ZW series

HITACHI

ZW100
ZW120

G Type

WHEEL LOADER

- **Model Code:** ZW100-G / ZW120-G
- **Operating Weight:** ZW100-G: 6 530-7 100 kg
  ZW120-G: 7 560-8 640 kg
- **Bucket Capacity:** ISO Heaped: ZW100-G: 1.1-1.6 m^3
  ZW120-G: 1.3-1.8 m^3
- **Max. Engine Output:** ZW100-G: 62 kW (83 HP)
  ZW120-G: 68 kW (91 HP)

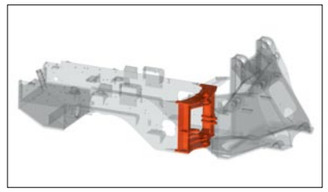
Enhanced Durability and Reliability

Durability and Reliability are enhanced with a number of advanced mechanism for long, continuous operation.

Improved Drive System for Higher Reliability and Maintainability

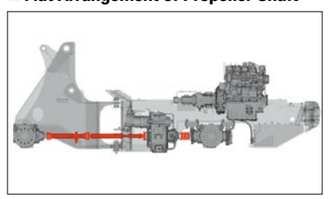
Tough and Reliable Engine
Kubota V3800 DI-T/TI engine, already mounted on numerous equipment, has proved ruggedness and reliability in tough operations.

Robust Frame



The box-section frame is thickened and strengthened to resist torsion and increase durability. Center pins are widely spaced for higher resistance to torsion.

Flat Arrangement of Propeller Shaft



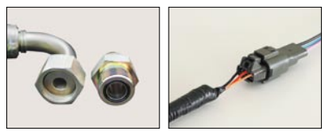
Flat arrangement of the propeller shaft is achieved to reduce resistance at the joint and to increase durability.

LED Indicators and Instruments
On the indicators, monitors and alarms, many LEDs are utilized for longer service life resulting in less failure, enhancing the reliability.

HN Bushings

The HN bushing containing lubricant is provided at each joint to reduce grease consumption, extend lubrication intervals (100 to 500 hours), and increase durability.

O-Ring Seal (ORS) Joints and Waterproof Electric Connectors



Numerous elaborate components are utilized for higher durability and reliability. The proven ORS joints and high-pressure hydraulic lines are utilized in the hydraulic system, and waterproof connectors in the electrical system.

Capacious Hydraulic Oil Cooler
The ample cooling capacity of the hydraulic oil cooler helps reduce oil temperature fluctuation, and extend service life of components.

Notes : The photos used in this brochure include optional equipment.
Some of the pictures in this brochure show an unmanned machine with attachments in an operating position. These were taken for demonstration purposes only and the actions shown are not recommended under normal operating conditions.

Keeping the Machine in Good Conditions for Higher Safety

Plenty of maintenance expertise always keeps the machine in good conditions for enhanced safety and higher job efficiency.

Easy-to-Read Monitor

With the easy-to-read monitor, the operator can see instructions for scheduled servicing and maintenance.
Monitor Indication Items:
Service intervals, travel speed, mileage, hour meter
Replacement Alerting:
The indicators alert the operator for scheduled replacement intervals to ensure proper maintenance.
Engine oil / filter, fuel filter, hydraulic oil / filter, transmission oil / filter, Axle oil.

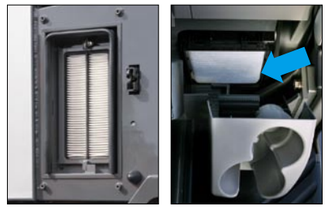
Protected Fuel Tank

The large counterweight is arranged to protect the fuel tank from collisions with obstacles during operation.

Conveniently Located Filters

Fuel filter, fuel pre-filter with sedimentary function and engine oil filter are strategically located for the convenient daily inspection and servicing.

Easy-to-Replace Air Conditioning Filters*



The fresh air filter can easily be replaced from the cab, and circulation air filter also replaced by detaching the drink holder.

Extended Filter Replacement Intervals (Up from 250 to 500 Hours)
Engine oil capacity and filter capacity are increased for longer filter replacement intervals, reducing maintenance time and downtime.

Emergency Steering System
The emergency electric pump delivers the necessary oil pressure for power steering even in the case of an emergency. This allows normal steering at all times even if the engine fails.

Highly Reliable Dual-Line Brake System
The dual-line hydraulic brake system is utilized: even if one line fails, the other can work for braking. The brake is an enclosed wet single-plate type for reliable braking.

Other Safety Features

Inclined Ladder

Retractable Seat Belt (Optional)

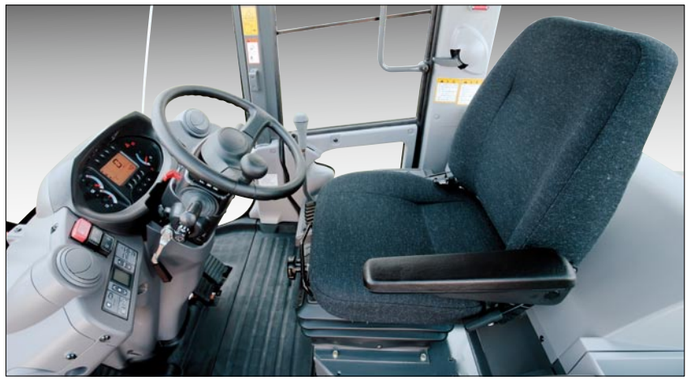
Aluminum Radiator and Oil Cooler
The radiator and oil cooler are made of aluminum instead of conventional steel or copper for corrosion prevention. Furthermore, the pararell arrangement of the radiator and oil cooler improves cooling capability and accessibility for maintenance.

**Cab model only*

Enhanced Operator Comfort with Luxury Designs (Cab Model)

Focusing on top-class operator comfort... riding comfort with less vibration and sound, and plenty of operator space... like large-sized models.

Mechanical Suspension Seat (Standard for Cab Model)

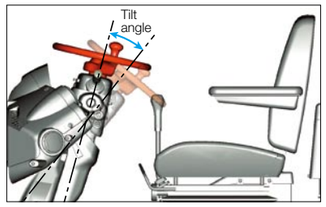


The mechanical suspension seat is provided standard to suppress vibration from the machine body for comfortable operation over long hours for ROPS/FOPS cab. The seat can be reclined, and adjusted horizontally to suit operator build for the optimum position. Seat cushion is also adjustable. An air suspension seat, associated with a headrest, lumbar support, seat height adjustment and seat heater, is optionally available for finer adjustments.

Functionally Grouped Controls

A cluster of controls are functionally grouped for ease of operation. The controls, used for prestart setting, are located on the right console to the seat, and those, handled during and after operation are on the front console.

Adjustable Steering Column



The steering wheel is tiltable and to suit operator of all builds for comfortable operation.

Fingertip Control with Pilot-Controlled Lever (Optional)

The pilot-controlled lever is optionally available for pleasant fingertip control.

Ergonomic Pedals

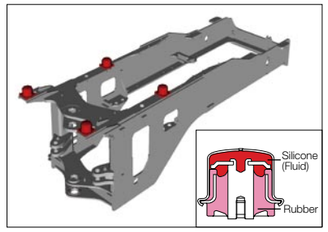
The brake pedal and accelerator pedal are ergonomically positioned for ease of control.

Bi-Level Auto Air Conditioner and Pressurized Cab

The bi-level air conditioner allows air conditioning at foot space and overhead simultaneously. Airflow direction can be freely adjusted with airflow volume automatically adjusting according to temperature setting. The pressurized cab shuts out dust and debris even in dusty environment.

Shock-Dampened Cab

The cab rests on fluid-filled elastic mounts to absorb shocks and vibration, and reduce resonance.



Low Noise Design

The cab is well sealed, and the new low-noise engine is utilized to reduce sound, along with the various noise reduction measures.

Panoramic Cab

The panoramic cab gives almost all-round visibility with the widened front glass window and pillar less cab rear corners. Front wheels are always in the operator's vision, enhancing safety and increasing loading efficiency.

Enhanced Upward Visibility

The front curved glass window gives good upward visibility, so the operator can directly see the movement of the bucket for safer loading.

Front / Rear Defrosters

With the front and rear defrosters, airflow comes out from three front air outlets and two rear outlets to protect respective windows from fogging, keeping clear vision even in rain and cold weather.

ROPS / FOPS Cab (Optional)

The ROPS / FOPS cab is provided to protect the operator from injury in an accident.

ROPS: Roll-Over Protective Structure: ISO3471

FOPS: Falling Object Protective Structure: ISO3449

An Array of Standard Accessories


Hot and cool box


Large tray and drink holder


Interior light interacting with cab door

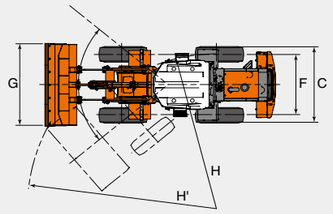

Seatback pocket

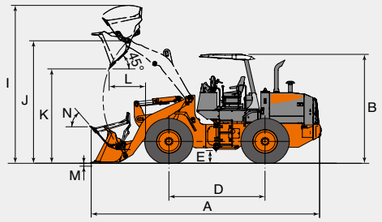

AM / FM stereo radio


Coat hook

SPECIFICATION

DIMENSIONS & SPECIFICATIONS





Bucket type			ZW100-G				ZW120-G			
			Standard Lift Arm		High Lift Arm		Standard Lift Arm		High Lift Arm	
			General purpose with bolt-on cutting edges				General purpose with bolt-on cutting edges			
Bucket capacity	ISO heaped	m³	1.3	1.6	1.1	1.3	1.5	1.8	1.3	1.5
	ISO struck	m³	1.1	1.3	0.9	1.1	1.2	1.5	1.1	1.2
A Overall length		mm	6 235	6 365	6 650	6 720	6 370	6 495	6 875	6 955
B Overall height, bucket on ground (with canopy)		mm	3 090				3 160			
Overall height, bucket on ground (with ROPS/FOPS cab)		mm	3 130				3 200			
C Width over tires		mm	2 180				2 320			
D Wheel base		mm	2 600				2 725			
E Ground clearance		mm	365				370			
F Tread		mm	1 725				1 820			
G Bucket width		mm	2 340				2 480			
H Turning radius (centerline of outside tire)		mm	4 440				4 690			
H' Loader clearance circle, bucket in carry position		mm	5 220	5 250	5 390	5 410	5 440	5 470	5 600	5 620
I Overall operating height		mm	4 530	4 605	4 600	4 745	4 650	4 730	4 905	4 990
J Height to hinge pin, fully raised		mm	3 515		3 725		3 560		3 900	
K Dump clearance 45 degree, full height		mm	2 710	2 620	2 965	2 915	2 730	2 645	3 130	3 070
L Reach, 45 degree dump, full height		mm	1 000	1 085	1 260	1 310	980	1 065	1 095	1 155
M Digging depth (horizontal digging angle)		mm	80		290		70		220	
N Max. roll back at carry position		deg	50				49			
Static tipping load*	straight	kgf	4 800	4 720	3 810	3 780	5 480	5 390	5 260	5 180
	Full 40 degree turn	kgf	4 140	4 050	3 260	3 230	4 710	4 620	4 510	4 450
Breakout force		kN(kgf)	61 (6 222)	53 (5 406)	63 (6 426)	58 (5 916)	79 (8 058)	68 (6 936)	86 (8 772)	78 (7 956)
Operating weight (with canopy)*		kg	6 530	6 570	6 650	6 690	7 560	7 650	8 200	8 230
Operating weight (with ROPS/FOPS cab)*		kg	6 950	6 990	7 070	7 100	7 980	8 070	8 610	8 640

Notes: 1. All dimensions, weight and performance data based on ISO 6746-1:1987, ISO 7131:1997 and ISO 7546:1983
2. Static tipping load and operating weight marked with * include 16.9-24-10PR(L2):ZW100, 18.4-24-10PR(L2):ZW120 tires (no ballast) with lubricants, coolant, full fuel tank and operator. Machine stability and operating weight depend on counterweight, tire size and other attachments.

BUCKET SELECTION GUIDE

%=Bucket Fill Factor 115% 100% 95%

ZW100-G : General purpose bucket with bolt-on cutting edges	Bucket Capacity m³	Material density kg/m³ 800	1 000	1 200	1 400	1 600	1 800
Standard lift arm	1.3						
	1.6						
High lift arm	1.1						
	1.3						

ZW120-G : General purpose bucket with bolt-on cutting edges	Bucket Capacity m³	Material density kg/m³ 800	1 000	1 200	1 400	1 600	1 800
Standard lift arm	1.5						
	1.8						
High lift arm	1.3						
	1.5						

ENGINE		ZW100-G	ZW120-G
Model		KUBOTA V3800-DI-T	KUBOTA V3800-DI-TI
Type		4-cycle water-cooled,direct injection	
Aspiration		Turbo charger	
No. of cylinders		4	
Maximum power	SAE J1349, with Fan net	62 kW (83 HP) at 2 100 min⁻¹(2 100 rpm)	68 kW (91 HP) at 2 100 min⁻¹(2 100 rpm)
	ISO 9249, with Fan net	62 kW (83 HP) at 2 100 min⁻¹(2 100 rpm)	68 kW (91 HP) at 2 100 min⁻¹(2 100 rpm)
Bore and stroke		100 mm x 120 mm	
Piston displacement		3.769 L	
Batteries		12V× 662 CCA, 159-min.rated reserve	
Air cleaner		Double stage dry type	

POWER TRAIN	ZW100-G	ZW120-G
Transmission controls	Hydrostatic (HST) transmission automatically controls power and 2-speed	
Travel speed : Forward & Reverse	34.5 km/h with 16.9-24-10PR tires	34.5 km/h with 18.4-24-10PR tires

AXLE AND FINAL DRIVE	ZW100-G	ZW120-G
Drive system	Four-wheel drive system	
Front & rear axle	Semi-floating	
Front	Fixed to the front frame	
Rear	Center pivot	
Oscillation angle	total 24° (±12°)	
Final drives	Heavy-duty, planetary final drive	

TIRES (tubeless, nylon body)	ZW100-G	ZW120-G
Standard	16.9-24-10PR (L2)	18.4-24-10PR (L2)
Optional	15.5-25-8PR (L2)*	17.5-25-12PR (L2)*

BRAKES	ZW100-G	ZW120-G
Service brakes	Inboard mounted fully hydraulic wet disk	
Parking brake	Spring applied hydraulic released wet disk	

STEERING SYSTEM	ZW100-G	ZW120-G
Type	Articulated frame steering	
Steering mechanism	Full hydraulic power steering with orbitrol®	
Steering angle	Each direction 40°; total 80°	
Cylinders	Double-acting piston type	
No. x Bore x Stroke	2 × 60 mm × 395 mm	2 × 60 mm × 395 mm
Minimum turning radius at the centerline of outside tire	4 440 mm	4 690 mm

HYDRAULIC SYSTEM		ZW100-G	ZW120-G
Arm and bucket are controlled by mechanical single control lever			
Arm controls		Four position valve; Raise, hold, lower, float	
Bucket controls		Two position valve; Roll back, dump	
Main pump	(Load & steer)	Gear type 108 L/min 2 100 min⁻¹(rpm) at 20.6 MPa (210 kgf/cm²)	Gear type 117 L/min 2 100 min⁻¹(rpm) at 20.6 MPa (210 kgf/cm²)
Relief pressure setting		20.6 MPa (210 kgf/cm²)	
Hydraulic cylinders	Type	Two arm and one bucket, double acting type	
	No. x Bore x Stroke	Arm: 2 × 90 mm × 760 mm Bucket : 1 × 110 mm × 421 mm	Arm: 2 × 105 mm × 710 mm Bucket : 1 × 125 mm × 445 mm
Filters		Full-flow 10 micron return filter before reservoir	
Hydraulic cycle times	Arm raise	5.0 s	5.7 s
	Arm lower	3.0 s	2.7 s
	Bucket dump	1.0 s	1.2 s

SERVICE REFILL CAPACITIES	ZW100-G	ZW120-G
Fuel tank	130 L	150 L
Engine coolant	14 L	
Engine oil	18 L	
Front axle differential & wheel hubs	10 L	14 L
Rear axle differential & wheel hubs	10 L	14 L
Hydraulic reservoir tank	75 L	80 L

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*When the optional tires are selected, the weights and the heights are changed as follows:
15.5-25-8PR (L2) Operational weight: -60 kg, Height:-5 mm
18.4-24-10PR (L2) Operational weight: -10 kg, Height:-5 mm

STANDARD AND OPTIONAL EQUIPMENT

Section	Components	ZW100-G	ZW120-G
Cabs			
	Canopy	○	○
	ROPS/FOPS cab	●	●
Front attachments			
	High lift arm	●	●
	Quick coupler (hydraulic/mechanical)	●	●
	Lift arm kickout	●	●
	Bucket cylinder rod guard	●	●
Forks			
	Lumber fork (pin/coupler)	●	●
	Lumber fork (pin) for high lift arm	●	●
Undercarriage			
	Torque proportioning differential (TPD)	○	○
	Limited slip differential (LSD)	●	●
	Electric parking brake	○	○
	Emergency steering system	●	●
	Underguard	●	●
	Ride control	●	●
Miscellaneous			
	Wide fin radiator	●	●
	Suction fan & radiator dust screen	●	●
	Precleaner	●	●
	Backup buzzer	○	○
	Loud backup buzzer	●	●
	Rear under-mirror	●	●
	Anti-corrosive paint (pipes & electric wiring connectors)	●	●
	Air cleaner for double elements	○	○
	Lifting lugs	●	●
	Full rear fender	●	●
	Large capacity alternator	○	○
	Air condenser dust screen	●	●

CAB AND CANOPY SPECIFICATIONS

○: Standard equipment ●: Optional equipment ×: No setting

Section	Components	ROPS/FOPS Cab	Canopy
Operator station			
	Full auto air conditioner	○	×
	Seat belt (2 inches)	×	○
	Seat belt (2 inches)*	○	×
	Seat belt (3 inches)*	●	×
	Tiltable steering column	○	○
	Sun visor	○	×
	AM/FM stereo radio	○	×
	Ashtray, cigar lighter	×	×
	Drink holder	○	×
	Large tray	○	×
	Hot & cool box	○	×
	Front windshield wiper (2-speed, intermittent) w/washer	○	×
	Rear windshield wiper w/washer	○	×
	Floor mat	○	○
	Quick shift switch (QSS)	○	○
	Implement lever lock	○	○
	Forward/rearward lever lock	○	○
	Hazard lamp	○	○
	Working light switch	○	○
	Door locks (inside/out)	○	×
	Room mirrors (2)	○	×
	Outer mirror	○	○
	12-V PTO (power take off)	●	×
	Immobilizer	●	●
Operator seat			
	Mechanical suspension seat (cloth-covered)	○	×
	Mechanical suspension seat (vinyl-covered)	●	●
	Air suspension seat w/headrest	●	×
	Fixed seat (vinyl-covered)	●	○
Lights			
	Headlights	○	○
	Rear combination lamps	○	○
	Backup light	○	○
	Front working lights (2)	○	×
	Extra front working lights (2) mounted on cab	●	×
	Rear working lights (2) built in rear grille	○	○
	Extra rear working lights (2) mounted on cab	●	×
Valves, levers (cable-operated)			
	2-spool valve w/mono lever	○	○
	3-spool valve w/mono lever + 1 lever	●	●
	4-spool valve w/mono lever + 1 lever	●	●
Valves, levers (pilot-controlled)			
	2-spool valve w/mono lever	●	×
	3-spool valve w/mono lever + 1 lever	●	×
	4-spool valve w/mono lever + 1 lever	●	×
Global e-service		●	×

*Retractable type for cab model with suspension seat

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.

Hitachi Construction Machinery
www.hitachi-c-m.com

KL-EN034 10.11 (KA/KA MT3)

Printed in Japan