



SANY

Technical Specification



Rough Terrain Crane SRC865

Superior Design. Performance. Support.



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1 STANDARD EQUIPMENT

ACCESSABILITY



Superior Accessibility provides full length anti-skid decking, 5 ladders on all sides and a hoist platform.

LMI



The SANY designed LMI has an extra large display screen featuring both lifting and travel modes.

CAB



The cab is designed with pilot operated joysticks for efficient operation and **Red Dot** air conditioning.

RUGGED & EASY TO MANUEVER



Box type chassis with 4x4 drive steer, **Axle Tech** axles and 3 position outriggers.



THE SANY SRC865 GLOBAL ROUGH TERRAIN CRANE

Global Rough Terrain Crane

BRADEN HOIST

Matching main and auxillary hoists with 3rd wrap indicator and cable follower.



FULL POWERED BOOM

113 feet, 4 section boom made with high strength, light weight formed steel is available with 54 feet bi-fold jib



CUMMINS ENGINE

Powerful, Tier III
Cummins QSB6.7

Rated at 250Hp @
2500 RPM



2 SUPERSTRUCTURE

Boom

37-113 ft. (11.28-34.5m), four section full power boom. Telescoping is mechanically synchronized with single lever control. The synchronization system consists of two telescope cylinders and a cable. The boom sections are made of two high strength steel plates, formed in a hexagonal cross section & welded inside and out. Each boom section has greasable antifriction slide pads. A single boom hoist cylinder provides for boom elevation of -2 to 78 degrees. Maximum tip height 117ft (43.58m).

Jibs

30-54 ft (9.2-16.4m) side stow bifold swingaway lattice type jib. Single nylon sheave mounted on anti-friction bearing. Jib is extendible to 54 ft. (16.4m) by means of a 20.7 ft. (6.3m) swing out section. Jib is offsettable at 0°, 20°, or 40°. Maximum tip height is 172ft. (60m).

Auxiliary Boom Head

Removable auxiliary boom head has single nylon sheave mounted on anti-friction bearing. Removable pin-type rope guard for quick reeving. Installs on main boom head only. Removal is not required for jib use.

Super Structure Frame

All welded one-piece structure fabricated with high tensile strength alloy steel. Counterweight is bolted to frame.

Swing

A hydraulic motor drives a double planetary reduction gear for precise and smooth swing function. Swing speed (no load) is 2.5 rpm.

Boomhead

Welded to fifth section of boom. Five nylon load sheaves, antifriction bearings, working light. Provisions made for side-stow jib mounting.

The primary telescoping cylinder extends the second and fifth section to a boom height of 62ft. The secondary cylinder and cable synchronously extend the fourth and fifth boom sections to a boom length of 139ft.

Hook Blocks & Overhaul Ball

8.3T (7.5mT) Overhaul Ball.

25T (22mT) 1-sheave Hook Block with safety latch.

50T (45mT) 3-sheave Hook Block with safety latch.

60T (55mT) 5-sheave Hook Block with safety latch.

Superstructure Connection

Swing bearing is a single row, ball type, with internal teeth. The swing bearing is bolted to the revolving super structure and to the chassis frame.

Swing Brake

Heavy duty multiple disc swing brake is mechanically actuated from operator's cab by foot pedal. Button on joystick allows for free swing or brake applied at neutral. A one position travel lock is provided standard and a 360° mechanical lock is optional.

Load Moment Indicator

The Sany designed Load Moment Indicator (LMI) includes large display screen, visual and audible warning system and automatic function lockout. The screen has two display modes—one for crane operations and one for traveling. Using the touch screen the operator can easily switch between display modes as well as function setup. The crane operation displays boom radius, boom angle, boom length, allowable load, actual load and percentage of actual to allowable using a bar graph. The travel mode displays engine speed, travel speed, and water & oil temperature & pressure. The anti two block system includes audible & visual warnings and automatic function lockout.

Operator's Cab

Ergonomic cab with all steel construction, optimum visibility, tinted safety glass throughout, and rubber floor mat. Cab is mounted on vibration absorbing pads. The cab has a sliding door on the left side, framed sliding window on the right side and opening top hatch to provide optimum visibility of the load. Acoustical foam padding insulates against sound and weather. The deluxe six-way adjustable seat is equipped with a mechanical suspension and includes head and arm rests.



THE SANY SRC865XL GLOBAL ROUGH TERRAIN CRANE

Controls

Armrest mounted dual axis hydraulic controls are for hoist(s), swing, and boom elevation. Drum rotation indication is incorporated into control handles. Armrest swings up to improve access and egress. Adjustable hand throttle included. Steering column mounted turn signal, wiper, and gear shift controls. Switches include ignition, lights, top hatch wiper, steering mode, parking brake, outriggers. Horn, hoist high/low speed and free swing travel switches are mounted in the levers. Foot control pedals include swing brake, boom telescope, service brake, and accelerator.

Instrumentation & Accessories

Accessories include fire extinguisher, bubble level, dome light, work light (one on boom head and one mounted to the cab), windshield washer/wiper, top hatch wiper, R.H. and L.H. rear view mirrors, dash lights, and seat belt. Hydraulic function gauges are located in cab behind operator seat. Well protected, the electrical controls & circuit breakers are also conveniently located in cab.

Hydraulic Control Valves

The main valve is mounted on the rear of the super structure and is easily accessible. The main valve is a pilot controlled, load sensitive block which includes four functions, (main and auxiliary hoist, boom elevation and telescope). Swing control valve is mounted on the inner side of the platform. Swing control valve is a hydraulic pilot control valve. Quick disconnects are provided for easy installation of pressure check gauges.

Optional Equipment

- Auxiliary Hoist Package (including wire rope)
- Rotating Beacon
- Rotation Resistant Wire Rope

3 CHASSIS ASSEMBLY

Chassis

Chassis is SANY designed with four-wheel drive and four-wheel steer(4×4×4). Has box-type construction with reinforcing cross members, a precision machined turn table mounting plate and integrally welded outriggers boxes. Decking has anti-skid surfaces.

Axles & Suspension

Rear axle is a planetary drive/steer type with 8.6 in (218mm) of total oscillation. Automatic oscillation lock outs

engage when the superstructure is swung +/- 6° from boom over the front. Front axle is a planetary drive/steer type, rigid mounted to the frame for increased stability. Both axles are supplied by **Axletech**.

Steering

Hydraulic, full power steering at the front or rear axles is easily controlled by steering wheel. Four steering modes are available: front wheel, rear wheel, four-wheel coordinated, or four-wheel crab steer. Two rear lights are provided.

Transmission

Dana Powershift transmission with torque converter provides 6 speeds forward and 6 speeds reverse with neutral safety start. Four wheel drive engages automatically with low range and two wheel drive with high range. Maximum vehicle speed in high range is 25 mph. Maximum Gradability is 75% Gross Vehicle Weight.

Multi-Position Outriggers

Fully independent hydraulic outriggers may be utilized fully extended to 23.6 ft.(7.2m) centerline to centerline, in their 1/2 extended position, or fully retracted for maximum flexibility. Removable steel floats, each with an area of 450 in²(2900cm²), stow on the outrigger boxes at their point of use. Complete controls and a sight leveling bubble located in the operator's cab. Additional outrigger controls are located in chassis electrical box.

Tires

29.5R25 (Optional 29.5×25, 28 PR), wide earthmover style tread tires provide good service life and high load ratings.

Service & Parking Brakes

Fully hydraulic actuated disc dual caliper brakes on front axle and single disc caliper brakes on rear axle. Brakes are actuated by foot pedal in the cab. Parking brake is spring applied, hydraulic release. Parking brake disc is mounted to front axle differential.

Engine Specifications

- **Cummins** QSB6.7 Tier III compliant engine
- Maximum horsepower: 250 hp @ 2500rpm
- Maximum torque: 728 lb.ft @ 1500rpm
- Displacement: 6.7 liter
- Aspiration: Turbo charged & charge air cooled
- Electrical system: 24V
- Fuel capacity: 90 gal

4 HYDRAULIC SYSTEM



Driving brake ,outrigger and Suspension Pump:
18.1gpm(68.6lpm)@
3,625psi (250bar)

Hydraulic System

Parker Pumps are featured in the Sany SR865 hydraulic system. **Husco** main valve and filters are conveniently located behind the operator's cab as well as the hydraulic driven **Red Dot** air conditioning unit for easy accessibility.

Filtration

Full flow oil filtration system with by pass protection includes 3 replaceable 10 micron high pressure filters.

Hydraulic Pumps

System consists of two gear type pumps and two piston pumps driven off the transmission.

Combined system capability is 117gpm (443 lpm).

Main and Auxiliary Winch, Boom Hoist, Telescope Pumps (combined flow):
77.7gpm (294lpm)@ 4,060psi (280bar)

Power Steering and Swing Pump:
21.4gpm (80.8lpm)@ 3,625psi (250bar)

Hydraulic Reservoir

All steel, welded construction with internal baffles and diffuser. Provides easy access to filters and is equipped with an external sight level gauge. The hydraulic tank is pressurized to aid in keeping out contaminants and in reducing potential pump cavitation. Capacity is 133 gal. (502L). Hydraulic oil cooler is standard.



Construction of Sany America's new assembly plant in Peachtree City, Georgia.

THE SANY SRC865 GLOBAL ROUGH TERRAIN CRANE

Hoist Performance

Max. line speed (no load) - 492 fpm (150 m/min)

Max. line pull - 18,210 lbs (8,277 kg)

Main Hoist Specification

Hydraulic hoist with bent axis piston motor and planetary reduction gearing provides 2-speed operation with equal speeds for power up and down. Winch is equipped with an integral automatic brake, grooved drum, tapered flanges, standard cable follower on drum, and an electronic drum rotation indicator.

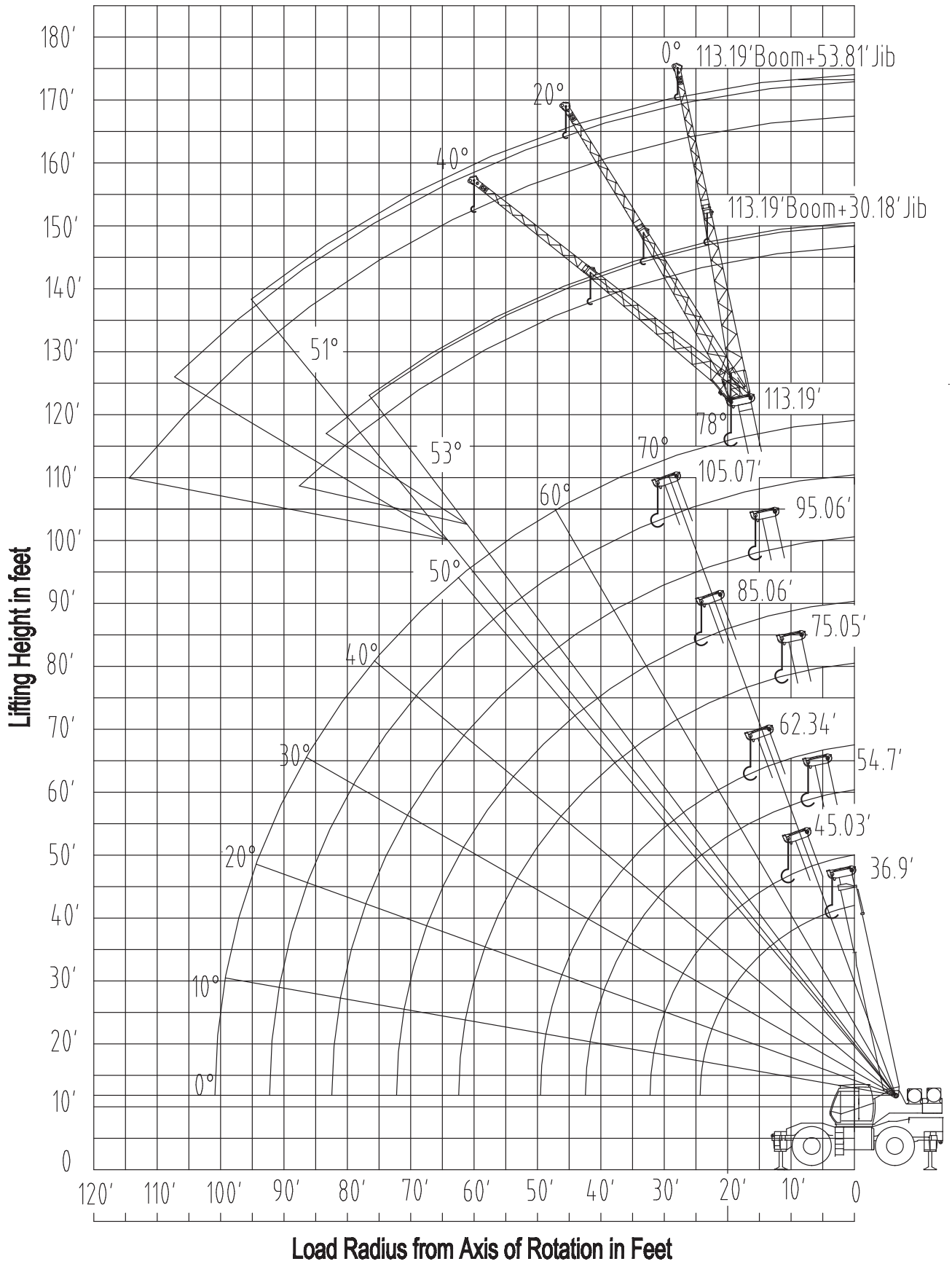
PERFORMANCE	LOW RANGE	HIGH RANGE
Max. line speed (no load)		
<i>First layer</i>	176 FPM	360 FPM
<i>Seventh layer</i>	277 FPM	565 FPM
<i>Max. line pull-first layer</i>	18,210 lbs	7,586 lbs
<i>Max. line pull-fifth layer</i>	11,590 lbs	4,820 lbs
<i>Permissible line pull</i>	14,189 lbs	

DRUM DIMENSIONS		DRUM CAPACITY	
<i>Drum diameter</i>	15.00 in	MAX. Storage:	906 ft
<i>Length</i>	18.37 in	MAX. Useable:	748 ft
<i>Flange diameter</i>	25.5 in	<i>Based on minimum flange height above.</i>	

Auxiliary Hoist Specification

Hydraulic winch with bent axis piston motor and planetary reduction gearing provides 2-speed operation with equal speeds for power up and down. Winch is equipped with an integral automatic brake, grooved drum, tapered flanges, standard cable follower on drum, and an electronic drum rotation indicator. Auxiliary hoist is identical to main hoist.





SRC865 - ON OUTRIGGERS - FULLY RETRACTED, 360°

RADIUS FT	BOOM LENGTH FT.								
	36.9	45.0	55.0	62.3	75.1	85.1	95.1	105.1	113.2
10	73960	70100	62390						
12	57670	53720	52990	45390					
15	39500	39020	33700	37270	36810	32070	27880		
20	23520	23340	21380	22770	23100	21600	20010		
25	15540	15320	13930	14790	15360	16660	16750	18180	18140
30		10490	9470	10000	10730	11830	12010	13160	13200
35			6520	6830	7670	8610	8880	9810	9920
40			4380	4560	5460	6320	6630	7420	7560
45				2860	3610	4580	4930	5640	5370
50				1520	2530	3260	3630	4250	4430
55					1410	2180	2570	3130	3320
60							1740	2220	2440
65								1450	1690
Parts Line	8	8	6	4	4	4	4	3	3
Min Angle				19°	31°	37°	42°	46°	49°

SRC865 - ON OUTRIGGERS - FULLY EXTENDED + BOOM EXTENSION, 360°

Boom Angle	34.5+9.2 Load Pounds			34.5+16.4 Load Pounds			Boom Angle
	OFFSET ANGLE REGREES			OFFSET ANGLE REGREES			
	0°	20°	40°	0°	20°	40°	
78	8590	5510	3960	5730	3300	1980	78
77	7710	5070	3740	5510	3080	1980	77
75	7050	4850	3520	5290	2860	1870	75
73	6390	4400	3300	4620	2640	1650	73
71	5950	3960	3080	4180	2420	1650	71
68	5290	3740	2750	3520	2200	1540	68
66	4850	3300	2530	3080	2090	1490	66
63	4180	3080	2200	2640	1870	1430	63
61	3520	2640	1870	2200	1650	1270	61
58	2640	2090	1430	1540	1320	1100	58
56	1650	1430	1100	1210			56
Min Angle	51°			53°			

SRC865 ON TIRES - PICK & CARRY					
RADIUS FT	BOOM LENGTH FT.				
	36.9	45.0	55.0	62.3	75.1
10	43470	37630	30680		
12	43470	37630	30680		
15	37960	37630	30680	19970	16310
20	30310	29980	28170	19680	16310
25	20280	19950	19060	18290	16310
30		14210	13930	14610	14680
35			10250	10820	11130
40			7600	7640	8040
45				5220	5510
50				3410	4070
55					3410
60					2310
Parts Line	6	6	6	6	6

SRC865 ON TIRES - STATIONARY - OVER FRONT					
RADIUS FT	BOOM LENGTH FT.				
	36.9	45.0	55.0	62.3	75.1
10	45410	42980	29760		
12	43650	41350	29760		
15	38580	36370	29760	21050	17520
20	31300	29760	26120	21050	17520
25	21160	20940	20500	18950	17520
30		14770	14550	15430	15210
35			10690	12010	11040
40			7930	9390	8810
45				7160	6720
50				5290	5180
55					3300
60					2420
Parts Line	6	6	6	6	6

SRC865 ON TIRES - STATIONARY - 360°					
RADIUS FT	BOOM LENGTH FT.				
	36.9	45.0	55.0	62.3	75.1
10	45410	39680	29760		
12	39590	39020	26450		
15	27090	26450	17190	21050	
20	15930	15540	11460	15980	16640
25	9760	9360	7930	10470	10470
30		5510	5290	6940	6670
35			2640	4510	3990
40				2790	2020
45				1430	1160
Parts Line	6	6	6	6	6
Min Angle			15°	33°	41°

Preliminary