

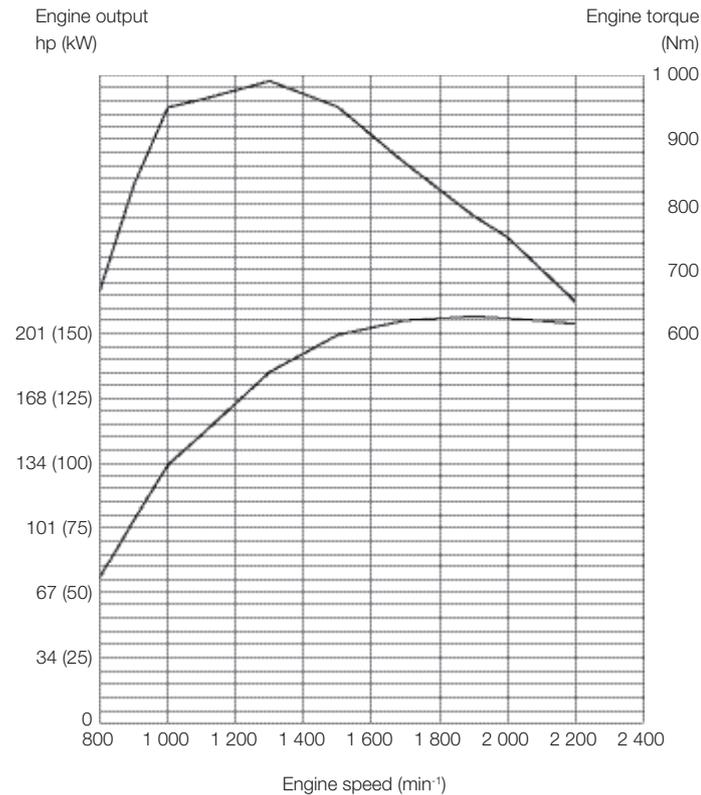
ZW220-7 SPECIFICATIONS

HITACHI

Reliable Solutions

LANDCROS

ENGINE	
Model	CUMMINS B6.7
Type	4 cycle water-cooled, direct injection
Aspiration	Turbocharger and intercooled
Aftertreatment	DPF+SCR system
No. of cylinders	6
Maximum power	
ECE R120, gross	157 kW (210 hp) at 1 900 min ⁻¹
ISO 9249 : 2007, net	152 kW (204 hp) at 1 900 min ⁻¹
Rated power	
ISO 14396 : 2002, gross	149 kW (200 hp) at 2 200 min ⁻¹
ISO 9249 : 2007, net	144 kW (193 hp) at 2 200 min ⁻¹
Maximum torque	
ISO 9249 : 2007 net	714 ft lbf (967 Nm) at 1 300 min ⁻¹ (rpm)
gross	731 ft lbf (990 Nm) at 1 300 min ⁻¹ (rpm)
Bore and stroke	4.2" x 4.9" (107 mm x 124 mm)
Piston displacement	410.1 cu.in (6.69 L)
Batteries	2 x 12 V
Air cleaner	Two element dry type with restriction indicator



POWER TRAIN	
Transmission	Torque convertershaft 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	3.9 / 4.1 mph (6.3 / 6.6 km/h) [3.9 / 4.1 mph (6.3 / 6.7 km/h)]
2nd	6.8 / 7.1 mph (10.9 / 11.4 km/h) [7.1 / 7.5 mph (11.4 / 12.0 km/h)]
3rd	9.9 / 15.4 mph (16.0 / 24.8 km/h) [10.7 / 16.7 mph (17.3 / 26.9 km/h)]
4th	14.7 mph (23.7 km/h) [16.0 mph (25.7 km/h)]
5th	22.5 mph (36.3 km/h) [22.5 mph (36.3 km/h)]

*With 23.5R25 (L3) tires
[] : Data at Power Mode

AXLE AND FINAL DRIVE	
Drive system	Four-wheel drive system
Front and rear axle	Semi-floating
Front	Fixed to the front frame
Rear	Trunnion support
Reduction and differential gear	Two stage reduction with torque proportioning differential
Oscillation angle	Total 24° (+12°, -12°)
Final drives	Heavy-duty planetary, mounted inboard

TIRES	
Tire size	23.5R25 (L3)
Optional	Refer to standard and optional equipment list

BRAKES	
Service brakes	Inboard mounted fully hydraulic 4 wheel wet disc brake. Front and 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 37°; total 74°
Cylinders	Double-acting piston type
No. x Bore x Stroke	2 x 2.8" x 17.4" (2 x 70 mm x 442 mm)

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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)	
Variable Displacement Axial Plunger Pump	
Maximum flow	72.6 gal (275 L) /min at 2 200 min ⁻¹ (rpm)
Maximum pressure	3 974 psi (27.4 MPa)
Fan pump	
Fixed Displacement Gear Pump	
Maximum flow	17.4 gal (65.6 L) /min at 2 200 min ⁻¹ (rpm)
Maximum pressure	2 756 psi (19.0 MPa)
Hydraulic cylinders	
Type	Double acting type
No. x Bore x Stroke	Arm: 2 x 5.1" x 34.6" (2 x 130 mm x 880 mm)
	Bucket: 1 x 6.5" x 20.1" (1 x 165 mm x 510 mm)
Filters	Full-flow 9 micron return filter in reservoir
Hydraulic cycle times	
Lift arm raise	5.6 s
Lift arm lower	3.3 s
Bucket dump	1.5 s
Total	10.4 s

*Data at Power Mode

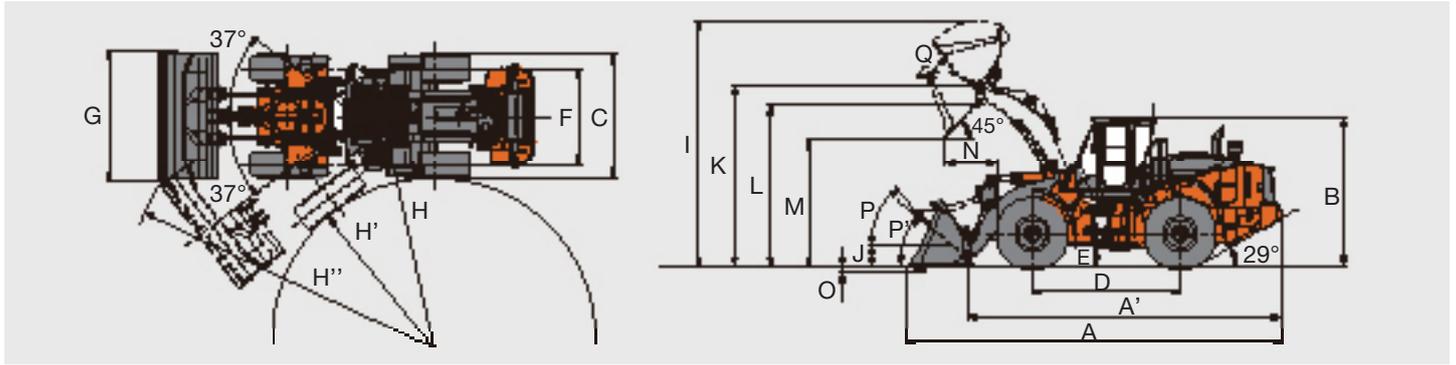
ENVIRONMENT	
Engine Emissions	
EPA Final Tier 4 / EU stage V	
Sound level	
Sound level in cab according to ISO 6396: 2008	LpA 68 dB(A)
External sound level according to ISO 6395: 2008 and EU Directive 2000/14/EC	LwA 105 dB(A)

SERVICE REFILL CAPACITIES	
Fuel tank	67.3 gal (255 L)
Engine coolant	7.7 gal (29 L)
Engine oil	6.6 gal (25 L)
Torque converter and transmission	7.1 gal (27 L)
Front axle differential and wheel hubs	8.4 gal (32 L)
Rear axle differential and wheel hubs	8.4 gal (32 L)
Hydraulic oil tank	30.1 gal (114 L)
DEF/AdBlue® tank	6.6 gal (25 L)

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DIMENSIONS AND SPECIFICATIONS



Bucket type		Standard arm			High-lift arm	
		General purpose	Material handling	Quick Coupler	General purpose	
		Bolt-on cutting edge	Bolt-on cutting edge	Bolt-on cutting edge	Bolt-on cutting edge	
Bucket capacity	ISO 7546: 1983 Heaped	yd ³ (m ³)	4.2 (3.2)	4.7 (3.6)	3.7 (2.8)	4.2 (3.2)
	ISO 7546: 1983 Struck	yd ³ (m ³)	3.5 (2.7)	4.1 (3.1)	3.0 (2.3)	3.5 (2.7)
A	Overall length	ft-in (mm)	27' 6" (8 395)	27' 8" (8 445)	28' 1" (8 575)	29' 2" (8 895)
A'	Overall length (without bucket)	ft-in (mm)	23' 3" (7 110)	23' 3" (7 110)	23' 3" (7 110)	24' 11" (7 610)
B	Overall height	up to cab top ft-in (mm)	11' 0" (3 370)			
C	Width over tires	outside tire ft-in (mm)	9' 3" (2 825)			
D	Wheel base	ft-in (mm)	10' 9" (3 300)			
E	Ground clearance	Minimum ft-in (mm)	1' 5" (450)			
F	Tread	ft-in (mm)	7' 1" (2 160)			
G	Bucket width	ft-in (mm)	9' 6" (2 910)	9' 6" (2 910)	9' 6" (2 910)	9' 6" (2 910)
H	Turning radius (centerline of outside tire)	ft-in (mm)	19' 8" (6 010)	19' 8" (6 010)	19' 8" (6 010)	19' 8" (6 010)
H'	Turning radius to inside of tires	ft-in (mm)	11' 6" (3 520)	11' 6" (3 520)	11' 6" (3 520)	11' 6" (3 520)
H''	Loader clearance radius, bucket in carry position	ft-in (mm)	22' 9" (6 955)	22' 10" (6 970)	22' 11" (7 005)	23' 5" (7 155)
I	Overall operating height	bucket full raise ft-in (mm)	17' 9" (5 435)	17' 10" (5 450)	18' 1" (5 520)	19' 2" (5 845)
J	Carry height of bucket pin	at carry position ft-in (mm)	1' 11" (590)	1' 11" (590)	1' 11" (590)	1' 11" (590)
K	Height to bucket hinge pin, fully raised	ft-in (mm)	13' 4" (4 085)	13' 4" (4 085)	13' 4" (4 085)	14' 8" (4 495)
L	Lift arm clearance at max lift	ft-in (mm)	12' 4" (3 780)	12' 4" (3 780)	12' 4" (3 780)	13' 8" (4 190)
M	Dumping clearance 45 degree, full height	ft-in (mm)	9' 5" (2 895)	9' 4" (2 855)	9' 0" (2 765)	10' 10" (3 305)
N	Reach, 45 degree dump, full height	ft-in (mm)	3' 8" (1 130)	3' 10" (1 170)	4' 1" (1 260)	4' 2" (1 290)
O	Digging depth (horizontal digging angle)	in (mm)	4.3 (110)	4.3 (110)	4.3 (110)	7.5 (190)
P	Max. roll back at carry position	deg	50			
P'	Max. roll back at ground level	deg	43			44
Q	Roll back angle at full height	deg	60			52

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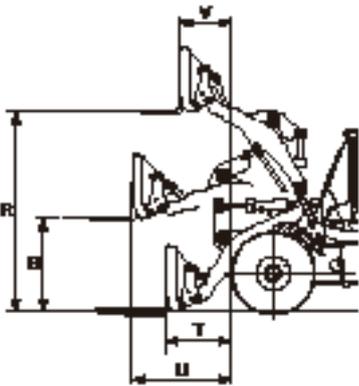
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Bucket type			Standard arm			High-lift arm
			General purpose	Material handling	Quick Coupler	General purpose
			Bolt-on cutting edge	Bolt-on cutting edge	Bolt-on cutting edge	Bolt-on cutting edge
Static tipping load ISO 14397-1: 2007 (Section 1-5) *	Straight	lb (kg)	33 797 (15 330)	33 532 (15 210)	30 578 (13 870)	26 984 (12 240)
	Full 40 degree turn	lb (kg)	29 938 (13 580)	29 696 (13 470)	26 962 (12 230)	23 788 (10 790)
Breakout force		kN	145	138	124	132
		lbf (kgf)	32 625 (14 760)	31 050 (14 060)	27 900 (12 680)	29 700 (13 460)
Operating weight * (With ROPS / FOPS Cab)		lb (kg)	40 013 (18 150)	40 190 (18 230)	41 094 (18 640)	40 344 (18 300)

Note:

: Static tipping load and operating weight marked with include 23.5R25 (L3) tires (No ballast) with lubricants, full fuel tank and operator.
Machine stability and operating weight depend on counterweight, tire size and other attachments.

WITH FORK ATTACHMENT



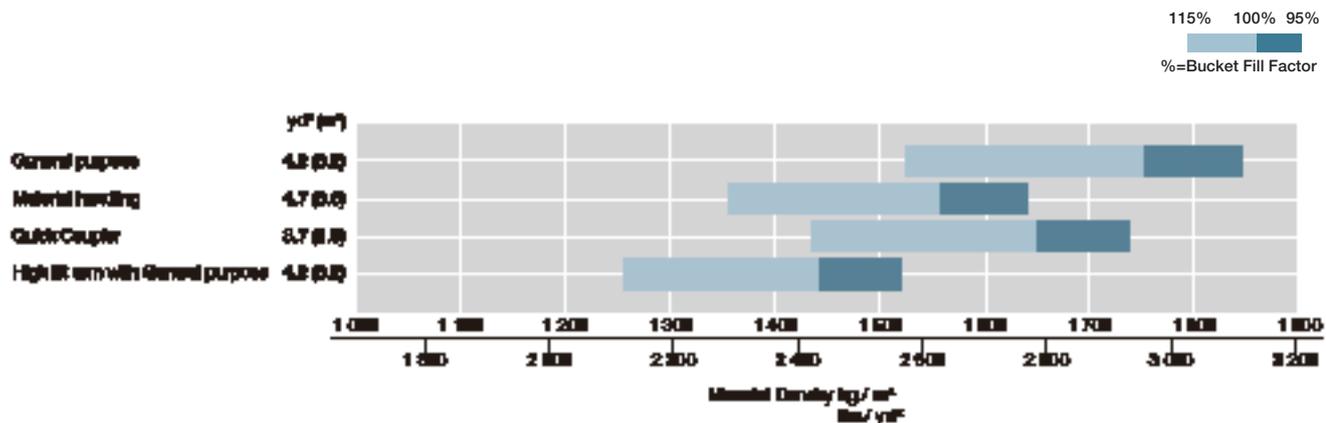
Attachment type			Fork
R	Max. stacking height	ft-in (mm)	12' 10" (3 915)
S	Height of fork at maximum reach	ft-in (mm)	6' 2" (1 885)
T	Reach at ground level	ft-in (mm)	10' 0" (3 055)
U	Max. reach	ft-in (mm)	12' 2" (3 710)
V	Reach at max. stacking height	ft-in (mm)	9' 4" (2 845)
Static tipping load	Straight	lbf (kgf)	19 091 (8 660)
	Full 40 degree turn	lbf (kgf)	16 777 (7 610)
Max. payload per EN 474-3, 80 %		lb (kg)	13 403 (6 080)
Max. payload per EN 474-3, 60 %		lb (kg)	10 052 (4 560)
Fork tine length		in (mm)	72" (1 830)
Operating weight *		lb (kg)	41 336 (18 750)

Note: *: Static tipping load and operating weight marked with* include 23.5R25 (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

Option item		Operating weight lb (kg)	Tipping load lb (kg)		Overall width in (mm) (outside tire)	Overall height in (mm)	Overall length in (mm)
			Straight	Full turn			
Tire	23.5R25(L3) VJT	±0	±0	±0	±0	±0	±0
Belly guard		+375 (+170)	+309 (+140)	+287 (+130)	-	-	-

BUCKET SELECTION GUIDE



EQUIPMENT

ZW220-7

● : Standard equipment ○ : Optional equipment

ENGINE	ZW220-7
Aftertreatment device	●
Aftertreatment manual regeneration inhibit switch	●
Aftertreatment manual regeneration switch	●
Air filter double elements	●
Air intake	
Pre-cleaner (sy-klone)	●
Air filter double elements	●
Anti-clogging radiator (wide fin pitch)	●
Automatic reversible cooling fan with heat sensing	●
Cartridge-type engine oil filter	●
Cartridge-type fuel main filter	●
Cartridge-type fuel pre-filter	●
Coolant reservoir sight gauge	●
DEF/AdBlue® tank extension filler	●
DEF/AdBlue® tank with ISO magnet adapter	●
Engine auto shut-down control system	●
Engine oil remote drain	●
Fan guard	●

BRAKE SYSTEM	ZW220-7
Front and rear independent brake circuit	●
Inboard mounted fully hydraulic 4 wheel wet disc	●
Spring-applied/Hydraulic-released parking brake	●

HYDRAULIC SYSTEM	ZW220-7
Bucket auto leveler (automatic return to dig control)	●
Electric control lever	
for 3 spools control valve	
MF lever and Proportional switch for 3rd function	●
2 levers and AUX lever for 3rd function - Inside layout pattern (3rd -bucket - liftarm)	○
for 4 spools control valve	
MF lever and 2 Proportional switches for 3rd and 4th function	○
2 levers and AUX lever for 3rd function and Proportional switch for 4th function - Inside layout pattern (4th - 3rd -bucket - liftarm)	○
Control lever lock switch	●
Dual lift arm auto leveler and kickout system	●
Hydraulic filters	●
Lift arm float system	●
Quick coupler piping and switch	●
Reservoir sight gauge	●
Ride control system (OFF-AUTO type)	●
Work mode selector	●

CAB	ZW220-7
Adjustable steering column with POP-UP	●
Auto control air conditioner	
Pre-cleaner for air conditioner	○
with double intake filter	○
with single intake filter	●
Bluetooth® integrated FM/AM+radio, hands-free calling	●
Camera and monitor	
AERIAL ANGLE (Side and rear view camera)	○
Rear view camera and monitor	●
Coat hook	●
Evacuation hammer	●
Front/rear defroster	●
Glove compartment	●
Inside cab LED light	●
Payload checker with tip-off function	●
Rear obstacle detection system	○
Rear view mirrors	
Inside (1)	●
Outside (2)	●
Outside (heated, 2) electrical adjustment retractable mirror stay	○
Retractable seat belt, 3.0 in (76 mm)	●
ROPS (ISO 3471:2008), FOPS (ISO 3449:2005 LEVEL II): multi-plane isolation mounted for noise, vibration reduction	●
Rubber floor mat	●
Seat	
Heavy duty air suspension seat equipped with horizontal suspension 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	●
Seat belt reminder	●
Steering system	
Joystick steering (with wheel steering)	○
Wheel steering	●
Storage	
Cup holder	●
Document holder	●
Hot and cool box	●
Seatback pocket	●
Smartphone and Tablet device holder	●
Sunscreen roller type	●
Textured steering wheel with spinner knob	●
Tinted safety glass	
Front windshield: laminated	●
Others: tempered	●
USB power supply	●
Windshield washer front and rear	●
Windshield wipers front and rear	●
2 speakers	●
8 inch sub monitor	●

EQUIPMENT

ZW220-7

● : Standard equipment ○ : Optional equipment

MONITORING SYSTEM	ZW220-7
Gauge: coolant temperature, fuel level, transmission oil temperature	●
Indicator lights: clearance lights, control lever lock, fuel level, high beam, parking brake, preheat, turn signals, work lights, fan reverse indicator, seat belt indicator	●
Indicator on multifunction monitor: F-N-R shift position, gear shift position, clock, DEF alarm indicator, DEF level gauge, ECO indicator, forward/reverse selector switch indicator, hold display, hour meter, joystick steering indicator (optional), odometer, battery volt, speedometer, tachometer, transmission auto-shifting indicator, 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	●
Indicator on sub monitor: payload checker, dual auto-leveler indicator rear obstacle detection and warning system (optional)	●
38 languages selection	●

ELECTRICAL SYSTEM	ZW220-7
Alternator (95 A)	●
Backup alarm	●
Battery disconnect switch	●
Large capacity batteries	●
Power outlet 12 V and 24 V	●

LIGHTS	ZW220-7
Clearance lights	●
LED brake & tail & backup lights	●
LED headlights	●
Rotating lamp	○
Turn signals with hazard switch	●
Work lights	●
4 front, 2 rear on cab and 2 rear LED working lights	●

POWER TRAIN	ZW220-7
Approach speed control	●
Automatic transmission with load sensing system	●
Clutch cut position switch	●
Differential	●
LSD (limited slip differential, front and rear)	●
Driving speed limiter (12.4 mph (20 km/h))	○
DSS (down shift switch)	●
Forward/reverse lever	●
Forward/reverse selector switch	●
Maximum gear limited switch	●
Power mode switch	●
Quick power switch	●
Travel mode selector (auto1-auto2)	●

TIRES	ZW220-7
23.5R25 (L3) VJT	●

MISCELLANEOUS	ZW220-7
Articulation lock bar	●
Belly guard (bolt on type) (front/rear)	○
Bucket cylinder guard	○
Cab top rail	●
Front rail on the cab top	●
Rear rail on the cab top	●
Cab window cleaning foot plate	●
Counterweight, built-in	●
Drawbar with locking pin	●
Engine block heater	●
Fenders	○
for 23.5R25 (front and full covered rear fenders with mud flaps)	○
Global e-Service	●
Lift and tie down hooks	●
Lift arm	●
Standard lift arm	●
High lift arm	○
On board information controller	●
Pilfer proof	●
Battery cover with locking bracket	●
Lockable engine cover	●
Lockable fuel refilling cap	●
Radiator dust protection screen	○
Secondary steering	●
ISO 5010 : 2019 compliant	●
Standard tool kit	●
Tool box	●

QUICK LINKS	ZW220-7
Website's Product Page	