P&H KOBELCO **Hydraulic Crawler Crane**

7080 Specifications

Max. lifting capacity: **80** *metric tons at* **4.0** *meters*

Max. boom length: **57.91** *meters*

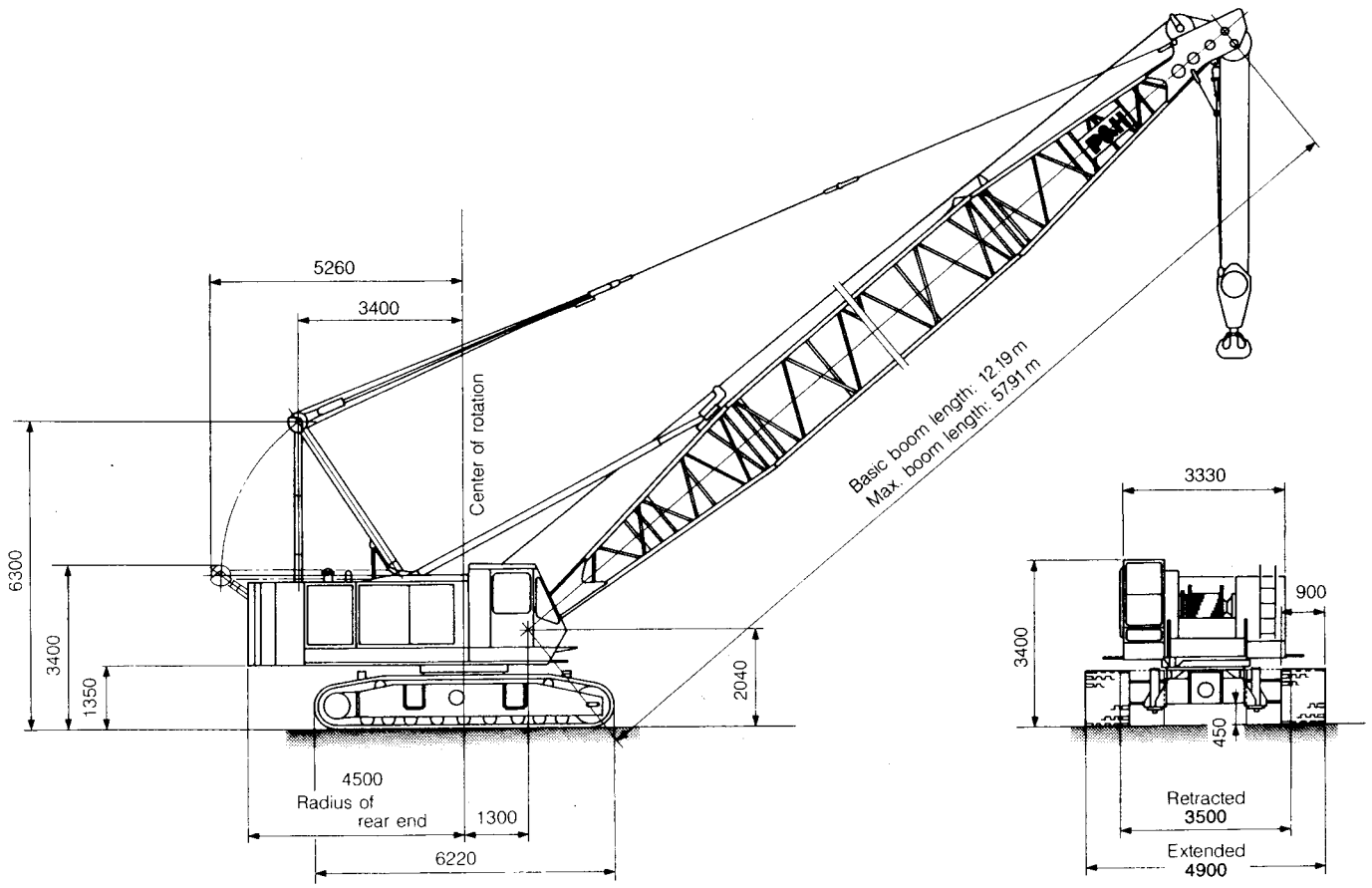
Max. total length (boom+jib) **70.11** *meters*

Max. total length (boom+luffing jib) **79.25** *meters*

- **Advanced winch system delivers a wide range of precisely controlled hoisting speeds, and the fastest hoisting in its class.**
- **Large main and auxiliary drums can be run simultaneously or independently, at different speeds and in opposite directions, according to your needs.**
- **Two-speed propel system features high speed for travel, low for superior break-out force.**
- **Precise swing speed control allows for delicate inching operations.**
- **Hoisting, lowering, neutral free-fall and neutral braking can be controlled by one lever.**

General Dimensions

Unit: mm



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.

Gantry
Two-position, telescopic gantry, raised and lowered by hydraulic cylinder.

Counterweight
Three-piece stack (10 tons + 7 tons + 6.5 tons), mounted behind the machinery compartment.
Total weight ..... 23,500 kg

Tools
Tool set and accessories for routine machine maintenance.

Lower machinery

Carbody: Steel-welded carbody with 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 two-speed plunger 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 ..... 58 each side
Standard flat shoe width ..... 900 mm
Max. travel speed:
High ..... 1.4 km/h
Low ..... 0.9 km/h
Max. gradeability: 30%
Trans-Lifter (optional): Trans-Lifter system allows quick and easy crawler side frame removal and trailer loading. 4 vertical cylinders lift the basic machine for self-loading onto trailer. 2 horizontal cylinders facilitate side frames for removal or replacement.

Crane attachments (standard use)

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 48.77 m.

Max. lifting capacity	80,000 kg
Basic boom length	12.19 m
Max. boom length	57.91

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

Max. lifting capacity	10.000 kg
Max. jib length	21.34 m
Max. total length (Boom length+jib length)	48.77+21.34 m

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

Lifting capacity	80 tons	50 tons	30 tons	10 tons
No. of sheaves	4	2	1	0
Weight (kg)	1,150	850	700	300

Diameter of wire ropes
Standard:
Hook hoist ..... 26 mm (dia.)
Boom hoist (12-part line) ..... 18 mm (dia.)
Boom pendants (2-part line) ..... 32 mm (dia.)
Optional:
Jib hook hoist ..... 26 mm (dia.)
Jib pendants ..... 20 mm (dia.)
Boom midpoint suspension ..... 18 mm (dia.)
Boom backstops are required for all boom lengths.

Weight
Working weight: Approx. 77,900 kg (including 12.19 m boom, 80 ton hook block and standard counterweights)
Ground pressure: 0.77 kg/cm^2

Line speed and line pull

	Max. line speed m/min				Max. starting line pull	Max. running line pull
	Hoisting		Lowering			
Main hoist drum	H	90/45	H	90/45	18.1 ton	19.7 ton
	L	60/30	L	60/30		
Aux. hoist drum	H	90/45	H	90/45	18.1 ton	19.7 ton
	L	60/30	L	60/30		

Boom Lifting Capacities

Rated Loads in Metric Tons for 360° Working Area (Standard)

Unit: metric ton

Operating radius (m) \ Boom length m (ft)	12.19 (40)	15.24 (50)	18.29 (60)	21.34 (70)	24.38 (80)	27.43 (90)	30.48 (100)	33.53 (110)	36.58 (120)	39.62 (130)	42.67 (140)	45.72 (150)	48.77 (160)	51.82 (170)	54.86 (180)	57.91 (190)	Operating radius (m) \ Boom length m (ft)
4.0	80.0																4.0
4.5	71.9	71.2															4.5
5.0	59.7	59.6	59.5														5.0
5.5	51.0	50.9	50.8	50.7													5.5
6.0	44.5	44.3	44.2	44.1	44.0	39.0/ 6.5m											6.0
7.0	35.3	35.2	35.1	35.0	34.9	34.8	34.7	31.3/ 7.5m									7.0
8.0	29.2	29.1	29.0	28.8	28.8	28.7	28.6	28.4	28.3	25.7/ 8.5m							8.0
9.0	24.8	24.7	24.6	24.5	24.4	24.3	24.2	24.0	23.9	23.8	23.4	20.8/ 9.6m					9.0
10.0	21.6	21.4	21.3	21.2	21.1	21.0	20.9	20.7	20.6	20.5	20.3	20.2	20.0/ 10.1m	17.2/ 10.6m			10.0
12.0	17.0	16.9	16.8	16.6	16.5	16.4	16.2	16.1	16.0	16.0	15.9	15.6	15.5	15.4	15.3	14.0	12.0
14.0		13.8	13.7	13.6	13.4	13.3	13.2	13.1	13.0	12.9	12.9	12.7	12.5	12.4	12.3	12.2	14.0
16.0			11.5	11.4	11.2	11.2	11.0	10.9	10.8	10.7	10.7	10.5	10.4	10.3	10.2	10.1	16.0
18.0			10.7/ 17.0m	9.8	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.5	18.0
20.0				8.5	8.3	8.3	8.1	8.0	7.9	7.8	7.7	7.6	7.5	7.4	7.3	7.2	20.0
22.0					7.3	7.2	7.1	7.0	6.9	6.8	6.7	6.6	6.5	6.4	6.3	6.2	22.0
24.0					6.9/ 23.0m	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.6	5.5	5.5	5.3	24.0
26.0						6.0/ 25.0m	5.6	5.5	5.4	5.3	5.1	5.0	4.9	4.8	4.7	4.6	26.0
28.0							5.0	4.9	4.8	4.7	4.5	4.4	4.3	4.2	4.1	4.0	28.0
30.0								4.4	4.3	4.2	4.0	3.9	3.8	3.7	3.6	3.5	30.0
32.0									3.9	3.7	3.6	3.5	3.3	3.2	3.1	3.0	32.0
34.0									3.7/ 33.0m	3.3	3.2	3.1	2.9	2.8	2.7	2.6	34.0
36.0										3.0	2.8	2.7	2.6	2.5	2.3	2.2	36.0
38.0											2.5	2.4	2.3	2.2	2.0	1.9	38.0
40.0												2.1	2.0	1.7	1.7	1.6	40.0

Max. Jib Rated Loads in Metric Tons for 360° Working Area

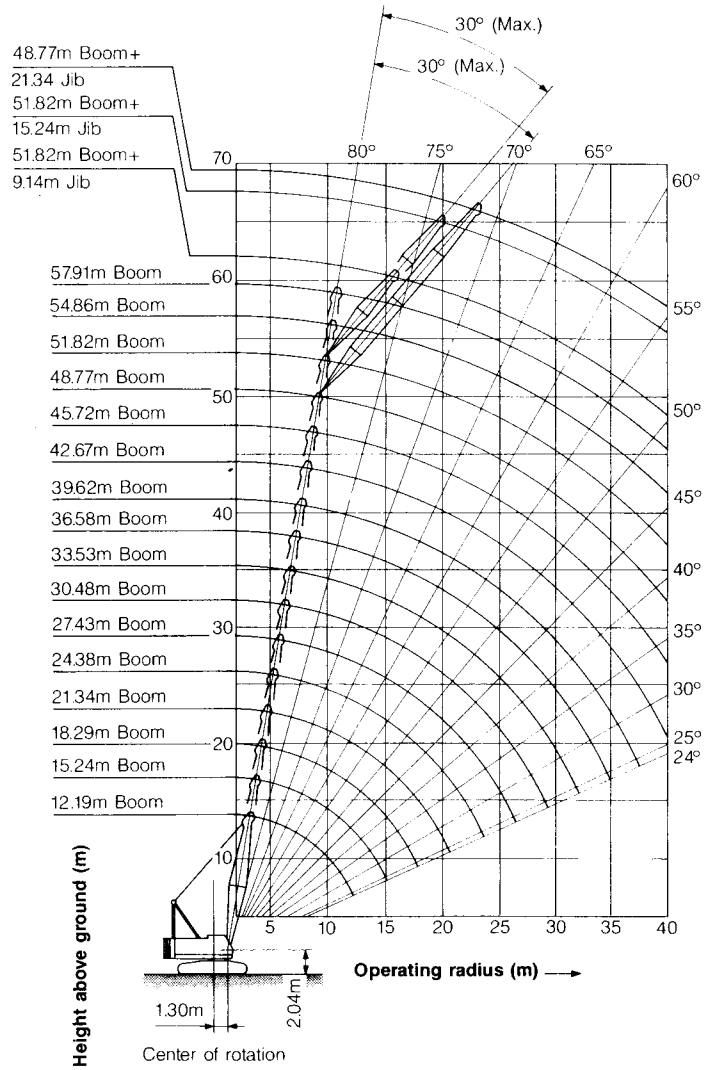
Unit: metric ton

Offset angle (°) \ Jib length m (ft)	9.14 (30)	15.24 (50)	21.34 (70)	Aux. sheave
10	10.0	8.0	4.3	10.0
30	5.0	5.0	3.1	

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

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 78% 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 23,500 kg 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.
6. The crane must be leveled to within 1% on a firm supporting surface.
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 33.53 m to 51.82 m.
13. An auxiliary sheave cannot be used on a 57.91 m boom.
14. The boom should be erected over the front of the crawlers, not laterally.

Working Range (with fixed jib)



Boom Component Chart

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

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

Jib Component Chart

Jib length meters (ft)	Jib arrangement
9.14 (30)	Base-Tip
15.24 (50)	Base-A-Tip
21.34 (70)	Base-A-A-Tip

Base = 7.62 m (15′), Tip = 7.62 m (15′),
Inserts: A = 6.10 m (20′)

Main Hoist Reeving

No. of parts of line	1	2	3	4
Max. load (tons)	10.0	20.0	30.0	40.0
No. of parts of line	5	6	7	8
Max. load (tons)	50.0	60.0	70.0	80.0