

ZW series

HITACHI

ZW30
ZW40
ZW50
ZW20



WHEEL LOADER

- **Model Code** : ZW20 / ZW30 / ZW40 / ZW50
- **Operating Weight** : ZW20 : 1 945 kg
ZW30 : 2 785 kg
ZW40 : 3 295 kg
ZW50 : 3 605 kg
- **Bucket Capacity** : ISO Heaped : 0.3 - 0.6 m³
- **Max. Engine Output** : ZW20 : 15.8 kW (21 HP)
ZW30 : 22.2 kW (30 HP)
ZW40 : 30.4 kW (41 HP)
ZW50 : 30.4 kW (41 HP)

**With Emphasis on
Functional Beauty
Practical Compact-Wheel Loader**

ZW

Pleasant to Drive

The ZW Compact Series features comfortable and reliable Compact-wheel loaders for use in a wide variety of fields. The strong and individual body of these Compact-machines was designed with functionality and mobility in mind. The graceful silhouette is a result of thorough research into the full range of basic functions. Try the ZW Compact Series of wheel loaders equipped with a diverse range of high-quality functions demanded of versatile Compact-machinery, including comfortable operability, high-level safety, easy maintenance and environmentally friendly design.



- The new engine complies with the Emission Regulations U.S EPA Interim Tier 4 and EU Stage III A
- The advanced low noise design complies with the coming EU noise regulation 2000 / 14 / EC, STAGE II

Note: The illustrations and photos used in this brochure include optional equipment.

Subtle Functional Beauty for Greater Work Performance

Heavy load performance that supports powerful digging, excellent stability, and strong traction force. Steering performance that improves work efficiency in tight job site. All part of greater work performance.

Excellent Stability



We have carefully researched the center of gravity to maintain the weight balance between the front and rear, upper and lower, and left and right of the machine so that not only is excellent stability maintained.

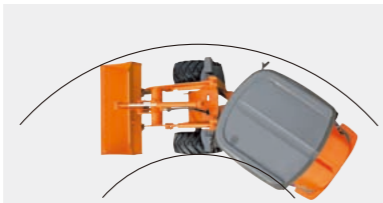
Great Dumping Clearance and Reach



	Dumping Clearance	Dumping Reach
ZW30	2 155 mm	775 mm
ZW40	2 445 mm	800 mm
ZW50	2 500 mm	870 mm

Achieves ample dumping and reach. Dumping into a hopper or loading into an 11 t dump truck is possible due to the excellent stability.

Small Turning Radius for Tight Spaces

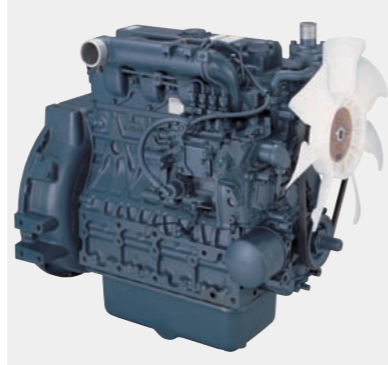


	Total Length (in Driving Mode)	Turning Radius
ZW30	4 165 mm	3 550 mm
ZW40	4 460 mm	3 740 mm
ZW50	4 630 mm	3 815 mm

Note: The turning radius is the value of the outermost bucket.

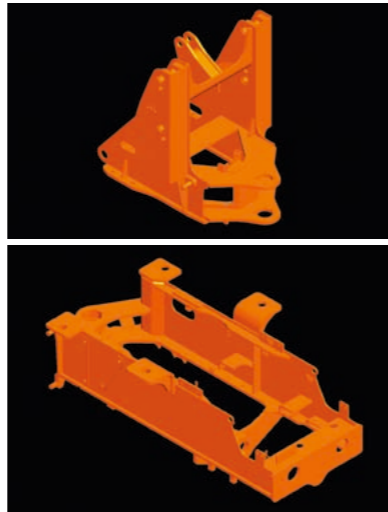
In order to improve turning performance, such as the distance and position from the front axle to center pin and center pin to rear axle, great improvements have been made to this latest model. In this way, the Compact-wheel loader is now easier to use in town and city streets and other confined work spaces.

High-Powered Engine



The high-powered engine, mounted on the ZW40 or ZW50, allows for more powerful, smoother operation with less fuel consumption even at low engine rpm, assisted by its new 4-cylinder configuration with increased displacement and suppressed vibration.

Reinforced Mainframe



To reinforce the front and rear frames, a box-section structure has been introduced. This improves durability, which results in greater reliability.

Highly Original Large Counterweight

The use of a large counterweight lowers the center of gravity and protects the body, as well as improves stability.

Easy-to-Use Towin Pin

By lowering the towin pin position, the troublesome need to raise loads by straining on a heavy wire rope has been eliminated, enabling much more stable towin performance.



Functional Beauty That Promotes Skillful Operation and Comfort

Can be operated skillfully by operators without great experience. Further, this quiet and comfortable operating environment is part of basic ZW concept.

HST Auto Transmission

Continuously adjustable speed can be achieved by operating the acceleration pedal - enabling start, acceleration, and stopping to be performed automatically.

- Travel is made easy with smooth automated speed changes
- Precision operations possible using extremely low speeds
- Excellent mechanical operations with highly responsive acceleration
- Smooth startup on inclines using HST brake operations
- Excellent rim pull at all speeds range

Simple and Secure Front Control Lever



A secure and easy-to-use front operation lever that controls the lifter smoothly and speedily.

Convenient Forward and Reverse Lever

Switch easily between forward and reverse operations using the fingers of your left hand while holding onto the handle.

Good Visibility Monitor



An easy-to-read transparent meter panel enables you to determine the machine's status at a glance. Instruments feature a compact layout for easy checking.

Walkthrough Type Cabin



A walkthrough type cabin enables mounting and alighting from either the right or left.



Special Handrail and Large Step for Mounting and Alighting



There are handrails and large steps mounted on both the left and right of the cabin for easy access.

Electric Switch Parking Brake that Prevents Pulling Friction Damage

Suppresses scorching due to pulling friction. Further, when the engine is stopped, the brake is automatically applied.

Comfortable Seat to Reduce Fatigue



A comfortable seat to relieve operator fatigue has been adopted. Absorbs unpleasant vibrations, reduces psychological and physical burdens, and reduces fatigue due to long time operations.



Glove Box Behind Seat

A convenient glove box is located behind the seat for storing documents, etc.

Panoramic Cab for Good Field of Vision (Optional)



Uses a large sliding sash for the door and a pillar-less design gives an unobstructed view of the front. The cab enables panoramic views via the addition of a lower window, which was absent in existing models, the removal of the rear corner pillar, and the use of a new and improved defroster nozzle, etc., providing a wide field of vision.

Quiet Cab Interior

Quiet interior design for operator comfort. Cab interior noise has been greatly suppressed to achieve quiet traveling rubber-mounted hydraulics, a tightly-sealed can operator frame and a new low-noise engine.



Sun Visor (Optional)

Suppresses glare from the snow and sun.



AM/FM Radio + 2 Speakers (Optional)



Suspension Seat (Optional)

A suspension seat is available to lessen vibrations and shock during operation.



Functional Beauty—Safety and Environmentally Friendly

Achieving a high-level of safety in the working environment with an array of advanced mechanisms.



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

Neutral Engine Start Mechanism to Improve Safety



Unless the forward and reverse lever is in neutral, this safety feature inhibits the engine from being started.

Lever Lock



This safety mechanism locks the front control lever. Lever locks can be fitted optionally to third function levers.

Key Lock to Prevent Vandalism



This key lock prevents damage caused by vandalism to the fuel inlet cap and engine cover.

Reduced Environmental Impact Substances

Aluminum Radiator Lead-Free Wiring

Functional Beauty—Centralized Rear Maintenance to Reduce Costs

In pursuit of functional beauty, models featuring this new design are not just beautiful, but also easy and reduced running costs.

Full-Open Cover Easy Day-to-Day Inspections



Daily maintenance is even easier with the incorporation of a large full-open cover and lowest counterweight. The cover opens at a touch, and is supported by tow gas dampers. The engine room, which can be fully open, enables maintenance such as inspections, replacements and filling to be carried out with ease.

Replacement Friendly Filter Layout



The layout enables easy replacement of the fuel and hydraulic system filters. These fuel filters are integrated combining water separator functions. The filters, including the engine oil and operating oil tank return filters, are cartridge type filters for easy replacement.

HN Bush* Extends Lubrication Intervals



HN bushes boasting superior lubrication characteristics are used in the loader joints to extend the lubrication interval to 250 hours.

Note: For the lubrication interval from the start of operation to 50 hours, refer to the user manual.

Improved Cab Cleaning

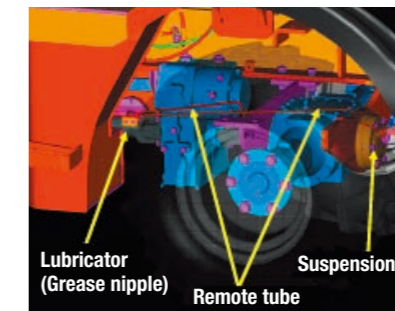


The area around the door has been redesigned to produce a flat, even floor inside the cab. This allows for easy of cleaning.

Compact Electrics Layout

Electrical device relays are located together for easy maintenance.

Easy Remote Lubrication



Because the rear suspension can be lubricated remotely, there is no need to crawl under the machine to perform this task.



SPECIFICATIONS

ENGINE

	ZW30	ZW40	ZW50	
Model	KUBOTA D1803-M-DI	KUBOTA V2403-M-DI	KUBOTA V2403-M-DI	
Type	4-cycle water-cooled,direct injection			
No. of cylinders	3	4	4	
Maximum power	ISO 9249, net	22.2 kW (30 HP) at 2 200 min ⁻¹ (2 200 rpm)	30.4 kW (41 HP) at 2 200 min ⁻¹ (2 200 rpm)	30.4 kW (41 HP) at 2 200 min ⁻¹ (2 200 rpm)
	EEC 80/1269, without Fan net	22.5 kW (30 HP) at 2 200 min ⁻¹ (2 200 rpm)	30.7 kW (41 HP) at 2 200 min ⁻¹ (2 200 rpm)	30.7 kW (41 HP) at 2 200 min ⁻¹ (2 200 rpm)
	SAE J1349, net	22.2 kW (30 HP) at 2 200 min ⁻¹ (2 200 rpm)	30.4 kW (41HP) at 2 200 min ⁻¹ (2 200 rpm)	30.4 kW (41HP) at 2 200 min ⁻¹ (2 200 rpm)
Bore and stroke	87 mm x 102.4 mm			
Piston displacement	1.826 L	2.434 L	2.434 L	
Batteries	12Vx490 CCA, 123-min.rated reserve	12Vx490 CCA, 123-min.rated reserve	12Vx490 CCA, 123-min.rated reserve	
Air cleaner	Double stage dry type with restrictuin indicator			

POWER TRAIN

	ZW30	ZW40	ZW50
Transmissioncontrols	Hydrostatic (HST) transmission automatically controls power and speed with electrically controlled		
Travel speed : Forward & Reverse	15 km/h With 12.5/70-16-6PR (L2) tires	15 km/h With 15.5/60-18-8PR (L2) tires	15 km/h With 15.5/60-18-8PR (L2) tires

AXLE AND FINAL DRIVE

	ZW30	ZW40	ZW50
Drive system	Four-wheel drive system		
Front & rear axle	Semi-floating		
	Front	fixed to the front frame	
Rear	Center pivot		
Oscillation angle	total 16° (±8°)	total 16° (±8°)	total 16° (±8°)
Final drives	Heavy-duty, planetary final drive		

TIRES (tubeless, nylon body)

	ZW30	ZW40	ZW50
Standard	12.5/70-16-6PR(L2)	15.5/60-18-8PR(L2)	15.5/60-18-8PR(L2)

BRAKES

	ZW30	ZW40	ZW50
Service brakes	Inboard mounted fully hydraulic wet disk		
Parking brake	Spring applied hydraulic released wet disk		

STEERING SYSTEM

	ZW30	ZW40	ZW50
Type	Articulated frame steering		
Steering mechanism	Full hydraulic power steering with orbitrol		
Steering angle	Each direction 41°; total 82°	Each direction 41°; total 82°	Each direction 41°; total 82°
Relief pressure	17.2 MPa (175 kgf/cm ²)	17.2 MPa (175 kgf/cm ²)	17.2 MPa (175 kgf/cm ²)
Cylinders	Double-acting piston type		
No. x Bore x Stroke	1 x 55 mm x 228 mm	1 x 60 mm x 228 mm	1 x 60 mm x 228 mm
Minimum turning radius at the centerline of outside tire	3 010 mm	3 125 mm	3 125 mm

HYDRAULIC SYSTEM

	ZW30	ZW40	ZW50	
Arm and bucket are controlled by mechanical single 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 34.9 L/min 2 200 min ⁻¹ (rpm) at 20.6 MPa (210 kgf/cm ²)	Gear type 39.5 L/min 2 200 min ⁻¹ (rpm) at 20.6 MPa (210 kgf/cm ²)	Gear type 48.3 L/min 2 200 min ⁻¹ (rpm) at 20.6 MPa (210 kgf/cm ²)	
Relief pressure setting	20.6 MPa (210 kgf/cm ²)	20.6 MPa (210 kgf/cm ²)	20.6 MPa (210 kgf/cm ²)	
Hydraulic cylinders	Type	Two arm and one bucket, double acting type	Two arm and one bucket, double acting type	Two arm and one bucket, double acting type
	No. x Bore x Stroke	Arm: 2 x 65 mm x 450 mm Bucket : 1 x 65 mm x 364 mm	Arm : 2 x 65 mm x 539 mm Bucket: 1 x 70mm x 431 mm	Arm: 2 x 70 mm x 531 mm Bucket: 1 x 70 mm x 450 mm
Filters	Full-flow 10 micron return filter in reservoir			
Hydraulic cycle times	Arm raise	5.0 s	5.0 s	5.0 s
	Arm lower	3.0 s	3.0 s	3.0 s
	Bucket dump	1.0 s	1.0 s	1.0 s

SERVICE REFILL CAPACITIES

	ZW30	ZW40	ZW50
Fuel tank	45 L	45 L	45 L
Engine coolant	4.5 L	6.5 L	6.5 L
Engine oil	5.6 L	7.6 L	7.6 L
Front axle differential & wheel hubs	4.5 L	4.5 L	4.5 L
Rear axle differential & wheel hubs	4.5 L	4.5 L	4.5 L
Hydraulic reservoir tank	38 L	38 L	38 L

STANDARD & OPTIONAL EQUIPMENT

	ZW30	ZW40	ZW50
ENGINE			
Coolant recovery tank	○	○	○
Environmentally friendly engine oil drain	○	○	○
Quick-release fuel filter and water separator	○	○	○
Glow system (for cold start)	○	○	○
Double-element air cleaner	○	○	○
Clog prevention net and fan	●	●	●
POWER TRAIN			
Hydrostatic (HST) transmission, electronic shift control, hydrostatic oil cooler, inching pedal, and forward and reverse	○	○	○
HYDRAULIC SYSTEM			
Automatic bucket return-to-dig control	○	○	○
Hydraulic filters, vertical mounting	○	○	○
Two-function hydraulic valve with joystick control (mechanical controlled)	○	○	○
Three-function hydraulic valve with joystick control and auxiliary lever for third function (mechanical controlled)	●	●	●
ELECTRICAL			
12-volt electrical system	○	○	○
Standard batteries (1), 12 volt with 490 CCA, 123-min. rated reserve	○	○	○
Alternator, 60 amps and 12 volts	○	○	○
Lights Driving with guards / Turn signals / Stop, tail and back-up lights / (Conform to SAE 99)	○	○	○
Work lights on cab, front (2) (Cab model only)	●	●	●
Work lights, rear (2) (Cab model only)	●	●	●
Horn, with push button in center of steering wheel (Conforms to SAE J994, J1446)	○	○	○
Buckup alarm	○	○	○
Monitor and warning system, multi-function electronic analog instruments: Engine coolant temperature / Fuel level / Hour-meter	○	○	○

Note: ○ Standard equipment ● Optional equipment

	ZW30	ZW40	ZW50
ELECTRICAL			
Operator warning lights: Brake oil / Engine oil pressure / Alternator voltage (charge)	○	○	○
Indicator lights: Turn signals / forward /Reverse	○	○	○
Parking brake (negative)	○	○	○
12-volt AM/FM radio (for cab model only)	●	●	●
OPERATOR'S STATION			
Canopy			
FRP roof	○	○	○
ROPS* / FOPS**	●	●	●
Cab			
Steel cab (with ROPS / FOPS)	●	●	●
Heater / Defroster (Cab model only)	●	●	●
Seat belt, 50mm	●	●	●
Seat, vinyl covered, mechanical suspension, adjustable for weight-height, fore-aft position, backrest tilt	●	●	●
Seat, vinyl covered, adjustable for fore-aft position, backrest tilt	○	○	○
Rubber floor mat	○	○	○
Steering wheel, textured with spinner knob	○	○	○
Rear view mirrors, outside (2)	○	○	○
Handholds, steps, and slip resistant	○	○	○
LOADER LINKAGE			
Z-bar loader linkage provides "high bucket breakout"	○	○	○
BUCKETS AND ATTACHMENTS			
Full line of Hitachi pin on buckets with selection of bolt-on cutting edges			
General purpose bucket with bolt on cutting edges	0.4 m ³ (ISO heaped)	○	
	0.5 m ³ (ISO heaped)		○
	0.6 m ³ (ISO heaped)		○
Light material handling bucket with bolt on cutting edges	0.5 m ³ (ISO heaped)	●	
	0.6 m ³ (ISO heaped)		●
	0.7 m ³ (ISO heaped)		●

* : ROPS (Roll Over Protective Structure) Conforms to ISO 3471;1994.
 ** : FOPS (Falling Objects Protective Structure) Conforms to ISO 3449; 1992 Level II.
 *** : Contact your Hitachi dealer for further information.

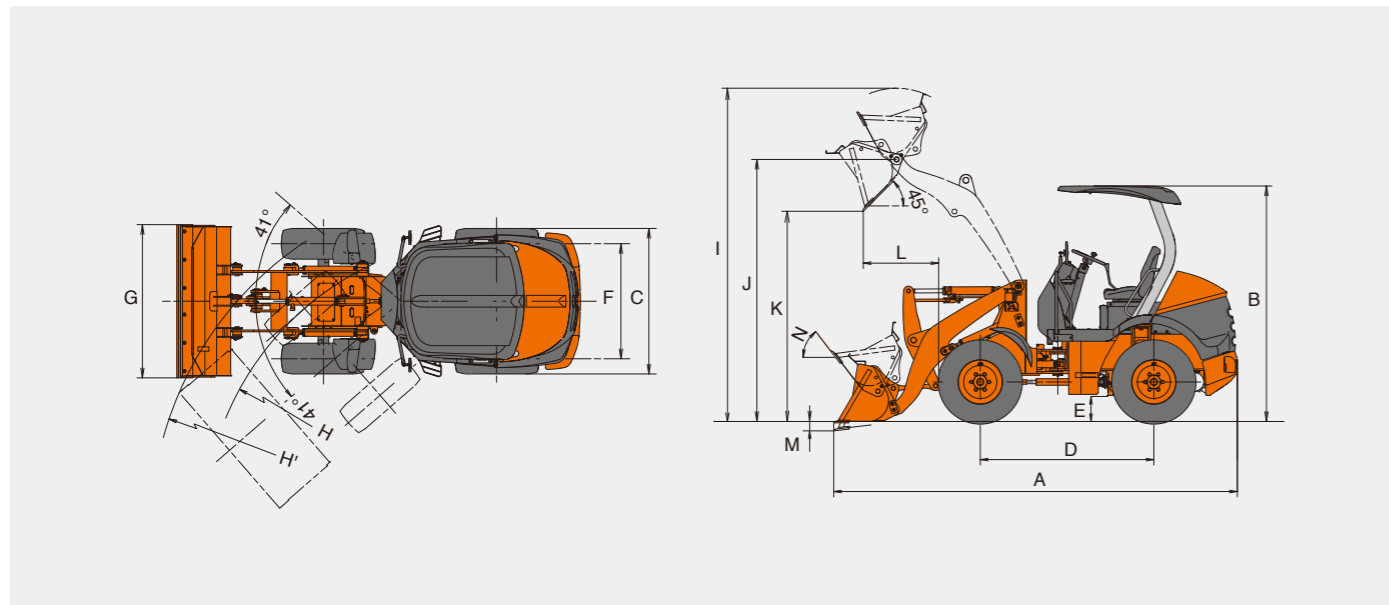
Note: ○ Standard equipment ● Optional equipment

	ZW30	ZW40	ZW50
BUCKETS AND ATTACHMENTS			
Full line of Hitachi pin on buckets with selection of bolt-on cutting edges			
Wide (daily & livestock) bucket with bolt on cutting edges	0.65 m ³ (ISO heaped)	●	
	0.8 m ³ (ISO heaped)		●
	0.9 m ³ (ISO heaped)		●
Quick-coupler and mechanical control system for quick-coupler locking pins, lines, and valves.	●	●	●
Full line of Hitachi buckets for quick coupler with selection of bolt-on cutting edges			
General purpose bucket with bolt on cutting edges	0.4 m ³ (ISO heaped)	●	
	0.5 m ³ (ISO heaped)		●
	0.6 m ³ (ISO heaped)		●
Light material handling bucket with bolt on cutting edges	0.5 m ³ (ISO heaped)	●	
	0.6 m ³ (ISO heaped)		●
	0.7 m ³ (ISO heaped)		●
Wide (daily & livestock) bucket with bolt on cutting edges	0.65 m ³ (ISO heaped)	●	
	0.8 m ³ (ISO heaped)		●
	0.9 m ³ (ISO heaped)		●
Full line of construction utilityforks, pallet forks, and attachments***			
Lumber and pallet fork	Max load 700 kg (pin on type)	●	
	Max load 860 kg (pin on type)		●
Lumber and pallet fork	Max load 980 kg (pin on type)		●
	Max load 650 kg (for quick coupler)	●	
Lumber and pallet fork	Max load 810 kg (for quick coupler)		●
	Max load 920 kg (for quick coupler)		●

	ZW30	ZW40	ZW50
BUCKETS AND ATTACHMENTS			
Manure fork	Max load 500 kg (for quick coupler)	●	
	Max load 550 kg (for quick coupler)		●
	Max load 550 kg (for quick coupler)		●
Roll grab	Max load 550 kg (for quick coupler)	●	
	Max load 700 kg (for quick coupler)		●
	Max load 800 kg (for quick coupler)		●
TIRES			
Bias ply	12.5/70-16-6PR (L2)	○	
	15.5/60-18-8PR (L2)		○
	15.5/60-18-8PR (L2)		○
Tire chain (H type)	●	●	●
Spare tire with rim	●	●	●
Spare rim	●	●	●
Solid tires with rims per machine	●	●	●
Spare solid tire with rim	●	●	●
Standard tires and galvanized rims per machine	●	●	●
Spare standard tire and galvanized rim	●	●	●
Spare galvanized rim	●	●	●
OTHERS			
Vandal protection, includes lockable engine enclosure, and fuel fill	○	○	○
Counter weight, built-in	○	○	○
Power steering	○	○	○
Lifting lig (4-point support)	○	○	○

DIMENSIONS & SPECIFICATIONS

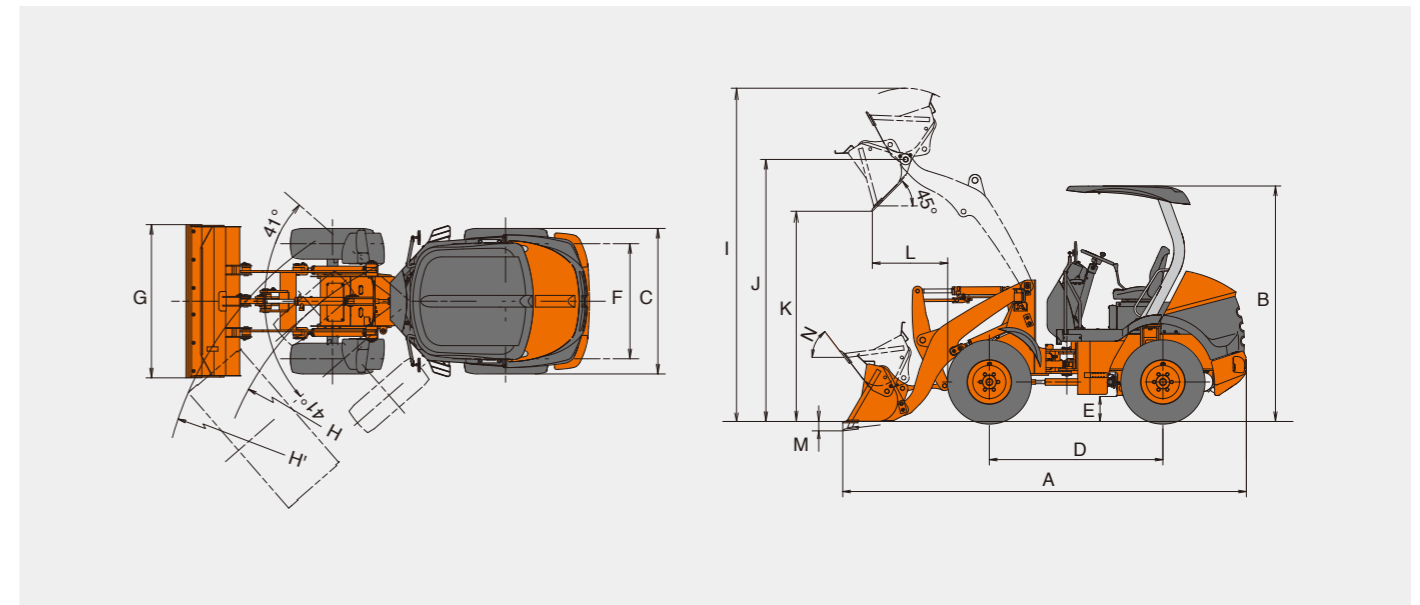
ZW30



Bucket type		Standard boom			Standard boom with quick-coupler			
		General purpose	Light material handling	Wide (dairy & livestock)	General purpose	Light material handling	Wide (dairy & livestock)	
		bolt-on cutting edges	bolt-on cutting edges	bolt-on cutting edges	bolt-on cutting edges	bolt-on cutting edges	bolt-on cutting edges	
Bucket capacity	ISO heaped	m ³	0.4	0.5	0.65	0.4	0.5	0.65
	ISO struck	m ³	0.38	0.42	0.58	0.38	0.42	0.58
A Overall length		mm	4 140	4 270	4 410	4 275	4 405	4 545
B Overall height, bucket on ground (with FRP canopy)		mm	2 415					
	Overall height, bucket on ground (with Rops cab)	mm	2 480					
C Width over tires		mm	1 505					
D Wheel base		mm	1 780					
E Ground clearance		mm	255					
F Tread		mm	1 180					
G Bucket width		mm	1 570	1 570	1 690	1 570	1 570	1 690
H Turning radius (centerline of outside tire)			3 010					
H' Loader clearance circle, bucket in carry position		mm	3 550	3 610	3 700	3 635	3 650	3 740
I Overall operating height		mm	3 420	3 435	3 515	3 420	3 525	3 610
J Height to hinge pin, fully raised		mm	2 685					
K Dump clearance 45 degree, full height		mm	2 155	2 065	1 965	2 060	1 965	1 865
L Reach, 45 degree dump, full height		mm	775	865	965	870	960	1 060
M Digging depth (horizontal digging angle)		mm	40					
N Max. roll back at carry position		deg	53					
Static tipping load *	straight	kgf	1 700	1 650	1 580	1 555	1 505	1 420
	Full 41 degree turn	kgf	1 400	1 360	1 300	1 280	1 240	1 170
Breakout force		kN	29.3	23.3	19.1	22.8	18.5	15.4
		(kgf)	(2 990)	(2 380)	(1 950)	(2 330)	(1 890)	(1 570)
Operating weight *		kg	2 785	2 800	2 835	2 870	2 890	2 900

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 12.5/70-16-6PR (L2) tires (no ballast) with lubricants, coolant, full fuel tank and operator.
 Machine stability and operating weight depend on counterweight, tire size and other attachments.

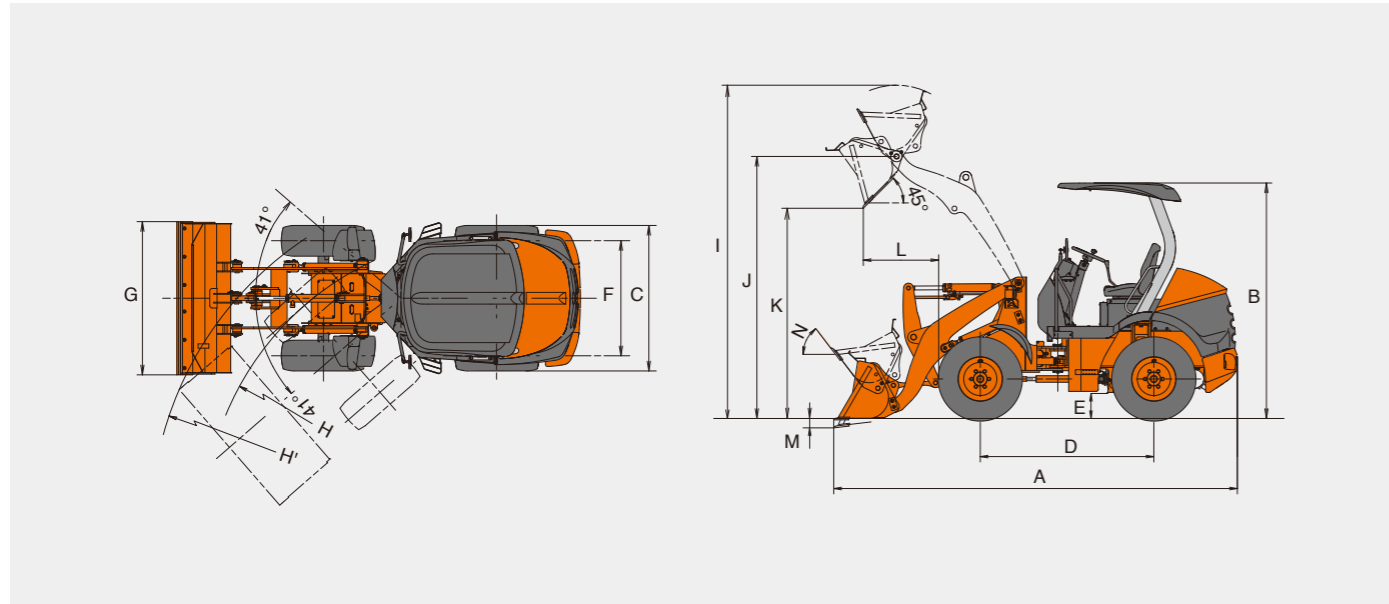
ZW40



Bucket type		Standard boom			Standard boom with quick-coupler			
		General purpose	Light material handling	Wide (dairy & livestock)	General purpose	Light material handling	Wide (dairy & livestock)	
		bolt-on cutting edges	bolt-on cutting edges	bolt-on cutting edges	bolt-on cutting edges	bolt-on cutting edges	bolt-on cutting edges	
Bucket capacity	ISO heaped	m ³	0.5	0.6	0.8	0.5	0.6	0.8
	ISO struck	m ³	0.42	0.52	0.65	0.42	0.52	0.65
A Overall length		mm	4 435	4 515	4 635	4 570	4 650	4 770
B Overall height, bucket on ground (with FRP canopy)		mm	2 495					
	Overall height, bucket on ground (with Rops cab)	mm	2 560					
C Width over tires		mm	1 660					
D Wheel base		mm	1 850					
E Ground clearance		mm	295					
F Tread		mm	1 260					
G Bucket width		mm	1 690	1 690	1 890	1 690	1 690	1 890
H Turning radius (centerline of outside tire)			3 125					
H' Loader clearance circle, bucket in carry position		mm	3 740	3 765	3 885	3 780	3 800	3 920
I Overall operating height		mm	3 795	3 865	3 895	3 885	3 955	3 990
J Height to hinge pin, fully raised		mm	3 030					
K Dump clearance 45 degree, full height		mm	2 445	2 390	2 305	2 350	2 295	2 210
L Reach, 45 degree dump, full height		mm	800	855	940	895	955	1 035
M Digging depth (horizontal digging angle)		mm	50	51	52	50	51	52
N Max. roll back at carry position		deg	54					
Static tipping load *	straight	kgf	2 100	2 050	1 955	1 905	1 855	1 710
	Full 41 degree turn	kgf	1 720	1 680	1 600	1 560	1 520	1 440
Breakout force		kN	35.8	31.6	26.9	28	25	21
		(kgf)	(3 650)	(3 220)	(2 750)	(2 850)	(2 550)	(2 150)
Operating weight *		kg	3 295	3 310	3 335	3 375	3 390	3 425

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 15.5/60-18-8PR (L2) tires (no ballast) with lubricants, coolant, full fuel tank and operator.
 Machine stability and operating weight depend on counterweight, tire size and other attachments.

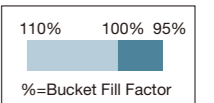
ZW50



Bucket type		Standard boom			Standard boom with quick-coupler			
		General purpose	Light material handling	Wide (dairy & livestock)	General purpose	Light material handling	Wide (dairy & livestock)	
		bolt-on cutting edges	bolt-on cutting edges	bolt-on cutting edges	bolt-on cutting edges	bolt-on cutting edges	bolt-on cutting edges	
Bucket capacity	ISO heaped	m ³	0.6	0.7	0.9	0.6	0.7	0.9
	ISO struck	m ³	0.52	0.6	0.75	0.52	0.6	0.75
A Overall length		mm	4 655	4 775	4 865	4 790	4 910	5 000
B Overall height, bucket on ground (with FRP canopy)		mm	2 495					
Overall height, bucket on ground (with Rops cab)		mm	2 560					
C Width over tires		mm	1 660					
D Wheel base		mm	1 850					
E Ground clearance		mm	295					
F Tread		mm	1 260					
G Bucket width		mm	1 690	1 690	1 890	1 690	1 690	1 890
H Turning radius (centerline of outside tire)			3 125					
H' Loader clearance circle, bucket in carry position		mm	3 815	3 850	3 960	3 855	3 890	4 000
I Overall operating height		mm	3 975	4 010	4 040	4 065	4 100	4 130
J Height to hinge pin, fully raised		mm	3 140					
K Dump clearance 45 degree, full height		mm	2 500	2 415	2 350	2 405	2 320	2 255
L Reach, 45 degree dump, full height		mm	870	955	1 015	965	1 050	1 100
M Digging depth (horizontal digging angle)		mm	55					
N Max. roll back at carry position		deg	55					
Static tipping load *	straight	kgf	2 390	2 314	2 190	2 190	2 120	1 995
	Full 41 degree turn	kgf	1 960	1 900	1 800	1 800	1 740	1 640
Breakout force		kN	33.4	28	25	27	23	21
		(kgf)	(3 400)	(2 850)	(2 500)	(2 750)	(2 350)	(2 100)
Operating weight *		kg	3 605	3 705	3 660	3 685	3 705	3 735

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 15.5/60-18-8PR (L2) 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



ZW30			Bucket Capacity m ³	Material density kg/m ³						
				0.8	1.0	1.2	1.4	1.6	1.8	
Standard lift arm	General purpose	With bolt-on cutting edges	0.4							
	Light material handling	With bolt-on cutting edges	0.5							
	Wide (dairy & livestock)	With bolt-on cutting edges	0.65							
Standard lift arm with quick-coupler	General purpose	With bolt-on cutting edges	0.4							
	Light material handling	With bolt-on cutting edges	0.5							
	Wide (dairy & livestock)	With bolt-on cutting edges	0.65							

ZW40			Bucket Capacity m ³	Material density kg/m ³						
				0.8	1.0	1.2	1.4	1.6	1.8	
Standard lift arm	General purpose	With bolt-on cutting edges	0.5							
	Light material handling	With bolt-on cutting edges	0.6							
	Wide (dairy & livestock)	With bolt-on cutting edges	0.8							
Standard lift arm with quick-coupler	General purpose	With bolt-on cutting edges	0.5							
	Light material handling	With bolt-on cutting edges	0.6							
	Wide (dairy & livestock)	With bolt-on cutting edges	0.8							

ZW50			Bucket Capacity m ³	Material density kg/m ³						
				0.8	1.0	1.2	1.4	1.6	1.8	
Standard lift arm	General purpose	With bolt-on cutting edges	0.6							
	Light material handling	With bolt-on cutting edges	0.7							
	Light material handling (snow)	With bolt-on cutting edges	0.75							
	Wide (dairy & livestock)	With bolt-on cutting edges	0.9							
Standard lift arm with quick-coupler	General purpose	With bolt-on cutting edges	0.6							
	Light material handling	With bolt-on cutting edges	0.7							
	Wide (dairy & livestock)	With bolt-on cutting edges	0.9							

A high-performance, compact wheel loader that is gentle to the environment while operating in urban areas and conducting night work.



HST Auto Transmission

Continuously adjustable speed can be achieved by operating the axle pedal enabling start, acceleration, and stopping to be performed automatically.

- Driving is made easy with smooth automatically speed changes
- Difficult operations possible using extremely slow speeds
- Excellent mechanical operations with highly responsive acceleration
- Smooth startup on inclines using HST brake operations
- Excellent rim pulling effects manifested at all speeds

A Single-Speed Locking Mechanism to Improve Performance

This switches the operation mode for the travel speed between work mode and drive mode.

LOW : When the switch is set to LOW, the speed is fixed and work mode is selected.

AUTO : When the switch is set to AUTO, work mode is released and the vehicle enters drive (automatic variable speed) mode.

High-Output Engine

15.8 kW (21 HP)

Top-Class Traction Force

17.2 kW (1 750 kgf)

Improved Starting Performance

When the outside air temperature is low and starting the engine is difficult, starting performance can be improved by turning the key switch to the HEAT (preheat) ON position.

Other

- Enclosed wet-disc brake
- Electric parking brake
- Full safety features
- Easy maintenance
- Equipped with HN bush
- Large fuel tank (33 L capacity)

Cab Specifications (Optional)



- Wide panorama cab (without ROPS / FOPS)
- Wider foot space and lever operation area with stylishly-spacious design, improved operability and interior comfort

SPECIFICATIONS

ZW20

ENGINE		
Model	KUBOTA D1105-K3A	
Type	4-cycle water-cooled, direct injection	
No. of cylinders	3	
Maximum power	ISO 9249, net	15.8 kW (21 HP) at 2 500 min ⁻¹ (2 500 rpm)
	SAE J1349, net	15.8 kW (21 HP) at 2 500 min ⁻¹ (2 500 rpm)
Bore and stroke	78 mm x 78.4 mm	
Piston displacement	1.123 L	
Batteries	12Vx490 CCA, 123-min. rated reserve	
Air cleaner	Single stage dry type with restriction indicator	

POWER TRAIN	
Transmission controls	Hydrostatic (HST) transmission automatically controls power and speed with electrically controlled
Travel speed : Forward & Reverse	15Km/h With 10-16.5-4PR (L2) tires

AXLE AND FINAL DRIVE		
Drive system	Four-wheel drive system	
Front & rear axle	Semi-floating	
	Front	fixed to the front frame
	Rear	Center pivot
Oscillation angle	total 16° (±8°)	
Final drives	Heavy-duty, planetary final drive	

TIRES (tubeless, nylon body)	
Standard	10-16.5-4PR (L2)

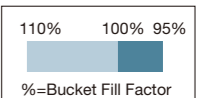
BRAKES	
Service brakes	Inboard mounted fully hydraulic wet disk
Parking brake	Spring applied hydraulic released wet disk

STEERING SYSTEM	
Type	Articulated frame steering
Steering mechanism	Full hydraulic power steering with orbitrol
Steering angle	Each direction 42°; total 84°
Relief pressure	17.2 MPa (175 kgf/cm ² , 2 490 psi)
Cylinders	Double-acting piston type
No. x Bore x Stroke	1 x 50 mm x 233 mm
Minimum turning radius at the centerline of outside tire	2.545 m

HYDRAULIC SYSTEM		
Arm and bucket are controlled by mechanical single 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 25 L/min 2 500 min ⁻¹ (rpm) at 20.6 MPa (210 kgf/cm ²)	
Relief pressure setting	20.6 MPa (210 kgf/cm ²)	
Hydraulic cylinders	Type	Two arm and one bucket, double acting type
	No. x Bore x Stroke	Arm: 2 x 55 mm x 385 mm Bucket: 1 x 60 mm x 262 mm
Filters	Full-flow 10 micron return filter in reservoir	
Hydraulic cycle times	Arm raise	4.6 s
	Arm lower	3.2 s
	Bucket dump	1.0 s

SERVICE REFILL CAPACITIES	
Fuel tank	33 L
Engine coolant	5.5 L
Engine oil	3.6 L
Front axle differential & wheel hubs	3.5 L
Rear axle differential & wheel hubs	3.5 L
Hydraulic reservoir tank	23 L

BUCKET SELECTION GUIDE



ZW20	Bucket Capacity m ³	Material density kg/m ³	Material density kg/m ³							
			0.8	1.0	1.2	1.4	1.6	1.8		
Standard lift arm	General purpose	With bolt-on cutting edges	0.3							
	Light material handling	With bolt-on cutting edges	0.4							
	Wide (dairy & livestock)	With bolt-on cutting edges	0.5							
Standard lift arm with quick-coupler	General purpose	With bolt-on cutting edges	0.3							
	Light material handling	With bolt-on cutting edges	0.4							
	Wide (dairy & livestock)	With bolt-on cutting edges	0.5							

STANDARD & OPTIONAL EQUIPMENT

ZW20

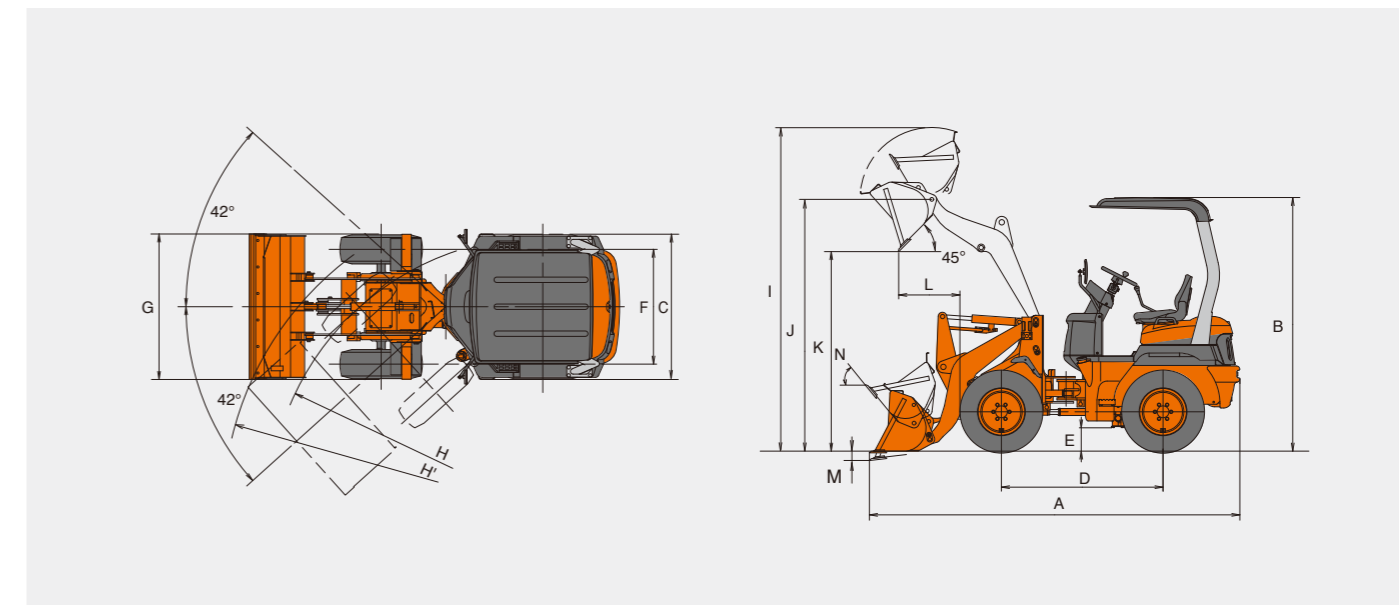
Note: ○ Standard equipment ● Optional equipment

ENGINE	
Coolant recovery tank	○
Environmentally friendly engine oil drain	○
Quick-release fuel filter and water separator	○
Glow system (for cold start)	○
Single-element air cleaner	○
Clog prevention net and fan	●
POWER TRAIN	
Hydrostatic (HST) transmission, electronic shift control, hydrostatic oil cooler, inching pedal, and two speeds forward and reverse	○
HYDRAULIC SYSTEM	
Automatic bucket return-to-dig control	○
Hydraulic filters, vertical mounting	○
Two-function hydraulic valve with joystick control (mechanical controlled)	○
Three-function hydraulic valve with joystick control and auxiliary lever for third function (mechanical controlled)	●
ELECTRICAL	
12-volt electrical system	○
Standard batteries (1), 12 volt with 490 CCA, 123-min. rated reserve	○
Alternator, 40 amps and 12 volts	○
Lights	○
Driving with guards / Turn signals / Stop, tail and buck-up lights / (Conform to SAE 99)	○
Work lights on cab, front (2) (Cab model only)	●
Work lights, rear (1) or (2) (Cab model only)	●
Horn, with push button in center of steering wheel (Conforms to SAE J994, J1446)	○
Buckup alarm	○
Monitor and alarm system, multi-function electronic analog instruments: Engine coolant temperature / Fuel level / Hour-meter	○
Operator warning lights: Brake oil / Engine oil pressure / Alternator voltage (charge)	○
Indicator lights: Turn signals / forward /Reverse	○
Parking brake (negative)	○
12-volt AM/FM radio (for cab model only)	●
OPERATOR'S STATION	
Canopy	
FRP roof	○
ROPS* / FOPS**	●
Cab	
Steel cab (without ROPS / FOPS)	●
Heater / Defroster (Cab model only)	●
Seat belt, 50mm	●
Seat, vinyl covered, mechanical suspension, adjustable for weight-height, fore-aft position, backrest tilt	●
Seat, vinyl covered, adjustable for fore-aft position, backrest tilt	○
OPERATOR'S STATION	
Rubber floormat	○
Steering wheel, textured with spinner knob	○
Rear view mirrors, outside (2)	○
Handholds, steps, and slip resistant	○
LOADER LINKAGE	
Z-bar loader linkage provides "high bucket breakout"	○
BUCKETS AND ATTACHMENTS	
Full line of Hitachi pin on buckets with selection of bolt-on cutting edges	
General purpose bucket with bolt on cutting edges : 0.3 m ³ (ISO heaped)	○
Light material handling bucket with bolt on cutting edges: 0.4 m ³ (ISO heaped)	●
Wide (daily & livestock) bucket with bolt on cutting edges : 0.5 m ³ (ISO heaped)	●
Quick-coupler and mechanical control system for quick-coupler locking pins, lines, and valves	●
Full line of Hitachi buckets for quick coupler with selection of bolt-on cutting edges	
General purpose bucket with bolt on cutting edges : 0.3 m ³ (ISO heaped)	●
Light material handling bucket with bolt on cutting edges : 0.4 m ³ (ISO heaped)	●
Wide (daily & livestock) bucket with bolt on cutting edges : 0.5 m ³ (ISO heaped)	●
Full line of construction utilityforks, pallet forks, and attachments***	
Lumber and pallet fork : Max load 500 kg (pin on type)	●
Lumber and pallet fork : Max load 450 kg (for quick coupler)	●
Manure fork : Max load 450 kg (for quick coupler)	●
Roll grab : Max load 400 kg (for quick coupler)	●
TIRES	
Bias ply : 10-16.5-4PR (L2)	○
Tire chain (H type)	●
Spare tire with rim	●
Spare rim	●
Solid tires with rims per machine	●
Spare solid tire with rim	●
Standard tires and galvanized rims per machine	●
Spare standard tire and galvanized rim	●
Spare galvanized rim	●
OTHERS	
Vandal protection, includes lockable engine enclosure, and fuel fill	○
Counter weight, built-in	○
Power steering	○
Lifting lig (4-point support)	○

* : ROPS (Roll Over Protective Structure) Conforms to ISO 3471;1994.
 ** : FOPS (Falling Objects Protective Structure) Conforms to ISO 3449; 1992 Level II.
 ***: Contact your Hitachi dealer for further information.

DIMENSIONS & SPECIFICATIONS

ZW20



Bucket type	Standard boom			Standard boom with quick-coupler				
	General purpose	Light material handling	Wide (dairy & livestock)	General purpose	Light material handling	Wide (dairy & livestock)		
	bolt-on cutting edges	bolt-on cutting edges	bolt-on cutting edges	bolt-on cutting edges	bolt-on cutting edges	bolt-on cutting edges		
Bucket capacity	ISO heaped	m ³	0.3	0.4	0.5	0.3	0.4	0.5
	ISO struck	m ³	0.24	0.35	0.43	0.24	0.35	0.43
A Overall length	mm		3 440	3 555	3 695	3 555	3 675	3 815
B Overall height, bucket on ground (with FRP canopy)	mm		2 350					
Overall height, bucket on ground (with Rops cab)	mm		2 395					
C Width over tires	mm		1 335					
D Wheel base	mm		1 500					
E Ground clearance	mm		215					
F Tread	mm		1 065					
G Bucket width	mm		1 350	1 405	1 570	1 350	1 450	1 570
H Turning radius (centerline of outside tire)			2 545					
H' Loader clearance circle, bucket in carry position	mm		2 970	3 025	3 140	3 000	3 060	3 175
I Overall operating height	mm		3 005	3 085	3 030	3 085	3 170	3 115
J Height to hinge pin, fully raised	mm		2 335					
K Dump clearance 45 degree, full height	mm		1 850	1 765	1 665	1 765	1 680	1 580
L Reach, 45 degree dump, full height	mm		570	650	755	650	740	840
M Digging depth (horizontal digging angle)	mm		55					
N Max. roll back at carry position	deg		51					
Static tipping load *	straight	kgf	1 350	1 290	1 250	1 240	1 180	1 150
	Full 42 degree turn	kgf	1 100	1 050	1 020	1 000	950	930
Breakout force		kN	21	16	13	16	13	10
		(kgf)	(2 100)	(1 650)	(1 300)	(1 600)	(1 300)	(1 050)
Operating weight *		kg	1 945	1 935	1 960	1 965	1 985	2005

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 10-16.5-4PR (L2) tires (no ballast) with lubricants, coolant, full fuel tank and operator.
 Machine stability and operating weight depend on counterweight, tire size and other attachments.

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.