



# KOBELCO 7065

## COMPREHENSIVE LIFTING SOLUTIONS

We look forward to providing a full heavy lift engineering and crane solution for your next project. Our heavy lift engineers and on site personnel are experienced in managing and organising highly de-manding lift requirements.

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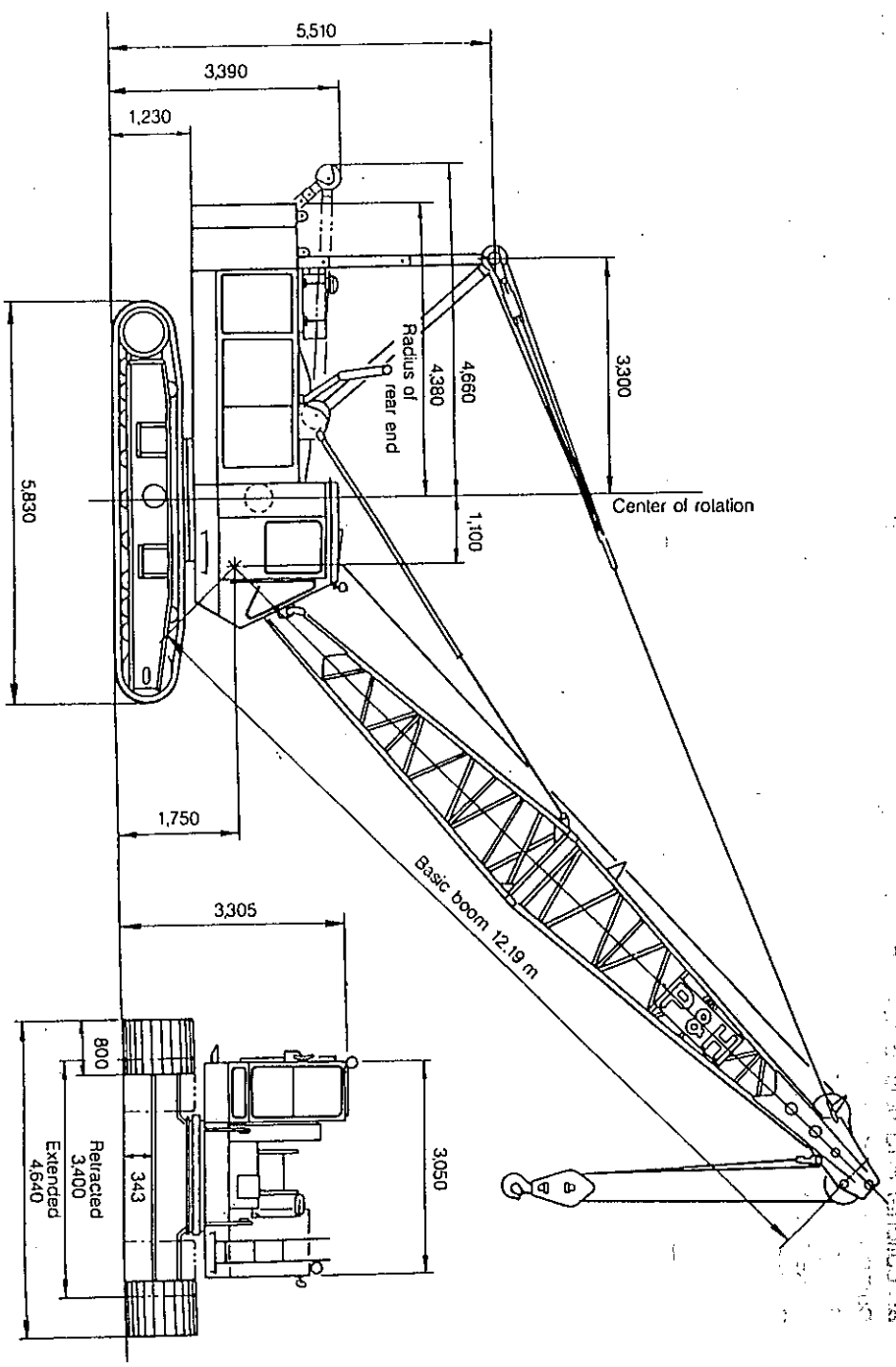
**P&H** **KOBELCO** Hydraulic Crawler Crane

# 7065 Specifications

Max. lifting capacity: **65** metric tons at **4.0** meters  
 Max. boom length: **54.86** meters  
 Max. total length (boom + jib): **60.96** meters

- Tough winch that delivers extra lifting power
- Precise speed control for delicate inching operations
- Unrivaled fuel economy through a variable displacement hydraulic system
- Rationalized control layout for greater comfort and efficiency
- Lifetime floating seals and pre-lubricated bearings for maintenance-free operation

## General Dimensions



# Specifications

## Upper machinery



<b>Power plant</b>	Mitsubishi 6D22C diesel	
Model .....	Water cooled, direct fuel injection	
Type .....	No. of cylinders .....	6
Bore and stroke .....	130 mm x 140 mm	
Displacement .....	11.1 liters	
Rated power .....	180 ps (132 kW) at 2,000 rpm (JIS D1005)	
Max. torque .....	174 ps (128 kW) at 2,000 rpm (DIN 6270) 70 kgf-m at 1,200 rpm (JIS D1005) 68kgf-m at 1,200 rpm (DIN 6270)	
Cooling system .....	Liquid, recirculating bypass	
Starter .....	24 V, 5.5 kW	
Generator .....	24 V, 30 amp	
Cycles .....	4	
Radiator .....	Corrugated fin type core, thermostat controlled	
Air cleaner .....	Two stage, dry	
Fuel tank capacity .....	280 liters	
Batteries .....	Two 12 V, 150 A-hr capacity batteries, series connected	
Fuel consumption (at 1,200 rpm) .....	164 g/hrs. hr	



### Hydraulic system

Pumps: Two variable displacement pumps and one fixed displacement pump are used. One variable displacement pump is used in the left propel circuit, boom hoist circuit and hook hoist circuit. The other is used in the right propel circuit and hook hoist circuit, and can accommodate an optional third hoist circuit. The fixed displacement pump is in the swing circuit. In addition, there are two gear pumps: one in the control system and one in the brake system.

Control: Full-flow hydraulic control system provides infinitely variable pressure to front and rear drums, boom, hoist brakes and clutches. Response to the operator's touch is instant, positive and smooth.

Pressure:

Load hoist, boom hoist and propel system .. 280kg/cm<sup>2</sup>

Swing system .....

Control system .....

Hoist drum service brake system .....

Reservoir capacity: 250 liters

Cooling: Oil-to-air heat exchanger, mounted in front of radiator.

Filtration: Suction with full-flow and drain filters



### Boom hoisting system

Powered by a hydraulic axial piston motor through a planetary reducer.

Brake: Spring-set, hydraulically released multiple-disk brake, mounted on the boom hoist motor and operated through a counter-balance valve.

Drum lock: Spring-set hydraulically released drum pawl, automatically actuated when boom is stopped.

Drum: One-piece cast drum, grooved for 16mm dia. wire rope.

Line speed (Single line on first drum layer):

Hoisting (max.) .....

Lowering (max.) .....



### Load hoist system

Tandem drums powered independently by two hydraulic axial piston motors through a planetary reducer.

Clutches: Internally expanding band clutches (splined on shaft).

Brakes: Brake valves and externally contracting, hydraulically set band brakes with both positive and negative actuation.

Drum locks: Manual safety pawls (external ratchets).

Drums (front and rear): 462 mm P.D. x 520 mm wide drums, each grooved for 22 mm wire rope. Rope capacity of 190 m working length and 273 m storage length.

Line speed (Single line on the first drum layer):

High .....

Low .....



### Swing system

Swing unit: Independently powered by a hydraulic axial piston motor through a planetary reducer; 360° of rotation.

Max. swing speed .....

Swing brakes: Spring-set, hydraulically released multiple-disk brake, mounted on the swing motor.

Swing circle: Single-row ball bearings with internal swing gear. Bolted to both upper structure and under-carriage.

Swing lock: Two-position pin-in-hole lock (manual)



### Operator's cab

Totally enclosed, full-vision cab fitted with safety glass and a sliding front window. A fully adjustable, high-backed seat permits all operators to set ideal working position. Signal horn, cigarette lighter, ashtray, windshield wipers, floor mat and cab heater are standard features.



### Controls

In front of operator are foot pedals for front and rear drum brakes. At operator's right are console-mounted adjustable short levers for front and rear drum control, boom hoist control lever, and positive/negative brake select switch for front and rear drum brakes. Beside the operator's seat on the right are two short levers for propel control. At operator's left are console-mounted swing lever, optional third drum control lever, crawler extend/retract lever, swing lock control lever, front and rear drum pawl control knobs; switches for ignition, engine stop, low and high speed control for front drum, rear drum and propel; and creep speed control for hoist, boom hoist and propel.

Gauges: Fuel, engine water temperature, engine oil pressure, hydraulic oil temperature, hourmeter and optional tachometer.

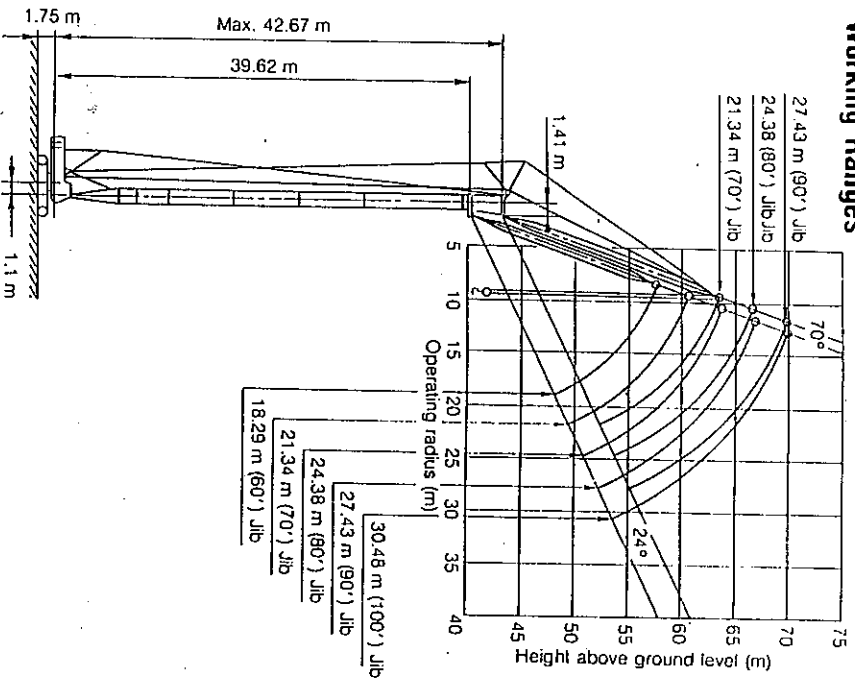
Warning lamps: Engine oil pressure, hydraulic oil pressure, battery charge, engine oil filter, air cleaner, and engine overheat.

Safety devices: Boom hoist limiter, hook over-hoist limiter, and optional load moment limiter.



# Luffing Jib

## Working Ranges



## Rated Loads in Metric Tons for 360° Working Area

Tower boom length m (ft)	Jib length		Operating radius		Height above ground level (m)		Unit: ton
	m (ft)	Operating radius m (ft)	Height above ground level (m)	Operating radius m (ft)	Height above ground level (m)	Operating radius m (ft)	
27.43 (90°)	21.34 (70°)	18.29 (60°)	12.0	12.0	12.0	11.0	33.53 (39.62)
24.38 (80°)	21.34 (70°)	18.29 (60°)	11.1	11.1	10.2	10.2	30.48 (36.57)
21.34 (70°)	18.29 (60°)	15.24 (50°)	10.2	10.2	9.4	9.4	27.43 (33.52)
30.48 (100°)	27.43 (90°)	24.38 (80°)	9.4	9.4	8.7	8.7	24.38 (29.47)
27.43 (90°)	24.38 (80°)	21.34 (70°)	8.7	8.7	8.0	8.0	21.34 (26.43)
24.38 (80°)	21.34 (70°)	18.29 (60°)	8.0	8.0	7.5	7.5	18.29 (22.36)
21.34 (70°)	18.29 (60°)	15.24 (50°)	7.5	7.5	7.0	7.0	15.24 (18.29)
18.29 (60°)	15.24 (50°)	12.20 (40°)	7.0	7.0	6.5	6.5	12.20 (15.24)
15.24 (50°)	12.20 (40°)	9.16 (30°)	6.5	6.5	6.0	6.0	9.16 (11.27)
12.20 (40°)	9.16 (30°)	6.12 (20°)	6.0	6.0	5.6	5.6	6.12 (7.63)
9.16 (30°)	6.12 (20°)	3.08 (10°)	5.6	5.6	4.9	4.9	3.08 (3.85)
6.12 (20°)	3.08 (10°)	0.04 (0°)	4.9	4.9	4.2	4.2	0.04 (0.05)
3.08 (10°)	0.04 (0°)		4.2	4.2	3.9	3.9	0.04 (0.05)
0.04 (0°)			3.9	3.9	3.6	3.6	0.04 (0.05)

Note: Major precautions for this model are identical to those for 7065 crawler crane.

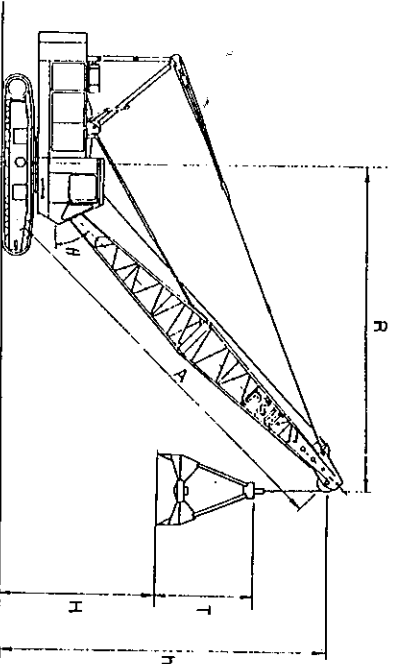
- This figure applies to an operating radius of 19 m.
- This figure applies to an operating radius of 24.5 m.
- This figure applies to an operating radius of 27 m.

# Clamshell

## Clamshell Ratings and Working Ranges

θ	12-19					15-24					18-29				
	Boom length (m)	Boom angle (°)	Working radius (m)	Height at bucket opening (m)	Rated loads (ton)	Boom length (m)	Boom angle (°)	Working radius (m)	Height at bucket opening (m)	Rated loads (ton)	Boom length (m)	Boom angle (°)	Working radius (m)	Height at bucket opening (m)	Rated loads (ton)
R	35	45	55	65	5.5	35	45	55	65	5.5	35	45	55	65	5.5
H	11.5	10.1	8.5	6.7	8.5	14.0	12.3	10.3	8.0	10.3	16.0 (37.9°)	14.5	12.0	9.3	12.3
	0.8m <sup>2</sup>	2.7	4.3	5.7	6.8	4.4	6.5	8.2	9.5	6.2	6.2	8.6	10.7	12.3	12.3
	1.0m <sup>2</sup>	2.7	4.3	5.7	6.8	4.4	6.5	8.2	9.5	6.2	6.2	8.6	10.7	12.3	12.3
	1.2m <sup>2</sup>	2.3	3.9	5.3	6.4	4.0	6.1	7.8	9.1	5.8	5.8	8.2	10.3	11.9	11.9
	1.6m <sup>2</sup>	2.4	4.0	5.4	6.5	4.1	6.2	7.9	9.2	5.9	5.9	8.3	10.4	12.0	12.0
h	8.5	10.2	11.6	12.7	5.5	10.3	12.4	14.1	15.5	12.7	14.5	16.6	18.2	18.2	18.2

## Dimensions



T: Bucket clearance

## Clamshell Buckets

Capacity (m <sup>3</sup> )	Approximate Weight (kg)	Bucket clearance (m)
0.8	2,100	3.3
1.0	2,500	3.3
1.2	3,100	3.7
1.6	2,000	3.6

## Boom Component Chart

Boom length (m)	Boom arrangement
15-24	Base-A/Tip
18-29	Base-B/Tip

Base = 6.10 m Tip = 6.10 m Inserts: A = 3.05 m, B = 6.10 m

### Note:

- 1) Bucket weight must not exceed 3.1 tons.
- 2) The 1.6 m<sup>3</sup> bucket is for loading operations.
- 3) Clamshell ratings also apply to grapple and all other material-handling buckets except dragline.
- 4) For clamshell operations, bucket weight is considered part of the load and the total bucket weight plus contents must not exceed the corresponding rating shown.
- 5) Ratings assume the use of a P & H KOBELCO boom.



**Gantry**  
Two-position, telescopic gantry, raised and lowered by boom hoist rope.

**Counterweight**

Two-piece stack, mounted behind the machinery compartment.  
Total weight: ..... 18,500 kg



**Tools**  
Tool set and accessories for routine machine maintenance.

**Lower machinery**

**Carbody:** Steel-welded carbody with 4-telescopic axles.  
**Crawler:** Side frames can be hydraulically extended for wide-track operation or retracted for transportation. Extension cylinders operated with a valve in the upper control system. Crawler belt tension adjusted with hydraulic jack and maintained by shims between idler block and frame.  
**Crawler drive:** Independent hydraulic propel drive built into each side frame, each with a piston motor propelling a driving wheel through a planetary gear box.  
**Crawler brakes:** Brake valves and spring-set, hydraulically released multiple-disc parking brakes.  
**Steering mechanism:** Differential speed steering (driving one track faster than the other), counter-rotating steering (driving tracks in opposite directions) and skid steering (driving one-track only) with lever control.  
**Track rollers:** 9 lower rollers and 2 upper rollers in each side frame, with life-time lubrication for maintenance-free operation.

**Shoes:**  
Number ..... 61 each side  
Standard flat shoe width ..... 800 mm  
**Max. travel speed:**  
High ..... 1.2 km/h  
Low ..... 0.9 km/h  
**Max. gradeability:** 40%

**Crane attachments**



**Boom:**  
Welded lattice construction using tubular, high tensile steel chords with pin connections between sections. Mid-point suspension (center-hitch) is required for boom lengths longer than 39.62 m.

Max. lifting capacity	65 tons
Basic boom length	12.19 m
Max. boom length	54.86 m



**Jib (optional)**  
Welded lattice construction using tubular, high-tensile steel chords with pin connections between sections.

	Fixed jib	Lifting jib
Max. lifting capacity (ton)	65	12.0
Max. jib length (m)	15.24	30.48
Max. total length (Boom length + jib length) (m)	45.72 + 15.24	39.62 + 30.48



**Hook blocks**  
A range of hook blocks can be specified, each with a safety latch.

Lifting capacity	65 tons	32 tons	19 tons	6.5 tons
No. of sheaves	5	2	1	0
Weight (kg)	700	500	400	160

**Diameter of wire ropes**

**Standard:**  
Hook hoist ..... 22 mm (dia.)  
Boom hoist (12-part line) ..... 16 mm (dia.)  
Boom pendants (2-part line) ..... 30 mm (dia.)  
**Optional:**  
Jib hook hoist ..... 22 mm (dia.)  
Jib back stay pendants ..... 16 and 18 mm (dia.)  
Boom midpoint suspension ..... 16 mm (dia.)  
Boom backstops are required for all boom lengths.

**Weight**

**Working weight:** Approx. 59,600 kg (including 12.19 m boom, 55 ton hook block and standard counter-weights)  
**Ground pressure:** 0.71 kg/cm<sup>2</sup>

**Line speed and line pull**

Standard winches	Max. line speed (m/min)		Max. line weight (kg)		Max. starting line pull	Max. running line pull
	H	L	H	L		
Main hoist drum	90/45	60/30	90/45	60/30	14.5 ton	15.8 ton
	L	L	L	L		
Aux. hoist drum	90/45	60/30	90/45	60/30	14.5 ton	15.8 ton
	L	L	L	L		

NOTE: All tonnage figures listed in these specifications are in metric tons.

# Lifting Capacities

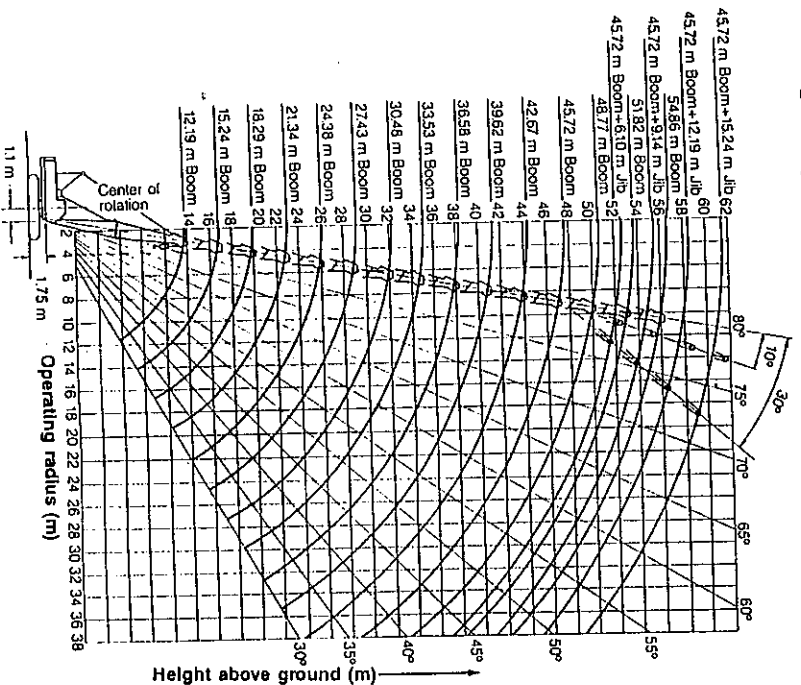
The following points should be kept in mind when interpreting the ratings given below.

1. Operating radius is the horizontal distance from center of rotation to the hoist load line or tackle with load applied.
2. Rated loads do not exceed 75% of tipping loads, and include weights of the load, hook blocks, slings and other lifting devices.
3. Rated loads are for stationary and level cranes lifting a freely suspended load, and have been determined for ideal operating conditions. The user must limit or derate lifted loads to allow for adverse conditions (such as soft or uneven ground, out-of-level conditions, winds, side loads, pendulum action, jerking or sudden stopping of loads, inexperience of personnel, multiple machine lifts and traveling with a load.)
4. Rated loads apply only to upper, lower, boom, jib, auxiliary sheave, and 18,500kg counterweight manufactured by Kobe Steel, Ltd.
5. Boom backstops are required for all boom lengths.
6. Gantry must be in fully raised position for all operations.
7. Crawlers must be fully extended and be locked in position.
8. The crane must be leveled to within 1% on a firm supporting surface.
9. When lifting over boom point with jib or auxiliary sheave, rated loads for the boom must be deducted as shown below.

Jib length	Aux. sheave	6.10m	9.14m	12.19m	15.24m
Deduct-kg	300	900	1,100	1,300	1,500

10. The total load that can be lifted with the jib at any radius is limited by the lower of the following two ratings: 1) the rated jib load, or 2) the rated load at that radius for the boom on which the jib is mounted.
11. When lifting over the boom point with a jib or auxiliary sheave, the combined weight of boom hook block, jib hook block, slings and other lifting devices is part of the total load. Their total weight must therefore be subtracted from the rated load to obtain the weight that can be lifted.
12. Boom lengths for jib mounting are 30.48m to 45.72m.
13. An auxiliary sheave cannot be used on a 54.86m boom.
14. The boom should be erected over the front of the crawlers, not laterally.

## Working Range

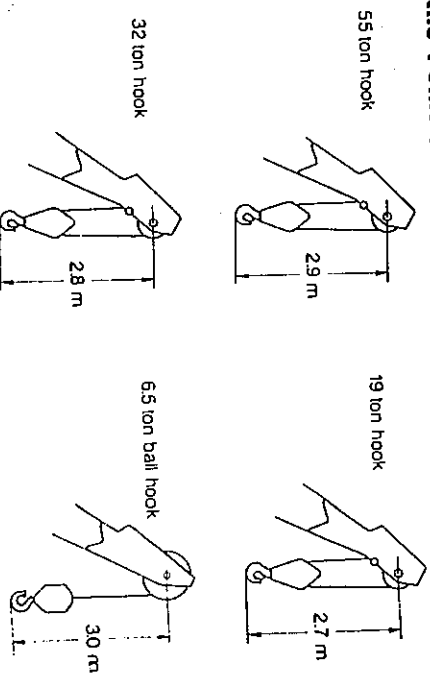


## Boom Component Chart

Boom length (meters) (ft)	Boom arrangement
15.24 (50)	Base-A-Tip
18.29 (60)	Base-AA-Tip, Base-B-Tip
21.34 (70)	Base-A-B-Tip
24.38 (80)	Base-B-B-Tip, Base-A-C-Tip, Base-AA-B-Tip
27.43 (90)	Base-B-C-Tip, Base-A-B-B-Tip
30.48 (100)	Base-A-B-C-Tip, Base-A-B-A-B-Tip
33.53 (110)	Base-B-B-C-Tip, Base-A-C-C-Tip
36.58 (120)	Base-B-C-C-Tip
39.62 (130)	Base-B-C-A-C-Tip
42.67 (140)	Base-AA-A-B-C-C-Tip, Base-B-B-C-C-Tip
45.72 (150)	Base-C-C-B-C-Tip
48.77 (160)	Base-B-B-B-C-C-Tip
51.82 (170)	Base-C-C-B-B-C-Tip
54.86 (180)	Base-A-B-C-B-C-C-Tip

Base = 6.10 m (20'), Tip = 6.10 m (20')  
 Inserts : A = 3.05 m (10'), B = 6.10 (20'), C = 9.14 m (30')

## Min. Distance between the Hook and the Point Sheave



NOTE: These lengths are recommended for boom and jib angles of 75° or less.