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起重设备产品手册  
LIFTING EQUIPMENT PRODUCT MANUALS



运营中心: 广东掌握重工科技有限公司  
Operation Center: Guangdong Master Heavy Industry Technology Co., Ltd  
生产中心: 河北坤达起重设备有限公司  
Production Center: Hebei Kunda Hoisting Equipment Co., Ltd  
全球销售中心: 天津坤达起重设备有限公司  
Global Sales Center: Tianjin Kunda Hoisting Equipment Co., Ltd

联系电话: 0317-2603586 0317-2603732  
Tel: 0086-022-85100278 Mob: 0086-15522182694  
企业官网: [www.toyo-hoists.com](http://www.toyo-hoists.com)  
Website: [www.toyo-hoists.com](http://www.toyo-hoists.com)  
企业邮箱: [sales@toyo-hoists.com](mailto:sales@toyo-hoists.com)  
Mail: [sales@toyo-hoists.com](mailto:sales@toyo-hoists.com)  
生产中心地址: 河北省任丘市胜利路67号  
Production Center Address: 67 Shengli Road, Renqiu City, Hebei Province, China  
全球销售中心地址: 天津市北辰区双街可信产业园  
Global Sales Center Address: Shuangjie Trusted Industrial Park, Beichen District, Tianjin, China

坤达起重设备有限公司  
Kunda Hoisting Equipment Co.,Ltd

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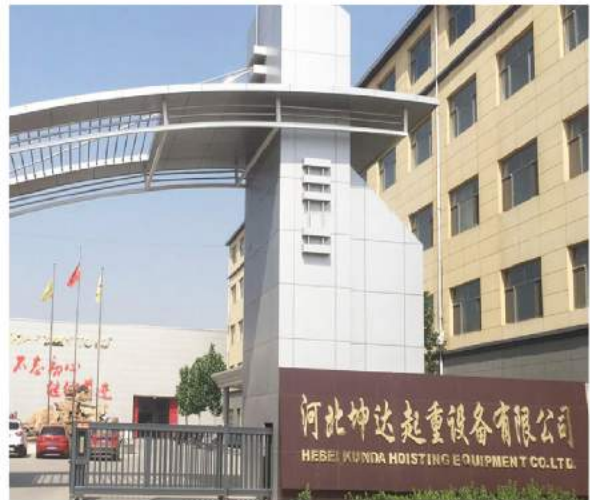
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# Company Profile 企业简介

Kunda Hoisting Equipment Co., Ltd was established in 1996, is a high-tech enterprise integrating r&d, manufacturing and sales. It is located in renqiu industrial zone in the hinterland of the Beijing-Tianjin-Hebei economic golden triangle. At present, there are more than 360 employees, including 3 senior engineers and 26 technical talents of all kinds, accounting for 19% with college degree or above. The company covers an area of 60,000 square meters and has a total asset of 600 million yuan.The leading products are Mini electric hoist(PA), Chain Block, Ratchet Lever hoist, Electric Chain Hoist, European Type Wire Rope Hoist, Electric Winches and other series of hardware lifting products.In 2006, obtained the product export license, to the current overseas market exported to Australia, the United States, Canada, Russia, Brazil, Mexico, Iran, India, Romania and other countries and regions.

Focusing on the research and development and innovation of lifting equipment, Kunda has obtained two national patents and a famous trademark in Hebei province. Its products have successively obtained China CCC certification, ISO9001, and its main products have passed international CE, GS, PAHs and TUV certification.We have partners all over the world, BOSCH, CINTAS, hapag-lloyd, etc.To provide customers with more safe and efficient, ultra-low noise, value of the lifting equipment, is our eternal pursuit.



坤达起重设备有限公司创建于1996年,是家集研发、制造、销售为一体的高新技术型企业,地处京津冀经济金三角腹地任丘工业区。现在职工360余人,其中高级工程师3人,各类技术人才26人,大专以上学历占19%,占地面积6万平方米,总资产6亿元。主导产品为微型电动葫芦、手拉葫芦、手扳葫芦、环链电动葫芦、欧式钢丝绳电动葫芦,电动绞盘等系列五金起重产品,总年产100余万台,成为中国北方最大的起重设备生产企业。2006年,取得产品出口许可证,到目前海外市场远销至澳大利亚、美国、加拿大、俄罗斯、巴西、墨西哥、伊朗、印度、罗马尼亚等多个国家和地区。

坤达专注于起重设备的研发与创新,获得两项国家专利,河北省著名商标,产品先后取得中国CCC认证、ISO9001、主要产品已通过国际CE、GS、PAHs、TUV认证。我们的合作伙伴遍布世界各地, BOSCH, CINTAS, Hapag-Lloyd等。为客户提供更安全高效、超低噪音、超值的起重设备,是我们永恒的追求。



## Qualification Certification 企业资质

TOYO Internet in April 2017 + new retail conference and new product launch, chain VA type C, micro letter, lever hoist, electric hoist PA type, chain electric hoist (TY1, TY2) is listed on the first batch of products. TOYO products have GS certification and CE certification, and their quality is recognized internationally. In addition, TOYO products also have CNAS certification, CMA metrological certification, CAL quality certification.It has special equipment manufacturing license and special equipment type test certificate issued by national lifting and transportation machinery quality supervision and inspection center.

2017年4月TOYO互联网+新零售发布会暨新产品发布会举行,手拉葫芦KII型、手扳葫芦C型、微型电动葫芦PA型、环链电动葫芦(TY1型、TY2型)首批产品正式上市。TOYO产品拥有GS认证证书和CE认证证书,产品质量受到国际认可。此外,TOYO产品还拥有CNAS认证标识,通过CMA计量认证,CAL质量认证。拥有国家起重运输机械质量监督检验中心颁发的特种设备制造许可证和特种设备型式试验合格证。





# Intelligent Aided Lifting Equipment

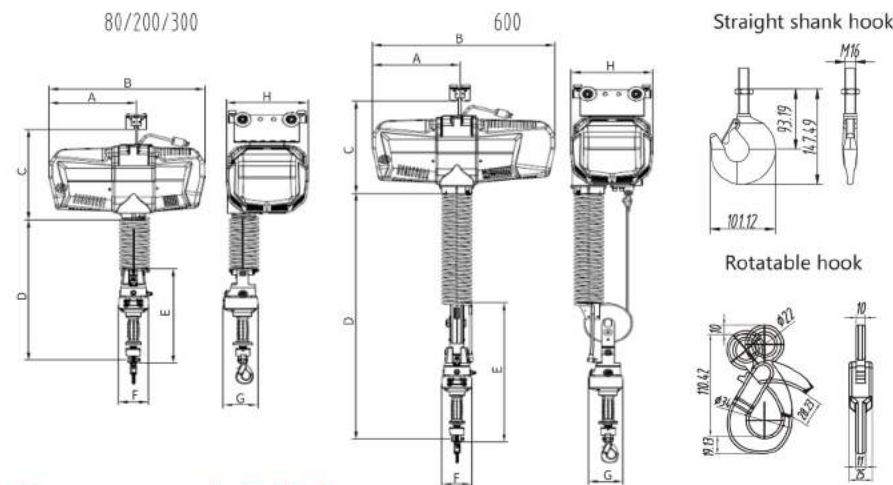
## 智能辅助提升设备

提升载重: 80kg, 200kg, 300kg, 600kg 以及客户需求定制

Hoisting Capacity: 80kg, 200kg, 300kg, 600kg and Customized as clients' request

提升速度: 最高达到40m/min

Lifting Speed: Up to 40m/min



### ● Features产品特点

#### ① 智能化, 操作简单, 升降速度可控

Intelligent and Easy Operation, Lifting Speed is controllable

#### ② 高精度定位(升降移动)

High Accuracy Positioning (Lifting and Moving)

#### ③ 安全、可靠

Safety and Reliable

#### ④ 良好的环境适应性(防尘、防潮)

Good Environmental Adaptability (Dust Resistance, Moisture Resistance)

### ● Technical Parameters性能参数表

Model型号	LAH-T080	LAH-T200	LAH-T300	LAH-T600
Maximum Lifting Capacity(loads and tools) (KG)最大提起重量(重物 and 夹具)	80	200	300	600
Maximum Lifting Speed-manual Mode (m/min)最大提升速度-手动模式	40	30	15	7.5
Maximum Lifting Speed-suspension Mode (m/min)最大提升速度-悬停模式	36	27	13.5	6.75
Maximum Lifting Stroke (m)最大提升行程	3.5	3.5	3.5	1.7
Rated Power额定功率	750W	1500W	2000W	2000W
Maximum Current (A)最大电流	10A	12A	15A	15A
Main Power Supply (VAC)主电源	Single phase单相 220V±10%	Single phase单相 220V±10%	Three phase三项 220V±10%	Three phase 三项 220V±10%
Limit限位	Hardware Limit and Software Limit 硬件限位、软件限位			
Available Power Supply for Tools工具可用电源	24VDC/0.5A			
Control Mode控制方式	Servo Control (Position control)伺服控制(位置控制)			
Lifting Media提升介质	Φ5.0mm 19x7 不锈钢钢丝绳			Φ6.5mm 19x7
Working Environment Temperature Range工作环境温度范围	-10-60°C			
Humidity Range of Working Environment工作环境湿度范围	0-93% without condensation无凝结			
Precision of Weight Displayed (KG)重量显示精度	±1% rated load lifting capacity额定起重量			
Cooling Method冷却方式	Natural wind or forced wind自然风或强迫风			
Noise噪音	≤80dB			

# Main Engine 主机



在选择智能辅助提升设备时,若要求非常高的提升精度和速度,建议您选用TOYO智能辅助提升设备。我公司生产的智能辅助提升设备具有准确的定位、自如的响应能力,电动葫芦、气动葫芦与本产品不具备可比性。

We recommend TOYO Intelligent aided lifting equipment to you if you require higher lifting precision and speed. Our Intelligent aided lifting equipment can provide you with more accurate positioning than electric hoist and stronger response than pneumatic hoist.

智能辅助提升设备主机组件主要承担为设备提供准确的控制、提升所需动力及信号处理。

The main engine of our Intelligent aided lifting equipment can provide precise control, and improve the power needed for lifting and signal processing.

### ● Technical Parameters性能参数表

Major Components of Main Engine主机主要部件	
Component, specification部件名称、规格	Quantity数量
Servo drive伺服驱动器	1
Servo motor伺服电机	1
E830主控板E830 Master control board	1
Smart sensors智能传感器	4

# Spiral cable 螺旋线缆

螺旋线缆的作用是在主机与手柄之间传输信号,传输的信号包括提升方向、提升速度、急停信号及故障信号等。

Spiral cable enables signal transmission between the main engine and the handle. The signals are mainly used for control the lifting direction, lifting speed, scram and break down.



# Handle 手柄



手柄是操作人员与提升设备之间的主要接口。用户通过手柄控制设备的升降,同时通过显示屏获取相应的信息。

Handle serves as the main interface between the operator and lifting equipment, with which the operator can control the equipment up and down and corresponding information can be available on the screen.

### ● Technical Parameters性能参数表

Main Components of Handle 手柄主要部件	
Component, Specification部件名称、规格	Quantity数量
LED Display LED显示屏	1
E831 Handle Panel E831手柄控制板	1
E837 Handle Display Board E837手柄显示板	1
E835 / E836 Handle Slip Ring Board E835/E836手柄滑环板	1
Photoelectric Sensor光电传感器	1



## Types of handle 手柄类型



### Sliding handle for remote installation 远程安装滑动手柄

特点:可根据手柄把手的位移量来控制设备运行的速度和方向;手柄内置光电传感器,可有效防止误操作,安全可靠;配置有显示屏,可随时查看相关信息,如:位移数据、操作模式等;适用于高度有限,操作人员无法靠近负载的场合。该手柄可集成在终端夹具上或固定于外侧。

This type of handles apply to a workplace with limited height and inaccessible to operators. They can be integrated into the fixture of or secured externally on a terminal.

Features: The operation speed and orientation of the equipment can be controlled based on the displacement of the handle, in which a photoelectric sensor is configured to provide safety and reliability without operation error. Meanwhile, a display is available for information access at anytime, e.g. displacement data, operation mode, etc.



### All-touch handle 全触控手柄

特点:根据内置压力传感器来控制设备运行的速度和方向;手柄模块两侧可增加任意外形的把手;配置有显示屏,可随时查看相关信息,如:位移数据、操作模式等;集成性强。适应集成在终端夹具上。

Features: Regulate the operation speed and orientation of the equipment through a built-in pressure sensor. The two sides of the handle module allow installation of grips in any form. A display is available for information access at any time, eg. displacement data, operation mode, etc. Highly integratable, applicable to integration into terminal fixture.



### Wireless remote control handle 无线遥控手柄

通过按键可以实现快速上下运动。慢速上下运动、切换悬浮、切换悬浮卸载等功能,适用于负载较大。行程较长的场合。

注:速度大小。功能类型可自定义。

By pressing the relevant buttons, this kind of handles can realize fast/slow upward/downward movement, switching between suspension and suspension unloading, etc. It is applicable to occasions of heavy loads and long stroke.

Note: Customized speed and functions are available.



### Coaxial sliding handle 同轴滑动手柄

特点:可根据手柄把手的位移量来控制设备运行的速度和方向;手柄内置光电传感器,可有效防止误操作,安全可靠;配置有显示屏,可随时查看相关信息,如:位移数据、操作模式等;手柄内置滑环组件,可有效的防止弹簧线、钢丝绳的扭结。

适用于操作人员可触及的高度及负载体积较小的工位。

Features: The operation speed and orientation of the equipment can be controlled based on the displacement of the handle, in which a photoelectric sensor is configured to provide safety and reliability without operation error. Meanwhile, a display is available for information access at any time, e.g. displacement data, operation mode, etc. A slip ring assembly is built in the handle, effectively preventing twist of spring cables and steel wire ropes. It is applicable to stations with accessible height and loads of small volume.

## Extension button handle 扩展按键手柄



### Single-button stepless extension handle 无级扩展单按键手柄

与无级手柄配合使用,适用于高度有限,操作人员无法靠近负载的场合,同时提供单按键开关,该按键可用于扩展功能使用。也可用于控制外部设备,如气阀、电磁阀等。该手柄可垂直悬挂于主机下方或安装在终端实具上。

Used in combination with a stepless handle, this type of handles applies to a workplace with limited height and inaccessible to operators. At the same time, a single-button switch is provided for extended function or to control external equipment such as air and solenoid valves. This kind of handles can either be hung beneath the main engine or installed on the terminal fixture.



### Double-button stepless extension handle 无级扩展双按键手柄

与无级手柄配合使用,适用于高度有限,操作人员无法靠近负载的场合。同时提供双按键开关,该按键可用于扩展功能使用,也可用于控制外部设备,如气阀、电磁阀等。该手柄可垂直悬挂于主机下方或安装在终端夹具上。

Used in combination with a stepless handle, this type of handles applies to a workplace with limited height and inaccessible to operators. At the same time, a double-button switch is provided for extended function or to control external equipment such as air and solenoid valves. This kind of handles can either be hung beneath the main engine or installed on the terminal fixture.



### Remote coaxial extension button handle 远程同轴扩展按键手柄

与远程安装滑动手柄配合使用,适用于高度有限,操作人员无法靠近负载的场合。同时提供单路按键开关,该按键可用于扩展功能使用,也可用于控制外部设备,如气阀、电磁阀等。该手柄可集成在终端夹具上或固定于外侧。

Used in combination with a remote installation sliding handle, this type of handles applies to a workplace with limited height and inaccessible to operators. At the same time, a one-way switch is provided for extended function or to control external equipment such as air and solenoid valves. They can be integrated into the fixture of or secured externally on a terminal.



### Three-button extension handle 扩展三按键手柄

手柄提供三路按键开关,该按键可用于扩展功能使用,也可用于控制外部设备,如气阀、电磁阀等。适用于双按键控制无法满足于使用要求或设备升降和控制按键需分离的场合。该手柄一般集成在终端夹具上。

On this kind of handles, a three-way switch is provided for extended function or to control external equipment such as air and solenoid valves. It applies to occasions where double buttons fail to fulfill the requirement of use or buttons for equipment lifting and control need to be separated. Such type of handles is generally integrated into the terminal fixture.





### Four-button extension handle 扩展四按键手柄

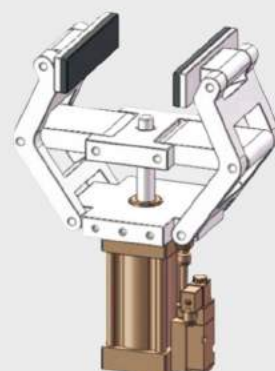
手柄提供四路按键开关,该按键可用于扩展功能使用,也可用于控制外部设备,如气阀、电磁阀等。适用于三按键控制无法满足于使用要求或设备升降和控制按键需分离的场合。该手柄一般集成在终端夹具上。

On this kind of handles, a four-way switch is provided for extended function or to control external equipment such as air and solenoid valves. It applies to occasions where three buttons fail to fulfill the requirement of use or buttons for equipment lifting and control need to be separated. Such type of handles is generally integrated into the terminal fixture.

## Optional accessories 可选配件



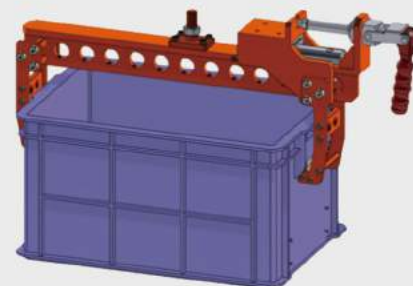
Extended I/O Box扩展I/O盒



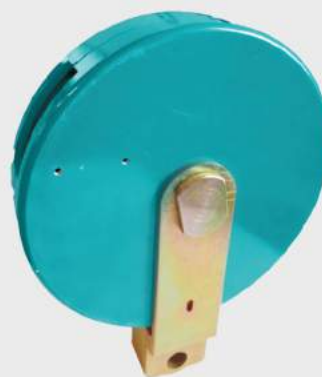
It could be customized according to the actual demand of the clients 夹具可根据客户现场需求定制



Wireless remote control receiver  
无线遥控接收



Fixture夹具设计



Movable pulley 动滑轮

## Electric Chain Hoist TY3-025

TOYO TY3-025环链电动葫芦



### ● Features产品特点

- 葫芦壳体:全铝合金压铸, CNC一体加工**  
Gourd shell: All aluminum alloy die casting, CNC integrated processing
- 电机一体式三相双速异步电机**  
S. All-in-one three-phase two-speed asynchronous motor
- 减速机:磨齿加工硬齿面斜齿轮,减速机油浴**  
Reducer: grinding teeth to process hard tooth surface helical gear, reducer oil bath
- 链轮:合金钢链轮, 高强度德国进口RUD链条**  
Sprocket wheel: alloy steel sprocket wheel, : high strength RUD chain imported from Germany
- 意大利进口GG手柄, CHERRY德国樱桃防水行程开关**  
GG handle imported from ItalyCHERRY German waterproof travel switch
- 电路板控制, DC5V控制电压, 选配DC24V控制带相序保护**  
circuit board control, DC5V control voltage, DC24V control with phase sequence protection
- 电源配威浦航空插头、控制配镀金水晶头加合金保护**  
power supply with Weipu aviation plug, control with gold-plated crystal head and alloy protection

### ● Size specification 尺寸规格

Model型号	Capacity(t) 载重	A	B	C	D	E	F	Hmin	J	L	K	X
TY3-0125	0.125	345	170	40	77	208	425	375	306	116	24	24
TY3-0250	0.25	345	170	40	77	208	425	375	306	116	24	24
TY3-0500	0.5	345	170	40	77	208	425	375	306	116	24	24
TY3-1000	1	345	170	40	77	208	425	375	306	116	24	27

Model型号	Capacity(t) 载重	Standard Lift(m) 起升高度	Classification(ISO) 工作级别	Lifting Speed(m/min) 起升速度	Lifting Short Chain 起重短链	No. Chain 链数	Out Put(kw) 输出功率	Motor Speed 电机转速(RPM)	Current(A) 电机电流	Voltage(V) 电压	Frequency(HZ) 频率	Duty Cycle 负载持续率(FC %)	Standard 3M N.W(kg) 配3米时净重
TY3-0125	0.125	2~18	M5	20-5月	4X12	1	0.17/0.7	680/2680	0.8/1.5	3P 380	50	13.4/26.6	22
TY3-0250	0.25	2~18	M5	8-2月	4X12	1	0.17/0.7	680/2680	0.8/1.5	3P 380	50	13.4/26.6	22
TY3-0500	0.5	2~15	M5	1.5/6	5X15	1	0.17/0.7	680/2680	0.8/1.5	3P 380	50	13.4/26.6	22.6
TY3-1000	1	2~10	M4	0.75/3	5X15	2	0.17/0.7	680/2680	0.8/1.5	3P 380	50	20-10月	26.5



# Electric Chain Hoist TY3-F025

TOYO TY3-F025变频环链电动葫芦



## ● Features产品特点

- 1 全铝合金压铸, CNC一体加工**  
Die casting and CNC processing of all Aluminum Alloy
- 2 恒扭矩变频电机, 合金钢链轮**  
constant torque variable frequency motor, alloy steel sprocket
- 3 磨齿加工硬齿面斜齿轮, 减速箱油浴**  
grinding tooth machining hard tooth surface helical gear, reduction box oil bath
- 4 高强度德国进口RUD链条**  
high-strength Germany imported RUD chain
- 5 变频器控制, 五重保护: 欠压, 过热, 过载, 过压, 过流**  
frequency converter control, five protection: undervoltage, overheating, overload, overvoltage, overcurrent.
- 6 意大利进口GG手柄**  
GG handle imported from Italy.
- 7 电器配威浦航空插头, 控制配镀金水晶头加合金保护**  
electrical appliance with Weipu aviation plug, control with gold-plated crystal head and alloy protection

## ● Size specification 尺寸规格

Model型号	Capacity(t)载重	A	B	C	D	E	F	Hmin	J	L	K	X
TY3F025-0.125T	0.125	345	170	40	77	208	425	357	306	116	24	24
TY3F025-0.25T	0.25	345	170	40	77	208	425	357	306	116	24	24
TY3F025-0.5T	0.5	345	170	40	77	208	425	357	306	116	24	27
TY3F025-1T	1	345	170	40	77	208	425	357	306	116	24	29

Model型号	Capacity(t)载重	Standard Lift(m)起升高度	Classification(I SO)工作级别	Lifting Speed(m/min)起升速度	Lifting Short Chain起重短链	No.Chain链数	Out Put(kw)输出功率	Motor Speed电机转速(RPM)	Current(A)电机电流	Voltage(V)电压	Frequency频率(HZ)	Duty Cycle负载持续率(FC%)	Standard 3M N.W(kg)标配3米时净重
TY3F025-0.125T	0.125	2~18	M5	20~5月	4X12	1	0.7	2860	2.8	1P 220	50	40	22
TY3F025-0.25T	0.25	2~18	M5	8~2月	4X12	1	0.7	2860	2.8	1P 220	50	40	22
TY3F025-0.5T	0.5	2~15	M5	1.5/6	5X15	1	0.7	2860	2.8	1P 220	50	40	22.6
TY3F025-1T	1	2~10	M5	0.75/3	5X15	2	0.7	2860	2.8	1P 220	50	40	26.6

# Electric Chain Hoist TY3-100

TOYO TY3-100环链电动葫芦



## ● Features产品特点

- 1 全铝合金压铸, CNC一体加工**  
Die casting and CNC processing of all Aluminum Alloy
- 2 恒扭矩变频电机**  
constant torque variable frequency motor
- 3 磨齿加工硬齿面斜齿轮, 减速箱油浴**  
grinding tooth machining hard tooth surface helical gear, reduction box oil bath
- 4 合金钢链轮**  
alloy steel sprocket
- 5 高强度德国进口RUD链条**  
high-strength Germany imported RUD chain
- 6 电路板控制, DC5V控制电压, 选配DC24V控制带相序保护**  
circuit board control, DC5V control voltage, optional DC24V control with phase sequence protection
- 7 意大利进口GG手柄**  
GG handle imported from Italy.
- 8 电器配威浦航空插头, 控制配镀金水晶头加合金保护**  
electrical appliance with Weipu aviation plug, control with gold-plated crystal head and alloy protection

## ● Size specification 尺寸规格

Model型号	Capacity(t)载重	A	B	C	D	E	F	Hmin	J	L	K	X
TY3100-0.5T	0.5	458	204	40	77	263	528	519	427	177	24	45
TY3100-1T	1	458	204	40	77	263	528	519	427	177	24	45
TY3100-2T	2	458	204	40	77	263	528	544	427	177	24	45

Model型号	Capacity(t)载重	Standard Lift(m)起升高度	Classification(I SO)工作级别	Lifting Speed(m/min)起升速度	Lifting Short Chain起重短链	No.Chain链数	Out Put(kw)输出功率	Motor Speed电机转速(RPM)	Current(A)电机电流	Voltage(V)电压	Frequency频率(HZ)	Duty Cycle负载持续率(FC%)	Standard 3M N.W(kg)标配3米时净重
TY3100-0.5T	0.5	2~18	M5	16~4月	7X21	1	0.45/1.9	680/2860	2.0/3.8	3P 380	50	13.4/26.6	47.5
TY3100-1T	1	2~18	M5	8~2月	7X21	1	0.45/1.9	680/2860	2.0/3.8	3P 380	50	13.4/26.6	47.5
TY3100-2T	2	2~15	M5	4~1月	7X21	2	0.45/1.9	680/2860	2.0/3.8	3P 380	50	13.4/26.6	47.5



# Electric Chain Hoist TY3-F100

TOYO TY3-F100变频环链电动葫芦

## ● Features产品特点



- 1 全铝合金压铸, CNC一体加工**  
Die casting and CNC processing of all Aluminum Alloy
- 2 恒扭矩变频电机, 合金钢链轮**  
Constant torque inverter motor, alloy steel sprocket wheel
- 3 磨齿加工硬齿面斜齿轮, 减速箱油浴**  
grinding teeth to process hard tooth surface helical gear, reducer oil bath
- 4 变频器控制, 五重保护: 欠压、过热、过载、过压、过流**  
Inverter control, five-fold protection: undervoltage, overheat, overload, overvoltage, overcurrent
- 5 高强度德国进口RUD链条**  
high-strength Germany imported RUD chain
- 6 CHERRY德国樱桃防水行程开关**  
CHERRY German waterproof travel switch
- 7 意大利进口GG手柄**  
GG handle imported from Italy.
- 8 电器配威浦航空插头, 控制配镀金水晶头加合金保护**  
electrical appliance with Weipu aviation plug, control with gold-plated crystal head and alloy protection

## ● Size specification 尺寸规格

Capacity(t)载重	A	B	C	D	E	F	Hmin	J	L	K	X
0.5	458	204	40	77	263	528	519	427	177	24	45
1	458	204	40	77	263	528	519	427	177	24	45
2	458	204	40	77	263	528	544	427	177	24	45

Capacity(t)载重	Standard Lift(m)起升高度	Classification (ISO)工作级别	Lifting Speed(m/min)起升速度	Lifting Short Chain起重短链	No.Chain链数	Out Put(kw)输出功率	Motor Speed电机转速(RPM)	Current(A)电机电流	Voltage(V)电压	Frequency频率(HZ)	Duty Cycle负载持续率(FC%)	Standard 3M N.W(kg)标配3米时净重
0.5	2~18	M5	16-4月	7X12	1	1.9	2680	3.8	3P 380	50	40	47.5
1	2~18	M5	8-2月	7X12	1	1.9	2680	3.8	3P 380	50	40	47.5
2	2~15	M5	4-1月	7X15	2	1.9	2680	3.8	3P 380	50	40	52.6

# Electric Chain Hoist TY3-FS Hand Control (Inverter)

TOYO TY3-FS手持控制变频环链电动葫芦

## ● Features产品特点



- 1 全铝合金压铸壳体, 结构紧凑密闭性好;**  
Aluminum alloy die-casting shell, compact structure and good sealing;
- 2 齿轮为高强度斜齿轮, 噪声小使用寿命长**  
The gears are helical gears with high strength, low noise and long service life.
- 3 失电式制动器, 制动平稳磨损小, 更安全。**  
Loss of power brake, brake smooth wear and tear, safer.
- 4 高强度耐磨工程塑料做导链器, 降低链条磨损与噪音。**  
High strength wear-resistant engineering plastics are used as guides to reduce chain wear and noise.
- 5 变频控制五重保护: 欠压、过热、过载、过压、过流。**  
Frequency conversion control has five protections: under-voltage, over-heat, over-load, over-voltage and over-current.
- 6 高强度德国进口RUD链条。使用寿命更长运行更稳定。**  
High strength imported RUD chain from Germany. The service life is longer and the operation is more stable.
- 7 全铝合金手持手柄, 保护更全面**  
All-aluminium handheld handle, more comprehensive protection
- 8 采用变频电机。恒扭矩输出保证足够的提升力矩。**  
Frequency conversion motor is used. Constant torque output ensures sufficient lifting moment.

## ● Size specification 尺寸规格

Model型号	Capacity(t)载重	A	B	C	D	E	F Headroom净空	H	J	L	K	X
TY3-SF0125	0.125	345	170	40	77	231	425	425	321	128	24	24
TY3-SF0250	0.25	345	170	40	77	231	425	425	321	128	24	24
TY3-SF0500	0.5	345	170	40	77	231	425	425	321	128	24	24

Model型号	Capacity(t)载重	Standard Lift(m)起升高度	Classification (ISO)工作级别	Lifting Speed(m/min)起升速度	Lifting Short Chain起重短链	No.Chain链数	Out Put(kw)输出功率	Motor Speed电机转速(RPM)	Current(A)电机电流	Voltage(V)电压	Frequency频率(HZ)	Duty Cycle负载持续率(FC%)	Standard 3M N.W(kg)标配3米时净重
TY3-SF0125	0.125	2~18	M5	20-5月	4X12	1	0.7	2860	2.8	1P 220	50	40	23
TY3-SF0250	0.25	2~18	M5	8-2月	4X12	1	0.7	2860	2.8	1P 220	50	40	23
TY3-SF0500	0.5	2~15	M5	1.5/6	5X15	1	0.7	2860	2.8	1P 220	50	40	23.6



## Electric Chain Hoist TY3-S Hand Control

TOYO TY3-S手持控制环链电动葫芦

### ● Features产品特点



- 1 全铝合金压铸壳体,结构紧凑密闭性好;**  
Aluminum alloy die-casting shell, compact structure and good sealing;
- 2 齿轮为高强度斜齿轮, 噪声小使用寿命长**  
The gears are helical gears with high strength, low noise and long service life.
- 3 失电式制动器, 制动平稳磨损小, 更安全。**  
Loss of power brake, brake smooth wear and tear, safer.
- 4 高强度耐磨工程塑料做导链器, 降低链条磨损与噪音。**  
High strength wear-resistant engineering plastics are used as guides to reduce chain wear and noise.
- 5 高强度德国进口RUD链条**  
high-strength Germany imported RUD chain
- 6 集成电路板控制, 多层控制保护**  
Integrated Circuit Board Control, Multilayer Control and Protection
- 7 全铝合金手持手柄, 保护更全面**  
All-aluminium handheld handle, more comprehensive protection
- 8 采用合金钢锻造加工而成。360°随意旋转**  
The alloy steel is forged and processed. 360 Degree Random Rotation

### ● Size specification 尺寸规格

Model型号	Capacity(t)载重	A	B	C	D	E	F headroom净空	H	J	L	K	X
TY3-S0125	0.125	345	170	40	77	231	764	425	321	128	24	24
TY3-S025	0.25	345	170	40	77	231	764	425	321	128	24	24
TY3-S050	0.5	345	170	40	77	231	764	425	321	128	24	24

Model型号	Capacity(t)载重	Standard Lift(m)起升高度	Classification (ISO)工作级别	Lifting Speed(m/min)起升速度	Lifting Short Chain起重短链	No.Chain链数	Out Put(kw)输出功率	Motor Speed电机转速(RPM)	Current(A)电机电流	Voltage(V)电压	Frequency频率(HZ)	Duty Cycle负载持续率(FC%)	Standard 3M N.W(kg)标配3米时净重
TY3-S0125	0.125	2~18	M5	20~5月	4X12	1	0.17/0.7	680/2680	0.8/1.5	3P 380	50	13.4/26.6	23
TY3-S025	0.25	2~18	M5	8~2月	4X12	1	0.17/0.7	680/2680	0.8/1.5	3P 380	50	13.4/26.6	23
TY3-S050	0.5	2~15	M5	1.5/6	5X15	1	0.17/0.7	680/2680	0.8/1.5	3P 380	50	13.4/26.6	23.6

## Electric Chain Hoist TY3-PM (with Manual Trolley)

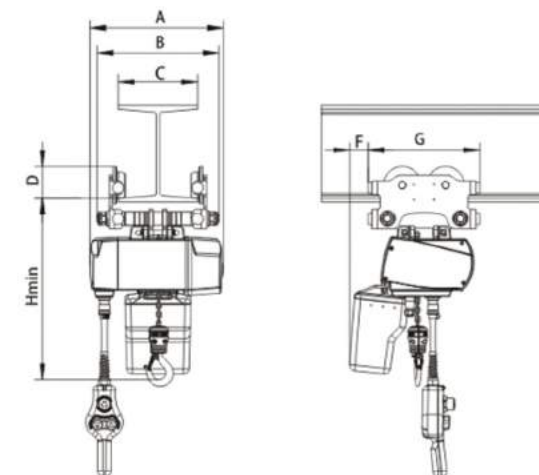
TOYO TY3-PM电动环链葫芦手推小车式

### ● Features产品特点



手推小车电动葫芦, 小车之间的距离可以调整, 适用于多种工字钢。起重量从0.5吨到2吨, 在重力作用下可自行调整高度, 使四个车轮实力均匀。产品传动效率高, 手推力小, 并可在较小的回转半径的弯道上行驶。手推小车电动葫芦是一种方便的起重工具, 可以达到横行移动即左右行走的目的。

Hand push car electric hoist, the distance between cars can be adjusted, suitable for a variety of i-steel. Lift weight from 0.5 tons to 2 tons, under the action of gravity can adjust their own height, so that the strength of the four wheels even. The product has high transmission efficiency, small hand thrust, and can drive on the curve with small turning radius. Hand trolley electric hoist is a kind of convenient lifting tool, can achieve the purpose of transverse movement that walk around.



### ● Size specification 尺寸规格

Model型号	Capacity(t)载重	A	B	C	D	F	Hmin	G
TY3-PM0500	0.5	345	314	85-205	81	231	468	288
TY3-PM1000	1	457	314	98-202	95	231	565	338
TY3-PM2000	2	457	314	100-200	117	231	601	390

Model型号	Capacity(t)载重	Standard Lift(m)起升高度	Classification (ISO)工作级别	Lifting Speed(m/min)起升速度	Lifting Short Chain起重短链	No.Chain链数	Out Put(kw)输出功率	Duty Cycle负载持续率(FC%)	Min.turning radius(m)最小转弯半径	Track Width(mm)使用轨道宽度	Standard 3M N.W(kg)标配3米时净重
TY3-PM0500	0.5	2~18	M5	1.5/6	5X15	1	0.17/0.7	13.4/26.6	1.2	85-205	23
TY3-PM1000	1	2~18	M5	8~2月	7X21	1	0.45/1.9	13.4/26.6	1.5	98-202	23
TY3-PM2000	2	2~15	M5	4~1月	7X21	1	0.45/1.9	13.4/26.6	1.8	100-200	23.6



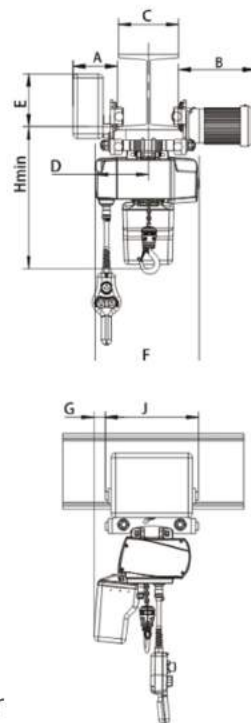
## Electric Chain Hoist TY3-GM (with Electric Trolley)

TOYO TY3-GM电动环链葫芦电动小车式



### ● Features产品特点

- 1 启动与制动平滑  
Start and brake smoothing
- 2 搬运转荷时防摇  
Anti-shake when carrying load
- 3 安装, 调试快捷  
Installation, debugging is fast
- 4 专为DCH环链葫芦而设计  
Designed for DCH chain hoists
- 5 通过PL031HP03.D4手电门来控制  
Controlled by PL031HP03.D4 flashlight door
- 6 即插即用特性, 可快速提高可用性: 备有与DCH环链葫芦连接的插入连接件  
Plug and play features for fast availability: plug connectors for connection to DCH chain hoists
- 7 电动小车选配使用控制板控制, 并集成进DCH环链葫芦壳内  
The electric trolley is controlled by the control panel and integrated into the DCH chain hoist shell.
- 8 双小车螺杆设计安全稳定  
Double trolley screw design is safe and stable



### ● Size specification 尺寸规格

Model型号	Capacity(t)载重	A	B	C	D	E	F	Hmin	G	J
TY3-GM-0.5T	0.5	150	254	90-200	177	176	344	471	37	310
TY3-GM-1T	1	150	257	90-200	256	176	457	560	73	354
TY3-GM-2T	2	157	305	100-200	256	180	457	596	48	404

Model型号	Capacity(t)载重	Standard Lift(m)起升高度	Classification(ISO)工作级别	Lifting Speed(m/min)起升速度	Lifting Short Chain起重短链	No.Chain链数	Lifting power(kw)起升功率	Running speed运行速度(M/MIN)	Operating power(KW)运行功率	Duty Cycle负载持续率(FC%)	Minimum turning radius最小转弯半径(m)	Applicable track width适用轨道宽度(mm)	Standard 3M N.W(kg)标配3米时净重
TY3-GM-0.5T	0.5	2~18	M5	1.5/6	5x15	1	0.17/0.7	20	0.2	30	1.2	85-205	48.6
TY3-GM-1T	1	2~18	M5	8-2月	7x21	1	0.45/1.9	20	0.2	30	1.5	98-202	73.5
TY3-GM-2T	2	2~15	M5	4-1月	7x21	2	0.45/1.9	20	0.4	30	1.8	100-200	78.6

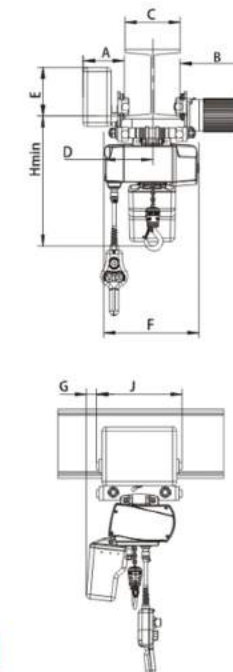
## Electric Chain Hoist TY3-FGM (with Inverter Electric Trolley)

TOYO TY3-FGM变频电动环链葫芦电动小车式



### ● Features产品特点

- 1 启动与制动平滑  
Start and brake smoothing
- 2 搬运转荷时防摇  
Anti-shake when carrying load
- 3 安装, 调试快捷  
.Installation and debugging are fast
- 4 专为DCH环链葫芦而设计  
Designed for DCH chain hoist
- 5 通过PL031HP03.D4手电门来拉制  
. Pulled through the PL031HP03.D4 flashlight door
- 6 即播即用特性, 可快速提高可用性: 备有与DCH环链葫芦连接的插入连接件  
On-demand features for fast availability: plug-in connectors for connection to DCH chain hoists
- 7 电动小车变频控制, 节能环保  
Electric car inverter control, energy saving and environmental protection
- 8 双小车螺杆设计安全稳定  
Double trolley screw design is safe and stable



### ● Size specification 尺寸规格

Model型号	Capacity(t)载重	A	B	C	D	E	F	Hmin	G	J
TY3-FGM-0.5T	0.5	150	254	90-200	177	176	344	471	37	310
TY3-FGM-1T	1	150	257	90-200	256	176	457	560	73	354
TY3-FGM-2T	2	157	305	100-200	256	180	457	596	48	404

Model型号	Capacity(t)载重	Standard Lift(m)起升高度	Classification(ISO)工作级别	Lifting Speed(m/min)起升速度	Lifting Short Chain起重短链	No.Chain链数	Lifting power(kw)起升功率	Running speed运行速度(M/MIN)	Operating power(KW)运行功率	Duty Cycle负载持续率(FC%)	Minimum turning radius最小转弯半径(m)	Applicable track width适用轨道宽度(mm)	Standard 3M N.W(kg)标配3米时净重
TY3-FGM-0.5T	0.5	2~18	M5	1.5/6	5x15	1	0.17/0.7	20-5月	0.2	30	1.2	85-205	48.6
TY3-FGM-1T	1	2~18	M5	8-2月	7x21	1	0.45/1.9	20-5月	0.2	30	1.5	98-202	73.5
TY3-FGM-2T	2	2~15	M5	4-1月	7x21	2	0.45/1.9	20-5月	0.4	30	1.8	100-200	78.6



# Electric Chain Hoist TY3-D

TOYO TY3-D倒挂环链电动葫芦

## ● Features产品特点

使用时只需将带钩的链条一端挂在上梁上。而下面的葫芦带着被吊物件-起顺着链条向上爬行至预定的高度。因此使用时十分方便省力。M5工作级别满足频繁使用场合。

The main features are: the use of the chain with a hook at the end of the above beam hanging. And the lower gourd with the lifting object - up the chain to climb to a predetermined height. Therefore, it is very convenient and labor-saving. The M5 work level is suitable for frequent use.

葫芦壳体:全铝合金压铸, CNC-体加工.

Motor: one - phase two - speed induction motor

减速箱:磨齿加工硬齿面斜齿轮, 减速箱油浴链

Reducer: gear grinding hard tooth surface bevel gear, reducer oil bath chain

轮:合金钢链轮

Wheel: alloy steel sprocket wheel

链条:高强度德国进口RUD链条

Chain: high strength RUD chain imported from Germany

控制板:电路板控制, DC5V控制电压, 选配DC24V控制带相序保护

Control board: circuit board control, DC5V control voltage, optional DC24V control with phase sequence protection

限位开关: CHERRY德国樱桃防水行程开关

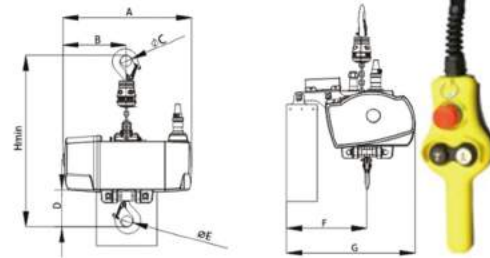
Limit switch: CHERRY German CHERRY waterproof travel switch

手操器:意大利进口GG手柄

Hand controller: GG handle imported from Italy

接插件:电源配威浦航空插头、控制配镀金水晶头加合金保护

Connector: power supply with weipu aviation plug, control with gold plated crystal head and alloy protection



## ● Size specification 尺寸规格

Model型号	Capacity(t)载重	A	B	C	D	E	F	Hmin	G
TY3-D0125	0.125	345	170	30	100	30	215	435	344
TY3-D0250	0.25	345	170	30	100	30	215	435	344
TY3-D0500	0.5	345	170	32	130	32	215	495	344
TY3-D1000	1	455	202	40	152	40	298	395	474

Model型号	Capacity(t)载重	Standard Lift(m)起升高度	Classification(ISO)工作级别	Lifting Speed(m/min)起升速度	Lifting Short Chain起重短链	No.Chain链数	Out Put(kw)输出功率	Motor Speed电机转速(RPM)	Current(A)电机电流	Voltage(V)电压	Frequency频率(HZ)	Duty Cycle负载持续率(F.C%)	Standard 3M N.W(kg)标配3米净重
TY3-D0125	0.125	2-18	M5	20-5月	4X12	1	0.17/0.7	680/2680	0.8/1.5	3P 380	50	13.4/26.6	22
TY3-D0250	0.25	2-18	M5	8-2月	4X12	1	0.17/0.7	680/2680	0.8/1.5	3P 380	50	13.4/26.6	22
TY3-D0500	0.5	2-15	M5	1.5/6	5X15	1	0.17/0.7	680/2680	0.8/1.5	3P 380	50	13.4/26.6	22.6
TY3-D1000	1	2-10	M4	8-2月	7X21	1	0.45/1.9	680/2680	2.0/3.8	3P 380	50	20-10月	47.5

# Accessories

TOYO 配件

## 1、快慢双速Dual Speed



每台TY3电动环链葫芦都配置有快慢双速的起升速度, TY30125、TY3025、TY3050、TY3100的速度比均为1:4,其中TY30125速度最快可达20M/min

Each TY3 Electric Chain Hoist is equipped with fast and slow two-speed lifting speed. The speed ratios of TY30125, TY3025, TY3050 and TY3100 are all 1:4, among which the fastest speed of TY30125 is 20M/min.

## 4、高强度合金链条 High Strength Alloy Chain



特制的高强度合金链条,使得链条寿命更长,更为安全可靠。

Specially made high strength chain with alloy plating, making the chain life longer, safer and more reliable.

## 7、旋转式吊钩 Rotating Hook



吊钩被设计为旋转式的,以便于操作人员轻松地起吊货物,并易于掌控吊钩方向。

The hook is designed to be rotary to allow the operator to easily lift the cargo and to easily control the hook direction.

## 10、5V电子式控制系统 5V electronic control system



KACC电子式控制系统采用无磨损的半导体技术,相较于机械式,更节省空间和重量。

The KACC electronic control system uses wear-free semiconductor technology to save space and weight compared to mechanical.

## 2、摩擦片耦合式起升过载保护装置 Friction Disc Coupled Lifting Overload Protection



摩擦片耦合式起升过载保护装置为葫芦的过载提供了可靠保护。特别的内衬设计极大地降低了磨损率,使得整个装置始终保持在高安全性的水平。并可方便地从外部对过载点进行精确调节。

Device Friction disc coupling start-up overload protection device provides for the overload of hoist Reliable protection. Special village design minimizes grinding Loss rate keeps the whole device at a high level of safety. The well can easily adjust the overload point accurately from the outside.

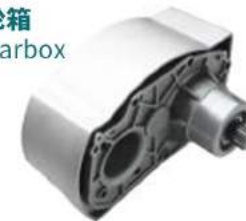
## 5、刹车装置 Brake device



刹车片由不含危害健康的石棉制成,使得整个刹车系统能够有较长的使用寿命(在第一次调节后刹车片能满足于百万次以上的制动要求)。可调节的刹车装置满足于不同工况的需要。

The brake pads are made of non-hazardous asbestos, which allows the entire brake system to have a long service life (the brake pads can meet more than one million brake requirements after the first adjustment). Adjustable brakes are available for different operating conditions.

## 8、电机和齿轮箱 Motor And Gearbox



电机和齿轮箱的标准化设计,为葫芦提供了范围更广的起升速度。所有电机都被制成笼式结构,并配有两级和八级线圈。齿轮箱则被单独压缩,这种设计使得安装与维修更为方便。齿轮箱自润滑使得齿轮箱轮子和轴承更为平滑地行走。

The standardized design of motor and gearbox provides a wide range of lifting speed for gourd. All motors are made into squirrel cage structures and are equipped with two-stage and eight-stage coils. The gearbox is compressed separately, which makes installation and maintenance more convenient. Gearbox self-lubrication makes gearbox wheels and bearings walk more smoothly.

## 11、链条系统 Chain system



链条系统由高合金链条,导链器和导链轮组成。导链器和导链轮都是标准化设计,易于更换,大大节省时间和费用。

The chain system consists of a high alloy chain, a chain guide and a guide chain wheel. Both the chain guide and the guide chain are standardized and easy to replace, saving time and money.

## 3、连接插头插座标准组件 Standard Components For Connecting Plugs And Sockets



电源和控制组件连接采用插头插座标准组件,使得连接更牢固,并大大简化了安装工作,省时省力,无接线差错。在日后的维护保养工作时,它同样提供了安全便利的条件。

The standard plug and socket components are used to connect the power supply and control components. The connection is stronger, and the installation work is greatly simplified, which saves time and effort. No wiring error. In future maintenance work, it also mentions it provides safe and convenient conditions.

## 6、电缆Cable



所有控制电缆均由特殊的织布材料包裹,很好地吸收张力。同时便于更换内部电线,避免了机械损伤。

All control cables are wrapped in special woven materials that absorb tension well. At the same time, it is convenient to replace the internal wires and avoid mechanical damage.

## 9、悬挂吊耳S uspension Lugs



可移动的悬挂吊耳设计有利于葫芦的安装与移动,同时保证了葫芦固定在一个方向。如果没有悬挂吊耳,葫芦可采用其他方式进行固定,这样将减少葫芦的净空间,增加起升高度。

Movable suspension lugs are designed to facilitate the installation and movement of hoists. The movement ensures that the gourd is fixed in one direction. If there is no hanging lug, the gourd can be fixed by other means. Fixed, this will reduce the net space of the gourd and increase the lifting height.

## 12、手电门Flashlight Gate



TOYO手电门采用人体工学设计,标准TOYO电动环链葫芦手电门配有两档按钮和一个急停按钮。手电门连接采用安装方便的插头插座标准组件,并有自锁组件。

The KACC flashlight door is designed by ergonomics. The standard KACC electric ring chain hoist door is equipped with two-gear button and one emergency stop button. The flashlight door connection adopts the standard assembly of plug and socket with convenient installation, and has a self-locking assembly.



# TOYO Light Cranes

## TOYO轻载起重机系统

额定载荷 可达2000公斤，跨距可达10米

A versatile and economic solution for loads up to 2000 kg and 10 meter span

TOYO轻载起重机系统为传统的悬挂起重系统提供符合人体工程学以及具有成本效益的解决方案，尤其是那些对于高度和空间都受限的应用中。

TOYO light-duty crane system provides ergonomic and cost-effective solutions for traditional suspension crane systems, especially in applications where height and space are limited.

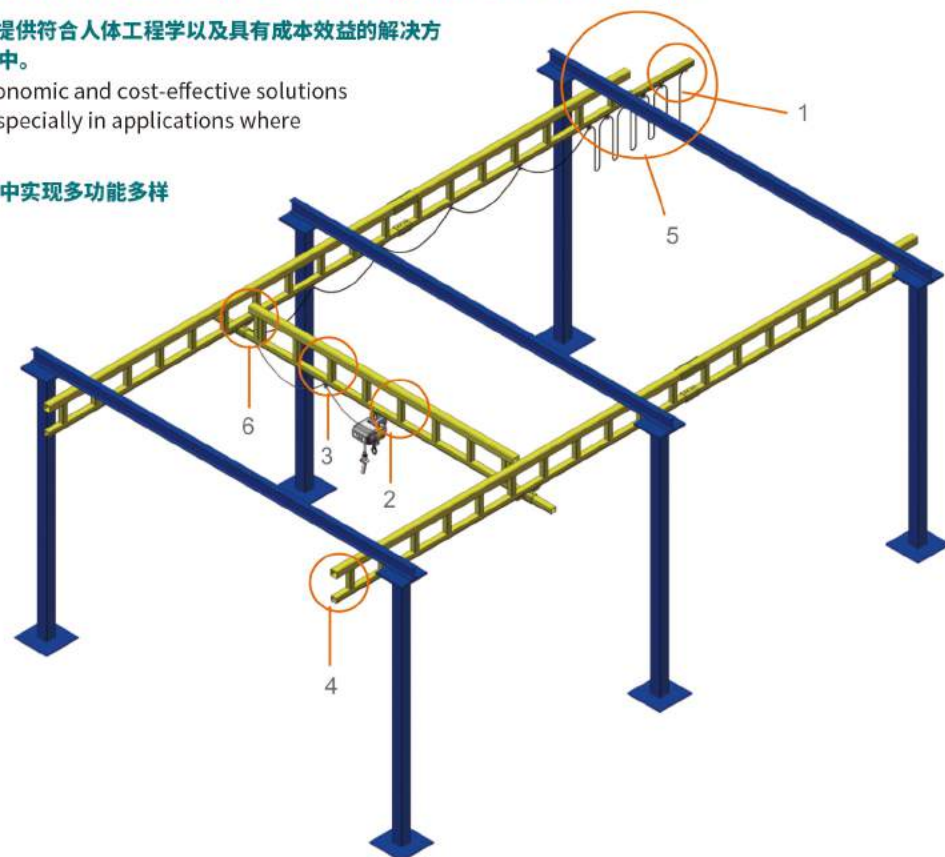
TOYO 模块化的设计，可以在大量的实际应用中实现多功能多样化且安全可靠的悬挂输送方案。

TOYO modular design enables a versatile, safe and reliable suspension delivery solution in a wide range of practical applications.

坚固耐用的设计能力以及高标准的制造要求确保了超长使用寿命以及低维护次数。Rugged design capabilities and high standards of manufacturing ensure long life and low maintenance.

我们的产品系列包含：滑动门系统、悬挂输送系统、电缆悬吊系统、防坠落制动系统以及轻载起重机系统。

Our product range includes: sliding door systems, suspension conveyor systems, cable suspension systems, fall arrest brake systems and light duty crane systems.



### Component 部件



1.带线缆终端夹的末端止挡  
End stop with cable end clip



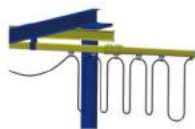
2.带销子的主梁滑车  
Main beam block with pin



3.电缆滑车  
Cable pulley



4.轨道末端止挡  
Track end stop



5.悬吊存储区（可以延长某一个型轨的长度 达到悬吊存储的作用。这种方式不会影响到起重机的有效运行范围。）  
Suspended storage area (the length of one type of rail can be extended to achieve the function of hanging storage. This method will not affect the effective operating range of the crane.)



6.带轨道接头的型轨小车  
End stop with cable end clip

### Features产品特点

● 最大负载2000公斤  
Maximum load 2000 kg

● 跨度最大可达10米  
Span up to 10 meters

● 模块化的设计具有可扩展性  
Modular design with scalability

● 具有成本效益  
Cost effective

● 采用各种支撑架便于安装  
Easy to install with a variety of support brackets

● 多样化安装方式  
Diversified installation methods

● 与将来的或者现有的悬挂输送系统具有连通性

Connectivity to future or existing suspension conveyor systems

● 伸缩臂式起重机  
Telescopic crane

● 手动或电动运行  
Manual or electric operation

● 地面自立式或天花悬挂式起重机系统  
Ground free standing or ceiling mounted crane system

● 产品部件可以镀金或镀银  
Product parts can be gold plated or silver plated

# Light Cranes technical parameters

## 轻载起重机技术参数

我们的三种尺寸规格的轨道能够适用于各种负载起重重量，最大负载可达2000公斤。

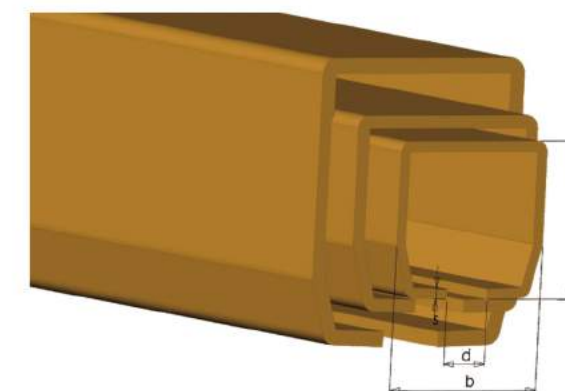
Our three sizes of rails are available for a wide range of load loads up to 2000 kg.

TOYO轨道的斜面设计很好地确保了轨道内滑车的直线型并且减少了轨道内灰尘的积累。这样就确保了滑车能够在轨道内顺畅地运行，并且延长了轨道的使用寿命。

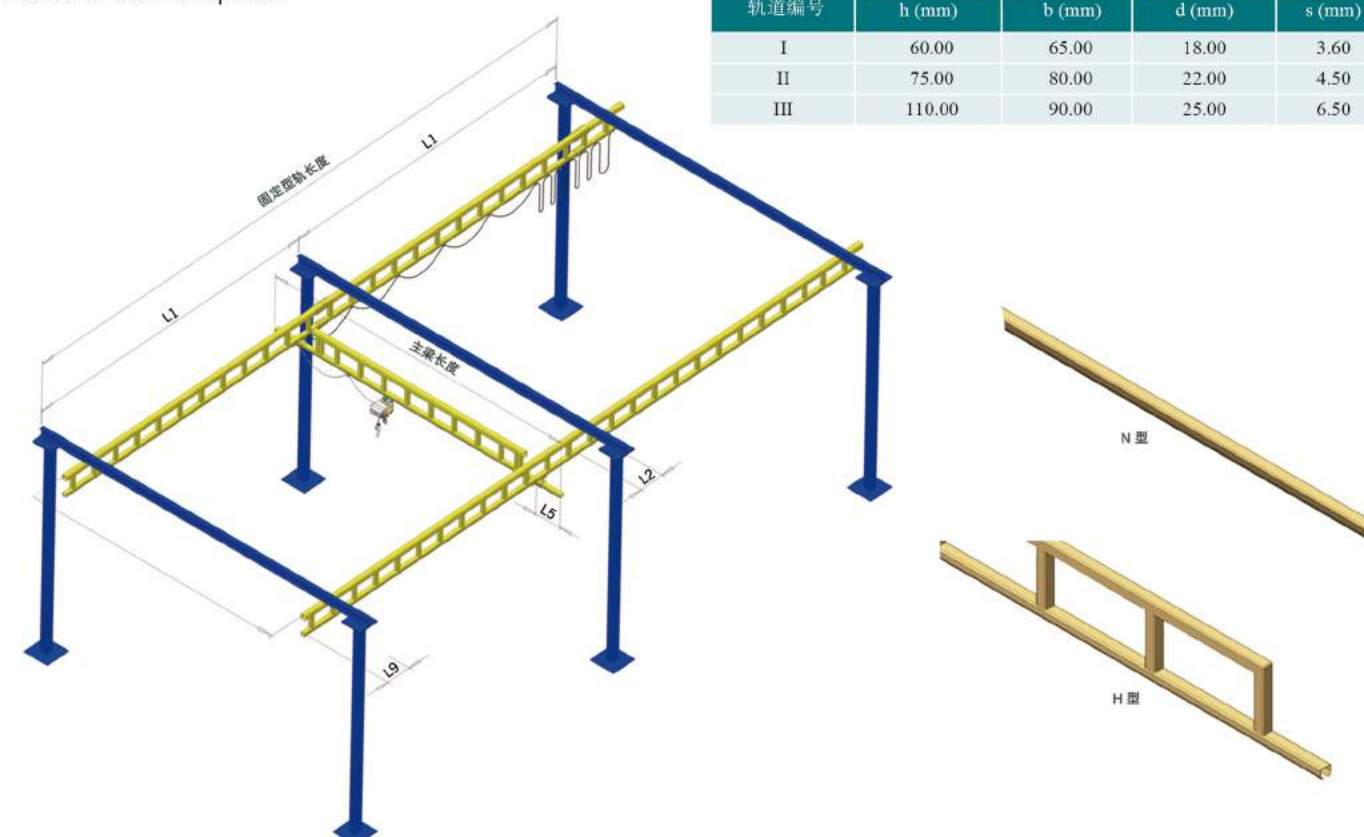
The bevel design of the TOYO track ensures a straight line of the trolley inside the track and reduces the accumulation of dust in the track. This ensures that the trolley can run smoothly in the track and extends the life of the track.

操作TOYO轻载起重机时，仅需要负载起重重量1-4%的力。

When operating a TOYO light-duty crane, only a load of 1-4% of the load is required.



Profile No. 轨道编号	Dimensions尺寸			
	h (mm)	b (mm)	d (mm)	s (mm)
I	60.00	65.00	18.00	3.60
II	75.00	80.00	22.00	4.50
III	110.00	90.00	25.00	6.50



### Technical Parameters性能参数表

Capacity(kg)额定载荷	Yale Profile No. Yale轨道编号	Span Max L4 (mm) 主梁跨距L4最大值	Max L1 (mm) L1最大值	Max L2 (mm) L2最大值	Max L5 (mm) L5最大值	Max L9 (mm) L9最大值
250	I-N	2500	1900	1200	600	1200
	I-H	10000	9000	1200	600	1200
500	II-N	2500	1800	1200	600	1200
	II-H	10000	9000	1200	600	1200
1000	III-N	3000	2000	1200	600	1200
	III-H	10000	9000	1200	600	1200
2000	III-H	9000	8000	1200	600	1200

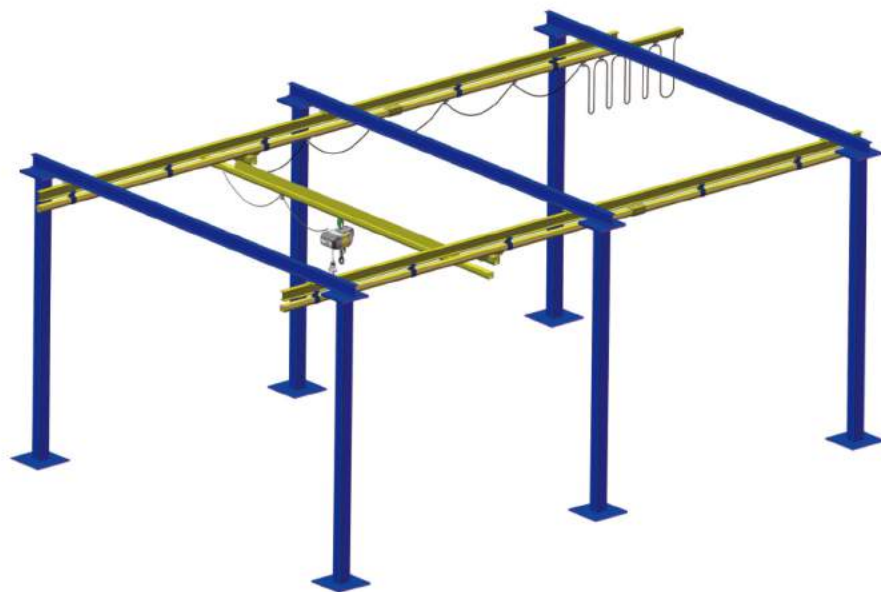


## Floor Mounted Crane with Standard Long Travel Tracks

采用普通轨道的自立式起重机

自立式起重机主要应用于顶部无法进行吊装的情况下。通常情况下为了达到较大的跨距，主梁一般采用加强型KBK轨道，而型轨通常采用普通轨道并直接固定在顶部相平行的工字钢梁上。

Floor mounted cranes are particularly useful when the roof cannot support an overhead Crane. The bridge profile is usually reinforced to achieve longer spans and plain long travel track profiles can be used by supporting them directly to an I beam that runs parallel above.

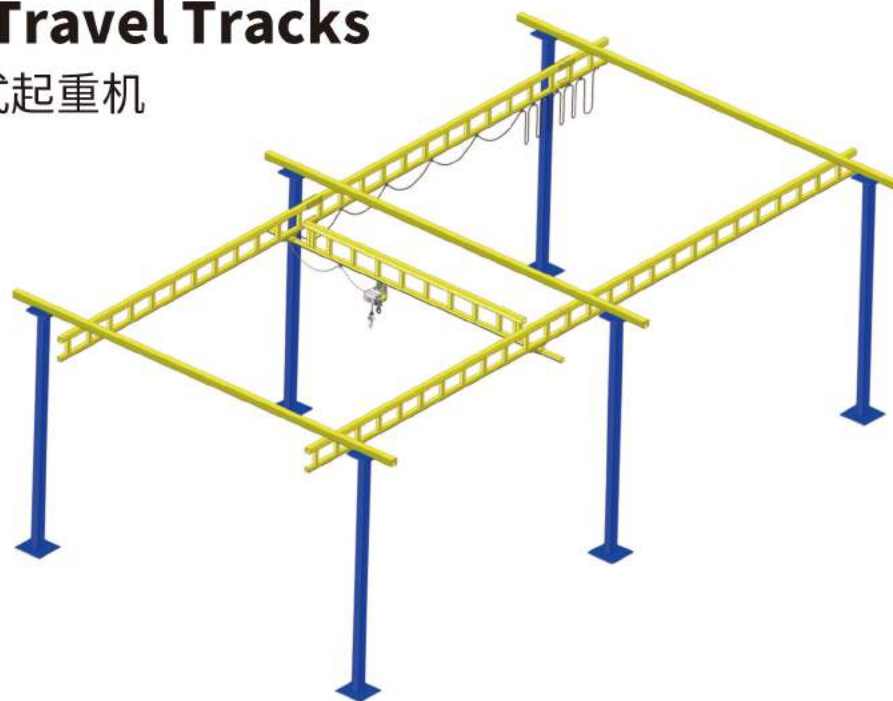


## Floor Mounted Crane with Reinforced Long Travel Tracks

采用桁架式轨道的自立式起重机

况下安装也简便了很多，节约了安装时间。

By using reinforced track profiles in the long travel the support distance can be increased rendering the I beams along the track profiles unnecessary. This way installation time is also minimized.

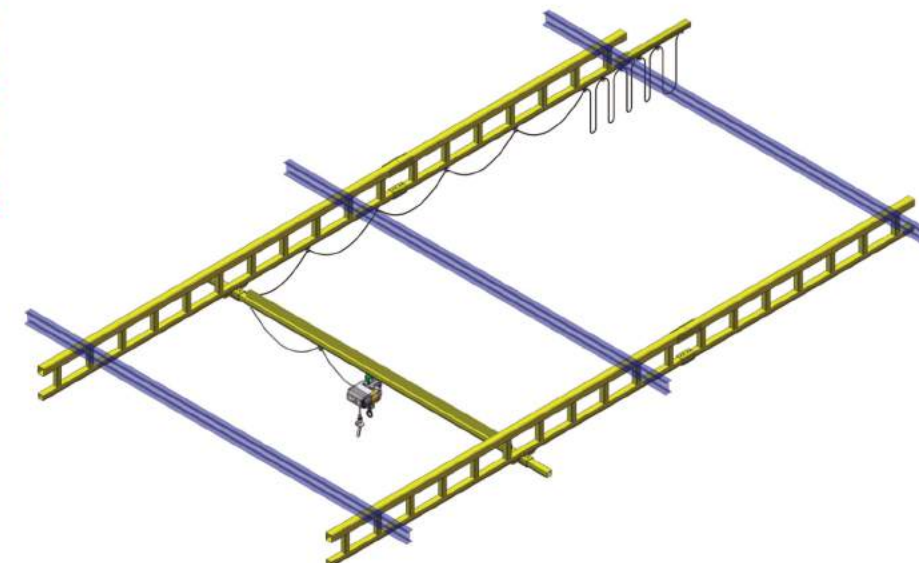


## Ceiling Mounted Crane with Plain Long Travel Tracks

采用普通轨道的悬挂式起重机

悬挂式起重机主要应用于地面空间受限的情况下。由于起重机直接悬挂于顶部、地面上不需要立柱，因此地面工作区域可以用作其它用途。然而，悬挂式起重机需要合适的顶部支撑结构。当顶部吊点间距较小时，可以采用将普通KBK轨道直接吊装在工字钢下的方式。

Ceiling mounted cranes are useful where the floor space is limited. Since the cranes are directly mounted on the ceiling and no supporting columns are necessary the working floors are kept clear for other operations. However it requires an adequate ceiling structure. Standard long travel can be used when short distance supporting is possible by utilizing I beams or other structures at the ceiling.

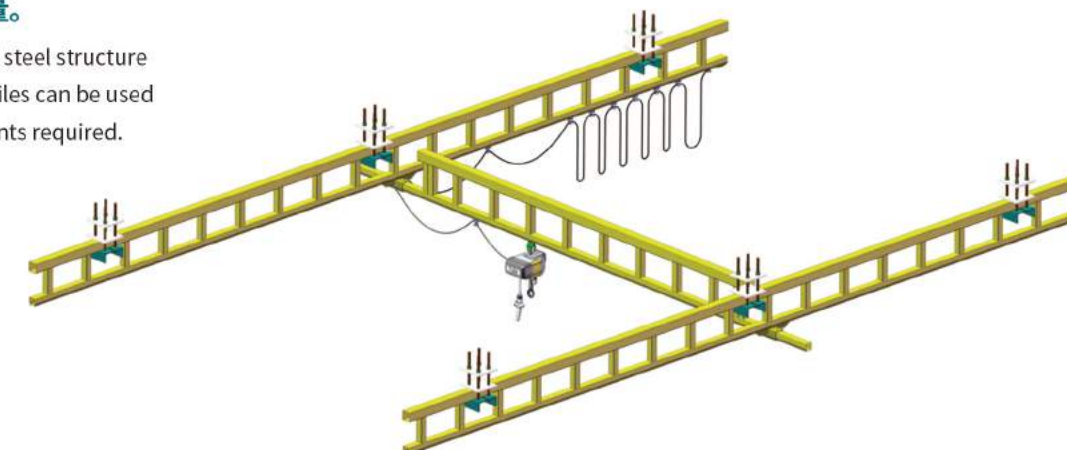


## Ceiling Mounted Crane with Reinforced Long Travel Tracks

采用桁架式轨道的悬挂式起重机

当顶部吊装钢结构受限时，可采用桁架式轨道以便减少吊点的数量。

In the case where the overhead steel structure is limited, reinforced track profiles can be used to minimize the supporting points required.





## Multiple Bridge Cranes

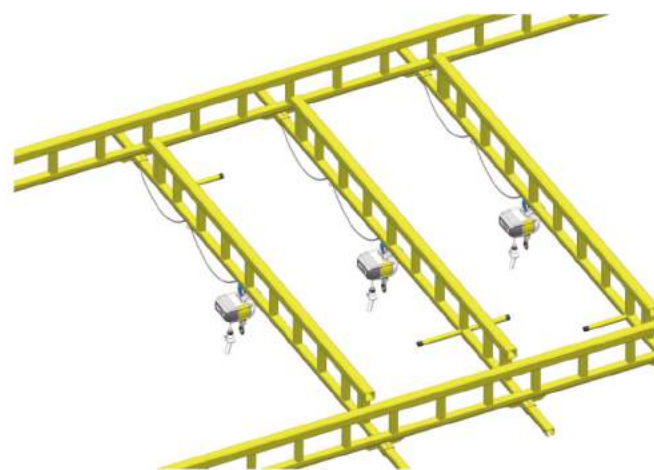
### 多主梁起重机

当需要多个操作人员在同一区域同时工作时，可以采用多主梁起重机。我们通常可以采用多种形式的缓冲区域防止起重机主梁之间相互干涉。通过这种方式也可以实现用小规格的型轨承载多个主梁。比如，用500公斤承载能力的型轨可以同时承载两组500公斤承载的主梁。当然，为了防止型轨上的负载超载，我们需要采用缓冲区域保持主梁之间的差距。

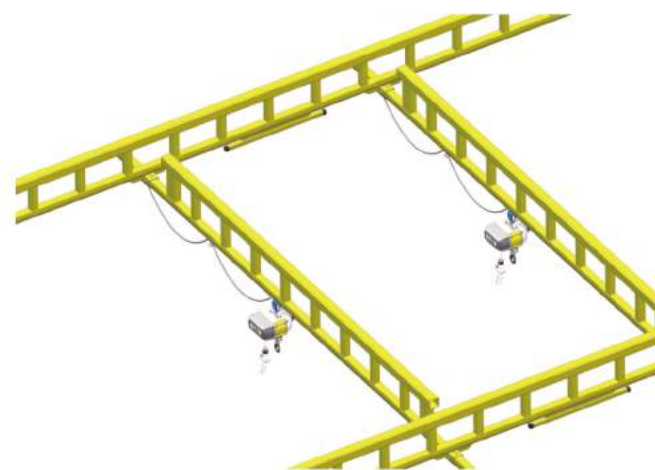
Multiple main beam cranes can be used when multiple operators are required to work simultaneously in the same area. We can usually use various forms of buffer area to prevent the main beams of the crane from interfering with each other. In this way, it is also possible to carry a plurality of main beams with small gauge rails. For example, a 500 kg load carrying rail can carry two sets of 500 kg load main beams at the same time. Of course, in order to prevent overloading of the load on the rail, we need to use the buffer area to maintain the gap between the main beams.



采用轨道末端止挡作为缓冲区域  
Permanent buffer zones using end stops



采用隔离杆作为缓冲区域  
Buffer zones using spacers



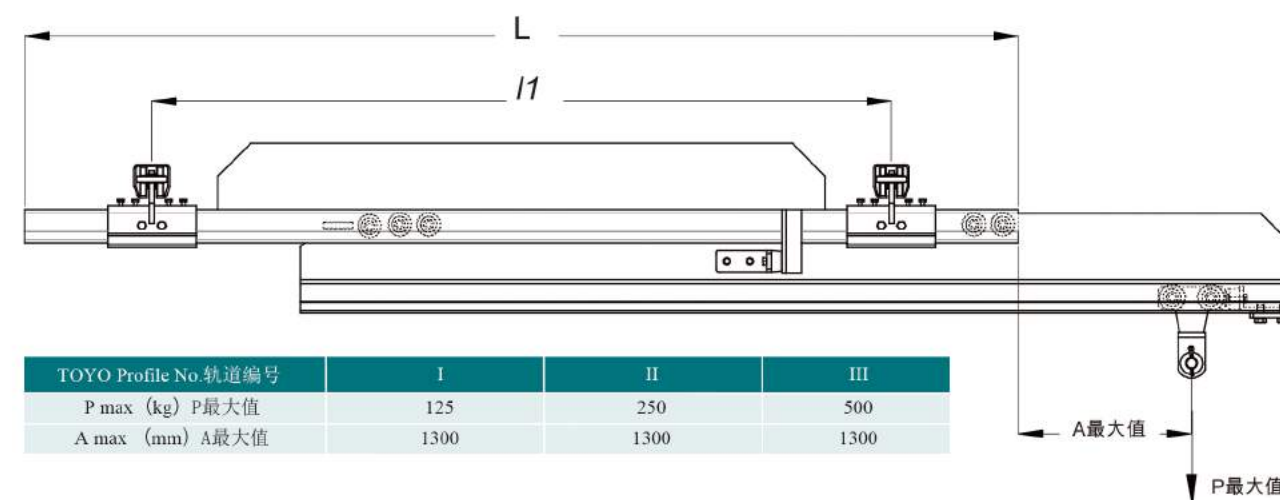
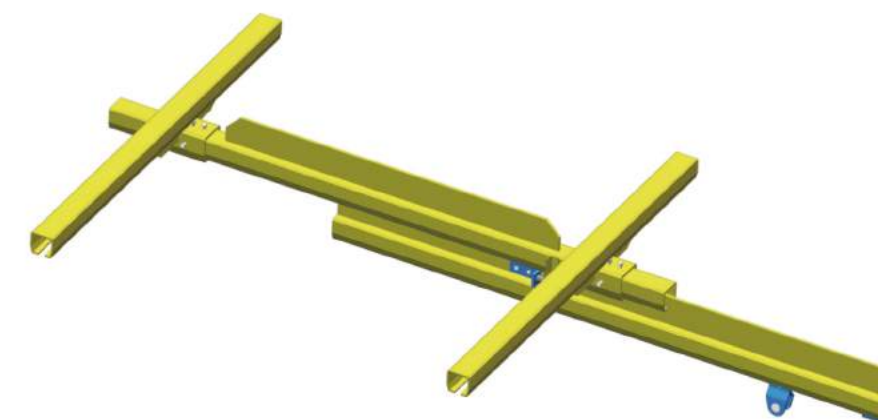
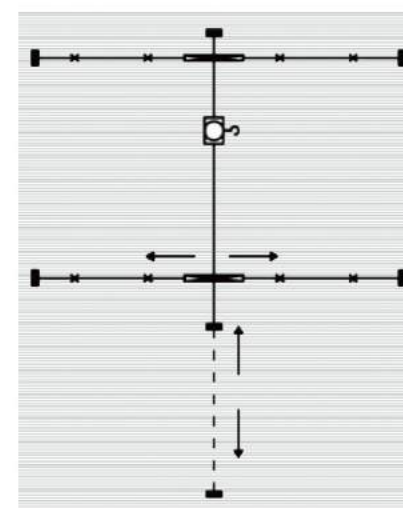
移动式缓冲区域  
Mobile buffer zones

## Telescopic Monorail and Cranes

### 伸缩式单轨系统和起重机

如果需要轻型起重机的有效覆盖区域超过其支撑结构的范围时，可采用伸缩式主梁。伸缩式起重机通常应用在集装箱或者卡车上，有时候也应用在汽车行业的工具滑轨。

In order to cover a wider area than the supporting space structure permits, a telescopic cross bridge is available. Using our components telescopic cranes are also possible which are very often installed in containers and trucks and used in the automotive industry for tool suspension.



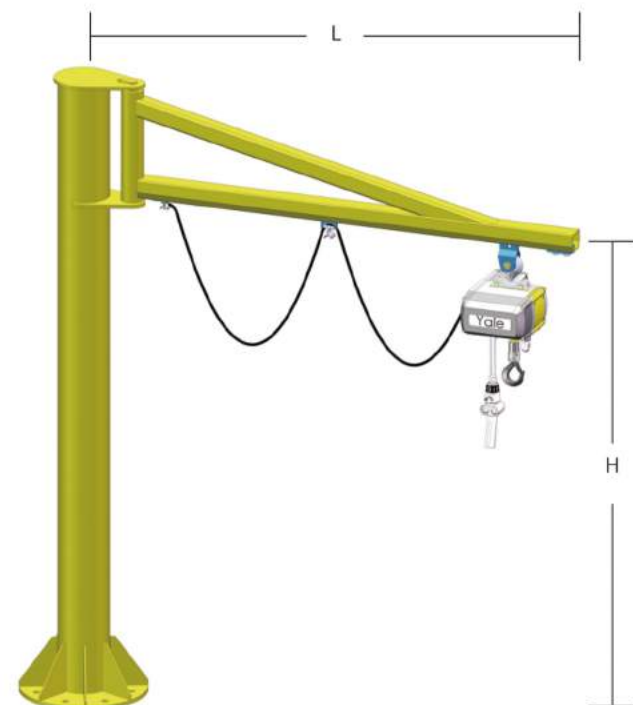
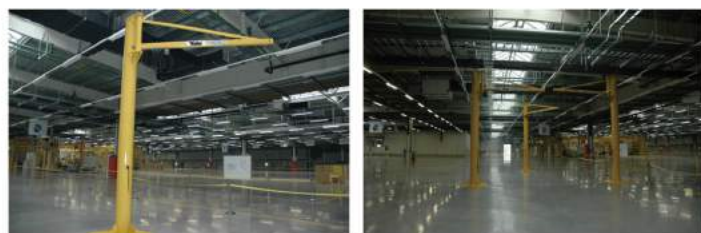


## Jib Cranes

### 悬臂起重机

采用我们的封闭轨道，我们为客户提供高质量、低成本的悬臂起重机，包括墙面支撑和立柱支撑形式。我们标准的悬臂起重机最大承重达 1000 公斤，旋转角度为180度。我们整套的悬臂起重机包含悬挂负载的葫芦小车和相应的电缆滑车。

Utilizing our enclosed Profiles we produce high quality and low cost jib cranes suitable for wall or pillar mounting. Our standard range covers 180 degrees for capacities of up to 1000 kg. Our jib crane sets come complete with a trolley for load suspension and the appropriate cable / hose trolleys.



我们封闭KBK轨道的独特设计使得客户操作悬臂起重机时极其简便，操作负载时所需的拉力非常小。这些对于悬臂起重机的人机工程学以及对操作人员的负荷来说，都是非常重要的。

Our enclosed profile design offers ease of use and minimal pulling/ pushing force in the operation of the jib cranes. This is critical for the ergonomic operation of the jib crane, and to minimize potential strain on the user.

#### ● Technical Parameters性能参数表

Rated load kg 额定载荷	Track height H m 轨道高度	Track length L m 轨道长度
125	3	3
	3	4
	4	3
	4	4
250	3	3
	3	4
	4	3
	4	4
500	3	3
	3	4
	4	3
	4	4
1000	3	3
	3	4
	4	3
	4	4

## Monorail model KBK-M

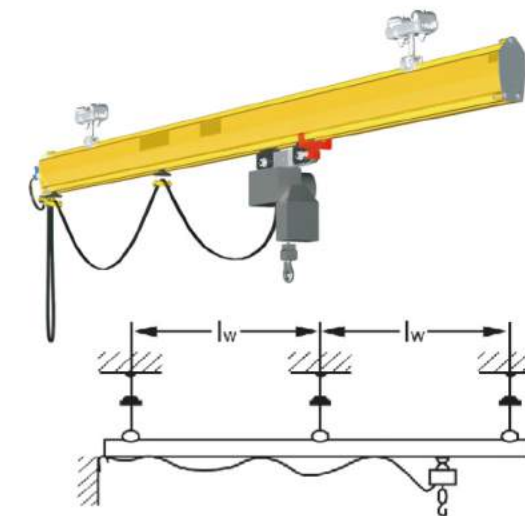
### 单轨轨道 KBK-M

此单轨轨道适用于我们所有的起重设备，为提升和移动负载提供通用型解决方案。标准的连接件和紧固件确保组装便利。

The monorail is adapted to our range of hoisting equipment and offers versatile solutions for lifting and moving loads. Standard connections and fastening arrangements ensure easy assembly.

模块化的设计能够在生产条件转变时更改，简单又快速地完成任

The modular design enables modifications required by changing production conditions to be carried out easily and quickly.



#### ● Technical Parameters性能参数表

Profile KBK-M 轨道	Overall height adjustable (mm) 最大可调节高度	/	Capacity (kg) 负载			
			125	250	500	1000
I	250	suspension spacing	4.1	2.5	/	/
II	400	for monorail Iw m 轨道空中间距	/	8.0	5.4	3.2

## Single-Girder Crane Model KBK-S

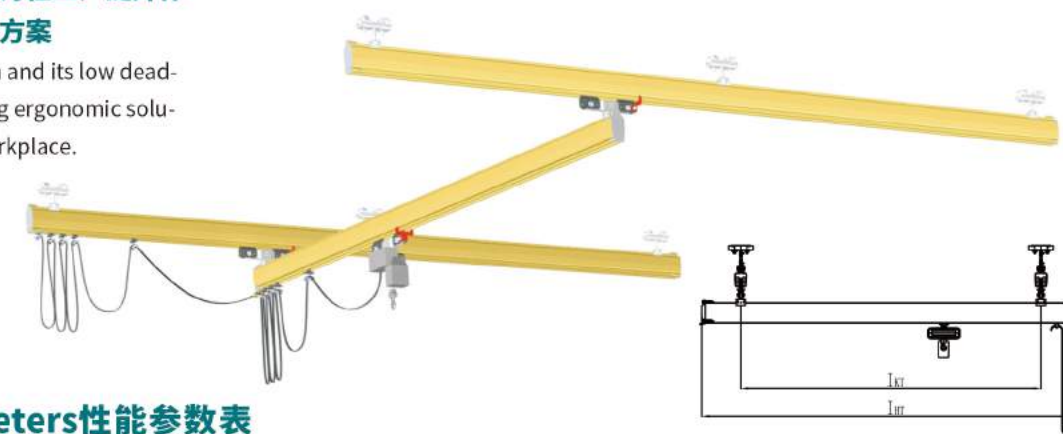
### 单梁轨道KBK-S

易使用的YKR-S型号的单梁KBK轨道有很大的操作半径。由于手推小车自动定位到最佳的提升位置，因此可减少负载摇晃现象的出现。

Single-girder cranes of the KBK-S model range are user-friendly cranes with a large operating radius. Swaying of the load is reduced, since the push-type trolley automatically aligns to the optimal lifting position.

三维的设计和较低的自重为在工厂提升作业提供了人机控制的解决方案

The three-dimensional design and its low dead-weight contribute to providing ergonomic solutions to lifting tasks at the workplace.



#### ● Technical Parameters性能参数表

Profile KBK-M 轨道	/	Capacity (kg) 负载			
		125	250	500	1000
I	Span IKT跨距	4.6	2.75	/	/
I	Girder length IHT主梁长度	5.0	3.0	/	/
II	Span IKT跨距	/	7.45	6.0	3.5
II	Girder length IHT主梁长度	/	8.0	6.5	4.0



## Double-Girder Crane Model KBK-D

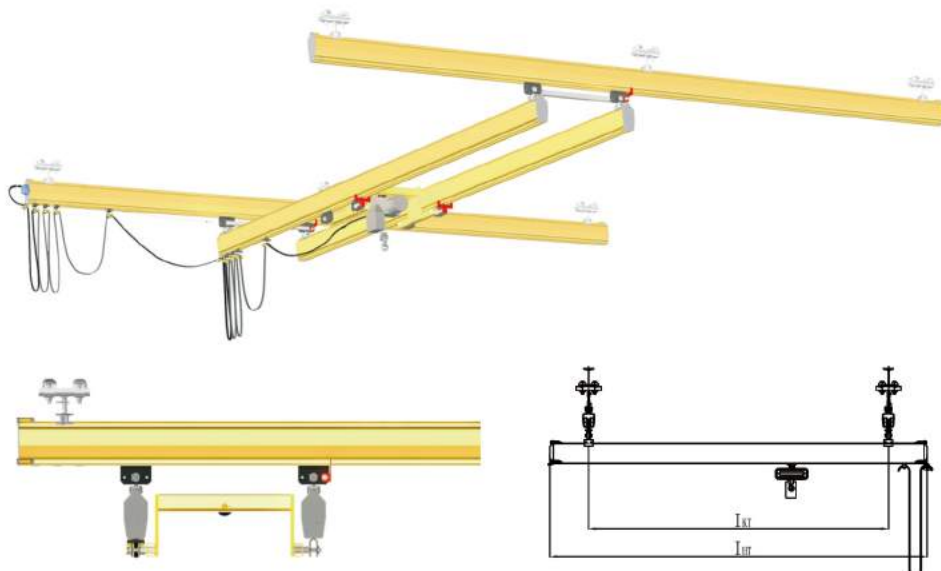
### 双梁轨道 KBK-D

**KBK-D双梁轨道拥有重型负载的能力，广泛适用于重物的起重。**

Double-girder cranes of the KBK-D model range are also suitable for heavy loads owing to their wide load capacity range.

**葫芦的位置在两根主梁截面之间，以确保双梁KBK轨道提升空间最大的使用率。**

The position of the hoist between the bridge profile sections ensures maximum utilization of the lifting height.



### Applications产品应用

**天花板结构或悬空支撑空间。一个扩展的应用就是把现有的机架结构作为单梁悬架轨道的支撑。这种应用不仅比悬空结构更经济，而且在没有现有屋顶结构的条件下也能使用起重系统。**

Ceiling structure or suspended support space. An extended application is to use the existing frame structure as a single beam suspension track support. This kind of application is not only more economical than suspension structure, but also can use hoisting system under the condition of no existing roof structure.



### Technical Parameters性能参数表

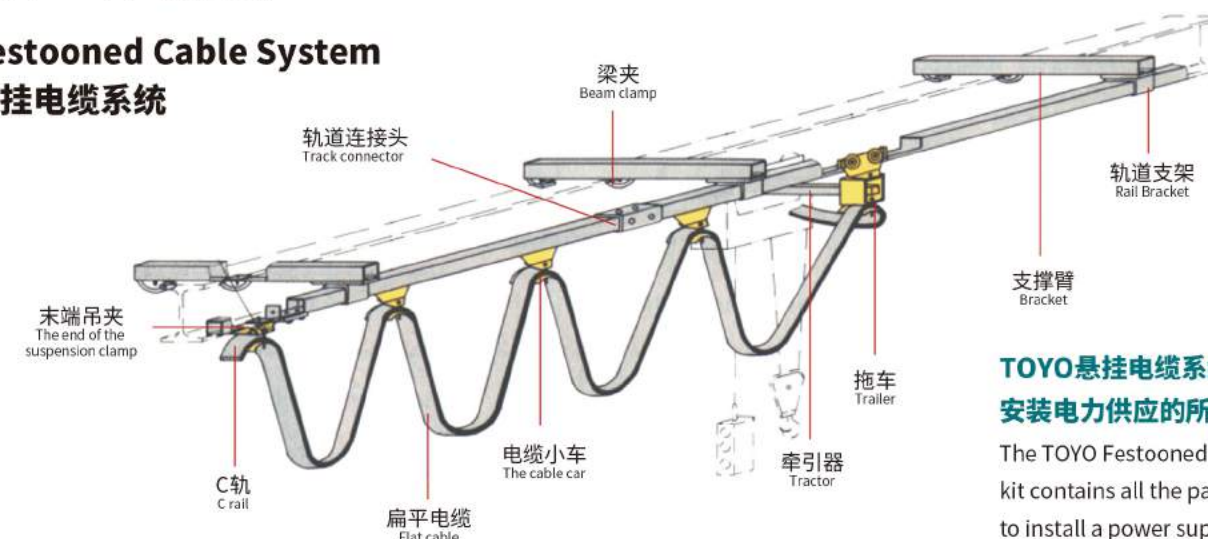
Profile KBK-M 轨道	/	Capacity (kg) 负载				
		125	250	500	1000	2000
I	Span IKT跨距	6.2	5.0	3.1	/	/
I	Girder length IHT主梁长度	9.0	6.0	4.0	/	/
II	Span IKT跨距	/	/	8.5	6.0	3.0
II	Girder length IHT主梁长度	/	/	9.0	6.5	3.5

## Accessories—Power Supply System

### 配件—供电系统

#### Festooned Cable System

#### 悬挂电缆系统



**TOYO悬挂电缆系统装备包括安装电力供应的所有必需部件**

The TOYO Festooned Cable System kit contains all the parts necessary to install a power supply.

### Features产品特点

**PVC扁平电缆规格是4\*2.5mm<sup>2</sup>，适用于所有功耗低于25A的电葫芦**

The PVC flat cable 4 x 2.5 mm<sup>2</sup> is suitable for all electric hoists with a power consumption of up to 25 A.

**滚轴和轴套由滚动球轴承连接**

The rollers are fitted with bronze bushes resp. ball bearings.

**C轨、轨道支撑架和轨道连接头都通过镀锌保护内部不被腐蚀**

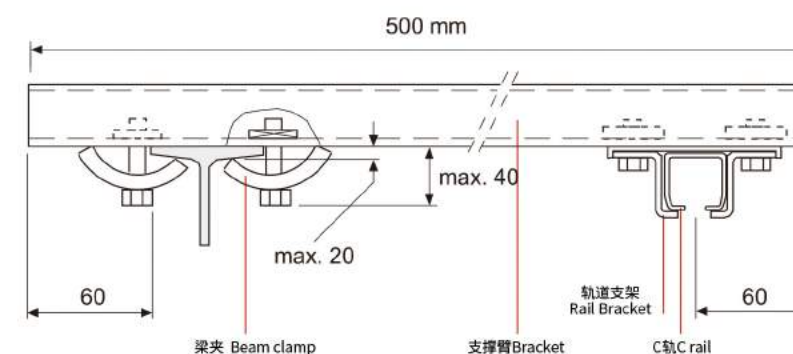
The C-rail, rail support brackets and rail connectors are zinc-plated for added protection against corrosion.



### Options产品选项

**装配部件包含支撑臂和连接横梁、纵梁的夹片**

Mounting kit consisting of support arm and girder clips for connection to the beam.



**单元件的数量取决于轨道长度**  
The number of elements depends on the track length

**特殊应用，如环形运行或者电缆小车需要，我们可提供圆电缆。**  
Special applications, such as circular running or cable trolley, we can supply round cables.



## Accessories - The Trolley Touches The Slip Line

### 配件-小车触滑线

#### Summarize 概述

绝缘滑线U15a U25a U35都是单相的，绝缘导体轨道可用于起重机(如行车、装载桥架等)、单轨系统、AS/F系统、升降系统、滑动门、数据信号转换、娱乐骑行设施、高压电装配、导体轨道沟槽系统等等,供给电流消耗在10A到1250A之间。

Insulated sliding line U15a U25a U35 are single-phase, insulated conductor track can be used for cranes (such AS crane, loading bridge, etc.), monorail system, AS/F system, lifting system, sliding door, data signal conversion, entertainment cycling facilities, high-voltage assembly, conductor track groove system, etc., the supply current consumption is between 10A and 1250A.

绝缘滑线U15a U25 U35是按当今国际安全要求设计它完全符合VDE 0100 ,手指保护符合VDE 0470第一部(EN60529)，防护等级IP23(吊装)。

Insulated slip wire U15a U25 U35 is designed in accordance with current international safety requirements. It is fully compliant with VDE 0100, finger protection is compliant with VDE 0470 part I (EN60529), protection grade IP23(lifting).

集电器只有在完全装进滑线时才对意外接触起保护作用

The collector protects against accidental contact only when fully installed into the slip wire.

滑线安装时会与手发生接触，因此需要对操作人员进行特殊的保护来防止他们与正脱离滑线的集电器发生意外接触(例如锁定或切断电源)。仅适用于电压高于25V交流或60V直流的情况。

Since the sliders are installed in contact with the hands, special protection is required for operators to prevent accidental contact (e.g. locking or cutting off power) with the collector that is coming off the sliders.Only applicable to voltage higher than 25V ac or 60V dc.

包裹各种导线的外护罩是优良的绝缘体，因此我们的单级组合式滑触线保证了操作中的最大安全性。

The outer cover covering various wires is an excellent insulator, so our single stage combined sliding contact wire ensures maximum safety in operation.

任何数量的导线可以在最小的空间要求下并排紧邻地安装在一起。

Any number of wires can be installed side by side and next to each other with minimal space requirements.

U15a U25的标准滑线长6米，而U35则6.25米长,也可订购短一些的滑线,地线由国际代码颜色黄色识别。出于安全原因考虑,相线和地线集电器不能互换。

Standard sliders for the U15a U25 are 6 meters long, while the U35 is 6.25 meters long. Shorter sliders can also be ordered and the ground wire is identified by the international code color yellow.For safety reasons, phase and ground collectors are not interchangeable.

U15a U25的标准滑线长6米，而U35则6.25米长,也可订购短一些的滑线,地线由国际代码颜色黄色识别。出于安全原因考虑,相线和地线集电器不能互换。

Standard sliders for the U15a U25 are 6 meters long, while the U35 is 6.25 meters long. Shorter sliders can also be ordered and the ground wire is identified by the international code color yellow.For safety reasons, phase and ground collectors are not interchangeable.



#### Splice 接头

快速安装的接头为导线提供了机械和电气的连续性。它包括绝缘保护的塑料外壳在温度波动大的情况下必须安装膨胀段,适用于U15滑线系统长度大于100m时(U25/35为150m时)。供电接头。供电接头是适宜安装在滑线接头处,并为电源的连接提供了单芯电缆。

Quick-fitting joints provide mechanical and electrical continuity to the wires.The expansion section must be installed when the temperature fluctuates greatly. It is suitable for U15 sliding line system length greater than 100m (u25/35 is 150m). Power supply connector.The power supply connector is suitable for installation in the slip line joint, and provides a single core cable for power connection.

## Accessories - The Trolley Touches The Slip Line

### 配件-小车触滑线

#### End Cap 端帽

滑线的末端由端帽封闭

The end of the slide line is closed by the end cap

导向喇叭口和导向端帽

Guide bell and guide end cap.

如设备含转台、道岔，可提供导向喇叭口及导向端帽。

If the equipment includes turntable and switch, guide bell and guide end cap can be provided.

#### Segmented components 分段组件

导线分段组件可用于控制线路分段,供电段、维修区域等。

The segment assembly can be used to control the segment of the line, the supply section, the maintenance area, etc.

#### Curved segment 弯弧段

工厂或是施工现场可以制作垂直或水平的圆弧。

Vertical or horizontal arcs can be made in factories or construction sites.

#### Collector 集电器

根据不同的应用，提供单集电器及双集电器。样本中提供的持续电流参数,仅适用于集电器用于塑壳铜当集电器用于铝基不锈钢的滑触线时，若其供电端处于静止状态或才以低于10m/min的速度行驶,此时集电器的最大持续电流仅允许为原设计的50%若集电器电缆的电流承载量与过流保护设计不符,则电缆长度不超过3m。请查阅VDE 0100 430部分。

Single collector and double collector are available for different applications.Samples provided by the constant current parameter, applies only to collector for copper plastic shell as the collector for aluminum sliding contact line of stainless steel, if the power supply side in the stationary state or just running at the speed of less than 10 m/min, the maximum continuous current collector at this time only allows 50% of the original design if collector cable current capacity does not accord with over-current protection design, the cable length is not more than 3 m.Please refer to VDE 0100 430.




EN60204-32于集电器一并提供连接电缆(H07RN-F)的设计电流与集电器的额定电流匹配。若有不同的连接方式，请参照VDE0299的规定考虑电压降的因素。

The design current of en60204-32 connection cable (h07rn-f) supplied with the collector matches the rated current of the collector.For different connections, please refer to VDE0299 for voltage drop considerations.

#### Safety note 安全注意

必须遵守滑线及集电器的安装规定,保证设备的固定及活动部件间的安全距离不能小于0.5m!

The installation regulations of sliders and collectors must be followed to ensure the safe distance between fixed and moving parts of the equipment is no less than 0.5m!

Cutaway view 剖面图	Model 型号	Voltage 额定电压	Current 持续电流负载
	U15	690V	100A
	U25	1000V	450A
	U35	1000V	1250A

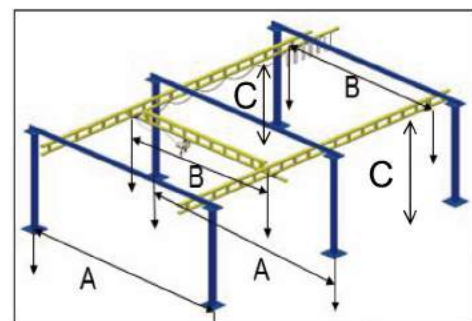
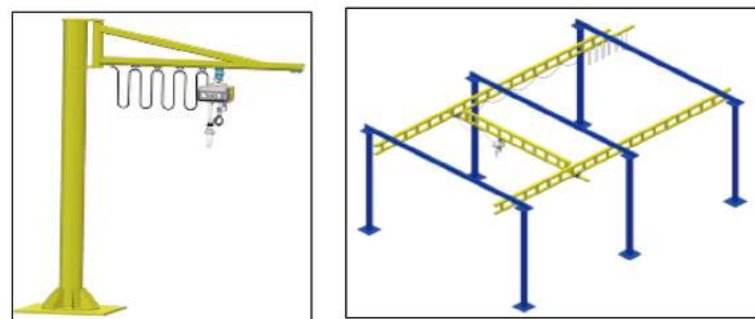


## Key points of track installation

### 轨道安装要点

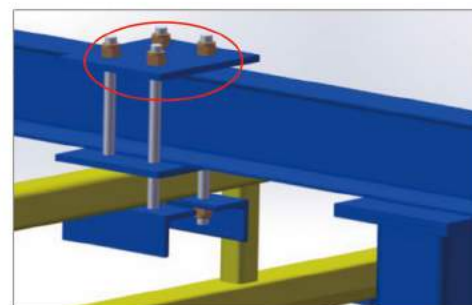
#### 自立式轻载系统地面基础的要求Requirements for the ground foundation of self-supporting light load system:

- 最低150/250mm厚度C30级别的混凝土地基 (C30=最低30Mpa/mm<sup>2</sup>)  
Concrete foundation of C30 class with minimum thickness of 150/250mm (C30 = minimum thickness of 30Mpa/mm<sup>2</sup>)
- 或者钢筋混凝土预埋  
Or reinforced concrete embedded
- 需要化学药剂螺栓固定  
Chemical bolt fixing is required



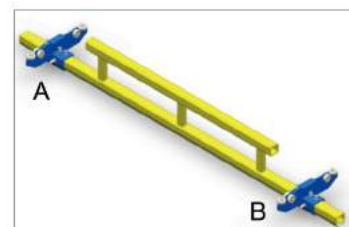
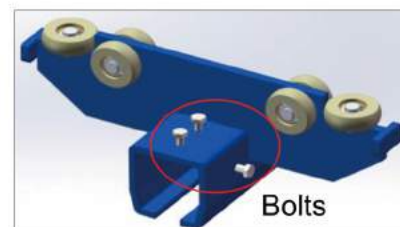
#### 自立式轻载系统的结构安装Structure and installation of self-supporting light load system:

- 立柱、行轨的中心距离 $A=Ad B=B$   
立柱中心距离必须保持一致允许公差:  $\pm 1\text{mm}$   
Center distance of column and rail  $A=Ad B=B$   
The center of the column must be kept at the same distance  
Allowable tolerance:  $\pm 1\text{mm}$
- 轨道下开口距地面距离 $C=C$   
轨道下开口距地面距离必须保持一致允许公差:  $\pm 1\text{mm}$   
(安装前必须测量并保证地面平整)  
The distance from the opening under the orbit to the ground  $C=C$   
The orbital openings must be consistent with the ground Allowable tolerance:  $\pm 1\text{mm}$   
(the ground must be measured and level before installation)
- 螺杆螺帽必须紧固  
螺帽必须保持一致高度(螺杆高出3-4牙)  
Screw nut must be tightened  
Nuts must be of the same height (3-4 teeth higher than the screw)
- 螺帽必须使用防松螺帽  
Locknut must be used



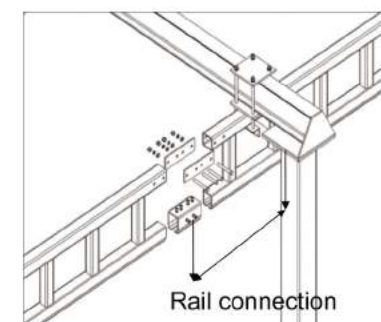
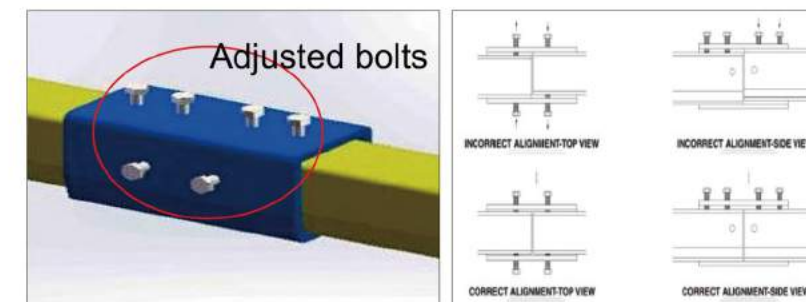
#### 行轨小车(端梁)的安装Installation of trolley (end beam):

- 行轨小车A和B必须区别对待  
Rail cars A and B must be treated differently
- 当小车A与主梁轨道紧固连接时, 小车B就不能紧固连接  
When trolley A is tightly connected to the main beam track, trolley B cannot be tightly connected
- 当使用滑触线供电时, 靠近滑触线一端的小车必须是紧固连接而另一端的小车是自由的(由于滑触线的集电器需要)  
When using the power supply of the sliding contact line, the trolley near one end of the sliding contact line must be tightly connected while the trolley at the other end is free (because the collector of the sliding contact line needs)



#### 轨道连接件的安装Installation of rail connector:

- 当两段轨道需要连接时, 我们使用轨道连接件;  
When two sections of track need to be connected, we use track connector;
- 在连接件的3个方向有12个紧固螺栓;  
There are 12 fastening bolts in 3 directions of the connector;
- 每个螺栓的作用是使两段轨道的接口达到完全紧密的和无缝的连接;  
The function of each bolt is to make the interface of two segments of track completely close and seamless connection;
- 连接件安装正确与否将直接影响行轨小车在轨道中是否运行顺畅——正确安装将保证无噪音&润滑  
Whether the connecting parts are installed correctly or not will directly affect whether the trolley runs smoothly in the track. Correct installation will ensure no noise & lubrication

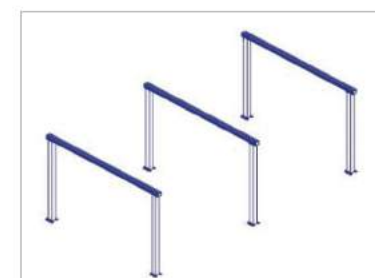
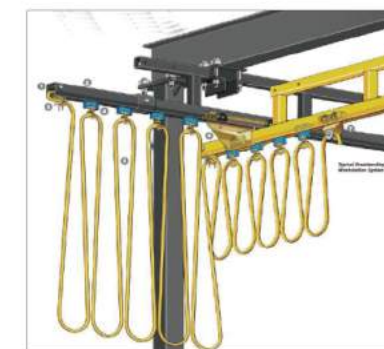


#### 行轨的安装Rail installation:

- 两个轨道的连接位置必须保证距离最近的立柱中心点不超过1,200mm  
The connection position of the two tracks must be no more than 1200 mm from the center point of the nearest column
- 两个轨道的平行度以及水平度决定了整个系统运行是否流畅  
The parallelism and levelness of the two tracks determine whether the whole system runs smoothly or not

#### 载荷(吊钩)覆盖范围Load (hook) coverage:

- Low line rail 行轨  
电缆小车/止挡/电缆终端止夹/行轨小车将减小载荷覆盖范围; 当行轨长度超过20m, 我们建议使用滑触线供电方式;  
Cable trolley/stop stop/cable terminal clip/trolley will reduce the load coverage; When the rail length exceeds 20m, we suggest using the power supply mode of sliding contact line;
- Low girder 主梁  
电缆小车/止挡/电缆终端止夹/主梁小车将减小彩盒覆盖范围;  
Cable trolley/stop stop/cable terminal clip/main beam trolley will reduce the coverage area of color boxes; Structure coverage # load range



(Torque of Bolts)力矩表	
Diameter of Bolt (mm)螺栓直径	Torque 力矩
M12	68N*M
M16	130N*M
M20	204N*M

#### 结构中的所有螺栓必须紧固All bolts in the structure must be tightened:

- 钢结构的所有螺栓必须紧固;  
All bolts of steel structure must be tightened;
- 推荐使用力矩扳手;  
Torque wrench is recommended;
- 螺栓的力矩必须遵循最低紧固力矩;  
Bolt torque must follow the minimum tightening torque;



# Aluminum Crane System

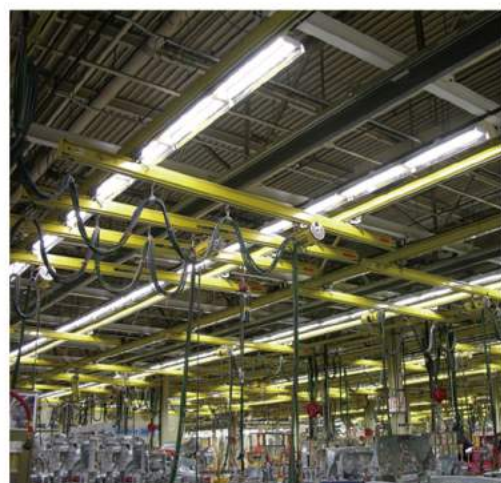
## 铝合金轨道系统

### ● Product advantages产品优势

- 自重轻
  - 额定载荷：可达到 2000 公斤
  - 滑行阻力：启动阶段推力低于0.5%，运行阶段推力低于0.25%
  - 安全系数5:1，且配有二次保护
  - 轨道表面阳极氧化处理：使得表面硬度更高，耐腐蚀，耐磨损。
  - 铝轨系统独特的柔性，多样性使操作者轻松搬运大型工件并避免产品及人员伤害。
  - 标准化配件：选型搭配更容易，根据客户现场需求定制方案，同时维修也更为便捷。
- Light weight
  - Rated load: up to 2000 kg
  - Sliding resistance: the thrust during the start-up phase is less than 0.5%, and the thrust during the running phase is less than 0.25%.
  - Safety factor 5:1 with secondary protection
  - Anodize oxidation of the track surface: making the surface hardness higher, corrosion resistant and wear resistant.
  - The unique flexibility and versatility of the aluminum rail system makes it easy for operators to handle large work pieces and avoid product and personnel injuries.
  - Standardized accessories: Easier selection and matching, customized solutions according to customer's site requirements, and maintenance is also more convenient.



悬挂机械手  
Suspension manipulator



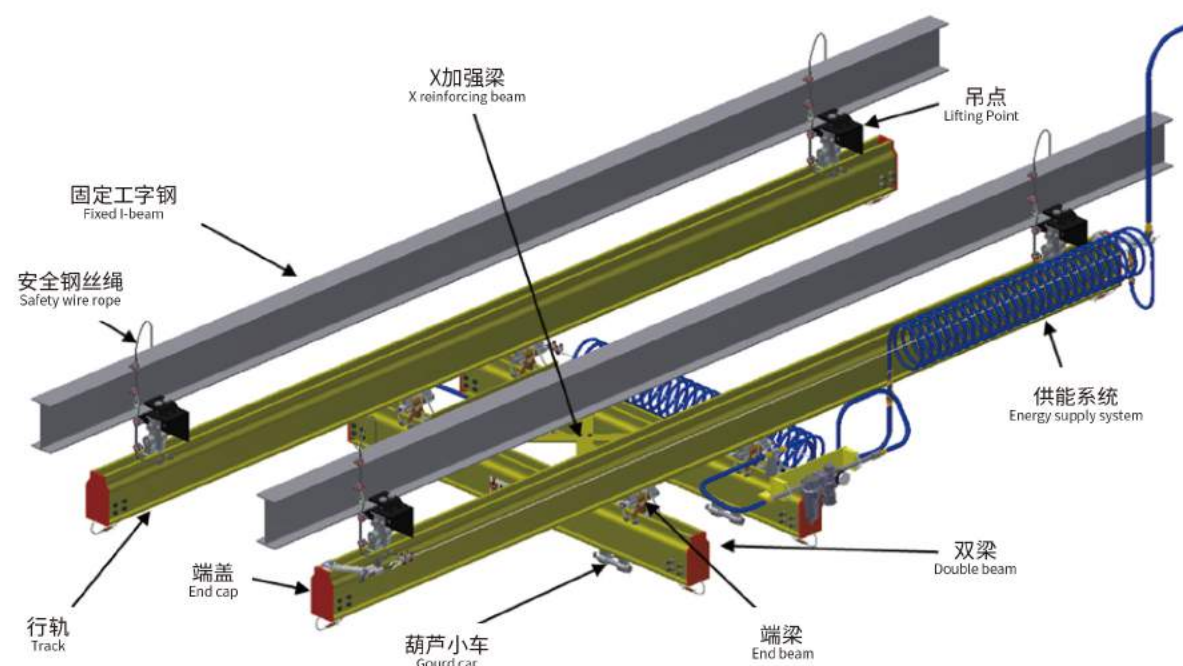
悬挂式铝轨系统  
Suspended aluminum rail system



自立式铝轨系统  
Self-supporting aluminum rail system

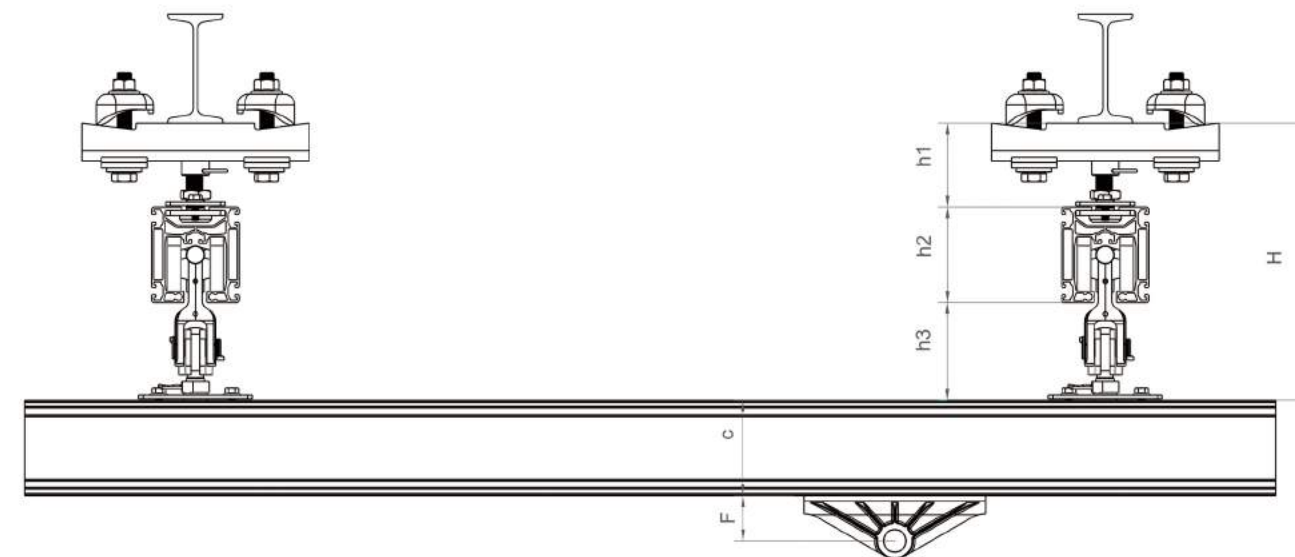


悬臂吊  
Cantilever crane



TOYO铝轨能最大限度让操作者以最轻松方式在给定单轨或工作区间XY内搬运各种工件。铝轨系统由7个基本部分组成，分别是吊点，行轨，端梁，主梁，葫芦小车，止档及功能系统。

TOYO aluminum rails allow the operator to carry the various work pieces in the most convenient way in a given monorail or work area XY. The aluminum rail system consists of seven basic parts, namely the lifting point, the rail, the end beam, the main beam, the hoist trolley, the stop and the functional system.



### ● Technical Parameters性能参数表

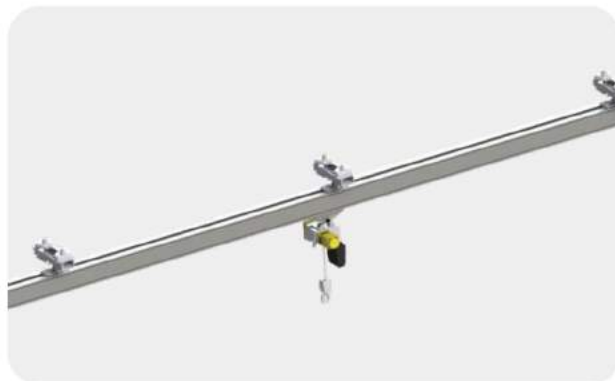
Standard single beam suspension crane installation parameter list 标准单梁悬挂式起重机安装参数表								
Product Code 产品代码	Track model 轨道型号	H1min/h1max (mm)	H2(mm)	H3(mm)	H min(mm)	Hmax	F	C
014014	A10	92-112	105	84	281	301	20	105
014022	A14	92-112	140	84	316	336	19.5	140
014030	A18	92-112	180	84	356	376	19.5	180
014037	A22	92-112	220	84	396	416	19.5	220



## Aluminum alloy track system combination application type 铝合金轨道系统组合应用型式



单轨悬挂式起重机  
Monorail suspension crane



单轨悬挂式起重机  
Monorail suspension crane



单梁低净空悬挂式起重机  
Single beam low clearance crane



单梁低净空伸缩梁起重机  
Single beam low clearance telescopic beam crane



双梁低净空悬挂式起重机  
Double beam low clearance crane



双梁悬挂式起重机  
Double beam hoisting crane

PS: 根据不同的工况采用相应的轨道布置形式, 配合不同形式的伺服控产品, 可以满足各种工作移栽、装配、输送、码垛、拧紧等工序, 从而适应不同客户的需求。

PS: According to different working conditions, the corresponding track arrangement is adopted, and different types of servo control products can be used to meet various work transfer, assembly, transportation, palletizing, tightening and other processes, so as to adapt to the needs of different customers.

## 高强度铝合金轨道系统 High strength aluminum alloy track system

KBK TOYO 轻型起重系统可为几乎所有的需求提供合适的解决方案, 让您能够设计几乎所有的悬挂式单梁起重机/悬挂式双梁起重机或单轨系统。  
KBK TOYO light crane system provides the right solution for almost any demand, allowing you to design almost all suspended single girder/-suspended girder cranes or monorail systems.

材质: 高强度阳极氧化铝合金轨道 6063-T6 合金铝材, 表面阳极氧化处理  
Material: high-strength anodized aluminum alloy track 6063-T6 alloy aluminum, surface anodized

承载能力: 轨道最大载荷 2000kg

Carrying capacity: the maximum load of the rail is 2000kg

自重轻: 轨道自重较轻, 最小的产品轨道自重 2.7kg/m

Light weight: the track has a light weight, and the smallest product rail has a weight of 2.7kg/m.

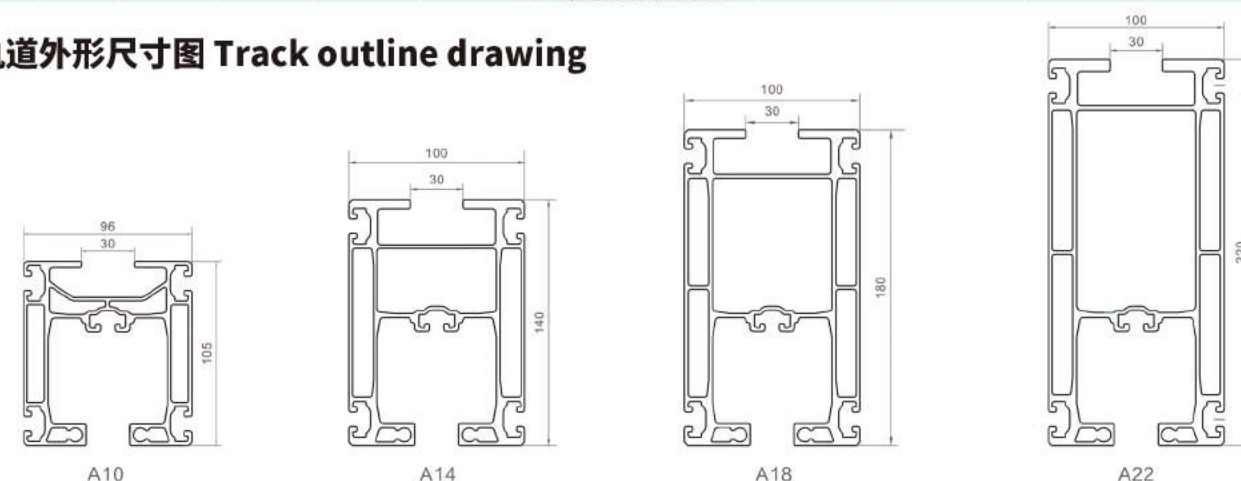
阻力小: 启动时阻力较低

Low resistance: low resistance at start-up

### Track specification sheet 轨道技术规格表

product code 产品代号	parameter 参数										
	name 名称	Height h mm 高度	Width w mm 宽度	Rated load kg 额定载荷	Self weight kg/m 自重	Material 材质	Inertia distance Iy cm <sup>4</sup> 惯性距	Inertia distance Iz cm <sup>4</sup> 惯性距	Spring cross wy cm <sup>3</sup> 弹簧横量	Spring cross wz cm <sup>3</sup> 弹性模量	Standard m 标准规格
014014	A10	105	96	250	5.5	High-strength aluminum alloy 高强度铝合金 6063-T6	235	214	42	44	6/7.5/9
014022	A14	140	100	500	7.2	High-strength aluminum alloy 高强度铝合金 6063-T6	605	335	85	67	6/7.5/9
014025	加强轨					High-strength aluminum alloy 高强度铝合金 6063-T6	2141	511	3423	609	6/7.5/9
014030	A18	180	100	750	8.8	High-strength aluminum alloy 高强度铝合金 6063-T6	1211	437	133	86	6/7.5/9
014037	A22	220	100	1200	10.2	High-strength aluminum alloy 高强度铝合金 6063-T6	2200	523	197	104	6/7.5/9

### 轨道外形尺寸图 Track outline drawing



### Rail suspension spacing 型轨吊件间距

Product code 产品代号	Aluminum rail model 铝轨型号	Carrying capacity 承载能力						
		80	125	250	500	750	1200	2000
014014	A10	3m	2.7m	2.4m				
014022	A14	6.1m	5.1m	3.8m	2.7m	2.3m		
014030	A18	8m	6.9m	5.5m	3.9m	3.2m	2.2m	1.8m
014037	A22	10m	9m	7m	5.2m	4.3m	3m	2.4m

#### 轨道配置 Track configuration :

- 单轨轨道可以连接各个工位
- 单梁和双梁桥式起重机可用于局部运输需求或复杂的搬运系统, 如汽车生产线
- 刚性搬运设备可跟双轨轨道或双梁起重机相连
- 伸缩梁装置可充分利用当前无法出入的区域——如, 装配线旁
- 铝轨型材可以和KBK钢轨型材完美结合——也可以后加装。
- Monorail track can be connected to each station
- Single beam and double girder overhead cranes can be used for local transportation needs or complex handling systems such as automotive production lines
- Rigid handling equipment can be connected to a double track or twin girder crane
- Telescopic beam devices make full use of areas that are currently inaccessible—for example, next to the assembly line
- The aluminum rail profile can be perfectly combined with the KBK rail profile - it can also be retrofitted.



# Track serialization component

## 轨道系列化组件

### Flexible hanger 柔性吊件

下部与法兰板连接采用免维护的球形结构，内置铜垫，结构灵活，主要承受向下方向的力。

The lower part is connected to the flange plate with a maintenance-free spherical structure, built-in copper pad, flexible structure, and mainly receives the downward force.



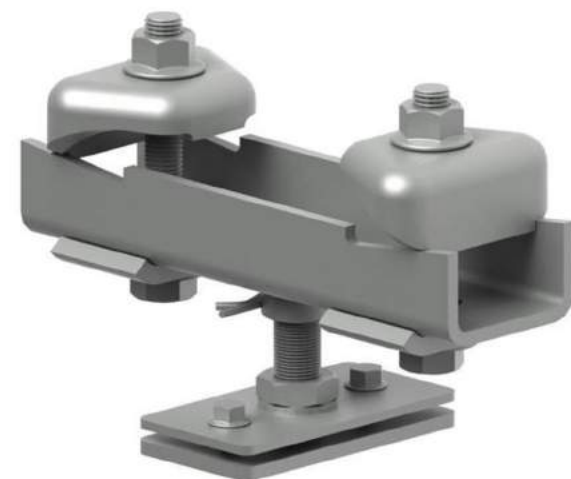
### Technical data 技术参数表

Product Code 产品代码	Parameter 参数						
	Name 名称	Carrying capacity kg承载能力	Width adjustment mm宽度调整	Height adjustment mm高度调整	weight kg 自重	Maximum tilt angle 最大倾斜角度	Applicable track model适用轨道型号
014056	Pendular mountings 50-150柔性吊点	2000kg	50-150mm	90-130mm	4kg	10°	A10-A22
014056	Pendular mountings 150-250柔性吊点	2000kg	150-25mm	90-130mm	4.5kg	10°	
014058	Pendular mountings 250-310柔性吊点	2000kg	250-310mm	90-130mm	5kg	10°	

### Rigid hanger 刚性吊件

精确定位的机械手、吊升装置或伸缩梁需要向上作用力时，采用高度可调节的刚性吊件安装，根据吊件的高度调节范围补偿钢结构的高度差。

When the precisely positioned manipulator, hoist or telescopic beam requires upward force, it is installed with a height-adjustable rigid hanger to compensate for the height difference of the steel structure according to the height adjustment range of the hanger.



### Technical data 技术参数表

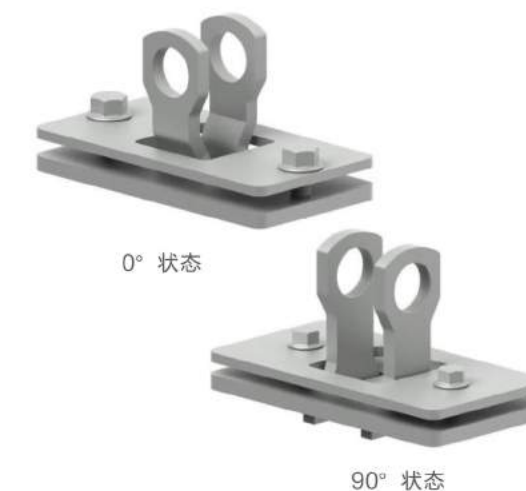
Product Code 产品代码	Parameter 参数					
	Name 名称	Carrying capacity kg承载能力	Width adjustment mm宽度调整	Height adjustment mm高度调整	weight kg 自重	Applicable track model适用轨道型号
014059	Regid mountings 50-150mm刚性吊点	2000kg	50-150	20	3.8	A10-A22
014060	regid mountings 150-250mm刚性吊点	2000kg	150-25	20	4.3	
014061	regid mountings 250-310mm刚性吊点	2000kg	250-310	20	4.8	

# Beam hanger

## 横梁吊件

横梁通过横梁吊件连接到纵轨上。通过铝合金轨道小车配合使用，精密整合确保系统能够低静音，稳定运行，最大承载达到600kg。横梁吊件分0°吊件和90°吊件，满足轨道不同的布置方式。

The beam is connected to the longitudinal rail by a beam hanger. Through the use of aluminum alloy rail car, the precise integration ensures that the system can be quiet and stable, and the maximum load reaches 600kg. The beam hangers are divided into 0° hangers and 90° hangers to meet different layouts of the track.



### Technical date 技术参数表

Product code 产品代码	Name 名称	Self weight kg 自重
014079	横梁吊件0°/Beam hanger 0°	0.6
014080	横梁吊件90°/Beam hanger 90°	0.6

### Secondary protection device 二次保护装置



### Technical date 技术参数表

Product code 产品代码	Name 名称	Self weight kg 自重
014099	轨道保护Track protection	1
014100	横梁保护Beam protection	1.5
014101	滑块保护/Block protection	1

根据轨道连接特性，贵公司有三种标准安全装置，可供选购：

- 轨道保护装置(纵轨与上方刚结构的连接)
- 横梁保护装置(纵轨与横梁之间的连接)
- 负载保护装置(防止负载从滑轮轴上脱落)

According to the track connection characteristics, your company has three standard safety devices available for purchase:

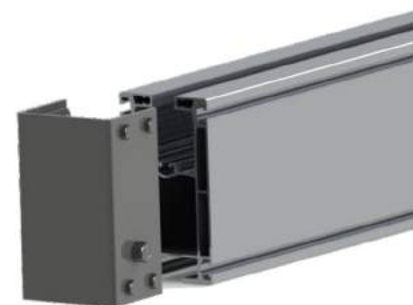
- Track protection device (connection of longitudinal rail to upper rigid structure)
- Beam protection device (connection between longitudinal rail and beam)
- Load protection device (to prevent the load from falling off the pulley shaft)



## Track end cover 轨道端盖

所有端盖采用金属结构，防止端盖脱落，以防灰尘进入轨道内部。

All end caps are constructed of metal to prevent the end caps from falling out to prevent dust from entering the rails.



### ● Technical data 技术参数表

Product code 产品代码	Name名称	size尺寸	Self weight kg自重
014069	A10 end cap/A10端盖	105*96*3	0.5kg
014070	A14 end cap/A14端盖	140*100*3	0.65kg
0147071	A18end cap/A18端盖	180*100*3	0.85kg
014072	A22 end cap/A22端盖	220*100*3	1.03kg

## Track joint assembly 轨道接头组件

接头组件共分:4种，固定在轨道侧面的凹槽内，因此轨道长度可以按照需求无限加长结构轻巧安装方便，完美实现轨道的无缝对接。

The joint components are divided into four types, which are fixed in the groove on the side of the track. Therefore, the length of the track can be infinitely lengthened according to the requirements. The structure is light and easy to install, and the seamless docking of the track is perfectly realized.



### ● Technical data 技术参数表

Product code 产品代码	Name名称	Self weight kg自重
014075	A10/rail joint assembly/A10端盖	2.15
014176	A14/rail joint assembly/A14端盖	2.6
014177	A18/rail joint assembly/A18端盖	3.1
014078	A22/rail joint assembly/A22端盖	3.65

## Main beam reinforcement connection assembly 主梁加强连接组件



### ● Technical data 技术参数表

Product code 产品代码	Name名称	Self weight kg自重
014075	A10 track reinforcement component/A10轨道加强组件	2.15
014176	A14track reinforcement component/A14轨道加强组件	2.6
014177	A18track reinforcement component/A18轨道加强组件	3.1
014078	A22track reinforcement component/A22轨道加强组件	3.65

## Track serialization component 轨道系列化组件

### Track hoist block 轨道葫芦滑车

材质: 铝合金压铸成型，每个自重1.25kg，最大承载600kg

Material: aluminum alloy die-casting, each weighing 1.25kg, the maximum load 600kg

#### ● 低静音Low mute

高强度耐磨尼龙轮，运行轻便，滑行顺畅。

High-strength wear-resistant nylon wheels for smooth running and smooth running.

#### ● 反滚轮装置Reverse roller device

独特的反滚轮装置，可双向承载的同时，良好的抗偏心能力，确保提升装置精确定位。运行过程更加平稳，操作更简便，安全系数极高。

The unique anti-roller device can be bi-direction ally loaded and has good anti-ecentricity to ensure precise positioning of the lifting device. The operation process is more stable, the operation is more flexible, and the safety factor is extremely high.

#### ● 缓冲装置Buffer device

小车两端配置橡胶防撞头，延长轨道和小车使用寿命。

Rubber anti-collision heads are arranged at both ends of the trolley to extend the service life of the rails and trolleys.

葫芦滑车Gourd block



轨道滑车Track block



### ● Track / hoist block technical parameter table 轨道/葫芦滑车技术参数表

Product code 产品代码	Name名称	Maximum load kg最大承载	Self weight kg自重	main material主要材质
014064	Aluminum alloy track block/铝合金轨道滑车	600	1.25	Aluminum alloy/铝合金
014062	Aluminum hoist block/铝合金葫芦滑车	600	1.6	Aluminum alloy/铝合金

### Tandem block串联滑车

通过串联两个铝合金滑车可安全地提升1200kg以下负荷。

The load of 1200kg or less can be safely increased by connecting two aluminum alloy



### ● Track / hoist block technical parameter table 轨道/葫芦滑车技术参数表

Product code 产品代码	Name名称	Maximum load kg最大承载	Self weight kg自重	main material主要材质
014065	Aluminum alloy track block/铝合金轨道滑车	1200	3.5	Aluminum alloy/铝合金
014066	Aluminum hoist block/铝合金葫芦滑车	1200	4.2	Aluminum alloy/铝合金



## Double beam trolley moving shelf 双梁小车移动架子

双梁小车架作用是将两根纵轨或两根横梁的链式葫芦悬挂起来。

The double beam frame is used to suspend the chain hoists of two vertical rails or two beams.

双梁小车自身通过吊挂滑车与相关的轨道连接。

The double beam trolley itself is connected to the associated track by means of a hanging trolley.



Product code 产品代码	Name 名称	Gauge mm 轨距	Self weight kg 自重
014068	Double beam frame/双梁小车架	500mm-1500mm	36.8kg

## Electric trolley 电动小车

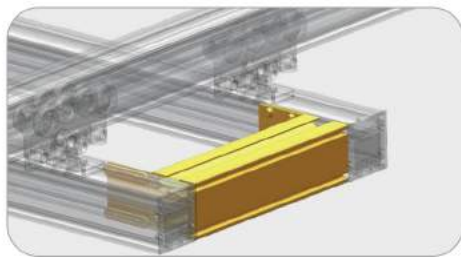
电驱小车根据实际起重量需要而实现起重机的电动行走。它采用电动行走装置，由电机、减速箱和摩擦轮一体化设计而成。启动和制动，减速和加速都柔和，均匀和平稳。当起重量大于500kg，主梁跨度大于6米以上时，我们推荐使用ABF。它能使输送效率大大提高，输送操作更安全，更可靠。优化设计使行走装置ABF直接安装在双梁起重机小车架内，节省空间并不影响吊钩行走范围，从而不损失起重机有效平面服务范围。

The electric drive trolley realizes the electric walking of the crane according to the actual lifting demand. It uses an electric walking device and is designed by integrated motor, gearbox and friction wheel. Start and brake, deceleration and acceleration are soft, even and smooth. When the lifting weight is greater than 500kg and the main beam span is more than 6m, we recommend using ABF. It can greatly improve the conveying efficiency, and the conveying operation is safer and more reliable. The optimized design enables the ABF of the traveling device to be directly installed in the small frame of the double-girder crane. The space saving does not affect the walking range of the hook, so that the effective plane service range of the crane is not lost.



Product code 产品代码	Name 名称	Running speed m/min 运行速度	Power supply 电源
014024	Electric drive trolley/电驱动小车	20/5m/min	Three-phase 380V50Hz/三相380V50Hz

## Double beam block 双梁垫块

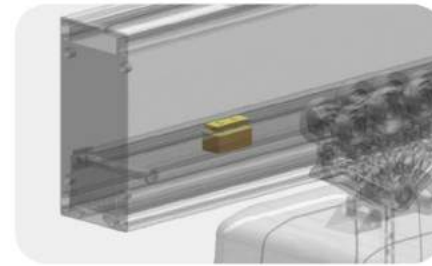


Product code 产品代码	Name 名称	Gauge mm 轨距	Self weight kg 自重
014086	Double beam blockA10/双梁垫块	300-2000	5.6
014087	Double beam blockA14/双梁垫块	300-2000	7.4
014088	Double beam blockA18/双梁垫块	300-2000	9
014089	Double beam blockA22/双梁垫块	300-2000	10.04

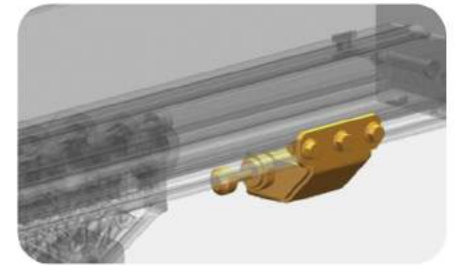
## END STOP 末端止档



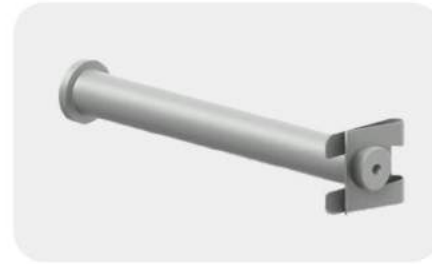
安装示意图  
Installation diagram 1



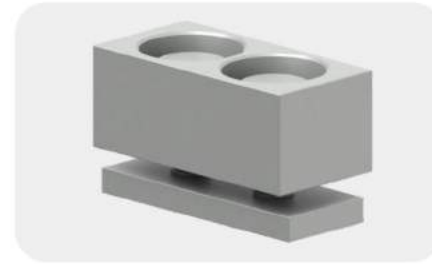
安装示意图  
Installation diagram 2



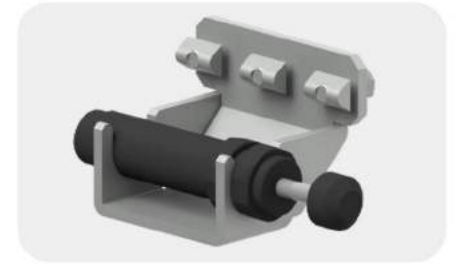
安装示意图  
Installation diagram 3



014082



014083



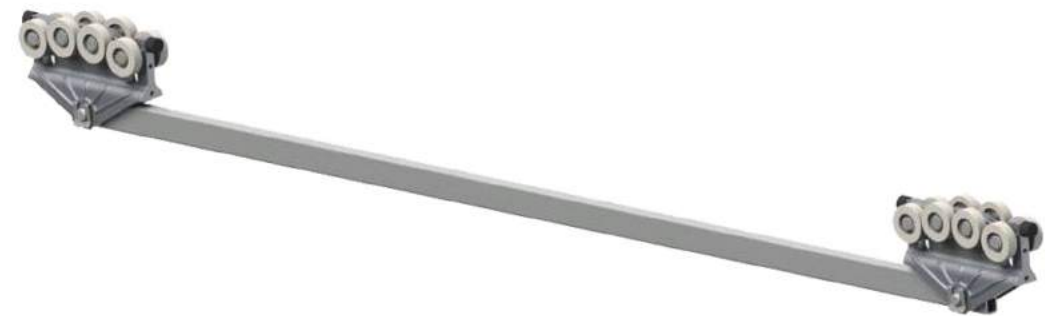
014084

Product code 产品代码	Name 名称	Self weight kg 自重
014082	end stop fixed A105-A220/二次保护插销	0.1
014083	end stop adjustable/可调止挡块	0.19
014084	end stop buffered/末端缓冲器	

## Intermediate movement stop 中间移动止挡

如型轨系统内上安装2个横梁或多个横梁，则我们的标准中间止挡是您所需的选择。我们提供的中间止挡长度在300-2000mm。如有需要，也可以提供非标尺寸。

If there are 2 beams or multiple beams installed in the rail system, our standard intermediate stop is your choice. The middle we provide The block length is 300-2000mm. Non-standard sizes are also available upon request.



Product code 产品代码	Name 名称	Adjustable distance 可调距离
014102	Adjustable intermediate shift stop/可调中间移动止挡	300-2000mm



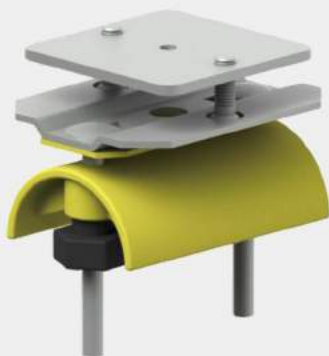
# Power supply system 供电系统



扁电缆滑车 Flat cable pulley  
产品代码Product code: 014103



圆电缆滑车Round cable pulley (Φ26-36mm)  
产品代码Product code: 014106



扁电缆末端固定器 Flat cable end holder  
产品代码Product code: 014107



圆电缆末端固定器Round cable end holder (26-36mm)  
产品代码Product code: 014110

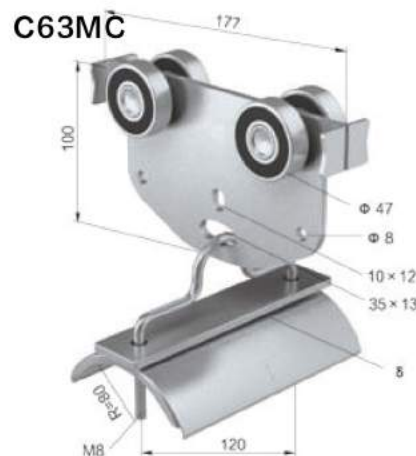


扁电缆拔杆 Flat cable pull rod  
产品代码Product code: 014111



圆电缆拔杆Round cable pull rod (26-36mm)  
产品代码Product code: 014114

# C-rail power supply system C型轨供电系统



中间滑车/Middle Trolley(C63)



牵引首车/Towing Trolley(C63)

## Technical data 技术参数表

Type型号	C63MC	C63SC
Wheels滚轮	Spherical bearing, hardened and galvanized Q 采用球面轴承, 经过硬化和镀锌处理Q Temperature range: -30P - +125P 温度范围: -30P——+125P Running speed: 160 m / min 运行速度: 160米/分钟	
Material材质	Panel: galvanized steel 面板: 镀锌钢 Base: galvanized steel 底座: 镀锌钢 Pin: galvanized steel 销子: 镀锌钢 Other parts: galvanized steel 其余零件: 镀锌钢 Temperature resistance: -30 ° C - +100 ° C 耐温: -30℃——+100℃	
Max,cable load载重	≤65kg	≤65kg
Dim,of Cable(mm)电缆尺寸	Max,120Wx40δ	Max,120Wx40δ
Weight (kg) 重量	1.95	2.30
Cat.-No.产品编码	751201	751101



## End Trolley(C63) 固定尾车



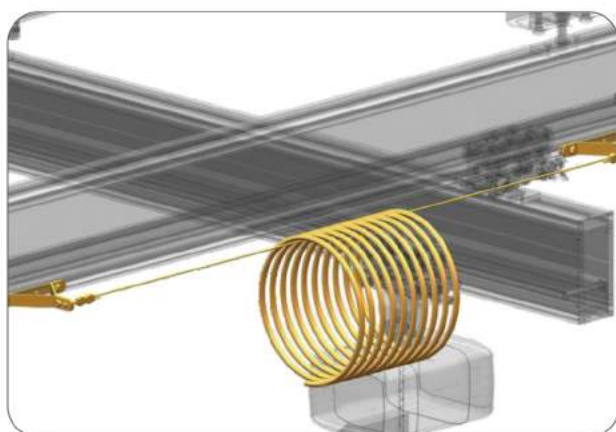
型号Type	C63EC
材质/Material	镀锌钢/Galvanized steel
载重/Max.cable load	≤65kg
电缆尺寸/Dim.of Cable(mm)	Max, 120Wx40δ
重量/Weight (kg)	1.15
产品编号/Cat.-No.	751301

Product Code产品代码	Name名称
014128	C30-4m轨道 C30-4m track
014129	C型轨支架A10 C-rail bracket A10
014030	C型轨支架A14 C-rail bracket A14
014031	C型轨支架A18 C-rail bracket A18
014032	C型轨支架A22 C-rail bracket A22
014033	C型轨端盖 C-type rail end cover
014034	C型轨止档 C-track stop
014035	C型轨电缆滑车 C-rail cable pulley
014036	C型轨电缆固定夹 C-rail cable clamp
	C型轨牵引滑车 C-rail traction pulley

## Gas supply system

### 供气系统

### 气管支架/Energy Wire Brackets



Product Code产品代码	Name名称
014126	气管支架 Tracheal stent
014127	钢丝绳直径: 4mm/Wire rope diameter: 4mm
014146	气管 (请告知横向贯穿路径长度) Trachea (please inform the length of the transverse path)

## Column type jib crane--BZD -PNN -S

### 立柱式电动悬臂--BZD -PNN -S

**BZD - PNN -S型立柱式电动悬臂吊，最大起重量可达5000Kg，悬臂长度可达10m。采用低净空悬臂允许有较大的起升高度，旋转采用电动旋转，角度不受限制，因此具有很大优势，特别是作业区域较大时。**

BZD -PNN -S type column type jib crane, the maximum lifting capacity can reach 5000Kg, and the jib length can reach 10m. The use of a low clearance cantilever can maximize the lifting height, 360 degree electric rotation. can cover a large working area.



### ● Features产品特点

- 1 最大标准起重量可达5000Kg;**  
Maximum lifting capacity up to 5000Kg;
- 2 悬臂长度可达10m(≤1000Kg);**  
jib length up to 10m(≤1000Kg);
- 3 n°360°全回转;**  
360 degree rotation;
- 4 悬臂采用的是H型钢作为悬臂材料，低净空设计**  
The jib is made of H-beam as a cantilever material with low clearance design;
- 5 可选配电动运行和电动旋转机构;**  
Cross travel and rotation can be electrical;
- 6 利用化学螺栓可直接安装于混凝土地面，方便快捷;**  
Quick and easy installation on concrete floors with chemical bolts;
- 7 当起重量比较大时，推荐使用预埋螺栓安装方式;**  
The embedded bolt installation method will be used at a larger lifting capacity;
- 8 板材采用激光切割精度高;**  
8.Cutting sheet in high precision laser;

### ● Technical Parameters性能参数表

起重量 SWL(KG)	臂长Outreach(m)									旋转角度 Rotation angle
	2	3	4	5	6	7	8	9	10	
125										N°360°
250										
500										
1000										
2000										
3000										
5000										



## Wall-mounted jib crane-- BZD -WNN -D

墙壁式电动悬臂吊--BZD -WNN -D



### ● Features产品特点

- ① 最大起重量可达3000Kg;**  
Maximum lifting capacity can be 3000kg;
- ② 悬臂长度可达10m(≤1000Kg);**  
Jib length up to 10m(≤1000kg);
- ③ 最大旋转角度180°;**  
Maximum rotation angle 180°;
- ④ 悬臂采用的是H型钢作为悬臂材料, 低净空设计;**  
The jib is made of H-beam as a cantilever material with low clearance design;
- ⑤ 可选配电动运行和电动旋转机构;**  
cross travel and rotation can be electrical;
- ⑥ 固定于墙面或厂房立柱上, 不占用任何土地面积;**  
Fixed on the wall or column, does not occupy any land area;

### ● Technical Parameters性能参数表

起重量 SWL(KG)	臂长Outreach(m)									旋转角度 Rotation angle
	2	3	4	5	6	7	8	9	10	
125										180°
250										
500										
1000										
2000										
3000										
5000										

## Mobile jib crane --BZD -PA -MV

移动式立柱悬臂吊--BZD -PA -MV



### ● Features产品特点

- ① 最大起重量可达1000Kg;**  
Maximum lifting capacity can be 1000kg;
- ② 悬臂长度可达4m(≤125Kg);**  
jib length reach to 4m(≤125Kg) ;
- ③ n\*360°全回转或最大旋转角度270°;**  
360 degree rotation or 270 degree rotation;
- ④ 悬臂采用的是H型钢为悬臂材料, 低净空设计;**  
The jib is made of H-beam as a cantilever material with low clearance design;
- ⑤ 可选配电动运行和电动旋转机构;**  
cross travel and rotation can be electrical;
- ⑥ 带有可移动的配重底座, 可以根据需要利用叉车或手推调整使用位置;**  
With a movable counterweight base, adjust the position of use with a forklift or hand push as needed;

### ● Technical Parameters性能参数表

起重量 SWL(KG)	臂长Outreach(m)									旋转角度 Rotation angle	
	2	3	4	5	6	7	8	9	10	n*360°	270°
125											
250											
500											
1000											



## Cable-stayed manual jib crane --BZD --HHN --G

斜拉式手动悬臂吊--BZD -HHN -G



### ● Features产品特点

- ① 最大起重量可达1000Kg;  
Maximum lifting capacity up to 1000Kg;
- ② 悬臂长度可达8m(≤250Kg)  
Jib length up to 8m(<250Kg);
- ③ 立柱式最大旋转角度270°(墙壁式最大旋转角度180°);  
Column type maximum rotation angle 270°(wall type maximum rotation angle 180°)
- ④ 悬臂采用Q345B材质钢板挤压成型;  
The arm is extruded by Q345B steel plate;
- ⑤ 小车移动和悬臂旋转均采用手动方式;  
cross travel and rotation both by manual;
- ⑥ 石墨铜套回转结构设计, 自润滑使摩擦阻力小, 操作轻便, 免维护;  
Graphite copper sleeve rotation structure design, self-lubricating, low frictional resistance light operation, maintenance-free;
- ⑦ BZD -WHN -G型可固定于墙面或厂房立柱上, 不占用任何地面面积;  
Can be fixed on the wall or column, does not occupy any land area;

### ● Technical Parameters性能参数表

起重量 SWL(KG)	臂长Outreach(m)									旋转角度 Rotation angle	
	2	3	4	5	6	7	8	9	10		
125										270°	180°
250											
500											
1000											

## Column-type aluminum alloy jib crane --BZD -HHN -N

立柱式铝合金悬臂吊--BZD -HHN -N



### ● Features产品特点

- ① 最大起重量可达1000Kg;  
Maximum lifting capacity up to: 1000kg;
- ② 悬臂长度可达6m(≤250kg);  
Jib length up to 6m(≤250kg);
- ③ 立柱式最大旋转角度270°(墙壁式最大旋转角度180°);  
Column type maximum rotation angle 270°(Wall type maximum rotation angle 180°);
- ④ 悬臂采用铝合金材质挤压成型;  
Jib is extruded by aluminum alloy;
- ⑤ 小车移动和悬臂旋转均采用手动方式;  
Cross travel and rotation both by manual;
- ⑥ 石墨铜套回转结构设计, 自润滑使摩擦阻力小, 操作轻便, 免维护;  
Graphite copper sleeve rotary structure design, self-lubricating low frictional resistance, light operation, maintenance-free;
- ⑦ BZD -WHN -N型可固定于墙面或厂房立柱上, 不占用任何地面面积;  
. Can be fixed on the wall or column, does not occupy any land area;
- ⑧ 可用于洁净室或核电行业;  
Can be used in clean room or nuclear power industry;

### ● Technical Parameters性能参数表

起重量 SWL(KG)	臂长Outreach(m)									旋转角度 Rotation angle	
	2	3	4	5	6	7	8	9	10		
125										270°	180°
250											
500											
1000											



## Truss arm manual jib crane- BZD -HHN -K

手动花架悬臂吊--BZD -HHN -K



### ● Features产品特点

- ① 最大起重量可达1000kg;**  
Maximum lifting capacity up to 1000Kg;
- ② 悬臂长度可达8m(≤500Kg);**  
Jib length up to 6m(<500Kg);
- ③ 立柱式最大旋转角度360°;**  
the maximum rotation angle of the column type 360°;
- ④ 悬臂采用空心轨道KBK I或KBK II材料,非常轻巧;**  
The jib is made of track KBK -I or II material, which is very lightweight;
- ⑤ 小车移动和悬臂旋转均采用手动方式;**  
cross travel and rotation both by manual;
- ⑥ 石墨铜套回转结构设计,自润滑使摩擦阻力小,操作轻便,免维护;**  
Graphite copper sleeve rotation structure design, self-lubricating, low frictional resistance light operation, maintenance-free;
- ⑦ BZD -WHN -K型可固定于墙面或厂房立柱上,不占用任何地面面积;**  
Can be fixed on the wall or column, does not occupy any land area;

### ● Technical Parameters性能参数表

起重量 SWL(KG)	臂长Outreach(m)									旋转角度 Rotation angle	
	2	3	4	5	6	7	8	9	10		
125										270°	180°
250											
500											
1000											

## Articulating jib crane with intelligent lifting device --BZD -CNN -ZB

折臂式智能提升机--BZD -CNN -ZB



### ● Features产品特点

- ① 最大起重量可达500kg;**  
Maximum lifting capacity up to 500Kg;
- ② 悬臂长度可达8m(≤125K) ;**  
jib length up to 8m(≤125Kg);
- ③ 立柱式最大旋转角度270°(墙壁式最大旋转角度180°)**  
Column type maximum rotation angle 270 (wall type maximum rotation angle 180°)
- ④ 悬臂采用的是矩形管材料,低净空设计;**  
The jib is made of rectangular tube material with low clearance design;
- ⑤ 悬臂旋转采用手动方式;**  
Rotation in manual mode;
- ⑥ 石墨铜套回转结构设计,自润滑使摩擦阻力小,操作轻便,免维护;**  
Graphite copper sleeve rotation structure design, self-lubricating, low frictional resistance, light operation, maintenance-free;
- ⑦ 采用阻尼器可以调整回转阻力的大小**  
Adjust the size of the rotary resistance with a damper;

### ● Technical Parameters性能参数表

起重量 SWL(KG)	臂长Outreach(m)									旋转角度 Rotation angle	
	2	3	4	5	6	7	8	9	10		
80										270°	360°
200											
300											
500											