

SANY[®]

SPECIFICATION



 25t

 41m

 1088kN·m

STC250C5

SANY TRUCK CRANE

V1.0

QUALITY CHANGES THE WORLD

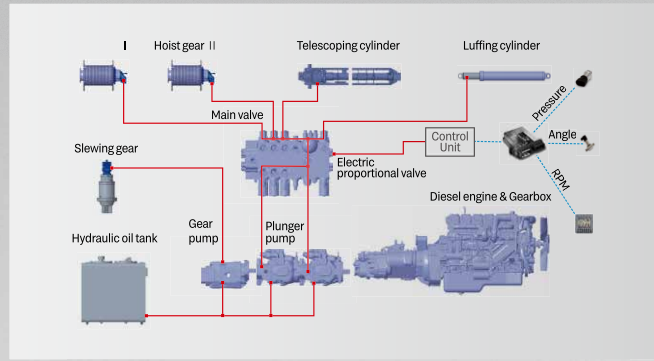
LEFT & RIGHT HAND DRIVE AVAILABLE
左右舵可售



Strong lifting capacity 超强起重能力

Full-extension boom 41m, max. lifting height of boom 41.5m.
U-shape large cross section boom, max. lifting moment 1088kN.m.
The lifting performance of middle & long boom is 20% higher among same class in the industry.

全伸臂长 41m，主臂最大起吊高度 41.5m。
大截面 U 形主臂，最大起重力矩 1088kN.m。
中长臂起重性能比行业同吨位产品提升 20%。



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.
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。
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。

SANY TRUCK CRANE STC250C5 / 25T LIFTING CAPACITY





High performance chassis
高性能底盘

WEICHAI P7.300 engine, FAST 9-speed transmission, rubber suspension.
Max. gradeability 41%, powerful performance.
Innovative structural frame verified by 200,000 cycling fatigue tests to ensure high reliability.
Lower positioned outrigger spanning 5.28m × 6.4m, providing stable support.

采用潍柴 P7.300 发动机、法士特 9 档变速箱、橡胶悬挂。
最大爬坡度 41%，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 5.28m × 6.4m，吊载稳定。



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" HD color display and silica gel panel, to further improve man-machine interaction.
SANY load moment indicator system provides protection for overloading, over release, over winding.

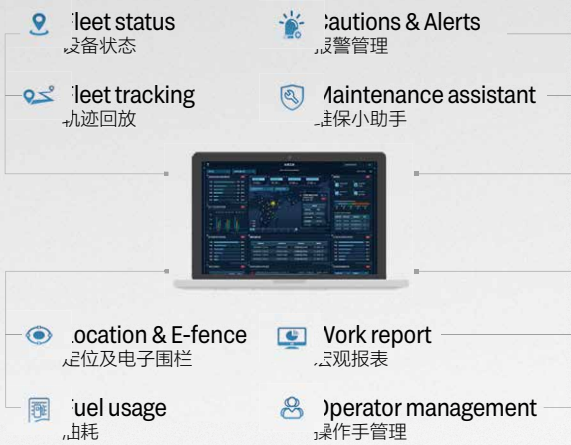
智能总线网络系统：整车控制器、显示器、显示仪表、I/O 模块、主要传感器等采用 CAN 总线组网，高速信息传输。
智能故障诊断系统：操作装置带智能控制器、车身带 BCM 控制模块，拥有故障诊断系统，能精准定位故障点，方便检修。
整车智能电量分配和控制，配备专用电瓶仓。
高清 7" 彩色显示屏、硅胶面板操控，进一步提升人机工程。
三一自主产权力矩限器系统，具备超载、过放、过卷等全面的安全保护。



MachineLink+

ROOTCLOUD T-AMS Pro device comes as standard to realize GPS trajectory, machine status, maintenance management, E-fence, alarm management, and operator management on computer or mobile MachineLink+ platform, by remote control of cranes. This telematics package greatly boosts efficiency of customer fleet management and helps provide better after-sales services.

标配树根物联终端 T-AMS Pro, 通过对起重机设备的远程控制, 在电脑或移动端 MachineLink+ 平台实现轨迹回放、设备状态、维保设备、电子围栏、报警管理、操作手管理等功能, 极大提高客户设备管理效率, 提升三一售后服务能力。

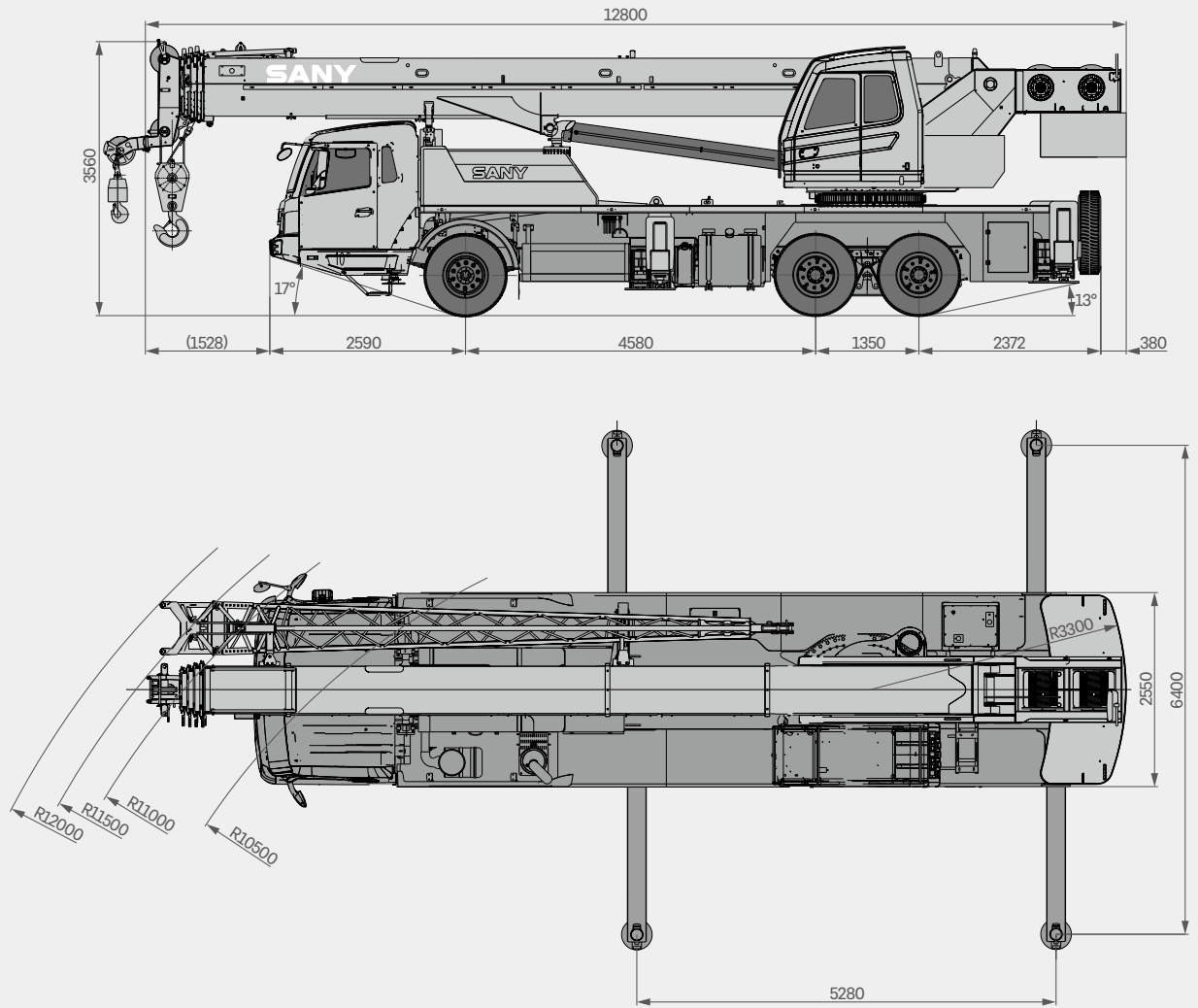


SANY TRUCK CRANE STC250C5 / 25T LIFTING CAPACITY



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	25	
WEIGHT 重量参数	Gross weight 整机总质量	t	31.9	
POWER 发动机参数	Engine model 发动机型号 (排放标准)	-	WEICHAI WP7.300E31 潍柴 WP7.300E31	
	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	12800	
	Overall width 整机全宽	mm	2550	
	Overall height 整机全高	mm	3560	
TRAVEL 行驶参数	Max. travel speed 最高行驶速度	km/h	85	
	Steering radius 转弯半径	Min.steering radius 最小转弯半径	m	10.5
		Min.steering radius of boom tip 臂头最小转弯半径	m	12
	Wheel formula 车轮模式	-	6 × 4	
	Min.ground clearance 最小离地间隙	mm	240	
	Approach angle 接近角	°	10	
	Departure angle 离去角	°	13	
	Max.gradeability 最大爬坡度	-	41%	
	Fuel consumption per 100km 每 100 公里油耗	L	30	
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	mm	3300	
	Boom sections (Qty.) 臂节数	-	5	
	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	1088
		Full-extension boom 全伸主臂	kN·m	672
		Full-extension boom + jib 全伸主臂 + 副臂	kN·m	293
	Boom length 臂长	Basic boom 基本臂	m	10.7
		Full-extension boom 全伸主臂	m	41
		Full-extension boom + jib 全伸主臂 + 副臂	m	49
	Max.lifting height 最大起重高度	Basic boom 基本臂	m	11
		Full-extension boom 全伸主臂	m	41.5
		Full-extension boom + jib 全伸主臂 + 副臂	m	49.5
Outrigger span (Longitudinal × Transverse) 支腿跨距 (纵 × 横)	m	5.28 × 6.4		
Jib offset 副臂安装角度	°	0, 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	Gross weight 总重量
Axle load 轴荷 /t	6.6	12.65	12.65	31.9



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
25	4	8	290
4	-	1	85



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	125m/min	16mm/185m	4t
Auxiliary winch 副卷扬	125m/min	16mm/105m	4t
Slewing speed 回转速度	2.7r/min		
Full luffing up/down time of boom 主臂起落幅时间	45s/50s		
Full extension/retraction time of boom 主臂伸缩时间	80s/95s		
Outrigger jack 垂直支腿	Retraction 收	20s	
	Extension 放	25s	
Outrigger beam 水平支腿	Retraction 收	20s	
	Extension 放	30s	

Crane Introduction

整机介绍

Carrier 下车

Driver's cab 驾驶室

- Integral steel structure cab in ergonomic design, featuring vibration reduction and external noise isolation.
- Driver's seat with headrest, three-point safety belt, adjustable steering wheel, large rear-view mirror, defroster, HVAC, stereo radio, and full set of instrument and controls, realizing safety and comfort.
- 全宽钢整体式钢结构驾驶室，采用人体工程学原理设计，减震性和封闭性优良。
- 配备舒适的驾驶座与副驾座、三点安全带、可调整式的转向盘、大视野后视镜、配有头枕的舒适驾驶椅、防雾扇、冷暖空调、立体收音机等，控制仪器和仪表齐全，更加舒适、安全、人性化。

Carrier frame 车架

- Designed and manufactured by Sany, the box-type structure is expanded in height and width, with its rigidity increased by 30%, featuring increased bearing capacity.
- 三一设计、制造，采用矩形截面结构，车架加高加宽，相较槽型车架，刚性提升30%，承载能力得到大幅提升。

Engine 发动机

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

Transmission 变速箱

- FAST manual transmission, 9 forward gears and 2 reverse gears, large speed ratio range, adaptable to slope climbing and high-speed traveling.
- 法士特手动变速箱，变速箱有 9 个前进挡、2 个后退挡，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。

Axle 车桥

- Axles 1 is steered; axle 2 & 3 are drive axles. Press-welding axle housing technology, bearing capacity is stronger.
- 1 轴为转向轴，轴 2、轴 3 为驱动桥；冲焊桥壳工艺，承载能力强。

Suspension system 悬挂

- Front suspension adopts leaf spring, rear rubber to reduce shock for ride comfort.
- 前悬挂为板簧结构，后悬挂采用橡胶悬挂，减震效果好，行驶舒适。

Steering 转向系统

- Mechanical steering with hydraulic power system of linkage feedback.
- 机械式转向机构，采用杆系反馈的液压助力转向系统。

Tires 轮胎

- Radial tires sized 12.00R22.5.
- 子午线轮胎，12.00R22.5。

Wheel formula 车轮模式

- 6 × 4.

Outrigger 支腿

- H-type layout, four point support, standard fifth outrigger, outrigger beams telescoping hydraulically.
- H 型支腿 4 点支撑，标配第五支腿，活动支腿全液压横向伸缩。

Brake 制动系统

- The braking system includes service brake & parking brake & assisting brake.
- Service brake: dual circuit.
- Parking brake: spring-loaded 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、和辅助制动。
- 行车制动采用双回路制动系统。
- 驻车制动形式为弹簧蓄能制动。
- 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. CAN instrument, data integration between superstructure and chassis.
- 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，可实现上下车信息交互。

Crane Introduction

整机介绍

superstructure 上车

Operator's cab 操纵室

- Independently developed by SANY in concept of ergonomics. Safety glass, corrosion resistant steel plate, safety glass, large internal space, softened interior trim, panoramic skylight, electric wiper, making the operation more comfortable and easier. The LMI display screen links the main console and the operation display system, so that all data of lifting operation can be seen at a glance.
- 三一自主研发人体工程学设计, 安全玻璃, 耐腐蚀钢板, 配置软化内饰、超大内部空间、全景式天窗等人性化设计, 配备电动雨刮器, 操作更舒适、轻松; 配置力矩限制器显示屏, 实现主控台与操作显示系统有机结合, 使吊装作业的全部工况数据一目了然。

Boom & telescoping system 伸缩系统

- Five section U-shape boom welded by high strength structural steel, single-board boom head design. Basic boom 10.7m, full-extension boom 41m, jib 8m, max. lifting height of full-extension boom 41.5m, max. lifting height of boom+jib 49.5m. Telescoping is realized by double cylinder with rope arranger.
- 臂结构采用抗扭曲设计, 采用高强度钢板制作, 五节臂, 单臂臂头, 基本臂 10.7m, 全伸臂 41m, 副臂 8m, 主臂全伸起升高度 41.5m, 带副臂最大起升高度 49.5m。U 形截面, 双缸绳排伸缩方式。

Hoist 起升系统

- Smooth hoisting powered by high quality fixed displacement piston motor.
- Normally closed winch brake and winch balance valve are fitted to prevent hook from falling and stalling.
- Standard 25t main hook, wire rope diameter 16mm, length 185m.
- Standard 4t aux. hook, wire rope diameter 16mm, length 105m.
- 卷扬采用高品质定量柱塞马达, 重物起落平稳。
- 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25t主钩, 直径 $\phi 16\text{mm}$, 长185m钢丝绳。
- 标配4t副钩, 直径 $\phi 16\text{mm}$, 长105m副卷扬钢丝绳。

Luffing system 变幅系统

- Passive luffing down, the luffing speed is uniform and controllable, improving the smoothness of luffing operation. Luffing angle: $-2^{\circ}\sim 80^{\circ}$.
- 采用自重落幅系统, 落幅速度均匀可控; 提高落幅操作的平稳性; 变幅角度 $:-2^{\circ}\sim 80^{\circ}$ 。

Hydraulics 液压系统

- Single piston pump, lifting speed of heavy load increased by 20%.
- The electro-hydraulic control system realizes effective flow distribution, the combined motion response is fast with less impact vibration.
- New hydraulic variable slewing system, smooth start & control with excellent inching performance.
- 强劲的单柱塞泵, 吊重物时速度提升 20%。
- 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。
- 采用新型液控变量回转系统, 回转启动和控制更为平稳, 微动性更卓越。

Slewing 回转系统

- 360° slewing, max. speed 2.7r/min.
- 360° 回转, 最大回转速度 2.7 r/min。

Control system 控制系统

- Data display system: multiple sensors realizing timely feedback of information, real-time monitoring, to ensure that working status well managed.
- Man-machine interaction interface: user-friendly design for comprehensive and clear information. The control pattern can be adjusted to customer's prefer.
- Bus instrument: integrated electrical bus instrument can control the driving parameters at any time. Engine fault prompting enables convenient and quick maintenance.
- 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, 客户可根据个人操作习惯和不同使用条件自行设置整车操控性, 充分满足客户的个性化需求。
- 总线仪表: 采用集成一体智能控制电气系统的总线仪表, 可随时掌控行驾参数; 同时, 拥有发动机故障提示功能, 维修排故方便、快捷。

Counterweight 配重

- Fixed counterweight 6.2t, no movable block.
- 固定配重 6.2t, 无活动配重。

Safety equipment 安全装置

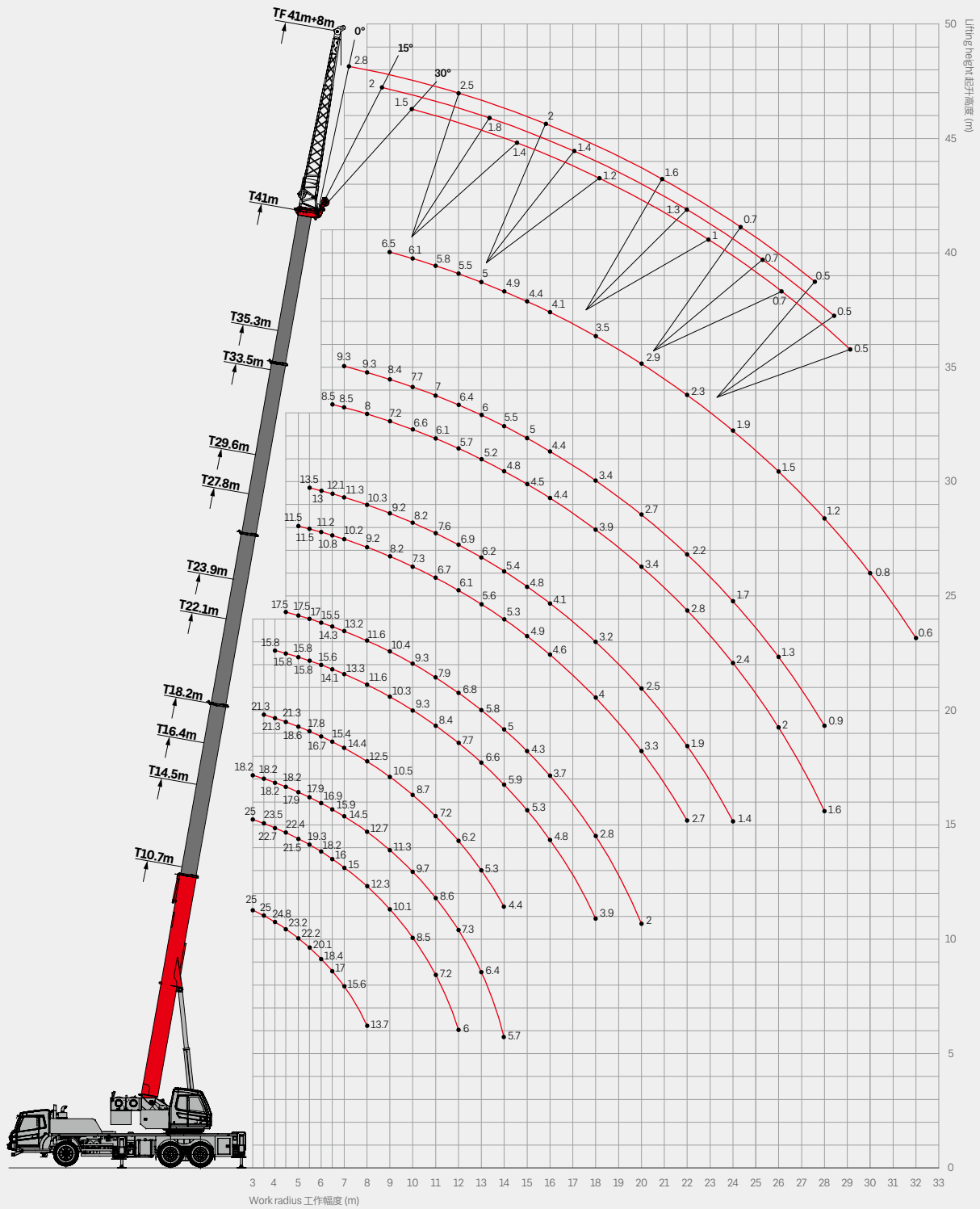
- Load moment indicator: A method of analytical mechanics is adopted and a moment limiter calculation system based on the hoisting mechanics model is established. Through online empty-load calibration, the rated hoisting accuracy can reach $\pm 3\%$ to fully protect the hoisting operation.
- The hydraulic system is equipped with hydraulic balance valve, overflow valve, two-way holding valve, etc. to realize stability and reliability.
- Boom head is equipped with A2B limit switch to prevent the wire rope from over winding.
- The length 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.
- 力矩限制器: 采用分析力学方法, 建立了基于吊重力学模型的力矩限制器计算系统, 通过在线空载标定, 额定吊重精度达到 $\pm 3\%$, 全方位保护吊载作业。
- 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。
- 主臂臂端配置高度限位器, 防止钢丝绳过卷。
- 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

- Anemometer.
- Reversing camera.
- Boom angle indicator.
- Secondary air filter.
- Customized painting.
- Other equipment available upon request.
- 风速仪。
- 倒车影像。
- 角度传感器。
- 二级空滤。
- 特殊涂装。
- 其他配置视需求定。

Operating Range - Telescopic Boom

起升高度曲线 - 主臂



Load Chart-Telescopic Boom

性能表 - 主臂

Unit: kg



Radius (m) 幅度	10.7	14.45	16.4	18.2	22.1	23.9	27.8	29.6	33.5	35.3	41	Radius (m) 幅度
3	25000	25000	18200									3
3.5	25000	23500	18200	21300								3.5
4	24800	22700	18200	21300	15800							4
4.5	23200	22400	18200	21300	15800	17500						4.5
5	22200	21500	17900	18600	15800	17500	11500					5
5.5	20100	19300	17900	17800	15800	17000	11500	13500				5.5
6	18400	18200	16900	16700	15600	15500	11200	13000				6
6.5	17000	16000	15900	15400	14100	14300	10800	12100	8500			6.5
7	15600	15000	14500	14400	13300	13200	10200	11300	8500	9300		7
8	13700	12300	12700	12500	11600	11600	9200	10300	8000	9300		8
9		10100	11300	10500	10300	10400	8200	9200	7200	8400	6500	9
10		8500	9700	8700	9300	9300	7300	8200	6600	7700	6100	10
11		7200	8600	7200	8400	7900	6700	7600	6100	7000	5800	11
12		6000	7300	6200	7700	6800	6100	6900	5700	6400	5500	12
13			6400	5300	6600	5800	5600	6200	5200	6000	5000	13
14			5700	4400	5900	5000	5300	5400	4800	5500	4900	14
15					5300	4300	4900	4800	4500	5000	4400	15
16					4800	3700	4600	4100	4400	4400	4100	16
18					3900	2800	4000	3200	3900	3400	3500	18
20						2000	3300	2500	3400	2700	2900	20
22							2700	1900	2800	2200	2300	22
24								1400	2400	1700	1900	24
26									2000	1300	1500	26
28									1600	900	1200	28
30											800	30
32											600	32
Telescoping status(%) 伸缩模式												
2nd boom 2 节臂	0	50	0	100	0	100	0	100	0	100	100	2nd boom 2 节臂
3rd boom 3 节臂	0	0	25	0	50	25	75	50	100	75	100	3rd boom 3 节臂
4th boom 4 节臂	0	0	25	0	50	25	75	50	100	75	100	4th boom 4 节臂
5th boom 5 节臂	0	0	25	0	50	25	75	50	100	75	100	5th boom 5 节臂
Rope rate 钢丝绳倍率	8	8	7	7	6	6	4	4	3	3	3	Rope rate 钢丝绳倍率

Load Chart-Telescopic Boom

性能表 - 主臂

Unit: kg



Radius (m) 幅度	10.7	14.45	16.4	18.2	22.1	23.9	27.8	29.6	33.5	35.3	41	Radius (m) 幅度
3	25000	25000	18200									3
3.5	25000	23500	18200	21300								3.5
4	24800	22700	18200	21300	15800							4
4.5	23200	22400	18200	21300	15800	17500						4.5
5	19000	19500	17900	18600	15800	17500	11500					5
5.5	15000	14700	17900	15800	15800	17000	11500	13500				5.5
6	13000	12900	15000	12500	15000	14000	11200	13000				6
6.5	11000	11200	12000	11000	13000	11000	10800	12100	8500			6.5
7	9500	9800	10200	9500	11000	9800	10200	10000	8500	9300		7
8	7500	7800	8200	7300	8500	7800	9200	8000	8000	7800		8
9		5900	6800	5900	6900	6100	7500	6500	7200	6500	6500	9
10		4800	5500	4600	5800	5100	6500	5500	6600	5500	6100	10
11		3600	4800	3700	5000	4300	5500	4500	5500	4700	4800	11
12		3000	4000	3100	4300	3600	4600	3800	4500	3900	4200	12
13			3400	2500	3700	3000	4000	3200	3800	3400	3600	13
14			2900	2000	3200	2600	3500	2800	3400	2900	3200	14
15				1400	2800	2200	3000	2400	3000	2500	2700	15
16				1000	2400	1800	2600	2100	2600	2200	2400	16
18					1800	1100	2000	1500	2100	1700	1800	18
20							1600	1000	1700	1200	1400	20
22							1200		1400	900	1000	22
24									1100			24
26												26
Telescoping status(%) 伸缩模式												
2nd boom 2 节臂	0	50	0	100	0	100	0	100	0	100	100	2nd boom 2 节臂
3rd boom 3 节臂	0	0	25	0	50	25	75	50	100	75	100	3rd boom 3 节臂
4th boom 4 节臂	0	0	25	0	50	25	75	50	100	75	100	4th boom 4 节臂
5th boom 5 节臂	0	0	25	0	50	25	75	50	100	75	100	5th boom 5 节臂
Rope rate 钢丝绳倍率	8	8	7	7	6	6	4	4	3	3	3	Rope rate 钢丝绳倍率

Load Chart - Fixed Jib

性能表 - 副臂

Unit: kg



Boom angle 主臂仰角 (°)	41m+8m			Boom angle 主臂仰角 (°)
	0°	15°	30°	
78	2800	2000	1500	78
75	2500	1800	1400	75
72	2200	1500	1300	72
70	2000	1400	1200	70
65	1600	1300	1000	65
60	1000	1000	900	60
55	600	600	600	55
50	350	350	350	50
Rope rate 钢丝绳倍率	1			Rope rate 钢丝绳倍率

Remark:

- Value listed are the max. capacity when the crane is in a level condition on solid ground or surface.
- Radius refers to actual radius with boom deflection considered.
- The rated load values determined by stability in the load chart are determined in accordance with ISO4305.
- Value above are calculated with hooks and lifting slings considered (290kg main hook block, 85kg aux. hook block).
- When the fifth outrigger is landed in position, value listed are applicable for 360 degree operation.
- Rated lifting performance on boom point sheave equals 5000kg; boom load capacity shall be 450kg less than value given when jib unfolds.
- 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:

- 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。
- 起重性能表中工作幅度是指吊载后的实际幅度。
- 起重性能表中的稳定性决定的额定载荷数值的确定遵循 ISO4305。
- 起重性能表中额定起重量包括起重钩（主起重钩重 290kg，副起重钩重 85kg）和吊具的重量。
- 打开好第五支腿时，表中数值适用于全方位（360°）作业。
- 使用臂尖滑轮时额定起重量不超过 5000kg。若副起重臂处于展开状态，主臂起吊的额定起重量应减少 450kg。
- 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。



SANY GROUP CRANE BU