



ALL TERRAIN CRANE

# XCA150\_U

STEADY POWER LIFTER



136 mt  
(150 USt)



62 m  
(203.4 ft)



70 m  
(229.7 ft)



92.5 m  
(303.5 ft)



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## EFFICIENT LIFTING

### SUPER LONG BOOM FOR SUPERIOR PERFORMANCE

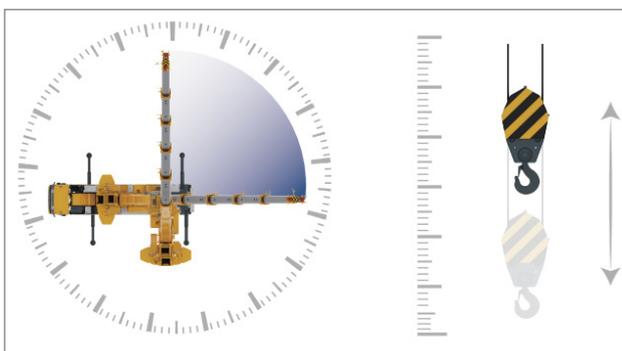
- With the 6-section boom of 62 m (203.4 ft), maximum lifting capacity of 136 t (150 USt) and maximum boom length of 94 m (310.1 ft), the crane can lift very high and reach extremely far, covering a wide range of operation modes.



**NEW ENERGY-SAVING HYDRAULIC SYSTEM**

- The minimum stable slewing speed is 0.1 °/s. The minimum stable lifting speed (at drum) is 2.5 m/min (8.2 ft/min). Precise and safe lifting movements can be realized.

Dual-pump independent/confluence control technology brings the industry-leading combined movement performance with higher working efficiency.

**PRECISE FINE CONTROL**

Fine control of winch, slewing and luffing reaches millimeter level.

# EXCELLENT MANEUVERABILITY AND SUPERIOR DRIVING PERFORMANCE

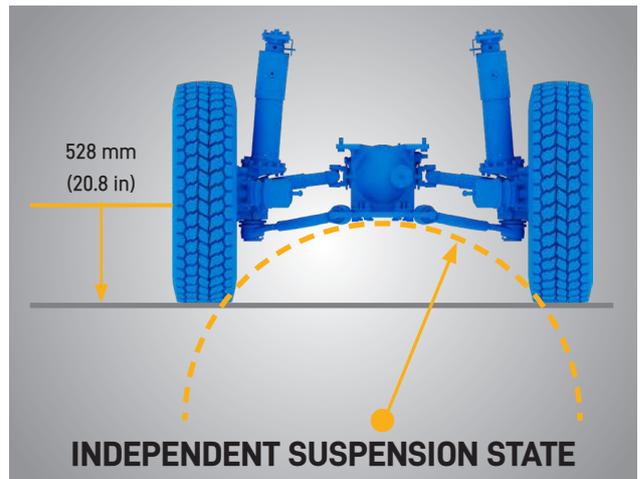
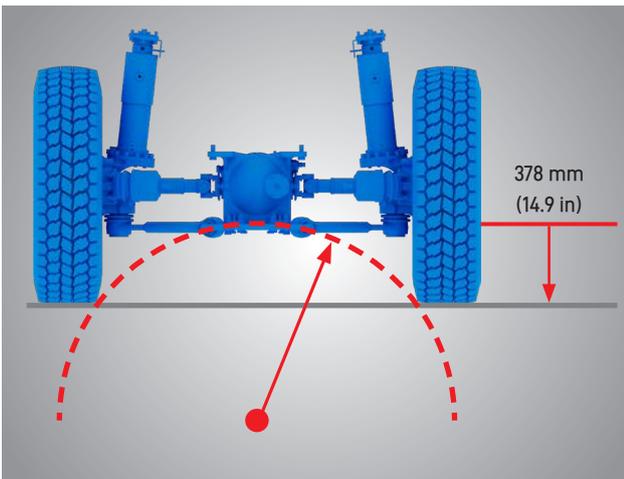
## INDUSTRY-LEADING DRIVING PERFORMANCE

- Industry-leading driving performance, excellent maneuverability in high-speed turning and standard 525 large tires contribute to strong adaptability to off-road travel; the axle load of 3-axle dolly is no more than 9 t (9.9 USt), complying with the North American regulations.
- The suspension system is equipped with functions such as automatic leveling, moving up and down the suspension, and switching between locked and unlocked suspension, providing a smoother driving experience.



## HEAVY-DUTY SINGLE-TRANSVERSE ARM INDEPENDENT SUSPENSION SYSTEM

- Each wheel operates independently, adapting to different road conditions, improving control stability during high-speed turning, and exhibiting excellent off-road performance on narrow and poor roads.



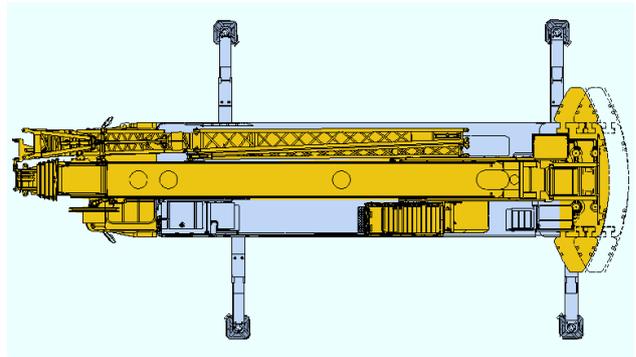
## DISC BRAKE ADOPTED

- High braking stability—ensures stability and reliability of braking when the vehicle is traveling at high speeds; sensitive braking response—can automatically adjust the gap, consistently ensuring high braking performance; good heat dissipation and resistance to heat fade—favorable for braking performance on mountainous roads.



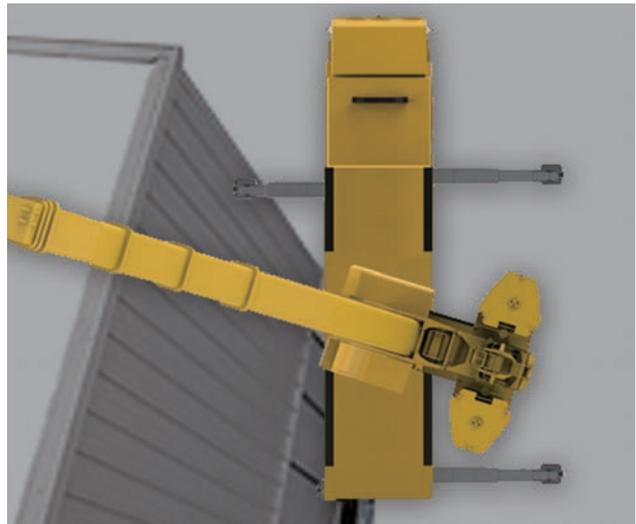
## VARIABLE-POSITION COUNTERWEIGHT

- When the counterweight is in the front position, the turning radius is small; when the counterweight is in the rear position, performance is improved by 8%.



## VARIABLE SUPPORT TECHNOLOGY

- Multiple outrigger telescoping length combinations are available, with more applicable OM scenarios.
- The crane can operate smoothly in narrow spaces, with high operating efficiency.



## REMOTE CONTROL

- Outriggers can be controlled in the operator's cab, eliminating the need to get in and out of the vehicle repeatedly, making outrigger operation more convenient.
- Remote control of outriggers, lifting, luffing, slewing, counterweight, and jib unfolding and folding by mobile terminal enables "one-man operation of the machine", thus saving labor costs.





# EXQUISITE CRAFTSMANSHIP FOR UPGRADED QUALITY

With comprehensive ergonomic analysis and detailed designs, a quality product is created that is safe, comfortable and convenient for driving and lifting operation.

## DRIVER'S CAB

①	Mechanical shock-absorbing adjustable seats for driver and co-driver	Leather + breathable mesh fabric seat material; the co-driver's seat is a double seat that can be unfolded into a sleeper.
②	High-definition display	12-inch full LCD instrument panel, displaying more clearly.
③	Multi-function entertainment screen	12-inch full LCD entertainment screen, integrated with backup camera and other functions.
④	Multi-function steering wheel	The steering wheel is adjustable up/down and forward/backward and integrates cruise control, multimedia control and other functions for convenient operation.
⑤	HVAC	It has face and foot blowing, defrosting and defogging functions, improving cooling and heating efficiency.
⑥	Other user-friendly configurations	LED combined headlight and electrically adjustable rearview mirrors with heating function makes driving safer.



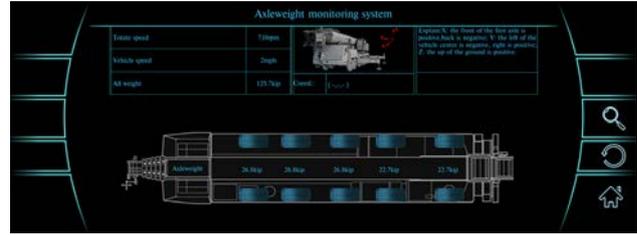
## OPERATOR'S CAB

①	Adjustable electric heated seat	Leather + breathable mesh fabric seat material.
②	High-definition display	10.4-inch true color touch screen.
③	Silicone buttons	Three control areas for safety protection, lifting operation and operating environment contribute to convenient control.
④	Vibration lever	Vibration lever is equipped to perceive the lifting operation speed easily.
⑤	HVAC	It has face and foot blowing, defrosting and defogging functions, improving cooling and heating efficiency.
⑥	20° tiltable operator's cab	Clearer lifting view.
⑦	Other user-friendly configurations	Dual-layer sun screen for roof window and sun screens for windshield, rear and side windows; external large-capacity water tank and independent control of windshield and top window washing functions make maintenance more convenient; mesh floor mat with edge sealing design, easy to be removed and cleaned.

# EXQUISITE CRAFTSMANSHIP FOR UPGRADED QUALITY

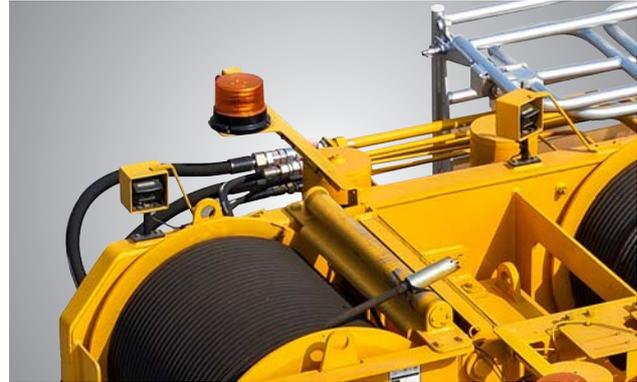
## SMARTER AND SAFER DRIVING CONTROL SYSTEM

- Equipped with self-diagnosis, dynamic monitoring of driving status, axle load detection, and other functions.



## MONITOR DEVICES

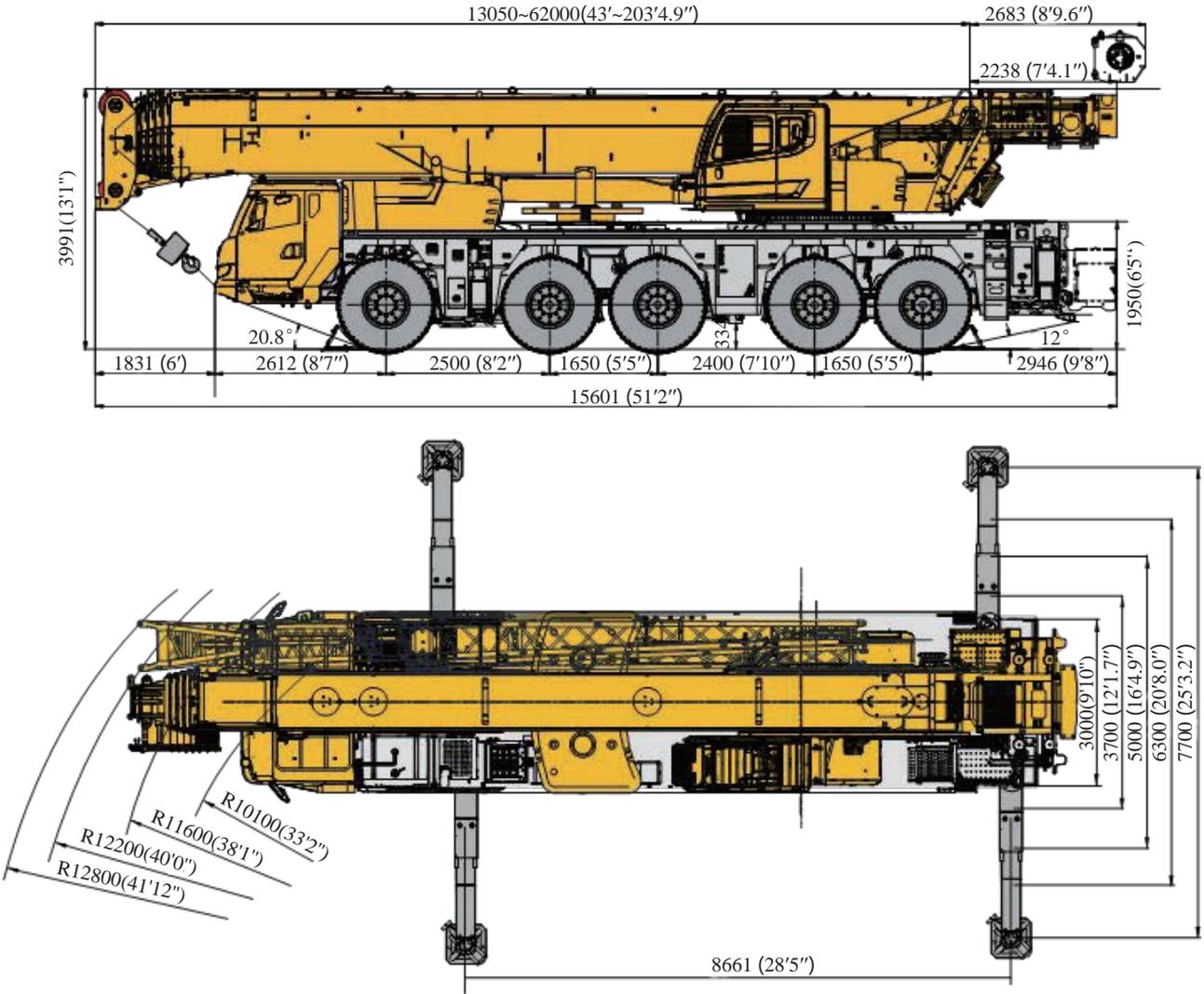
- Boom head, winch, and counterweight camera systems are convenient for operators to hoist and observe the hoisting condition.



## WELL-PLANNED ACCESS

- Access is arranged at the winch area to facilitate operation, maintenance and inspection.

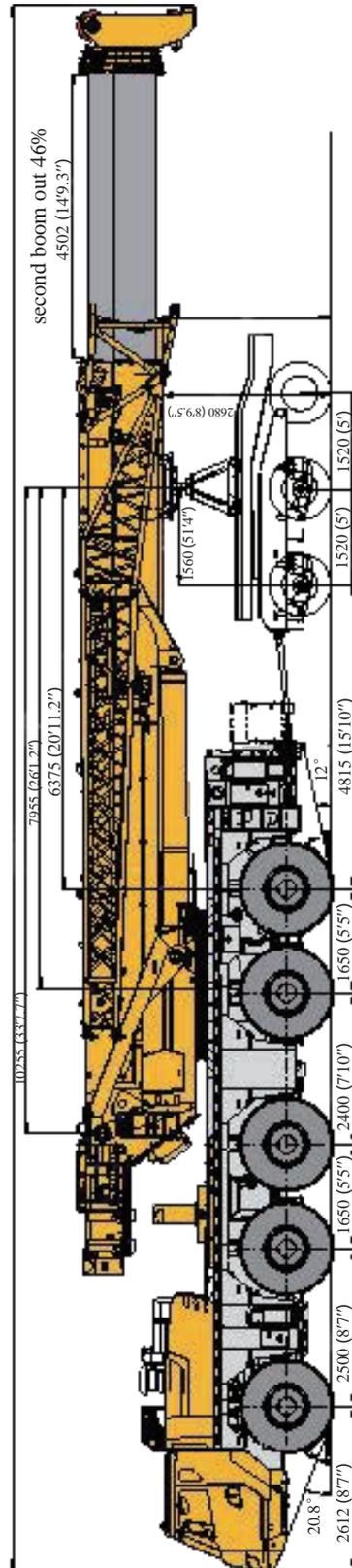
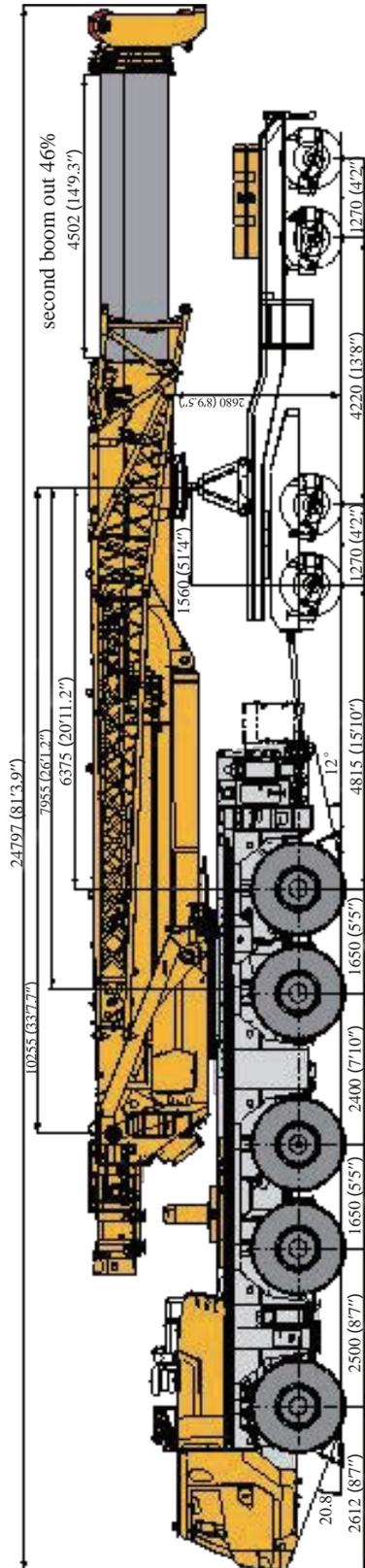




Tight-turning radius steering mode

# DIMENSIONS

Travel configuration with dolly



Note: The dollies in Figure above are only for reference.

GVW	DOLLY CONFIGURATION	COMPONENTS
59.9 t (132.1 klb)	4-axle dolly	<p>1. Superstructure: two jib sections, counterweight (2200 kg (4850 lb)+700 kg (1543 lb)+1400 kg(3086 lb),and dolly with counterweight (5600 kg (12345 lb)+5500 kg (12125 lb)) are carried; hook blocks, auxiliary winch and rope, auxiliary sheave, hydraulic hose reel and counterweight (6100 kg (13448 lb)*2+5800 kg (12787 lb)*2+2800kg (6172 lb)) are removed.</p> <p>2. Chassis: spare tire and its bracket are removed.</p>
	3-axle dolly	<p>1. Superstructure: two jib sections and counterweight (2200 kg (4850 lb)+700 kg (1543 lb)+1400 kg (3086 lb)) are carried; hook blocks, auxiliary winch and rope, auxiliary sheave, hydraulic hose reel and counterweight (6100 kg (13448 lb)*2+5800 kg (12787 lb)*2+5600 kg (12345 lb)+5500 kg(12125 lb)+2800 kg (6172 lb)) are removed.</p> <p>2. Chassis: spare tire and its bracket are removed.</p>

# TECHNICAL SPECIFICATIONS



## CHASSIS

<b>Frame</b>	Box structure design with high load-bearing capacity, made of high strength steel. Finite element analysis method is adopted for all operation mode analysis and calculation. High standard testing is realized for the whole manufacturing process. Flaw detection is applied for the key parts to guarantee the high reliability of strength and stability during the load-bearing process.	●
<b>Outriggers</b>	H-shaped outriggers, two-stage telescoping movable outrigger with push-pull outrigger floats. There are four working positions (fully retracted, half extended, 75% extended and fully extended) to meet different requirements. Outrigger control panels controlled by CAN bus are located at both sides of chassis. Float dimensions: $\varnothing 495$ mm ( $\varnothing 1.624$ ft). Maximum outrigger load: 888 kN (199779.5 lb).	●
<b>Engine</b>	Mercedes Benz OM471LA, 6 cylinders, diesel engine. Rated power/rpm: 360 kw/1600 rpm (482.8 bhp/1600 rpm); Maximum output torque/rpm: 2400 N.m/1300 rpm (1769.9 lb ft/1300 rpm). Emission standard: EU Stage V / EPA Tier 4F. Fuel tank capacity: 415 L (110 US gal).	●
	Engine cold weather starting device	●
<b>Transmission</b>	ZF AMT auto transmission; 12 forward gears and 2 reverse gears.	●
<b>Axles</b>	5-axle chassis with disconnected axles; axles 2, 3, 4 and 5 for driving, all wheel steering.	●
<b>Suspension</b>	Advanced independent suspension technology is adopted, and the tires on left and right side move separately to adapt to the road conditions with improved stability; Hydro-pneumatic suspensions have good shock-absorbing effect and automatic leveling function. The height of chassis above the ground can be adjusted. Main reducer is attached to the frame, which can be lifted or lowered with frame, leading to improved pass ability. The stroke of suspension cylinder is -150 mm~150 mm (-0.5 ft ~ 0.5 ft).	●
<b>Tires</b>	525/80R25(20.5R25), 10+1 (spare tire).	●
<b>Brakes</b>	Service brake: foot pedal operated double-circuit air pressure brake. Circuit 21 acts on the wheels of axles 3, 4 and 5, and circuit 22 acts on the wheels of axles 1 and 2; Parking brake: air-release brake, which acts on axles 2, 4 and 5, and gives effect by the spring-loaded air chamber on each axle. Auxiliary brake: engine retarder brake and transmission retarder brake.	●
	Eddy current retarder	○
<b>Steering</b>	Axles 1 and 2 are mechanically steered + hydraulic power assistance, and axles 3, 4 and 5 adopt electrically controlled hydraulic steering system.	●



**CHASSIS**

<p><b>Driver's cab</b></p>	<p>New full dimension steel structure cab, with suspended connection structure, is equipped with the shock absorber at the rear of the cab. It is equipped with adjustable seats, safety glass, electrically operated door window lifter, electric-adjustable rearview mirrors, steering wheel adjustable in height and angle, backup camera, large screen liquid crystal display, CD player, etc. New combined central control panel is reasonably arranged with arc shape adopted, presenting human-oriented design concept. Heater and air conditioning are standard.</p>	<p>●</p>
<p><b>Electrical system</b></p>	<p>CAN bus is adopted for the chassis electric system. An LCD display is equipped to indicate data. The intelligent system enables rapid, stable and accurate data-transfer, brake system comprehensive management, and fault diagnosis &amp; alarm.</p>	<p>●</p>
<p><b>Hydraulic system</b></p>	<p>Electro-hydraulic steering, outrigger, suspension and independent cooling hydraulic system realized by the variable piston pump driven by the engine.</p> <p>Electro-hydraulic steering system is variable pump valve control system which is composed of load-sensing pump, emergency pump, selector valve, proportional valve group, lock valve group, boost cylinder, lock cylinder, hydraulic oil cooler, etc.</p> <p>The outrigger and suspension are variable pump valve-control systems, which are composed of load-sensing pump, solenoid directional valve group, extension cylinder, jack cylinder and suspension cylinder, etc.</p> <p>The independent cooling system is controlled by variable displacement pump, which is composed of the fan motor driven by the electric controlled variable pump.</p>	<p>●</p>

# TECHNICAL SPECIFICATIONS



## SUPERSTRUCTURE

<b>Structure</b>	Designed and manufactured by XCMG, made of high strength steel.	●	
<b>Hydraulic system</b>	Hydraulic pump: driven by engine, the variable piston pump is used for lifting, luffing, telescoping and slewing; the drive gear pump is used for oil filling, auxiliary system and air conditioning, etc. Control valve: with open type system, the main valve is controlled by the electric proportional pilot hydraulic oil. Oil circuit: Air cooled hydraulic oil cooler effectively reduces the oil temperature in the system.	●	
<b>Control system</b>	The electric-proportional pilot operation system is equipped with two levers at left and right sides controlling the main movements of the crane. Normal switch control is carried out through bus-type modular console. The touch screen display can show operation parameters and lifting OMs, diagnose overall faults, and control auxiliary movements related to PTO and counterweight assembly.	●	
<b>Winch system</b>	Hydraulic control is used for speed regulation. The system is driven by a hydraulic motor through a planetary gear reducer, with a normally closed brake, a counterbalance valve and a grooved drum equipped.	Main winch	●
		Auxiliary winch	○
<b>Slewing system</b>	Single-row four-point ball contact external tooth slewing bearing is driven by the planetary gear reducer of slewing mechanism driven by a hydraulic motor, and can continuously slew 360°. Power control and free slewing function as well as stepless speed regulation are available.	●	
<b>Operator's cab</b>	New steel cab with a full-view windshield. Safety glass and sun screen are used for windows. The cab features a new ergonomic seat design with backrest adjustment and armrests with control levers fitted. A sliding door and a pull-out step are available to make it easy and safe as access and egress the cab. Wipers are fitted for the windshield and roof window. Control panel with human-machine interactive system is used in the cab. The cab can be tilted up to 20°.	●	
<b>Operational aids</b>	Hydraulic counterbalance valve; hydraulic relief valve; hydraulic double-way lock; LMI; lowering limiter; anti-two block; anemometer; winch monitoring device.	●	
<b>Combined counterweight</b>	9 counterweight combinations of 42 t (92,610 lb), 30.4 t (67,032 lb), 24.9 t (54,905 lb), 19.3 t (42,557 lb), 15.4 t (33,957 lb), 9.9 t (21,830 lb), 7.1 t (15,656 lb), 4.3 t (9,482 lb) and 2.1t (4,631 lb) are available.	●	
<b>Centralized lubrication system</b>	Controlled by computer program; lubrication points are at slewing bearing, bearing pedestals of main winch and auxiliary winch, upper and lower pivots of luffing cylinder, pivot of tilting cylinder and rear pivot of boom.	●	
<b>Hook block</b>	11 t (12.1 USt) hook block	●	
	25 t (27.6 USt) hook block	●	
	60 t (66.1 USt) hook block	●	
	90 t (99.2 USt) hook block	●	
	136 t (150.0 USt) hook block	○	

**SUPERSTRUCTURE**

<b>Boom</b>	6-section boom with oval cross-section, welded structure with single-plate boom head and compact boom tail. Single-cylinder pinning telescoping mechanism. Boom length:13050~62000 mm (43.0 ft~203.4 ft).	●
<b>Jib</b>	The jib consists of a connecting bracket, an offsetting bracket and two lattice sections. Three offset angles of 0°, 20° and 40° are available. It is stowed along the side of the boom. Jib length:11 m (36.1 ft),18.5 m (60.7 ft).	●
	Stepless luffing	○
<b>Extension</b>	7 m (23 ft) boom extension	○
	7 m (23 ft) boom extension	○
<b>Independent jib head</b>	Independent jib head of 2.9 m (9.5 ft)	○
<b>Auxiliary sheave</b>	Fitted at boom head, can be folded to one side when not in use. The maximum lifting load with single part of line is 7 t (7.7 USt).	○

Other items of equipment available on request.

- — Standard configuration;
- — Optional configuration.

# WEIGHTS



1-3	4-5	DRIVING MODE		TOTAL WEIGHT	TOTAL LENGTH
12 t (26.5 klb)	12 t (26.5 klb)	10×8×10	525/80R2 (20.00 R25)	60 t (132.3 klb) <sup>1)</sup>	15.6 m (51.2 ft)
14 t (30.9 klb)	20 t (44.1 klb)	10×8×10	525/80R2 (20.00 R25)	80 t (176.4 klb) <sup>2)</sup>	15.6 m (51.2 ft)

1) With: 11 t (12.1 USt) hook block; 2.2 t (4850 lb) movable counterweight placed in the middle of the vehicle and 0.7 t (1543 lb)+1.4 t (3086 lb) fixed counterweight at the rear; two jib sections; Without: 60 t (66.1 USt) hook block; 25 t (27.6 USt) hook block; auxiliary winch system; auxiliary winch system slings, auxiliary sheave; hose reel; other movable counterweight of the crane; spare tire and its bracket.

2) With: Outrigger floats and storage box; jib; 60 t (66.1 USt) hook block; 17.2 t (37919 lb) counterweight at the middle position and 1.4 t (3086 lb) counterweight at the rear.

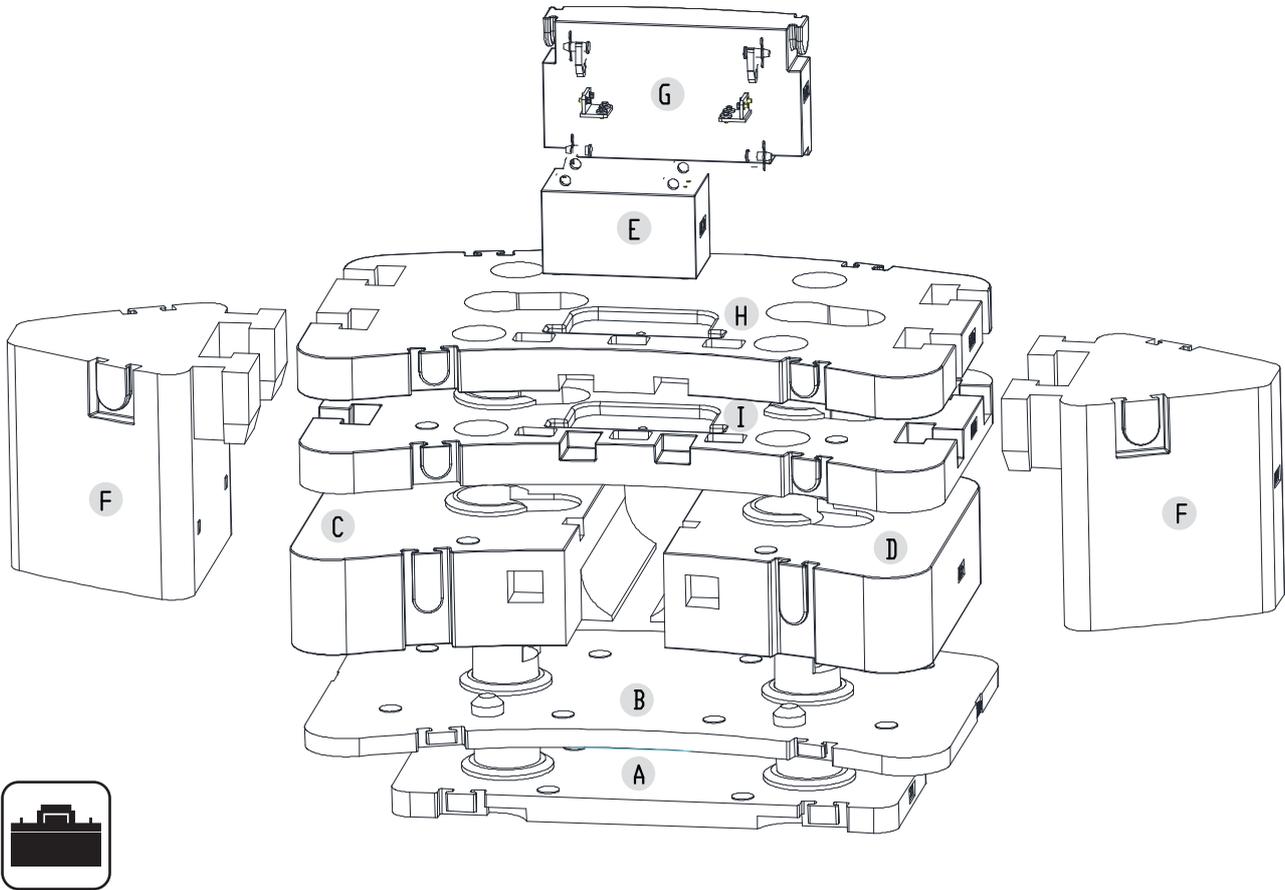


MAXIMUM LIFTING CAPACITY OF THE HOOK BLOCK	PARTS OF LINE	WEIGHT (kg (lb))	DIMENSIONS (in)	REMARKS
136 t (150 USt) (optional)	14	1367 kg (3014 lb)	75×30×33	Dual-hook
90 t (99.2 USt)	10	950 kg (2094 lb)	65×25×24	Dual-hook
60 t (66.1 USt)	7	636 kg (1402 lb)	57×25×14	Dual-hook
25 t (27.6 USt)	3	417 kg (919 lb)	57×22×13	Single-hook
11 t (12.1 USt)	1	296 kg (653 lb)	17×29×17	Single-hook

			
525/80R25 (20.5R25)		80 km/h (49.7 mph)	60%

					
	0-130 m/min (0-426 fpm)	single line, 4th layer	8.4 t (18.6 klb)	20 mm (0.78 in)	265 m (869.4 ft)
	0-130 m/min (0-426 fpm)	fpm, single line, 4th layer	8.4 t (18.6 klb)	20 mm (0.78 in)	205 m ( 672.5 ft)
	0-1.5 rpm				
	Approx. 65 s for boom luffing up from -0.5° to 82°				
	Approx. 580 s for boom extending from 13050 mm (43 ft) to 62000 mm (203.4 ft) .				

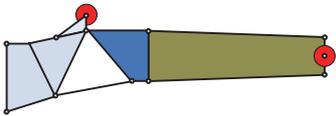
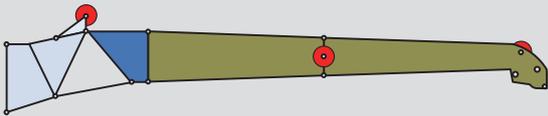
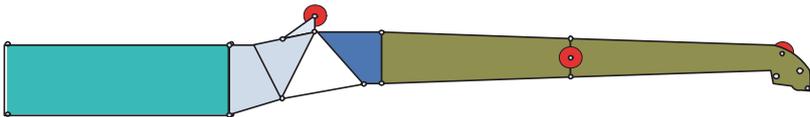
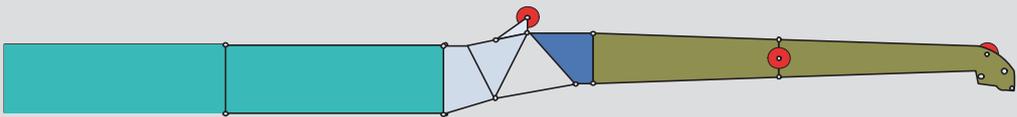
# COUNTERWEIGHT

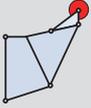


COUNTERWEIGHT	A	B	C	D	E	F	G*	H	I
Length (m(in))	2.36 (93)	3 (118)	1.4 (55)	1.4 (55)	0.71 (28)	1.19 (47)	1.19 (47)	3 (118)	3 (118)
Width (m(in))	0.89 (35)	1.83 (72)	1.83 (72)	1.83 (72)	0.36 (14)	1.14 (45)	0.28 (11)	1.83 (72)	1.83 (72)
Length (m(in))	0.84 (33)	0.18 (7)	0.51 (20)	0.51 (20)	0.48 (19)	1.1 (43)	0.66 (26)	0.2 (8)	0.23 (9)
Weight (t(lb))	2.2 (4,850)	2.8 (6,172)	6.1 (13,448)	6.1 (13,448)	0.7 (1,543)	5.8 (12,787)	1.4 (3,086)	5.6 (12,345)	5.5 (12,125)

OPERATION MODE	42 t (92,610 lb)	30.4 t (67,032 lb)	24.9 t (54,905 lb)	19.3 t (42,557 lb)	15.4 t (33,957 lb)	9.9 t (21,830 lb)	7.1 t (15,656 lb)	4.3 t (9,482 lb)	2.1 t (4,631 lb)
Combinations	A + B + C + D + E + F × 2 + G + H + I	A + B + C + D + E + G + H + I	A + B + C + D + E + G + H	A + B + C + D + E + G	A + E + G + H + I	A + E + G + H	A + B + E + G	A + E + G	E + G

\* CWT G is only used when aux winch is removed

Jib – 11 m (36.1ft)	
Jib – 18.5 m (60.7 ft)	
Boom extension – 25.5 m (83.6 ft)	
Boom extension – 32.5 m (106.6 ft)	

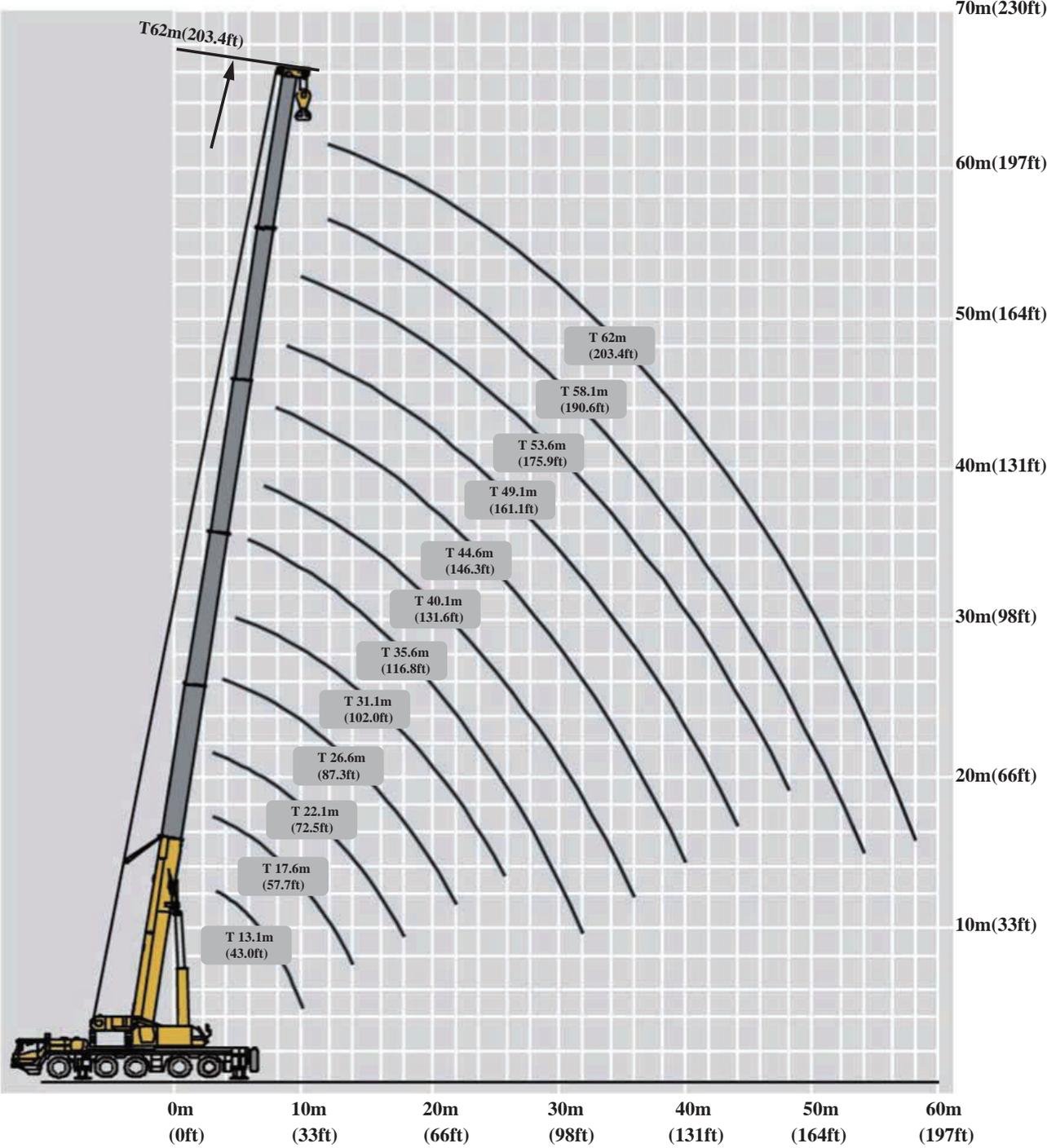
COMPONENT	STRUCTURE	LENGTH (m (ft))	WEIGHT (kg (lb))
Connecting bracket		1.00 (3.28)	373 (822.3)
Offsetting bracket		3.40 (11.15)	381 (839.9)
Boom extension		7.10 (23.29)	640 (1410.9)
1st jib section assembly		7.03 (23.06)	616 (1358.0)
2nd jib section assembly		7.36 (24.15)	364 (802.5)

# BOOM / JIB COMBINATIONS

BOOM	JIB	BOOM EXTENSION
T: 13.05~62 m (43.0 ft~203.4 ft)	T: 13.05~62 m (43.0 ft~203.4 ft) J: 11 m (36.1 ft), 18.5 m (60.7 ft)	T: 58 m~62 m (190.6 ft~203.4 ft) V: 7 m (23 ft)×2 J: 11 m (36.1 ft), 18.5 m (60.7 ft)

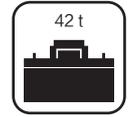
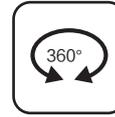


# BOOM



# LOAD CHARTS

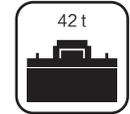
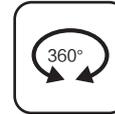
## COUNTERWEIGHT IN THE FRONT POSITION METRIC TONS



	13.1	17.6	22.1	26.6	31.1	35.6	40.1	44.6	49.1	53.6	58.1	62	
3	136.0**	83.0	83.0										3
3.5	101.0*	83.0	83.0										3.5
4	93.0*	83.0	83.0	67.0									4
4.5	86.0*	83.0	82.0	67.0									4.5
5	81.0	79.0	77.0	67.0	58.0								5
6	71.0	69.0	68.0	66.0	58.0	50.0							6
7	62.0	62.0	61.0	59.0	58.0	50.0	42.0						7
8	55.0	56.0	55.0	53.0	53.0	48.8	42.0	32.7					8
9	47.0	50.0	50.0	48.0	48.0	46.3	42.0	32.7	25.1				9
10	38.0	44.8	44.9	44.0	44.0	44.0	40.3	31.9	25.1	18.7			10
12		36.1	36.3	36.0	36.7	37.4	34.0	27.6	25.1	17.8	14.7	11.8	12
14		27.0	30.1	29.8	30.5	31.2	29.6	24.1	22.6	16.8	14.6	11.8	14
16			24.3	24.0	24.8	25.7	25.3	21.4	20.1	15.8	14.5	11.8	16
18			20.1	19.8	20.6	21.4	21.0	19.1	17.8	14.7	14.2	11.7	18
20				16.5	17.4	18.1	17.8	17.2	16.1	13.9	12.9	11.7	20
22				14.0	14.8	15.6	15.2	15.2	14.6	12.8	11.6	10.6	22
24				10.0	12.8	13.5	13.2	13.2	13.2	11.7	10.5	9.6	24
26					11.1	11.8	11.5	11.5	11.7	10.7	9.6	8.8	26
28					9.6	10.4	10.0	10.0	10.2	9.8	8.9	8.1	28
30						9.2	8.8	8.8	9.0	9.0	8.2	7.5	30
32						8.0	7.8	7.7	7.9	8.3	7.6	6.8	32
34							6.8	6.8	7.0	7.3	7.0	6.4	34
36							6.0	6.0	6.2	6.5	6.5	5.9	36
38								5.3	5.5	5.8	6.1	5.5	38
40								4.7	4.9	5.2	5.6	5.1	40
42									4.3	4.6	5.0	4.7	42
44									3.8	4.1	4.5	4.3	44
46										3.6	4.0	4.0	46
48										3.2	3.6	3.6	48
50											3.2	3.2	50
52											2.8	2.9	52
54											2.5	2.6	54
56												2.3	56
58												1.6	58

\*\* Capacity class; \* with the additional sheave of boom.

**COUNTERWEIGHT IN THE REAR POSITION  
METRIC TONS**

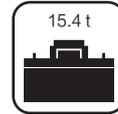
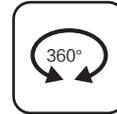


	13.1	17.6	22.1	26.6	31.1	35.6	40.1	44.6	49.1	53.6	58.1	62	
3	136.0**	83.0	83.0										3
3.5	101.0*	83.0	83.0										3.5
4	93.0*	83.0	83.0	67.0									4
4.5	86.0*	83.0	82.0	67.0									4.5
5	81.0	79.0	77.0	67.0	58.0								5
6	71.0	69.0	68.0	66.0	58.0	50.0							6
7	62.0	62.0	61.0	59.0	58.0	50.0	42.0						7
8	55.0	56.0	55.0	53.0	53.0	48.8	42.0	32.7					8
9	47.0	50.0	50.0	48.0	48.0	46.3	42.0	32.7	25.1				9
10	38.0	45.6	45.0	44.0	44.0	44.0	40.3	31.9	25.1	18.7			10
12		36.8	37.0	36.7	37.4	38.0	34.0	27.6	25.1	17.8	14.7	11.8	12
14		27.0	30.2	29.8	30.7	31.5	29.6	24.1	22.6	16.8	14.6	11.8	14
16			24.3	24.0	24.8	25.7	25.3	21.4	20.1	15.8	14.5	11.8	16
18			20.1	19.8	20.6	21.4	21.0	19.1	17.8	14.7	14.2	11.7	18
20				16.5	17.4	18.1	17.8	17.2	16.1	13.9	12.9	11.7	20
22				14.0	14.8	15.6	15.2	15.2	14.6	12.8	11.6	10.6	22
24				10.0	12.8	13.5	13.2	13.2	13.2	11.7	10.5	9.6	24
26					11.1	11.8	11.5	11.5	11.7	10.7	9.6	8.8	26
28					10.3	10.4	10.1	10.0	10.2	9.8	8.9	8.1	28
30						9.2	8.8	8.8	9.0	9.0	8.2	7.5	30
32						8.0	7.8	7.8	8.0	8.3	7.6	6.8	32
34							6.9	6.9	7.1	7.4	7.0	6.4	34
36							6.1	6.1	6.3	6.6	6.5	5.9	36
38								5.4	5.6	5.9	6.1	5.5	38
40								4.7	4.9	5.3	5.6	5.1	40
42									4.4	4.7	5.1	4.7	42
44									3.9	4.2	4.5	4.3	44
46										3.7	4.1	4.0	46
48										3.3	3.6	3.7	48
50											3.3	3.3	50
52											2.9	2.9	52
54											2.6	2.6	54
56												2.3	56
58												1.6	58

\*\* Capacity class; \* with the additional sheave of boom.

# LOAD CHARTS

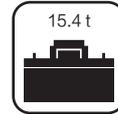
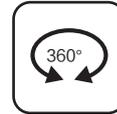
## COUNTERWEIGHT IN THE FRONT POSITION METRIC TONS



	13.1	17.6	22.1	26.6	31.1	35.6	40.1	44.6	49.1	53.6	58.1	62	
3	134.3**	83.0	83.0										3
3.5	101.0*	83.0	83.0										3.5
4	93.0*	83.0	83.0	67.0									4
4.5	86.0*	83.0	82.0	67.0									4.5
5	80.1	79.0	77.0	67.0	58.0								5
6	65.6	66.3	66.5	66.0	58.0	50.0							6
7	55.2	55.9	56.1	55.7	56.5	50.0	42.0						7
8	47.4	48.1	48.3	47.9	48.6	48.8	42.0	32.7					8
9	38.6	39.6	39.9	39.4	40.4	41.5	41.0	32.7	25.1				9
10	31.3	32.4	32.7	32.1	33.2	34.3	33.8	31.9	25.1	18.7			10
12		22.7	23.0	22.5	23.5	24.5	24.0	24.0	24.3	17.8	14.7	11.8	12
14		16.9	17.1	16.7	17.6	18.5	18.1	18.1	18.3	16.8	14.6	11.8	14
16			13.2	12.8	13.7	14.5	14.1	14.1	14.3	14.7	14.5	11.8	16
18			10.4	10.0	10.8	11.7	11.3	11.3	11.5	11.8	12.3	11.7	18
20				7.9	8.7	9.5	9.1	9.1	9.3	9.7	10.1	10.1	20
22				6.2	7.0	7.8	7.5	7.4	7.6	8.0	8.4	8.4	22
24				4.9	5.7	6.5	6.1	6.1	6.3	6.6	7.0	7.1	24
26					4.6	5.4	5.0	5.0	5.2	5.5	5.9	6.0	26
28					3.7	4.5	4.1	4.1	4.3	4.6	5.0	5.0	28
30						3.7	3.3	3.3	3.5	3.8	4.2	4.3	30
32							3.0	2.6	2.6	2.8	3.1	3.5	32
34								2.1	2.1	2.3	2.6	2.9	34
36									1.6	1.5	1.7	2.1	36
38										1.1	1.3	1.6	38
40												1.2	40
42													42

\*\* Capacity class; \* with the additional sheave of boom.

**COUNTERWEIGHT IN THE REAR POSITION  
METRIC TONS**

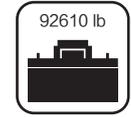
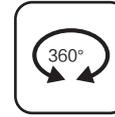


	13.1	17.6	22.1	26.6	31.1	35.6	40.1	44.6	49.1	53.6	58.1	62	
3	136.0**	83.0	83.0										3
3.5	101.0*	83.0	83.0										3.5
4	93.0*	83.0	83.0	67.0									4
4.5	86.0*	83.0	82.0	67.0									4.5
5	81.0	79.0	77.0	67.0	58.0								5
6	66.7	67.4	67.5	66.0	58.0	50.0							6
7	56.1	56.8	57.0	56.6	57.4	50.0	42.0						7
8	48.2	48.9	49.1	48.7	49.4	48.8	42.0	32.7					8
9	39.6	40.6	40.9	40.3	41.4	42.5	42.0	32.7	25.1				9
10	32.2	33.3	33.6	33.0	34.1	35.2	34.7	31.9	25.1	18.7			10
12		23.4	23.7	23.2	24.2	25.2	24.7	24.7	24.9	17.8	14.7	11.8	12
14		17.4	17.7	17.2	18.2	19.1	18.6	18.6	18.9	16.8	14.6	11.8	14
16			13.7	13.2	14.1	15.0	14.6	14.6	14.8	15.2	14.5	11.8	16
18			10.8	10.4	11.2	12.1	11.7	11.6	11.9	12.2	12.7	11.8	18
20				8.2	9.0	9.9	9.5	9.5	9.7	10.0	10.4	10.5	20
22				6.5	7.3	8.1	7.8	7.7	8.0	8.3	8.7	8.8	22
24				5.1	6.0	6.8	6.4	6.4	6.6	6.9	7.3	7.4	24
26					4.8	5.6	5.3	5.2	5.5	5.8	6.2	6.2	26
28					3.9	4.7	4.3	4.3	4.5	4.8	5.2	5.3	28
30						3.9	3.5	3.5	3.7	4.0	4.4	4.5	30
32							3.2	2.8	2.8	3.0	3.3	3.7	32
34								2.2	2.2	2.4	2.8	3.1	34
36									1.7	1.7	1.9	2.2	36
38										1.3	1.5	1.8	38
40											1.0	1.4	40
42												1.4	42
44													44

\*\* Capacity class; \* with the additional sheave of boom.

# LOAD CHARTS

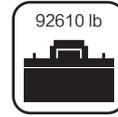
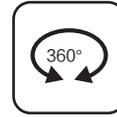
## COUNTERWEIGHT IN THE FRONT POSITION 1,000 lb



	43.0	57.7	72.5	87.3	102.0	116.8	131.6	146.3	161.1	175.9	190.6	203.4	
9.8	300.0**	183.0	183.0										9.8
11.5	222.7**	183.0	183.0										11.5
13.1	205.0**	183.0	183.0	147.7									13.1
14.8	189.6**	183.0	180.8	147.7									14.8
16.4	178.6	174.2	169.8	147.7	127.9								16.4
19.7	156.6	152.1	149.9	145.5	127.9	110.3							19.7
23.0	136.7	136.7	134.5	130.1	127.9	110.3	92.6						23.0
26.2	121.3	123.5	121.3	116.9	116.9	107.6	92.6	72.1					26.2
29.5	103.6	110.3	110.3	105.8	105.8	102.1	92.6	72.1	55.3				29.5
32.8	83.8	98.8	99.0	97.0	97.0	97.0	88.9	70.3	55.3	41.2			32.8
39.4		79.6	80.0	79.4	80.9	82.5	75.0	60.9	55.3	39.2	32.4	26.0	39.4
45.9		59.5	66.4	65.7	67.3	68.8	65.3	53.1	49.8	37.0	32.2	26.0	45.9
52.5			53.6	52.9	54.7	56.7	55.8	47.2	44.3	34.8	32.0	26.0	52.5
59.1			44.3	43.7	45.4	47.2	46.3	42.1	39.2	32.4	31.3	25.8	59.1
65.6				36.4	38.4	39.9	39.2	37.9	35.5	30.6	28.4	25.8	65.6
72.2				30.9	32.6	34.4	33.5	33.5	32.2	28.2	25.6	23.4	72.2
78.7				22.1	28.2	29.8	29.1	29.1	29.1	25.8	23.2	21.2	78.7
85.3					24.5	26.0	25.4	25.4	25.8	23.6	21.2	19.4	85.3
91.9					21.2	22.9	22.1	22.1	22.5	21.6	19.6	17.9	91.9
98.4						20.3	19.4	19.4	19.8	19.8	18.1	16.5	98.4
105.0						17.6	17.2	17.0	17.4	18.3	16.8	15.0	105.0
111.6							15.0	15.0	15.4	16.1	15.4	14.1	111.6
118.1							13.2	13.2	13.7	14.3	14.3	13.0	118.1
124.7								11.7	12.1	12.8	13.5	12.1	124.7
131.2								10.4	10.8	11.5	12.3	11.2	131.2
137.8									9.5	10.1	11.0	10.4	137.8
144.4									8.4	9.0	9.9	9.5	144.4
150.9										7.9	8.8	8.8	150.9
157.5										7.1	7.9	7.9	157.5
164.1											7.1	7.1	164.1
170.6											6.2	6.4	170.6
177.2											5.5	5.7	177.2
183.7												5.1	183.7
190.3												3.5	190.3

\*\* Capacity class; \* with the additional sheave of boom.

**COUNTERWEIGHT IN THE REAR POSITION**  
**1,000 lb**

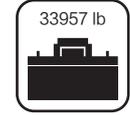
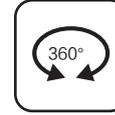
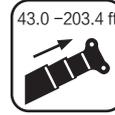


	43.0	57.7	72.5	87.3	102.0	116.8	131.6	146.3	161.1	175.9	190.6	203.4	
9.8	300.0**	183.0	183.0										9.8
11.5	222.7*	183.0	183.0										11.5
13.1	205.0*	183.0	183.0	147.7									13.1
14.8	189.6*	183.0	180.8	147.7									14.8
16.4	178.6	174.2	169.8	147.7	127.9								16.4
19.7	156.6	152.1	149.9	145.5	127.9	110.3							19.7
23.0	136.7	136.7	134.5	130.1	127.9	110.3	92.6						23.0
26.2	121.3	123.5	121.3	116.9	116.9	107.5	92.6	72.1					26.2
29.5	103.6	110.3	110.3	105.8	105.8	102.2	92.6	72.1	55.3				29.5
32.8	83.8	100.5	99.2	97.0	97.0	97.0	88.8	70.4	55.3	41.2			32.8
39.4		81.1	81.6	80.9	82.5	83.8	75.0	61.0	55.3	39.2	32.4	25.9	39.4
45.9		59.5	66.6	65.7	67.7	69.5	65.3	53.0	49.8	37.0	32.2	26.0	45.9
52.5			53.6	52.9	54.7	56.7	55.8	47.3	44.3	34.7	32.0	26.0	52.5
59.1			44.3	43.7	45.4	47.2	46.3	42.1	39.2	32.4	31.2	25.8	59.1
65.6				36.4	38.4	39.9	39.2	37.9	35.5	30.5	28.4	25.8	65.6
72.2				30.9	32.6	34.4	33.5	33.5	32.1	28.2	25.5	23.4	72.2
78.7				22.1	28.2	29.8	29.1	29.1	29.1	25.8	23.2	21.2	78.7
85.3					24.5	26.0	25.4	25.4	25.8	23.6	21.2	19.4	85.3
91.9					22.7	22.9	22.3	22.1	22.5	21.6	19.6	17.9	91.9
98.4						20.3	19.4	19.4	19.8	19.8	18.1	16.5	98.4
105.0						17.6	17.2	17.2	17.6	18.3	16.7	15.0	105.0
111.6							15.2	15.2	15.7	16.3	15.4	14.1	111.6
118.1							13.5	13.5	13.9	14.6	14.3	13.0	118.1
124.7								11.9	12.3	13.0	13.3	12.1	124.7
131.2								10.4	10.8	11.7	12.3	11.2	131.2
137.8									9.7	10.4	11.2	10.3	137.8
144.4									8.6	9.3	9.9	9.5	144.4
150.9										8.2	9.0	8.8	150.9
157.5										7.3	7.9	8.2	157.5
164.1											7.3	7.3	164.1
170.6											6.4	6.4	170.6
177.2											5.7	5.7	177.2
183.7												5.1	183.7
190.3												3.5	190.3

\*\* Capacity class; \* with the additional sheave of boom.

# LOAD CHARTS

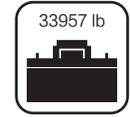
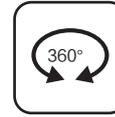
## COUNTERWEIGHT IN THE FRONT POSITION 1,000 lb



	43.0	57.7	72.5	87.3	102.0	116.8	131.6	146.3	161.1	175.9	190.6	203.4	
9.8	296.1**	183.0	183.0										9.8
11.5	222.7**	183.0	183.0										11.5
13.1	205.0**	183.0	183.0	147.7									13.1
14.8	189.6**	183.0	180.8	147.7									14.8
16.4	176.6	174.2	169.8	147.7	127.9								16.4
19.7	144.6	146.2	146.6	145.5	127.9	110.3							19.7
23.0	121.7	123.3	123.7	122.8	124.6	110.3	92.6						23.0
26.2	104.5	106.1	106.5	105.6	107.2	107.6	92.6	72.1					26.2
29.5	85.1	87.3	88.0	86.9	89.1	91.5	90.4	72.1	55.3				29.5
32.8	69.0	71.4	72.1	70.8	73.2	75.6	74.5	70.3	55.3	41.2			32.8
39.4		50.1	50.7	49.6	51.8	54.0	52.9	52.9	53.6	39.2	32.4	26.0	39.4
45.9		37.3	37.7	36.8	38.8	40.8	39.9	39.9	40.4	37.0	32.2	26.0	45.9
52.5			29.1	28.2	30.2	32.0	31.1	31.1	31.5	32.4	32.0	26.0	52.5
59.1			22.9	22.1	23.8	25.8	24.9	24.9	25.4	26.0	27.1	25.8	59.1
65.6				17.4	19.2	20.9	20.1	20.1	20.5	21.4	22.3	22.3	65.6
72.2				13.7	15.4	17.2	16.5	16.3	16.8	17.6	18.5	18.5	72.2
78.7				10.8	12.6	14.3	13.5	13.5	13.9	14.6	15.4	15.7	78.7
85.3					10.1	11.9	11.0	11.0	11.5	12.1	13.0	13.2	85.3
91.9					8.2	9.9	9.0	9.0	9.5	10.1	11.0	11.0	91.9
98.4						8.2	7.3	7.3	7.7	8.4	9.3	9.5	98.4
105.0						6.6	5.7	5.7	6.2	6.8	7.7	7.9	105.0
111.6							4.6	4.6	5.1	5.7	6.4	6.6	111.6
118.1							3.5	3.3	3.7	4.6	5.3	5.5	118.1
124.7								2.4	2.9	3.5	4.4	4.4	124.7
131.2										2.6	3.5	3.5	131.2
137.8											2.6	2.9	137.8

\*\* Capacity class; \* with the additional sheave of boom.

**COUNTERWEIGHT IN THE REAR POSITION**  
**1,000 lb**

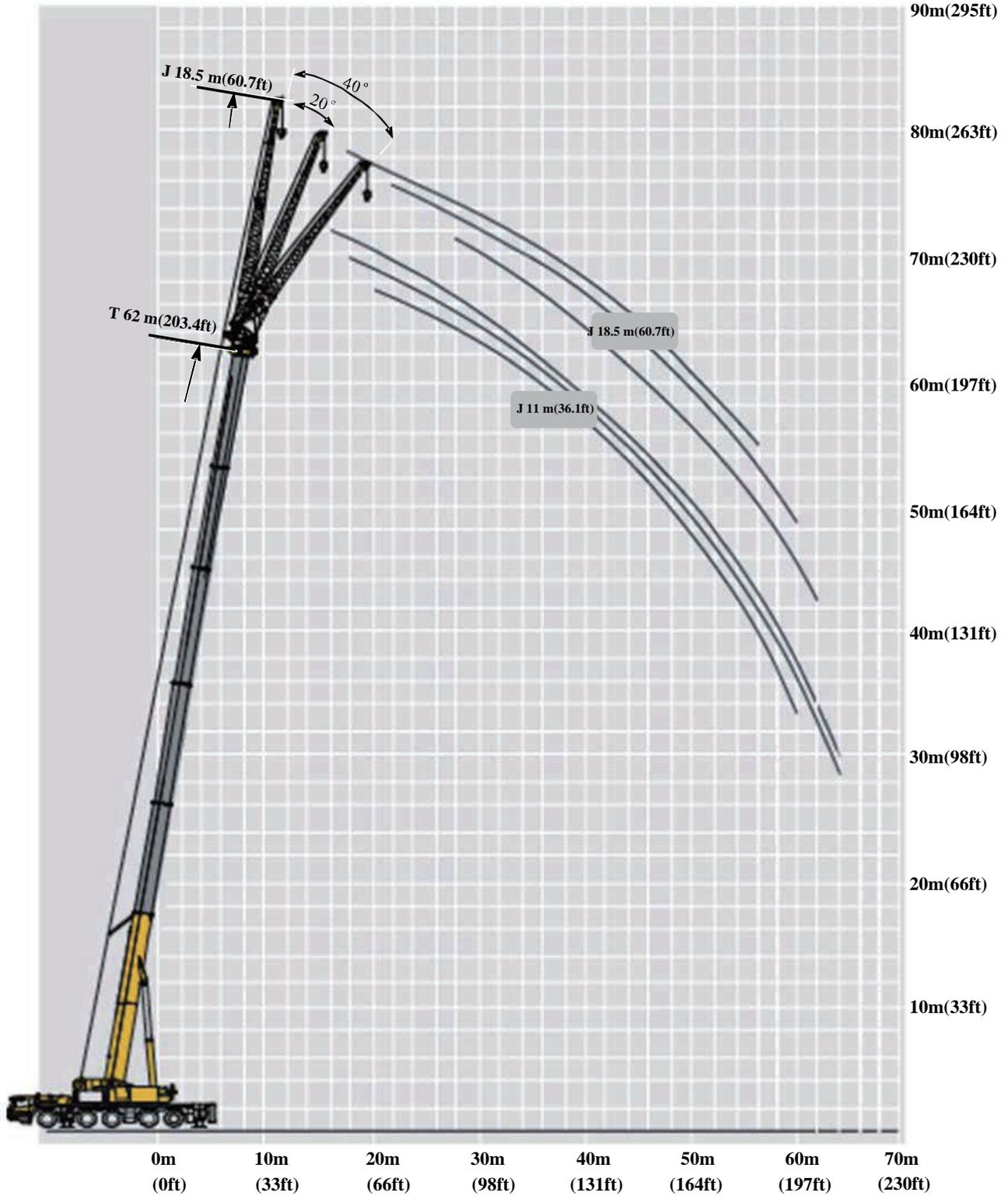


	<b>43.0</b>	<b>57.7</b>	<b>72.5</b>	<b>87.3</b>	<b>102.0</b>	<b>116.8</b>	<b>131.6</b>	<b>146.3</b>	<b>161.1</b>	<b>175.9</b>	<b>190.6</b>	<b>203.4</b>	
9.8	300.0**	183.0	183.0										9.8
11.5	222.7*	183.0	183.0										11.5
13.1	205.0*	183.0	183.0	147.7									13.1
14.8	189.6*	183.0	180.8	147.7									14.8
16.4	178.6	174.2	169.8	147.7	127.9								16.4
19.7	147.1	148.6	148.8	145.5	127.9	110.3							19.7
23.0	123.7	125.2	125.7	124.8	126.6	110.3	92.6						23.0
26.2	106.3	107.8	108.3	107.4	108.9	107.6	92.6	72.1					26.2
29.5	87.3	89.5	90.2	88.9	91.3	93.7	92.6	72.1	55.3				29.5
32.8	71.0	73.4	74.1	72.8	75.2	77.6	76.5	70.3	55.3	41.2			32.8
39.4		51.6	52.3	51.2	53.4	55.6	54.5	54.5	54.9	39.2	32.4	26.0	39.4
45.9		38.4	39.0	37.9	40.1	42.1	41.0	41.0	41.7	37.0	32.2	26.0	45.9
52.5			30.2	29.1	31.1	33.1	32.2	32.2	32.6	33.5	32.0	26.0	52.5
59.1			23.8	22.9	24.7	26.7	25.8	25.6	26.2	26.9	28.0	26.0	59.1
65.6				18.1	19.8	21.8	20.9	20.9	21.4	22.1	22.9	23.2	65.6
72.2				14.3	16.1	17.9	17.2	17.0	17.6	18.3	19.2	19.4	72.2
78.7				11.2	13.2	15.0	14.1	14.1	14.6	15.2	16.1	16.3	78.7
85.3					10.6	12.3	11.7	11.5	12.1	12.8	13.7	13.7	85.3
91.9					8.6	10.4	9.5	9.5	9.9	10.6	11.5	11.7	91.9
98.4						8.6	7.7	7.7	8.2	8.8	9.7	9.9	98.4
105.0						7.1	6.2	6.2	6.6	7.3	8.2	8.4	105.0
111.6							4.9	4.9	5.3	6.2	6.8	7.1	111.6
118.1								3.7	3.7	4.2	4.9	5.7	118.1
124.7									2.9	3.3	4.0	4.6	124.7
131.2										2.2	3.1	3.7	131.2
137.8												3.1	137.8
144.4												2.2	144.4

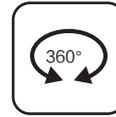
\*\* Capacity class; \* with the additional sheave of boom.

# WORKING RANGE DIAGRAM

## JIB



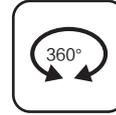
**COUNTERWEIGHT IN THE FRONT POSITION**  
**METRIC TONS**



	13.1			40.1			53.6			58.1			62			
	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	
5	16.8															5
6	16.8	11.6														6
7	16.5	10.1														7
8	15.2	9														8
9	14	8.6	5.9	13												9
10	12.7	8.1	5.6	12.5												10
12	11.5	7.1	5.1	12	10		10.4									12
14	9.8	6.6	4.9	11	9.1		10.4			8.4						14
16	9	6.1	4.7	10.5	8.7	5.6	10.3	9.5		8.4			7.4			16
18	6.8	5.6	4.6	10	8.2	5.4	10.1	8.7	5.5	8.4	8.4		7.4	7.6		18
20		4.7	4.5	9.5	7.7	5.2	9.9	8.5	5.3	8.4	8.3	5.1	7.4	7.6	5.1	20
22				9.2	7.4	5	9.6	8	5.1	8.4	7.9	5	7.4	7.6	5	22
24				8.9	7	4.9	9.2	7.5	5	8.3	7.6	4.9	7.4	7.3	4.9	24
26				8.6	6.8	4.8	8.4	7.4	4.9	7.6	7.3	4.8	6.8	6.6	4.8	26
28				8.3	6.4	4.7	7.7	6.9	4.8	6.9	6.6	4.7	6.2	6	4.7	28
30				8.1	6.2	4.5	7	6.8	4.7	6.2	6.1	4.6	5.6	5.6	4.5	30
32				8	6	4.4	6.3	6.2	4.5	5.7	5.5	4.4	5.1	4.9	4.4	32
34				7.2	5.7	4.3	5.8	5.8	4.4	5.2	5.1	4.3	4.7	4.5	4.3	34
36				6.4	5.6	4.2	5.4	5.3	4.3	4.8	4.7	4.2	4.2	4.1	4.1	36
38				5.7	5.3	4.1	4.8	4.9	4.2	4.3	4.3	4.1	3.8	3.7	3.7	38
40				5.1	5.2	4.1	4.4	4.5	4	3.9	3.9	3.9	3.4	3.5	3.5	40
42				4.6	4.7	3.9	4	4	4	3.6	3.6	3.6	3.2	3.2	3.2	42
44					4.2		3.8	3.7	3.7	3.3	3.3	3.4	2.9	2.9	3	44
46							3.4	3.5	3.4	3.1	3.1	3.1	2.6	2.7	2.6	46
48							3.1	3.2	3.1	2.8	2.9	2.8	2.4	2.4	2.4	48
50							2.8	2.9	3	2.4	2.5	2.6	2.1	2.2	2.3	50
52							2.4	2.6	2.6	2.2	2.4	2.3	1.9	2	1.9	52
54							2.1	2.2		2.1	2.2	2.2	1.8	1.8	1.8	54
56							1.8	1.9		2	2	2	1.6	1.5	1.6	56
58										1.8	1.8		1.5	1.3	1.4	58
60										1.5	1.6		1.2	1.2	1.2	60
62													1.1	1.1		62
64													0.9	1		64

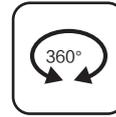
# LOAD CHARTS

## COUNTERWEIGHT IN THE REAR POSITION METRIC TONS



	13.1			40.1			53.6			58.1			62			
	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	
5	16.8															5
6	16.8	11.6														6
7	16.5	10.1														7
8	15.2	9														8
9	14	8.6	5.9	13												9
10	12.7	8.1	5.6	12.5												10
12	11.5	7.1	5.1	12	10		10.4									12
14	9.8	6.6	4.9	11	9.1		10.4			8.4						14
16	9	6.1	4.7	10.5	8.7	5.6	10.3	9.5		8.4			7.4			16
18	6.8	5.6	4.6	10	8.2	5.4	10.1	8.7	5.5	8.4	8.4		7.4	7.6		18
20		4.7	4.5	9.5	7.7	5.2	9.9	8.5	5.3	8.4	8.3	5.1	7.4	7.6	5.1	20
22				9.2	7.4	5	9.6	8	5.1	8.4	7.9	5	7.4	7.6	5	22
24				8.9	7	4.9	9.2	7.5	5	8.3	7.6	4.9	7.4	7.3	4.9	24
26				8.6	6.8	4.8	8.4	7.4	4.9	7.6	7.3	4.8	6.8	6.6	4.8	26
28				8.3	6.4	4.7	7.7	6.9	4.8	6.9	6.6	4.7	6.2	6	4.7	28
30				8.1	6.2	4.5	7	6.8	4.7	6.2	6.1	4.6	5.6	5.6	4.5	30
32				8	6	4.4	6.3	6.2	4.5	5.7	5.5	4.4	5.1	4.9	4.4	32
34				7.2	5.7	4.3	5.8	5.8	4.4	5.2	5.1	4.3	4.7	4.5	4.3	34
36				6.4	5.6	4.2	5.4	5.3	4.3	4.8	4.7	4.2	4.2	4.1	4.1	36
38				5.7	5.3	4.1	4.8	4.9	4.2	4.3	4.3	4.1	3.8	3.7	3.7	38
40				5.1	5.2	4.1	4.4	4.5	4	3.9	3.9	3.9	3.4	3.5	3.5	40
42				4.6	4.7	3.9	4	4	4	3.6	3.6	3.6	3.2	3.2	3.2	42
44					4.2		3.8	3.7	3.7	3.3	3.3	3.4	2.9	2.9	3	44
46							3.4	3.5	3.4	3.1	3.1	3.1	2.6	2.7	2.6	46
48							3.2	3.2	3.1	2.8	2.9	2.8	2.4	2.4	2.4	48
50							2.8	2.9	3	2.4	2.5	2.6	2.1	2.2	2.3	50
52							2.4	2.6	2.6	2.2	2.4	2.3	1.9	2	1.9	52
54							2.1	2.3		2.1	2.2	2.2	1.8	1.8	1.8	54
56							1.8	1.9		2	2	2	1.6	1.5	1.6	56
58										1.8	1.8		1.5	1.3	1.4	58
60										1.5	1.6		1.2	1.2	1.2	60
62													1.1	1.1		62
64													0.9	1		64

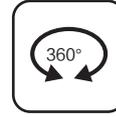
**COUNTERWEIGHT IN THE FRONT POSITION**  
**METRIC TONS**



	13.1			40.1			53.6			58.1			62			
	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	
5	7.8															5
6	7.5															6
7	7.4															7
8	7.2															8
9	7.1															9
10	6.9	6														10
12	5.9	5.4		5.6												12
14	5.1	4.7		5.5			4.9									14
16	4.6	4.2	2.5	5.4	4.2		4.8			4.5						16
18	4.1	4.1	2.4	5.3	4.1		4.8			4.4			4			18
20	3.7	3.8	2.3	5.2	3.8		4.7	4.1		4.4			4			20
22	3.4	3.6	2.1	5.1	3.6	2.4	4.7	3.9		4.4	3.9		4	3.7		22
24		3.4	2	5.1	3.4	2.3	4.6	3.7	2.4	4.3	3.8		3.9	3.5		24
26			1.9	5.1	3.2	2.2	4.5	3.6	2.3	4.3	3.6	2.3	3.8	3.4		26
28				5	3.1	2.1	4.5	3.3	2.2	4.3	3.4	2.2	3.7	3.3	2.2	28
30				4.7	3	2	4.4	3.2	2.1	4.2	3.3	2.1	3.6	3.2	2.1	30
32				4.5	2.9	2	4.4	3.1	2.1	4.2	3.2	2.1	3.5	3.1	2.1	32
34				4.2	2.7	1.9	4.3	3	2	4.1	3	2.1	3.4	3	2	34
36				4	2.6	1.9	4.3	2.9	2	4.1	2.9	2	3.3	2.8	2	36
38					2.5	1.9	4.2	2.7	2	4	2.8	2	3.2	2.7	2	38
40					2.3	1.9	4.1	2.6	1.9	4	2.7	2	3.2	2.6	2	40
42					2.2	1.8	4.1	2.5	1.9	3.8	2.5	1.9	3.1	2.5	1.9	42
44					2.1	1.8	3.9	2.4	1.9	3.8	2.4	1.9	3	2.5	1.9	44
46						1.8	3.7	2.4	1.9	3.6	2.4	1.9	2.9	2.4	1.9	46
48							3.5	2.2	1.8	3.3	2.4	1.9	2.8	2.4	1.9	48
50							3.1	2.2	1.9	3	2.3	1.9	2.6	2.4	1.9	50
52								2.1	1.9	2.7	2.2	1.8	2.3	2.2	1.8	52
54								2.1	1.8	2.5	2.2	2	2.2	2.2	1.9	54
56									1.9	2.3	2.1	1.8	2	2	1.9	56
58										2.1	2	1.8		1.9	1.8	58
60										1.8	2			1.7	1.8	60
62										1.6	1.8				1.5	62
64										1.3	1.5					64
66											1.3					66
68											1.1					68

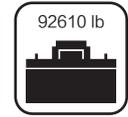
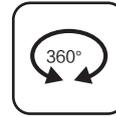
# LOAD CHARTS

## COUNTERWEIGHT IN THE REAR POSITION METRIC TONS



	13.1			40.1			53.6			58.1			62			
	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	
5	7.8															5
6	7.5															6
7	7.4															7
8	7.2															8
9	7.1															9
10	6.9	6														10
12	5.9	5.4		5.6												12
14	5.1	4.7		5.5			4.9									14
16	4.6	4.2	2.5	5.4	4.2		4.8			4.5						16
18	4.1	4.1	2.4	5.3	4.1		4.8			4.4			4			18
20	3.7	3.8	2.3	5.2	3.8		4.7	4.1		4.4			4			20
22	3.4	3.6	2.1	5.1	3.6	2.4	4.7	3.9		4.4	3.9		4	3.7		22
24		3.4	2	5.1	3.4	2.3	4.6	3.7	2.4	4.3	3.8		3.9	3.5		24
26			1.9	5.1	3.2	2.2	4.5	3.6	2.3	4.3	3.6	2.3	3.8	3.4		26
28				5	3.1	2.1	4.5	3.3	2.2	4.3	3.4	2.2	3.7	3.3	2.2	28
30				4.7	3	2	4.4	3.2	2.1	4.2	3.3	2.1	3.6	3.2	2.1	30
32				4.5	2.9	2	4.4	3.1	2.1	4.2	3.2	2.1	3.5	3.1	2.1	32
34				4.2	2.7	1.9	4.3	3	2	4.1	3	2.1	3.4	3	2	34
36				4	2.6	1.9	4.3	2.9	2	4.1	2.9	2	3.3	2.8	2	36
38					2.5	1.9	4.2	2.7	2	4	2.8	2	3.2	2.7	2	38
40					2.3	1.9	4.1	2.6	1.9	4	2.7	2	3.2	2.6	2	40
42					2.2	1.8	4.1	2.5	1.9	3.8	2.5	1.9	3.1	2.5	1.9	42
44					2.1	1.8	3.9	2.4	1.9	3.8	2.4	1.9	3	2.5	1.9	44
46						1.8	3.7	2.4	1.9	3.6	2.4	1.9	2.9	2.4	1.9	46
48							3.5	2.2	1.8	3.3	2.4	1.9	2.8	2.4	1.9	48
50							3.2	2.2	1.9	3	2.3	1.9	2.6	2.4	1.9	50
52								2.1	1.9	2.7	2.2	1.8	2.3	2.2	1.8	52
54								2.1	1.8	2.5	2.2	2	2.2	2.2	1.9	54
56									1.9	2.3	2.1	1.8	2	2	1.9	56
58										2.1	2	1.8		1.9	1.8	58
60										1.8	2			1.7	1.8	60
62										1.6	1.8				1.5	62
64										1.4	1.5					64
66											1.3					66
68											1.1					68

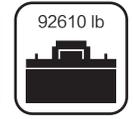
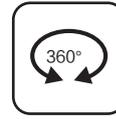
**COUNTERWEIGHT IN THE FRONT POSITION**  
1,000 lb



	43			131.6			175.9			190.6			203.4			
	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	
16.4	37.0															16.4
19.7	37.0	25.6														19.7
23.0	36.4	22.3														23.0
26.2	33.5	19.8														26.2
29.5	30.9	19.0	13.0	28.7												29.5
32.8	28.0	17.9	12.3	27.6												32.8
39.4	25.4	15.7	11.2	26.5	22.1		22.9									39.4
45.9	21.6	14.6	10.8	24.3	20.1		22.9			18.5						45.9
52.5	19.8	13.5	10.4	23.2	19.2	12.3	22.7	20.9		18.5			16.3			52.5
59.1	15.0	12.3	10.1	22.1	18.1	11.9	22.3	19.2	12.1	18.5	18.5		16.3	16.8		59.1
65.6		10.4	9.9	20.9	17.0	11.5	21.8	18.7	11.7	18.5	18.3	11.2	16.3	16.8	11.2	65.6
72.2				20.3	16.3	11.0	21.2	17.6	11.2	18.5	17.4	11.0	16.3	16.8	11.0	72.2
78.7				19.6	15.4	10.8	20.3	16.5	11.0	18.3	16.8	10.8	16.3	16.1	10.8	78.7
85.3				19.0	15.0	10.6	18.5	16.3	10.8	16.8	16.1	10.6	15.0	14.6	10.6	85.3
91.9				18.3	14.1	10.4	17.0	15.2	10.6	15.2	14.6	10.4	13.7	13.2	10.4	91.9
98.4				17.9	13.7	9.9	15.4	15.0	10.4	13.7	13.5	10.1	12.3	12.3	9.9	98.4
105.0				17.6	13.2	9.7	13.9	13.7	9.9	12.6	12.1	9.7	11.2	10.8	9.7	105.0
111.6				15.9	12.6	9.5	12.8	12.8	9.7	11.5	11.2	9.5	10.4	9.9	9.5	111.6
118.1				14.1	12.3	9.3	11.9	11.7	9.5	10.6	10.4	9.3	9.3	9.0	9.0	118.1
124.7				12.6	11.7	9.0	10.6	10.8	9.3	9.5	9.5	9.0	8.4	8.2	8.2	124.7
131.2				11.2	11.5	9.0	9.7	9.9	8.8	8.6	8.6	8.6	7.5	7.7	7.7	131.2
137.8				10.1	10.4	8.6	8.8	8.8	8.8	7.9	7.9	7.9	7.1	7.1	7.1	137.8
144.4					9.3		8.4	8.2	8.2	7.3	7.3	7.5	6.4	6.4	6.6	144.4
150.9							7.5	7.7	7.5	6.8	6.8	6.8	5.7	6.0	5.7	150.9
157.5							6.8	7.1	6.8	6.2	6.4	6.2	5.3	5.3	5.3	157.5
164.1							6.2	6.4	6.6	5.3	5.5	5.7	4.6	4.9	5.1	164.1
170.6							5.3	5.7	5.7	4.9	5.3	5.1	4.2	4.4	4.2	170.6
177.2							4.6	4.9		4.6	4.9	4.9	4.0	4.0	4.0	177.2
183.7							4.0	4.2		4.4	4.4	4.4	3.5	3.3	3.5	183.7
190.3										4.0	4.0		3.3	2.9	3.1	190.3
196.9										3.3	3.5		2.6	2.6	2.6	196.9
203.4													2.4	2.4		203.4
210.0													2.0	2.2		210.0

# LOAD CHARTS

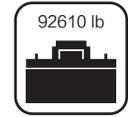
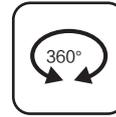
## COUNTERWEIGHT IN THE REAR POSITION 1,000 lb



	43			131.6			175.9			190.6			203.4			
	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	
16.4	37.0															16.4
19.7	37.0	25.6														19.7
23.0	36.4	22.3														23.0
26.2	33.5	19.8														26.2
29.5	30.9	19.0	13.0	28.7												29.5
32.8	28.0	17.9	12.3	27.6												32.8
39.4	25.4	15.7	11.2	26.5	22.1		22.9									39.4
45.9	21.6	14.6	10.8	24.3	20.1		22.9			18.5						45.9
52.5	19.8	13.5	10.4	23.2	19.2	12.3	22.7	20.9		18.5			16.3			52.5
59.1	15.0	12.3	10.1	22.1	18.1	11.9	22.3	19.2	12.1	18.5	18.5		16.3	16.8		59.1
65.6		10.4	9.9	20.9	17.0	11.5	21.8	18.7	11.7	18.5	18.3	11.2	16.3	16.8	11.2	65.6
72.2				20.3	16.3	11.0	21.2	17.6	11.2	18.5	17.4	11.0	16.3	16.8	11.0	72.2
78.7				19.6	15.4	10.8	20.3	16.5	11.0	18.3	16.8	10.8	16.3	16.1	10.8	78.7
85.3				19.0	15.0	10.6	18.5	16.3	10.8	16.8	16.1	10.6	15.0	14.6	10.6	85.3
91.9				18.3	14.1	10.4	17.0	15.2	10.6	15.2	14.6	10.4	13.7	13.2	10.4	91.9
98.4				17.9	13.7	9.9	15.4	15.0	10.4	13.7	13.5	10.1	12.3	12.3	9.9	98.4
105.0				17.6	13.2	9.7	13.9	13.7	9.9	12.6	12.1	9.7	11.2	10.8	9.7	105.0
111.6				15.9	12.6	9.5	12.8	12.8	9.7	11.5	11.2	9.5	10.4	9.9	9.5	111.6
118.1				14.1	12.3	9.3	11.9	11.7	9.5	10.6	10.4	9.3	9.3	9.0	9.0	118.1
124.7				12.6	11.7	9.0	10.6	10.8	9.3	9.5	9.5	9.0	8.4	8.2	8.2	124.7
131.2				11.2	11.5	9.0	9.7	9.9	8.8	8.6	8.6	8.6	7.5	7.7	7.7	131.2
137.8				10.1	10.4	8.6	8.8	8.8	8.8	7.9	7.9	7.9	7.1	7.1	7.1	137.8
144.4					9.3		8.4	8.2	8.2	7.3	7.3	7.5	6.4	6.4	6.6	144.4
150.9							7.5	7.7	7.5	6.8	6.8	6.8	5.7	6.0	5.7	150.9
157.5							7.1	7.1	6.8	6.2	6.4	6.2	5.3	5.3	5.3	157.5
164.1							6.2	6.4	6.6	5.3	5.5	5.7	4.6	4.9	5.1	164.1
170.6							5.3	5.7	5.7	4.9	5.3	5.1	4.2	4.4	4.2	170.6
177.2							4.6	5.1		4.6	4.9	4.9	4.0	4.0	4.0	177.2
183.7							4.0	4.2		4.4	4.4	4.4	3.5	3.3	3.5	183.7
190.3										4.0	4.0		3.3	2.9	3.1	190.3
196.9										3.3	3.5		2.6	2.6	2.6	196.9
203.4													2.4	2.4		203.4
210.0													2.0	2.2		210.0

**COUNTERWEIGHT IN THE FRONT POSITION**

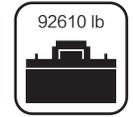
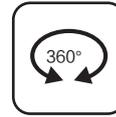
1,000 lb



	43			131.6			175.9			190.6			203.4			
	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	
16.4	17.2															16.4
19.7	16.5															19.7
23.0	16.3															23.0
26.2	15.9															26.2
29.5	15.7															29.5
32.8	15.2	13.2														32.8
39.4	13.0	11.9		12.3												39.4
45.9	11.2	10.4		12.1			10.8									45.9
52.5	10.1	9.3	5.5	11.9	9.3		10.6			9.9						52.5
59.1	9.0	9.0	5.3	11.7	9.0		10.6			9.7			8.8			59.1
65.6	8.2	8.4	5.1	11.5	8.4		10.4	9.0		9.7			8.8			65.6
72.2	7.5	7.9	4.6	11.2	7.9	5.3	10.4	8.6		9.7	8.6		8.8	8.2		72.2
78.7		7.5	4.4	11.2	7.5	5.1	10.1	8.2	5.3	9.5	8.4		8.6	7.7		78.7
85.3			4.2	11.2	7.1	4.9	9.9	7.9	5.1	9.5	7.9	5.1	8.4	7.5		85.3
91.9				11.0	6.8	4.6	9.9	7.3	4.9	9.5	7.5	4.9	8.2	7.3	4.9	91.9
98.4				10.4	6.6	4.4	9.7	7.1	4.6	9.3	7.3	4.6	7.9	7.1	4.6	98.4
105.0				9.9	6.4	4.4	9.7	6.8	4.6	9.3	7.1	4.6	7.7	6.8	4.6	105.0
111.6				9.3	6.0	4.2	9.5	6.6	4.4	9.0	6.6	4.6	7.5	6.6	4.4	111.6
118.1				8.8	5.7	4.2	9.5	6.4	4.4	9.0	6.4	4.4	7.3	6.2	4.4	118.1
124.7					5.5	4.2	9.3	6.0	4.4	8.8	6.2	4.4	7.1	6.0	4.4	124.7
131.2					5.1	4.2	9.0	5.7	4.2	8.8	6.0	4.4	7.1	5.7	4.4	131.2
137.8					4.9	4.0	9.0	5.5	4.2	8.4	5.5	4.2	6.8	5.5	4.2	137.8
144.4					4.6	4.0	8.6	5.3	4.2	8.4	5.3	4.2	6.6	5.5	4.2	144.4
150.9						4.0	8.2	5.3	4.2	7.9	5.3	4.2	6.4	5.3	4.2	150.9
157.5							7.7	4.9	4.0	7.3	5.3	4.2	6.2	5.3	4.2	157.5
164.1							6.8	4.9	4.2	6.6	5.1	4.2	5.7	5.3	4.2	164.1
170.6								4.6	4.2	6.0	4.9	4.0	5.1	4.9	4.0	170.6
177.2								4.6	4.0	5.5	4.9	4.4	4.9	4.9	4.2	177.2
183.7									4.2	5.1	4.6	4.0	4.4	4.4	4.2	183.7
190.3										4.6	4.4	4.0		4.2	4.0	190.3
196.9										4.0	4.4			3.7	4.0	196.9
203.4										3.5	4.0				3.3	203.4
210.0										2.9	3.3					210.0
216.5											2.9					216.5
223.1											2.4					223.1

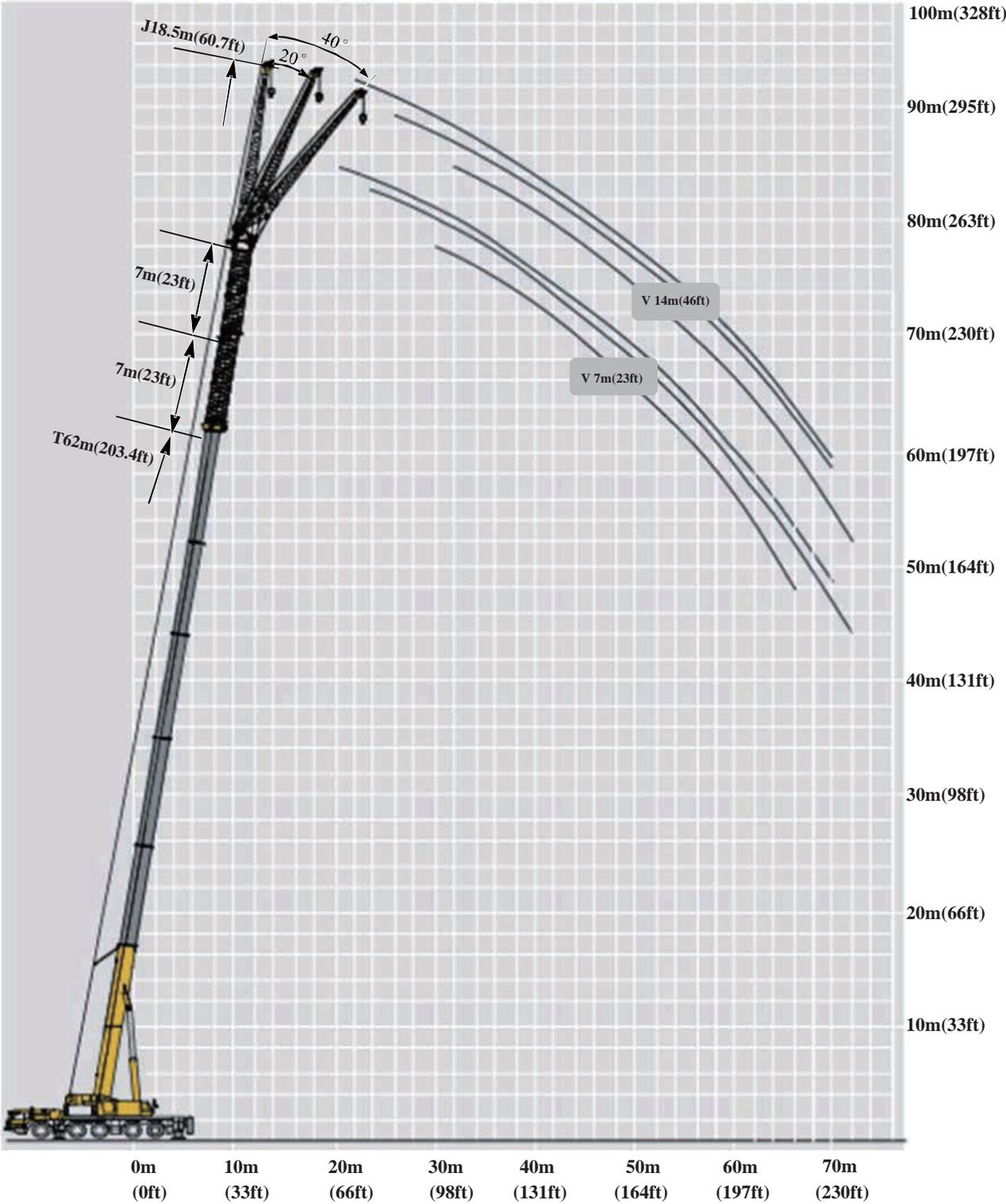
# LOAD CHARTS

## COUNTERWEIGHT IN THE REAR POSITION 1,000 lb



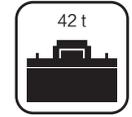
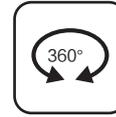
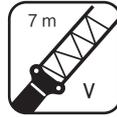
	43			131.6			175.9			190.6			203.4			
	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	0°	20°	40°	
16.4	17.2															16.4
19.7	16.5															19.7
23.0	16.3															23.0
26.2	15.9															26.2
29.5	15.7															29.5
32.8	15.2	13.2														32.8
39.4	13.0	11.9		12.3												39.4
45.9	11.2	10.4		12.1			10.8									45.9
52.5	10.1	9.3	5.5	11.9	9.3		10.6			9.9						52.5
59.1	9.0	9.0	5.3	11.7	9.0		10.6			9.7			8.8			59.1
65.6	8.2	8.4	5.1	11.5	8.4		10.4	9.0		9.7			8.8			65.6
72.2	7.5	7.9	4.6	11.2	7.9	5.3	10.4	8.6		9.7	8.6		8.8	8.2		72.2
78.7		7.5	4.4	11.2	7.5	5.1	10.1	8.2	5.3	9.5	8.4		8.6	7.7		78.7
85.3			4.2	11.2	7.1	4.9	9.9	7.9	5.1	9.5	7.9	5.1	8.4	7.5		85.3
91.9				11.0	6.8	4.6	9.9	7.3	4.9	9.5	7.5	4.9	8.2	7.3	4.9	91.9
98.4				10.4	6.6	4.4	9.7	7.1	4.6	9.3	7.3	4.6	7.9	7.1	4.6	98.4
105.0				9.9	6.4	4.4	9.7	6.8	4.6	9.3	7.1	4.6	7.7	6.8	4.6	105.0
111.6				9.3	6.0	4.2	9.5	6.6	4.4	9.0	6.6	4.6	7.5	6.6	4.4	111.6
118.1				8.8	5.7	4.2	9.5	6.4	4.4	9.0	6.4	4.4	7.3	6.2	4.4	118.1
124.7					5.5	4.2	9.3	6.0	4.4	8.8	6.2	4.4	7.1	6.0	4.4	124.7
131.2					5.1	4.2	9.0	5.7	4.2	8.8	6.0	4.4	7.1	5.7	4.4	131.2
137.8					4.9	4.0	9.0	5.5	4.2	8.4	5.5	4.2	6.8	5.5	4.2	137.8
144.4					4.6	4.0	8.6	5.3	4.2	8.4	5.3	4.2	6.6	5.5	4.2	144.4
150.9						4.0	8.2	5.3	4.2	7.9	5.3	4.2	6.4	5.3	4.2	150.9
157.5							7.7	4.9	4.0	7.3	5.3	4.2	6.2	5.3	4.2	157.5
164.1							7.1	4.9	4.2	6.6	5.1	4.2	5.7	5.3	4.2	164.1
170.6								4.6	4.2	6.0	4.9	4.0	5.1	4.9	4.0	170.6
177.2								4.6	4.0	5.5	4.9	4.4	4.9	4.9	4.2	177.2
183.7									4.2	5.1	4.6	4.0	4.4	4.4	4.2	183.7
190.3										4.6	4.4	4.0		4.2	4.0	190.3
196.9										4.0	4.4			3.7	4.0	196.9
203.4										3.5	4.0				3.3	203.4
210.0										3.1	3.3					210.0
216.5											2.9					216.5
223.1											2.4					223.1

# BOOM EXTENSION



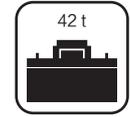
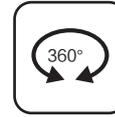
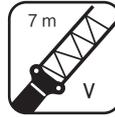
# LOAD CHARTS

## COUNTERWEIGHT IN THE FRONT POSITION t



	58.1+7			62+7			
	18.5						
	0°	20°	40°	0°	20°	40°	
18	4						18
20	4			3.5			20
22	4			3.4			22
24	3.9	4.1		3.4	3.2		24
26	3.9	3.9		3.4	3.2		26
28	3.9	3.6	2.5	3.3	3.2		28
30	3.8	3.4	2.4	3.3	3.2	2.6	30
32	3.8	3.3	2.3	3.3	3.2	2.5	32
34	3.7	3.1	2.2	3.2	3.2	2.4	34
36	3.7	3	2.1	3.2	3.1	2.2	36
38	3.6	2.9	2.1	3.1	3	2.1	38
40	3.6	2.8	2.1	3.1	3	2	40
42	3.5	2.7	2	3	2.9	2	42
44	3.5	2.6	2	2.8	2.6	2	44
46	3	2.5	2	2.5	2.6	2	46
48	3	2.5	2	2.5	2.6	2	48
50	2.5	2.4	1.9	2	2.1	2	50
52	2.3	2.4	1.9	2	2.1	1.9	52
54	1.6	2.2	1.9	1.8	1.9	1.9	54
56	1.5	2.1	1.9	1.6	1.8	1.9	56
58	1.5	1.8	1.9	1.6	1.6	1.4	58
60	1.2	1.6	1.2	1.5	0.8	1.4	60
62	1.5	1.4	1.2	1.1	0.8	1.3	62
64	1	1.4	1.2	0.5	0.5	0.8	64
66		1.2	1.2	0.5	0.5	0.5	66
68			0.8		0.5		68

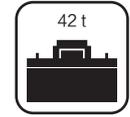
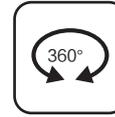
**COUNTERWEIGHT IN THE REAR POSITION**      **t**



	58.1+7			62+7			
	18.5						
	0°	20°	40°	0°	20°	40°	
18	4						18
20	4			3.5			20
22	4			3.4			22
24	3.9			3.4	3.2		24
26	3.9	3.9		3.4	3.2		26
28	3.9	3.6	2.5	3.3	3.2		28
30	3.8	3.4	2.4	3.3	3.2	2.6	30
32	3.8	3.3	2.3	3.3	3.2	2.5	32
34	3.7	3.1	2.2	3.2	3.2	2.4	34
36	3.7	3	2.1	3.2	3.1	2.2	36
38	3.6	2.9	2.1	3.1	3	2.1	38
40	3.6	2.8	2.1	3.1	3	2	40
42	3.5	2.7	2	3	2.9	2	42
44	3.5	2.6	2	2.8	2.6	2	44
46	3	2.5	2	2.5	2.6	2	46
48	3	2.5	2	2.5	2.6	2	48
50	2.5	2.4	1.9	2	2.1	2	50
52	2.3	2.4	1.9	2	2.1	1.9	52
54	1.6	2.2	1.9	1.8	1.9	1.9	54
56	1.5	2.1	1.9	1.6	1.8	1.9	56
58	1.5	1.8	1.9	1.6	1.6	1.4	58
60	1.2	1.6	1.2	1.5	0.8	1.4	60
62	1.5	1.4	1.2	1.1	0.8	1.3	62
64	1	1.4	1.2	0.5	0.5	0.8	64
66		1.2	1.2	0.5	0.5	0.5	66
68			0.8	0.5	0.5		68
70					0.5		70

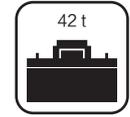
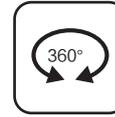
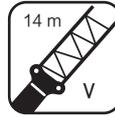
# LOAD CHARTS

## COUNTERWEIGHT IN THE FRONT POSITION t



	58.1+14			62+14			
	18.5						
	0°	20°	40°	0°	20°	40°	
20	3.5						20
22	3.5			3			22
24	3.5			3			24
26	3.4	3.4		3	2.9		26
28	3.4	3.3		3	2.8		28
30	3.4	3.3	2.4	3	2.8		30
32	3.3	3.3	2.3	2.9	2.8	2.6	32
34	3.3	3.3	2.2	2.9	2.7	2.5	34
36	3.2	3.2	2.2	2.9	2.7	2.4	36
38	3.2	3	2.1	2.9	2.7	2.2	38
40	3.1	2.9	2.1	2.9	2.7	2.1	40
42	3	2.9	2.1	2.6	2.7	2.1	42
44	2.6	2.8	2	2.3	2.6	2	44
46	2.5	2.6	2	2.3	2.1	2	46
48	2.4	2.3	2	1.8	2.1	2	48
50	2.1	2.1	2	1.8	1.9	2	50
52	1.9	2.1	2	1.8	1.7	1.8	52
54	1.7	1.6	2	1	1.4	1.5	54
56	1.6	1.6	1.8	1.8	1.8	1.5	56
58	1.5	1.6	1.5	1.6	1.2	1.5	58
60	1.5	1.4	1.5	1.5	1.2	1.5	60
62	1.2	1.5	1.5	1.2	1.2	0.8	62
64	1.2	1.2	1.2	1.1	0.8	0.8	64
66	1	1.2	1.2		0.8	0.8	66
68		0.8	0.8		0.8	0.5	68
70			0.8				70

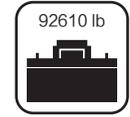
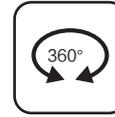
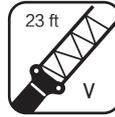
**COUNTERWEIGHT IN THE REAR POSITION**      **t**



	58.1+14			62+14			
	18.5						
	0°	20°	40°	0°	20°	40°	
20	3.5						20
22	3.5			3			22
24	3.5			3			24
26	3.4	3.4		3	2.9		26
28	3.4	3.3		3	2.8		28
30	3.4	3.3	2.4	3	2.8		30
32	3.3	3.3	2.3	2.9	2.8	2.6	32
34	3.3	3.3	2.2	2.9	2.7	2.5	34
36	3.2	3.2	2.2	2.9	2.7	2.4	36
38	3.2	3	2.1	2.9	2.7	2.2	38
40	3.1	2.9	2.1	2.9	2.7	2.1	40
42	3	2.9	2.1	2.6	2.7	2.1	42
44	2.6	2.8	2	2.3	2.6	2	44
46	2.5	2.6	2	2.3	2.1	2	46
48	2.4	2.3	2	1.8	2.1	2	48
50	2.1	2.1	2	1.8	1.9	2	50
52	1.9	2.1	2	1.8	1.7	1.8	52
54	1.7	1.6	2	1	1.4	1.5	54
56	1.6	1.6	1.8	1.8	1.8	1.5	56
58	1.5	1.6	1.5	1.6	1.2	1.5	58
60	1.5	1.4	1.5	1.5	1.2	1.5	60
62	1.2	1.5	1.5	1.2	1.2	0.8	62
64	1.2	1.2	1.2	1.1	0.8	0.8	64
66	1	1.2	1.2	0.9	0.8	0.8	66
68	0.8	0.8	0.8	0.7	0.8	0.5	68
70			0.8		0.5	0.5	70

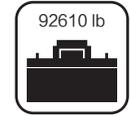
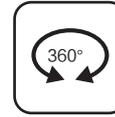
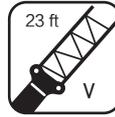
# LOAD CHARTS

## COUNTERWEIGHT IN THE FRONT POSITION klb



	190.6+23			203.4+23			
	60.7						
	0°	20°	40°	0°	20°	40°	
59.0	8.8						59.0
65.6	8.8			7.7			65.6
72.2	8.8			7.5			72.2
78.7	8.6	9.0		7.5	7.1		78.7
85.3	8.6	8.6		7.5	7.1		85.3
91.8	8.6	7.9	5.5	7.3	7.1		91.8
98.4	8.4	7.5	5.3	7.3	7.1	5.7	98.4
105.0	8.4	7.3	5.1	7.3	7.1	5.5	105.0
111.5	8.2	6.8	4.9	7.1	7.1	5.3	111.5
118.1	8.2	6.6	4.6	7.1	6.8	4.9	118.1
124.6	7.9	6.4	4.6	6.8	6.6	4.6	124.6
131.2	7.9	6.2	4.6	6.8	6.6	4.4	131.2
137.8	7.7	6.0	4.4	6.6	6.4	4.4	137.8
144.3	7.7	5.7	4.4	6.2	5.7	4.4	144.3
150.9	6.6	5.5	4.4	5.5	5.7	4.4	150.9
157.4	6.6	5.5	4.4	5.5	5.7	4.4	157.4
164.0	5.5	5.3	4.2	4.4	4.6	4.4	164.0
170.6	5.1	5.3	4.2	4.4	4.6	4.2	170.6
177.1	3.5	4.9	4.2	4.0	4.2	4.2	177.1
183.7	3.3	4.6	4.2	3.5	4.0	4.2	183.7
190.2	3.3	4.0	4.2	3.5	3.5	3.1	190.2
196.8	2.6	3.5	2.6	3.3	1.8	3.1	196.8
203.4	3.3	3.1	2.6	2.4	1.8	2.9	203.4
209.9	2.2	3.1	2.6	1.1	1.1	1.8	209.9
216.5		2.6	2.6	1.1	1.1	1.1	216.5
223.0			1.8		1.1		223.0

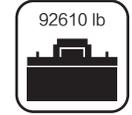
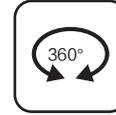
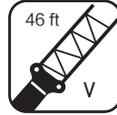
**COUNTERWEIGHT IN THE REAR POSITION**      **klb**



	190.6+23			203.4+23			
	60.7						
	0°	20°	40°	0°	20°	40°	
59.0	8.8						59.0
65.6	8.8			7.7			65.6
72.2	8.8			7.5			72.2
78.7	8.6	9.0		7.5	7.1		78.7
85.3	8.6	8.6		7.5	7.1		85.3
91.8	8.6	7.9	5.5	7.3	7.1		91.8
98.4	8.4	7.5	5.3	7.3	7.1	5.7	98.4
105.0	8.4	7.3	5.1	7.3	7.1	5.5	105.0
111.5	8.2	6.8	4.9	7.1	7.1	5.3	111.5
118.1	8.2	6.6	4.6	7.1	6.8	4.9	118.1
124.6	7.9	6.4	4.6	6.8	6.6	4.6	124.6
131.2	7.9	6.2	4.6	6.8	6.6	4.4	131.2
137.8	7.7	6.0	4.4	6.6	6.4	4.4	137.8
144.3	7.7	5.7	4.4	6.2	5.7	4.4	144.3
150.9	6.6	5.5	4.4	5.5	5.7	4.4	150.9
157.4	6.6	5.5	4.4	5.5	5.7	4.4	157.4
164.0	5.5	5.3	4.2	4.4	4.6	4.4	164.0
170.6	5.1	5.3	4.2	4.4	4.6	4.2	170.6
177.1	3.5	4.9	4.2	4.0	4.2	4.2	177.1
183.7	3.3	4.6	4.2	3.5	4.0	4.2	183.7
190.2	3.3	4.0	4.2	3.5	3.5	3.1	190.2
196.8	2.6	3.5	2.6	3.3	1.8	3.1	196.8
203.4	3.3	3.1	2.6	2.4	1.8	2.9	203.4
209.9	2.2	3.1	2.6	1.1	1.1	1.8	209.9
216.5		2.6	2.6	1.1	1.1	1.1	216.5
223.0			1.8	1.1	1.1		223.0
229.7					1.1		229.7

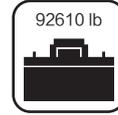
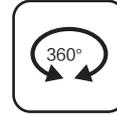
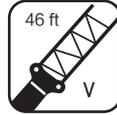
# LOAD CHARTS

## COUNTERWEIGHT IN THE FRONT POSITION klb



	190.6+46			203.4+46			
	60.7						
	0°	20°	40°	0°	20°	40°	
65.6	7.7						65.6
72.2	7.7			6.6			72.2
78.7	7.7			6.6			78.7
85.3	7.5	7.5		6.6	6.4		85.3
91.9	7.5	7.3		6.6	6.2		91.9
98.4	7.5	7.3	5.3	6.6	6.2		98.4
105.0	7.3	7.3	5.1	6.4	6.2	5.7	105.0
111.6	7.3	7.3	4.9	6.4	6.0	5.5	111.6
118.1	7.1	7.1	4.9	6.4	6.0	5.3	118.1
124.7	7.1	6.6	4.6	6.4	6.0	4.9	124.7
131.2	6.8	6.4	4.6	6.4	6.0	4.6	131.2
137.8	6.6	6.4	4.6	5.7	6.0	4.6	137.8
144.4	5.7	6.2	4.4	5.1	5.7	4.4	144.4
150.9	5.5	5.7	4.4	5.1	4.6	4.4	150.9
157.5	5.3	5.1	4.4	4.0	4.6	4.4	157.5
164.1	4.6	4.6	4.4	4.0	4.2	4.4	164.1
170.6	4.2	4.6	4.4	4.0	3.7	4.0	170.6
177.2	3.7	3.5	4.4	2.2	3.1	3.3	177.2
183.7	3.5	3.5	4.0	4.0	4.0	3.3	183.7
190.3	3.3	3.5	3.3	3.5	2.6	3.3	190.3
196.9	3.3	3.1	3.3	3.3	2.6	3.3	196.9
203.4	2.6	3.3	3.3	2.6	2.6	1.8	203.4
210.0	2.6	2.6	2.6	2.4	1.8	1.8	210.0
216.5	2.2	2.6	2.6		1.8	1.8	216.5
223.1		1.8	1.8		1.8	1.1	223.1
229.7			1.8				229.7

**COUNTERWEIGHT IN THE REAR POSITION**      **klb**



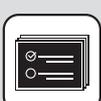
	190.6+46			203.4+46			
	60.7						
	0°	20°	40°	0°	20°	40°	
65.6	7.7						65.6
72.2	7.7			6.6			72.2
78.7	7.7			6.6			78.7
85.3	7.5	7.5		6.6	6.4		85.3
91.9	7.5	7.3		6.6	6.2		91.9
98.4	7.5	7.3	5.3	6.6	6.2		98.4
105.0	7.3	7.3	5.1	6.4	6.2	5.7	105.0
111.6	7.3	7.3	4.9	6.4	6.0	5.5	111.6
118.1	7.1	7.1	4.9	6.4	6.0	5.3	118.1
124.7	7.1	6.6	4.6	6.4	6.0	4.9	124.7
131.2	6.8	6.4	4.6	6.4	6.0	4.6	131.2
137.8	6.6	6.4	4.6	5.7	6.0	4.6	137.8
144.4	5.7	6.2	4.4	5.1	5.7	4.4	144.4
150.9	5.5	5.7	4.4	5.1	4.6	4.4	150.9
157.5	5.3	5.1	4.4	4.0	4.6	4.4	157.5
164.1	4.6	4.6	4.4	4.0	4.2	4.4	164.1
170.6	4.2	4.6	4.4	4.0	3.7	4.0	170.6
177.2	3.7	3.5	4.4	2.2	3.1	3.3	177.2
183.7	3.5	3.5	4.0	4.0	4.0	3.3	183.7
190.3	3.3	3.5	3.3	3.5	2.6	3.3	190.3
196.9	3.3	3.1	3.3	3.3	2.6	3.3	196.9
203.4	2.6	3.3	3.3	2.6	2.6	1.8	203.4
210.0	2.6	2.6	2.6	2.4	1.8	1.8	210.0
216.5	2.2	2.6	2.6	2.0	1.8	1.8	216.5
223.1	1.8	1.8	1.8	1.5	1.8	1.1	223.1
229.7			1.8		1.1	1.1	229.7

# TABLE OF MAIN TECHNICAL PARAMETERS

CATEGORY	ITEM		UNIT	PARAMETER
Dimensions	Dimensions (length ×width ×height)		mm (ft)	15601×3000×3991 (51.2×9.8×13.1)
	Axle spacing		mm (ft)	2500 (8.2)+1650 (5.4)+2400 (7.9)+1650 (5.4)
	Track (front/ rear)		mm (ft)	2316 (7.6)
	Front/rear overhang		mm (ft)	2621 (8.6)/2713 (8.9)
	Front/rear extension		mm (ft)	1828 (6)/0 (0)
Weights	Maximum permissible total weight		lb	60000 (132,275)
	Axle load	Axle 1	kg (lb)	12000 (26,455)
		Axle 2	kg (lb)	12000 (26,455)
		Axle 3	kg (lb)	12000 (26,455)
		Axle 4	kg (lb)	12000 (26,455)
		Axle 5	kg (lb)	12000 (26,455)
Power	Engine model		—	OM471LA (EU Stage V /EPA Tier 4F)
	Maximum net power/rpm		kW (bhp) /rpm	360 (482.8 )/1600
	Maximum output torque/rpm		N.m (lb-ft)/rpm	2400 (1769.9 )/1300
Travel	Maximum travel speed		km/h (mph)	80 (49.7)
	Minimum stable travel speed		km/h (mph)	3 (1.86)
	Minimum turning diameter		m (ft)	≤20.2 (66.3) (Tight-turning radius steering) ≤24.6 (80.7) (Road steering)
	Minimum turning diameter at boom tip		m (ft)	≤24.4 (80.0) (Tight-turning radius steering) ≤28.4 (93.2) (Road steering)
	Minimum ground clearance		mm (ft)	334 (1.09)
	Approach angle		°	20.8
	Departure angle		°	12
	Braking distance (initial speed at 50 mph)		m (ft)	≤30 (98.4)
	Maximum grade ability		%	60
	Fuel consumption per 100 km		L (US gal)	65 (17.2)
Noise	Exterior noise level when accelerating		dB(A)	80
	Noise level at seated position		dB(A)	90

CATEGORY	ITEM		UNIT	PARAMETER	
Main performance	Maximum rated lifting capacity		t (USt)	136 (150)	
	Minimum rated working radius		m(ft)	3 (9.8)	
	Slewing radius at turntable tail	At counterweight	mm (ft)	4954 (16.3)/ 4454 (14.9)	
		At auxiliary winch	mm (ft)	5004 (16.4)	
	Maximum load moment	Base boom section	kN.m (lb-ft)	4312 (3,183,000)	
		Fully-extended boom	kN.m (lb-ft)	2293 (1,692,000)	
		Fully-extended boom + Jib	kN.m (lb-ft)	1740 (1,284)	
	Outrigger span	Longitudinal	m (ft)	8.65 (28.4)	
		Lateral	m (ft)	3.7 (12.1)/5 (16.4)/6.3 (20.7)/7.7 (25.3)	
	Maximum outrigger load		kN(lb)	888 (199779.5)	
	Lifting height	Base boom section	m (ft)	12.1 (39.7)	
		Fully-extended boom	m (ft)	61.5 (201.7)	
		Fully-extended boom + Jib	m (ft)	77.6(254.6)	
		Fully-extended boom + extensions + Jib	m (ft)	92.5 (303.50)	
Boom length	Base boom section	m (ft)	13.05 (43)		
	Fully-extended boom	m (ft)	62 (203.4)		
	Fully-extended boom + Jib	m (ft)	80.5 (264.1)		
	Fully-extended boom + extensions + Jib	m (ft)	94.5 (310.1)		
Jib offset angle		°	0/20/40		
Working speeds	Time for raising boom		s	≤65	
	Time for fully extending boom		s	≤580	
	Maximum slewing speed		rpm	≥1.5	
	Time for extending and retracting outriggers	Outrigger beams	Retracting	s	≤20
			Extending	s	≤25
		Outrigger jacks	Retracting	s	≤30
			Extending	s	≤60
	Lifting speed (single line, 4th layer, no load)	Main winch	m/min (fpm)	≥130 (426)	
Auxiliary winch		m/min (fpm)	≥130 (426)		
Noise	Exterior noise level		dB(A)	≤109	
	Noise level at seated position		dB(A)	≤80	

# DESCRIPTION OF SYMBOLS

	Superstructure		Boom
	Rated lifting load		Boom length
	Counterweight		Working radius
	Slewing radius of variable-position counterweight		Lifting height with boom
	Hook block		Boom angle
	Parts of line		Extension
	Boom length combination		Independent jib head
	Wind speed		Simple jib head
	Configuration		Fixed jib
	Optional equipment		Fixed jib length
	Wire rope length		Fixed jib offset angle
	Wire rope diameter		Luffing jib

	Maximum single line pull
	Maximum working speed
	Main winch
	Auxiliary winch
	Chassis
	Outrigger span
	Tires
	Axle load
	Grade ability
	Travel speed
	Luffing
	EN 13000 standard

	Maximum lifting height
	Maximum working radius
	Super lift
	Wind power jib
	Telescoping
	Slewing
	360° slewing
	360° slewing with the 5th jack down
	Side and rear operation
	Operation over front
	Operation over rear

# CONSISTANT SAFE AND RELIABLE MACHINES

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**AUTOMATED PAINTING TO INSURE CONSISTANT QUALITY**



**DIGITIZED WELDING AND MACHINING**



**DIGITAL AUTOMATED PROCESS FLOWS**



**UNMANNED AUTOMATIC WELDING**

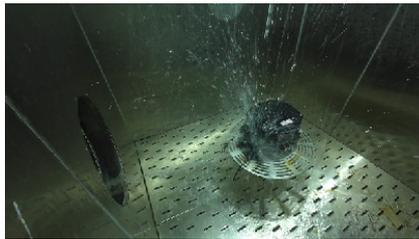
## PARTS AND COMPLETE MACHINE TESTING

- Each new technology and component is required to meet the most stringent design and quality protocols.
- Each complete machine undergoes rigorous run in and testing, components are subject to ongoing testing.

## OVER 2,000 COMPONENTS FROM 123 MANUFACTURERS UNDERGOING LIFE CYCLE TESTING



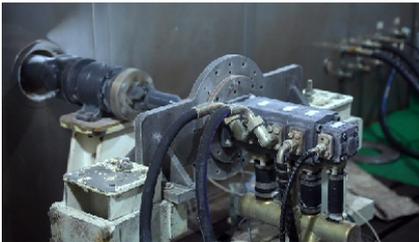
HMI display  
Low-temperature performance test under -40 °C



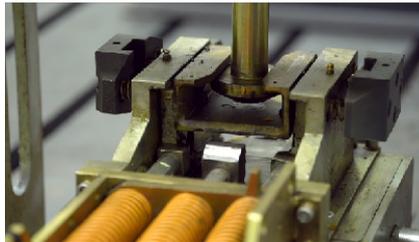
Length measurement sensor  
48-hour rain test



Panel buttons cycled  
1.2 million times



Hydraulic pump undergoing Low-temperature  
performance test under -40 °C



Telescoping mechanism  
Smoothness test



Telescoping mechanism  
Smoothness test

## 178 POST PRODUCTION FULL-SCALE TESTS ON THE COMPLETE MACHINE



Passability



Climbing & Hill holding



Dynamic & Static lifting

# NOTES FOR LIFTING

- ❖ The total rated loads given in the rated load charts are the maximum lifting capacity when the crane is set up on firm and level ground with the tires free of the ground. The weights of the hookblock, rigging and the rope between the boom tip and block must be deducted as well as optional items such as the auxiliary sheave and jib.
- ❖ The working radius shown in the rated load charts is the radius when the load is lifted off the ground, and it is the actual value including loaded boom deflection. The operator will need to take boom deflection into consideration before beginning a lifting operation.
- ❖ A lifting operation is permissible only when the wind force is below grade 5 (instantaneous wind speed is 14m/s (46.2ft/s), and wind pressure is below 124Pa (2.59lb/ft<sup>2</sup>).
- ❖ Before beginning lifting operation, the operator should know the weight of the load to be lifted and the crane's working range, and then select proper working conditions. Never operate the crane beyond the limit shown in the chart. Use the lower value from the chart when the boom length or working radius is between the range of values.
- ❖ Observe the boom angle limit. Never operate the crane with the boom angle beyond the recommended limit even if a load is not being carried. Otherwise, the crane may overturn.
- ❖ The boom should be extended according to the telescoping codes shown on the load charts.



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