



ZOOMLION ZTC600 TRUCK CRANE

**TECHNICAL SPECIFICATIONS**  
**ZTC600/27Y**

ZOOMLION HEAVY INDUSTRY SCIENCE AND TECHNOLOGY CO., LTD.

# ZOOMLION ZTC600 TRUCK CRANE

## TECHNICAL SPECIFICATIONS

ZTC600/27Y

---

### 1 Product characteristics

ZOOMLION ZTC600 truck crane, which makes good use of our many years' experience in designing and manufacturing mobile cranes combined with advanced technologies, is a new-generation and high-performance product designed and developed to meet the market demands. Its performances, such as lifting height, main boom length, working speed and lifting capacity, etc., have achieved advanced international level.

This product is a truck crane of full range slewing function, telescopic boom sections and pilot-operated proportional controlled systems. The 4-axle (8 × 4 drive, offering convenient and flexible hydraulically powered steering) special purpose chassis is manufactured by Zoomlion, which providing wide vision, spacious cab and luxurious equipment.

The latest multiple unit directional control valve, variable pumps system ensure that each executive mechanism makes full use of its working capability.

The safety devices, such as relief valve, balance valve, hydraulic lock and brake valve, etc. in the hydraulic system, are against rupture of pipes and hoses.

The complete lighting systems and the safety devices, such as load moment limiter, can ensure your safety during operation and are convenient for night work.

This crane has a novel style which makes it beautiful in figure, in form and in color.

### 2 Specifications, complete vehicle

#### 2.1 Product model

Model in engineering industry: ZTC600

## 2.2 Technical data

Item		Value	Remarks
Working performance	Max. rated lifting capacity kg	60000	
	Max. load moment of basic boom kN.m	1793	
	Max. load moment of max. length main boom kN.m	851	
	Max. lifting height of basic boom m	12.5	
	Max. lifting height of main boom m	41.8	These parameters do not include deflection of main boom and jib.
	Max. lifting height of jib m	59.3	
Working speeds	Max. hoist rope speed (Main winch) m/min	115	
	Max. hoist rope speed (Auxiliary winch) m/min	100	Optional
	Boom derricking up time s	50	
	Boom telescoping out time s	90	
	Slewing speed r/min	0 - 2.2	
Driving	Max. driving speed km/h	90	
	Max. gradeability %	50.9	
	Min. turning diameter m	≤24	
	Min. ground clearance mm	310	
	Oil consumption per hundred kilometer L	40	
Mass	Deadweight in driving condition kg	42000	
	Complete vehicle kerb mass kg	41870	
	Front axle load kg	18000	
	Rear axle load kg	24000	
Dimensions	Overall dimensions (L × W × H) mm	12250×2550×4000	
	Outrigger spread (L) m	Fully extended: 7.1 m Intermediately extended: 5.97 m	
	Outrigger spread (W) m	Fully extended: 6.9 m Intermediately extended: 5.24 m	
	Tail slewing radius mm	3700	
	Main boom length m	10.7 - 40.5	
	Boom angle °	-2 - 80	
	Jib length m	9.5, 16.0	Optional
	Offset °	0, 15, 30	

## 2.3 Rated lifting capacity tables

This crane is provided with 13 sheets of rated lifting capacity tables. The operator should select proper rated lifting capacity referring to resp. lifting capacity tables according to actual working conditions. For details, please refer to Table 1 to Table 13.

The values in column "I" refer to the extendable length of telescoping cylinder I.

The values in column "II" refer to 3 times extendable length of telescoping cylinder II, namely, the total extendable length of boom section 3, 4 and 5.

Table 1

Unit: Metric kg

Working radius (m)	Main boom (m)						
	Telescoping cylinder I and outriggers fully extended, with 6 t counterweight assembled, over full range						
	10.7	14.4	18.1	23.7	29.3	34.9	40.5
2.5	60000*						
3.0	50000*	40000					
3.5	46000*	40000	32000				
4.0	42000*	40000	30500	24000			
4.5	39000	37000	28500	24000			
5.0	36000	35000	27000	23000			
5.5	32800	32000	25500	22000			
6.0	30500	30000	24000	21000	17000		
6.5	25500	25000	22000	20000	16200		
7.0	24000	23000	21000	19000	15600	12000	
7.5		20500	20000	17800	14800	11800	
8.0		19000	19000	17000	14000	11300	
9.0		15500	15500	15400	13000	10400	8500
10.0		13000	13000	14000	12000	9600	7900
11.0		10500	10800	11800	11100	8800	7300
12.0			9100	10100	9900	8200	7100
14.0			6300	7400	8100	7100	6200
16.0				5600	6200	6200	5400
18.0				4200	4800	5100	4700
20.0				3100	3700	4000	4200
22.0					2900	3100	3500
24.0					2200	2500	2800
26.0						1900	2200
28.0						1500	1800
30.0						1100	1400
32.0							1000
I	0	3.7	7.4	7.4	7.4	7.4	7.4
II	0	0	0	5.6	11.2	16.8	22.4
Reevings	9	9	8	6	4	4	3
Hook	40 t						

Table 2

Unit: Metric kg

Working radius (m)	Main boom (m)						
	Telescoping cylinder I intermediately extended and outriggers fully extended, with 6 t counterweight assembled, over full range						
	10.7	14.4	20	25.6	31.2	36.8	
2.5	60000*						
3.0	50000*	40000	24000				
3.5	46000*	40000	24000				
4.0	42000*	40000	24000				
4.5	39000	37000	24000	17000			
5.0	36000	35000	24000	17000			
5.5	32800	32000	24000	17000			
6.0	30500	30000	24000	17000	13700		
6.5	25500	25000	24000	17000	13200		
7.0	24000	23000	23000	17000	12700		
7.5		20500	22000	17000	12200	8500	
8.0		19000	21000	17000	11800	8500	
9.0		15500	17000	16000	11000	8500	
10.0		13000	14000	14800	10000	8400	
11.0		10500	12000	12800	9300	7800	
12.0			10000	11000	8600	7200	
14.0			7500	8400	7500	6200	
16.0			5500	6500	6500	5500	
18.0				5000	5500	4800	
20.0				4000	4500	4200	
22.0				3100	3700	3700	
24.0					3000	3000	
26.0					2400	2400	
28.0						1900	
30.0						1500	
32.0							
I	0	3.7	3.7	3.7	3.7	3.7	
II	0	0	5.6	11.2	16.8	22.4	
Reevings	9	9	6	4	4	3	
Hook	40 t						

Table 3

Unit: Metric kg

Working radius (m)	Main boom (m)						
	Telescoping cylinder I fully retracted and outriggers fully extended, with 6 t counterweight assembled, over full range						
	10.7	16.3	21.9	27.5	33		
2.5	60000*						
3.0	50000*	24000					
3.5	46000*	24000	17000				
4.0	42000*	24000	17000				
4.5	39000	24000	17000				
5.0	36000	24000	17000				
5.5	32800	24000	17000	12500			
6.0	30500	24000	17000	12500			
6.5	25000	24000	16500	12000			
7.0	24000	23500	16000	11600	8500		
7.5		22800	15800	11000	8500		
8.0		22400	15500	10600	8500		
9.0		18100	14200	9800	8200		
10.0		15000	13200	9200	8000		
11.0		12700	12200	8500	7400		
12.0		10900	11400	8000	6800		
14.0		8000	8800	7000	5900		
16.0			6800	6200	5200		
18.0			5400	5500	4600		
20.0				4800	4100		
22.0				3900	3700		
24.0					3300		
26.0					2900		
28.0					2400		
30.0							
32.0							
I	0	0	0	0	0		
II	0	5.6	11.2	16.8	22.4		
Reevings	9	6	4	4	3		
Hook	40 t						

Table 4

Unit: Metric kg

Working radius (m)	Main boom (m)						
	Telescoping cylinder I fully extended and outriggers intermediately extended, with 6 t counterweight assembled, over full range						
	10.7	14.4	18.1	23.7	29.3	34.9	40.5
2.5	50000*						
3.0	50000*	40000					
3.5	45000*	40000	32000				
4.0	42000*	40000	30500	24000			
4.5	38000	37000	28500	24000			
5.0	30000	30000	27000	23000			
5.5	24500	24000	23800	21500	17500		
6.0	20000	20000	19700	20000	17500		
6.5	17000	17000	16700	18000	16500		
7.0	15000	15500	14300	15600	15500	11500	
7.5		12800	12300	13600	14000	11000	
8.0		11500	11000	12000	12800	10500	
9.0		9500	9300	9500	11000	9800	8100
10.0		8000	7500	8500	8800	8800	7600
11.0		6400	6200	6800	7500	8000	7000
12.0			4900	5700	6300	6900	6500
14.0			3000	4000	4500	5000	5100
16.0				2800	3200	3700	4000
18.0				1800	2300	2700	3000
20.0					1500	1800	2200
22.0							1500
24.0							
26.0							
28.0							
30.0							
32.0							
I	0	3.7	7.4	7.4	7.4	7.4	7.4
II	0	0	0	5.6	11.2	16.8	22.4
Reevings	9	9	8	6	4	4	3
Hook	40 t						

Table 5

Unit: Metric kg

Working radius (m)	Main boom (m)						
	Telescoping cylinder I and outriggers intermediately extended, with 6 t counterweight assembled, over full range						
	10.7	14.4	20	25.6	31.2	36.8	
2.5	50000*						
3.0	50000*	40000	24000				
3.5	45000*	40000	24000				
4.0	42000*	40000	24000				
4.5	38000	37000	24000	17000			
5.0	30000	30000	24000	17000			
5.5	24500	24000	23000	17000			
6.0	20000	20000	22000	17000	13000		
6.5	17000	17000	19000	16500	13000		
7.0	15000	15500	18500	16000	12500		
7.5		12800	15000	15300	12000	8500	
8.0		11500	14000	14300	11500	8500	
9.0		9500	11200	11800	10500	8500	
10.0		8000	9000	9600	9500	8000	
11.0		6400	7500	8300	8500	7400	
12.0			6200	7000	7500	6800	
14.0			4500	5000	6500	5800	
16.0			3000	3700	4000	4400	
18.0				2700	3000	3200	
20.0				1800	2200	2500	
22.0					1600	1900	
24.0							
26.0							
28.0							
30.0							
32.0							
I	0	3.7	3.7	3.7	3.7	3.7	
II	0	0	5.6	11.2	16.8	22.4	
Reevings	9	9	6	4	4	3	
Hook	40 t						



Table 6

Unit: Metric kg

Working radius (m)	Main boom (m)						
	Telescoping cylinder I fully retracted and outriggers intermediately extended, with 6 t counterweight assembled, over full range						
	10.7	16.3	21.9	27.5	33		
2.5	50000*						
3.0	50000*	24000					
3.5	45000*	24000	17000				
4.0	42000*	24000	17000				
4.5	38000	24000	17000				
5.0	30000	24000	17000				
5.5	24500	22000	17000	12500			
6.0	20000	21000	17000	12000			
6.5	17000	19500	16500	11500			
7.0	15000	18500	16000	11000	8500		
7.5		15000	15000	10500	8500		
8.0		14000	14500	10000	8500		
9.0		11500	12000	9000	8200		
10.0		9500	10000	8500	7400		
11.0		8000	8500	8000	6800		
12.0		6800	7300	7400	6000		
14.0			5500	5800	5200		
16.0			4100	4400	4600		
18.0			3000	3200	3700		
20.0				2400	2800		
22.0				1800	2100		
24.0					1600		
26.0							
28.0							
30.0							
32.0							
I	0	0	0	0	0		
II	0	5.6	11.2	16.8	22.4		
Reevings	9	6	4	4	3		
Hook	40 t						

Table 7

Unit: Metric kg

Working radius (m)	Main boom (m)						
	Telescoping cylinder I and outriggers fully extended, with 2.1 t counterweight assembled, over full range						
	10.7	14.4	18.1	23.7	29.3	34.9	40.5
2.5	50000*						
3.0	45000*	40000					
3.5	43000*	40000	32000				
4.0	42000*	40000	30500	24000			
4.5	39000	37000	28500	24000			
5.0	36000	35000	27000	23000			
5.5	32000	33000	25500	22000			
6.0	30500	30000	24000	21000	17000		
6.5	25500	25000	22000	20000	16200		
7.0	24000	23000	21000	18800	15600	12000	
7.5		19500	19500	17500	14800	11800	
8.0		18000	18000	16800	14000	11200	
9.0		14500	14000	15000	13000	10200	8500
10.0		11000	10500	12000	11800	9400	7900
11.0		8800	8800	9800	10900	8800	7300
12.0			7000	8000	9000	8000	6800
14.0			4500	5500	6200	6800	5900
16.0				3800	4400	4800	5100
18.0				2500	3100	3500	3900
20.0				1500	2200	2600	2900
22.0					1400	1800	2100
24.0					900	1200	1500
26.0						900	1000
28.0						500	600
30.0							
32.0							
I	0	3.7	7.4	7.4	7.4	7.4	7.4
II	0	0	0	5.6	11.2	16.8	22.4
Reevings	9	9	8	6	4	4	3
Hook	40 t						

Table 8

Unit: Metric kg

Working radius (m)	Main boom (m)						
	Telescoping cylinder I intermediately extended and outriggers fully extended, with 2.1 t counterweight assembled, over full range						
	10.7	14.4	20	25.6	31.2	36.8	
2.5	50000*						
3.0	45000*	40000	24000				
3.5	43000*	40000	24000				
4.0	42000*	40000	24000				
4.5	39000	37000	24000	17000			
5.0	36000	35000	24000	17000			
5.5	32000	32000	24000	17000			
6.0	30500	30000	24000	17000	13800		
6.5	25500	25000	24000	17000	13000		
7.0	24000	23000	23000	17000	12500		
7.5		19500	20500	17000	12000	8500	
8.0		19000	20000	16000	11500	8500	
9.0		14500	15500	14800	10800	8500	
10.0		11000	13000	13800	9800	8200	
11.0		8800	10400	11200	9000	7800	
12.0			8500	9200	8300	7100	
14.0			5800	6500	7000	6100	
16.0			4100	4800	5100	5200	
18.0				3400	3900	4300	
20.0				2500	3000	3300	
22.0				1600	2100	2500	
24.0					1500	1900	
26.0					1000	1400	
28.0						1000	
30.0						500	
32.0							
I	0	3.7	3.7	3.7	3.7	3.7	
II	0	0	5.6	11.2	16.8	22.4	
Reevings	9	9	6	4	4	3	
Hook	40 t						

Table 9

Unit: Metric kg

Working radius (m)	Main boom (m)						
	Telescoping cylinder I fully retracted and outriggers fully extended, with 2.1 t counterweight assembled, over full range						
	10.7	16.3	21.9	27.5	33		
2.5	50000*						
3.0	45000*	24000					
3.5	43000*	24000	17000				
4.0	42000*	24000	17000				
4.5	39000	24000	17000				
5.0	36000	24000	17000				
5.5	32000	24000	17000	12500			
6.0	30500	24000	17000	12500			
6.5	25500	24000	16500	11800			
7.0	24000	23500	16000	11400	8500		
7.5		22500	15800	11000	8500		
8.0		21800	15300	10300	8500		
9.0		17100	14000	9300	8200		
10.0		13600	13000	8900	7800		
11.0		11000	11900	8100	7200		
12.0		9000	9800	7700	6600		
14.0			7000	6700	5700		
16.0			5200	5600	5000		
18.0			3900	4300	4400		
20.0				3300	3700		
22.0				2500	3000		
24.0					2400		
26.0					1800		
28.0					1400		
30.0					1000		
32.0							
I	0	0	0	0	0		
II	0	5.6	11.2	16.8	22.4		
Reevings	9	6	4	4	3		
Hook	40 t						

Table 10

Unit: Metric kg

Working radius (m)	Main boom (m)						
	Telescoping cylinder I fully extended and outriggers intermediately extended, with 2.1 t counterweight assembled, over full range						
	10.7	14.4	18.1	23.7	29.3	34.9	40.5
2.5	50000*						
3.0	45000*	40000					
3.5	43000*	40000	32000				
4.0	42000*	40000	30500	24000			
4.5	38000	37000	28500	24000			
5.0	30000	30000	27000	23000			
5.5	24500	24000	23800	21500			
6.0	20000	20000	19700	20000	17000		
6.5	17000	17000	16500	17000	16000		
7.0	15000	15000	14800	15600	15500	11500	
7.5		12800	12300	13000	14000	11000	
8.0		11000	11000	12000	12800	10500	
9.0		8500	8500	9500	10500	9800	8100
10.0		6500	6800	7800	8400	8800	7600
11.0		5500	5200	6300	7000	7400	7000
12.0			4200	5200	5800	6200	6500
14.0			2500	3400	4000	4400	4800
16.0				2200	2800	3200	3500
18.0				1300	1800	2200	2500
20.0					1000	1500	1800
22.0							1300
24.0							
26.0							
28.0							
30.0							
32.0							
I	0	3.7	7.4	7.4	7.4	7.4	7.4
II	0	0	0	5.6	11.2	16.8	22.4
Reevings	9	9	8	6	4	4	3
Hook	40 t						

Table 11

Unit: Metric kg

Working radius (m)	Main boom (m)						
	Telescoping cylinder I and outriggers intermediately extended, with 2.1 t counterweight assembled, over full range						
	10.7	14.4	20	25.6	31.2	36.8	
2.5	50000*						
3.0	45000*	40000	24000				
3.5	43000*	40000	24000				
4.0	42000*	40000	24000				
4.5	38000	37000	24000	17000			
5.0	30000	30000	24000	17000			
5.5	24500	24000	23000	17000			
6.0	20000	20000	22000	17000	13000		
6.5	17000	17000	18000	16500	13000		
7.0	15000	15000	16800	16000	12500		
7.5		12800	13500	15300	12000	8500	
8.0		11000	12800	13700	11500	8500	
9.0		8500	10200	10800	10500	8500	
10.0		6500	8200	8900	9400	8000	
11.0		5500	6500	7300	7800	7400	
12.0			5600	6100	6500	6800	
14.0			3700	4300	4800	5000	
16.0			2400	3100	3400	3700	
18.0				2100	2500	2800	
20.0				1400	1800	2000	
22.0					1200	1400	
24.0							
26.0							
28.0							
30.0							
32.0							
I	0	3.7	3.7	3.7	3.7	3.7	
II	0	0	5.6	11.2	16.8	22.4	
Reevings	9	9	6	4	4	3	
Hook	40 t						

Table 12

Unit: Metric kg

Working radius (m)	Main boom (m)						
	Telescoping cylinder I fully retracted and outriggers intermediately extended, with 2.1 t counterweight assembled, over full range						
	10.7	16.3	21.9	27.5	33		
2.5	50000*						
3.0	45000*	24000					
3.5	43000*	24000	17000				
4.0	42000*	24000	17000				
4.5	38000	24000	17000				
5.0	30000	24000	17000				
5.5	24500	22000	17000	12500			
6.0	20000	21000	17000	12000			
6.5	17000	18500	16500	11500			
7.0	15000	17500	16000	11000	8500		
7.5		15000	15000	10500	8500		
8.0		13500	14300	10000	8500		
9.0		10700	11400	9000	8200		
10.0		8700	9400	8500	7400		
11.0		7200	7800	8000	6800		
12.0		6000	6600	7000	6000		
14.0			4800	5100	5200		
16.0			3500	3800	4100		
18.0			2500	2900	3100		
20.0				2100	2400		
22.0				1600	1800		
24.0					1300		
26.0							
28.0							
30.0							
I	0	0	0	0	0		
II	0	5.6	11.2	16.8	22.4		
Reevings	9	6	4	4	3		
Hook	40 t						

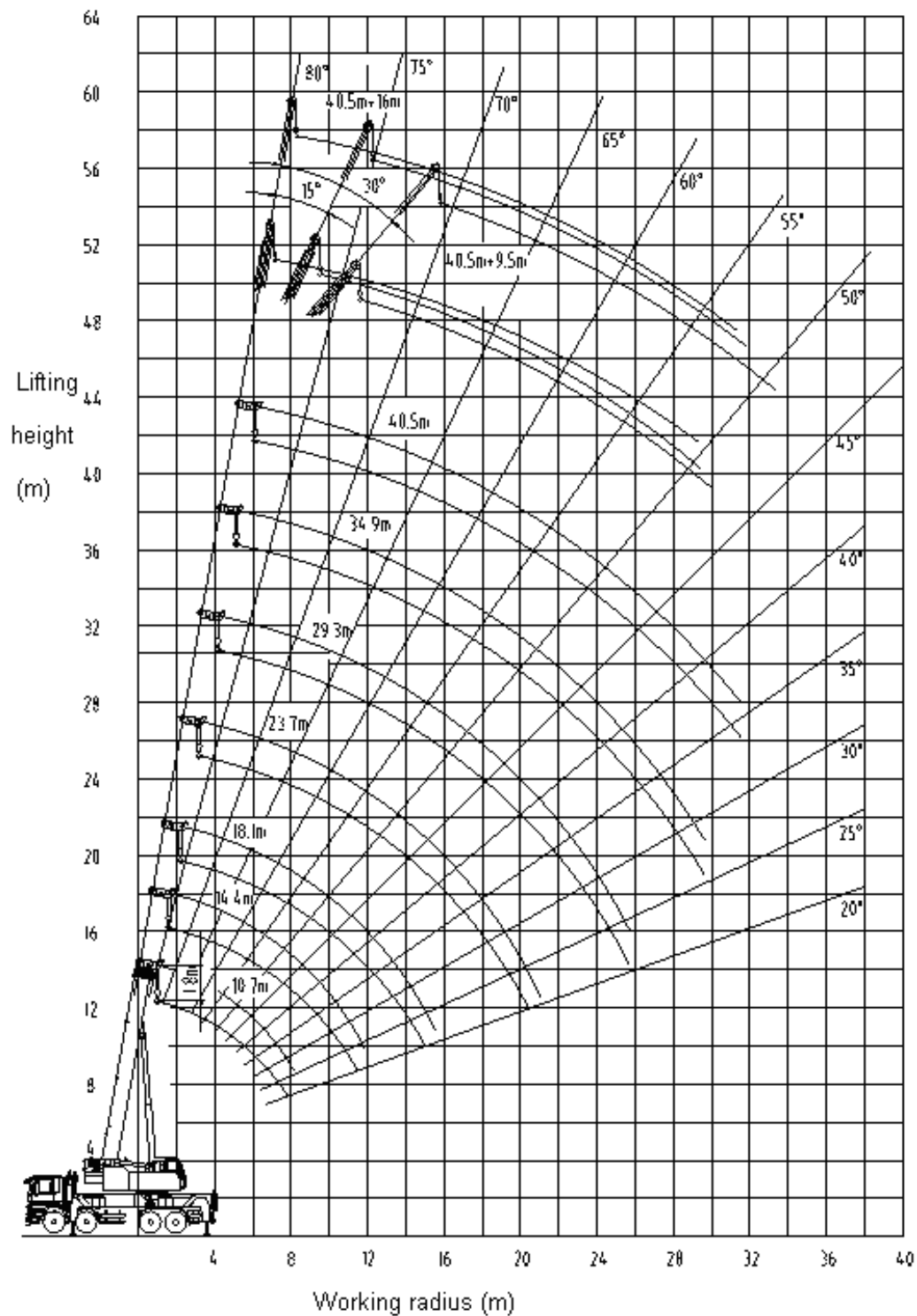
Table 13

Unit: Metric kg

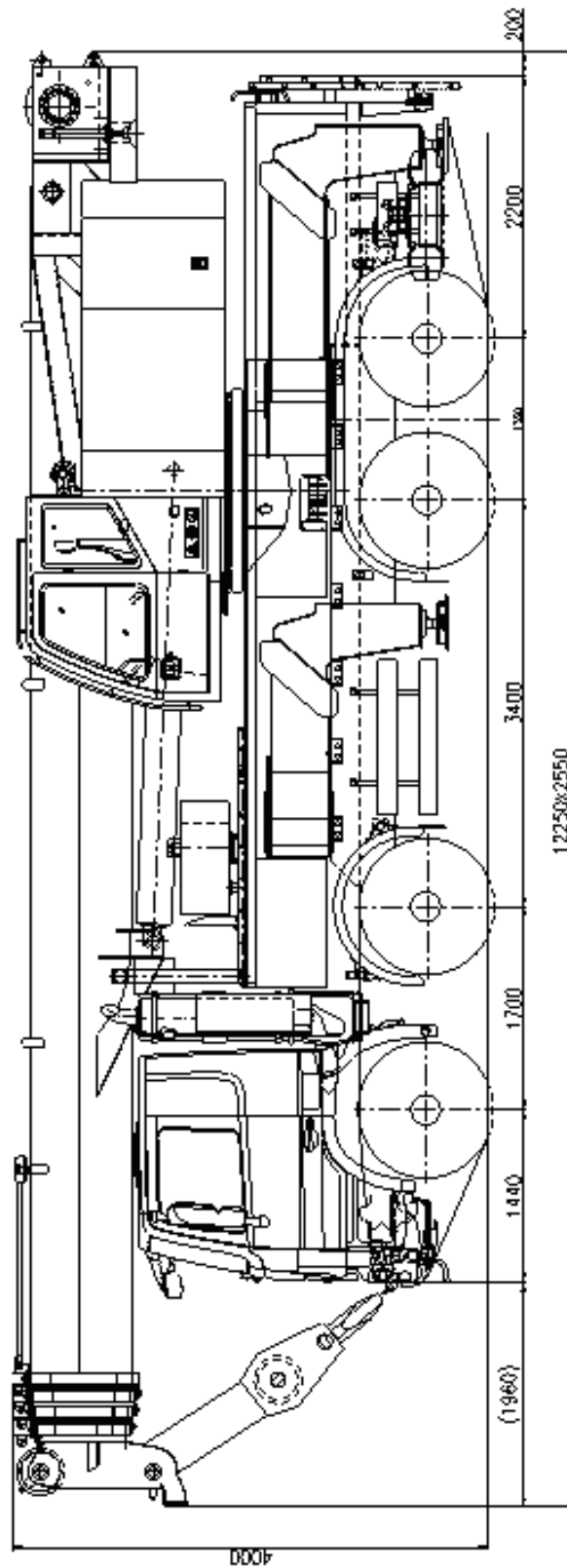
Boom angle (°)	Main boom (m) + jib (m)					
	40.5 + 9.5			40.5 + 16		
	0°	15°	30°	0°	15°	30°
80	4500	3000	2150	2800	1700	1000
78	4500	2800	2100	2600	1600	1000
76	4200	2600	2000	2300	1500	1000
74	3800	2500	1950	2150	1400	1000
72	3500	2400	1900	1900	1300	1000
70	3200	2300	1850	1750	1200	950
68	3000	2100	1800	1650	1100	950
66	2700	2000	1750	1550	1000	900
64	2400	1900	1700	1450	950	850
62	2100	1800	1650	1350	900	800
60	1800	1650	1500	1250	850	750
58	1500	1400	1200	1100	800	700
56	1200	1100	1000	900	750	600
54	1000	900	850	750		
52	800	700	550			
Reevings	1					
Hook	4.5 t					



## 2.4 Lifting height chart



## 2.5 Overall view (Unit: Metric mm)



### **3 Components, superstructure**

#### **3.1 Main boom and telescoping mechanism**

The box-shaped main boom consists of 5 U-type boom sections made of low-alloy high-strength steel plate, providing the boom with excellent bending-resistance capacity, super load bearing capacity, light deadweight, large lateral stiffness and small end deflection. Self-created sliding block support structure and a series of optimized design have the deadweight of the boom greatly decreased and the stress on the boom evenly distributed to avoid partial distortion. Furthermore, the boom has good guidance quality and adjustability.

The telescopic boom sections are telescoped in / out via two telescoping cylinders and two sets of boom extension / retraction rope. The telescoping cylinder I drives the telescopic boom section 1 to telescope in / out. The telescoping cylinder II drives telescopic boom sections 2, 3, and 4 to telescope in / out simultaneously together with the boom extension / retraction rope. This compact design makes the crane work reliably. Each cylinder is fitted with a balance valve.

#### **3.2 Jib**

It consists of two jib sections and can be installed and removed by inserted pins.

Jib section 1, reducing and lattice structured.

Jib section 2, box-shaped, can be pulled out from jib section 1.

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 offset can be conveniently changed via the pins and pull bracket.

It can be folded on the side of main boom when it is not used.

Jib length:

Jib section 1: 9.5 m

Jib section 1 + jib section 2: 16 m

#### **3.3 Slewing table**

Single ribbed plate structured and optimized slewing table made from high-strength steel plate makes the layout of articulated points of main boom and derricking mechanism more reasonable. It also has a distinctive structure and beautiful appearance.

The engine hood is of a designed ergonomically.

The securing device installed in the front of the slewing table can prevent the superstructure from slewing during driving.

### 3.4 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.

### 3.5 Derricking mechanism

1 front-mounted hydraulic cylinder with balance valve provides the boom with smooth derricking movements from  $-2^{\circ}$  to  $80^{\circ}$ .

### 3.6 Slewing mechanism

Via the planetary gear reducer, the axial plunger hydraulic motor drives the pinion gear on the output shaft to rotate the toothed ring of slewing bearing fixed on chassis frame, providing superstructure with  $360^{\circ}$  unlimited slewing.

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

### 3.7 Hoist mechanism

It consists of main and auxiliary hoist mechanisms.

The two hoist mechanisms are driven by axial plunger hydraulic 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.

The two-stage planetary reducer is of compact structure, light deadweight and high reliability.

Specifications for high-tensile torsion resistant hoist rope:

Diameter:  $\phi 17.0$  mm

Strength grade:  $1960 \text{ N/mm}^2$

Length of main hoist rope: 200 m

Length of auxiliary hoist rope: 130 m

Auxiliary winch and auxiliary hoist rope are optional.

### 3.8 Main and auxiliary hooks

Main hook: 40 t, with 4 pulleys, press nipple and hook latch

Main hook: 50 t (optional), with 6 pulleys

Auxiliary hook (1 reeving): 4.5 t, with hook latch

### 3.9 Operator's cab

As the new series operator's cab, it is of steel-structure with front-mounted instrument console and adjustable seat with headrest. Two joysticks are located at either side of the seat to control the superstructure movements. The ergonomically designed arrangement provides spacious operating space, reasonable arrangement, beautiful appearance and convenient & safe operation.

The cab can also be tilted backwards for 20° via the tilting cylinder to broaden the operator's field of vision during operation.

### 3.10 Engine

V-type, 4-cylinder diesel, manufactured by Mercedes-Benz, turbo-charged, water-cooled

Performance: 129 KW at 2200 rpm

Maximum torque: 675 Nm at 1200 – 1600 rpm

Exhaust emissions complies with EU III Stage B Emission Standard.

### 3.11 Outriggers

X-type outriggers, which are with box-shaped sections and welded of low-alloy high-strength steel plate, are of good sectional performance and strong load bearing capability via Pro/E and CAD simulated design and actual-used calculation.

2-section sliding beams and swinging cylinders can be extended to provide large outrigger span, thus ensure stability of the crane.

The outrigger pad which is mounted at the bottom of vertical cylinder can be pushed inwards (to avoid the complete vehicle from being over-wide during driving) and pulled outwards (for convenient operation) to greatly reduce the labor intensity. After the outriggers are intermediately / fully extended or retracted, the outrigger pads can be secured with retaining pins.

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.

### 3.12 Hydraulic system

The advanced open-type pilot-operated proportional controlled hydraulic system is adopted, providing stable crane movements and good micro-positioning function. It can control the movements such as slewing, telescoping, derricking and hoisting.

It also can control the counterweight lifting and operator's cab tilting movements.

The outrigger control valves, which are manual multiple directional control valves, can control the swinging, horizontal and vertical cylinders' movements. Each of them is fitted with a pressure limiting valve, thus, can prevent the piston rods of swinging cylinders and horizontal cylinders from bending.

The variable pump and gear pump supply hydraulic oil for the system. Among which, the variable pump supplies hydraulic oil for main winch, auxiliary winch, derricking mechanism and telescoping mechanism. The gear pump supplies hydraulic oil for outrigger system and slewing mechanism.

The international standard bite-type fitting, steel pipes and hoses ensure the high reliability and cleanness of the system.

### 3.13 Electrical system

Single wire system, negative grounded, 24 Volt DC.

The engine can be started and shut off from the switch near outrigger control valve and in the operator's cab.

The adopted wind gauge, tricolor light, windshield wiper, horn and lighting system ensure the operation safety and provide comfortable working environment.

Press the emergency off switch in an emergency, then all superstructure movements are cut off.

### 3.14 Safety devices

This crane is equipped with an automatic load moment limiter whose display and warning devices are all fitted in operator's cab.

When the actual load reaches 90% of the rated one, the warning light lights up and the buzzer sends out slow acoustic warning.

When the actual load approaches 100% of the rated one, the warning light lights up, the buzzer sends out fast acoustic warning and all dangerous movements are switched off.

The basic parameters, such as moment ratio, main boom angle, main boom length, working radius, actual lifting capacity and rated lifting capacity will be displayed on the digital LCD.

This crane is also equipped with the following safety devices to ensure the crane safety:

- a) Boom angle indicator

- b) Hoisting limit switch
- c) Hook latch
- d) Lowering limit switch
- e) Two-way hydraulic lock
- f) Balance valve
- g) Relief valve

### 3.15 Air conditioning and heater

Both the driver's cab and operator's cab are equipped with special air conditioning and heater for vehicle.

## 4 Specifications, chassis

Chassis	Model		ACTROS 4141/8X4		
	Type		Universal chassis		
	Engine	Model		OM501 LA	Mercedes-Benz
		Rated power	kW/r/min	300/1800	
		Max. output torque	N.m/r/min	2000/1080	
	Limits for exhaust pollutants and smoke		Comply with EU Stage V emission standard		
	Manufacturer		Mercedes-Benz AG		

For detailed information, please refer to *Technical Specifications, Special Purpose Chassis for Truck Crane*.

**Appendix**

**Table of main purchased parts**

Ser. No.	Description	Manufacturer	Remarks
1	Main valve	Changde Zoomlion Heavy Industry Science and Technology Hydraulic Co., Ltd.	
2	Main pump	Shanghai Bosch Rexroth Hydraulics and Automation Ltd.	
3	Winch motor	Avic Liyuan Hydraulic Co., Ltd.	
		Beijing Huade Hydraulic Industrial Group Co., Ltd.	
		High-tech Fluid Power Co., Ltd.	
		Shanghai Electric Hydraulics and Pneumatics Co., Ltd.	
4	Winch reducer	Xuzhou Keyuan Hydraulic Co., Ltd. Tongshan County Branch Company	
		Bosch Rexroth (Beijing) Hydraulic Co., Ltd.	
		Shanghai Wanhui Mechanical Manufacture Co., Ltd.	
5	Slewing motor	Shanghai Electric Hydraulics and Pneumatics Co., Ltd.	
		High-tech Fluid Power Co., Ltd.	
		Avic Liyuan Hydraulic Co., Ltd.	
		Beijing Huade Hydraulic Industrial Group Co., Ltd.	
6	Slewing reducer	Xuzhou Keyuan Hydraulic Co., Ltd. Tongshan County Branch Company	
		Bosch Rexroth (Beijing) Hydraulic Co., Ltd.	
		Shanghai Wanhui Mechanical Manufacture Co., Ltd.	
7	Slewing bearing	Xuzhou Rothe Erde Slewing Bearing Co., Ltd.	
		Yantai HaoYang Machinery Co., Ltd.	
8	Telescoping cylinder	Hunan Teli Hydraulic Co., Ltd.	
9	Derricking cylinder	Hunan Teli Hydraulic Co., Ltd.	
10	Horizontal cylinder	Hunan Teli Hydraulic Co., Ltd.	
11	Vertical cylinder	Hunan Teli Hydraulic Co., Ltd.	
12	Balance valve – telescoping mechanism	Bucher Hydraulics Remscheid GMBH (Germany)	
13	Balance valve – derricking mechanism	Bucher Hydraulics Remscheid GMBH (Germany)	



<b>Ser. No.</b>	<b>Description</b>	<b>Manufacturer</b>	<b>Remarks</b>
14	Balance valve – hoist mechanism	Shanghai Bosch Rexroth Hydraulics and Automation Ltd.	
15	Wire rope	Jiangsu SAFETY Steel Wire Rope Co., Ltd.	
16	Hook	Shandong Hong Ruida Machinery Co., Ltd.	
17	Load moment limiter	Hirschmann Electronics (Shanghai) Co., Ltd.	
18	Operator's cab assy.	Hubei Qixing Vehicle-Body Limited Company	
19	Engine, superstructure	Mercedes-Benz AG	
20	Chassis	Mercedes-Benz AG	

**Note:**

The equipment fitted in the crane is subject to change due to design improvements or other reasons. Therefore, the above table is for reference only.