



全球起重机方案解决专家

GLOBAL CRANE SOLUTION PROVIDER

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产品样本
PRODUCT SAMPLES

NR 型钢丝绳电动葫芦

**NR TYPE WIRE ROPE
ELECTRIC HOIST**

产品分类
PRODUCT CLASSIFICATION

低净空运行式电动葫芦
LOW-HEADROOM MONORAIL HOIST

标准净空运行式电动葫芦
STANDARD HEADROOM MONORAIL HOIST



NR 型钢丝绳电动葫芦
NR TYPE WIRE ROPE ELECTRIC HOIST

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全新一代 NR型 钢丝绳电动葫芦

NR TYPE WIRE ROPE ELECTRIC HOIST

A 产品优势 PRODUCT ADVANTAGE

六大设计理念 打造匠心之作

The ingenious product is born based on six design concepts



1/ 核心技术自主可控设计理念
Autonomous and controllable design concept of core technology



2/ 模块化设计理念
Modular design concept



3/ 智能化、远程运维设计理念
Intelligent and remote operation and maintenance design concept



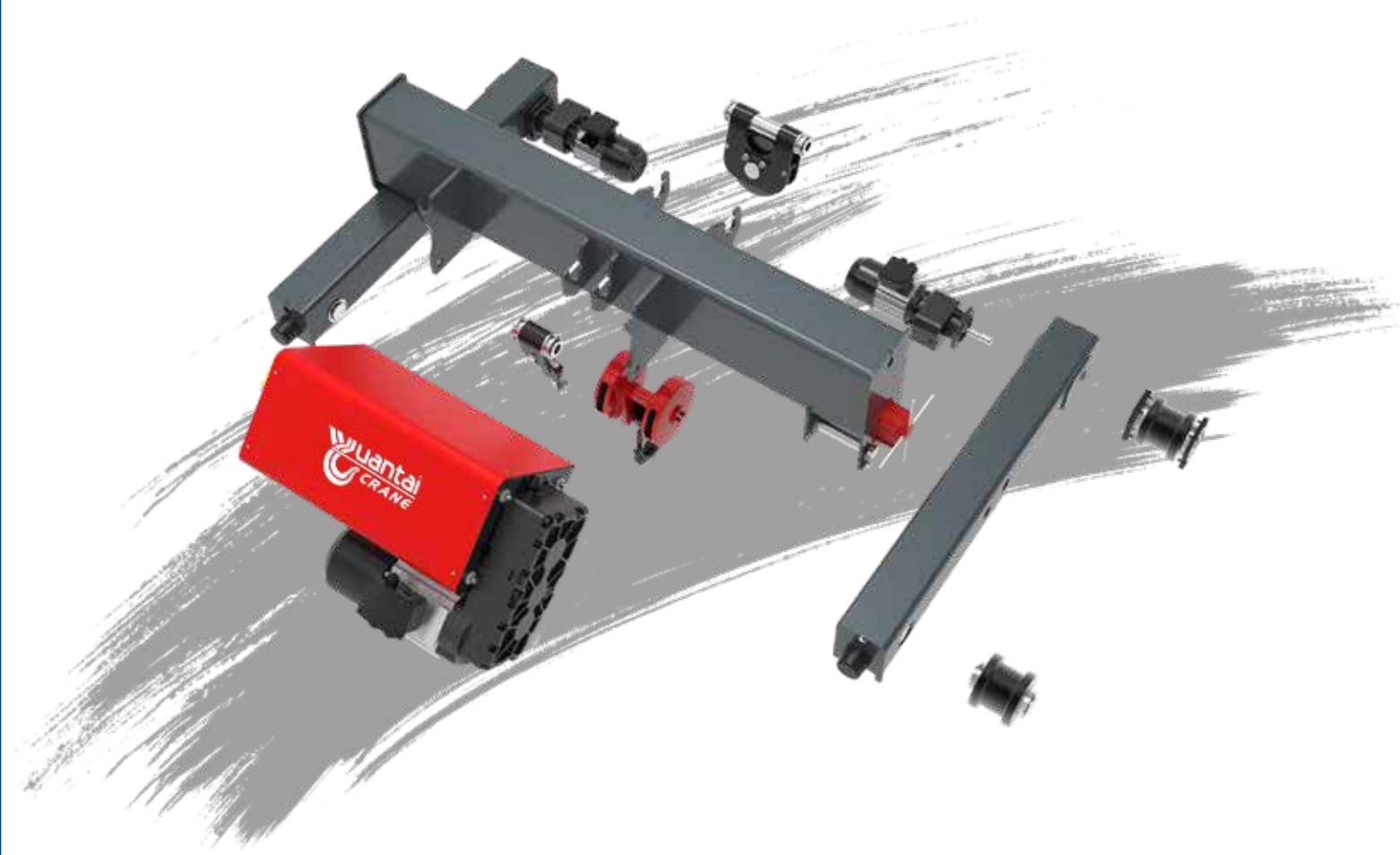
4/ 低净空、紧凑设计理念
Low headroom and compact design concept



5/ 免维护、节能环保设计理念
Design concept of maintenance-free, energy-saving and Green



6/ 坚固耐用、安全设计理念
Rugged and safe design concept



01 核心技术自主可控设计理念

Autonomous and controllable design
concept of core technology



起升驱动单元
Lifting Drive Unit



安全监控器
Security Monitor



运行驱动单元
Travelling Drive Unit

按照 ISO、GB、FEM、DIN、BS 等标准打造的全新一代电动葫芦产品：

NR型钢丝绳电动葫芦

NR Type Wire Rope Electric Hoist:

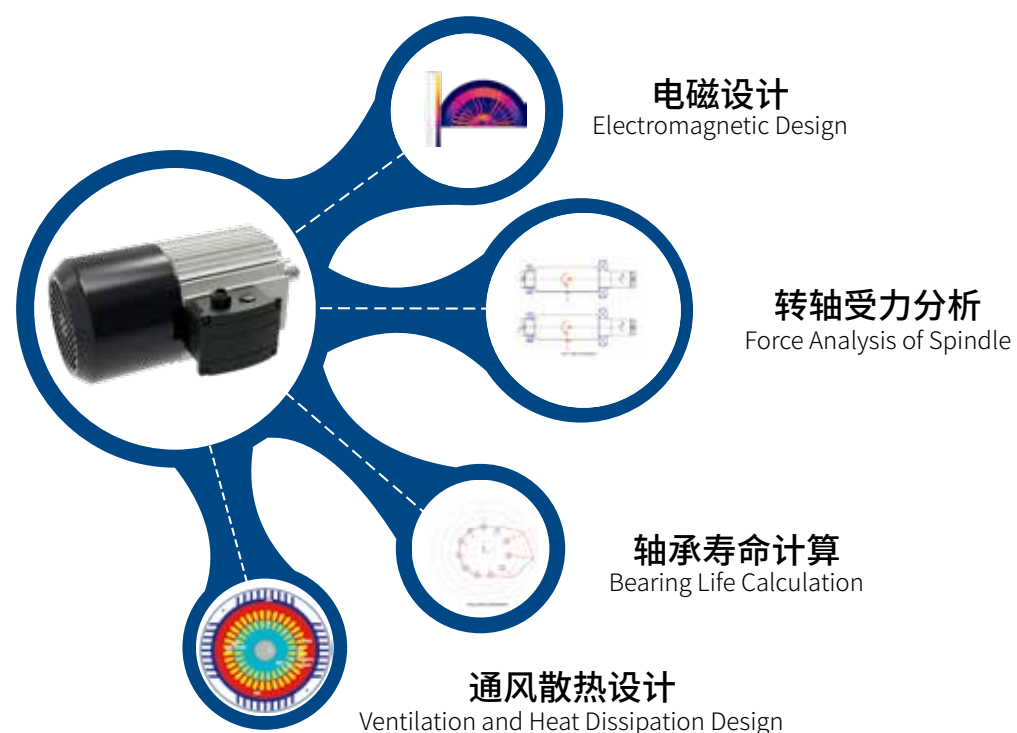
A new generation Electric Hoist which fabricated according to ISO、GB、FEM、DIN、BS standards

与重点高校研究机构合作开发核心零部件，并完全自主生产制造，实现产品品质可控、工期可控。

Cooperate with major university research institutes to develop core spare part, and can realize the independent production of core spare part, so as to achieve controllable product quality and controllable construction period.

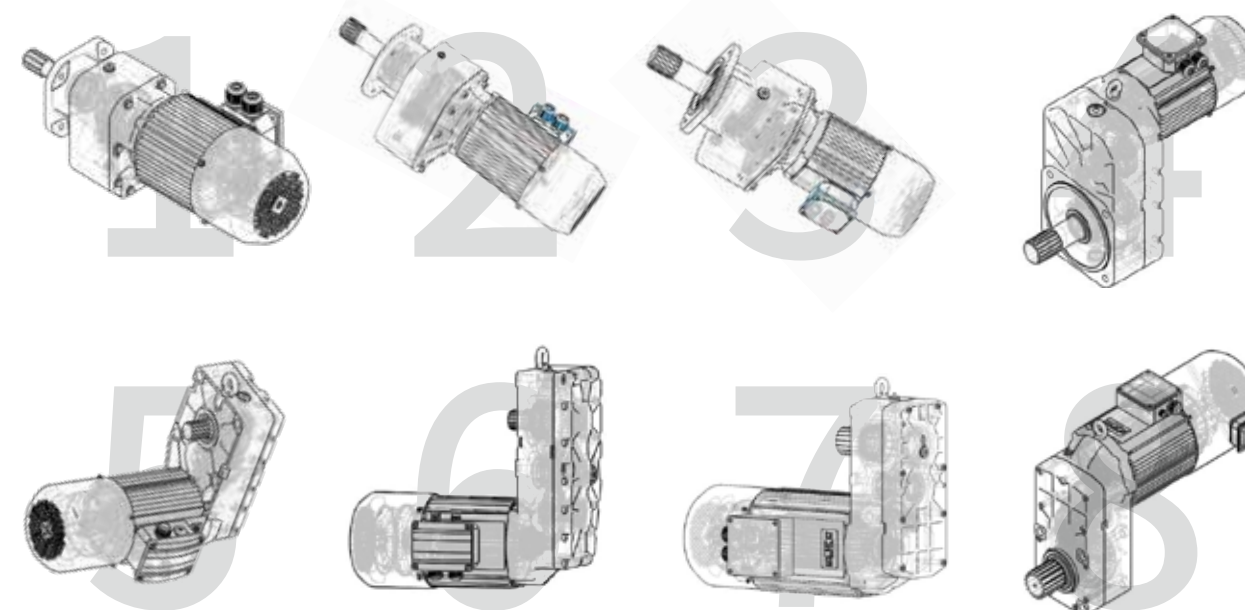


电机结构设计和电磁计算 Structural Design and Electromagnetic Calculation of Motor

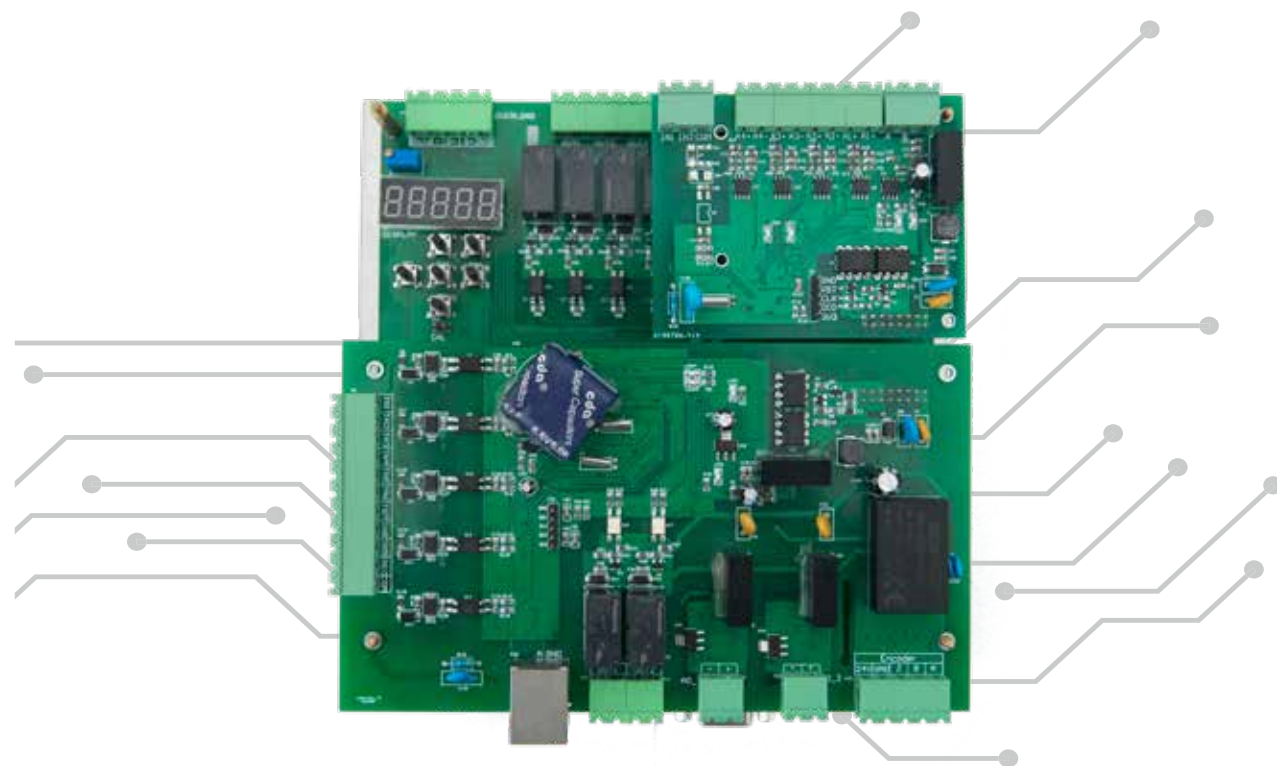


减速器结构设计

Structure Design of Reducer



ASW 防摇系统 (可选) (第三代防摇摆控制系统) **ASW Anti-Swing System(Optional)**
(The Third Generation Anti-Swing Control System)



1

功能升级
Function Upgrade

可替代 PLC 实现逻辑控制
及电气防摇摆功能
It can replace PLC to realize
logic control and electric anti-
swing function



2

高匹配性
High Matching

不限制变频器品牌
No restriction on
inverter brand



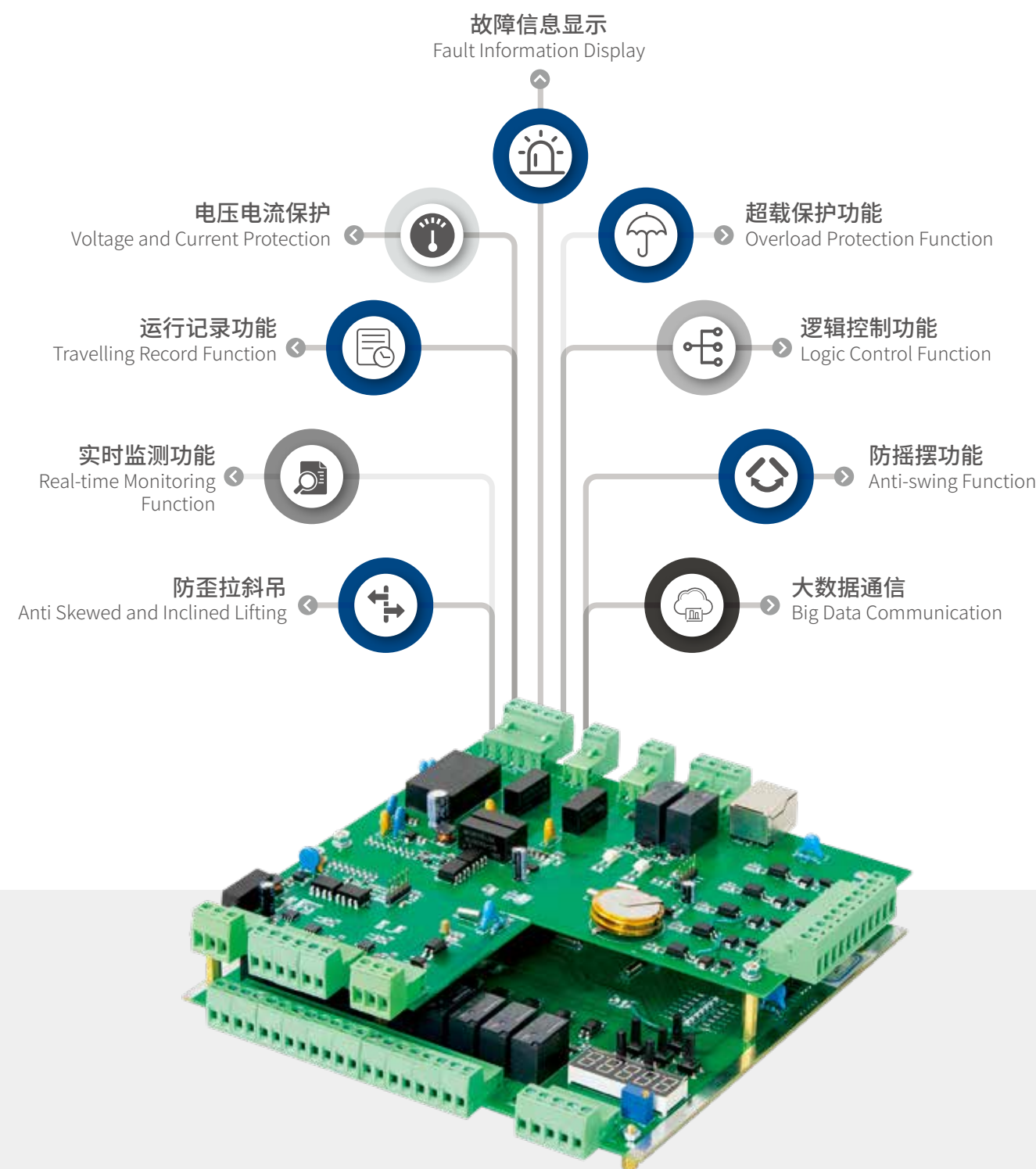
3

成本优势
Cost Advantage

节约通讯卡、通讯线
Saving communication
cards and lines



集中控制器 **Integrated Controller**



变频器

Frequency Converter

起重机专用 For Crane Use Only

小体积、小功率、高性价比

It owns the features as follows: small volume, small power and high cost performance

支持性好 High Support Performance

支持开环矢量控制和 V/F 控制方式，起动力矩大

It can support open-loop vector control and V/F control, the starting torque is large

特有控制功能 Special Control Function

配备起重驱动特有的报闸控制功能

Equipped with special brake control function of crane driving system

应用范围广 Wide Range of Applications

起重设备的提升、平移、回转等驱动和控制场合

It can be widely used in driving and controlling occasions such as the lifting, translation and rotation of lifting equipment



核心零部件“自主化”的优势

Independent Production of Core Components

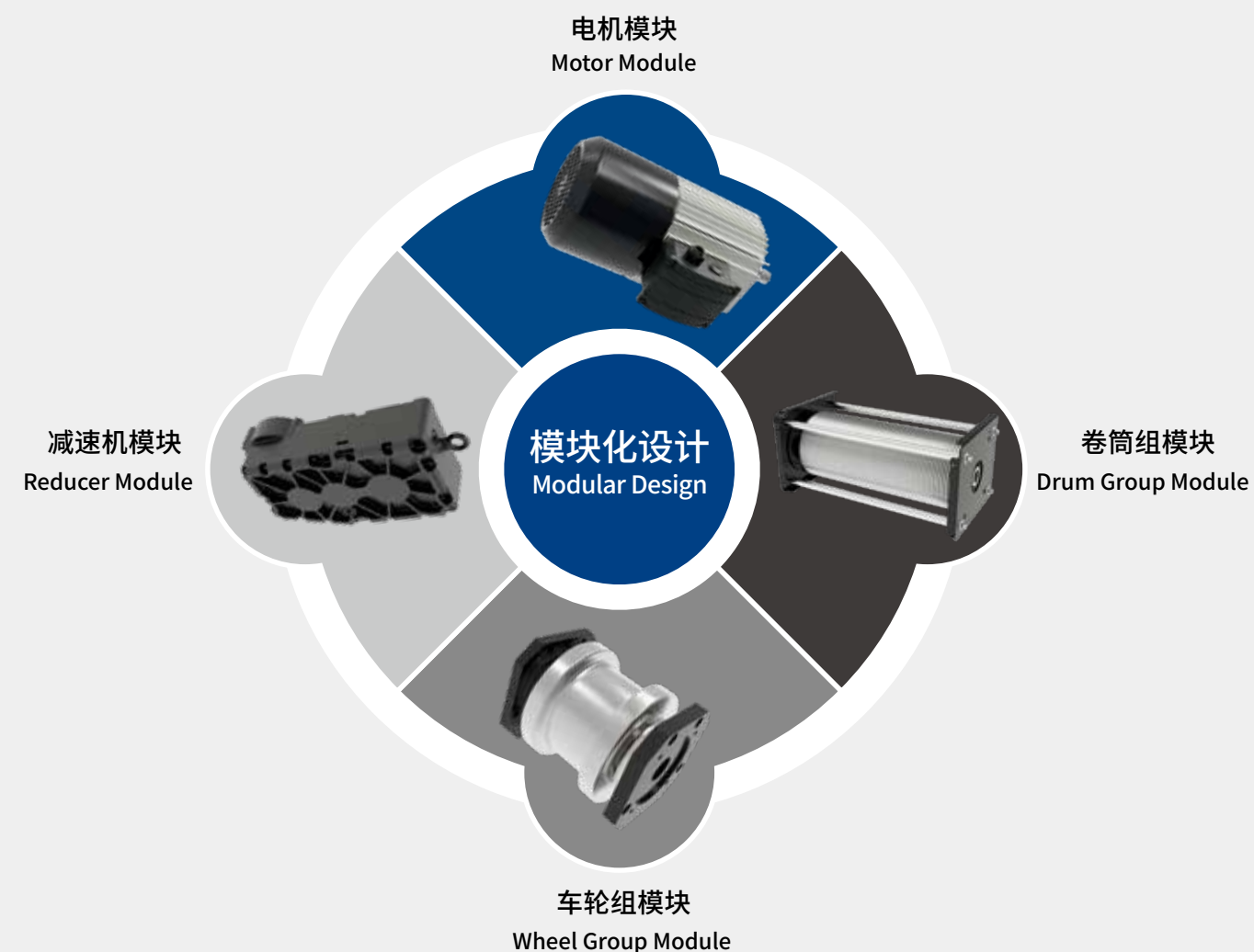


02 模块化设计理念

Modular Design Concept

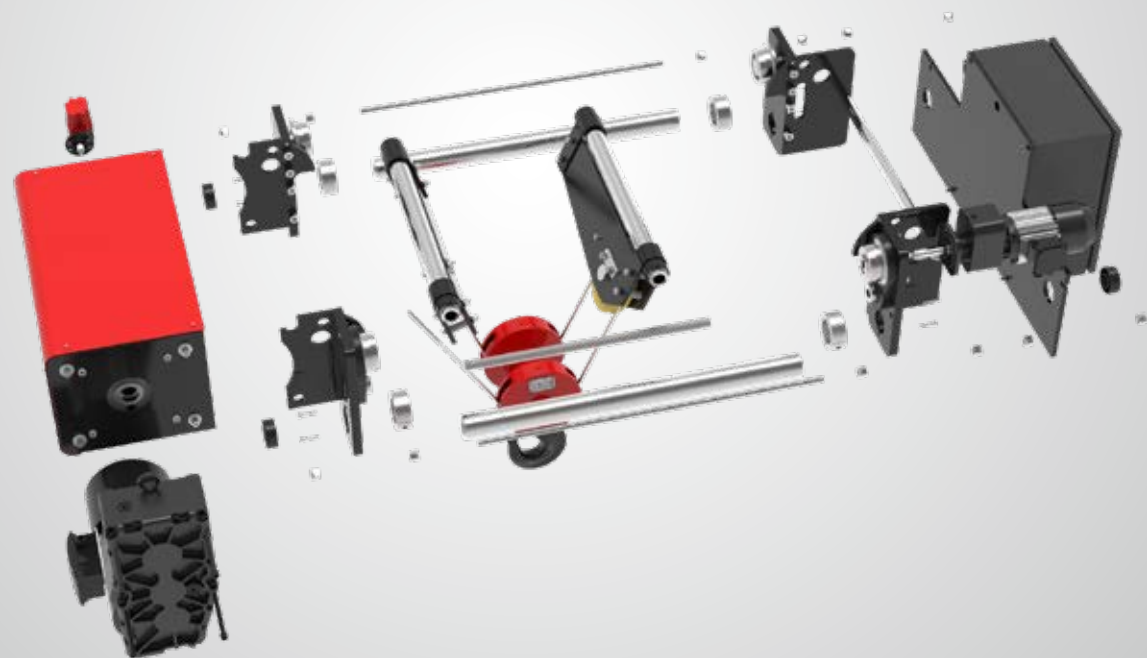
NR 型钢丝绳电动葫芦采用模块化结构，可以满足您的应用需求，其拥有的灵活性，可以为您提供个性化需求的解决方案。

NR Electric Hoist with modular structure can fully meet your requirements which owns flexibility and can provide you with solutions for personalized needs.



部件通用性强

Strong Versatility of Spare Parts



五种结构车轮组

Five kinds of Wheel Sets

四种运行三合一

Four kinds of Travelling Gear Motor

四种起升三合一

Four kinds of Hoisting Gear Motor

新型起重机系列产品

New Series Crane Products

NR 型系列钢丝绳电动葫芦
NR Series Steel Wire Rope Electric Hoist

HD 型电动单梁起重机
HD Single Girder Overhead Crane

QDX 型电动葫芦桥式起重机
QDX Overhead Crane with Electric Hoist

03 智能化、远程运维设计理念

Intelligent and Remote Operation and Maintenance Design Concept

智能安全监控

Intelligent safety monitoring system has the advantage as follows:

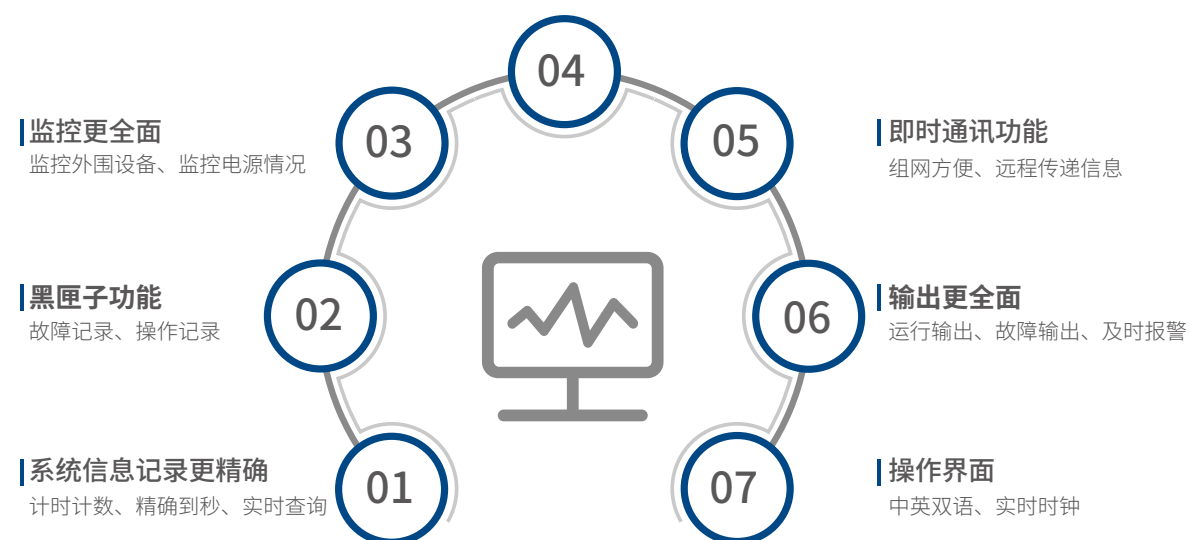
- 01 计算起升机构剩余安全工作周期
Calculating the remaining safety cycle of lifting mechanism
- 02 制动器安全工作次数
Brake safety operation times
- 03 累计设备起升及运行启动次数
Accumulated starts times of hoisting and travelling
- 04 记录起升负载吨位
Records the load tonnage
- 05 过载保护，禁止用户违规超载作业
Overload protection, prohibit users from illegal overloading operations
- 06 实时监测起重机运行电源情况
Real-time monitoring of crane's operating Power Supply
- 07 电机过热保护
Motor overheat protection
- 08 可扩展无线网关，接入用户大数据中心监控管理，实现远程运维信息提示
Extensible wireless access point, it can access to user's big data center monitoring management, so as to realize remote operation and maintenance



大数据管理
云平台连接
Big data management,
cloud platform connection

全新一代安全监控系统（可选） A new generation of security monitoring system(optional)

|多路监控信号接入 起重机状态、故障类别诊断



- 01** More accurate recording of system information: timing and counting can be accurate to seconds, and real-time queries can also be realized
- 02** Black Box Function which can record the malfunctions and operations
- 03** More comprehensive monitoring: it can monitor peripheral equipment and power supply situation
- 04** Multi-channel monitoring signal access: crane condition, fault category diagnosis
- 05** Instant Messaging Function which owns the features as follows: convenient networking and remote information transmission
- 06** More comprehensive output such as: operation output, fault output, timely alarming
- 07** Operating Interface: Both in Chinese-English Language, Real-time Clock



安全监控器
Security Monitor



电器元件布局图
Electrical Component Layout



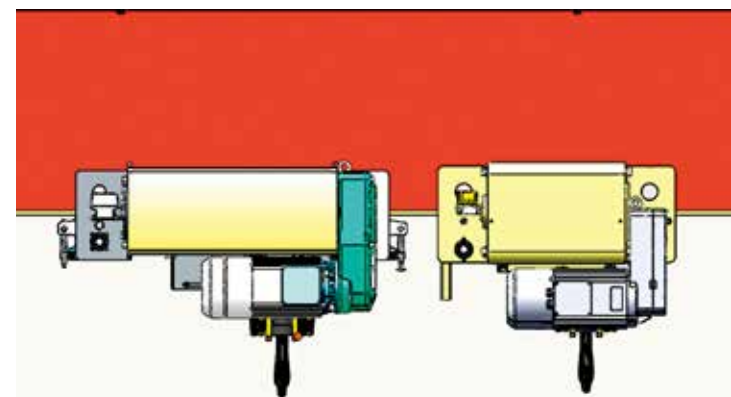
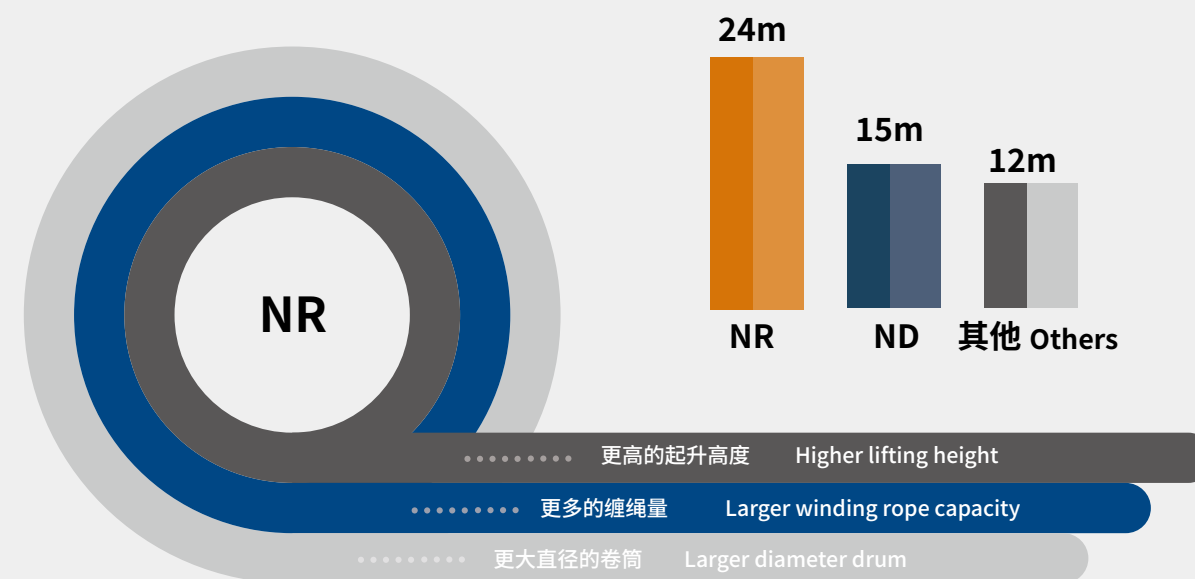
手机 APP 实时监控
Mobile APP Real-time Monitoring

04/ 低净空、紧凑设计理念

Low Headroom and Compact Design Concept

所有系列均采用大直径卷筒，可有效实现起升高度的增加和左右极限的缩小，起重机工作盲区更小，给用户提供更使用空间。

All series Electric Hoist are equipped with large diameter drum, which can effectively increase the lifting height and reduce the left and right limits. Crane's dead zone when working becomes smaller, which can provide larger using space for the customers.

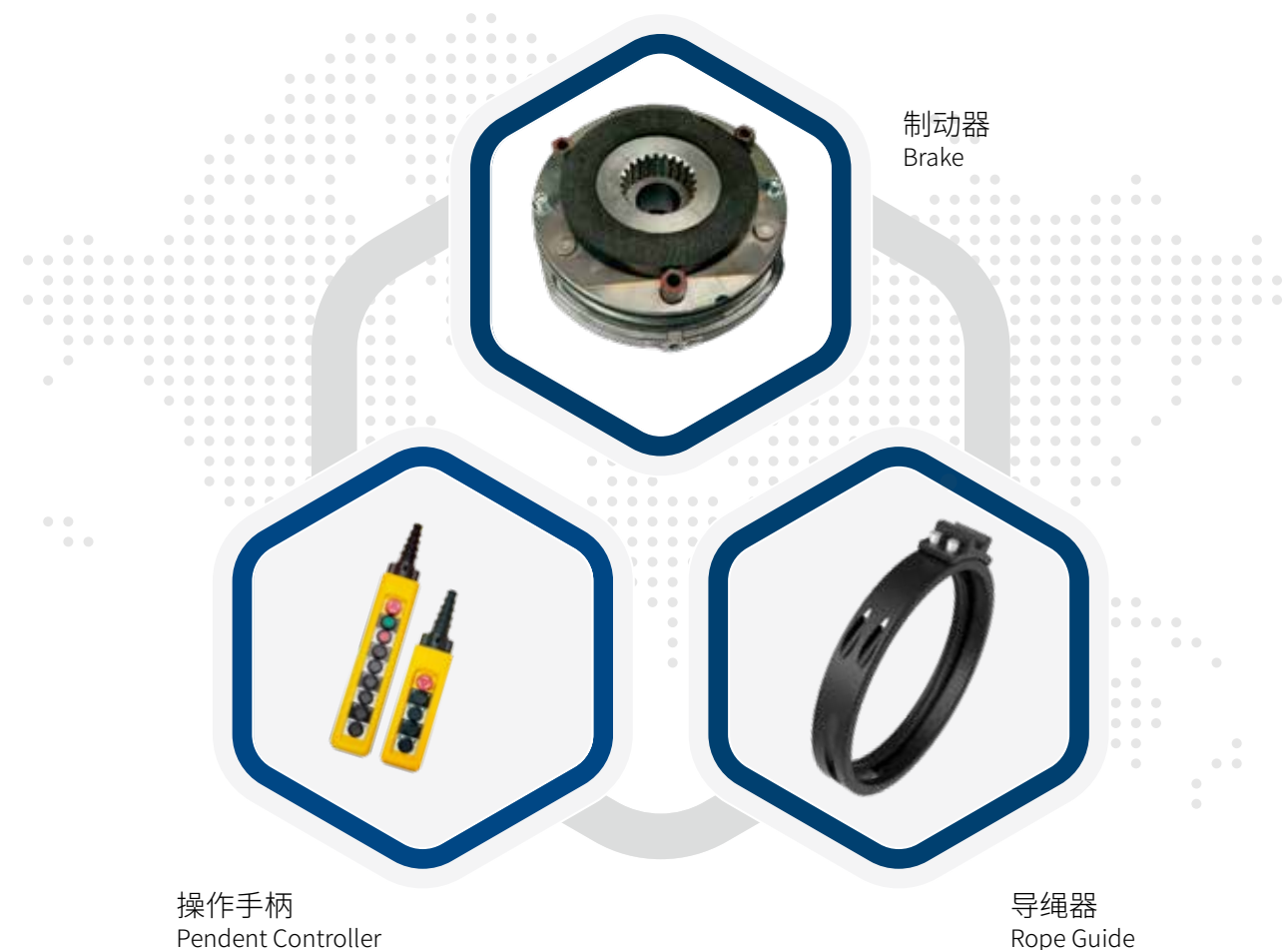


相同起升高度新老型号葫芦长度对比，NR 型葫芦（右）
Comparison of the length of Traditional and New Type Electric Hoist with the same lifting height, NR Type Electric Hoist (Right)

05 免维护、节能环保设计理念

Design Concept of Maintenance-free, Energy-saving and Green

电机减速度器一体式设计
Integral Structure of Gear Motor



- 电机功率较传统电动葫芦降低 30%
The motor power is reduced by 30% compared with the traditional Electric Hoist
- 通过变频定位技术的成熟应用，使工作效率提高 20% 以上
Through the mature application of Variable frequency positioning technology, the work efficiency is improved by more than 20%
- 整机噪音在 70 分贝以下
The noise of the whole machine is below 70 decibels
- 制动器刹车片采用无石棉设计
The brake pads adopt non-asbestos design
- 尼龙导绳器与钢丝绳、卷筒滑动摩擦不会产生金属粉尘，为工人提供高洁净操作空间
No metal dust caused by the slide friction between the Nylon Rope Guide and Steel Wire Rope, drum, providing workers with high cleanness operation environment

- 高精度硬齿面减速机出厂已加注国际品牌润滑油，产品生命周期内无需更换
The high-precision hard gear reducer has been filled with international brand lubricants before delivery from factory , and there is no need to replace it within the service cycle of the product
- 采用国际品牌免维护钢丝绳
Adopt international brand and maintenance-free steel wire rope
- 高强尼龙导绳器，由易损件成为耐用品
High-strength Nylon rope guides, change from wearing parts to durable parts
- 国际品牌电器元件、轴承、操作手柄
International brand electrical components, bearings, and pendent controller
- 电磁盘式制动器具有刹车间隙自动补偿和免维护功能
Electromagnetic disk brake with automatic compensation of brake clearance and maintenance-free function

06 坚固耐用、安全设计理念

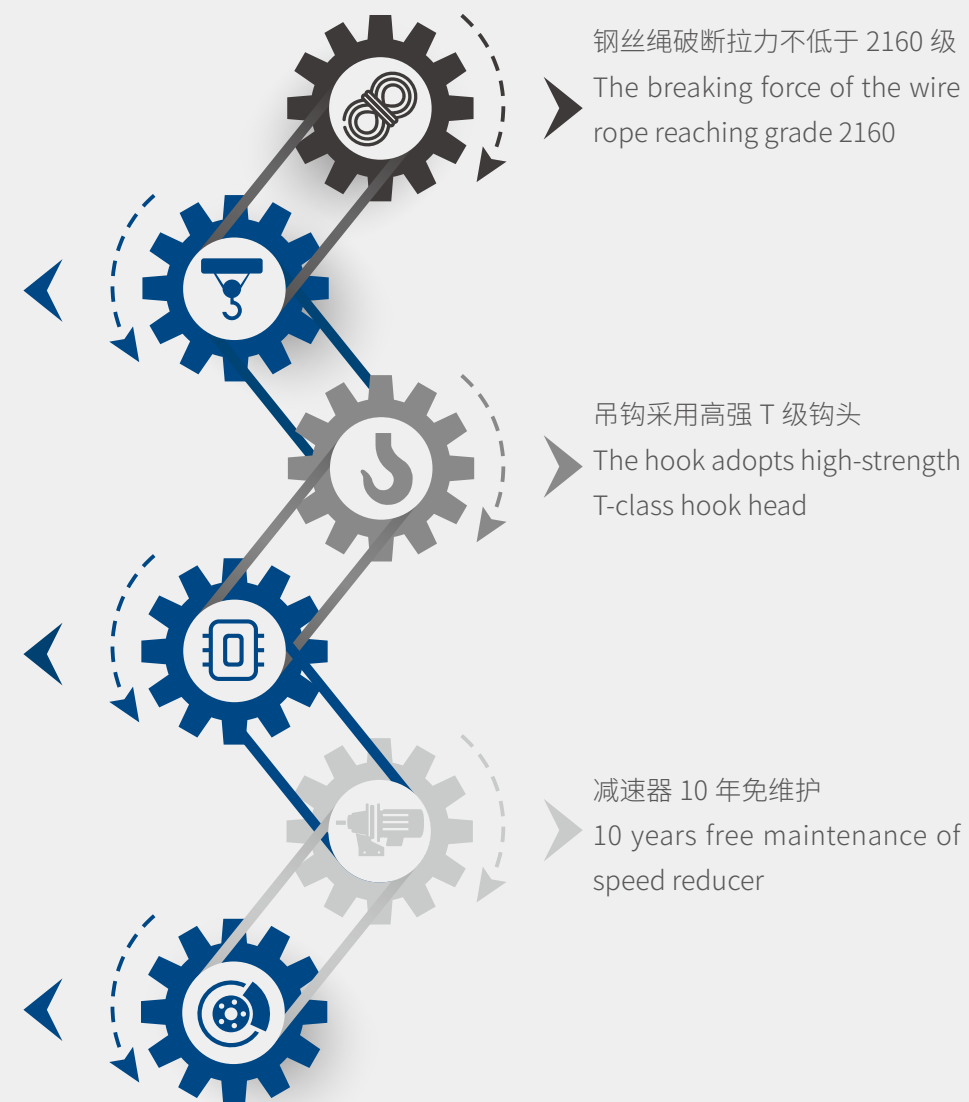
Rugged and Safe Design Concept



整机通过国家标准寿命试验 (1600 小时)
The whole machine passed the national standard life test (1600 hours)

电器元件机械寿命不低于 50 万次
The service life of electrical components is not less than 500,000 times

制动器安全制动不低于 100 万次
The safe use of brake reaching 1 million times





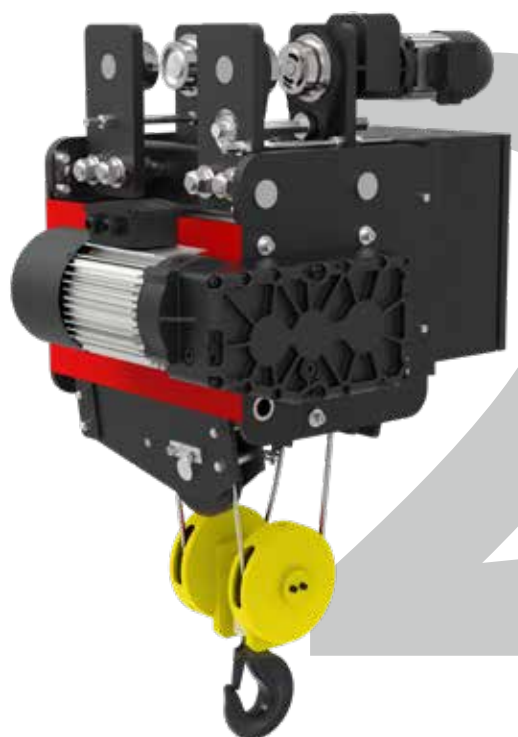
低净空运行式电动葫芦
Low-headroom Monorail Hoist



固定式电动葫芦
Foot-mounted Hoist

B 产品选型 PRODUCT SELECTION

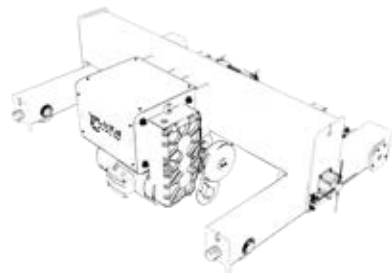
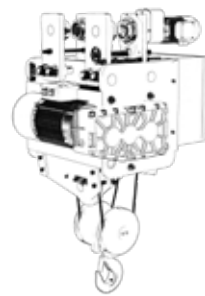
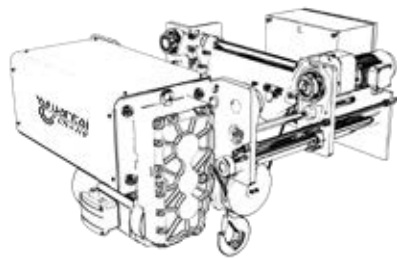
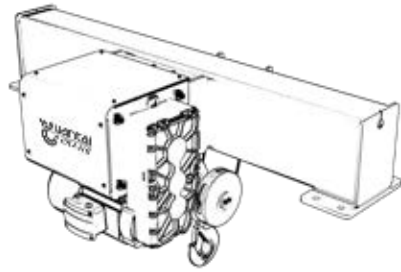
NR 型钢丝绳电动葫芦，
有四种结构设计可供用户选择：
NR Wire Rope Electric Hoist has four structural
designs for users to choose from:



标准净空运行式电动葫芦
Standard Headroom Monorail Hoist



双梁小车式电动葫芦
Trolley Type Electric Hoist



载荷类别 Load category					日平均工作时间（小时） Average daily working time (hours)		
1	轻载：极少吊运额定载荷，经常吊运载荷很轻。 Light load: The rated load is rarely lifted and always handle the loads.				4~8	8~16	> 16
2	中载：有时吊运额定载荷，经常吊运载荷中等。 Medium load: The rated load is sometimes lifted and the frequency of load handling is medium.				2~4	4~8	8~16
3	重载：经常需要吊运额定载荷，经常吊运载荷较重。 Heavy load: The rated load is always lifted and the handling loads are always heavy.				1~2	2~4	4~8
4	特重载：经常吊运额定载荷。 Super heavy load: always handling the rated load.				0.5~1	1~2	2~4
工作级别 Work duty					M5	M6	M7
滑轮倍率 Pulley ratio				型号 Model			
2/1	4/1	6/1	8/1				
4/2	8/2	12/2	16/2				
起重量 Lifting capacity							
1	2	—	—		—	—	
1.25	2.5	—	—		—		—
1.5	3	—	—	NR1		—	
2	4	—	—		—		—
2.5	5	—	—	NR2		—	—
3.2	6.3	10	—		—	—	
4	8	12.5	—		—		—
5	10	16	—	NR3		—	
6.3	12.5	20	25		—		
8	16	25	32				—
10	20	32	40	NR4		—	
12.5	25	40	50		—		
16	32	50	63				—
20	40	63	80	NR5		—	—

日平均工作时间可由下式计算：

Average daily working time can be calculated by the following formula :

$$T_m = \frac{2 \times \text{吊钩行程 (m)} \times \text{每小时循环次数} \times \text{日工作时间}}{60 \times \text{起升速度 (m/min)}}$$

$$T_m = \frac{2 \times \text{Travelling distance of Hook} \times \text{Number of cycles per hour} \times \text{Working hours per day}}{60 \times \text{Lifting speed (m/min)}}$$

实例

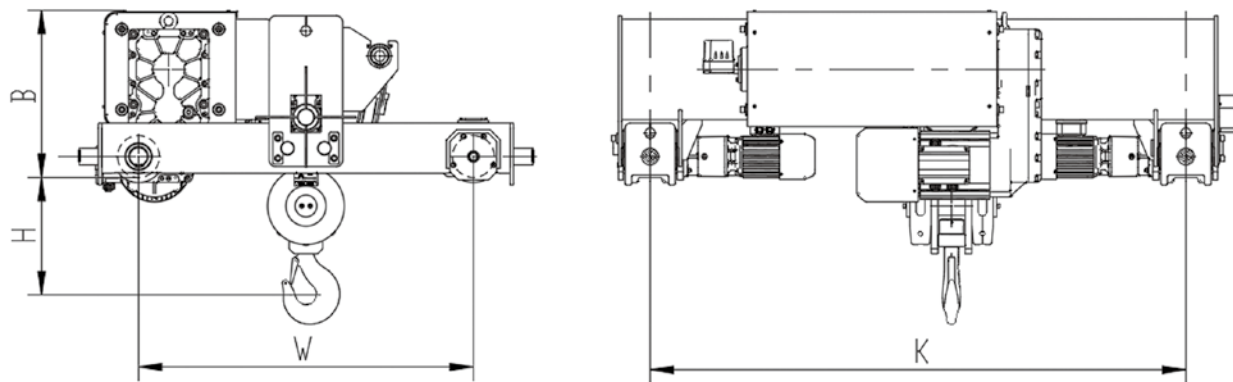
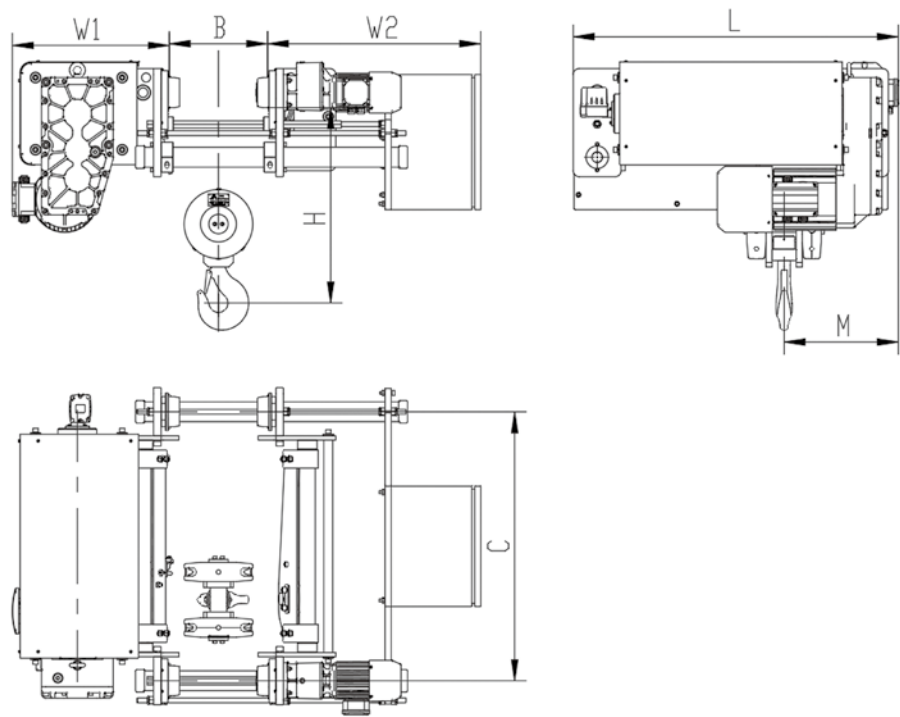
Example

起重量	10t	Lifting capacity	10t
载荷类型	中等载荷	Load category	Medium load
起升速度	5m/min	Lifting speed	5m/min
滑轮倍率	4/1	Pulley ratio	4/1
吊钩平均行程	估计为 6m	Average travelling distance of hook	Estimated to be 6m
每小时循环次数	估计为 12 次	Number of cycles per hour	Estimated to be 12 times
日工作时间	8 小时	Daily working day	8 hours
载荷类型	中载	Load category	Medium load

$$T_m = \frac{2 \times 6 \times 12 \times 8}{60 \times 5} = 3.84 \text{ 小时(hour)}$$

表中给出工作级别为M5，起重量为10t和滑轮倍率为4/1，表中给出型号NR3。

The working level is M5, the lifting capacity is 10t and the pulley ratio is 4/1. The model NR3 is given in the table.



NR 系列低净空葫芦参数表
NR series low headroom hoist parameter table

起重量 (t) Capacity (t)	工作级别 Work duty	起升速度 (m/min)Lift- ing speed (m/min)	起升高度 (m)Lifting height (m)	出绳方式 Number of falls	运行速度 Travelling speed (m/ min)	轨道宽度 B(mm)	吊钩上极 限 Hook upper limit H(mm)	葫芦宽度 Hoist width W1/W2 (mm)	吊钩右极限 Hook right limit M(mm)	葫芦总长 Hoist length L(mm)	葫芦轮距 Hoist wheel gauge C(mm)
3	M5	5/0.8	6	4/1	2~20	120~350	550	483 538	342	863	670
			9							1043	850
			12							1223	1030
			15							1403	1210
			18							1583	1390
			24							1943	1750
5	M5	5/0.8	6	4/1	2~20	120~450	650	526 713	382	798	605
			9							943	750
			12							1088	895
			15							1233	1040
			18							1378	1185
			24							1668	1475
10	M5	5/0.8	9	4/1	2~20	250~550	650	560 590	380	1010	790
			12							1130	910
			15							1250	1030
			18							1370	1150
			24							1610	1390

NR 系列小车参数表
NR series trolley parameter table

起重量 (t) Capacity(t)	工作级别 Work duty	起升速度 (m/min) Lifting speed	起升高度 (m)Lifting height (m)	出绳方式 Number of falls	运行速度 (m/min) Travelling speed (m/ min)	小车高度 Height of trolley B(mm)	吊钩上极限 Hook upper limit H(mm)	小车基距 Trolley wheel gauge W(mm)	小车轨距 Trolley gauge K(mm)
5	M5	5/0.8	≤ 24	4/1	2~20	500	330	1000	1600 2200
10	M5	5/0.8	≤ 24	4/1	2~20	605	520	1000	
16	M5	3.3/0.53	≤ 16	6/1	2~20	700	860	1300	
16	M5	5/0.8	≤ 24	4/1	2~20	670	800	1300	2000 2500 3000
20	M5	5/0.8	≤ 24	4/1	2~20	670	800	1300	
32	M5	3.3/0.5	≤ 16	6/1	2~20	750	975	1300	
32	M5	5/0.8	≤ 24	8/2	2~20	720	1075	1300	
40	M5	5/0.8	≤ 24	8/2	2~20	720	1075	1300	
50	M5	3.3/0.5	≤ 24	12/2	2~20	770	1100	1400	2500 3000 3250 3750 4250
63	M5	2.4/0.4	≤ 21	16/2	2~20	770	1100	1400	
80	M5	2.4/0.4	≤ 21	16/2	2~20	785	1150	1600	