



TRUCK CRANE TC750C5





LIUGONG

TC750C5

起重量下严禁站人

柳工

TC750C5

46000kg

Selling Points



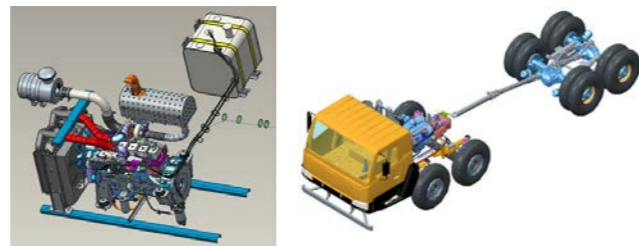
Superior lifting capacity

- ◎ Five-section U-shaped boom of large cross section with maximum length reaches up to 48m ,which is the longest among same type of products in the whole industry.
- ◎ The single-plate boom head and the compact boom tail structure improve the overlapping between boom section as well as make the boom bearing capacity stronger.
- ◎ The 7.9m transverse outrigger span with a total counterweight of 13t makes its lifting performance 5-10% higher than that of the products in same class.
- ◎ The rear-mounted luffing cylinder hinge point improves the lifting stability by 15%,making the crane an industry leader
- ◎ The newly-developed elevated and widened box-shaped with large cross section frame strengthens the torsional resistance and bending capacity comprehensively..



Strong and energy-saving power heavy-duty chassis

- ◎ Double engine and low-power engine of the superstructure reduce the working fuel consumption by more than 25%.
- ◎ The combination of DCEC high-power engine, Fast 9-speed gearbox with synchronizer and the heavy-duty double reduction axle optimizes the suitability of power, and allows the maximum traveling speed of 85km/h, the maximum gradeability of 46%. (please refer to the chassis 3D diagram as below)

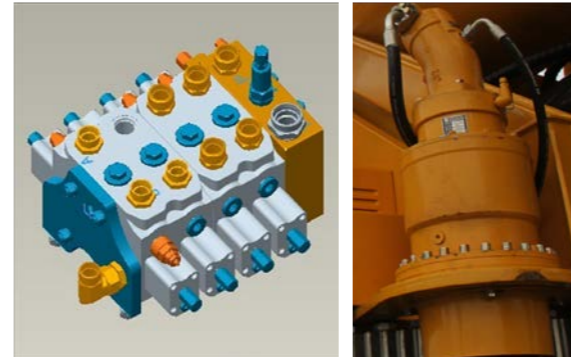


Stable and reliable operation system

- ◎ The configuration of internationally well-known hydraulic pump and winch variable motor satisfies the precision lifting demand. The minimum slewing speed and minimum winch speed is 0.1°/s and 1.5 m/min respectively.

Selling Points

- ◎ The large displacement variable pump and load sensitive technology effectively reduce energy consumption and the heating of the hydraulic system.
- ◎ The valve post-compensation technology ensures smooth compound action.
- ◎ The advanced closed slewing system ensures stable and reliable slewing.



Humanized control system

- ◎ The configuration of load moment limiter, three-wire rope protector, hook height limiter, night vision level gauge, ABS, etc. provides the crane with comprehensive safety protection such as overload protection, over-wind protection, over-fall protection, tip-over protection, and driving protection.



- ◎ The operator's cab is equipped with the winch monitor for easy observation and operation.
- ◎ The reverse image system is set in the cab to make parking easier and avoid scratches.



- ◎ The engine start/stop device and acceleration switch are set in outrigger operation area, bringing easy operation.
- ◎ The flip-up superstructure canopy makes the maintenance more convenient.



- ◎ The suspension seat with high strength special-shaped steel pipe structure reduces fatigue and improves comfort.
- ◎ Air suspension type of the driver's seat can slide forwards and backwards and its angle can be changed, thus effectively reducing the driver's fatigue.



- ◎ The instrument panel and the rocker switches in the cab are arranged according to the service frequency to make the operator feel more comfortable and convenient.



- ◎ The cab is equipped with foldable sleeper, making the crane more comfortable.

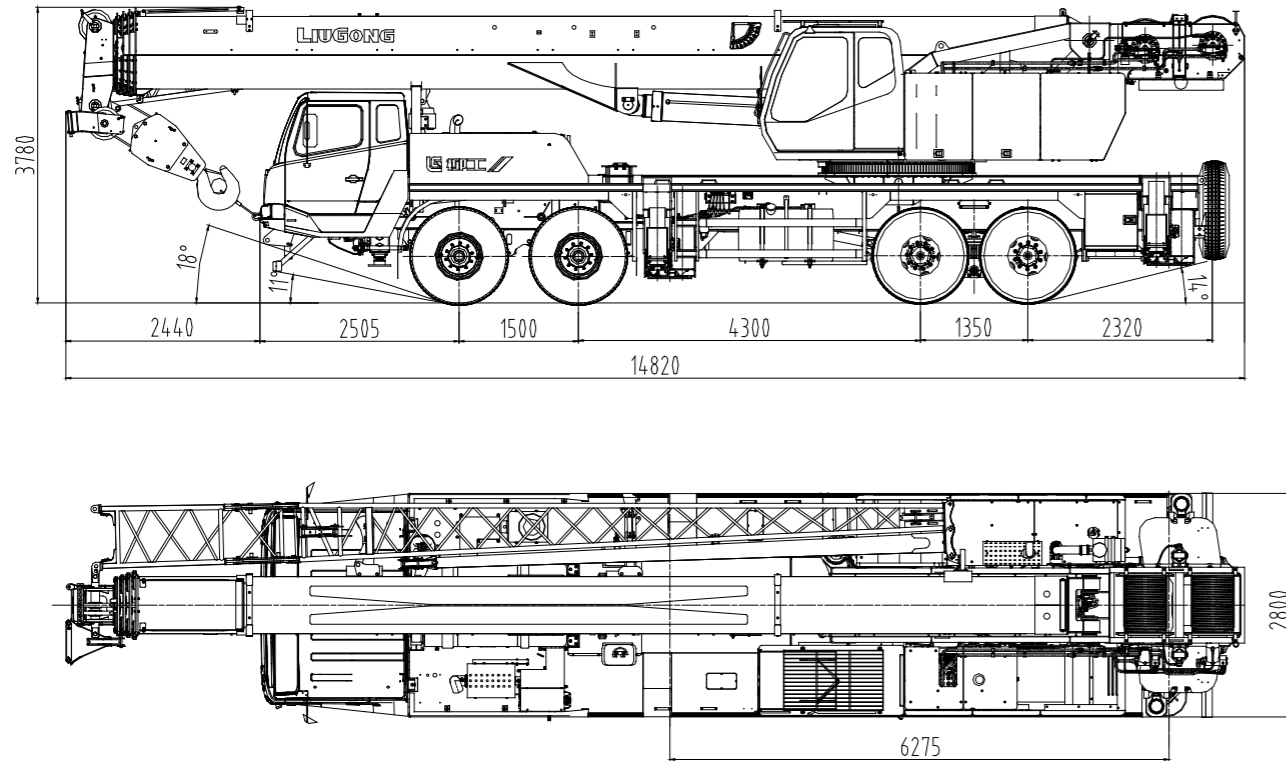


- ◎ The main hook features quick change parts of line. Specifically speaking, parts of line can be changed directly without removing the wedge sleeve, thus reducing the change steps and improving work efficiency.



- ◎ The configuration of remote control of the counterweight and remote control function for slewing allows removal of counterweight by one person only.

Overall Dimensional Drawing



Main Technical Parameters

Type	Item	Unit	Parameter	
Dimension parameters	Overall length	mm	14820	
	Overall width	mm	2800	
	Overall height	mm	3780	
Mass parameters	Dead weight in Travel Mode	kg	46000	
	Load	Axle load – 1,2	kg	20000
		Axle load – 3,4	kg	26000
Power parameters	Engine model		DCEC ISLe375 30	
	Max. power	kW/rpm	275/2100	
	Max. output torque	N.m/rpm	1550/1100-1400	
Traveling parameter	Max. traveling speed	km/h	85	
	Min. turning radius	m	12	
	Approach angle	°	≥ 18	
	Departure angle	°	≥ 14	
	Max. gradeability	%	46	
	Fuel consumption per 100 km	l	≤ 48	
	Max. lifting capacity	t	75	
Performance parameters	Turntable tail slewing radius	m	4.38	
	Max. load moment	Basic boom	kN.m	2958
		Fully-extended boom	kN.m	1693
	Outrigger span (transverse×longitudinal)	m	7.9×6.275	
	Boom length	Basic boom	m	12.5
		Fully-extended boom	m	48
		Fully-extended boom + jib	m	65.5
Working speed parameters	Single rope speed of main lifting mechanism. (no-load)	m/min	130	
	Single rope speed of auxiliary lifting mechanism. (no-load)	m/min	130	
	Full extension/retraction time of boom	s	105/135	
	Full lifting/descending time of boom	s	50/100	
	Slewing speed	r/min	0-2	

Load Chart

Unit:kg

13T counterweight,working in rear and side direction,fifth outrigger retracted; Working in all directions with fifth outrigger extended.					
Working radius (m)	Main boom(m)				
	12.50	19.18	25.85	32.53	39.20
3	75000	30000			
3.5	75000	30000			
4	68000	30000	30000		
4.5	65000	30000	30000		
5	58000	30000	30000		
5.5	54000	30000	30000		
6	50300	30000	29500	20000	
6.5	46000	30000	28800	20000	
7	42500	30000	27800	20000	
7.5	39500	30000	27000	19700	
8	37100	30000	26200	19000	11500
9	31400	30000	24800	17800	11500
10		27600	23500	16800	11500
11		23400	22000	15800	11500
12		20200	19600	14700	11500
14		15500	16500	13500	11300
16			13100	12100	10300
18			10700	10800	9400
20			9000	9300	8600
22				7900	7800
24				6800	7100
26				6100	6100
28					5300
30					4700
32					4000
1# cylinder	0%	0%	0%	0%	0%
2# cylinder	0%	25%	50%	75%	100%
Parts of line	12	6	6	4	3

Load Chart

Unit:kg

13T counterweight,working in rear and side direction,fifth outrigger retracted; Working in all directions with fifth outrigger extended.					
Working radius (m)	Main boom(m)				
	14.70	21.38	28.05	34.73	41.40
3	64000	30000			
3.5	62000	30000			
4	60000	30000			
4.5	58000	30000	30000		
5	55000	30000	30000		
5.5	52000	30000	30000		
6	48000	30000	30000		
6.5	44000	30000	30000	20000	
7	41000	30000	30000	20000	
7.5	38500	30000	30000	20000	
8	35200	30000	29200	20000	
9	31000	30000	27600	19100	11500
10	25500	27100	26000	17900	11500
11	21400	22900	23700	16800	11500
12		19500	20500	15500	11500
14		15200	15900	14200	11500
16		12000	12700	12500	10800
18			10400	10800	9800
20			8700	9000	8900
22			7000	7700	7800
24				6600	6800
26				5600	5900
28				4800	5100
30					4500
32					3900
34					3200
1# cylinder	25%	25%	25%	25%	25%
2# cylinder	0%	25%	50%	75%	100%
Parts of line	11	6	6	4	3

Load Chart

Unit:kg

13T counterweight,working in rear and side direction,fifth outrigger retracted; Working in all directions with fifth outrigger extended.					
Working radius (m)	Main boom(m)				
	16.90	23.57	30.25	36.92	43.60
3	65000				
3.5	63000	30000			
4	61000	30000			
4.5	58000	30000			
5	55000	30000			
5.5	52000	30000	30000		
6	48000	30000	30000		
6.5	45000	30000	30000		
7	42500	30000	30000	20000	
7.5	39000	30000	30000	20000	
8	35500	30000	30000	20000	
9	30700	30000	28600	19200	
10	25200	26700	26500	18200	11500
11	21100	22600	23400	17200	11500
12	18000	18800	20200	16100	11500
14		14800	15600	14600	11500
16		11500	12400	12800	10800
18		9200	10100	10600	10000
20			8400	8800	9000
22			7000	7400	7800
24			5800	6300	6600
26				5400	5700
28				4600	4900
30				4000	4300
32					3700
34					3200
36					2500
1# cylinder	50%	50%	50%	50%	50%
2# cylinder	0%	25%	50%	75%	100%
Parts of line	11	6	5	4	3

Load Chart

Unit:kg

13T counterweight,working in rear and side direction,fifth outrigger retracted; Working in all directions with fifth outrigger extended.					
Working radius (m)	Main boom(m)				
	19.10	25.78	32.45	39.12	45.80
3	55000				
3.5	52500				
4	50200	30000			
4.5	47200	30000			
5	44000	30000			
5.5	41500	30000			
6	39200	30000	30000		
6.5	37100	29500	28800		
7	35200	29200	27400		
7.5	33500	29000	26200		
8	31200	27600	24500	19500	
9	28500	25200	22900	18900	
10	24900	23100	21100	18100	
11	20900	21200	19500	17300	11500
12	17600	18500	17700	16000	11500
14	13300	14600	15300	14500	11500
16		11500	12200	12600	10800
18		9200	9900	10300	10000
20		7100	8200	8600	8900
22			6800	7200	7500
24			5700	6100	6400
26			4800	5200	5500
28				4500	4700
30				3800	4100
32				3100	3500
34					3000
36					2400
1# cylinder	75%	75%	75%	75%	75%
2# cylinder	0%	25%	50%	75%	100%
Parts of line	9	6	5	4	3

Load Chart

Unit:kg

13T counterweight,working in rear and side direction,fifth outrigger retracted; Working in all directions with fifth outrigger extended.					
Working radius (m)	Main boom(m)				
	21.30	27.98	34.65	41.33	48.00
3	44000				
3.5	44000				
4	43500				
4.5	43000	30000			
5	41000	30000			
5.5	39500	30000			
6	37500	30000			
6.5	35500	30000			
7	33700	29600	26400		
7.5	32000	28200	25300		
8	30200	26500	24000		
9	27800	24500	22200	17800	
10	24800	22500	20500	17200	
11	20700	20500	19000	16500	11500
12	17500	17800	17300	15500	11500
14	13200	14400	15000	14100	11500
16	9500	11300	12000	12400	10800
18		9000	9700	10100	9800
20		7300	8000	8400	8700
22		6000	6600	7000	7400
24			5500	5900	6200
26			4600	5000	5300
28			3900	4300	4600
30				3600	3900
32				3100	3400
34					2900
36					2200
1# cylinder	100%	100%	100%	100%	100%
2# cylinder	0%	25%	50%	75%	100%
Parts of line	8	6	4	3	3

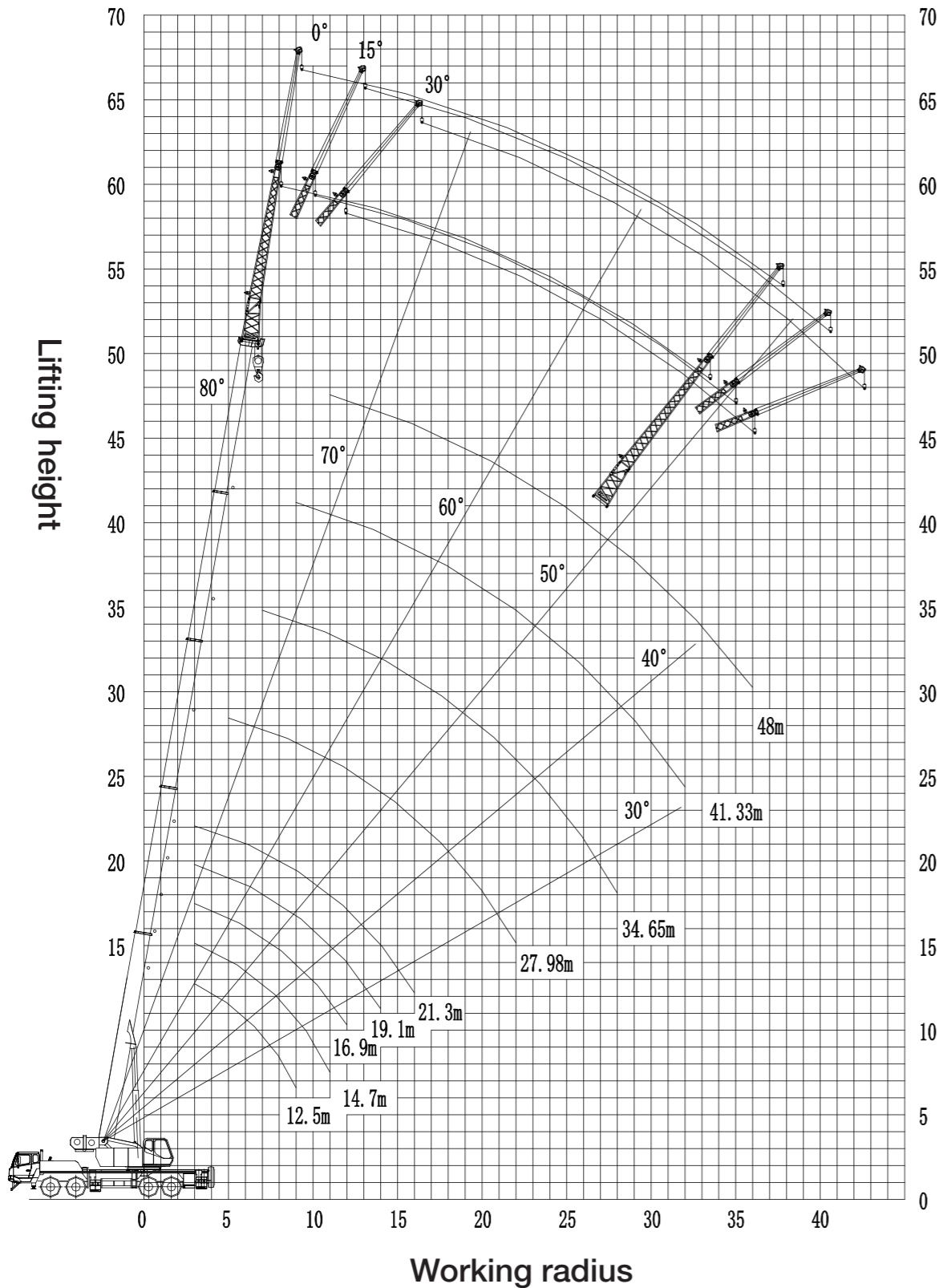
Load Chart (jib)

Unit: kg

Working angle (°)	13t counterweight,48m base boom+17.5m jib					
	Working in all directions with fifth outrigger extended.					
	48m+10.5m			48m+17.5m		
	0°	15°	30°	0°	15°	30°
80°	5000	3500	3000	3000	1700	1300
78°	4700	3300	2800	2700	1600	1200
76°	4400	3200	2600	2400	1500	1150
74°	4100	3000	2500	2100	1400	1100
72°	3800	2800	2400	1950	1300	1050
70°	3500	2700	2300	1850	1250	1000
68°	3200	2600	2200	1700	1200	1000
66°	3000	2500	2150	1600	1150	1000
64°	2600	2450	2100	1500	1100	950
62°	2300	2300	2050	1400	1050	950
60°	2000	2000	1800	1300	1000	900
58°	1800	1700	1400	1200	900	900
56°	1500	1400	1200	1100	850	750
54°	1200	1100	1000	900	800	700
52°	900	850	800	750	700	-
Parts of line	1					
Hook	7t					

Lifting Height Curve

TC750C5 Lifting Height Curve



Configuration Information

Superstructure

Turntable structure

It is made of high-strength steel plate and is designed with the large box structure at the bottom,improving the rigidity by 20%. The rear-mounted luffing hinge point improves the lifting stability under the same weight by 15%;The slewing ring with large ball and wide track brings high anti-tipping performance and better slewing stability.

Hydraulic system

The load sensitive variable hydraulic system, valve post-compensation technology, original imported variable plunger pump, slewing closed pump, and pressure measuring joint at the hydraulic system improve the product operation, maintenance and repair performance.

Control system

The movement of superstructure such as lifting, luffing, slewing and boom extending etc is controlled by two pilot hydraulic control handles in the cab. The engine speed is controlled by the electronic accelerate pedal.

Hoisting system

High pressure automatic variable plunger motor is equipped to drive the winch reducer with double folded rope groove and provide the lifting power. Normally closed winch brake and the original imported winch balance valve are equipped to prevent gravity loss of the hook

Luffing system

Self-weight drop luffing system equipped with original imported self-compensating luffing balance valve, adjusting luffing speed automatically and improving the stability of the drop luffing operation.

Slewing system

The advanced closed slewing system together with the original imported closed variable pump and slewing plunger motor ensures stable and reliable start and stop of the slewing system and prominent micro-motion and control advantages.

Operator's cab

Designed with large interior space, the cab is made of corrosion-resistant steel plate and equipped with safety glass, full-coverage softening interior, panoramic skylight, adjustable seats and ergonomic devices such as winch monitor to ensure convenient observation and operation

Safety devices

Equipped with high-precision well-known brand load moment limiter, long angle sensor, height limiter, three wire rope protector, hydraulic relief valve, balance valve, outrigger bi-directional hydraulic lock, level meter and other protective devices.

Boom system

Five-section U-shaped boom made of high-strength welded structural steel, with double cylinder and rope row telescoping mode adopted. Basic boom length is 12.5m, and fully extended boom length is 48m. Folded jib length is 10.5m and fully extended jib length is 17.5m. Section one of the jib is designed of truss structure and section two of box deformation section structure. Jib offset angle: 0, 15, 30 degrees.

Counterweight

The fixed counterweight is 1.5t+2.5t and the movable counterweight is 4.25t+4.75t, with a total weight of 13t.

Configuration information

Lower structure

Cab

Panoramic and spacious cab with full coverage of softening interior. The seat is equipped with pneumatic shock absorber, which can slide forward and backward, its angle can be changed and effectively reduce driver fatigue. The folding sleeper design is spacious, comfortable and practical. Configured with standard air-conditioner, radio and USB music interface. The cab and the control room interior dashboard are ergonomically arranged in the far and near position to make the operator feel more comfortable and convenient.

Chassis

The self-made four-axle chassis of 8x4 type is applied, and it is configured with DCEC ISLe375 30 engine and Fast 9-speed gearbox.

Frame structure

The frame of large rectangular cross section structure with height and width increased improves the rigidity by 25% and greatly enhances the bearing capacity.

Outrigger

H-type outrigger with a span of 6.275m x 7.9m (longitudinal * transverse) makes the operation easier and more stable; the outriggers include 1-grade outrigger and 2-grade outrigger, both of which are made of fine grain high-strength steel plate.

Electric system

The 2 x 12V free maintenance battery is equipped with a mechanical power switch, which enables manual cut-off of the entire power supply.



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