SANY®

SCE800TB

SANY TELESCOPIC BOOM CRAWLER CRANE

www.sanygroup.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.

V1.1

01 | Introduce

300t·m
Max. lifting moment

47m
Max. boom

47m+17.5m
Max. boom + jib length

Strong Capability

- U-shape large profile boom with max. lifting moment 300t·m, lifting performance improved by more than 10%.

Convenient Transfer

- The basic machine dismantled tracks meets 3m transportation width, and only 3 vehicles are needed for transportation.

Simple and Reliable

- Car-level operation experience, a more seamless human-machine interaction interface, third-generation intelligent control system, one-butt on start/stop, 10.1" dual touchscreen display, intelligent and convenient.

High Efficiency

- Combined motions are carried out efficiently, with each motion starting and braking smoothly.

SCE800TB
TELESCOPIC BOOM CRAWLER CRANE


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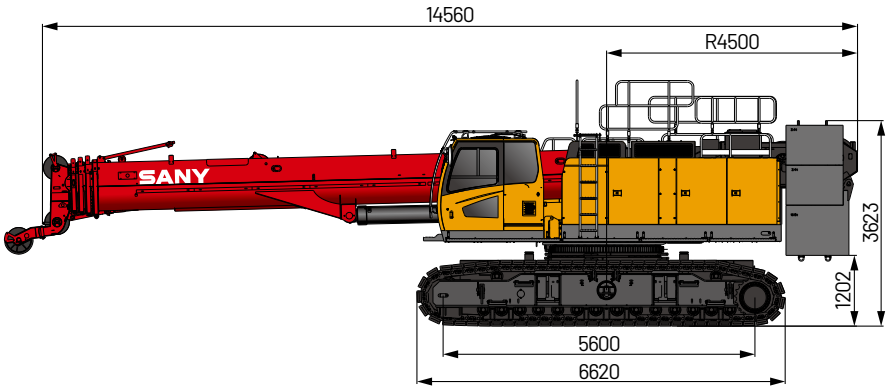
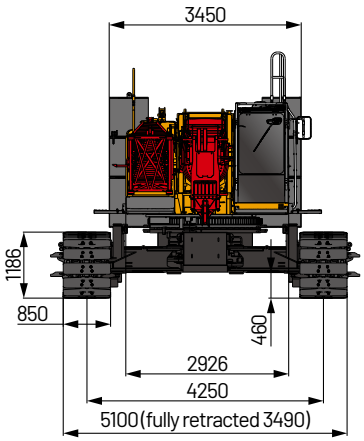
02 | Outline Dimension

SCE800TB

Unit: mm

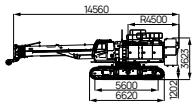
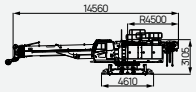
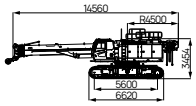
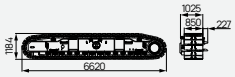
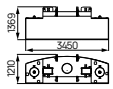
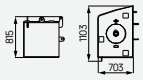
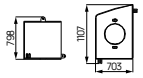
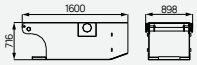
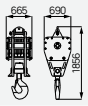
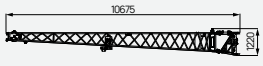




03 | Main Performance Parameters

Performance Indicators	Unit	Parameter
Outline Dimension		
Machine length	mm	14560
Machine width (retracted)	mm	5100 (3490)
Machine height	mm	3670
Distance of centers between drive and idle wheels	mm	5600
Track shoe width	mm	850
Boom Configuration		
Maximum rated load capacity	t	80
Boom length	m	12.2~47
Boom angle	°	-1.5~80
Max. rated load moment	t·m	300
Jib Configuration		
Longest boom + longest jib	m	47+17.5
Boom to jib angle	°	0, 15, 30
Operation Speed		
Rope speed of main/aux. load hoist	m/min	0~140
Boom full up/down duration	s	80/105
Boom full extension/retraction duration	s	100/125
Swing speed	rpm	0~2
Travel without load	km/h	0~2.5
Engine		
Engine	-	Cummins QSL9-C325
Rated power	kW/rpm	242/1800
Wire Rope		
Diameter	mm	Φ22
Transport Parameter		
Machine weight	t	90.1
Weight of largest single piece	t	34.9
Transport dimensions of basic crane (dismantling crawler frame) (L × W × H)	mm	14560 × 3000 × 3100
Other Parameters		
Average ground bearing pressure (base boom)	MPa	0.09
Min. swing radius	mm	4500

04 | Transport Dimension

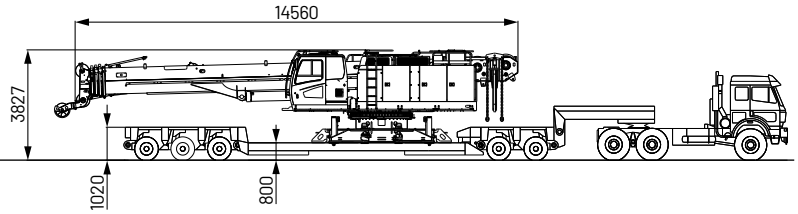
No.	Item	Shape	Length (m)	Width (m)	Height (m)	Weight(t)	Quantity
1	Whole Machine		14.56	5.10	3.62	89.4	1
2	Basic Machine (with jib)		14.56	3.00	3.11	35.1	1
3	Basic Machine (without counterweight)		14.56	5.10	3.45	56.1	1
4	Track Frame		6.62	1.03	1.18	10.5	2
5	Counterweight Tray		3.45	1.21	1.37	16.5	1
6	Rear Counterweight 1		0.70	1.10	0.82	2.4	2
7	Rear Counterweight 2		0.70	1.11	0.80	2.4	2
8	Carbody Counterweight		1.60	0.90	0.72	3.0	2
9	9t Hook Block		0.75	0.37	0.37	0.26	1
10	80t Hook Block		1.86	0.69	0.66	1.0	1
11	45t Hook (optional)		1.52	0.69	0.37	0.48	1
12	15t Hook (optional)		1.34	0.60	0.34	0.34	1
13	7m Swing-away		7.24	0.38	0.51	0.26	1
14	10m Jib Section		10.68	0.76	1.22	0.69	1

Remarks:
① . The transport dimensions of each part in the table are schematic, not proportional to the real parts. The dimensions are designed value without packing.
② . The Weight is designed value that the actual manufactured part may deviate a little. The total weight of counterweight is 26t.
③ . The above dimensions and weight is subject to change due to product upgrading.

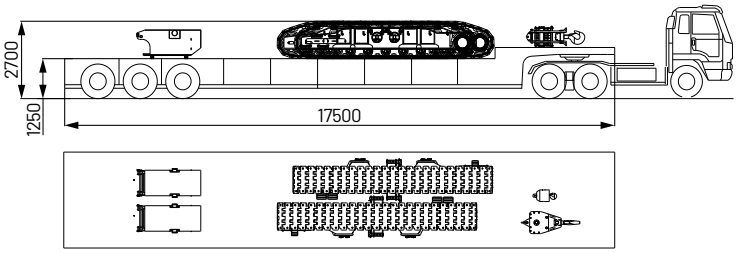
05 | Transport Plan

1 Transport Plan 1

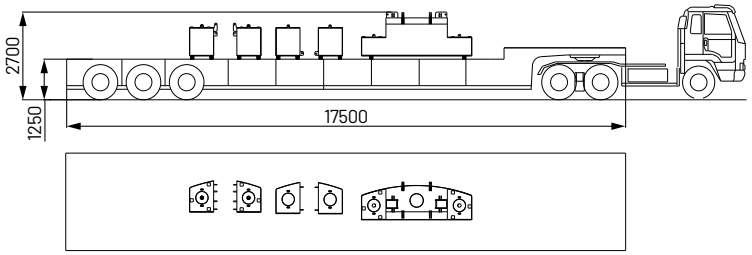
Trailer	▪ 3000mm
Part (s)	▪ Basic machine × 1
Weight	▪ 34.9t



Trailer 2	▪ 3000mm
Part (s)	▪ Counterweight × 2 ▪ Left crawler × 1 ▪ Right crawler × 1 ▪ 80t hook block × 1 ▪ 9t hook block × 1
Weight	▪ 27.5t



Trailer 3	▪ 3000mm
Part (s)	▪ Counterweight tray × 1 ▪ Counterweight block I × 2 ▪ Counterweight II × 2
Weight	▪ 26t



06 | Main Characteristics

1 Product Specification

Engine

- Model: Cummins L9-C325 242kW, Stage V.
- Type: 4 cycle, water-cooled, vertical in-line 6, direct injection, turbo-charger, intercooler, complied with European Off-way Stage V Emission standard.
- Displacement: 8.9L.
- Rated power: 242kW/1800rpm.
- Operation power: 242kW/1800rpm.
- Max. Torque: 1527N.m/1500rpm.
- Cooling System: Temperature-adjustable, pressurized water cycle system.
- Starter: 24V-5.0kW.
- Radiator: Fin type core in aluminum.
- Air cleaner: Dry type main filter element, safety element core and resistance indicator.
- Throttle: Grip type hand throttle, electrically controlled.
- Fuel filter: Replaceable paper element.
- Batteries: Two 12V × 180Ah capacity batteries, connected in series.
- Fuel tank capacity: 400L.

Electrical control system

- Utilizes the independently developed SYIC-III integrated control system, featuring high system integration, precise operation, and reliable quality.
- The control system consists of the power system, engine system, main control system, LMI system, auxiliary system, and safety monitoring system.
- CAN BUS is used for data communication between controller, monitor and the engine.
- Monitor: The working parameters and status are shown on the monitor, such as the engine speed, fuel volume, engine oil pressure, servo pressure, wind speed, engine working hours, lifting conditions and boom angle.

Hydraulic system

- Main pumps: Open variable displacement piston pumps of large displacement is adopted to provide oil supply for main actuators of main machine.
- Gear pump: Dual gear pump for swing, radiator and control circuit.
- Control: Main pump adopts electrically-controlled positive flow control, winch motor adopts limitless adjustable piston motor of variable displacement. The operating components are two cross hydraulic handle, one hydraulic pedal for telescopic boom, one dual travel pedal control valve to control various actuator proportionally.
- Way of cooling: Heat exchanger, fan core and multi-stage cooling.
- Filter: Large flow, high precision filter, with bypass valve and transmitter, which can remind the user to replace the filter element in time.
- Max. pressure of system:
  Main/aux. load hoist and travel system: 32Mpa.
  Boom hoist cylinder: 32 Mpa.
  Swing system: 20 MPa.
  Control system: 5 MPa.
- Hydraulic Tank Capacity: 950L.

Main/aux. load hoist mechanism

- Pump and motor: Dual variable displacement with speed adjustable, to realize higher efficiency and lower down the energy. Winch balance valve combined with anti-hook sliding technology can make sure the load lifting steady.
- Winch brake adopts wet type and spring loaded fin type normally engaged brake, spring force braking, oil pressure released.
- Main and aux. load hoist system adopts piston motor of variable displacement to drive planetary gearbox.

Main load hoist winch	Rope speed on the outermost layer	0~140m/min
	Wire rope diameter	Φ22mm
	Wire rope length	245m
	Rated single line pull	8.0t
Axu. load hoist winch	Rope speed on the outermost layer	0~140m/min
	Wire rope diameter	Φ22mm
	Wire rope length	145m
	Rated single line pull	8.0t

Boom hoist mechanism

- Dual-acting single piston hydraulic cylinder, with safety balance valve, and a luffing angle of -1.5°~ 80°. Luffing down through self-weight to reduce energy consumption and increase stability of luffing down operation.

Swing mechanism

- Swing brake adopts wet, spring loaded, normally-closed brake, and braking through spring force.
- Swing system, equipped with integrated swing buffer valve, has free slipping function. It is featured in steady start, control and excellent inching function.
- Unique swing buffer design and more steady brake.
- Swing drive: External gear swing drive with 360° swing range, and the max. swing speed is 2r/min. The max. drive pressure can reach 20MPa.
- Swing lock: Cylinder lock device can make sure the upperworks can be locked on four directions after the work is done or during transport, which is more convenient and reliable.
- Swing ring: Single row ball bearing.

Counterweight

- Counterweight are designed into blocks for self-assembly and easier transport.
- Counterweight tray and blocks are piled up for easier assembly and transport.
- Rear counterweight: Total 26t and capable of self-assembly.
- Carbody counterweight: 3t × 2 at the front and rear of carbody.

Upperworks

- High-strength steel weld framework, with no torsion or deformation. The parts are laid out in the way that is easier for maintenance and service.

06 | Main Characteristics

1 Product Specification

Cab and controls

- Innovative cab design: The cab features stylish aesthetics and a spacious glass area; equipped with low beam headlights for wider visibility; comes with heating and cooling air conditioning and an integrated radio; the seats, control levers, and buttons are ergonomically designed for enhanced comfort during operation.
- Cab configuration: Features a 10.1-inch dual touchscreen, programmable smart switches, and a user-friendly human-machine interface.
- Armrest boxes: Streamlined design for the left and right armrest boxes makes controls and electrical switches more accessible; armrests and seats can be adjusted independently to accommodate operators of various builds.
- Seats: Equipped with a new mechanical seat featuring a load switch, providing a wider and larger seating surface.
- Air conditioning: Offers both heating and cooling controlled via touchscreen, with optimized air ducts and vents for higher efficiency and faster operation.
- Monitoring: Equipped with a display screen capable of split-screen views, including a reverse imaging feature. Allows real-time monitoring of wire rope conditions on all winch mechanisms, counterweights at the rear, the right crawler track, and the surrounding area of the equipment.

Travel drive

- Independent travel driving units are adopted for each side of the crawler, to realize straight walking and turning driven by travel motor through gearbox and drive wheel.
- There are high-speed and low-speed for travel as fast as 2.5km/h.
- Gradeability is 30%.

Travel brake

- Embedded, wet, spring-loaded and normally-closed brake, which is braking with spring force and released by oil pressure.

Crawler extension and retraction

- The crawlers can extend and retract under high pressure provided by auxiliary system and electrically-controlled cylinder. During normal operation, the crawlers must be extended, and can be retracted during transport to stay on the machine.

Crawler tensioning

- The jack is used to push the guide wheel and insert the shim to adjust crawler tension.

Steering system

- The machine is capable of pivot turning and single track turning.

Track pad

- High-strength alloy cast steel track pad can prolong the service life. They are 850mm wide, and the total amount is 62 pcs × 2.

Track roller

- Maintenance-free track roller.

Outrigger

- Outrigger cylinder is offered to facilitate the track frame disassembly during jobsite transfer.

Boom

- The boom is made of high-strength steel structure with U-shape section area, with five sections, of which the basic boom is 12.2m and the total length is 47m.
- Dual cylinder full power rope row telescoping.

Fixed Jib

- Two lengths of fixed jib, 10.2m and 17.5m, each can be installed in angle 0°, 15°, 30°.

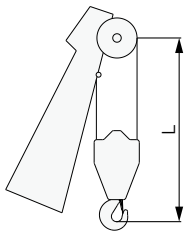
Boom point sheave block

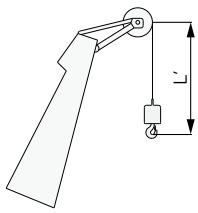
- Weld structures, connected to the boom through pins and used for aux. hook.

Hook Block

No.	Capacity (t)	No. of sheaves	Weight (t)	Quantity
1	80	5	1.05	1
2	45 (optional)	3	0.48	1
3	15 (optional)	1	0.34	1
4	9	1	0.26	1

Hook limitation height





Hook	L	Hook	L'
80t	3.5m	9t	3m

06 | Main Characteristics

2 Safety Device

Integrated LMI control system

- LMI control system is standard offering and it is calibration-free. It ensures the operation safety and improves efficiency.
- LMI system can automatically detect the load weight, working radius and boom angle, to compare with rated load weight and actual load, work radius and boom angle. In normal operation, it can make judgment and cut off the actions towards dangerous directions. It also acts as black box to record overload information.
- Composition: Monitor, controller, length and angle sensor, pressure sensor.

Assembly/work mode control switch

- In Assembly Mode, the over-hoist protection, LML are all off work to facilitate crane assembly.
- In Work Mode, all safety devices activate to protect the operation.

Emergent stop

- In emergent situation, this button is pressed down to cut off the power supply of whole machine and all actions stop.

Over-hoist protection of the main/auxiliary hooks

- Height limit device is installed at the tip of main boom and jib, which prevents the hook lift up too much. When the hook lifts up to the limit height, the limit switch activates, buzzer on the left control panel sends alarm, and failure indicator light starts to flash, the hook hoisting action is cut off automatically.

Over-release protection device of the main/auxiliary winch

- Three-wrap protector is installed on main and aux. load hoist winches to prevent over-release of wire rope. When the rope is paid out close to the last three wraps, the limit switch acts, and the system sends alarm through buzzer and show the alarm on the instrument panel, automatically cutting off the winch action.

Function lock

- If the function lock level is not in work position, all the other handles won't work, which prevents any mis-operation caused by accidental collision.

Swing lock

- Electrical lock is equipped, and swing action can only happen when the lock is released, so as to prevent any operational error and ensure the safety.
- The cylinder lock can lock the upperworks at four directions.

Hook latch

- The lifting hook is installed with a baffle plate to prevent wire rope from falling off.

Monitoring system

- Remote Monitoring system is a standardized offering to provide functions like GPS locating, GPRS data transfer, machine status inquiry and statistics, operating data monitoring and analysis, remote diagnosis of failures.

Tri-color load indicator

- The load indication light has three colors, green, yellow and red, indicating the real-time load. When the actual load is smaller than 90% of rated load, the green light is on.
- When the actual load is $>90\%$ and $\leq 100\%$, the yellow light is on, the alarm light flashes and sends out intermittent sirens.
- When the actual load reaches 100% of rated load, the red light on, the alarm light flashes and sends out continuous sirens.
- When the actual load is 102% of rated load, the system will automatically cut off the crane's dangerous operation.

Flash alarm

- When the LMI system is powered on, the flash alarm starts to flash.

Swing indicator light

- The swing indicator light flashes during traveling or swing.

Seat interlock protection

- If the operator leaves the seat, all control handles will be locked immediately to prevent any mis-operation due to accidental collision.

Illuminating light

- The machine is equipped with, low-beam light in front of machine, lamps in operator's cab and boom lights, so as to increase the visibility during work.

Rearview mirror

- It is installed on the front of the operator's cab and the handrail of the right platform and the winch.

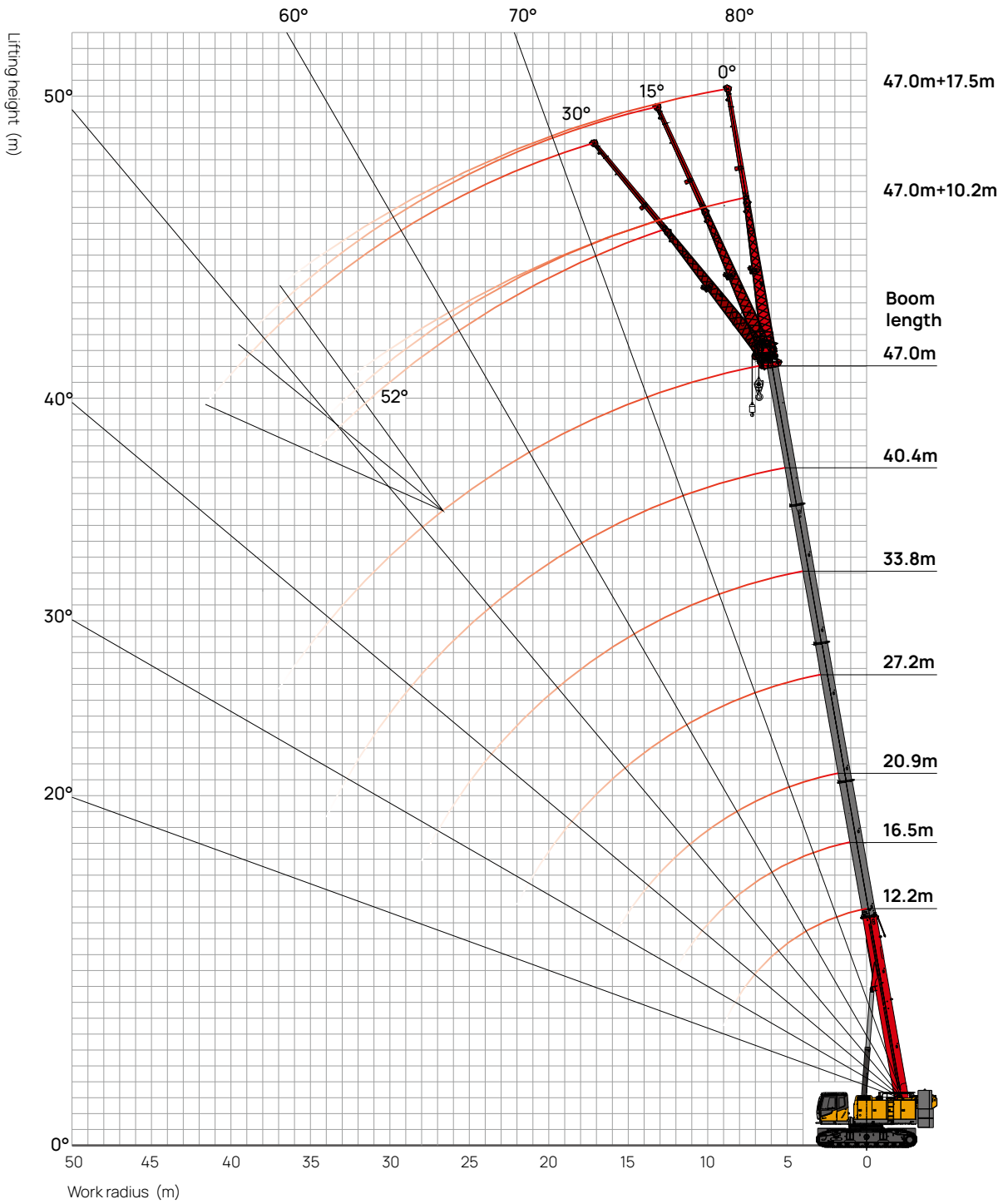
Electronic level gauge

- It can show the upperworks tipping angle on the monitor.

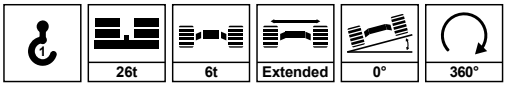
Monitor system

- Two cameras and illumination lights are installed on the tail of rotating bed, which will show the conditions on the rear and winches on the monitor.

07 | Working Range



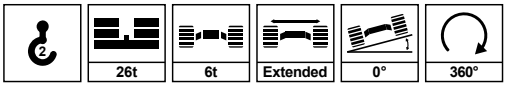
07 | Load Chart of H



Unit: t

m	Main Boom Length (m)															m
	12.2	16.5	18.7	20.7	23	25.2	27.2	29.5	31.8	33.8	36	38.3	40.4	42.5	47	
3	80	65														3
3.5	75	63														3.5
4	68	61.5	30	44												4
4.5	65	60	30	43	30	28		28								4.5
5	58	55.5	30	42.5	30	27	30	27		26						5
5.5	54	50	30	39.6	30	26	30	26		25						5.5
6	50.3	47	29	39.3	29	25	30	25	20	24	20		20			6
6.5	46	43	29	35.4	29	24.5	29	24.5	19.5	23	19.5		19			6.5
7	40.3	40	29	34.8	29	24	28	24	19	22.5	19		18			7
7.5	37.2	37	28	31	28.5	23.1	26.8	23.5	18	21.8	18.5		17.5			7.5
8	32.4	32.1	28	30.5	28	22.8	26.5	23	17	21.4	18		17.2			8
9	26.8	26.6	27	26.3	27	21.5	24.3	22	16	20.5	16.8		16		11.7	9
10		22.4	23	22.1	23.3	20.2	21.7	21	15	19.6	15.6	11	15.3	11	11.5	10
11		19.2	19.9	18.5	19.5	19.5	19.3	19.9	14	16.2	14.5	10.5	13.6	10.8	10.7	11
12		16.7	17.2	15.6	16.8	17.8	17.5	17.1	13.2	15	13.6	10.2	12.5	10.5	10.6	12
14		11.5	12.8	11.6	12.8	13.6	13.3	13.1	11.6	12.5	12	9.6	11.7	10.2	10.2	14
16			10.6	8.8	9.8	10.8	10.2	10.4	10.5	10.6	10.9	8.8	10	9.8	9.7	16
18				6.7	7.8	8.8	8	8.3	9	8.4	8.9	8	8.9	8.9	8.1	18
20					6.5	7.4	6.4	6.9	7.5	6.9	7.3	7.3	7.3	7.5	7.25	20
22						6.4	5.2	5.6	6.2	5.7	6.1	6.4	6.1	6.4	6.2	22
24							4	4.6	5.1	4.6	5.1	5.6	5	5.4	5.4	24
26								4.1	4.4	3.8	4.3	4.7	4.1	4.6	4.6	26
28									4.1	3.1	3.6	4	3.4	3.9	3.9	28
30										2.4	3	3.5	2.8	3.3	3.4	30
32											2.6	3	2.3	2.85	2.8	32
34												2.7	1.8	2.3	2.4	34
36													1.4	1.9	1.8	36
38														1.6	1.3	38
40															1	40
42															0.7	42
44															0.4	44
n	12	10	10	8	8	6	6	6	5	5	5	4	4	3	3	n
2#	0	50	0	100	50	0	100	50	0	100	50	0	100	50	100	2#
3#	0	0	25	0	25	50	25	50	75	50	75	100	75	100	100	3#
4#	0	0	25	0	25	50	25	50	75	50	75	100	75	100	100	4#
5#	0	0	25	0	25	50	25	50	75	50	75	100	75	100	100	5#

07 | Load Chart of FJ



Unit: t

	47m+10.2m			47m+17.5m			
	0	15	30	0	15	30	
80°	5.5	3.8	3.3	3.3	2.0	1.5	80°
78°	5.2	3.8	3.2	3.0	1.9	1.3	78°
76°	4.9	3.7	2.9	2.7	1.8	1.3	76°
74°	4.2	3.5	2.7	2.3	1.7	1.2	74°
72°	3.6	3.3	2.6	2.1	1.6	1.2	72°
70°	3.9	3.1	2.4	1.9	1.5	1.1	70°
68°	3.5	2.9	2.3	1.8	1.4	1.1	68°
66°	3.1	2.7	2.2	1.7	1.3	1.0	66°
64°	2.7	2.5	2.1	1.6	1.2	1.0	64°
62°	2.3	2.3	2.0	1.5	1.1	1.0	62°
60°	2.0	2.0	1.8	1.4	1.0	0.9	60°
58°	1.8	1.7	1.4	1.2	0.9	0.9	58°
56°	1.6	1.4	1.2	1.1	0.9	0.8	56°
54°	1.2	1.1	1.0	0.9			54°
52°	0.9						52°
Min	52°						Min

Note: rated capacity of crane

1. The rated load in the load chart is calculated complying with EN13000.
2. The crawlers of crane must be extended during lifting;
3. All ratings in the table are calculated when the machine is sitting on firm and level ground with less than 1% gradient, and the load lifting is slowly and steadily.
4. All ratings in the table are calculated with wind speed under 9.8m/s and tipping load of 75%.
5. All ratings in the table are valid for 360° swing.
6. The rated load is no more than 5.5t when using boom point sheave block. If the jib is extended, the boom rated load shall reduce 2.3t.
7. The ratings in the table include the weight of hook block and riggings (main hook block of 1.05t, aux. hook block of 0.35t). The weight of hook, riggings and wire ropes shall be deducted from the ratings to get the actual load capacity.

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