



ZOOMLION QY120V TRUCK CRANE

TECHNICAL SPECIFICATION

QY120V633/27Y

CHANGSHA ZOOMLION HEAVY INDUSTRY SCIENCE & TECHNOLOGY
DEVELOPMENT CO., LTD

QY120V633 TRUCK CRANE

TECHNICAL SPECIFICATION

QY120V633/27Y

1. Product characteristics

QY120V truck crane, which integrates our many years' experience in designing and manufacturing mobile cranes with internationally advanced technology, is a fine-performance and high-reliability product produced to meet the market demands. This is a high-tech product combining mechanical, electrical and hydraulic systems as a whole, and partly adopts all-terrain crane technology. For its good control performance, excellent jogging performance, large lifting capacity and super lifting height, it is applied in many fields of our national economic construction. This product can be widely used in chemical industrial and mining establishments, oil fields, harbors, building sites except strong electromagnetic wave area to do lifting and hoisting work.

This product is a truck crane of full range slewing function, telescopic boom sections and electro-hydraulic proportional controlled systems. This product adopts 5-axle (3 driven axles and 3 steered axles) special purpose chassis manufactured by Zoomlion, providing wide vision, spacious cab and luxurious equipments.

The latest electro-hydraulic proportional directional control valve with load feedback function, multiple variable pumps, open and close loop combined variable systems ensure that each executive mechanism makes full use of its working capability. The easy-controlled, flexible, reliable and stepless speed regulated joysticks can provide the crane with smooth simultaneous movements, which greatly improves the working efficiency. The safety devices, such as relief valve, balance valve, hydraulic lock and brake valve, fitted in hydraulic system prevent the accidents caused by oil line overload and oil pipe breakage.

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

2. Specifications, complete vehicle

2.1 Product Model

Model in auto industry: ZLJ5550JQZ120V

Model in engineering industry: QY120V

Product code: QY120V633

2.2 Technical parameters

Item		Value	Remarks	
Working performance	Max. rated lifting capacity	kg	120000	
	Max. load moment of basic boom	kN.m	4586.4	
	Max. load moment of Max. boom length	kN.m	1882	
	Max. lifting height of main boom	m	58.5	
	Max. lifting height of jib	m	77 / (85)	
			The specifications do not include deflection of main boom and jib. The specifications in the brackets include the length of extension.	
Working speeds	Max. hoist rope speed (Main winch)	m/min	110	
	Max. hoist rope speed (Auxiliary winch)	m/min	70	
	Boom extending time	s	≥550	
	Boom derricking up time	s	≥70	
	Slewing speed	r/min	≤1.5	
Traveling parameters	Max. traveling speed	km/h	72	
	Max. gradeability	%	40	
	Min. turning diameter	m	23	
	Min. ground clearance	mm	280	
	Limits for exhaust pollutants and smoke		Conform to related standards	
	Oil consumption per hundred kilometers	L	70	
Weights	Deadweight in traveling condition	kg	54900	
	Complete vehicle kerb mass	kg	54705	
	Front axle load	kg	19900	
	Rear axle load	kg	35000	
Dimensions	Overall dimensions (L×W×H)	mm	14690×3000×3900	
	Longitudinal distance between outriggers	m	7.67	
	Transversal distance between outriggers	m	7.3(fully extended), 5.0(half extended)	
	Main boom length	m	12.8 ~57.5	
	Boom angle	°	-1.5 ~82	
	Jib length	m	11、18.6	
	Jib + extension	m	26.6	
	Offset	°	0、30	
Chassis	Model		ZLJ5551	
	Type		II	
	Engine	Model	OM501LA.III/18	
		Rated power	kW/r/min	320
		Max. output torque	N.m/r/min	2100
		Manufacturer	Changsha Zoomlion Heavy Industry Science & Technology Development Co., Ltd.	
			Code: ZLJ5551V3	
			At 1800r/min	
			At 1080r/min	

2.3 Lifting capacity table

Table 1

Unit: ton

Working radius (m)	Boom (m)												
	0 t counterweight, outriggers fully extended, over full range												
	12.8	16.9	21.0	25.1	29.2	33.3	37.4	41.5	45.6	49.7	53.8	57.5	
3.0	110.	90.0	85.0										
3.5	100.	90.0	85.0	70.0									
4.0	87.0	85.0	80.0	64.0	55.0								
4.5	81.0	78.0	70.0	59.0	55.0	45.0							
5.0	73.0	70.0	56.0	51.0	50.0	43.5							
6.0	51.0	49.0	43.0	43.0	42.8	42.0	35.0						
7.0	36.0	35.0	32.5	32.0	32.0	32.5	31.0	25.5					
8.0	27.0	27.0	25.0	25.0	25.5	26.0	24.0	24.0	22.5				
9.0	21.0	21.0	20.0	20.0	20.0	21.0	20.0	19.5	19.5	18.0			
10.0	16.5	17.0	16.0	16.0	17.0	17.2	16.5	16.4	16.0	16.2	15.0	12.0	
12.0		11.5	10.5	11.0	12.0	12.5	12.0	11.5	12.0	12.0	12.5	11.0	
14.0		8.0	7.2	8.0	8.5	9.5	8.8	8.5	9.0	9.0	9.5	9.5	
16.0			4.5	5.5	6.0	7.0	6.5	6.5	6.6	7.0	7.0	7.2	
18.0			3.0	3.8	4.5	5.5	5.0	4.8	5.0	5.2	5.6	5.8	
20.0				2.5	3.2	4.0	3.5	3.5	3.8	4.0	4.5	4.5	
22.0				1.5	2.1	3.0	2.5	2.5	2.8	3.0	3.5	3.5	
24.0					1.4	2.0	1.7	1.8	2.0	2.2	2.5	2.6	
26.0						1.3			1.3	1.5	2.0	2.0	
28.0										1.0	1.2	1.4	
30.0													
32.0													
34.0													
36.0													
38.0													
40.0													
42.0													
44.0													
46.0													
48.0													
50.0													
52.0													
Reeving	16	14	13	10	8	7	5	4	4	3	2	2	
I	1	1	2	2	2	2	3	3	3	3	3	4	
II	1	2	2	2	2	2	2	3	3	3	3	4	
III	1	1	1	2	2	2	2	2	3	3	3	4	
IV	1	1	1	1	2	2	2	2	2	3	3	4	
V	1	1	1	1	1	2	2	2	2	2	3	4	
Hook	120t	90t			55t					20t			

Table 2

Unit: ton

Working radius (m)	Boom (m)												
	10 t counterweight, outriggers fully extended, over full range												
	12.8	16.9	21.0	25.1	29.2	33.3	37.4	41.5	45.6	49.7	53.8	57.5	
3.0	112.	90.0	85.0										
3.5	105.	90.0	85.0	70.0									
4.0	95.0	88.0	80.0	64.0	55.0								
4.5	87.0	82.0	75.0	59.0	55.0	45.0							
5.0	78.0	75.5	69.0	55.0	50.0	45.0							
6.0	63.0	61.0	60.0	52.0	48.0	41.0	35.0						
7.0	52.0	50.0	46.0	46.0	45.0	38.0	33.0	26.0					
8.0	40.0	39.0	36.0	36.0	36.0	36.5	31.5	25.0	23.0				
9.0	31.0	31.0	29.0	29.0	29.5	30.0	28.0	24.0	22.0	18.0			
10.0	25.0	26.0	24.0	24.0	24.5	25.0	24.0	23.0	20.0	16.0	15.0		
12.0		18.0	17.0	17.2	18.0	18.5	18.0	17.5	18.0	15.0	14.0	12.0	
14.0		13.0	12.0	13.0	14.0	14.5	14.0	13.5	14.0	13.5	12.0	11.0	
16.0			9.0	10.0	10.5	11.0	11.0	10.0	11.0	11.2	11.5	10.0	
18.0			7.0	7.5	8.5	9.0	8.5	8.5	8.7	9.0	9.5	9.0	
20.0				6.0	6.5	7.2	7.0	7.0	7.0	7.5	8.0	8.0	
22.0				4.5	5.3	6.0	5.5	5.5	5.8	6.0	6.5	6.5	
24.0					4.1	4.5	4.2	4.3	4.6	5.0	5.5	5.2	
26.0					3.0	3.6	3.5	3.5	3.6	4.0	4.5	4.5	
28.0						2.8	2.5	2.6	2.8	3.2	3.6	3.5	
30.0						2.0	2.0	2.0	2.2	2.5	3.0	3.0	
32.0							1.4	1.5	1.5	2.0	2.3	2.5	
34.0									1.2	1.5	1.8	2.0	
36.0										1.0	1.5	1.5	
38.0											1.0	1.0	
40.0													
42.0													
44.0													
46.0													
48.0													
50.0													
52.0													
Reeving	16	14	13	10	8	7	6	5	4	3	2	2	
I	1	1	2	2	2	2	3	3	3	3	3	4	
II	1	2	2	2	2	2	2	3	3	3	3	4	
III	1	1	1	2	2	2	2	2	3	3	3	4	
IV	1	1	1	1	2	2	2	2	2	3	3	4	
V	1	1	1	1	1	2	2	2	2	2	3	4	
Hook	120t	90t			55t					20t			

Table 3

Unit: ton

Working radius (m)	Boom (m)												
	24 t counterweight, outriggers fully extended, over full range												
	12.8	16.9	21.0	25.1	29.2	33.3	37.4	41.5	45.6	49.7	53.8	57.5	
3.0	115.	90.0	85.0										
3.5	110.	90.0	85.0	70.0									
4.0	100.	88.0	80.0	65.0	55.0								
4.5	90.0	83.0	75.0	60.0	55.0								
5.0	80.0	76.0	70.0	57.0	51.0	45.0							
6.0	70.0	68.0	63.0	54.0	50.0	42.0	35.0						
7.0	60.0	60.0	57.0	50.0	46.5	40.0	33.5	26.0					
8.0	50.0	50.0	50.0	45.0	44.0	37.0	32.2	25.5	23.0				
9.0	40.0	41.0	42.0	40.0	40.0	35.0	30.0	25.0	22.0	18.0			
10.0	35.0	35.8	35.2	34.0	34.0	30.5	27.6	24.0	20.0	16.5	15.0		
12.0		26.0	25.6	26.5	27.0	27.3	25.0	22.0	19.0	15.2	14.0	12.0	
14.0		20.0	19.0	20.0	20.0	20.5	21.0	20.0	17.2	14.0	13.0	11.0	
16.0			15.0	16.0	16.2	16.5	17.0	16.8	15.7	12.8	12.0	10.5	
18.0			12.0	12.4	12.6	13.0	13.5	13.5	13.8	12.0	11.0	10.0	
20.0				10.2	10.5	10.5	11.0	11.0	11.3	11.5	10.5	9.5	
22.0				8.0	8.2	8.5	9.0	9.2	9.4	9.7	10.0	8.5	
24.0					7.0	7.2	7.6	7.8	8.0	8.2	8.5	8.0	
26.0					5.3	5.7	6.2	6.5	6.6	7.0	7.3	7.5	
28.0						4.7	5.4	5.4	5.5	5.8	6.3	7.0	
30.0							3.8	4.5	4.5	4.7	5.0	6.0	
32.0								3.5	3.7	3.9	4.1	5.0	
34.0								3.0	3.0	3.2	3.5	4.5	
36.0									2.4	2.6	3.0	3.8	
38.0									2.0	2.2	2.4	3.2	
40.0										1.7	2.0	2.8	
42.0										1.2	1.5	2.4	
44.0											1.2	2.0	
46.0											1.0	1.5	
48.0												1.2	
50.0												1.0	
52.0													
Reeving	16	14	13	10	8	7	6	5	4	3	2	2	
I	1	1	2	2	2	2	3	3	3	3	3	4	
II	1	2	2	2	2	2	2	3	3	3	3	4	
III	1	1	1	2	2	2	2	2	3	3	3	4	
IV	1	1	1	1	2	2	2	2	2	3	3	4	
V	1	1	1	1	1	2	2	2	2	2	3	4	
Hook	120t	90t			55t					20t			

Table 4

Unit: ton

Working radius (m)	Boom (m)												
	32 t counterweight, outriggers fully extended, over full range												
	12.8	16.9	21.0	25.1	29.2	33.3	37.4	41.5	45.6	49.7	53.8	57.5	
3.0	120.	90.0	85.0										
3.5	112.	90.0	85.0	70.0									
4.0	102.	90.0	83.0	65.0	55.0								
4.5	95.0	83.0	78.0	60.0	55.0	45.0							
5.0	87.0	76.0	70.0	59.0	51.0	45.0							
6.0	74.0	70.0	63.5	55.0	50.0	42.0	35.0						
7.0	62.0	62.0	57.5	51.0	46.5	40.0	33.5	26.0					
8.0	53.0	53.0	51.0	46.0	44.0	37.0	32.2	25.5	23.0				
9.0	47.0	46.0	44.0	41.0	40.0	35.0	30.0	25.0	22.0	18.0			
10.0	39.0	41.0	40.0	35.0	34.0	30.5	27.6	24.0	20.0	16.5	15.0		
12.0		30.0	30.0	30.0	30.0	27.5	25.0	22.0	19.0	15.2	14.0	12.5	
14.0		23.0	23.0	23.0	23.0	23.3	22.8	20.0	17.2	14.0	13.0	11.0	
16.0			17.5	18.0	18.0	18.4	18.4	17.0	15.7	12.8	12.0	10.5	
18.0			14.0	14.5	14.5	14.8	15.5	15.5	14.3	12.0	11.0	10.0	
20.0				11.5	12.0	12.2	12.8	12.8	12.5	11.5	10.5	9.5	
22.0				9.5	10.0	10.5	10.7	10.7	11.0	10.5	10.0	8.5	
24.0					8.0	8.5	9.0	9.0	9.2	9.5	9.7	8.0	
26.0					6.5	7.2	7.7	7.6	7.8	8.2	8.5	7.5	
28.0						6.0	6.5	6.5	6.7	7.0	7.4	7.0	
30.0						5.0	5.5	5.5	5.7	6.0	6.3	6.4	
32.0							4.7	4.7	4.8	5.2	5.5	5.5	
34.0							4.0	4.0	4.2	4.4	4.8	4.8	
36.0								3.2	3.5	3.8	4.1	4.2	
38.0								2.5	2.8	3.2	3.6	3.6	
40.0									2.4	2.7	3.0	3.1	
42.0									2.0	2.2	2.6	2.7	
44.0										1.8	2.2	2.2	
46.0										1.5	1.8	1.9	
48.0											1.5	1.6	
50.0												1.4	
52.0												1.2	
Reeving	16	14	13	10	8	7	6	5	4	3	2	2	
I	1	1	2	2	2	2	3	3	3	3	3	4	
II	1	2	2	2	2	2	2	3	3	3	3	4	
III	1	1	1	2	2	2	2	2	3	3	3	4	
IV	1	1	1	1	2	2	2	2	2	3	3	4	
V	1	1	1	1	1	2	2	2	2	2	3	4	
Hook	120t	90t			55t					20t			

Table 5

Unit: ton

Working radius (m)	Boom (m)												
	38 t counterweight, outriggers fully extended, over full range												
	12.8	16.9	21.0	25.1	29.2	33.3	37.4	41.5	45.6	49.7	53.8	57.5	
3.0	120.	90.0	85.0										
3.5	115.	90.0	85.0	70.0									
4.0	105.	90.0	83.0	69.0	55.0								
4.5	96.0	84.0	78.0	66.0	55.0	45.0							
5.0	90.0	78.0	70.0	63.0	51.0	45.0							
6.0	78.0	71.0	63.5	57.0	50.0	42.0	35.0						
7.0	65.0	64.0	57.5	52.0	46.5	40.0	33.5	26.0					
8.0	55.0	55.0	52.0	47.0.	44.0	37.2	32.5	25.5	23.0				
9.0	48.0	47.0	46.0	43.0	40.0	35.5	30.0	25.0	22.0	18.5			
10.0	42.0	41.0	41.0	39.5	36.0.	32.6	28.0	24.3	20.0	16.5	15.0		
12.0		35.5	34.5	34.0	31.5	29.0	25.0	21.8	19.0	15.2	14.0	12.5	
14.0		26.6	26.3	27.0	27.5	24.3	23.0	19.0	17.5	14.0	13.0	11.0	
16.0			21.0	21.5	22.0	21.6	19.6	17.0	16.0	12.8	12.0	10.5	
18.0			17.0	17.5	18.0	18.0	17.5	15.5	14.5	12.0	11.0	10.0	
20.0				14.4	14.5	14.8	15.6	14.7	12.5	11.5	10.5	9.5	
22.0				12.0	12.2	12.5	13.2	13.2	11.0	10.5	10.0	8.5	
24.0					10.4	10.5	11.3	11.2	10.0	9.8	9.5	8.0	
26.0					8.6	9.0	9.8	9.6	9.4	9.2	9.2	7.5	
28.0						7.7	8.4	8.4	8.5	8.5	8.6	7.0	
30.0						6.5	7.2	7.2	7.5	7.8	8.0	6.4	
32.0							6.3	6.3	6.5	6.8	7.0	6.0	
34.0							5.0	5.5	5.7	6.0	6.3	5.6	
36.0								4.7	4.9	5.2	5.6	5.0	
38.0								4.0	4.3	4.5	4.8	4.8	
40.0									3.8	4.0	4.3	4.4	
42.0									3.4	3.4	3.8	3.9	
44.0										3.0	3.3	3.4	
46.0										2.5	2.9	3.0	
48.0											2.5	2.6	
50.0											2.0	2.2	
52.0												2.0	
Reeving	16	14	13	10	8	7	6	5	4	3	2	2	
I	1	1	2	2	2	2	3	3	3	3	3	4	
II	1	2	2	2	2	2	2	3	3	3	3	4	
III	1	1	1	2	2	2	2	2	3	3	3	4	
IV	1	1	1	1	2	2	2	2	2	3	3	4	
V	1	1	1	1	1	2	2	2	2	2	3	4	
Hook	120t	90t			55t					20t			

Table 6

Unit: ton

Working radius (m)	Boom (m)											
	0 t counterweight, outriggers half extended, over full range											
	12.8	16.9	21.0	25.1	29.2	33.3	37.4	41.5	45.6	49.7	53.8	57.5
3.0	80.0	70.0	60.0									
3.5	65.0	60.0	55.0	50.0								
4.0	48.0	44.0	40.0	38.0	35.0							
4.5	36.0	34.0	30.0	28.6	27.0	26.0						
5.0	28.0	26.0	24.0	23.4	23.0	22.8	20.0					
6.0	20.0	18.0	16.5	16.5	17.0	17.0	16.0	15.0				
7.0	14.0	13.0	12.0	12.3	12.8	13.2	12.5	12.2	12.0			
8.0	10.0	10.0	9.0	9.5	10.0	10.5	9.8	9.5	9.2	9.0		
9.0	7.0	7.2	6.0	6.7	7.0	7.5	6.9	6.8	7.0	7.2	7.5	
10.0	5.0	5.0	5.0	5.5	6.0	6.5	5.8	5.6	5.7	6.0	6.3	6.2
12.0		4.0	4.0	4.5	5.0	5.6	5.0	5.0	5.2	5.5	6.0	6.0
14.0		2.0	2.0	2.3	2.8	3.4	3.0	3.0	3.2	3.5	3.8	3.8
16.0				1.5	2.0	2.5	2.0	2.2	2.5	2.8	3.2	3.0
18.0					1.0	1.4	1.0	1.2	1.4	1.6	2.0	2.0
20.0						1.0				1.0	1.4	1.5
22.0												
24.0												
26.0												
28.0												
30.0												
32.0												
34.0												
36.0												
38.0												
40.0												
42.0												
44.0												
46.0												
48.0												
50.0												
52.0												
Reeving	13	11	9	8	5	4	3	3	2	2	2	2
I	1	1	2	2	2	2	3	3	3	3	3	4
II	1	2	2	2	2	2	2	3	3	3	3	4
III	1	1	1	2	2	2	2	2	3	3	3	4
IV	1	1	1	1	2	2	2	2	2	3	3	4
V	1	1	1	1	1	2	2	2	2	2	3	4
Hook	90t			55t			20t					

Table 7

Unit: ton

Working radius (m)	Boom (m)											
	10 t counterweight, outriggers half extended, over full range											
	12.8	16.9	21.0	25.1	29.2	33.3	37.4	41.5	45.6	49.7	53.8	57.5
3.0	90.0	80.0	75.0									
3.5	85.0	75.0	70.0	65.0								
4.0	75.0	70.0	65.0	60.0	55.0							
4.5	60.0	55.0	52.0	50.0	45.0	40.0						
5.0	50.0	45.0	43.0	42.0	40.0	36.0						
6.0	35.0	33.0	31.0	30.5	30.0	30.0	29.0					
7.0	25.0	24.0	22.0	22.0	22.5	23.0	23.0	23.0				
8.0	20.0	20.0	18.0	18.5	19.0	20.0	19.5	19.0	19.0			
9.0	15.0	15.0	14.5	15.0	16.0	17.0	16.5	16.5	16.0	16.5		
10.0	12.0	12.5	12.0	13.0	13.5	14.5	14.0	14.0	14.0	14.5	14.0	
12.0		10.0	9.0	9.5	10.0	10.5	10.0	10.5	10.5	10.5	11.0	11.0
14.0		7.0	6.0	7.0	7.5	8.0	7.5	7.5	8.0	8.2	8.5	8.5
16.0			4.0	5.0	5.5	6.0	6.0	5.6	6.0	6.5	6.7	6.5
18.0			2.5	3.0	4.0	5.0	4.3	4.2	4.5	5.0	5.5	5.5
20.0				2.2	3.0	3.5	3.2	3.0	3.4	3.8	4.2	4.3
22.0				1.3	1.7	2.5	2.0	2.2	2.5	2.8	3.2	3.4
24.0					1.2	2.0	1.5	1.5	1.7	2.0	2.5	2.5
26.0						1.2		1.0	1.2	1.5	1.8	2.0
28.0										1.0	1.3	1.4
30.0												
32.0												
34.0												
36.0												
38.0												
40.0												
42.0												
44.0												
46.0												
48.0												
50.0												
52.0												
Reeving	14	13	12	10	8	7	5	4	3	3	2	2
I	1	1	2	2	2	2	3	3	3	3	3	4
II	1	2	2	2	2	2	2	3	3	3	3	4
III	1	1	1	2	2	2	2	2	3	3	3	4
IV	1	1	1	1	2	2	2	2	2	3	3	4
V	1	1	1	1	1	2	2	2	2	2	3	4
Hook	90t				55t				20t			

Table 8

Unit: ton

Working radius (m)	Boom (m)											
	24 t counterweight, outriggers half extended, over full range											
	12.8	16.9	21.0	25.1	29.2	33.3	37.4	41.5	45.6	49.7	53.8	57.5
3.0	90.0	85.0	80.0									
3.5	85.0	80.0	78.0	75.0								
4.0	80.0	78.0	75.0	70.0	55.0							
4.5	75.0	74.0	72.0	65.0	55.0	45.0						
5.0	70.0	65.0	65.0	60.0	50.0	40.0						
6.0	52.0	50.0	48.0	46.0	45.0	42.0	35.0					
7.0	40.0	40.0	38.0	38.0	37.0	37.0	32.0	28.0				
8.0	33.0	33.0	31.0	31.0	31.5	31.5	28.0	26.0	25.0			
9.0	27.0	27.0	26.0	26.0	26.5	27.0	26.0	23.0	20.0	18.0		
10.0	22.0	23.0	22.0	22.2	22.8	23.0	22.0	20.0	18.0	17.0	15.0	
12.0		17.0	16.0	16.0	17.0	17.5	17.0	16.2	16.5	16.5	14.0	12.0
14.0		12.0	11.5	12.0	13.0	13.5	13.0	13.0	13.5	13.5	12.0	11.0
16.0			9.0	9.5	10.0	11.0	10.5	10.3	10.5	11.0	11.0	10.0
18.0			7.0	7.5	8.0	8.5	8.0	7.8	8.2	9.0	9.5	9.5
20.0				6.0	6.3	6.5	6.5	6.5	7.0	7.5	7.5	8.0
22.0				4.5	5.2	6.0	5.5	5.6	6.0	6.3	6.5	6.5
24.0					4.0	5.0	4.5	4.5	5.0	5.2	5.5	5.5
26.0					3.0	3.5	3.0	3.5	4.0	4.2	4.8	4.8
28.0						3.0	2.5	3.0	3.0	3.5	4.0	4.0
30.0						2.5	2.0	2.3	2.5	2.8	3.0	3.2
32.0							1.5	1.5	2.0	2.0	2.5	2.8
34.0							1.0	1.2	1.5	1.5	2.2	2.2
36.0									1.0	1.2	1.5	1.5
38.0											1.2	1.2
40.0											1.0	1.0
42.0												
44.0												
46.0												
48.0												
50.0												
52.0												
Reeving	14	13	12	10	8	7	5	4	4	3	2	2
I	1	1	2	2	2	2	3	3	3	3	3	4
II	1	2	2	2	2	2	2	3	3	3	3	4
III	1	1	1	2	2	2	2	2	3	3	3	4
IV	1	1	1	1	2	2	2	2	2	3	3	4
V	1	1	1	1	1	2	2	2	2	2	3	4
Hook	90t				55t				20t			

Table 9

Unit: ton

Working radius (m)	Boom (m)												
	32 t counterweight, outriggers half extended, over full range												
	12.8	16.9	21.0	25.1	29.2	33.3	37.4	41.5	45.6	49.7	53.8	57.5	
3.0	90.0	85.0	80.0										
3.5	85.0	83.0	78.0	75.0									
4.0	80.0	80.0	75.0	70.0	55.0								
4.5	75.0	75.0	72.0	65.0	55.0	45.0							
5.0	70.0	65.0	65.0	62.0	53.0	43.0							
6.0	60.0	58.0	56.0	56.0	50.0	42.0	35.0						
7.0	45.0	43.5	43.0	42.0	42.0	40.0	33.0	28.0					
8.0	40.0	38.0	37.0	37.0	37.0	35.0	31.0	27.0	25.0				
9.0	32.0	32.0	31.0	31.0	31.5	31.0	30.0	25.0	24.0	18.0			
10.0	26.0	27.0	26.5	27.0	27.5	27.0	26.0	23.0	22.0	17.0	15.0		
12.0		20.0	19.0	20.0	20.3	20.5	19.5	19.0	19.0	16.5	14.0	12.0	
14.0		15.0	14.6	15.5	16.0	16.5	16.0	16.0	16.5	16.0	13.5	11.0	
16.0			11.5	12.0	12.0	12.5	13.0	12.5	13.0	13.0	13.0	10.0	
18.0			8.5	9.0	9.5	9.7	10.5	10.4	10.6	11.0	11.0	9.5	
20.0				7.5	7.6	7.8	8.5	8.2	8.5	9.0	9.0	9.0	
22.0				6.0	6.5	6.8	7.0	7.0	7.5	7.4	7.6	7.8	
24.0					4.5	5.0	5.5	5.6	5.8	6.0	6.5	6.5	
26.0					3.5	4.0	4.5	4.5	4.7	5.0	5.4	5.5	
28.0						3.0	3.5	3.6	3.8	4.0	4.2	4.5	
30.0						2.5	2.8	3.0	3.2	3.3	3.5	3.7	
32.0							2.2	2.2	2.5	2.7	3.0	3.2	
34.0							1.8	1.8	2.0	2.2	2.5	2.5	
36.0								1.5	1.8	2.0	2.2	2.2	
38.0									1.5	1.5	1.8	2.0	
40.0									1.0	1.3	1.6	1.6	
42.0										1.0	1.3	1.4	
44.0											1.0	1.2	
46.0													
48.0													
50.0													
52.0													
Reeving	14	13	12	10	8	7	5	4	4	3	2	2	
I	1	1	2	2	2	2	3	3	3	3	3	4	
II	1	2	2	2	2	2	2	3	3	3	3	4	
III	1	1	1	2	2	2	2	2	3	3	3	4	
IV	1	1	1	1	2	2	2	2	2	3	3	4	
V	1	1	1	1	1	2	2	2	2	2	3	4	
Hook	90t				55t					20t			

Table 10

Unit: ton

Working radius (m)	Boom (m)											
	38 t counterweight, outriggers half extended, over full range											
	12.8	16.9	21.0	25.1	29.2	33.3	37.4	41.5	45.6	49.7	53.8	57.5
3.0	110.	90.0	85.0									
3.5	100.	90.0	80.0	75.0								
4.0	90.0	85.0	78.0	70.0	55.0							
4.5	80.0	80.0	75.0	65.0	55.0	45.0						
5.0	75.0	73.0	72.0	62.0	53.0	45.0						
6.0	68.0	66.0	63.0	58.0	51.0	42.0	35.0					
7.0	53.0	52.0	50.0	50.0	45.0	40.0	33.0	28.0				
8.0	42.0	41.0	40.5	41.0	38.0	36.0	31.0	27.0	25.0			
9.0	34.0	34.0	33.0	33.5	33.5	33.8	30.0	26.0	24.0	18.5		
10.0	28.0	29.0	27.0	28.0	28.5	28.5	28.0	24.0	22.0	17.0	15.0	
12.0		21.0	20.0	21.0	22.0	22.0	21.0	21.0	19.0	16.5	14.0	12.5
14.0		16.0	15.0	16.0	17.0	17.2	17.0	16.5	16.8	16.0	13.5	11.0
16.0			12.0	12.5	13.0	14.0	13.5	13.5	14.0	14.0	13.0	10.5
18.0			9.0	9.5	10.0	10.5	10.5	10.5	11.0	11.5	11.8	10.0
20.0				7.8	8.0	8.5	9.0	8.8	9.0	9.5	10.0	9.5
22.0				6.5	7.0	7.5	8.0	7.5	7.8	8.0	8.5	8.5
24.0					6.0	6.3	7.0	6.5	6.8	7.0	7.5	8.0
26.0					4.5	4.8	5.2	5.0	5.2	5.5	6.0	6.5
28.0						3.5	4.0	4.2	4.5	5.0	5.4	6.0
30.0						3.0	3.2	3.5	3.8	4.2	4.5	5.0
32.0							2.5	3.0	3.2	3.5	4.0	4.5
34.0							2.0	2.5	2.8	3.0	3.5	4.0
36.0								2.0	2.2	2.5	3.0	3.5
38.0								1.5	1.8	2.0	2.5	2.8
40.0									1.5	1.8	2.2	2.5
42.0									1.0	1.7	2.0	2.2
44.0										1.4	1.5	1.8
46.0										1.0	1.3	1.5
48.0											1.0	1.2
50.0												
52.0												
Reeving	16	14	13	10	8	7	5	4	4	3	2	2
I	1	1	2	2	2	2	3	3	3	3	3	4
II	1	2	2	2	2	2	2	3	3	3	3	4
III	1	1	1	2	2	2	2	2	3	3	3	4
IV	1	1	1	1	2	2	2	2	2	3	3	4
V	1	1	1	1	1	2	2	2	2	2	3	4
Hook	120t	90t			55t					20t		

Table 11

Unit: ton

Boom angle (⁰)	Boom + jib					
	10t counterweight, outrigger half extended, over full range					
	57.5m+11m		57.5m+18.6m		57.5m+26.6m	
	Offset		Offset		Offset	
	0 ⁰	30 ⁰	0 ⁰	30 ⁰	0 ⁰	30 ⁰
82	7.0	5.0	4.8	2.2	4.0	1.5
80	6.5	4.5	4.5	2.2	3.5	1.5
78	5.5	4.0	4.0	2.0	3.0	1.4
76	4.5	3.5	3.5	1.8	2.8	1.3
74	3.5	3.0	3.0	1.5	2.5	1.2
72	2.5	2.0	2.4	1.2	1.5	1.0
70	2.0	1.5	1.5	1.2	1.2	
68	1.5	1.0	1.0	1.0		
66	1.0					
64						
62						
60						
58						
56						
54						
52						
50						
Reeving	1	1	1	1	1	1

Table 12

Unit: ton

Boom angle (⁰)	Boom + jib					
	24t counterweight, outrigger half extended, over full range					
	57.5m+11m		57.5m+18.6m		57.5m+26.6m	
	Offset		Offset		Offset	
	0 ⁰	30 ⁰	0 ⁰	30 ⁰	0 ⁰	30 ⁰
82	7.0	5.0	5.0	4.0	4.2	1.7
80	6.5	4.8	5.0	4.0	3.8	1.6
78	5.5	4.6	5.0	4.0	3.4	1.5
76	5.0	4.5	5.0	4.0	3.2	1.5
74	4.5	4.3	4.5	4.0	2.8	1.4
72	4.0	4.0	4.2	3.8	2.5	1.4
70	3.5	3.5	4.0	3.5	2.2	1.3
68	3.0	3.0	3.5	3.0	2.0	1.2
66	2.8	2.5	3.0	2.5	1.6	1.1
64	2.4	2.0	2.5	2.0	1.3	1.0
62	2.0	1.5	2.0	1.5	1.0	
60	1.5	1.2	1.5	1.3		
58	1.0	1.0	1.1	1.0		
56						
54						
52						
50						
Reeving	1	1	1	1	1	1

Table 13

Unit: ton

Boom angle (⁰)	Boom + jib					
	32t counterweight, outrigger half extended, over full range					
	57.5m+11m		57.5m+18.6m		57.5m+26.6m	
	Offset		Offset		Offset	
	0 ⁰	30 ⁰	0 ⁰	30 ⁰	0 ⁰	30 ⁰
82	7.0	5.0	5.0	2.2	4.0	1.7
80	6.5	4.8	4.8	2.2	3.5	1.6
78	5.5	4.6	4.3	2.2	3.3	1.6
76	5.0	4.5	3.8	2.1	3.0	1.5
74	4.8	4.4	3.5	2.0	2.8	1.4
72	4.5	4.3	3.2	1.9	2.5	1.4
70	4.2	4.0	3.0	1.8	2.3	1.3
68	4.0	3.8	2.8	1.7	2.2	1.3
66	3.8	3.5	2.6	1.6	2.0	1.2
64	3.5	3.0	2.4	1.5	1.8	1.2
62	2.5	2.4	2.2	1.4	1.5	1.1
60	2.3	2.2	1.8	1.3	1.3	1.0
58	2.0	1.8	1.5	1.2	1.1	
56	1.6	1.5	1.3	1.1	1.0	
54	1.3	1.2	1.2	1.0		
52	1.0	1.0				
50						
Reeving	1	1	1	1	1	1

Table 14

Unit: ton

Boom angle (⁰)	Boom + jib					
	38 t counterweight, outrigger half extended, over full range					
	57.5m+11m		57.5m+18.6m		57.5m+26.6m	
	Offset		Offset		Offset	
	0 ⁰	30 ⁰	0 ⁰	30 ⁰	0 ⁰	30 ⁰
82	7.0	5.0	5.0	2.2	4.0	1.7
80	6.5	4.8	4.8	2.2	3.8	1.6
78	6.0	4.6	4.3	2.1	3.4	1.6
76	5.5	4.5	3.8	2.0	3.1	1.5
74	5.0	4.4	3.5	1.9	2.9	1.4
72	4.5	4.3	3.2	1.8	2.6	1.4
70	4.3	4.2	3.0	1.8	2.4	1.3
68	4.2	4.1	2.9	1.8	2.3	1.3
66	4.0	3.9	2.7	1.7	2.2	1.2
64	3.8	3.6	2.5	1.7	1.9	1.2
62	3.5	3.2	2.4	1.6	1.8	1.2
60	3.0	2.8	2.2	1.6	1.7	1.1
58	2.6	1.5	2.1	1.6	1.6	1.0
56	2.3	2.0	2.0	1.5	1.3	1.0
54	2.0	1.8	1.8	1.4	1.2	
52	1.5	1.3	1.5	1.3	1.0	
50	1.2	1.2	1.2	1.0		
Reeving	1	1	1	1	1	1

Table 15

Unit: ton

Boom angle (⁰)	Boom + jib					
	10 t counterweight, outrigger fully extended, over full range					
	57.5m+11m		57.5m+18.6m		57.5m+26.6m	
	Offset		Offset		Offset	
	0 ⁰	30 ⁰	0 ⁰	30 ⁰	0 ⁰	30 ⁰
82	7.0	5.0	5.0	2.2	4.0	1.6
80	6.5	4.8	4.5	2.2	3.5	1.5
78	6.0	4.7	4.3	2.0	3.4	1.5
76	5.0	4.6	3.8	2.0	3.0	1.4
74	4.7	4.5	3.5	1.9	2.8	1.4
72	4.5	4.3	3.2	1.8	2.6	1.3
70	4.0	3.5	3.0	1.7	2.3	1.2
68	3.5	3.0	2.8	1.6	2.0	1.1
66	2.8	2.4	2.4	1.5	1.5	1.0
64	2.4	2.0	1.8	1.4	1.2	
62	1.8	1.5	1.5	1.3	1.0	
60	1.4	1.2	1.2	1.0		
58	1.0					
56						
54						
52						
50						
Reeving	1	1	1	1	1	1

Table 16

Unit: ton

Boom angle (⁰)	Boom + jib					
	24 t counterweight, outrigger fully extended, over full range					
	57.5m+11m		57.5m+18.6m		57.5m+26.6m	
	Offset		Offset		Offset	
	0 ⁰	30 ⁰	0 ⁰	30 ⁰	0 ⁰	30 ⁰
82	7.0	5.0	5.0	2.2	4.2	1.7
80	6.5	4.8	4.5	2.1	3.8	1.6
78	6.0	4.7	4.2	2.0	3.4	1.5
76	5.5	4.6	3.8	2.0	3.2	1.5
74	4.8	4.5	3.5	1.9	2.8	1.4
72	4.6	4.4	3.2	1.8	2.7	1.4
70	4.2	4.1	3.0	1.8	2.5	1.3
68	3.8	3.5	2.8	1.8	2.3	1.3
66	3.2	3.0	2.5	1.7	2.2	1.2
64	3.0	2.8	2.3	1.7	1.9	1.2
62	2.8	2.5	2.1	1.6	1.8	1.2
60	2.5	2.3	2.0	1.5	1.7	1.1
58	2.2	2.0	2.0	1.4	1.6	1.1
56	2.0	1.9	1.8	1.3	1.5	1.0
54	1.8	1.6	1.6	1.2	1.2	
52	1.5	1.4	1.4	1.1	1.0	
50	1.2	1.2	1.2	1.1		
Reeving	1	1	1	1	1	1

Table 17

Unit: ton

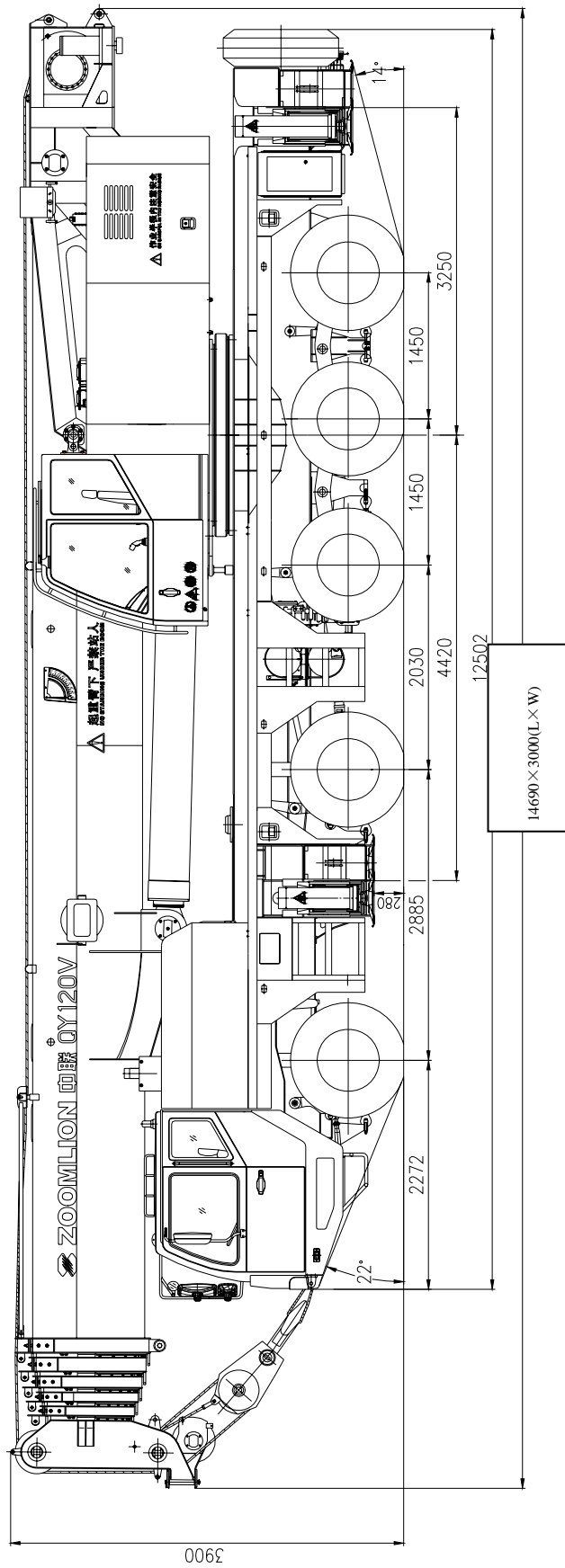
Boom angle (⁰)	Boom + jib					
	32 t counterweight, outrigger fully extended, over full range					
	57.5m+11m		57.5m+18.6m		57.5m+26.6m	
	Offset		Offset		Offset	
	0 ⁰	30 ⁰	0 ⁰	30 ⁰	0 ⁰	30 ⁰
82	7.0	5.0	5.0	2.2	4.0	1.7
80	7.0	4.8	4.8	2.2	3.5	1.6
78	7.0	4.6	4.3	2.1	3.3	1.6
76	6.8	4.5	3.8	2.0	3.0	1.5
74	6.5	4.4	3.5	1.9	2.8	1.4
72	6.0	4.3	3.2	1.9	2.6	1.4
70	5.5	4.0	3.0	1.8	2.5	1.3
68	5.3	3.9	2.8	1.8	2.3	1.3
66	4.8	3.8	2.7	1.7	2.2	1.2
64	4.5	3.7	2.6	1.7	2.0	1.2
62	4.2	3.6	2.5	1.6	1.9	1.2
60	3.8	3.4	2.4	1.6	1.8	1.1
58	3.4	3.0	2.3	1.6	1.7	1.1
56	3.0	2.8	2.2	1.6	1.6	1.1
54	2.8	2.4	2.1	1.6	1.5	1.1
52	2.5	2.0	2.0	1.5	1.4	1.1
50	2.0	1.8	1.8	1.5	1.3	1.0
45	1.5	1.3	1.4	1.4	1.0	
40	1.2	1.1	1.0	1.1		
Reeving	1	1	1	1	1	1

Table 18

Unit: ton

Boom angle (⁰)	Boom + jib					
	38 t counterweight, outrigger fully extended, over full range					
	57.5m+11m		57.5m+18.6m		57.5m+26.6m	
	Offset		Offset		Offset	
	0 ⁰	30 ⁰	0 ⁰	30 ⁰	0 ⁰	30 ⁰
82	7.0	5.0	5.0	2.2	4.0	1.7
80	7.0	4.9	4.8	2.2	3.8	1.6
78	7.0	4.8	4.3	2.1	3.4	1.6
76	7.0	4.7	3.8	2.0	3.1	1.5
74	6.5	4.6	3.5	1.9	2.9	1.4
72	6.0	4.5	3.2	1.9	2.6	1.4
70	5.5	4.5	3.0	1.8	2.4	1.3
68	5.0	4.4	2.9	1.8	2.3	1.3
66	4.8	4.3	2.7	1.7	2.2	1.2
64	4.5	4.2	2.5	1.7	2.0	1.2
62	4.0	3.8	2.4	1.7	1.9	1.2
60	3.8	3.4	2.3	1.6	1.9	1.1
58	3.6	3.2	2.2	1.6	1.8	1.1
56	3.4	3.0	2.2	1.6	1.7	1.1
54	3.0	2.8	2.1	1.6	1.6	1.1
52	2.8	2.7	2.0	1.6	1.5	1.1
50	2.5	2.4	1.9	1.5	1.5	1.1
45	2.0	1.8	1.8	1.5	1.4	1.1
40	1.5	1.4	1.5	1.5	1.0	1.0
35	1.3	1.2	1.3	1.2		
30	1.1	1.1				
Reeving	1	1	1	1	1	1

2.4 Overall view (Unit: Metric mm)



3 Specifications, superstructure

3.1 Boom and telescoping mechanism

The main boom consists of 6 oval boom sections made from imported high-strength structural steel (WELDOX 960E), providing the boom with super lifting capacity.

Basic number of reeving: 14

Max. number of reeving: 16 (adding 1 additional pulley)

All telescopic sections are automatically driven by a telescopic cylinder and pinned mechanically, extendable independently of each other.

3.2 Jib

The jib consists of two jib sections and one jib extension. The jib section 1 is reducing and lattice structured and the jib section 2 is constant and box-shaped. Jib section 2 can be pulled out from jib section 1. The jib extension is constant and lattice structured. The jib can be attached below 0° or 30° in relation to boom. The jib extension is optional.

The jib cannot be attached with the vehicle during driving.

Jib length: 11m, 18.6m, 26.6m (with jib extension).

3.3 Slewing table

The slewing table welded by high-strength structural steel ($\delta s = 960\text{MPa}$) has high structural strength and super bearing capacity.

3.4 Rooster sheave

It is inserted at the boom head of telescopic boom section 5. 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 hydraulic cylinder with safety balance valve provides the boom with stable derricking movements from -1.5° to 82° .

3.6 Slewing mechanism

Dual slewing mechanism: hydraulic motor + planetary reducer

2 lines of roller type slewing bearing provide big output torque and smooth slewing.

3.7 Hoist mechanism

Hydraulic motor + planetary reducer

Types of main and auxiliary hoist mechanism are different. Main hoist mechanism is driven by variable motor and auxiliary hoist mechanism is driven by fixed displacement motor.

Imported wire rope diameter for main and auxiliary mechanism: $\phi 19$ mm

The auxiliary hoist mechanism cannot be attached with the vehicle during driving.

3.8 Hook

5 hooks: 120 ton, 90 ton, 55 ton, 20 ton, 7ton (1 reeving);

Basic hooks: 90 ton, 55 ton, 20 ton, 7 ton;

Optional: 120 ton;

Straight shank hooks with two points: 120 ton, 90 ton;

Straight shank hooks: 55 ton, 20 ton, 7 ton.

3.9 Operator's cab

New V-series and steel construction can be tilted backwards 20° to broaden the operator's vision, luxury equipment, A/C and heater.

3.10 Outriggers

The synchronous telescoping of two-stage horizontal H-type sliding beam can be fully / half extended and retracted simultaneously with a horizontal cylinder and wire rope used together.

H-type sliding beam with box-shaped section welded by high-strength steel ($\sigma_s=960\text{MPa}$). The new outrigger control box can be operated from both sides of chassis by filmy button. Each is equipped with outrigger working lights, control box lighting lamps and electronic support control unit.

This crane is not equipped with the 5th outrigger.

3.11 Hydraulic System

The superstructure is electro-hydraulic proportional controlled with computer system, providing comfortable operation, accurate jogging and simultaneous movements.

Open and close loop combined variable system offers little hydraulic pressure loss, high working efficiency, accurate movements, stable running and stepless speed regulation.

In addition, this crane is also of such functions as counterweight plates self-assembled and self-dismantled function, operator's cab tilting angle regulation, providing stable brake performance and high system reliability.

3.12 Electrical system

Modern data bus technology effectively decreases the use of cables and connections, improving system reliability and convenient for maintenance.

This system is of such functions as engine load limit control and maximum speed limit control.

The computer system is used to control and monitor mobile cranes. In addition to the function of displaying the relevant parameters on the LCD for analysis and treatment, it is also of self-diagnosis function.

Electron accelerator, easy for operation

GPS: optional.

3.13 Safety device

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

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

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

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

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

- 1) Boom angle indicator
- 2) Hoisting limit switch
- 3) Safety trap
- 4) Lowering limit switch
- 5) Two-way hydraulic lock
- 6) Balance valve
- 7) Relief valve

3.14 Engine, superstructure

In-line 6-cylinder diesel engine, manufactured by Benz, intercooled, conforms to EURO II.

Maximum rated power: 190kw/2200rpm

Maximum output torque: 1000Nm/1200rpm

3.15 Air conditioning

The driver's cab and operator's cab are all equipped with air conditioning and heater for vehicle.

3.16 Counterweight

Movable combination counterweight plates can be combined according to various working conditions.

Total weight: 38T

Movable combination counterweight plates can be assembled and disassembled by the counterweight handler on the tail of slewing table.

Counterweight variants: 0 ton, 10 ton, 24 ton, 32 ton, 38 ton.

3.17 Central lubricating system

All the lubricating points are automatically supplied with the correct grease quantity.

4. Specifications, chassis

Code	Engine model	Manufacturer
ZLJ5551V3	OM501LA. III/18	Benz

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