

HITACHI

DASH 3



ZAXIS 225US LC-3

- Engine Net Power: 159 hp (118 kW) @ 2,000 rpm
- Operating Weight: 53,936 lb. (24 487 kg)
- Backhoe Bucket: 1.09 yd³ (0.83 m³)

Engine

Manufacturer and Model	Isuzu AI-4HK1XYSA-02 certified to EPA Tier-3 emissions
Net Power (ISO9249)	159 hp (118 kW) @ 2,000 rpm
Cylinders	4
Displacement	317 cu. in. (5.193 L)
Aspiration	turbocharged, intercooled
Off-Level Capacity	70% (35 deg.)

Powertrain

Maximum Travel Speed

Low	2.2 mph (3.5 km/h)
High	3.4 mph (5.5 km/h)
Drawbar Pull	45,636 lb. (20 719 kg)

Hydraulics

Open center, load sensing; auxiliary hydraulic flow adjustable through monitor

Main Pumps	2 variable-displacement axial-piston pumps
Maximum Rated Flow	2 x 56.0 gpm (2 x 212 L/min.)
Pilot Pump	one gear
Maximum Rated Flow	7.9 gpm (30 L/min.)
Pressure Setting	570 psi (3930 kPa)

System Operating Pressure

Implement Circuits	4,980 psi (34 336 kPa)
Travel Circuits	4,980 psi (34 336 kPa)
Swing Circuits	4,410 psi (30 406 kPa)
Controls	pilot levers, short stroke, low effort; hydraulic pilot controls with shutoff lever

Cylinders

Heat-treated, chrome-plated, polished cylinder rods; hardened-steel (replaceable bushings) pivot pins

	Bore	Rod Diameter	Stroke
Boom (2)	4.72 in. (120 mm)	3.35 in. (85 mm)	49.61 in. (1260 mm)
Arm (1)	5.31 in. (135 mm)	3.74 in. (95 mm)	58.10 in. (1475 mm)
Bucket (1)	4.53 in. (115 mm)	3.15 in. (80 mm)	41.73 in. (1060 mm)

Electrical

Batteries	2 x 12 volt
Reserve Capacity	190 min.
Alternator	50 amp
Lights	halogen (one mounted on boom, one mounted on frame)

Undercarriage

Planetary final drives with axial piston motors

Carrier Rollers (per side)	2
Track Rollers (per side)	8
Shoes (per side)	49

Track

Adjustment	hydraulic
Chain	sealed and lubricated

Swing Mechanism

Swing Speed	13.3 rpm
Swing Torque	50,662 lb.-ft. (68 900 Nm)

Ground Pressure

Triple Semi-Grouser Shoes

28 in. (700 mm)	6.24 psi (43.0 kPa)
32 in. (800 mm)	5.51 psi (38.0 kPa)

Serviceability

Refill Capacities

Fuel Tank.....	85 gal. (320.0 L)
Cooling System	28 qt. (26.0 L)
Engine Oil with Filter	24.3 qt. (23.0 L)
Hydraulic Tank	33 gal. (123.0 L)
Hydraulic System	60.8 gal. (230.0 L)

Gearbox

Propel (each)	7.2 qt. (6.8 L)
Swing.....	7.3 qt. (6.9 L)
Pump Drive.....	1.1 qt. (1.0 L)

Operating Weights

With Full Fuel Tank; 175-lb. (79 kg) Operator; 42-in. (1067 mm), 1.09-cu.-yd. (0.83 m³), 1,731-lb. (721 kg) Heavy-Duty Bucket; 9-ft. 7-in. (2.91 m) Arm; 16,710-lb. (7586 kg) Counterweight; and 32-in. (800 mm) Triple Semi-Grouser Shoes.....53,936 lb. (24 487 kg)

Optional Components

Undercarriage with Triple Semi-Grouser Shoes

28 in. (700 mm).....	17,155 lb. (7788 kg)
32 in. (800 mm).....	17,805 lb. (8083 kg)

Upperstructure with Full Fuel Tank (less front attachments and counterweight).....	10,845 lb. (4924 kg)
One-Piece Boom (with arm cylinder)	3,890 lb. (1766 kg)

Arm with Bucket Cylinder and Linkage

7 ft. 11 in. (2.42 m)	2,045 lb. (928 kg)
9 ft. 7 in. (2.91 m)	2,180 lb. (990 kg)
Boom Lift Cylinders (2) Total Weight.....	749 lb. (340 kg)
42-in. (1067 mm), 1.09-cu.-yd. (0.83 m ³)	
Heavy-Duty Bucket.....	1,590 lb. (722 kg)
Counterweight (standard)	16,710 lb. (7586 kg)

Lifting Capacities

Boldface italic type indicates hydraulic-limited capacities; lightface type indicates stability-limited capacities, in lb. (kg). Ratings are at bucket lift hook, using 1.05-cu.-yd. (0.80 m³), 1,455-lb. (660 kg) bucket; standard counterweight, situated on firm, level, uniform supporting surface. Figures do not exceed 87 percent of hydraulic capacity or 75 percent of weight needed to tip machine.

Load Point Height	5 ft. (1.52 m)		10 ft. (3.05 m)		15 ft. (4.57 m)		20 ft. (6.10 m)		25 ft. (7.62 m)	
	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side
<i>With 7-ft. 11-in. (2.42 m) arm and 28-in. (700 mm) triple semi-grouser shoes</i>										
25 ft. (7.62 m)					7,000 (3175)	7,000 (3175)				
20 ft. (6.10 m)					10,121 (4591)	10,121 (4591)	9,968 (4521)	9,968 (4521)		
15 ft. (4.57 m)					12,700 (5761)	12,700 (5761)	10,914 (4951)	10,476 (4752)	10,156 (4607)	7,107 (3224)
10 ft. (3.05 m)					17,268 (7833)	15,432 (7000)	12,772 (5793)	9,921 (4500)	10,816 (4906)	6,891 (3126)
5 ft. (1.52 m)							14,685 (6661)	9,356 (4244)	11,175 (5069)	6,624 (3005)
Ground Line					22,240 (10 088)	13,764 (6243)	15,465 (7015)	8,984 (4075)	10,952 (4968)	6,420 (2912)
-5 ft. (-1.52 m)					21,260 (9643)	13,739 (6232)	15,316 (6947)	8,851 (4015)	10,879 (4935)	6,353 (2882)
-10 ft. (-3.05 m)			19,713 (8942)	19,713 (8942)	18,806 (8530)	13,935 (6231)	14,164 (6425)	8,945 (4057)		
-15 ft. (-4.57 m)			17,364 (7876)	17,364 (7876)	13,923 (6315)	13,923 (6315)				
<i>With 9-ft. 7-in. (2.91 m) arm and 28-in. (700 mm) triple semi-grouser shoes</i>										
25 ft. (7.62 m)							6,348 (2879)	6,348 (2879)		
20 ft. (6.10 m)							8,868 (4022)	8,868 (4022)	6,672 (3026)	6,672 (3026)
15 ft. (4.57 m)					11,093 (5032)	11,093 (5032)	9,940 (4509)	9,940 (4509)	9,351 (4242)	7,198 (3265)
10 ft. (3.05 m)					15,571 (7063)	15,571 (7063)	11,900 (5298)	10,065 (4565)	10,194 (4624)	6,947 (3151)
5 ft. (1.52 m)					20,080 (9108)	14,511 (6582)	14,025 (6362)	9,458 (4290)	11,209 (5084)	6,648 (3015)
Ground Line					22,077 (10 014)	13,831 (6274)	15,484 (7023)	9,014 (4089)	10,940 (4962)	6,402 (2904)
-5 ft. (-1.52 m)			14,178 (6431)	14,178 (6431)	21,813 (9894)	13,668 (6200)	15,276 (6929)	8,807 (3995)	10,804 (4901)	6,278 (2848)
-10 ft. (-3.05 m)	18,661 (8464)	18,661 (8464)	23,452 (10 638)	23,452 (10 638)	19,922 (9036)	13,782 (6251)	14,804 (6715)	8,824 (4003)	10,860 (4926)	6,339 (2875)
-15 ft. (-4.57 m)			20,995 (9523)	20,995 (9523)	15,959 (7239)	14,152 (6419)	11,521 (5226)	9,112 (4133)		

Lifting Capacities

Boldface italic type indicates hydraulic-limited capacities; lightface type indicates stability-limited capacities, in lb. (kg). Ratings are at bucket lift hook, using 1.05-cu.-yd. (0.80 m³), 1,455-lb. (660 kg) bucket; standard counterweight, situated on firm, level, uniform supporting surface. Figures do not exceed 87 percent of hydraulic capacity or 75 percent of weight needed to tip machine.

Load Point Height	5 ft. (1.52 m)		10 ft. (3.05 m)		15 ft. (4.57 m)		20 ft. (6.10 m)		25 ft. (7.62 m)	
	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side
<i>With 7-ft. 11-in. (2.42 m) arm and 32-in. (800 mm) triple semi-grouser shoes</i>										
25 ft. (7.62 m)					7,000 (3175)	7,000 (3175)				
20 ft. (6.10 m)					10,121 (4591)	10,121 (4591)	9,968 (4521)	9,968 (4521)		
15 ft. (4.57 m)					12,700 (5761)	12,700 (5761)	10,914 (4951)	10,604 (4810)	10,156 (4607)	7,204 (3268)
10 ft. (3.05 m)					17,268 (7833)	15,619 (7085)	12,772 (5793)	10,049 (4558)	10,816 (4906)	6,988 (3170)
5 ft. (1.52 m)							14,685 (6661)	9,484 (4302)	11,332 (5140)	6,721 (3049)
Ground Line					22,240 (10 088)	13,951 (6328)	15,678 (7111)	9,112 (4133)	11,109 (5039)	6,517 (2956)
-5 ft. (-1.52 m)					21,260 (9643)	13,926 (6317)	15,529 (7044)	8,979 (4073)	11,036 (5006)	6,450 (2926)
-10 ft. (-3.05 m)			19,713 (8942)	19,713 (8942)	18,806 (8530)	14,122 (6406)	14,164 (6425)	9,073 (4115)		
-15 ft. (-4.57 m)			17,364 (7876)	17,364 (7876)	13,923 (6315)	13,923 (6315)				
<i>With 9-ft. 7-in. (2.91 m) arm and 32-in. (800 mm) triple semi-grouser shoes</i>										
25 ft. (7.62 m)							6,348 (2879)	6,348 (2879)		
20 ft. (6.10 m)							8,868 (4022)	8,868 (4022)	6,672 (3026)	6,672 (3026)
15 ft. (4.57 m)					11,093 (5032)	11,093 (5032)	9,940 (4509)	9,940 (4509)	9,351 (4242)	7,296 (3309)
10 ft. (3.05 m)					15,571 (7063)	15,571 (7063)	11,900 (5298)	10,193 (4623)	10,194 (4624)	7,044 (3195)
5 ft. (1.52 m)					20,080 (9108)	14,698 (6667)	14,025 (6362)	9,586 (4348)	11,224 (5091)	6,745 (3059)
Ground Line					22,077 (10 014)	14,018 (6358)	15,484 (7023)	9,142 (4147)	11,097 (5034)	6,500 (2948)
-5 ft. (-1.52 m)			14,178 (6431)	14,178 (6431)	21,813 (9894)	13,855 (6285)	15,489 (7026)	8,935 (4053)	10,961 (4972)	6,376 (2892)
-10 ft. (-3.05 m)	18,661 (8464)	18,661 (8464)	23,452 (10 638)	23,452 (10 638)	19,922 (9036)	13,696 (6336)	14,804 (6715)	8,952 (4061)	10,860 (4926)	6,436 (2919)
-15 ft. (-4.57 m)			20,995 (9523)	20,995 (9523)	15,959 (7239)	14,339 (6504)	11,521 (5226)	9,240 (4191)		

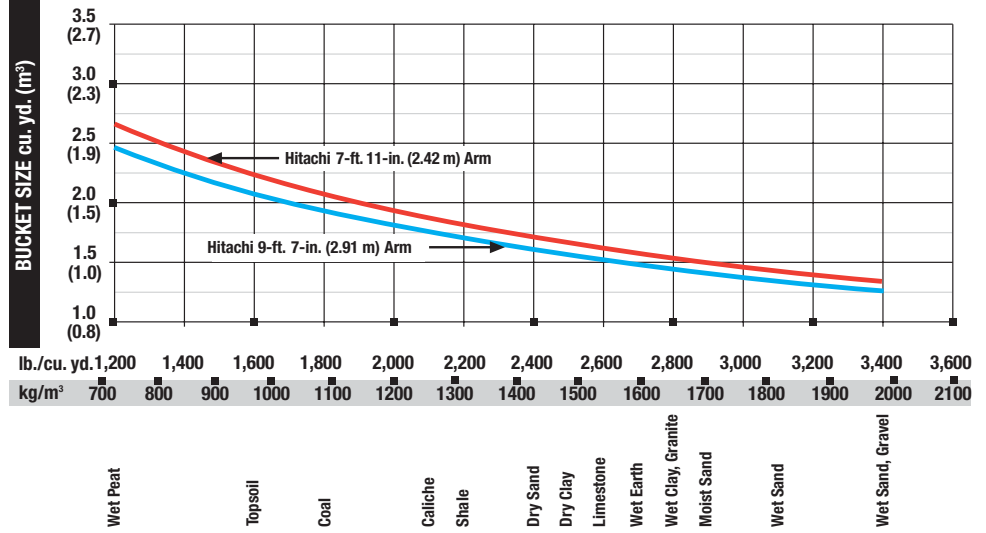
Buckets

A full line of buckets is offered to meet a wide variety of applications. Digging forces are with power boost. Replaceable cutting edges are available through John Deere parts. Optional side cutters add 6 inches (150 mm) to bucket widths. Capacities are SAE heaped ratings.

Type Bucket	Bucket Width		Bucket Capacity		Weight		Bucket Dig Force		Arm Dig Force 7 ft. 11 in. (2.42 m)		Arm Dig Force 9 ft. 7 in. (2.91 m)		Bucket Tip Radius		No. Teeth
	in.	mm	cu. yd.	m ³	lb.	kg	lb.	kN	lb.	kN	lb.	kN	in.	mm	
General-Purpose	30	760	0.79	0.60	1,432	650	28,904	128.6	27,806	123.7	22,873	101.7	58.00	1473	4
High Capacity	36	915	1.00	0.76	1,621	736	28,904	128.6	27,806	123.7	22,873	101.7	58.00	1473	5
	42	1065	1.22	0.93	1,790	813	28,904	128.6	27,806	123.7	22,873	101.7	58.00	1473	5
	48	1220	1.43	1.09	1,976	897	28,904	128.6	27,806	123.7	22,873	101.7	58.00	1473	6
Heavy Duty	24	610	0.52	0.40	1,197	543	29,099	129.4	27,877	124.0	22,924	102.0	57.61	1463	4
	30	760	0.71	0.54	1,369	622	29,099	129.4	27,877	124.0	22,924	102.0	57.61	1463	4
	36	915	0.90	0.69	1,559	708	29,099	129.4	27,877	124.0	22,924	102.0	57.61	1463	5
	42	1065	1.09	0.83	1,731	786	29,099	129.4	27,877	124.0	22,924	102.0	57.61	1463	5
	48	1220	1.29	0.99	1,921	872	29,099	129.4	27,877	124.0	22,924	102.0	57.61	1463	6
Heavy-Duty	24	610	0.56	0.43	1,424	646	28,904	128.6	27,806	123.7	22,873	101.7	58.00	1473	4
High Capacity	30	760	0.76	0.58	1,593	723	28,904	128.6	27,806	123.7	22,873	101.7	58.00	1473	4
	36	915	0.97	0.74	1,782	809	28,904	128.6	27,806	123.7	22,873	101.7	58.00	1473	5
	42	1065	1.19	0.91	1,951	886	28,904	128.6	27,806	123.7	22,873	101.7	58.00	1473	5
Ditching	60	1500	1.14	0.87	1,271	577	40,279	179.2	31,133	138.5	25,271	112.4	41.62	1057	0

Bucket Selection Guide*

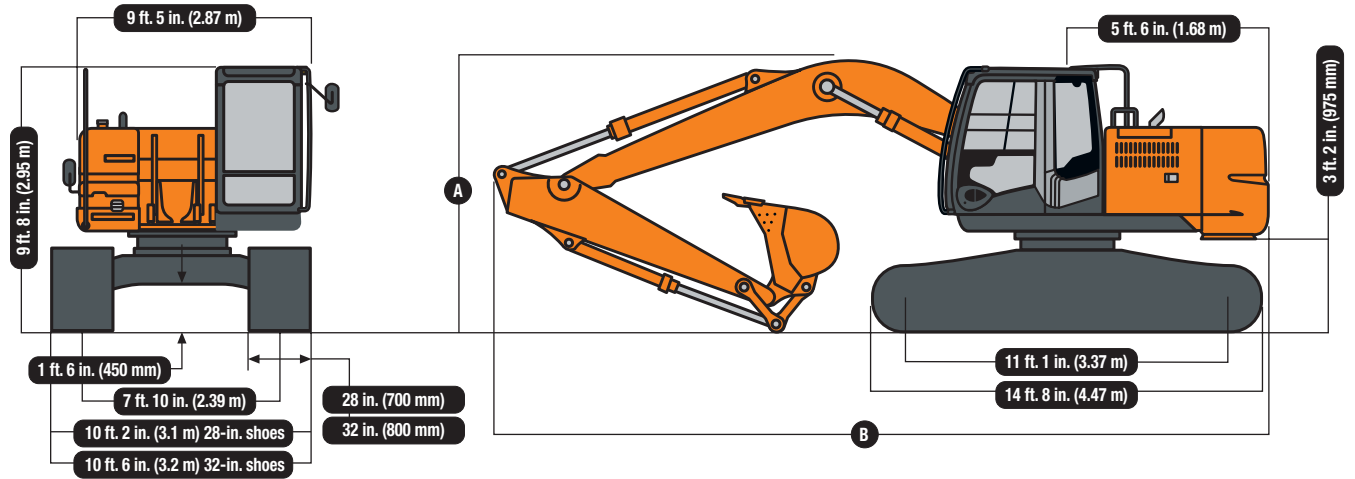
*Contact your Hitachi dealer for optimum bucket and attachment selections. These recommendations are for general conditions and average use. Does not include optional equipment such as thumbs or couplers. Larger buckets may be possible when using light materials, for flat and level operations, less compacted materials, and volume loading applications such as mass excavation in ideal conditions. Smaller buckets are recommended for adverse conditions such as off-level applications, rocks, and uneven surfaces. Bucket capacity indicated is SAE heaped.



Dimensions

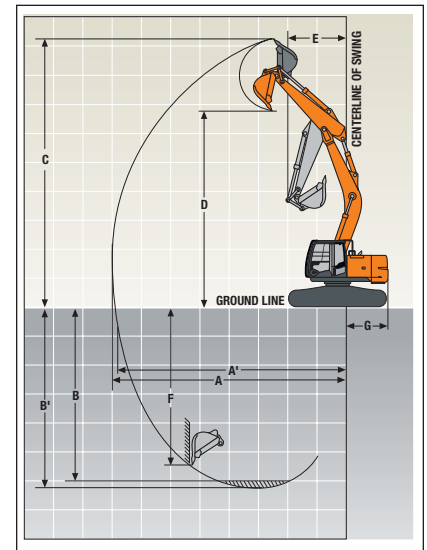
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|--|--|
| A 7-ft. 11-in. (2.42 m) arm 10 ft. 6 in. (3.20 m) | B 7-ft. 11-in. (2.42 m) arm 32 ft. 0 in. (9.74 m) |
| 9-ft. 7-in. (2.91 m) arm 9 ft. 10 in. (2.98 m) | 9-ft. 7-in. (2.91 m) arm 31 ft. 7 in. (9.62 m) |

ZAXIS 225US LC-3



Operating Information

	Arm Length 7 ft. 11 in. (2.42 m)	Arm Length 9 ft. 7 in. (2.91 m)
Arm Force with 42-in. (1067 mm), 1.09-cu.-yd. (0.83 m ³) Heavy-Duty Bucket with Power Boost	27,877 lb. (124.0 kN)	22,924 lb. (102.0 kN)
Bucket Digging Force with 42-in. (1067 mm) 1.09-cu.-yd. (0.83 m ³) Heavy-Duty Bucket with Power Boost	29,099 lb. (129.4 kN)	29,099 lb. (129.4 kN)
Lifting Capacity Over Front at Ground Level		
20-ft. (6.1 m) Reach with Power Boost	14,533 lb. (6598 kg)	14,248 lb. (6469 kg)
A Maximum Reach.....	31 ft. 3 in. (9.52 m)	32 ft. 10 in. (10.01 m)
A' Maximum Reach at Ground Level	30 ft. 7 in. (9.32 m)	32 ft. 3 in. (9.83 m)
B Maximum Digging Depth	20 ft. 5 in. (6.21 m)	22 ft. 0 in. (6.70 m)
B' Maximum Digging Depth at		
8-ft. (2.44 m) Flat Bottom	19 ft. 7 in. (5.96 m)	21 ft. 4 in. (6.50 m)
C Maximum Cutting Height	34 ft. 8 in. (10.56 m)	36 ft. 0 in. (10.98 m)
D Maximum Dumping Height	25 ft. 1 in. (7.64 m)	26 ft. 5 in. (8.05 m)
E Minimum Swing Radius	9 ft. 0 in. (2.74 m)	7 ft. 9 in. (2.37 m)
F Maximum Vertical Wall	17 ft. 2 in. (5.23 m)	19 ft. 5 in. (5.92 m)
G Tail Swing Radius	5 ft. 6 in. (1.68 m)	5 ft. 6 in. (1.68 m)



Equipment

Key ● Standard Equipment ▲ Optional or Special Equipment

Engine

- Certified to EPA Tier-3 emissions
- Auto-idle system
- Batteries (two 12 volt), 190-min. reserve capacity
- Coolant recovery tank
- Dual-element dry-type air filter
- Electronic engine control
- Enclosed fan guard (conforms to SAE J1308)
- Engine coolant to -34°F (-37°C)
- Fuel filter with water separator
- Full-flow oil filter
- Turbocharger with charge air cooler
- Muffler, under hood, with vertical curved end exhaust stack
- Radiator, oil cooler, and intercooler with dust-protective net
- Glow-plug start aid
- 500-hour engine oil-change interval
- 70% (35 deg.) off-level capability
- Isolation mounted
- Engine oil-drain coupler

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
- ▲ 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 and center
- Two-speed propel with automatic shift
- Upper carrier rollers (2)
- Sealed and lubricated track chain
- ▲ Triple semi-grouser shoes, 28 in. (700 mm)
- ▲ Triple semi-grouser shoes, 32 in. (800 mm)

Upperstructure

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

Front Attachments

- Centralized lubrication system
- Dirt seals on all bucket pins
- Less boom and arm
- HN bushings
- Reinforced resin thrust plates
- Tungsten carbide thermal coating on arm-to-bucket joint
- ▲ Arm, 7 ft. 11 in. (2.42 m)
- ▲ Arm, 9 ft. 7 in. (2.91 m)
- ▲ Attachment quick-couplers
- ▲ Boom cylinder with plumbing to mainframe for less boom and arm
- ▲ Buckets: Ditching / Heavy duty / Heavy-duty high capacity / Side cutters and teeth
- ▲ Material clamps

Operator's Station

- Adjustable independent control positions (levers-to-seat, seat-to-pedals)
- AM/FM radio
- Auto climate control/air conditioner, 20,000 Btu/hr. (5.9 kW), with heater and 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 4-in. (100 mm) adjustable armrests
- Floor mat
- Front windshield wiper with intermittent speeds
- Gauges (illuminated): Engine coolant / Fuel
- Horn, electric
- Hour meter, electric
- Hydraulic shutoff lever, all controls
- Hydraulic warm-up control
- Interior light
- Large cup holder
- Machine Information Center (MIC)
- Mode selectors (illuminated): Power modes – three / Travel modes – two with automatic shift / Work mode – one

Operator's Station (continued)

- 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 console lever
- SAE two-lever control pattern
- Seat belt, 2 in. (51 mm), retractable
- Tinted glass
- Transparent tinted overhead hatch
- Hot/cold beverage compartment
- ▲ Seat belt, 3 in. (76 mm), non-retractable
- ▲ Monitor system with alarm features: Hydraulic oil filter restriction indicator light
- ▲ Air-suspension heated seat
- ▲ 24- to 12-volt D.C. radio convertors, 10 amp
- ▲ Protection screens for cab front, rear, and side
- ▲ Window vandal protection covers

Electrical

- 50-amp alternator
- Blade-type multi-fused circuits
- Positive terminal battery covers
- ZLink™ Ultimate wireless communication system with 3 years of service

Lights

- Work lights: Halogen / One mounted on boom / One mounted on frame

Control Owning and Operating Costs

Customer Personal Service (CPS) is part of Hitachi's proactive, fix-before-fail strategy on machine maintenance that will help control costs, increase profits, and reduce stress. Included in this comprehensive lineup of ongoing programs and services are:

Fluid analysis program – tells you what's going on inside all of your machine's major components so you'll know if there's a problem before you see a decline in performance. Fluid analysis is included in most extended coverage and preventive-maintenance agreements.

Component life-cycle data – gives you vital information on the projected life span of components and lets you make informed decisions

on machine maintenance by telling you approximately how many hours of use you can expect from an engine, transmission, or hydraulic pump. This information can be used to preempt catastrophic downtime by servicing major components at about 80 percent of their life cycle.

Preventive Maintenance (PM) agreements – give you a fixed cost for maintaining a machine for a given period of time. They also help you avoid downtime by ensuring that critical maintenance work gets done right and on schedule. On-site preventive maintenance service performed where and when you need it helps protect you from the expense of catastrophic failures and lets you avoid waste-disposal hassles.

Extended coverage – gives you a fixed cost for machine repairs for a given period of time so you can effectively manage costs. Whether you

work in a severe-service setting or just want to spread the risk of doing business, this is a great way to custom-fit coverage for your operation. And an extended coverage contract also travels well because it's backed by Hitachi and is honored by all Hitachi construction dealers.

Customer Support Advisors (CSAs) – Hitachi believes the CSA program lends a personal quality to Customer Personal Service (CPS). Certified CSAs have the knowledge and skills for helping make important decisions on machine maintenance and repair. Their mission is to help you implement a plan that's right for your business and take the burden of machine maintenance off your shoulders.

Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan at test conditions per ISO9249. No derating is required up to 10,000-ft. (3050 m) 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 32-in. (800 mm) triple semi-grouser shoes; 9-ft. 7-in. (2.91 m) arm; 42-in. (1067 mm), 1.09-cu. yd. (0.83 m³), 1,590-lb. (721 kg) general-purpose bucket; 16,710-lb. (7586 kg) counterweight; full fuel tank; and 175-lb. (79 kg) operator.