

WITH **GREAT POWER**
COMES **GREAT RESPONSIBILITY**

ZOOMLION
TRUCK CRANE

ZTC800V532-1R



Max. rated lifting
capacity
80 t

Max. load moment
of basic boom
2813 kN.m

Max. lifting height
of main boom
49.8 m

Max. lifting height
of jib
66.1 m

An 80t right-hand drive truck crane
with 5 boom sections

Providing High Economy

(Optional automatic transmission)

Leading lifting performance

49m boom with 5 boom sections, 12.4t rated load on fully extended boom;
Double H-type outriggers with 8m horizontal outrigger spread and 6.6m longitudinal spread which is the largest in the industry.

Excellent driving performance

380hp engine with large power + FAST 10 gears synchronous manual transmission (**Optional automatic transmission**), providing strong power and excellent driving performance;
325 tires for both front and rear axles, 48% max. gradeability, 89km/h highest driving speed, with sound pass-through performance.

Accurate and fuel-efficient operations




Derricking down under gravity with self-compensation, ensuring stability and fuel efficiency;
Automatic flow distribution ensures stable compound crane movements;
Variable pump of constant power + intelligent idling speed adjustment + intelligent regeneration + IECO module.








Crane Data






Hook (transported individually)

			Standard/optional
80t	685kg	13	Optional
70t	689kg	12	Optional
60t	550kg	12	Standard
35t	380kg	6	Optional
8t	125kg	1	Standard

Working Speed

	 km/h	 %	
325/95 R24	89	48	10-speed (MT) 12-speed (AMT)
Drive	 Φ		 F
	$\Phi 20\text{mm}$	230m	6500kg
	$\Phi 20\text{mm}$	140m	6500kg
	0-1.8 r/min		
	55s		
	115s		

Technical Data

	Item	Unit	Value	Remarks
 Working performance	Max. rated lifting capacity	kg	80000	
	Max. load moment of basic boom	kN.m	2813	
	Max. load moment of max. length boom	kN.m	1658	
	Max. lifting height of basic boom	m	13.9	
	Max. lifting height of boom	m	49.8	These parameters do not include deflection of boom and jib.
	Max. lifting height of jib	m	66.1	
 Working speeds	Max. hoist rope speed (main winch)	m/min	130	Drum 4th layer
	Max. hoist rope speed (auxiliary winch)	m/min	130	Drum 2nd layer
	Boom derricking up time	s	55	
	Boom telescoping out time	s	115	
	Slewing speed	r/min	0~1.8	
 Driving	Max. altitude	m	2000	
	Max. driving speed	km/h	89	
	Max. gradeability	%	48	
	Min. turning diameter	m	24	
	Min. ground clearance	mm	304	
	Fuel consumption per hundred kilometers	L	39	
 Mass	Deadweight in driving condition	kg	45000	Excluding auxiliary counterweight and movable counterweight
	Complete vehicle kerb mass	kg	44870	
	Front axle load	kg	19000	
	Rear axle load	kg	26000	
 Dimensions	Overall dimensions (L×W×H)	mm	15000×2800×3870	
	Longitudinal distance between outriggers	m	6.6	
	Transversal distance between outriggers	m	Fully extended: 8 Intermediately extended: 5.26	
	Tail slewing radius	mm	4300	
	Boom length	m	12.5~49	
	Boom angle	°	-1~80	
	Jib length	m	9.5/16.0	
	Jib angle	°	0/ 15/30	

Specifications

Crane Superstructure

Boom and telescoping mechanism

The box-shaped boom consists of 5 U-type boom sections made of low-alloy and high-strength steel plate. The boom head adopts new plate-type structure, realizing larger lapping ratio between boom sections, and matching with embedded sliding blocks.

The telescopic boom sections are telescoped in / out via two telescopic cylinders and two sets of boom extension / retraction rope. Each cylinder is fitted with a balance valve.

Jib

It consists of one adapter and two jib sections. They are folded on the side of boom when not used and can be installed and removed by inserted pins.

The two jib sections are of a reducing and lattice structure.

Jib section 1 is articulated on the head of top boom section with pins and can be assembled below an angle of 0, 15 or 30 to the telescopic boom according to your needs. The angle can be conveniently changed via the pins and pull bracket.

Jib length:

Jib section 1: 9.5 m

Jib section 1 + jib section 2: 16 m

Slewing platform

Single ribbed plate structured and optimized slewing platform made from high-strength steel plate makes the layout of articulated points of boom and derricking mechanism more reasonable. It also has a novel style and beautiful figure.

The engine hood is of a human-based layout.

Rooster sheave

It is secured at the outside of the boom head when it is not used. It can be rotated around the shaft and pinned onto the boom head when it is used.

This option is set up for rapid hoists over the boom head to improve the working efficiency when the loads are light.

Derricking mechanism

1 front-mounted hydraulic cylinder with safety balance valve provides the boom with smooth derricking movements from -1° to 80° .

Slewing mechanism

Via the planetary gear reducer, the axial plunger hydraulic motor drives the pinion gear on the output shaft to rotate the exterior toothed ring of slewing ring fixed on chassis frame, providing superstructure with 360° unlimited slewing.

The slewing mechanism is of controllable aligning function, which can make the load be aligned automatically during operation. Slewing cushion valve and normally-closed brake can ensure stable and reliable slewing operation of the crane. 4-point contact ball-type slewing ring ensures the slewing platform with super-strong load bearing capability and long service life.

Hoist mechanism

It consists of main and auxiliary hoist mechanisms.

The two hoist mechanisms are driven by hydraulic variable motor with built-in planetary gear reducer to lift or lower the hook. A brake is fitted between the motor and reducer.

The two winch mechanisms can be controlled independently and also can carry out simultaneous movements.

Models of main and auxiliary winch reducers are the same.

Main and auxiliary winch adopt variable pumps.

The lowering limit switch is fitted on the main winch.

The built-in planetary reducer is of compact structure, light deadweight and high reliability.

Equipped with high-tensile torsion resistant hoist rope.

Main and auxiliary hooks

Main hook: 60 t, with 6 pulleys, installed with a mounting lug at the end of the wire rope and an anti-slipping and anti-rotation hook latch

Auxiliary hook (1 reeving): 8 t, installed with an anti-twist and anti-slipping hook latch

Operator's cab

It is of steel-structure welded with right-mounted instrument console and adjustable seat with headrest. It is equipped with two joysticks, windshield wiper, washing system, air conditioning and heater. The arrangement provides spacious operating space, reasonable arrangement, human-based design, convenient and safe operation.

Outriggers

H-type outriggers, which are in box-shaped structure and welded of low-alloy and high-strength steel plate, are of good sectional performance and strong load bearing capability via finite element analysis and simulated design.

2-section horizontal outrigger beam can be extended and retracted with a horizontal cylinder and a set of outrigger extension / retraction rope. Large outrigger span ensures stability of the crane.

After the outriggers are fully extended or retracted, the outrigger pads can be locked with retaining pins.

Manual outrigger control levers are fitted on both sides of the vehicle for controlling the outriggers to extend or retract simultaneously or independently. Each vertical cylinder is equipped with a two-way hydraulic lock to ensure stable and reliable operation of the crane.

In addition, the crane also can work with outriggers intermediately extended for narrow area operation.

Hydraulic system

The open-type hydraulic system adopts advanced pilot-operated proportional joysticks, hydraulic proportional control system and anti-pollution bite-type fitting to ensure the high reliability of the system. The main power element is the variable pump and dual unit gear pumps. Among them, the variable pump supplies hydraulic oil for main winch, auxiliary winch, derricking mechanism and telescoping mechanism; the front gear pump supplies hydraulic oil for chassis hydraulic system, slewing mechanism, while the rear gear pump supplies oil to the air conditioning system and counterweight lifting system.

The outrigger control valves are new-type manual multiple directional control valves to control the horizontal and vertical cylinders' movements. Each of them is fitted with a pressure limiting valve, thus, can prevent the piston rods of horizontal cylinders from bending. The 5th outrigger cylinder and vertical cylinder can be also controlled to retract simultaneously, so damage of the 5th outrigger cylinder can be avoided.

A counterweight handler is installed to ensure sound starting and braking performance and high reliability.

Electrical system

Double-wire system, 24 Volt DC.

Safety devices

Equipped with an automatic load moment limiter, warning light, digital LCD, hoisting limit switch, hook safety device, lowering limit switch, two-way hydraulic lock, balance valve, relief valve

Counterweight

Under standard configuration, the counterweight system consists of one 4 t fixed counterweight plate, one 4 t auxiliary counterweight, one 8 t lower movable counterweight, which are 16 t in total.

Specifications

Crane chassis

Engine

Model: YUCHAI YCK10380-30

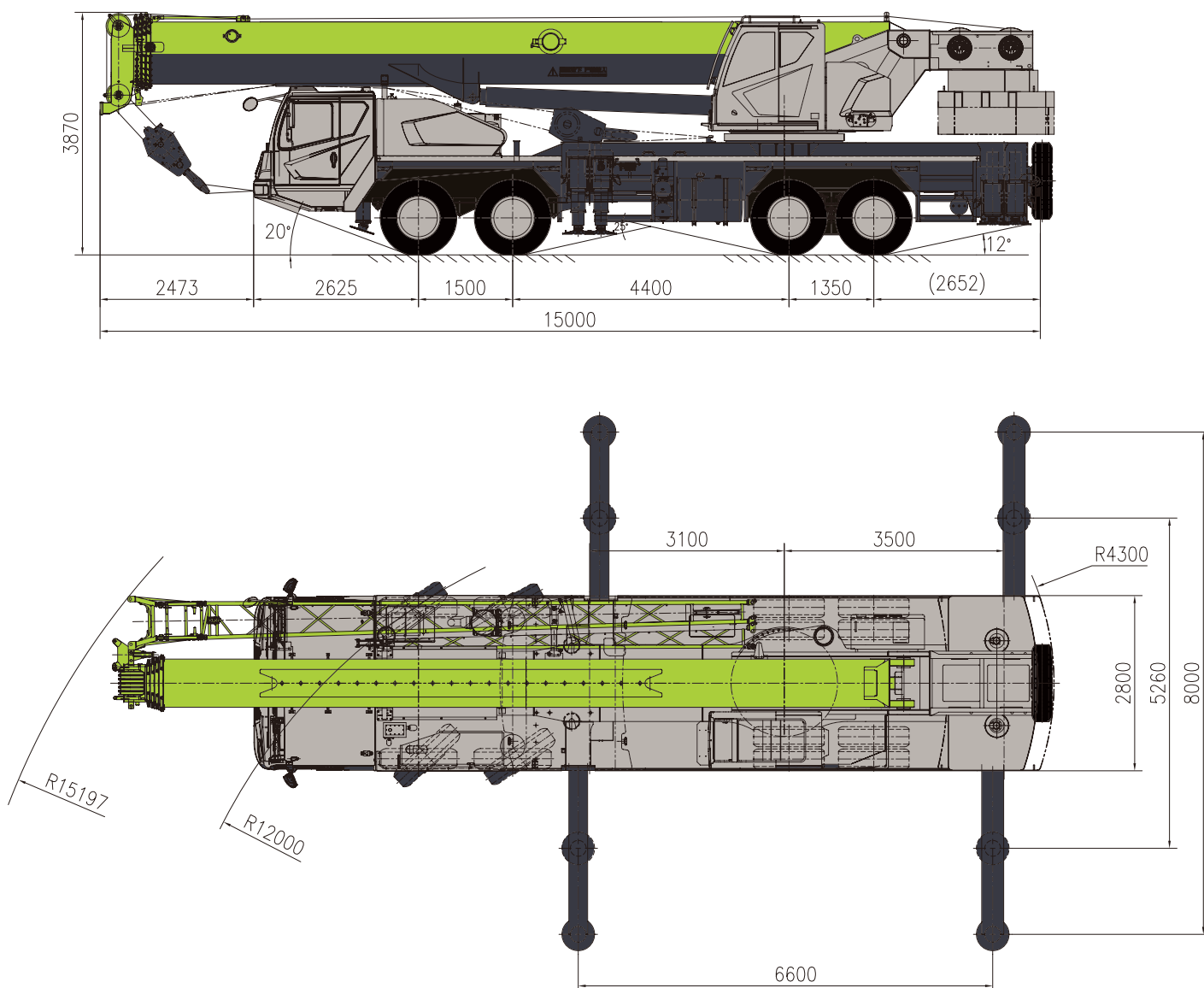
Rated power: 280/1900 kW/r/min

Max. output torque: 1800/1100-1450 N.m/r/min

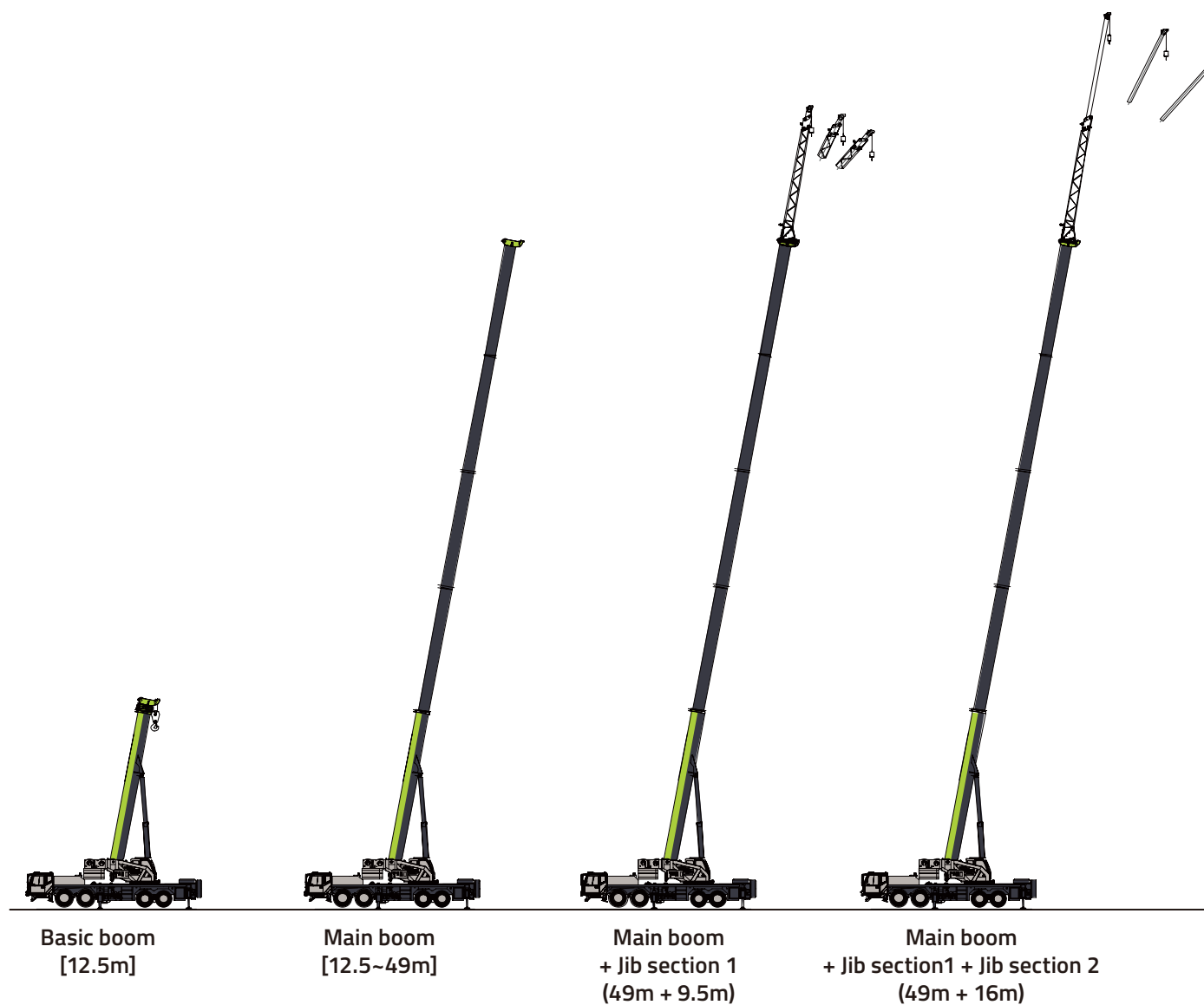
Limits for exhaust pollutants and smoke: Chinese National Stage III

Dimensions

Unit: mm

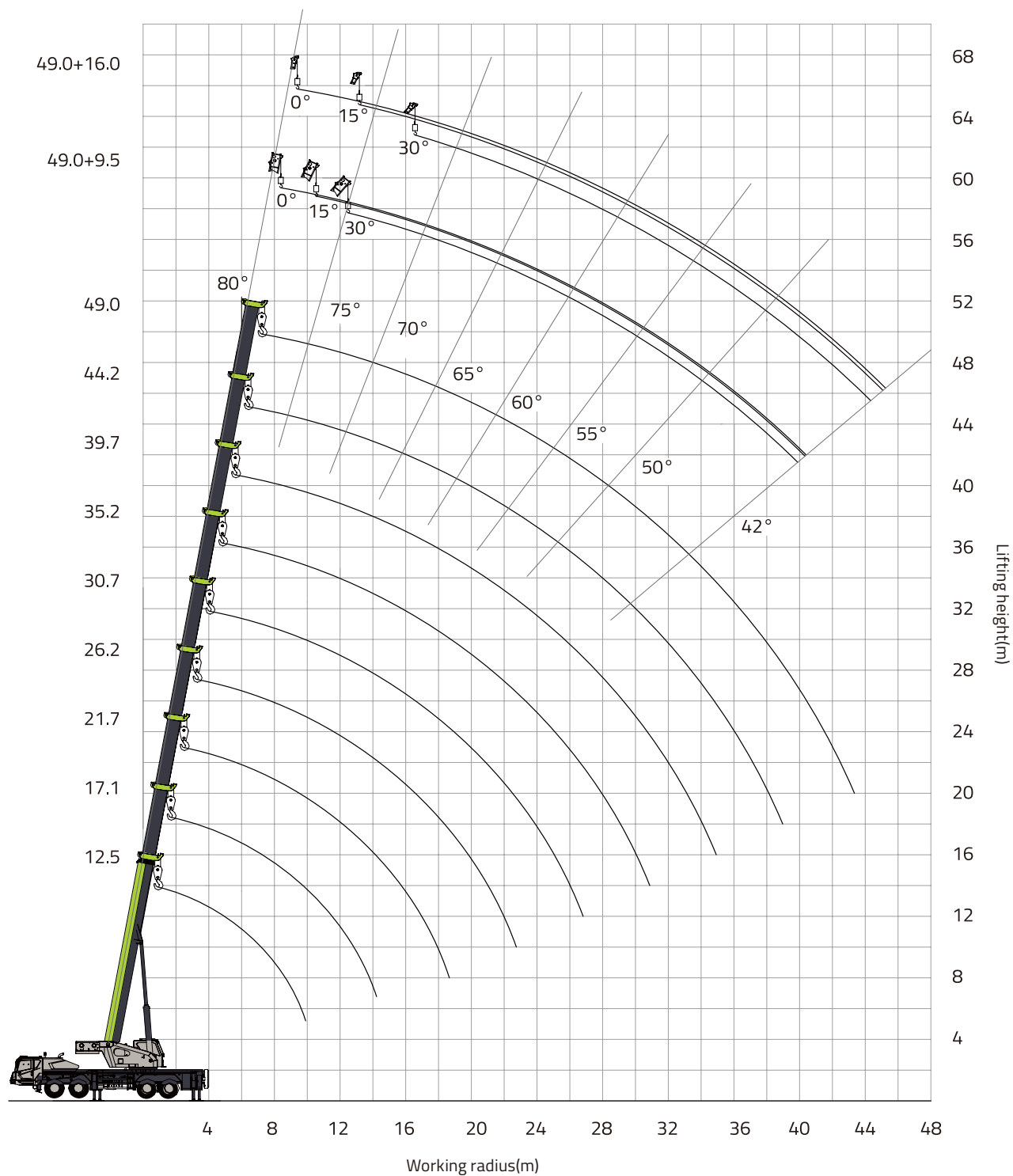


Boom/Jib Combinations



Lifting Height Chart

Main boom / Main boom + jib





Lifting Capacity Chart

Main boom



Unit: ton



 m	12.5m	17.1m	21.7m	26.2m	30.7m	35.2m	39.7m	44.2m	49.0m	 m
3.0	80.0	65.0								3.0
3.5	73.0	63.0	42.0							3.5
4.0	66.0	61.0	42.0							4.0
4.5	60.0	60.5	42.0	32.0						4.5
5.0	56.0	54.0	42.0	32.0						5.0
5.5	52.0	50.5	40.0	32.0	29.0					5.5
6.0	46.0	45.5	39.0	32.0	29.0					6.0
7.0	41.0	40.0	34.0	32.0	29.0	26.0				7.0
8.0	35.5	35.0	29.5	29.0	27.0	26.0	21.0			8.0
9.0	28.5	27.5	26.0	26.0	25.0	22.5	19.7	16.5		9.0
10.0		22.5	22.5	22.5	23.0	20.8	18.2	16.0	12.4	10.0
11.0		20.5	20.2	21.0	21.0	19.0	17.0	15.0	12.2	11.0
12.0		17.5	17.2	18.2	19.0	17.6	15.8	14.2	12.0	12.0
14.0			12.7	13.7	14.3	14.7	13.5	12.5	11.5	14.0
16.0			9.7	10.5	11.1	11.6	12.0	11.0	10.4	16.0
18.0			7.4	8.2	8.8	9.3	9.7	9.7	9.4	18.0
20.0				6.5	7.1	7.6	8.0	8.2	8.3	20.0
22.0				5.1	5.7	6.2	6.6	6.9	7.2	22.0
24.0					4.6	5.1	5.4	5.7	6.0	24.0
26.0					3.7	4.2	4.5	4.8	5.1	26.0
28.0						3.4	3.7	4.0	4.3	28.0
30.0						2.7	3.0	3.3	3.6	30.0
32.0							2.5	2.8	3.0	32.0
34.0							2.0	2.3	2.5	34.0
36.0								1.9	2.1	36.0
38.0								1.5	1.8	38.0
40.0									1.4	40.0
42.0									1.1	42.0
44.0										44.0
I (m)	0	4.6	9.2	9.2	9.2	9.2	9.2	9.2	9.2	I (m)
II (m)	0	0	0	4.5	9.0	13.5	18.0	22.5	27.3	II (m)
Reeving	13	10	7	5	5	4	4	3	3	Reeving
Hook	80t	70t	60t							Hook

Lifting Capacity Chart

Main boom



Unit: ton



 m	12.5m	17.1m	21.6m	26.1m	30.6m	35.1m	39.6m	44.4m	 m
3.0	80.0	65.0	32.0						3.0
3.5	73.0	63.0	32.0						3.5
4.0	66.0	61.0	32.0	30.0					4.0
4.5	60.0	60.5	32.0	30.0					4.5
5.0	56.0	54.0	32.0	30.0	27.0				5.0
5.5	52.0	50.5	32.0	30.0	27.0				5.5
6.0	46.0	45.5	32.0	30.0	27.0				6.0
7.0	41.0	40.0	32.0	30.0	27.0	22.0			7.0
8.0	35.5	35.0	30.0	30.0	27.0	21.0	16.5		8.0
9.0	28.5	27.5	27.0	27.0	27.0	20.0	16.5	13.5	9.0
10.0		22.5	23.5	24.0	24.0	19.0	16.0	13.0	10.0
11.0		20.5	21.5	22.0	22.0	17.5	15.0	12.5	11.0
12.0		17.5	18.5	19.4	19.9	16.5	14.0	12.0	12.0
14.0			14.0	14.8	15.3	14.6	12.3	11.0	14.0
16.0			10.9	11.5	12.0	12.4	11.0	9.7	16.0
18.0				9.3	9.8	10.0	9.7	8.7	18.0
20.0				7.5	8.0	8.3	8.6	7.8	20.0
22.0				6.1	6.6	6.9	7.2	7.0	22.0
24.0					5.5	5.8	6.1	6.3	24.0
26.0					4.5	4.8	5.1	5.3	26.0
28.0						4.1	4.4	4.6	28.0
30.0						3.4	3.7	3.9	30.0
32.0							3.1	3.2	32.0
34.0							2.6	2.8	34.0
36.0								2.4	36.0
38.0								2.0	38.0
40.0									40.0
I (m)	0	4.6	4.6	4.6	4.6	4.6	4.6	4.6	I (m)
II (m)	0	0	4.5	9.0	13.5	18.0	22.5	27.3	II (m)
Reeving	13	10	5	5	5	4	3	3	Reeving
Hook	80t	70t	60t						Hook

Lifting Capacity Chart

Main boom



Unit: ton



 m	12.5m	17.0m	21.5m	26.0m	30.5m	35.0m	39.8m	 m
3.0	80.0	32.0	30.0					3.0
3.5	73.0	32.0	30.0					3.5
4.0	66.0	32.0	30.0	27.0				4.0
4.5	60.0	32.0	30.0	27.0				4.5
5.0	56.0	32.0	30.0	27.0	22.0			5.0
5.5	52.0	32.0	30.0	27.0	22.0			5.5
6.0	46.0	32.0	30.0	27.0	21.0			6.0
7.0	41.0	32.0	30.0	27.0	20.0	16.5		7.0
8.0	35.5	31.0	30.0	27.0	19.0	16.5	14.0	8.0
9.0	28.5	27.0	27.0	26.0	18.0	16.0	13.5	9.0
10.0		24.0	24.0	24.0	16.5	15.0	13.0	10.0
11.0		22.0	22.0	22.0	15.2	14.0	12.5	11.0
12.0		19.0	19.5	20.0	14.2	13.0	11.5	12.0
14.0			15.5	15.8	12.5	11.2	10.0	14.0
16.0			12.2	12.7	11.0	10.0	9.0	16.0
18.0				10.3	9.8	9.0	8.0	18.0
20.0				8.6	8.8	8.0	7.2	20.0
22.0					7.4	7.2	6.5	22.0
24.0					6.3	6.5	5.9	24.0
26.0					5.3	5.6	5.4	26.0
28.0						4.8	5.0	28.0
30.0						4.1	4.3	30.0
32.0							3.7	32.0
34.0							3.2	34.0
36.0								36.0
I (m)	0	0	0	0	0	0	0	I (m)
II (m)	0	4.5	9.0	13.5	18.0	22.5	27.3	II (m)
Reeving	13	5	5	5	4	3	3	Reeving
Hook	80t	60t						Hook

Lifting Capacity Chart

Main boom + jib



Unit: ton

	49m+9.5m			49m+16m			
	0°	15°	30°	0°	15°	30°	
80	5.0	3.3	2.5	3.0	2.0	1.5	80
78	5.0	3.3	2.5	3.0	2.0	1.45	78
76	4.8	3.2	2.5	2.9	1.9	1.4	76
74	4.5	3.1	2.5	2.7	1.8	1.35	74
72	4.2	3.0	2.5	2.5	1.7	1.3	72
70	3.9	2.9	2.4	2.3	1.65	1.25	70
68	3.6	2.8	2.3	2.1	1.6	1.25	68
66	3.4	2.7	2.2	2.0	1.55	1.2	66
64	3.2	2.6	2.1	1.9	1.5	1.2	64
62	3.0	2.5	2.05	1.8	1.45	1.15	62
60	2.9	2.4	2.0	1.7	1.4	1.15	60
58	2.8	2.3	1.95	1.6	1.35	1.1	58
56	2.5	2.2	1.9	1.55	1.3	1.1	56
54	2.2	2.1	1.85	1.5	1.25	1.05	54
52	1.9	1.8	1.7	1.45	1.2	1.05	52
50	1.6	1.55	1.5	1.35	1.15	1.0	50
48	1.4	1.35	1.3	1.2	1.1	0.95	48
46	1.2	1.15	1.1	1.05	0.95	0.9	46
44	1.0	0.95	0.9	0.9	0.85	0.8	44
42	0.85	0.8	0.75	0.75	0.7	0.65	42
40							40
Reeving	1						Reeving
Hook	8t						Hook

The operator should select proper rated lifting load referring to resp. lifting capacity tables according to actual working conditions.

1. When the rated capacity exceeds 78t, a special device needs to be installed to increase the fall, and other hooks meeting the requirements should be used. When the rated capacity is 80t, the fall is 13.
2. Do not lift a load that is above the capacity of the crane under any condition, special for the intermediately extended outriggers operations
3. Do not perform the lifting operation when the wind speed exceeds the limit.
4. The temperature difference occurs between the side facing the sun and the side facing away from the sun in cranes with telescopic booms. This causes that the boom frame material expands when heated and contracts when cooled, which can affect the straightness of the boom frame to some extent.
5. The hook and reeving factor in the rated capacity charts above are the max. spec for a corresponding operating mode (except in OM with special device installed). Select the proper hook and multiple rope fall during lifting operation. Reduce the working pulling force of single rope, and thus reduce the risk of wire rope damage.

Graphical representation

