

ZAXIS  
**135US-5**

■ 72 kW (97 hp)



**HITACHI**

# ZAXIS 135US-5

## ENGINE

Manufacturer and Model .....	Isuzu 4JJ1
Non-Road Emissions Standard .....	EPA Interim Tier 4/EU Stage IIIB
Net Rated Power (ISO 9249) .....	72 kW (97 hp) at 2,000 rpm
Cylinders .....	4
Displacement .....	3.0 L (182 cu. in.)
Off-Level Capacity .....	70% (35 deg.)
Aspiration .....	turbocharged, air-to-air charge-air cooler

## COOLING

Direct-drive suction-type fan

## POWERTRAIN

2-speed propel with automatic shift

### Maximum Travel Speed

Low .....	3.4 km/h (2.1 mph)
High .....	5.5 km/h (3.4 mph)
Drawbar Pull .....	11 000 kg (24,251 lb.)

## HYDRAULICS

Open center, load sensing

**Main Pumps** ..... 2 variable-displacement axial-piston pumps

Maximum Rated Flow ..... 105 L/m (28 gpm) x 2

**Pilot Pump** ..... one gear

Maximum Rated Flow ..... 32.9 L/m (8.7 gpm)

Pressure Setting ..... 3930 kPa (570 psi)

### System Operating Pressure

Implement Circuits ..... 34 336 kPa (4,980 psi)

Travel Circuits ..... 34 336 kPa (4,980 psi)

Swing Circuits ..... 32 300 kPa (4,685 psi)

Power Boost ..... 36 300 kPa (5,265 psi)

Controls ..... pilot levers, short stroke, low-effort hydraulic pilot controls with shutoff lever

## CYLINDERS

	Bore	Rod Diameter	Stroke
<b>Boom (2)</b> .....	105 mm (4.13 in.)	70 mm (2.76 in.)	995 mm (39.17 in.)
<b>Arm (1)</b> .....	115 mm (4.53 in.)	80 mm (3.15 in.)	1127 mm (44.37 in.)
<b>Bucket (1)</b> .....	100 mm (3.94 in.)	70 mm (2.76 in.)	875 mm (34.45 in.)

## ELECTRICAL

Number of Batteries (12 volt) .....	2
Battery Capacity .....	300 CCA
Alternator Rating .....	50 amp
Work Lights .....	2 halogen (one mounted on boom, one on frame)

## UNDERCARRIAGE

### Rollers (each side)

Carrier .....	1
Track .....	7
Shoes, Triple Semi-Grousers (each side) .....	44

### Track

Adjustment .....	hydraulic
Guides .....	front idler
Chain .....	sealed and lubricated

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## GROUND PRESSURE

	<i>Without Blade</i>	<i>With Blade</i>
500-mm (20 in.) Rubber Crawler Pads .....	43 kPa (6.24 psi)	46 kPa (6.67 psi)
600-mm (24 in.) Triple Semi-Grouser Shoes.....	36 kPa (5.22 psi)	38 kPa (5.51 psi)
700-mm (28 in.) Triple Semi-Grouser Shoes.....	31 kPa (4.50 psi)	33 kPa (4.79 psi)

## SWING MECHANISM

Swing Speed.....	13.3 rpm
Swing Torque.....	34 000 Nm (25,000 lb.-ft.)

## SERVICEABILITY

### Refill Capacities

Fuel Tank.....	220 L (58 gal.)
Cooling System .....	20 L (21.1 qt.)
Engine Oil with Filter.....	17 L (18 qt.)
Hydraulic Tank.....	60 L (15.9 gal.)
Hydraulic System.....	125 L (33 gal.)
Swing Gearbox.....	3.2 L (3.4 qt.)
Propel Gearbox (each).....	4 L (4.2 qt.)

## OPERATING WEIGHTS

With full fuel tank; 79-kg (175 lb.) operator; 914-mm (36 in.), 0.50-m<sup>3</sup> (0.65 cu. yd.), 414-kg (913 lb.) general-purpose bucket; 3.01-m (9 ft. 11 in.) arm; and 3650-kg (8,047 lb.) counterweight

<b>Operating Weights</b> .....	<i>Without Blade</i>	<i>With Blade</i>
500-mm (20 in.) Rubber Crawler Pad .....	13 900 kg (30,617 lb.)	14 900 kg (32,819 lb.)
600-mm (24 in.) Triple Semi-Grouser Shoes .....	13 700 kg (30,176 lb.)	14 700 kg (32,379 lb.)
700-mm (28 in.) Triple Semi-Grouser Shoes .....	13 900 kg (30,617 lb.)	14 900 kg (32,819 lb.)

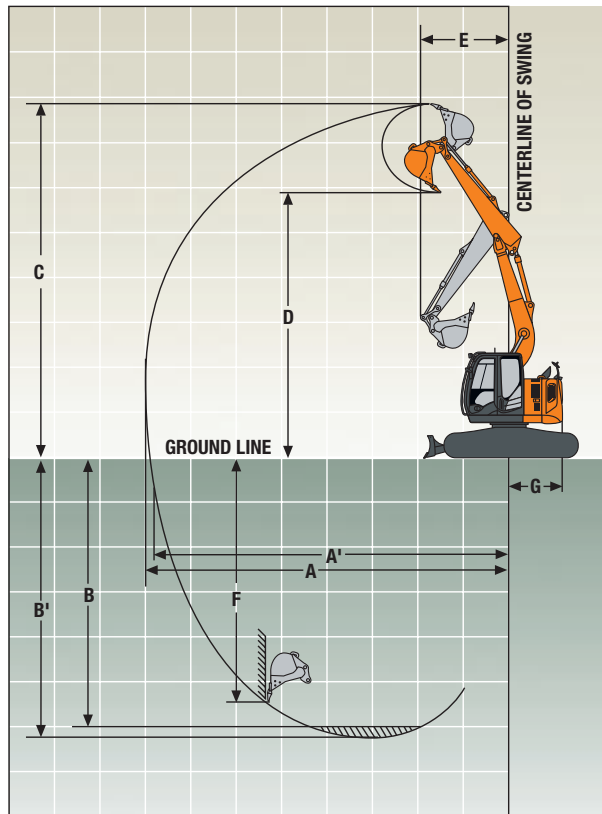
### Component Weights

	<i>Without Blade</i>	<i>With Blade</i>
Undercarriage.....		
500-mm (20 in.) Rubber Crawler Pad .....	4639 kg (10,218 lb.)	5577 kg (12,284 lb.)
600-mm (24 in.) Triple Semi-Grouser Shoes .....	4439 kg (9,778 lb.)	5516 kg (12,150 lb.)
700-mm (28 in.) Triple Semi-Grouser Shoes .....	4639 kg (10,218 lb.)	5732 kg (12,626 lb.)
One-Piece Boom (with arm cylinder).....	951 kg (2,095 lb.)	
Arm with Bucket Cylinder and Linkage		
2.52 m (8 ft. 3 in.) .....	431 kg (949 lb.)	
3.01 m (9 ft. 11 in.) .....	501 kg (1,104 lb.)	
Boom-Lift Cylinders (2), Total Weight.....	232 kg (511 lb.)	
914-mm (36 in.), 0.50-m <sup>3</sup> (0.65 cu. yd.) Bucket.....	414 kg (913 lb.)	
Counterweight, Standard .....	3650 kg (8,047 lb.)	

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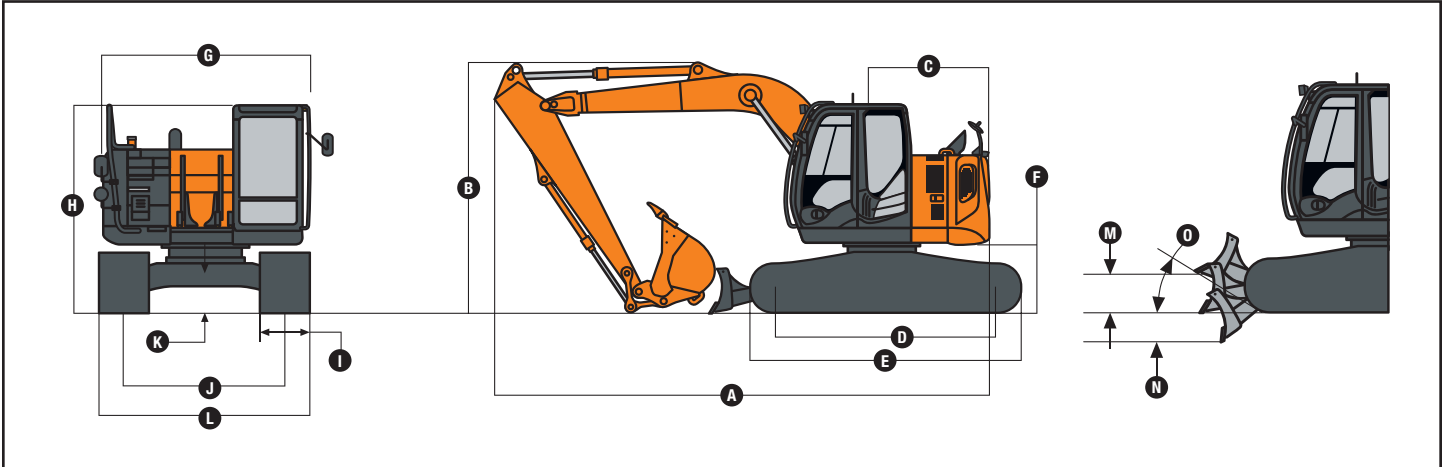
## OPERATING DIMENSIONS

	2.52 m (8 ft. 3 in.)	3.01 m (9 ft. 11 in.)
<b>Arm Length</b>		
Arm Digging Force		
SAE .....	65 kN (14,611 lb.)	59 kN (13,167 lb.)
ISO .....	67 kN (15,066 lb.)	60 kN (13,521 lb.)
Bucket Digging Force		
SAE .....	85 kN (19,015 lb.)	85 kN (19,015 lb.)
ISO .....	96 kN (21,480 lb.)	96 kN (21,480 lb.)
Lifting Capacity Over Front at Ground Level		
6.1-m (20 ft.) Reach (with power boost).....	2699 kg (5,950 lb.)	2676 kg (5,900 lb.)
<b>A</b> Maximum Reach .....	8.38 m (27 ft. 6 in.)	8.86 m (29 ft. 1 in.)
<b>A'</b> Maximum Reach at Ground Level .....	8.24 m (27 ft.)	8.72 m (28 ft. 7 in.)
<b>B</b> Maximum Digging Depth .....	5.49 m (18 ft.)	5.98 m (19 ft. 7 in.)
<b>B'</b> Maximum Digging Depth at 2.44-m (8 ft.) Flat Bottom.....	5.27 m (17 ft. 3 in.)	5.79 m (19 ft.)
<b>C</b> Maximum Cutting Height .....	9.29 m (30 ft. 6 in.)	9.69 m (31 ft. 9 in.)
<b>D</b> Maximum Dumping Height .....	6.83 m (22 ft. 5 in.)	7.22 m (23 ft. 8 in.)
<b>E</b> Minimum Swing Radius .....	1.49 m (4 ft. 11 in.)	1.49 m (4 ft. 11 in.)
<b>F</b> Maximum Vertical Wall.....	4.73 m (15 ft. 6 in.)	5.19 m (17 ft.)
<b>G</b> Tail-Swing Radius.....	1.49 m (4 ft. 11 in.)	1.49 m (4 ft. 11 in.)



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## MACHINE DIMENSIONS



<b>A Overall Length with Arm</b>		
2.52 m (8 ft. 3 in.)	.....	7.37 m (24 ft. 2 in.)
3.01 m (9 ft. 11 in.)	.....	7.39 m (24 ft. 3 in.)
<b>B Overall Height with Arm</b>		
2.52 m (8 ft. 3 in.)	.....	2.79 m (9 ft. 2 in.)
3.01 m (9 ft. 11 in.)	.....	2.78 m (9 ft. 1 in.)
<b>C Rear-End Length/Swing Radius</b>	.....	1.49 m (4 ft. 11 in.)
<b>D Distance Between Idler/Sprocket Centerline</b>	.....	2.88 m (9 ft. 5 in.)
<b>E Undercarriage Length</b>	.....	3.58 m (11 ft. 9 in.)
<b>F Counterweight Clearance</b>	.....	840 mm (33 in.)
<b>G Upperstructure Width</b>	.....	2.48 m (8 ft. 2 in.)
<b>H Cab Height</b>	.....	2.79 m (9 ft. 2 in.)
<b>I Track Width with Triple Semi-Grouser Shoes</b>	.....	600 mm (24 in.)
		700 mm (28 in.)
<b>J Gauge Width</b>	.....	1.99 m (6 ft. 6 in.)
<b>K Ground Clearance</b>	.....	410 mm (16 in.)
<b>L Overall Width</b>		
500-mm (20 in.) Rubber Crawler Pad	.....	2.49 m (8 ft. 2 in.)
600-mm (24 in.) Triple Semi-Grouser Shoes	.....	2.59 m (8 ft. 6 in.)
700-mm (28 in.) Triple Semi-Grouser Shoes	.....	2.69 m (8 ft. 10 in.)
<b>M Blade Lift Height</b>	.....	460 mm (18 in.)
<b>N Blade Cut Below Grade</b>	.....	540 mm (21 in.)
<b>O Blade Lift Angle</b>	.....	29 deg.
Blade Length	.....	2.51 m (8 ft. 3 in.)
Blade Height	.....	460 mm (18 in.)
Blade Width		
500-mm (20 in.) Rubber Crawler Pad	.....	2590 mm (8 ft. 6 in.)
600-mm (24 in.) Triple Semi-Grouser Shoes	.....	2590 mm (8 ft. 6 in.)
700-mm (28 in.) Triple Semi-Grouser Shoes	.....	2690 mm (8 ft. 10 in.)

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## LIFT CAPACITIES

Boldface type indicates hydraulically limited capacity; lightface type indicates stability-limited capacities, in kg (lb.). All lift capacities are based on ISO 10567 (with power boost). Machine equipped with 414-kg (913 lb.) bucket and standard counterweight; and situated on firm, level, uniform supporting surface. Total load includes weight of cables, hook, etc. Figures do not exceed 87 percent of hydraulic capacities or 75 percent of weight needed to tip machine.

Load Point Height	1.5 m (5 ft.)		3.0 m (10 ft.)		4.5 m (15 ft.)		6.0 m (20 ft.)		7.5 m (25 ft.)	
	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side
<i>With 2.52-m (8 ft. 3 in.) arm and 600-mm (24 in.) triple semi-grouser shoes, blade on ground</i>										
4.5 m (15 ft.)			<b>3550</b> (7,850)	<b>3550</b> (7,850)	<b>3550</b> (7,750)	3500 (7,500)	<b>3200</b> (6,500)	2100 (4,500)		
3.0 m (10 ft.)			<b>6250</b> (13,400)	<b>6250</b> (13,400)	<b>4350</b> (9,450)	3300 (7,100)	<b>3600</b> (7,900)	2050 (4,350)		
1.5 m (5 ft.)			<b>6450</b> (15,850)	5750 (12,350)	<b>5350</b> (11,500)	3050 (6,600)	<b>4000</b> (8,650)	1950 (4,150)		
Ground Line			<b>5750</b> (13,400)	5450 (11,750)	<b>5850</b> (12,700)	2900 (6,250)	<b>4200</b> (9,150)	1850 (4,000)		
-1.5 m (-5 ft.)	<b>4350</b> (9,800)	<b>4350</b> (9,800)	<b>8750</b> (18,950)	5450 (11,700)	<b>5750</b> (12,450)	2850 (6,100)	<b>4000</b> (8,600)	1850 (3,950)		
-3.0 m (-10 ft.)	<b>8250</b> (18,650)	<b>8250</b> (18,650)	<b>7100</b> (15,250)	5550 (11,900)	<b>4750</b> (10,150)	2900 (6,200)				
<i>With 3.01-m (9 ft. 11 in.) arm and 500-mm (20 in.) rubber crawler pad, blade on ground</i>										
4.5 m (15 ft.)					<b>3100</b> (6,700)	<b>3100</b> (6,700)	<b>3000</b> (6,400)	2150 (4,650)		
3.0 m (10 ft.)			<b>4900</b> (10,250)	<b>4900</b> (10,250)	<b>3900</b> (8,500)	3400 (7,300)	<b>3350</b> (7,250)	2100 (4,450)		
1.5 m (5 ft.)			<b>8050</b> (17,300)	5950 (12,850)	<b>4950</b> (10,750)	3150 (6,750)	<b>3800</b> (8,200)	1950 (4,200)	<b>2150</b> (3,700)	1300 (2,800)
Ground Line			<b>6250</b> (14,550)	5550 (11,900)	<b>5700</b> (12,350)	2950 (6,300)	<b>4100</b> (8,900)	1850 (4,000)		
-1.5 m (-5 ft.)	<b>3800</b> (8,500)	<b>3800</b> (8,500)	<b>8250</b> (18,950)	<b>5450</b> (11,650)	<b>5800</b> (12,550)	2850 (6,100)	<b>4100</b> (8,850)	1800 (3,900)		
-3.0 m (-10 ft.)	<b>6850</b> (15,450)	<b>6850</b> (15,450)	<b>7800</b> (16,750)	5550 (11,800)	<b>5150</b> (11,050)	2850 (6,150)	<b>3350</b> (7,200)	1850 (4,000)		
-4.5 m (-15 ft.)			<b>5050</b> (10,500)	<b>5050</b> (10,500)	<b>2900</b> (6,200)	<b>2900</b> (6,200)				
<i>With 3.01-m (9 ft. 11 in.) arm and 600-mm (24 in.) triple semi-grouser shoes, blade on ground</i>										
4.5 m (15 ft.)					<b>3100</b> (6,700)	<b>3100</b> (6,700)	<b>3000</b> (6,400)	2100 (4,550)		
3.0 m (10 ft.)			<b>4900</b> (10,250)	<b>4900</b> (10,250)	<b>3900</b> (8,500)	3350 (7,200)	<b>3350</b> (7,250)	2050 (4,400)		
1.5 m (5 ft.)			<b>8050</b> (17,300)	5900 (12,650)	<b>4950</b> (10,750)	3100 (6,650)	<b>3800</b> (8,200)	1950 (4,150)	<b>2150</b> (3,700)	1300 (2,750)
Ground Line			<b>6250</b> (14,550)	5450 (11,700)	<b>5700</b> (12,350)	2900 (6,200)	<b>4100</b> (8,900)	1850 (3,950)		
-1.5 m (-5 ft.)	<b>3800</b> (8,500)	<b>3800</b> (8,500)	<b>8250</b> (18,950)	5350 (11,500)	<b>5800</b> (12,550)	2800 (6,000)	<b>4100</b> (8,850)	1800 (3,800)		
-3.0 m (-10 ft.)	<b>6850</b> (15,450)	<b>6850</b> (15,450)	<b>7800</b> (16,750)	5400 (11,650)	<b>5150</b> (11,050)	2800 (6,000)	<b>3350</b> (7,200)	1800 (3,800)		
-4.5 m (-15 ft.)			<b>5050</b> (10,500)	<b>5050</b> (10,500)	<b>2900</b> (6,200)	<b>2900</b> (6,200)				
<i>With 3.01-m (9 ft. 11 in.) arm and 700-mm (28 in.) triple semi-grouser shoes, blade on ground</i>										
4.5 m (15 ft.)					<b>3100</b> (6,700)	<b>3100</b> (6,700)	<b>3000</b> (6,400)	2150 (4,600)		
3.0 m (10 ft.)			<b>4900</b> (10,250)	<b>4900</b> (10,250)	<b>3900</b> (8,500)	3400 (7,300)	<b>3350</b> (7,250)	2050 (4,450)		
1.5 m (5 ft.)			<b>8050</b> (17,300)	5950 (12,800)	<b>4950</b> (10,750)	3150 (6,750)	<b>3800</b> (8,200)	1950 (4,200)	<b>2150</b> (3,700)	1300 (2,800)
Ground Line			<b>6250</b> (14,550)	5550 (11,900)	<b>5700</b> (12,350)	2950 (6,300)	<b>4100</b> (8,900)	1850 (4,000)		
-1.5 m (-5 ft.)	<b>3800</b> (8,500)	<b>3800</b> (8,500)	<b>8250</b> (18,950)	5450 (11,650)	<b>5800</b> (12,550)	2850 (6,100)	<b>4100</b> (8,850)	1800 (3,900)		
-3.0 m (-10 ft.)	<b>6850</b> (15,450)	<b>6850</b> (15,450)	<b>7800</b> (16,750)	5500 (11,800)	<b>5150</b> (11,050)	2850 (6,100)	<b>3350</b> (7,200)	1850 (3,900)		
-4.5 m (-15 ft.)			<b>5050</b> (10,500)	<b>5050</b> (10,500)	<b>2900</b> (6,200)	<b>2900</b> (6,200)				

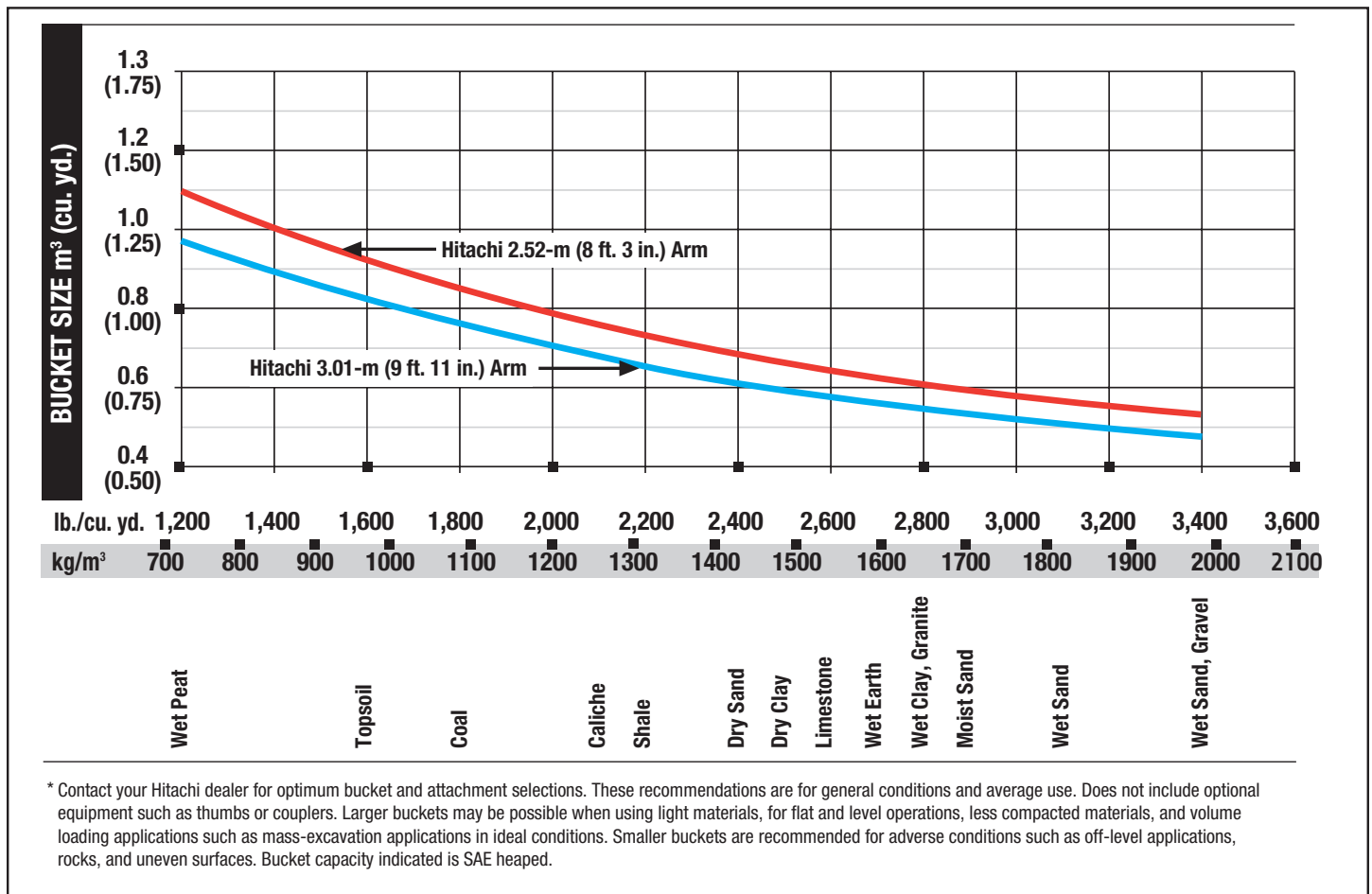
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## BUCKETS

A full line of buckets is offered to meet a wide variety of applications. Digging forces are with power boost. Buckets are equipped with ESCO teeth standard. Replaceable cutting edges and a variety of teeth are available through Hitachi Parts. Optional side cutters add 150 mm (6 in.) to bucket widths. Capacities are SAE heaped ratings.

Type Bucket	Bucket Width		Bucket Capacity		Bucket Weight		Bucket Dig Force		Arm Dig Force 2.52 m (8 ft. 3 in.)		Arm Dig Force 3.01 m (9 ft. 11 in.)		Bucket Tip Radius		Number of Teeth
	mm	in.	m <sup>3</sup>	cu. yd.	kg	lb.	kN	lb.	kN	lb.	kN	lb.	mm	in.	
Heavy Duty Plate Lip	610	24	0.37	0.48	460	1,014	84.6	19,015	65.0	14,611	58.6	13,167	1328	52.27	4
	760	30	0.50	0.65	522	1,150	84.6	19,015	65.0	14,611	58.6	13,167	1328	52.27	4
	915	36	0.62	0.81	589	1,297	84.6	19,015	65.0	14,611	58.6	13,167	1328	52.27	5
Ditching	1067	42	0.76	0.99	631	1,390	84.6	19,015	65.0	14,611	58.6	13,167	1328	52.27	5
	1500	60	0.63	0.83	457	1,007	121.9	27,411	72.7	16,337	64.6	14,529	921	36.25	0

## BUCKET SELECTION GUIDE\*



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## ADDITIONAL EQUIPMENT

**KEY:** ● Standard ▲ Optional or special — See your Hitachi dealer for further information.

### ENGINE

- Auto-idle system
- Automatic belt-tension device
- Batteries (2 – 12 volt)
- Coolant recovery tank
- Dual-element dry-type air filter
- Electronic engine control
- Enclosed fan guard (conforms to SAE J1308)
- Engine coolant to –37 deg. C (–34 deg. F)
- Fuel filter with water separator
- Full-flow oil filter
- Turbocharger with charge air cooler
- Cool-on-demand hydraulic-driven fan
- 500-hour engine-oil-change interval
- 70% (35 deg.) off-level capability
- Programmable auto shutdown
- ▲ Engine-oil-sampling valve
- ▲ Severe-duty fuel filter

### HYDRAULIC SYSTEM

- Reduced-drift valve for boom down, arm in
- Auxiliary hydraulic valve section
- Spring-applied, hydraulically released automatic swing brake
- Auxiliary hydraulic-flow adjustments through monitor
- Auto power lift
- 5,000-hour hydraulic-oil-change interval
- ▲ Hydraulic-oil-sampling valve
- ▲ Auxiliary hydraulic lines
- ▲ Auxiliary pilot and electric controls
- ▲ Hydraulic filter restriction indicator kit
- ▲ Load-lowering control device
- ▲ Single-pedal propel control
- ▲ Control pattern-change valve

### UNDERCARRIAGE

- Planetary drive with axial piston motors
- Propel motor shields
- Spring-applied, hydraulically released automatic propel brake
- Track guides, front idler
- 2-speed propel with automatic shift
- Upper carrier roller (1)
- Sealed and lubricated track chain

### UNDERCARRIAGE (CONTINUED)

- ▲ Triple semi-grouser shoes, 600 mm (24 in.)
- ▲ Triple semi-grouser shoes, 700 mm (28 in.)
- ▲ Rubber crawler pads, 500 mm (20 in.)
- ▲ Undercarriage with blade

### UPPERSTRUCTURE

- Right-hand, left-hand, and counterweight mirrors
- Vandal locks with ignition key: Cab door / Service doors / Toolbox
- Debris screening
- Remote-mounted engine oil and fuel filters

### FRONT ATTACHMENTS

- Centralized lubrication system
- Dirt seals on all bucket pins
- Less boom and arm
- Oil-impregnated bushings
- Reinforced resin thrust plates
- Tungsten carbide thermal coating on arm-to-bucket joint
- ▲ Arm, 2.52 m (8 ft. 3 in.)
- ▲ Arm, 3.01 m (9 ft. 11 in.)
- ▲ Attachment quick-couplers
- ▲ Boom cylinder with plumbing to mainframe less boom and arm
- ▲ Buckets: Ditching / Heavy duty / Heavy-duty high capacity / Side cutters and teeth
- ▲ Material clamps

### OPERATOR'S STATION

- Meets ISO 12117-2 for ROPS
- Adjustable independent-control positions (levers-to-seat, seat-to-pedals)
- AM/FM radio
- Auto climate control/air conditioner/heater/pressurizer
- Built-in Operator's Manual storage compartment and manual
- Cell-phone power outlet, 12 volt, 60 watt, 5 amp
- Coat hook
- Deluxe suspension cloth seat with 100-mm (4 in.) adjustable armrests
- Floor mat
- Front windshield wiper with intermittent speeds
- Gauges (illuminated): Engine coolant/Fuel
- Horn, electric
- Hour meter, electric

### OPERATOR'S STATION (CONTINUED)

- Hydraulic shutoff lever, all controls
- Hydraulic warm-up control
- Interior light
- Large cup holder
- Machine Information Center (MIC)
- Mode selectors (illuminated): Power modes (3) / Travel modes (2 with automatic shift) / Work mode (1)
- Multifunction, color LCD monitor with: Diagnostic capability / Multiple-language capabilities / Maintenance tracking / Clock / System monitoring with alarm features: Auto-idle indicator, engine air cleaner restriction indicator light, engine check, engine coolant temperature indicator light with audible alarm, engine oil pressure indicator light with audible alarm, low-alternator-charge indicator light, low-fuel indicator light, fault code alert indicator, fuel-rate display, wiper-mode indicator, work-lights-on indicator, and work-mode indicator
- Motion alarm with cancel switch (conforms to SAE J994)
- Power-boost switch on right console lever
- Auxiliary hydraulic control switches in right pilot lever
- SAE 2-lever control pattern
- Seat belt, 51 mm (2 in.), retractable
- Tinted glass
- Transparent tinted overhead hatch
- Hot/cold beverage compartment
- ▲ 24- to 12-volt D.C. radio convertors, 10 amp
- ▲ Hydraulic oil filter restriction indicator light
- ▲ Protection screens for cab front, rear, and side
- ▲ Seat belt, 76 mm (3 in.), non-retractable
- ▲ Window vandal-protection covers

### ELECTRICAL

- 50-amp alternator
- Blade-type multi-fused circuits
- Positive-terminal battery covers
- ZXLink™ wireless communication system (available in specific countries; see your dealer for details)
- ▲ Rearview camera

### LIGHTS

- Work lights: Halogen / One mounted on boom / One mounted on frame
- ▲ 2 lights mounted on cab / One mounted on right side of boom

Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan, at test conditions specified per ISO 9249. No derating is required up to 3050-m (10,000 ft.) altitude. Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with SAE standards. Except where otherwise noted, these specifications are based on a unit with 914-mm (36 in.), 0.50-m<sup>3</sup> (0.65 cu. yd.), 414-kg (913 lb.) general-purpose bucket; 3.01-m (9 ft. 11 in.) arm; 3650-kg (8,047 lb.) counterweight; 700-mm (28 in.) triple semi-grouser shoes; full fuel tank; and 79-kg (175-lb.) operator.