

ZW-7 series

HITACHI

Reliable Solutions

ZW120-7

LANDCROS



WHEEL LOADER

Model code : ZW120-7

Engine maximum power : 100 HP (74 kW)

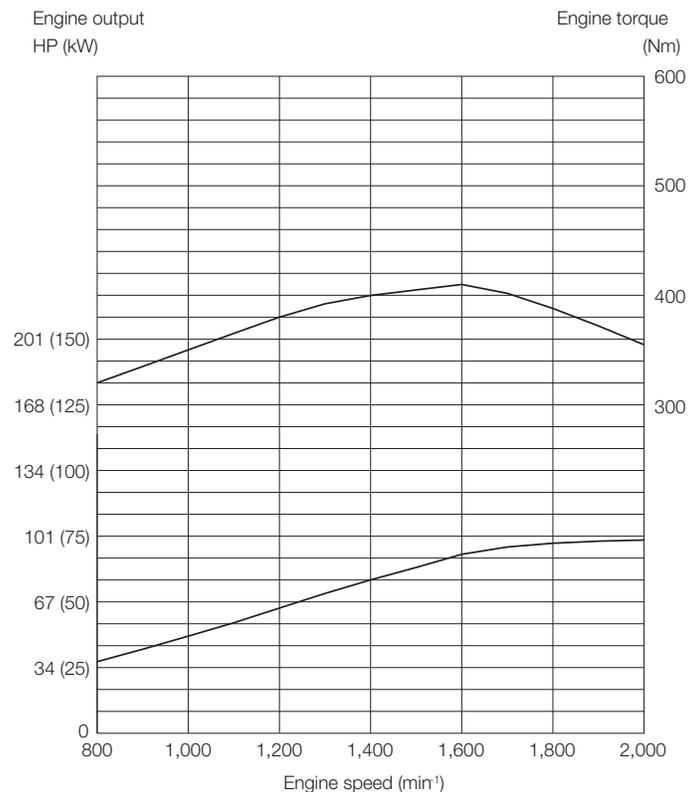
Operating weight : 19,100 - 20,340 lb (8,660 – 9,220 kg)

Bucket capacity : 1.8 - 2.4 yd³ (1.4 - 1.8 m³)

SPECIFICATIONS

ZW120-7

ENGINE	
Model	DEUTZ TCD3.6
Type	4 cycle water-cooled, direct injection
Aspiration	Turbocharger and intercooled
Aftertreatment	DOC/DPF+SCR system
No. of cylinders	4
Maximum power	
ECE R120 gross	100 HP (74 kW) at 2,000 min ⁻¹
ISO 9249 : 2007 net	97 HP (73 kW) at 2,000 min ⁻¹
Rated power	
ISO 14396 : 2002 gross	100 HP (74 kW) at 2,000 min ⁻¹
ISO 9249 : 2007 net	97 HP (73 kW) at 2,000 min ⁻¹
Maximum torque	
ISO 9249 : 2007 net	296 lbf ft (401 Nm) at 1,600 min ⁻¹
Bore and stroke	3.9" x 4.7" (98 mm X 120 mm)
Piston displacement	221.0 in ³ (3.621 L)
Batteries	2 x 12 V
Air cleaner	Two element dry type with restriction indicator



POWER TRAIN		
Transmission	Electronically controlled 1 motor hydrostatic transmission with gear box, 2-speed (High and Low), powershift countershaft type	
Cooling method	Forced circulation type	
Travel speed* Forward / Reverse		
Operating Mode	Standard Mode	Power Mode
Low speed (L) mph (km/h)	7.1 (11.5) / 7.1 (11.5)	7.1 (11.5) / 7.1 (11.5)
High speed (H) mph (km/h)	21.4 (34.5) / 21.4 (34.5)	21.4 (34.5) / 21.4 (34.5)

*With 17.5-25-12 (L2) tires

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 proportional differential
Oscillation angle	Total 20° (+10°, -10°)
Final drives	Heavy-duty planetary, mounted inboard

TIRES	
Tire size	17.5-25-12PR (L2)

BRAKES	
Service brakes	Inboard mounted fully hydraulic 4-wheel wet disc brakes. Front and rear independent brake circuit, HST (Hydro Static Transmission) system provides additional hydraulic braking capacity
Parking brakes	Spring-applied, hydraulically-released, transmission output shaft mounted multi wet disc

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 2.4" x 15.6" (2 x 60 mm x 395 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)	
Fixed Displacement Gear Pump	
Maximum flow	32 gal (121 L) / min at 2,000 min ⁻¹
Maximum pressure	2,990 psi (20.6 MPa)
Main pump (Serve as brake pump)	
Fixed Displacement Gear Pump	
Maximum flow	5.8 gal (22 L) / min at 2,000 min ⁻¹
Maximum pressure	247 psi (1.7 MPa)
Fan pump	
Fixed Displacement Gear Pump	
Maximum flow	9.5 gal (36 L) / min at 2,000 min ⁻¹
Maximum pressure	1,460 psi (10.1 MPa)
HST charging pump	
Maximum flow	10 gal (38 L) / min at 2,000 min ⁻¹
Maximum pressure	360 psi (2.5 MPa)
Hydraulic cylinders	
Type	Double acting type
No. x Bore x Stroke	Arm: 2 x 4.1" x 28" (2 x 105 mm x 710 mm)
	Bucket: 1 x 4.9" x 17.5" (1 x 125 mm x 445 mm)
Filters	Full-flow 10 micron return filter in reservoir
Hydraulic cycle times	
Lift arm raise	6.5 s
Lift arm lower	2.6 s
Bucket dump	1.6 s
Total	10.7 s

*Data at Power Mode

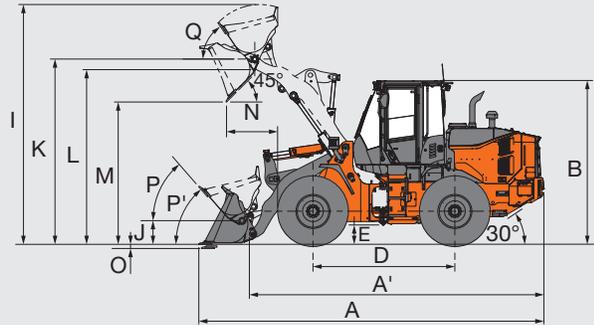
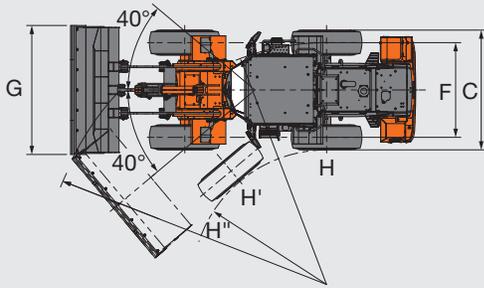
ENVIRONMENT	
Engine Emissions	
EPA Final Tier 4 / EU stage V	
Sound level	
Sound level in cab according to ISO 6396: 2008	LpA 70 dB(A)
External sound level according to ISO 6395: 2008 and EU Directive 2000/14/EC	LwA 102 dB(A)

SERVICE REFILL CAPACITIES	
Fuel tank	37.0 gal (140 L)
Engine coolant	4.5 gal (17 L)
Engine oil (Including oil pan)	2.9 gal (11 L)
Front axle	3.7 gal (14 L)
Rear axle	3.7 gal (14 L)
Hydraulic oil tank	23.2 gal (88 L)
DEF/AdBlue® tank	6.2 gal (24 L)

SPECIFICATIONS

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DIMENSIONS AND SPECIFICATIONS



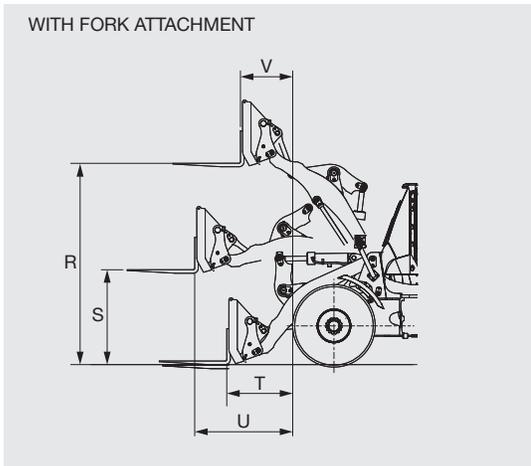
Bucket type			Standard arm		Standard arm with Quick coupler	
			General purpose		General purpose	
			Bolt-on cutting edge		Bolt-on cutting edge	
Bucket capacity	ISO 7546: 1983 Heaped	yd ³ (m ³)	2.0 (1.5)	1.8 (1.4)	2.4 (1.8)	2.0 (1.5)
	ISO 7546: 1983 Struck	yd ³ (m ³)	1.7 (1.3)	1.5 (1.2)	2.1 (1.6)	1.7 (1.3)
A	Overall length	ft-in (mm)	21' 8" (6,605)	22' 5" (6,830)	22' 1" (6,710)	23' 7" (7,190)
A'	Overall length (without bucket)	ft-in (mm)	18' 5" (5,600)	18' 5" (5,600)	18' 5" (5,600)	20' 4" (6,200)
B	Overall height	up to cab top ft-in (mm)	10' 5" (3,150)	10' 5" (3,150)	10' 5" (3,150)	10' 5" (3,150)
C	Width over tires	outside tire ft-in (mm)	7' 5" (2,270)	7' 5" (2,270)	7' 5" (2,270)	7' 5" (2,270)
D	Wheel base	ft-in (mm)	8' 11" (2,725)	8' 11" (2,725)	8' 11" (2,725)	8' 11" (2,725)
E	Ground clearance	Minimum ft-in (mm)	1' 2" (370)	1' 2" (370)	1' 2" (370)	1' 2" (370)
F	Tread	ft-in (mm)	6' (1,820)	6' (1,820)	6' (1,820)	6' (1,820)
G	Bucket width	ft-in (mm)	8' (2,450)	8' (2,450)	8' (2,450)	8' (2,450)
H	Turning radius (centerline of outside tire)	ft-in (mm)	15' 4" (4,660)	15' 4" (4,660)	15' 4" (4,660)	15' 4" (4,660)
H'	Turning radius to inside of tires	ft-in (mm)	8' 7" (2,620)	8' 7" (2,620)	8' 7" (2,620)	8' 7" (2,620)
H''	Loader clearance radius, bucket in carry position	ft-in (mm)	17' 10" (5,430)	18' 1" (5,490)	17' 11" (5,460)	18' 5" (5,620)
I	Overall operating height	bucket full raise ft-in (mm)	15' 3" (4,650)	16' 8" (5,075)	15' 7" (4,760)	16' 5" (4,990)
J	Carry height of bucket pin	at carry position ft-in (mm)	1' 6" (450)	1' 6" (450)	1' 6" (450)	1' 6" (450)
K	Height to bucket hinge pin, fully raised	ft-in (mm)	11' 8" (3,560)	11' 8" (3,560)	11' 8" (3,560)	12' 9" (3,900)
L	Lift arm clearance at max lift	ft-in (mm)	11' 0" (3,360)	11' 1" (3,385)	11' 0" (3,360)	12' 1" (3,700)
M	Dumping clearance 45 degree, full height	ft-in (mm)	8' 10" (2,705)	8' 4" (2,545)	8' 8" (2,630)	10' (3,040)
N	Reach, 45 degree dump, full height	ft-in (mm)	3' 4" (1,010)	3' 11" (1,210)	3' 7" (1,080)	3' 11" (1,090)
O	Digging depth (horizontal digging angle)	ft-in (mm)	2.7" (65)	1.8" (45)	2.7" (65)	8.5" (215)
P	Max. roll back at carry position	deg	49	49	49	50
P'	Max. roll back at ground level	deg	40	39	40	44
Q	Roll back angle at full height	deg	56	56	56	52

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Bucket type		lb (kg)	Standard arm	Standard arm with Quick coupler	Standard arm	High-lift arm
			General purpose	General purpose	Material handling	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		14,580 (6,610)	12,690 (5,750)	14,430 (6,540)	13,140 (5,960)
	Full turn		12,780 (5,790)	11,010 (4,990)	12,620 (5,720)	11,380 (5,160)
Breakout force		kN	75.0	54.8	67.0	74.0
		lbf (kgf)	16,840 (7,650)	12,300 (5,590)	15,062 (6,830)	16,636 (7,550)
Operating weight * (With ROPS / FOPS Cab)		lb (kg)	19,100 (8,660)	19,850 (9,000)	19,250 (8,730)	20,340 (9,220)

Note*: Static tipping load and operating weight marked with* include 17.5-25-12 (L2) tires (No ballast) with lubricants, full fuel tank and operator.
Machine stability and operating weight depend on counterweight, tire size and other attachments.



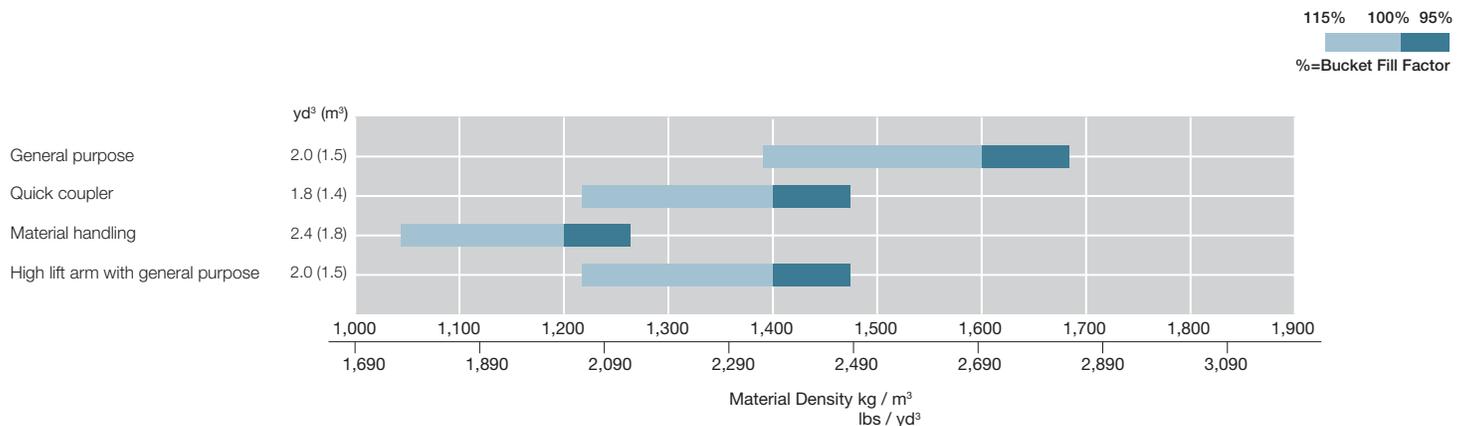
Attachment type		Fork	
R	Max. stacking height	ft-in (mm)	11' 5" (3,480)
S	Height of fork at maximum reach	ft-in (mm)	5' 10" (1,780)
T	Reach at ground level	ft-in (mm)	3' 4" (1,020)
U	Max. reach	ft-in (mm)	5' 8" (1,720)
V	Reach at max. stacking height	ft-in (mm)	3' 4" (1,030)
Static tipping load ISO 14397-1:2007 (Section 1-5) *	Straight	lb (kg)	8,410 (3,810)
	Full turn	lb (kg)	7,250 (3,290)
Max. payload per EN 474-3, 80 %		lb (kg)	5,800 (2,630)
Max. payload per EN 474-3, 60 %		lb (kg)	4,350 (1,970)
Fork tine length		in (mm)	48' (1,220)
Operating weight *		lb (kg)	19,670 (8,920)

Note*: Static tipping load and operating weight marked with* include 17.5-25-12 (L2) 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			
Belly guard (bolt on type) (front/rear)	+150 (+70)	+170 (+80)	+110 (+50)	±0	±0	±0

BUCKET SELECTION GUIDE



EQUIPMENT

ZW120-7

● : Standard equipment ○ : Optional equipment

ENGINE	ZW120-7
Aftertreatment device	●
Aftertreatment manual regeneration switch	●
Cold start automatic warm-up	●
Air filter double elements	●
Pre-cleaner (sy-klone type)	●
Anti-clogging radiator (wide fin pitch)	●
Automatic reversible cooling fan with temperature sensing	●
Spin-on type engine oil filter	●
Spin-on type fuel main filter	●
Spin-on type fuel pre-filter (with water separator function)	●
Radiator coolant level sight gauge	●
DEF/AdBlue® tank with refilling interface magnet	●
Adjustable engine idle auto shut-down system	●
Engine oil remote drain	●
Fan guard	●

BRAKE SYSTEM	ZW120-7
Front and rear independent brake circuits	●
Inboard mounted fully hydraulic 4 wheel wet disc	●
Spring-applied/Hydraulic-released parking brake	●
Dual brake pedals	●

HYDRAULIC SYSTEM	ZW120-7
Pilot actuated multi-function (MF) control lever	●
Control lever lock switch	●
Lift arm adjustable dual level kickout settings	●
Bucket auto leveler (automatic return to dig control)	●
MF lever + 1 lever for 3rd function	●
Hydraulic filters	●
Lift arm float control detent	●
Quick coupler piping with switch control	●
Tank oil level sight gauge	●
Speed adjustable ride control system (OFF-AUTO type)	●
Direct acting hydraulic power steering system	●

CAB	ZW120-7
Adjustable steering column with POP-UP	●
Air conditioner/heater with auto climate control	●
Fresh and recirculation cab air filters	●
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	●
LED room light	●
Rear obstacle detection system (Automatic speed reduction)	○*
Rear view mirrors	
Inside (1)	●
Outside manually adjusted (2)	●
Outside remotely adjusted and heated (2)	○*
ROPS (ISO 3471 : 2008), FOPS (ISO 3449 : 2008 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 indicator	●
Retractable seat belt, 3.0 in (76 mm)	●
Steering wheel sure-grip with steering knob and horn button	●
Storage	
Cup holder	●
Document holder	●
Hot and cool box	●
Seatback pocket	●
Smartphone and Tablet device holder	●
Fire extinguisher mounting bracket	●
Retractable windshield sunscreen	●
Tinted safety glass	
Front windshield: laminated	●
Others: tempered	●
USB power supply	●
Windshield washer front and rear	●
Windshield wipers front and rear	●
Speakers (2)	●
8 inch sub monitor	●

EQUIPMENT

ZW120-7

● : Standard equipment ○ : Optional equipment

MONITORING SYSTEM	ZW120-7
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, hour meter, odometer, battery volt, speedometer, tachometer, Warning lights: air filter restriction, brake oil low level 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 : rear obstacle detection and warning system (optional)	●
35 languages selection	●

ELECTRICAL SYSTEM	ZW120-7
Alternator (24V-100 A)	●
Backup alarm	●
Battery disconnect switch with removable lever	●
Large capacity batteries (2 x 12V-710 CCA)	●
Power outlets 12 V and 24 V	●

LIGHTS	ZW120-7
LED headlights (low and high beam)	●
LED front combination clearance, turn signal and hazard lights	●
LED rear combination tail, brake, reverse, turn signal and hazard lights	●
Rotating warning beacon	○
LED working lights (4 front and 2 rear cab, 2 rear grille)	●
Headlight guards	○
Tail light guards	○

POWER TRAIN	ZW120-7
Approach speed control mode switch	●
Machine deceleration mode switch	●
TPD (Torque Proportioning Differential, front and rear)	●
Lever temporary power mode switch	●
Forward/reverse column lever and MF lever switch	●
Standard/Power mode switch	●
Traction control mode switch	●
Low (Lo) speed maximum speed limiter dial	●

TIRES	ZW120-7
17.5-25-12PR (L2) Bridgestone FG	●

MISCELLANEOUS	ZW120-7
Articulation lock bar	●
Belly guard (bolt-on front and rear)	○
Bucket cylinder guard	○
Cab front and rear top rails	●
Snow windshield wipers (front and rear)	○
Cab windshield guard (refuse)	○
Counterweight, (bolt-on)	●
Drawbar with locking pin	●
Fenders	
Full front with mud flap and half rear coverage	●
Full front with mud flap and full rear coverage	○*
Global e-Service (telematics service)	●
Lift/tie down lugs (front and rear chassis)	●
Lift arm	
High lift arm	○
Standard lift arm	●
On board and remote systems monitoring	●
Anti-vandalism	
Lockable cab door	●
Lockable engine compartment doors	●
Lockable fuel refilling cap	●
Lockable battery box and disconnect switch	●
Lockable DEF tank & tool storage compartment	●
Radiator dust protection screen	○
Emergency secondary steering (ISO 5010:2019 compliant)	○*1
Tool storage compartment	●
Servicing tool	●

QUICK LINKS	ZW120-7
Website's Product Page	

* Included in Premium Package offering
*1 Standard where regulation mandated