

回转 / 起升 Slewing / Hoist

回转：回转动作具有优秀的微动性和平顺性，适用各种需要精确定位的吊装作业。
起升：高效，高寿命，动作平稳。

Slewing: Excellent micro-position performance and smooth movements, suitable for hoist work which needs accurate positioning

Hoist: High efficiency, long service life, stable up / down movements

- 回转制动采用可控滑移技术，类似ABS防抱死系统；
- 通过系统优化，回转最低稳定速度可达22分钟/20°/转；
- 优化转台侧向刚度，降低转台重心。

- The slewing brake adopts controllable sliding technology, very similar to ABS;
- The lowest stable slewing speed can achieve 22" 20° per revolution after systematical optimization;
- The gravity of slewing table is reduced after the optimization of its lateral stiffness.

- 高品质“4V”钢丝绳，抗扭并且耐磨；
- 主副卷扬均采用变量马达，作业效率高，零部件通用性好；
- 增加“双折线”绳槽卷扬减速机，寿命提升20%；
- 全面优化的液压系统和阀件的流量匹配。

- High quality "4v" wire rope, anti-torsion and hard-wearing;
- The main and auxiliary winches both adopt variable motors, which offer high working efficiency and excellent universality;
- The winch reducer is fitted with a specially designed double broken-line rope groove, which extends the service life of the winch reducer 20% longer than the older one;
- Overall optimized hydraulic system and perfect valve flow matching.

额定起重量表 QY20H-431 QY20D-431 单位Unit:kg
Rated lifting capacity table

主臂仰角 Boom angle (°)	主臂+副臂 Boom + Jib			
	后、侧方作业 Over rear and over side	前方作业 Over front	后、侧方作业 Over rear and over side	前方作业 Over front
	33.0m+8.0m		33.0m+8.0m	
	副臂安装角 Offset (°)			
	0°		30°	
80	3000	3000	1500	1500
78	2850	2850	1500	1500
76	2750	2750	1450	1450
74	2650	2650	1400	1400
72	2550	2550	1350	1350
70	2400	2300	1300	1300
68	2250	1950	1250	1250
66	2100	1550	1200	1200
64	1950	1250	1150	1000
62	1850	1050	1100	800
60	1700	800	1050	650
58	1600	650	1000	500
56	1450	500	950	400
54	1250	400	900	300
52	1100	300	850	200
50	950	200	700	
45	700		500	
40	500		400	
35	350		250	
30	200			

思想 构筑 未来
Vision Creates Future

汽车起重机

QY20H-431 QY20D-431



起重性能 Lifting capacity

起重性能：不断的进行全方位多项提升，我们的起重性能一次又一次的在飞跃。

Continuously all-round promotion makes our lifting capacity of crane be improved once and once again.

- 80级别钢板，十边形四吊臂；
- 33米主臂，3.9吨配重；
- 优化回转中心位置，提高后方起重能力；
- 超大的支腿跨距，作业稳定性大幅度提升；
- 先进的嵌入式臂头，有效防止吊臂在侧载后的扭转现象；
- 国际先进的结构分析和计算方法，深度开发车辆起重性能；
- 行业领先的吊臂制造工艺。

- High strength steel plate, 4 decagon-shaped boom sections;
- 33 m boom, 3.9 t counterweight;
- Optimized central slewing position increases the lifting capacity of the crane over rear;
- Large outrigger span increases the working stability of the crane greatly;
- Advanced embedded boom head effectively prevents the boom to be torsion during lifting load over side;
- Adopt internationally advanced structure analysis and calculation method to develop the lifting capacity of crane deeply;
- Leading boom manufacturing process in trade.



ZOOMLION
中联重科



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ZOOMLION
中联重科

中联重科 QY20H-431 QY20D-431 全液压汽车起重机 Fully hydraulic truck crane

Fully hydraulic truck crane 全液压汽车起重机 QY20H-431 QY20D-431 中联重科

电气系统 Electrical system

电气系统：安全有保障、配置高规格、考虑更周全。

Electrical system: Solid safety, proved components and thorough consideration

- 采用单线制，24V电源，负极搭铁；
- 配置高度限位器、防过放装置、力矩限制器，全方位确保作业的安全；
- 具有自主知识产权的全新优化的数据计算模型，使吊重数据误差控制在±5%内；
- 专利设计的一键式数据偏差校正技术，可实现无砣码校正，无需专业人员联机调试；
- 具有常见故障的判断系统，可快速索引，维修便捷；
- 使用国际知名品牌的压力传感器，全铝芯片，高可靠性。



- Single wire system, 24 Volt DC, negative electrode;
- Hoisting / lowering limit switches and load moment limiter ensure working safety at full range.
- The new optimized data model which owns independent intellectual property rights controls the error of load weight within ±5%;
- Patented technology of correction the data deviation by one key can realize the correction without weight, thus not need experts to debug on line;
- Error diagnosis system of fast indexing function, convenient for maintenance;
- World famous pressure sensors, all with high reliable tantalum chips.

动力系统 Power system

动力系统：经过与国家级动力传动实验室联合的科学实验研究，中联“威风”系列采用的最优动力组合，带来超过10%的能耗降低、扭矩更大、换挡更平稳、动力更加强劲。

Power system: Researched together with the national power transmission lab, the power system of ZOOMLION VF-series truck cranes adopts can brings you low energy consumption (save 10% energy), big torque, smooth gearshift and powerful crane drive.

- 潍柴欧洲技术的工程机械专用WP6高压共轨电喷发动机，电子油门控制。
- 三级复合式沙漠级空滤器，改善进气质量，从容面对沙漠地区的恶劣工况。
- 多级柴油精滤器，为系统提供更洁净的燃油。
- 潍柴专利技术的“水寒宝”，带电动泵和加热功能。



- 陕西法士特6档同步器变速器。
- 重卡行业通用的车桥、储气系统等零件，可靠性高，通用性高，维护成本低。
- 18层重载轮胎，轮胎寿命长，路况适应性好，行驶更安全。...

- Weichai high pressure common rail engine (type WP6) for construction machinery, electron accelerator
- Three stage composite desert stage air filter improves the air quality, thus calms in the face of harsh working conditions of desert.
- Multistage diesel filter provides the system with clean fuel.
- The Weichai patented filter, with electric pump and heating function

- Shanxi Fast 6-speed synchromesh transmission
- Universal axles and air reservoirs for heavy duty vehicle, low maintenance cost but high reliability and universality
- 18 layers of heavy duty tyre, long service life, safe driving guarantee and adapted to all road conditions

操纵室/驾驶室 Operator's cab / driver's cab

操纵室：极致的人性化设计带给你轻松的操控环境

驾驶室：应用人体工程学的设计带给您愉悦的乘坐享受

Ultimate human-oriented operator's cab offers you convenient handling at permanent operation. Ergonomically designed driver's cab brings you comfortable operating space.

操纵室 Operator's cab:

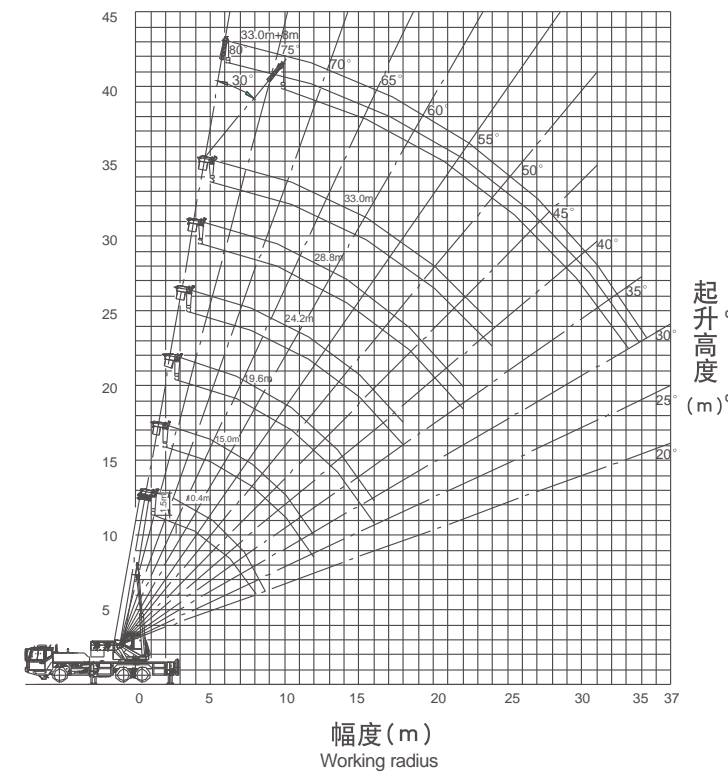
- 冷暖空调
- 灵活的操纵杆
- 高强度全钢结构
- 耐用的抗震压力表
- 高精度大屏幕电脑
- Air conditioning
- Flexible joysticks
- High strength structural steel
- Durable pressure gauge
- High precision and large screen computer



驾驶室 Driver's cab:

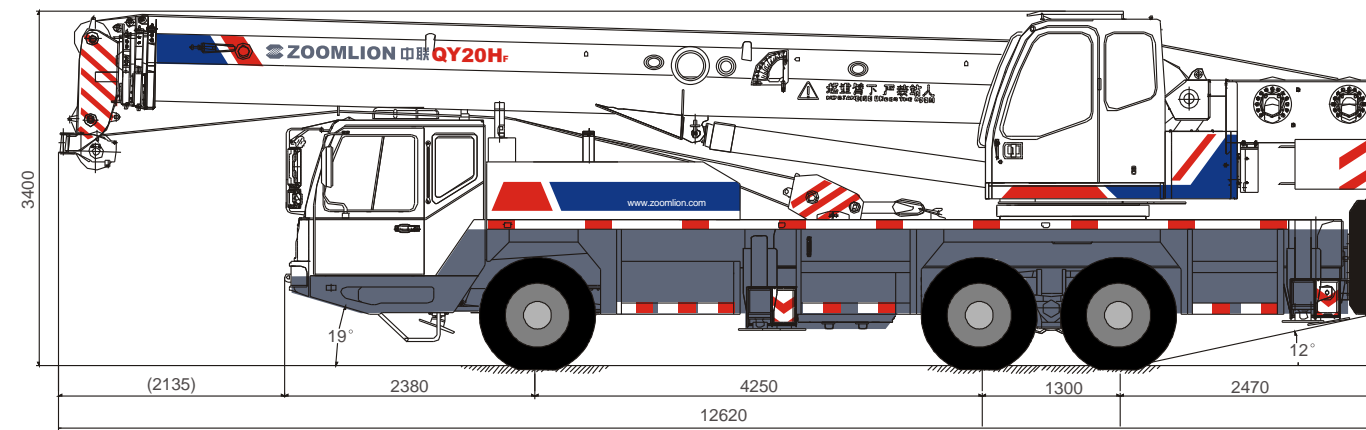
- 空调暖风
- 前开放式维修门（半驾为对开前后门 开度大于70°）
- 防紫外线窗帘（半驾内置遮阳板）
- 宽敞明亮的空间（半驾设全覆盖吸塑件内饰）
- 高强度全钢结构
- 豪华可调减震座椅
- Heater
- Front opened door for maintenance (Semi-mounted driver's cab with 2 doors, front and rear. The open degree is over 70°)
- UV-cut reinforced curtain (Semi-mounted driver's cab with sun visor)
- Spacious and bright cabs (Semi-mounted driver's cab with pieces of plastic interior)
- Luxurious and adjustable damping seat

起升高度曲线 (QY20Hf431 QY20Df431) Lifting height curve



主要技术参数 Technical data

		项 目 Items	数 值 Values		
工作性能参数	Working performance	最大额定总起重量	Max. rated lifting capacity	kg	20000
		基本臂最大起重力矩	Max. load moment of basic boom	kN.m	850
		最长主臂最大起重力矩	Max. load moment of Max. length boom	kN.m	468
		主臂最大起升高度	Max. lifting height of boom	m	33.5
		副臂最大起升高度	Max. lifting height of jib	m	41.5
工作速度	Working speeds	单绳最大速度(主卷扬)	Max. hoist rope speed (Main winch)	m/min	120
		单绳最大速度(副卷扬)	Max. hoist rope speed (Auxiliary winch)	m/min	108
		起重臂起臂时间	Boom derricking up time	s	40
		起重臂伸出时间	Boom extending time	s	70
		回转速度	Stewing speed	r/min	0-3
行驶参数	Driving parameters	最高行驶速度	Max. driving speed	km/h	75
		最大爬坡度	Max. gradeability	%	30
		最小转弯直径	Min. turning diameter	m	20
		最小离地间隙	Min. ground clearance	mm	250
		排气污染物排放值及烟度限值	Limits for exhaust pollutants and smoke		GB3847-2005 GB17691-2005 国III National stage III
质量参数	Weights	百公里油耗	Oil consumption per hundred kilometers	L	34
		行驶状态自重(总质量)	Self weight in driving condition	kg	26400
		整车整备质量	Complete vehicle kerb mass	kg	26270
		前轴轴荷	Axle load (Front)	kg	6500
		后桥轴荷	Axle load (Rear)	kg	19900
尺寸参数	Dimensions	外形尺寸(长×宽×高)	Overall dimensions (L × W × H)	mm	12620x2500x3400
		支腿纵向距离	Longitudinal distance between outriggers	m	5.15
		支腿横向距离	Transversal distance between outriggers	m	5.6
		主臂长	Boom length	m	10.4-33
		主臂仰角	Boom angle	°	-2-80
		副臂长	Jib length	m	8
		副臂安装角	Offset	°	0,30



额定起重量表 Rated lifting capacity table

工作幅度 Working radius (m)	主 臂 Boom (m)					
	前方作业(打第五支腿)，后方、侧方作业 Over front (with 5th outrigger), over rear, over side					
	10.4	15.0	19.6	24.2	28.8	38.0
3.0	20000	14500	12000			
3.5	20000	14500	12000			
4.0	19200	14500	12000	10500		
4.5	18500	14500	12000	10500		
5.0	17000	14000	12000	10500	8000	
5.5	15200	13500	12000	10200	8000	
6.0	13200	13000	11500	9800	8000	6500
6.5	11700	12000	11000	9200	7500	6500
7.0	10500	10600	10500	8600	7000	6200
8.0	8500	8600	8700	7700	6500	5700
9.0		6900	7100	7000	6000	5100
10		5700	5900	6000	5500	4600
11		4700	4900	5000	5000	4200
12		4000	4200	4300	4400	3900
14			3200	3300	3400	3200
16			2500	2600	2700	2700
18				1900	2000	2050
20					1500	1550
22					1100	1150
24						950

工作幅度 Working radius (m)	主 臂 Boom (m)					
	前方作业(不打第五支腿) Over front (without 5th outrigger)					
	10.4	15.0	19.6	24.2	28.8	38.0
3.0	20000	14500	12000			
3.5	20000	14500	12000			
4.0	19000	14500	12000	10500		
4.5	18500	14500	12000	10500		
5.0	15000	14000	12000	10500	8000	
5.5	12000	12500	12000	10200	8000	
6.0	9600	10000	10500	9800	8000	6500
6.5	7800	8500	8800	8800	7500	6500
7.0	6800	7200	7500	7600	7000	6200
8.0	5000	5500	5600	5700	5800	5700
9.0		4200	4500	4600	4700	4700
10		3400	3500	3600	3700	3800
11		2600	2900	3000	3100	3100
12		2100	2400	2500	2600	2600
14			1500	1600	1700	1700
16			1000	1100	1200	1200
18				700	800	800
20					500	500
22						300