## STANDARD EQUIPMENT

**ENGINE**
- Engine, HINO J08E-TM, diesel engine with turbocharger and intercooler
- Automatic engine deceleration
- Auto Idle Stop (AIS)
- Automatic engine shut-down for low engine oil pressure
- Engine oil pan drain valve
- Double element air cleaner
- Pre-air cleaner

**CONTROL**
- Working mode selector (H-mode and S-mode)
- Power Boost

**SWING SYSTEM & TRAVEL SYSTEM**
- Swing rebound prevention system
- Straight propel system
- Two-speed travel with automatic shift down
- Grease-type track adjusters
- Automatic swing brake

**HYDRAULIC**
- Arm regeneration system
- Aluminum hydraulic oil cooler
- N&B piping* (for 2.6 m arm)

**MIRRORS & LIGHTS**
- Two rearview mirrors
- Four front working lights
- Swing flashers

**CAB & CONTROL**
- Two control levers, pilot-operated
- Tow eyes
- Horn, electric
- Integrated left-right slide-type control box
- Cab, all-weather sound suppressed type
- Cab light (interior)
- Coat hook
- Luggage tray
- Large cup holder
- Detachable two-piece floor mat
- Double slide seat
- 7-way adjustable suspension seat
- Retractable seatbelt
- Headrest
- Handrails
- Intermittent windshield wiper with double-spray washer
- Tinted safety glass
- Pull-up type front window and removable lower front window
- Easy-to-read multi-display monitor
- Automatic air conditioner
- Emergency escape hammer
- ROPS cab
- Head guard (TOP guard: Level 2)
- Travel alarm

*Not applicable for 2.25 m arm

## OPTIONAL EQUIPMENT

- Wide range of buckets
- Various optional arms
- Boom and arm safety valve
- Front-guard protective structure
- Refueling pump

*Note: Standard and optional equipment may vary. Consult your KOBELCO dealer for specifics.*



**KOBELCO CONSTRUCTION MACHINERY CO., LTD.**
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Inquiries To:

KOBELCO

SK380HDLC-8

Hydraulic Excavators

# SK380HD LC

## Mining and Quarrying Specification

Bucket Capacity:
**1.9 - 2.1 m³ ISO heaped**

Engine Power:
**209 kW/2,100 min-1** (ISO 14396)

Operating Weight:
**36,800 kg**

We Save You Fuel
Achieving a Low-Carbon Society

The Concept of Beautiful Performance

# The Power Wave of Change

When we set out to design our new hydraulic excavators,
we kept our eyes on the big picture.
Of course we wanted machines with greater digging capacity.
But they also had to be fuel-efficient and economical,
while imposing less of a burden on the local and global environments.
Applying our advanced technologies,
we developed KOBELCO's new SK380HDLC,
an entirely new kind of excavator that beautifully balances
all the demands of today's construction industry.
Lean and efficient with capacity to spare,
these sleek powerhouses bring a whole new style to the worksite while
setting new standards for environmental responsibility.




E E E

NEXT-3E

## Pursuing the "Three E's"

### The Perfection of Next-Generation, Network Performance

**Enhancement**

**Greater Performance Capacity**

- New hydraulic circuitry minimizes pressure loss
- High-efficiency,electronically controlled Common Rail Fuel Injection Engine
- Powerful travel and arm/bucket digging force
- Sturdy Construction

**Economy**

**Improved Cost Efficiency**

- Advanced power plant that reduces fuel consumption
- Easy maintenance that reduces upkeep costs
- High structural durability and reliability that retain machine value longer

**Environment**

**Features That Go Easy on the Earth**

- Auto Idle Stop as standard equipment
- Noise reduction measures (with improvement of the sound quality) minimize noise and vibration

# Sturdy Construction & Built-in Durability

## Stable Attachment Strength

Forged and cast components are used throughout. The arm tip's cross-sectional coefficient is 15 % higher than previous models, giving the arm the same strength as the 3-faced reinforced arm that was offered only as an option before. The strength of the boom foot has also been increased by 18 %.

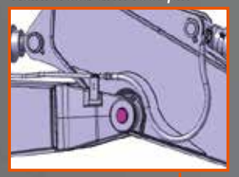
## Durability That Retains Machine Value Five and Ten Years in the Future

- New operator's seat covered in durable material
- High-quality urethane paint
- Easily repaired bolted hand rails

## Outstanding Durability

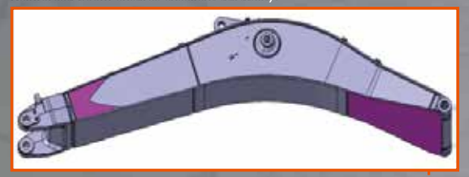
Comprehensively reinforced specs designed for the toughest mining and quarrying jobs.

*Reinforced arm foot pin*

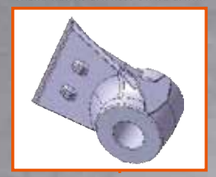


*Integrated cast steel boom top*

*Reinforced boom*
*Reinforced boom ensures excellent durability.*



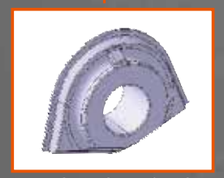
*Cast steel boom foot boss*



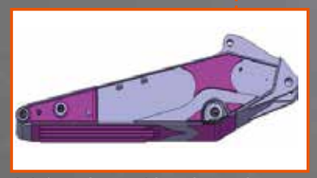
### Pre-air Cleaner

The pre-air cleaner prolongs a replacement cycle of main air cleaner.


*Reinforced bucket*

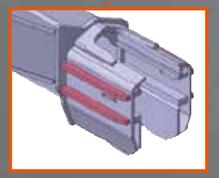


*Forged steel arm foot boss*



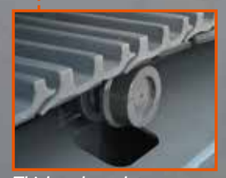
*Reinforced arm with rock guard*
*Rock guard helps prevent the arm from damage.*

*Reinforced idler*



*Extra heavy-duty idler cover*
*The idler cover, which takes a lot of wear and tear during travel, has been reinforced, thereby boosting durability.*

*Reinforced track guides*
*Reinforced track guides installed on three places help prevent the crawlers from coming off the rollers.*



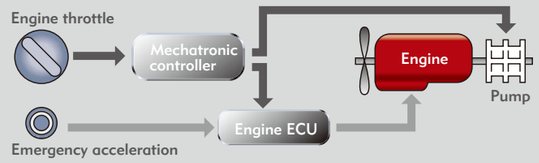
*Thicker shoe plate*

*Travel motor protection*
*Large travel motor protectors repel stones and prevent damage to travel motors.*



## Emergency Acceleration (Dial) Permits Continued Operation in the Unlikely Event of Malfunction

If unexpected trouble is experienced with the ITCS mechatronic control system, the machine can still be operated using the emergency acceleration system. Digging modes are also automatically relayed to an emergency system so that digging can continue temporarily until a service person arrives to repair the primary system.




## Newly designed MCU

*New MCU*

*Conventional MCU*

- Vertical alignment and sealed cover gives better protection from water and dust
- Integration in base plate boosts assembly quality
- Reliable fixture to base plate

## Countermeasures Against Electrical System Failure

All elements of the electrical system, including controller, have been designed for enhanced reliability.

# Efficient Performance

## Amazing Productivity with 18 % Saving in Fuel Consumption and Top-Class Cost Performance

**Fuel Consumption***

**18%** improvement in fuel efficiency when performing more work volume (S-Mode)

**Work Volume***

**27%** increase in work volume using the same amount of fuel. (H-Mode)

## "Top-Class" Powerful Digging

| | |
|---|---|
| Max. arm crowding force: | 205kN |
| Max. arm crowding force with power boost: | 225kN |
| Max. bucket digging force: | 221kN |
| Max. bucket digging force with power boost: | 244kN |

## Powerful Travel

| | |
|---|---|
| Travel torque: increased by | 13% |
| Drawbar pulling force: | 321kN |

## Greater Swing Power, Shorter Cycle Times

| | |
|---|---|
| Swing torque: increased by | 7% |
| Swing speed: | 10.0min$^{-1}$ |

## Significant Extension of Continuous Working Hours

The combination of large-capacity fuel tank and excellent efficiency delivers an impressive 22 % increase in continuous operation hours.**

| | |
|---|---|
| Fuel tank: | 22% |

## Light Lever Operation

It takes 10% less effort to move the control levers, so that operators can work longer hours with less fatigue.

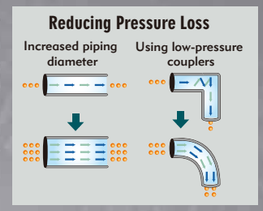
**10%Less**

**The value shows results from actual measurements taken by KOBELCO when compared with previous KOBELCO models.*
***The value shows results from actual measurements taken by KOBELCO for continuous operation in S Mode, compared with previous models.*
*Results vary depending on the method of operation and load conditions.*


## NEXT-3E Technology

### New Hydraulic System

Rigorous inspections for pressure loss are performed on all components of the hydraulic piping, from the spool of the control valve to the connectors. This regimen, combined with the use of a new, high-efficiency pump, cuts energy loss to a minimum.




## NEXT-3E Technology

### Next-Generation Electronic Engine Control

The high-pressure, common-rail fuel-injection engine features adjustable control to maximize fuel efficiency and provide powerful medium/low-speed torque. The result is a highly fuel-efficient engine.

## NEXT-3E Technology

### Total Tuning Through Advanced ITCS Control

The next-generation engine control is governed by a new version of ITCS, which responds quickly to sudden changes in hydraulic load to ensure that the engine runs as efficiently as possible with a minimum of wasted output.

ITCS *ITCS (Intelligent Total Control System) is an advanced, computerized system that provides comprehensive control of all machine functions.*

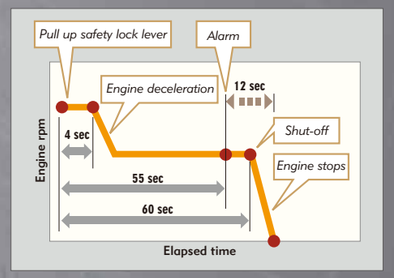
### Simple Select: Two Digging Modes

| | |
|---|---|
| H Mode | For heavy duty when a higher performance level is required. |
| S Mode | For normal operations with lower fuel consumption. |

### Optional N&B (crusher and breaker)

The operator selects the desired mode from inside the cab, and the selector valve automatically configures the machine accordingly.

### Auto Idle Stop Provided as Standard Equipment

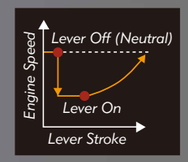



ECO AUTO IDLING STOP

This function saves fuel and cuts emissions by shutting down the engine automatically when the safety lock lever is pulled up. It also stops the hourmeter, which helps to retain the machine's asset value.

### Automatic Acceleration/Deceleration Function Reduces Engine Speed

Engine speed is automatically reduced when the control lever is placed in neutral, effectively saving fuel and reducing noise and exhaust emissions. The engine proportionally comes to desire speed when the lever is moved out of neutral.



# Easy Maintenance

## Comfortable "On the Ground" Maintenance

The machine layout was designed with easy inspection and maintenance in mind.

## Access Through the Left Side Cover

### Parallel Cooling Units Are Easy to Clean

Large-capacity radiator and oil cooler are aligned side by side, with intercooler positioned in front. This more effective layout gives outstanding cooling results.

*Oil cooler* *Radiator*
*Air conditioner condenser* *Intercooler*

## Pre-air Cleaner

The pre-air cleaner prolongs a replacement cycle of main air cleaner.


## Quick Oil Drain Valves for Quick Maintenance

A quick drain valve, which requires no tools, is provided as standard equipment.

*Quick drain valve*

To facilitate fuel tank cleaning, the fuel drain valve was made larger and fitted with a flange on the bottom.

*Fuel drain valve*

## More Efficient Maintenance

*Drain type* *Detachable*

*Detachable two-piece floor mat with handles for easy removal.*

*Easy-access fuse box.*

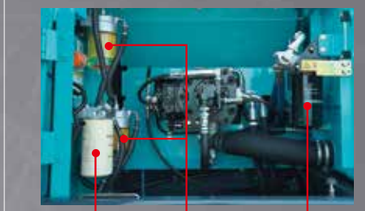
*Air conditioner filter can be easily removed.*

*Hour meter can be checked while standing on the ground.*

*Refueling pump (option)*

## Access Through the Right Side Cover

The fuel filter with built-in water separator functions in two ways by removing large contaminants and separating out water.



*Main fuel filter* *Engine oil filter*
*Pre-fuel filter (with built-in water separators)*

*Main fuel filter*

## Highly Durable Super-fine Filter

The high-capacity hydraulic oil filter incorporates glass fiber with superior cleaning power and durability. With a replacement cycle of 1,000 hours and a construction that allows replacement of the filter element only, it's both highly effective and highly economical.

*Super-fine filter*

## Double-Element Air Cleaner as Standard

The large-capacity element features a double-filter structure that keeps the engine running clean even in dusty environments.

*Air cleaner (double element)*

## Monitor Display with Essential Information for Accurate Maintenance Checks

- *Displays only the maintenance information that's needed, when it's needed.*
- *Self-diagnostic function that provides early-warning detection and display of electrical system malfunctions.*
- *Record previous breakdowns, including irregular and transient malfunctions.*

## Choice of 16 Languages for Monitor Display

With messages including those requiring urgent action displayed in the local language, users in all parts of the world can work with greater peace of mind.

# Comfort and Safety

## Spacious, Comfortable Cab

Designed for safety, the cab meets ISO standards, and also offers a spacious interior and plenty of foot room, with levers and other controls ideally positioned for easy operation.

*•A long wiper covers a wide area for a broad view in bad weather.*
*•Back mirrors provide a safe view of the rear.*
*•Reinforced green glass windows meet European standards.*

## Wide-Access Cab Ensures Smooth Entry and Exit

The left control box lifts up with the safety lock lever to add 10° to the cab entry angle for easy entrance and exit.


## Reduced Vibration for Fatigue-Free Operation

The rigid cab construction and liquid-filled viscous cab mounts minimize cab vibration. In addition, the use of new lower rollers on the crawlers cuts travel vibration in half compared with previous models.

## In-Cab Noise is Reduced by 3dB Compared with Previous Models.

## Newly Designed Information Display Prioritizes Visual Recognition

The analog gauge provides information that's easy to read regardless of the operating environment. The information display screen has been enlarged, and a visor is attached to further enhance visibility.

## Suspension Seat

Comfortable, double-sliding suspension seat, fitted as standard, creates a higher grade working environment and reduces fatigue.

## Creating a Comfortable Operating Environment

*Seat can be reclined to horizontal position*

*Double slide seat*

*Powerful automatic air conditioner*

*Spacious luggage tray*

*•New interior design and materials create an elegant feel*

*One-touch lock release simplifies opening and closing the front window*

*Large cup holder*

## ROPS Cab

The ROPS (Roll-Over-Protective Structure) – compliant cab clears ISO standards (ISO-12117-2: 2008) and ensures greater safety for operator should the machine tip over.

*•Level 2 TOP Guard (ISO 10262) is fitted as standard.*

## Low Noise Level and Mild Sound Quality

The electronically controlled common-rail engine has a unique fuel injection system that runs quietly.

## Meets EMC (Electromagnetic Compatibility) Standards in Europe.

Measures have been taken to ensure that the SK machines do not cause electro-magnetic interference.

## Automatic Engine Shut-Down for Low Engine Oil Pressure

## Safety Features That Take Various Scenarios into Consideration

*Firewall separates the pump compartment from the engine*

*Hammer for emergency exit*

*Swing flashers*

*Travel alarm*

*• Thermal guard prevents contact with hot components during engine inspections*
*• Hand rails meet European standards*
*• Retractable seatbelt requires no manual adjustment*

# Specifications

## Engine

| Model | HINO J08E-TM |
|---|---|
| Type: | Direct injection, water-cooled, 4-cycle diesel engine with turbocharger, intercooler |
| No. of cylinders: | 6 |
| Bore and stroke: | 112 mm X 130 mm |
| Displacement: | 7.684 L |
| Rated power output: | 197 kW /2,100 $min^{-1}$ (ISO9249) |
| | 209 kW /2,100 $min^{-1}$ (ISO14396) |
| Max. torque: | 969 N·m/1,600 $min^{-1}$ (ISO9249) |
| | 998 N·m/1,600 $min^{-1}$ (ISO14396) |

## Hydraulic System

| Pump | |
|---|---|
| Type: | Two variable displacement pumps + 1 gear pump |
| Max. discharge flow: | 2 X 294 L/min, 1 X 20 L/min |
| **Relief valve setting** | |
| Boom, arm and bucket: | 34.3 MPa {350 kgf/$cm^2$} |
| Power Boost: | 37.8 MPa {385 kgf/$cm^2$} |
| Travel circuit: | 34.3 MPa {350 kgf/$cm^2$} |
| Swing circuit: | 29.0 MPa {296 kgf/$cm^2$} |
| Control circuit: | 5.0 MPa {50 kgf/$cm^2$} |
| Pilot control pump: | Gear type |
| Main control valves: | 8-spool |
| Oil cooler: | Air cooled type |

## Swing System

| | |
|---|---|
| Swing motor: | Axial-piston motor |
| Brake: | Hydraulic; locking automatically when the swing control lever is in the neutral position |
| Parking brake: | Hydraulic disc brake |
| Swing speed: | 10.0 $min^{-1}$ {rpm} |
| Tail swing radius: | 3,500 mm |
| Min. front swing radius: | 4,450 mm |

## Attachments

Backhoe bucket and arm combination

| Use | | | Backhoe bucket | |
|---|---|---|---|---|
| | | | Normal digging | |
| | | |  |  |
| **Bucket capacity** | **ISO heaped** | **$m^3$** | 1.9 | 2.1 |
| | **Struck** | **$m^3$** | 1.4 | 1.5 |
| **Opening width** | **With side cutter** | **mm** | 1,730 | 1,820 |
| | **Without side cutter** | **mm** | 1,550 | 1,640 |
| **No. of bucket teeth** | | | 5 | 5 |
| **Bucket weight** | | **kg** | 1,700 | 1,770 |
| **Combination** | **2.25 m super short arm** | | — | ◎ |
| | **2.6 m short arm** | | ◎ | — |

◎ Standard

## Travel System

| | |
|---|---|
| Travel motors: | 2 X axial-piston, two-step motors |
| Travel brakes: | Hydraulic brake per motor |
| Parking brakes: | Oil disc brake per motor |
| Travel shoes: | 48 each side |
| Travel speed: | 5.6/3.3 km/h |
| Drawbar pulling force: | 321 kN (ISO7464) |
| Gradeability: | 70 % {35°} |
| Ground clearance: | 500 mm |

## Cab & Control

**Cab**

All-weather, sound-suppressed steel cab mounted on the silicon-sealed viscous mounts and equipped with a heavy, insulated floor mat.

**Control**

Two hand levers and two foot pedals for travel

Two hand levers for excavating and swing

Electric rotary-type engine throttle

## Boom, Arm & Bucket

| | |
|---|---|
| Boom cylinders: | 140 mm X 1,550 mm |
| Arm cylinder: | 170 mm X 1,788 mm |
| Bucket cylinder: | 150 mm X 1,193 mm |

## Refilling Capacities & Lubrications

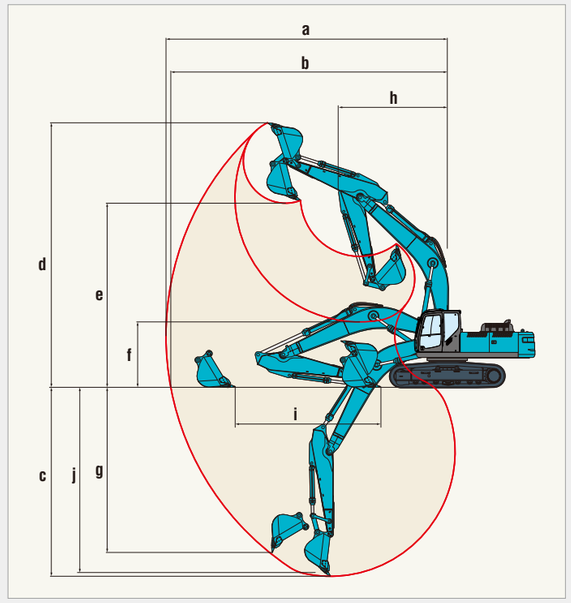
| | |
|---|---|
| Fuel tank: | 580 L |
| Cooling system: | 31.1 L |
| Engine oil: | 28.5 L |
| Travel reduction gear: | 2 X 9.5 L |
| Swing reduction gear: | 7.4 L |
| Hydraulic oil tank: | 280 L tank oil level<br>353 L hydraulic system |



## Working Ranges

Unit: m

| Boom | 6.5 m | |
|---|---|---|
| Arm / Range | Super Short 2.25 m | Short 2.6 m |
| **a- Max. digging reach** | 10.35 | 10.61 |
| **b- Max. digging reach at ground level** | 10.14 | 10.40 |
| **c - Max. digging depth** | 6.51 | 6.86 |
| **d- Max. digging height** | 10.28 | 10.26 |
| **e- Max. dumping clearance** | 7.05 | 7.06 |
| **f - Min. dumping clearance** | 3.73 | 3.32 |
| **g- Max. vertical wall digging depth** | 4.32 | 5.84 |
| **h- Min. swing radius** | 4.48 | 4.45 |
| **i - Horizontal digging stroke at ground level** | 3.40 | 4.21 |
| **j - Digging depth for 2.4 m (8') flat bottom** | 6.31 | 6.67 |
| **Bucket capacity ISO heaped $m^3$** | 2.1 | 1.9 |




### Digging Force (ISO 6015)

Unit: kN (tf)

| Arm length | Super Short 2.25 m | Short 2.6 m |
|---|---|---|
| **Bucket digging force** | 220 {22.4}<br>241 {24.6}* | 221 {22.5}<br>244 {24.9}* |
| **Arm crowding force** | 231 {23.6}<br>255 {26.0}* | 205 {20.9}<br>225 {23.9}* |

*Power Boost engaged.

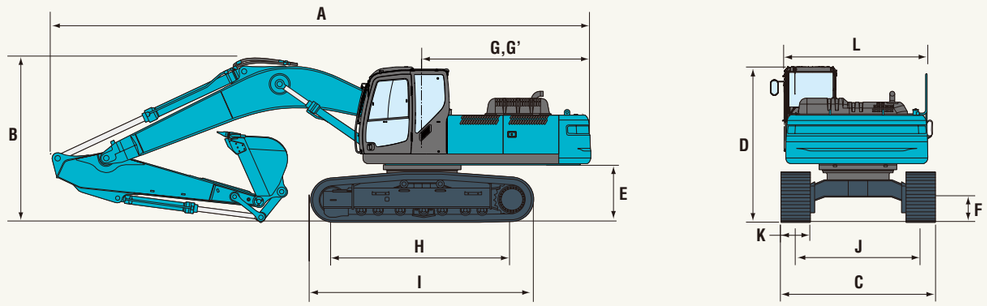
## Dimensions

Unit: mm

| Arm length | | Super Short 2.25 m | Short 2.6 m |
|---|---|---|---|
| **A** | **Overall length** | 11,410 | 11,280 |
| **B** | **Overall height (to top of boom)** | 3,760 | 3,640 |
| **C** | **Overall width** | 3200/3,270*1 | |
| **D** | **Overall height (to top of cab)** | 3,160 | |
| **E** | **Ground clearance of rear end*** | 1,190 | |
| **F** | **Ground clearance*** | 500 | |

| | | |
|---|---|---|
| **G** | **Tail swing radius** | 3,500 |
| **G'** | **Distance from center of swing to rear end** | 3,500 |
| **H** | **Tumbler distance** | 4,050 |
| **I** | **Overall length of crawler** | 4,980 |
| **J** | **Track gauge** | 2,600 |
| **K** | **Shoe width** | 600 |
| **L** | **Overall width of upperstructure** | 2,950 |

* Without including height of shoe lug. *1 With lower step




## Operating Weight & Ground Pressure

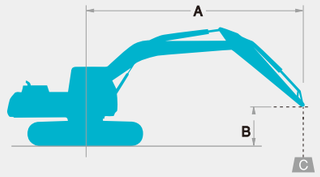
**In standard trim, with 6.5 m boom, 2.6 m short arm, and 1.9 $m^3$ ISO heaped bucket**

| Shaped | | Triple grouser shoes (even height) |
|---|---|---|
| **Shoe width** | **mm** | **600** |
| **Overall width** | **mm** | 3,200/3,270* |
| **Ground pressure** | **kPa** | 69 |
| **Operating weight** | **kg** | 36,800 |

*With lower step

# Lifting Capacities

SK380HDLC




Rating over front

Rating over side or 360 degrees

A - Reach from swing centerline to arm top
B - Arm top height above/below ground
C - Lifting capacities in kilograms
• Max. discharge pressure: 34.3 MPa (350 kg/cm²)

| SK380HDLC | | Super Short Arm: 2.25 m Bucket: Without Shoe: 600 mm | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A / B | | 3.0 m | | 4.5 m | | 6.0 m | | 7.5 m | | At Max. Reach | | Radius |
| | | | | | | | | | | | | |
| 7.5 m | kg | | | | | *8,330 | *8,330 | | | *8,280 | *8,280 | 6.73 m |
| 6.0 m | kg | | | | | *8,680 | *8,680 | *7,980 | 7,420 | *7,970 | 7,050 | 7.71 m |
| 4.5 m | kg | | | | | *9,600 | *9,600 | *8,240 | 7,210 | *7,890 | 6,120 | 8.31 m |
| 3.0 m | kg | | | | | *10,670 | 9,430 | *8,720 | 6,920 | *7,920 | 5,650 | 8.61 m |
| 1.5 m | kg | | | | | *11,470 | 8,970 | *9,130 | 6,670 | *8,010 | 5,510 | 8.64 m |
| G. L. | kg | | | | | *11,690 | 8,750 | *9,250 | 6,530 | *8,120 | 5,660 | 8.40 m |
| -1.5 m | kg | | | *14,520 | 13,310 | *11,260 | 8,750 | *8,800 | 6,550 | *8,180 | 6,190 | 7.87 m |
| -3.0 m | kg | *15,310 | *15,310 | *12,690 | *12,690 | *9,920 | 8,950 | | | *8,020 | 7,410 | 6.98 m |
| -4.5 m | kg | | | *9,210 | *9,210 | | | | | *7,100 | *7,100 | 5.56 m |

| SK380HDLC | | Short Arm: 2.6 m Bucket: Without Shoe: 600 mm | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A / B | | 3.0 m | | 4.5 m | | 6.0 m | | 7.5 m | | At Max. Reach | | Radius |
| | | | | | | | | | | | | |
| 7.5 m | kg | | | | | | | | | *7,750 | *7,750 | 7.06 m |
| 6.0 m | kg | | | | | *8,310 | *8,310 | *7,610 | 7,520 | *7,540 | 6,720 | 8.00 m |
| 4.5 m | kg | | | *11,960 | *11,960 | *9,280 | *9,280 | *7,980 | 7,290 | *7,510 | 5,860 | 8.58 m |
| 3.0 m | kg | | | | | *10,420 | 9,570 | *8,530 | 6,980 | *7,580 | 5,430 | 8.87 m |
| 1.5 m | kg | | | | | *11,320 | 9,070 | *9,010 | 6,710 | *7,710 | 5,290 | 8.89 m |
| G. L. | kg | | | *15,780 | 13,220 | *11,700 | 8,800 | *9,230 | 6,530 | *7,870 | 5,410 | 8.66 m |
| -1.5 m | kg | *13,910 | *13,910 | *14,970 | 13,280 | *11,430 | 8,740 | *8,970 | 6,500 | *8,010 | 5,870 | 8.15 m |
| -3.0 m | kg | *16,900 | *16,900 | *13,350 | *13,350 | *10,350 | 8,890 | | | *8,020 | 6,910 | 7.29 m |
| -4.5 m | kg | *12,780 | *12,780 | *10,320 | *10,320 | | | | | *7,530 | *7,530 | 5.95 m |

**Notes:**
1. Do not attempt to lift or hold any load that is greater than these lift capacities at their specified lift point radius and heights. Weight of all accessories must be deducted from the above lift capacities.
2. Lift capacities are based on machine standing on level, firm, and uniform ground. User must make allowance for job conditions such as soft or uneven ground, out of level conditions, side loads, sudden stopping of loads, hazardous conditions, experience of personnel, etc.
3. Arm top defined as lift point.
4. The above lifting capacities are in compliance with ISO 10567. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Lifting capacities marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load.
5. Operator should be fully acquainted with the Operator's and Maintenance Instructions before operating this machine. Rules for safe operation of equipment should be adhered to at all times.
6. Lift capacities apply to only machine as originally manufactured and normally equipped by KOBELCO CONSTRUCTION MACHINERY CO., LTD.