

ZAXIS-3 series

HITACHI

ZAXIS 190W



WHEEL EXCAVATOR

- **Model Code:** ZX190W-3
- **Engine Rated Power:** 122 kW (164 HP)
- **Operating Weight:** 18 000 - 20 400 kg
- **Backhoe Bucket:** SAE, PCSA Heaped: 0.51 - 1.20 m³
CECE Heaped: 0.45 - 1.00 m³

The Power to Perform

The ZAXIS-3 series is a new generation of excavators designed to provide more efficient power, productivity and improved operator comfort. By listening carefully to the wishes of the end-user, HITACHI not only understands your business, but also provides the reliable solutions you've been looking for.

NEW AND IMPROVED

- **Performance:**
 - Increased maximum travel speed
 - Greater acceleration performance
- **Reduced running cost:**
 - Decrease of fuel consumption during both driving and working
 - Improved durability and reliability
- **New equipment:**
 - Standard satellite communication system
 - Standard rear view camera
 - Standard theft deterrent system
- **Comfort:**
 - Excellent visibility
 - Enhanced controllability
 - Lower noise level



Power to spare

New OHC 4-valve diesel engine
 Improved driving ability
 Improved fuel consumption
 Wider oscillation angle
 Newly developed tires
 The FNR (Forward-Neutral-Reverse) switch

Page 4-5**Operational features and functions**

New E-mode
 HIOS II hydraulic system
 Auto axle lock system
 Brake holding system
 Smooth and shockless operation
 No-play disk brake
 New two-piece boom (optional)
 New outrigger (optional)
 New blade (optional)

Page 6-7**Operator comfort**

High visibility inside cab
 Comfort designed seat
 Short stroke levers
 Wide foot space
 Improved controllability and operator comfort

Page 8-9**Multi function monitor**

Maintenance support
 Attachment support system
 Rear view camera
 Theft deterrent system
 Fuel consumption monitoring
 Multi-language selection

Page 10-11**Maintenance**

Parallel arrangement of the cooling pack
 Conveniently located inspection points

Page 12-13**Solid Base**

Undercarriage design
 Front attachment

Page 14**Safety Features**

CRES II cab
 Cab right bars
 Pilot control shut-off lever
 Engine shut-off switch

Page 15**Environmental Features**

Array of low noise mechanisms
 Ecological design

Page 16**e-Service Owner's site****Page 17****Specifications****Page 18-28**

- **The new engine complies with the Emission Regulations EU Stage III A**
- **The advanced low noise design complies with the coming EU noise regulations 2000 / 14 / EC, STAGE II**



Power to spare

A new OHC 4-valve diesel engine and new structure power train were developed for the ZAXIS-3.



Development Concept of New Engine

OHC* 4-Valve Engine

The new OHC 4-valve diesel engine is developed and built to comply with the rigorous Emission Regulations enforced in 2007 in U.S and EU. This new engine contributes to environmental preservation. At the same time it realizes high durability and low fuel consumption by adopting the latest advanced engine technology.

*Overhead camshaft

Common Rail Type Fuel Injection System

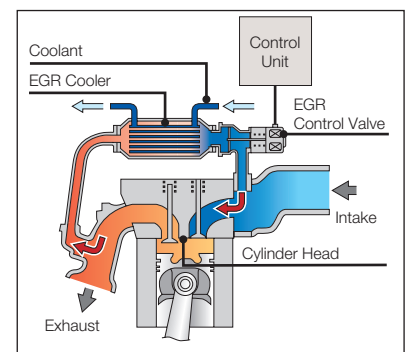
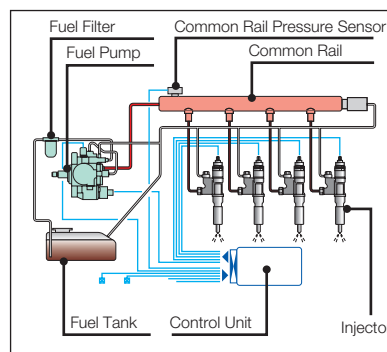
Electronic control common rail type fuel injection system drives an integrated fuel pump at an ultrahigh pressure to distribute fuel to each injector per cylinder through a common rail. This enables optimum combustion to generate large horsepower, and reduce PM* (diesel plume) and fuel consumption.

*Particulate Matter

Cooled EGR* System

The cooled EGR system lets part of exhaust gasses mix with intake air for re-combustion to reduce oxygen concentration in the air in the combustion chamber. This design lowers combustion temperature in the cylinder, reducing fuel consumption and NOx while yielding more horsepower.

*Exhaust Gas Recirculation



Excellent Driving Ability, Less Fuel Consumption

Improved Driving Ability

The merits of the new OHC 4-valve engine and new power train, this unit features an increased driving ability in comparison to the conventional ZAXIS-1.

-Maximum travel speed is improved by 17%

-Acceleration performance is improved by 15%

Improved Fuel Consumption

The unit features an HIOS II system, which takes advantage of the most sophisticated hydraulic technology, efficiently maximizing the full performance potential of the newly developed engine. It efficiently controls the engine output and hydraulic output which results in lower fuel consumption.

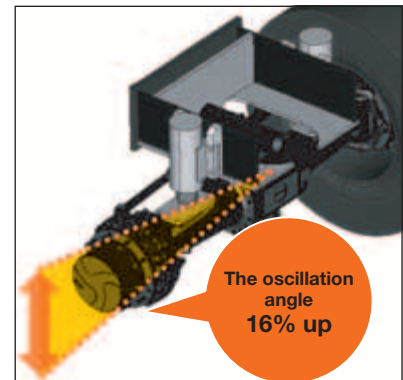
-Fuel consumption when driving on an incline is decreased by 29%*

**It is one example, this varies depending on the road conditions.*

Superior Travel Stability and Drivability

Wider Oscillation Angle

The oscillation angle has been increased by 16% over the conventional model, ZAXIS-1. Improved surface-holding performance on rough roads results in more stable driving.



Newly Developed Tires for More Comfortable Stability and Drivability

These new tires which were developed in cooperation with Bridgestone features an improved tread pattern and cross section form. This provides lower vibration and lower noise in driving, and even results in improved stability of the unit during operation.



Ease in Driving-Much Like an Automobile

Switches Easily Between Forward and Reverse

The FNR (Forward-Neutral-Reverse) switch is installed on the right operation lever. This allows you to switch between forward and reverse with your right hand. This is also highly convenient since you can switch without taking your hand off from the operation lever—especially useful when driving and performing complex operations at job site.



Variety of outstanding operational features and functions

Hydraulic system HIOS II and new OHC 4-valve diesel engine developed specially for ZAXIS-3.



Low Fuel Consumption and Advanced Technology for Optimizing Oil Pressure

New E-mode

The new E mode, H/P mode and P mode can be selected to suit job needs. The new E mode can save fuel consumption by up to 16% compared to the conventional model's P mode, while yielding similar production.

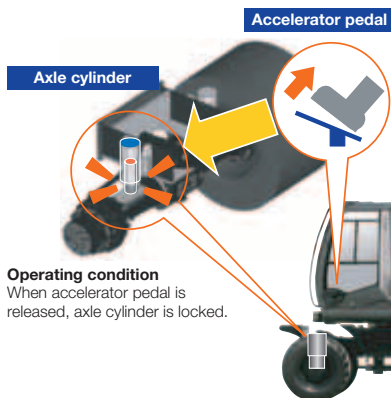
HIOS II Hydraulic System

HIOS II hydraulic system delivers higher operator satisfaction. Additionally, the new ZAXIS utilizes new system for higher margin by new ZAXIS 210 pump and improved stability.

Useful Functions of Wheel Excavator

Auto Axle Lock System

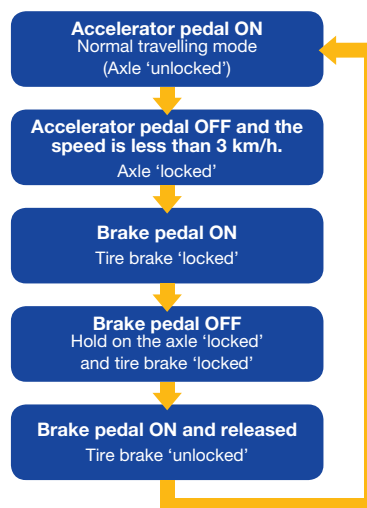
We gave the unit even a greater stability during operation by allowing the user to fix the front axle, with a function that locks the front axle cylinder. This lets you concentrate fully on operation, since the axle cylinder automatically locks when you release your foot from the accelerator and the speed is less than 3 km/h.



Brake Holding System

This system holds the lock and release of the brake along with the movement of the brake pedal. If you press the pedal down once, it holds the brake until the next time you press the pedal.

Accelerator/brake operation flow



Smooth and Shockless Operation

Yawing vibrations that occur when swing operation is stopped have been decreased by installing a swing dampener valve and shockless valve. This lets the operator smoothly and accurately stop motion at the intended place.

No-play disk brake

It utilizes no-play disk brake which holds wheel directly without play of final gear. Reliable tire lock on operating front attachment.

Improved Structure to Meet Market Needs

New Two-piece Boom (optional)

Due to the newly designed two-piece boom, we have expanded the maximum digging reach and decreased the overall height. This makes the unit more compact and stable during transportation and easier to move, yet maintains a large digging reach.

-Maximum digging reach: expanded by 370 mm

-Overall height for transportation: decreased by 370 mm

Expansion of the Lift Amount of New Outrigger (optional)

The outrigger provides 60 mm greater lifting height compared to the conventional model. This allows ample lift up in rough conditions.

New Blade (optional)

New blade features wide and flat shaped bottom, resulting in less road surface damage and reduced mud collection.

A New Standard in Operator Comfort

The operator's seat of the ZAXIS-3 series gives the operator an excellent view of the jobsite. Moreover, the widescreen colour LCD monitor allows the operator to see what is behind the machine.

Ample legroom, short stroke levers and a large seat ensure optimum working conditions for the operator during long shifts.





Good Visibility and Information Functions

The operator's seat gives the operator an excellent view of the jobsite and the road. Visibility is improved especially for the right downward view. Sliding windows on the front and side enable direct communication between operator and other workers. With the widescreen colour LCD monitor, the operator can check machine conditions, while the rear view camera lets the operator confirm the view behind the machine.

Comfortable cab for Operator

Overall comfort is improved in order to lessen operator's fatigue. The cab has a fully automatic air-conditioning, and silicone-oil-filled shock absorbers to minimize vibration. The seat features a contoured backrest, suspension, heating, and has horizontal and vertical adjustments. A retractable seat belt is also included. Left console tilts upward enabling easy entry and exit.

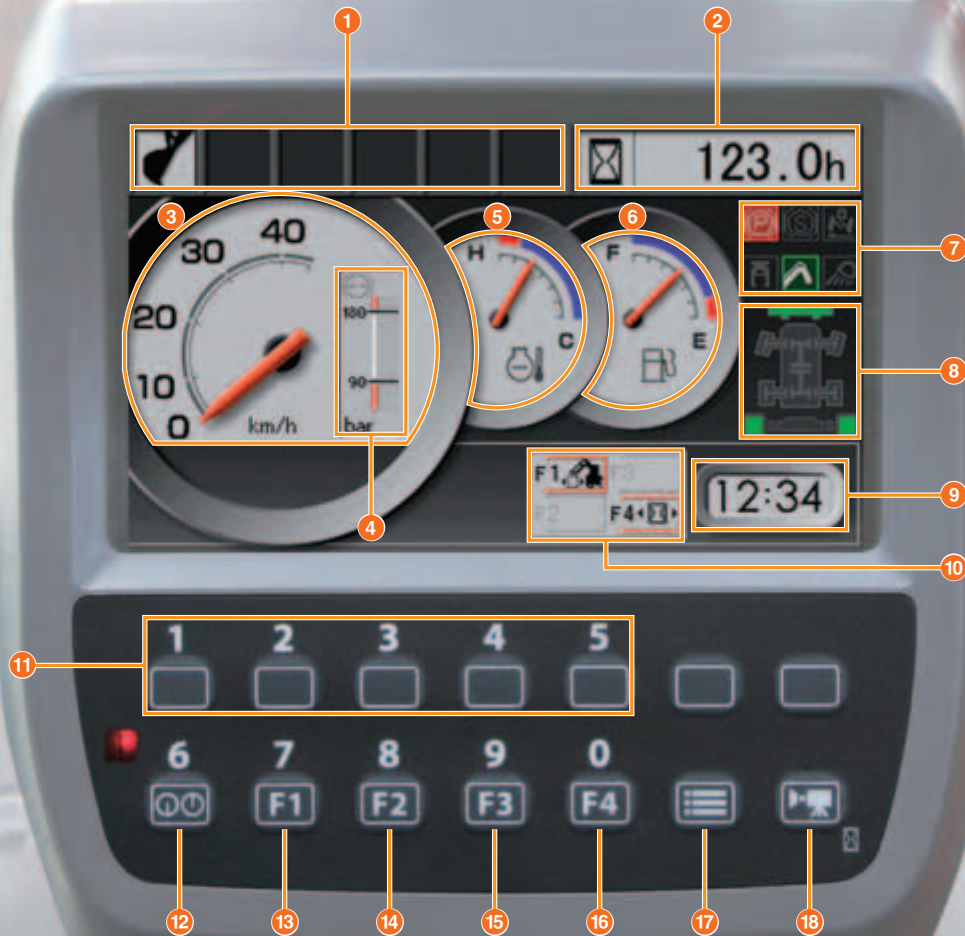
Ease of controllers

Ergonomically positioned short stroke levers ensure optimum working conditions. A built-in FNR switch provides easier forward/reverse switching during travel. Easy control to front attachment by handy analog switch. And, with the foot-operated angle adjustment lever steering tilt can be adjusted to the most comfortable position.



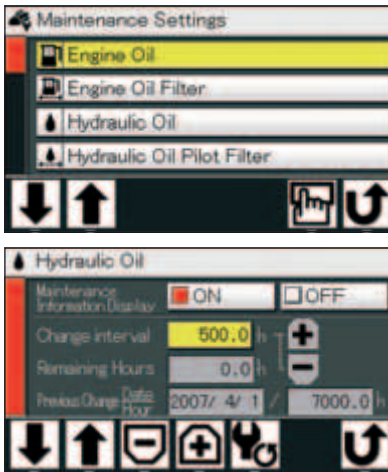
Embedded Information Technology

The ZAXIS-3 series is equipped with a widescreen colour LCD monitor with adjustable contrast for day and night shifts. With the monitor the operator can check maintenance intervals, select work modes, monitor fuel consumption, connect to the rear view camera, etc.



- | | | |
|--|---|-------------------------------|
| 1 Display for work mode, Auto-Idle, etc. | 8 Outrigger and blade operation display | 14 Option selector |
| 2 Hour meter / Odometer / Trip meter | 9 Clock | 15 Option selector |
| 3 Speedometer / Tachometer | 10 Work mode / Option selector / Mail indication (optional) / Hour meter selector display | 16 Hour meter selector |
| 4 Brake oil pressure meter | 11 Function selector switch | 17 Menu |
| 5 Coolant temperature meter | 12 Return to basic screen key | 18 Rear view monitor selector |
| 6 Fuel meter | 13 Work mode selector | |
| 7 Display for parking brake, working brake, etc. | | |

Maintenance Support



The LCD monitor provides maintenance timing alerts for the hydraulic oil and fuel filters, according to the schedule preset by the user each time the key switch is turned. Properly scheduled maintenance can prevent equipment damage and failure.

Theft Deterrent System



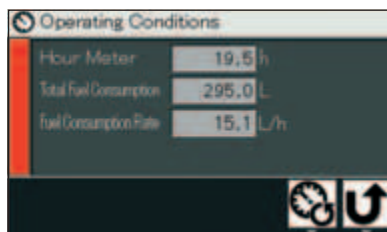
The electronic immobilizer requires the entry of an encryption code to the multifunctional monitor each time when starting the engine to prevent theft and vandalism.

Attachment Support System (work mode selector)



When replacing the attachment, oil flow adjustment can automatically be done by one touch on the work mode selection display on the LCD monitor. Minor adjustments of oil flow is possible if necessary.

Fuel Consumption Monitoring



Fuel consumption per operating hour is computed, and the result is displayed on the LCD monitor. This information suggests refuelling timing, guides energy-saving operation and efficient job management.

**The indicated values are examples and could differ from those in actual operation.*

Rear View Camera



The widescreen colour LCD, in tandem with the rear view camera on the counterweight, provides a convenient view of the area behind the unit. The rear view camera automatically works when travelling backward, and can also be manually turned on with a select switch on the monitor.

Multi-language Selection



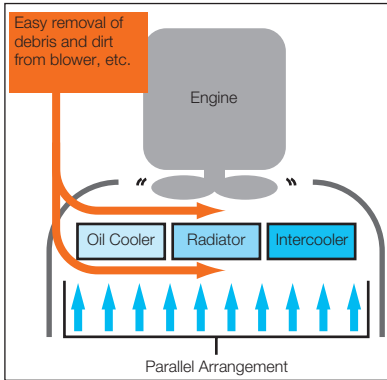
The menu allows selection from 12 languages.

Simplified Maintenance

The ZAXIS-3 series meet customer demands for simplified maintenance. Regular maintenance is the key for keeping equipment in top condition, which can help to prevent costly downtime. In addition, a regular serviced machine has a higher residual value. There are many convenient service features to be found on the ZAXIS-3 series.



Parallel Arrangement of the Cooling Pack



The oil cooler, radiator and intercooler are laid out in a parallel arrangement, instead of the conventional in-line arrangement. This parallel arrangement makes it significantly easier to clean around the engine. The air conditioner condenser can be opened for easy cleaning of the condenser and the radiator located behind.

Conveniently Located Inspection Points



Wide doors give ground-level access to the fuel filter, water separator and engine oil filter. Hydraulic oil can be used up to 5 000 hours.



The engine oil pan is fitted with a drain coupler. When draining, an associated drain hose is connected to the drain coupler. The drain coupler is reliable, preventing oil leakage and vandalism.



The large handrail, steps and anti-skid plates lead to the engine cover.



The fresh air filter for the air conditioner is relocated to the cab door side from the conventional location behind the operator seat. This allows easy cleaning and replacement of the fresh air filter, like the air circulation filter inside the cab.



The concentrated one-spot oil refill point for swing bearing was redesigned and located underneath the cab. This results in easier greasing and maintenance.



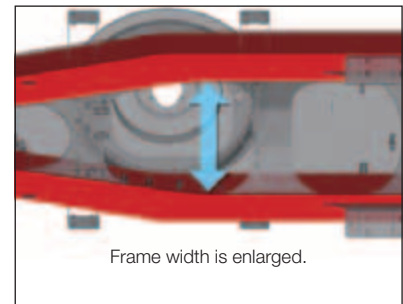
The unit features a large-capacity tool box with enough space to store a tin pail. The box can be used as an all-purpose storage space for storing tools and grease guns.

A Solid Base for a Long Life

HITACHI's technology is built on a wealth of experience and know-how from severe job sites around the world. The undercarriage of the ZAXIS 210W has become much stronger. Reinforced frame section featuring improved structure and enhanced cross-section provides greater machine durability, and the integrated transmission with rear axle realizes better performance.

Reinforced Undercarriage Design

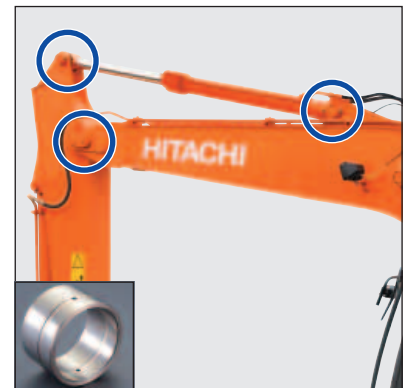
The undercarriage which supports travelling and operation performs an important role in improving ease of operation and durability. ZAXIS-3 series utilizes a new undercarriage frame design. Wider frame width enhanced 9% greater vertical strength rate.



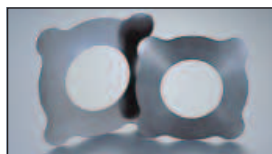
Strengthened Front Attachment

The boom top bracket is strengthened by using high-tensile steel. At arm-bucket joint, the arm top is hardened with WC thermal spraying (Tungsten-Carbide) for greater wear resistance at its contact surface with bucket, reducing jerking. Reinforced resin thrust plates are designed to reduce noise and resist wear.

The new HN bushings, containing solid molybdenum-based lubricant, are utilized at the boom-arm joint and arm cylinder mounting area for better lubrication and higher durability. (At other joints, conventional HN bushings are also utilized.)



WC Thermal spraying



Reinforced resin thrust plates

Safety Features

Ensuring the safety of the operator and other workers on the jobsite is an important concern for HITACHI. That is why the ZAXIS-3 series has a number of safety features including a new reinforced cab and shut-off mechanisms for engine and pilot controls.

CRES II Cab

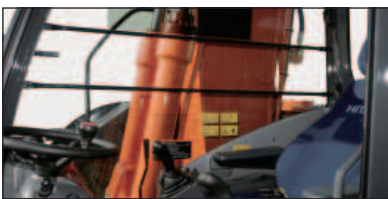
The CRES II cab is designed to help with “just in case” protection for the operator. Safety in case of tipping is improved. The cab top, for instance, can withstand about 2.5 times conventional load when side load is applied to the cab top until its deformation reaches 200 mm.

Withstanding load: 2.5-fold increase



Additional Features

Cab Right Bars



Evacuation Hammer



Engine Shut-off Switch



Pilot Control Shut-off Lever



OPG Top Guard, Level II



(optional)

Retractable Seat Belt



Other features include a retractable seat belt, evacuation hammer and an emergency engine shut-off switch. A shut-off lever for pilot control helps to prevent unintentional movements. In addition a Falling Object Protective Structure (OPG top guard, Level II) guard is optionally available. For the cab windows there is a choice of laminated or tempered glass.

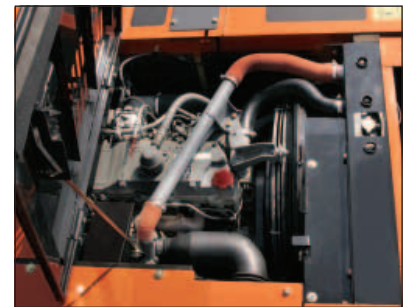
Environmental Features

HITACHI takes its environmental responsibility seriously. Our production facilities have ISO 14001 certification. The HITACHI machine is lead free and has a low-noise design, providing HITACHI customers with one of the most environmentally friendly hydraulic excavators available today.



A Cleaner Machine

The ZAXIS-3 series is equipped with a clean but powerful engine to comply with Tier 3, and Stage III A engine emission regulations effective in the U.S. EPA and European Union from 2007. Exhaust gas is partly re-combusted to reduce particulate matter (PM) output and lower nitrogen oxide (NOx) levels.



A Quieter Machine

A number of features make this machine quieter. First, isochronous control of the engine speed means a restriction of engine speed during no-load and light-duty operation to suppress sound. Second, a fan with curved blades reduces air resistance and air flow noise. Third, a time-tested muffler suppresses engine noise significantly. This advanced low noise design complies with the 2000 / 14 / EC, Stage II, directive effective in the European Union from 2006.



A Recyclable Machine

Over 97% of the ZAXIS-3 series can be recycled. All resin parts are marked to facilitate recycling. The machine is completely lead-free. The radiator and oil cooler are made from aluminium and all wires are lead-less. In addition, biodegradable hydraulic oil is available for jobsites where special environmental care is required.



Remote fleet management with e-Service Owner's Site

Reduce maintenance effort and costs for your machine fleet with e-Service Owner's Site; latest machine information of each of your machines available on-line, in your office.



e-Service Owner's Site features

Operation

Remote access to all relevant machine operation information such as daily operating hours and machine fuel level as well as historically cumulated temperatures and pressures.



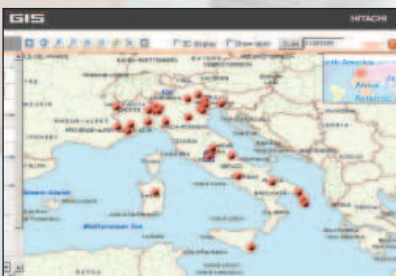
Maintenance

For each machine, maintenance history as well as recommended maintenance due is displayed in one view, allowing for accurate and efficient fleet maintenance management.



Location

In addition to any general GPS function, GIS (Geographical Information System) will not only show the geographical position of each machine with immediate serial number identification, it will also allow for dedicated multiple machine searches using specific operational information as search criteria.



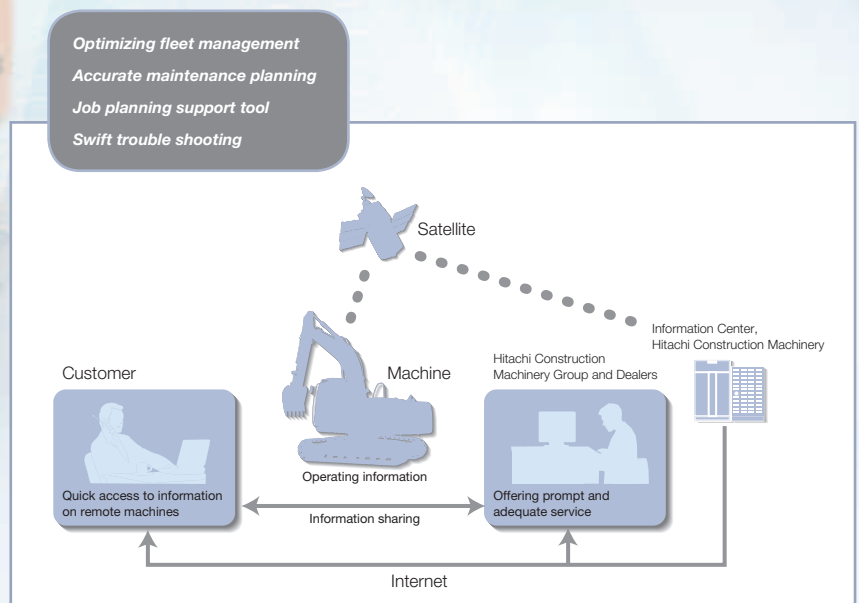
Check and monitor each of your machines from your office

Enhanced service support from your local dealer

Actual geographical location of each of your machines

e-Service Owner's Site is an on-line fleet management tool offered by HCME to each of its customers. It will present all operational information and location of your machines on a PC in your office, giving you an up to date overview of your machines, allowing for full fleet control. Each machine will regularly send its operational data to a satellite and from there, via a ground station to a Hitachi server. The data collected in the server will then be processed and directed to each customer around the world. Your machine information will be available through a secure internet connection for you and your dealer. This communication chain is operational 24h a day, each day of the year. It will support your job planning, help you maintain your machine and allow for enhanced service and trouble shooting support by your local dealer, all directly contributing to reduce downtime and increase the cost performance of your fleet.

All new ZAXIS-3 and ZW machines supplied by HCME will have a satellite communication unit installed as standard*, meaning each owner can directly enjoy the benefits of e-Service Owner's Site. Your local dealer will be able to give you access to e-Service Owner's Site.



* (1) Satellite communication units can not be installed in machines for countries that currently do not have Satellite Communication Services available. At the time of print however, the majority of European countries have Satellite Communication Services available and full European coverage is expected.

(2) Satellite communication basically allows for worldwide coverage. Contact your local dealer for the latest situation on actual satellite communication availability for your country or specific jobsite.

(3) If transmission of the satellite signal is hindered in any way, satellite communication may not be possible.

SPECIFICATIONS

ENGINE

Model	Isuzu AI-4HK1X
Type	4-cycle water-cooled, direct injection
Aspiration	Turbocharged, intercooled
No. of cylinders	4
Rated power	
ISO 9249, net	122 kW (164 HP) at 2 000 min ⁻¹ (rpm)
EEC 80/1269, net ..	122 kW (164 HP) at 2 000 min ⁻¹ (rpm)
SAE J1349, net	122 kW (164 HP) at 2 000 min ⁻¹ (rpm)
Maximum torque	655 N·m at 1 500 min ⁻¹ (rpm)
Piston displacement ..	5.193 L
Bore and stroke	115 mm x 125 mm
Batteries	2 x 12 V / 88 Ah

HYDRAULIC SYSTEM

- Work mode selector
Digging mode / Attachment mode
 - Engine speed sensing system
- | | |
|----------------------|--|
| Main pumps | 2 variable displacement axial piston pumps |
| Maximum oil flow ... | 2 x 189 L / min |
| Pilot pump | 1 gear pump |
| Maximum oil flow ... | 27.7 L / min |
| Steering pump | 1 gear pump |
| Maximum oil flow ... | 27.7 L / min |

Hydraulic Motors

Travel	1 variable displacement axial piston motors
Swing	1 axial piston motor

Relief Valve Settings

Implement circuit	34.3 MPa (350 kgf / cm ²)
Swing circuit	32.4 MPa (330 kgf / cm ²)
Travel circuit	34.3 MPa (350 kgf / cm ²)
Pilot circuit	3.9 MPa (40 kgf / cm ²)

Hydraulic Cylinders

High-strength piston rods and tubes. Cylinder cushion mechanisms provided in boom and arm cylinders to absorb shock at stroke ends.

Dimensions

	Quantity	Bore	Rod diameter
Boom (2-piece boom)	2	120 mm	85 mm
Position (2-piece boom)	1	170 mm	110 mm
Boom (Monoblock boom)	2	120 mm	85 mm
Arm	1	125 mm	90 mm
Bucket	1	105 mm	75 mm

Hydraulic Filters

Hydraulic circuits use high-quality hydraulic filters. A suction filter is incorporated in the suction line, and full-flow filters in the return line and swing/travel motor drain lines.

CONTROLS

Pilot controls. Hitachi's original shockless valve and quick warm-up systems built-in pilot Hydraulic warm-up control systems for engine and hydraulic oil.

Implement levers	2
Travel pedal	1
Outrigger and/or blade lever	1
Position and/or Att Pedal.....	1

UPPERSTRUCTURE

Revolving Frame

Welded sturdy box construction, using heavy-gauge steel plates for ruggedness. D-section frame for resistance to deformation.

Swing Device

Axial piston motor with planetary reduction gear is bathed in oil. Swing circle is single-row, shear-type ball bearing with induction-hardened internal gear. Internal gear and pinion gear are immersed in lubricant. Swing parking brake is spring-set/hydraulic-released disc type.

Swing speed	12.2 min ⁻¹ (rpm)
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Operator's Cab

Independent spacious cab, 1 005 mm wide by 1 675 mm high, conforming to ISO* Standards. Reinforced glass windows on 4 sides for visibility. Front windows (upper and lower) can be opened. Reclining seat with armrests; adjustable with or without control levers.

* International Standardization Organization

UNDERCARRIAGE

Wheeled type undercarriage. The frame is of welded, stress-relieved structure.

Drive system: 2 speed power shift transmission and variable displacement axial piston type travel motor.

Travel speed (forward and reverse)

 Creeper speed range

 Low speed range

 High speed range

Gradeability

Min. turning radius

Axle:

 All-wheel drive

 The front axle can be locked hydraulically in any position.

 Oscillating front axle

Brakes system:

 Maintenance free wet-disc brakes on axle are standard.

 Fully hydraulic service brake system

WEIGHTS AND GROUND PRESSURE

ZX190W-3 WITH MONOBLOCK BOOM:

Equipped with monoblock boom 2.71 m arm and 0.70 m³ (SAE heaped) bucket .

Stabilization	Standard Gauge		Wide Gauge	
	Short Chassis	STD Chassis	Short Chassis	STD Chassis
Rear Blade	18 000 kg	18 200 kg	18 000 kg	18 200 kg
Rear Outrigger	18 300 kg	18 500 kg	18 400 kg	18 600 kg
Outrigger and Blade	–	19 400 kg	–	19 400 kg
Front and Rear Outrigger	–	19 700 kg	–	19 800 kg

ZX190W-3 WITH 2-PIECE BOOM:

Equipped with 2-piece boom, 2,40 m arm and 0.70 m³ (SAE heaped) bucket.

Stabilization	Standard Gauge		Wide Gauge	
	Short Chassis	STD Chassis	Short Chassis	STD Chassis
Rear Blade	18 600 kg	18 800 kg	18 600 kg	18 800 kg
Rear Outrigger	19 000 kg	19 200 kg	19 000 kg	19 200 kg
Outrigger and Blade	–	20 100 kg	–	20 100 kg
Front and Rear Outrigger	–	20 400 kg	–	20 400 kg

BACKHOE ATTACHMENTS

Boom and arms are of welded, box-section design, Monoblock and 2-piece boom are available.

2.26 m, and 2.71 m arms are available for monoblock boom.

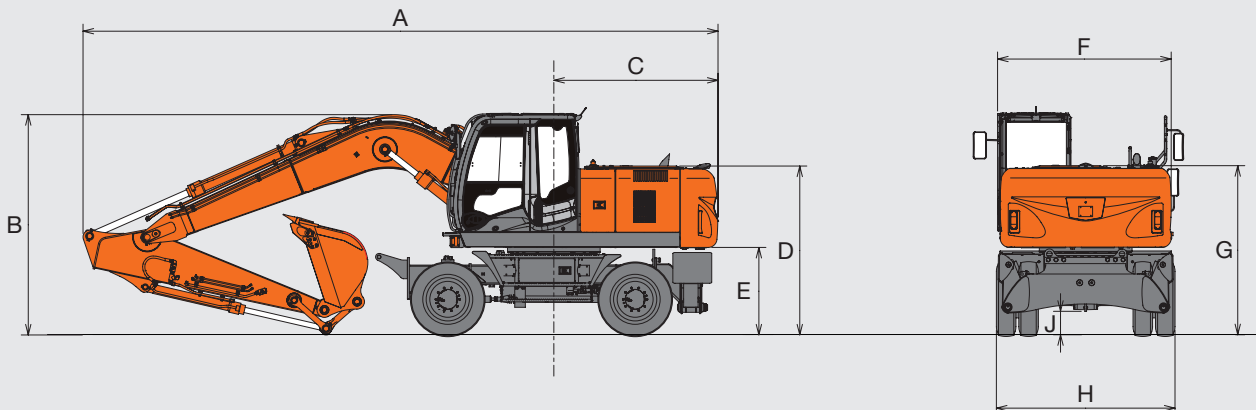
2.26 m 2.40 m and 2.71 m arms are available for 2-piece boom.

SERVICE REFILL CAPACITIES

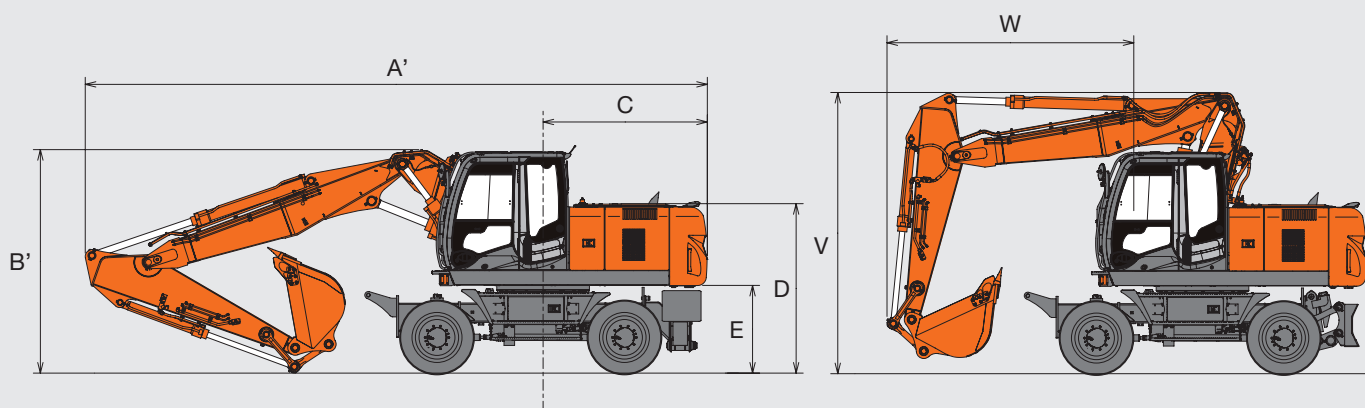
Fuel tank	290.0 L
Engine coolant	22.0 L
Engine oil	23.0 L
Swing device	6.9 L
Transmission	2.5 L
Front differential gear	9.5 L
Rear differential gear	14.0 L
Hub reduction gear	
Front axle	2 x 2.5 L
Rear axle	2 x 2.5 L
Hydraulic system	240 L
Hydraulic tank	100 L

DIMENSIONS

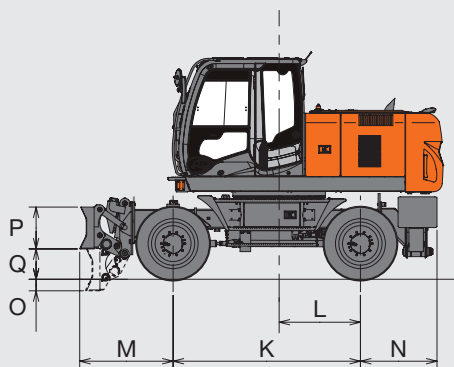
MONOBLOCK BOOM



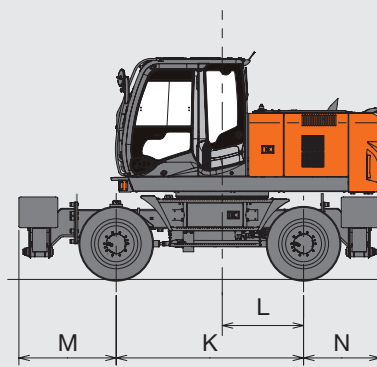
2-PIECE BOOM



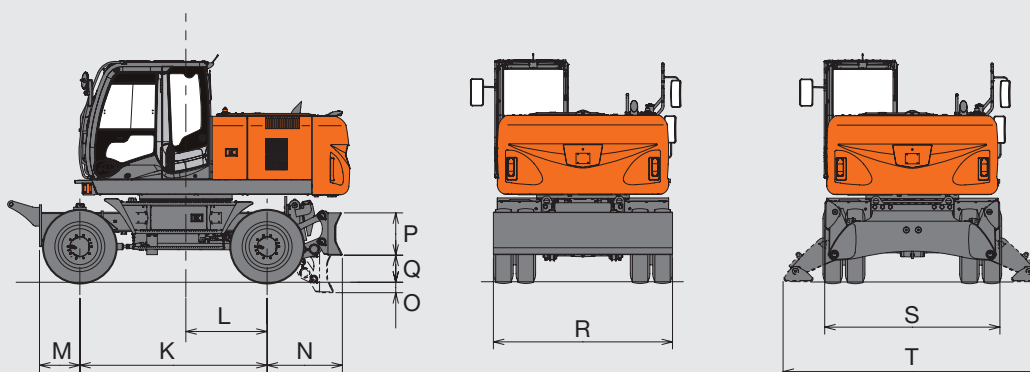
FRONT BLADE AND REAR OUTRIGGER



FRONT AND REAR OUTRIGGER



REAR BLADE



DIMENSIONS

Unit: mm

		Standard Gauge/Wide Gauge						
		Short Chassis		Standard Chassis				
		Rear BL	Rear O/R	Rear BL	Rear O/R	Front BL Rear O/R	Front O/R Rear BL	Front and Rear O/R
A	Overall length (with monoblock boom)							
	2.26 m arm	9 000						
	2.71 m arm	8 980						
A'	Overall length (with 2-piece boom)							
	2.26 m arm	8 810						
	2.40 m arm	8 790						
	2.71 m arm	8 800						
B	Overall height (with monoblock boom)							
	2.26 m arm	3 150						
	2.71 m arm	3 130* (3 120: Boom height)						
B'	Overall height (with 2-piece boom)							
	2.26 m arm	3 190						
	2.40 m arm	3 150						
	2.71 m arm	3 210						
C	Rear-end swing radius	2 320						
D	Engine cover height	2 345						
E	Counterweight clearance	1 235						
F	Overall width of upper structure	2 450						
G	Overall height of cabin	3 130						
H	Overall width tires	2 550/2730						
J	Min. ground clearance	350						
K	Wheel base	2 650						
L	Swing-centre to rear axle	1 150						
M	Front overhang	470		975		1 320	1 380	
N	Rear overhang	1 065	1 085	1 065	1 085		1 065	1 085
O	Max. blade lower	220	–	220	–	220		–
P	Height of blade	590	–	590	–	590		–
Q	Max. blade raise	370	–	370	–	370		–
R	Overall width of blade	2 530/2 730	–	2 530/2 730	–	2 530/2 730		–
S	Over width of O/R retract	–	2 470	–	2 470			
T	Overall width O/R extend	–	3 440	–	3 440			
V	Over height of boom (travelling)							
	2.26 m arm	3 980						
	2.40 m arm	3 980						
	2.71 m arm	3 970						
W	Front overhang (travelling)							
	2.26 m arm	3 475						
	2.40 m arm	3 495						
	2.71 m arm	5 255						

Transportation dimensions are A (A') , B (B') , H (without blade) or A (A') , B (B') , R (with blade).

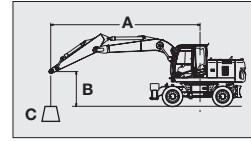
* Cabin Height.

LIFTING CAPACITIES

ZX190W-3 WITH MONOBLOCK BOOM, 2.71 M ARM, STANDARD CHASSIS, STANDARD GAUGE

Metric measure

- Notes: 1. Ratings are based on ISO 10567.
 2. Lifting capacity of the ZAXIS Series does not exceed 75% of tipping load with the machine on firm, level ground or 87% full hydraulic capacity.
 3. The load point is the centre-line of the bucket pivot mounting pin on the arm.
 4. *Indicates load limited by hydraulic capacity.
 5. Each value with Rear blade up over the Front-axle side and each value with Rear blade down over the Rear-axle side respectively, and value in optimal position with positioning cylinder.
 6. 0 m = Ground.



A: Load radius
 B: Load point height
 C: Lifting capacity

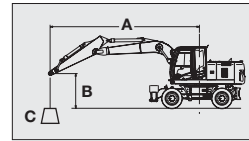
Rating over front or rear Rating over-side 360 degrees Unit: 1 000 kg

Stabilization		Load radius								At max. reach		
		3.0 m		4.5 m		6.0 m		7.5 m				Meter
6.0 m	Rear blade up (over front)					*4.9	3.1			*3.4	2.4	6.88
	Rear blade down (over rear)					*4.9	3.5			*3.4	2.8	
	Rear outrigger down (over rear)					*4.9	4.2			*3.4	3.3	
	Front outrigger and rear blade down (over rear)					*4.9	*4.9			*3.4	*3.4	
	Front blade and rear outrigger down (over rear)					*4.9	*4.9			*3.4	*3.4	
	4 outrigger down (over rear)					*4.9	*4.9			*3.4	*3.4	
4.5 m	Rear blade up (over front)			*6.5	4.6	5.0	3.0	3.5	2.1	*3.4	2.0	7.62
	Rear blade down (over rear)			*6.5	5.3	*5.5	3.4	*3.9	2.4	*3.4	2.3	
	Rear outrigger down (over rear)			*6.5	6.4	*5.5	4.1	*3.9	2.8	*3.4	2.8	
	Front outrigger and rear blade down (over rear)			*6.5	*6.5	*5.5	5.0	*3.9	3.5	*3.4	*3.4	
	Front blade and rear outrigger down (over rear)			*6.5	*6.5	*5.5	5.2	*3.9	3.6	*3.4	*3.4	
	4 outrigger down (over rear)			*6.5	*6.5	*5.5	*5.5	*3.9	*3.9	*3.4	*3.4	
3.0 m	Rear blade up (over front)			7.4	4.2	4.8	2.8	3.4	2.0	3.1	1.8	8.01
	Rear blade down (over rear)			*7.9	4.9	*6.0	3.2	*5.1	2.3	*3.5	2.0	
	Rear outrigger down (over rear)			*7.9	5.9	*6.0	3.9	4.7	2.8	*3.5	2.5	
	Front outrigger and rear blade down (over rear)			*7.9	7.4	*6.0	4.8	*5.1	3.4	*3.5	3.1	
	Front blade and rear outrigger down (over rear)			*7.9	7.8	*6.0	5.0	*5.1	3.6	*3.5	3.2	
	4 outrigger down (over rear)			*7.9	*7.9	*6.0	5.8	*5.1	*4.1	*3.5	*3.5	
1.5 m	Rear blade up (over front)			7.0	3.8	4.6	2.6	3.3	1.9	2.9	1.7	8.10
	Rear blade down (over rear)			*9.0	4.5	*6.6	3.0	*5.3	2.2	*3.8	2.0	
	Rear outrigger down (over rear)			*9.0	5.5	*6.5	3.7	4.6	2.7	*3.8	2.4	
	Front outrigger and rear blade down (over rear)			*9.0	7.0	*6.6	4.6	*5.3	3.3	*3.8	3.0	
	Front blade and rear outrigger down (over rear)			*9.0	7.3	*6.6	4.8	5.1	3.5	*3.8	3.1	
	4 outrigger down (over rear)			*9.0	8.6	*6.6	5.6	*5.3	4.0	*3.8	3.6	
0 m	Rear blade up (over front)			6.7	3.6	4.4	2.5	3.2	1.8	3.0	1.7	7.90
	Rear blade down (over rear)			*9.2	4.2	*6.7	2.9	*5.2	2.1	*4.3	2.0	
	Rear outrigger down (over rear)			*9.2	5.3	*6.3	3.6	4.5	2.6	4.2	2.4	
	Front outrigger and rear blade down (over rear)			*9.2	6.7	*6.7	4.4	*5.2	3.2	*4.3	3.0	
	Front blade and rear outrigger down (over rear)			*9.2	7.1	*6.7	4.6	5.0	3.4	*4.3	3.2	
	4 outrigger down (over rear)			*9.2	8.4	*6.7	5.4	*5.2	3.9	*4.3	3.7	
-1.5 m	Rear blade up (over front)	*8.4	6.5	6.7	3.6	4.4	2.4			3.3	1.9	7.38
	Rear blade down (over rear)	*8.4	*8.4	*8.6	4.2	*6.4	2.8			*4.8	2.2	
	Rear outrigger down (over rear)	*8.4	*8.4	*8.6	5.2	*6.2	3.5			4.6	2.7	
	Front outrigger and rear blade down (over rear)	*8.4	*8.4	*8.6	6.7	*6.4	4.4			*4.8	3.3	
	Front blade and rear outrigger down (over rear)	*8.4	*8.4	*8.6	7.0	*6.4	4.6			*4.8	3.5	
	4 outrigger down (over rear)	*8.4	*8.4	*8.6	8.3	*6.4	5.4			*4.8	4.0	
-3.0 m	Rear blade up (over front)	*9.4	6.7	6.7	3.6	4.4	2.5			4.0	2.3	6.47
	Rear blade down (over rear)	*9.4	7.9	*7.2	4.3	*5.2	2.9			*4.6	2.6	
	Rear outrigger down (over rear)	*9.4	*9.4	*7.2	5.3	*5.2	3.5			*4.6	3.2	
	Front outrigger and rear blade down (over rear)	*9.4	*9.4	*7.2	6.7	*5.2	4.4			*4.6	4.0	
	Front blade and rear outrigger down (over rear)	*9.4	*9.4	*7.2	7.1	*5.2	4.6			*4.6	4.2	
	4 outrigger down (over rear)	*9.4	*9.4	*7.2	*7.2	*5.2	*5.2			*4.6	*4.6	

ZX190W-3 WITH MONOBLOCK BOOM, 2.71 M ARM, STANDARD CHASSIS, WIDE GAUGE

Metric measure

- Notes: 1. Ratings are based on ISO 10567.
 2. Lifting capacity of the ZAXIS Series does not exceed 75% of tipping load with the machine on firm, level ground or 87% full hydraulic capacity.
 3. The load point is the centre-line of the bucket pivot mounting pin on the arm.
 4. *Indicates load limited by hydraulic capacity.
 5. Each value with Rear blade up over the Front-axle side and each value with Rear blade down over the Rear-axle side respectively, and value in optimal position with positioning cylinder.
 6. 0 m = Ground.



A: Load radius
 B: Load point height
 C: Lifting capacity

Rating over front or rear Rating over-side 360 degrees Unit: 1 000 kg

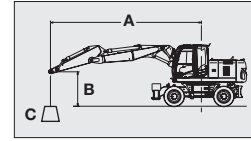
Stabilization		Load radius								At max. reach		Meter
		3.0 m		4.5 m		6.0 m		7.5 m				
6.0 m	Rear blade up (over front)					*4.9	3.1			*3.4	2.5	6.88
	Rear blade down (over rear)					*4.9	3.5			*3.4	2.8	
	Rear outrigger down (over rear)					*4.9	4.2			*3.4	3.3	
	Front outrigger and rear blade down (over rear)					*4.9	*4.9			*3.4	*3.4	
	Front blade and rear outrigger down (over rear)					*4.9	*4.9			*3.4	*3.4	
	4 outrigger down (over rear)					*4.9	*4.9			*3.4	*3.4	
4.5 m	Rear blade up (over front)			*6.5	4.7	5.1	3.0	3.5	2.1	*3.4	2.0	7.62
	Rear blade down (over rear)			*6.5	5.3	*5.5	3.4	*3.9	2.4	*3.4	2.3	
	Rear outrigger down (over rear)			*6.5	*6.4	*5.5	4.1	*3.9	2.8	*3.4	2.8	
	Front outrigger and rear blade down (over rear)			*6.5	*6.5	*5.5	5.0	*3.9	3.5	*3.4	*3.4	
	Front blade and rear outrigger down (over rear)			*6.5	*6.5	*5.5	5.2	*3.9	3.7	*3.4	*3.4	
	4 outrigger down (over rear)			*6.5	*6.5	*5.5	*5.5	*3.9	*3.9	*3.4	*3.4	
3.0 m	Rear blade up (over front)			7.6	4.3	4.9	2.8	3.5	2.0	3.1	1.8	8.01
	Rear blade down (over rear)			*7.9	4.9	*6.0	3.2	*5.1	2.3	*3.5	2.1	
	Rear outrigger down (over rear)			*7.9	5.9	*6.0	3.9	4.7	2.8	*3.5	2.5	
	Front outrigger and rear blade down (over rear)			*7.9	7.5	*6.0	4.8	*5.1	3.4	*3.5	3.1	
	Front blade and rear outrigger down (over rear)			*7.9	7.8	*6.0	5.0	*5.1	3.6	*3.5	3.2	
	4 outrigger down (over rear)			*7.9	*7.9	*6.0	5.8	*5.1	4.1	*3.5	*3.5	
1.5 m	Rear blade up (over front)			7.1	3.9	4.7	2.6	3.4	1.9	3.0	1.7	8.10
	Rear blade down (over rear)			*9.0	4.5	*6.6	3.0	*5.3	2.2	*3.8	2.0	
	Rear outrigger down (over rear)			*9.0	5.5	6.5	3.7	4.6	2.7	*3.8	2.4	
	Front outrigger and rear blade down (over rear)			*9.0	7.0	*6.6	4.6	*5.3	3.4	*3.8	3.0	
	Front blade and rear outrigger down (over rear)			*9.0	7.4	*6.6	4.8	5.2	3.5	*3.8	3.1	
	4 outrigger down (over rear)			*9.0	8.7	*6.6	5.6	*5.3	4.0	*3.8	3.6	
0 m	Rear blade up (over front)			6.9	3.7	4.5	2.5	3.3	1.9	3.1	1.7	7.90
	Rear blade down (over rear)			*9.2	4.3	*6.7	2.9	*5.2	2.1	*4.3	2.0	
	Rear outrigger down (over rear)			*9.2	5.3	6.3	3.6	4.5	2.6	4.2	2.4	
	Front outrigger and rear blade down (over rear)			*9.2	6.8	*6.7	4.5	*5.2	3.3	*4.3	3.1	
	Front blade and rear outrigger down (over rear)			*9.2	7.1	*6.7	4.7	5.1	3.4	*4.3	3.2	
	4 outrigger down (over rear)			*9.2	8.4	*6.7	5.4	*5.2	3.9	*4.3	3.7	
-1.5 m	Rear blade up (over front)	*8.4	6.6	6.8	3.6	4.5	2.5			3.4	1.9	7.38
	Rear blade down (over rear)	*8.4	7.9	*8.6	4.2	*6.4	2.9			*4.8	2.2	
	Rear outrigger down (over rear)	*8.4	*8.4	*8.6	5.2	6.3	3.5			4.6	2.7	
	Front outrigger and rear blade down (over rear)	*8.4	*8.4	*8.6	6.7	*6.4	4.4			*4.8	3.3	
	Front blade and rear outrigger down (over rear)	*8.4	*8.4	*8.6	7.1	*6.4	4.6			*4.8	3.5	
	4 outrigger down (over rear)	*8.4	*8.4	*8.6	8.3	*6.4	5.4			*4.8	4.0	
-3.0 m	Rear blade up (over front)	*9.4	6.7	6.9	3.7	4.5	2.5			4.1	2.3	6.47
	Rear blade down (over rear)	*9.4	8.0	*7.2	4.3	*5.2	2.9			*4.6	2.6	
	Rear outrigger down (over rear)	*9.4	*9.4	*7.2	5.3	*5.2	3.5			*4.6	3.2	
	Front outrigger and rear blade down (over rear)	*9.4	*9.4	*7.2	6.8	*5.2	4.5			*4.6	4.0	
	Front blade and rear outrigger down (over rear)	*9.4	*9.4	*7.2	7.1	*5.2	4.7			*4.6	4.2	
	4 outrigger down (over rear)	*9.4	*9.4	*7.2	*7.2	*5.2	*5.2			*4.6	*4.6	

LIFTING CAPACITIES

ZX190W-3 WITH 2-PIECE BOOM, 2.40 M ARM, STANDARD CHASSIS, STANDARD GAUGE

Metric measure

- Notes: 1. Ratings are based on ISO 10567.
 2. Lifting capacity of the ZAXIS Series does not exceed 75% of tipping load with the machine on firm, level ground or 87% full hydraulic capacity.
 3. The load point is the centre-line of the bucket pivot mounting pin on the arm.
 4. *Indicates load limited by hydraulic capacity.
 5. Each value with Rear blade up over the Front-axle side and each value with Rear blade down over the Rear-axle side respectively, and value in optimal position with positioning cylinder.
 6. 0 m = Ground.



A: Load radius
 B: Load point height
 C: Lifting capacity

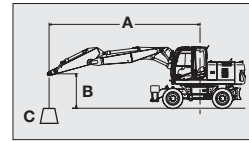
Rating over front or rear Rating over-side 360 degrees Unit: 1 000 kg

Stabilization		Load radius								At max. reach		Meter
		3.0 m		4.5 m		6.0 m		7.5 m				
7.5 m	Rear blade up (over front)			*4.5	*4.5					*4.2	4.0	5.14
	Rear blade down (over rear)			*4.5	*4.5					*4.2	*4.2	
	Rear outrigger down (over rear)			*4.5	*4.5					*4.2	*4.2	
	Front outrigger and rear blade down (over rear)			*4.5	*4.5					*4.2	*4.2	
	Front blade and rear outrigger down (over rear)			*4.5	*4.5					*4.2	*4.2	
	4 outrigger down (over rear)			*4.5	*4.5					*4.2	*4.2	
6.0 m	Rear blade up (over front)			*4.5	*4.5	*4.5	3.2			*3.7	2.7	6.48
	Rear blade down (over rear)			*4.5	*4.5	*4.5	3.6			*3.7	3.1	
	Rear outrigger down (over rear)			*4.5	*4.5	*4.5	4.3			*3.7	*3.7	
	Front outrigger and rear blade down (over rear)			*4.5	*4.5	*4.5	*4.5			*3.7	*3.7	
	Front blade and rear outrigger down (over rear)			*4.5	*4.5	*4.5	*4.5			*3.7	*3.7	
	4 outrigger down (over rear)			*4.5	*4.5	*4.5	*4.5			*3.7	*3.7	
4.5 m	Rear blade up (over front)	*7.0	*7.0	*5.4	4.8	*4.8	3.2			*3.6	2.2	7.27
	Rear blade down (over rear)	*7.0	*7.0	*5.4	5.4	*4.8	3.6			*3.6	2.5	
	Rear outrigger down (over rear)	*7.0	*7.0	*5.4	*5.4	*4.8	4.2			*3.6	3.0	
	Front outrigger and rear blade down (over rear)	*7.0	*7.0	*5.4	*5.4	*4.8	*4.8			*3.6	*3.6	
	Front blade and rear outrigger down (over rear)	*7.0	*7.0	*5.4	*5.4	*4.8	*4.8			*3.6	*3.6	
	4 outrigger down (over rear)	*7.0	*7.0	*5.4	*5.4	*4.8	*4.8			*3.6	*3.6	
3.0 m	Rear blade up (over front)	*8.5	8.1	*6.9	4.7	5.0	3.2	3.5	2.0	3.3	1.9	7.68
	Rear blade down (over rear)	*8.5	*8.5	*6.9	5.2	*5.4	3.6	*4.7	2.3	*3.6	2.2	
	Rear outrigger down (over rear)	*8.5	*8.5	*6.9	6.2	*5.4	4.2	*4.7	2.8	*3.6	2.7	
	Front outrigger and rear blade down (over rear)	*8.5	*8.5	*6.9	*6.9	*5.4	5.0	*4.7	3.5	*3.6	3.3	
	Front blade and rear outrigger down (over rear)	*8.5	*8.5	*6.9	*6.9	*5.4	5.1	*4.7	3.6	*3.6	3.5	
	4 outrigger down (over rear)	*8.5	*8.5	*6.9	*6.9	*5.4	*5.4	*4.7	4.2	*3.6	*3.6	
1.5 m	Rear blade up (over front)	*10.6	8.0	7.4	4.6	*4.9	3.1	3.4	2.0	3.2	1.8	7.77
	Rear blade down (over rear)	*10.6	9.2	*8.3	*5.2	*6.1	3.5	*5.1	2.3	*3.9	2.1	
	Rear outrigger down (over rear)	*10.6	*10.6	*8.3	6.1	*6.1	4.2	4.7	2.8	*3.9	2.6	
	Front outrigger and rear blade down (over rear)	*10.6	*10.6	*8.3	7.3	*6.1	4.9	*5.1	3.4	*3.9	3.2	
	Front blade and rear outrigger down (over rear)	*10.6	*10.6	*8.3	7.6	*6.1	5.1	*5.1	3.6	*3.9	3.3	
	4 outrigger down (over rear)	*10.6	*10.6	*8.3	*8.3	*6.1	*5.8	*5.1	4.1	*3.9	*3.9	
0 m	Rear blade up (over front)	*13.0	8.1	7.4	4.5	4.9	2.9	3.3	1.9	3.3	1.8	5.56
	Rear blade down (over rear)	*13.0	9.3	*9.0	5.2	*6.6	3.3	*4.9	2.2	*4.3	2.1	
	Rear outrigger down (over rear)	*13.0	11.4	*9.0	6.2	6.5	4.0	4.6	2.7	*4.3	2.6	
	Front outrigger and rear blade down (over rear)	*13.0	*13.0	*9.0	7.4	*6.6	4.9	*4.9	3.3	*4.3	3.3	
	Front blade and rear outrigger down (over rear)	*13.0	*13.0	*9.0	7.7	*6.6	5.1	*4.9	3.5	*4.3	3.4	
	4 outrigger down (over rear)	*13.0	*13.0	*9.0	8.7	*6.6	5.9	*4.9	4.0	*4.3	4.0	
-1.5 m	Rear blade up (over front)	14.5	7.7	7.6	4.3	4.7	2.7			3.6	2.0	7.01
	Rear blade down (over rear)	*14.6	9.1	*9.2	5.0	*6.8	3.1			*5.2	2.4	
	Rear outrigger down (over rear)	*14.6	11.6	*9.2	6.1	6.6	3.8			5.1	2.9	
	Front outrigger and rear blade down (over rear)	*14.6	*14.3	*9.2	7.6	*6.8	4.7			*5.2	3.6	
	Front blade and rear outrigger down (over rear)	*14.6	*14.6	*9.2	8.0	*6.8	4.9			*5.2	3.8	
	4 outrigger down (over rear)	*14.6	*14.6	*9.2	8.9	*6.8	5.7			*5.2	4.4	
-3.0 m	Rear blade up (over front)	*15.1	7.7	7.3	4.0					4.6	2.6	5.94
	Rear blade down (over rear)	*15.1	9.0	*9.4	4.7					*5.9	3.0	
	Rear outrigger down (over rear)	*15.1	11.5	*9.4	5.7					*5.9	3.7	
	Front outrigger and rear blade down (over rear)	*15.1	*15.1	*9.4	7.2					*5.9	4.6	
	Front blade and rear outrigger down (over rear)	*15.1	*15.1	*9.4	7.6					*5.9	4.8	
	4 outrigger down (over rear)	*15.1	*15.1	*9.4	9.0					*5.9	5.6	

ZX190W-3 WITH 2-PIECE BOOM, 2.40 M ARM, STANDARD CHASSIS, WIDE GAUGE

Metric measure

- Notes: 1. Ratings are based on ISO 10567.
 2. Lifting capacity of the ZAXIS Series does not exceed 75% of tipping load with the machine on firm, level ground or 87% full hydraulic capacity.
 3. The load point is the centre-line of the bucket pivot mounting pin on the arm.
 4. *Indicates load limited by hydraulic capacity.
 5. Each value with Rear blade up over the Front-axle side and each value with Rear blade down over the Rear-axle side respectively, and value in optimal position with positioning cylinder.
 6. 0 m = Ground.



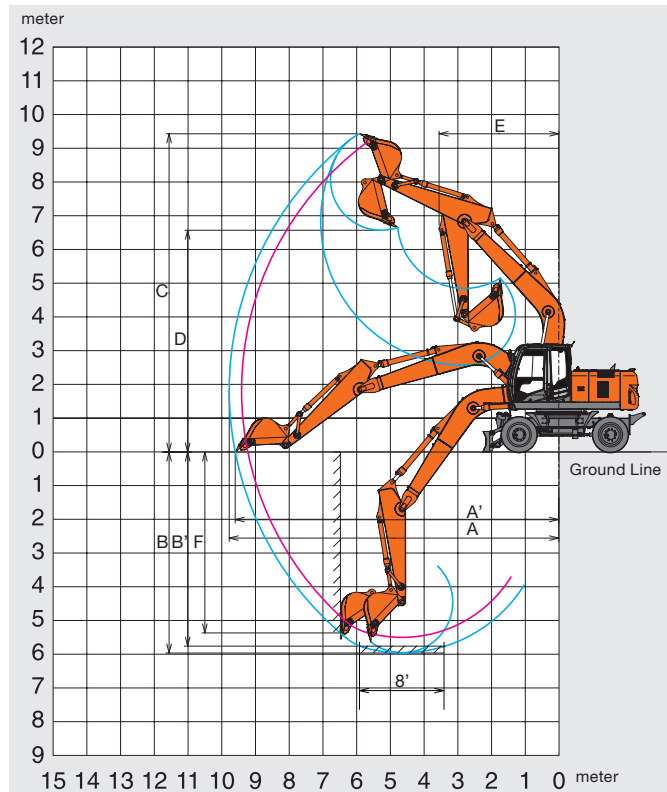
A: Load radius
 B: Load point height
 C: Lifting capacity

Rating over front or rear Rating over-side 360 degrees Unit: 1 000 kg

Stabilization		Load radius								At max. reach		Meter
		3.0 m		4.5 m		6.0 m		7.5 m				
7.5 m	Rear blade up (over front)			*4.5	*4.5					*4.2	4.0	5.14
	Rear blade down (over rear)			*4.5	*4.5					*4.2	*4.2	
	Rear outrigger down (over rear)			*4.5	*4.5					*4.2	*4.2	
	Front outrigger and rear blade down (over rear)			*4.5	*4.5					*4.2	*4.2	
	Front blade and rear outrigger down (over rear)			*4.5	*4.5					*4.2	*4.2	
	4 outrigger down (over rear)			*4.5	*4.5					*4.2	*4.2	
6.0 m	Rear blade up (over front)			*4.5	*4.5	*4.5	3.2			*3.7	2.7	6.48
	Rear blade down (over rear)			*4.5	*4.5	*4.5	3.6			*3.7	3.1	
	Rear outrigger down (over rear)			*4.5	*4.5	*4.5	*4.3			*3.7	*3.7	
	Front outrigger and rear blade down (over rear)			*4.5	*4.5	*4.5	*4.5			*3.7	*3.7	
	Front blade and rear outrigger down (over rear)			*4.5	*4.5	*4.5	*4.5			*3.7	*3.7	
	4 outrigger down (over rear)			*4.5	*4.5	*4.5	*4.5			*3.7	*3.7	
4.5 m	Rear blade up (over front)	*7.0	*7.0	*5.4	4.8	*4.8	3.2			*3.6	2.2	7.27
	Rear blade down (over rear)	*7.0	*7.0	*5.4	5.4	*4.8	3.6			*3.6	2.5	
	Rear outrigger down (over rear)	*7.0	*7.0	*5.4	*5.4	*4.8	4.2			*3.6	3.0	
	Front outrigger and rear blade down (over rear)	*7.0	*7.0	*5.4	*5.4	*4.8	*4.8			*3.6	*3.6	
	Front blade and rear outrigger down (over rear)	*7.0	*7.0	*5.4	*5.4	*4.8	*4.8			*3.6	*3.6	
	4 outrigger down (over rear)	*7.0	*7.0	*5.4	*5.4	*4.8	*4.8			*3.6	*3.6	
3.0 m	Rear blade up (over front)	*8.5	8.2	*6.9	4.7	5.0	3.2	3.5	2.0	3.4	1.9	7.68
	Rear blade down (over rear)	*8.5	*8.5	*6.9	5.3	*5.4	3.6	*4.7	2.3	*3.6	2.2	
	Rear outrigger down (over rear)	*8.5	*8.5	*6.9	6.2	*5.4	4.2	*4.7	2.8	*3.6	2.7	
	Front outrigger and rear blade down (over rear)	*8.5	*8.5	*6.9	*6.9	*5.4	5.0	*4.7	3.5	*3.6	3.4	
	Front blade and rear outrigger down (over rear)	*8.5	*8.5	*6.9	*6.9	*5.4	5.2	*4.7	3.7	*3.6	3.5	
	4 outrigger down (over rear)	*8.5	*8.5	*6.9	*6.9	*5.4	5.4	*4.7	4.2	*3.6	*3.6	
1.5 m	Rear blade up (over front)	*10.6	8.1	7.5	4.6	5.0	3.1	3.5	2.0	3.2	1.8	7.77
	Rear blade down (over rear)	*10.6	9.3	*8.3	5.2	*6.1	3.5	*5.1	2.3	*3.9	2.1	
	Rear outrigger down (over rear)	*10.6	*10.6	*8.3	6.1	*6.1	4.2	4.7	2.8	*3.9	2.6	
	Front outrigger and rear blade down (over rear)	*10.6	*10.6	*8.3	7.4	*6.1	5.0	*5.1	3.4	*3.9	3.2	
	Front blade and rear outrigger down (over rear)	*10.6	*10.6	*8.3	7.7	*6.1	5.2	*5.1	3.6	*3.9	3.4	
	4 outrigger down (over rear)	*10.6	*10.6	*8.3	*8.3	*6.1	5.8	*5.1	4.1	*3.9	*3.9	
0 m	Rear blade up (over front)	*13.0	8.1	7.5	4.6	5.0	2.9	3.4	1.9	3.3	1.9	7.56
	Rear blade down (over rear)	*13.0	9.4	*9.0	5.2	*6.6	3.3	*4.9	2.2	*4.3	2.2	
	Rear outrigger down (over rear)	*13.0	11.4	*9.0	6.2	6.5	4.0	*4.6	2.7	*4.3	2.6	
	Front outrigger and rear blade down (over rear)	*13.0	*13.0	*9.0	*7.5	*6.6	5.0	*4.9	3.3	*4.3	*3.3	
	Front blade and rear outrigger down (over rear)	*13.0	*13.0	*9.0	7.7	*6.6	5.2	*4.9	3.5	*4.3	3.5	
	4 outrigger down (over rear)	*13.0	*13.0	*9.0	8.7	*6.6	5.9	*4.9	4.0	*4.3	4.0	
-1.5 m	Rear blade up (over front)	*14.6	7.8	7.8	4.4	4.8	2.7			3.7	2.1	7.01
	Rear blade down (over rear)	*14.6	9.2	*9.2	5.0	*6.8	3.1			*5.2	2.4	
	Rear outrigger down (over rear)	*14.6	11.6	*9.2	6.1	6.6	3.8			5.1	2.9	
	Front outrigger and rear blade down (over rear)	*14.6	14.4	*9.2	7.7	*6.8	4.7			*5.2	3.7	
	Front blade and rear outrigger down (over rear)	*14.6	*14.6	*9.2	8.0	*6.8	4.9			*5.2	3.8	
	4 outrigger down (over rear)	*14.6	*14.6	*9.2	8.9	*6.8	5.7			*5.2	4.4	
-3.0 m	Rear blade up (over front)	*15.1	7.7	7.4	4.1					4.7	2.6	5.94
	Rear blade down (over rear)	*15.1	9.1	*9.4	4.7					*5.9	3.0	
	Rear outrigger down (over rear)	*15.1	11.5	*9.4	5.8					*5.9	3.7	
	Front outrigger and rear blade down (over rear)	*15.1	*15.1	*9.4	7.3					*5.9	4.7	
	Front blade and rear outrigger down (over rear)	*15.1	*15.1	*9.4	7.6					*5.9	4.9	
	4 outrigger down (over rear)	*15.1	*15.1	*9.4	9.0					*5.9	5.7	

WORKING RANGES

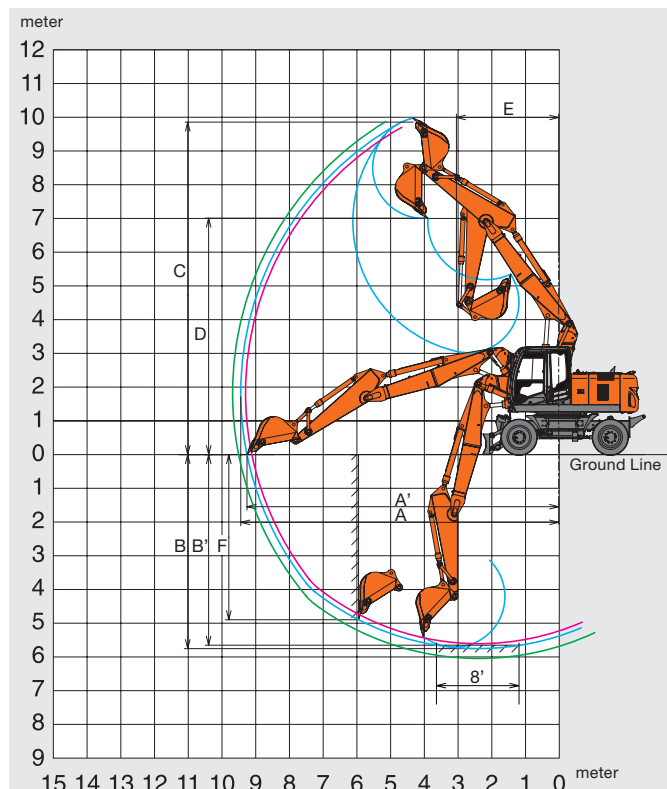
ZX190W-3 WITH MONOBLOCK BOOM



Unit: mm

Arm length	2.26 m	2.71 m
A Max. digging reach	9 220	9 580
A' Max. digging reach (on ground)	9 040	9 400
B Max. digging depth	5 390	5 830
B' Max. digging depth (8' level)	5 180	5 640
C Max. cutting height	9 160	9 250
D Max. dumping height	6 340	6 450
E Min. swing radius	3 510	3 480
F Max. vertical wall	4 810	5 260
Bucket digging force ISO	116 kN (11 800 kgf)	
Bucket digging force SAE: PCSA	102 kN (10 400 kgf)	
Arm crowd force ISO	99 kN (10 100 kgf)	86 kN (8 780 kgf)
Arm crowd force SAE: PCSA	95 kN (9 680 kgf)	83 kN (8 460 kgf)

ZX190W-3 WITH 2-PIECE BOOM



Unit: mm

Arm length	2.26 m	2.40 m	2.71 m
A Max. digging reach	9 100	9 240	9 480
A' Max. digging reach (on ground)	8 920	9 060	9 310
B Max. digging depth	5 500	5 640	5 930
B' Max. digging depth (8' level)	5 400	5 540	5 830
C Max. cutting height	9 670	9 780	9 850
D Max. dumping height	6 760	6 870	6 950
E Min. swing radius	3 150	2 970	3 000
F Max. vertical wall	4 630	4 800	5 030
Bucket digging force ISO	116 kN (11 800 kgf)		
Bucket digging force SAE: PCSA	102 kN (10 400 kgf)		
Arm crowd force ISO	99 kN (10 100 kgf)	92 kN (9 390 kgf)	86 kN (8 780 kgf)
Arm crowd force SAE: PCSA	95 kN (9 680 kgf)	88 kN (9 020 kgf)	83 kN (8 460 kgf)

STANDARD EQUIPMENT

Standard equipment may vary by country, so please consult your Hitachi dealer for details.

ENGINE

- H/P mode control
- E mode control
- 50 A alternator
- Dry-type air filter with evacuator valve (with safety element)
- Cartridge-type engine oil filter
- Cartridge-type fuel double filters
- Air cleaner double filters
- Radiator, oil cooler and intercooler with dust protective net
- Radiator reserve tank
- Fan guard
- Isolation-mounted engine
- Auto idle system
- Fuel cooler
- Electrical fuel feed pump
- Engine oil drain coupler

HYDRAULIC SYSTEM

- Work mode selector
- E-P control system
- Quick warm-up system for pilot circuit
- Shockless valve in pilot circuit
- Boom-arm anti-drift valve
- Brake valves for travel circuits
- Control valve with main relief valve
- Extra port for control valve
- Suction filter
- Full-flow filter
- Pilot filter
- Swing dampener valve
- Steering filter
- Outriggers are individually controlled

UPPER STRUCTURE

- Undercover
- Fuel level float
- Hydraulic oil level gauge
- Rearview mirrors, left and right
- Swing parking brake
- Swing lock
- 120 Ah batteries

UNDERCARRIAGE

- Parking brake
- Toolbox: left chassis
- Traction types pattern tires (10.00-20 16 PR)
- Tire spacer
- 4 tie down hooks

FRONT ATTACHMENTS

- HN bushing
- WC (tungsten-carbide) thermal spraying
- Reinforced resin thrust plate
- Flanged pin
- Centralized lubrication system
- Dirt seal on all bucket pins

CAB

- CRES II (Centre Pillar Reinforced Structure) cabin
- OPG top guard fitted Level I (ISO 10262) compliant cab
- All-weather sound-suppressed steel cab
- Equipped with reinforced, tinted (green colour) glass windows
- 4 fluid-filled elastic mounts
- Windows on upper, lower-front and left side can opened
- Intermittent windshield retractable wipers
- Front window washer
- Footrest
- Electric double horn
- AM - FM radio with digital clock
- Retractable seat belt
- Drink holder
- Cigar lighter
- Ashtray
- Storage box
- Glove compartment
- Floor mat
- Short wrist control levers
- Pilot control shut-off lever with tilt-up console
- Engine shut-off switch
- Auto control air conditioner
- Rain guard
- Adjustable reclining seat with adjustable armrests
- Suspension seat with heater
- Transparent roof with slide curtain
- Sun visor
- Room lamp (delay type)

LIGHTS AND SIGNALS

- Two headlights
- Working lights
- Combination lamps
- Turn signal lamps
- Brake lamps
- Clearance lamps
- Hazard lamps

MONITOR SYSTEM

- Meter:
 - Speedometer, Tachometer, Hour meter, Odometer, Trip meter,
 - Engine coolant temperature gauge, Hydraulic brake pressure gauge, Fuel gauge, Clock
- Alarms:
 - Overheat, Engine warning, Engine oil pressure, Alternator, Minimum fuel level, Hydraulic filter restriction, Air filter restriction, Brake oil pressure, Operation signal, Operate signal is abnormal for Outrigger Blade, Operate signal is abnormal for electrical lever, Network, Work mode, Lock lever

PILOT LAMP

- Multi-monitor:
 - Digging mode, Auto-idle, Auto-acceleration, Engine pre-heat, Parking brake, Working brake, Axle lock, Positioning / Attachment (Breaker & crusher), Work light, Outrigger / Blade
- Column-monitor:
 - Turn signals, Head light high beam, Hazard warning signals, F/N/R indication, Clearance light, Pilot cut, Low speed

ALARM BUZZERS

- Front attachment operation while parking brake is on, Engine oil pressure, Engine overheat, Brake pressure, Overload, Error of electrical lever

MISCELLANEOUS

- Standard tool kit
- Lockable machine covers
- Lockable fuel filling cap
- Skid-resistant tapes, plates and handrails
- Travel direction mark on chassis frame
- Onboard information controller
- Electric fuel refilling pump

OPTIONAL EQUIPMENT

Optional equipment may vary by country, so please consult your Hitachi dealer for details.

UNDERCARRIAGE

- Short Chassis
- Rear dozer blade
- Rear outriggers
- Front dozer blade + rear outrigger
- Front outrigger + rear dozer blade
- Front outrigger + rear outrigger
- Right toolbox
- Wide gauge axles

ATTACHMENTS

- Parts for hammer and crusher
- Hammer and crusher piping
- 2 pump combined flow assist piping
- Welded bucket link A with welded hook
- Clamshell piping
- Pilot accumulator

CAB

- Air suspension seat with heater
- Laminated round glass window
- FOPS guard
- 12 V power source

LIGHT

- Additional cab roof front light
- Additional cab roof rear light
- Rotating lamp
- Additional boom light with cover
- License lamp

OTHERS

- Hose rupture valve
- Pre-cleaner
- Biodegradable oil
- High-performance full flow filter (with restriction indicator)

These specifications are subject to change without notice.

Illustrations and photos show the standard models, and may or may not include optional equipment, accessories, and all standard equipment with some differences in colour and features.

Before use, read and understand the Operator's Manual for proper operation.

