

ZW-5 series

HITACHI

Reliable solutions

ZW140



WHEEL LOADER

Model Code : ZW140-5B
Max. Engine Power : 113 kW (152 HP)
Operating Weight : 11 100 - 11 400 kg
Bucket ISO Heaped : 1.6 - 2.3 m³



WALK AROUND

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Advanced technology

Comfortable and fuel efficient traveling performance with the New HST control system.

Lower fuel costs

The new ZW-5 wheel loader can work in two modes, which provide an appropriate level of performance for the specific job. One is for regular operations with the benefit of efficient fuel consumption; the other is for more demanding tasks and increases productivity. The optional auto-engine shutdown function avoids fuel wastage while the machine is waiting for a dump truck.

High productivity

A new hydraulic circuit facilitates the combined operation of the bucket and lift arm for loading and prioritises the use of the bucket for unloading.

Powerful engine

The 5.2-litre four-cylinder water-cooled turbo engine enables a powerful digging performance, impressive travel speeds and benefits from excellent fuel consumption.

Heavy-duty axle

Hitachi axles are renowned for high performance and durability – ideal for working on demanding job sites.



ZW140

The new Hitachi ZW140-5 wheel loader has been designed with one aim in mind: empowering your vision. Productivity, comfort, advanced technology, environmental performance and maintenance, it delivers on all levels. It not only meets our customers' expectations of high-quality, reliable machines, but also provides operators with a safer working environment, a comfortable cab with easy-to-use controls, and overall, a machine that responds quickly and precisely. To ensure optimum availability of the new ZW140-5, we have incorporated easy maintenance features into its design. We also offer the flexible Hitachi Support Chain after-sales program to customers who wish to further enhance its uptime and protect their investment.

Spacious cab

The heated air-suspension seat can slide back further, providing more legroom. The tilting telescopic pop-up steering column has also been repositioned to create additional space.

Ultimate comfort

An air-conditioning system regulates the temperature inside the cab and a double filter is provided as standard equipment for dusty environment such as industrial waste job sites. Sound insulation reduces noise levels from the local environment.

Excellent visibility

A windshield without pillars and a large sun visor enhance visibility levels from the operator's seat.

Quick and easy access

The redesigned engine cover provides easy access to inspection points and allows for quick maintenance from ground level.

Transmission control

The fully automatic HST system selects the appropriate speed for travelling and digging.



The photos in the brochure are taken using the machines for Europe and Japan. The specification in Australia may be different from that of the photos.



COMFORT

The spacious cab of the new ZW140-5 wheel loader was designed to offer maximum comfort. Several modifications have been made to create more room, provide greater visibility and offer a pleasant working environment for operators. Practical and user-friendly features have been incorporated to help you work quickly and easily. The ultimate aim was to improve the overall operator experience of Hitachi ZW-5 wheel loaders, so you could enjoy your work and feel less fatigued at the end of the day.



For operator comfort, the ZW-5 series is second to none



Take a seat

Hitachi has prioritised operator comfort in the design of the ZW-5 range of wheel loaders to give you a greater sense of enjoyment during your working day.

The sloped ladder and wide steps allow quick and easy access to the cab. The heated air-suspension seat with adjustable lumbar support can slide back further than ever before, allowing more leg room. The wrist, arm rests and right-hand side console are ergonomically positioned. The tilting telescopic and pop-up steering column have also been repositioned to create additional space.

Pleasant working conditions

Busy construction sites and quarries can be stressful environments to work in, but Hitachi has installed a range of features in the new ZW-5 wheel loaders to make you feel more relaxed wherever you are.

An effective air conditioning system regulates the temperature within the cab. A double air-conditioning filter is provided as standard equipment for dusty environment such as industrial waste and indoor disposal facilities. High levels of sound insulation ensure noise levels within the cab are reduced.

Space for storage

Working long shifts mean that you spend most of your day in the cab of the ZW-5 wheel loader. Hitachi has incorporated several practical features to make you feel more at home.

There is a large space for a lunch box behind and at the side of the seat. The cab also has a large cool box, which is cooled by the air conditioner, with enough storage space for four cans or bottles. Another feature of the cab is the drink holder, designed to hold a 1.5-litre bottle.

Enjoy your day

A happy operator is also a more productive one. That's why we have enhanced the versatility of the audio equipment, so you can listen to your favourite music while you work.

The AM/FM stereo radio now has an auto-tuning feature and the two-speaker stereo system provides excellent sound quality. The inclusion of an MP3 dock allows you to connect your personal MP3 player.

Key features

- | | |
|--|---|
| ■ Effective air conditioning | ■ Tilting telescopic and pop-up steering column |
| ■ Expansive leg room | ■ Easy access via sloped ladder and wide steps |
| ■ Ergonomically designed control panel | ■ AUX terminal and storage for MP3 player |
| ■ Heated air-suspension seat | |



FUEL EFFICIENCY

Hitachi has designed the new ZW-5 wheel loader range to deliver high levels of performance and productivity on the job site, while using significantly less fuel than previous models. Several features on the ZW140-5 result in greater fuel efficiency, which brings the benefits of lower running costs and a reduced impact on the environment. It not only satisfies US EPA Tier 4 Interim/EU Stage IIIB emission regulations, but will also have a positive impact on the profitability of your business.



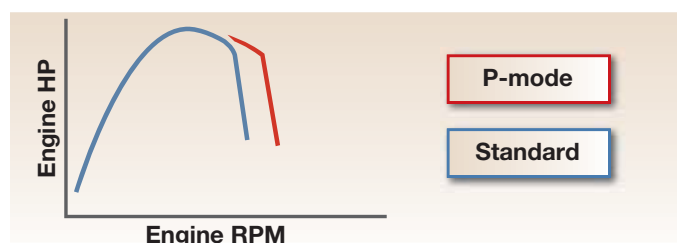
Reducing fuel consumption to lower running costs



Two work modes

To minimise fuel consumption and maximise productivity, the new ZW-5 wheel loader has two work modes: Standard and P (Power) mode. Standard allows for smooth and efficient acceleration during loading, regular operations and travelling on level terrain. The engine speed is controlled and fuel consumption is reduced by up to 20%.

The P mode is useful when greater traction force is required for heavy-duty excavation and travelling up gradual slopes. The engine's maximum rpm is increased by approximately 10% for greater productivity, and results in a faster front speed and greater rimpull while digging.



New HST control system

Hitachi engineers have equipped the ZW140-5 with a new HST Control system, which helps to reduce fuel consumption by approximately 20%* when it is used for digging. The new wheel loader also uses between 11 and 18%* less fuel when travelling thanks to the HST system.

ECO display

The ECO display shows the operator when the wheel loader is operating economically in ECO drive and results in fuel-saving performance. Fuel consumption is minimised by the automatic control of the engine speed. The ECO display will turn off following excessive acceleration or when shifting down a gear is recommended to save fuel.

Auto engine shutdown

The optional auto engine shutdown feature enhances fuel efficiency by preventing wastage as well as unnecessary exhaust emissions. It ensures that the engine shuts down one minute after the machine has been placed in neutral.

(*ZW-5B standard mode vs. ZW-1 N mode)

Key features

- Simple work mode
- New HST control system
- ECO display
- Auto engine shut-down (optional)



MANOEUVRABILITY

The ZW140-5 wheel loader has been designed with both operator and owner in mind. Hitachi design engineers have incorporated several new features to enhance its operational efficiency and comfort, as well as to reduce running costs. Moving swiftly and adeptly around the job site, it is guaranteed to have a productive impact and contribute to the smooth overall running of any operation.



Smooth and easy operation for any job site



New HST control system

The ZW140-5 is easy to manoeuvre thanks to the new HST control system. It features two work modes, Standard and P mode, which can be selected to suit the task and terrain. Both modes have the same maximum speed and maximum rimpull force, which is delivered on every speed change.

The HST control system enables a smooth transition between speeds. A first speed selector dial switch enables the operator to set the maximum speed from 1 to 13 km/h in first gear.

1st speed selector

The operator can use the 1st speed selector to set the travelling speeds for the first gear, so it is not necessary to shift up and down during short-cycle operations. From 7 to 13 km/h, the maximum speed can be adjusted by using the 1st speed selector function. This means that it is not necessary to adjust the acceleration pedal on small job sites.

Rimpull control system

The ZW140-5's rimpull control system strikes a perfect balance between rimpull and front digging force – it allows for a superior digging performance. Rimpull can be adjusted to varying degrees, depending on the work mode. Without rimpull control, the breakout force would not be sufficient for digging.

Traction control system

The traction control system comes into play when the ZW140-5 is working in snowy, slippery or muddy conditions. The maximum rimpull is reduced to avoid tire slippage and ultimately helps to prevent wear and fuel wastage, as well as to lower running costs. It is highly effective for light applications.

Inching pedal

The inching pedal reduces the travelling speed of the ZW140-5 without braking, while full engine speed is available for lifting purposes, for example to load a truck. It is particularly beneficial for use on small job sites or in confined areas, and for short-cycle operations.

Key features

- HST control system
- Traction control system
- Rimpull control system

- 1st speed selector
- Inching pedal



MAINTENANCE

Wherever you operate the new ZW140-5 wheel loader, high levels of availability are guaranteed. This is due to a number of features that allow quick and easy routine maintenance procedures. Daily checks can be made from ground level, with the engine and radiator cover opening fully, providing convenient access. The new ZW-5 wheel loaders have been designed to make life easier on the job site, allowing you to work productively and keep downtime to an absolute minimum.



Work for longer with the ZW-5 wheel loader



Easy access

Hitachi has introduced a range of time-saving features on the new ZW-5 wheel loaders, which are designed to make life easier for you on the job site.

Many of the covers on the machine can be opened fully so you can access maintenance points quickly and easily on a daily basis. Many features – such as the greasing points, oil levels and the fuel filters – can be accessed at ground level.

For operation in dust-filled environments, such as agricultural and waste handling applications, the ZW-5 wheel loader can be equipped with an optional anti-clogging radiator with wide fin pitch.

Using the front console you can set the routine service schedule to help prevent breakdowns each time the ignition switch is turned on.

Easy cleaning

Quick and easy routine maintenance is essential for you to achieve high levels of productivity on the job site. With convenient features, such as the automatic reversible cooling fan the new Hitachi ZW wheel loaders are capable of working for longer.

The fan allows for easy cleaning of the radiator with its one-minute automatic reverse rotation every 30 operating minutes. In moderate working conditions, this can be manually operated for cleaning as necessary.

Key features

- Daily checks from ground level
- Automatic reversible cooling fan
- Quick and easy service access
- Optional anti-clogging radiator (wide fin pitch)



SUPPORT CHAIN

Once you have taken delivery of your ZW140-5 wheel loader, we want to ensure that it continues to exceed your expectations on the job site. Hitachi's national network of company-owned branches is equipped to provide our customers first-class after-sales service. To further protect your investment, you can choose from a variety of options within the Hitachi Support Chain program. Giving you the flexibility to create your own service plan from the following key areas – each one represents a link in the chain of service available from Hitachi via your local dealer.



Protect your investment with a variety of after-sales options

Global e-Service

The new ZW-5 wheel loader is equipped with a satellite communication system. This sends a wide range of machine data to the Hitachi main server. Via the Global e-Service database, you will have remote access to all of this data. All you need is an internet connection and your Global e-Service log-in details.

Global e-Service enables you and your dealer to download and share this data, helping you to remotely manage your fleet. The online facility also helps your dealer to proactively advise you on preventive maintenance and related special offers.

The latest information on the ZW-5 wheel loader is available 24/7 and includes operational data, such as the number of working hours, fuel consumption figures, working modes and location. This helps you to reduce running costs, plan jobs efficiently and keep up to date with machine maintenance to ensure optimum performance and minimal downtime.

Technical support

The professional and highly trained Hitachi service team combines the global expertise and knowledge of Hitachi Construction Machinery. We take a proactive approach towards customer service by continuously training our dealer personnel, so that the available global knowledge is passed onto each individual technician in our dealer network.

Extended warranty and service contracts

Every new Hitachi model is covered by a full manufacturer's warranty. However, your ZW-5 wheel loader may require extra protection due to severe working conditions or to minimise equipment repair costs. To meet these demands, our dealers offer the option of a unique extended warranty program (HELP – Hitachi Extended Life Program) and comprehensive service contracts – the most effective way to optimise the performance of your new ZW-5 wheel loader.

Parts

Hitachi offers different lines of parts and components to suit your specific needs. In addition to our range of genuine parts, the below options are available:

- If your machines have been working for several years, Hitachi can offer a second line of genuine parts as an attractively priced solution.
- For that highly demanding application or climate, Hitachi provides a line of parts with extra performance.

Whatever choice you make, you can be assured by Hitachi's renowned quality and warranty to give you added peace of mind.

Your Hitachi dealer can supply you with more details on each of the above parts lines.



Key features

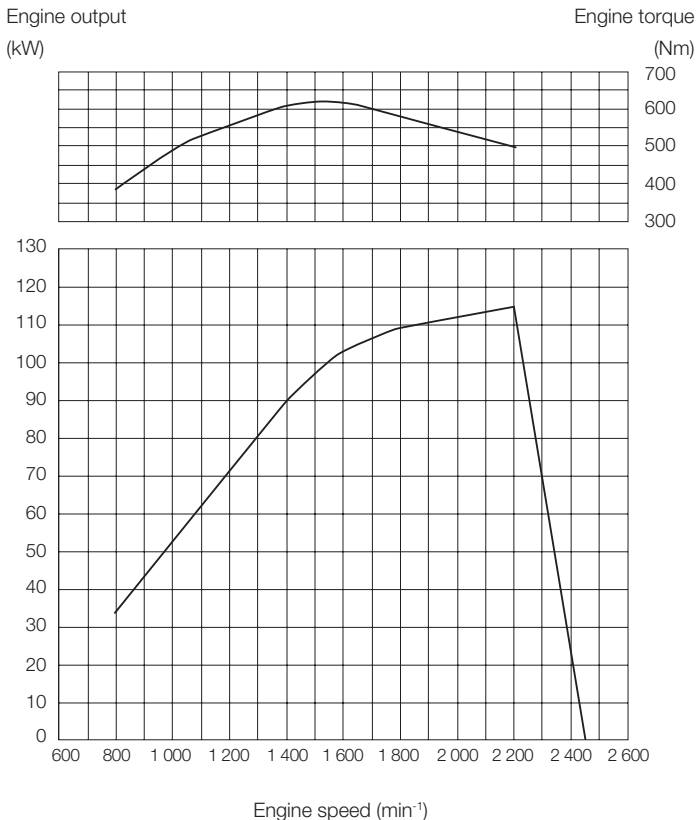
- Check each of your machines from your office – 24/7
- Have a remote insight into fuel consumption
- Check the current and previous locations and movements of your machine(s)

- See maintenance status and items due for renewal on each of your machines
- Receive e-mail notifications for any machine alerts, unexpected movements and so on

SPECIFICATIONS

ENGINE

Model	Isuzu 4HK1
Type	4-cycle water-cooled, direct injection
Aspiration	Turbocharger and intercooled
Aftertreatment	Muffler filter
No. of cylinders	4
Maximum power	
Gross	115 kW (154 HP) at 2 200 min ⁻¹ (rpm)
ISO 9249, net	113 kW (152 HP) at 2 200 min ⁻¹ (rpm)
Maximum torque	622 Nm at 1 500 min ⁻¹ (rpm)
Bore and stroke	115 mm X 125 mm
Piston displacement	5.193 L
Batteries	2 x 12 V
Air cleaner	Two element dry type with restriction indicator



POWER TRAIN

Transmission	Electrical-controlled 2 motor hydrostatic transmission with summation gear box
Gear box : Fixed gear ratio, powershift countershaft type	
Cooling method	Forced circulation type
Travel speed* Forward / Reverse	
1st	7.0 / 7.0 km/h**
2nd	13.0 / 13.0 km/h
3rd	20.0 / 20.0 km/h
4th	39.0 / 39.0 km/h
*With 20.5 R25 (L3) tires	
**Adjustable from 7.0 to 13.0 km/h	

AXLE AND FINAL DRIVE

Drive system	Four-wheel drive system
Front & rear axle	Semi-floating
Front	Fixed to the front frame
Rear	Trunnion support
Reduction and differential gear	Two stage reduction with torque proportional differential
Oscillation angle	Total 20° (+10°, -10°)
Final drives	Heavy-duty planetary, mounted inboard

TIRES

Tire size	20.5 R25 (L3)
Optional	Refer to standard & optional equipment list

BRAKES

Service brakes	Inboard mounted fully hydraulic 4 wheel wet disc brake. HST (Hydro Static Transmission) system provides additional hydraulic braking capacity
Parking brakes	Spring applied, hydraulically released, wet disc type

STEERING SYSTEM

Type	Articulated frame steering
Steering angle	Each direction 40° ; total 80°
Cylinders	Double-acting piston type
No. x Bore x Stroke	2 x 65 mm x 419 mm

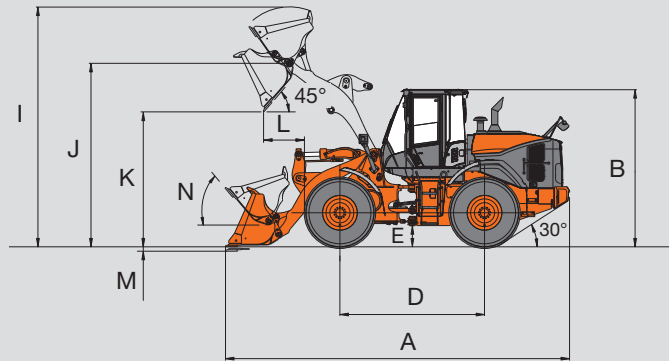
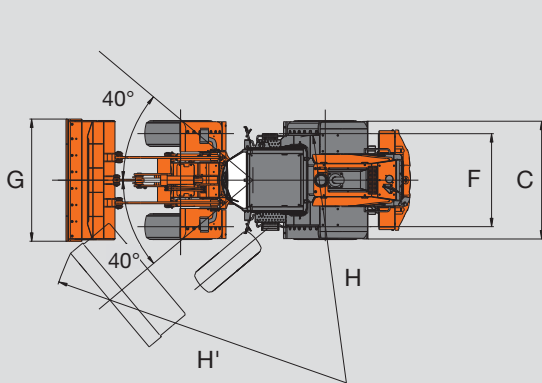
HYDRAULIC SYSTEM

Arm and bucket are controlled by multi function control lever	
Arm controls	Four position valve ; Raise, hold, lower, float
Bucket controls with automatic bucket return-to-dig control	Three position valve ; Roll back, hold, dump
Main pump (Load & steer)	Gear type 189.2 L/min at 2 200 min ⁻¹ (rpm) at 20.6 MPa (210 kgf/cm ²)
Relief pressure setting	20.6 MPa (210 kgf/cm ²)
HST charging pump	Gear type 53.9 L/min at 2 200 min ⁻¹ (rpm) at 2.45 MPa (25 kgf/cm ²)
Transmission charging pump	Gear type 17.6 L/min at 2 200 min ⁻¹ (rpm) at 1.96 MPa (20 kgf/cm ²)
Hydraulic cylinders	
Type	Double acting type
No. x Bore x Stroke ...	Arm : 2 x 125 mm x 620 mm
	Bucket : 1 x 150 mm x 445 mm
Filters	Full-flow 10 micron return filter in reservoir
Hydraulic cycle times	
Lift arm raise	5.5 s (4.8 s)
Lift arm lower	3.5 s (3.5 s)
Bucket dump	1.1 s (1.1 s)
Total	10.1 s (9.4 s)
() : Data at Power Mode	

SERVICE REFILL CAPACITIES

Fuel tank	205 L
Engine coolant	24 L
Engine oil	18 L
Transmission gear box	10 L
Front axle differential & wheel hubs	25 L
Rear axle differential & wheel hubs	25 L
Hydraulic oil tank	80 L

DIMENSIONS & SPECIFICATIONS



Bucket type			Standard arm			High lift arm
			General purpose			General purpose
			Bolt-on cutting edge	Bolt-on cutting edge	Bolt-on teeth	Bolt-on cutting edge
Bucket capacity	ISO heaped	m ³	2.0	2.3	1.9	1.6
	ISO struck	m ³	1.6	1.9	1.6	1.3
A Overall length		mm	7 110	7 205	7 240	7 440
B Overall height		mm	3 265			
C Width over tires		mm	2 470			
D Wheel base		mm	3 000			
E Ground clearance		mm	430			
F Tread		mm	1 930			
G Bucket width		mm	2 480			
H Turning radius (Centerline of outside tire)		mm	5 085			
H' Loader clearance radius, bucket in carry position		mm	5 860	5 885	5 895	6 005
I Overall operating height		mm	5 020	5 110	5 020	5 210
J Height to bucket hinge pin, fully raised		mm	3 805			4 165
K Dumping clearance 45 degree, full height		mm	2 860	2 790	2 770	3 320
L Reach, 45 degree dump, full height		mm	880	950	960	950
M Digging depth (Horizontal digging angle)		mm	40	40	50	130
N Max. roll back at carry position		deg	50			
Static tipping load *	Straight	kg	8 900	8 830	9 020	7 080
	Full 40 degree turn	kg	7 720	7 650	7 840	6 120
Breakout force		kgf	9 810	8 890	8 800	11 590
		kN	96	87	86	114
Operating weight *		kg	11 150	11 190	11 100	11 400

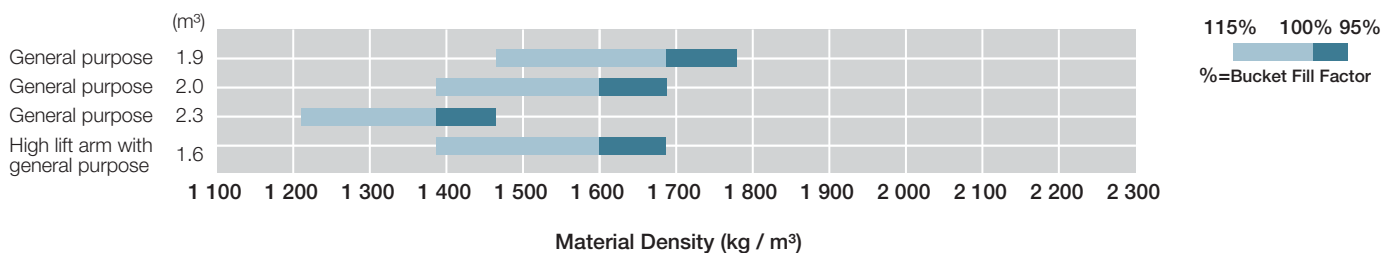
Note: All dimensions, weight and performance data based on ISO 6746-1:1987, ISO 7131:2009 and ISO 7546:1983

: Static tipping load and operating weight marked with include 20.5 R25 (L3) tires (No ballast) with lubricants, full fuel tank and operator.
Machine stability and operating weight depend on counterweight, tire size and other attachments.

WEIGHT CHANGE

Option item	Operating weight (kg)	Tipping load (kg)		Overall width (mm) (outside tire)	Overall height (mm)	Overall length (mm)
		Straight	Full turn			
Belly guard	+70	+50	+40	±0	±0	±0

BUCKET SELECTION GUIDE



EQUIPMENT

● Standard equipment

○ Optional equipment

OPERATOR'S STATION

Adjustable steering column with POP-UP	●
Air suspension seat with headrest and heater: adjustable for damper, armrest angle, fabric, fore-aft position, headrest height and angle, high back, inclination of the seat, lumbar support, reclining angle, seat depth, weight-height	●
AM/FM radio with AUX for digital audio player	●
Ashtray, cigar lighter	●
Auto control air conditioner with double intake filter	●
Coat hook	●
Front/Rear defroster	●
Rear view camera & monitor	●
Rear view mirrors	
Inside (2)	●
Outside (2)	●
Retractable seat belt, 50 mm	●
ROPS (ISO3471), FOPS Level II (ISO3449) compliant cab: multi-plane isolation mounted for noise, vibration reduction	●
Rubber floor mat	●
Storage	
Cup holder	●
Digital audio player holder	●
Document holder	●
Glove compartment	●
Hot & cool box	●
Seatback pocket	●
Sun visor	●
Textured steering wheel with spinner knob	●
Tinted safety glass: front windshield : laminated, others : tempered	●
Windshield washer front and rear	●
Windshield wipers front and rear	●

ELECTRICAL SYSTEM

Backup alarm	●
Batteries	
Standard batteries (80AH-622A)	●
Large capacity batteries (128AH-685A)	○
Battery disconnect switch	●
Engine auto shut-down control system	○
12 V power outlet	●

COOLING SYSTEM

Automatic reversible cooling fan with heat sensing	●
Fan guard	●
Radiator	
Standard fin pitch radiator	●
Wide fin pitch radiator	○

LIGHTS

Brake & tail lights	●
Clearance lights	●
Headlights	●
Rotating beacon	●
Turn signals with hazard switch	●
Work lights	
Front lights on cab (2)	●
Rear lights in rear grille (2)	●
Additional front lights on cab (2)	●
Rear lights on cab (2)	●

POWERTRAIN

Differential	
TPD (Torque Proportioning Differential, front and rear)	●
LSD (Limited Slip Differential, front and rear)	○
Electrically controlled HST system	●
Forward/Reverse lever	●
Forward/Reverse selector switch	●
Power mode switch	●
Traction control switch	●
1st speed limit switch	●

ENGINE

Air filter double elements	●
Cartridge-type engine oil filter	●
Cartridge-type fuel pre-filter	●
Cartridge-type fuel main filter	●
Engine oil remote drain	●
Pre-cleaner (Sy-Klone)	●



MONITORING SYSTEM

Gauge: coolant temperature, fuel, HST oil temperature	●
Indicator lights: air filter restriction, clearance lights, control lever lock, discharge warning, emergency steering, engine warning, fan reverse, forward/reverse selector switch, fuel filter restriction, high beam, HST oil temperature, HST warning, maintenance, muffler filter(amber), parking brake, power mode, preheat, seat belt, service, turn signal, water separator, work lights	●
LCD monitor display: clock, ECO, F-N-R/Shift position, hour meter, odometer, replacement intervals, ride control, speedometer, traction control switch	●
Warning lights: brake oil low pressure, engine oil low pressure, hydraulic oil level, muffler filter(red), overheat, steering oil low pressure,	●

BRAKE SYSTEM

Automatic spring applied/Hydraulic-released/wet disk type parking brake	●
Front & rear independent brake circuit	●
Inboard mounted fully hydraulic 4 wheel wet disc	●

HYDRAULIC SYSTEM

Bucket auto leveler (Automatic return to dig control)	●
Control lever	
for 3 spools control valve	
MF lever & AUX lever for 3rd function	●
	
2 levers & AUX lever for 3rd function	
- Outside layout pattern	
(Bucket - lift arm - 3rd)	○
	
Control lever lock switch	●
Hydraulic filters	●
Lift arm float system	●
Lift arm kick-out system	●
Reservoir sight gauge	●
Ride control system (OFF-AUTO type)	●

TIRES

20.5 R25 (L3)	●
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MISCELLANEOUS

Articulation lock bar	●
Belly guard (Bolt on type)	●
Bucket cylinder guard	●
Counterweight, built-in & additional	●
Drawbar with locking pin	●
Emergency steering	●
Fenders for 20.5 R25	
Front & full covered rear fenders with mud flaps	●
Global e-Service	●
Lift arm	
Standard lift arm	●
High lift arm	○
Lift & tie down hooks	●
On board information controller	●
Pilfer proof	
Battery cover with locking bracket	●
Lockable engine cover	●
Lockable fuel refilling cap	●







Built on the foundation of superb technological capabilities, Hitachi Construction Machinery is committed to providing leading-edge solutions and services which contribute to the businesses of our customers worldwide.

Hitachi Environmental Vision 2025

The Hitachi Group (the Group) released the Environmental Vision 2025 to reduce their annual carbon dioxide emissions. While the Group is committed to global production, the focus is to reduce the environmental impact of all products, and fulfil a sustainable society by tackling three goals — prevention of global warming, recycling of resources, and enhancing the ecosystem.

Reducing Environmental Impact by the New ZWs

Hitachi reduces carbon emissions for global warming prevention according to LCA*. The new ZWs exemplify the Group's commitment to the environment through features, such as the new standard mode which optimises fuel efficiency. Hitachi has long been committed to the recycling of components, such as aluminium parts in radiators and oil coolers. Resin parts are marked for recycling.

*Life Cycle Assessment – ISO 14040

Prior to operating this machine, including the satellite communication system, in a country other than the country of its intended use, it may be necessary to make modifications to the machine to ensure it complies with the local regulatory standards (including safety standards) and legal requirements of that particular country. Please do not export or operate this machine outside the country of its intended use until such compliance has been confirmed. Please contact your Hitachi dealer regarding compliance. These specifications are subject to change without notice.

Illustrations and photos show the standard models, and may or may not include optional equipment, accessories, customer installed and modified parts, optional parts and all standard equipment with some differences in colour and features. Before use, read and understand the Operator's Manual for proper operation.