

**P&H** | **KOBELCO**

# 5170

## Basic Machine



# Specifications

## UPPER MACHINERY



**POWER PLANT:** Diesel: Cummins, V-903 with torque converter (standard) .....  
8 cyl., 140 mm (5.50") x 121 mm (4.75") stroke,  
14.8 liters (903 cubic inch) displacement, 4 cycles,  
water cooled, natural aspirated air induction, direct  
injection type, 24 volt electric starter, 24 volt-50 amp. alternator,  
net 250 PS @ 2,200 rpm (at flywheel) rated engine output, net  
200 PS @ 1,650 rpm (at trans. output shaft) rated engine output.

**THROTTLE:** Foot pedal engine governor control in combination  
with positive hand throttle lever (twist grip control on swing lever).  
Hand lever output shaft governor control.

**BATTERIES:** Two 12 volt, heavy duty, with battery relay. Series  
connected.

**ENGINE STARTING AID:** Ether type, electrically actuated.

**RADIATOR:** Vertical tube and fin type core, thermostatically  
controlled.

**FUEL TANK:** Capacity ..... 400 liters (105.7 US gal.)

**AIR CLEANER:** Dry type with replaceable paper element.

**LUBE OIL FILTER:** Full flow and by-pass types with replaceable  
paper elements.

**FUEL FILTER:** Heavy duty, with replaceable paper element.

**TORQUE CONVERTER:** Niigata TACN-20-1101, single stage,  
stationary housing type with integral drives for propel, control and  
converter charging pumps, and with two speed electro hydraulic  
power shift transmission, actuated by electrical switch.

**CONVERTER CHARGING HYDRAULIC SYSTEM:** Gear type  
pump charges converter. Oil to water heat exchanger cools fluid.  
Filtered with full flow pressure filters with replaceable elements.

**HYDRAULIC PUMPS:** All driven from heavy duty pump drive.  
Propel Pumps—two Sundstrand series 24 variable displacement piston  
type pumps, one for each crawler drive. Torque Converter  
Charging Pump—gear type. Control System Pump—gear type.



**BOOM HOIST ASSEMBLY:** Independent planetary  
gear type with external ratchets and automatic brake  
provides for raising or lowering boom under power  
and locking boom.

Clutch—Boom hoist: 584 mm (23") dia. x 127 mm  
(5") wide, band type, internal expanding.

Planetary boom lowering: band type, external contracting,  
spring set hydraulically released safety pawl.

Brake—Two 762 mm (30") dia. x 76 mm (3") wide, band type,  
external contracting "full wrap" design, spring set-  
hydraulic release. Single spring set, hydraulic release safety  
pawl.

Drums—401 mm (15.79") pitch dia. x 290 mm (11.42") long.  
Grooved twin drums mounted tapered roller bearings.



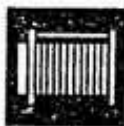
**FRONT DRUM (LOAD DRUM):** Mounted on tapered  
roller bearings, torque converter drive.

Clutch—889 mm (35") dia. x 101.6 mm (4") wide,  
band type, internal expanding.

Brake—Drum brake: 1,016 mm (40") dia. x 127 mm  
(5") wide, band type, external contracting "full wrap"  
design. Hydraulic set with additional spring set hydraulically  
released brake—fail safe device, and spring set,  
hydraulic release safety pawl (external ratchet for locking  
drum). Both positive and negative brake system available.  
Power lowering: 1,016 mm (40") dia. x 127 mm (5") wide,

band type, external contracting "full wrap" design. Planetary  
gear type power lowering available.

Drum—518 mm (20.39") pitch dia. x 525 mm (20.67") long. Cast  
groove.



**REAR DRUM (LOAD DRUM):** Mounted on tapered  
roller bearings, torque converter drive.

Clutch—889 mm (35") dia. x 101.6 mm (4") wide,  
band type, internal expanding.

Brake—Drum brake: 1,016 mm (40") dia. x 127 mm  
(5") wide, band type, external contracting "full wrap"  
design. Hydraulic set with additional spring set hydraulically  
released brake—fail safe device, and spring set,  
hydraulic release safety pawl (external ratchet for locking  
drum). Both positive and negative brake system available.  
Power lowering: 1,016 mm (40") dia. x 127 mm (5") wide,  
band type, external contracting "full wrap" design. Planetary  
gear type power lowering available.

Drum—514 mm (20.24") pitch dia. x 525 mm (20.67") long. Cast  
groove.



**SWING UNITS:** Swing motion through two electro-  
magnetic "Magnetorque" units, travel and spur gear  
drive, 660 mm (26") dia. x 159 mm (6.26") wide.  
Powered by engine driven alternator. Frictionless,  
stepless control.

**SWING BRAKE:** 457 mm (18") dia. x 63.5 mm (2.5") wide,  
mechanical friction type—band type, external contracting, double  
acting, spring set, hydraulic release.

**FRAME:** All welded frame and power box constructed of heavy  
steel plate. Shaft mountings are line bored to insure precise alignment  
of all parts.

**POWER BOX:** Completely seals gears (except swing) provides  
automatic lubrication from oil bath. Involute splined shafts are  
used, turn in roller and ball bearings. Gears and roller chains are  
hardened, trouble free operation.

**MACHINERY CAB:** All steel construction, access panels on both  
sides and roof. Removable panels for main drum brake access. No  
lines pass through cab. Low profile, recessed center roof. Deck  
covered with non-skid floor plate. Deck machinery is in compact  
arrangement, easy to maintain and repair.

**GANTRY:** High gantry folding type, two position telescopic. Fitted  
with sheave frame for boom hoist reeving. Lowers automatically  
toward rear into cab roof. Hydraulic lift is standard. Positions  
full up and full down with linkage, locked in full-up.

**COUNTERWEIGHT:** Five-piece, bustle mounted, pin connected,  
cast construction.

Total weight ..... 47,100 kg (103,800 lbs.)



**CONTROLS:** In front of operator are foot pedals  
for front and rear drum brakes, hand levers for swing  
control, front and rear drum controls, boom hoist  
control and propel drives, switches for front and rear  
drum pawls and brake locks and transmission shift  
and positive-negative select. At operator's right is swing brake  
lever. Operator's left are console mounted switches for master  
switch, engine start, starting aid, lights and gauges (see instru-  
ments). At operator's left are also located levers for throttle and  
output shaft governor control.

**ELECTRICAL SYSTEM:** All wiring color coded for easy servicing  
individual fused branch circuits.

**HYDRAULIC SYSTEM:** Upper Controls—Full flow system for  
infinitely variable pressure to front and rear drum, boom hoist

brakes and clutches. System at 100 kg/cm<sup>2</sup> (1,420 psi) line pressure. Response is instant, positive and smooth to operator's light touch. Pumped fluid is filtered, stored in accumulator under pressure, cooled in reservoir and filtered again before returning to pump.

Propel (crawler drive)—Closed loop system. Maximum pressure rating 385 kg/cm<sup>2</sup> (5,500 psi). Oil to air heat exchanger cools fluid. Filtered with full flow filters with replaceable paper elements. Reservoir holds 200 liters (52.8 US gal.).



**OPERATOR'S CAB:** Totally enclosed from weather. Full vision cab has safety glass throughout, sliding front window and door. Operator's adjustable high back seat is standard. Side mounted console for auxiliary controls and instruments. Cab heater, windshield wiper, and boom hoist kickout limit switch available (optional extra).

**LIGHTING:** 2—front flood lights, 1—cab inside light, 2—machinery cab inside lights, 1—trouble light.



**INSTRUMENTS:** Tachometer, fuel gauge, hydraulic control pressure gauge, engine oil pressure gauge, engine water temperature gauge, ammeter, transmission control pressure gauge and converter oil temperature gauge. Cigarette lighter, ashtray and trouble light receptacle.

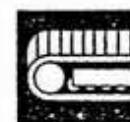
**SAFETY DEVICES:** Crane over hoist alarm bell. Boom over hoist limiter. Boom angle indicator (indicate operation radius and rated load). Signal horn. Boom hoist drum lock. Front and rear hoist drum lock. Swing lock. Boom backstops.

Crane over load protective device (Moment limiter)—optional extra.

**TOOLS AND ACCESSORIES:** The machine is furnished with a set of tools and accessories.

## LOWER MACHINERY

**CAR BODY:** Car body of Steel welded construction with integral axles. Crawler frames pinned to end of axles.



**CRAWLER:** Crawlers designed with quick disconnect feature for individual removal as a unit from axles. Crawler belt tension maintained by hydraulic jack force on track adjusting bearing block. 12 lower rollers in each frame, with double rolling surfaces and center guide.

**CRAWLER DRIVE:** Independent hydraulic propel drive built into each crawler side frame. Each drive consists of a hydraulic motor propelling a driving tumbler (wheel) through a planetary gear box. The tumbler exerts force against lugs cast into crawler shoes propelling machine. Self-contained system eliminates gear and chain drives in carbody and shafts.

**CRAWLER BRAKES:** Spring set, hydraulically released parking brakes are built into each propel drive. Disc type.

**STEERING MECHANISM:** The hydraulic propel system provides both skid steering (driving one track only) and counter-rotating steering (driving each track in opposite direction).

**TRACK ROLLERS:** Sealed track rollers for maintenance-free operation.

**CRAWLER-SHOES:** Total number—both sides ..... 118  
Flat cast shoes—standard width ..... 1,070 mm (42.13")

**TRANS-LIFTER (OPTIONAL EXTRA):** Trans-Lifter system allows quick and easy crawler side frame removal and trailer loading. Two lifting beams with each two vertical cylinders lift up

the basic machine and give road clearance of 1,280 mm (50.39") for self trailer loading. Two horizontal cylinders facilitate side frame removal.

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## CRANE ATTACHMENTS



**BASIC BOOM:** Two piece, open throat lattice type tubular boom consisting of a tapered base section and a tapered tip section having seven offset boom point sheaves 616 mm (24.25") pitch dia. with roller bearings. Sections are pin connected, lower 1,905 mm (75") deep x 2,032 mm (80") wide cross section and complete with suspension cable assemblies. High tensile steel chords all welded. Boom extendible to 82.30 m (270').

Basic length ..... 18.29 m (60')  
Boom base section ..... 9.14 m (30')  
Boom tip section ..... 9.14 m (30')

**BOOM INSERT SECTION (OPTIONAL EXTRA):** Boom insert available for extension, tubular lattice type, high tensile steel chords, all welded, with suspension cable assemblies, pin connections.

Available in 3.05 m (10'), 6.10 m (20'), 9.14 m (30') and 12.19 m (40') long.

**BASIC JIB (OPTIONAL EXTRA):** Three piece, open throat tubular lattice type, high tensile steel chords, all welded, two equal tapered sections with one jib insert, pin connected, having a 737 mm (29") deep x 914 mm (36") wide cross section and with single jib point sheave, compression strut and guy cables assemblies. Extendible to 27.43 m (90'). For lifts not exceeding 14,000 kg (30,900 lbs.)

Basic length ..... 12.19 m (40')  
Jib base section ..... 3.05 m (10')  
Jib insert section ..... 6.10 m (20')  
Jib tip section ..... 3.05 m (10')

**JIB INSERT SECTION (OPTIONAL EXTRA):** Jib insert available for extension, tubular lattice type, high tensile steel chords, all welded, with suspension cable assemblies, pin connections.

Available in 6.10 m (20') and 9.14 m (30') long.

**MAST:** Required for all booms. 9.8 m (32') long. 2 legs rectangular box section cross laced high tensile steel and all welded. Mast foot 356 mm (14") above boom foot to allow close coupling of mast and boom base for low clearance.



**HOOK BLOCKS:** 25 metric ton block with single sheave, swivel hook, safety latch and three (3) parts hoist line—standard also available as optional extra.

65 metric ton block with three sheaves, swivel hook, safety latch and seven (7) parts hoist line—optional extra.

150 metric ton block with seven sheaves, swivel hook, safety latch and fourteen (14) parts hoist line—optional extra.

12 metric ton weighted ball hook with safety latch for jib—optional extra.

**DIAMETER OF WIRE ROPE:** Hoist wire rope ..... 28 mm (1.10")  
Jib hoist wire rope—opt. .... 24 mm (0.94")  
Boom hoist wire rope (16 part line) ..... 20 mm (0.79")  
Boom suspension wire rope (4 part line) ..... 30 mm (1.18")  
Intermediate boom suspension wire rope [required when boom length is 57.91 m (190') or longer]—opt. .... 22 mm (0.87")  
Jib suspension wire rope—opt. .... 24 mm (0.94")

**CABLE GUIDE ROLLERS (OPTIONAL EXTRA):** Use as required to eliminate wire rope interference. Recommended for all boom length.

## TOWER CRANE ATTACHMENTS



**TOWER BOOM:** Lattice type tubular boom consisting of a tapered base section, three inserts and a cap section. Sections are pin connected. High tensile steel chords all welded. Tower boom extendible to 47.24 m (155').

Length in five sections .....	35.05 m (115')
Base section .....	9.14 m (30')
1—insert .....	3.05 m (10')
1—insert .....	6.10 m (20')
1—insert .....	9.14 m (30')
Cap section .....	7.62 m (25')

**TOWER INSERT SECTIONS (OPTIONAL EXTRA):** Tower insert available for extension. Available in 3.05 m (10') and 9.14 m (30') long.

**JIB:** Open throat lattice type tubular boom consisting of a tapered base section, two inserts and a tip section, high tensile steel chords all welded, pin connections. Jib extendible to 36.58 m (120').

Length in four sections .....	21.34 m (70')
Jib base section .....	6.10 m (20')
1—insert .....	6.10 m (20')
1—insert .....	3.05 m (10')
Jib tip section .....	6.10 m (20')

**JIB INSERT SECTIONS (OPTIONAL EXTRA):** Jib insert available for extension. Available in 6.10 m (20') and 9.14 m (30') long.

**HOOK BLOCK:** 25 metric ton block with single sheave, swivel hook and safety latch.

<b>DIAMETER OF WIRE ROPE:</b> Hoist wire rope .....	28 mm (1.10")
Tower hoist wire rope .....	20 mm (0.79")
Jib boom hoist wire rope .....	24 mm (0.94")
Tower suspension wire rope (4 part line) .....	30 mm (1.18")
Jib suspension wire rope (upper) .....	32 mm (1.26")
Jib suspension wire rope (lower) .....	36 mm (1.42")

## CLAMSHELL ATTACHMENTS



**BASIC BOOM:** Two piece, open throat lattice type tubular boom consisting a tapered base section and a tapered tip section having five offset boom point sheaves, high tensile steel chords, all welded, pin connections. Boom extendible to 24.38 (80').

Basic length .....	18.29 m (60')
Boom base section .....	9.14 m (30')
Boom tip section .....	9.14 m (30')

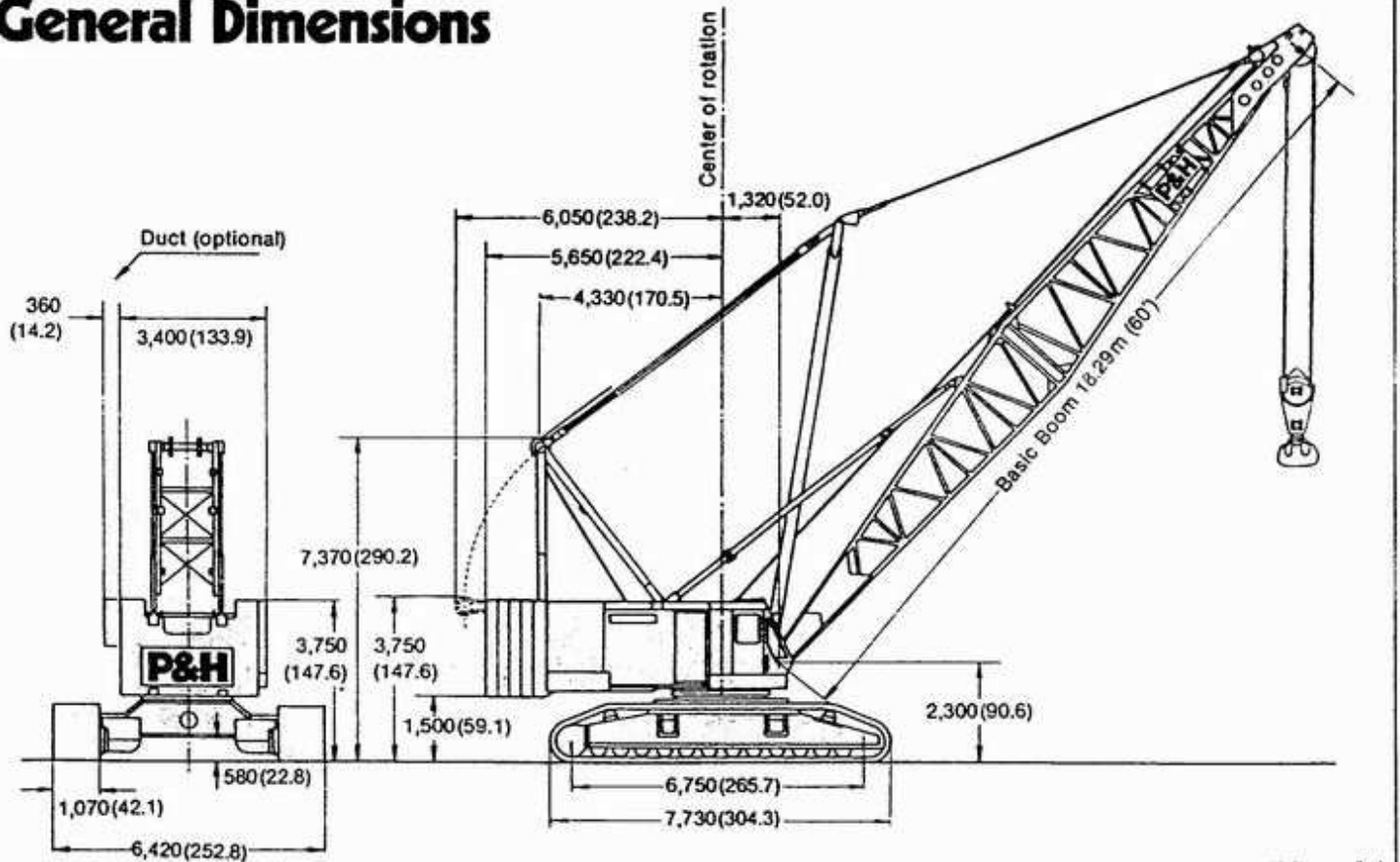
**BOOM INSERT SECTIONS (OPTIONAL EXTRA):** Tubular lattice type, high tensile steel chords, all welded, pin connections. Available in 3.5 m (10') and 6.10 m (20') long.

**TAGLINE WINDER:** Spring type.

**BUCKET:** Max. allowable bucket capacity..... 2.0 m<sup>3</sup> (2.6 cu.yd.)  
Max. allowable bucket weight (approx.) ..... 4,500 kg (9,900 lbs.)

<b>DIAMETER OF WIRE ROPE:</b> Boom hoist wire rope (10 part line) .....	20 mm (0.79")
Holding wire rope .....	28 mm (1.10")
Closing wire rope .....	28 mm (1.10")
Boom suspension wire rope (4 part line) .....	30 mm (1.18")

## General Dimensions



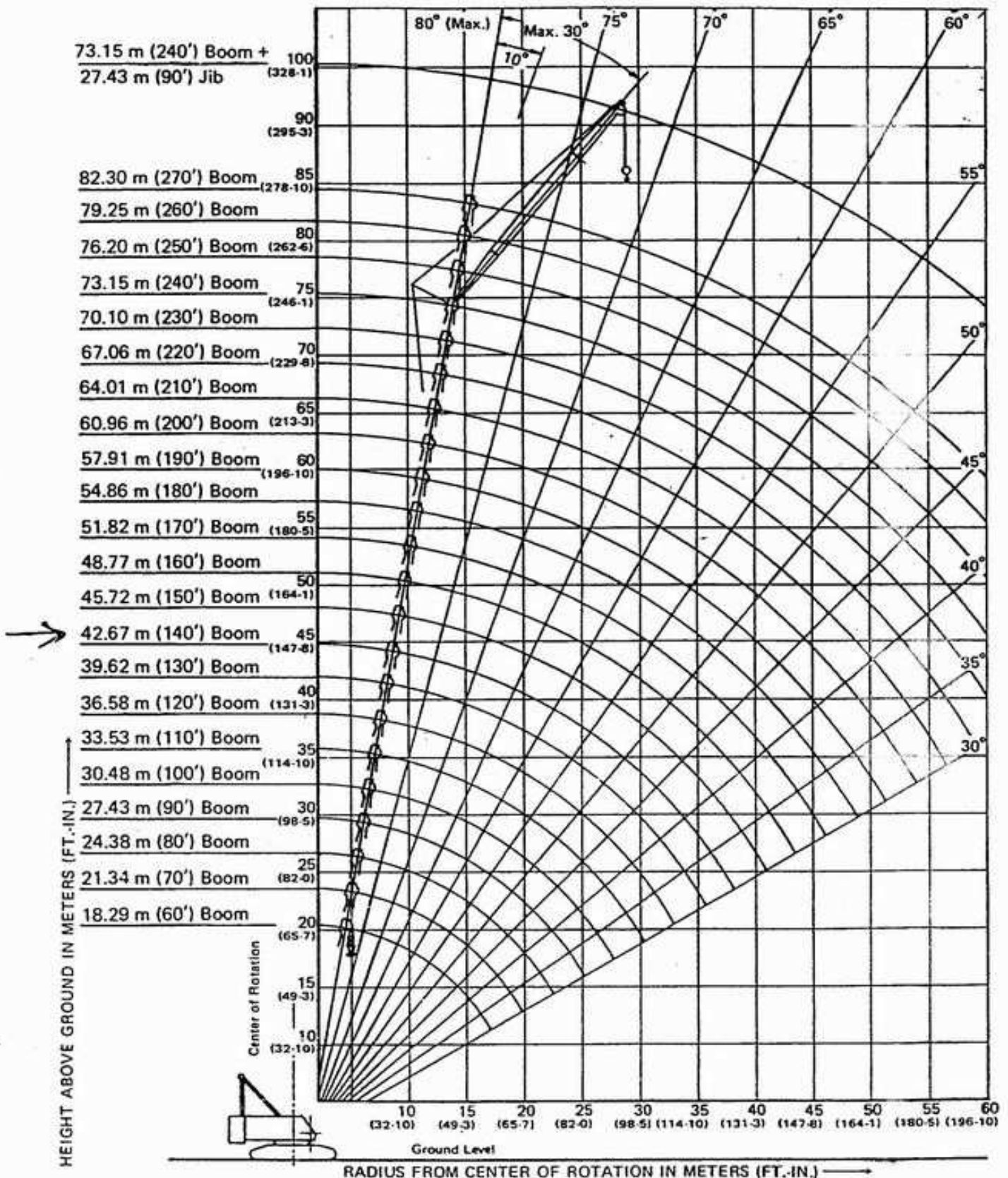
Unit: mm (in.)

# 150-M ton Crawler Crane

82.30m Boom

73.15m Boom + 27.43m Jib

## Working Ranges



# Lifting Capacities

• Boom Length 51.82 m (170') to 82.30 m (270')

Operating Radius In Meters (ft.-in.)	51.82 m (170')			54.86 m (180')			57.91 m (190')			60.96 m (200')			64.01 m (210')			67.05 m (220')			70.10 m (230')			73.15 m (240')			76.20 m (250')			79.25 m (260')			82.30 m (270')			Operating Radius In Meters (ft.-in.)
	An- gle	Rating	Boom	An- gle	Rating	Boom	An- gle	Rating	Boom	An- gle	Rating	Boom	An- gle	Rating	Boom	An- gle	Rating	Boom	An- gle	Rating	Boom	An- gle	Rating	Boom	An- gle	Rating	Boom	An- gle	Rating	Boom				
12.0 (39-4)	78.3	35,900 (79,100)	79.0	32,900 (72,500)	79.6	32,700 (72,100)																										12.0 (39-4)		
14.0 (45-11)	76.1	34,000 (75,000)	76.9	31,200 (68,800)	77.6	31,200 (68,800)																										14.0 (45-11)		
16.0 (52-6)	73.8	29,800 (65,700)	74.7	29,400 (64,800)	75.5	29,400 (64,800)																										16.0 (52-6)		
18.0 (59-1)	71.4	25,300 (55,800)	72.5	25,100 (55,300)	73.5	25,100 (55,300)																											18.0 (59-1)	
20.0 (65-7)	69.1	21,900 (48,300)	70.3	21,700 (47,800)	71.4	21,700 (47,800)																											20.0 (65-7)	
22.0 (72-2)	66.7	19,100 (42,100)	68.1	18,900 (41,700)	69.3	18,900 (41,700)																											22.0 (72-2)	
24.0 (78-9)	64.3	16,900 (37,200)	65.8	16,700 (36,800)	67.1	16,700 (36,800)																											24.0 (78-9)	
26.0 (85-4)	61.8	15,100 (33,300)	63.5	14,900 (32,800)	65.0	14,900 (32,800)																											26.0 (85-4)	
28.0 (91-10)	59.2	13,500 (29,800)	61.1	13,300 (29,300)	62.8	13,300 (29,300)																											28.0 (91-10)	
30.0 (98-5)	56.6	12,200 (26,900)	58.7	12,000 (26,500)	60.5	12,000 (26,500)																											30.0 (98-5)	
32.0 (105-0)	53.9	11,100 (24,500)	56.2	10,900 (24,000)	58.2	10,900 (24,000)																											32.0 (105-0)	
34.0 (111-7)	51.1	10,100 (22,300)	53.7	9,900 (21,800)	55.8	9,900 (21,800)																											34.0 (111-7)	
36.0 (118-1)	48.2	9,300 (20,500)	51.0	9,000 (19,800)	53.4	9,000 (19,800)																											36.0 (118-1)	
38.0 (124-8)	45.2	8,500 (18,700)	48.3	8,300 (18,300)	50.9	8,300 (18,300)																											38.0 (124-8)	
40.0 (131-3)	41.9	7,800 (17,200)	45.4	7,600 (16,800)	48.3	7,600 (16,800)																											40.0 (131-3)	
42.0 (137-10)	38.5	7,200 (15,900)	42.4	7,000 (15,400)	45.6	7,000 (15,400)																											42.0 (137-10)	
44.0 (144-1)	34.8	6,700 (14,600)	39.1	6,400 (14,100)	42.7	6,400 (14,100)																											44.0 (144-1)	
46.0 (150-11)	30.6	6,200 (13,700)	35.7	5,900 (13,000)	39.7	5,900 (13,000)																											46.0 (150-11)	
48.0 (157-6)				5,500 (12,100)	36.5	5,500 (12,100)																											48.0 (157-6)	
50.0 (164-1)					33.0	5,100 (11,200)																											50.0 (164-1)	
52.0 (170-7)																																	52.0 (170-7)	
54.0 (177-2)																																	54.0 (177-2)	
56.0 (183-9)																																	56.0 (183-9)	
58.0 (190-3)																																	58.0 (190-3)	
60.0 (196-10)																																	60.0 (196-10)	

NOTE: Ratings inside of box are limited by strength of materials.

OPERATION OF THIS EQUIPMENT IN EXCESS OF LOAD RATING AND DISREGARD OF INSTRUCTIONS VIOLATES THE WARRANTY.

- Operating radius is the horizontal distance from center-line of rotation to a vertical line through the center of gravity of the load.
- Ratings shown are only for combination of KOBE STEEL manufactured upper, crawler, boom, jib and counterweights.
- Ratings do not exceed 75% of tipping load. Deduct weight of hook block(s), slings, and all other load handling accessories from main boom or jib rating shown.
- At radii and boom length where no ratings are shown on plate operation is not intended or approved.
- Ratings are contingent upon the machine being equipped with the proper KOBE STEEL boom.
- Must be required for all booms and gentry must be raised position for all operating conditions.
- Boom backstops are required for all boom lengths.
- Boom inserts and guy cables must be arranged as shown in the "Owner and Operator's Manual".
- Standard boom hoist reeving is 16 part line.
- Ratings are based on counterweight of 47,000kg(103,600lbs.).
- Inadvertent suspension (kennerbach) required when boom length is 57.91 m (190') or longer.
- Values in "RATED CRANE LOADS WITH JIB" show the rated loads when boom is equipped with jib. The values are determined by considering jib weight and jib-hook block weight (25 metric ton hook for 12.19 m or 18.29 m jib, and 12 metric ton ball hook for 27.43 m jib). To obtain actual hoistable loads, deduct weight of hook block(s), slings, and all other load handling accessories from rated loads.
- Ratings shown are based on freely suspended loads and make no allowance for such factors as wind effect on lifted load, ground conditions out-of-level, operating speeds or any other condition that could be detrimental to the safe operation of this equipment. The operator, therefore, has the responsibility to judge the existing conditions and reduce lifted loads and operating speed accordingly.

NOTE: This P&H model 5170 meets the requirements of Japanese mobile construction type crane safety code.

## WARNING:

- Welding or other repair to tubular steel booms may weaken the structure. See your P&H dealer for authorized boom repair service. Unauthorized repair will void all warranties.
- The wind effect on the lifted load can cause sufficient side load to overstress boom or jib structure. When suspended load will not remain in line with boom, derate chart 25%. We recommend stopping operation when wind is above 10 m/sec. (20 mph) and lifting off, or lowering, boom when wind is above 16 m/sec. (35 mph).

# Lifting Capacities

RATED CRANE LOADS IN KGS (LBS.) - MAIN BOOM IN 360° WORK AREAS  
 • Boom Length 18.29 m (60') to 48.77 m (160')

Operating Radius in Meters (Ft.-In.)	18.29 m (60')		21.24 m (70')		24.28 m (80')		27.43 m (90')		30.48 m (100')		33.53 m (110')		36.58 m (120')		39.62 m (130')		42.67 m (140')		45.72 m (150')		48.77 m (160')		Operating Radius in Meters (Ft.-In.)	
	An- gle	Rating	An- gle	Rating	An- gle	Rating	An- gle	Rating	An- gle	Rating	An- gle	Rating	An- gle	Rating	An- gle	Rating	An- gle	Rating	An- gle	Rating	An- gle	Rating		
4.6 (15-1)	80.3 (150,000)																						4.6 (15-1)	
5.0 (16-5)	79.0 (140,600)																						5.0 (16-5)	
6.0 (19-8)	75.8 (1310,000)																						6.0 (19-8)	
7.0 (23-0)	72.5 (101,300)	77.9 (117,200)	75.1 (160,900)	77.0 (160,900)	79.4 (104,200)	78.5 (129,700)	83.100 (198,400)	79.6 (117,200)	80.400 (177,200)	78.9 (115,000)	79.4 (114,200)	79.4 (114,200)	79.1 (113,500)	78.9 (113,500)	78.9 (113,500)	78.9 (113,500)	78.9 (113,500)	78.9 (113,500)	78.9 (113,500)	78.9 (113,500)	78.9 (113,500)	78.9 (113,500)	78.9 (113,500)	7.0 (23-0)
8.0 (26-3)	69.2 (81,700)	72.3 (81,700)	72.3 (180,100)	74.6 (180,100)	76.3 (179,000)	76.3 (179,000)	81.200 (179,000)	77.7 (170,400)	77.7 (170,400)	78.9 (185,000)	79.4 (185,000)	79.4 (185,000)	79.1 (182,200)	78.9 (182,200)	78.9 (182,200)	78.9 (182,200)	78.9 (182,200)	78.9 (182,200)	78.9 (182,200)	78.9 (182,200)	78.9 (182,200)	78.9 (182,200)	78.9 (182,200)	8.0 (26-3)
9.0 (29-6)	65.8 (68,300)	69.4 (68,300)	69.4 (150,600)	72.1 (150,600)	74.2 (150,600)	74.2 (150,600)	86.300 (198,400)	75.8 (150,600)	77.1 (150,600)	77.1 (150,600)	78.2 (145,200)	78.2 (145,200)	78.2 (145,200)	78.2 (145,200)	78.2 (145,200)	78.2 (145,200)	78.2 (145,200)	78.2 (145,200)	78.2 (145,200)	78.2 (145,200)	78.2 (145,200)	78.2 (145,200)	78.2 (145,200)	9.0 (29-6)
10.0 (32-10)	62.3 (58,600)	66.5 (58,600)	66.5 (129,200)	69.6 (129,200)	72.0 (129,200)	72.0 (129,200)	86.500 (198,400)	73.8 (128,700)	75.3 (128,700)	75.3 (128,700)	76.6 (128,700)	76.6 (128,700)	76.6 (128,700)	76.6 (128,700)	76.6 (128,700)	76.6 (128,700)	76.6 (128,700)	76.6 (128,700)	76.6 (128,700)	76.6 (128,700)	76.6 (128,700)	76.6 (128,700)	76.6 (128,700)	10.0 (32-10)
12.0 (39-4)	54.9 (45,400)	60.5 (45,400)	60.5 (100,100)	64.5 (99,900)	67.5 (99,900)	67.5 (99,900)	95.200 (216,500)	69.9 (99,400)	71.8 (99,400)	71.8 (99,400)	73.3 (99,000)	73.3 (99,000)	74.7 (99,000)	74.7 (99,000)	74.7 (99,000)	74.7 (99,000)	74.7 (99,000)	74.7 (99,000)	74.7 (99,000)	74.7 (99,000)	74.7 (99,000)	74.7 (99,000)	74.7 (99,000)	12.0 (39-4)
14.0 (45-11)	46.7 (36,900)	54.1 (36,900)	54.1 (81,400)	59.1 (81,400)	62.9 (81,400)	62.9 (81,400)	100.500 (230,000)	68.8 (80,500)	68.1 (80,500)	68.1 (80,500)	70.0 (80,500)	70.0 (80,500)	71.6 (80,500)	71.6 (80,500)	71.6 (80,500)	71.6 (80,500)	71.6 (80,500)	71.6 (80,500)	71.6 (80,500)	71.6 (80,500)	71.6 (80,500)	71.6 (80,500)	71.6 (80,500)	14.0 (45-11)
16.0 (52-6)	37.2 (31,000)	47.1 (31,000)	47.1 (68,300)	53.3 (67,900)	58.1 (67,900)	58.1 (67,900)	106.200 (240,000)	61.6 (67,200)	64.4 (67,200)	64.4 (67,200)	66.7 (66,800)	66.7 (66,800)	68.5 (66,800)	68.5 (66,800)	68.5 (66,800)	68.5 (66,800)	68.5 (66,800)	68.5 (66,800)	68.5 (66,800)	68.5 (66,800)	68.5 (66,800)	68.5 (66,800)	68.5 (66,800)	16.0 (52-6)
18.0 (59-1)		39.1 (26,400)		47.3 (26,400)	53.0 (26,400)	53.0 (26,400)	111.700 (246,000)	57.2 (26,100)	60.5 (26,100)	60.5 (26,100)	63.2 (25,900)	63.2 (25,900)	65.4 (25,700)	65.4 (25,700)	65.4 (25,700)	65.4 (25,700)	65.4 (25,700)	65.4 (25,700)	65.4 (25,700)	65.4 (25,700)	65.4 (25,700)	65.4 (25,700)	65.4 (25,700)	18.0 (59-1)
20.0 (65-7)				40.5 (23,000)	47.5 (23,000)	47.5 (23,000)	117.900 (259,000)	52.6 (23,000)	56.5 (23,000)	56.5 (23,000)	59.4 (22,800)	59.4 (22,800)	62.2 (22,500)	62.2 (22,500)	62.2 (22,500)	62.2 (22,500)	62.2 (22,500)	62.2 (22,500)	62.2 (22,500)	62.2 (22,500)	62.2 (22,500)	62.2 (22,500)	62.2 (22,500)	20.0 (65-7)
24.0 (78-9)					32.5 (20,300)	32.5 (20,300)	124.200 (276,000)	41.5 (18,100)	47.8 (18,100)	47.8 (18,100)	52.3 (17,700)	52.3 (17,700)	55.4 (17,400)	55.4 (17,400)	55.4 (17,400)	55.4 (17,400)	55.4 (17,400)	55.4 (17,400)	55.4 (17,400)	55.4 (17,400)	55.4 (17,400)	55.4 (17,400)	55.4 (17,400)	24.0 (78-9)
26.0 (85-4)							131.100 (290,000)	36.3 (25,500)	42.9 (25,500)	42.9 (25,500)	47.8 (25,100)	47.8 (25,100)	51.8 (24,800)	51.8 (24,800)	51.8 (24,800)	51.8 (24,800)	51.8 (24,800)	51.8 (24,800)	51.8 (24,800)	51.8 (24,800)	51.8 (24,800)	51.8 (24,800)	51.8 (24,800)	26.0 (85-4)
28.0 (91-10)							138.000 (303,000)	37.6 (26,100)	44.2 (26,100)	44.2 (26,100)	49.1 (25,700)	49.1 (25,700)	53.1 (25,300)	53.1 (25,300)	53.1 (25,300)	53.1 (25,300)	53.1 (25,300)	53.1 (25,300)	53.1 (25,300)	53.1 (25,300)	53.1 (25,300)	53.1 (25,300)	53.1 (25,300)	28.0 (91-10)
30.0 (98-5)							144.900 (321,000)	31.5 (22,800)	38.1 (22,800)	38.1 (22,800)	43.0 (22,400)	43.0 (22,400)	47.0 (22,000)	47.0 (22,000)	47.0 (22,000)	47.0 (22,000)	47.0 (22,000)	47.0 (22,000)	47.0 (22,000)	47.0 (22,000)	47.0 (22,000)	47.0 (22,000)	47.0 (22,000)	30.0 (98-5)
32.0 (105-0)							151.800 (335,000)	33.5 (20,200)	39.9 (20,200)	39.9 (20,200)	44.8 (19,800)	44.8 (19,800)	48.8 (19,400)	48.8 (19,400)	48.8 (19,400)	48.8 (19,400)	48.8 (19,400)	48.8 (19,400)	48.8 (19,400)	48.8 (19,400)	48.8 (19,400)	48.8 (19,400)	48.8 (19,400)	32.0 (105-0)
34.0 (111-7)							158.700 (349,000)	34.7 (18,100)	41.1 (18,100)	41.1 (18,100)	46.0 (17,700)	46.0 (17,700)	50.0 (17,300)	50.0 (17,300)	50.0 (17,300)	50.0 (17,300)	50.0 (17,300)	50.0 (17,300)	50.0 (17,300)	50.0 (17,300)	50.0 (17,300)	50.0 (17,300)	50.0 (17,300)	34.0 (111-7)
36.0 (118-1)							165.600 (363,000)	35.9 (16,100)	42.3 (16,100)	42.3 (16,100)	47.2 (15,700)	47.2 (15,700)	51.2 (15,300)	51.2 (15,300)	51.2 (15,300)	51.2 (15,300)	51.2 (15,300)	51.2 (15,300)	51.2 (15,300)	51.2 (15,300)	51.2 (15,300)	51.2 (15,300)	51.2 (15,300)	36.0 (118-1)
38.0 (124-8)							172.500 (377,000)	31.0 (14,200)	37.4 (14,200)	37.4 (14,200)	42.3 (13,800)	42.3 (13,800)	46.3 (13,400)	46.3 (13,400)	46.3 (13,400)	46.3 (13,400)	46.3 (13,400)	46.3 (13,400)	46.3 (13,400)	46.3 (13,400)	46.3 (13,400)	46.3 (13,400)	46.3 (13,400)	38.0 (124-8)
40.0 (131-3)							179.400 (391,000)	32.5 (12,200)	38.9 (12,200)	38.9 (12,200)	43.8 (11,800)	43.8 (11,800)	47.8 (11,400)	47.8 (11,400)	47.8 (11,400)	47.8 (11,400)	47.8 (11,400)	47.8 (11,400)	47.8 (11,400)	47.8 (11,400)	47.8 (11,400)	47.8 (11,400)	47.8 (11,400)	40.0 (131-3)
42.0 (137-10)							186.300 (405,000)	33.7 (10,200)	40.1 (10,200)	40.1 (10,200)	45.0 (9,800)	45.0 (9,800)	49.0 (9,400)	49.0 (9,400)	49.0 (9,400)	49.0 (9,400)	49.0 (9,400)	49.0 (9,400)	49.0 (9,400)	49.0 (9,400)	49.0 (9,400)	49.0 (9,400)	49.0 (9,400)	42.0 (137-10)

NOTE: Ratings inside of box are limited by strength of materials.  
 OPERATION OF THIS EQUIPMENT IN EXCESS OF LOAD RATING AND DISREGARD OF INSTRUCTIONS VIOLATES THE WARRANTY.

# Lifting Capacities

## RATED CRANE LOADS IN KGS (LBS.) – MAIN BOOM WITH JIB

Operating Radius in Meters (Ft.-In.)	12.19 m (40') Jib					18.29 m (60') Jib 27.43 m (90') Jib				
	48.77 m (160') Boom	54.86 m (180') Boom	60.96 m (200') Boom	67.06 m (220') Boom	73.15 m (240') Boom	48.77 m (160') Boom	54.86 m (180') Boom	60.96 m (200') Boom	67.06 m (220') Boom	73.15 m (240') Boom
10.0 (32-10)	38,700 (85,300)					37,800 (83,300)				
12.0 (39-4)	36,500 (80,500)	30,300 (66,800)				35,700 (78,700)	29,500 (65,000)			
14.0 (45-11)	33,400 (73,600)	28,700 (63,300)	25,700 (56,700)	21,200 (46,700)		32,700 (72,100)	28,000 (61,700)	25,000 (55,100)	20,500 (45,200)	
16.0 (52-6)	27,400 (60,400)	26,900 (59,300)	24,600 (54,200)	20,400 (45,000)	16,000 (35,300)	26,700 (58,900)	26,300 (58,000)	24,000 (52,900)	19,700 (43,400)	15,300 (33,700)
18.0 (59-1)	23,100 (50,900)	22,700 (50,000)	22,700 (50,000)	19,500 (43,000)	15,300 (33,700)	22,400 (49,400)	22,100 (48,700)	22,100 (48,700)	18,900 (41,700)	14,700 (32,400)
20.0 (65-7)	19,600 (43,200)	19,300 (42,500)	19,200 (42,300)	18,700 (41,200)	14,500 (32,000)	19,000 (41,900)	18,700 (41,200)	18,700 (41,200)	18,200 (40,100)	14,000 (30,900)
22.0 (72-2)	16,900 (37,300)	16,600 (36,600)	16,600 (36,600)	16,400 (36,200)	13,900 (30,600)	16,400 (36,200)	16,000 (35,300)	16,000 (35,300)	15,800 (34,800)	13,400 (29,500)
24.0 (78-9)	14,700 (32,400)	14,400 (31,700)	14,400 (31,700)	14,200 (31,300)	13,100 (28,900)	14,200 (31,300)	13,800 (30,400)	13,800 (30,400)	13,700 (30,200)	12,600 (27,800)
26.0 (85-4)	12,900 (28,400)	12,600 (27,800)	12,500 (27,600)	12,400 (27,300)	12,200 (26,900)	12,300 (27,100)	12,100 (26,700)	12,000 (26,500)	11,900 (26,200)	11,800 (26,000)
28.0 (91-10)	11,400 (25,100)	11,000 (24,300)	11,000 (24,300)	10,800 (23,800)	10,600 (23,400)	10,900 (24,000)	10,500 (23,100)	10,500 (23,100)	10,400 (22,900)	10,200 (22,500)
30.0 (98-5)	10,100 (22,300)	9,700 (21,400)	9,700 (21,400)	9,500 (20,900)	9,400 (20,700)	9,600 (21,200)	9,300 (20,500)	9,300 (20,500)	9,100 (20,100)	8,900 (19,600)
32.0 (105-0)	9,000 (19,800)	8,600 (19,000)	8,500 (18,700)	8,500 (18,700)	8,200 (18,100)	8,600 (19,000)	8,200 (18,100)	8,100 (17,900)	8,000 (17,600)	7,700 (17,000)
34.0 (111-7)	8,000 (17,600)	7,600 (16,800)	7,600 (16,800)	7,500 (16,500)	7,200 (15,900)	7,600 (16,800)	7,200 (15,900)	7,100 (15,700)	7,000 (15,400)	6,800 (15,000)
36.0 (118-1)	7,100 (15,700)	6,800 (15,000)	6,800 (15,000)	6,600 (14,600)	6,300 (13,900)	6,700 (14,800)	6,300 (13,900)	6,300 (13,900)	6,200 (13,700)	5,900 (13,000)
38.0 (124-8)	6,500 (14,300)	6,100 (13,400)	6,000 (13,200)	5,800 (12,800)	5,600 (12,300)	6,000 (13,200)	5,700 (12,600)	5,600 (12,300)	5,400 (11,900)	5,200 (11,500)
40.0 (131-3)	5,800 (12,800)	5,400 (11,900)	5,300 (11,700)	5,100 (11,200)	4,900 (10,800)	5,400 (11,900)	5,000 (11,000)	4,900 (10,800)	4,700 (10,700)	4,500 (9,900)
42.0 (137-10)	5,200 (11,500)	4,800 (10,600)	4,700 (10,400)	4,500 (9,900)	4,200 (9,300)	4,800 (10,600)	4,400 (9,700)	4,300 (9,500)	4,100 (9,000)	3,800 (8,400)
44.0 (144-4)		4,200 (9,300)	4,100 (9,000)	3,900 (8,600)	3,700 (8,200)		3,800 (8,400)	3,700 (8,200)	3,500 (7,700)	3,400 (7,500)
46.0 (150-11)		3,700 (8,200)	3,600 (7,900)	3,400 (7,500)	3,200 (7,100)		3,300 (7,300)	3,200 (7,100)	3,100 (6,800)	2,900 (6,400)
48.0 (157-6)		3,300 (7,300)	3,200 (7,100)	3,000 (6,600)	2,600 (5,700)		2,900 (6,400)	2,800 (6,200)	2,700 (6,000)	2,300 (5,100)
50.0 (164-1)			2,800 (6,200)	2,500 (5,500)	2,100 (4,600)			2,500 (5,500)	2,200 (4,900)	
52.0 (170-7)			2,400 (5,300)	2,100 (4,600)				2,100 (4,600)		
54.0 (177-2)			2,000 (4,400)							

Jib crane ratings are based on strength of materials.



# Lifting Capacities

## JIB RATED LOADS IN KGS (LBS.)

Operating radius in Meters (Ft.-In.)	48.77 m (160') Boom						54.86 m (180') Boom				
	12.19 m (40') Jib		16.29 m (60') Jib		27.43 m (90') Jib		12.19 m (40') Jib		18.29 m (60') Jib		
	Offset Angle		Offset Angle		Offset Angle		Offset Angle		Offset Angle		
	10	30	10	30	10	30	10	30	10	30	
14.0 (45-11)	14,000 (30,900)										
16.0 (52-6)	14,000 (30,900)						14,000 (30,900)				
18.0 (59-1)	14,000 (30,900)	10,000 (22,000)	8,000 (17,600)				14,000 (30,900)		10,000 (22,000)		
20.0 (65-7)	14,000 (30,900)	10,000 (22,000)	8,000 (17,600)		3,900 (8,600)		14,000 (30,900)	10,000 (22,000)	10,000 (22,000)		
22.0 (72-2)	14,000 (30,900)	10,000 (22,000)	8,000 (17,600)	5,800 (12,800)	3,900 (8,600)		14,000 (30,900)	10,000 (22,000)	10,000 (22,000)		
24.0 (78-9)	14,000 (30,900)	10,000 (22,000)	8,000 (17,600)	5,800 (12,800)	3,900 (8,600)		14,000 (30,900)	10,000 (22,000)	10,000 (22,000)	5,800 (12,800)	
26.0 (85-4)	14,000 (30,900)	10,000 (22,000)	8,000 (17,600)	5,800 (12,800)	3,900 (8,600)		14,000 (30,900)	10,000 (22,000)	10,000 (22,000)	5,800 (12,800)	
28.0 (91-10)	13,700 (30,200)	10,000 (22,000)	8,000 (17,600)	5,800 (12,800)	3,900 (8,600)	3,300 (7,300)	13,300 (29,300)	10,000 (22,000)	10,000 (22,000)	5,800 (12,800)	
30.0 (98-5)	12,400 (27,300)	10,000 (22,000)	8,000 (17,600)	5,800 (12,800)	3,900 (8,600)	3,300 (7,300)	12,000 (26,500)	10,000 (22,000)	10,000 (22,000)	5,800 (12,800)	
32.0 (105-0)	11,300 (24,900)	10,000 (22,000)	8,000 (17,600)	5,800 (12,800)	3,900 (8,600)	3,300 (7,300)	10,900 (24,000)	10,000 (22,000)	10,000 (22,000)	5,800 (12,800)	
34.0 (111-7)	10,300 (22,700)	10,000 (22,000)	8,000 (17,600)	5,800 (12,800)	3,900 (8,600)	3,300 (7,300)	9,900 (21,800)	9,900 (21,800)	9,900 (21,800)	5,800 (12,800)	
36.0 (118-1)	9,400 (20,700)	9,400 (20,700)	8,000 (17,600)	5,800 (12,800)	3,900 (8,600)	3,300 (7,300)	9,000 (21,800)	9,000 (21,800)	9,000 (21,800)	5,800 (12,800)	
38.0 (124-8)	8,700 (19,200)	8,700 (19,200)	8,000 (17,600)	5,800 (12,800)	3,900 (8,600)	3,300 (7,300)	8,300 (18,300)	8,300 (18,300)	8,300 (18,300)	5,800 (12,800)	
40.0 (131-3)	8,000 (17,600)	8,000 (17,600)	8,000 (17,600)	5,800 (12,800)	3,900 (8,600)	3,300 (7,300)	7,600 (16,800)	7,600 (16,800)	7,600 (16,800)	5,800 (12,800)	
42.0 (137-10)	7,400 (16,300)	7,400 (16,300)	7,400 (16,300)	5,800 (12,800)	3,900 (8,600)	3,300 (7,300)	7,000 (15,400)	7,000 (15,400)	7,000 (15,400)	5,800 (12,800)	
44.0 (144-4)							6,400 (14,100)	6,400 (14,100)	6,400 (14,100)	5,800 (12,800)	
46.0 (150-11)							5,900 (13,000)	5,900 (13,000)	5,900 (13,000)	5,800 (12,800)	
48.0 (157-6)							5,500 (12,100)	5,500 (12,100)	5,500 (12,100)	5,500 (12,100)	
50.0 (164-1)											
52.0 (170-7)											
54.0 (177-2)											
56.0 (183-9)											
58.0 (190-3)											
60.0 (196-10)											

## WEIGHT OF HOOK BLOCK

Hook Blocks	Kg (Lbs.)
25 metric ton block with single sheave (Std.)	700 (1,500)
65 metric ton block with three sheaves (Opt.)	900 (2,000)
150 metric ton block with seven sheaves (Opt.)	2,200 (4,900)
12 metric ton ball hook – for jib (Opt.)	300 (700)

## MAXIMUM BOOM LENGTH TO LIFT OFF GROUND IN METERS (FT.) with 47,000 kg (103,600 lbs.) Counterweight

	Boom Only	Boom & Jib
Over Side	73.15 m (240')	67.06 m + 27.43 m (220' + 90')
Over Idler End	82.30 m (270')	73.15 m + 27.43 m (240' + 90')

## MAIN HOIST REEVING – 28 mm (1.10") dia. 6XFi (29)

No. of Parts of Line	1	2	3	4	5	6	7
Max. Load – kg (lbs.)	10,500 (23,100)	21,000 (46,300)	31,500 (69,500)	42,000 (92,600)	52,500 (115,700)	65,000 (143,300)	77,000 (169,600)
No. of Parts of Line	8	9	10	11	12	13	14
Max. Load – kg (lbs.)	84,000 (185,200)	94,500 (208,300)	105,000 (231,500)	115,500 (254,600)	126,000 (277,800)	136,500 (300,900)	150,000 (330,000)

## JIB HOIST REEVING – 24 mm (0.94") dia. U4Xses (39)

No. of Parts of Line	1	2
Max. Load – kg (lbs.)	7,000 (15,400)	14,000 (30,900)

## BOOM MAKE-UP ARRANGEMENT CHART

Boom Length Meters (Ft.)	Boom Arrangement	Boom Length Meters (Ft.)	Boom Arrangement
21.34 (70)	Base–A–Tip	54.86 (180)	Base–A–B–C–C–C–Tip
24.38 (80)	Base–B–Tip	57.91 (190)	Base–C–C–A–B–D–Tip
27.43 (90)	Base–A–B–Tip, Base–C–Tip	60.96 (200)	Base–A–C–C–C–D–Tip
30.48 (100)	Base–A–C–Tip	64.01 (210)	Base–B–C–C–C–D–Tip
33.53 (110)	Base–B–C–Tip	67.06 (220)	Base–B–C–C–D–D–Tip
36.58 (120)	Base–A–B–C–Tip, Base–C–C–Tip	70.10 (230)	Base–A–B–C–C–D–D–Tip
39.62 (130)	Base–A–C–C–Tip		Base–C–C–C–D–D–Tip
42.67 (140)	Base–B–C–C–Tip	73.15 (240)	Base–C–C–C–A–D–D–Tip
45.72 (150)	Base–A–B–C–C–Tip, Base–C–C–C–Tip	76.20 (250)	Base–C–C–C–B–D–D–Tip
48.77 (160)	Base–A–C–C–C–Tip	79.25 (260)	Base–A–B–C–C–C–D–D–Tip
51.82 (170)	Base–B–C–C–C–Tip	82.30 (270)	Base–A–B–C–C–A–C–D–D–Tip

Base = 9.14 m (30') Tip = 9.14 m (30') Inserts: A = 3.05 m (10'); B = 6.10 m (20'); C = 9.14 m (30'); D = 12.19 m (40')

## JIB MAKE-UP ARRANGEMENT CHART

Jib Length Meters (Ft.)	Jib Arrangement
12.19 (40)	Base–B–Tip
18.29 (60)	Base–B–B–Tip
27.43 (90)	Base–B–B–C–Tip

Base = 3.05 m (10')

Tip = 3.05 m (10')

Inserts: B = 6.10 m (20'); C = 9.14 m (30')