

SCA1000A

Lattice Boom Crawler Crane

Quality Changes the World



Max. Lifting Capacity: 110 UST
Max. Boom Length: 210 ft
Max. Boom + Jib Length: 170.6 + 73.8 ft

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Lattice Boom Crawler Crane SCA1000A

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SCA1000A
LATTICE BOOM CRAWLER CRANE
110 UST (100 TONS) LIFTING CAPACITY

Main Features

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Product Specification



Engine

- Model: Cummins QSL9-C334 diesel engine;
- Type: 4-stroke, water-cooled, vertical in-line 6 cylinders, direct injection, turbo-charger, intercooler, complied with CARB Tier 4 (f), EU Stage IV and US EPA Tier 4 (f) emission standard;
- Displacement: 2.4Gal (8.9L);
- Rated power: 334HP/2100rpm;
- Operation power: 331HP/1800rpm;
- Max. Torque: 1050lb-ft/1500rpm;
- Starter: 24V-7.8kW;
- Radiator: Fin type aluminum plate core;
- Air cleaner: Dry type system with main filter element, safety element;
- Throttle: Hand throttle, foot throttle, electrically-controlled;
- Fuel filter: Replaceable paper element;
- Batteries: Two 12V×165Ah capacity batteries, connected in series (24V system);
- Fuel tank capacity: 105.7Gal (400L).

Electrical Control System

- Self-developed SYIC-II integrated control system is adopted with higher integration, precise operation and reliable quality;
- Control system consists of power system, engine system, main control system, LMI system, auxiliary system and safety monitoring system. CAN BUS is used for data communication between controller, monitor and the engine;
- Monitor: The working parameters and status are shown on the monitor, such as the engine speed, fuel level, engine oil pressure, servo pressure, engine working hours, lifting conditions and boom angle.

Hydraulic System

- Main pumps: Three open variable displacement piston pumps provide oil supply for main actuators of machine;
- Gear pump: Two types of gear pump for radiator and control circuit;
- Control: Main pump adopts electrically-controlled positive flow control; winch motor adopts limitless adjustable piston motor of variable displacement. The operating components are three one-axis hydraulic handles for main/aux. load hoist and boom hoist functions; dual one-axis handles for travel; one cross hydraulic control handle, to control slewing and the third winch;
- Way of cooling: Heat exchanger, plate fan core and multi-stage cooling;
- Filter: Large flow, high precision filter, with bypass valve and transmitter, which can remind the user to replace the filter element in time;
- Max. pressure of system: 4641psi;
- Main/aux. load hoist, boom hoist and travel system: 4641psi;
- Swing system: 4641psi;
- Control system: 725psi;
- Hydraulic Tank Capacity: Gal 121.5 Gal (460L).

Main and Aux. Hoist Winch

- Main and aux. hoist winches are driven separately by motor via gearbox. Operating winch handle can control the winch to rotate in two directions, which are lifting and lowering of hook. Fine inching function is equipped on the machine;
- Winches with grooved lagging allow for multilayer spooling;
- Free fall for main/aux. hoist winch is offered as optional.

Main hoist/Aux. hoist without free fall function:

Main Hoisting Winch	Drum diameter	2'1" (630mm)
	Rope speed on the outermost work layer	0~397.0ft/min (0~121m/min)
	Wire rope diameter	1.0" (26mm)
	Main hoist wire rope length	787.4' (240m)
	Rated single line pull	26.4Klb (12t)
Auxiliary Hoisting Winch	Drum diameter	2'1" (630mm)
	Rope speed on the outermost work layer	0~397.0ft/min (0~121m/min)
	Wire rope diameter	1.0" (26mm)
	Aux. hoist wire rope length	590.5' (180m)
	Rated single line pull	26.4Klb (12t)

Main hoist/Aux. hoist with free fall function:

Main Hoisting Winch	Drum diameter	1'11" (576mm)
	Rope speed (1st layer)	0~397.0ft/min (0~121m/min)
	Wire rope diameter	1.0" (26mm)
	Main hoist wire rope length	787.4' (240m)
	Rated single line pull	26.4Klb (12t)
Auxiliar Hoisting Winch	Drum diameter	1'11" (576mm)
	Rope speed (1st layer)	0~397.0ft/min (0~121m/min)
	Wire rope diameter	1.0" (26mm)
	Aux. hoist wire rope length	590.5' (180m)
	Rated single line pull	26.4Klb (12t)



Product Specification

Optional 3rd Winch

- Optional 3rd winch mechanism is connected with boom base with pins and driven separately by motor via gearbox. Operating handle can control the winch to rotate in two directions, which are lifting and lowering of hook;
- Winches with grooved lagging allow for multilayer spooling.

Optional 3rd Winch Mechanism	Drum diameter	1'9" (522mm)
	Rope speed on the outermost work layer	328 ft/min (0~100m/min)
	Wire rope diameter	0.9" (22mm)
	Wire rope length	426.5' (130m)
	Rated single line pull	20Klb (9t)

Boom Hoist

- Boom hoist winch is driven separately by motor via gearbox. Operating handle can control the winch to rotate to two directions, which are lifting and lowering of boom;
- Drums with fold-line grooves can ensure the wire rope reeved in order in multilayers.

Boom Hoist Winch	Drum diameter	1'4" (420mm)
	Rope speed on the outermost work layer	0~194 ft/min (0~59m/min)
	Wire rope diameter	0.8" (20mm)
	Wire rope length of boom hoist	459'4" (140m)
	Rated single line pull	15.4Klb (7t)

Swing Mechanism

- Swing brake has wet, spring loaded, normally-closed brake, and braking through spring force;
- Swing system has three work modes to accommodate different needs. It is featured in small backlash, steady control, and fine inching function. It also has free slipping function and swing control on slope to provide smoother braking;
- Swing drive: Internal engaged swing drive with 360° swing range, and the max. swing speed is 2.7rpm. The max. drive pressure can reach 4641psi;
- Swing lock: Cylinder lock can ensure the upperworks locked securely in four positions or during transport;
- Swing ring: Single row ball bearing.

Cab and Control

- New operator's cab with fashionable profile, nice interior and large window glass. There are low and high-beam lights, left side rear view swing mirror, heater and A/C, radio and other functions. The layout of seat, handles, control buttons are designed with ergonomic principles to make operation more comfortable;
- Cab layout: Integrated 10.4-inch touch screen, programmable smart switches, and improved touch screen interference;
- Armrest box: On the left and right armrest box are control handles, electrical switches, emergent stop and ignition switch. The armrest box can be adjusted along with the seat;
- Seat: Multi-way and multi-level floating adjustable seat with unload switch;
- A/C: Cool and heat air; optimized air channels and vents;
- Multiple cameras can be displayed on the monitor at the same time to realize backing video, real-time monitoring of wire rope on each winch, conditions behind the counterweight and surrounding the machine.

Counterweight

- Counterweight tray and blocks nest together for easier assembly and transport;
- Rear counterweight is self-assembled, total 68.8Klb (31.2t);
- Self-assembled counterweight: Tray 21.8Klb (9.9t)×1, left counterweight block 7.6Klb (3.45t)×3, and right counterweight block 7.6Klb (3.45t) × 3, cylinder bracket 1.3Klb (0.6t)×1;
- Carbody counterweight: 12.1Klb (5.5t)×2 at the front and rear of carbody.

Upperworks

- High-strength steel weld framework. Design allows for easy maintenance and service.

Product Specification



Lowerworks

- Independent travel driving units on each side of the crawler, provide straight travel and turning driven by travel motor through gearbox and drive wheel.

Crawler Extension and Retraction

- The crawlers can extend and retract via cylinders. During Work Mode, the crawlers must be extended, and retracted during transport with crawlers on when there is no restrictions.

Crawler Tensioning

- Use the jack to push the guide wheel and insert the shim to adjust crawler tension.

Track Pad

- High-strength alloy cast steel track pad can prolong the service life. They are 2'9" (850mm) wide, and the total amount is 53pcs×2.

Jack Cylinder

- Jack cylinders are provided as standard offering to make jobsite transfer easier.

Self-assembly Cylinder

- Self-assembly cylinder is provided as standard offering to help crawlers and carbody counterweight assembly during jobsite transfer.

Operating Equipment

- All chords are high-strength steel tubes, and the boom/jib top sheaves are made of high-strength anti-wearing Nylon material protecting wire rope. The hooks are installed with rolled welded steel sheave. Pendant cables with quick hitch connector that are easy to assemble are adopted.

Boom

- Lattice structure. The chord are high-strength structural tube and each section is connected through pins;
- Basic boom: 21'4" (6.5m) boom top + 21'4" (6.5m) boom base;
- Boom insert: 9'10" (3m)×1, 19'8" (6m)×2, 29'6" (9m)×4;
- Boom length: 42'8" (13m)~210' (64m).

Fly Jib

- Lattice structure. The chord are high-strength structural tube and each section is connected through pins;
- Basic boom: 14'9" (4.5m) boom top + 14'9" (4.5m) boom base;
- Boom insert: 14'9" (4.5m) × 3;
- Boom length: 29'6" (9m)~73'10" (22.5m);
- Longest boom + jib: 170'7" (52m) boom + 73'10" (22.5m) jib.

Auxiliary Tip Extension

- The auxiliary tip extension is a welded structure connected to the boom tip by pins, used for auxiliary hook;
- Extension jib length: 5'5" (1.66m).

Hook Block

- 110 USt (100 mt) hook block, 5 sheaves;
- 55 USt (50 mt) hook block, 3 sheaves;
- 27.5 USt (25 mt) hook block, 1 sheave;
- 14.9 USt (13.5 mt) hook ball.

Safety Device



Assembly Mode/Work Mode Switch

- In Assembly Mode, some safety devices are disabled for crane assembly;
- In Work Mode, all safety devices activate to protect the operation.

Emergency Stop

- When this button is pressed down to cut off the power supply of whole machine and all actions stop.

Load Moment Indicator (LMI)

- It is an independent computerized safety control system. LMI can automatically detect the load weight, work radius and boom angle, and present on the display the rated load, actual load, work radius and boom angle. In normal operation, the LMI can make a judgment and cut off automatically if the crane moves towards dangerous direction. It can also perform as a black box to record the lifting information;
- Composition: Monitor, angler sensor, force sensor and other electrical components.

Over-hoist Protection of the Main/Auxiliary Hooks

- Over-hoist protection device comprises of limit switch and weight on boom top, which prevents the hook lift up too much. When the hook lifts up to the limit height, the limit switch activates, buzzer on the left control panel sends alarm, and failure indicator light starts to flash, the hook hoisting action is cut off automatically.

Over-release Protection Device of the Main/Auxiliary Winch

- It is comprised of activator in the drum and proximity switch to prevent over release of wire rope. When the rope is paid out close to the last three wraps, the limit switch acts, and the system sends alarm through buzzer and show the alarm on the instrument panel, automatically cutting off the winch action.

Function Lock

- If the function lock level is not in work position, all the other handles won't work, which prevents any mis-operation caused by accidental collision.

Drum Lock

- Hydraulically controlled lock is installed for boom hoist drum, which needs to unlock by switch before operation, in order to prevent mis-operation of handles and ensure safety during non-work time.

Swing Lock

- Swing Lock can lock the machine at four positions, front and back, left and right.

Boom Limit Device

- When the boom angle reaches the maximum angle the buzzer sounds and boom action cut off. This protection is two-stage control ensured by both LMI system and travel switch.

Back-stop Device

- Its major components are tubes and spring, in order to buffer the boom backlash and prevent further tipping back.

Boom Angle Indicator

- Pendulum angle indicator is fixed on the side of boom base close to the cab, so as to provide convenience to the operator.

Hook Latch

- The lifting hook is installed with a baffle plate to prevent wire rope from falling off.

Safety Device



Zoom Camera

- It can monitor load lifting on the main hook and the surroundings at real time. The camera can zoom in/out as needed.
- Components: Wireless remote transmitter, wireless remote receiver, zoom camera.

Lightning Protection Device

- It is offered as an optional feature, which includes the grounding device that can effectively protect the electric system elements and workers from lightning.

Tri-color Load Indicator

- The load indication light has three colors, green, yellow and red, and the real time load status is presented on the display. When the actual load is smaller than 90% of rated load, the green light is on; when the actual load is larger than 90% and smaller than 100%, the yellow light is on, the alarm light flashes and sends out intermittent sirens; when the actual load reaches 102% of rated load, the red light on, the alarm light flashes and sends out continuous sirens. At this moment, the system will automatically cut off the crane's dangerous operation.

Audio-Visual Alarm

- It flashes once the machine is powered on with electricity, so as to warn people around.

Swing Indicator Light

- The swing indicator light flashes during traveling or swing.

Illuminating Light

- The machine is equipped with, short-beam light in front of machine, front angle adjustable far-beam, lamps in operator's cab, lighting devices for night operation, so as to increase the visibility during work.

Rear View Mirror

- It is installed on the left of the operator's cab for monitoring the rear part of the machine.

Airplane Warning Light

- Airplane warning light is light mounted on the top of boom/jib to indicating the height.

Anemometer

- It is mounted on the top of boom/jib, and displayed the wind speed on the monitor in the cab.

Electronic Level Gauge

- It displays the tipping angle of crane on the monitor in real time, protecting the machine from dangerous situation.

Operation Release

- If the operator leaves the seat, all control handles will be locked immediately to prevent any mis-operation due to accidental collision.

Engine Power Limit Load Adjustment and Stalling Protection

- The controller monitors the engine power to prevent engine getting stuck and stalling.

Engine Status Monitoring

- The engine status will be presented, such as engine coolant temperature, fuel level, total work hours, engine oil pressure, engine speed, battery charging, voltage.



**SCA1000A
LATTICE BOOM CRAWLER CRANE
110 UST (100 TONS) LIFTING CAPACITY**

Technical Parameters

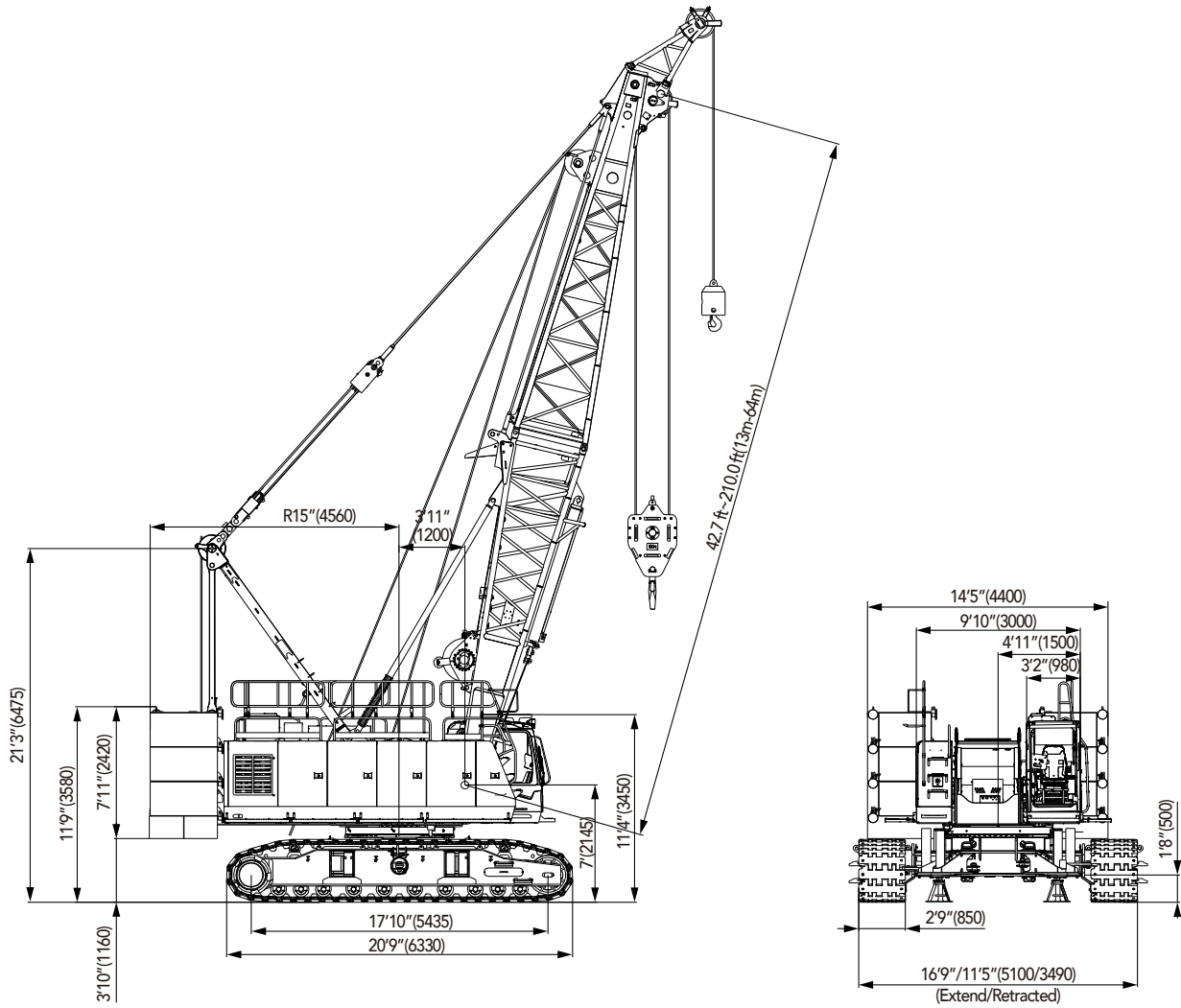
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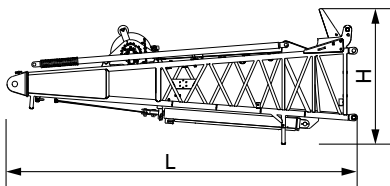
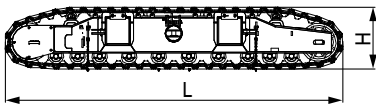
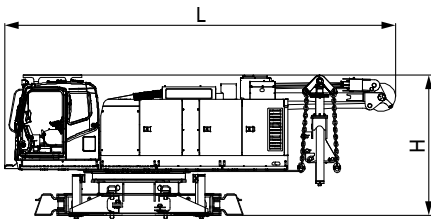
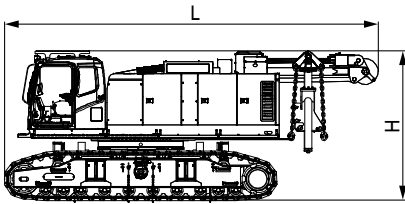
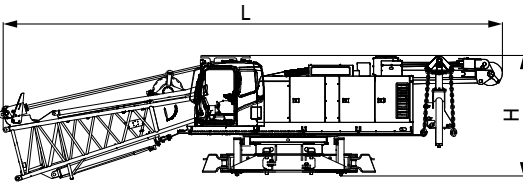
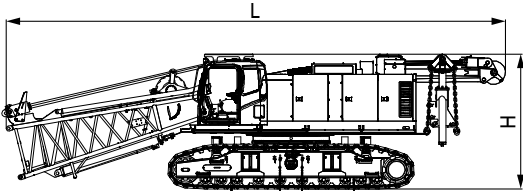
Major Performance & Specifications

Major Performance & Specifications of SCA1000A			
Performance Indicators		Unit	Parameter
H	Max. rated lifting capacity	Klb (t)	220 (100)
	Max. lifting moment	Klb×ft (t·m)	220×12.5 (100×3.8=380)
	Boom length	ft (m)	42.7~210 (13~64)
	Boom luffing angle	°	30~80
FJ	Max. rated lifting capacity	Klb (t)	24.3 (11)
	Jib length	ft (m)	29.5~73.8 (9~22.5)
	Longest boom + longest jib	ft (m)	170.6 +73.8 (52+22.5)
	Jib angle	°	15, 30
Speed	Rope speed of main/aux. winch (the outermost work layer)	ft/min (m/min)	397.0 (121)
	Rope speed of boom hoist winch (the outermost work layer)	ft/min (m/min)	193.6 (59)
	Swing speed	rpm	2.7
	Travel speed	mile/h (km/h)	1.2/0.6 (2\1)
Wire Rope	Main hoist wire rope: diameter × length	in×ft (φ mm×m)	1.0×787.4 (26×240)
	Aux. hoist wire rope: diameter × length	in×ft (φ mm×m)	1.0×590.6 (26×180)
	Single line pull of main/aux. hoist wire rope	Klb (t)	26.5 (12)
Engine	Output power	HP	334
	Rated speed	rpm	2100
Transport	Weight of machine with basic boom	Klb (t)	210.8 (95.6)
	Transport weight of basic machine (with boom base, crawlers and 4 winches)	Klb (t)	113.5 (51.5)
	Transport weight of basic machine (without crawlers)	Klb (t)	71.7 (32.5)
	Machine transport dimension (with boom base, crawlers and 4 winches) L×W×H	ft (mm)	43.6×11.5×11.4 (13300×3490×3460)
	Machine transport dimension (without crawlers) L×W×H	ft (mm)	27.3×9.8×10.0 (8310×3000×3070)
Other Specifications	Average ground pressure (basic boom)	PSI	13.8
	Gradeability	%	30

Dimensions



Transport Dimension



Basic Machine 1 (with base boom, crawlers and 4 winches) ×1

Length (L)	43.6ft (13.3m)
Width (W)	11.5ft (3.49m)
Height (H)	11.4ft (3.46m)
Weight	113.5Klb (51.5t)

Note: weight of the optional 3rd winch is 2.3Klb (1.04t).

Basic Machine 2 (with boom base and 4 winches) ×1

Length (L)	43.6ft (13.3m)
Width (W)	9.8ft (3.00m)
Height (H)	10.1ft (3.07m)
Weight	71.7Klb (32.5t)

Basic Machine 3 (with crawlers and 3 winches) ×1

Length (L)	28.4ft (8.67m)
Width (W)	11.5ft (3.49m)
Height (H)	11.4ft (3.46m)
Weight	106.0Klb (48.1t)

Basic Machine 4 ×1

Length (L)	27.3ft (8.31m)
Width (W)	9.8ft (3.00m)
Height (H)	10.1ft (3.07m)
Weight	64.2Klb (29.1t)

Side Frame ×2

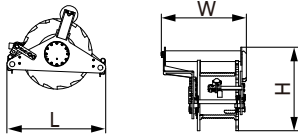
Length (L)	20.8ft (6.33m)
Width (W)	3.6ft (1.09m)
Height (H)	3.8ft (1.15m)
Weight	20.9Klb (9.5t)

Boom Base With the 3rd Winch ×1

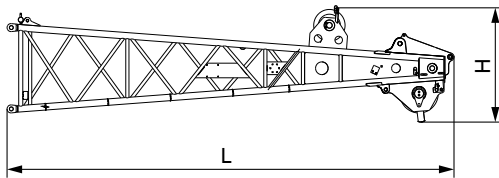
Length (L)	22.0ft (6.72m)
Width (W)	5.8ft (1.78m)
Height (H)	6.8ft (2.06m)
Weight	7.9klb (3.58t)

Note: weight of the optional 3rd winch is 2.3Klb (1.04t).

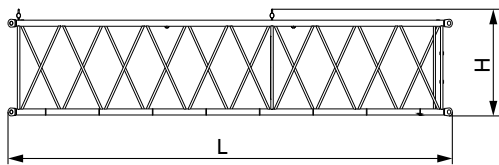
Transport Dimension



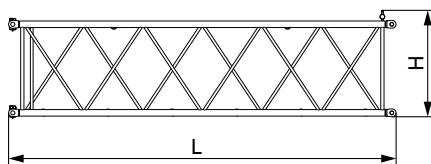
3rd Winch		×1
Length (L)		3.6ft (1.11m)
Width (W)		3.1ft (0.95m)
Height (H)		3.1ft (0.94m)
Weight		2.3Klb (1.04t)



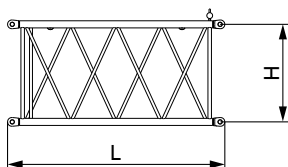
Boom Top		×1
Length (L)		23.4ft(7.13m)
Width (W)		4.9ft(1.49m)
Height (H)		5.9ft(1.79m)
Weight		3.3Klb(1.50t)



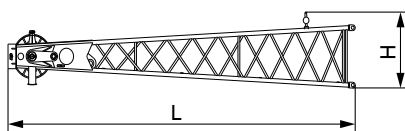
29'6" (9m) Boom Insert		×4
Length (L)		30.0ft (9.14m)
Width (W)		5.0ft (1.51m)
Height (H)		4.8ft (1.47m)
Weight		2.4Klb (1.07t)



19'8" (6m) Boom Insert		×2
Length (L)		20.1ft (6.14m)
Width (W)		5.0ft (1.51m)
Height (H)		4.8ft (1.47m)
Weight		1.7Klb (0.78t)

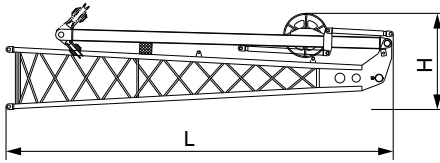


9'10" (3m) Boom Insert		×1
Length (L)		10.3ft (3.14m)
Width (W)		5.0ft (1.51m)
Height (H)		4.8ft (1.47m)
Weight		1.1Klb (0.50t)

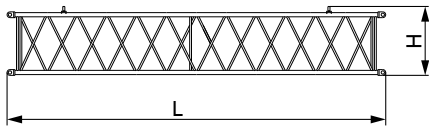


Fly Jib Top		×1
Length (L)		16.2ft (4.93m)
Width (W)		2.9ft (0.87m)
Height (H)		3.01ft (0.92m)
Weight		0.7Klb (0.31t)

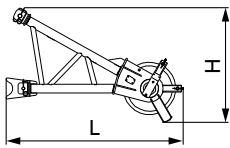
Transport Dimension



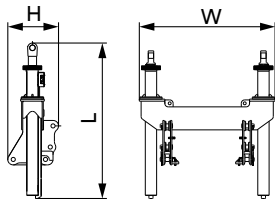
Fly Jib Base and Strut ×1	
Length (L)	15.6ft (4.75m)
Width (W)	2.9ft (0.87m)
Height (H)	3.9ft (1.18m)
Weight	1.7Klb (0.75t)



14'9" (4.5m) Fly Jib ×3	
Length (L)	15.0ft (4.57m)
Width (W)	2.9ft (0.87m)
Height (H)	2.7ft (0.83m)
Weight	0.5Klb (0.24t)

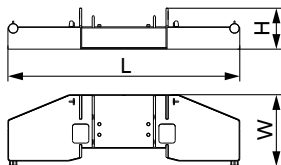


Auxiliary Tip Extension ×1	
Length (L)	6.0ft (1.82m)
Width (W)	3.0ft (0.9m)
Height (H)	3.9ft (1.2m)
Weight	0.4Klb (0.2t)

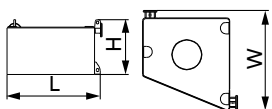


Counterweight Cylinder Bracket ×1	
Length (L)	7.5ft (2.28m)
Width (W)	6.5ft (1.98m)
Height (H)	2.4ft (0.74m)
Weight	3.1Klb (1.4t)

Note: weight includes that for chains and pendant bar

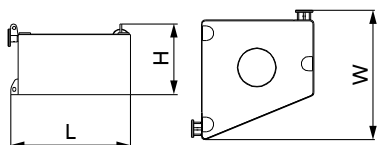


Counterweight Tray ×1	
Length (L)	14.4ft (4.40m)
Width (W)	4.4ft (1.35m)
Height (H)	2.5ft (0.77m)
Weight	22Klb (9.9t)



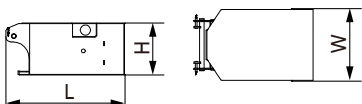
Left Counterweight Block ×3	
Length (L)	4.4ft (1.33m)
Width (W)	4.1ft (1.26m)
Height (H)	2.4ft (0.72m)
Weight	7.6Klb (3.45t)

Transport Dimension



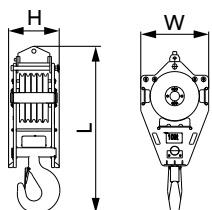
Right Counterweight Block ×3

Length (L)	4.4ft (1.33m)
Width (W)	4.1ft (1.26m)
Height (H)	2.4ft (0.72m)
Weight	7.6Klb (3.45t)



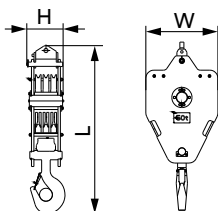
Carbody Counterweight ×2

Length (L)	6.1ft (1.85m)
Width (W)	3.7ft (1.13m)
Height (H)	2.7ft (0.81m)
Weight	12.1Klb (5.5t)



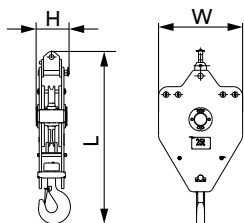
110USt (100Mt) Hook Block ×1

Length (L)	6.8ft (2.08m)
Width (W)	2.8ft (0.85m)
Height (H)	2.1ft (0.63m)
Weight	3.0Klb (1.36t)



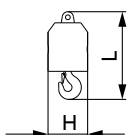
55USt (50Mt) Hook Block ×1

Length (L)	6.4ft (1.95m)
Width (W)	3.0ft (0.90m)
Height (H)	1.5ft (0.45m)
Weight	2.3Klb (1.04t)



27.5USt (25Mt) Hook Block ×1

Length (L)	6.1ft (1.86m)
Width (W)	3.0ft (0.90m)
Height (H)	1.1ft (0.35m)
Weight	1.7Klb (0.79t)



14.9USt (13.5Mt) Ball Hook ×1

Length (L)	3.1ft (0.95m)
Width (W)	1.4ft (0.43m)
Height (H)	1.4ft (0.43m)
Weight	1.0Klb (0.45t)

Note:

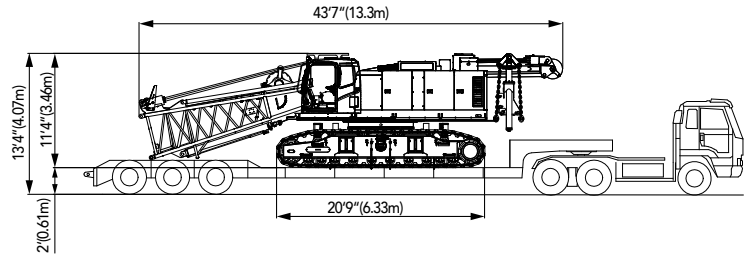
- 1.The transport dimensions of each part in the table are schematic, not proportional to the real parts. The dimensions are designed value without package considered.
- 2.The Weight is designed value that the actual manufactured part may deviate a little.

Transport Plan For Shipping 210 ft Boom

Trailer 1

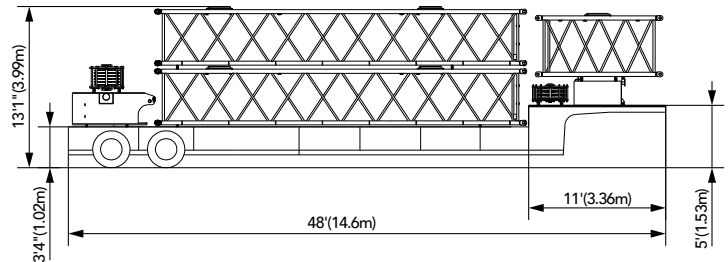
- | | |
|----------|--|
| Part (s) | <ul style="list-style-type: none"> Basic machine with 4 winches |
| Weight | <ul style="list-style-type: none"> 113.5Klb (51.5t) |

Note: Free fall each 2.8Klb (1.25t) 3rd winch 2.2Klb (1t)



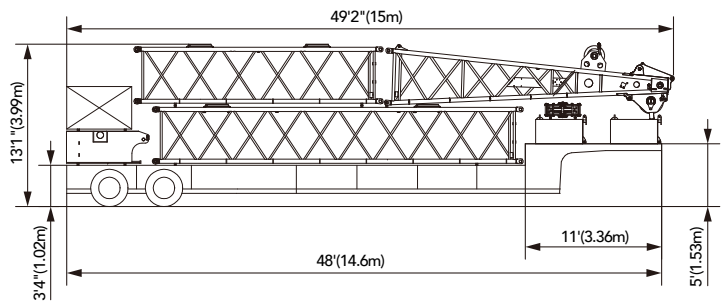
Trailer 2

- | | |
|----------|---|
| Part (s) | <ul style="list-style-type: none"> Carbody counterweight x1 Rear counterweight block x2 29.5ft (9m) boom x2 220.5Klb (100t) hook x1 110.2Klb (50t) hook x1 |
| Weight | <ul style="list-style-type: none"> 38.3Klb (17.3t) |



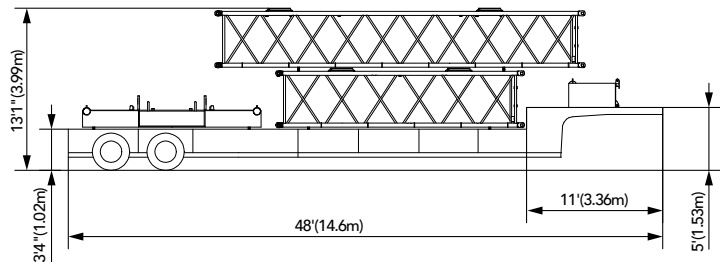
Trailer 3

- | | |
|----------|---|
| Part (s) | <ul style="list-style-type: none"> Carbody counterweight x1 Rear counterweight block x2 29.5ft (9m) boom x1 19.7ft (6m) boom x1 Boom top x1 55.1Klb (25t) hook x1 Spare parts box x1 |
| Weight | <ul style="list-style-type: none"> 41.4Klb (18.7t) |



Trailer 4

- | | |
|----------|--|
| Part (s) | <ul style="list-style-type: none"> Carbody counterweight tray x1 Rear counterweight block x2 29.5ft (9m) boom x1 19.7ft (6m) boom x1 9.8ft (3m) boom x1 |
| Weight | <ul style="list-style-type: none"> 41.6Klb (18.8t) |





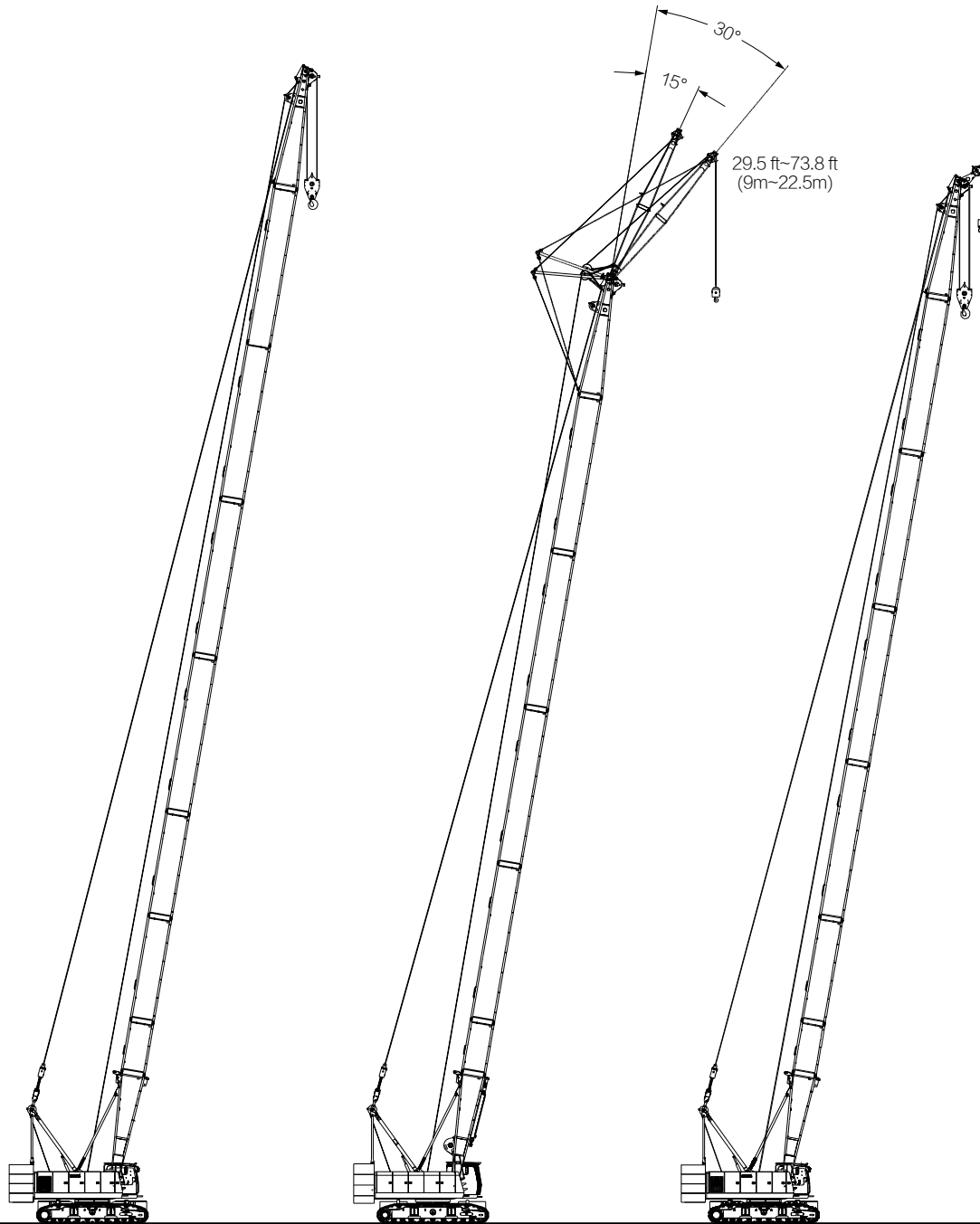
**SCA1000A
LATTICE BOOM CRAWLER CRANE
110 UST (100 TONS) LIFTING CAPACITY**

Configuration

- Page 19 (H) Main Boom Operating Conditions
- Page 23 (FJ) Fly Jib Operating Conditions
- Page 29 (HC) Auxiliary Tip Extension Operating Conditions



Boom and Jib Combinations

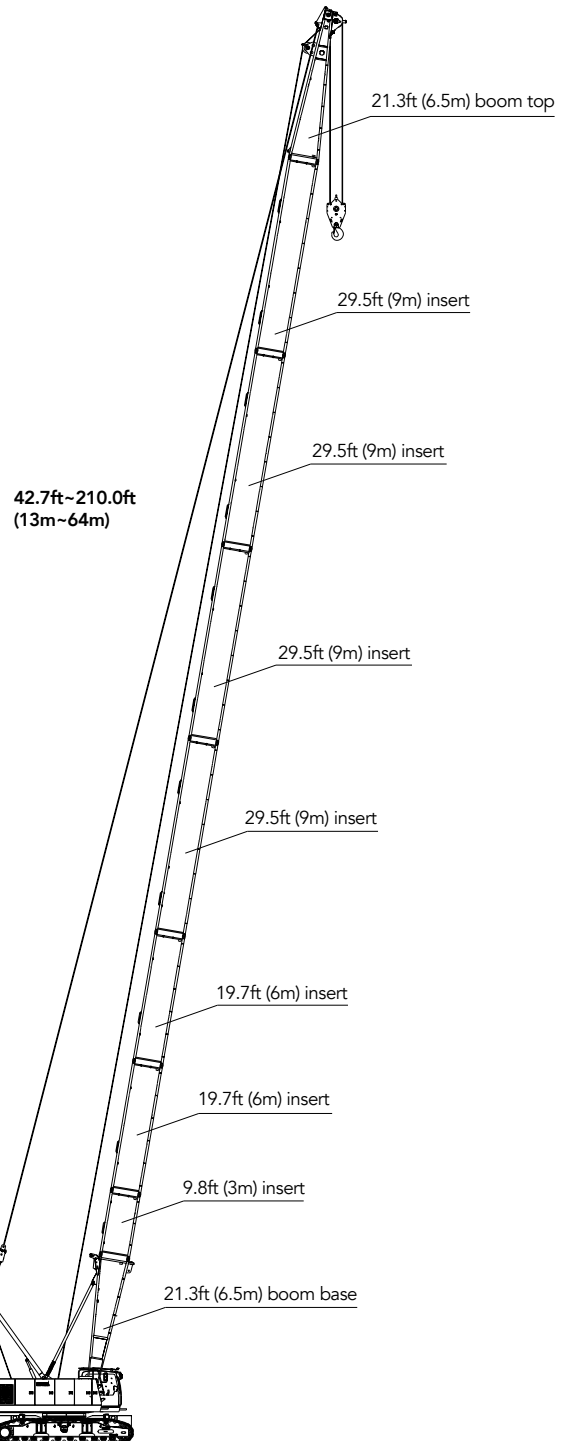
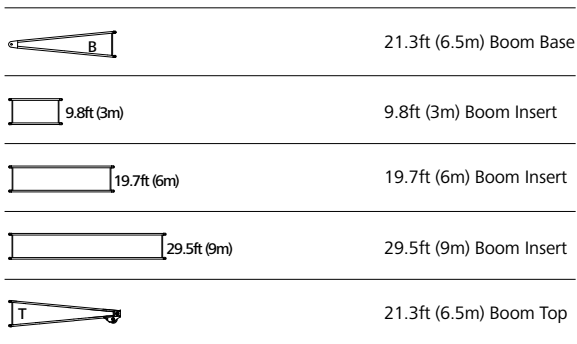
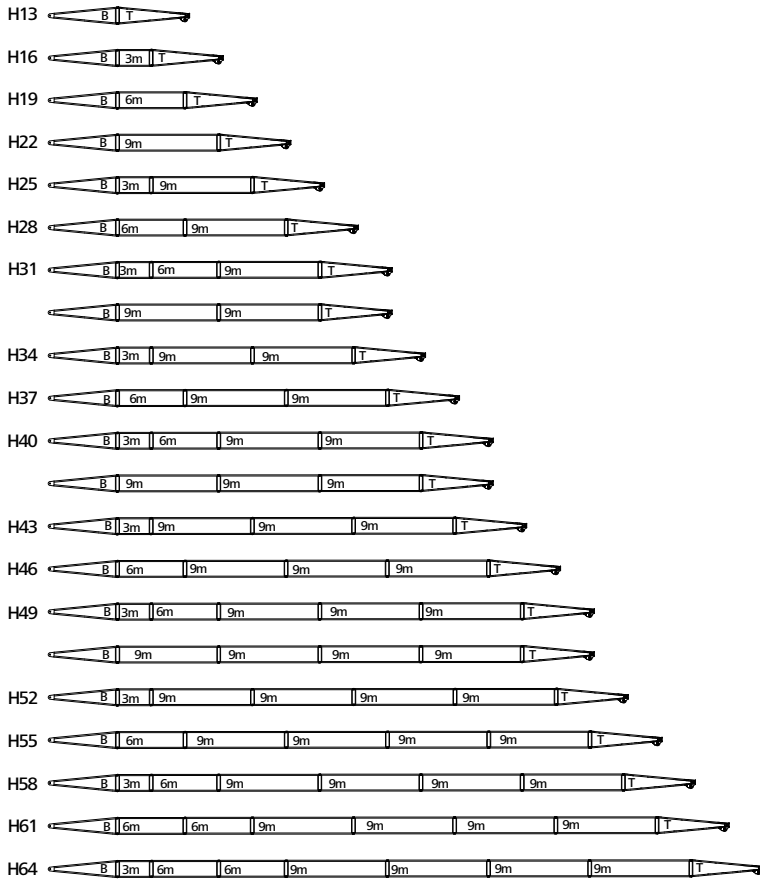


H Configuration
42.7 ft~210.0 ft
(13m~64m)

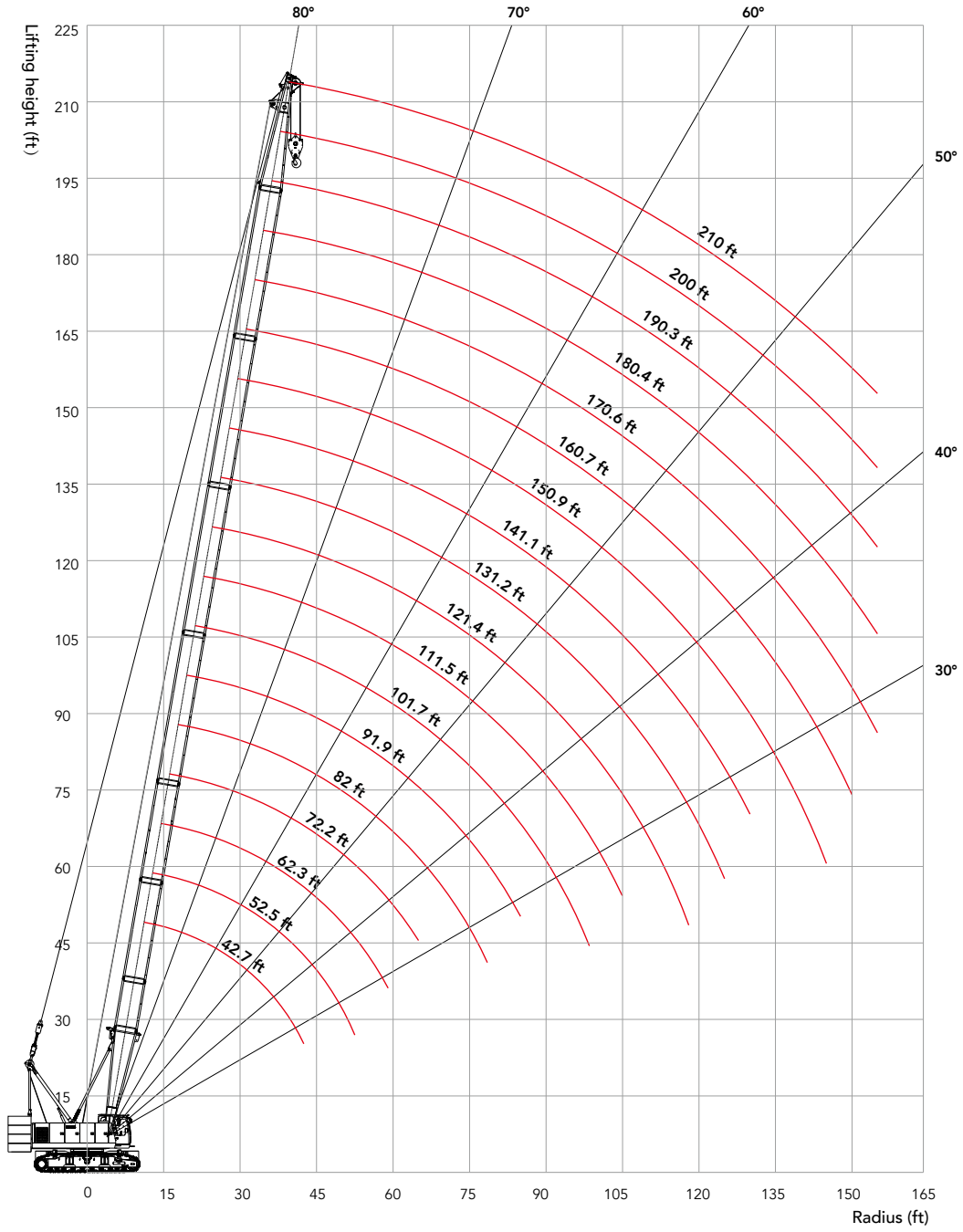
FJ Configuration
101.7 ft~170.6 ft
(31m~52m)

HC Configuration
42.7 ft~190.3 ft
(13m~58m)

(H) Main Boom Operating Conditions

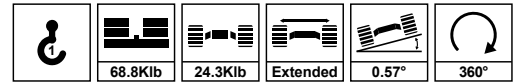


(H) Main Boom Range Diagram



(H) Main Boom Load Chart

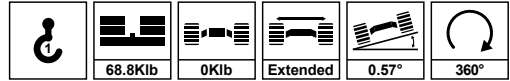
Unit: Klb



ft	Main Boom Length (ft)																		ft	
	42.7	52.5	62.3	72.2	82.0	91.9	101.7	111.5	121.4	131.2	141.1	150.9	160.7	170.6	180.4	190.3	200.0	210.0		
12.5	220.5																			12.5
13.0	202.5																			13.0
14.0	191.6																			14.0
15.0	182.7	177.9																		15.0
16.0	170.3	165.8																		16.0
17.0	160.5	157.6																		17.0
18.0	152.5	151.9	150.0																	18.0
19.0	144.3	143.2	141.6																	19.0
20.0	135.6	134.1	132.5	128.2																20.0
25.0	97.3	96.5	95.6	95.0	94.1	92.4	89.9													25.0
30.0	75.9	75.0	74.4	74.0	73.3	72.7	72.2	71.2	69.6	68.1										30.0
35.0	61.8	61.1	60.6	60.2	59.5	59.1	58.6	58.0	57.5	56.8	55.9									35.0
40.0	51.9	51.2	50.8	50.5	49.9	49.5	49.0	48.6	48.1	47.7	47.3	46.9	45.9	44.8						40.0
45.0		44.1	43.7	43.2	42.8	42.4	41.9	41.5	41.2	40.8	40.3	39.9	39.5	38.9	38.0	34.3				45.0
50.0		38.5	38.3	37.8	37.4	37.0	36.6	36.1	35.9	35.4	35.0	34.6	34.3	33.7	33.4	32.2	29.6	25.3		50.0
55.0			34.0	33.5	33.1	32.8	32.4	31.9	31.6	31.2	30.8	30.5	30.1	29.7	29.2	28.8	27.3	22.6		55.0
60.0				29.9	29.4	29.2	28.8	28.3	27.9	27.7	27.2	26.8	26.6	26.1	25.7	25.2	25.0	21.3		60.0
65.0				27.0	26.4	26.2	25.9	25.3	25.0	24.8	24.2	23.9	23.7	23.1	22.8	22.4	22.2	19.6		65.0
70.0					23.9	23.7	23.4	22.8	22.6	22.4	21.7	21.5	21.3	20.8	20.4	20.0	19.8	17.9		70.0
75.0					21.8	21.5	21.2	20.7	20.4	20.2	19.6	19.4	19.1	18.7	18.3	17.9	17.7	16.2		75.0
80.0						19.6	19.4	18.9	18.5	18.3	17.8	17.6	17.2	16.8	16.5	16.0	15.8	14.5		80.0
85.0						18.2	17.7	17.3	17.1	16.8	16.2	16.0	15.7	15.3	14.9	14.4	14.2	12.9		85.0
90.0							16.4	15.9	15.7	15.3	14.8	14.6	14.4	13.9	13.5	13.1	12.8	11.8		90.0
95.0								15.1	14.7	14.5	14.0	13.6	13.4	13.2	12.7	12.3	11.8	11.6	10.7	95.0
100.0									13.6	13.4	12.9	12.5	12.3	12.0	11.6	11.2	10.7	10.5	9.6	100.0
110.0										11.3	11.1	10.6	10.4	10.0	9.6	9.3	8.9	8.6	7.8	110.0
120.0											9.4	9.0	8.8	8.5	8.0	7.7	7.2	7.0	6.1	120.0
130.0												7.7	7.4	7.2	6.7	6.5	5.9	5.7	4.8	130.0
140.0													6.4	5.9	5.5	5.3	4.8	4.6	3.7	140.0
150.0														5.1	4.7	4.3	3.8	3.6	2.7	150.0
155.0															4.2	3.9	3.5	3.1	2.4	155.0

(H) Main Boom Load Chart

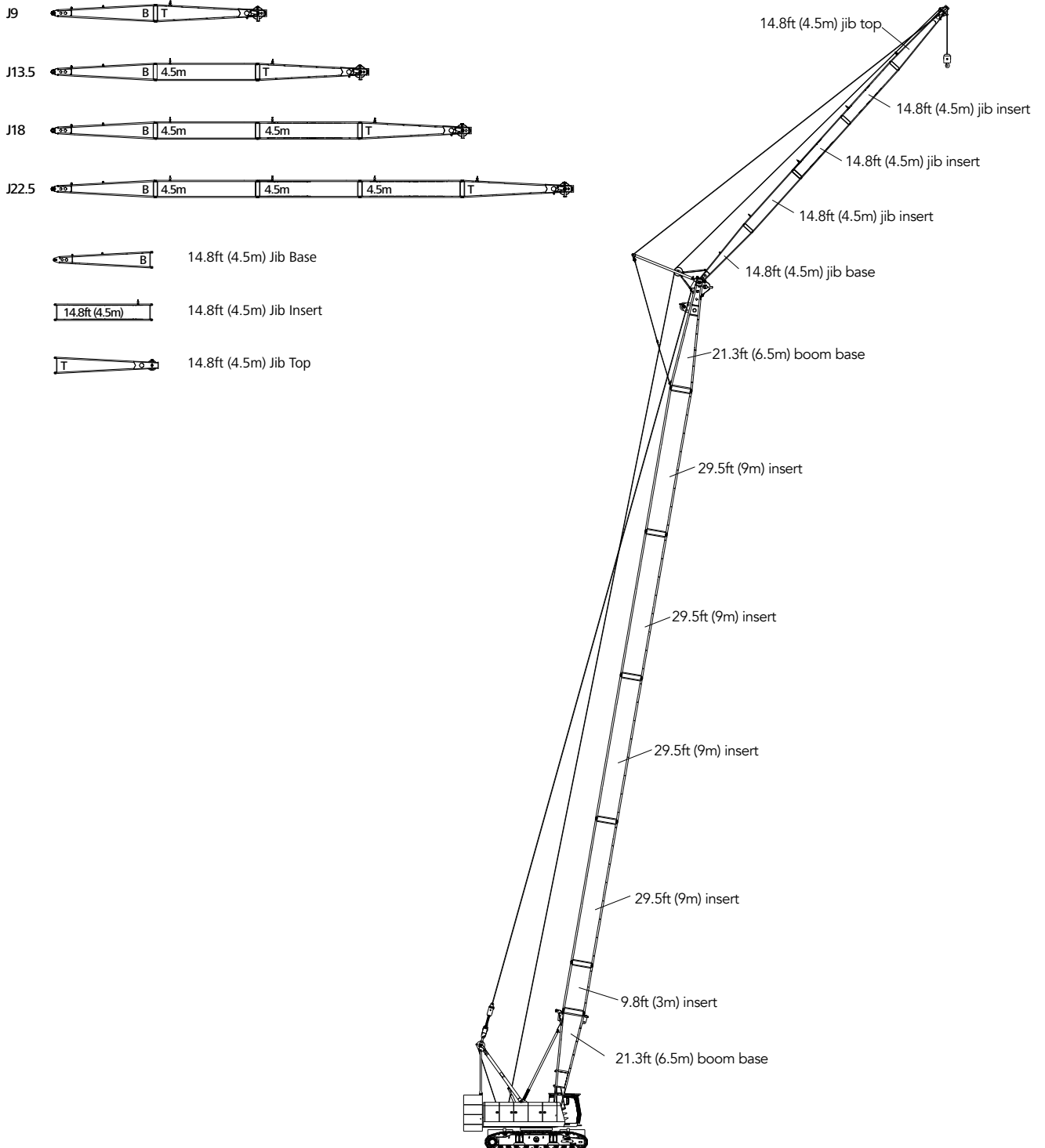
Unit: Klb



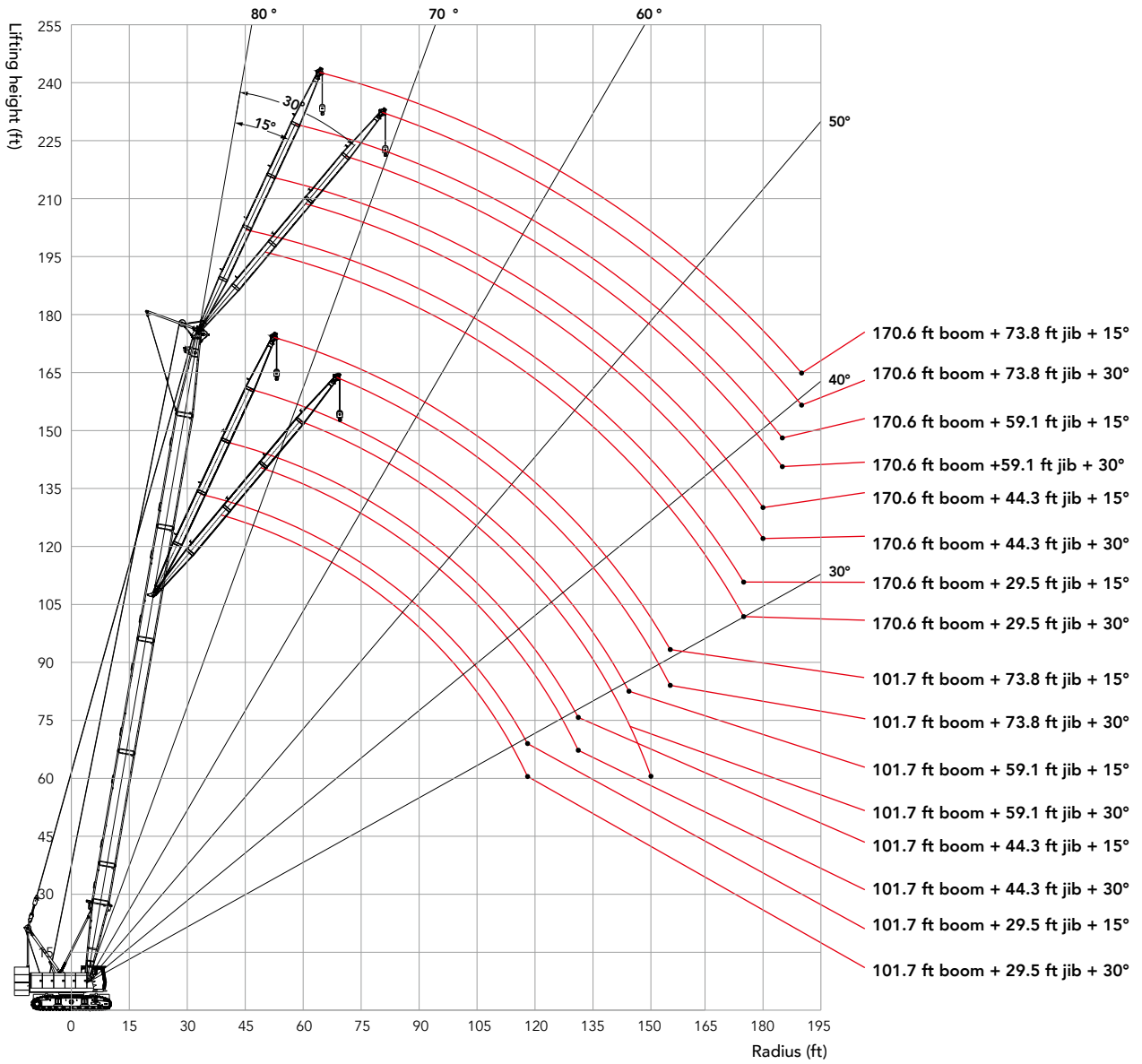
ft	Main Boom Length (ft)															ft		
	42.7	52.5	62.3	72.2	82.0	91.9	101.7	111.5	121.4	131.2	141.1	150.9	160.7	170.6	180.4			
13.0	198.5															13.0		
14.0	181.1															14.0		
15.0	164.3															15.0		
16.0	150.5															16.0		
17.0	136.6	131.8														17.0		
18.0	122.2	120.6	115.8													18.0		
19.0	112.9	111.6	108.7													19.0		
20.0	104.1	103.1	101.6	98.1												20.0		
25.0	73.9	73.0	72.5	71.9	71.1	69.7	67.8									25.0		
30.0	57.8	57.1	56.7	56.3	55.6	55.2	54.5	53.5	52.3							30.0		
35.0	47.0	46.4	45.9	45.6	45.0	44.5	44.2	43.6	43.2	42.6	41.4					35.0		
40.0	39.4	38.8	38.6	38.1	37.5	37.2	36.8	36.3	35.9	35.5	35.1	34.4	33.6	32.8		40.0		
45.0		33.1	32.9	32.4	32.0	31.5	31.3	30.8	30.4	30.2	29.6	29.3	28.8	28.3	27.4	45.0		
50.0		29.0	28.5	28.3	27.6	27.4	27.0	26.5	26.3	25.9	25.4	25.2	24.8	24.3	23.9	50.0		
55.0			25.2	24.9	24.4	24.1	23.8	23.3	23.0	22.7	22.2	21.9	21.6	21.1	20.8	55.0		
60.0				22.0	21.6	21.4	21.0	20.5	20.3	19.9	19.4	19.2	18.8	18.3	18.1	60.0		
65.0				19.7	19.2	19.0	18.8	18.1	17.9	17.7	17.2	16.8	16.6	16.1	15.9	65.0		
70.0					17.3	17.1	16.9	16.4	16.0	15.8	15.4	15.1	14.7	14.2	14.0	70.0		
75.0					15.7	15.4	15.2	14.8	14.3	14.1	13.7	13.4	13.0	12.6	12.3	75.0		
80.0						14.0	13.7	13.3	12.9	12.7	12.2	12.0	11.6	11.1	10.9	80.0		
85.0							12.9	12.4	12.0	11.8	11.5	11.1	10.7	10.4	10.0	85.0		
90.0								11.4	11.0	10.7	10.4	9.9	9.6	9.4	9.0	90.0		
95.0									7.9	10.0	9.7	9.4	9.0	8.7	8.4	8.0	7.6	95.0
100.0										9.1	8.8	8.6	8.1	7.9	7.5	7.1	6.8	100.0
110.0											7.3	7.0	6.6	6.4	6.0	5.5	5.3	110.0
120.0												5.8	5.3	5.1	4.9	4.4	4.1	120.0
130.0													4.3	4.1	3.9	3.4	3.0	130.0
135.0														3.6	3.4	2.9	2.6	135.0

- Note:
- 1.The rated load in the load chart is calculated complying with AS ME B 30.5.
 - 2.The working radius is the horizontal distance from the load center to the swing center.
 - 3.The actual lifting capacity must subtract the weight of hooks and other rigging s from the rated capacity in the load chart.
 - 4.The load value is calculated when the object is hung freely, without considering the influence of wind on the load, ground conditions and slope, operation speed and the influence of anyother negative factors over safe operation. Therefore, the operator bears the responsibility of making a judgment and decreasing the load and lowering speed.
 - 5.All ratings are calculated when the machine is parking on firm and level ground with less than 1%gradient.
 - 6.The load value is calculated with windspeed of 21.9mph (9.8m/s).
 - 7.More detailed information needs to refer to Operator Manual.
 - 8.This note is applicable to all the following load charts.

(FJ) Fly Jib Operating Conditions



(FJ) Fly Jib Range Diagram



(FJ) Fly Jib Load Chart

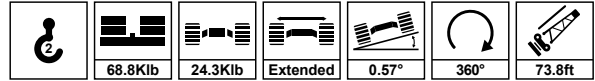
Unit: Klb





ft	Main Boom Length (ft)																ft
	101.7		111.6		121.4		131.2		141.1		150.9		160.7		170.6		
	15°	30°	15°	30°	15°	30°	15°	30°	15°	30°	15°	30°	15°	30°	15°	30°	
40																	40
45																	45
50																	50
55	23.8		23.8														55
60	22.9		22.9		22.9		22.9		22.0								60
65	21.5		21.5		21.5		21.5		21.4								65
70	20.4	15.3	20.4	15.3	20.4		20.4		20.4		20.1		19.4		18.0		70
75	19.3	14.6	19.3	14.6	19.3	14.6	19.3	14.6	19.3	14.6	19.1		18.5		17.6		75
80	18.3	14.0	18.3	14.0	18.3	14.0	18.3	14.0	18.3	14.0	18.2	14.0	17.4	14.0	17.0	14.0	80
85	17.5	13.5	17.5	13.5	17.5	13.5	17.5	13.5	17.3	13.5	16.8	13.5	16.6	13.5	16.4	13.5	85
90	16.6	13.1	16.5	13.1	16.3	13.1	16.2	13.1	15.8	13.1	15.5	13.1	15.3	12.8	14.9	13.1	90
95	15.7	12.7	15.4	12.7	15.1	12.7	14.9	12.7	14.5	12.7	14.3	12.7	14.0	12.5	13.6	12.7	95
100	14.6	12.2	14.2	12.2	14.0	12.2	13.7	12.2	13.3	12.2	13.1	12.2	12.9	12.2	12.5	12.2	100
110	12.6	11.6	12.2	11.6	12.0	11.6	11.7	11.6	11.3	11.6	11.1	11.6	10.8	11.4	10.4	11.1	110
120	11.0	11.1	10.5	11.0	10.3	10.8	10.1	10.5	9.7	10.3	9.4	10.0	9.2	9.8	8.8	9.4	120
140	8.4	8.6	8.1	8.3	7.7	8.1	7.5	7.9	7.1	7.5	6.8	7.3	6.6	7.1	6.2	6.8	140
150		7.4	6.9	7.1	6.7	6.9	6.5	6.7	6.0	6.5	5.8	6.3	5.6	6.0	5.2	5.6	150
160					5.8	5.9	5.6	5.8	5.1	5.5	4.9	5.3	4.7	5.0	4.2	4.6	160
170							4.7	4.9	4.4	4.7	4.2	4.4	3.8	4.2	3.6	3.8	170
180									3.8	3.8	3.3	3.6	3.1	3.3	2.7	3.1	180
190											2.9	2.9	2.4	2.7	2.2	2.2	190

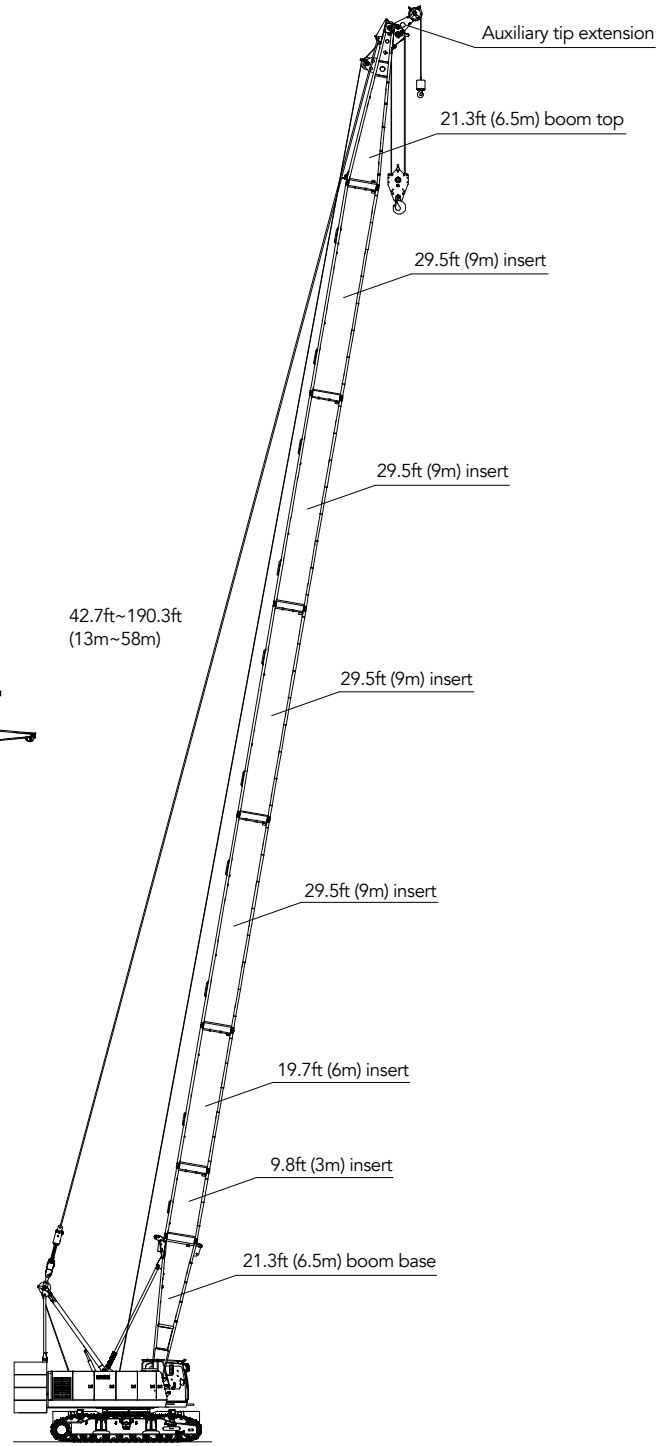
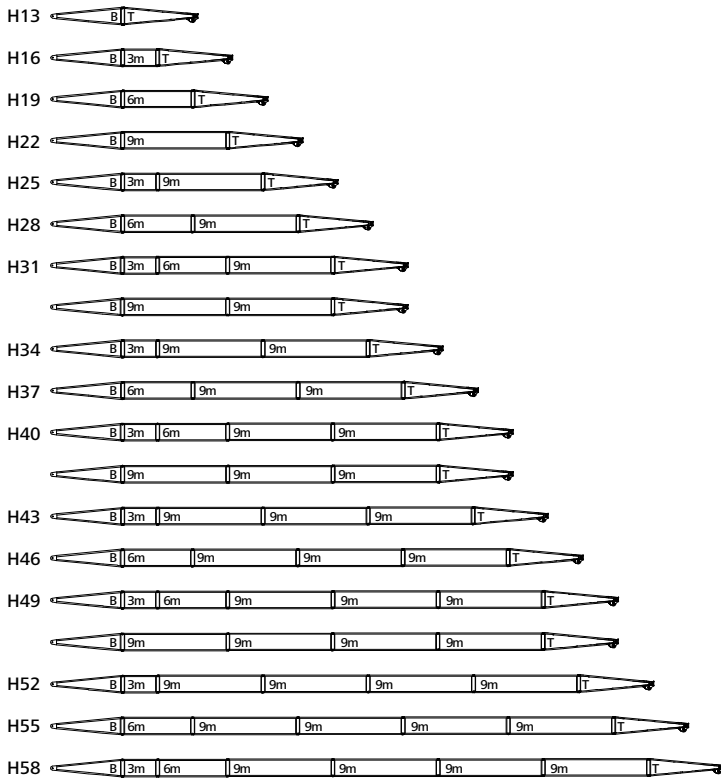
(FJ) Fly Jib Load Chart

Unit: Klb



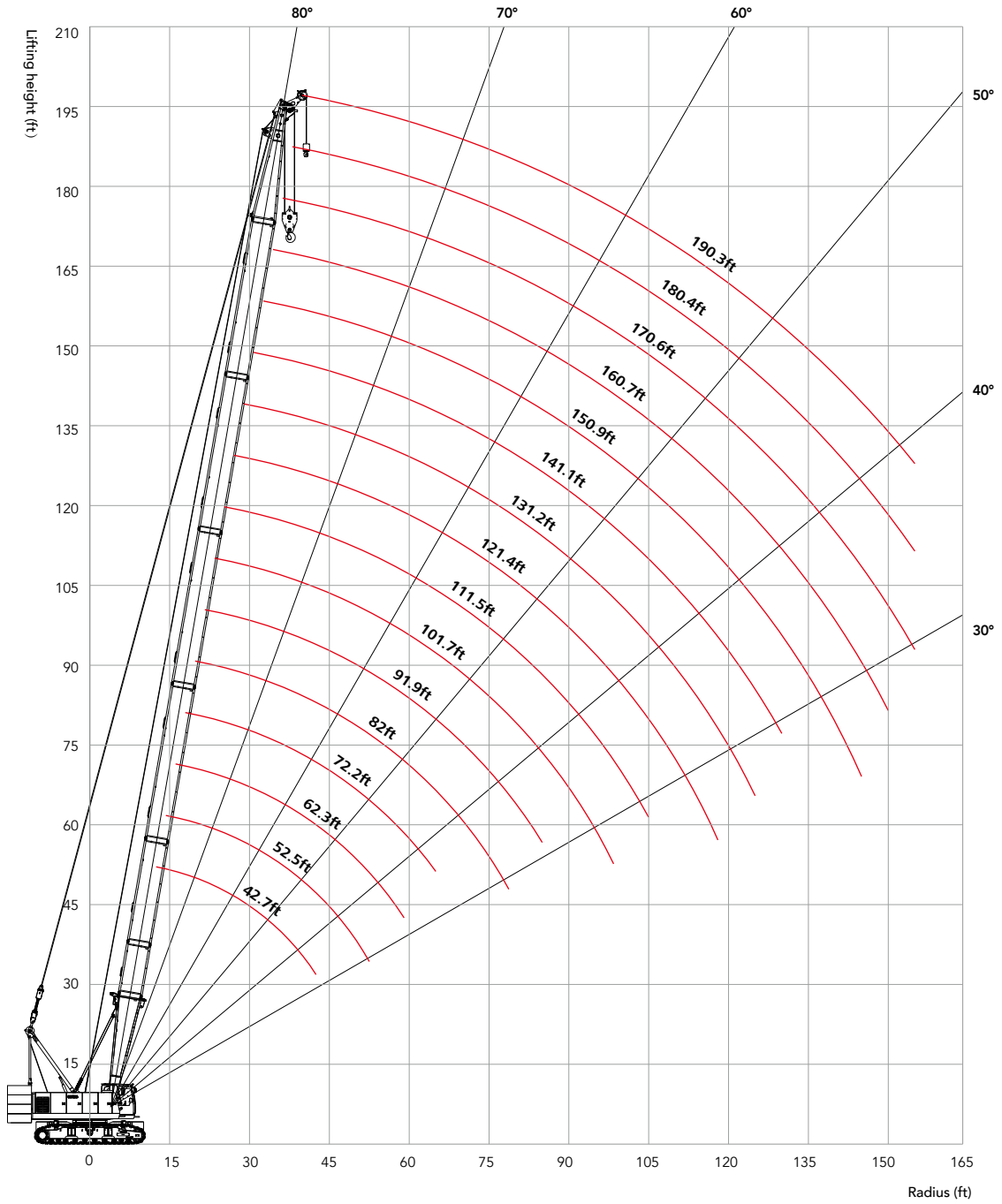
 ft	Main Boom Length (ft)																 ft	
	101.7		111.6		121.4		131.2		141.1		150.9		160.7		170.6			
	15°	30°	15°	30°	15°	30°	15°	30°	15°	30°	15°	30°	15°	30°	15°	30°		
40																		40
45																		45
50																		50
55																		55
60	15.5		15.7															60
65	14.9		15.1															65
70	14.2		14.4		14.6		14.8		15.0									70
75	13.6	12.2	13.8	12.5	14.0		14.3		14.5		14.7		14.7		15.1			75
80	13.1	11.6	13.3	12.0	13.5	12.2	13.8	12.3	14.0	12.5	14.2	12.7	14.2		14.6			80
85	12.6	11.1	12.8	11.5	13.0	11.7	13.3	11.9	13.5	12.1	13.7	12.4	13.9		14.1			85
90	12.3	10.7	12.5	11.1	12.7	11.4	12.9	11.6	13.1	11.8	13.2	12.0	13.6	11.6	13.6	11.4		90
95	11.8	10.4	12.0	10.8	12.4	11.0	12.6	11.3	12.7	11.5	12.8	11.7	13.0	11.3	13.1	10.9		95
100	11.4	10.0	11.6	10.5	12.0	10.7	12.2	10.9	12.2	11.1	12.4	11.3	12.4	10.9	12.5	10.5		100
110	10.7	9.5	10.9	9.8	11.1	10.0	11.3	10.4	11.2	10.6	11.1	10.3	10.8	10.0	10.6	9.8		110
120	10.1	9.1	10.2	9.4	10.3	9.4	10.1	9.8	9.8	10.0	9.4	9.6	9.2	9.4	9.0	9.1		120
140	8.6	8.3	8.4	8.4	7.9	8.2	7.7	8.2	7.4	7.7	7.2	7.6	6.8	7.4	6.5	7.2		140
150	7.8	7.8	7.6	7.6	6.9	7.3	6.7	7.1	6.3	6.7	6.0	6.5	5.8	6.3	5.4	6.0		150
160					6.0	6.4	5.8	6.1	5.3	5.7	5.1	5.5	4.9	5.3	4.4	5.0		160
170					5.1	5.3	4.9	5.1	4.4	4.9	4.2	4.7	4.0	4.5	3.6	4.0		170
180									3.8	4.1	3.6	3.8	3.3	3.7	2.9	3.3		180
190									3.1	3.3	2.9	3.1	2.7	2.9	2.2	2.7		190

(HC) Auxiliary Tip Extension Operating Conditions



	19.7ft (6.5m) Boom base
	9.8ft (3m) Insert
	19.7ft (6m) Insert
	29.5ft (9m) Insert
	19.7ft (6.5m) Boom top

(HC) Auxiliary Tip Extension Range Diagram (Lift w/ Jib)



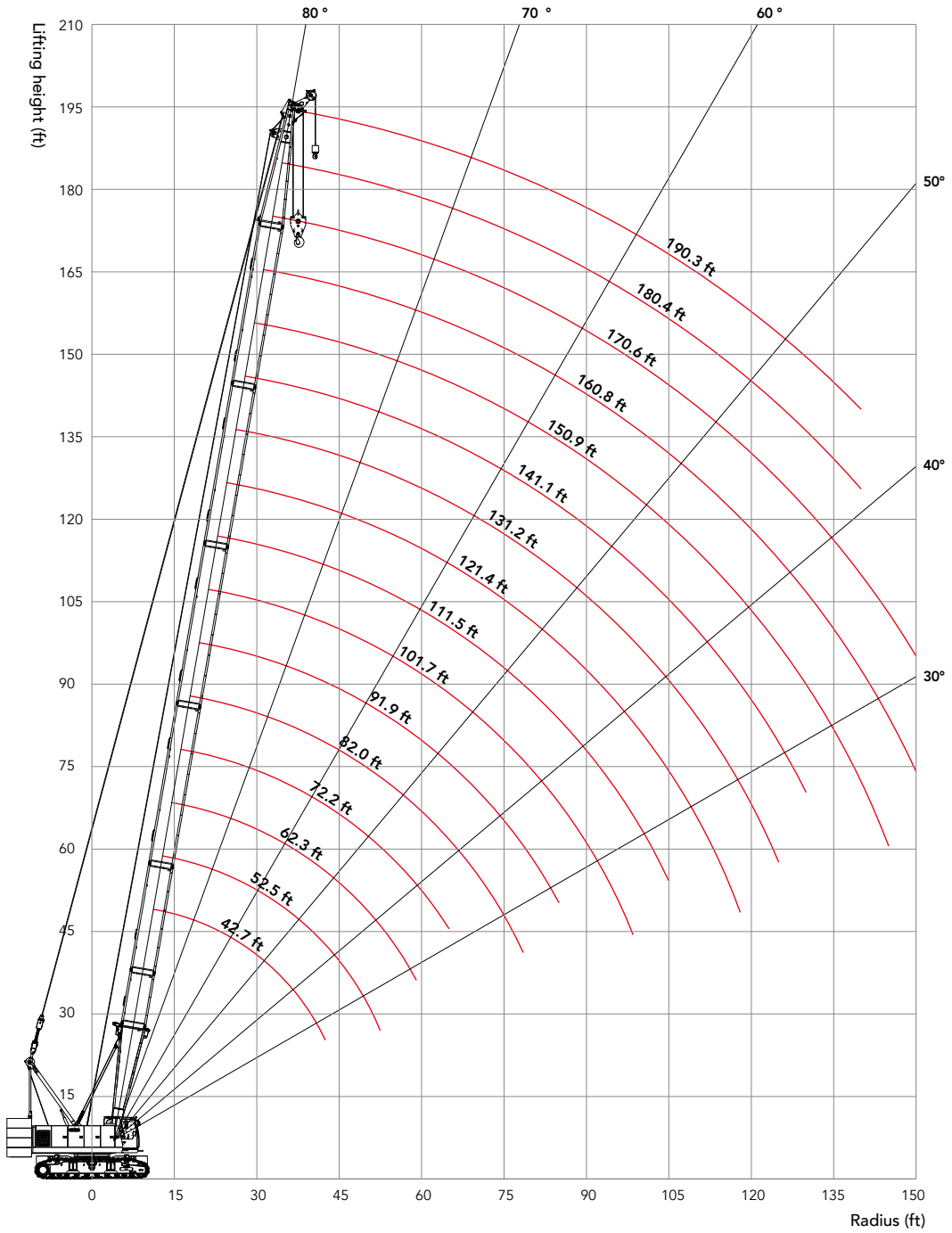
(HC) Auxiliary Tip Extension Load Chart (Lift w/ Jib)

Unit: Klb



ft	Main Boom Length (ft)															ft	
	42.7	52.5	62.3	72.2	82.0	91.9	101.7	111.5	121.4	131.2	141.1	150.9	160.7	170.6	180.4		190.3
12.5	26.5																12.5
13.0	26.5																13.1
14.0	26.5																14.0
15.0	26.5	26.5															15.0
16.0	26.5	26.5															16.0
17.0	26.5	26.5															17.0
18.0	26.5	26.5	26.5														18.0
19.0	26.5	26.5	26.5														19.0
20.0	26.5	26.5	26.5	26.5													20.0
25.0	26.5	26.5	26.5	26.5	26.5	26.5	26.5										25.0
30.0	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5							30.0
35.0	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5						35.0
40.0	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5			40.0
45.0		26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	45.0
50.0		26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	50.0
55.0			26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.4	26.2	55.0
60.0				26.5	26.4	26.4	26.3	26.2	26.2	26.2	26.1	26.0	26.0	25.9	25.7	25.2	60.0
65.0				26.5	26.1	25.8	25.6	25.0	24.8	24.6	24.0	23.8	23.6	23.0	22.8	22.3	65.0
70.0					23.9	23.7	23.3	22.8	22.6	22.4	21.7	21.5	21.3	20.8	20.4	20.0	70.0
75.0					21.8	21.5	21.2	20.7	20.4	20.2	19.6	19.4	19.1	18.7	18.3	17.9	75.0
80.0						19.6	19.4	18.9	18.5	18.3	17.8	17.6	17.2	16.8	16.5	16.1	80.0
85.0						18.2	17.7	17.3	17.1	16.8	16.2	16.0	15.7	15.3	14.9	14.4	85.0
90.0							16.4	15.9	15.7	15.3	14.8	14.6	14.4	13.9	13.5	13.1	90.0
95.0								15.1	14.7	14.5	14.0	13.6	13.4	13.2	12.7	12.3	95.0
100.0									13.6	13.4	12.9	12.5	12.3	12.0	11.6	11.2	100.0
110.0										11.3	11.1	10.6	10.4	10.0	9.6	9.3	110.0
120.0											9.4	9.0	8.8	8.5	8.0	7.7	120.0
130.0												7.7	7.4	7.2	6.7	6.5	130.0
140.0													6.4	5.9	5.5	5.3	140.0
150.0														5.1	4.7	4.3	150.0
155.0															4.2	3.9	155.0

(HC) Auxiliary Tip Extension Range Diagram (Lift w/ Boom)



(HC) Auxiliary Tip Extension Load Chart (Lift w/ Boom)

Unit: Klb



ft	Main Boom Length (ft)															ft		
	42.7	52.5	62.3	72.2	82.0	91.9	101.7	111.5	121.4	131.2	141.1	150.9	160.7	170.6	180.4		190.3	
12.5	218.3																	12.5
13.0	200.3																	13.0
14.0	189.4																	14.0
15.0	180.5	175.7																15.0
16.0	168.1	163.6																16.0
17.0	158.3	155.4																17.0
18.0	149.9	149.5	148.2															18.0
19.0	142.1	141.0	139.4															19.0
20.0	133.7	132.2	130.6	126.3														20.0
25.0	94.9	94.0	93.1	92.5	91.6	90.0	87.5											25.0
30.0	73.8	72.9	72.3	71.8	71.2	70.5	70.1	69.1	67.5	66.0								30.0
35.0	59.7	59.0	58.5	58.1	57.4	57.0	56.5	55.9	55.4	54.7	53.8							35.0
40.0	49.7	49.0	48.6	48.3	47.7	47.3	46.8	46.4	45.9	45.5	45.1	44.7	43.7	42.6				40.0
45.0		41.9	41.5	41.1	40.6	40.2	39.7	39.3	39.0	38.6	38.1	37.7	37.3	36.7	35.8	32.1		45.0
50.0		36.3	36.1	35.6	35.2	34.7	34.4	33.9	33.6	33.2	32.8	32.4	32.1	31.5	31.2	29.9		50.0
55.0			31.8	31.3	30.9	30.6	30.2	29.7	29.4	29.0	28.6	28.3	27.9	27.5	27.0	26.6		55.0
60.0				27.7	27.2	27.0	26.6	26.1	25.7	25.5	25.0	24.6	24.4	23.9	23.5	23.0		60.0
65.0				24.8	24.2	24.0	23.7	23.1	22.8	22.6	22.0	21.7	21.5	20.9	20.6	20.2		65.0
70.0					21.7	21.5	21.2	20.6	20.4	20.2	19.5	19.3	19.1	18.6	18.2	17.8		70.0
75.0					19.6	19.3	19.0	18.5	18.2	18.0	17.4	17.2	16.9	16.5	16.1	15.7		75.0
80.0						17.4	17.2	16.7	16.3	16.1	15.6	15.4	15.0	14.6	14.3	13.8		80.0
85.0						16.0	15.5	15.1	14.9	14.6	14.0	13.8	13.5	13.1	12.7	12.2		85.0
90.0							14.2	13.7	13.5	13.1	12.6	12.4	12.2	11.7	11.3	10.9		90.0
95.0							12.9	12.5	12.3	11.8	11.4	11.2	11.0	10.5	10.1	9.6		95.0
100.0								11.4	11.2	10.7	10.3	10.1	9.8	9.4	9.0	8.5		100.0
110.0									9.1	8.9	8.4	8.2	7.8	7.4	7.1	6.6		110.0
120.0										7.2	6.8	6.6	6.3	5.8	5.5	5.0		120.0
130.0											5.5	5.2	5.0	4.5	4.3	3.7		130.0
140.0												4.2	3.7	3.3	3.1	2.6		140.0
150.0													2.9	2.5				150.0



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