Telescopic Crawler Crane EN 13000

XGTC100

- 100 t lifting capacity
- 13.3 - 52 m five-section pin boom
- 17.5 m jib
- WEICHAI WP7 EU Stage Ⅲ diesel engine
- Rear view, right side and hoist cameras
- High visibility cab with 15° tilt

Table of Contents

Table of Contents

Technical Descriptions

BASIC MACHINE

Capacity
100t at 2.5m

Boom
Five section boom with single-cylinder pinned telescoping system.

- Retracted Length: 13.3m
- Extended Length: 52.0m
- Extension Time: 150 seconds
- Elevating Angles: -1.5° to 80°
- Elevating Time: 65 seconds
- Boom Head: Five, 440 mm diameter cast nylon sheaves on heavy-duty roller bearings, and two lead-in sheaves.

XCMG LTI Load Moment Indicator

- Control function shutdown with audible and visual warnings
- Full color touch screen provides continuous display of working boom length, boom angle, working load radius, tip height, swing position, parts-of-line (operator set), machine track configuration , relative load moment, maximum permissible load and actual load
- Configurable working range limits with automatic soft stop
- External 3-color LED light stack indicates safe working conditions

SUPERSTRUCTURE

High-strength steel structure precision machined to accept boom and swing components. Centralized plumbing of lubrication points for slew bearing and boom pivot pin.

Counterweight
Self-erecting counterweight system with configuration sensing and remote control. Integrated access steps and mounting for handrails. Load charts available for various counterweight configurations.
Four upper counterweight configurations:

- 26,000 kg
- 18,500 kg
- 11,000 kg
- 0 kg

Carbody countweights:

- 2×45000kg

Fuel system
500L capacity diesel tank, with engine mounted filter and inline fuel/water separator.

Operator's Cab
Fully-enclosed, all-steel modular cab with lockable sliding door, acoustical lining, anti-slip floor, and tinted safety glass. Grab bars and steps are provided for easy access to the cab.

- 15° tilt
- Air conditioned with defroster, heater, and circulating fan.
- Four-way adjustable seat with headrest and seat belt Electronic foot pedals control travel. Two electrical foot pedal , one controls the boom telescope, another for track travel.
- Four-way adjustable armrest-mounted electronic joysticks control swing, main winch, auxiliary winch, boom hoist, and boom telescope.
- Selectable modes for Fine Control and Travel
- Seat termination switch immediately disables all joysticks and control pedals as the operator rises from the seat. Can also be disabled by switch on console.
- Camera views: Four cameras for view of winches, and rear, right and left sides of upper
- Remote control work lights mounted at front side, front right side.
- Two-speed windshield wipers for front and top glass.
- Dome light
- Dry-chemical fire extinguisher

Electrical system

- 24 VDC
- Equipped with arbitrary extension and retractiob of boom, virtual wall, track gauge detection and remote management functions.
- The crane is intelligent and has high safety in limit working conditions.
- CAN-bus transmission and port status inquiry in display interface (monitor all BUS sensors) make troubleshooting more easily. Shrapnel terminal and overload improves the maintenance convenience.
- Monitoring systems on winch, turntable and boom head are used to improve the operation comfort and safety.

Engine

- WEICHAI WP7 - 6 cylinder, 4 cycle, turbocharged and inter cooled
- Maximum power: 199 kW at 2,000 rpm
- Maximum torque: 1,200 N•m at (1,200~1500) rpm
- Emission Certifications: Euro Stage Ⅲ

Technical Descriptions

Hydraulic system

- Hydraulic Pumps: one high pressure, variable piston pumps with positive displacement and power limiting controls for crane functions; one gear pumps for pilot ,cooling and swing.
- Total Pump output: 615 l/min@ 2000 RPM engine speed. 320 bar maximum pressure
- Directional Valves: Multiple pressure and flow compensated valves with hydraulically controlled integrated relief valves.
- Reservoir: 1500 liter capacity with filler breather, sight gauge, cleanout, and sump drain.
- Filtration: one 20-micron, full flow return filters with electrical clogging indicator. 10-micron inline pilot oil pressure filter.

Winches

Planetary geared two-speed winch with grooved drum, hydraulic motor, multi-disc internal brake and counterbalance valve. Includes drum rotation and last layer indicators. (Complete winch performance specs on page 7).

Main Winch

- Rope Diameter and Length: 20 mm × 295 m
- Auxiliary Winch
- Rope Diameter and Length: 20 mm × 165 m

Swing

An axial piston swing motor with planetary gear reducer drives the pinion and the internal gear shear-ball slew bearing allowing smooth rotation even at low speeds.

- Swing Speed: 0 - 1.5 rpm
- Modes: Free swing with counter swing, or controlled swing with hydraulic braking
- Swing Parking Brake: Spring applied failsafe brake with hydraulic release that is controlled from the operators cab
- Swing Service Brake: Hydraulically applied, controlled through electronic joystick.
- House Lock Systems: 360° house lock actuated from the operator's cab.

CRAWLER CARRIER

Carrier comprising a center carbody, 4 extension beams, 2 crawlers, and integrated assembly jacks. Tool-free connection between crawlers and extension beams.

Carbody

Torsion resistant welded structure constructed of high strength steel. Hydraulic lines with quick connection to crawler drives.

Track Extension

Powerful hydraulic track extend system quickly adjusts operating width while stationary.
Track position sensing allows automatic selection of operating configuration in AML.

Crawlers

Two crawler frames are paired with a track group. Selfassembly with 4 track frame lifting points.

- Track Rollers: Fifteen bottom rollers and replaceable top wear pads on each track frame.
- Idler: Oil filled, self-lubricating with nitrogen type tensioner.
- Track Shoes: 850 mm.

Crawler drive

The tracks are powered by a planetary gear reducer and oblique axis piston motor controlled. Each crawler speed is infinitely variable, both independently and in opposite direction. Multi-sheet wet constant closed brake, spring brake, hydraulic release brake, to ensure a high braking safety during travel.

- 1.52 km/hr
- Gradeability (unladen): 45%

Assembly Jacks

2-stage jacks mounted to carbody structure with radio remote control and self-leveling for easy assembly/ disassembly for transport. Includes 4 octagonal outrigger pads.

Carbody Counterweights

Two carbody counterweights with integrated lift points.

- 2×45000kg

Technical Descriptions

OPTIONAL EQUIPMENT

Hook Blocks

- 100t hook block - seven steel sheaves with swivel hook & safety latch

Other

- Cold Weather Packages: Cold weather options are available for operation to -40°C (Consult factory for application support)
- Work Platform: Model WP750 0.9m x 1.8m, all steel, welded, two person platform with maximum capacity of 340 kg.
- Automatic central lubrication system
- Anemometer – Mounts to boom or jib head with cab display
- Aircraft Warning Beacon
- Cab Mounted Rotating Beacon
- TRAM Boom Access System
- FOPS: Operator Cab Falling Object Protection System; ISO 3449 Level II compliant
- Additional handrails for top of engine side covers
- Boom Removal System
- Full function Cable remote control package
- Equipped with arm head wireless zoom camera, reversing radar

Winch and Machine Weight Charts

MAIN WINCH PERFORMANCE					
Wire Rope: 20 mm diameter rotation resistant. Line pulls are not based on wire rope strength.					
Rope Layer	Max Line Pull (kN)	High Line Speed (m/min)	Pitch Dia (mm)	Layer (m)	Total (m)
1	115.6	102.8	450	53.7	53.7
2	106.1	111.9	490	58.5	112.2
3	98.1	121.0	530	63.2	175.4
4	91.2	130.2	570	68.0	243.4
5	85.3	139.3	610	72.8	316.2

AUXILIARY WINCH PERFORMANCE					
Wire Rope: 20 mm diameter rotation resistant. Line pulls are not based on wire rope strength.					
Rope Layer	Max Line Pull (kN)	High Line Speed (m/min)	Pitch Dia (mm)	Layer (m)	Total (m)
1	115.6	103	450	53.7	53.7
2	106.1	112	490	58.5	112.2
3	98.1	121	530	63.2	175.4
4	91.2	130	570	68.0	243.4

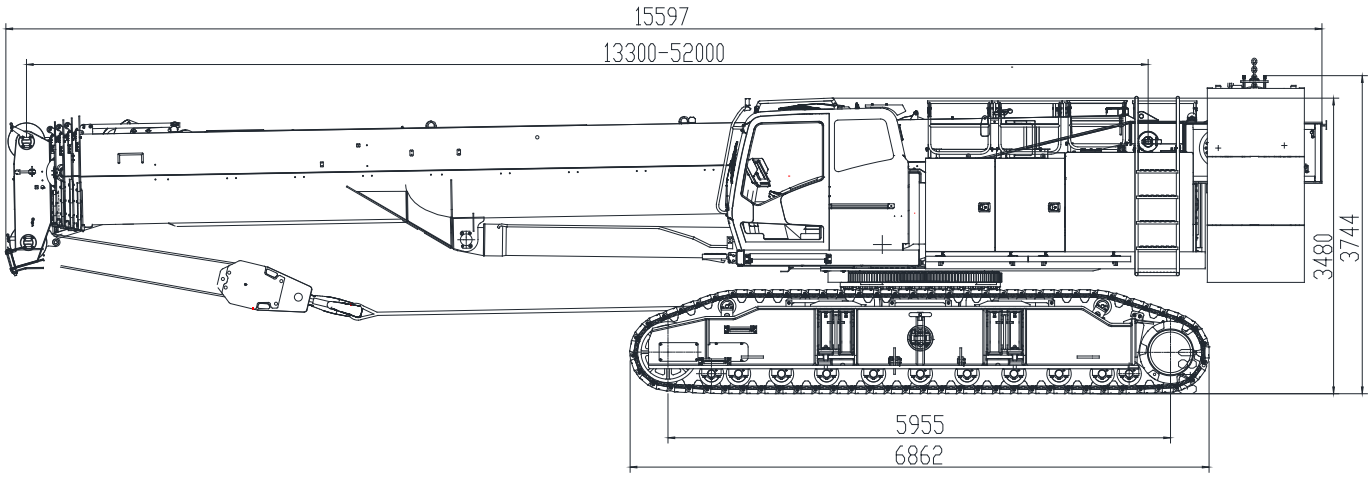
MACHINE WEIGHTS	t
Standard Crane integrated transportation without dismantling any parts	99.8
Standard Crane with 5 section, 52m boom, 2 winches with wire rope, auxiliary nose sheave,CWT (Counterweights removed)	73.8
Standard Crane with 2 winches and wire rope(counterweights and crawlers removed)	43.6
Standard Crane with 2 winches and wire rope(Boom, aux winch with wire rope , counterweights and crawlers removed)	30.6

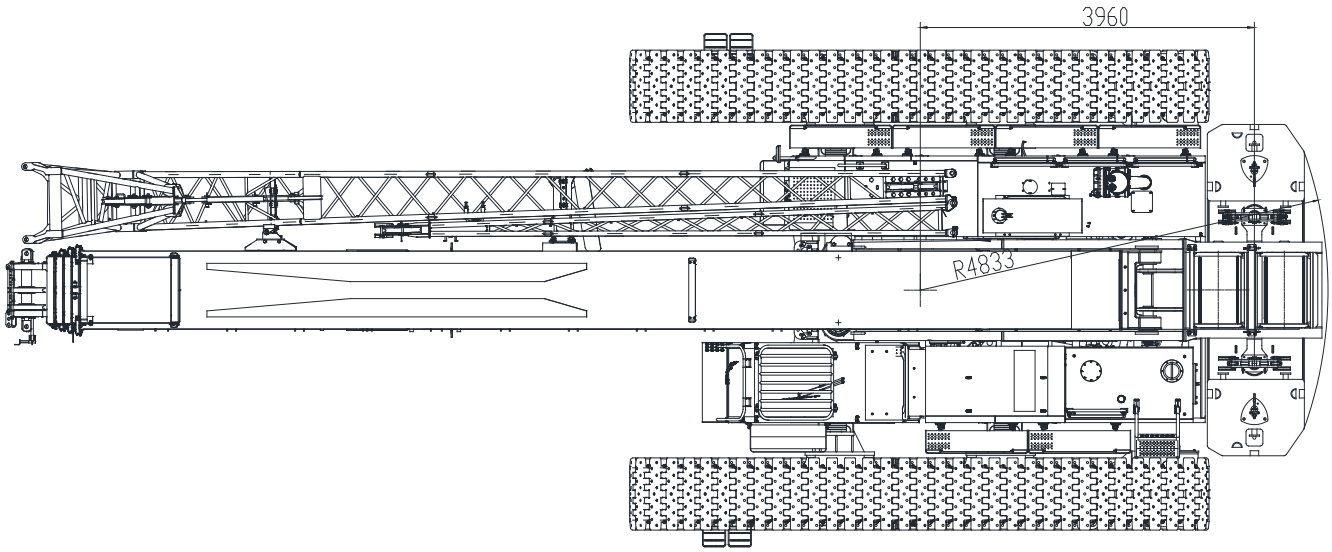
MACHINE WEIGHTS	kg
80t hook block - six sheave	700
7t Overhaul Ball	150

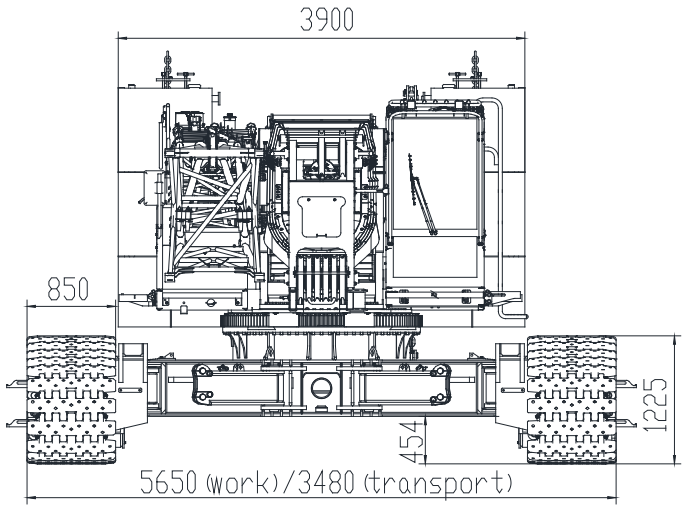
Main Technical Parameters

Parameters			Unit	Data
Lifting capacity	Max. rated lifting capacity	Boom	t	100
		Jib	t	6.5
	Max. lifting moment		t.m	360(60t@6m)
	Boom/Jib length	Boom	m	13.3~52 (five sections)
		Jib	m	10.5/17.5（two sections）
		Longest combination	m	69.5（52+17.5）
Weight	Overall crane wight		T	99.8
	Ground pressure		Mpa	0.088
Dimension	Max. dimension of single unit in transport state (with crawler tracks)		m	15.59×3.496×3.49
	Outline dimension of the crane		m	15.59×5.65×3.49
	Min. slewing radius		m	4.83
	Crawler chassis width (wide track gauge/narrow track gauge)		m	5.65/3.496
	Crawler shoe width		m	0.85
Wire rope	Diameter/ single line pull		mm/t	Φ20/8.5 (aux. winch 6.5)
Speed	Lifting speed	Main winch	m/min	130
		Aux. winch	m/min	130
	Slewing speed		r/min	1.6
	Travel speed		km/h	1.7
	Grade ability		%	45
Power system	Engine brand		/	Weichai
	Power/rated speed		kW/rpm	199/2000
	Fuel tank capacity		L	500
	Emission standard		/	Off-road EU Ⅲ

Dimensions and Transport







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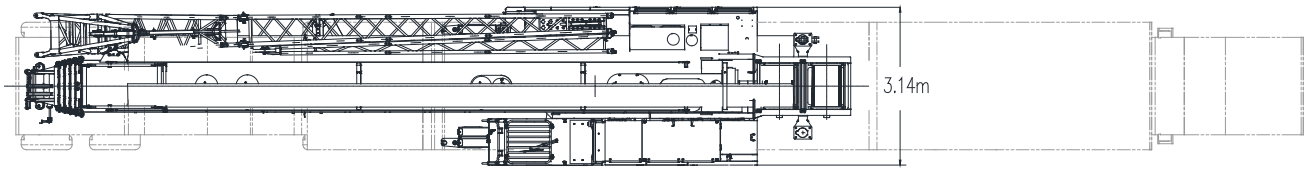
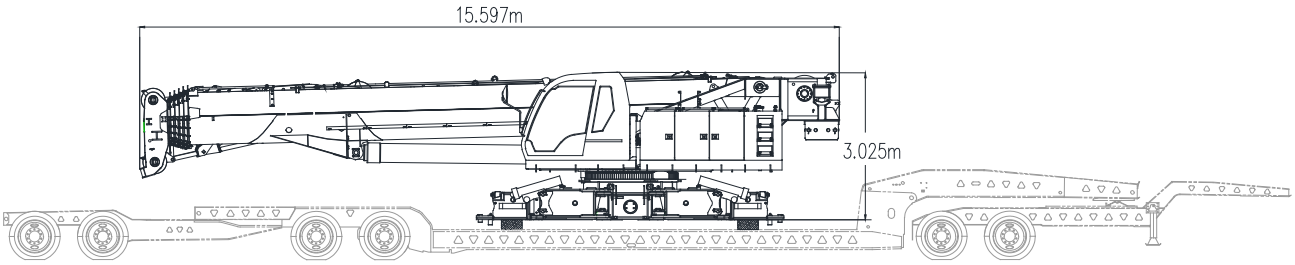
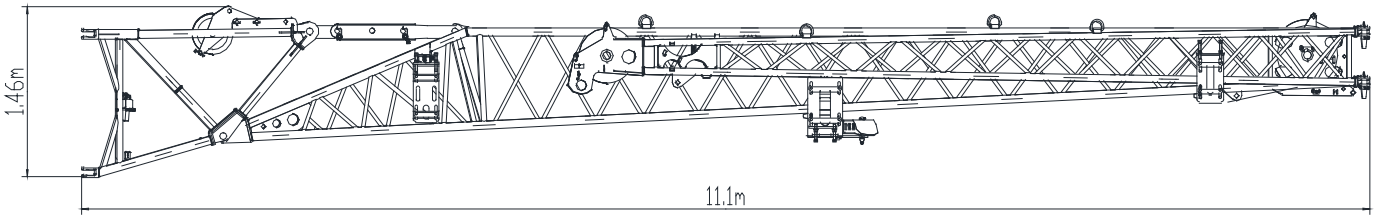
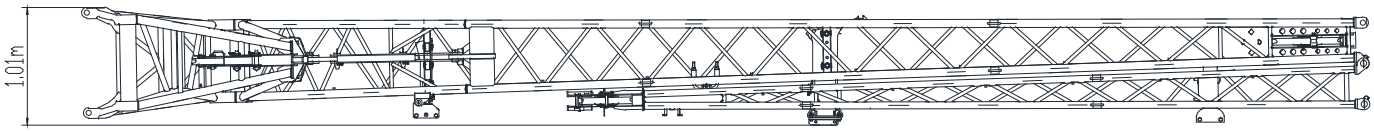




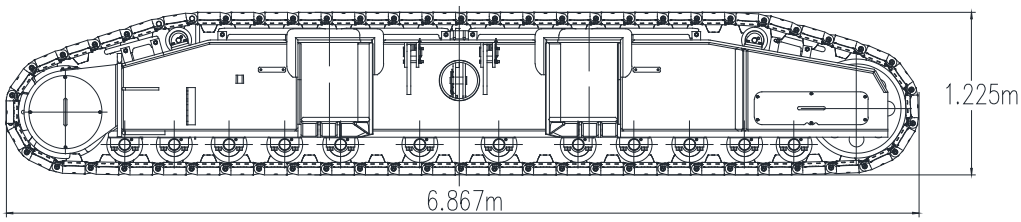
Transport Plan					
Item	Weight	Dims	Trailer		
	t	(L x W x H)	1	2	3
Crane Transporter (with 2 winches, boom, wire rope, aux nose sheave)	43.6	15.597×3.14×3.025	√		
Left Track Frame	10.7	6.867×1.155×1.225			√
Right Track Frame	10.7	6.867×1.155×1.225			√
Counterweight - Base assembly	11	3.9×1.15×0.985		√	
Counterweight – Mid Left	2×3.75	1.15×0.975×0.835		√	
Counterweight –Mid Right	2×3.75	1.15×0.975×0.835		√	
CWT	2×4.5	1.955×1.2×0.89			√
Jib	1.29	11.1×1.46×1.01	√		
Hook Block – 80 t	0.7	1.735×0.6×0.52		√	
Overhaul Ball - 7 t	0.15	0.717×0.32×0.32		√	

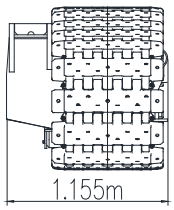
Dimensions and Transport



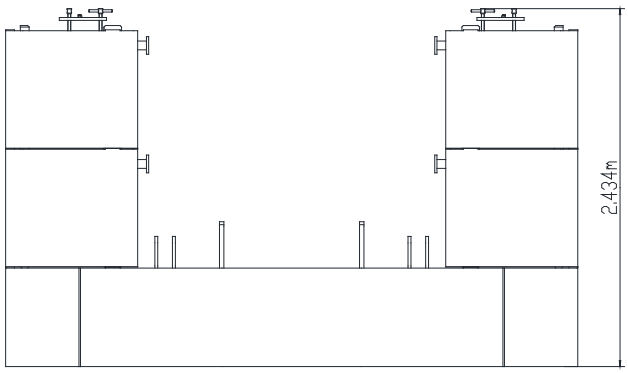


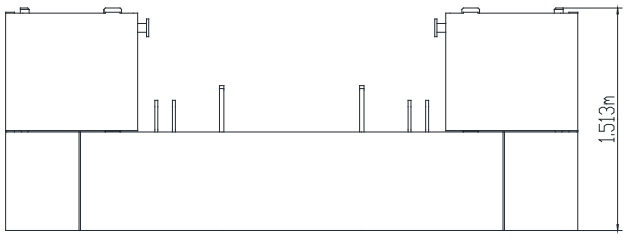
Jib
1.75t

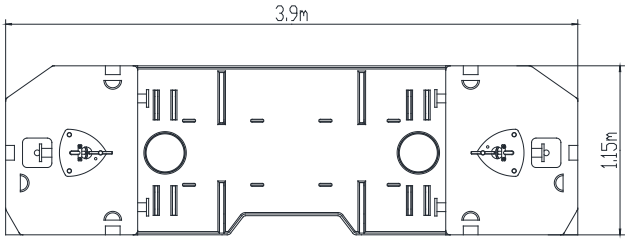


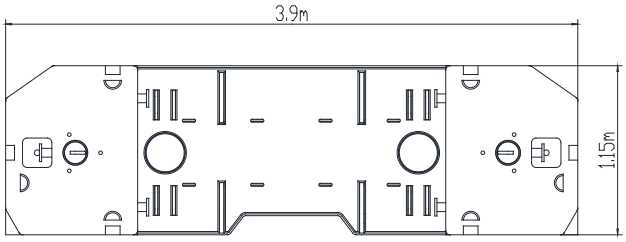


TRACK FRAME ASSEMBLY
10.7t each





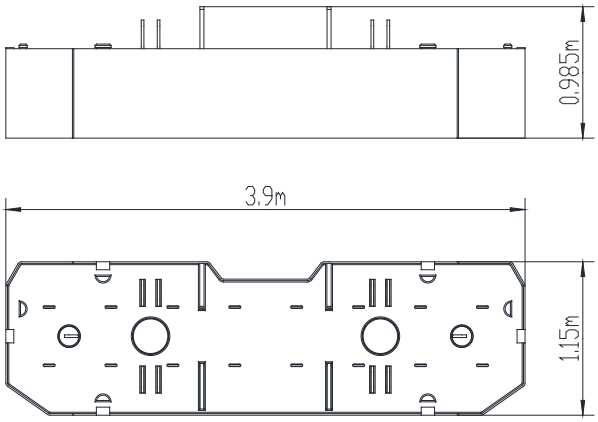




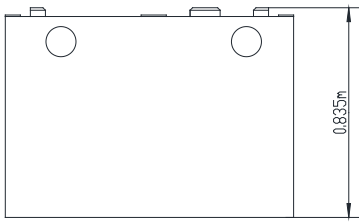
26t COUNTERWEIGHT CONFIGURATION

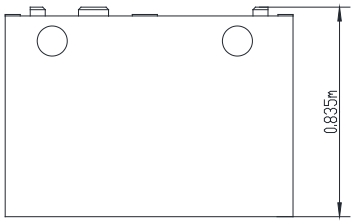
18.5t COUNTERWEIGHT CONFIGURATION

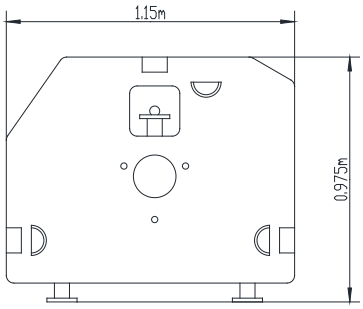
Dimensions and Transport



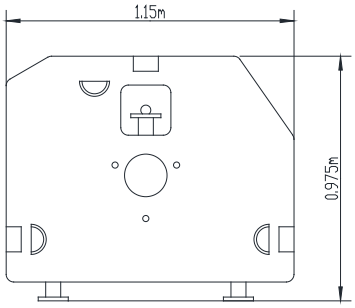
BEASE ASSEMBLY COUNTERWEIGHT
(11t)



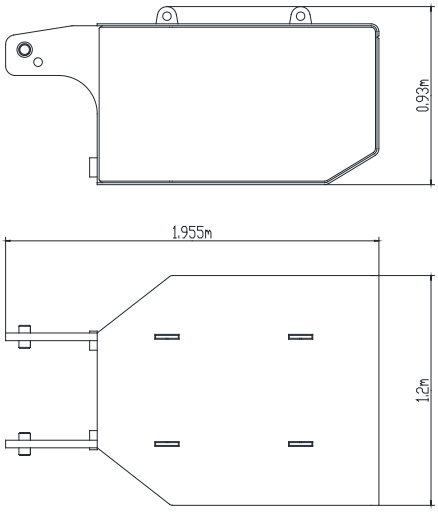




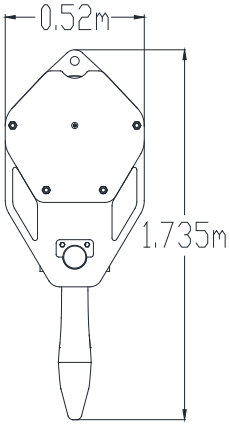
MID LEFT COUNTERWEIGHT
(3.75t)



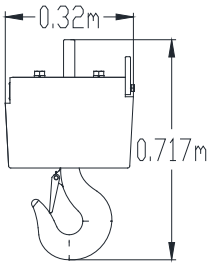
MID RIGHT COUNTERWEIGHT
(3.75t)



REAR CARBODY COUNTERWEIGHT
(4.5t)

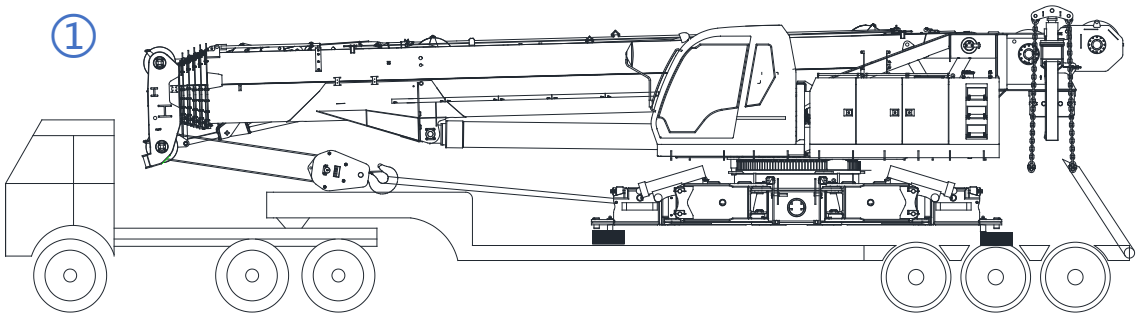


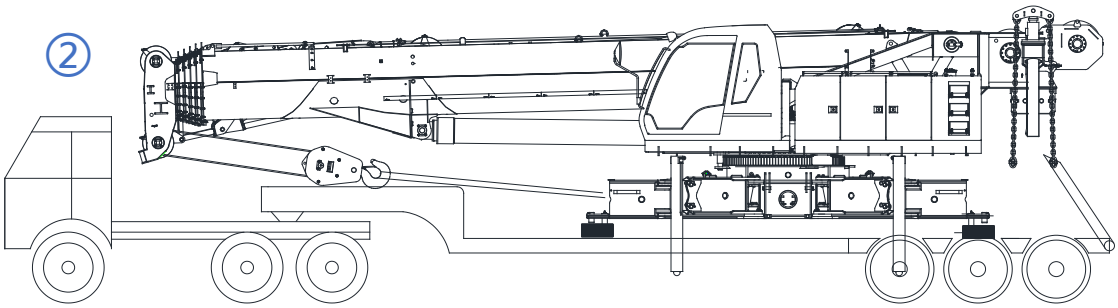
80tHOOK BLOCK
(700kg)

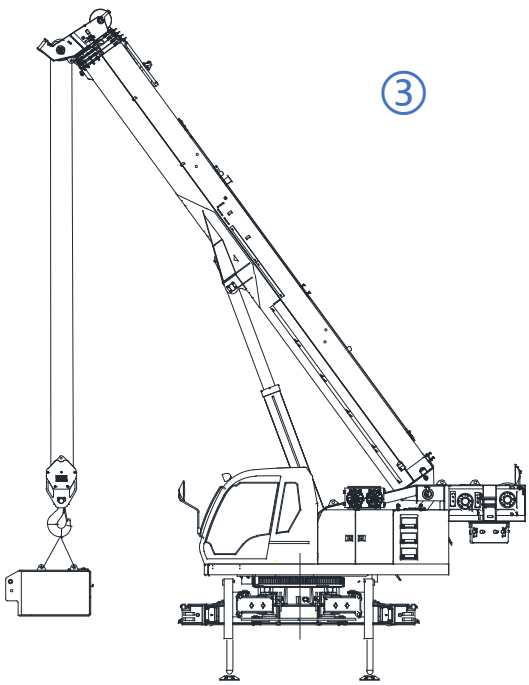


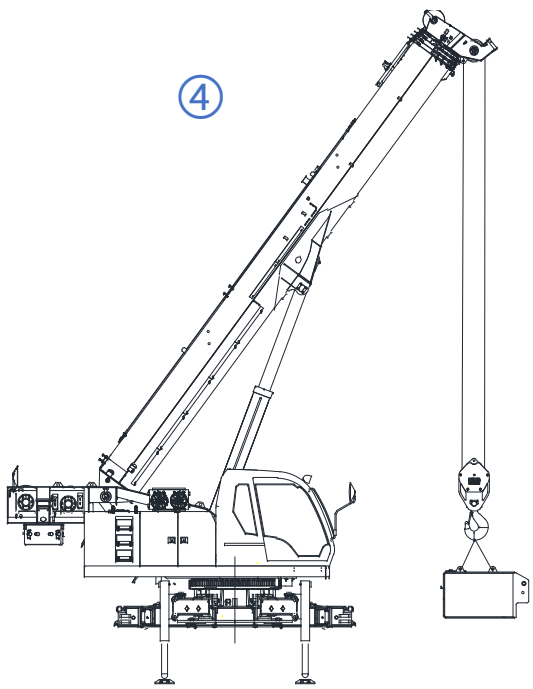
7t HOOK BLOCK
(150kg)

Self-assembly System









Self-assembly System

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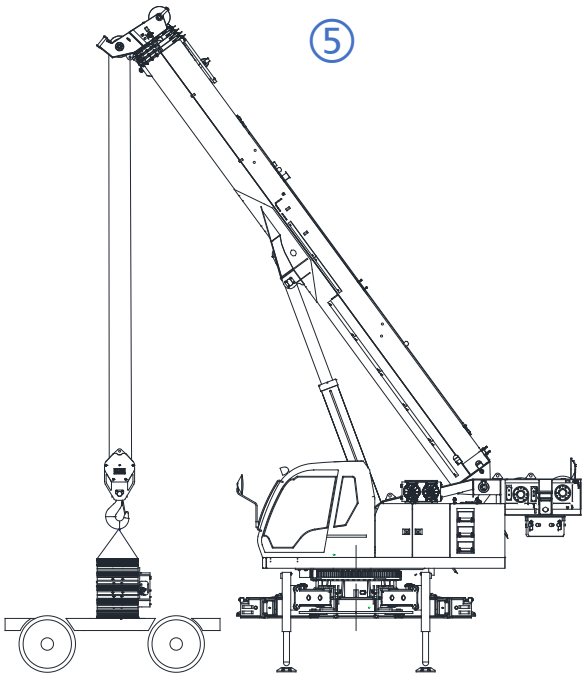

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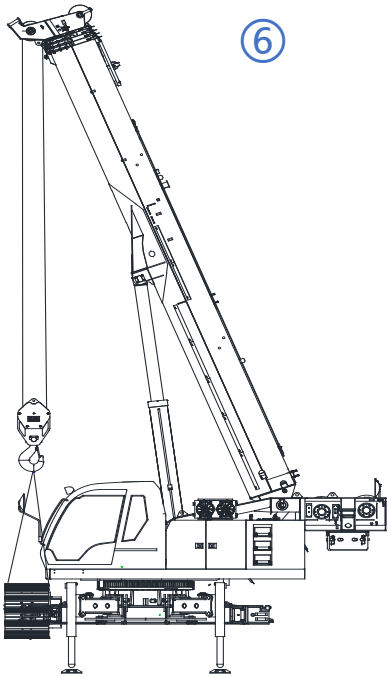

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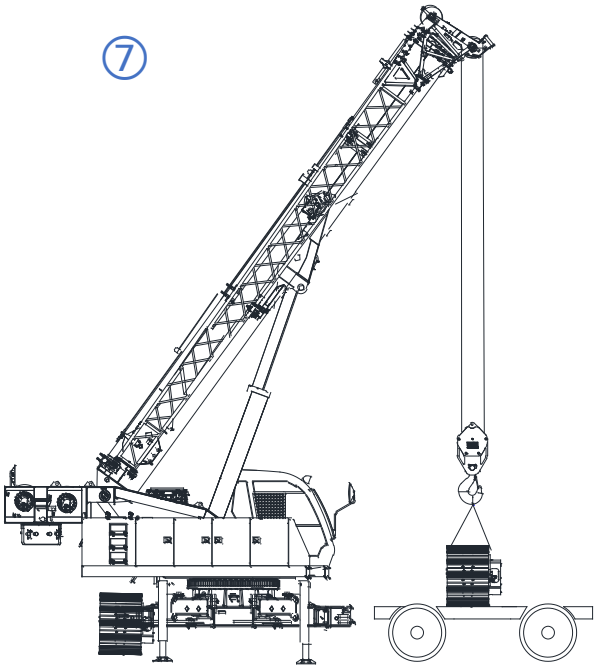

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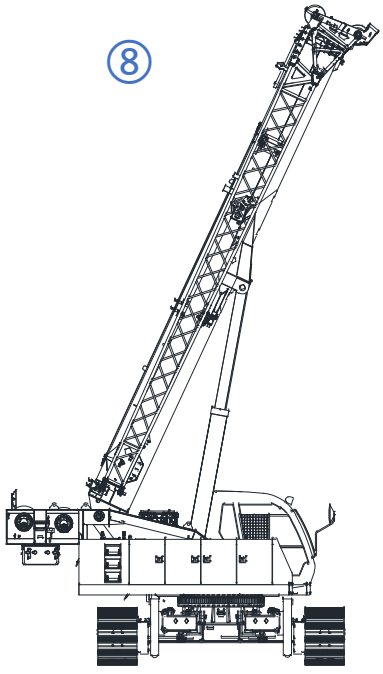

Self-assembly System

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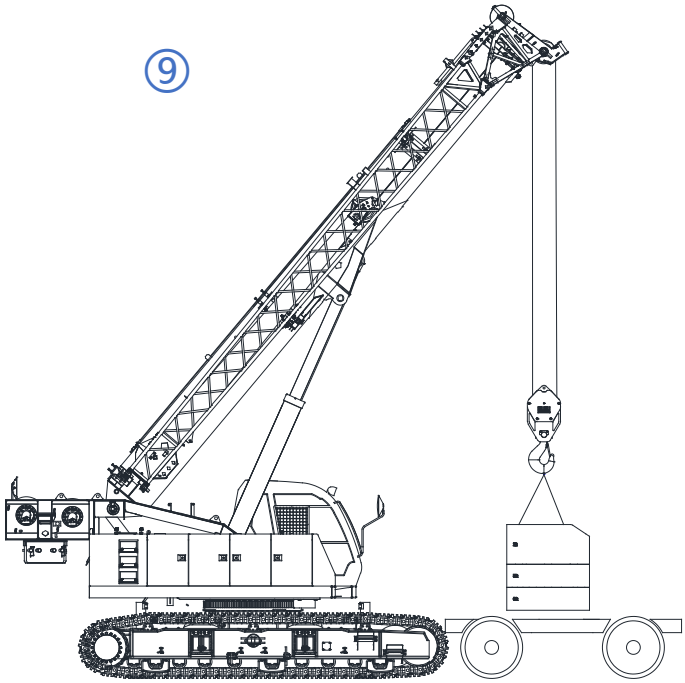

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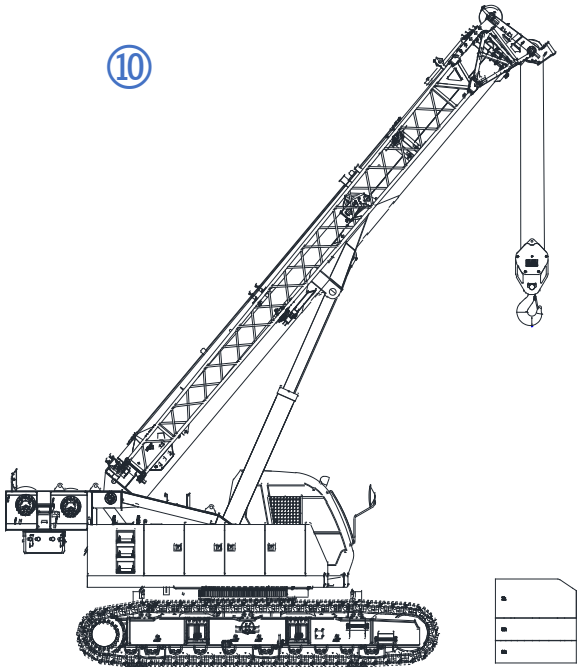

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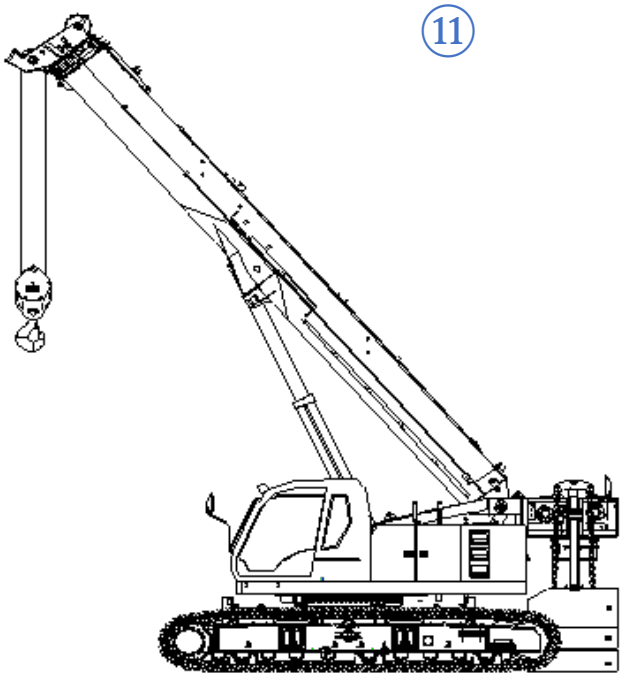

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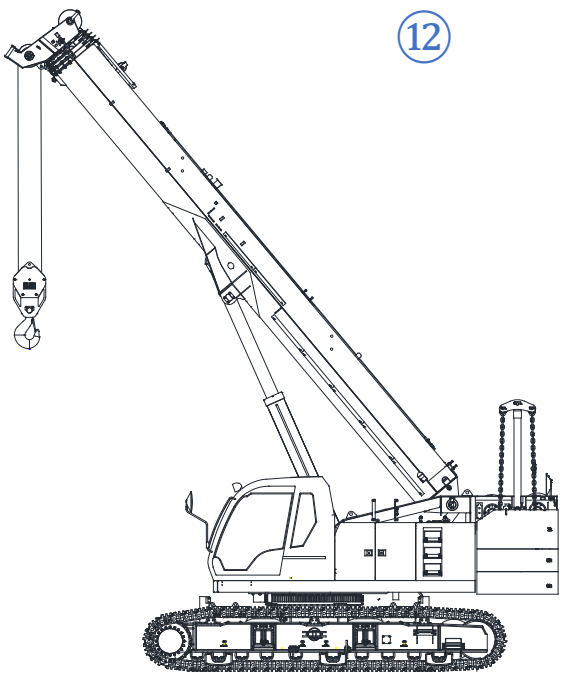
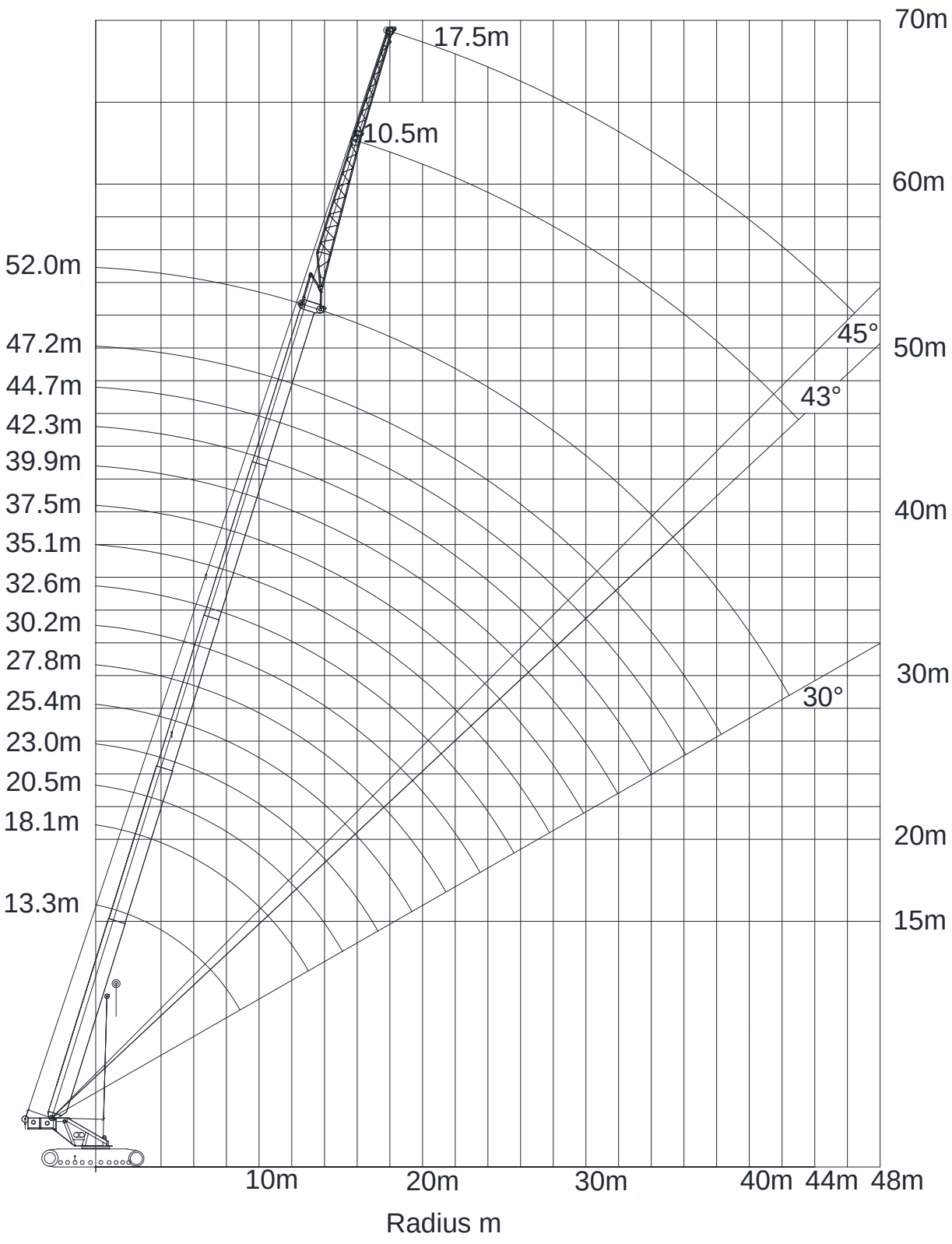
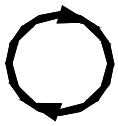


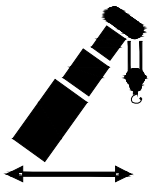
Working Range



Load Charts of Main Boom

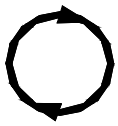
LOADS IN t

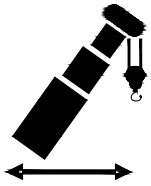
					
MB	26t	9t	MAX - MAX	0.5 °	360 °

	m	13.3	18.1	23	30.2	37.5	44.7	52
m 	2.5	100*						
	3	90.0	78.0	58.0				
	3.5	87.0	78.0	58.0				
	4	83.0	78.0	58.0				
	4.5	78.0	78.0	58.0				
	5	70.0	70.0	58.0	42.0			
	6	60.0	59.0	57.3	42.0			
	7	50.0	50.0	46.8	42.0	39.0		
	8	41.4	41.0	38.8	37.1	34.3		
	9	33.7	33.4	32.3	31.3	29.1		
	10	27.9	27.7	27.4	26.8	25.1	21.5	17.8
	12		19.9	19.8	20.3	19.3	17.5	13.7
	14		14.8	14.7	16.0	15.3	14.0	10.9
	16			11.1	12.8	12.4	11.3	8.8
	18			8.4	10.2	10.2	9.4	7.2
	20			6.2	8.1	8.4	7.8	5.9
	22				6.4	7.1	6.6	4.9
	24				5.0	5.9	5.5	4.1
	26				3.8	4.9	4.7	3.5
	28					3.9	4.0	2.9
	30					3.1	3.4	2.5
	32					2.4	2.9	2.1
	34					1.7	2.4	1.7
	36						1.8	1.4
	Parts of line	12	12	10	6	6	5	4
	II	0%	50%	100%	100%	100%	100%	100%
	III	0%	0%	0%	25%	50%	75%	100%
	IV	0%	0%	0%	25%	50%	75%	100%
	V	0%	0%	0%	25%	50%	75%	100%
	*Requires Additional Lifting Equipment							

Load Charts of Main Boom

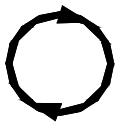
LOADS IN t

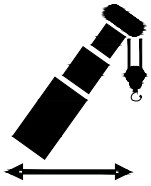
					
MB	26t	9t	MAX - MAX	0.5 °	360 °

	m	20.5	25.4	27.8	32.6	35.1	39.9	42.3	47.2
	3	46.0							
	3.5	46.0							
	4	46.0	45.0						
	4.5	46.0	45.0	41.0					
	5	46.0	45.0	41.0					
	6	46.0	45.0	41.0	42.0				
	7	46.0	45.0	41.0	42.0	22.5			
	8	43.7	40.3	41.0	37.7	22.5	22.0		
	9	36.7	33.9	35.0	32.0	22.5	22.0		
	10	30.9	29.1	30.3	27.6	22.5	22.0	21.2	19.5
m	12	23.0	22.2	23.5	21.3	22.0	19.7	19.2	17.7
	14	17.7	17.0	18.9	17.0	17.8	15.8	16.3	14.2
	16	14.0	13.3	15.2	13.9	14.8	13.0	13.5	11.7
	18		10.6	12.4	11.6	12.5	10.9	11.4	9.8
	20		8.5	10.3	9.6	10.7	9.2	9.8	8.3
	22		6.8	8.6	7.9	9.2	7.8	8.5	7.1
	24			7.1	6.5	7.8	6.7	7.4	6.1
	26				5.4	6.6	5.8	6.5	5.3
	28				4.4	5.6	5.0	5.8	4.6
	30					4.8	4.2	5.1	4.0
	32					4.0	3.5	4.5	3.5
	34						2.8	3.8	3.1
	36						2.3	3.3	2.7
	38							2.7	2.2
	40								1.8
	42								1.4
	Parts of line	10	8	8	8	6	5	5	4
	II	0%	50%	0%	50%	0%	50%	0%	50%
	III	25%	25%	50%	50%	75%	75%	100%	100%
	IV	25%	25%	50%	50%	75%	75%	100%	100%
	V	25%	25%	50%	50%	75%	75%	100%	100%

Load Charts of Main Boom

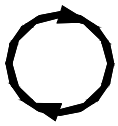
LOADS IN t

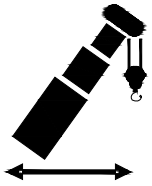
					
MB	11t	9t	MIN - MIN	0.5 °	360 °

	m	13.3	18.1	20.5	23	25.4	27.8	30.2
m 	2.5	58.8						
	3	58.8	50.1	46	43.5			
	3.5	48.5	41.8	43.6	36.7			
	4	40.8	35.5	37.6	31.5	33.1		
	4.5	34.9	30.6	32.9	27.3	29	30.3	
	5	30.3	26.6	29.1	23.8	25.7	26.7	22.4
	6	22.7	20.6	23.1	18.5	20	20.9	17.1
	7	17.1	16.2	18.4	14.3	15.8	16.9	13.4
	8	13.1	12.8	15	11.2	12.8	13.9	10.7
	9	10.2	9.9	12.5	8.8	10.4	11.6	8.6
	10	7.8	7.7	10.4	6.9	8.6	9.8	6.9
	12		4.4	7.2	4.1	5.9	7.2	4.4
	14		2.2	4.9	2.1	4	5.3	2.7
	16			3.2	0.4	2.6	4	1.4
	18					1.3	2.9	0.4
	20					0.3	2	
	22						1.2	
	24						0.5	
	26							
	28							
	30							
	32							
	34							
	36							
	Parts of line	12	12	8	8	6	6	5
	II	0%	50%	0%	100%	50%	0%	100%
	III	0%	0%	25%	0%	25%	50%	25%
	IV	0%	0%	25%	0%	25%	50%	25%
	V	0%	0%	25%	0%	25%	50%	25%

Load Charts of Main Boom

LOADS IN t

					
MB	11t	9t	MIN - MIN	0.5 °	360 °

	m	32.6	35.1	37.5	39.9	42.3	44.7	47.2	52
m 	2.5						Forbidden		
	3								
	3.5								
	4								
	4.5								
	5								
	6	17.6							
	7	14.1	14.4	11.4					
	8	11.4	11.9	9.1	9.3				
	9	9.4	10	7.3	7.7				
	10	7.8	8.5	5.9	6.3	6.6			
	12	5.4	6.2	3.8	4.3	4.7			
	14	3.8	4.6	2.3	2.9	3.4			
	16	2.5	3.4	1.2	1.9	2.4			
	18	1.6	2.5	0.3	1.1	1.7			
	20	0.9	1.8		0.4	1.1			
	22		1.2			0.6			
	24		0.8						
	26		0.4						
	28								
	30								
	32								
	34								
	Parts of line	12	12	8	8	6			
	II	50%	0%	100%	50%	0%			
	III	50%	75%	50%	75%	100%			
	IV	50%	75%	50%	75%	100%			
	V	50%	75%	50%	75%	100%			

Construction Cases

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XUZHOU CONSTRUCTION MACHINERY GROUP IMP.&EXP.CO.,LTD
Add:No.1,Tuolanshan Road,Xuzhou Economic Developing Zone,Jiangsu,China 221004
Fax:(+86-516)87739230
E-mail:export@xcmg.com

XCS MACHINERY(S) PTE LTD
Add:West Park Bizcentral, 20 Pioneer Crescent, Singapore 628555
Tel:+65-83710570
E-mail:sales@xcmgsg.com

1st edition,Jul 2022