ZAXIS 160LC-3

- Engine Net Power: 121 hp (90.2 kW) @ 2,200 rpm
- Operating Weight: 37,908 lb. (17,195 kg)
- Backhoe Bucket: 0.81 cu. yd. (0.62 m³)
### Engine

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer and Model</td>
<td>Isuzu AI-4JJ1X</td>
</tr>
<tr>
<td>certified to EPA Tier-3 emissions</td>
<td></td>
</tr>
<tr>
<td>Net Power (ISO9249)</td>
<td>121 hp (90.2 kW) @ 2,200 rpm</td>
</tr>
<tr>
<td>Cylinders</td>
<td>4</td>
</tr>
<tr>
<td>Displacement</td>
<td>183 cu. in. (2.99 L)</td>
</tr>
<tr>
<td>Aspiration</td>
<td>turbocharged, air-to-air charge air cooler</td>
</tr>
<tr>
<td>Off-Level Capacity</td>
<td>70% (35 deg.)</td>
</tr>
</tbody>
</table>

### Powertrain

**Maximum Travel Speed**
- Low ........................................... 2.1 mph (3.4 km/h)
- High ........................................... 3.3 mph (5.3 km/h)
- Drawbar Pull .................................. 38,030 lb. (17 250 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 50.4 gpm (2 x 191 L/min.)
- Pilot Pump ........................................... one gear
- Maximum Rated Flow .............................. 8.87 gpm (33.6 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 ...................................... 4,250 psi (29 300 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

<table>
<thead>
<tr>
<th>Cylinder</th>
<th>Bore</th>
<th>Rod Diameter</th>
<th>Stroke</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boom (2)</td>
<td>4.33 in. (110 mm)</td>
<td>3.15 in. (80 mm)</td>
<td>43.70 in. (1110 mm)</td>
</tr>
<tr>
<td>Arm (1)</td>
<td>4.72 in. (120 mm)</td>
<td>3.54 in. (90 mm)</td>
<td>53.74 in. (1365 mm)</td>
</tr>
<tr>
<td>Bucket (1)</td>
<td>4.13 in. (105 mm)</td>
<td>2.95 in. (75 mm)</td>
<td>36.81 in. (935 mm)</td>
</tr>
</tbody>
</table>

### Electrical

- Batteries ..................................... 2 x 12 volt
- Alternator ..................................... 50 amp
- Lights ........................................ halogen (one mounted on boom, one mounted on frame)

### Undercarriage

- Carrier Rollers (per side) .................. 2
- Track Rollers (per side) ..................... 7
- Shoes (per side) ............................... 43

**Track**
- Adjustment ...................................... hydraulic
- Chain ........................................... sealed and lubricated

### Swing Mechanism

- Swing Speed ................................... 13.3 rpm
- Swing Torque ................................... 32,353 lb.-ft. (44 000 Nm)

### Ground Pressure

**Triple Semi-Grouser Shoes**
- 24 in. (600 mm) .................................. 5.83 psi (40.2 kPa)
- 28 in. (700 mm) .................................. 5.11 psi (35.2 kPa)
Serviceability

Refill Capacities
- Fuel Tank: 85 gal. (320.0 L)
- Cooling System: 23 qt. (22.0 L)
- Engine Oil with Filter: 16 qt. (15.0 L)
- Hydraulic Tank: 33 gal. (125.0 L)
- Hydraulic System: 52.0 gal. (196.8 L)

Gearbox
- Propel (each): 5.0 qt. (4.7 L)
- Swing: 6.0 qt. (5.7 L)

Operating Weights
With Full Fuel Tank; 175-lb. (79 kg) Operator; 36-in. (914 mm), 0.81-cu.-yd. (0.62 m³), 1,373-lb. (623 kg) Heavy-Duty Bucket; 10-ft. 2-in. (3.10 m) Arm; 7,275-lb. (3300 kg) Counterweight; 12-ft. 10-in. (3.92 m) Undercarriage Length; and Triple Semi-Grouser Shoes
- 24 in. (600 mm): 37,436 lb. (16 981 kg)
- 28 in. (700 mm): 37,908 lb. (17 195 kg)

Optional Components
- Undercarriage with Triple Semi-Grouser Shoes:
  - 24 in. (600 mm): 13,911 lb. (6316 kg)
  - 28 in. (700 mm): 14,383 lb. (6530 kg)
- Upperstructure with Full Fuel Tank (less front attachments and 7,275-lb. [3300 kg] counterweight): 8,997 lb. (4081 kg)
- One-Piece Boom (with arm cylinder): 2,864 lb. (1300 kg)
- Arm with Bucket Cylinder and Linkage:
  - 8 ft. 6 in. (2.60 m): 1,735 lb. (788 kg)
  - 10 ft. 2 in. (3.10 m): 1,925 lb. (874 kg)
- Boom Lift Cylinders (2) Total Weight: 675 lb. (306 kg)
- 36-in. (914 mm), 0.81-cu.-yd. (0.62 m³) Heavy-Duty Bucket: 1,373 lb. (623 kg)
- Counterweight (standard): 7,275 lb. (3300 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 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.

### With 8-ft. 6-in. (2.60 m) arm, 0.78-cu.-yd. (0.60 m³) bucket, and 24-in. (600 mm) triple semi-grouser shoes

<table>
<thead>
<tr>
<th>Load Point Height</th>
<th>Over Front</th>
<th>Over Side</th>
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<tbody>
<tr>
<td>5 ft. (1.52 m)</td>
<td>18,000</td>
<td>18,000</td>
<td>16,758</td>
<td>16,758</td>
<td>15,450</td>
<td>15,450</td>
<td>10,825</td>
<td>10,825</td>
<td>8,485</td>
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</tr>
<tr>
<td>10 ft. (3.05 m)</td>
<td>13,758</td>
<td>13,758</td>
<td>12,523</td>
<td>12,523</td>
<td>11,190</td>
<td>11,190</td>
<td>7,565</td>
<td>7,565</td>
<td>6,170</td>
<td>6,170</td>
</tr>
<tr>
<td>15 ft. (4.57 m)</td>
<td>13,758</td>
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</table>

### With 8-ft. 6-in. (2.60 m) arm, 0.78-cu.-yd. (0.60 m³) bucket, and 28-in. (700 mm) triple semi-grouser shoes

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</tr>
</tbody>
</table>

Ground Line
- 5 ft. (1.52 m): 14,137 (6412) 8,920 (3805) 9,160 (4155) 5,733 (2600) 6,443 (2922) 3,995 (1812)
- 10 ft. (3.05 m): 18,000 (8165) 18,000 (8165) 16,798 (7619) 8,226 (3731) 8,875 (4026) 5,361 (2432)
- 15 ft. (4.57 m): 15,450 (7008) 15,450 (7008) 10,825 (4910) 8,315 (3772) 8,956 (4062) 5,398 (2448)
- 20 ft. (6.10 m): 5,470 (2481) 5,470 (2481) 5,470 (2481) 5,470 (2481) 5,470 (2481) 5,470 (2481)
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 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.

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<tr>
<td>Over Front</td>
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<td>Over Side</td>
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<td>Over Side</td>
</tr>
<tr>
<td>20 ft. (6.10 m)</td>
<td>5,363 (2433)</td>
<td>5,363 (2433)</td>
<td>7,960 (3611)</td>
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<td>6,893 (3127)</td>
</tr>
<tr>
<td>15 ft. (4.57 m)</td>
<td>7,960 (3611)</td>
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<tr>
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<td>13,390 (5975)</td>
</tr>
</tbody>
</table>

**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 Hitachi parts.

**Optional side cutters** add 6 inches (150 mm) to bucket widths. Capacities are SAE heaped ratings.

<table>
<thead>
<tr>
<th>Type Bucket</th>
<th>Bucket Width</th>
<th>Bucket Capacity*</th>
<th>Weight</th>
<th>Bucket Dig Force</th>
<th>Arm Dig Force 8 ft. 6 in. (2.60 m)</th>
<th>Arm Dig Force 10 ft. 2 in. (3.10 m)</th>
<th>Bucket Tip Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>General-Purpose</td>
<td>24</td>
<td>0.54</td>
<td>1,081</td>
<td>20,920</td>
<td>93.1</td>
<td>18,804</td>
<td>83.6</td>
</tr>
<tr>
<td>High Capacity</td>
<td>30</td>
<td>0.72</td>
<td>1,253</td>
<td>22,697</td>
<td>101.0</td>
<td>19,352</td>
<td>86.1</td>
</tr>
<tr>
<td>Heavy Duty</td>
<td>36</td>
<td>0.91</td>
<td>1,443</td>
<td>22,697</td>
<td>101.0</td>
<td>19,352</td>
<td>86.1</td>
</tr>
</tbody>
</table>

**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 applications 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

| A | 8-ft. 6-in. (2.60 m) arm | 9 ft. 5 in. (2.87 m) |
|   | 10-ft. 2-in. (3.01 m) arm | 10 ft. 2 in. (3.11 m) |

| B | 8-ft. 6-in. (2.60 m) arm | 28 ft. 1 in. (8.55 m) |
|   | 10-ft. 2-in. (3.01 m) arm | 28 ft. 2 in. (8.58 m) |

### Operating Information

**Arm Length**

| 8 ft. 6 in. (2.60 m) | 10 ft. 2 in. (3.10 m) |

- Arm Force with 36-in. (914 mm), 0.81-cu.-yd. (0.62 m³) Heavy-Duty Bucket with Power Boost: 19,352 lb. (86.1 kN)
- Bucket Digging Force with 36-in. (914 mm), 0.81-cu.-yd. (0.62 m³) Heavy-Duty Bucket with Power Boost: 22,697 lb. (101.0 kN)

- Lifting Capacity Over Front at Ground Level with Power Boost: 9,105 lb. (4134 kg)
- Maximum Reach: 29 ft. 1 in. (8.87 m)
- Maximum Reach at Ground Level: 28 ft. 7 in. (8.70 m)
- Maximum Digging Depth: 19 ft. 7 in. (5.98 m)
- Maximum Digging Depth at 8-ft. (2.44 m) Flat Bottom: 18 ft. 10 in. (5.74 m)

- Maximum Cutting Height: 29 ft. 2 in. (8.88 m)
- Maximum Dumping Height: 20 ft. 3 in. (6.17 m)
- Minimum Swing Radius: 9 ft. 7 in. (2.91 m)
- Maximum Vertical Wall: 16 ft. 11 in. (5.16 m)
- Tail Swing Radius: 8 ft. 2 in. (2.49 m)
Equipment

Key ● Standard Equipment ▲ Optional or Special Equipment

Engine
● Certified to EPA Tier-3 emissions
● H/P mode control
● E mode control
● 50 A alternator
● Dry-type air filter with evacuator valve
(with air filter restriction switch for monitor)
● Cartridge-type engine oil filter
● Cartridge-type fuel double filters
● Air cleaner double filters
● Radiator, oil cooler and intercooler
with dust protective net
● Radiator reserve tank
● Fan guard
● Isolation-mounted engine
● Auto-idle system
● Fuel cooler
● Glow-plug start aid
● 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
● 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

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, 8 ft. 6 in. (2.60 m)
● Arm, 10 ft. 2 in. (3.10 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
● Super-long fronts

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
● Hourmeter, 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

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, 24 in. (600 mm)
▲ Triple semi-grouser shoes, 28 in. (700 mm)

Control Owning and Operating Costs
Customer Personal Service (CPS) is part of Hitachi’s proactive, fix-before-failure 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 machine’s major components so you’ll know if there’s a problem before you see a decline in performance. Fluid analysis program lends a personal quality to Customer Personal Service (CPS).

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.

Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan at test conditions per SAE J909. 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 28-in. (700 mm) triple semi-grouser shoes; 10-ft. 2-in. (3.10 m) arm; 36-in. (914 mm)
6.0-lit. yd. (6.22 yd.), 1,375-lb. (623 kg) heavy-duty bucket; 7,275-lb. (3300 kg) counterweight; full fuel tank; and 175-lb. (79 kg) operator.

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