

# HEAVY DUTY BASE MACHINE FOR FOUNDATION WORK BM 500

# KOBELCO

Max. Lifting Capacity: 50 Metric Tons at 3.8 Meters

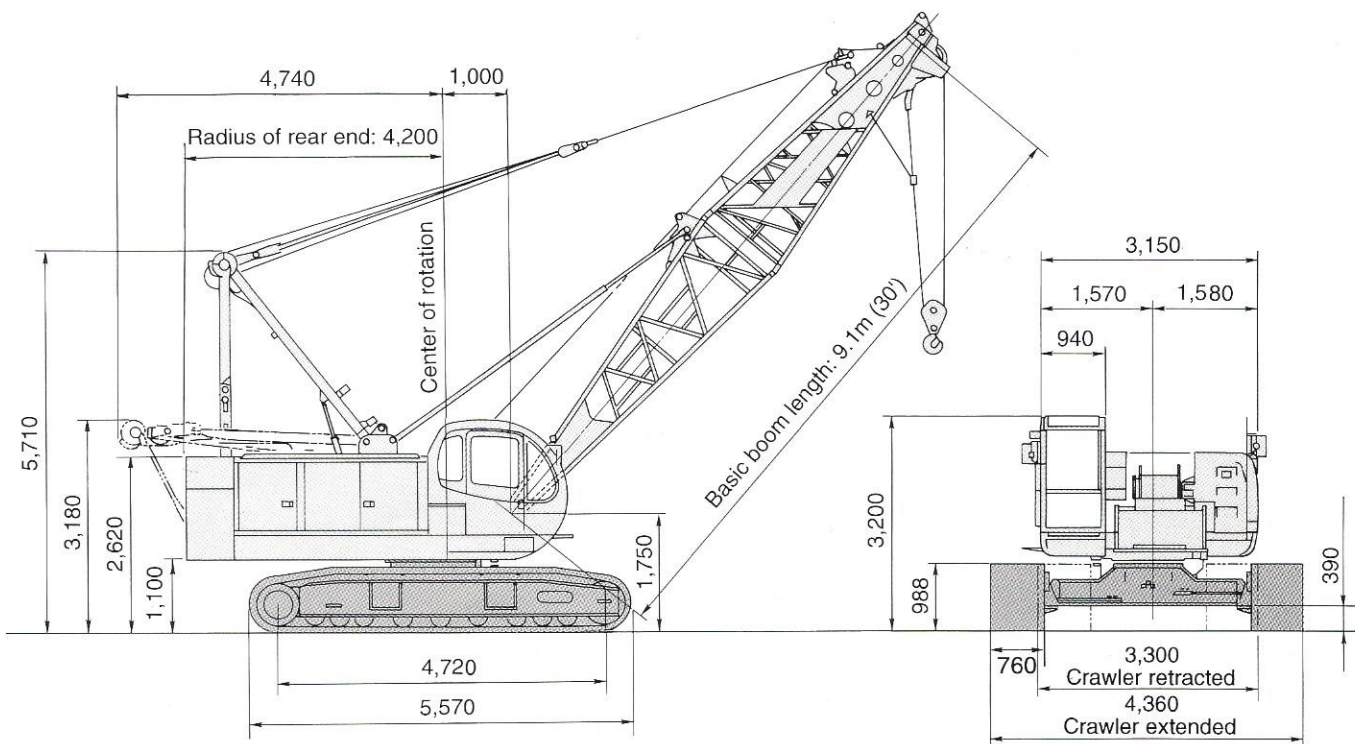
Max. Boom Length: 51.8 Meters

## Specifications

- A mega-powered crane equipped with precision control capability.
- Engine Speed Sensing (ESS) System makes efficient 100% use of engine power for steady, effortless operation.
- Powerful engine and strong line pull make light work of heavy-duty tasks such as diaphragm wall construction.
- Precise, full hydraulic control gives crane performance ideal for construction tasks demanding high precision.
- Powerful winch first layer maximum line pull of 17 tons, and wide, large-diameter drum with maximum rope capacity of 32 m at first layer.
- Maximum line speed of 100 m/min for main and auxiliary winches.

## General Dimensions

Unit: mm



## Notes:

- Operating radius is the horizontal distance from the centerline of rotation to a vertical line through the centerline of gravity of the load.
- Rated loads included in the charts are the maximum allowable freely suspended loads at a given boom length, boom angle and radius, and have been determined for the machine standing level on firm supporting surface under ideal operating conditions. The user must limit or de-rate 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).
- Capacities do not exceed 75% of minimum tipping loads. Some of the rated crane loads are based on the structural strength, and overload could damage the boom, jib and frame, etc. without tipping.
- Areas on rated crane load table where no rating are shown, operation is not intended or approved.
- The loads can be lifted actually is obtained by deducting weight of hook block, slings and all other load handling accessories from the rated crane load.
- For arrangements of the boom, jib and guy lines and reevings of the boom hoist rope, strictly observe the instruction of the operator's manual.
- Gantry must be in fully raised position for all operations.
- Hook block capacity and weight (metric ton).

Capacity of hook	50 ton	32 ton	19 ton	6.6 ton (ball-hook)	6.6 ton (swivel-hook)
Weight (metric ton)	0.65	0.5	0.4	0.16	0.06

## 9. Max. hoisting load

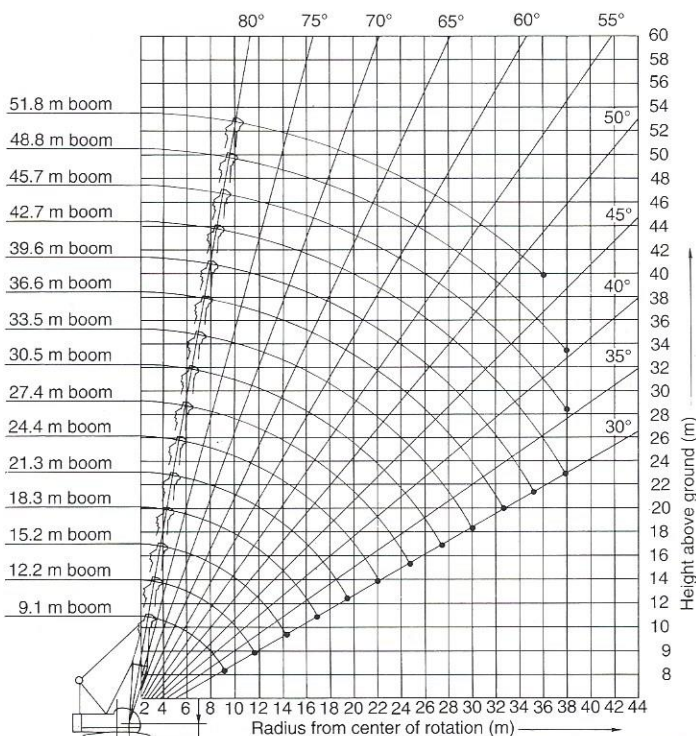
No. of parts of line	1	2	3	4	5
Max. load (metric ton)	6.6	13.2	19.8	26.4	33.0
No. of parts of line	6	7	8		
Max. load (metric ton)	39.6	46.2	50.0		

## 10. When lifting over boom point with jib or auxiliary sheave, rated loads for the boom must be deducted as shown below.

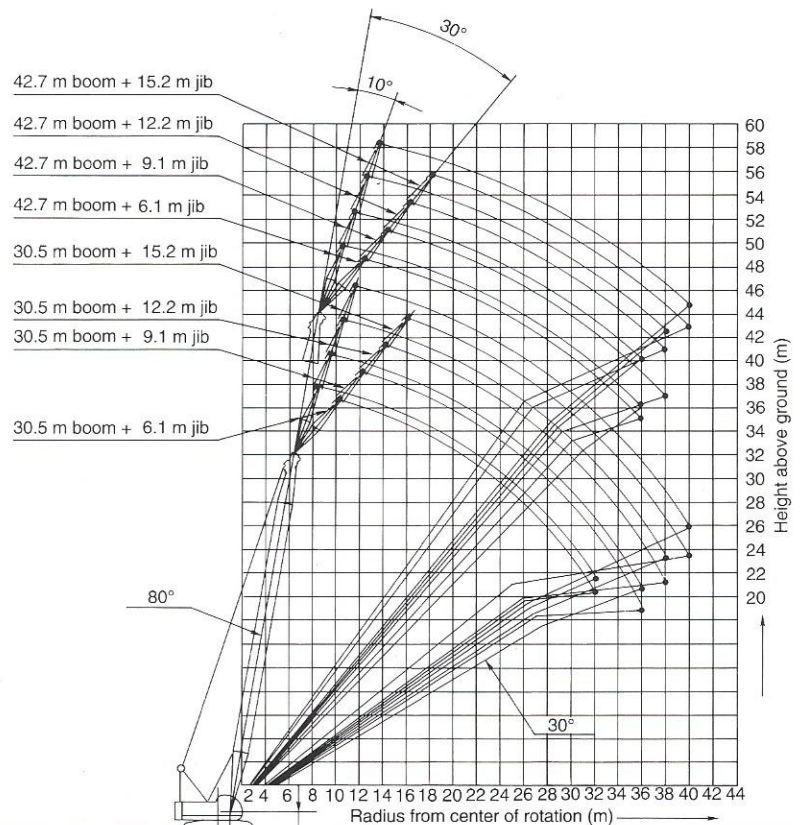
Jib length m (ft)	6.1 (20)	9.1 (30)	12.2 (40)	15.2 (50)	Aux. sheave
Deduct (metric ton)	1.1	1.4	1.6	1.9	0.46

- The total loads that can be lifted over a jib is limited by rated jib loads. The total load that can be lifted over an auxiliary sheave is limited by rated aux. sheave load. Weight of hooks, hook blocks, slings and other lifting devices are a part of the total load. Their total weight must be subtracted from the rated load to obtain the weight that can be lifted.
- Boom lengths for jib mounting are 30.5 m (100') to 42.7 m (150').
- An aux. sheave cannot be used on 51.8m (170') boom length.
- Insert boom with lug is required for jib mounting.

## Working Ranges



## Fixed Jib Working Range



# Boom Lifting Capacities

# BM500

Unit: metric ton

## Boom rated loads in metric tons for 360° working area

Crawlers fully extended

Boom length m (ft) Operating radius (m)	9.1 (30)	12.2 (40)	15.2 (50)	18.3 (60)	21.3 (70)	24.4 (80)	27.4 (90)	30.5 (100)	33.5 (110)	36.6 (120)	39.6 (130)	42.7 (140)	45.7 (150)	48.8 (160)	51.8 (170)	Boom length m (ft) Operating radius (m)
3.5	50.0/3.5	50.0/3.5														3.5
3.8	50.0	50.0														3.8
4.0	49.0	48.9	48.8/4.0	41.8/4.5												4.0
5.0	35.1	35.0	35.0	34.9	34.8/5.0	29.7/5.6										5.0
6.0	26.4	26.4	26.3	26.3	26.2	26.2	26.0/6.1	23.0/6.6								6.0
7.0	21.1	21.0	21.0	20.9	20.9	20.8	20.8	20.7	19.8/7.2	18.0/7.7						7.0
8.0	17.5	17.5	17.4	17.4	17.3	17.3	17.2	17.2	17.1	17.1	16.9/8.2	15.3/8.7				8.0
9.0	14.9	14.9	14.8	14.8	14.7	14.7	14.6	14.6	14.5	14.5	14.4	14.4	13.2/9.3	13.2/9.8		9.0
10.0	14.7/9.1	13.0	12.9	12.9	12.8	12.8	12.7	12.7	12.6	12.6	12.5	12.5	12.4	12.4	11.5/10.3	10.0
12.0		10.5/11.7	10.1	10.1	10.0	10.0	9.9	9.9	9.8	9.8	9.7	9.7	9.6	9.6	9.5	12.0
14.0			8.3	8.3	8.2	8.2	8.1	8.1	8.0	8.0	7.9	7.9	7.8	7.8	7.7	14.0
16.0			8.0/14.4	7.0	6.8	6.8	6.7	6.7	6.6	6.6	6.5	6.5	6.4	6.4	6.3	16.0
18.0				6.4/17.0	5.9	5.8	5.7	5.7	5.6	5.6	5.5	5.4	5.4	5.3	5.2	18.0
20.0					5.2/19.7	5.0	4.9	4.9	4.9	4.8	4.8	4.6	4.5	4.4	4.3	20.0
22.0						4.4	4.3	4.2	4.1	4.1	4.0	3.9	3.9	3.8	3.6	22.0
24.0						4.3/22.3	3.8	3.7	3.6	3.6	3.5	3.4	3.3	3.2	3.1	24.0
26.0							3.6/24.9	3.2	3.2	3.1	3.0	2.9	2.8	2.8	2.6	26.0
28.0								2.9/27.6	2.8	2.8	2.6	2.5	2.5	2.3	2.2	28.0
30.0									2.5	2.4	2.3	2.2	2.1	2.0	1.8	30.0
32.0									2.5/30.2	2.2	2.0	1.9	1.8	1.6	1.5	32.0
34.0										2.1/32.9	1.7	1.6	1.5	1.3	1.2/34.0	34.0
36.0											1.5/35.5	1.3	1.2	1.1/36.0		36.0
38.0												1.1/38.5	1.1/37.0			38.0

Note: Ratings shown in  are determined by the strength the boom or other structural components.

## Boom Arrangement

### Arrangement A: 3.0m + 6.1 m + 9.1 m insert boom

Boom length m (ft)	Boom arrangement
9.1 (30)	Base-Tip
12.2 (40)	Base-A-Tip
15.2 (50)	Base-B-Tip, Base-A-A-Tip
18.3 (60)	Base-A-B-Tip, Base-C-Tip
21.3 (70)	Base-A-C-Tip, Base-B-B-Tip, Base-A-A-B-Tip
24.4 (80)	Base-B-C-Tip, Base-A-B-B-Tip, Base-A-A-C-Tip
27.4 (90)	Base-A-B-C-Tip, Base-B-B-B-Tip, Base-A-A-B-B-Tip, Base-C-C-Tip
30.5 (100)	Base-B-B-C-Tip, Base-A-B-B-B-Tip, Base-A-A-B-C-Tip, Base-A-C-C-Tip

Base = 5.1m(17'), Tip = 4.0m(13')

Inserts: A = 3.0 m (10'), B = 6.1 m (20'), C = 9.1m (30')

Boom length m (ft)	Boom arrangement
33.5 (110)	Base-B-C-C-Tip, Base-A-B-B-C-Tip, Base-A-A-C-C-Tip
36.6 (120)	Base-A-B-C-C-Tip, Base-A-A-B-B-C-Tip, Base-B-B-B-C-Tip
39.6 (130)	Base-B-B-C-C-Tip, Base-A-A-B-C-C-Tip, Base-A-B-B-B-C-Tip
42.7 (140)	Base-A-A-B-B-B-C-Tip, Base-A-B-B-C-C-Tip
45.7 (150)	Base-A-A-B-B-C-C-Tip, Base-B-B-B-C-C-Tip
48.8 (160)	Base-A-B-B-B-C-C-Tip
51.8 (170)	Base-A-A-B-B-B-C-C-Tip

### Arrangement B: 3.0m + 6.1 m insert boom

Boom length m (ft)	Boom arrangement
9.1 (30)	Base-Tip
12.2 (40)	Base-A-Tip
15.2 (50)	Base-B-Tip, Base-A-A-Tip
18.3 (60)	Base-A-B-Tip
21.3 (70)	Base-B-B-Tip, Base-A-A-B-Tip
24.4 (80)	Base-A-B-B-Tip
27.4 (90)	Base-B-B-B-Tip, Base-A-A-B-B-Tip

Base = 5.1m(17'), Tip = 4.0m(13')

Inserts: A = 3.0 m (10'), B = 6.1 m (20'), C = 9.1m (30')

Boom length m (ft)	Boom arrangement
30.5 (100)	Base-A-A-A-B-B-Tip, Base-A-B-B-B-Tip
33.5 (110)	Base-B-B-B-B-Tip, Base-A-A-B-B-B-Tip
36.6 (120)	Base-A-B-B-B-B-Tip, Base-A-A-A-B-B-B-Tip
39.6 (130)	Base-B-B-B-B-B-Tip, Base-A-A-B-B-B-Tip
42.7 (140)	Base-A-B-B-B-B-B-Tip, Base-A-A-A-B-B-B-B-Tip
45.7 (150)	Base-B-B-B-B-B-B-Tip, Base-A-B-B-B-B-B-Tip
48.8 (160)	Base-A-B-B-B-B-B-B-Tip, Base-A-A-A-B-B-B-B-B-Tip
51.8 (170)	Base-A-A-B-B-B-B-B-B-Tip