

ZCC1100H

ZCC1100H PRODUCT GUIDE

Crawler Crane

110 U.S. ton (100m ton) capacity

220' (67m) main boom length

59' (18m) maximum fixed jib length

ZCC1100H



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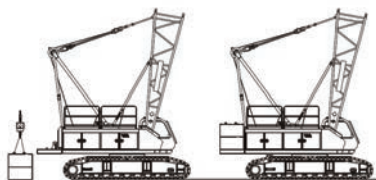
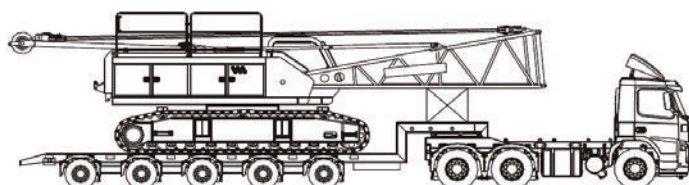
12-13 Working Range Diagram

14-20 Load Charts

ZCC1100H CRAWLER CRANE

FEATURES

Transportability - Main Crane Assembly weighs less than 100,000 lb. with tracks and boom base section still installed.



Self-Assembly Capability - A standard counterweight removal system and movable A-frame permits the crane to self-assemble.

Operator Cab - Full-vision operator's cab is designed for maximum comfort and ease of operation.



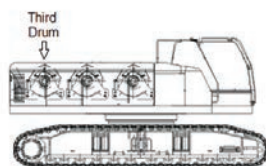
Hirschmann LMI - Hirschmann LMI is the industry's leading electronic monitoring system available.

Cummins Diesel Engine - QSL9-280 diesel engine is EPA tier 3 compliant and is proven to have superior performance and durability.



Optional Free Fall Winches - Two 44,000 lb. line pull free fall winches are available. These winches offer full range, free fall capability.

Optional Third Drum - An optional third drum is located behind Main and Auxiliary Winches. Standard or free fall versions are available.

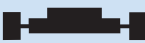


MAIN SPECIFICATIONS

- Main Boom — 220 ft. Maximum
- Fixed Jib — 59 ft. Maximum with 10° & 30° Offset
- Main and Auxiliary Winches
- 8t, 30t, 50t and 100t Hook Blocks
- Auxiliary Lifting Sheave
- Rotation Resistant Wire Rope
- Cameras
- Deluxe Tilt Seat
- AM/FM Radio
- Air Conditioner / Heater
- Work Light Package
- Battery Disconnect Switch
- ANSI Approved

ZCC1100H CRAWLER CRANE

KEY / SYMBOLS

	Engine	p4
	Electric System & Controls	p4
	Hydraulic System	p4
	Winches	p4
	Swing	p4
	Counterweight	p5
	Cab	p5
	LMI	p5
	Chassis	p5
	Main Boom	p5
	Fixed Jib	p5
	Third Drum	p6
	Free Fall Winches	p6

ZCC1100H CRAWLER CRANE

TECHNICAL DESCRIPTION



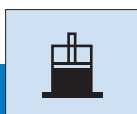
ENGINE

- Cummins QSL9-280 Inline 6-cylinder intercooled turbo diesel.
- Maximum Kilowatts (hp) 209 (280) @ 2100 rpm.
- Maximum Torque—Nm (ft-lb) - 1424 (1050) @ 1500 rpm.
- 106 gal. fuel tank capacity.
- US EPA / California ARB / Euro EU Tier 3 emission rating.



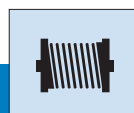
ELECTRICAL SYSTEM & CONTROLS

- Boom, Swing, Main and Auxiliary Winch functions are controlled with multi-axis joystick controls, which are also used to control left and right tracks for driving.
- Zoomlion employs a PLC control system with CAN – Bus communications to ensure complete system functionality and easy diagnostics.
- Large, color display in the cab reports system functions and is used for diagnostics.
- 24 volt system powered by 2-120 Amp-Hr batteries.



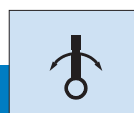
HYDRAULIC SYSTEM

- Hydraulic system begins with 3 variable displacement pumps for all main functions and two gear pumps for the hydraulic cooler, brakes and hydraulic controls.
- Maximum working pressure = 33 MPa (4800 psi).
- Total hydraulic system flow = 734 liter/min (194 gpm).
- Hydraulic Tank Capacity = 580 liter (153 gal).



WINCHES

- Standard two speed main and auxiliary winches, each with planetary reduction and spring applied, multiple disk wet brake.
- Each winch features:
 - Grooved drum lagging.
 - Maximum Permissible Line Pull – 14,200 kg (31,300 lb).
 - Maximum Line Speed (6th Layer) – 129.5 m/min (425 ft/min).
 - Rope length – 220m (722') main, 170m (558') aux.
- Power up / power down.
- Rope construction – 26mm (1.02") rotation resistant, compacted strand.
- Derricking Winch Specifications:
 - Maximum Permissible Line Pull – 7,240 kg (16,000 lb).
 - Maximum Line Speed (4th Layer) – 61 m/min (200 ft/min).
 - Rope length – 150m (492').
 - Rope diameter – 20mm (0.78").



SWING

- Bi-directional hydraulic swing drive with multi-disc wet brake and planetary reduction gearbox. Spring-applied hydraulically released swing brake and 360° pneumatic positive swing lock.
- Maximum swing speed = 2 rpm.

ZCC1100H CRAWLER CRANE

TECHNICAL DESCRIPTION



COUNTERWEIGHT

- Superstructure counterweights consist of 6 – 3.86t (8,500 lb) counterweight slabs and one tray for a total of 27.9t (61,470 lb).
- 2-5t (22,000 lb) carbody counterweights are also included.



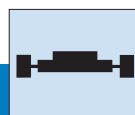
CAB

- Full-vision operator cab designed for maximum comfort. All steel fabrication with acoustical lining and tinted safety glass throughout. The cab has a sliding door on the left and a sliding window on the right with a swing-up skylight, retractable shade and wiper. Fully adjustable deluxe seat with tilt.
- Temperature control is provided by a heater / air conditioning unit located in the rear of the cab. Easy view dashboard with large display for all gauges, engine sensors and diagnostics. Right side console features all switches for crane and driving functions. Standard amenities also include dome light, left-side rearview mirror, seat belt, signal horn, radio, sun visor & fan.



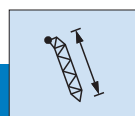
LMI

- Hirschmann LMI control system and graphic display load moment and anti-two block system with audio-visual warning and function limiter.
- System displays the following information: crane configuration, boom length, boom angle, load radius, allowed capacity, actual load, and load percentage of allowed capacity.
- System includes settable work parameters: min./max. Boom length, min./max. boom angle, defined swing area.



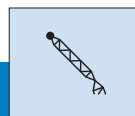
CHASSIS

- Carbody and track frame weldments made of high quality steel for rigidity in lifting and travel.
- Track frames extend and retract hydraulically.
- 2-speed Drive motors are Rexroth brand for high reliability and durability.
- Maximum travel speed = 1.26 km/hr (0.78 mph).
- Maximum gradeability = 30°.
- Optional outriggers for easy detachment of track frames.



MAIN BOOM

- Welded, tubular construction using high strength steel.
- Boom sections are pinned with positive lock pins.
- Basic boom length (base and tip sections) is 13m (43').
- Additional boom sections are 3m, 6m and 9m (10', 20' and 30') for a maximum boom length of 67m (220').



FIXED JIB

- Optional fixed jib is welded, tubular construction using high strength steel.
- Jib sections are pinned with positive lock pins.
- Jib length can be varied from 6m (20') to 18m (60').
- Jib offsets are 10° and 30°.
- Maximum boom length with maximum boom and 18m jib = 73m (240').



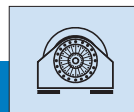
ZCC1100H CRAWLER CRANE

TECHNICAL DESCRIPTION



THIRD DRUM

- Optional third drum available. It is located directly behind main and auxiliary winch.
- Single speed winch has a planetary reduction and spring applied, external brake.
- Limited free fall capabilities are standard.
- Winch features:
 - Grooved drum lagging.
 - Maximum Permissible Line Pull – 12,000 kg (26,460 lb).
 - Maximum Line Speed (6th Layer) – 129.5 m/min (425 ft/min).
 - Rope length – 170m (558').
- Power up / power down.
- Rope construction – 26mm (1.02") rotation resistant, compacted strand.



FREE FALL WINCHES

Optional Zollern free fall winches are available for replacement of front and auxiliary winches.

Standard two speed main and auxiliary winches, each with planetary reduction and spring applied, multiple disk wet brake.

Full range free fall capabilities.

Each winch features:

- Grooved drum lagging.
- Maximum Permissible Line Pull – 20,000 kg (44,110 lb).
- Maximum Line Speed (5th Layer) – 113.4 m/min (372 ft/min).
- Rope length – 170m (558').
- Power up / power down.
- Rope construction – 26mm (1.02") rotation resistant, compacted strand.



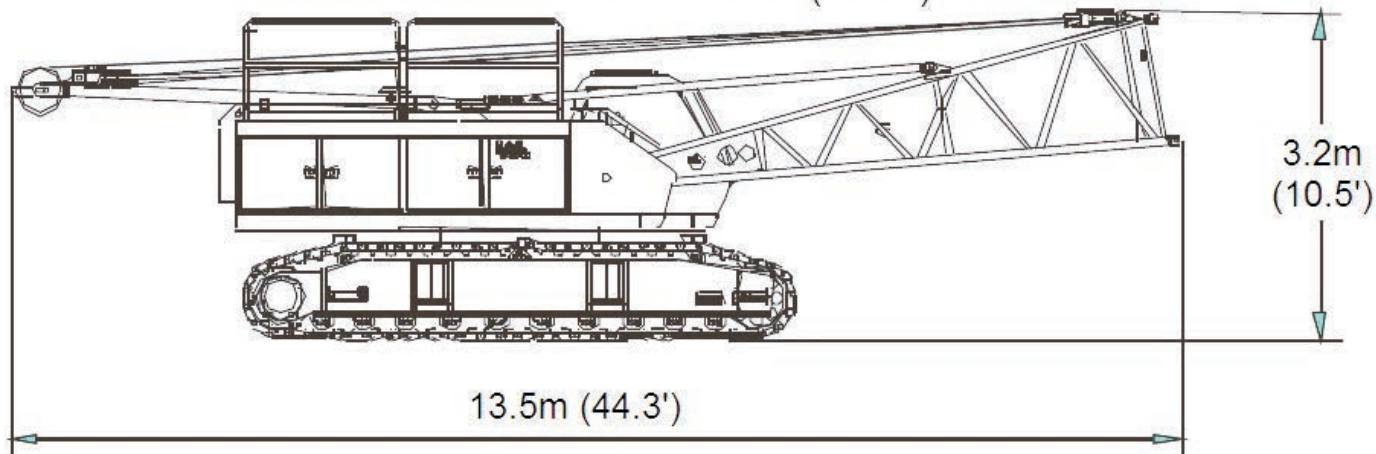
ZCC1100H CRAWLER CRANE

CRANE AND COMPONENT WEIGHTS

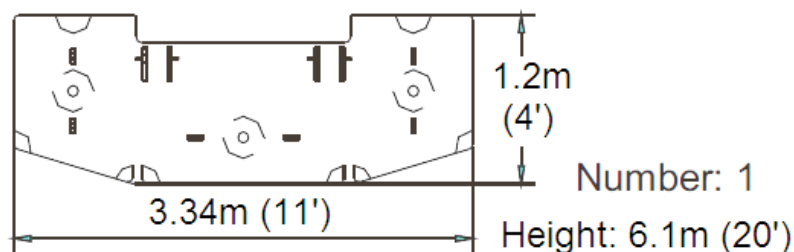
Transport weight of basic machine: 45 t (99,200 lb)

Number of basic machine: 1

Width: 3.4m (11.15')



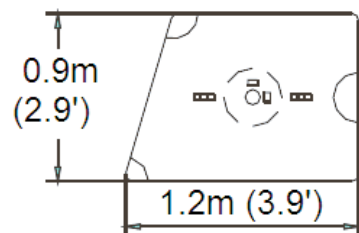
Counterweight base plate: 4.72t (10,400 lb)



Number: 1

Height: 6.1m (20')

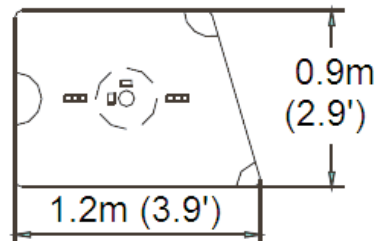
Counterweight plate: 3.86t (8510 lb)



Number: 3

Height: 0.6m (2')

Counterweight plate: 3.86t (8510 lb)



Number: 3

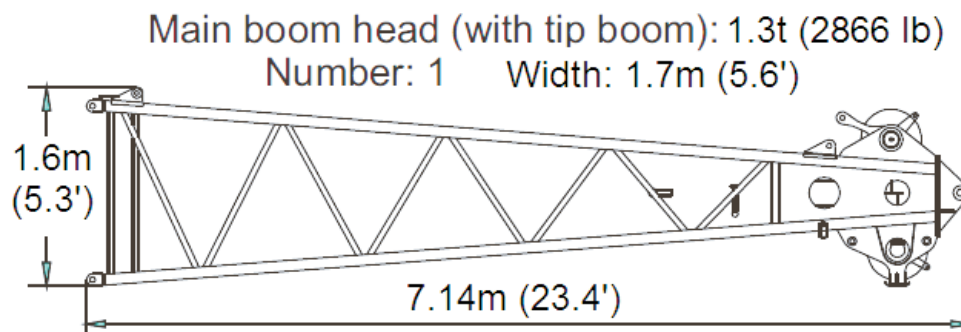
Height: 0.63m (2.1')



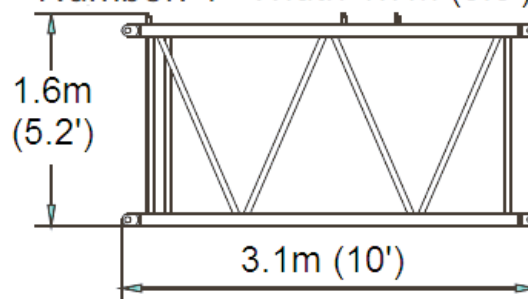


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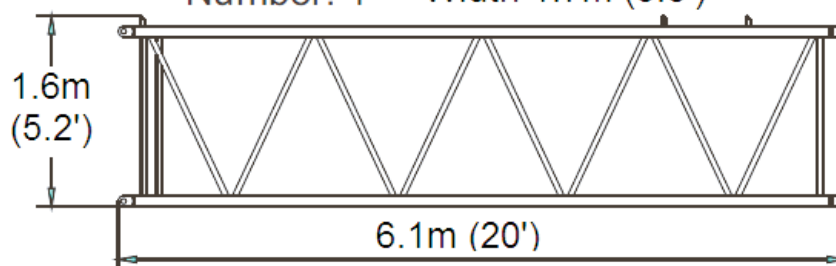
CRANE AND COMPONENT WEIGHTS



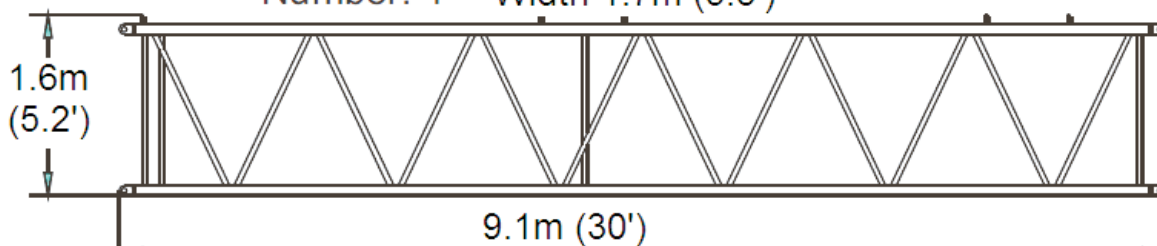
3m main boom intermediate section: 0.3t (660 lb)
Number: 1 Width 1.7m (5.6')



6m main boom intermediate section: 0.58t (1280 lb)
Number: 1 Width 1.7m (5.6')



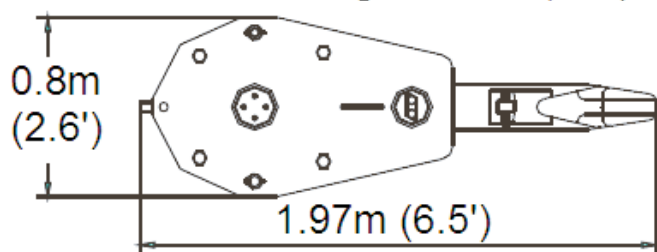
9m main boom intermediate section: 0.88t (1940 lb)
Number: 4 Width 1.7m (5.6')



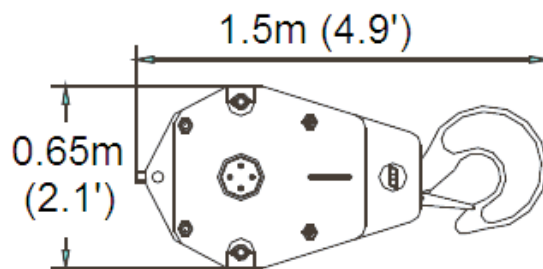
ZCC1100H CRAWLER CRANE

CRANE AND COMPONENT WEIGHTS

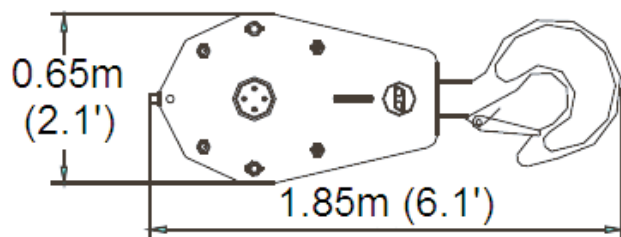
Load block (100t): 1.9t (4250 lb)
Number: 1 Height: 0.8m (2.6')



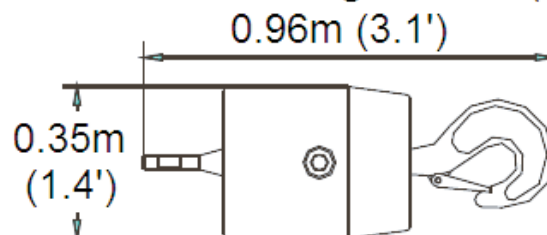
Load hook (30T): 0.6t (1330 lb)
Number: 1 Height: 0.4m (1.3')



Load hook (50T): 0.9t (2000 lb)
Number: 1 Height: 0.48m (1.6')



Load hook (8t): 0.3t (660 lb)
Number: 1 Height: 0.4m (1.3')

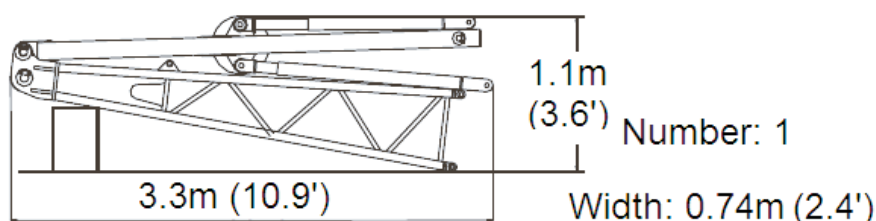




ZCC1100H CRAWLER CRANE

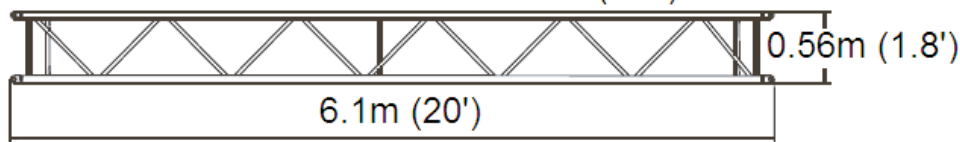
CRANE AND COMPONENT WEIGHTS

Fixed jib base assembly: 0.7t (1540 lb)



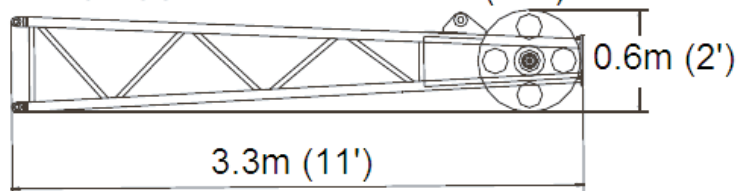
6m fixed jib intermediate section: 0.17t (375 lb)

Number: 1 Width: 0.56m (1.8')



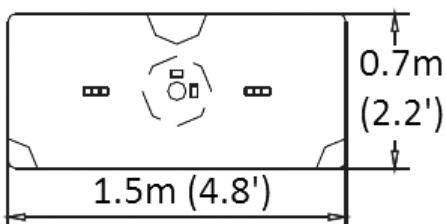
Fixed jib head: 0.31t

Number: 1 Width: 0.56m (1.8')



Counterweight Plate: 3t (6713lb)

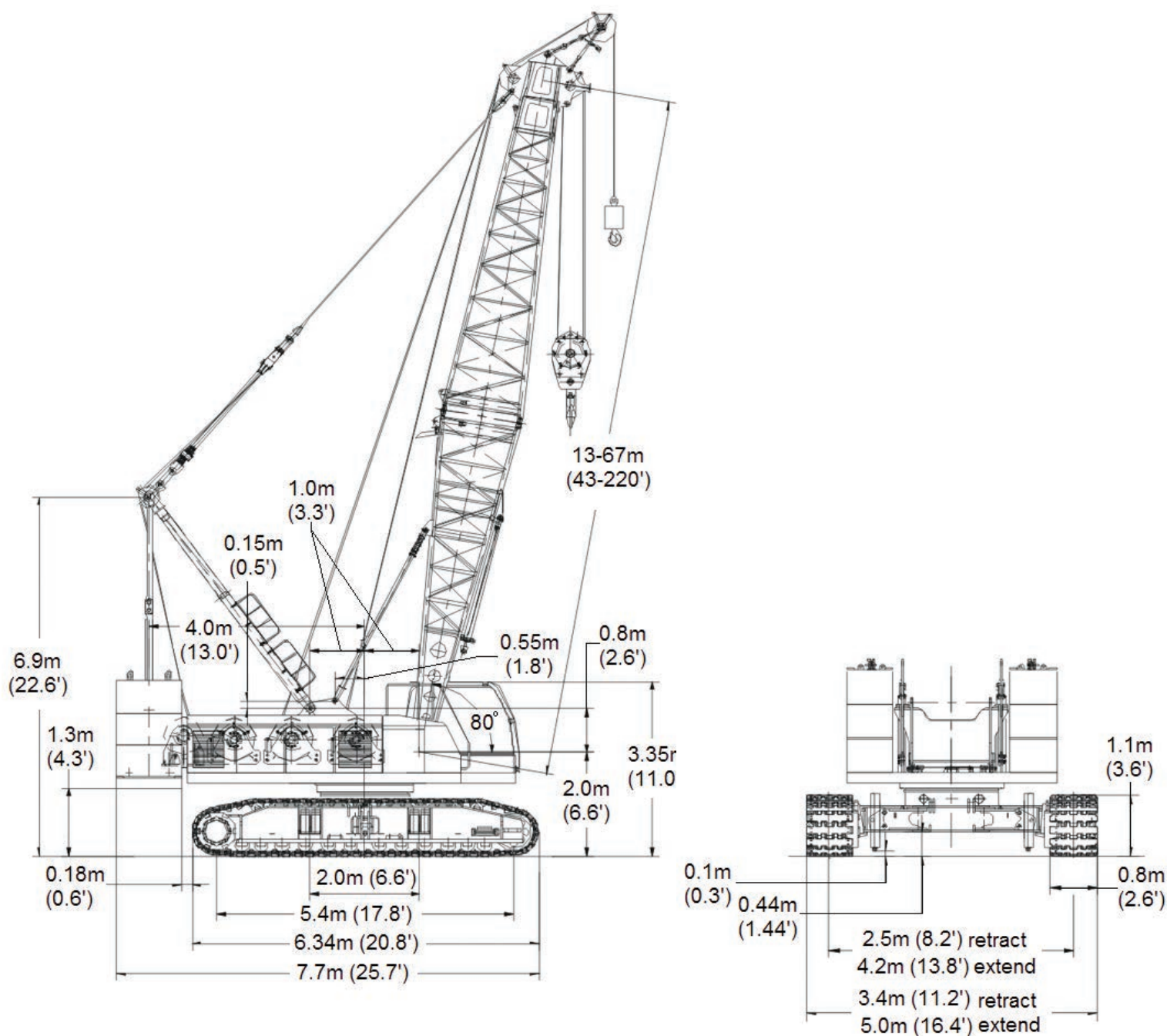
Number: 2 Height: 0.5m (1.6m)



ZCC1100H CRAWLER CRANE



CRANE DIMENSIONS

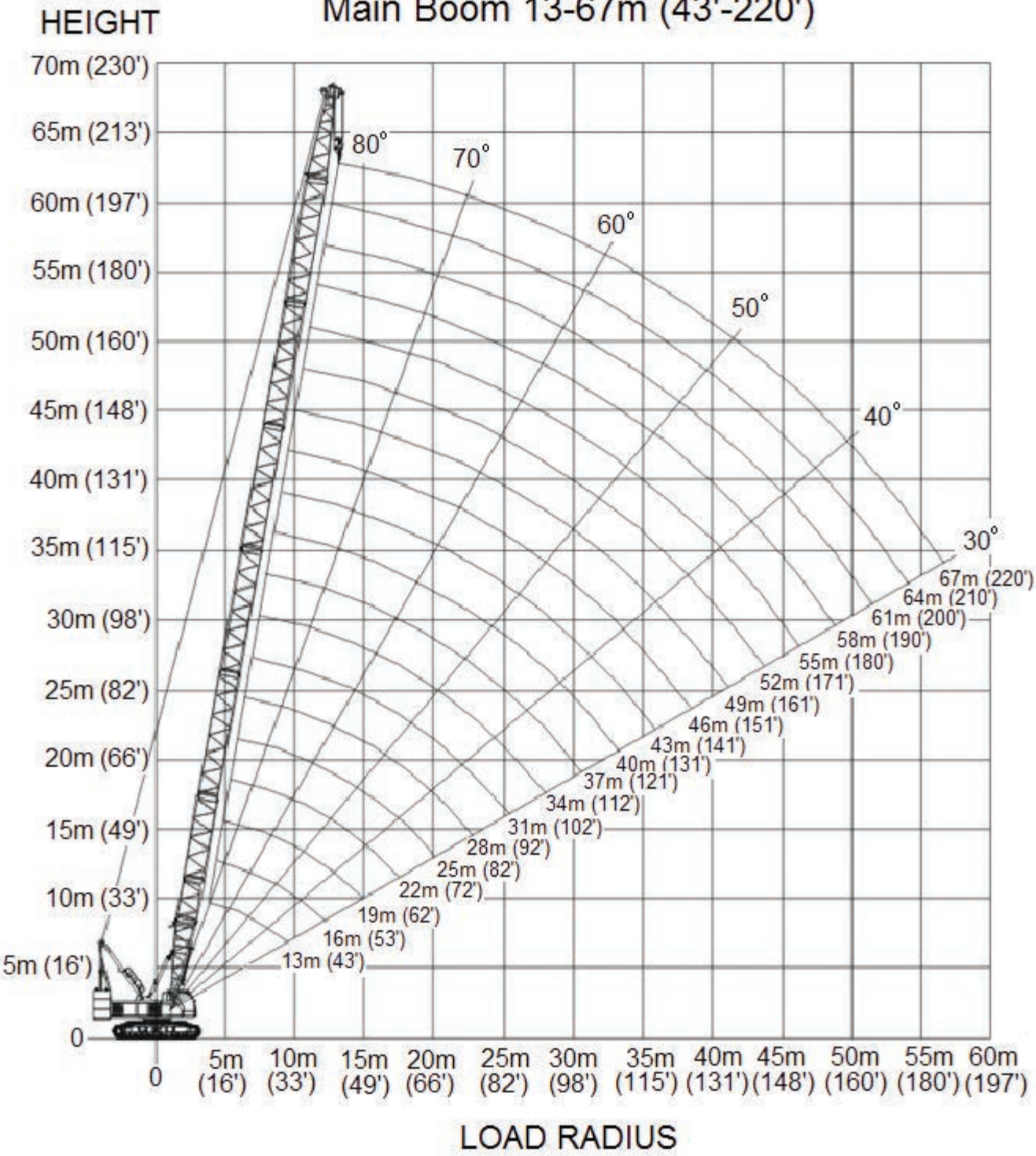


ZCC1100H CRAWLER CRANE



WORKING RANGE DIAGRAM

ZCC1100H WORKING RANGE DIAGRAM
Main Boom 13-67m (43'-220')





ZCC1100H CRAWLER CRANE

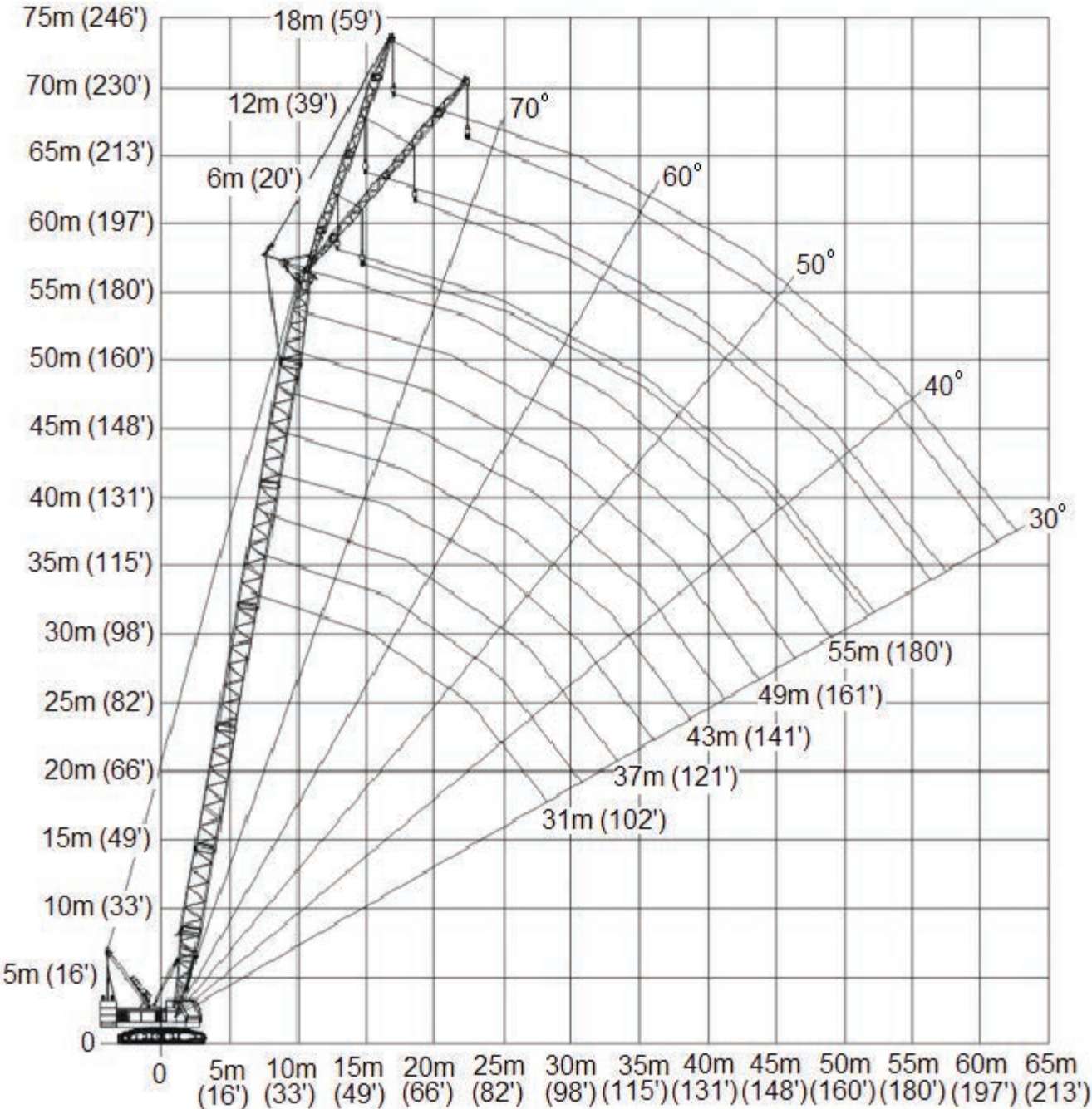


WORKING RANGE DIAGRAM

ZCC1100H WORKING RANGE DIAGRAM

Fixed Jib 6-18m (20'-59')

HEIGHT



LOAD RADIUS





ZCC1100H CRAWLER CRANE

 Main boom 83,790 lb counterweight 360° rating 75% stability rating										
Capacity - lb [x1000]						Boom Length - ft				
Load Radius (ft)	42.7	52.5	62.3	72.2	82.0	91.9	101.7	111.5	121.4	131.2
10.5	220.5									
12.1	193.1									
13.1	179.9									
14.1	171.1									
15.1	161.2	159.0								
16.1	151.9	151.7	145.9							
17.1	142.9	142.4	138.7							
18.0	134.9	134.3	131.4	131.4						
19.0	127.9	127.2	126.1	124.1						
20.0	120.0	121.0	120.2	119.7	116.2					
24.9	90.2	90.2	89.9	89.7	89.7	89.5	89.1	88.8		
29.9	70.1	69.9	69.7	69.7	69.4	69.2	69.0	68.8	68.6	68.3
35.1	56.7	56.2	56.0	55.8	55.6	55.6	55.3	55.1	54.9	54.7
40.0	47.6	47.2	47.2	47.0	46.7	46.5	46.3	46.1	45.9	45.9
49.9		35.7	35.5	35.3	35.1	34.8	34.6	34.4	34.2	34.2
60.0				27.8	27.6	27.3	27.1	26.9	26.7	26.5
69.9					22.7	22.5	22.3	22.0	21.8	21.6
80.1						18.7	18.5	18.3	18.1	17.9
89.9							15.9	15.7	15.4	15.2
100.1								13.4	13.2	13.0
109.9									11.5	11.5



ZCC1100H CRAWLER CRANE

 Main boom 83,790 lb counterweight 360° rating 75% stability rating									
Capacity - lb [x1000]					Boom Length - ft				
Load Radius (ft)	141.1	150.9	160.8	170.6	180.4	190.3	200.1	210.0	219.8
29.9	68.1								
35.1	54.5	49.6	41.9	40.0					
40.0	45.6	44.1	40.1	38.4	33.7	31.3			
49.9	33.7	33.7	33.5	33.3	30.2	29.8	27.3	26.2	26.2
60.0	26.2	26.0	25.8	25.6	25.4	25.1	24.9	24.7	23.6
69.9	21.4	21.2	20.9	20.7	20.5	20.3	20.1	19.8	19.6
80.1	17.6	17.4	17.2	17.0	16.8	16.5	16.3	16.1	15.9
89.9	15.0	14.8	14.6	14.3	13.9	13.7	13.4	13.2	13.0
100.1	12.8	12.6	12.3	11.9	11.7	11.5	11.2	11.0	10.8
109.9	11.0	10.8	10.6	10.4	10.1	9.7	9.5	9.3	9.0
120.1	9.5	9.3	9.0	8.8	8.6	8.4	8.2	7.9	7.5
129.9		8.2	7.9	7.5	7.3	7.1	6.8	6.6	6.4
140.1			6.8	6.6	6.4	6.2	6.0	5.5	5.3
149.9				5.7	5.5	5.3	5.1	4.9	4.4
160.1					4.6	4.4	4.2	4.0	3.7
169.9						3.7	3.5	3.3	3.1
180.1								2.6	2.4

ZCC1100H CRAWLER CRANE

 Fixed Jib 83,790 lb counterweight 360° rating 75% stability rating													
Boom Length 101'-9"							Boom Length 111'-6"						
Fixed Jib Length (ft)			Capacity - lbs [x1000]				Fixed Jib Length (ft)			Capacity - lbs [x1000]			
Load Radius (ft)	19.7		39.4		59.1		Load Radius (ft)	19.7		39.4		59.1	
	Jib Offset Angle (deg)							Jib Offset Angle (deg)					
	10	30	10	30	10	30		10	30	10	30	10	30
35.0	17.6						35.0	17.6					
40.0	17.6	17.6	17.6				40.0	17.6					
50.0	17.6	17.6	17.6	13.4			50.0	17.6	17.6	17.6	13.7		
60.0	17.6	17.6	17.6	16.3	12.8		60.0	17.6	17.6	17.6	16.3	13.0	
70.0	17.6	17.6	17.6	14.8	12.3	8.4	70.0	17.6	17.6	17.6	14.8	12.6	8.8
80.0	16.8	17.0	17.4	13.7	11.9	7.7	80.0	16.8	16.8	16.8	13.2	12.1	8.4
90.0	14.6	14.3	15.0	12.6	11.5	6.8	90.0	14.1	14.6	14.6	12.3	11.7	7.5
100.0	12.3	12.3	12.8	11.0	11.0	6.4	100.0	11.9	12.3	12.1	11.9	11.2	6.6
110.0	10.6		11.0	10.8	10.1	6.2	110.0	10.4	10.6	10.8	10.8	10.8	6.4
120.0	9.5			9.7	8.6	5.7	120.0	9.0		9.3	9.5	9.5	6.0
130.0	8.4			7.7	5.5		130.0	7.9			8.2	8.4	5.7
140.0	7.1				5.3		140.0	7.1				7.3	5.5
150.0	5.1						150.0	6.4					5.3
							160.0	4.9					



ZCC1100H CRAWLER CRANE

 Fixed Jib 83,790 lb counterweight 360° rating 75% stability rating															
Boom Length 121'-5"							Boom Length 131'-3"								
Fixed Jib Length (ft)			Capacity - lbs [x1000]				Fixed Jib Length (ft)			Capacity - lbs [x1000]					
Load Radius (ft)	19.7		39.4		59.1			Load Radius (ft)	19.7		39.4		59.1		
	Jib Offset Angle (deg)						Jib Offset Angle (deg)								
	10	30	10	30	10	30	10		30	10	30	10	30		
35.0	17.6						40.0	17.6							
40.0	17.6						50.0	17.6	17.6	17.6					
50.0	17.6	17.6	17.6				60.0	17.6	17.6	17.6	17.2	13.2			
60.0	17.6	17.6	17.6	16.3	13.2		70.0	17.6	17.6	17.6	15.9	12.8			
70.0	17.6	17.6	17.6	15.4	12.6	8.8	80.0	16.5	17.0	16.8	15.0	12.6	7.9		
80.0	16.5	16.5	17.2	14.1	12.3	7.7	90.0	13.7	13.9	14.1	13.7	12.1	7.5		
90.0	14.1	14.3	14.3	13.2	11.9	7.5	100.0	11.5	11.7	12.1	12.6	11.5	7.1		
100.0	11.9	12.1	12.1	12.6	11.7	6.6	110.0	9.7	9.9	10.4	10.6	10.6	6.6		
110.0	10.1	10.4	10.4	10.8	10.8	6.4	120.0	8.4	8.6	8.8	9.0	9.3	6.2		
120.0	8.6	8.8	9.0	9.3	9.3	6.2	130.0	7.3	7.5	7.7	7.9	7.7	6.0		
130.0			7.7	8.2	8.2	6.0	140.0			6.6	6.8	6.8	5.5		
140.0			6.8	7.1	7.1	5.5	150.0			5.7	6.0	6.0	5.5		
150.0					6.2	5.5	160.0					5.3	5.3		
160.0					5.3	5.3	170.0					4.6	4.6		



ZCC1100H CRAWLER CRANE

 Fixed Jib 83,790 lb counterweight 360° rating 75% stability rating																
Boom Length 141'-2"							Boom Length 150'-11"									
Fixed Jib Length (ft)			Capacity - lbs [x1000]				Fixed Jib Length (ft)			Capacity - lbs [x1000]						
Load Radius (ft)	19.7		39.4		59.1			Load Radius (ft)	19.7		39.4		59.1			
	Jib Offset Angle (deg)						Jib Offset Angle (deg)									
	10	30	10	30	10	30	10		30	10	30	10	30			
50.0	17.6		17.6				50.0	17.6		17.6						
60.0	17.6	17.6	17.6	16.8	13.2			60.0	17.6	17.6	17.6	13.7				
70.0	17.6	17.6	17.6	15.9	12.8			70.0	17.6	17.6	17.6	16.3	13.2			
80.0	15.9	16.5	16.8	15.0	12.6	8.6		80.0	15.9	16.5	16.3	15.4	12.8	8.6		
90.0	13.2	13.9	13.9	13.9	12.1	7.7		90.0	13.2	13.7	13.9	14.6	12.6	7.7		
100.0	11.2	11.5	11.9	12.3	11.7	7.3		100.0	11.2	11.5	11.5	12.1	11.9	7.5		
110.0	9.7	9.9	10.1	10.6	10.1	6.6		110.0	9.5	9.5	9.9	10.1	10.1	6.8		
120.0	8.2	8.4	8.6	9.0	8.8	6.4		120.0	7.9	8.2	8.4	8.6	8.6	6.6		
130.0	7.1	7.1	7.3	7.7	7.5	6.2		130.0	6.8	6.8	7.1	7.5	7.5	6.4		
140.0	6.0	6.0	6.4	6.6	6.6	5.7		140.0	5.7	6.0	6.2	6.4	6.4	6.2		
150.0			5.5	5.7	5.7	5.5		150.0			5.3	5.5	5.5	5.7		
160.0			4.6	4.9	5.1	5.3		160.0			4.4	4.6	4.6	5.1		
170.0					4.2	4.4		170.0			3.7	4.0	4.0	4.4		
180.0					3.7			180.0					3.5	3.7		
							190.0							2.9	3.1	



ZCC1100H CRAWLER CRANE

 Fixed Jib 83,790 lb counterweight 360° rating 75% stability rating															
Boom Length 160'-10"							Boom Length 170'-8"								
Fixed Jib Length (ft)			Capacity - lbs [x1000]				Fixed Jib Length (ft)			Capacity - lbs [x1000]					
Load Radius (ft)	19.7		39.4		59.1			Load Radius (ft)	19.7		39.4		59.1		
	Jib Offset Angle (deg)						Jib Offset Angle (deg)								
	10	30	10	30	10	30	10		30	10	30	10	30		
50.0	17.6	17.6	17.6				50.0	17.6							
60.0	17.6	17.6	17.6		13.7		60.0	17.6	17.6	17.6					
70.0	17.6	17.6	17.6	16.8	13.2		70.0	17.6	17.6	17.6	16.8	13.2			
80.0	16.1	16.1	16.3	15.4	12.6	8.8	80.0	15.7	15.7	16.1	15.4	12.8	8.8		
90.0	13.0	13.2	13.4	14.3	12.3	8.2	90.0	12.6	13.2	13.2	13.4	12.6	8.2		
100.0	10.8	11.0	11.2	11.9	11.5	7.7	100.0	10.6	11.0	11.0	11.7	11.5	7.5		
110.0	9.0	9.3	9.5	9.9	9.7	7.3	110.0	8.8	9.3	9.3	9.7	9.5	7.3		
120.0	7.7	7.9	7.9	8.6	8.4	6.6	120.0	7.3	7.7	7.9	8.4	8.2	6.6		
130.0	6.6	6.6	6.8	7.3	7.1	6.4	130.0	6.2	6.4	6.6	7.1	6.8	6.4		
140.0	5.5	5.7	5.7	6.2	6.0	6.2	140.0	5.3	5.3	5.7	6.0	6.0	6.2		
150.0	4.6	4.9	4.9	5.3	5.1	5.7	150.0	4.4	4.6	4.9	5.1	5.1	5.5		
160.0	3.7	4.0	4.2	4.4	4.4	4.9	160.0	3.5	3.7	4.0	4.2	4.2	4.6		
170.0				3.7	3.7	4.2	170.0	2.9	3.1	3.3	3.5	3.5	4.0		
180.0					3.1	3.5	180.0			2.6	2.9	2.9	3.3		
190.0					2.6	2.9									



ZCC1100H CRAWLER CRANE

		Fixed Jib 360° rating		83,790 lb counterweight 75% stability rating			
Boom Length 180'-5"							
Fixed Jib Length (ft)			Capacity - lbs [x1000]				
Load Radius (ft)	19.7		39.4		59.1		
	Jib Offset Angle (deg)						
	10	30	10	30	10	30	
50.0	17.6						
60.0	17.6	17.6	17.6				
70.0	17.6	17.6	17.6	17.0	13.4		
80.0	15.0	15.4	15.9	16.1	13.0		
90.0	12.3	12.8	12.8	13.7	12.6	8.2	
100.0	10.4	10.6	10.6	11.5	11.2	7.7	
110.0	8.6	8.8	9.0	9.7	9.3	7.5	
120.0	7.1	7.5	7.5	8.2	7.7	7.1	
130.0	6.0	6.2	6.4	6.8	6.6	6.6	
140.0	4.9	5.1	5.3	5.7	5.5	6.2	
150.0	4.2	4.2	4.4	4.9	4.6	2.4	
160.0	3.3	3.3	3.7	4.0	3.7	4.4	
170.0	2.9	2.6	3.1	3.1	3.1	3.5	
180.0		2.0	2.4	2.4	2.4	2.9	
190.0				1.8	1.8	2.2	

