

QUALITY CHANGES THE WORLD

PRODUCT SPECIFICATIONS



SPC100

SANY TRUCK CRANE
10T LIFTING CAPACITY

10T汽车起重机



10 t



25.6 m



25.8 m

www.sanyglobal.com

RIGHT HAND DRIVE AVAILABLE
右舵可售

V1.1

Optimized performance

Four section U shape boom is made of high tensile structural steel. The boom can extend to 25.6m in full length to hoist load to 25.8m high. Max. lifting moment is up to $316\text{kN} \cdot \text{m}$. Outrigger span increases to $4.9\text{m} \times 4.4\text{m}$, stability upgraded.

New hydraulic system in slewing mechanism ensures smoother start and stop, better inching mobility.

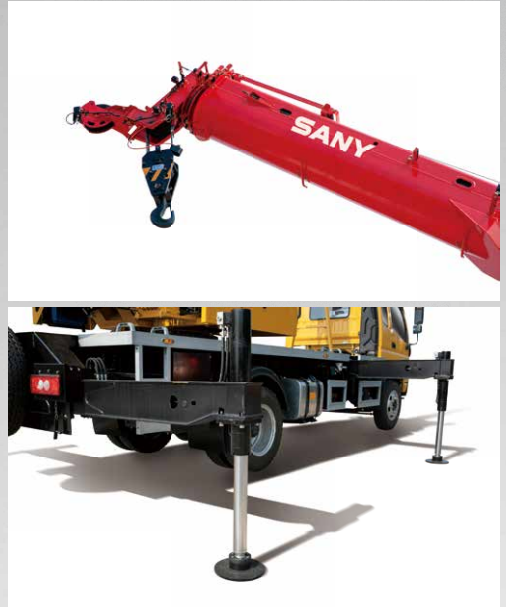
Cutting edge and strictly controlled manufacturing technique guarantees every product functioning perfectly after delivered.

4 节 U 型主臂, 采用高强度结构钢; 主臂全伸长 25.6m, 最大起吊高度 25.8m, 最大起重力矩达 $316\text{kN} \cdot \text{m}$ 。支腿跨距达到 $4.9\text{m} \times 4.4\text{m}$, 整车稳定性更强。

采用新液压系统, 回转启动、制动过程中更为平稳, 微动性更卓越。

广泛应用先进的制造工艺技术, 确保每一道工序精益求精, 有效保证产品的卓越性能。

SANY TRUCK CRANE SPC100 / 10T LIFTING CAPACITY





Uncompromised quality

Optimal chassis structure raises torsion resistance by over 20%. Beijing FOTON two axle commercial chassis is adopted.

The crane can drive at 90 km/h to its most. Max. gradeability is 30%.

Traveling flexibility is also remarkable on rough roads. Driving the crane is made more comfortable in full width cab with standard berth.

优化车架结构, 抗扭提升 20% 以上。

采用北汽福田通用两桥底盘, 最高行驶速度 90 km/h, 最大爬坡度达 30%。

能适应各种恶劣路况, 通过性更卓越, 全宽驾驶室标配卧铺, 驾乘更舒适。

90 km/h

Max. speed
最高速度

30%

Max. gradient
最大爬坡度



Prioritized safety

Buzzers are equipped to send out audible alarm of crane motions to prevent mis-operation and protect people on and around the crane.

Highly precise, stable and intelligent load moment indicator monitors lifting operation in all round way.

Multiple sensors provide real-time working data for operator to monitor the crane status at every second.

配备声响报警系统,对各种动作进行声响提示,防止误操作和对周围人员进行提示、报警,保证了车辆作业和人员安全。

采用高精度、高稳定性、高智能化的力矩限制器系统,全方位保护吊载作业。

配置丰富的传感器件,及时反馈数据信息,实现实时监控,随时掌握整车工作状态。



Right hand drive
Adjustable seat
Adjustable steering wheel
Berth
MP3
A/C cooling
Stereo radio

右舵
可调座椅
可调整方向盘
卧铺
MP3
冷空调
立体收音机

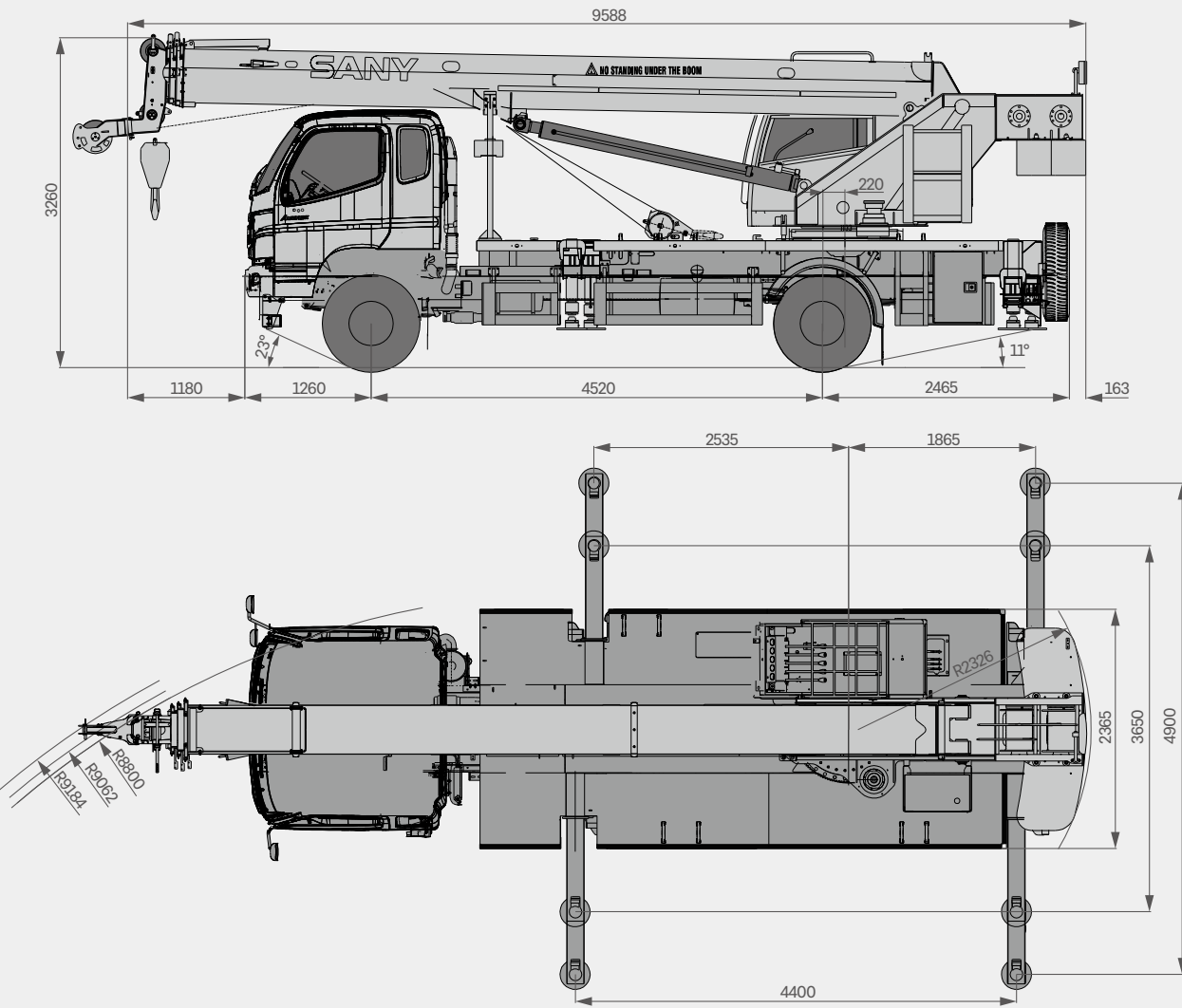
Softened interior trim
Adjustable seat
A/C cooling
Panoramic skylight
Electric wiper
LMI display
Lever control

软化内饰
可调式座椅
冷空调
全景式天窗
电动雨刮器
力限器显示屏
推拉杆控制





Overall Dimensions 整机尺寸图



Technical Specification 主要性能参数

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	10
WEIGHT 重量参数	Gross weight 整机总质量		kg	12800
POWER 发动机参数	Engine model 发动机型号 (排放标准)		-	FOTON CUMMINS ISF3.8s3168 Euro III 福康 ISF3.8s3168 欧 III
	Max. engine power 发动机最大功率		kW/rpm	125/2600
	Max. engine torque 发动机最大输出扭矩		N · m/rpm	600/(1300~1700)
DIMENSIONS 尺寸参数	Overall length 整机全长		mm	9588
	Overall width 整机全宽		mm	2365
	Overall height 整机全高		mm	3260
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	8.6
		Min.steering radius of boom tip 臂头最小转弯半径	m	8.8
	Wheel formula 车轮模式		-	4 × 2
	Min.ground clearance 最小离地间隙		mm	240
	Approach angle 接近角		°	30
	Departure angle 离去角		°	13
	Max.gradeability 最大爬坡度		%	30
	Fuel consumption per 100km 每 100 公里油耗		L	18
	Working temperature range 使用温度区间		℃	-20~+40
MAIN PERFORMANCE 主要性能参数	Min.rated lifting radius 最小额定幅度		m	2
	Tail slewing radius 转台尾部回转半径		mm	2326
	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	316
		Full-extension boom 全伸主臂	kN · m	203
	Boom length 臂长	Basic boom 基本臂	m	8
		Full-extension boom 全伸主臂	m	25.6
	Max.lifting height 最大起重高度	Basic boom 基本臂	m	8.5
		Full-extension boom 全伸主臂	m	25.8
	Outrigger span (Longitudinal × Transverse) 支腿跨距 (纵 × 横)		m	4.4 × 4.9
	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 Parameters 主要参数表



Axle Load 轴荷

Axle 轴	1	2	Gross weight 总重量
Axle load 轴荷 /t	3.48	9.32	12.8
Remark 备注	-		



Hook 吊钩

Rated load 额载 /t	Number of sheaves 滑轮数量	Rope rate 倍率	Hook weight 吊钩重量 /kg
10	3	6	100
1.5	-	1	30



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		>120m/min	10mm/110m	16.7kN
Auxiliary winch 副卷扬		120m/min	10mm/60m	16.7kN
Slewing speed 回转速度		2.6r/min		
Full luffing up/down time of boom 主臂起落幅时间		30s/50s		
Full extension/retraction time of boom 主臂伸缩时间		20s/25s		
Outrigger jack 垂直支腿	Retraction 收	15s		
	Extension 放	24s		
Outrigger beam 水平支腿	Retraction 收	17s		
	Extension 放	20s		

Crane Introduction 整机介绍

Carrier 下车



Chassis 底盘

- Beijing FOTON two-axle commercial chassis, complying with Euro III emission standard, featuring proven reliability, safety, and compatibility.
- 下车采用北汽福田两桥通用底盘，欧 III 标准，可靠性、安全性、通用性卓越突出。



Sub-frame 副车架

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



Engine 发动机

- Model: Inline four-cylinder electronically controlled diesel with watercooler.
- Emission standard: complying with Euro III .
- Fuel reservoir capacity: 150L.
- 型式：直列四缸、水冷却、电控、柴油发动机；
- 排放标准：排放符合欧 III 标准；
- 燃料箱有效容积：150L。



Transmission 变速箱

- ZF 6-speed manual transmission, large speed ratio range, adaptable to slope climbing and high-speed traveling.
- 采埃孚高品质手动变速箱，6 档，速比范围大，即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 linking shaft.
- 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

- Axle 1 is steered; axle 2 is drive axle with built-in inter-axle reducer. Press welding process strengthens the axle cover, increasing bearing capacity.
- 第 2 轴为驱动轴，第 1 轴为转向轴，轴 2 内置轴间减速；冲焊桥壳工艺，承载能力强。



Suspension system 悬挂

- Suspension of all axles is realized by leaf spring. With upgraded ride comfort, the suspension system is verified by 100,000 cycling fatigue tests, hence durability is out of question.
- 全部车轴悬挂装置为钢板弹簧的悬挂系统；板簧经过超过 10 万次的疲劳试验，同时优化前后板簧的性能参数，保证强度的同时兼顾乘坐的舒适性。



Steering 转向系统

- Mechanical steering with hydraulic booster.
- 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

- 7*8.25R20 16PR, radial tires. 子午线轮胎。



Wheel formula 车轮模式

- 4 × 2 。



Brake 制动系统

- Service brake: dual circuit air brake.
- Parking brake: performed by spring loaded accumulator.
- Assisting brake: engine exhaust brake.
- 行车制动：双回路气压制动；
- 驻车制动：弹簧蓄能制动；
- 辅助制动：发动机排气制动。



Electrical system 电气系统

- 120AH maintenance-free battery with a mechanical power switch, the overall power can be cut off manually.
- 120AH 容量免维护蓄电池，机械式电源总开关可手动切断整车电源。

Crane Introduction 整机介绍



Operator's cab 操纵室

- The cab is designed by Sany in ergonomic concept with deep consideration of convenience, safety, and comfort. Corrosion resistant bodywork with softened interior trim and extra large indoor space, the skylight, adjustable seat, air conditioning, electric windshield wiper, and LMI touch screen make working on the crane more comfortable.
- 造型新颖独特，人体工程学设计，采用安全玻璃，耐腐蚀钢板，配置全覆盖软化内饰、超大内部空间、全景式天窗、可调式座椅等人性化设计，配有电动刮雨器，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

- Four section U shape boom welded by high tensile steel plate. Telescoping is realized by single cylinder with rope arranger.
- 四节臂，由高强度焊接结构钢制成，U 型截面，单缸绳排伸缩方式。



Hoist 起升系统

- High quality constant displacement plunger motor is used for smooth hoisting.
- 卷扬采用高品质定量柱塞马达，重物起落平稳。



Luffing system 变幅系统

- Active luffing down in constant speed, reducing energy cost yet raising efficiency. Luffing angle: $-2^{\circ} \sim 80^{\circ}$.
- 采用动力落幅系统，落幅速度均匀可控；降低能耗，提高落幅操作的平稳性；变幅角度： $-2^{\circ} \sim 80^{\circ}$ 。



Hydraulics 液压系统

- Oil pump, motor, main valve, winch motor, slewing motor, balance valve and other key hydraulic components are of high quality and high reliability.
- Hydraulic control is remarkable via precise parameter match. Main valve functions flow confluence, securing stable control over single and combined motions.
- Fixed displacement motor is adopted for max. winch single rope speed 120m/min, working efficiency leading in industry.
- New slewing mechanism of smoother start, functioning and better inching mobility.
- 采用稳定、高品质的主油泵、主阀、卷扬马达、回转马达、平衡阀等关键液压件，系统可靠性高；
- 通过精确的参数匹配，操控性能优越。主阀具备流量合流功能，能在各种工况下，轻松实现单个动作和任意组合动作的稳定控制；
- 卷扬采用定量马达，作业效率高；卷扬单绳最大速度达 120m/min，起升效率行业领先
- 采用新型回转系统，回转启动和控制更为平稳，微动性更卓越。



Slewing 回转系统

- 360° slewing, stable and reliable. Start and brake smoothly.
- 360° 回转，动作稳定，系统可靠，制动平稳。



Control system 控制系统

- CAN-Bus: Driving is made easier with real-time data feedback from integral panel for electrical system. Engine fault detection makes maintenance and troubleshooting more convenient.
- Load moment indicator: Highly intelligent LMI providing all-round protection.
- 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，驾乘轻松；同时，拥有发动机故障提示功能，维修排故方便、快捷；
- 力矩限制器：采用高度智能力矩限制器系统，全方位保护吊装作业，确保操作精准、平稳、舒适。



Outrigger 支腿

- H-type layout, four point support, easy to operate. Welded by fine grain high tensile steel plate, optimized stability. 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。



Counterweight 配重

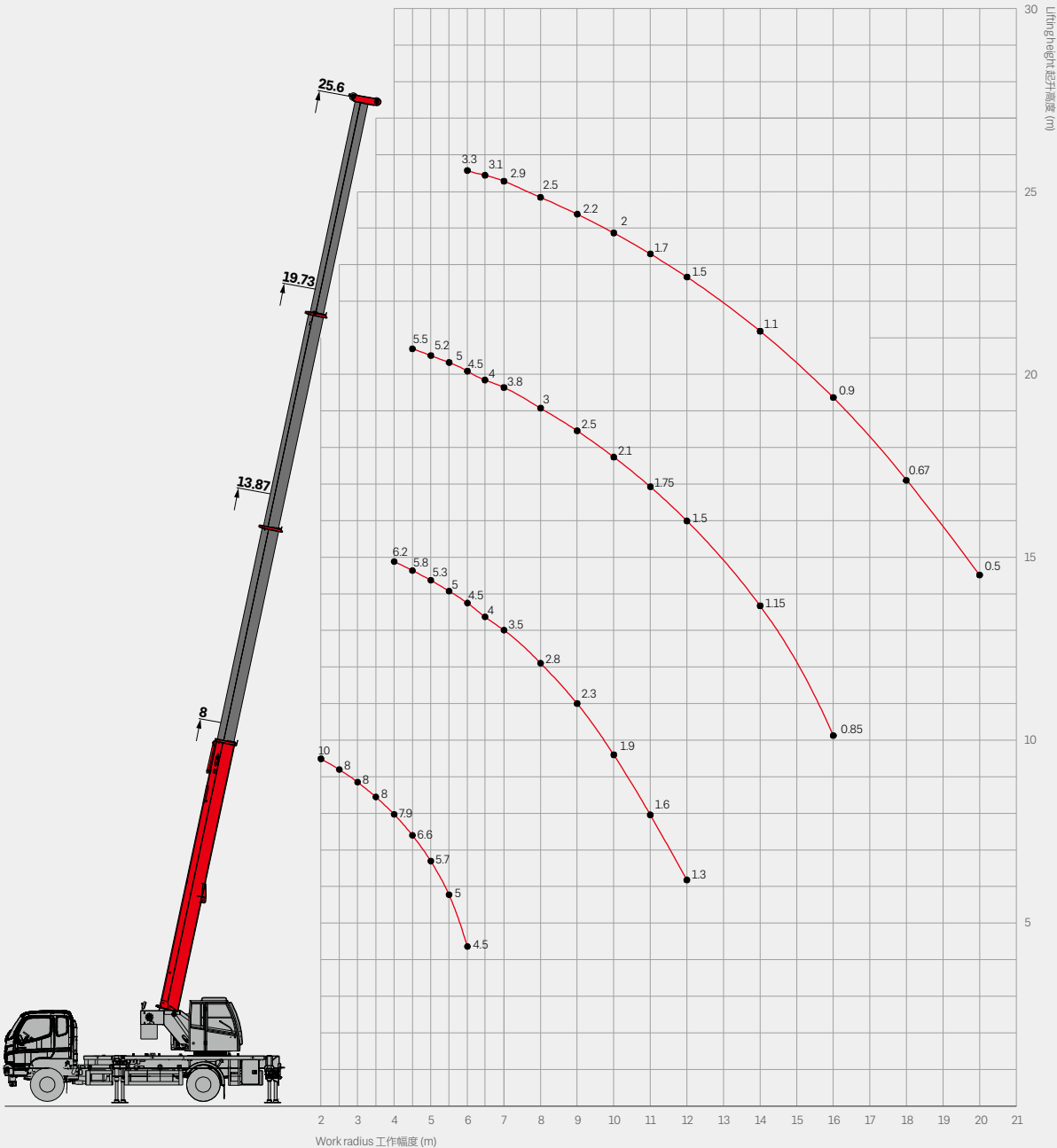
- Fixed counterweight 800kg, no movable unit.
- 固定配重 800kg，无活动配重。



Safety equipment 安全装置

- Self developed LMI is set through analytical mechanics approach. Load accuracy is maintained in a range of $\pm 3\%$ via online unloaded calibration. Alarm for overload is triggered automatically.
- Hydraulic balance valve, relief valve, two-way pilot-controlled valve are equipped for hydraulic system reliability.
- Height limit switch at boom head, preventing wire rope from over-hoist up.
- Boom length & angle sensor and stress sensor help monitor crane working status. Motion of risks are cut off automatically with buzzer warning simultaneously.
- 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 $\pm 3\%$ ，全方位保护吊装作业；超载作业时，系统自动报警提示，为操纵作业提供安全保障；
- 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。

Operating Range 起升高度



Load Chart-Telescopic Boom 主臂性能表



Unit: kg

Radius (m) 幅度	8	13.87	19.73	25.6	Radius (m) 幅度
2	10000				2
2.5	8000				2.5
3	8000				3
3.5	8000				3.5
4	7900	6200			4
4.5	6600	5800	5500		4.5
5	5700	5300	5200		5
5.5	5000	5000	5000		5.5
6	4500	4500	4500	3300	6
6.5		4000	4000	3100	6.5
7		3500	3800	2900	7
7.5		3200	3300	2700	7.5
8		2800	3000	2500	8
9		2300	2500	2200	9
10		1900	2100	2000	10
11		1600	1750	1700	11
12		1300	1500	1500	12
14			1150	1100	14
16			850	900	16
18				670	18
20				500	20
Rope rate 钢丝绳倍率	6	6	4	3	Rope rate 钢丝绳倍率

Remark: the ratings are given for load over rear and side.
备注：侧后方作业。

- Note:
- 1. Value above are max. load calculated with hooks and lifting slings considered;
 - 2. Radius refers to actual radius with boom deflection considered;
 - 3. Outdoor operation mustn't be carried out when Wind Force ≥6.
 - 4. Value listed are the max. capacity when the crane is in a level condition on solid ground or surface.
- 注意事项:
- 1. 表中所列数值为允许的最高值，且包括吊钩和吊具的重量。
 - 2. 表中工作幅度是指吊载后的实际幅度。
 - 3. 室外作业时，风力在 6 级以下时才可以作业。
 - 4. 表中起重数值是在地面坚实，整机调平状态下本起重机的最大起重重量。

Load Chart-Telescopic Boom 主臂性能表



Unit: kg

Radius (m) 幅度	8	13.87	19.73	25.6	Radius (m) 幅度
3	8000				3
3.5	8000				3.5
4	6200	5500			4
4.5	4400	4500	3600		4.5
5	3400	3500	3200		5
5.5	2600	2800	2800		5.5
6	2100	2300	2300	2300	6
6.5	200	1900	1900	2000	6.5
7		1600	1600	1700	7
7.5		1400	1400	1500	7.5
8		1200	1250	1300	8
9		950	950	1000	9
10		750	750	800	10
11		550	600	650	11
12		450	450	500	12
14			300	330	14
16			200	250	16
18				200	18
20				200	20
Rope rate 钢丝绳倍率	6	6	4	4	Rope rate 钢丝绳倍率

Remark: the ratings are given for load over front.
备注：前方作业。



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SANY CRANE



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