SANY®

SPECIFICATION

BETTER WORLD, BETTER SANY CRANE

STC350TH

SANY TRUCK CRANE

35 t

35 m

43.5 m

www.sanyglobal.com

QUALITY CHANGES THE WORLD

The parameters, pictures and standard/optional equipment are only for reference in this brochure, the actual machine is based on the effective price list and contract.

V1.0

It is one of the core business units in SANY Group, specializing in the development and manufacturing of high-end wheel cranes, crawler cranes and tower cranes.

三一集团旗下核心事业部，从事高端轮式起重机、履带起重机、塔式起重机系列产品的研发制造。

BETTER WORLD, BETTER SANY CRANE

SANY CRANE

QUALITY CHANGES THE WORLD

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Strong lifting capacity
超强起重能力

Full-extension boom 35m, max. lifting height of boom 35.5m.
U-shape large cross section boom, max. lifting moment 1143kN.m.
The lifting performance of middle & long boom is 5% higher among same class in the industry.

全伸臂长35m，主臂最大起吊高度35.5m。
大截面U形主臂， 最大起重力矩1143KN.m。
中长臂起重性能比行业同吨位产品提升5%。

High performance chassis
高性能底盘

WEICHAI WP7.300E31 engine, FAST 9-speed transmission.
Max. gradeability 40%, powerful performance.
Innovative structural frame verified by 200,000 cycling fatigue tests to ensure high reliability.
Lower positioned outrigger spanning 5.35m×6.4m, providing stable support.
Low center of gravity provides good driving stability.

采用潍柴WP7.300E31发动机、法士特9档变速箱。
最大爬坡度40%，动力强劲。
采用创新结构车架，通过2万次高强度测试，可靠性高。
低支腿布置，支腿跨距5.35m×6.4m，吊载稳定。
底盘重心低，行驶稳定性好。

Variable pump electro-hydraulic control hydraulic system
变量泵电液复合控制液压系统

The electro-hydraulic control system realizes effective flow distribution, featuring quick response to combined motions and small impact shock, energy saving and environmentally friendly.
Precise control: Excellent inching performance, min. stable speed of single rope is 1.2m/min and min. stable speed of slewing is 0.1° /s, realizing precise lifting of mm level.
Dynamic compensation passive luffing down: Flow compensation automatically limits speed, ensuring uniform and stable luffing down under heavy load, enhanced luffing down at large angles for high efficiency when lifting light loads.
Integrated slewing buffer control: boost buffer, sequential brake and free swing technology. Smooth start & stop.

电液复合控制液压系统：创新电液复合控制系统实现了流量有效分配，组合动作响应快，冲击振动小，作业高效，节能环保。
操控精准：微动性一流，卷扬单绳最低稳定速度1.2m/min，回转最低稳定速度0.1°/s，可实现mm级精准吊装。
动态补偿自重落幅：流量补偿自动限速，重载落幅匀速平稳；大仰角加压落幅，轻载落幅效率高。
集成回转缓冲控制：融合升压缓冲、顺序制动及自由滑转技术，回转启停柔和平稳。

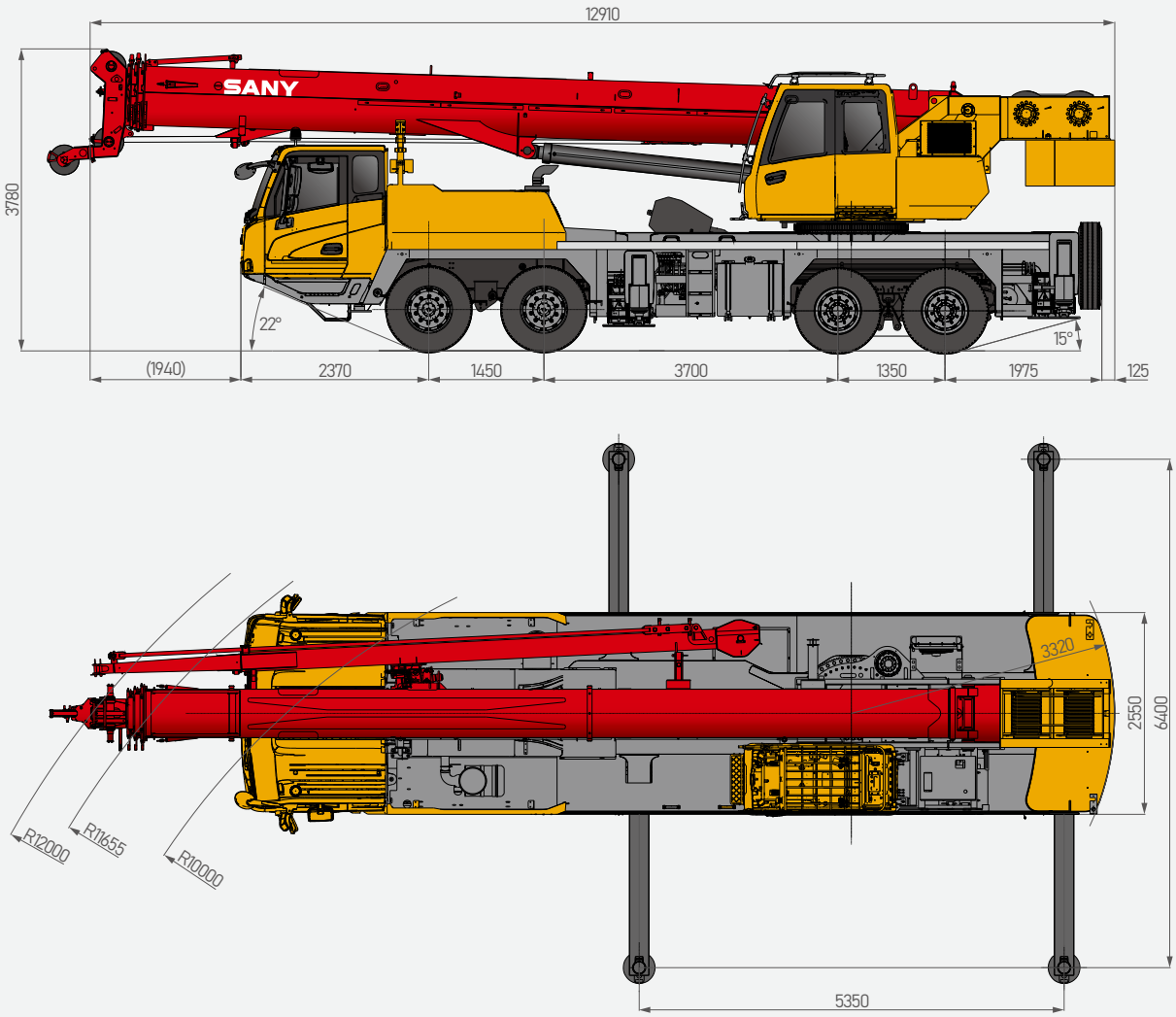
Smart control system
智能控制系统

CAN BUS system: Controllers, displays, meters, I/O modules, sensors, etc. are integrated in CAN Bus networking, fast-responsive.
Fault diagnosis system: Operating device with smart controller, body with BCM module, accurately locating the fault point, making the maintenance convenient.
Smart power distribution and control with battery pack.
7" color display + smart panel + smart IO distribution module: High-definition large screen display and silicone panel control, further enhancing ergonomics.
Accurate load moment indicator and safety protection: Sany's proprietary load moment indicator system provides comprehensive safety protection against overload, overextension, and overwinding. Separate secondary section boom length measurement allows for flexible and safe operation with selectable boom lengths.

智能总线网络系统：整车控制器、显示器、显示仪表、I/O模块、主要传感器等采用CAN总线组网，高速信息传输、响应速度小于20ms。
智能故障诊断系统：操作装置带智能控制器、车身带BCM控制模块，拥有故障诊断系统，能精准定位故障点，方便检修。
智能电量分配和控制：专用电瓶仓，整车电量智能分配和控制。
7'彩色显示屏+智能面板+智能IO配电模块：高清大屏显示、硅胶面板操控，进一步提升人机工程。
精准力限系统及安全保护：三一自主产权力矩限器系统，具备超载、过放、过卷等全面的安全保护；单独的二节臂长测量，臂长任选，操作灵活且安全可靠。

STC350TH
SANY TRUCK CRANE

Overall Dimensions
整机尺寸



Technical Specification
整机参数

CATEGORY 类型	ITEM 项目		UNIT 单位	VALUE 参数
CAPACITY 额定起重量	Max. lifting capacity 最大起重量		t	35
WEIGHT 重量参数	Gross weight 整机总质量		kg	30000
POWER 发动机参数	Engine model 发动机型号		-	WP7.300E31 (Euro III 欧三)
	Max. engine power 发动机最大功率		kW/rpm	220/2100
	Max. engine torque 发动机最大输出扭矩		N·m/rpm	1250/1200~1600
DIMENSIONS 尺寸参数	Overall length 整机全长		mm	12910
	Overall width 整机全宽		mm	2550
	Overall height 整机全高		mm	3780
TRAVEL 行驶参数	Max. travel speed 最高行驶速度		km/h	90
	Steering radius 转弯半径	Min.steering radius 最小转弯半径	m	10
		Min.steering radius of boom tip 臂头最小转弯半径	m	12
	Wheel formula 车轮模式		-	8×4×4
	Min.ground clearance 最小离地间隙		mm	260
	Approach angle 接近角		°	22
	Departure angle 离去角		°	15
	Max. gradeability 最大爬坡度		-	40
	Fuel consumption per 100km 每 100 公里油耗		L	29
MAIN PERFORMANCE 主要性能参数	Working temperature range 使用温度区间		℃	-20~+40
	Min.rated lifting radius 最小额定幅度		m	3
	Tail slewing radius 转台尾部回转半径		m	3.32
	Boom sections (Qty.) 臂节数		-	4
	Boom shape 臂形状		-	U shape U型
	Max.lifting moment 最大起重力矩	Basic boom 基本臂	kN.m	1143
		Full-extension boom 全伸主臂	kN.m	717
		Full-extension boom + jib 全伸主臂+副臂	kN.m	293
	Boom length 臂长	Basic boom 基本臂	m	10.8
		Full-extension boom 全伸主臂	m	35
		Full-extension boom + jib 全伸主臂+副臂	m	43
	Max.lifting height 最大起重高度	Basic boom 基本臂	m	11.3
		Full-extension boom 全伸主臂	m	35.5
		Full-extension boom + jib 全伸主臂 + 副臂	m	43.5
	Outrigger span (Longitudinal×Transverse) 支腿跨距(纵×横)		m	5.35×6.4
	Jib offset 副臂安装角度		°	5, 15, 30
AIRCONDITIONER 空调	In operator's cab 上车空调		-	Cooling 制冷
	In driver's cab 下车空调		-	Heating & Cooling 制冷、制热

Technical Specification
整机参数

Axle Load 轴荷

Axle 轴	1	2	3	4	Gross weight 总重量
Axle load 轴荷/kg	5300	5300	9700	9700	30000

Hook 吊钩

Rated load 额载 /t		Number of sheaves 滑轮数量	Rope rate 倍率	Hook weight/kg 吊钩重量
35	●	4	8	320
5	●	0	1	100

● Standard 标配　○ Optional 选配

Operations 主要动作参数

Item 项目		Max.single rope lifting speed (empty load) 单绳速度 (空载)	Rope diameter/length 钢丝绳直径 / 长度	Max. single line pull 最大单绳拉力
Main winch 主卷扬		130m/min	Φ16mm/165m	4.5t
Auxiliary winch 副卷扬		130m/min	Φ16mm/95m	4.5t
Slewing speed 回转速度		2.8r/min		
Full luffing up/down time of boom 主臂起落幅时间		40s/60s		
Full extension/retraction time of boom 主臂伸缩时间		45s/45s		
Outrigger jack 垂直支腿	Extension 伸	15s		
	Retraction 缩	15s		
Outrigger beam 水平支腿	Extension 伸	25s		
	Retraction 缩	25s		

Crane Introduction
整机介绍

Driver's cab 驾驶室

- Equipped with a new generation cab, realizing safety and comfort.
- Self-developed full-width low-position cab in ergonomic design, featuring vibration and external noise isolation.
- Equipped with an air suspension shock-absorbing seat, three-point safety belt, adjustable steering wheel, multifunctional steering wheel, remote key, 21.1-inch entertainment screen, and a two-in-one sleeper.
- 配套新一代驾驶室，更加舒适、安全、人性化。
- 自主开发全宽低置式驾驶室，采用人体工程学原理设计，减震性和封闭性优良。
- 配备空气悬浮减震座椅，三点式安全带，可调节方向管柱、多功能方向盘，遥控钥匙、21.1寸娱乐大屏、二合一卧铺。

Carrier frame 车架

- Designed and manufactured by Sany, the torsion resistant box-type structure is welded by fine grain high-strength steel, featuring increased bearing capacity.
- 三一设计、制造，由细晶粒高强钢板焊接而成的防扭转箱形结构，承载能力强。

Chassis engine 底盘发动机

- Model: WEICHAI WP7.300E31, Inline six-cylinder diesel engine with watercooler and inter cooler.
- Emission standard: Euro III.
- Fuel reservoir capacity: 300L.
- 型式：WEICHAI WP7.300E31，直列六缸、水冷却、增压中冷、柴油发动机。
- 排放标准：Euro III。
- 燃料箱有效容积：300L。

Transmission system 传动系统

- 9-speed manual transmission with synchronizer, large speed ratio range, adaptable to slope climbing and high-speed traveling.
- 手动带同步器变速箱，9 挡，速比范围大，既可满足低速场地爬坡 行驶，又可满足高速行驶。

Transmission shaft 传动轴

- Optimized layout, higher torque output via contrate gear connecting transmission shaft cardan.
- 优化的传动轴布置，传动轴传动平稳、可靠。最优化力传输，采用端面齿联结传动轴，传递扭矩大。

Axle 车桥

- Axles 1, 2 are steered; axles 3, 4 are drive axles with built-in differential lock, realizing tougher ability to rough-terrain travelling. Single-stage reducer gear and more compact axle bags contribute to better accessibility. Press-welding axle housing technology, bearing capacity is stronger.
- 3、4 轴为驱动轴 ,1、2 轴为转向轴，驱动轴3轴内置轴间及轮间差速器，4轴内置轮间差速器。使车辆有更强的脱困能力；单减桥，冲焊桥壳工艺，承载能力更强。

Suspension system 悬挂系统

- Front suspension is realized by leaf spring, and rear rubber. The leaf spring is verified by 100,000 cycling fatigue tests to ensure strength and ride comfort.
- 一二桥采用钢板弹簧悬挂系统，三四桥采用橡胶悬挂系统，悬挂系统经过超过10万次的疲劳试验，保证强度的同时兼顾乘坐的舒适性。

Steering 转向系统

- Equipped with cyclic ball power steering gear.
- Steering system with hydro booster in axle 1 and axle 2.
- 配置循环球式动力转向器。
- 1、2 桥采用杆系反馈的液压助力转向系统。

Tires 轮胎

- 13 tires sized 12R22.5, strong bearing capacity and durability.
- 13(轮胎数)—轮胎规格: 12R22.5，承载能力强，耐用。

Wheel formula 车轮模式

- 8×4×4.

Outrigger 支腿

- H-type layout, four point support with high strength steel plate, easy to operate, outrigger beam hydraulically telescoping.
- H型支腿4点支撑，易操作、稳定性强；采用细晶粒高强度钢板材料，活动支腿全液压横向伸缩。

Brakes system 制动系统

- The braking system includes service brake & parking brake & emergency brake & assisting brake.
- Service brake: air servo, dual circuit.
- Parking brake: functioning at axles 3 and 4 by spring-loaded air chamber.
- Emergency brake: performed by the parking brake.
- Assisting brake: engine exhaust brake, safety assured when driving down long slopes.
- 制动系统包括行车制动、驻车制动、应急制动和辅助制动。
- 行车制动采用双回路制动系统，所有车轮均用空气伺服制动器。
- 驻车制动是通过气室内弹簧作用在第三、四桥上。
- 应急制动由驻车制动兼做应急制动。
- 辅助制动为排气制动，保证在下长坡时的制动安全，保证行车的安全可靠。

Electrical system 电气系统

- 2*12V maintenance-free battery with a mechanical power switch, the overall power can be cut off manually. The BUS control system connects the engine, transmission, lighting, ABS braking system, communication, instrumentation, human-machine interaction, and other systems through a single line. This line transmits multiple signals simultaneously to different instruments or devices, simplifying the wiring and making maintenance and servicing easier.
- 2×12V 免维护蓄电池，配有机械式电源总开关，可手动切断整车电源；总线控制系统将发动机、变速箱、照明、ABS 制动系、通讯、仪表、人机交互等系统的连接线路，通过一条线路把多路且需要同时传输的信号传给不同的仪表或装置，简化线路，便于检修和保养。

Crane Introduction
整机介绍

Operator's cab 操纵室

- It is made of pressed and welded structure, equipped with safety glass, sun shade, outward opening door, panoramic skylight. 4 sides are equipped with large glass ensuring no blind spot. Double guide glass window: the glass can slide back and forth for ventilation and no light reflection during night operation. 5.7" HD color display: loading information is comprehensive, clear. Cooling A/C available.
- 采用冲压成型的全焊接结构，装有安全玻璃，车窗装有遮阳帘，外开式车门，全景式天窗、4面配置超大玻璃，吊装"无死角"；双导轨玻璃窗：玻璃可前后滑动，通风透气，晚上吊装不反光，操作舒适、轻松；5.7寸高清显示屏：高清、彩色显示屏，吊载信息全面、清晰，配备单冷空调。

Boom & telescoping system 伸缩系统

- Four section U-shape boom welded by high strength structural steel. Basic boom 10.8m, full-extension boom 35m, jib 8m, max. lifting height of full-extension boom 35.5m, max. lifting height of boom+jib 43.5m. Telescoping is realized by single cylinder with rope arranger.
- 臂结构采用抗扭曲设计，采用进口高强钢板制作，4节U型主臂，基本臂10.8m，全伸臂35m，副臂8m，主臂全伸起升高度35.5m，带副臂最大起升高度43.5m。单缸绳排伸缩方式。

Hoisting system 起升机构

- Normally closed type winch brake and winch balance valve are set to prevent hook falling and stalling. Standard 5t, 35t hook.
- 35W main wire rope with 16mm diameter and 165m length, 35W auxiliary wire rope with 16mm diameter and 95m length.
- 常闭式卷扬制动器，并设置卷扬平衡阀，可防止落钩失速。
- 标配5t、35t吊钩，直径φ16mm，长165m 35W钢丝绳(主)，长95m 35W钢丝绳(副)。

Luffing system 变幅系统

- Two luffing down modes for free switching. In conventional mode, the speed is fast and work efficiency is high. In the electro-hydraulic composite mode, the lowering uniformity is good, the start and stop are smooth, making it more suitable for precise operations.
- High-quality luffing balance valve, high reliability, passed a million durability tests.
- 两种落幅模式自由切换。常规模式下速度快，作业效率高。电液复合模式下落幅均匀性好，启停平稳，更适合精细操作。
- 高品质变幅平衡阀，可靠性高，通过百万次耐久性测试。

Hydraulic system 液压系统

- Two control modes, conventional/electro-hydraulic composite mode, can be switched freely according to working conditions.
- Dual-piston high-flow pump ensures sufficient system flow, leading the industry in efficiency at both idle and high speeds.
- Utilizing industry-first variable power pump technology, it prevents stalling at low speed ratios, while reducing idle/high-speed RPM, resulting in 20% lower fuel consumption and 2dB noise reduction.
- 11-piston large-displacement motor, providing strong lifting power, with a minimum speed of less than 50 rpm, offering industry-leading micro-movement.
- Additionally, key hydraulic components such as oil pumps, motors, and valves in the hydraulic system are all made to high-quality industry standards, ensuring the hydraulic system's stability and reliability.
- 两种操控模式，常规/电液复合模式根据工况随心切换。
- 双联柱塞大流量泵，保证系统流量充足，怠速/高速下作业效率领先行业。
- 采用行业首创的变功率泵技术，在低转速比下保证不熄火，同时怠速/高速转速更低，油耗下降20%，噪声下降2dB。
- 11柱塞大排量马达，吊载强劲，最低转速 < 50rpm,微动性领先行业。
- 液压系统的油泵、马达、阀等关键液压元件均采用行业内高品质标准，保证液压系统稳定、可靠。

Slewing 回转系统

- Stepless speed regulation. Close type system reduces energy loss. Emergency brake available.
- 回转阀与主阀集成，采用常闭式制动，防止溜车。

Control system 控制系统

- Vehicle data display system: equipped with multiple sensors to give timely feedback of data information, achieving real-time monitoring of the vehicle working state.
- Man-machine interaction interface: more user-friendly interface with rich and clear information.
- 整车数据显示系统：配置丰富的传感器件，及时反馈数据信息，实现实时监控，确保随时掌控整车工作状态。
- 人机交互界面：人机交互界面设计人性化，信息丰富而清晰。

Counterweight 配重

- Fixed counterweight 4t, no movable unit.
- 固定配重4t，无活动配重。

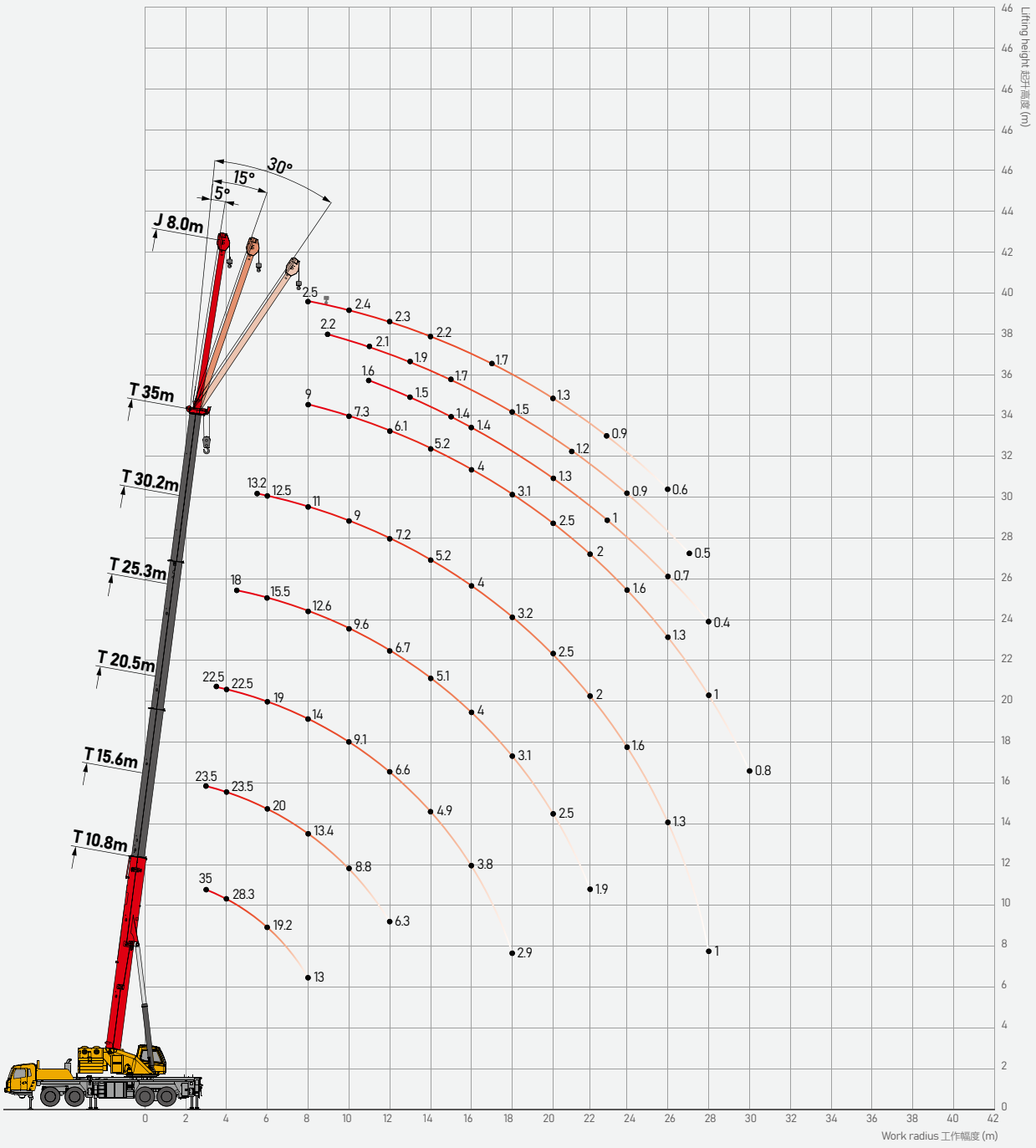
Safety system 安全装置

- The hydraulic system is equipped with balance valve, relief valve, two-way holding valve, etc. to realize stability and reliability.
- Three-circle protector at boom winch and luffing jib winch and height limit, preventing wire rope from over-hoist down.
- The length & angle sensor and pressure sensor are equipped to display the operating status of the crane in real time, automatically cut off dangerous actions, and give a buzzer alarm.
- 液压系统配置液压平衡阀、溢流阀、双向液压锁等元件，实现液压系统稳定可靠。
- 主、副臂卷扬配置三圈保护器、配置高度限位器，防止钢丝绳过放、过卷。
- 配置长度、角度传感器、压力传感器，实时显示起重机作业状态，自动切断危险动作，蜂鸣报警。

Optional equipment at extra fees 选配

- Slewing buzzer.
- Special painting.
- Other equipment available upon request.
- 回转蜂鸣器。
- 特殊涂装。
- 其他配置视需求定。

Operating Range
起升高度曲线



Load Chart - Telescopic Boom (T)

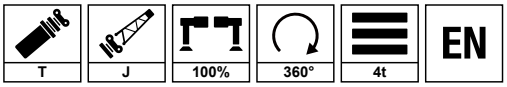
性能表 - 主臂

Unit: kg

m	10.8	15.6	20.5	25.3	30.2	35.0	m
3	35000	23500					3
3.5	30700	23500	22500				3.5
4	28300	23500	22500				4
4.5	25400	23500	21800	18000			4.5
5	23100	23500	20700	17000			5
5.5	21200	21500	19900	16200	13200		5.5
6	19200	20000	19000	15500	12500		6
6.5	17600	18300	17900	14600	12500		6.5
7	16100	16500	16700	14000	12000		7
8	13000	13400	14000	12600	11000	9000	8
9		10800	11000	11300	10000	8100	9
10		8800	9100	9600	9000	7300	10
11		7400	7700	8000	8100	6600	11
12		6300	6600	6700	7200	6100	12
13			5700	5900	6400	5600	13
14			4900	5100	5200	5200	14
15			4300	4400	4600	4500	15
16			3800	4000	4000	4000	16
18			2900	3100	3200	3100	18
20				2500	2500	2500	20
22				1900	2000	2000	22
24					1600	1600	24
26					1300	1300	26
28					1000	1000	28
30						800	30
n	8	7	5	4	3	3	n

Load Chart - Fixed Jib (TJ)

性能表 - 副臂



Unit: kg

	35m+8m			
	0°	15°	30°	
78	2500	2200	1600	78
75	2400	2100	1500	75
72	2300	1900	1400	72
70	2200	1700	1400	70
65	1700	1500	1300	65
60	1300	1200	1000	60
55	900	900	700	55
50	600	500	400	50

Note:
1. Value listed are the max. capacity when the crane is in a level condition on solid ground or surface.
2. Radius refers to actual radius with boom deflection considered.
3. Value above are calculated with hooks and lifting slings considered (320kg main hook block, 100kg aux. hook block).
4. When the fifth outrigger is landed in position, value listed are applicable for 360 degree operation.
5. Rated lifting performance on boom point sheave equals 2500kg; boom load capacity shall be 500kg less than value given when jib unfolds.
6. Load value is given according to the larger radius or boom length value when the actual radius or boom length falls between two numbers above.

备注:
1、起重性能表中给定数值是在平整坚固的地面上，整机调平状态下起重机的额定起重量。
2、起重性能表中工作幅度是指吊载后的实际幅度。
3、起重性能表中额定起重量包括起重钩(主起重钩重320kg，副起重钩重100kg)和吊具的重量。
4、打开好第五支腿时，表中数值适用于全方位(360°)作业。
5、使用臂尖滑轮时额定起重量不超过2500kg。若副起重臂处于展开状态，主臂起吊的额定起重量应减少500kg。
6、如果实际臂长和幅度介于两个数值之间时，取较长的臂长及较大的幅度所决定的额定起重量进行起吊作业。

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