NEW SuperEX EX220

Rated engine HP: 118 kW (160 PS)
Operating weight
EX220: 22 500 kg (49 600 lb)
EX220LC: 23 800 kg (52 500 lb)
Bucket capacity
PCSA heaped: 0.80—1.40 m³ (1.05—1.83 yd³)
CECE heaped: 0.70—1.20 m³
Smooth, rapid movements and efficient level retraction. The Hitachi EX220 intelligent hydraulic excavator comes with a new level of productivity never before available.

The front attachment works fast and smoothly, with quick response to the operator’s will. It moves up and down matching the quick-action control lever. That eases complicated tasks, such as slope finishing and grading. The renowned EX220 also permits direct access to the skill of an experienced operator thanks to numerous advanced features. The EX220 is Hitachi’s answer to the needs of increasingly tough construction jobs.

- **More Production with Less Fuel**: Production is improved, but not at the cost of fuel consumption. The E (Economy) mode is further refined for ease of use, making possible powerful operation at a cost of the P (Power) mode.
- **Designed for Versatility**: The EX220 is designed for a wide range of applications. Versatility, in other words. The key is the use of an assortment of front attachments. With the extra port, optimum flow is delivered to optional front attachments.
- **More Production with More Power**: Excavation and dumping speeds are increased by increasing the pump delivery flow. Swing acceleration speed is also increased.
- **Efficient Slope Finishing and Grading**: Efficient level retraction is the big feature. This allows quick, smooth finishing works, like slope finishing and grading.
- **Rapid, Sure Response**: Hitachi design focuses on rapid, sure response to job needs. Control levers and boom respond quickly and agilely, well matching the operator’s will. The result is dynamic tamping and rolling.
- **Advanced Cab Mount**: The fluid-filled elastic mount supporting the cab dampens shocks and vibration significantly. Also, the cab bed is rugged, using thick plates.
- **Comfortable Suspension Seat**: The comfort-designed operator seat keeps the operator feeling relaxed. The rugged L-shaped suspension and cold-foamed seat cushions reduce operator fatigue greatly for seating comfort.

- **Sliding Cockpit**: Armrest angle can be adjusted steplessly to operator’s proportions, with a choice of two control lever heights for operator comfort and convenience.
- **Smooth Ride**: Smooth ride and steering are achieved with the improved travel shockless relief valve and damper. Shocks at start and stop of travel are damped dramatically, too.
- **Operator-first Design**: Operator-first is the key cab design concept. Seat belt, and pilot-control shutoff lever, which prevent misoperation when getting in and out of the cab, are provided as standard equipment.
- **Tested Durability**: The machine, before its launch, underwent a number of stringent low-temperature and endurance tests, demonstrating Hitachi’s traditional durability.
Impressive Versatility

1. **Advanced Hydraulics for Productivity**: Pump delivery flow can be adjusted to the load for efficient digging and dumping onto off-highway trucks. The result: production is up 5% to 6% without increase in fuel consumption (compared to our conventional model).

2. **Efficient Slope Finishing and Grading**: Rapid, smooth level retraction can be achieved with the help of the boom pilot sensor. This allows efficient slope finishing and grading during overburden stripping, road maintenance and land grading.

3. **Rapid Response**: Even a slight movement of the control lever is converted into brisk up-and-down movement of the boom. This means both movements are well matched. This advantage is effective in complex operations like tamping in civil engineering jobs and land leveling.

4. **Smooth Ride**: The improved travel shockless relief valve and damper reduce shocks at start and stop of travel. The rugged cab bed and fluid-filled elastic mount help reduce shocks and vibration during travel. These designs ensure smooth ride, reducing operator fatigue.

5. **Work Mode Selector**: With the work mode selector, you can select an optimum mode from four work modes — general purpose, trenching, grading and precision modes — to suit job requirements, at one touch of a switch.

- Improved E-P (Engine-Pump) control system to save energy.
- Smoothly combined operations and pleasant control through the ELLE (Electronic Load-sensing Excavation) system.
- Swing dampener mechanism to eliminate coasting at stop of swing.
- Power digging to increase the digging speed as needed.
- Auto idle to save energy when not in operation.
- Shockless valve absorbs shocks when stopping the front.
- Holding valve prevents lowering of the boom and arm under gravity.
Operator Comfort and Convenience

- Operator comfort and convenience are the top considerations: boosting productivity in other words. With the fluid-filled elastic mount, the operator cab is insulated from shocks and vibration.

The adjustable suspension seat provides seating comfort. The seat and control levers glide together or separately to accommodate the proportions of the operator, enhancing operating convenience and reducing operator's fatigue.

- Shock-dampened, Quiet Cab: Operator comfort is ensured with the fluid-filled elastic mount that effectively damps shocks and vibration, and sturdy cab bed using thick plates. This brings a smooth ride, protected from shocks and vibration.

- Sliding Cockpit: The operator seat, termed the sliding cockpit, glides separately, or together with control levers and monitor panel, adjusting to the proportions of any operator.

- Adjustable Suspension Seat: Seating comfort is further enhanced through the use of I-shaped linkage suspension and cold-foamed seat cushions. This keeps the operator feeling relaxed.

- Lever Height/Armrest Angle Adjust Mechanisms: Armrest angle can be adjusted steplessly to operator's proportions, with a choice of two control lever heights for operator comfort and convenience.

- Ergonomically Designed Control Levers: Pleasant human-touch control is enhanced. Control levers can be shifted with less effort, and lever grips are ergonomically designed.

- Easy-to-Read Monitor and Finger-touch Switches: The monitor is curved for easy reading. Touch switches are resin-molded for dust protection. Each operation can be controlled at the touch of a finger.

- Large Curved Rear Window: The cab rear window glass is curved and large enough to give good rear visibility. Low-profile engine hood helps increase rear visibility.

- Air Conditioner (Optional): An air conditioner, using a freon substitute, maintains the operator comfort all year around, increasing operating efficiency.

- Window washer and intermittent wiper keep the front window clean.
- The front window is spring-assisted for easy storing in the cab.
- Auto-tuning AM radio with digital clock is standard equipment as in automobiles.
The Edge of Mechatronics

From the Hitachi EX220, you'll get more than you expect. The secret is the leading edge of mechatronics, built up through Hitachi's high technologies and years of experience. Hitachi expertise always meets job requirements and often exceeds your expectations. Hitachi engineers are constantly addressing job needs ever before they are demanded. That's the way of Hitachi's design approach. The Hitachi EX220 is the fruit of this design approach.

- **Rugged D-section Frame Skirt**: Rugged D-section frame skirt, proven on the EX series, provides high resistance to deformation.
- **Advanced Travel Mechanism**: Three travel speeds — fast, intermediate and slow — can be selected to suit job conditions. Compact travel motors and piping are logically arranged inside the track frame for unobstructed travel on rough terrain.
- **Seat Belt Provided as Standard**: Seat belt is provided as standard equipment.
- **Environment-Friendly Low Noise Design**: Machine body is all round-pressed for increased rigidity to avoid resonance. All noise sources are boxed in, using sound-absorbing lining that repels oil. In the E mode, engine speed automatically drops to reduce sound.
- **Wave-finned Radiator to Avoid Clogging**: Radiator is fitted with waved fins to prevent clogging and ensure ease of maintenance.
- **Dr. EX Self-diagnostic System**: A portable self-diagnostic system, Dr. EX, provides instant status check of machine conditions, including engine RPM, hydraulic pressure, oil flow, and electrical systems. Dr. EX enables Hitachi servicemen to service and inspect the machine instantly.

Versatility Means Productivity.

Extra Port that Sets Optimum Flow to Optional Attachment: The extra port is a hydraulic source for setting and delivering the optimum oil flow to optional attachment that is well matched with the front attachment.

Attachment Mode Optionally Available: The attachment mode can be selected with the attachment selection switch according to the attachment used. This makes combined operation smooth.
**ENGINE**

- **Model**: Hino H06C-T
- **Type**: 4-cycle water-cooled, direct injection Turbocharged
- **No. of cylinders**: 6
- **Rated flywheel horsepower**: 118 kW (160 PS) at 2 100 min⁻¹ (rpm) [DIN 6271, net]
- **Rated flywheel horsepower**: 116 kW (156 HP) at 2 100 min⁻¹ (rpm) [SAE J1349, net]
- **Maximum torque**: 530 Nm (54 kgf.m, 390 lbf.ft) at 1 600 rpm
- **Piston displacement**: 6.49 L (396 in³)
- **Bore and stroke**: 108 mm × 118 mm (4.25" × 4.65")
- **Batteries**: 2 × 12 V, 120 AH
- **Governor**: Mechanical, speed control with stepping motor

**HYDRAULIC SYSTEM**

ELLE (Electronic Load-sensing Excavation) system designed for job efficiency and controllability.
- **Load-sensing system**
- **Flow dividing control system**
- **Work mode selector**
  - General-purpose mode / Trenching mode
  - Grading mode / Precision mode
- **Power selector designed for maximum productivity and fuel savings**
  - Engine speed sensing system
  - P [Power] mode / E [Economy] mode
  - L [Low speed] mode / I [Low idle] mode

**Main pumps**: 2 variable displacement axial piston pumps
- **Maximum oil flow**: 2 × 189 L/min (49.9 US gpm, 41.6 imp gpm)
- **Pilot pump**: 1 gear pump
- **Maximum oil flow**: 34 L/min (9.0 US gpm, 7.5 imp gpm)

**Hydraulic Motors**
- **Travel**: 2 variable displacement axial piston motors
- **Swing**: 1 axial piston motor

**Relief Valve Settings**
- **Implement circuit**: 34.3 MPa (350 kgf/cm², 4 980 psi)
- **Swing circuit**: 32.2 MPa (328 kgf/cm², 4 660 psi)
- **Travel circuit**: 36.3 MPa (370 kgf/cm², 5 260 psi)
- **Pilot circuit**: 4.9 MPa (50 kgf/cm², 710 psi)

**Hydraulic Cylinders**
- High-strength piston rods and tubes. Cylinder cushion mechanisms provided in all cylinders to absorb shocks at stroke ends.

**Dimensions**

<table>
<thead>
<tr>
<th></th>
<th>Qty</th>
<th>Rod diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boom</td>
<td>4</td>
<td>125 mm (4.92&quot;) 90 mm (3.54&quot;)</td>
</tr>
<tr>
<td>Arm</td>
<td>1</td>
<td>135 mm (5.32&quot;) 100 mm (3.94&quot;)</td>
</tr>
<tr>
<td>Bucket</td>
<td>1</td>
<td>125 mm (4.92&quot;) 85 mm (3.35&quot;)</td>
</tr>
</tbody>
</table>

**Hydraulic Filters**
- Hydraulic circuits use high-quality hydraulic filters. A suction filter is incorporated in the suction line, and 10 μm full-flow filters in the return line and swing/travel motor drain lines.

**CONTROLS**

- **Pilot controls**, Hitachi's original shockless valve and quick warm-up system built in the pilot circuit. Hydraulic warm-up control system for engine and hydraulic oil. Multi selection lever with rotary valve is optionally available for selection of control lever direction.
- **Implement levers**: 2
- **Travel levers with pedals**: 2

**UPPERSTRUCTURE**

- **Revolving Frame**
  - Welded sturdy box construction, using heavy-gauge steel plates for ruggedness. D-section frame for resistance to deformation.

- **Swing Mechanism**
  - Axial piston motor with planetary reduction gear is bathed in oil. Swing circle is single-row, shear-type ball bearing with induction-hardened internal gear. Internal gear and pinion gear are immersed in lubricant. Swing parking brake is spring-SET/hydraulic-released disc type. Swing damper valve in the swing circuit prevents coasting when stopping swing. Swing cushion valve built in swing motor absorbs shocks when stopping swing.
  - **Swing speed**: 10.0 min⁻¹ (rpm)

- **Operator's Cab**
  - Independent roomy cab, 940 mm (37") wide by 1 620 mm (64") high, conforming to ISO * Standards. Reinforced glass windows on 4 sides for visibility. Front windows (upper and lower) are openable and spring-assisted for easy storing in the cab and absorbing shocks during lowering. Adjustable, suspension seat with armrests, movable with or without control levers and monitor panel.
  - * International Standard Organization

**UNDERCARRIAGE**

- **Tracks**
  - Tractor-type undercarriage. Welded track frame, using carefully selected materials. Side frame welded to track frame. Lubricated track rollers, idlers, and sprockets with floating seals.
  - Track shoes with triple grousers made of induction-hardened rolled alloy. Flat and triangular shoes are also available. Heat-treated connecting pins with dirt seals. Hydraulic (grease) track adjusters with shock-absorbing recoil springs.

- **Numbers of Rollers and Shoes on Each Side**
  - Upper rollers: 2
  - Lower rollers: 8: EX220 s, 9: EX220LC s
  - Track shoes: 47: EX220 s, 51: EX220LC s
  - Track guard: 1

- **Traction Device**
  - Each track driven by 2-speed axial piston motor through planetary reduction gear for counterrotation of the tracks. Sprockets are replaceable. Parking brake is spring-SET/hydraulic-released disc type. Travel shockless relief valve built in travel motor absorbs shocks when stopping travel.
  - Automatic transmission system: High—Medium.
  - **Travel speed**
    - High: 0 to 5.5 km/h (3.4 mph)
    - Medium: 0 to 3.5 km/h (2.2 mph)
    - Low: 0 to 2.2 km/h (1.4 mph)
  - **Maximum traction force**: 176.5 kN (18 000 kgf, 39 700 lbf)
  - **Gradeability**: 35° (70%) continuous
WEIGHTS AND GROUND PRESSURE

Equipped with 6.00 m (19' 8") boom, 2.96 m (9' 9") arm and 1.05 m² (1.37 yd²) PCSA heaped bucket.

<table>
<thead>
<tr>
<th>Shoe type</th>
<th>Shoe width</th>
<th>Operating weight</th>
<th>Ground pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trip grousers</td>
<td>600 mm (24&quot;)</td>
<td>22 500 kg (49 600 lb)</td>
<td>48.1 kPa (0.49 kp/cm², 6.97 psi)</td>
</tr>
<tr>
<td></td>
<td>800 mm (31&quot;)</td>
<td>23 100 kg (50 900 lb)</td>
<td>52.3 kPa (0.53 kp/cm², 7.56 psi)</td>
</tr>
<tr>
<td></td>
<td>900 mm (35&quot;)</td>
<td>23 800 kg (52 300 lb)</td>
<td>35.3 kPa (0.36 kp/cm², 5.12 psi)</td>
</tr>
<tr>
<td>Triangular</td>
<td>600 mm (24&quot;)</td>
<td>23 300 kg (51 600 lb)</td>
<td>34.3 kPa (0.35 kp/cm², 4.98 psi)</td>
</tr>
<tr>
<td></td>
<td>700 mm (28&quot;)</td>
<td>24 700 kg (54 300 lb)</td>
<td>32.4 kPa (0.33 kp/cm², 4.69 psi)</td>
</tr>
<tr>
<td>Flat</td>
<td>600 mm (24&quot;)</td>
<td>23 400 kg (51 500 lb)</td>
<td>41.1 kPa (0.42 kp/cm², 6.07 psi)</td>
</tr>
<tr>
<td></td>
<td>700 mm (28&quot;)</td>
<td>24 700 kg (54 300 lb)</td>
<td>32.4 kPa (0.33 kp/cm², 4.69 psi)</td>
</tr>
</tbody>
</table>

Figures in ________ are data on the EX220LC.

Operating weight is the total weight of the basic machine plus 5,050 kg (11,100 lb) counterweight and triple grousers shoes, excluding front-end attachment.

EX220: 18,100 kg (39,900 lb)
EX220LC: 19,400 kg (42,800 lb)

SERVICE REFILL CAPACITIES

<table>
<thead>
<tr>
<th></th>
<th>liters</th>
<th>US gal</th>
<th>Imp gal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel tank</td>
<td>310.0</td>
<td>81.9</td>
<td>68.2</td>
</tr>
<tr>
<td>Engine coolant</td>
<td>27.0</td>
<td>7.1</td>
<td>5.9</td>
</tr>
<tr>
<td>Engine oil</td>
<td>26.0</td>
<td>6.9</td>
<td>5.7</td>
</tr>
<tr>
<td>Swing mechanism</td>
<td>13.2</td>
<td>3.5</td>
<td>2.9</td>
</tr>
<tr>
<td>Travel final device (each side)</td>
<td>6.5</td>
<td>1.7</td>
<td>1.4</td>
</tr>
<tr>
<td>Hydraulic system</td>
<td>260.0</td>
<td>68.7</td>
<td>57.2</td>
</tr>
<tr>
<td>Hydraulic tank</td>
<td>140.0</td>
<td>37.0</td>
<td>30.8</td>
</tr>
</tbody>
</table>

BACKHOE ATTACHMENTS

Boom and arms are of welded, box-section design. 6.00 m (19' 8") boom, and 2.32 m (7' 7"), 2.96 m (9' 9") and 3.61 m (11' 10") arms are available.

Bucket is of welded steel structure. Side clearance adjust mechanism provided on the bucket joint bracket.

Buckets

<table>
<thead>
<tr>
<th>Capacity</th>
<th>CECE heaped</th>
<th>Width</th>
<th>No. of teeth</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCSA heaped</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.80 m³ (1.05 yd³)</td>
<td>0.70 m³</td>
<td>940 mm (37&quot;)</td>
<td>4</td>
<td>700 kg (1,550 lb)</td>
</tr>
<tr>
<td>1.05 m³ (1.37 yd³)</td>
<td>0.90 m³</td>
<td>1 160 mm (46&quot;)</td>
<td>5</td>
<td>820 kg (1,810 lb)</td>
</tr>
<tr>
<td>1.15 m³ (1.50 yd³)</td>
<td>1.00 m³</td>
<td>1 270 mm (50&quot;)</td>
<td>5</td>
<td>870 kg (1,920 lb)</td>
</tr>
<tr>
<td>1.25 m³ (1.63 yd³)</td>
<td>1.10 m³</td>
<td>1 380 mm (54&quot;)</td>
<td>5</td>
<td>920 kg (2,030 lb)</td>
</tr>
<tr>
<td>1.40 m³ (1.83 yd³)</td>
<td>1.20 m³</td>
<td>1 490 mm (59&quot;)</td>
<td>5</td>
<td>890 kg (1,960 lb)</td>
</tr>
<tr>
<td>0.92 m³ (1.02 yd³)</td>
<td>0.80 m³</td>
<td>1 200 mm (44&quot;)</td>
<td>5</td>
<td>1,000 kg (2,200 lb)</td>
</tr>
<tr>
<td>Ripper bucket: 0.70 m³ (0.92 yd³); CECE heaped</td>
<td>Width 1,000 mm (39&quot;)</td>
<td>3</td>
<td>210 kg (460 lb)</td>
<td></td>
</tr>
</tbody>
</table>

* Rock bucket

- Suitable for materials with density of 2,000 kg/m³ (3.70 lb/yd³) or less
- Suitable for materials with density of 1,600 kg/m³ (2.70 lb/yd³) or less
- Suitable for materials with density of 1,100 kg/m³ (1.85 lb/yd³) or less
- Heavy-duty service
- Not recommended
**DIMENSIONS**

<table>
<thead>
<tr>
<th></th>
<th>EX220-3</th>
<th>EX220LC-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Distance between turntables</td>
<td>3 460 mm (11' 4&quot;)</td>
<td>3 840 mm (12' 7&quot;)</td>
</tr>
<tr>
<td>B Undercarriage length</td>
<td>4 260 mm (14' 0&quot;)</td>
<td>4 640 mm (15' 3&quot;)</td>
</tr>
<tr>
<td>C Counterweight clearance</td>
<td>1 090 mm (3' 7&quot;)</td>
<td>1 090 mm (3' 7&quot;)</td>
</tr>
<tr>
<td>D Rear-end swing radius</td>
<td>2 940 mm (9' 8&quot;)</td>
<td>2 940 mm (9' 8&quot;)</td>
</tr>
<tr>
<td>E Overall width of upperstructure</td>
<td>2 870 mm (9' 5&quot;)</td>
<td>2 870 mm (9' 5&quot;)</td>
</tr>
<tr>
<td>F Overall height of cab</td>
<td>2 920 mm (9' 7&quot;)</td>
<td>2 920 mm (9' 7&quot;)</td>
</tr>
<tr>
<td>G Min. ground clearance</td>
<td>460 mm (1' 6&quot;)</td>
<td>460 mm (1' 6&quot;)</td>
</tr>
<tr>
<td>H Track gauge</td>
<td>2 390 mm (7' 10&quot;)</td>
<td>2 390 mm (7' 10&quot;)</td>
</tr>
<tr>
<td>I Track shoe width</td>
<td>G600 mm (24&quot;)</td>
<td>G600 mm (24&quot;)</td>
</tr>
<tr>
<td>J Undercarriage width</td>
<td>2 990 mm (9' 10&quot;)</td>
<td>3 190 mm (10' 5&quot;)</td>
</tr>
<tr>
<td>K Overall width</td>
<td>2 990 mm (9' 10&quot;)</td>
<td>3 190 mm (10' 5&quot;)</td>
</tr>
<tr>
<td>L Overall length</td>
<td>10 260 mm (33' 8&quot;)</td>
<td>10 260 mm (33' 8&quot;)</td>
</tr>
<tr>
<td>M Overall height of boom</td>
<td>3 250 mm (10' 8&quot;)</td>
<td>3 250 mm (10' 8&quot;)</td>
</tr>
<tr>
<td>N Track height</td>
<td>945 mm (3' 1&quot;)</td>
<td>945 mm (3' 1&quot;)</td>
</tr>
</tbody>
</table>

*Excluding track shoe lug.

G: Triple-grouser shoe

T: Triangular shoe

**WORKING RANGES**

<table>
<thead>
<tr>
<th>Arm length</th>
<th>EX220-3</th>
<th>EX220LC-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Max. digging reach</td>
<td>9 710 mm (31' 10&quot;)</td>
<td>10 270 mm (33' 8&quot;)</td>
</tr>
<tr>
<td>A' Max. digging reach on ground</td>
<td>9 530 mm (31' 3&quot;)</td>
<td>10 100 mm (33' 2&quot;)</td>
</tr>
<tr>
<td>B Max. digging depth at 8' level</td>
<td>6 310 mm (20' 8&quot;)</td>
<td>6 950 mm (22' 10&quot;)</td>
</tr>
<tr>
<td>B' Max. digging depth at 10' level</td>
<td>6 070 mm (19' 11&quot;)</td>
<td>6 740 mm (22' 1&quot;)</td>
</tr>
<tr>
<td>C Max. cutting height</td>
<td>9 410 mm (30' 10&quot;)</td>
<td>9 630 mm (31' 7&quot;)</td>
</tr>
<tr>
<td>D Max. dumping height</td>
<td>6 530 mm (21' 5&quot;)</td>
<td>6 760 mm (22' 2&quot;)</td>
</tr>
<tr>
<td>E Min. swing radius</td>
<td>3 920 mm (12' 10&quot;)</td>
<td>3 850 mm (12' 8&quot;)</td>
</tr>
<tr>
<td>F Max. vertical wall</td>
<td>5 400 mm (17' 9&quot;)</td>
<td>6 030 mm (19' 9&quot;)</td>
</tr>
</tbody>
</table>

**Bucket digging force**

- EX220-3: 136.3 kN (13 900 kgf, 30 600 lbf)
- EX220LC-3: 136.3 kN (13 900 kgf, 30 600 lbf)

**Arm crown force**

- EX220-3: 132.4 kN (13 500 kgf, 29 800 lbf)
- EX220LC-3: 132.4 kN (13 500 kgf, 29 800 lbf)

Excluding track shoe lug.
STANDARD EQUIPMENT

ENGINE
- 35 A alternator
- Dry-type air filter with evacuator valve (with safety element)
- Cartridge-type engine oil filter
- Cartridge-type engine oil bypass filter
- Cartridge type fuel filter
- Radiator and oil cooler with dust protective net
- Radiator reserve tank
- Fan guard
- Isolation-mounted engine
- Auto-idling system

HYDRAULIC SYSTEM
- Load-sensing system
- Flow dividing control system
- Work mode selector
- Engine speed sensing system
- E-P control system (power mode selector)
- FPS
- Hydraulic warm-up control system for hydraulic oil
- Quick warm-up system for pilot circuit
- Shockless valve in pilot circuit
- Swing cushion valve in swing circuit
- Accumulator in pilot circuit
- Boom-arm holding valve
- Control valve with main relief valve
- Extra port for control valve
- Suction filter
- Full-flow filter
- Pilot filter

CAB
- All-weather sound-suppressed steel cab equipped with reinforced, tinted (bronze color) glass windows, openable front windows-upper with assist spring, and lower and both side windows with intermittent windshield wipers, front window washer, curved rear window, adjustable suspension seat with adjustable armrests, footrest, electric double horn, auto-tuning radio with digital clock, auto-idle switch, seat belt, cigarette lighter, ashtray, parcel pocket, rear tray, floor mat, heater, and pilot control shut-off lever.

MONITOR SYSTEM
- Meters: Hourmeter, engine coolant temperature gauge and fuel meter.
- Warning lamps: Alternator charge, engine oil pressure, engine overheat, air cleaner clog and minimum fuel level.
- Pilot lamps: Engine preheat, engine oil level, engine coolant level and hydraulic oil level
- Alarm buzzers: Engine oil pressure and engine overheat.

LIGHTS
- 2 working lights and 1 cab light

UNDERCARRIAGE
- Travel parking brake
- Travel motor covers
- Track guards and hydraulic track adjuster
- Bolt-on sprocket
- Upper rollers and lower rollers
- Reinforced track links with pin seals
- 600 mm (24") triple grouser shoes: EX220-3 and EX220LC-3

FRONT ATTACHMENTS
- Bucket clearance adjust mechanism
- Monolithically cast bucket link A
- Centralized lubrication system
- Dirt seals on all bucket pins
- 2.96 m (9' 9") arm
- 1.05 m² (11.37 yd²; FCMA heaped) bucket

MISCELLANEOUS
- Standard tool kit
- Lockable machine covers
- Lockable fuel filling cap
- Skid-resistant tapes and handrails.

OPTIONAL EQUIPMENT

Air conditioner
Multi selection lever with rotary valve
Hose rupture valves
Electric fuel refilling pump
Swing motion alarm device with lamps
Travel motion alarm device
Additional pump
Piping kit for extra port
PTO valve & additional valve with piping kit

Type of Bucket
- Rock bucket
- Ripper bucket
- One-point ripper

Type of Shoe
- Triple grouser shoe 800 mm (31")
- Flat shoe 600 mm (24")
- Triangular shoe 900 mm (35")
- Rock bucket for hard, rocky ground
- Ripper bucket for ripping and loading hardpan
- One-point ripper for ripping hardpan
## METRIC MEASURE

### EX220a

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Load point height (m ft)</th>
<th>Load radius (m ft)</th>
<th>At max. reach (m ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 (9’ 10&quot;)</td>
<td>4 (13’ 1&quot;)</td>
<td>5 (16’ 5&quot;)</td>
<td>6 (19’ 8&quot;)</td>
</tr>
<tr>
<td>6 (19’ 8&quot;)</td>
<td></td>
<td></td>
<td><strong>4.50</strong></td>
</tr>
<tr>
<td>4 (13’ 1&quot;)</td>
<td></td>
<td></td>
<td><strong>3.60</strong></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td><strong>4.85</strong></td>
</tr>
<tr>
<td>Bucket</td>
<td><strong>5.76</strong></td>
<td><strong>6.74</strong></td>
<td><strong>4.50</strong></td>
</tr>
<tr>
<td>PCSA: 1.05 m³ (1.37 yd³)</td>
<td></td>
<td></td>
<td><strong>5.36</strong></td>
</tr>
<tr>
<td>CECE: 0.90 m³ (1.21 yd³)</td>
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<td><strong>4.85</strong></td>
</tr>
<tr>
<td>Shoes 600 mm (24&quot;)</td>
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<td><strong>4.25</strong></td>
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</tbody>
</table>

### EX220C

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Load point height (m ft)</th>
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<th>At max. reach (m ft)</th>
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</thead>
<tbody>
<tr>
<td>3 (9’ 10&quot;)</td>
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<tr>
<td>PCSA: 1.05 m³ (1.37 yd³)</td>
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</tr>
<tr>
<td>CECE: 0.90 m³ (1.21 yd³)</td>
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<td><strong>4.85</strong></td>
</tr>
<tr>
<td>Shoes 600 mm (24&quot;)</td>
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<td></td>
<td><strong>4.25</strong></td>
</tr>
</tbody>
</table>

### Notes:
1. Ratings are based on SAE J1097.
2. Lifting capacity of the Super EX Series does not exceed 75% of tipping load with the machine on firm, level ground or 87% full hydraulic capacity.
3. The load point is a hook (not standard equipment) located on the back of the bucket.
4. * indicates load limited by hydraulic capacity.
<table>
<thead>
<tr>
<th>Conditions</th>
<th>Load point</th>
<th>70% (1.3)</th>
<th>80% (1.0)</th>
<th>90% (0.8)</th>
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<td></td>
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<td>0.97</td>
<td>0.95</td>
</tr>
</tbody>
</table>

**Notes:**
1. Ramps are based on 95% of gross load or 100% of nominal capacity.
2. The load point is taken from the point of support of the machine's outriggers.
3. Use the load chart for reference only. Always consult the machine's operator's manual for detailed ratings.