

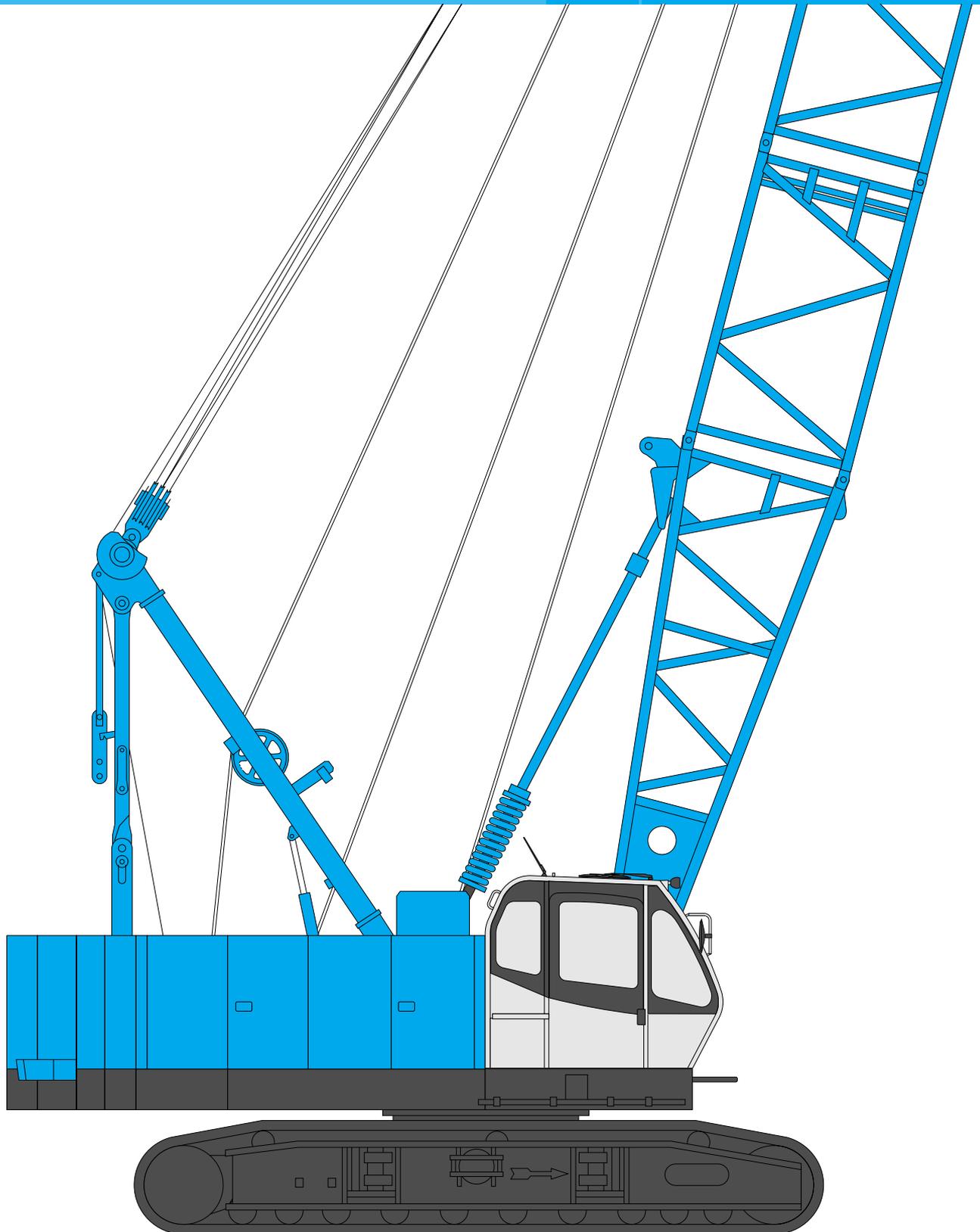


KOBELCO

HEAVY DUTY BASE MACHINE
FOR FOUNDATION WORK

BME800HD

Model: BME800HD



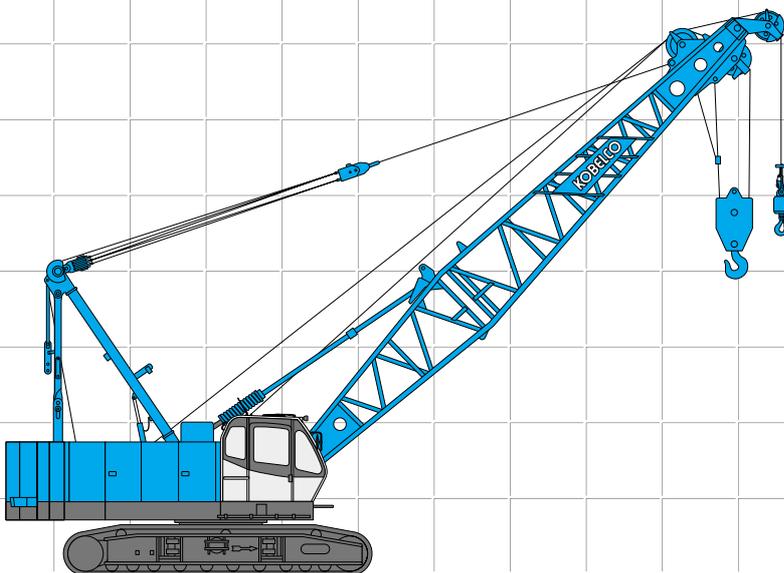
Max. Lifting Capacity: 80 t x 3.6 m
Max. Crane Boom Length: 54.9 m



CONFIGURATION

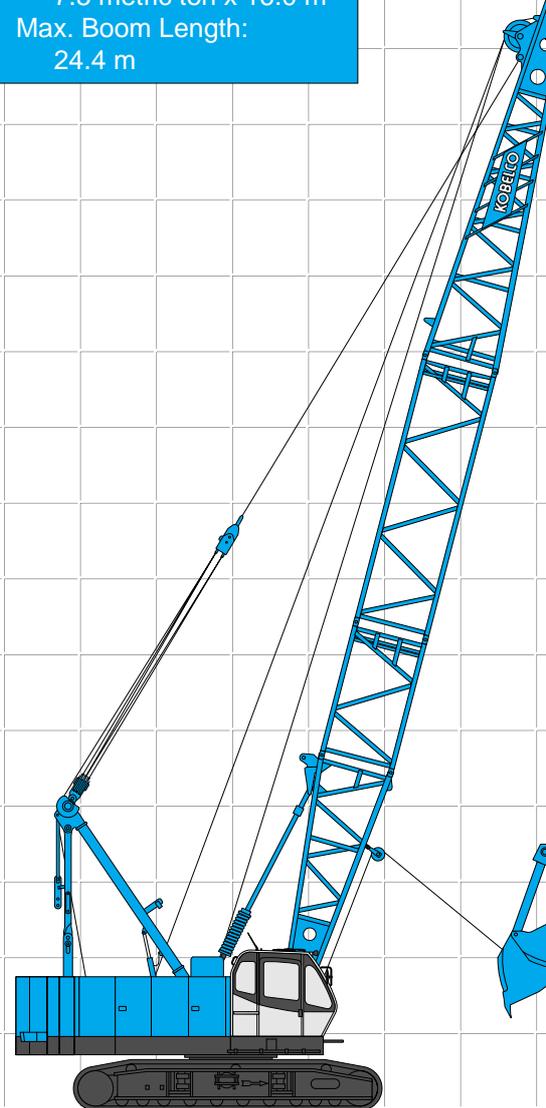
Crane Boom

Max. Lifting Capacity:
80 metric ton x 3.6 m
Max. Boom Length:
54.9 m



Clamshell

Max. Lifting Capacity:
7.5 metric ton x 16.0 m
Max. Boom Length:
24.4 m

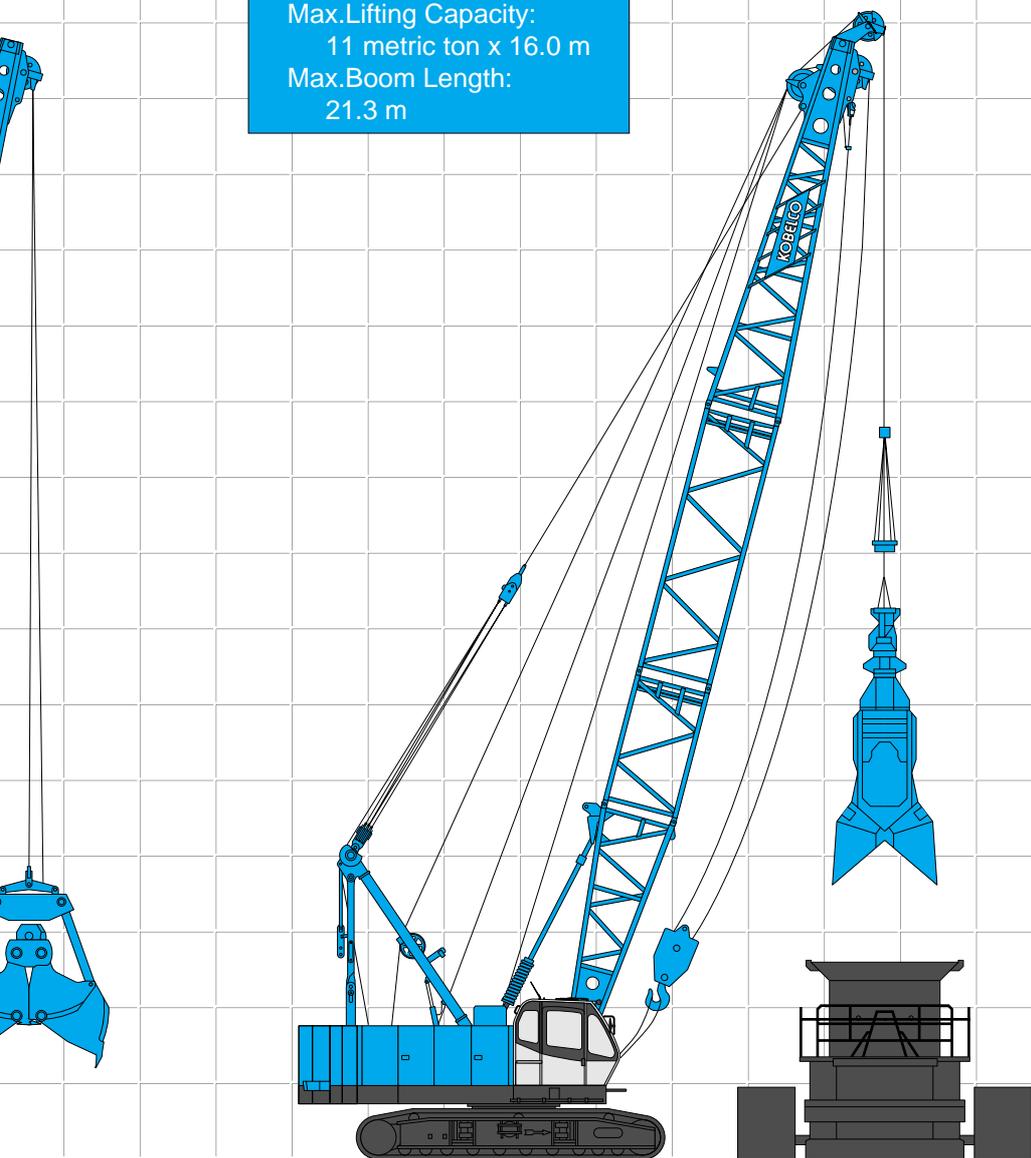




HEAVY DUTY BASE MACHINE FOR FOUNDATION WORK BME800 HD

Hammer Grab

Max.Lifting Capacity:
11 metric ton x 16.0 m
Max.Boom Length:
21.3 m



CONTENTS

- Configuration 1
- Specifications 3
- General Dimensions 5
- Boom Arrangements 6
- Working Ranges and Lifting Capacities
 - Crane Boom Working Ranges 8
 - Crane Boom Lifting Capacity 9
 - Auxiliary Sheave Lifting Capacity for Crane Boom 10
- Clamshell 11
- Parts and Attachments ... 12



SPECIFICATIONS



Power Plant

Model: Hino diesel engine P11C-UN

Type: Water-cooled, direct fuel injection, with turbocharger
Complies with NRMM (Europe) stage IIIA and US EPA Tier III.

Displacement: 10.520 liters

Rated Power: 247 kW/2,000 min⁻¹ {rpm} (ISO)

Max. torque: 1,300 N·m/1,500 min⁻¹

Cooling system: Liquid, recirculating bypass

Starter: 24 V/6.0 kW

Radiator: Corrugated type core, thermostatically controlled

Air cleaner: Dry type with replaceable paper element

Throttle: Electric throttle control, twist grip type

Fuel filter: Replaceable paper element

Batteries: Two 12V, 170 Ah/20HR capacity batteries, series connected.

Fuel tank capacity: 400 liters



Hydraulic System

Three variable displacement piston pumps are driven by heavy-duty pump drive. Two of variable displacement pumps are used in the main hook hoist circuit, boom hoist circuit, auxiliary hook hoist circuit and each propel circuit. The other is used in the swing circuit.

Control: Full-flow hydraulic control system for infinitely variable pressure to front and rear drums, boom hoist brakes and clutches. Controls respond instantly to the touch, delivering smooth function operation.

Cooling: Oil-to-air heat exchanger (plate-fin type)

Filtration: Full-flow and bypass type with replaceable element

Electrical system: All wiring corded for easy servicing, individual fused branch circuits.

Max. relief valve pressure:

Load hoist, boom hoist and propel system:

31.9 MPa {325 kgf/cm²}

Swing system: 27.5 MPa {280 kgf/cm²}

Control system: 7.0 MPa {71 kgf/cm²}

Reservoir capacity: 440 liters

Powered by a hydraulic motor through a planetary reducer.



Boom Hoisting System

Brake: A spring-set, hydraulically released multiple-disc brake is mounted on the boom hoist motor and operated through a counter-balance valve.

Drum lock: External ratchet for locking drum.

Drum: Single drum, grooved for 18 mm dia. wire rope.

Line speed: Single line on first drum layer

Hoisting/Lowering: 70 to 2 m/min

Diameter of wire ropes

Boom guy line: 30 mm

Boom hoist reeving: 12 parts of 18 mm dia. high strength wire rope

Boom backstops: Required for all boom length



Load Hoist System

Front and rear drums for load hoist powered by a hydraulic variable plunger motors, driven through planetary reducers.

Positive & Negative Brake: Forced-circulation oil-cooled wet-type multi-disc brake, each using positive and negative actuation. The drums are manually locked by the control cable. Both positive and negative brake systems are available in lever neutral position.

Drum lock: External ratchet for locking drum.

Drums:

Front drum:

614 mm P.C.D. x 617 mm wide drum, grooved for 26 mm wire rope. Rope capacity is 170 m working length and 242 m storage length.

Rear drum:

614 mm P.C.D. x 617 mm wide drum, grooved for 26 mm wire rope. Rope capacity is 125 m working length and 242 m storage length.

Note: Rope lengths listed above denote drum capacity and may differ from actual rope lengths supplied when machinery is shipped.

Line speed: Single line on the first drum layer

Hoisting/Lowering: 120 to 3 m/min

Line Pull (Single-line):

Max. line pull: 196 kN {20 tf} (1st layer)

Rated line pull: 108 kN {11 tf}

Note: Max. line pull is theoretical values under certain test condition.



Swing System

Swing unit is powered by hydraulic motor driving spur gear through planetary reducer, the swing system provides 360° rotation.

Swing parking brakes: A spring-set, hydraulically released multiple-disc brake is mounted on swing motor.

Swing circle: Single-row ball bearing with an integral internally cut swing gear.

Swing lock: Manually, four position lock for transportation

Swing speed: 4.0 min⁻¹ {rpm}



Upper Structure

Torsion-free precision machined upper frame. All components are located clearly and service friendly. Engine with low noise level. Complies with EC Directive 2000/14/EC.

Counterweight: 25.7 ton



HEAVY DUTY BASE MACHINE FOR FOUNDATION WORK BME800HD



Cab & Control

Totally enclosed, full vision cab with safety glass, fully adjustable, high backed seat with a head-rest and armrests, and intermittent wiper and window washer (roof and front window).

Cab fittings:

Air conditioner, convenient compartment (for tool), cup holder, ashtray, cigarette lighter, sun visor, roof blind, tinted glass, floor mat, foot-rest, shoe tray

Controls: Four adjustable levers for front drum, rear drum, boom drum and swing controls, and boom hoist pedal.



Lower Structure

Steel-welded carbody with axles. Crawler assemblies can be hydraulically extended for wide-track operation or retracted for transportation. Crawler belt tension is maintained by hydraulic jack force on the track-adjusting bearing block.

Carbody weight: 6.7 ton

Crawler drive: Independent hydraulic propel drive is built into each crawler side frame. Each drive consists of a hydraulic motor propelling a driving tumbler through a planetary gear box. Hydraulic motor and gear box are built into the crawler side frame within the shoe width.

Crawler brakes: Spring-set, hydraulically released parking brakes are built into each propel drive.

Steering mechanism: A hydraulic propel system provides both skid steering (driving one track only) and counter-rotating steering (driving each track in opposite directions).

Track rollers: Sealed track rollers for maintenance-free operation.

Shoes (flat): 59 shoes, 800 mm wide each crawler

Max. travel speed: 1.9/1.2 km/h

Max. gradeability: 30%



Weight

Including upper and lower machine, 25.7 ton counterweight and 6.7 ton carbody weight, 12.2 m basic boom hook, and other accessories.

Specification	Weight	Ground pressure
Crane boom	Approx. 81 ton,	97 kPa {0.99 kgf/cm ² }



Attachment

Boom

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

Boom Length

	Min. length (Min. Combination)	Max. length (Max. Combination)
Crane boom	12.2 m	54.9 m

Main Specifications (Model: BME800HD)

Crane Boom	
Max. Lifting Capacity	80 t/3.6 m
Max. Length	54.9 m
Main & Aux. Winch	
Line Speed	120 to 3 m/min (1st layer)
Max. line pull (Single-line)***	196 kN {20 tf} (1st layer)
Rated Line Pull (Single-line)	108 kN {11 tf}
Wire Rope	26 mm
Wire Rope Length	170 m (Main) 125 m (Aux.)
Brake Type	Forced-circulation oil-cooled wet-type multi-disc brake (Positive & Negative)
Working Speed	
Swing Speed	4.0 min ⁻¹ {rpm}
Travel Speed	1.9/1.2 km/h
Power Plant	
Model	Hino P11C-UN
Engine Output	247 kW/2,000 min ⁻¹ {rpm}
Fuel Tank Capacity	400 liters

Hydraulic System	
Main Pumps	3 variable displacement
Max. Pressure	31.9MPa {325 kgf/cm ² }
Hydraulic Tank Capacity	440 liters
Self-Removal device	Standard counterweight removal
Weight	
Operating Weight*	Approx. 81 t
Ground Pressure*	97 kPa {0.99 kgf/cm ² }
Counterweight	25.7 t (Upper), 6.7 t (Lower)
Transport Weight**	Approx. 45 t

Units are SI units. { } indicates conventional units.

Line speed in table are for light loads. Line speed varies with load.

* Including upper and lower machine, 25.7 ton counterweight and 6.7 ton carbody weight, 12.2m basic boom, hook and other accessories.

** Base machine with gantry, carbody, crawlers, wire ropes for main aux. winches, lower spreader (Refer to notes P12).

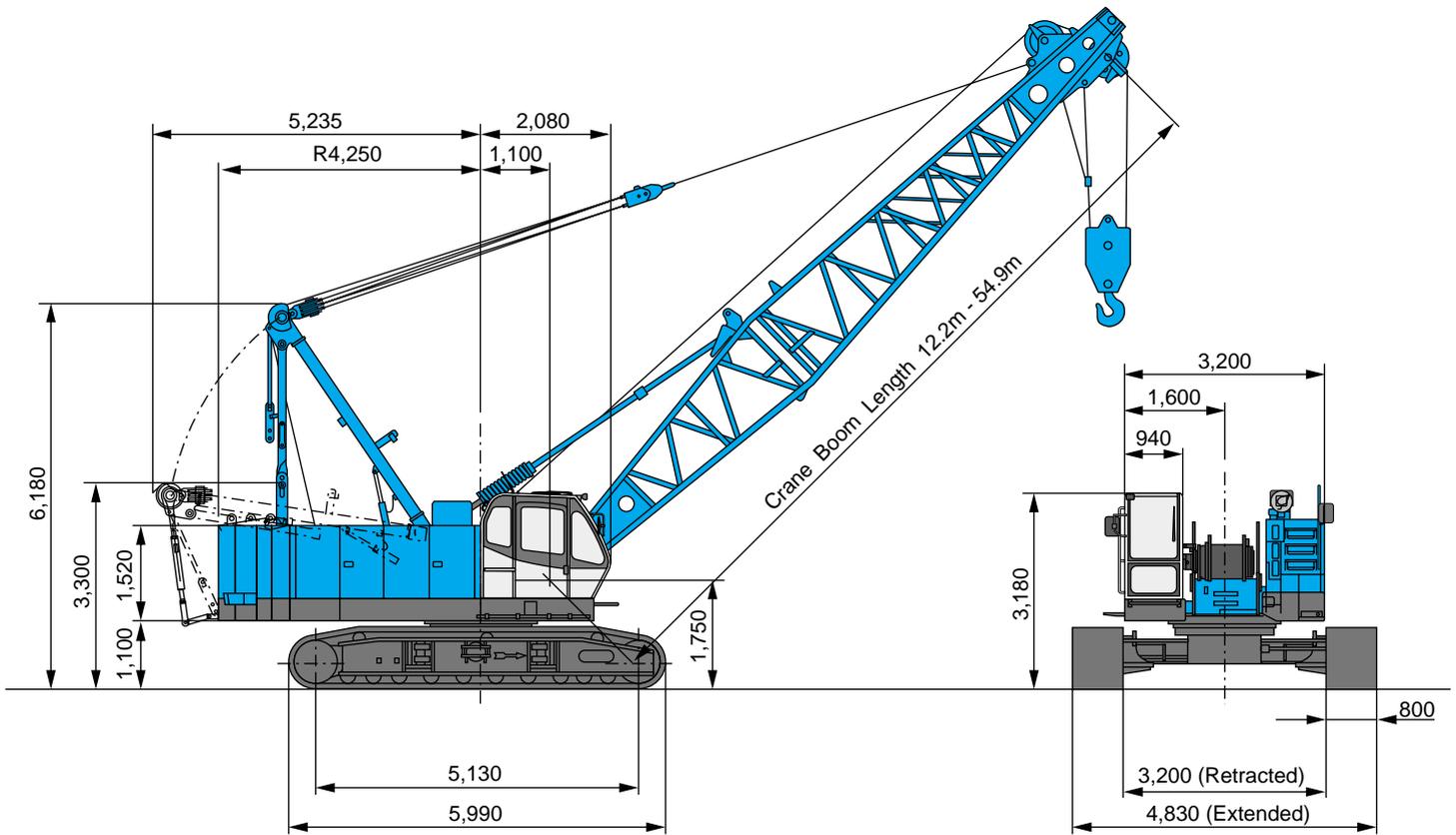
*** Max. line pull is theoretical values under certain test condition.



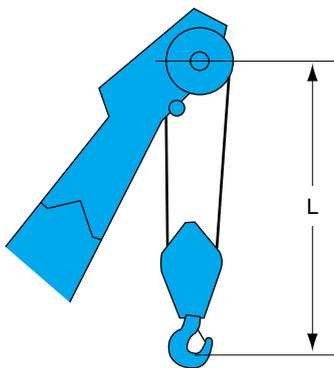
GENERAL DIMENSIONS

Crane Boom

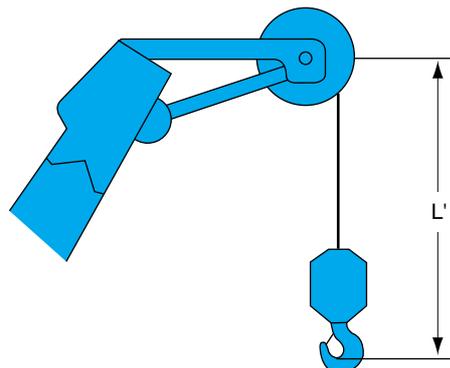
(Unit: mm)



Limit of Hook Lifting



Hook	L
80 t hook	4.3 m
50 t hook	4.1 m
32 t hook	4.1 m



Hook	L'
11 t ball hook	4.2 m



BOOM ARRANGEMENTS

HEAVY DUTY BASE MACHINE FOR FOUNDATION WORK BME800 HD

Boom length m (ft)	Boom arrangement
12.2 (40)	
15.2 (50)	
18.3 (60)	
21.3 (70)	
24.4 (80)	
27.4 (90)	
30.5 (100)	
33.5 (110)	

Boom length m (ft)	Boom arrangement
36.6 (120)	
39.6 (130)	
42.7 (140)	
45.7 (150)	
48.8 (160)	
51.8 (170)	
54.9 (180)	

Symbol	Boom Length	Remarks
	5.2 m	Boom Base
	7.0 m	Boom Top
	3.0 m	Insert Boom
	6.1 m	Insert Boom
	9.1 m	Insert Boom

mark shows the standard boom arrangement which enables each boom length of less than that boom length to be configured.

**Hook Blocks**

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

Hooks	Weight (kg)	No. of sheaves	No. of lines and max. rated loads (tons)							
			1	2	3	4	5	6	7	8
80-ton	950	4	—	—	33.0	44.0	55.0	66.0	77.0	80.0
50-ton	700	3	—	22.0	33.0	44.0	50.0	—	—	—
32-ton	550	1	—	22.0	32.0	—	—	—	—	—
11-ton ball hook	300	0	11.0	—	—	—	—	—	—	—

Symbols for Attachments:

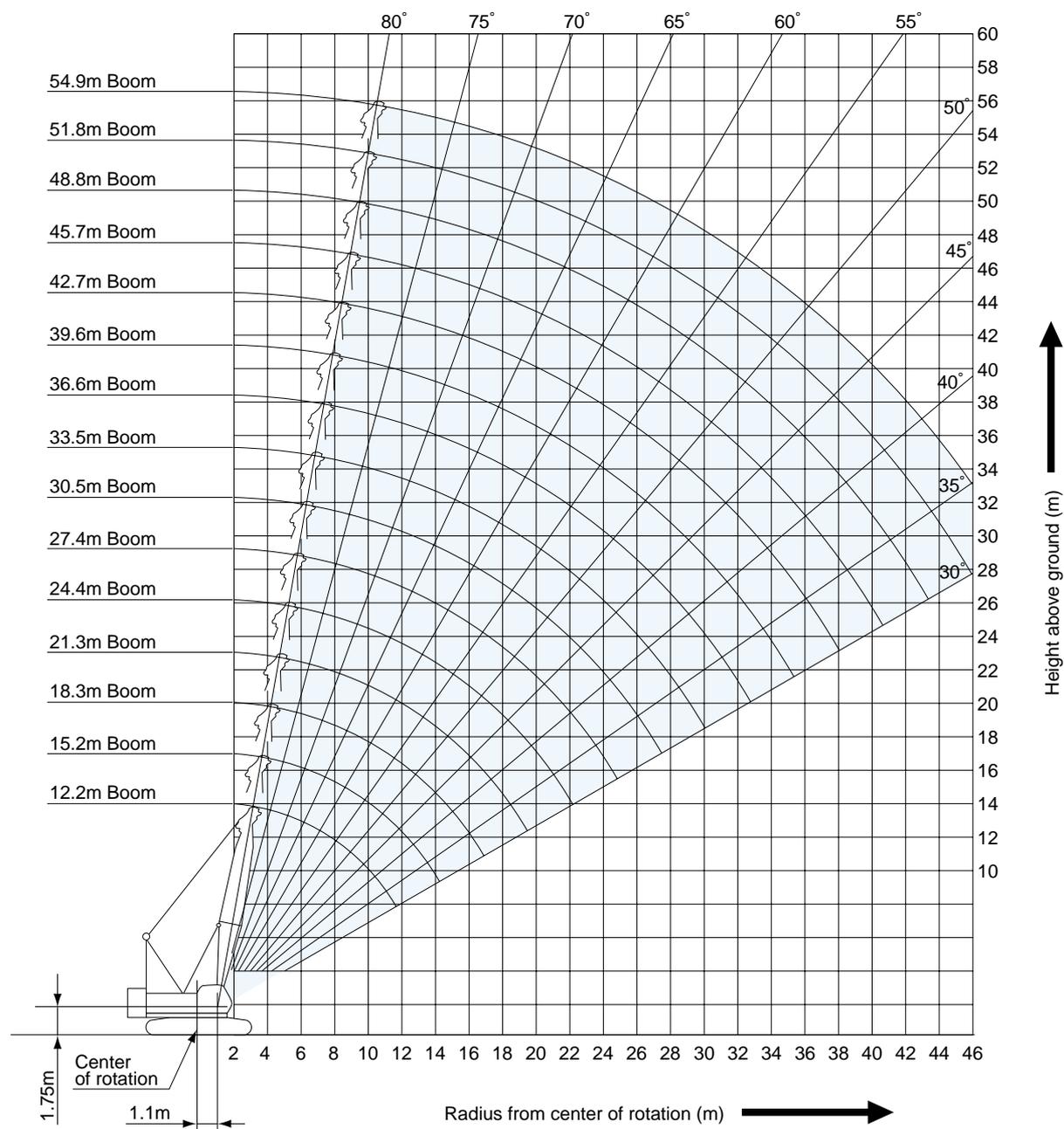
Crane Boom

Auxiliary Sheave
for Crane Boom



WORKING RANGES AND LIFTING CAPACITIES

Crane Boom Working Ranges



NOTES:

1. Ratings according to EN13000.
2. Ratings in metric tons for 360° working area.
3. Operating radius is the horizontal distance from center of rotation to a vertical line through the center of gravity of the load.
4. Weight of hook block(s), slings and other load handling accessories is included in rated load. Their total weight must be subtracted from rated load to obtain weight that can be lifted.
5. 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. Operator, therefore, has the responsibility to judge the existing conditions and reduce lifted loads and operating speeds accordingly.
6. Ratings are for operation on a firm and level surface, up to 1% gradient.
7. At radii and boom lengths where no ratings are shown on chart, operation is not intended nor approved.
8. Boom inserts and guy lines must be arranged as shown in the "Operator's Manual".
9. Boom hoist reeving is 12 part line.
10. Gantry must be in raised position for all conditions.
11. Boom backstops are required for all boom lengths.
12. Crawler frames must be fully extended for all crane operations.
13. Ratings shown in are determined by the strength of the boom or other structural component.
14. Instruction in the "Operator's Manual" must be strictly observed when operating the machine.
15. Crane boom ratings: Deduct weight of main hook block, slings, and all other load handling accessories from main boom ratings shown.
16. Auxiliary sheave ratings for crane boom: Deduct weight of ball hook, slings, and all other load handling accessories from auxiliary sheave ratings shown.
17. Crane boom lengths for auxiliary sheave mounting are 12.2 m to 51.8 m.



HEAVY DUTY BASE MACHINE FOR FOUNDATION WORK BME800 HD

Auxiliary Sheave Lifting Capacity for Crane Boom (With 32 t Main Hook)

Unit: metric ton

Counterweight : 25.7tons, Carbodyweight : 6.7tons

Working radius(m)	Boom Length (m)												Boom Length (m)	Working radius(m)	
		12.2	15.2	18.3	21.3	24.4	27.4	30.5	33.5	36.6	39.6	42.7			45.7
5.0	11.0	11.0	5.4m/11.0	5.9m/11.0											5.0
6.0	11.0	11.0	11.0	11.0	6.4m/11.0										6.0
7.0	11.0	11.0	11.0	11.0	11.0	11.0	7.5m/11.0								7.0
8.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	8.6m/11.0						8.0
9.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	9.1m/11.0	9.6m/11.0				9.0
10.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	10.1m/11.0			10.0
12.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0		12.0
14.0	13.0m/11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0		14.0
16.0		15.6m/11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	10.9	10.6	10.3	10.0		16.0
18.0			9.1	9.6	9.5	9.4	9.3	9.2	9.1	8.9	8.8	8.5	8.0		18.0
20.0			18.3m/8.7	7.8	8.1	8.0	7.9	7.8	7.7	7.5	7.5	7.3	7.0		20.0
22.0				20.9m/6.9	7.0	6.9	6.8	6.7	6.5	6.4	6.4	6.2	6.0		22.0
24.0					23.6m/6.1	6.0	5.9	5.8	5.6	5.5	5.4	5.3	5.0		24.0
26.0						5.1	5.1	5.0	4.9	4.8	4.7	4.6	4.4		26.0
28.0						26.2m/5.0	4.3	4.4	4.2	4.1	4.0	3.9	3.8		28.0
30.0							28.8m/3.9	3.8	3.7	3.6	3.5	3.4	3.3		30.0
32.0								31.5m/3.3	3.2	3.1	3.0	2.9	2.8		32.0
34.0									2.7	2.7	2.6	2.5	2.4		34.0
36.0									34.1m/2.6	2.3	2.2	2.1	2.0		36.0
38.0										36.7m/2.1	1.9	1.8	1.7		38.0
40.0											39.4m/1.6	1.5	1.4		40.0
42.0												1.2	1.1		42.0
Reeves	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Reeves

Working radius(m)	Boom Length (m)	48.8	51.8	Boom Length (m)	Working radius(m)
		10.7m/11.0	11.2m/11.0		
10.0	10.7m/11.0	11.2m/11.0			10.0
12.0	11.0	11.0			12.0
14.0	11.0	11.0			14.0
16.0	9.7	9.3			16.0
18.0	8.2	7.9			18.0
20.0	7.1	6.8			20.0
22.0	6.1	5.8			22.0
24.0	5.2	5.1			24.0
26.0	4.4	4.3			26.0
28.0	3.8	3.6			28.0
30.0	3.2	3.1			30.0
32.0	2.8	2.6			32.0
34.0	2.3	2.2			34.0
36.0	2.0	1.8			36.0
38.0	1.7	1.5			38.0
40.0	1.4	1.2			40.0
42.0	1.1				42.0
Reeves	1	1			Reeves

NOTES:

Ratings according to EN13000.

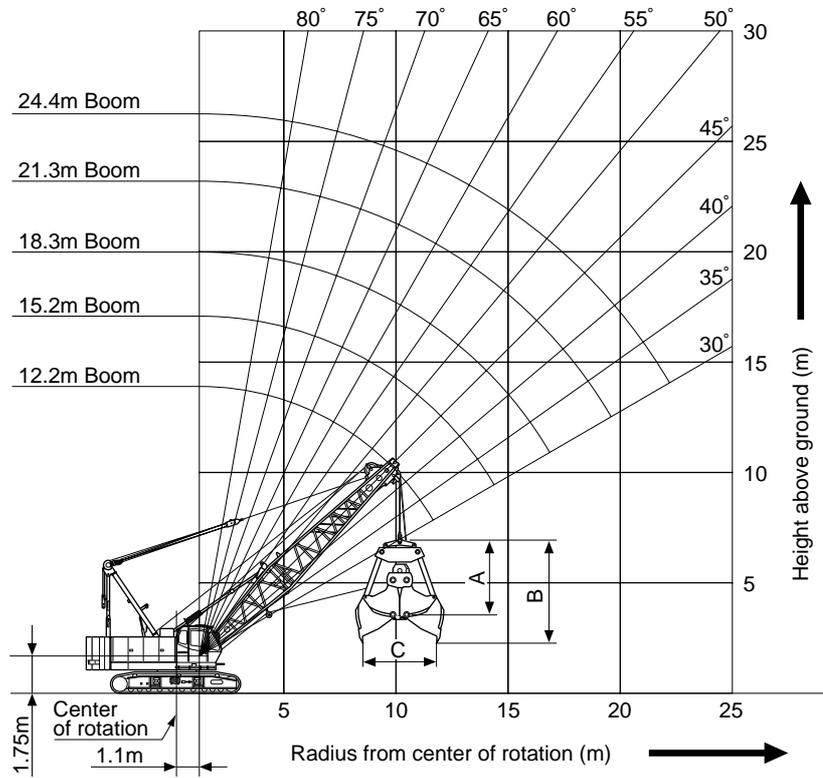
Ratings shown in are determined by the strength of the boom or other structural components.

Refer to notes P8.



CLAMSHELL

Working Ranges



Clamshell Bucket Lifting Capacity

Unit: metric ton

Working radius(m)	Boom Length (m)					Working radius(m)
	12.2	15.2	18.3	21.3	24.4	
5.0	7.5					5.0
5.5	7.5	7.5				5.5
6.0	7.5	7.5				6.0
7.0	7.5	7.5	7.5			7.0
8.0	7.5	7.5	7.5	7.5	7.2	8.0
9.0	7.5	7.5	7.5	7.5	7.2	9.0
10.0	7.5	7.5	7.5	7.5	7.2	10.0
11.0		7.5	7.5	7.5	7.2	11.0
12.0		7.5	7.5	7.5	7.2	12.0
13.0		7.5	7.5	7.5	7.2	13.0
14.0			7.5	7.5	7.2	14.0
15.0			7.5	7.5	7.1	15.0
16.0			7.5	7.5	6.9	16.0
17.0				7.1	6.7	17.0
18.0				6.6	6.5	18.0
19.0					6.0	19.0
20.0					5.6	20.0
21.0					5.2	21.0

Counterweight : 25.7tons, Carbodyweight : 6.7tons

Clamshell Bucket Specification (Reference)

Bucket Capacity (m³)	Bucket Weight (t)	Dimension (m)			Use
		A	B	C	
1.25	3.6	2.9	3.7	3.0	Digging
1.6	4.6	3.2	4.0	3.2	Digging
2.0	3.8	3.5	3.9	3.1	Scoop

NOTES:

- Working radius is the horizontal distance between the center of rotation and the bucket's center of gravity.
- Total weight of bucket and materials must not exceed rated load.
- Optimal bucket should be required according to material.
 $\text{Bucket capacity (m}^3\text{)} \times \text{Specified gravity of material (ton/m}^3\text{)} + \text{Bucket weight (ton)} = \text{Rated load}$
 Material: sand, gravel, lime (apparent specific gravity: approx. 1 to 1.8)
 Ex.) Bucket capacity: 2.0 m³, Bucket weight 3.8 tons
 $2.0 \text{ m}^3 \times 1.8 + 3.8 \text{ tons} = 7.4 \text{ tons}$
- Bucket weight must also be decreased according to operating cycle and bucket lowering height.
- Rated loads are determined by stability and boom strength.

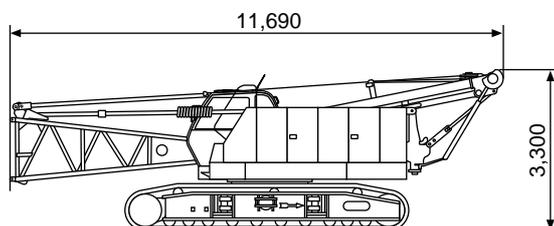


HEAVY DUTY BASE MACHINE FOR FOUNDATION WORK BME800 HD

Dimensions: mm

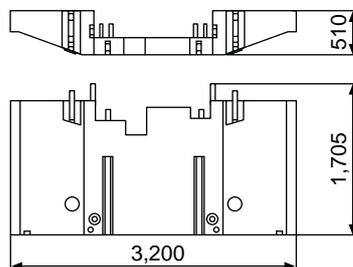
Base Machine

With gantry, boom base, carbody, crawlers, wire ropes for main and aux. winches, lower spreader and upper spreader.
Weight: 46,600 kg Width: 3,200 mm



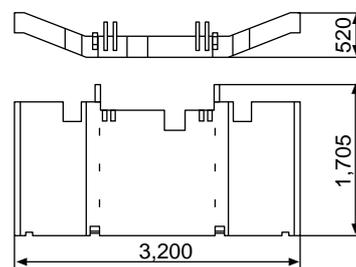
Counterweight A

Weight: 8,990 kg



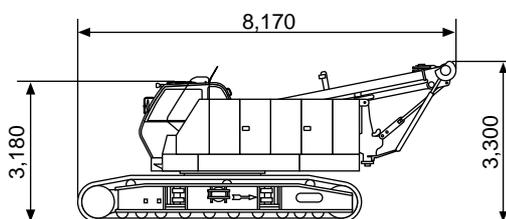
Counterweight B

Weight: 7,370 kg



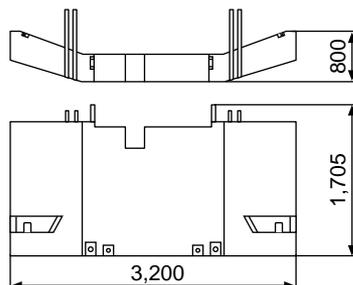
Base Machine

With gantry, carbody, crawlers, wire ropes for main and aux. winches and lower spreader.
Weight: 45,000 kg Width: 3,200 mm



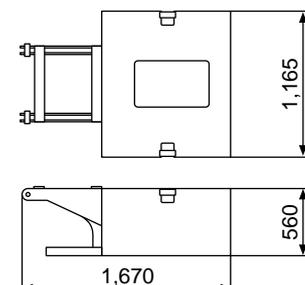
Counterweight C

Weight: 9,350 kg



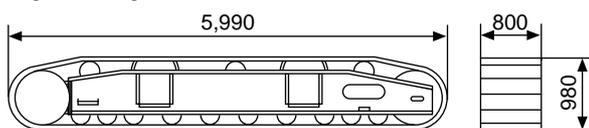
Carbodyweight

Weight: 3,340 kg x 2 pieces



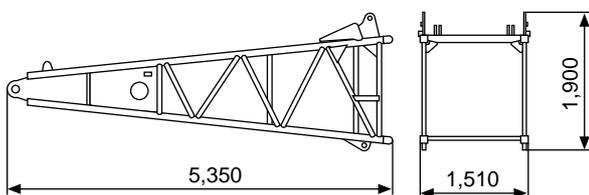
Crawler

Weight: 7,000 kg



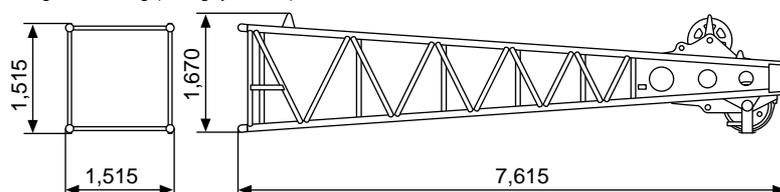
Boom Base

Weight: 1,130 kg

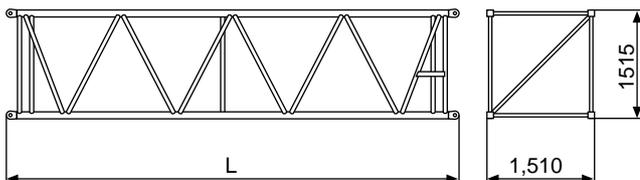


Boom Top

Weight: 1,480 kg (with guy cables)



Insert Boom



	L (mm)	Weight (kg)*
3.0m	3,160	380
6.1m	6,210	620
9.1m	9,260	860

*with guy cables

Other Attachments

Attachments	Weight	Dimensions (L x W x H)
Auxiliary sheave	330 kg	1,450 mm x 1,075 mm x 755 mm
Upper spreader	280 kg	1,580 mm x 300 mm x 680 mm
Gantry (with Lower spreader)	1,500 kg	4,550 mm x 1,450 mm x 800 mm
Crane backstop	700 kg	4,280 mm x 230 mm x 280 mm
11-ton ball hook	300 kg	1,050 mm x 360 mm dia.
32-ton hook block	550 kg	700 mm x 360 mm x 1,570 mm
50-ton hook block	700 kg	700 mm x 370 mm x 1,700 mm
80-ton hook block	950 kg	700 mm x 450 mm x 1,825 mm



HEAVY DUTY BASE MACHINE
FOR FOUNDATION WORK

BME800HD

Standard Equipment

Upper structure/Lower structure

Counterweight: 25.7 ton (total weight)
Carbody weight: 6.7 ton (total weight)
800 mm shoe crawlers
Batteries (170 Ah / 20 HR)
Gantry raising/lowering cylinder
Electric hand throttle grip
Variable boom hoist speed controller
Variable main/aux. hoist speed controller
Side deck for cab
Steps (crawlers)
Two front working lights
Tools (for routine maintenance)
Two rear view mirrors
Electric fuel pump
Counterweight self removal
Cable roller (for boom)
Upper spreader storage guide

Cab/Control

Boom hoist pedal (EU area only)
Air conditioner
Cup holder
Ashtray
Cigar lighter
Intermittent wiper & window washer
(skylight and front window)
Sun visor
Roof blind
Floor mat (cloth)
Foot rest
Shoe tray
Level gauge (operator cabin)

Safety Device

Load Moment Indicator (with boom lowering slow stop function)
LMI release key
(for hook over-hoist prevention device and boom over-hoist prevention device)
LCD multi display
Ultimate stop function for boom over - hoist
Function lock lever
Propel lever lock
Mechanical drum lock pawl (main, aux. and boom hoist)
Signal horn
Swing parking brake
Mechanical swing lock pin (two positions)
Swing flashers/warning buzzer
Cab window guard (left side)
Cab top guard
Fire extinguisher
External lamp for over-load alarm
Life hammer

Note: Standard equipment may vary depending on your areas or countries.

Due to our policy of continual product improvements all designs and specifications are subject to change without advance notice.

Copyright by KOBELCO CRANES CO., LTD. No parts of this catalog may be reproduced in any manner without notice.

KOBELCO CRANES CO., LTD.

17-1, Higashigotanda 2-chome, Shinagawa-ku, Tokyo 141-8626 JAPAN
Tel: +81-3-5789-2130 Fax: +81-3-5789-3372

KOBELCO is the corporate mark used by Kobe Steel on a variety of products and in the names of a number of Kobe Steel Group companies.

Inquiries To: