ZW-6 series

HITACHI

Reliable solutions

ZW140 Tier 4 Final Certified	**145 hp** 108 kW Engine Output, Max, Gross (ISO 14396)	**142 hp** 106 kW Engine Output, Max, Net (ISO 9249)	**2.8 yd³** 2.1 m³ Bucket capacity	**25,661 lbs** 11,640 kg Operating weight
ZW150 Tier 4 Final Certified	**145 hp** 108 kW Engine Output, Max, Gross (ISO 14396)	**142 hp** 106 kW Engine Output, Max, Net (ISO 9249)	**3.1 yd³** 2.4 m³ Bucket capacity	**27,029 lbs** 12,260 kg Operating weight
ZW150PL Tier 4 Final Certified	**145 hp** 108 kW Engine Output, Max, Gross (ISO 14396)	**142 hp** 106 kW Engine Output, Max, Net (ISO 9249)	**2.8 yd³** 2.1 m³ Bucket capacity	**27,010 lbs** 12,830 kg Operating weight

Machine representative of global product. Options may not be available in all markets.

SPECIFICATIONS

ZW140-6/ZW150-6/ZW150PL-6

EPA Tier 4 Final/EU Stage IV Certified

ENGINE

Gross power (ISO 14396)	145 HP/2,000 RPM (108 kW/2,000 RPM)
Net power (ISO 9249)	142 HP/2,000 RPM (106 kW/2,000 RPM)
Make/Model	Cummins QSB4.5 diesel engine
Type	4-cycle, water-cooled, direct injection with turbocharger and air cooled intercooler
Fuel type	#2 Diesel (Requires ultra-low sulfur fuel.)
Fuel injection pump	Electronically controlled, common rail type
Governor	All speed electrical type
Cooling module type	Forced circulation type
Number of cylinders	4
Bore and stroke	4.2" x 4.9" (107mm x 124mm)
Total displacement	272 in³ (4.5 liters)
Alternator	DC 24V–65A (2.64 kW)
Air cleaner	Dry type (double element) with restriction indicator
Starter motor	DC 24V–6.1 HP (4.5 kW)
Battery	(2) 12V–930 CCA (140 Ah)

TORQUE CONVERTER AND TRANSMISSION

Transmission: Electrical-controlled 2 motor hydrostatic transmission with summation gear box, Gear box: Fixed gear ratio, powershift countershaft type

		Normal Mode	Power Mode
Speeds: Forward	1st:	4.3 MPH (7.0 km/hr)	4.3 MPH (7.0 km/hr)
	2nd:	7.2 MPH (11.5 km/hr)	7.8 MPH (12.5 km/hr)
	3rd:	12.4 MPH (20.0 km/hr)	12.4 MPH (20.0 km/hr)
	4th:	24.2 MPH (39.0 km/hr)	24.2 MPH (39.0 km/hr)
Speeds: Reverse	1st:	4.3 MPH (7.0 km/hr)	4.3 MPH (7.0 km/hr)
	2nd:	7.2 MPH (11.5 km/hr)	7.8 MPH (12.5 km/hr)
	3rd:	12.4 MPH (20.0 km/hr)	12.4 MPH (20.0 km/hr)
	4th:	24.2 MPH (39.0 km/hr)	24.2 MPH (39.0 km/hr)

SYSTEMS REFILL CAPACITY

LOCATION	GALLONS	LITERS
Fuel tank (diesel fuel)	53	200
Engine lubricant (including oil pan)	4.2	16
Engine coolant	5.3	20
T/M	2.6	10
Axle (front/rear)	6.6/6.6	25/25
Hydraulic oil tank	25.4	96
Hydraulic system (including hydraulic tank)	39.6	150
DEF/AdBlue® tank	3.2	12

HYDRAULIC AND STEERING SYSTEM

Steering type		Articulated frame steering
Steering mechanism		Hydraulic power steering unit, double-acting piston type
ZW140-6 and ZW150-6	Lift (boom) cylinder	Two (2) double-acting piston type: 4.9" x 29.9" (125mm x 760mm)
	Tilt (bucket) cylinder	One (1) double-acting piston type: 5.9" x 19.3" (150mm x 490mm)
ZW150PL-6	Lift (boom) cylinder	Two (2) double-acting piston type: 4.9" x 29.9" (125mm x 760mm)
	Tilt (bucket) cylinder	Two (2) double-acting piston type: 4.3" x 39.6" (110mm x 1005mm)
Steering cylinder		Two (2) double-acting piston type: 2.6" x 16.5" (65mm x 419mm)
Main oil pump		51.2 GPM/2,988 PSI @ 2,200 RPM (194 LPM/20.6 MPa @ 2,200 RPM)
HST charging pump		14.2 GPM/355 PSI @ 2,200 RPM (53.9 LPM/2.45 MPa @ 2,200 RPM)
Relief valve set pressure	Control	2,988 PSI, 20.6 MPa (210 kgf/cm²)
	Priority	2,843 PSI, 19.6 MPa (200 kgf/cm²)

HYDRAULIC CYCLE TIME* front end loading, Z bar linkage system

	ZW140-6, ZW150-6	ZW150P-6L
Lifting time (at full load)	6.0 sec.	6.0 sec.
Lowering time (empty)	4.5 sec.	3.4 sec.
Bucket dumping time	1.4 sec.	3.4 sec.
TOTAL	11.9 sec.	12.8 sec.

* Measured in accordance with SAE J732C

AXLE SYSTEM

Drive system	4-wheel drive
Front and rear axle	Semi-floating type
Tires	20.5 R25 (L-3)
Reduction and differential gear	Two-stage reduction with limited slip differential
Final reduction gear	Inboard mounted, heavy duty planetary gear
Oscillation angle	Total 20 (+10, –10)°

BRAKE SYSTEM

Service brakes	Inboard mounted fully hydraulic 4-wheel disc brake. Front and rear independent brake circuit.
Parking/Emergency brake	Transmission mounted, spring-applied, hydraulically-released multi wet disc

Remarks

- Materials and specifications are subject to change without notice and without any obligation on the part of the manufacturer.
- This information, while believed to be completely reliable, is not to be taken as warranty for which we assume legal responsibility.
- Dumping clearance and reach are measured from bucket edge in accordance with SAE J732C.
- Counterweight should not be used with tire ballast.
- This specification sheet may contain attachments and optional equipment not available in your area.

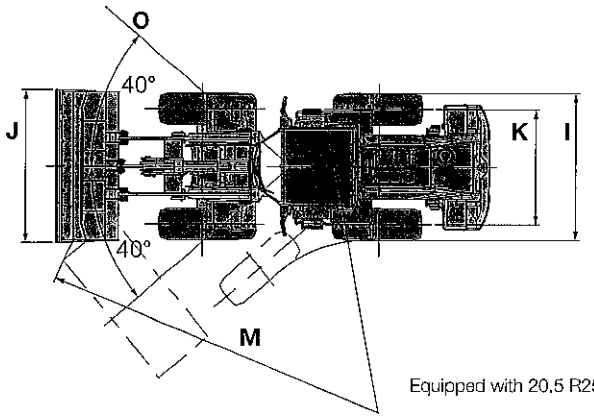
Please contact your local HCMA dealer for additional information.

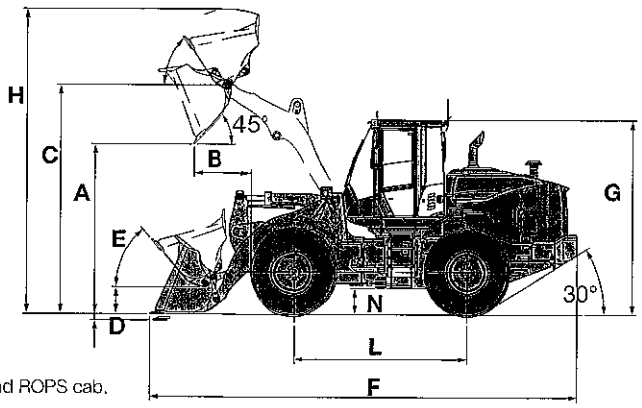
BUCKET DATA

			Standard Arm		High Lift Arm
			General Purpose	Material Handling	Material Handling
			Straight Edge w/ Bolt-on Cutting Edge	Straight Edge w/ Bolt-on Cutting Edge	Straight Edge w/ Bolt-on Cutting Edge
Capacity	Heaped	yd^3 (m^3)	2.8 (2.1)	3.1 (2.4)	2.8 (2.1)
	Struck	yd^3 (m^3)	2.4 (1.8)	2.6 (2.0)	2.4 (1.8)
A Maximum dumping clearance		ft-in (mm)	9'6" (2,885)	9'4" (2,845)	10'8" (3,245)
B Dumping reach (to front of bucket edge or tooth)		ft-in (mm)	3'3" (990)	3'5" (1,030)	3'11" (1,185)
C Max. hinge pin height		ft-in (mm)	12'7" (3,840)	12'7" (3,840)	13'9" (4,200)
D Digging depth (with bucket level)		in (mm)	4" (95)	4" (95)	11" (280)
Breakout force		lbf (kN)	23,850 (106)	22,481 (100)	23,155 (103)
Bucket tilt-back angle	at ground level	degree	43°	43°	44°
	E at carry position	degree	50°	50°	50°
Overall	**F** Length	ft-in (mm)	23'11" (7,290)	24'1" (7,345)	25'6" (7,780)
	G Height (up to cab top)	ft-in (mm)	10'9" (3,265)	10'9" (3,265)	10'9" (3,265)
	H Height (bucket fully raised)	ft-in (mm)	16'6" (5,040)	17' (5,190)	17'9" (5,400)
	I Width (outside tire)	ft-in (mm)	8'2" (2,490)	8'2" (2,490)	8'2" (2,490)
	J Width (outside bucket)	ft-in (mm)	8'5" (2,560)	8'5" (2,560)	8'5" (2,560)
K Tread		ft-in (mm)	6'4" (1,930)	6'4" (1,930)	6'4" (1,930)
L Wheel base		ft-in (mm)	9'11" (3,000)	9'11" (3,000)	9'11" (3,000)
Clearance Circle (bucket carry position)	**M** at outside of bucket	ft-in (mm)	19'6" (5,935)	19'6" (5,950)	20'2" (6,140)
	at outside of tire	ft-in (mm)	17'7" (5,355)	17'7" (5,355)	17'7" (5,355)
N Minimum ground clearance		in (mm)	17" (435)	17" (435)	17" (435)
O Full articulation angle		degree	40°	40°	40°
Operating weight (with ROPS cab)*		lb (kg)	25,661 (11,640)	25,816 (11,710)	26,169 (11,870)
Static tipping load (with ROPS cab)*	Straight	lb (kg)	20,261 (9,190)	20,150 (9,140)	16,028 (7,270)
	Full turn	lb (kg)	17,570 (7,970)	17,461 (7,920)	13,823 (6,270)

Note: All dimensions,weight and performance data based on ISO 6746-1:1987,ISO 7137:2009 and ISO 7546:1983
* Static tipping load and operating weight marked with* include 20.5R25 (L3) tires (No ballast) with lubricants, full fuel tank and operator. Machine stability and operating weight depend on counterweight, tire size and other attachments.

DIMENSIONS





Equipped with 20.5 R25 (L-3) tire and ROPS cab.

STANDARD EQUIPMENT

ENGINE

- Air cleaner, double element
- Auto idle shut down
- Cold start (air intake heater)
- Cooling fan, automatic reversible
- Cummins QSB4.5
- EGR system
- Fuel filter (main), w/water separator
- Fuel pre-filter, w/water separator
- Pre-cleaner (SyKlone)
- SCR system and DOC
- VGT (Variable Geometry Turbocharger)
- Work mode selector

POWERTRAIN

- Brakes, service
  - Enclosed wet disc
  - Dual circuit
  - Inboard mounted
- Brake, parking
  - Spring applied
  - Oil pressure released
  - Wet disc type
- Coolers, wide fin
- Differential, limited slip (F/R)
- Drive shafts, low maintenance
- F-R direction selector (2-column mounted/HYD-control lever mounted)
- Hydrostatic transmission
- Inching pedal
- Maximum speed adjuster for 1st speed
- Traction control
- Universal joints, sealed

HYDRAULIC SYSTEM

- Boom kick-out, dual (operator adjustable in cab)
- Bucket positioner
- Control lever, single, pilot-assisted w/1 aux lever for 3rd spool control
- Control lever lock (electric)
- Control valve, 3-function, parallel and tandem control
- Pump, gear, fixed displacement
- Quick coupler control lines and controls
- Ride control w/Load sensing valve and automatic shut-off
- Steering, orbitrol

ELECTRICAL

- 24-volt electrical system
- Back-up alarm
- Batteries (2), 12V, 930 CCA
- Battery disconnect switch
- Converter, 12V/15 Amp
- Horn, dual electric
- Instrument panel, LCD, color
- Lights:
  - 2 Headlights (halogen)
  - 4 Forward working lights (LED)
  - 4 Rear working lights (LED)
  - 2 Stop/tail/backup (LED)
- Turn signal w/4-way flashers/marker

CAB

- ROPS cab: Enclosed cab with sound suppression, front & rear wipers and washers, two rear view and side mirrors, tinted glass, full view latch-back doors, sliding side windows.
- Accessory outlet, 12V,
- Adjustable armrest/console
- Air conditioner/heater/pressurizer
- AM/FM/WB radio with AUX input and Bluetooth
- Ashtray
- Cab dome lamps (2)
- Cigarette lighter
- Coat hook
- Cooler box storage area
- Cup holder (2)
- Floormat
- Retractable seat belt (3 inch)
- ROPS/FOPS certified, ISO 3449 Level II compliance
- Seat, premium, heated w/TLV suspension
- Steering column, telescoping and tilting w/quick-release pedal
- Storage box (heated/cooled)
- Sun visor

OTHERS

- Articulation locking bar
- Counterweight
- Drawbar
- Fire extinguisher, 5 lb., 2a:10b:c ratd (w/mounting) (US market only)
- Global e-Service, telematic monitoring system
- Ladders, inclined
- Lifting eyes
- Linkage pins, HN bushing
- Neutral safety start
- Rear grill, steel
- Steps, rear
- Vandalism protection
- Z-bar loader linkage

ALARMS, GAUGES, INDICATORS

Alarms (visual & audible)	Air cleaner element
	Aftertreatment device
	Brake oil low pressure
	Engine oil low pressure
	Emergency steering alarm
	Engine trouble
	Engine warning
	Fuel filter (water in fuel)
	Hydraulic oil level
	Hydraulic oil temperature
	Overheat (engine coolant)
	Steering oil low pressure
Gauges	DEF/AdBlue® Level
	Engine coolant temperature
	Fuel gauge
	Speedometer
Indicators	Air conditioner display
	Cold start
	Control lever lock
	Eco-operating status
	Engine warning
	Fan reverse rotation
	F-N-R selection
	F-N-R switch enable
	Fuel filter (plugged filter)
	Fuel filter (water in fuel)
	High beam
	HST oil temperature
	HST warning
	Low fuel level
	Maintenance
	Operating mode (Normal, Power)
	Parking brake
	Ride control
	Time/operating hour/ODO
	Traction control switch
	Turn signal w/4-way flashers/marker
	Work light

OPTIONAL EQUIPMENT

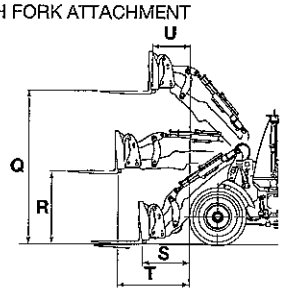
- Belly guard,front chassis, transmission (rear)
- Bolt-on cutting edges
- Camera, rear view
- Cooling cores, standard spacing (high ambient)
- Dual lever hydraulic control
- Emergency steering system
- Front and full covered rear fenders with mud flaps (20.5 Tire)
- Front and half covered rear fenders with mud flaps (20.5 Tire)
- High lift arm
- Mirror, heated rear view (outside)
- Mount bracket, wiring harness and switch for rotating lamp (without beacon) (Canada Only)
- Quick coupler & attachments

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

SPECIFICATIONS

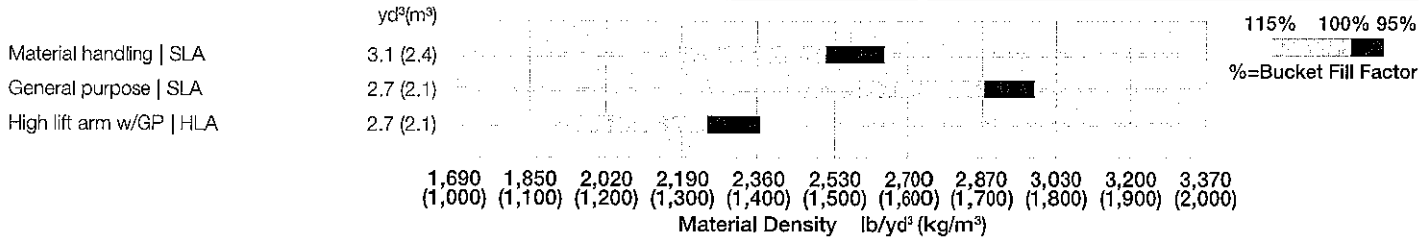
ZW140-6 FORK SPECIFICATIONS

WITH FORK ATTACHMENT



ZW140-6			ISO (48")	416 (48")	ISO (60")	416 (60")
Q Max. stacking height		ft	12'	12'1"	12'	12'1"
R Height of fork at maximum reach		ft	5'7"	5'10"	5'7"	5'10"
S Reach at ground level		ft	3'11"	3'8"	3'11"	3'8"
T Max. reach		ft	5'7"	5'6"	5'7"	5'6"
U Reach at max. stacking height		ft	3'1"	3'	3'1"	3'
Tipping load	Straight	lb	12,316	12,173	11,632	11,501
	Full turn	lb	10,668	10,544	10,076	9,962
Max. payload per EN 474-3, 80%		lb	8,535	8,436	8,061	7,970
Max. payload per EN 474-3, 60%		lb	6,401	6,327	6,046	5,977
SAE allowable load		lb	5,334	5,272	5,038	4,981
Operating weight *		lb	25,846	25,832	25,948	25,935

ZW140-6 BUCKET SELECTION CHART



ZW140-6 WEIGHTS AND DIMENSIONS

		Operating Weight	Tipping Load			Overall Width (Outside Tire)	Overall Height	Overall Length
			Straight		Full Turn			
Belly guard	lb (kg)	+150 (70)	+70 (30)	+110 (50)	+90 (40)	in (mm)		
Tires: 20.5-25-12PR (L2)	lb (kg)	-400 (-180)	-260 (-120)		-240 (-110)	in (mm)	-3.3 (-85)	-2.4 (-60)	+2.0 (+50)
Tires: 20.5-25-12PR (L3)	lb (kg)	-400 (-180)	-260 (-120)		-240 (-110)	in (mm)	+0.6 (+15)	+1.2 (+30)	-1.0 (-25)
Emergency steering (Secondary steering)	lb (kg)	+80 (+35)	+0 (+0)		+0 (+0)	in (mm)			
Full covered rear fender	lb (kg)	+70 (+30)	+0 (+0)		+0 (+0)	in (mm)			
Bracket for rotating beacon	lb (kg)	+20 (+10)	+0 (+0)		+0 (+0)	in (mm)			

Specs highlighted in orange denote Canada only. 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 include 20.5R25 (L3) tires, ROPS cabin and ride control. Machine stability and operating weight depend on counterweight, tire size and other attachments.