

# **XGC75T**

## **Telescopic Crawler Crane**



# **XGC75T**

**RONCO GROUP**







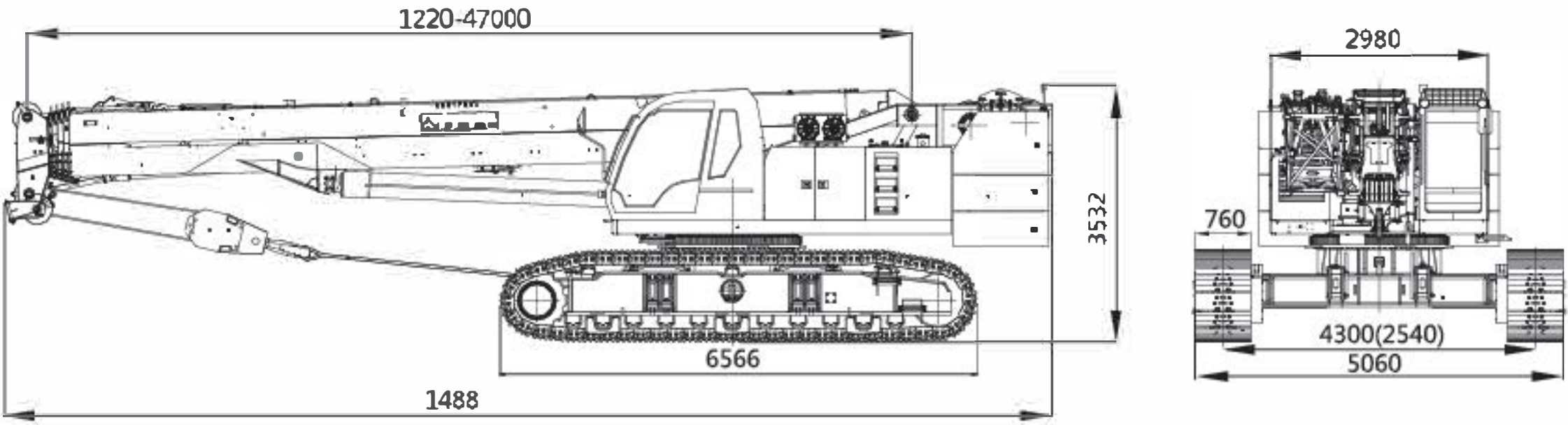
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The Main Technical Parameters

	Items		Unit	Data
Dimension	Overall length		mm	14448
	Overall width (extension/retraction)		mm	5060/3400
	Overall height		mm	3532
	Central distance from drive roller to driven roller		mm	5525
	Track shoe width		mm	760
Weight	Total mass in travel state		kg	79985
Travel	Max. travel speed with no load		km/h	2.5
	Max. travel speed with full load		km/h	1.5
	Min. ground clearance		mm	472
	Max. grade-ability		%	40
	Ground pressure		MPa	0.093
Power	Engine model		-	WP7.270
	Engine rated output power		KW	199
	Engine rated rotation speed		r/min	2000
	Engine emission standard		-	-
Capacity	Hydraulic oil tank		L	1000
	Fuel tank		L	550
Main performance	Max. rated lifting capacity		t	75
	Min. rated working radius		m	3
	Max. load moment	Baseboom	kN·m	2764
		Max. length boom	m	1443
	Lifting height	Base boom	m	11.6
		Max. length boom	m	46
		Max. length boom + Jib	m	62.1
	Boom length	Base boom	m	12.2
		Max. length boom	m	47
		Max. length boom + Jib	m	64.5
Working speed	Jib offset angle		°	0°, 15°, 30°
	Boom raising time		s	60
	Boom full extension time		s	110
	Max. slewing speed		r/min	2.0
	Hoisting speed (no load at the 4th layer)	Main winch system	m/min	140
		Auxiliary winch system	m/min	90

Pictures and data in this catalog will change with the update and modification of products, so please take the actual vehicle as reference.





## Brief Introduction

## Crane Superstructure

发动机/Engine
潍柴WP7.270发动机 额定功率/转速：199kW/2000rpm 燃油箱：有效容积550L。
Weifang Diesel WP7.270, rated power / speed: 199kW/2000rpm. Fuel tank: effective capacity 550L.

起升机构/Hoist Gear
起升机构描述： 空载起升速度：0 ~ 140m/min 钢丝绳直径/长度： 主卷钢丝绳：20mm/240m 副卷钢丝绳：20mm/150m 额定单绳拉力:7.1t
Hoist winch description: Hoisting speed with no load: 0 ~ 140m / min. Wire rope diameter / length: Main winch rope: 20mm/240m. Auxiliary winch rope: 20mm/150m. Rated single line pull: 7.1t.

变幅机构/Luffing Gear
变幅机构描述：单缸前支变幅 主臂起升时间≤60S
Luffing winch description: single cylinder front support luffing Boom raising times≤60S

液压系统/Hydraulic Gear
液压先导控制,控制精准,微动性好,调速范围广。起重作业伸缩、变幅及起升液压系统与行驶作业液压系统共用一恒功率双泵，回转系统和先导系统分别单独的齿轮泵供油。
The hydraulic system adopts electronic-proportional valve control, featuring precise control, excellent fine movement and wide speed range. The hydraulic system of telescoping, luffing, hoisting and travel operation shares the same double pump; swing system adopts closed type pump; and the pilot system gets oil supply from gear pump of displacement.

回转机构/Slewing Unit
回转机构布置于转台右前端，由马达驱动。 行星减速机与回转支承齿轮外啮合进行回转，具有自动滑转功能，可调整臂架起重作用线与重物同铅直线，保证作业安全。行星齿轮减速机具备常闭、片式制动器工作可靠维修方便。 回转支承：采用单排四点接触球式回转支承，承载能力强，保证上车360°回转作业安全、平稳。 回转速度：0 ~ 2.0r/min

Slewing gear is on the left of the behind of turntable and driven by motor.  
The planetary reducer is meshed with slewing bearing outer gear, hydraulic buffering, with free swing function to ensure operation safety. There is constant closed, disk-type brake for reliable operation and easy for maintenance.  
Slewing gear: 4-row column outer slewing gear, with strong bearing capacity, ensuring superstructure 360 ° swing operation safe and reliable.  
Swing speed: 0 ~ 2.0r/min

电气控制系统/Electric Control System
采用ECU控制器，脚油门，手油门，通过CAN实现对发动机转速的高效控制。 系统采用供电方式为DC 24V，负极搭铁单线制。采用PLC可编程控制器作为控制系统的核心，系统由发动机控制、安全控制、先导控制、力矩限制器控制、辅助功能控制等几部分组成。通过显示器实时监测发动机水温、机油压力，当超过安全临界值时，蜂鸣器自动报警；同时，通过力 limiter 对当前工况的分析，当吊重量、侧角或幅度任意一值超出安全范围时，三色报警灯和蜂鸣器会发出“声光报警”并通过程序控制，限制危险动作的进行。

Use of ECU controller, foot accelerator, hand accelerator, efficient control of the engine speed by CAN. The system uses DC 24V for power supply, negative ground and single cable system. PLC programmable controller is used as the core of the control system, the system consists of several parts such as engine control, safety control, pilot control, load moment limiter control, auxiliary function control. Real-time monitoring through the display of engine temperature, oil pressure, buzzer warning when the load exceeds the safety limit: at the same time, analysis of current conditions such as lifting load weight, boom elevation angler or radius through load moment limiter, if any values exceed safe limits, a three-color warning light and buzzer will give “sound and light warning” , and control and restriction of hazardous actions by program control.

## Crane Carrier

Crane carrier comprises car-body,crawler track and travel gear  
Car body and crawler are using the plug in connection.

履带伸缩/Track Frame Extension/Retraction
通过履带伸缩油缸实现履带梁的扩张与收缩。方便转场及狭窄环境通过。
Retraction is achieved by track frame telescopic cylinder, facilitate site transition and narrow environment through.

行走装置/Travel Device
有行走马达、减速机、驱动轮来实现整机的直线行走及转弯。空载行驶速度为0 ~ 2.5 km/h，带载行驶速度为0 ~ 1.5 km/h。
It realizes crane straight travel and steer through travel motor, reducer and drive roller. Travel with no load speed: 0 ~ 2.5km/h; Travel with load speed: 0 ~ 1.5 km/h

吊钩/Hook Block			
名称	75t 吊钩	55t 吊钩	7t 吊钩
重量( Kg )	700	470	150
数量	1	1	1
Name	75t hook block	55t hook block	7t hook block
Weight(kg)	700	470	150
Qty.	1	1	1

平衡重/Counterweight
平衡重由上车平衡重与中央平衡重两部分组成。 上车平衡重重量为21.5t；中央平衡重由1块1.1t组成。
Counterweight system consists of superstructure and undercarriage counterweight. The superstructure counterweight total 21.5t; the undercarriage counterweight consists of two 1.1t counterweight slabs. The undercarriage counterweight must be installed during operation, and the superstructure counterweight is installed according acity and boom length.

## Safety Devices

Safety devices comprise:emergency stop switch、pilot control switch、load moment limiter、hoist limit switch、level meter、slewing locking device、rope end limiter,etc.

紧急停止/Emergency Stop Switch
按下急停开关，发动机熄火，整车动作停止。
Press the emergency stop switch to stop the engine, and to stop all the machine movements.

先导控制开关/Pilot Control Switch
按下开关后，起重作业电气系统才能正常操作。
Press the switch, the electric system for lifting operation starts to a normal work.

力矩限制器/LMI
当吊重量大于额定起重量，吊臂仰角超出额定范围时，或幅度超出额定范围时，力矩器会发出信号，限制危险动作的继续进行。
The LMI will send our alarm signal to prevent dangerous movement when the lifting capacity exceeds the rated capacity, boom angle exceeds rated area or radius exceeds rated area.

起升高度限位器/Hoist Limit Switch
由主、副臂端部限位开关和重锤构成，当吊钩中心起升至距吊臂滑轮中心约710mm时，起升动作自动停止。
It consists of boom and jib end limit switch and the weight, which will automatically stop the hoisting movement when hook block center is raised 710mm to boom sheave center.

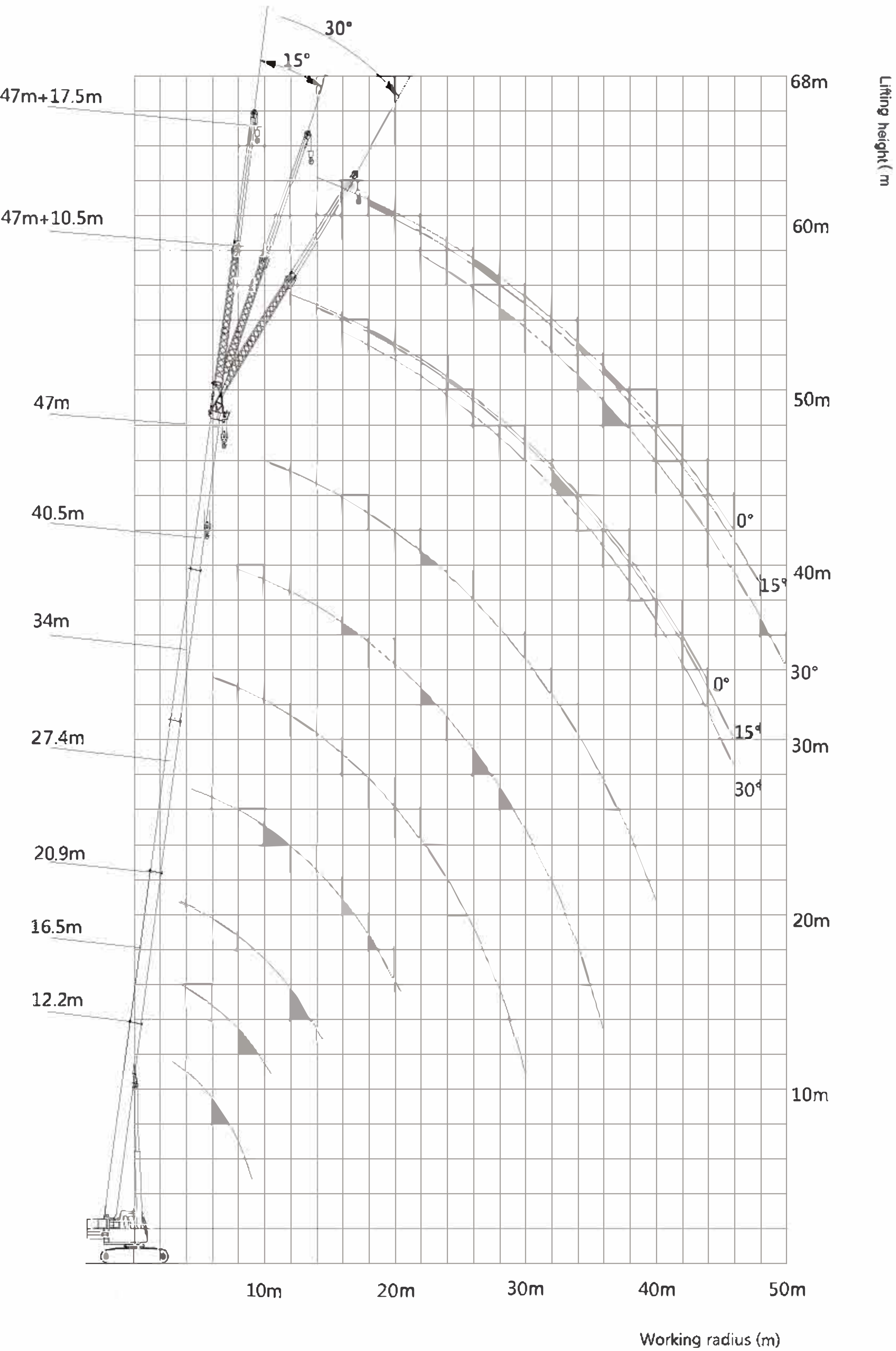
水平仪/Level Meter
转台内部、回转支承上方装有水平仪，监控地面是否满足作业要求。
A level meter is set inside the turntable and on the top of swing,to monitor the ground surfacefor operation requirements.

回转锁止装置/Slewing Locking Device
保证运输时转台有效锁止，防止其自由滑转。
The device is used to lock the turntable during transport to avoid free swing.

三圈保护器/Rope-end Limiter
当吊钩下降至卷扬钢丝绳剩余三至五圈时，落钩自动停止。
The device is used to stop hook block lowering when the hook block lowering down and only three to five turns of wire rope left on the winch drum.



Working Area



Boom Lifting Load Chart

Boom working condition,crawler fully extends,21.5t counterweight,static lifting

Radius/Boom length (m)	12.2	16.5	20.9	27.4	34	40.5	47
3	75						
4	68	61	42				
5	56.4	55	42				
6	40.5	46.7	39	27.5			
7	31.1	34.8	34.5	27.5	22		
8	24.8	27.3	27	26	21	17	
9	20.4	22.1	21.9	23.8	20	15.8	
10		18.4	18.1	19.9	19	15.2	11.5
12		15.5	15.3	16.9	14.2	14.7	10.5
14		11.3	11.2	12.7	11.1	11.5	10
16			8.5	9.8	8.8	9.2	9.5
18			6.4	7.8	7.1	7.5	7.8
20				6.2	5.8	6.2	6.5
22				5	4.8	5.2	5.4
24				4	3.9	4.3	4.6
26					3.2	3.6	3.9
28					2.6	3	3.2
30					2.1	2.5	2.7
32						2	2.3
34						1.6	1.9
36						1.3	1.5
38							1.2
	12	10	7	5	4	3	3
	68.7	73.4	74.8	77.3	78.1	79.5	79.3
	25.4	42.8	40.1	37.3	21.6	22.7	35.3

Boom Lifting Load Chart

Boom working condition,crawler fully extends,15.5t counterweight,static lifting

Radius/Boom length (m)	12.2	16.5	20.9	27.4	34	40.5	47
3	75						
4	68	61	42				
5	47	55	42				
6	33.4	38.7	39	27.5			
7	25.5	28.6	34.5	27.5	22		
8	20.2	22.2	27	23.2	21	17	
9	16.5	17.9	21.9	18.8	17.8	15.8	
10		14.7	18.1	15.6	15	15.2	11.5
12		12.3	15.3	13.1	11	11.5	10.5
14		8.7	11.2	9.7	8.4	8.8	9.1
16			8.5	7.3	6.6	7	7.3
18			6.4	5.6	5.2	5.6	5.8
20				4.3	4.1	4.5	4.8
22				3.3	3.3	3.6	3.9
24				2.5	2.6	2.9	3.2
26					2	2.3	2.6
28					1.5	1.8	2.1
30					1.1	1.4	1.7
32						1	1.3
	12	10	7	5	4	3	3
	68.7	73.4	74.8	77.3	78.1	79.5	79.3
J	25.4	42.8	40.1	37.3	21.6	36.2	47.6

Boom working condition,crawler fully extends,8.5t counterweight,static lifting

Radius/Boom length (m)	12.2	16.5	20.9	27.4	34	40.5	47
3	75						
4	60.5	61	42				
5	37.5	46	42				
6	26.4	30.6	30.3	27.5			
7	19.9	22.4	22.1	27.5	21.4		
8	15.6	17.2	16.9	26	17	17	
9	12.6	13.6	13.4	23.8	13.9	14.3	
10		11	10.8	19.9	11.5	12	11.5
12		9	8.8	16.9	8.3	8.7	9
14		6.1	6	12.7	6.2	6.6	6.9
16			4.1	9.8	4.6	5	5.3
18			2.7	7.8	3.5	3.9	4.1
20				6.2	2.6	3	3.2
22				5	1.9	2.3	2.5
24				4	1.3	1.7	1.9
26						1.2	1.5
28							1
	12	10	7	5	4	3	3
	68.7	73.4	77.7	77.3	78.1	79.5	79.3
	68.7	29.6	29.2	37.3	43.2	49.8	54.3

Boom Lifting Load Chart

Boom working condition,crawler fully extends,0t counterweight,static lifting

Radius/Boom length ( m )	12.2	16.5	20.9	27.4	34	40.5	47
3	75						
4	46	61	34.1				
5	28	34.5	34.1				
6	19.4	22.6	22.3	23.9			
7	14.4	16.2	15.9	17.3	15.8		
8	11	12.1	11.9	13.1	12.4	12.9	
9	8.6	9.4	9.1	10.3	9.9	10.4	
10		7.3	7.1	8.2	8.1	8.6	8.9
12		5.8	5.6	6.7	5.6	6	6.3
14		3.6	3.4	4.5	3.9	4.3	4.6
16			2	2.9	2.7	3.1	3.4
18				1.9	1.8	2.2	2.4
20				1	1.1	1.5	1.7
22							1.2
	12	10	6	4	3	3	3
	68.7	73.4	77.7	77.3	78.1	79.5	79.3
	25.4	29.6	40.1	44.3	52.9	60.8	63.3

Boom working condition,crawler fully extends,21.5t counterweight,travel with a load

Radius/Boom length ( m )	12.2	16.5	20.9	27.4
3	52.5			
4	47.6	42.7		
5	35.21	38.5	29.4	
6	25.2	29.12	27.3	19.2
7	19.32	21.63	21.49	19.2
8	15.47	17.01	16.8	17.64
9	12.74	13.79	13.65	14.35
10		11.41	11.27	11.97
12		9.66	9.52	10.22
14		6.9	7	7.63
16			5.32	5.95
18			3.9	4.69
20				3.71
22				3.01
	9	7	5	4
	68.7	73.4	74.8	77.3
	25.4	42.8	40.1	37.3



Boom Single PulleyLifting  
Load Chart

Boom single pulley working condition,crawler fully extends,21.5t counterweight,static lifting

Radius/Boom length ( m )	12.2	16.5	20.9	27.4	34	40.5	47
3	6.5						
4	6.5	6.5	6.5				
5	6.5	6.5	6.5				
6	6.5	6.5	6.5	6.5			
7	6.5	6.5	6.5	6.5	6.5		
8	6.5	6.5	6.5	6.5	6.5	6.5	
9	6.5	6.5	6.5	6.5	6.5	6.5	
10		6.5	6.5	6.5	6.5	6.5	6.5
12		6.5	6.5	6.5	6.5	6.5	6.5
14		6.5	6.5	6.5	6.5	6.5	6.5
16			6.5	6.5	6.5	6.5	6.5
18			6.4	6.5	6.5	6.5	6.5
20				6.2	5.8	6.2	6.5
22				5	4.8	5.2	5.4
24				4	3.9	4.3	4.6
26					3.2	3.6	3.9
28					2.6	3	3.2
30					2.1	2.5	2.7
32						2	2.3
34						1.6	1.9
36						1.3	1.5
38							1.2
	1	1	1	1	1	1	1
	68.7	73.4	77.7	77.3	78.1	79.5	79.3
J	25.4	29.6	29.2	28.6	21.6	22.7	35.3

Jib Lifting Load Chart

Jib working condition,crawler fully extends,21.5t counterweight,static lifting

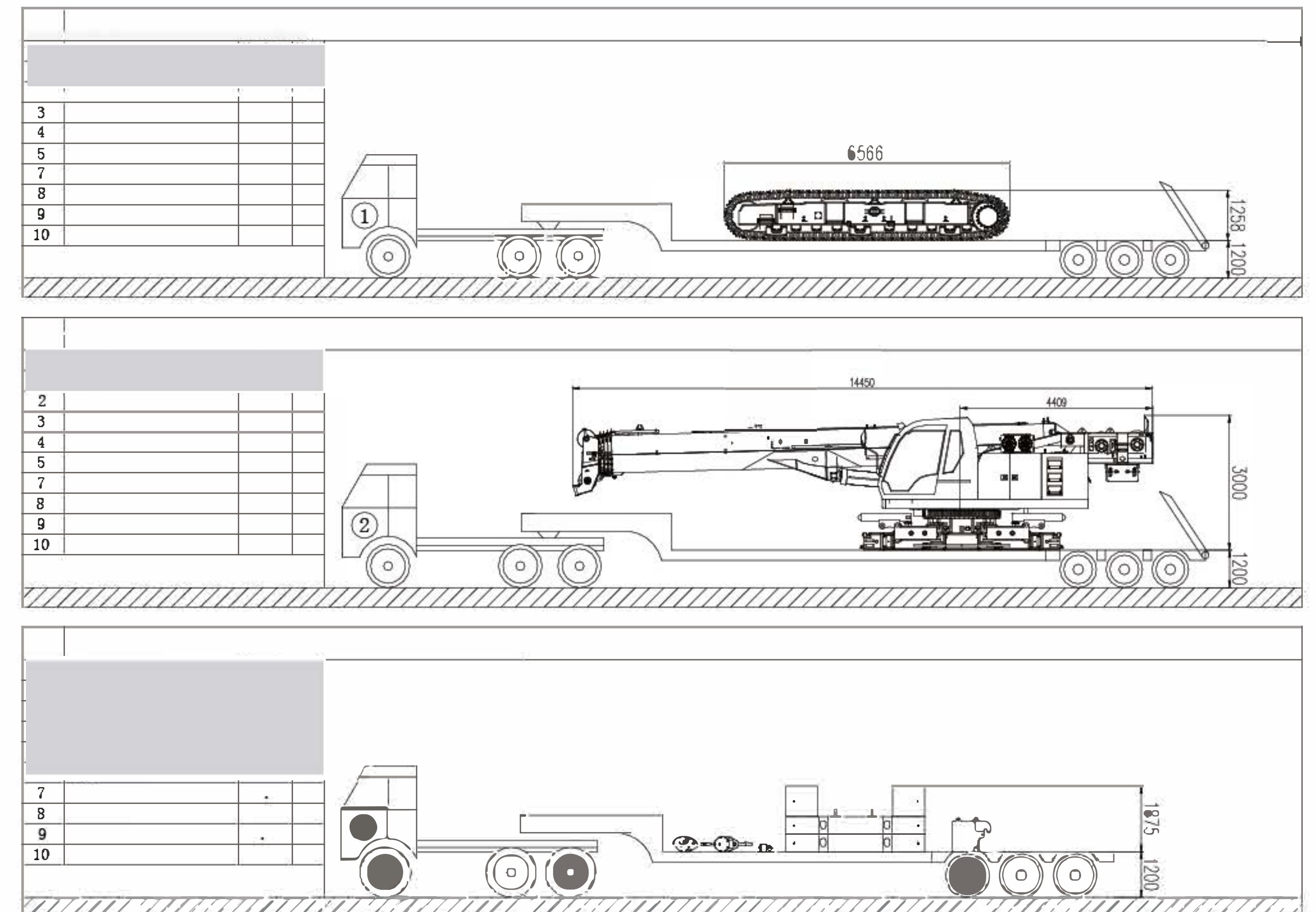
Boom length	Boom length 47m					
Jib length	Jib length 10.5m					
Radius ( m )	0°		15°		30°	
	Lifting load(t)	Lifting height(m)	Lifting load(t)	Lifting height(m)	Lifting load(t)	Lifting height(m)
11	5.50	55.8				
12	4.94	55.5	4.05	55.2		
14	4.69	54.9	3.95	54.7	3.73	53.9
16	4.54	54.2	3.95	54	3.59	53.3
18	4.54	53.5	3.86	53.3	3.32	52.5
20	4.44	52.7	3.64	52.5	3.14	51.7
22	4.13	51.7	3.41	51.5	2.95	50.8
24	3.83	50.7	3.18	50.5	2.82	49.7
26	3.57	49.6	3.00	49.4	2.73	48.6
28	3.27	48.4	2.86	48.2	2.59	47.3
30	2.8	47.1	2.68	46.8	2.50	46
32	2.4	45.6	2.59	45.4	2.41	44.5
34	2	44	2.2	43.8	2.3	42.8
36	1.7	42.3	1.8	42	1.9	41
38	1.4	40.4	1.5	40.1	1.6	39
40	1.1	38.3	1.2	38	1.3	36.8
42	0.9	36	1	35.6	1.1	34.4
44	0.7	33.3	0.8	32.9	0.8	31.6
46			0.6	29.9	0.6	28.5

# Jib Lifting Load Chart

Jib working condition,crawler fully extends,21.5t counterweight,static lifting

Boom length		Boom length 47m				
Jib length		Jib length 17.5m				
Radius ( m )	0°		15°		30°	
	Lifting load(t)	Lifting height(m)	Lifting load(t)	Lifting height(m)	Lifting load(t)	Lifting height(m)
14	3.3	62.1				
16	2.9	61.5	2.4	61.1		
18	2.7	60.9	2.2	60.6		53.9
20	2.45	60.2	2.1	59.8	1.7	53.3
22	2.20	59.4	1.95	59	1.6	52.5
24	2.05	58.5	1.85	58.1	1.55	51.7
26	1.9	57.5	1.75	57.1	1.5	50.8
28	1.75	56.5	1.65	56.1	1.45	49.7
30	1.7	55.3	1.55	56.1	1.4	48.6
32	1.6	54.1	1.55	53.7	1.35	47.3
34	1.45	52.8	1.4	52.3	1.3	46
36	1.35	51.3	1.35	50.9	1.25	44.5
38	1.3	49.7	1.3	49.3	1.2	42.8
40	1.25	48	1.25	47.6	1.15	41
42	1.1	46.2	1.2	45.7	1.15	39
44	0.9	44.2	1.1	43.6	1.1	36.8
46	0.7	42	0.9	41.4	1	34.4
48			0.7	38.9	0.8	31.6
50					0.6	28.5

## Transport Planning



Note:

1. The dimension in the diagram is design dimension which will be slightly different according to manufacturing error.
2. Place wood block in front and behind track frame to prevent slide during transport.
3. The transport dimension is sketch map, not drawn in proportion, and the dimension on the diagram is design value without package.