80C

**Engine**
- **Type**: Isuzu CC-4JG1 – naturally aspirated direct-injection diesel
- **Rated power**: 52 SAE net hp (39 kW) @ 2,100 rpm
- **Cylinders**: 4
- **Displacement**: 187 cu. in. (3.06 L)
- **Maximum net torque**: 142 lb.-ft. (192 Nm) @ 1,700 rpm
- **Fuel consumption, typical**: 1.5 to 2.5 gal./hr. (5.7 to 9.5 L/h)
- **Cooling fan**: suction-type
- **Electrical system**: 24 volt with 30-amp alternator
- **Batteries (two 12 volt)**: reserve capacity: 180 min.
- **Off-level capacity**: 70% (35 deg.)

**Hydraulic System**
- **Main pumps**: three variable-displacement axial-piston open center
  - **Maximum flow**: 2 x 16.6 gpm (2 x 63 L/min.) / 1 x 13.9 gpm (1 x 52.5 L/min.)
- **Pilot pump**: one gear
  - **Maximum rated flow**: 5.9 gpm (22.5 L/min.)
  - **Pressure setting**: 570 psi (3930 kPa)
- **Dozer blade pump**: one gear
- **System operating pressure**
  - **Implement circuits**: 4,550 psi (31 380 kPa)
  - **Swing circuits**: 3,270 psi (22 546 kPa)
  - **Blade circuit**: 3,770 psi (25 988 kPa)
  - **Oil filtration**: one 10-micron full-flow return filter with by-pass / one pilot oil filter / one suction filter

**Cylinders**
- **Boom (1)**
  - **Bore**: 4.5 in. (115 mm)
  - **Rod diameter**: 2.6 in. (65 mm)
  - **Stroke**: 34.8 in. (885 mm)
- **Arm (1)**
  - **Bore**: 3.7 in. (95 mm)
  - **Rod diameter**: 2.4 in. (60 mm)
  - **Stroke**: 35.4 in. (900 mm)
- **Bucket (1)**
  - **Bore**: 3.3 in. (85 mm)
  - **Rod diameter**: 2.2 in. (55 mm)
  - **Stroke**: 28.7 in. (730 mm)

**Swing Mechanism**
- **Swing speed**: 0–11.3 rpm
- **Swing torque**: 10,200 lb.-ft. (13 840 Nm)

**Undercarriage**
- **Carrier rollers (per side)**: 1
- **Track rollers (per side)**: 5
- **Idlers (per side)**: 1
- **Shoes, triple semi-grouser (per side)**: 38
- **Track guides**: front
- **Track adjustment**: hydraulic
- **Travel speed**
  - **Low**: 0–2.1 mph (0–3.4 km/h)
  - **High**: 0–3.1 mph (0–5.0 km/h)
- **Drawbar pull**: 12,350 lb. (5602 kg)

**Ground Pressure Data**
- **Average ground pressure with dozer blade**: 3.63 psi (25.03 kPa)
- **Offset boom**: 4.06 psi (28.13 kPa)
**Capacities**

- Fuel tank: 0.36 gal. (136 L)
- Cooling system: 6.1 qt. (5.8 L)
- Engine lubrication, including filter: 10.5 qt. (9.9 L)
- Hydraulic tank: 15.5 gal. (58.7 L)
- Hydraulic system: 26.4 gal. (100 L)
- Propel gearbox (each): 2.6 qt. (2.5 L)

**Operating Weights**

<table>
<thead>
<tr>
<th>With offset boom</th>
<th>With one-piece boom</th>
</tr>
</thead>
<tbody>
<tr>
<td>With full fuel tank; 175-lb. (79 kg) operator; blade; 24-in. (600 mm) triple semi-grouser shoes; 5-ft. 4-in. (1.62 m) arm; and 0.36-cu. yd. (0.28 m³), 30-in. (760 mm), 522-lb. (237 kg) bucket</td>
<td>17,910 lb. (8125 kg)</td>
</tr>
</tbody>
</table>

**Component Weights**

- Undercarriage with 24-in. (600 mm) triple semi-grouser shoes and blade: 6,481 lb. (2940 kg)
- Upperstructure for standard one-piece boom with full fuel tank (less front attachments and 1,763-lb. [800 kg] counterweight): 5,112 lb. (2319 kg)
- Upperstructure for offset boom with full fuel tank (less front attachments and 1,763-lb. [800 kg] counterweight): 5,112 lb. (2319 kg)
- Standard one-piece boom (with boom and arm cylinders): 1,082 lb. (491 kg)
- Offset boom (with boom and arm cylinders): 1,986 lb. (902 kg)
- Boom cylinder only: 203 lb. (92 kg)
- Arm with bucket cylinder and linkage:
  - 5 ft. 4 in. (1.62 m): 567 lb. (257 kg)
  - 6 ft. 11 in. (2.12 m): 653 lb. (296 kg)
- Counterweight: 1,763 lb. (800 kg)
- 0.36-cu. yd. (0.28 m³), 30-in. (760 mm) bucket: 522 lb. (237 kg)

**Operating Information**

<table>
<thead>
<tr>
<th>Arm Length</th>
<th>Arm Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arm force with 30-in. (760 mm), 0.36-cu. yd. (0.28 m³), 522-lb. (237 kg) heavy-duty bucket:</td>
<td>8,425 lb. (37.5 kN)</td>
</tr>
<tr>
<td>Bucket digging force with 30-in. (760 mm), 0.36-cu. yd. (0.28 m³), 522-lb. (237 kg) heavy-duty bucket:</td>
<td>11,220 lb. (49.9 kN)</td>
</tr>
<tr>
<td>Lifting capacity over front @ ground level 15-ft. (4.57 m) reach:</td>
<td>2,988 lb. (1355 kg)</td>
</tr>
<tr>
<td>A Maximum reach:</td>
<td>20 ft. 6 in. (6.25 m)</td>
</tr>
<tr>
<td>A’ Maximum reach @ ground level:</td>
<td>20 ft. 6 in. (6.10 m)</td>
</tr>
<tr>
<td>B Maximum digging depth:</td>
<td>13 ft. 5 in. (4.09 m)</td>
</tr>
<tr>
<td>B’ Maximum digging depth @ 8-ft. (2.44 m) flat bottom:</td>
<td>12 ft. 3 in. (3.74 m)</td>
</tr>
<tr>
<td>C Maximum cutting height:</td>
<td>23 ft. 3 in. (7.09 m)</td>
</tr>
<tr>
<td>D Maximum dumping height:</td>
<td>16 ft. 10 in. (5.13 m)</td>
</tr>
<tr>
<td>E Minimum swing radius:</td>
<td>5 ft. 8 in. (1.72 m)</td>
</tr>
<tr>
<td>F Maximum vertical wall:</td>
<td>12 ft. 3 in. (3.73 m)</td>
</tr>
<tr>
<td>G Tail swing radius:</td>
<td>5 ft. 9 in. (1.75 m)</td>
</tr>
</tbody>
</table>
### Dimensions

**80C**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>5-ft. 4-in. (1.62 m) arm</th>
<th>6-ft. 11-in. (2.12 m) arm</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>19 ft. 11 in. (6.08 m)</td>
<td>20 ft. 1 in. (6.12 m)</td>
</tr>
<tr>
<td>B</td>
<td>8 ft. 4 in. (2.55 m)</td>
<td>9 ft. 5 in. (2.88 m)</td>
</tr>
<tr>
<td>C</td>
<td>12 ft. 2 in. (3.71 m)</td>
<td>12 ft. 2 in. (3.71 m)</td>
</tr>
<tr>
<td>D</td>
<td>13 ft. 8 in. (4.16 m)</td>
<td>12 ft. 2 in. (3.71 m)</td>
</tr>
<tr>
<td>E</td>
<td>12 ft. 5 in. (3.78 m)</td>
<td>10 ft. 11 in. (3.33 m)</td>
</tr>
<tr>
<td>F</td>
<td>14 ft. 0 in. (4.27 m)</td>
<td>14 ft. 0 in. (4.27 m)</td>
</tr>
<tr>
<td>G</td>
<td>11 in. (280 mm)</td>
<td>11 in. (280 mm)</td>
</tr>
<tr>
<td>H</td>
<td>1 ft. 5 in. (435 mm)</td>
<td>1 ft. 5 in. (435 mm)</td>
</tr>
<tr>
<td>I</td>
<td>7 ft. 7 in. (2.32 m)</td>
<td>7 ft. 7 in. (2.32 m)</td>
</tr>
</tbody>
</table>

*Maximum digging depth will be less in applications where offset boom interferes with edge of trench.*

### Dimensions for Offset Boom

<table>
<thead>
<tr>
<th>Dimension</th>
<th>With No Offset</th>
<th>With Offset to Left</th>
<th>With Offset to Right</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>13 ft. 8 in. (4.16 m)</td>
<td>12 ft. 2 in. (3.71 m)</td>
<td>12 ft. 2 in. (3.71 m)</td>
</tr>
<tr>
<td>B</td>
<td>12 ft. 5 in. (3.78 m)</td>
<td>10 ft. 11 in. (3.33 m)</td>
<td>10 ft. 11 in. (3.33 m)</td>
</tr>
<tr>
<td>C</td>
<td>20 ft. 3 in. (6.165 m)</td>
<td>19 ft. 2 in. (5.84 m)</td>
<td>19 ft. 2 in. (5.84 m)</td>
</tr>
<tr>
<td>D</td>
<td>16 ft. 9 in. (5.05 m)</td>
<td>15 ft. 5 in. (4.70 m)</td>
<td>15 ft. 5 in. (4.70 m)</td>
</tr>
<tr>
<td>E</td>
<td>30 ft. 4 in. (9.24 m)</td>
<td>21 ft. 0 in. (6.40 m)</td>
<td>21 ft. 0 in. (6.40 m)</td>
</tr>
<tr>
<td>F</td>
<td>1 ft. 4 in. (400 mm)</td>
<td>1 ft. 4 in. (400 mm)</td>
<td>1 ft. 4 in. (400 mm)</td>
</tr>
<tr>
<td>G</td>
<td>11 in. (280 mm)</td>
<td>11 in. (280 mm)</td>
<td>11 in. (280 mm)</td>
</tr>
<tr>
<td>H</td>
<td>1 ft. 5 in. (435 mm)</td>
<td>1 ft. 5 in. (435 mm)</td>
<td>1 ft. 5 in. (435 mm)</td>
</tr>
<tr>
<td>I</td>
<td>7 ft. 7 in. (2.32 m)</td>
<td>7 ft. 7 in. (2.32 m)</td>
<td>7 ft. 7 in. (2.32 m)</td>
</tr>
</tbody>
</table>

*Maximum digging depth will be less in applications where offset boom interferes with edge of trench.*
Lift Capacities 80C

BOLDFACE ITALIC type indicates hydraulic-limited capacities; lightface type indicates stability-limited capacities, in lb. (kg). Ratings at bucket lift hook, machine equipped with 24-in. (600 mm) shoes; 0.36-cu. yd. (0.28 m³), 30-in. (760 mm), 522-lb. (237 kg) bucket; and situated on firm, 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.

<table>
<thead>
<tr>
<th>Load Point</th>
<th>5 ft. (1.52 m)</th>
<th>10 ft. (3.05 m)</th>
<th>15 ft. (4.57 m)</th>
<th>20 ft. (6.10 m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>Over Front</td>
<td>Over Side</td>
<td>Over Front</td>
<td>Over Side</td>
</tr>
<tr>
<td>10 ft. (3.05 m)</td>
<td>3,678 (1668)</td>
<td>3,678 (1668)</td>
<td>3,235 (1467)</td>
<td>2,849 (1292)</td>
</tr>
<tr>
<td>5 ft. (1.52 m)</td>
<td>6,033 (2737)</td>
<td>5,020 (2277)</td>
<td>3,139 (1424)</td>
<td>2,687 (1219)</td>
</tr>
<tr>
<td>Ground Line</td>
<td>5,695 (2583)</td>
<td>4,710 (2136)</td>
<td>2,988 (1355)</td>
<td>2,543 (1153)</td>
</tr>
<tr>
<td>–5 ft. (–1.52 m)</td>
<td>7,935 (3599)</td>
<td>7,935 (3599)</td>
<td>5,670 (2572)</td>
<td>4,687 (2126)</td>
</tr>
<tr>
<td>–10 ft. (–3.05 m)</td>
<td>5,210 (2363)</td>
<td>4,844 (2197)</td>
<td>2,946 (1336)</td>
<td>2,503 (1135)</td>
</tr>
</tbody>
</table>

With standard one-piece boom, 6-ft. 11-in. (2.12 m) arm, and blade on ground

<table>
<thead>
<tr>
<th>Height</th>
<th>15 ft. (4.57 m)</th>
<th>10 ft. (3.05 m)</th>
<th>5 ft. (1.52 m)</th>
<th>Ground Line</th>
<th>–5 ft. (–1.52 m)</th>
<th>–10 ft. (–3.05 m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 ft. (4.57 m)</td>
<td>2,570 (1166)</td>
<td>2,570 (1166)</td>
<td>2,570 (1166)</td>
<td>2,570 (1166)</td>
<td>2,570 (1166)</td>
<td>2,570 (1166)</td>
</tr>
<tr>
<td>10 ft. (3.05 m)</td>
<td>2,835 (1286)</td>
<td>2,835 (1286)</td>
<td>2,795 (1268)</td>
<td>2,795 (1268)</td>
<td>2,795 (1268)</td>
<td>2,795 (1268)</td>
</tr>
<tr>
<td>5 ft. (1.52 m)</td>
<td>5,288 (2399)</td>
<td>5,191 (2355)</td>
<td>3,600 (1633)</td>
<td>3,739 (1624)</td>
<td>2,437 (1105)</td>
<td>1,667 (756)</td>
</tr>
<tr>
<td>Ground Line</td>
<td>7,075 (3209)</td>
<td>4,744 (2152)</td>
<td>4,385 (1989)</td>
<td>2,561 (1162)</td>
<td>2,480 (1125)</td>
<td>2,480 (1125)</td>
</tr>
<tr>
<td>–5 ft. (–1.52 m)</td>
<td>6,604 (2996)</td>
<td>6,604 (2996)</td>
<td>7,264 (3295)</td>
<td>4,638 (2104)</td>
<td>4,638 (2104)</td>
<td>4,638 (2104)</td>
</tr>
<tr>
<td>–10 ft. (–3.05 m)</td>
<td>10,373 (4705)</td>
<td>10,373 (4705)</td>
<td>6,098 (2766)</td>
<td>4,730 (2146)</td>
<td>4,730 (2146)</td>
<td>4,730 (2146)</td>
</tr>
</tbody>
</table>

With offset boom, 5-ft. 4-in. (1.62 m) arm, and blade on ground

<table>
<thead>
<tr>
<th>Height</th>
<th>15 ft. (4.57 m)</th>
<th>10 ft. (3.05 m)</th>
<th>5 ft. (1.52 m)</th>
<th>Ground Line</th>
<th>–5 ft. (–1.52 m)</th>
<th>–10 ft. (–3.05 m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 ft. (4.57 m)</td>
<td>2,614 (1186)</td>
<td>2,614 (1186)</td>
<td>3,549 (1610)</td>
<td>3,549 (1610)</td>
<td>2,917 (1323)</td>
<td>2,917 (1323)</td>
</tr>
<tr>
<td>10 ft. (3.05 m)</td>
<td>3,549 (1610)</td>
<td>3,549 (1610)</td>
<td>3,490 (1583)</td>
<td>3,490 (1583)</td>
<td>2,462 (1171)</td>
<td>2,462 (1171)</td>
</tr>
<tr>
<td>5 ft. (1.52 m)</td>
<td>5,922 (2718)</td>
<td>4,029 (1828)</td>
<td>3,963 (1798)</td>
<td>2,188 (992)</td>
<td>2,133 (958)</td>
<td>2,133 (958)</td>
</tr>
<tr>
<td>Ground Line</td>
<td>4,285 (1944)</td>
<td>4,285 (1944)</td>
<td>3,963 (1754)</td>
<td>2,188 (992)</td>
<td>2,133 (958)</td>
<td>2,133 (958)</td>
</tr>
</tbody>
</table>

Buckets

A full line of buckets is offered to meet a wide variety of applications. Tooth selection includes either the John Deere Fanggs® tooth or Tiger, Twin Tiger, Flare, or Star tooth. Replaceable cutting edges are available through John Deere parts.

<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 5 ft. 4 in. (1.62 m)</th>
<th>Arm Dig Force 6 ft. 11 in. (2.12 m)</th>
<th>Bucket Tip Radius</th>
<th>No. Teeth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy-Duty</td>
<td>18 in. (460)</td>
<td>0.19 cu. yd. (0.15 m³)</td>
<td>421 lb. (191 kg)</td>
<td>11,185 lb. (49.8 kN)</td>
<td>8,500 lb. (37.8 kN)</td>
<td>7,190 lb. (32.0 kN)</td>
<td>39.0 in. (991 mm)</td>
<td>4</td>
</tr>
<tr>
<td>Plate Lip</td>
<td>24 in. (610)</td>
<td>0.27 cu. yd. (0.21 m³)</td>
<td>495 lb. (225 kg)</td>
<td>11,185 lb. (49.8 kN)</td>
<td>8,500 lb. (37.8 kN)</td>
<td>7,190 lb. (32.0 kN)</td>
<td>39.0 in. (991 mm)</td>
<td>5</td>
</tr>
<tr>
<td>Ditching</td>
<td>42 in. (1065)</td>
<td>0.53 cu. yd. (0.41 m³)</td>
<td>714 lb. (323 kg)</td>
<td>12,465 lb. (55.4 kN)</td>
<td>8,845 lb. (39.3 kN)</td>
<td>7,435 lb. (33.1 kN)</td>
<td>34.1 in. (866 mm)</td>
<td>0</td>
</tr>
</tbody>
</table>

*All capacities are SAE heaped ratings.
80C Excavator

Key: ● Standard equipment ▶ Optional or special equipment

80C Engine
● Auto-idle system
● Batteries (two 12 volt), 180-min. (1,250 CCA) reserve capacity
● Dual element dry-type air filter
● Enclosed fan guard (conforms to SAE J1038)
● Engine coolant to –34°F (–37°C)
● Fuel filter with water separator
● Full-flow oil filter
● Radiator trash screen
● Tier II EPA off-road emission compliant
● Underhood muffler with vertical curved end exhaust stack

Hydraulic System
● Auxiliary valve section
● Auxiliary pilot controls
● Reduced-drift valve for boom down
● Spring-applied, hydraulically released automatic swing brake
● Auxiliary hydraulic and electric pilot controls
● Hydraulic filter restriction indicator kit

Undercarriage
● Planetary final drive with axial piston motors
● Propel motor shields
● Two-speed propel
● Track guards, front idler
● Triple semi-grouter shoes, 24 in. (600 mm)
● Undercarriage with blade
● Upper carrier roller (1)

Upperstructure
● Counterweight, 1,763 lb. (800 kg)
● Right- and left-hand mirrors
● Vandal locks with ignition key: Cab door / Engine hood / Fuel cap / Service doors

80C Front Attachments
● Arm, 5 ft. 4 in. (1.62 m)
● Arm, 6 ft. 11 in. (2.12 m)
● Bucket-to-arm clearance adjustable bushing (except ditching buckets)
● Centralized lubrication system
● Dirt seals on all bucket pins
● No-boom-arm
● Auxiliary hydraulic lines with shutoff valve
● Boom cylinder with plumbing to mainframe
● Buckets: Ditching / Heavy duty / Side cutters and teeth
● Hydraulic coupler

Operator's Station
● Adjustable seat with independent control positions (seat-to-pedals)
● AM/FM stereo
● Auto climate control/air conditioner, 20,000 Btu/hr. (5.9 kW), heater and pressurizer
● Cell-phone power outlet, 12 volt, 60 watt, 5 amp
● Coat hook
● Deluxe suspension cloth seat with 4-in. (100 mm) adjustable armrests and lumbar support
● Front windshield wiper with intermittent speed
● Gauges (illuminated): Engine coolant / Fuel
● Horn, electric on left control lever
● Hourmeter, electric
● Hydraulic shutoff lever, all controls
● Interior light
● Large cup holder
● Machine Information Center (MIC)

80C Operator's Station (continued)
● Mode selectors (illuminated): Power modes – two / Travel modes – two
● Monitor system with alarm features: Auto-idle indicator light / Engine air cleaner restriction indicator light / Engine coolant temperature indicator light with audible alarm / Engine oil pressure indicator light with audible alarm / Fluid level: Engine coolant level indicator light and engine oil level indicator light / Low alternator charge indicator light / Low fuel indicator light / Preheat indicator
● Motion alarm with cancel switch (conforms to SAE J994)
● Propel pedals and levers
● Seat belt, 2 in. (51 mm), retractable
● Seat belt, 3 in. (76 mm), non-retractable
● Tinted glass
● Transparent tinted overhead hatch with sunshade
● Alternate pilot control pattern
● Circulation fan
● Protection screen for cab lower front window
● Rear secondary exit window kit
● Window vandal protection covers
● 24- to 12-volt D.C. radio converters, 10 amp

Electrical
● 30-amp alternator
● Blade-type multi-fused circuits
● Positive terminal battery covers

Lights
● Halogen work lights: One mounted on boom / One mounted on frame

Control Owning and Operating Costs

Customer Personal Service (CPS) is part of John Deere’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 John Deere and is honored by all Deere construction dealers.

Customer Support Advisors (CSAs) – Deere 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 standard conditions per SAE J1349 and DIN 6270B, using No. 2-D fuel at 35 API gravity. No derating is required up to 10,000-ft. (3050 m) altitude. Gross power is without cooling fan.

Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with PCSA and SAE standards. Except where otherwise noted, these specifications are based on a unit with 0.36-cu. yd. (0.28 m³), 30-in. (760 mm), 522-lb. (237 kg) bucket; 24-in. (600 mm) triple semi-grouter shoe; counterweight, 5-ft. 4-in. (1.62 m) arm; full fuel tank; and 175-lb. (79 kg) operator; and standard equipment.