

ZW-5A series



HITACHI

Reliable solutions

ZW180



WHEEL LOADER

Model Code: ZW180-5A

Max. Engine Power: 125 kW (168 HP)

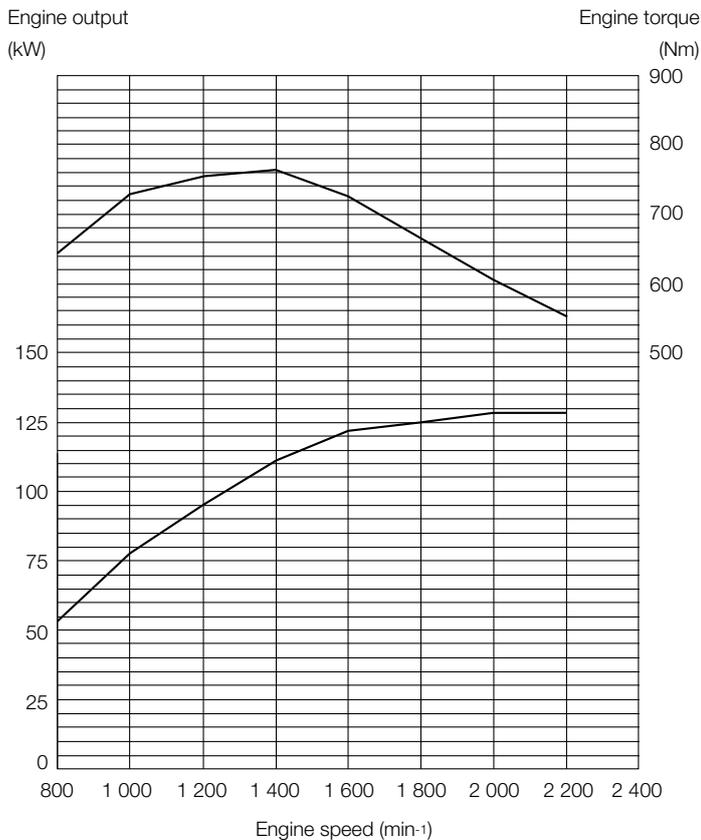
Operating Weight: 14 370 - 14 860 kg

Bucket ISO Heaped: 2.2 - 3.3 m³

SPECIFICATIONS

ENGINE

Model	CUMMINS QSB6.7
Type	4-cycle water-cooled, direct injection
Aspiration	Turbocharger and intercooled
No. of cylinders	6
Maximum power	
Gross	128 kW (172 HP) at 2 200 min ⁻¹ (rpm)
ISO 9249, net	125 kW (168 HP) at 2 200 min ⁻¹ (rpm)
Maximum torque	763 Nm at 1 400 min ⁻¹ (rpm)
Bore and stroke	107 mm X 124 mm
Piston displacement	6.690 L
Batteries	120 Ah - 760 A Std 155 Ah - 900 A Large
Air cleaner	Two element dry type with restriction indicator



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
Main clutch	Wet hydraulic, multi-disc type
Cooling method	Forced circulation type
Travel speed* Forward / Reverse	
1st	5.9 / 6.1 km/h (5.8 / 6.1 km/h)
2nd	11.5 / 11.8 km/h (12.0 / 12.6 km/h)
3rd	17.0 / 26.0 km/h (18.1 / 27.7 km/h)
4th	24.8 km/h (26.4 km/h)
5th	38.5 km/h (38.5 km/h)

*With 20.5-25-12PR (L3) tires

() : Data at Power Mode

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 conventional differential
Oscillation angle	Total 24° (+12°, -12°)
Final drives	Heavy-duty planetary, mounted outboard

TIRES

Tire size	20.5-25-12PR (L3)
Optional	Refer to standard & optional equipment list

BRAKES

Service brakes	Outboard mounted fully hydraulic 4 wheel wet disc brake. Front & rear independent brake circuit
Parking brakes	Spring applied, hydraulically released, dry disc type with external output shaft

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 70 mm x 442 mm

HYDRAULIC SYSTEM

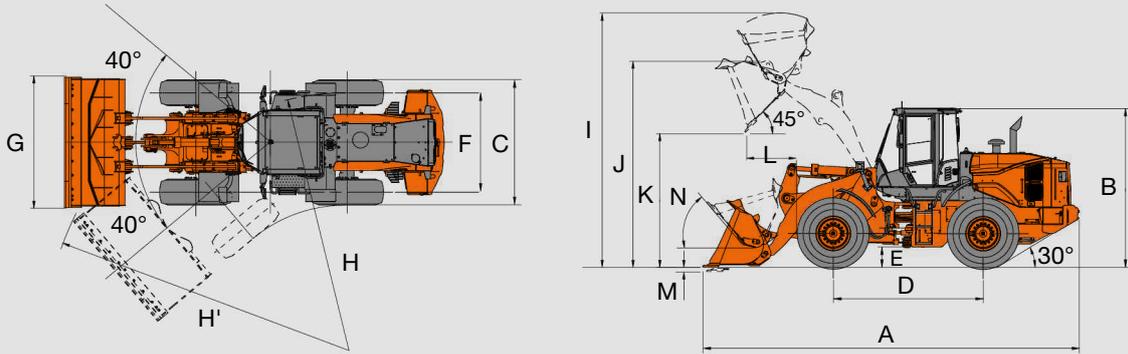
Arm and bucket are controlled by independent control lever	
Arm controls	Four position valve ; Raise, hold, lower, float
Bucket controls with automatic bucket return-to-dig control	Three position valve ; Roll back, hold, dump
Main pump (Serve as steering pump)	
.....	Variable Displacement Axial Plunger Pump
Maximum flow	210 L/min at 2 200 min ⁻¹ (rpm)
Maximum pressure ..	27.4 MPa
Fan pump	
.....	Fixed Displacement Gear Pump
Maximum flow	80.5 L/min at 2 200 min ⁻¹ (rpm)
Maximum pressure ..	14.7 MPa
Hydraulic cylinders	
Type	Double acting type
No. x Bore x Stroke ...	Arm : 2 x 125 mm x 765 mm Bucket : 1 x 150 mm x 495 mm
Filters	Full-flow 15 micron return filter in reservoir
Hydraulic cycle times	
Lift arm raise	5.9 s (5.7 s)
Lift arm lower	3.6 s (3.6 s)
Bucket dump	1.4 s (1.3 s)
Total	10.9 s (10.6 s)

() : Data at Power Mode

SERVICE REFILL CAPACITIES

Fuel tank	235 L
Engine coolant	25 L
Engine oil	25 L
Torque converter & transmission	30 L
Front axle differential & wheel hubs	34 L
Rear axle differential & wheel hubs	35 L
Hydraulic oil tank	100 L

DIMENSIONS & SPECIFICATIONS



Bucket type			Standard arm					
			General purpose					Rock bucket
			Bolt-on cutting edge			Bolt-on teeth		Bolt-on teeth
Bucket capacity	ISO heaped	m ³	2.8	3.0	3.3	2.7	2.9	2.2
	ISO struck	m ³	2.4	2.6	2.9	2.3	2.5	1.9
A Overall length		mm	7 790	7 840	7 920	7 940	7 990	7 820
B Overall height		mm	3 280					
C Width over tires		mm	2 610					
D Wheel base		mm	3 100					
E Ground clearance		mm	395					
F Tread		mm	2 050					
G Bucket width		mm	2 690					
H Turning radius (Centerline of outside tire)		mm	5 300					
H' Loader clearance radius, bucket in carry position		mm	6 200	6 210	6 230	6 240	6 260	6 210
I Overall operating height		mm	5 290	5 340	5 420	5 290	5 340	5 230
J Height to bucket hinge pin, fully raised		mm	3 920					
K Dumping clearance 45 degree, full height		mm	2 800	2 760	2 710	2 690	2 660	2 770
L Reach, 45 degree dump, full height		mm	1 070	1 100	1 160	1 150	1 190	1 070
M Digging depth (Horizontal digging angle)		mm	100	100	100	110	110	110
N Max. roll back at carry position		deg	50					
Static tipping load *	Straight	kg	11 560	11 510	11 430	11 740	11 690	11 260
	Full 40 degree turn	kg	9 960	9 910	9 830	10 130	10 080	9 650
Breakout force		kgf	11 970	11 450	10 740	13 040	12 430	14 430
		kN	117	112	105	128	122	141
Operating weight*		kg	14 430	14 470	14 520	14 370	14 400	14 860

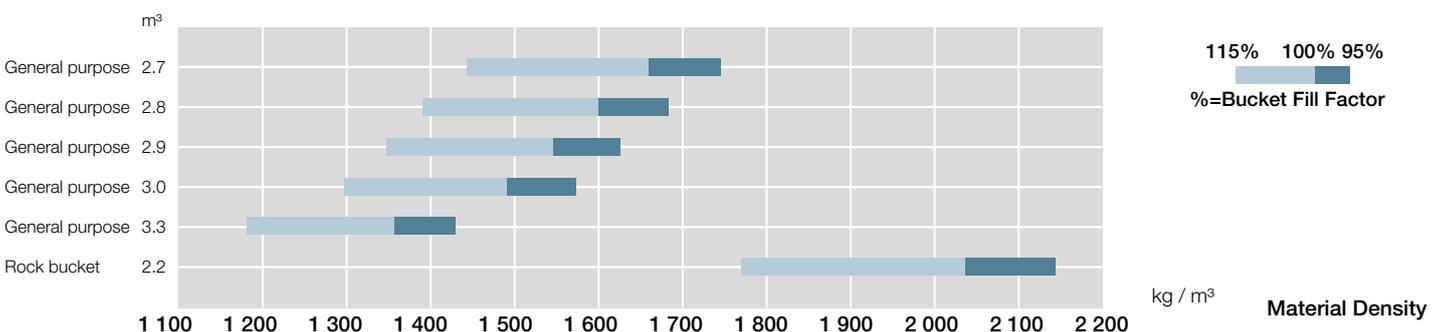
Note: All dimensions, weight and performance data based on ISO 6746-1:1987, ISO 7131:2009 and ISO 7546:1983

: Static tipping load and operating weight marked with include 20.5-25-12PR(L3) tires (No ballast) with lubricants, full fuel tank, 1 350kg counter weight, Non ROPS cab 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			
Tire	20.5-25-12PR (L3)	±0	±0	±0	±0	±0
	20.5-25-16PR (L3)	+30	+20	+10	±0	±0
	20.5R25 (L3)	+180	+140	+120	+20	+10
	20.5R25 (L5)	+610	+460	+400	+40	+30
Belly guard	+160	+90	+80	-	-	-
ROPS / FOPS Cab	+210	+210	+180	-	-	-
1 660 kg Counter weight	+310	+790	+700	-	-	-

BUCKET SELECTION GUIDE



EQUIPMENT

● Standard equipment

○ Optional equipment

OPERATOR'S STATION	
Adjustable steering column	●
Ashtray, cigar lighter	●
Audio	
AM/FM radio	●
AM/FM radio with AUX for digital audio player	○
Auto control air conditioner	
with single intake filter	●
with double intake filter	○
Cab	
Non ROPS / FOPS cab	●
ROPS (ISO3471), FOPS (ISO3449)	○
Coat hook	●
Front/Rear defroster	●
Glove compartment	●
Rear view camera & monitor	○
Rear view mirrors	
Inside (2)	●
Outside (2)	●
Outside (Heated, 2)	○
Retractable seat belt, 50mm	●
Rubber floor mat	●
Seat	
Mechanical suspension seat: fabric, high back, adjustable for armrest angle, fore-aft position, reclining angle and weight-height.	●
Air suspension seat with headrest and heater: fabric, high back, adjustable for armrest angle, damper, fore-aft position, headrest height and angle, inclination of the seat, lumbar support, reclining angle, seat depth and weight-height.	○
Storage	
Cup holder	●
Digital audio player holder	●
Document holder	●
Hot & cool box	●
Seatback pocket	●
Sun visor	●
Textured steering wheel with spinner knob	●
Safety glass (tempered)	●
Windshield washer front and rear	●
Windshield wipers front and rear	●

ELECTRICAL SYSTEM	
Backup alarm	●
Batteries	
Standard batteries (120AH-760A)	●
Large capacity batteries (155AH-900A)	○
Battery disconnect switch	○
Immobilizer key	○
12V power outlet	○

COOLING SYSTEM	
Fan	
Cooling fan with heat sensing	●
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 lamp	○
Turn signals with hazard switch	●
Work lights	
Front lights on cab (2)	●
Rear lights on rear grille side cover (2)	●
Additional front lights on cab (2)	○
Rear lights on cab (2)	○

POWER TRAIN	
Automatic transmission with load sensing system	●
Clutch cut position switch	●
Differential	
Conventional differential	●
LSD (Limited Slip Differential, front)	○
DSS (Down Shift Switch)	●
Forward/Reverse lever	●
Forward/Reverse selector switch	○
Power mode switch	●
Quick power switch	●
Travel mode selector (Auto1-Auto2)	●
1st speed fixed switch	●

ENGINE	
Air intake	
Rain cap	●
Pre-cleaner (Sy-Klone)	○
Pre-cleaner (Bowl type)	○
Air filter double elements	●
Cartridge-type engine oil filter	●
Cartridge-type fuel pre-filter	●
Cartridge-type fuel main filter	●
Engine oil remote drain	●

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

BRAKE SYSTEM	
Front & rear independent brake circuit	●
Outboard mounted fully hydraulic 4 wheel wet disc	●
Pedal	
Single brake pedal	●
Double (LH & RH) brake pedal	○
Spring-set/Hydraulic-released parking brake	●

HYDRAULIC SYSTEM	
Bucket auto leveler (Automatic return to dig control)	●
Control lever	
for 2 spools control valve	
2 levers	●
	
Multifunction lever (MF lever)	○
	
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)	○
- Outside layout pattern (Bucket - liftarm - 3rd)	○
for 4 spools control valve	
MF lever & AUX joystick lever for 3rd & 4th function	○
	
2 levers & AUX 2 levers for 3rd & 4th function	
- Inside layout pattern (4th - 3rd - bucket - liftarm)	○
	
2 levers & AUX joystick lever for 3rd & 4th function	○
	
Control lever lock switch	●
Dual lift arm auto leveler	○
Hydraulic filters	●
Lift arm float system	●
Reservoir sight gauge	●
Ride control system (OFF-AUTO type)	○

TIRES	
20.5-25-12PR (L3)	●
20.5-25-16PR (L3)	○
20.5R25 (L3)	○
20.5R25 (L5)	○

MISCELLANEOUS	
Articulation lock bar	●
Belly guard (Bolt on type)	○
Bucket cylinder guard	○
Counter weight	
1 350 kg counter weight	●
1 660 kg counter weight	○
Drawbar with locking pin	●
Emergency steering	○
Fenders	
for 20.5-25-12PR	
Front & half covered rear fenders	●
Front & full covered rear fenders with mud flaps	○
Front & half 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	●
Theft prevention system*	○

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

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

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