### **HITACHI**

Reliable solutions

# **ZW330**



#### **WHEEL LOADER**

Model code: ZW330-6

Engine output: 232 kW / 311 hp (ISO14386)

Operating weight: 26 040 – 26 580 kg

Bucket ISO heaped: 4.1 – 5.2 m<sup>3</sup>

## ZW330-6. NO COMPROMISE

Exceptionally durable and reliable, the ZW330-6 is ideal for working in tough conditions. Designed and built using pioneering technology, it incorporates high-quality and robust components that can withstand the challenges of busy job sites.

Thanks to low levels of fuel consumption and greater traction force, the new ZW-6 wheel loader can deliver high levels of performance without compromising on efficiency.







6. COMPLETE RELIABILITY



8. BUILT FOR DURABILITY



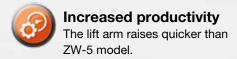
10. OUTSTANDING VERSATILITY

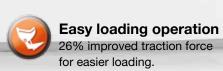


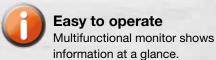
## DEMAND PERFECTION

Hitachi has developed the ZW330-6 to perfection, using unique technology and a focus on durability, operator comfort and safety. Robust materials and strengthened components ensure a reliable performance. It is designed and built to deliver exceptional productivity at the lowest possible cost of ownership.

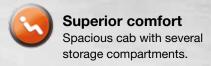
















### Enhanced design

Excellent rear view thanks to the curved engine hood.



#### Low emissions

SCR system without DPF reduces NO<sub>x</sub> from exhaust gas.



### **Reduced running costs**

7% fuel saving in V-shaped loading.





#### **User-friendly**

Effortless control with the optional Joystick Steering System.



### Convenient access

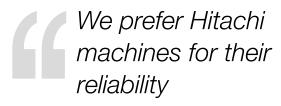
Easy-to-open wide engine covers.



## Improved fuel efficiency

Lock-up transmission and Stage IV-compliant engine.







Pieterjan Versteele, Operations Manager Technical Dept. Civil and Environment, Jan De Nul

# COMPLETE RELIABILITY

Built using decades of experience in manufacturing reliable construction machinery, the ZW330-6 has been developed by Hitachi to perform efficiently. Its design includes several easy maintenance features to ensure minimal downtime and high levels of availability.

#### **Quick access**

The engine covers open fully for the convenience of technical support. The urea tank is also located for safe and easy access from ground level. These help to ensure routine maintenance is completed quickly to ensure a reliable performance.

#### Improved fuel efficiency

The lock-up transmission has improved the fuel efficiency of the ZW330-6 while travelling, which reduces running costs.

#### Easy maintenance

For safer and easier maintenance, the battery disconnect switch is now included as standard. This helps to avoid electrical

accidents and retain battery energy during long-term storage.

#### **Reduced costs**

The new Stage IV-compliant engine does not require a diesel particulate filter, which further reduces fuel consumption and maintenance costs.

#### Reliable performance

The lift arm contributes to the reliable performance of the ZW330-6. Its speed has been improved and it stops smoothly thanks to the flow control system for increased productivity. It is easy to control using the auto leveller.



Easy access to the engine compartment.







Hitachi wheel loaders are tested extensively in job site conditions around the world, in extreme temperatures.



# BUILT FOR DURABILITY

Ultimate durability is required from Hitachi ZW-6 wheel loaders. The ZW330-6 is equipped with reinforced parts, strengthened components and robust features to ensure it meets the needs of customers working in demanding conditions. It has been designed and engineered to withstand the toughest environments.





The optional belly guard provides added protection.

#### **Increased protection**

The newly designed rear grille prevents raw material from the job site entering the radiator compartment. This provides greater protection for this durable component.

#### **Durable materials**

High-quality radiators improve resistance to corrosion and enhance the overall durability of the ZW330-6 wheel loader.

#### Robust design

The lift arm, front and rear frame of the ZW330-6 have been designed to be able to handle the rigours of heavy applications.

#### **Efficient cooling**

The reversible cooling fan, activated manually or automatically every 30 minutes, ensures that the radiator stays clean during operation.





Damiano Alberton, Operator, TIB

# OUTSTANDING VERSATILITY

The versatility of the ZW330-6 is enhanced by its smooth operation and user-friendly features. It demonstrates speed and precision on a wide range of applications, and the all-round visibility from the cab ensures industry-leading safety for a variety of busy job sites.

#### **Enhanced rear visibility**

The muffler and air intake have been moved further away from the cab to improve visibility through the rear window.

#### **Greater traction force**

The traction force has improved by 26% compared to the previous model. The result is a more efficient loading operation.

#### **Efficient flexibility**

The quick power switch increases engine output when more power is instantly required, or when driving uphill.

#### **Effective control**

To ensure a smooth drive on all kinds of terrain, the ride control feature prevents unnecessary pitching via the movement of lift arm cylinders.

#### **High productivity**

The simultaneous movement of the bucket and lift arm ensures a smooth digging operation. The bucket is prioritised after unloading so that the wheel loader quickly returns to digging, which helps to increase productivity.



Rear visibility has been enhanced by design modifications.







The final checking and inspection procedure for each Hitachi wheel loader is typical of Hitachi's dedication to manufacturing products of unfailing quality in response to customer needs.



# THE HIGHEST QUALITY

The inherent quality of a Hitachi ZW-6 wheel loader is one of the reasons why it remains at the forefront of the industry in terms of comfort and safety. With first-rate design elements and superior components, it also offers exceptional visibility from the cab and a low-noise performance that ensures it's one of the quietest on the market.





The optional Joystick Steering System provides exceptional control.

#### **Reduced emissions**

A selective catalytic reduction (SCR) system injects urea into exhaust gas to reduce nitrogen oxide from emissions. This cutting-edge technology not only helps the environment, but also complies with EU Stage IV emission regulations.

#### **Increased safety**

To enhance visibility in low light conditions, the ZW330-6 is fitted with LED tail lights and optional LED work lights at the front and rear.

#### **Excellent visibility**

The 360° panoramic view of the spacious cab creates a comfortable working environment, and helps to increase safety

and productivity. The rear-view camera, in combination with the unique two-piece counterweight, also contributes to excellent all-round visibility and safety on the job site.

#### Low-noise performance

To significantly reduce noise levels in the cab, sound insulation has been improved. As a result of this and the low-noise engine, operators can enjoy a quieter working environment.

#### **User-friendly operation**

The optional Joystick Steering System enables operators to reach high levels of productivity with effortless steering, and incorporates a number of useful functions.





HCME is constantly focused on enhanced customer satisfaction by developing the latest advanced technology



Vasilis Drougkas, Wheel Loader Product Manager, Hitachi Construction Machinery (Europe) NV

# DRIVEN BY TECHNOLOGY

Unique technology is at the heart of the design of Hitachi ZW-6 wheel loaders. As a result, they are state-of-the-art machines that incorporate the most advanced features and components. They are engineered to satisfy the demands of the European construction industry for equipment that not only offers high productivity, but also the lowest possible cost of ownership.

#### **Reduced maintenance**

A new Stage IV-compliant engine contains a high-volume cooled exhaust gas recirculation (EGR) system, a common rail-type fuel injection system and a diesel oxidation catalyst (DOC) without DPF. This helps to reduce fuel costs and maintenance requirements.

#### Smaller environmental impact

The optional auto shutdown feature helps to prevent fuel wastage, as well as reduce noise levels, exhaust emissions and NOx levels of the ZW330-6 wheel loader.

#### **Optimum performance**

Hitachi ZW-6 wheel loaders are fitted with a multifunctional LCD colour monitor that shows useful information at a glance, such as fuel and urea levels, oil temperature and power modes. It ensures an optimum performance and easy maintenance. It also includes the display for the easy-to-use rear-view camera, which enhances visibility for a safe operation.

#### Remote monitoring

Global e-Service allows ZW330-6 owners to monitor their Hitachi machines remotely via Owner's Site (24/7 online access) and ConSite (an automatic monthly report). These help to maximise efficiency, minimise downtime and improve overall performance.





The LCD monitor shows the machine's status and settings.



Covers open fully to give easy access for maintenance.



Remote monitoring with Global e-Service helps to maximise efficiency.





We are very happy with the quality and low cost of ownership of the Hitachi wheel loader



Phil Meuser-Schaede, owner, Trasswerke Meurin

# REDUCING THE TOTAL COST OF OWNERSHIP



Hitachi has created the Support Chain after-sales programme to ensure optimum efficiency, as well as minimal downtime, reduced running costs and high resale values.

#### Global e-Service

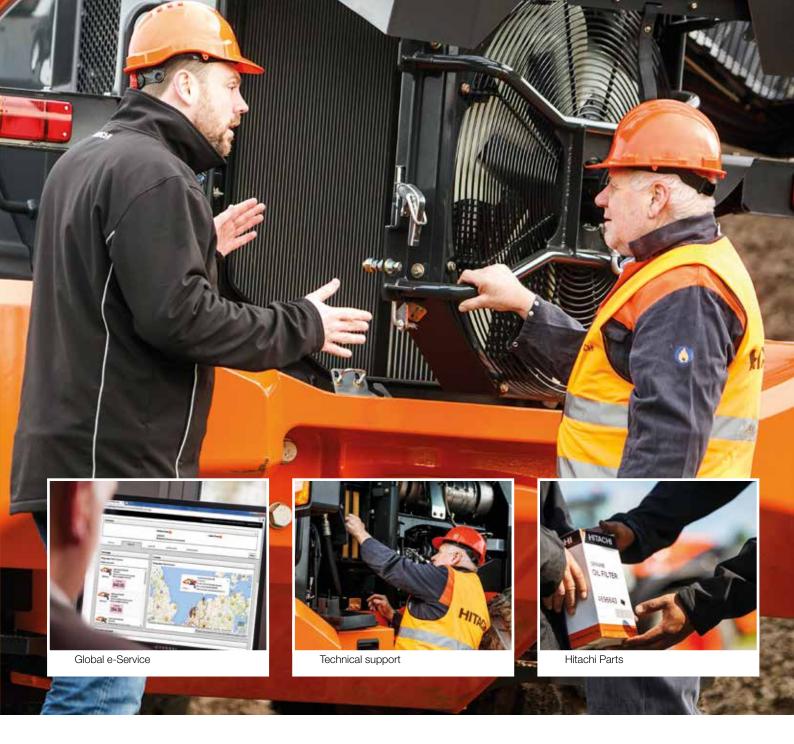
Hitachi has developed two remote monitoring systems as part of its Global e-Service online application. Owner's Site and ConSite are an integral part of the wheel loader, which sends operational data daily via GPRS or satellite to www.globaleservice.com. This allows immediate access to the Owner's Site, and the vital information that is required for support on job sites.

Comparing the ratio of operating and nonoperating hours helps to enhance efficiency. Effective management of maintenance programmes helps to maximise availability. Running costs can also be managed by analysing the fuel consumption. The location and movements of each machine are clearly displayed for essential planning.

An automatic service report – ConSite – sends a monthly email summarising the information from Global e-Service for each wheel loader. This includes: daily working hours and fuel consumption data; statistics on the operating mode ratio, plus a comparison for fuel consumption/efficiency, and  $\rm CO_2$  emissions.

#### **Technical support**

Each Hitachi service technician receives full technical training from HCME in Amsterdam. These sessions provide access to the same technical knowledge available within the Hitachi quality assurance departments and design centres. Technicians combine this global expertise with the local language and culture of the customer to provide the highest level of after-sales support.



### Extended warranty and service contracts

Every new Hitachi ZW-6 model is covered by a full manufacturer's warranty. For extra protection – due to severe working conditions or to minimise equipment repair costs – Hitachi dealers offer a unique extended warranty called HELP (Hitachi Extended Life Program) and comprehensive service contracts. These can help to optimise the performance of each machine, reduce downtime and ensure higher resale values.

#### **Parts**

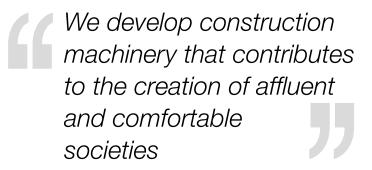
Hitachi offers a wide range and a high availability of parts dispatched from the 53,000 m² HCME European Parts Depot in The Netherlands.

- Hitachi Genuine Parts: allow machines to work for longer, with lower running and maintenance costs.
- Hitachi Select Parts and 2Genuine Parts: especially for older machines, they cost less, are of proven quality and come with the manufacturer's warranty.
- Performance Parts: to cope with highly demanding conditions, they have been engineered for greater durability, better performance or longer life.
- Remanufactured components: offering an economically viable solution, they are the best option when preventative replacements are required.

Whatever the choice, the renowned quality of Hitachi construction machinery is assured.







Koutarou Hirano, HCM President

# BUILDING A BETTER FUTURE

Established in 1910, Hitachi, Ltd. was built upon a founding philosophy of making a positive contribution to society through technology. This is still the inspiration behind the Hitachi group's reliable solutions that answer today's challenges and help to create a better world.

Hitachi, Ltd. is now one of the world's largest corporations, with a vast range of innovative products and services. These have been created to challenge convention, improve social infrastructure and contribute to a sustainable society.



EX ultra-large excavators

Hitachi Construction Machinery Co., Ltd. (HCM) was founded in 1970 as a subsidiary of Hitachi, Ltd. and has become one of the world's largest construction equipment suppliers. A pioneer in producing hydraulic excavators, HCM also manufactures wheel loaders, rigid dump trucks, crawler cranes and special application machines at state-of-the-art facilities across the globe.

Incorporating advanced technology, Hitachi construction machinery has a reputation for the highest quality standards. Suitable for a wide range of industries, it is always

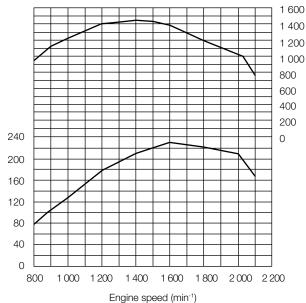
hard at work around the world – helping to create infrastructure for a safe and comfortable way of living, developing natural resources and supporting disaster relief efforts.

Hitachi ZW wheel loaders are renowned for being reliable, durable and versatile – capable of delivering the highest levels of productivity under the most challenging of conditions. They are designed to provide owners with a reduced total cost of ownership, and operators with the ultimate level of comfort and safety.

### **SPECIFICATIONS**

ENGINE	
Model	CUMMINS QSL9
Type	4-cycle water-cooled, direct injection
Aspiration	Turbocharger and intercooled
Aftertreatment	DOC and SCR system
No. of cylinders	6
Maximum power	
ISO 14396	232 kW (311 hp) at 1 600 min <sup>-1</sup> (rpm)
ISO 9249, net	225 kW (302 hp) at 1 600 min <sup>-1</sup> (rpm)
Maximum torque, gross	1 451 Nm at 1 400 min <sup>-1</sup> (rpm)
Bore and stroke	114 mm X 145 mm
Piston displacement	8.9 L
Batteries	2 x 12 V
Air cleaner	Two element dry type with restriction indicator
Emission	Complies with EU stage IV and US EPA Tier 4 Final

Engine output Engine torque (kW) (Nm)



#### **POWER TRAIN**

Transmission	Torque converter, countershaft type powershift with computer-controlled automatic shift and manual shift features included
Torque converter	Three element, single stage, single phase with lock-up clutch
Main clutch	Wet hydraulic, multi-disc type
Cooling method	Forced circulation type
Travel speed* Forward / Re	everse
1st	6.5 [6.8] / 6.5 [6.8] km/h
2nd	11.2 (11.3) [11.8 (11.7)] / 11.2 (11.3) [11.8 (11.7)] km/h
3rd	21.9 (22.1) [21.9 (22.1)] / 21.9 (22.1) [21.9 (22.1)] km/h
4th	36.0 (36.0) [36.0 (36.0)] / 36.0 (36.0) [36.0 (36.0)] km/h

\*With 26.5R25(L3) tires

( ): Data at Lock-up clutch ON

[ ]: Data at Power mode

# = Y A Y	LE AI	11 2 4 1 1	11111-1	1 - 1	

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 proportioning differential (std) / limited slip differential (optional)
Oscillation angle	Total 24° (+12°,-12°)
Final drives	Heavy-duty planetary, mounted inboard

#### BRAKES

Service brakes	Inboard mounted fully hydraulic 4 wheel wet disc
	brake. Front & rear independent brake circuit
Parking brake	Spring applied, hydraulically released, located in
	transmission

#### STEERING SYSTEM

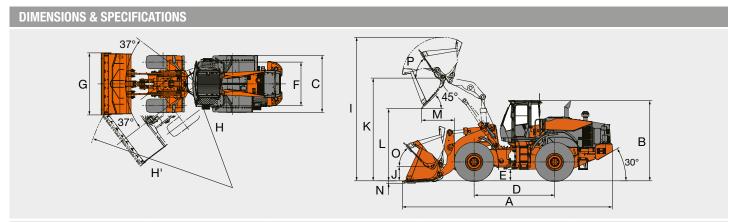
Type	Articulated frame steering
Steering angle	Each direction 37°; total 74°
Cylinders	Double-acting piston type
No. x Bore x Stroke	2 x 90 mm x 450 mm

HYDRAULIC SYSTEM
Arm and bucket are controlled by multifunction 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 (Serve as steering pump)
Fan pump Gear type Maximum flow 85 L/min at 2 000 min <sup>-1</sup> (rpm) Maximum pressure 16.5 MPa
Hydraulic cylinders

Type ...... Double acting type No. x Bore x Stroke ... Arm : 2 x 150 mm x 930 mm Bucket: 1 x 190 mm x 507 mm Filters ..... Full-flow 15 micron return filter in reservoir Hydraulic cycle times Lift arm raise ...... 6.4 s (6.3 s) Lift arm lower ...... 4.4 s (4.4 s) 

( ): Data at Power Mode

SERVICE REFILL CAPACITIES	
Fuel tank	375 L
Engine coolant	47 L
Engine oil	24 L
Torque convertor & transmission	51 L
Front axle differential & wheel hubs	60 L
Rear axle differential & wheel hubs	60 L
Hydraulic oil tank	137 L
DEF/AdBlue® tank	35 L

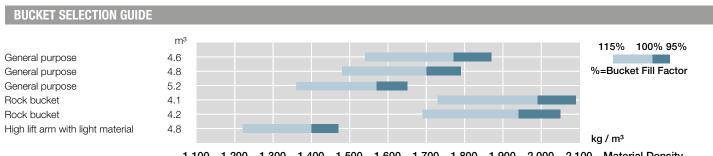


					Standard arm			High lift arm
				General purpose		Rock bucket		Light material
Bucket type			Straight edge			Straight edge	V-edge	Straight edge
			Bolt-on cutting edge	Bolt-on teeth	Bolt-on cutting edge	Bolt-on teeth	Bolt-on teeth	Bolt-on cutting edge
Puokot opposity	ISO heaped	m³	4.8	4.6	5.2	4.1	4.2	4.8
Bucket capacity	ISO struck	m³	4.2	4.0	4.6	3.4	3.6	4.2
A Overall length		mm	9 255	9 395	9 330	9 335	9 500	9 690
B Overall height		mm			3 5	530		
C Width over tires		mm			2 9	930		
D Wheel base mm					3 5	550		
E Ground clearance		mm				05		
F Tread			2 230					
		mm	3 170	3 185	3 170	3 185	3 185	3 170
H Turning radius (Centerline of outside tire) mr		mm	6 420					
H' Loader clearance radius, bucket in carry position mm		mm	7 535	7 580	7 555	7 305	7 565	7 565
Overall operating height	ht	mm	6 320	6 320	6 405	6 020	6 020	6 765
J Carry height of bucket	t pin	mm	435					
K Height to bucket hinge	e pin, fully raised	mm			4 525			4 970
L Dumping clearance 45	5 degree, full height	mm	3 175	3 055	3 120	3 100	2 980	3 620
M Reach, 45 degree dur	mp, full height	mm	1 440	1 520	1 495	1 480	1 595	1 455
N Digging depth (Horizontal digging angle) deg		deg	105	135	105	135	135	105
O Max. roll back at carry	position	deg			45			43
P Roll back angle at full	height	deg				50		
Static tipping load *	Straight	kg	20 360	20 670	20 220	20 370	20 140	16 880
	Full 37 degree turn	kg	17 760	18 030	17 640	17 770	17 570	14 730
Breakout force		kN	189	203	179	211	182	189
		kgf	19 250	20 720	18 290	21 490	18 590	19 280
Operating weight *		kg	26 190	26 040	26 270	26 300	26 390	26 580

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

<sup>\*:</sup> Static tipping load and operating weight marked with\* include 26.5R25(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								
0.50	Operating weight Tipping load (kg) Overall width (mm) Overall height Overall length							
Ор	tion item	(kg)	Straight	37 degree turn	(outside tire)	(mm)	(mm)	
	26.5R25(L3) XHA2	± 0	± 0	± 0	± 0	± 0	± 0	
Tire	26.5R25(L4) XLDD1	+ 400	+ 290	+ 260	+ 15	+ 30	- 15	
TITE	26.5R25(L5) XLDD2A	+ 660	+ 480	+ 420	+ 15	+ 35	- 15	
	26.5R25(L3) VMT	± 0	± 0	± 0	± 0	± 0	± 0	
Belly guard (front & re	ar)	+ 240	+ 130	+ 120	± 0	± 0	± 0	



### **EQUIPMENT**

**OPERATOR'S STATION** Adjustable steering column with POP-UP • Radio AM/FM radio with AUX for digital audio player  $\circ$ DAB and AM/FM radio with AUX for digital audio player Ashtray, cigar lighter Auto control air conditioner with single intake filter 0 with double intake filter • Coat hook Front/Rear defroster Glove compartment Rear view camera & monitor Rear view mirrors Inside (2) Outside (2) 0 Outside (Heated, 2) Retractable seat belt, 50mm ROPS (ISO3471), FOPS (ISO3449): multi-plane isolation mounted for noise, vibration reduction Rubber floor mat Seat Air suspension seat with headrest and heater: fabric, high back, adjustable for damper, inclination of the seat, seat depth, weight-height, fore-aft position, reclining angle, armrest angle, headrest height and angle, lumbar support Air suspension seat (heavy duty) with headrest and heater: fabric, high back, adjustable for damper, inclination of the seat, seat depth, weight-0 height, fore-aft position, reclining angle, armrest angle, headrest height and angle, lumbar support Steering system Wheel steering 0 Joystick steering (with wheel steering) Storage Cup holder • Digital audio player holder Document holder Hot & cool box Seatback pocket Sun visor Textured steering wheel with spinner knob • Tinted safety glass Front windshield: laminated Others: tempered Windshield washers for front and rear Windshield wipers for front and rear Sun shade film on front windshield **ELECTRICAL SYSTEM** • Backup alarm Batteries Standard batteries (120AH-760A) 0 Large capacity batteries (155AH-900A) Battery disconnect switch •

.... Standard equipment

O ..... Optional equipment

LIGHTS	
Brake & tail lights LED	•
Clearance lights	•
Headlights	•
Turn signals with hazard switch	•
Work lights	
Front lights on cab (2)	•
Rear lights on rear grille side cover (2)	•
Front lights on cab (2) LED	0
Rear lights on rear grille side cover (2) LED	0
Additional front lights on cab (2) LED	0
Rear lights on cab (2) LED	0

POWER TRAIN	
Automatic transmission with load sensing system	•
Axle oil cooler	0
Clutch cut position switch	•
Differential	
TPD (Torque Proportioning Differential, front and rear)	•
LSD (Limited Slip Differential, front and rear)	0
DSS (Down Shift Switch)	•
Forward/Reverse lever	•
Forward/Reverse selector switch	•
Lock-up clutch (torque converter)	•
Power mode switch	•
Quick power switch	•
Travel mode selector (Auto1-Auto2)	•

ENGINE	
Air filter double elements	•
Automatic reversible cooling fan with heat sensing	•
Cartridge-type engine oil filter	•
Cartridge-type fuel pre-filter (with water separator function)	•
Cartridge-type fuel main filter	•
Coolant reservoir sight gauge	•
DEF/AdBlue® tank with ISO magnet adapter	•
Engine auto shut-down control system	0
Engine oil remote drain	•
Fan guard	•
Pre-cleaner (Sy-Klone)	•
Radiator (standard fin pitch radiator)	•

12V power outlet

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

<sup>\*</sup> Hitachi Construction Machinery cannot be held liable for theft, any system will just minimize the risk of theft.

MONITORING SYSTEM	
Gauge: coolant temperature, fuel	•
ndicator lights: clearance lights, control lever lock, fuel level, high beam, parking brake, preheat, turn signals, work lights	•
Indicator on multifunction monitor: air conditioner display, auto shut-down indicator, clock, clutch cut off indicator, DEF alarm indicator, DEF level gauge, dual lift arm auto leveler indicator, ECO indicator, fan reverse indicator, F-N-R/shift position indicator, forward/reverse selector switch indicator, hold display, hour meter, joystick steering indicator (optional), odometer, power mode indicator, ride control indicator, seat belt indicator, speedometer, tachometer, transmission auto-shifting indicator, transmission oil temperature	•
Warning lights: air filter restriction, brake oil low pressure, communication system error, discharge warning, engine oil low pressure, engine warning, hydraulic oil level, low steering oil pressure, overheat, transmission warning	•
BRAKE SYSTEM	i
Front & rear independent brake circuit	
Inboard mounted fully hydraulic 4 wheel wet disc	•
Spring-applied/Hydraulic-released parking brake	•
HYDRAULIC SYSTEM	
Bucket auto leveler (Automatic return to dig control)	•
Control lever	
for 2 spools control valve	
Multifunction lever (MF lever)	D
2 levers	
R	•
for 3 spools control valve	_
MF lever & AUX lever for 3rd function	

2 levers & AUX lever for 3rd function - Inside layout pattern (3rd - bucket - liftarm)



Control lever lock switch	•
Dual lift arm auto leveler	•
Hydraulic filters	•
Lift arm float system	•
Ride control system (OFF-AUTO type)	•

TIRES	
26.5R25(L3) XHA2	•
26.5R25(L4) XLDD1	0
26.5R25(L5) XLDD2A	0
26.5R25(L3) VMT	0

MISCELLANEOUS	
Articulation lock bar	•
Belly guard (Bolt on type)	0
Bucket cylinder guard	0
Counterweight, built-in	•
Drawbar with locking plate	•
Emergency steering	•
Fenders	
for 26.5R25 (Front & full covered rear fenders with mud flaps)	•
Global e-Service	•
Lift arm	
Standard lift arm	•
High lift arm	0
Lift & tie down hooks	•
On board information controller	•
Pilfer proof	
Battery cover with locking bracket	•
Lockable engine cover	•
Lockable fuel refilling cap	•
Standard tool kit	•

in a country other than a country of its intended use, it may be necessary	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 color and features. Before use, read and understand the Operator's Manual for proper operation.

KL-EN137EU

Printed in Europe

**Hitachi Construction Machinery** 

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