

Power Meets Efficiency

Increased POWER
means increased
PRODUCTIVITY

Greater fuel
economy means
higher efficiency

From urban centers to mines around the world, KOBELCO's all-out innovation brings you durable, Earth-friendly construction machinery that's equal to any task all over the planet. Increased power and better fuel economy bring greater efficiency to any project. The KOBELCO SK390LC Conventional Hydraulic Excavator is more durable than ever, able to withstand the rigors of the toughest job sites. Focusing on the global environment of the future, KOBELCO offers next-generation productivity to meet the need for lower life-cycle costs and exceed the expectations of customers the world over. It all adds up to new levels of value that are a step ahead of the times.



SK390_{LC}

More power and higher efficiency.

On the job performance increase

For maximum ON THE JOB lift capacity, for pipe and handling trench boxes, KOBELCO substituted larger boom cylinders.

Lift over the front is complimented via lift stability over the side. KOBELCO is utilizing it's own design High and Wide Heavy Duty undercarriage.



↑ Up to **14%** Increased

■ Lift capacity
(Over the front @20' Ground Level)
(Compared to SK350LC-10)

↑ About **7%** Increased diameter

■ Boom cylinder
(Compared to SK350LC-10)



Power to do more, faster

Digging Volume

The SK390LC offers dynamic digging force even as it minimizes fuel consumption, achieving class-leading work volume.

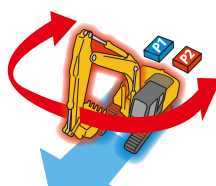
Heavy Lift

High hydraulic pressure (Heavy Lift) means greater lifting power, at close radius, allowing for smooth and steady operation while moving heavy objects.



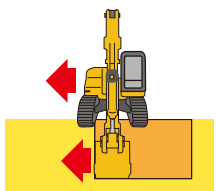
Independent Travel

Selecting Independent Travel dedicates one hydraulic pump to travel and one to the attachment on a continuous basis, allowing for a smooth and constant movement speed even while swinging or using the boom or attachment. With Independent Travel, safely carrying a large pipe across a job site is a breeze.



Swing Priority

Our exclusive system automatically and instantly delivers full swing power during combined operations. There's no need to mode-switch to make quick work of jobs like side-digging and back-filling.



Power Boost

When you need more power instantly, engage Power Boost to get 10 % more power with no time limit.

■ Max. Bucket Digging Force (ISO 6015)
With Power Boost: **56,200 lbs** {250 kN}

■ Max. Arm Crowding Force (ISO 6015)
With Power Boost: **40,700 lbs** {181 kN}

Drawbar Pulling Force (SAE J1309)

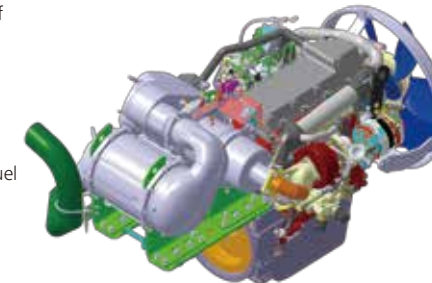
Excellent drawbar force lets you conquer rough terrain and slopes.

70,600 lbs {314 kN}

Conforms to Tier IV Final exhaust emissions standards

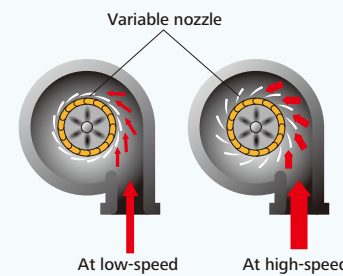
Reduces fuel consumption and minimizes exhaust emissions

The HINO engine, (a subsidiary of Toyota) is renowned for fuel efficiency and environmental performance, and KOBELCO has tuned them specifically for construction machinery. The high-pressure common rail fuel injection system, the variable-geometry (VG) turbocharger, reduce particulate matter (PM) while the large EGR cooler greatly reduces the formation of nitrogen oxide (NOx) gases.



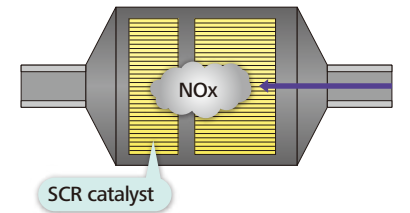
VG turbo reduces PM

The variable-geometry turbocharger adjusts air intake to maximize combustion efficiency. At low engine speeds the nozzles are closed, the turbo speed increased and air intake is boosted. This helps lower fuel consumption.



SCR System with DEF **NEW**

Engine exhaust system utilizes Selective Catalytic Reduction (SCR) to convert NOx* into harmless nitrogen and water emissions. SCR combined with a Diesel Particulate Filter (DPF) makes a much cleaner machine meeting US EPA regulations for Tier IV final.

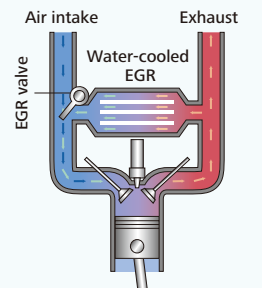


■ NOx reduction rate
(Compared to previous models)

About **80%** decrease*

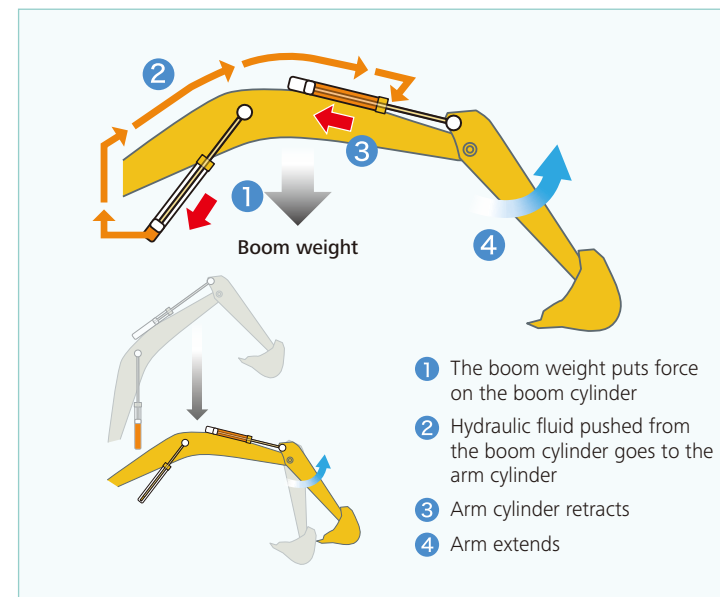
EGR cooler reduces NOx

Cooled exhaust gases from the EGR cooler are mixed with fresh air in the intake. The recirculated air lowers the combustion temperature which reduces NOx.



Boom to Arm Regeneration System **NEW**

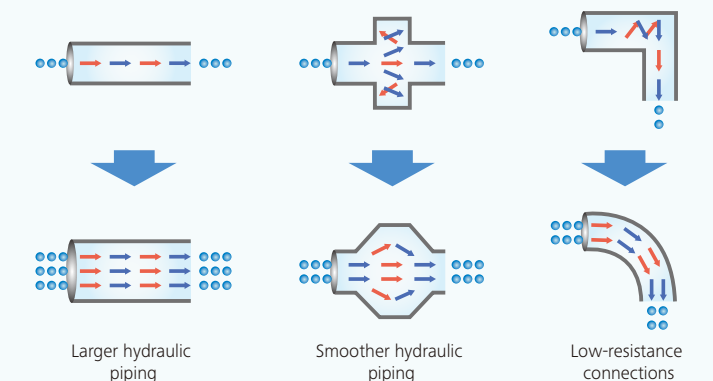
Innovative engineering uses the downward movement of the boom to push fluid to the arm. Gravity and kinetic energy greatly reduce the amount of power needed to move fluid through the system.



Hydraulic circuit reduces energy loss

Improved hydraulic line layout minimizes hydraulic pressure resistance from turbulence and valve restrictions. Fuel efficiency is increased because it takes less energy to move fluid through a circuit with low flow resistance.

Improved hydraulic piping is an effective means of reducing pressure loss.



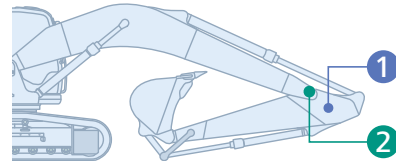
Increased power with enhanced durability to maintain the machine's value

Smart system design increases strength and eliminates hydraulic problems.
Enhanced reliability and durability takes productivity to a new level.



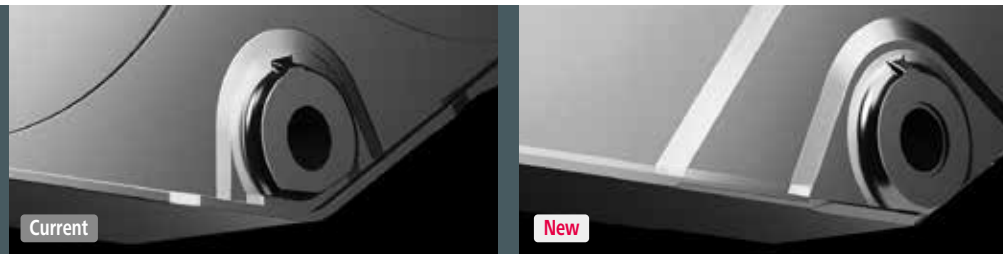
Built to operate in tough working environments

Reinforced and redesigned boom and arm offers excellent durability during demanding work conditions to reliably handle higher work volume.



1 Enlarged reinforcement of the arm

Arm: Base plate thickness has been increased.



2 Modified foot boss shape

Arm foot boss shape has been changed to better distribute stress.



500 Hour Attachment Lubrication Interval

The self lubrication bushings are used at the attachment pins and the bushings with high abrasion resistant property are used at the pins around the bucket. The lubrication cycle of the lubrication points around the bucket is 250 hours and that of other lubrication points is 500 hours.



* Additionally the two piece bucket bushings protect the side of the arm from contact and then wear from the bucket ears. Should the bucket bushings need replacement, they can be replaced separately from the larger main bushing, reducing costs.

Three Track Guides

Three heavy-duty track guides installed on each crawler side frame assure stability in the most demanding situations.



Improved filtration system reliability

Clean, contaminant-free fuel and hydraulic fluid are essential to stable performance. The improved filtration systems reduce the risk of mechanical trouble and enhance longevity and durability.

Hydraulic fluid filter

Recognized as the best in the industry, our super-fine filter separates out even the smallest particles. A new cover prevents contamination when changing filters.

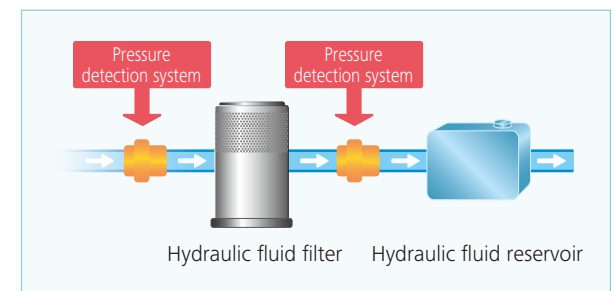
Long-life hydraulic fluid:
5,000 hours

Hydraulic fluid filter replacement cycle is
1,000 hours



Hydraulic fluid filter restriction indicator

Detects clogging by measuring the difference in pressure between incoming and outgoing hydraulic fluid. Detecting contaminants before they can get into the hydraulic fluid reservoir reduces the risk of damage to the hydraulic system.



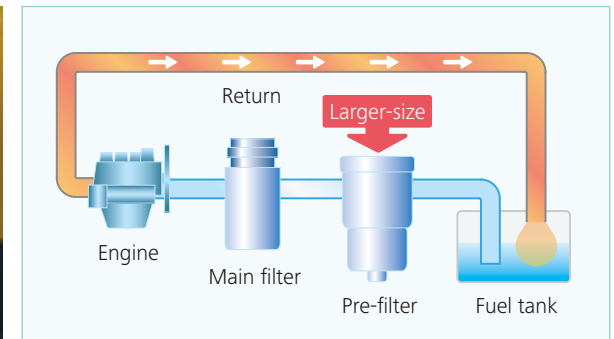
Double-element air cleaner

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



Fuel filter

Pre-filter with built-in water-separator maximizes filtering performance.



Comprehensive safety and intuitive operation

User-friendly design and enhanced safety means greater efficiency and productivity.



SK

Safety

ROPS / FOPS CAB

ROPS (Roll-Over-Protective Structure)-compliant cab complies with ISO standards (ISO-12117-2: 2008) and ensures greater operator safety in the event of a roll-over. KOBELCO encourages operators to wear their seat belt during operation.



The standard FOPS guard can be tilted open for easy window cleaning. Meets standard FOPS, Top Guard Level II requirements. (ISO10262)



Mounting brackets for vandalism guards are standard equipment (contact your KOBELCO dealer to fit vandalism or front rock guards).

Expanded field of view for greater safety



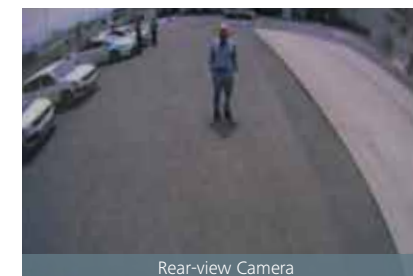
Left and right rear-view mirrors/Right bottom clearance mirror



Rear view from cab



Emergency escape hammer



Rear-view Camera



Standard rear-view camera eases safety checks behind the machine. Color video displays on cab monitor.



Standard rear swing flashers and rear work lights.

Operator-friendly features that are easy to see, easy to use



Color Multi-display

Brilliant colors differentiate multiple graphics on cab LCD. Graphics indicate fuel consumption, maintenance intervals and more.

- 1 Analog-style gauges provide an intuitive reading of fuel level and engine temperature
- 2 Green indicates ECO mode selected or efficient operation in other modes
- 3 PM accumulation (left)/DEF level (right)
- 4 Fuel consumption/Rear-view camera
- 5 Digging mode switch
- 6 Monitor display switch

One-touch attachment mode switch

A simple flick of switch converts the hydraulic circuit and flow amount to match attachments. Helpful icons let the operator confirm the proper configuration at a glance.



PM accumulation/DEF level



Fuel consumption



Maintenance



Breaker mode



Nibbler mode



Independent Travel mode



Heavy Lift



Rear-view camera

Cab comfort takes a step ahead

The newly refined cab puts the operator first, ensuring a quieter, more comfortable work environment and easier operation.



Standard suspension seat



Comfort

Climate control outlets behind the seat **NEW**



Five air outlets deliver warm or cool air directly to the operator.

A light touch on the lever means smoother, **NEW** less tiring work



It takes 25 % less effort to work the operation lever, which reduces fatigue over long working hours or continuous operations. *Compared to SK350LC-9 model

More comfortable seat means higher productivity



Suspension seat absorbs vibration



Seat back can be lowered flat



Double slides allow adjustment for optimum comfort

Quiet Inside



The high level of air-tightness ensures a quiet, comfortable cabin interior.

Interior equipment adds to comfort and convenience



Bluetooth installed AM/FM stereo radio



USB connector/12 V power outlet

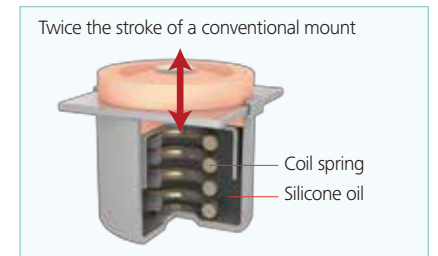
Large door allows easy access in and out of the cab

The expanded cab provides plenty of room for a large door, more headroom and smoother entry and exit.



Low Vibration

Coil springs absorb small vibrations and high suspension mounts filled with silicone oil reduce heavy vibration. The long stroke achieved by this system provides excellent vibration protection.



Wide, Open View Provides Excellent Visibility

The front window features one large piece of glass without a center pillar on the right side for a wide, unobstructed view.



Spacious storage tray



Large cup holder

Efficient maintenance keeps the machine in peak operating condition



| MAINTENANCE | | | |
|-------------|----------|----------------|--------------|
| | INTERVAL | REMAINING TIME | EXCHANGE DAY |
| ENGINE OIL | 500 | 495 | --/--/-- |
| FUEL FILTER | 500 | 495 | --/--/-- |
| HYD. FILTER | 1000 | 995 | --/--/-- |
| HYD. OIL | 5000 | 4995 | --/--/-- |

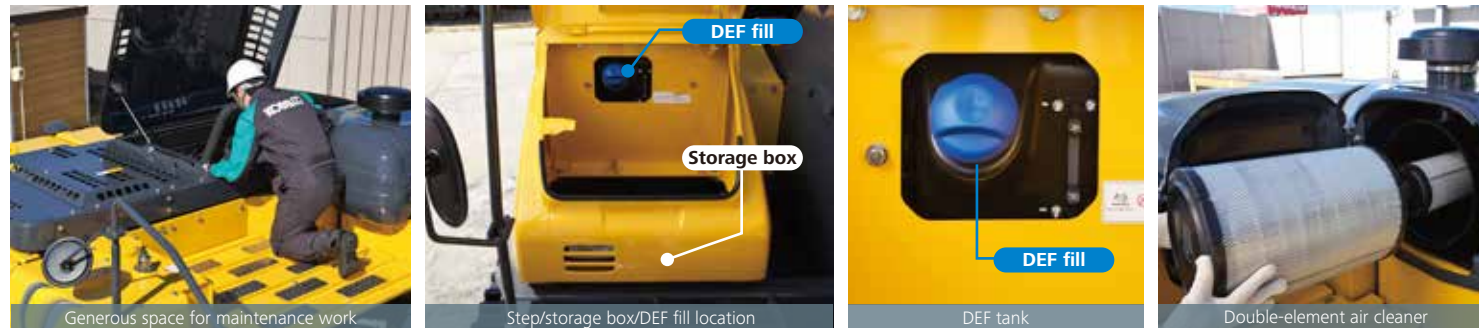
Examples of displaying maintenance information

Machine information display function

- Displays only the maintenance information that's needed, when it's needed
- Self-diagnostic function provides early-warning detection and display of electrical system malfunctions
- Service-diagnostic function makes it easier to check the status of the machine
- Record function for any possible on going or intermittent service issues

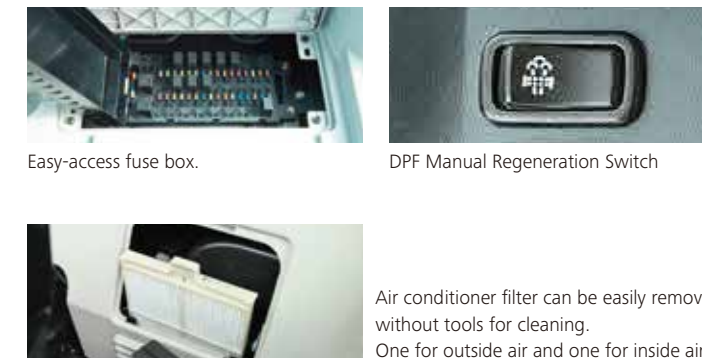
Easy, on-the-spot maintenance NEW

Ample space in the engine compartment allows service staff to comfortably perform maintenance in a natural body position. The distance between access steps is smaller so getting to and from the engine compartment is easier. The hood is lighter and easier to raise and lower.

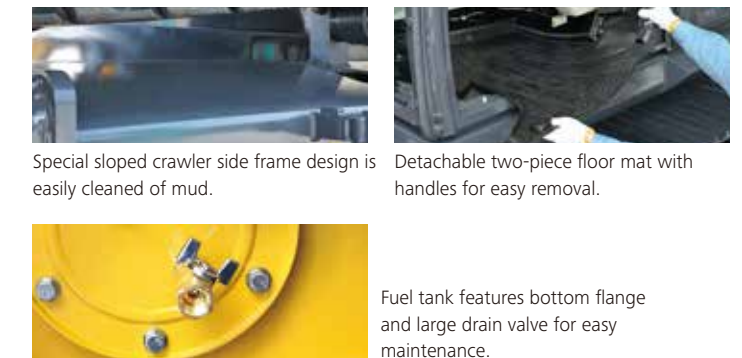


The DEF fill is located inside the convenient storage compartment.

Easy Access to In-cab Maintenance Features



Easy Cleaning



Ground-level Access

Design allows for easy access at ground level for daily checks and maintenance work.



- 1 Main fuel filter with integrated water separator
- 2 Pre-fuel filter with integrated water separator
- 3 Engine oil filter

KOMEXS Total Support for Machines with Network Speed and Accuracy

KOMEXS is a satellite-based system for receiving machine information. Manage your machines anywhere in the world using the Internet. Location, workload and diagnostic data aid business operations.



Direct Access to Operational Status

Location Data

Accurate location data can be obtained even from sites where communications are difficult.

Operating Hours

A comparison of operating times of machines at multiple locations shows which locations are busier and more profitable. Operating hours on site can be accurately recorded, for running time calculations needed for rental machines, etc.

Fuel Consumption Data

Data on fuel consumption and idling times can be used to indicate improvements in fuel consumption.

Graph of Work Content

The graph shows how working hours are divided among different operating categories, including digging, idling, traveling, and optional operations (NGB).



Maintenance Data and Warning Alerts

Machine Maintenance Data

Provides maintenance status of separate machines operating at multiple sites. Maintenance data is also relayed to KOBELCO service personnel, for more efficient planning of periodic servicing.

Security System

Engine Start Alarm

Sends a notification if the engine is started outside of pre-defined hours.

Area Alarm

Sends a notification if the machine leaves a pre-defined area.

Engine

| | |
|--------------------|---|
| Model | HINO J08EVV |
| Type | Water-cooled, 4cycle 6cylinder direct injection type diesel engine with intercooler turbo-charger (complies with EU (NRMM) Stage IV, EPA Tier IV Final) |
| No. of cylinders | 6 |
| Bore and stroke | 4.41" {112 mm} x 5.12" {130 mm} |
| Displacement | 468.9 cu.in {7.684 L} |
| Rated power output | 270 hp {201 kW} / 2,100 rpm (SAE NET) 286 hp {213 kW} / 2,100 rpm (Without fan) |
| Max. torque | 729 lb-ft {989 N-m} / 1,600 rpm (SAE NET) 750 lb-ft {1,017 N-m} / 1,600 rpm (Without fan) |

Hydraulic System

| | |
|----------------------|--|
| Pump | |
| Type | Two variable displacement pumps + One gear pump |
| Max. discharge flow | 2 x 77.7 U.S.gpm {2 x 294 L/min} 1 x 5.5 U.S.gpm {1 x 21 L/min} |
| Relief valve setting | |
| Boom, arm and bucket | 4,970 psi {34.3 Mpa} |
| Power Boost | 5,480 psi {37.8 Mpa} |
| Travel circuit | 4,970 psi {34.3 Mpa} |
| Swing circuit | 4,210 psi {29.0 Mpa} |
| Control circuit | 725 psi {5.0 Mpa} |
| Pilot control pump | Gear type |
| Main control valves | 8-spool |
| Oil cooler | Air cooled type |

Swing System

| | |
|-------------------------|--|
| Swing motor | Axial piston motor |
| Parking brake | Oil disc brake, hydraulic operated automatically |
| Swing speed | 10 rpm {10 min ⁻¹ } |
| Swing torque | 88,212.43lb-ft{119.6kNm}{SAE} |
| Tail swing radius | 11'10" {3,600 mm} |
| Min. front swing radius | 13'7" {4,140mm} |

Bucket Selection Chart

| Bucket type | Capacity (SAE) Cubic Yard (m ³) | Width Inches (m) | Bucket Weight lb (kg) | Arm ft-in (m) | |
|-----------------|---|------------------|-----------------------|---------------|--------------|
| | | | | 10'10" {3.30} | 13'7" {4.15} |
| General Purpose | 0.875 {.669} | 24" {.609} | 1,925 {873} | H | H |
| | 1.25 {.956} | 30" {.762} | 2,105 {955} | H | H |
| | 1.50 {1.146} | 36" {.914} | 2,365 {1,073} | H | M |
| | 1.75 {1.337} | 42" {1.066} | 2,550 {1,157} | H | L |
| | 2.0 {1.529} | 48" {1.219} | 2,700 {1,225} | M | X |
| Heavy Duty | 2.375 {1.815} | 54" {1.371} | 3,825 {1,735} | L | X |
| | 2.75 {2.10} | 54" {1.371} | 4,050 {1,837} | L | X |
| | 0.875 {.669} | 24" {.609} | 2,070 {939} | H | H |
| | 1.25 {.956} | 30" {.762} | 2,265 {1,027} | H | H |
| | 1.50 {1.146} | 36" {.914} | 2,545 {1,154} | H | M |
| Severe Duty | 1.75 {1.337} | 42" {1.066} | 2,740 {1,243} | M | L |
| | 2.0 {1.529} | 48" {1.219} | 2,905 {1,318} | L | X |
| | 2.375 {1.815} | 54" {1.371} | 3,040 {1,379} | L | X |
| | 1.00 {.764} | 27" {.685} | 2,330 {1,057} | H | H |
| | 1.25 {.956} | 33" {.762} | 2,585 {1,172} | H | H |
| | 1.50 {1.146} | 36" {.914} | 2,690 {1,220} | H | M |
| | 1.75 {1.337} | 42" {1.066} | 2,945 {1,336} | M | L |
| | 2.0 {1.529} | 48" {1.219} | 3,160 {1,433} | L | X |

H - Used with material weight up to 3,000 lbs/cu yd {1,780 kg/m³} M - Used with material weight up to 2,500 lbs/cu yd {1,483 kg/m³}
L - Used with material weight up to 2,000 lbs/cu yd {1,186 kg/m³} X - Not recommended

Travel System

| | |
|-----------------------|------------------------------------|
| Travel motors | 2 x Axial piston, two speed motors |
| Parking brakes | Oil disc brake per motors |
| Travel shoes | 48 each side |
| Travel speed | 3.6 / 2.2 mph {5.8 / 3.6 km/h} |
| Drawbar pulling force | 70,600 lbs {314 kN}{SAE J 1309} |
| Gradeability | 70 % {35 deg} |
| Ground clearance | 30.9" {785 mm} |

Cab & Control

| | |
|---|--|
| Cab | |
| All-weather, sound-suppressed steel cab mounted on the silicon-sealed suspension 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 cylinder | 2-5.9" {150 mm} x 5'11" {1,542 mm} |
| Arm cylinder | 1-6.7" {170 mm} x 5'10" {1,788 mm} |
| Bucket cylinder | 1-5.9" {150 mm} x 3'11" {1,193 mm} |

Refilling Capacities & Lubrications

| | |
|-----------------------|---|
| Fuel tank | 132.9 U.S.gal {503 L} |
| Cooling system | 9.2 U.S.gal {35 L} |
| Engine oil | 7.5 U.S.gal {28.5 L} |
| Travel reduction gear | 2X 2.0 U.S.gal {2X 7.5L} |
| Swing reduction gear | 2.0 U.S.gal {7.4 L} |
| Hydraulic oil tank | 64.7 U.S.gal {245 L} tank oil level 108.3 U.S.gal {410 L} hydraulic system |
| DEF/AdBlue tank | 21.9 U.S.gal {83 L} |

Hydraulic P.T.O

| Hydraulic P.T.O | Output | PSI (Mpa) | US gal (L) / min |
|-----------------|--------|--------------|------------------|
| | | | |
| N&B | | 3,550 {24.5} | 155.3 {588} |
| Rotary | | 2,990 {20.6} | 11.3 {42.6} |

Working Ranges

| Range | Arm | 21' 3" {6.50} | |
|--|-----|--------------------------|---------------------|
| | | Standard 10'10" {3.30 m} | Long 13'7" {4.15 m} |
| a- Max. digging reach | | 36' 11" {11.26} | 39' 3" {11.97} |
| b- Max. digging reach at ground level | | 36' 1" {11.00} | 38' 6" {11.73} |
| c- Max. digging depth | | 23' 1" {7.04} | 25' 11" {7.89} |
| d- Max. digging height | | 36' 5" {11.10} | 36' 11" {11.25} |
| e- Max. dumping clearance | | 25' 10" {7.87} | 26' 5" {8.05} |
| f - Min. dumping clearance | | 9' 11" {3.03} | 7' 2" {2.18} |
| g- Max. vertical wall digging depth | | 20' 7" {6.27} | 22' 9" {6.94} |
| h- Min. swing radius | | 13' 7" {4.14} | 13' 11" {4.25} |
| i - Horizontal digging stroke at ground level | | 19' 3" {5.87} | 23' 11" {7.28} |
| j - Digging depth for 8 feet flat bottom | | 22' 7" {6.89} | 25' 6" {7.76} |
| Bucket capacity SAE heaped cu.yd.(m ³) | | 1.83 {1.40} | 1.57 {1.20} |

Dimensions

| Arm length | Unit: ft-in (mm) | |
|--|---------------------------------------|---------------------|
| | Standard 10'10" {3.30 m} | Long 13'7" {4.15 m} |
| A Overall length | 36' 8" {11,180} | 36' 9" {11,210} |
| B Overall height (to top of boom) | 11' 2" {3,410} | 11' 4" {3,450} |
| C Overall width | 11'11.7" {3,650}** / 12'4" {3,750}*** | |
| D Overall height (to top of cab) | 11' 7" {3,520} | |
| E Ground clearance of rear end* | 4' 11" {1,510} | |
| F Ground clearance* | 30.9" {785} | |
| G Tail swing radius | 11' 10" {3,600} | |
| G' Distance from center of swing to rear end | 11' 10" {3,600} | |
| H Tumbler distance | 13' 3" {4,050} | |
| I Overall length of crawler | 16' 4" {4,980} | |
| J Track gauge | 9' 8" {2,950} | |
| K Shoe Width. In (mm) | 27.6" {700} / 31.5" {800} | |
| L Overall width of upperstructure | 10' 3" {3,120} | |

*Without including height of shoe lug **Shoe width : 27.6" {700} ***Shoe width : 31.5" {800}

Operating Weight & Ground Pressure

In standard trim, with standard boom, 10'10" {3.30 m} arm, and 1.83 cu.yd. {1.40 m³} SAE heaped bucket

| Shaped | Triple grouser shoes (even height) | |
|--------------------------|------------------------------------|-----------------|
| | ft-in {mm} | lbs {kg} |
| Shoe width | 27.6" {700} | 31.5" {800} |
| Overall width of crawler | 11'11.7" {3,650} | 12'4" {3,750} |
| Ground pressure | 8.8 {60} | 7.8 {53} |
| Operating weight | 83,600 {37,900} | 84,400 {38,300} |

STANDARD EQUIPMENT

ENGINE

- Turbocharged and inter-cooled HINO J08EVV Tier IV Final Diesel engine
- Automatic engine deceleration
- Two 12 V, 112 Ah batteries
- 24 V, 5 kW starting motor
- 60-amp alternator
- Removable radiator clean-out screen
- Automatic engine shut-down if low engine oil pressure
- Side by side oil, hydraulic and engine radiators
- Double-element air cleaner

CONTROL

- Working mode selector (H-mode, S-mode and ECO-mode)
- Heavy Lift and Power Boost "without time limit"

SWING SYSTEM & TRAVEL SYSTEM

- Swing rebound prevention system
- Independent travel system
- Two-speed travel with automatic down shift
- Sealed & lubricated track links
- 27.6" {700mm} shoes are standard
- Grease-type track adjusters
- Automatic swing brake
- Lower track guides

HYDRAULIC

- Exclusive boom to arm regeneration systems
- Auto warm-up system
- Hydraulic oil cooler

MIRRORS & LIGHTS

- Three rearview mirrors plus rear-view camera
- Two front working lights
- Swing flashers

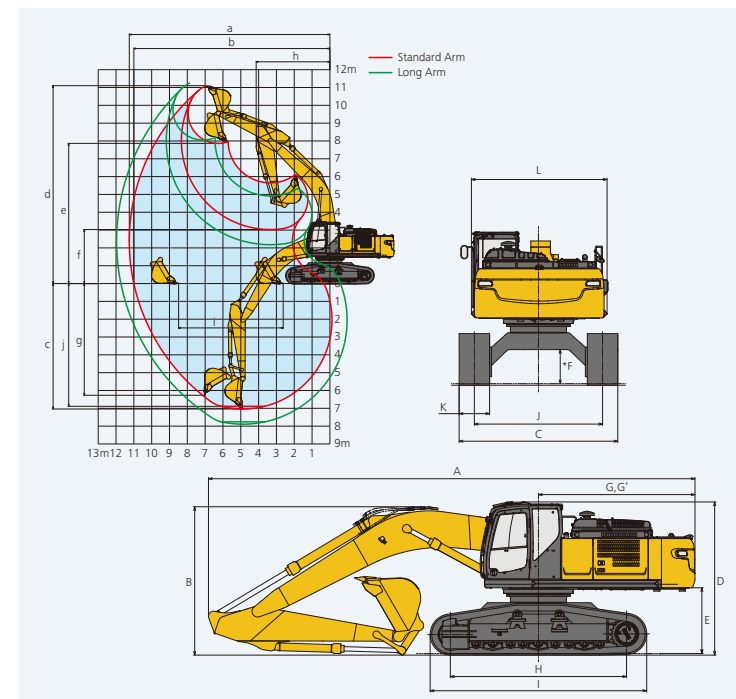
CAB & CONTROL

- ROPS / FOPS cab
- Two pilot-operated control levers
- Electric horn
- Integrated left-right slide-type control box
- All-weather, sound-insulated cab
- Interior cab light
- Coat hook
- Luggage tray
- Large cup holder
- Detachable two-piece floor mat
- 7-way adjustable suspension seat
- Headrest
- Handrails
- Heater and defroster

- Intermittent windshield wiper with double-spray washer
- Skylight
- FOPS top guard
- Tinted safety glass
- Pull-type front window and removable lower front window
- Easy to read multi-display monitor
- Automatic climate control
- Emergency escape hammer
- Bluetooth installed radio (AM/FM Stereo with speakers)
- Travel alarm
- Attachment pressure release switch
- Manual DPF regeneration switch
- 12 V converter
- Two-way control pattern changer

OPTIONAL EQUIPMENT

- 31.5" {800mm} shoes are optional.
- Boom & arm load (lock) holding valve
- Front-guard protective structures
- Additional hydraulic circuits
- Vandal Guards available via KOBELCO Parts department
- Air suspension seat
- CAB two light
- Right side camera
- Rain visor
- Single pedal for travel control



Digging Force

| Arm length | Unit: lbs {kN} | |
|------------------------------------|--------------------------|-----------------------------|
| | Standard 10'10" {3.30 m} | Long 13'7" {4.15 m} |
| Bucket digging force (Power boost) | SAE | 45,900 {204} (50,600 {225}) |
| | ISO | 51,000 {227} (56,200 {250}) |
| Arm crowding force (Power boost) | SAE | 36,000 {160} (39,600 {176}) |
| | ISO | 37,100 {165} (40,700 {181}) |