

BME800HD

KOBELCO

HEAVY DUTY BASE MACHINE
FOR FOUNDATION WORK

BME800HD

Max. Lifting Capacity: 80 tons x 3.6 m

Max. Boom Length: 54.9 m



Heavy-duty reliability from wet-type disc brakes. Powerful and large capacity winches to handle any job with power to spare. Drawing on long experience in crane manufacture, KOBELCO researched the bottom line in boosting operating efficiency in civil engineering and foundations work, and has unveiled a new generation of base machines. The BME800HD features power and precision in operations, simple controls and comprehensive safety features. Economic to run, easy to transport, kind to operator and environment alike. In every respect the BME800HD delivers a performance that sets new standards for heavy-duty foundation work.

BME800HD **Five Major Features**

1

High-Performance Winch Accommodates a Wide Range of Jobs

2

Smooth Operation and Control

3

Excellent Cab with Enhanced Functions

4

Excellent Transportability and Assembly

5

Safe, Environmentally-Conscious Design



A New Generation of Base Machines for Heavy-Duty Foundation Work

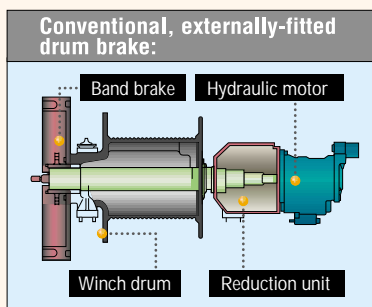
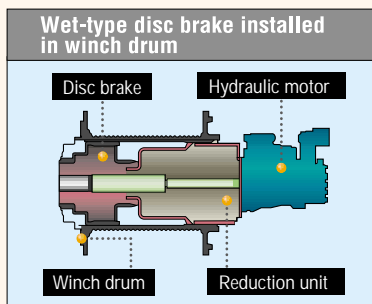
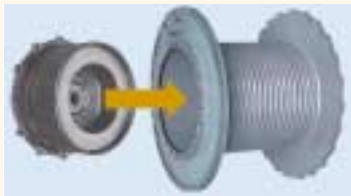
RELIABILITY AND VERSATILITY

Powerful, reliable braking

High-Performance Winch Accommodates a Wide Range of Jobs

Innovative Wet-Type Disc Brake System

KOBELCO's new oil cooled wet-type multi-disc brake system is first in its class and provides quiet, dependable braking power. The multiple discs are self-adjusting and self-equalizing. Forced oil circulation keeps brake temperatures cooler during long, continuous operations and ensures smooth braking. The completely enclosed system eliminates the possibility of outside contamination, providing years of problem-free service life. In free-fall mode, the brake pedal is easily depressed to reduce operator fatigue.



■ Maintenance-Free Winches

The built-in wet-type disc brake for the free-fall winch has a forced-oil cooling system to prevent overheating, and requires no band adjustment or lining replacement.

■ Environmentally Friendly Design

Because there's no brake band, the brake operates quietly and doesn't generate lining dust.

Wide, Large-Capacity Winches for Smooth Work

The wide hoist winches provide an impressive spooling capacity of 42 m on the first layer with a 26 mm hoist rope. Their large capacity and large diameter help to prevent uneven spooling and wear while ensuring smooth operation.

Spooling Capacity (First-Layer):

42 m



Winches with a Powerful Line Pull Handle Hard Work with Ease

Through the efficient match-up of a high-output engine and high-performance hydraulic motors, the winches deliver plenty of line pull for single-line work. There's also ample capacity for heavy loads when they first clear the ground, and other tough jobs.

Rated Line Pull (Single Line):

108 kN {11.0 tf}

Max. Line Pull (Single Line)*:

196 kN {20.0 tf}

High-Speed Lifting Increases Work Efficiency

The main and auxiliary winches deliver a fast maximum hoisting and lowering speed of 120 m/min. Faster operation in throating work cuts cycle times and boosts operating efficiency.

Max. Line Speed (First layer):

120 m/min

Large Third Winch (Optional)

Because of KOBELCO's innovative internal disc brake system and side engine layout, the optional third winch is the same size as the main and auxiliary winches, making the BME800HD ideal for foundation work.



Double Auxiliary Sheave (Optional)

By using a double auxiliary sheave, the hammer-grab bucket can be suspended on the auxiliary winch with the crown on the main winch. And the optional third wire rope on a point sheave can accommodate a large capacity hook for greater operating versatility.

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

For greater work efficiency

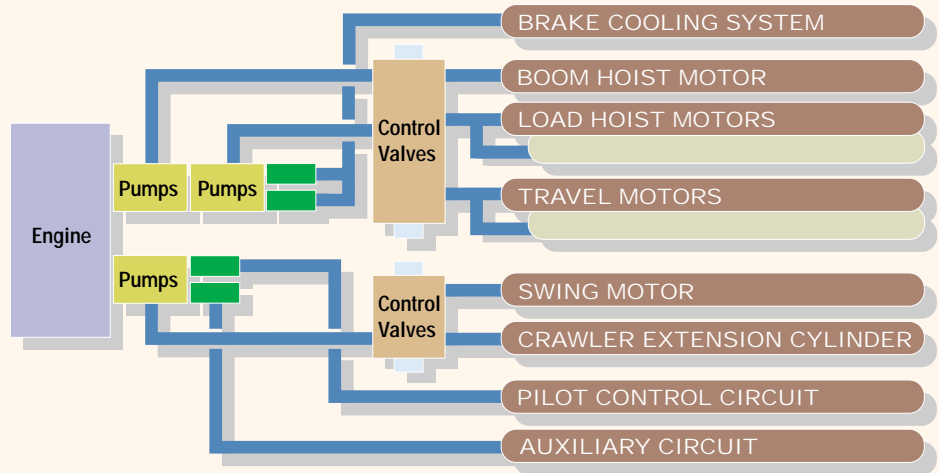
Smooth Operation and Control

Independent Swing System

Smooth swing is assured by an independent-driven swing motor with planetary reducer. Maximum swing speed is 4.0 min^{-1} {rpm}. The single-row, induction-hardened ball bearing circle is bolted to the upper frame and carbody. The swing disc brake is spring set and hydraulically released.

Max. Swing Speed:

4.0 min^{-1} {rpm}



On-Site Maneuverability

Independently driven hydraulic travel motors with planetary reduction units provide three steering modes (differential steering, skid steering and counter rotation) for optimal on-site maneuverability.

Max. Travel Speed:

1.9 km/h

Winch Speed Controller



The speeds of the main winch, auxiliary winch and boom hoist can be set independently with trimmer controls.

High-Output Engine

The engine has an impressive rated output of 247 kW and complies with NRMM (Europe) Stage IIIA and US EPA Tier III exhaust emissions regulations. All of this power works with KOBELCO's unique Engine Speed Sensing (ESS) control system and new hydraulic systems to ensure stable and smooth simultaneous operations.



Engine Output:

247 kW

Meets NRMM (Europe) Stage IIIA

Control Levers Connected Directly to Pilot Valves for Smooth Operation

The control levers regulate the pilot valves directly to reduce the amount of play and ensure smooth, precise hoisting start-ups and inching. Control is light and sure, with almost no clatter even over long operating periods.



■ Hydraulic pilot system detects swing reaction force.

■ Electric throttle with a twist grip ensures sensitive engine control.



■ Red switch on the boom lever grip allows easy inching control for hoist, boom hoist, and travel. The operator can activate it without taking his hands off the boom hoist lever.

For better man-machine communication

Excellent Cab with Enhanced Functions

Multi-Function LMI Display

The newly designed load moment indicator (LMI) system features a large, easy-to-read LCD display. The rated load, actual load, load ratio, and other information are displayed in large characters. Warnings and other items are displayed in color, and text messages and alarms alert the operator to prevent dangerous conditions from developing. Other information can also be displayed, including a rated load chart and rated load curve, in addition to a function that regulates the working range.



Multi Display

The easy-to-read LCD multi display provides information on the current status of such functions as engine rpm, maintenance, and on-board troubleshooting, so that the operator has an ongoing, real-time assessment of the machine's condition at a glance.

Normal Displays

- Engine speed (Lifting height^{*1})
- Engine oil change interval
- Reeving number for the main/aux winch wire rope
- Low-speed switch status

^{*1} With the optional lifting height gauge installed

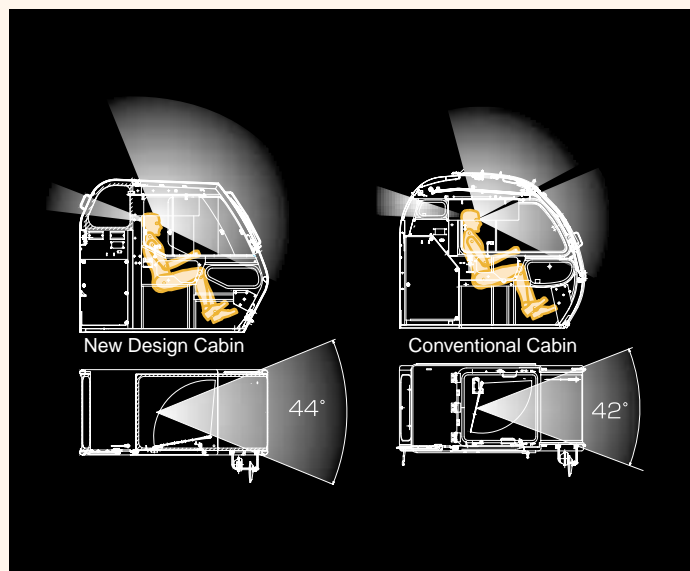
Warning Displays

- Warning (malfunction, maintenance information, etc.)
- Self-diagnostic function (detects malfunctions in solenoid valves, sensors, etc.)



Clear, Panoramic View

The BME800HD has a new cabin design with sashless front and top glass that provides a panoramic frontward and skylight view. The glass also has less curvature to minimize distortion. The front upper window has been broadened on both sides for a view that is 31% wider than a conventional cab, while the top-window view is widened toward the rear.



Comfortable 940mm-Wide Cab

- Air conditioner
- Fully adjustable, high backed seat with a headrest and armrests
- Intermittent wipers and window washers
- Sun visor
- Roof blind



■ Luggage tray



■ Cup holder

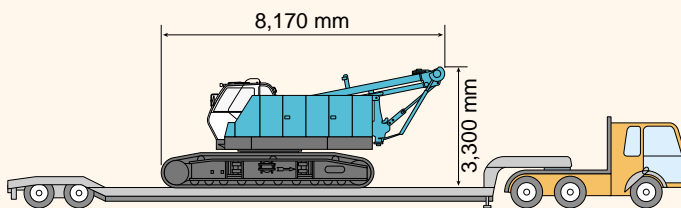
To ensure safe assembly and increase actual working hours

Excellent Transportability and Assembly

Crawler Retraction to 3.2 m Designed for Easier Transport

With its crawlers retracted, the BME800HD measures just 3.2 m wide for easy transport. Total transportation weight (including gantry and crawlers) is 45 tons, complying with transport regulations in Europe and helping to reduce the number of trailers required.

Transport width: 3.2 m Transport weight: 45 tons



Boom Assembly/Disassembly Mode

The boom assembly/disassembly mode, which is used to release the over-hoist prevention function to facilitate boom assembly and disassembly, is activated with a switch located under the multi-function LCD display of the load moment indicator (LMI). (This switch is different from the switch that releases the auto-stop functions for over-load and hook over-hoist.) When the boom is lifted to a certain angle, it is automatically deactivated and the LMI function is automatically re-engaged to ensure that the boom assembly/disassembly function is used only when needed.



Self-Removal System

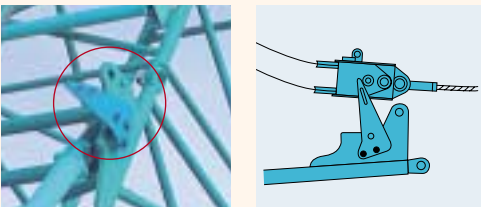
KOBELCO has designed the BME800HD to be assembled and disassembled without the need of assist crane by employing a counterweight self-handling system.



■ Gantry raising/lowering cylinder is supplied as a standard to simplify gantry raising.

Upper Spreader Storage Guide

Upper spreader storage guides make it easy to connect guy cables.



No compromise in KOBELCO's safety policy

Safe, Environmentally-Conscious Design

Automatic Soft-Stop Function Reduces Shocks

This function is activated automatically when boom lowering or boom hoisting is stopped by the over-load prevention system and the over-hoist prevention system. It makes for a smooth stop and reduces dangerous swinging of the load.

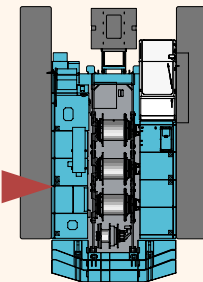
Automatic Stop Release Switch with Safety Function

The automatic stop system prevents over-load, hook over-hoist and boom over-hoist. To deactivate the system, a two-stage release procedure is employed that uses a master key and separate switches. This makes it easy to supervise the use of the single key and prevent unauthorized release of the automatic stop system.



Side-Engine Layout For Easy Maintenance

A new engine layout on the side of the machine provides easy access for routine inspections and servicing. Maintenance crews can access the entire power plant just by opening the side door.

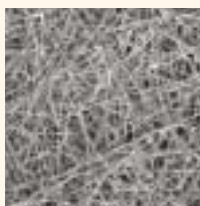


Super-Fine Filter, a Long-Life Filter for Hydraulic Oil

The large-capacity, super-fine filter is made of a high-performance filter medium consisting of glass fiber reinforced with steel wires. The replacement cycle is extended to four times longer than that of conventional filters to reduce lifelong operating costs.



Photomicrograph (× 250)



Super fine filter
(glass fiber)



Conventional filter
(paper fiber)

Safety Functions of the Free-fall Winch


Free-fall with Monitoring and Lock Functions

Free-fall operations can only be initiated by releasing the lock using a key switch. Unless the lock is released, free-fall cannot occur even if the switch is put in the "neutral-free" position. Also, to prevent the free-fall mode from being activated accidentally because of system malfunction, a monitoring function monitors the free-fall clutch cylinder pressure in the winch.

Free-fall Switch with Interlock

The free-fall switches are strategically located on the hoist levers, allowing the operator to engage free-fall without removing his hands from the control levers. To prevent the load from accidentally dropping, the interlock function makes it impossible to initiate free-fall unless the foot brake is fully depressed.



 To prevent the load from accidentally dropping because of operator error, do not use free-fall when lifting.

Conforms with European Exhaust-Gas and Noise Regulations

The BME800HD meets NRMM Stage IIIA exhaust emissions regulations in Europe, and is designed with advanced KOBELCO low-noise construction technologies to comply with European Noise Regulations EC Directive 2000/14/EC.

Other Safety Features



■ Function lock lever helps prevent accidental operation when the operator enters or leaves the cab.



■ Directional markings on the crawlers make it easy to see which direction the crawlers will move.



■ One-way call supports the safety of onsite personnel (optional).



■ External lamp for over-load alarm notifies surrounding workers of the load condition.

■ Swing flashers and warning buzzer warn surrounding workers when the machine is swinging.

■ Cameras and color monitor provide views of the rear of the machine, the main and auxiliary winches, and the boom hoist winch (optional).

■ Main Specifications (Model: BME800HD)

Crane Boom	
Max. Lifting Capacity	80 t/3.6 m
Max. Length	54.9 m
Main & Aux. Winch	
Max. Line Speed	120 m/min (1st layer)
Rated Line Pull (Single line)	108 kN {11.0 tf}
Max. Line Pull (Single line)	*196 kN {20.0 tf}
Wire Rope Diameter	26 mm
Wire Rope Length	170 m (Main) 125 m (Aux.)
Brake Type	Wet-type multiple disc brake
Free-Fall	Standard
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	31.9 MPa {325 kgf/cm ² }
Hydraulic Tank Capacity	440 liters
Self- Removal Device	Standard counterweight removal
Weight	
Operating Weight**	Approx. 81 t
Ground Pressure**	97.0 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.

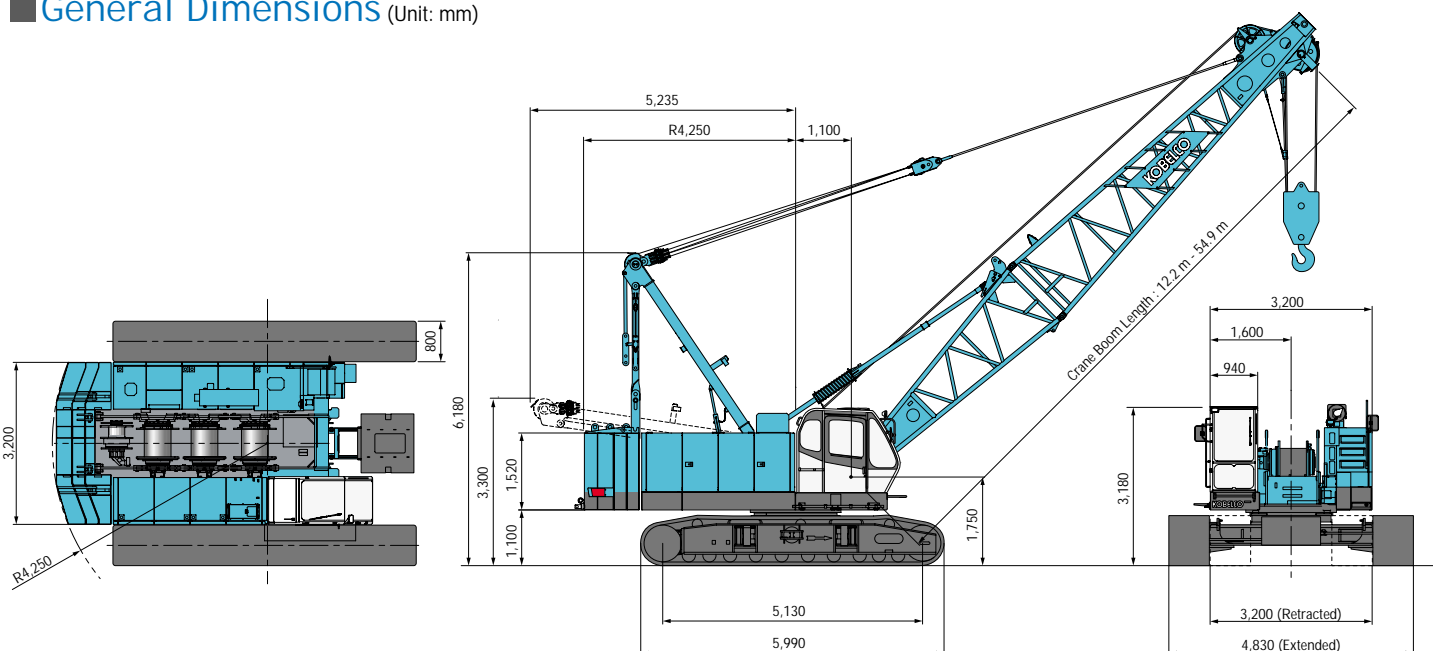
Line speeds in table are for light loads. Line speed varies with load.

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

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

***Base machine with gantry, crawlers, wire ropes for main and aux. winches and lower spreader.

■ General Dimensions (Unit: mm)



Note: This catalog may contain photographs of machines with specifications, attachments and optional equipment not certified for operation in your country. Please consult KOBELCO for those items you may require. Due to our policy of continual product improvements all designs and specifications are subject to change without advance notice.

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