XCR60L5_U

Rough Terrain Crane

Technical Specifications

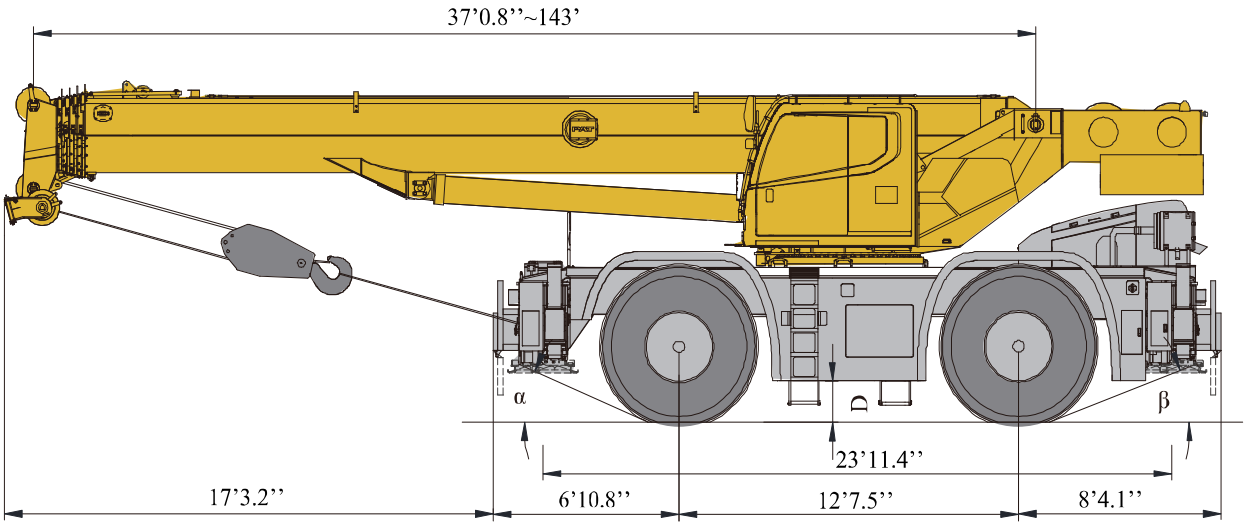
60UST

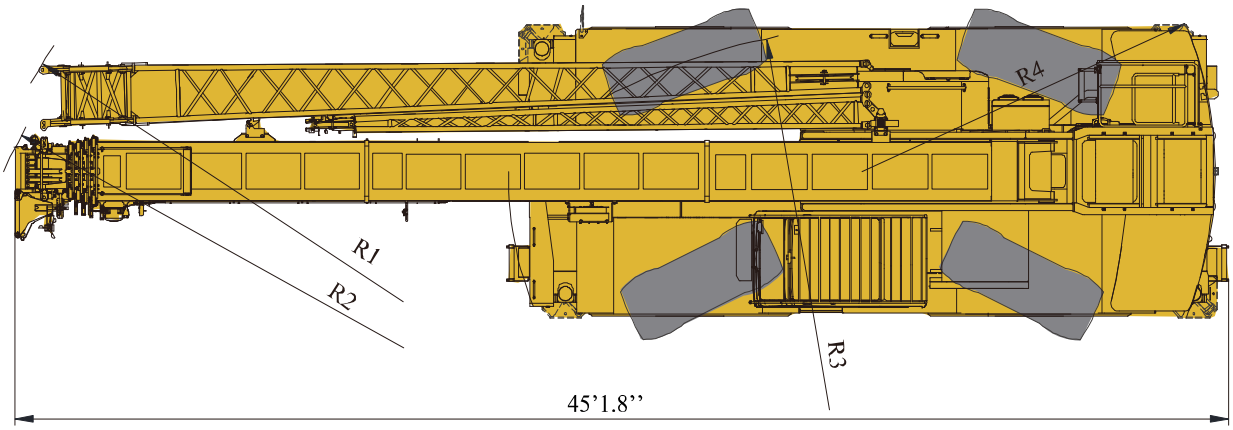
143.0ft

187.3ft

Contents

Dimensions





	α	β	A	B	C	D	R1	R2	R3	R4
23.5R25	26°	20.5°	5’3.4’’	11’9.3’’	9’10.1’’	1’5.5’’	35’6.0’’	34’11.2’’	19’8.2’’	13’7.7’’

Technical Specifications

		
Boom	1 basic boom and 4-telescoping sections, U-shape cross section welding structure. Double cylinder plus ropes telescoping mechanism. 6 pulleys on boom head are standard. Boom length:37.1ft ~ 143.0ft.	●
Jib	Two-section lattice structure. Three offset angles of 0° , 15° and 30° are available. It is stowed along the side of the boom. Jib length: 30.2ft~52.5ft.	●
Frame	Made of high strength fine grained steel, welded torsion-resistant frame type construction with large cross-section, high load-bearing capacity.	●
Outrigger	4outriggers, H-shaped arrangement, which are controlled by electrical and hydraulic and located at both sides of chassis frame.	●
Engine	QSB6.7,in line, six-cylinder water-cooled compression ignition diesel engine, manufactured by Cummins, with rated power of 260/2200(bhp/(r/min)), max. torque of 730/1500(lb.ft/(r/min)), U.S. EPA Tier 4F emission standard compliant Fuel tank capacity: approx. 80.52gal	●
Gearbox	6WG210, automatic transmission from ZF Germany, with 6 forward and 3 reverse gears	●
Axles	Both front and rear axles are for driving and steering, and the axles have features of great load bearing capacity.	●
Suspension	Front axle is rigidly connected with frame; rear axle is equipped with swing hydraulic suspensions, which have cushioning function when driving on roads; the rear suspension cylinder may be locked to rigid state so as to meet the requirement for travel with a load suspended, increasing operation stability.	●
Tires	4 specialized off-road, large bearing capacity. Tire specifications: 23.5R25.	●
Steering	Front axle independent steering, tight turning radius steering, crab walk steering and rear axle independent steering modes are available. The steering angle can be self-adjusted when changing mode.	●
Brakes	Service brake: double-circuit hydraulic disc brake, acting on all wheels. Automatically braking and alarm are available when the pressure in braking system is too low. Parking brake: spring-loaded brake, acting on front axles, hydraulic-released independent disc brake.	●

Hydraulic system	A dual-variable displacement pump, used for hoisting, elevating and telescoping operations, and a gear pump, used for slewing, outrigger, steering and braking operations; a load sensitive proportional multi-way change valve is used as main valve; an independent hydraulic oil radiator. Tank capacity: approx. 228gal.	●
Operating mode	Hydraulic controlled pilot operation system is equipped with two levers controlling the main movements of the crane.	●
Electrical System	24 V DC, two sets of 12 V battery in series.	●
Main and auxiliary winch system	The system is driven by a hydraulic motor through a planetary gear reducer, with a normally closed brake and a balance valve equipped.	●
Slewing system	Single-row four-point ball contact slewing ring, driven by a hydraulic motor through planetary gear reducer, and with a normally closed brake fitted.	●
Operator's cab	Tiltable cab, with sliding door and adjustable seat equipped. It is equipped with safe glass and roof protective grille. Sun shade is available for windshield and roof window. Heater and air conditioner, radio, 12 V and 24 V DC outlets are standard.	●
Safety devices	Hydraulic balance valve, hydraulic relief valve, hydraulic double-way valve and LMI. Lowering limiter is equipped in winch to prevent rope over-releasing. Anti-two block is fitted on the boom head to prevent rope over-winding.	●
Counterweight	The counterweight weight is 16535lb	●
Hook Block	60USt hook， 5.5USt hook block	●

Product parts list is as mentioned above. Please refer to the product quotation for specific parts.

Symbol explanation:

● ——it means the standard configuration;

○ ——it means the optional configuration.

Weights

Axle	Front Axle	Rear Axle	Total weight
lb	46747	45406	92153

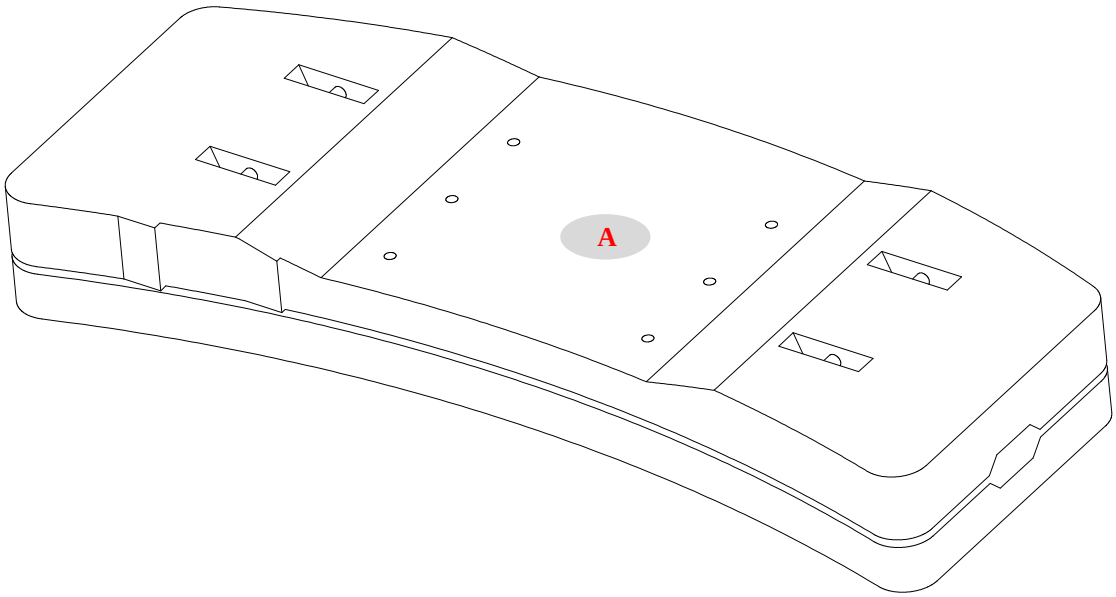
Hook	No. of lines	Weight (lb)	Remarks
60USt	12	1151	Single hook
5.5USt	1	220	Single hook

Working Speeds

23.5 R 25	21.7	86%

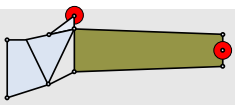
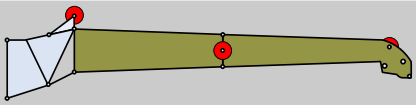
Drive	Working speed	Max. single line pull	Rope diameter/ length
1	0-492 ft/min, no load, 4th layer	11464lb	0.7086in/629.9ft
2	0-426 ft/min, no load, 4th layer	11464lb	0.7086in/426.5ft
360°	0-2r/min		
	Approx. 45s for boom elevation from -1.5° to 80°		
	Approx. 90s for boom extension from 37.1ft to 143.0ft		

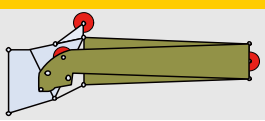
Counterweight



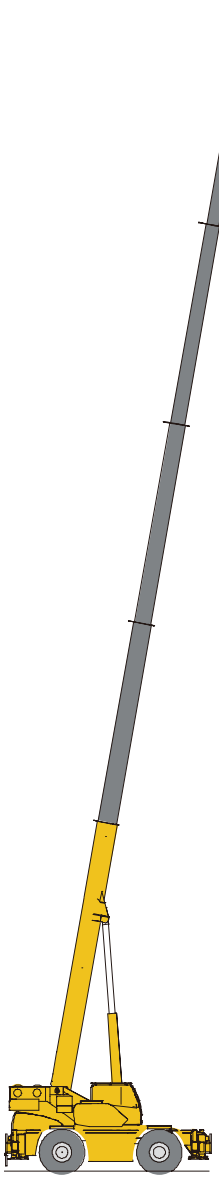
Counterweight	A
Size（L×W×H） ft	9.8×4.1×1.2
Weight lb	16535

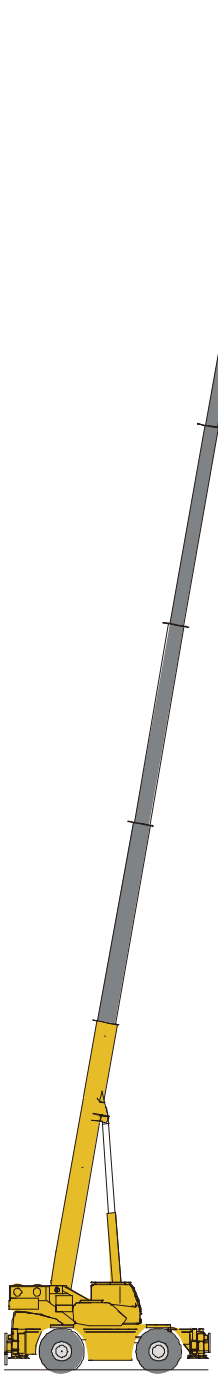
Boom / Jib Combinations

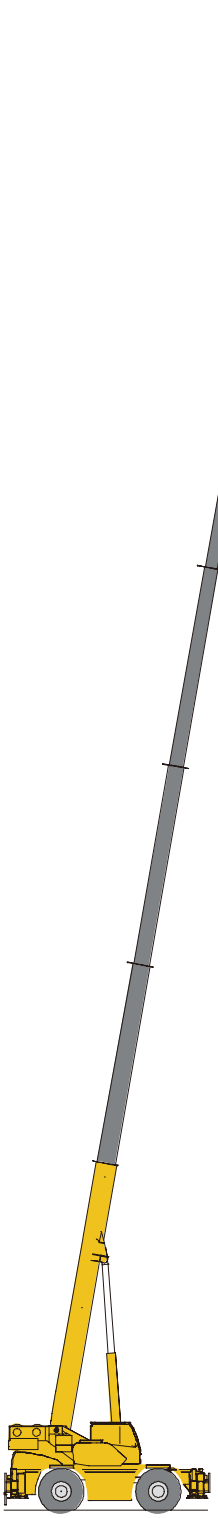
Jib – 30.2ft	
Jib – 52.5ft	

Component	Structure	Size（L×W×H）ft	（Weight lb）
First and second jib section assembly + Connecting bracket		（Folded）：32.1×2.8×4.1	2055

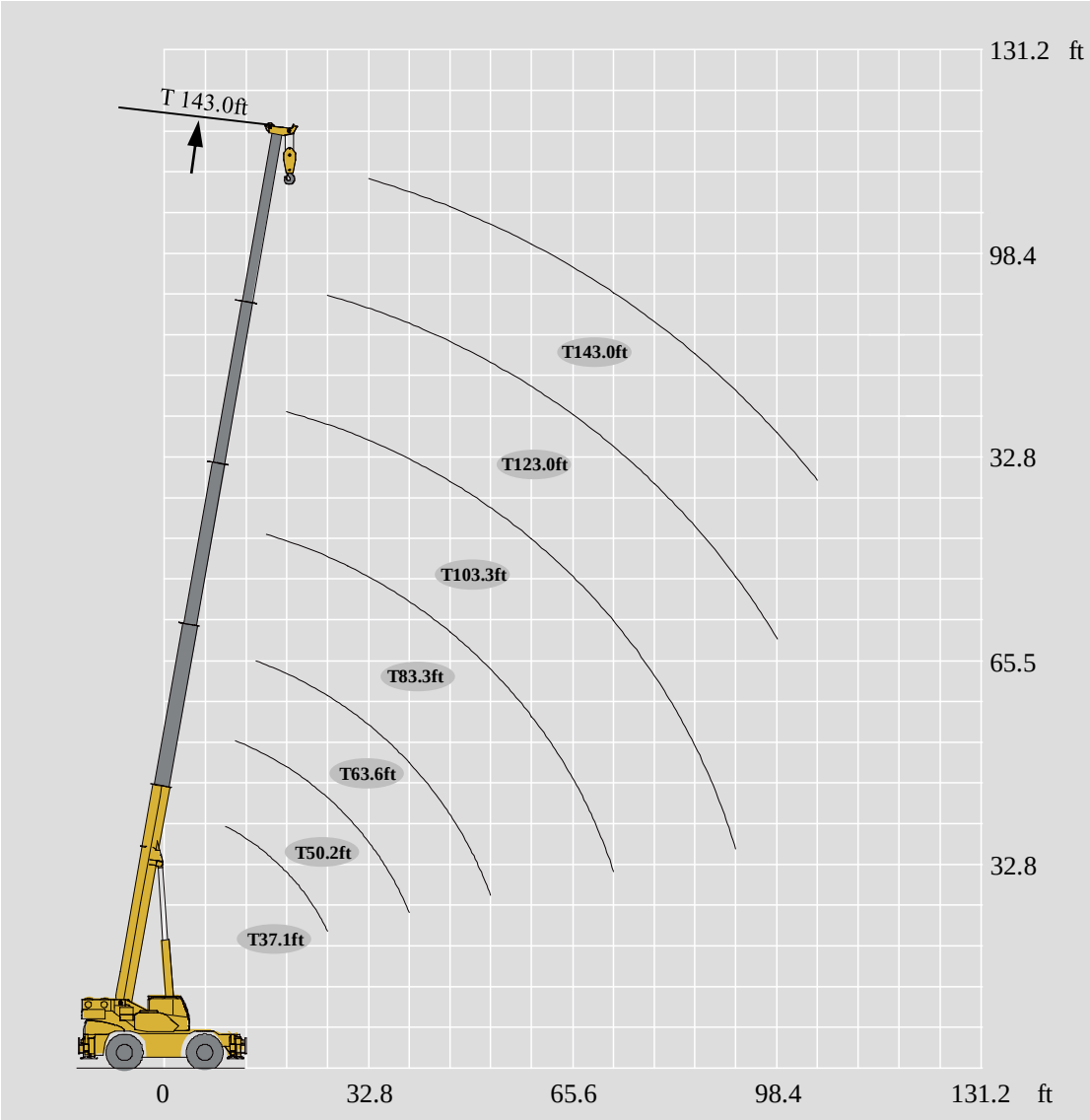
Boom / Jib Combinations







Telescopic boom	Telescopic boom+Jib	Telescopic boom+Jib
37.1~143.0 ft	143.0 ft+30.2 ft	143.0 ft+52.5 ft

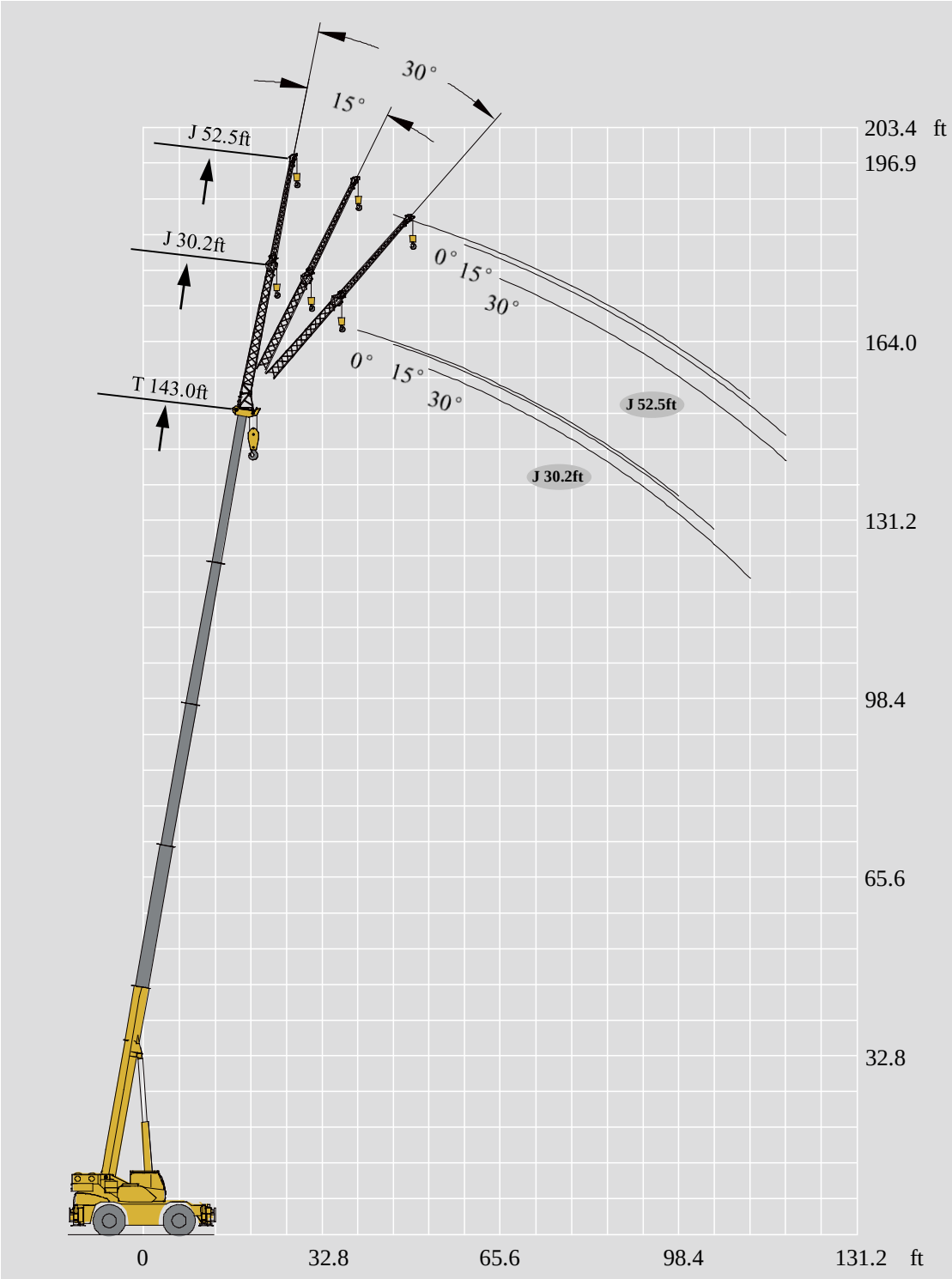

T 143.0ft
T143.0ft
T123.0ft
T103.3ft
T83.3ft
T63.6ft
T50.2ft
T37.1ft
131.2 ft
98.4
32.8
65.5
32.8
0
32.8
65.6
98.4
131.2 ft

Lifting Capacities

T 37.1~143.0ft

ASME B30.5 85% : lb

ft	37.1ft	50.2ft	63.6ft	83.3ft	103.3ft	123.0ft	143.0ft	57.1ft	76.8ft	96.8ft	116.5ft	70.2ft	90.2ft	109.9ft	129.9ft	ft
9.8	120000															9.8
11.5	113538	99208						52911								11.5
13.1	104719	94799						52911				52911				13.1
14.8	94799	88185	72752					52911	55116			52911				14.8
16.4	91492	82673	69446	49604				52911	55116			52911	54013			16.4
19.7	68343	72752	55116	49604	38581			52911	51147	36376		52911	54013			19.7
23.0	60848	59525	49604	41888	38581			52911	47620	33951	27117	52911	51147	35053		23.0
26.2	47399	51147	45195	36597	36376	26455		52911	44533	31306	25794	50706	48061	33069		26.2
29.5		39904	39022	32408	29762	24692		44533	41447	29101	24251	42990	44754	31085	24471	29.5
32.8		31967	31306	27778	23149	19180	19842	36376	37919	26896	22928	35053	36597	29101	22928	32.8
39.4		21826	21164	23810	20944	18078	16314	25794	27117	23369	20723	24692	26015	27117	21385	39.4
45.9			14991	17416	18739	16094	14330	19180	20503	21385	18298	18078	19621	20503	20944	45.9
52.5			10582	13007	14330	14550	13007		16094	16755	17416	13669	14991	15873	16314	52.5
59.1				9921	11023	11905	12566		12787	13448	14110	10582	11905	12566	13007	59.1
65.6				7496	8598	9480	10141		10362	11023	11684		9480	10141	10582	65.6
72.2				5512	6834	7496	8157			9039	9700		7496	8157	8598	72.2
78.7					5291	5952	6614			7496	8157		5952	6614	7055	78.7
85.3					3968	4630	5291			6173	6834			5512	5732	85.3
91.9					2866	3748	4189				5732			4409	4630	91.9
98.4						2866	3307				4850			3307	3748	98.4
105.0							2425				3968				3086	105.0
111.5															2425	111.5
2nd	0	50%	100%	100%	100%	100%	100%	0%	0%	0%	0%	50%	50%	50%	50%	2nd
3rd	0	0	0	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%	3rd
4th	0	0	0	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%	4th
5th	0	0	0	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%	5th


30°
15°
J 52.5ft
J 30.2ft
T 143.0ft
0° 15° 30°
0° 15° 30°
J 52.5ft
J 30.2ft
203.4 ft
196.9
164.0
131.2
98.4
65.6
32.8
0
32.8
65.6
98.4
131.2 ft

ASME B30.5 85% : lb

143.0 ft+30.2ft

ft	0°	15°	30°	ft
39.4	11023			39.4
45.9	10582	7055		45.9
52.5	9921	6834	5512	52.5
59.1	8818	6614	5291	59.1
65.6	7055	6393	4850	65.6
72.2	5732	5952	4850	72.2
78.7	4630	5071	4409	78.7
85.3	3748	4189	4189	85.3
91.9	3086	3307	3968	91.9
98.4	2425	2646	3527	98.4
105.0		1984	2646	105.0
111.5			1984	111.5

ASME B30.5 85% : lb

143.0 ft+30.2 ft

ft	0°	15°	30°	ft
45.9	6393			45.9
52.5	6173			52.5
59.1	5952	4189		59.1
65.6	5512	3968	2866	65.6
72.2	5071	3748	2646	72.2
78.7	4630	3307	2646	78.7
85.3	4189	3086	2646	85.3
91.9	3748	2866	2425	91.9
98.4	3527	2866	2425	98.4
105.0	2646	2646	2205	105.0
111.5	1984	2646	2205	111.5
118.1		2205	1764	118.1

Description of Symbols

Symbol Glossary

	Outriggers		Axle
	Radius		Driving speed
	Boom angle		Grade ability
	Boom length		Tires
	Hook block		Counterweight
	360° rotation		Superstructure
	Winch		Chassis

Crane Specific Symbols

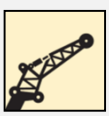
	Boom		Jib

Table of Main Technical Parameters

Category	Item		Unit	Parameter	Allowance
Dimensions	Outline size （length×width×height）		ft	45.2×9.8×11.8	±1%
	Wheel base		ft	12.6	±1%
	Track（Front/ Rear ）		ft	7.6/7.6	±1%
	Front/ Rear overhang		ft	6.9/8.3	±1%
	Front/ Rear extension		ft	17.3/0	±1%
Weight	Total vehicle mass in travel configuration		lb	92153 (16535 lb counterweight)	±3%
	Axle load	1st axle	lb	46747	±3%
		2nd axle	lb	45406	±3%
Power	Engine model		——	QSB6.7	-
	Engine rated power/rpm		bhp/(r/min)	260/2000	-
	Engine rated torque/rpm		lb.ft/(r/min)	730/1500	-
Travel	Max. travel speed		mph	21.7	≥
	Min. travel speed		mph	1.1	≤
	Min. turning diameter		ft	≤39.4	-
	Min. ground clearance		ft	1.5	±1%
	Approach angle		°	26	±1%
	Departure angle		°	20.5	±1%
	Braking distance (at 14.91 mph)		ft	29.5	≤
	Max. grade ability		%	86	≥

Table of Main Technical Parameters

Category	Item			Unit	Parameter	Allowance
Main Performance	Max. total rated lifting capacity			USt	60	±5%
	Min. rated working radius			ft	9.8	±1%
	Turning radius at turntable tail	Counterweight		ft	13.6	±1%
	Max. load moment	Base boom		ft·lb	1499832	±1%
		Fully-extended boom		ft·lb	689546	±1%
	Outrigger span	Longitudinal		ft	24.0	±1%
		Lateral		ft	23.6	±1%
	Hoist height	Base boom		ft	39	±1%
		Fully-extended boom		ft	143.4	±1%
		Fully-extended boom + Jib		ft	187.3	±1%
	Boom length	Base boom		ft	37.1	±1%
		Fully-extended boom		ft	143.0	±1%
		Fully-extended boom + Jib		ft	195.5	±1%
	Jib offset angle			°	0、15、30	±1%
Working Speed	Boom raising time			s	45	≤
	Boom fully extending time			s	90	≤
	Max. slewing speed			r/min	2	≤
	Outrigger extending and retracting time	Outrigger beam	Retracting	s	20	≤
			Extending	s	30	≤
		Outrigger jack	Retracting	s	30	≤
			Extending	s	35	≤
	Hoisting speed (single line, 4th layer, no load)	Main winch		fpm	492.1	≥
		Auxiliary winch		fpm	426.5	≥

Notes

1. 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, which includes the weight of the hook block and slings. The weight of above-mentioned devices should be deducted from the rated lifting load.

2. 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. Take boom deflection into consideration before beginning a lifting operation.

3. A lifting operation is permissible only when the wind force is below grade 5 (instantaneous wind speed is 46.2ft/s, wind pressure is 142.2psi).

4. Before beginning lifting operation, the operator should know the weight of the load to be lifted and its 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.

5. 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 will tip.

6. The boom should be extended according to the telescoping code shown by digits, which means the percentage of boom sections extended.

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