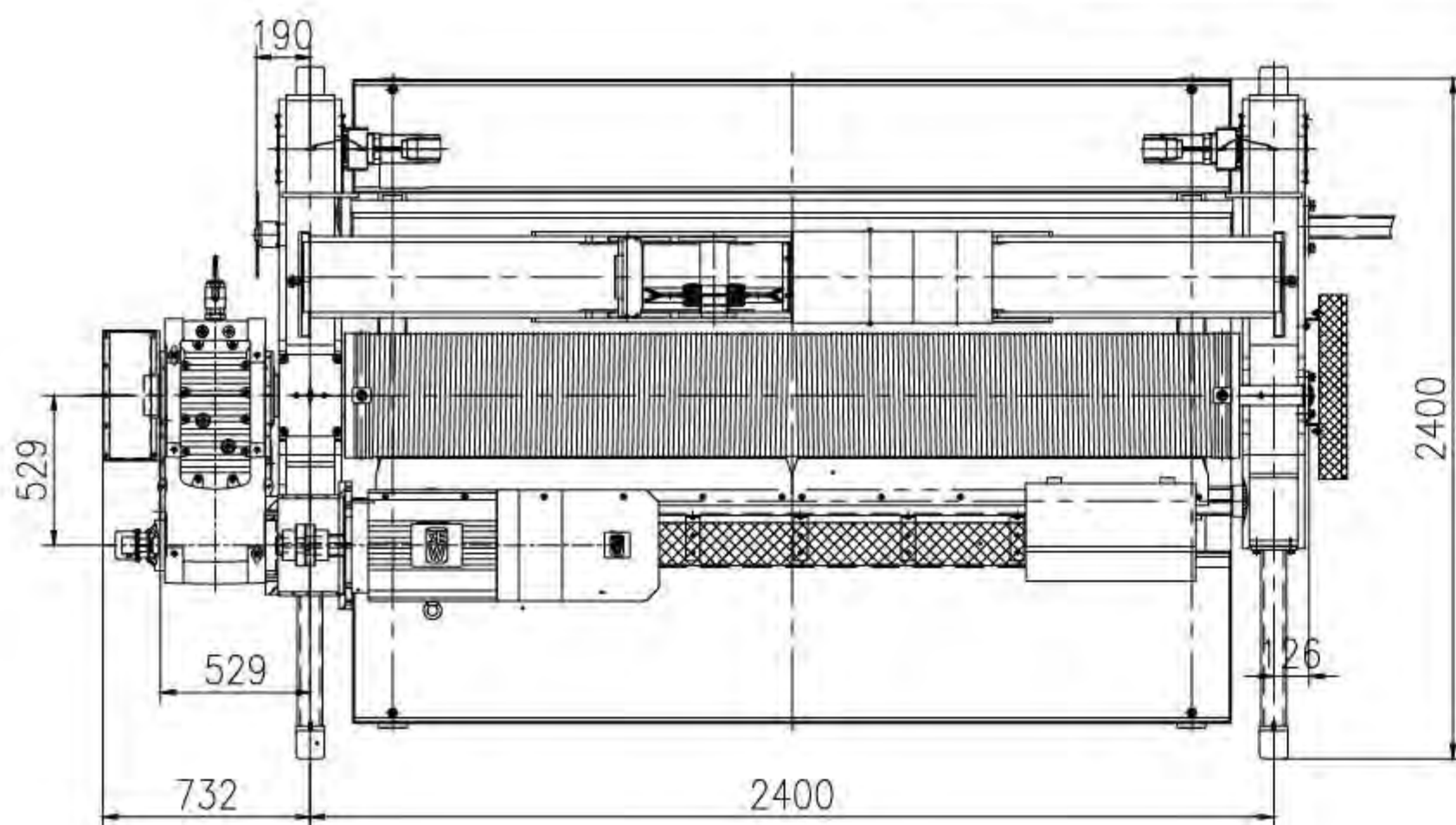


极限低净空小车简图及参数
Low Clearance Trolley Sketch And Specification



技术参数表 TECHNICAL DATA SHEET

起重量 Lifting Capacity	32t
起升高度 Liftign Height	18m
起升速度 Lifting Speed	5m/min变频控制 VVVF
运行速度 Traveling Speed	20m/min变频控制 VVVF
起升电机 Lifting Motor	30KW 40%ED
运行电机 Traveling Motor	2 × 1.1KW 25%ED
电源 Power Source	三相 380V 50HZ



ELECTRICAL CONTROL
电气控制

安全滑触线

- ★ 安全滑触线供电
- ★ 防腐蚀、绝缘外壳封闭的紧凑型复合滑触线
- ★ 导电率高、压降小
- ★ 自重轻、安装便利、无须维护
- ★ 使用温度范围：-30°C到 +60°C
- ★ 集电器滑行速度高，确保持续供电

Safety Slide Wire

- ★ Power supply with safety slide wire
- ★ Compact and compound slide wire with anti-corrosion and enclosed with insulated shell
- ★ High conductivity and low pressure drop
- ★ With light self-weight, easy installation and maintenance-free
- ★ Used temperature range: -30°C - +60°C
- ★ Current collector has high slipping speed ensuring continuous power supply.

电控箱与电缆

控制箱体表面经喷塑防腐处理，布局合理，便于维修，防护等级IP55，环境温度：<45°C，湿度 <90%，主电源为三相四线 380V(+/-10%)，50Hz(+/-5%)，所有电线都有颜色、数字或线号标记，易于识别。固定电缆布置在线槽内或有保护套管（镀锌钢管）。插头采用标准编码，减少错误连接。

所有连接采用重载航空插头插座，接插牢固，装配简单快捷；

控制箱内布局合理，便于维修；

插头连接部位采用塑料套管绝缘保护；

所有线缆都有线号，便于识别；

小车移动供电系统采用起重机专用的 PVC 扁电缆，耐压等级达到 450/750V

小车移动供电系统由扁电缆、镀锌滑轨和电缆小滑车，滑动平稳；

线路部分，采用线框线槽保护，保障电路安全，延长使用寿命，线槽安装维修方便，对于线缆易于观察。

Electric Control Cabinet And Cable

Surface of electric cabinet is dealt with through antiseptis plastic spraying, reasonable layout, easy maintenance, with protection level IP55, the temperature of working environment should be lower than 45 °C and the humidity should be less than 90%. The main power supply employs three-phase four-wire with 380V(+/-10%), 50Hz (+/-5%). All wires have color, number or wire size marks, by which can be easy identified. The fixed cable is arranged at groove or has protective cased pipe (galvanized steel pipe). The plug uses standard code in order to avoid incorrect connection.

All connection employs overloaded air plugs and sockets, which can be solid connected and have simple installation and assemble;

Layout in electric cabinet is reasonable in order to ensure easy reparation;

The plastic insulation protection is applied to the connection of plugs;

All cables have their own wire size in order that they can be recognized;

PVC flat cable specially used for crane is employed in power supply system of trolley traveling, of which voltage-endurance gets to 450/750V.

The power supply system of trolley traveling consists of flat cable, galvanized sliding rail and cable trolley, which has stable sliding;

As to circuits, wire frame and wire groove are used to protect them for the purpose to ensure safety of circuits and prolong service life. Installation of wire groove is easy to repair and maintain, which contributes to observe cable.



防撞装置

同一轨道有多台起重机运行时，常规解决方案下均设置有接触式防互撞装置，避免误操作引起相互间剧烈撞击。繁忙运行或特别重要的工作环境可加装红外非接触感应式防撞装置实现双重安全保护措施，声光报警。

Anti-Collision Device

If several cranes travel on the same rail, the common resolutions refer to install contact anti-collision device so as to avoid sharp impact due to incorrect operation. Non-contact infrared sensor anti-collision device will be additionally installed to take double safety protection measure- sound and light alarm if running busily or under an important working environment.

超载保护装置

对于超载作业，有防护作用的安全装置，包括自动停止型起重重量限制器和重量显示仪，在设定误差范围 3% 内（自动识别实际超载和正常作业时吊物起升、制动、运行时的动载影响）按照取力传感器的信号，自动停止向不安全方向动作，同时允许向安全方向动作，并发出声光预警信号，并可根据要求在桥架上设置大屏幕重量显示仪。

Overload Protection Device

If work with over load, it has safety devices with protection function including auto-stop lifting-capacity limiter and weight display. Within error limit of 3% of the set point (auto-recognize actual effects of moving-load while lifting, braking and movement of items at overload and ordinary working condition), it auto-stops moving to the unsafe location according to signals of power take sensor, meanwhile, allows to move to safety position and sends sound and light warning signals, and the large weight display can be installed on the bridge in accordance with demand.

电气保护

主隔离开关，紧急断电开关，短路、失压、零位、失磁、过流和超速保护等措施完备，充分落实安全第一的理念。

Electric Protection

It has complete equipments including main isolation switch, emergency disconnect switch, protection for short circuit, pressure loss, zero position, excitation loss, over current and over speed, which sufficiently implements conception of safety first.



安全监控单元（选配）

- ★ 计算起升机构剩余安全工作周期
- ★ 累计起升工作时间、超载次数、电机启动次数
- ★ 起升电机过热保护及报警
- ★ 过载保护及报警

Safety Monitoring Power Unit (Optional)

- ★ Compute the rest safety working circle of hoisting mechanism
- ★ Accumulated working time for lifting, overload and motor starting times
- ★ Over-heat protection of hoisting motor and alarm
- ★ Overload protection and alarm



起重机控制模式

★ 地操

操作简便，无需设置专业驾驶员

★ 双挡按钮

跟随式或独立滑道非跟随式悬挂

防护等级为 IP65

寿命 50 万次

★ 遥控

操作简便，无需设置专业驾驶员，操作者在地面自由度大

几万组频点，互不干涉

双挡按钮或摇杆式操纵杆

防护等级为 IP65

寿命 50 万次

★ 空操

航空仓司机室，大视野，钢化玻璃，方便开启便于擦拭，符合人体工程学的座椅，

操作灵活的联动台，需设置专业驾驶员。



Control Patterns Of Crane

★ Ground control

Easy to operate and without assigning professional driver

★ Double buttons

Following-type or separate slide non-following hanging

Protection level IP65

Service life 500,000 times

★ Wireless Remote Control

It's easy to operate, without assigning professional driver. The operator has more freedom on the ground.

There is no any interaction between tens thousands of group frequency.

Double buttons or rocker lever

Protection level IP65

Service life 500,000 times

★ Cabin control

Space luxury cabin, large wide view, tempered glass, easy open for clean, Ergonomic chair and flexible linkage control console, need professional crane driver.

安全防护功能

Safety Protection Function

★ 红外感应限位，灵敏、可靠

★ Wireless anti-collision limiter: with infrared sensor limiter, it's sensible and reliable;

★ 制动安全保护：电气制动 + 机械制动

★ Braking security protection: electric brake and mechanical brake;

★ 大车，小车运行机构设置可以吸收运动能量减缓硬冲击的聚氨酯缓冲器，其安装和维护方便，同时重要工作场合下，液压式缓冲器也可作为选配方案达到更好的性能。

★ The traveling mechanism of crane and trolley has polyurethane buffer which relieves impact by absorbing motion energy and is easy to install and maintain, meanwhile, under important working condition, the hydraulic buffer also be selected to achieve the better performance;

★ 防撞扫轨板，端部止挡块

在大车和小车的车轮前均安装扫轨板，清除轨道上的异物，保证起重机运行安全。

在大车和小车运行的极限位置均安装有端部止挡块，作为电气限位失灵情况下的强制停止措施，防止起重机脱轨。

★ Anti-collision rail-sweep plate and end stop blocks;

Install rail-sweep plate in front of LT&CT wheels, clean off any objects on the rail and ensure crane travel safely.

Install end stop block at the travelling limit position of LT & CT, which is considered as force stopping methods if electric limit switch fail.



APPLICATION 新型起重机应用

工作级别可达 M8，噪音低

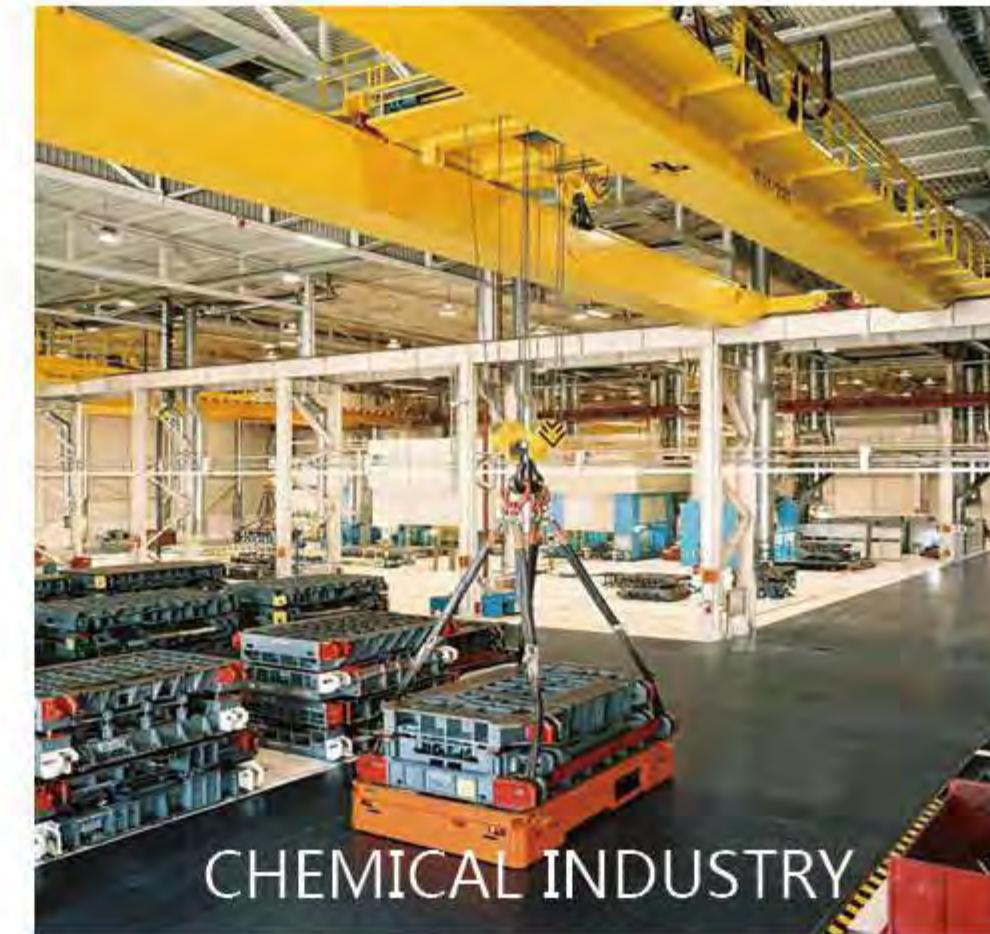
适用于工厂、货场、码头、电厂、建筑、工地等场所

特别适合厂房或使用场地的净空高度受到限制，可用来最大限度提高有效起升高度

Working class can reach M8, low noise

Be applicable to plane, goods yard, dock, power plant, building, construction site and other places.

Especially applicable to plant or the places that head room is limited, maximally improve the lifting height.





METALLURGY CRANE



PAPER INDUSTRY



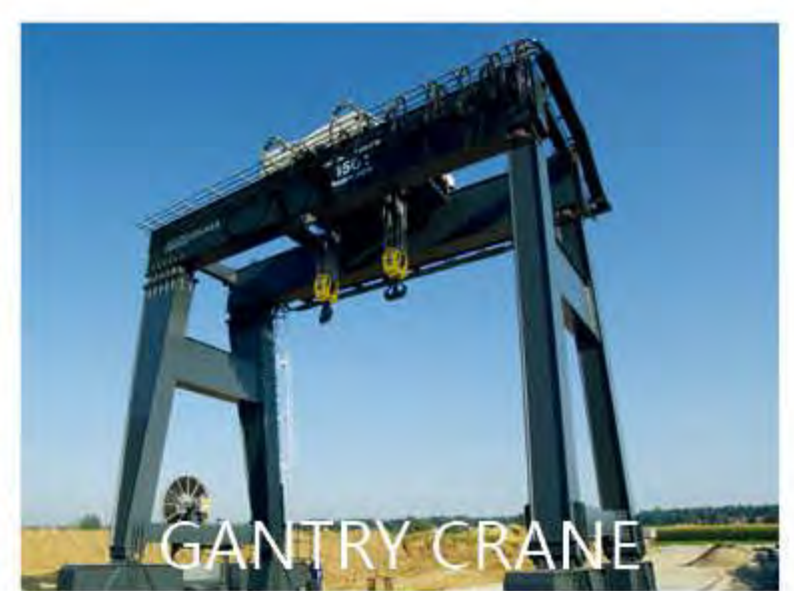
BILLET REBAR HANDLING CRANE



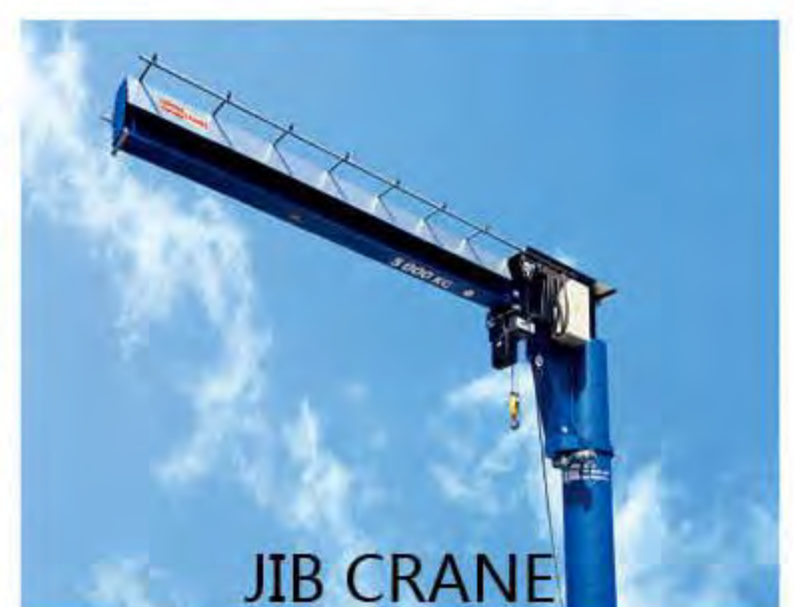
STEEL PLATE HANDLING CRANE



STEEL COIL CRANE



GANTRY CRANE



JIB CRANE