



FLORIDA SHERIFFS ASSOCIATION BID FSA20-VEH18.0
ITEM #184 WHEEL LOADER 1.5 CUBIC YARD

Base Hitachi ZW120 Wheel Loader
73MA022 2.0 Cu. Yd. Bucket with Bolt-on Edge
TBP1741 17.5-25 12 PR L-2 Bias ply Tires
73MD020 Rims

STANDARD EQUIPMENT

ENGINE	HYDRAULIC SYSTEM	ALARMS, GAUGES, INDICATORS	CAB
Air cleaner, double element Cold start (glow plug) Deutz TCD36 diesel engine EGR system Fuel filter (main), w/water separator Fuel pre-filter, w/water separator SCR system Work mode selector	Boom kick-out, dual (operator adjustable in cab) Bucket positioner Control lever, single, pilot-assisted, w/ F-N-R switch, w/3rd aux function lever Control lever lock (electric) Control valve, 3-function, parallel control Ride control w/load sensing valve and automatic shut-off Quick coupler control, lines and controls Pump, gear, fixed displacement Steering, orbitrol	Alarms (Visual & Audible) Brake oil low pressure Engine oil low pressure Gauges Overheat (Engine Coolant) Engine coolant temperature Fuel gauge Indicators HST oil temperature Air cleaner element Air conditioner display Battery discharge warning Cold start Control lever lock Eco-operating status Emergency steering Engine warning Fan reverse rotation Fuel filter (water in fuel) High beam HST oil temperature HST warning Maintenance Operating mode (Normal, Power) Parking brake Ride control Service Speedometer Time/operating hour/ODO Turn signal w/4-way flashers/marker Work light	ROPS Cab: Enclosed cab with sound suppression, front and rear wipers and washers, two rear view and side mirrors, tinted glass, full view latch-back doors, and sliding side windows. Accessory outlet, 12v Adjustable armrest/console AC/Heater/Pressurizer AM/FM/WB radio with AUX input Ashtray Cab dome lamps (2) Cigarette lighter, 24V Coat hook Cooler box storage area Cup holder (2) Floormat Retractable seat belt (3-inch) ROPS/FOPS certified Seat, Premium, Heated w/TLV suspension Steering column, telescoping and tilting w/quick-release pedal Storage box (heated/cooled) Sun visor
POWERTRAIN	ELECTRICAL		OTHERS
Brakes, service Enclosed wet disc Dual system Inboard mounted Brake, parking Spring applied Oil pressure released Wet disc type Cooler, Wide Fin Spacing Differential, torque proportioning (F/R) Drive shafts, low maintenance Hydrostatic transmission Inching pedal Maximum speed adjuster (Creeper Function) for 1st speed Traction control	24-volt electrical system Back-up alarm Batteries (2), 12V, 800 CCA Battery disconnect switch Converter, 12V/15 Amp Horn, dual electric Instrument panel, LCD, monochrome Lights: 2 Headlights (halogen) 2 Forward working lights (hal.) 4 Rear working lights (hal.) 2 Stop/tail/backup (LED) Turn signal w/4-way flashers/marker		Articulation locking bar Counterweight Drawbar Global e-service, telematic monitoring system Ladders, inclined Lifting eyes Linkage, Z-BAR, sealed Linkage pins, HN bushing Neutral safety start Steps, rear

Engine: DEUTZ TCD36 Diesel

Horsepower: 96 HP/2000 RPM (71 kW/2000 RPM) Net

Machine Price Includes Standard Tires and Rims: Bias Ply, 17.5-25.12PR L2

Effective December 6, 2019

(Revised May 7, 2020)

(Subject to change without notice)

HCM ZW120-6 PRICE LIST

BUCKETS

General Purpose, 2.0 Cu. Yd. w/ Bolt-on Cutting Edge	73MA022
Material Handling, 2.4 Cu. Yd. w/ Bolt-on Cutting Edge	73MA042

QUICK COUPLER AND ATTACHMENTS

Hydraulic Quick Coupler, 416 Type	73MB016
48" Construction Utility Fork on 60" Carriage, 416 Type	73MB020
60" Construction Utility Fork on 60" Carriage, 416 Type	73MB021
General Purpose, 1.8 Cu. Yd. Bucket w/ Bolt-on Cutting Edge, 416 Type	73MA060
Hydraulic Quick Coupler, ISO Type	73MB017
48" Construction Utility Fork on 60" Carriage, ISO Type	73MB065
60" Construction Utility Fork on 60" Carriage, ISO Type	73MB066
General Purpose, 1.8 Cu. Yd. Bucket w/ Bolt-on Cutting Edge, ISO Type	73MA065

RIMS

17.5-25 1-PIECE RIM (EAG160) - STD Price Reference Only	73MD020
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TIRE SELECTION (Subject to Availability) (Rims must be selected)

Bias Ply, 17.5-25.12PR L2 (Brand not Specified) - STD Price Reference Only	TBP1741
Radial, 17.5 R25 L2 1* MICHELIN	TMI1702
Radial, 17.5R25 L2T 1* MICHELIN XSNOPUS	TMI1703

CAB ACCESSORIES

BACKUP CAMERA, Heavy-Duty, (Field Installed)	
7" High-Mount RLED Monitor w/Sunshade	73M6135
HEATED MIRRORS (Field Installed)	73M6120
LIGHTS, LED (mounted on cab), Front & Rear (Field Installed)	73M5120

MAINTENANCE / SERVICEABILITY

GLOBAL E-SERVICE, Telematic Monitoring System (SAT version) (I.L.O. STD GSM version)	73M5020
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POWERTRAIN

COOLING SYSTEM CORES, STANDARD FIN SPACING (for High Ambient Temps) (*)										73M2031
A					W	ENGINE PRE-CLEANER (Turbine Style) (Field Installed)				73M2020

PROTECTION / GUARDING

BELLYGUARD, Transmission (Field Installed)					73M1030	
				R	BELLYGUARD, FRONT CHASSIS (*) (Field Installed)	73M1040
				R	CAB WINDSHIELD GUARD - Refuse (*) (Field Installed)	73M6035
				R	WHEEL SEAL GUARDS (*) (Field Installed)	73M3021

STRUCTURAL ACCESSORIES

FENDERS (Full rear fenders w/ mud flaps) (Field Installed)	73M1070
HIGH LIFT ARM FOR MATERIAL HANDLING (*)	73M1050

Recommended for Special Application :

A	C	H	L	R	W
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 = (A) Agriculture, (C) Chemical, (H) Hot Slag, (L) Logging, (R) Refuse, (W) Woodchip

(*) Long lead time, may increase delivery time.

(*) May ship separately from machine. Dealer responsible for freight.

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ZW-6 series

HITACHI

Reliable solutions

ZW120/140/150/150_{PL}



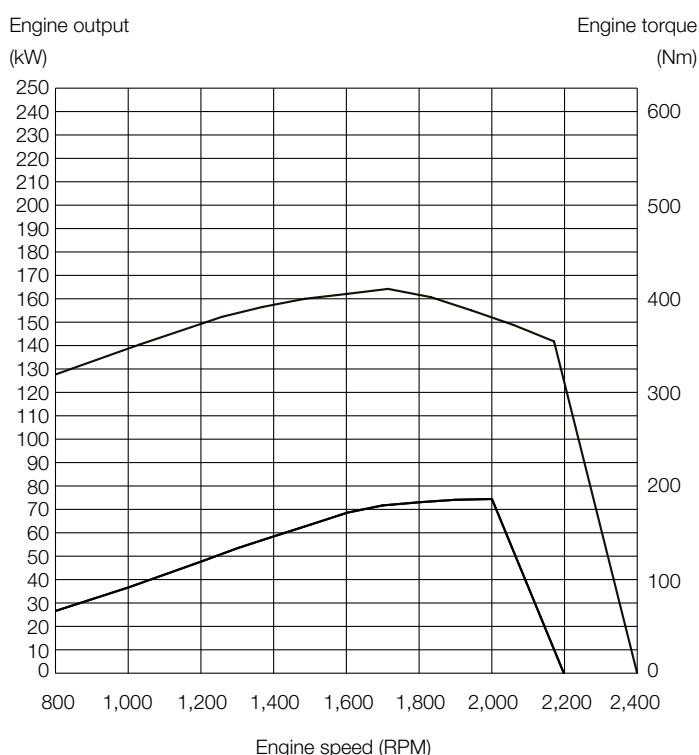
*Machine representative of global product.
Options may not be available in all markets.*

WHEEL LOADER

Model:	ZW120-6	ZW140-6	ZW150-6	ZW150PL-6
Gross engine rated power:	101 hp/74 kW (ISO14396)	141 hp/104 kW (ISO14396)	141 hp/104 kW (ISO14396)	141 hp/104 kW (ISO14396)
Operating weight:	18,590–19,850 lb (8,430–9,000 kg)	25,661–26,169 lb (11,640–11,870 kg)	27,029–27,540 lb (12,260–12,469 kg)	27,010–28,440 lb (12,830–12,900 kg)
Bucket ISO heaped:	2.0–2.4 yd ³ (1.5–1.8 m ³)	2.7– 3.1 yd ³ (2.1–2.4 m ³)	3.1–3.5 yd ³ (2.4–2.7 m ³)	2.7 yd ³ (2.1 m ³)

ENGINE

Model	DEUTZ TCD3.6L4F
Type	4-cycle water-cooled, direct injection
Aspiration	Turbocharger and intercooled
Aftertreatment	DOC and SCR system
No. of cylinders	4
Maximum rated power	
ISO 14396, gross	101 hp (74 kW) at 2,000 min ⁻¹ (rpm)
ISO 9249, net	96 hp (71 kW) at 2,000 min ⁻¹ (rpm)
Maximum torque	400 Nm at 1,600 min ⁻¹ (rpm)
Bore and stroke	3.9 in x 4.7 in (98 mm x 120 mm)
Piston displacement	221 in ³ (3.621 L)
Batteries	2 x 12 V
Air cleaner	Two element dry type with restriction indicator
Emission	Complies with EU stage IV and US EPA Tier 4 Final



POWERTRAIN

Transmission	Electrical-controlled 1 motor hydrostatic transmission with gear box, Gear box: Fixed gear ratio, powershift countershaft type
Cooling method	Forced circulation type
Travel speed* Forward/Reverse	
1st	11.5/7.1 km/mph
2nd	21.4/34.5 km/mph
* With 17.5-25-12PR (L-2) tire	

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

BRAKES

Service brakes	Inboard mounted fully hydraulic 4 wheel wet disc brakes. Front & rear independent brake circuit, HST (Hydro Static Transmission) system provides additional hydraulic braking capacity
Parking brakes	Spring applied, hydraulically released, wet disc type

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 in x 15.6 in (2 x 60 mm x 395 mm)

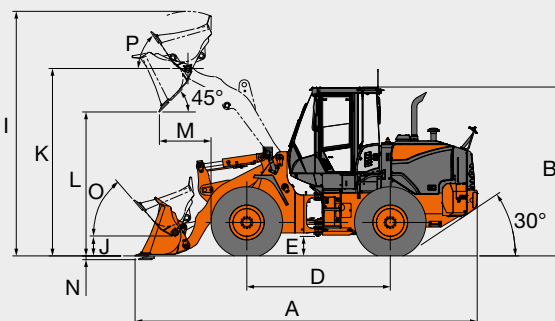
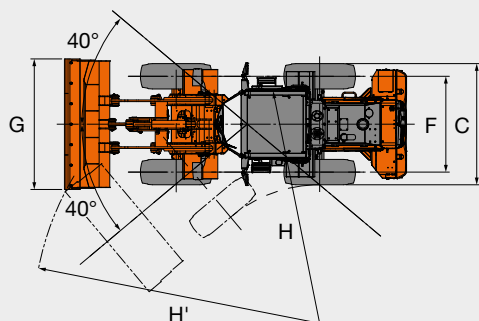
HYDRAULIC SYSTEM

Arm and bucket are controlled by multi function 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 (Load & steer)	
.....	Gear type 32.0 gal/min (121 L/min) at 2,000 min ⁻¹ (rpm) at 20.6 MPa (210 kgf/cm ²)
Relief pressure setting	20.6 MPa (210 kgf/cm ²)
HST charging pump	Gear type 10.4 gal/min (39.2 L/min) at 2,000 min ⁻¹ (rpm) at 2.5 MPa (25 kgf/cm ²)
Transmission charging pump	Gear type 5.9 gal/min (22 L/min) at 2,000 min ⁻¹ (rpm) at 1.8 MPa (18 kgf/cm ²)
Hydraulic cylinders	
Type	Double acting type
No. x Bore x Stroke ...	Arm: 2 x 4.1 in x 28.0 in (2 x 105 mm x 710 mm) Bucket: 1 x 4.9 in x 17.5 in (1 x 125 mm x 445 mm)
Filters	Full-flow 10 micron return filter in reservoir
Hydraulic cycle times	
Lift arm raise	6.6 s
Lift arm lower	2.7 s
Bucket dump	1.6 s
Total	10.9 s

SERVICE REFILL CAPACITIES

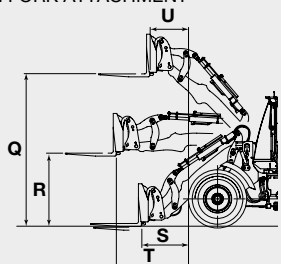
Fuel tank	39.62 gal (150 L)
Engine coolant	4.20 gal (16 L)
Engine oil	2.80 gal (10.5 L)
Front axle differential & wheel hubs	3.70 gal (14 L)
Rear axle differential & wheel hubs	3.70 gal (14 L)
Hydraulic oil tank	19.8 gal (75 L)
DEF/AdBlue® tank	4.50 gal (17 L)

DIMENSIONS & SPECIFICATIONS



Bucket type			Standard arm		High lift arm
			General purpose		General purpose
			Bolt-on cutting edge		
Bucket capacity	ISO heaped	yd³ (m³)	2.0 (1.5)	2.4 (1.8)	2.0 (1.5)
	ISO struck	yd³ (m³)	1.6 (1.2)	1.5 (1.4)	1.6 (1.2)
A Overall length		ft (mm)	21.0 (6,545)	21.3 (6,650)	21.0 (7,105)
B Overall height		ft (mm)		10.5 (3,210)	
C Width over tires		ft (mm)		7.4 (2,270)	
D Wheel base		ft (mm)		8.9 (2,725)	
E Ground clearance		in (mm)		14.6 (370)	
F Tread		ft (mm)		6.0 (1,820)	
G Bucket width		ft (mm)		8.0 (2,450)	
H Turning radius (Centerline of outside tire)		ft (mm)		16.2 (4,915)	
H' Loader clearance circle, bucket in carry position		ft (mm)	17.8 (5,430)	17.9 (5,460)	18.4 (5,610)
I Overall operating height		ft (mm)	15.3 (4,650)	15.6 (4,760)	16.4 (4,990)
J Carry Height of bucket pin		ft (mm)	1.5 (455)	1.5 (455)	1.5 (455)
K Height to bucket hinge pin, fully raised		ft (mm)	11.7 (3,560)	11.7 (3,560)	12.8 (3,900)
L Dumping clearance 45 degree, full height		ft (mm)	8.9 (2,705)	8.6 (2,630)	10.0 (3,040)
M Reach, 45 degree dump, full height		ft (mm)	3.3 (1,010)	3.5 (1,080)	3.9 (1,190)
N Digging depth (Horizontal digging angle)		in (mm)	2.8 (70)	2.8 (70)	8.3 (210)
O Max. roll back at carry position		deg		49	50
P Roll back angle at full height		deg		56	52
Static tipping load *	Straight	lb (kg)	14,330 (6,500)	14,200 (6,440)	12,940 (5,870)
	Full 40 degree turn	lb (kg)	12,390 (5,620)	12,240 (5,550)	11,140 (5,050)
Breakout force		lbf (kgf)	16,840 (7,520)	14,970 (6,790)	16,590 (7,520)
		kN	74.9	66.6	73.8
Operating weight *		lb (kg)	18,590 (8,430)	18,760 (8,510)	19,850 (9,000)

WITH FORK ATTACHMENT



ZW120-6			ISO (48)	416 (48)	ISO (60)	416 (48)
Q	Max. stacking height	ft (mm)	11.3 ()	11.4 ()	11.3 ()	11.4 ()
R	Height of fork at maximum reach	ft (mm)	5.7 ()	5.9 ()	5.7 ()	5.9 ()
S	Reach at ground level	ft (mm)	3.4 ()	3.3 ()	3.4 ()	3.3 ()
T	Max. reach	ft (mm)	5.4 ()	5.5 ()	5.4 ()	5.5 ()
U	Reach at max. stacking height	ft (mm)	3.3 ()	3.4 ()	3.3 ()	3.4 ()
Tipping load	Straight	lbf (kgf)	7,996 ()	7,681 ()	7,498 ()	7,211 ()
	Full turn	lbf (kgf)	6,913 ()	6,641 ()	6,483 ()	6,235 ()
Max. payload per EN 474-3, 80%		lb (kg)	5,531 ()	5,313 ()	5,187 ()	4,988 ()
Max. payload per EN 474-3, 60%		lb (kg)	4,148 ()	3,985 ()	3,890 ()	3,741 ()
SAE allowable load		ft (mm)	3,457 ()	3,321 ()	3,242 ()	3,118 ()
Operating weight *		lb (kg)	19,134 ()	19,136 ()	19,236 ()	19239 ()

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

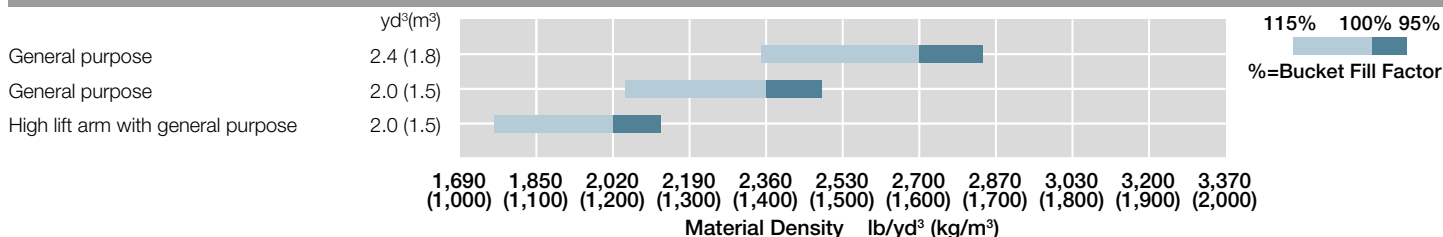
: Static tipping load and operating weight marked with include 17.5-25-12PR (L-2) tires (No ballast) with lubricants, full fuel tank and operator.

Machine stability and operating weight depend on counterweight, tire size and other attachments.

WEIGHT & SPECIFICATION CHANGES

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	17.5R25	±0	±0	±0	±0	±0	±0
Belly guard		+154 (70)	+132 (60)	+110 (50)	±0	±0	±0

BUCKET SELECTION GUIDE



STANDARD EQUIPMENT

ENGINE

Air cleaner, double element
 Cold start (glow plug)
 Cooler, wide fin
 Deutz TCD36 diesel engine
 EGR system
 Fuel filter (main), w/water separator
 Fuel pre-filter, w/water separator
 SCR catalyst and DOC
 Work mode selector

POWERTRAIN

Brakes, service
 Enclosed wet disc
 Dual system
 Inboard mounted
 Brake, parking
 Spring applied
 Oil pressure released
 Wet disc type
 Differential, torque proportioning (F/R)
 Drive shafts, low maintenance
 Hydrostatic transmission
 Inching pedal
 Maximum speed adjuster for 1st speed
 Traction control

HYDRAULIC SYSTEM

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

ELECTRICAL

24-volt electrical system
 Back-up alarm
 Battery disconnect switch
 Converter, 12V/15 Amp
 Horn, dual electric
 Instrument panel, LCD, color
 Lights:
 2 Headlights (halogen)
 2 Forward working lights (halogen)
 4 Rear working lights (halogen)
 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, (fore/aft sliding)
 Air conditioner/heater/pressurizer
 AM/FM/WB radio with AUX input
 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
 Seat, air suspension, fabric
 Steering column, telescoping and tilting w/quick-release pedal
 Storage box (heated/cooled)
 Sun visor

OTHERS

Articulation locking bar
 Counterweight
 Drawbar
 Global e-Service, telematic monitoring system (GSM-version w/4 yrs. service)
 Ladders, inclined
 Lifting eyes
 Linkage pins, HN bushing
 Neutral safety start
 Steps, rear
 Z-bar loader linkage

ALARMS, GAUGES, INDICATORS

Alarms (visual & audible)	Brake oil low pressure Engine oil low pressure
Gauges	DEF/AdBlue® Level Engine coolant temperature Fuel gauge Overheat (engine coolant)
Indicators	Aftertreatment Device Air cleaner element Air conditioner display Battery discharge warning Cold start Control lever lock Eco-operating status Emergency steering Engine warning Fan reverse rotation Fuel filter (water in fuel) High beam HST oil temperature HST warning Maintenance Operating mode (Normal, Power) Parking brake Ride control Service Speedometer 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 edge & segments
 Camera, rear view
 Fenders, rear, full, w/mudflap
 HID work lights
 High lift boom arm
 Hydraulic system, 3rd function control
 LED work lights
 Pre-cleaner (turbine type)
 Quick coupler & attachments
 Seat, heated
 Secondary steering