

# ZW140-6 SPECIFICATIONS

HITACHI

Reliable Solutions

LANDCROS

## 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 in <sup>3</sup> (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
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		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

**EPA Tier 4 Final/EU Stage IV Certified**

## 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/cm <sup>2</sup> )
	Priority	2,843 PSI, 19.6 MPa (200 kgf/cm <sup>2</sup> )
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.

# SPECIFICATIONS

## ZW140-6

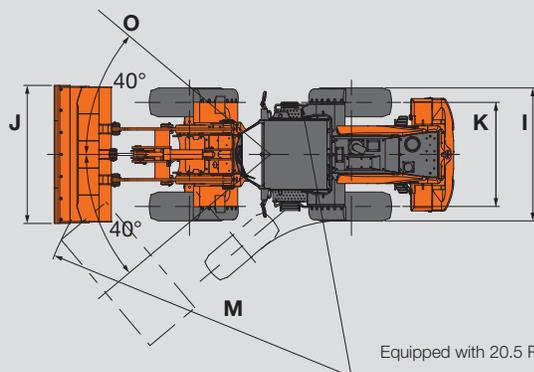
### BUCKET DATA

			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 <sup>3</sup> (m <sup>3</sup> )	2.8 (2.1)	3.1 (2.4)	2.8 (2.1)
	Struck	yd <sup>3</sup> (m <sup>3</sup> )	2.4 (1.8)	2.6 (2.0)	2.4 (1.8)
<b>A</b>	Maximum dumping clearance	ft-in (mm)	9'6" (2,885)	9'4" (2,845)	10'8" (3,245)
<b>B</b>	Dumping reach (to front of bucket edge or tooth)	ft-in (mm)	3'3" (990)	3'5" (1,030)	3'11" (1,185)
<b>C</b>	Max. hinge pin height	ft-in (mm)	12'7" (3,840)	12'7" (3,840)	13'9" (4,200)
<b>D</b>	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°
	<b>E</b> at carry position	degree	50°	50°	50°
Overall	<b>F</b> Length	ft-in (mm)	23'11" (7,290)	24'1" (7,345)	25'6" (7,780)
	<b>G</b> Height (up to cab top)	ft-in (mm)	10'9" (3,265)	10'9" (3,265)	10'9" (3,265)
	<b>H</b> Height (bucket fully raised)	ft-in (mm)	16'6" (5,040)	17' (5,190)	17'9" (5,400)
	<b>I</b> Width (outside tire)	ft-in (mm)	8'2" (2,490)	8'2" (2,490)	8'2" (2,490)
	<b>J</b> Width (outside bucket)	ft-in (mm)	8'5" (2,560)	8'5" (2,560)	8'5" (2,560)
	<b>K</b> Tread	ft-in (mm)	6'4" (1,930)	6'4" (1,930)	6'4" (1,930)
<b>L</b> Wheel base	ft-in (mm)	9'11" (3,000)	9'11" (3,000)	9'11" (3,000)	
Clearance Circle (bucket carry position)	<b>M</b> 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)
<b>N</b>	Minimum ground clearance	in (mm)	17" (435)	17" (435)	17" (435)
<b>O</b>	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)

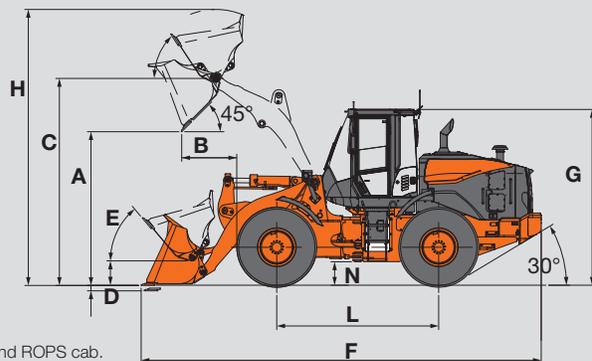
Note: All dimensions, weight and performance data based on ISO 6746-1:1987, ISO 7137:2009 and ISO 7546:1983

\* Static tipping load and operating weight marked with \* include 20.5R25 (L-3) 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.



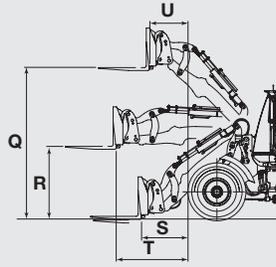
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# SPECIFICATIONS

## ZW140-6

### ZW140-6 FORK SPECIFICATIONS

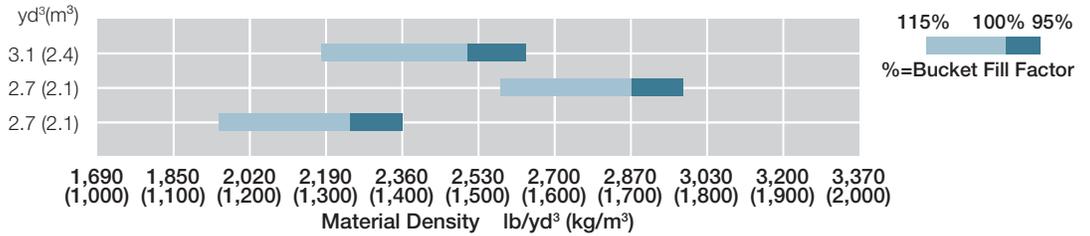
WITH FORK ATTACHMENT



ZW140-6		ISO (48")	416 (48")	ISO (60")	416 (60")	
<b>Q</b>	Max. stacking height	ft	12'	12'1"	12'	12'1"
<b>R</b>	Height of fork at maximum reach	ft	5'7"	5'10"	5'7"	5'10"
<b>S</b>	Reach at ground level	ft	3'11"	3'8"	3'11"	3'8"
<b>T</b>	Max. reach	ft	5'7"	5'6"	5'7"	5'6"
<b>U</b>	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

- Material handling | SLA
- General purpose | SLA
- High lift arm w/GP | HLA



### 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)
	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)	+0 (+0)	in (mm)			
Full covered rear fender	lb (kg)	+70 (+30)	+0 (+0)	+0 (+0)	+0 (+0)	in (mm)			
Bracket for rotating beacon	lb (kg)	+20 (+10)	+0 (+0)	+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.

# EQUIPMENT DATA

## ZW140-6

### 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

#### QUICK LINKS

Website's  
Product Page



#### ELECTRICAL

24-volt electrical system  
Back-up alarm  
Batteries (2), 12V, 930 CCA  
Battery disconnect switch  
Converter  
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 local Hitachi Construction Machinery authorized dealer for details.

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