**Features:**
With over 250 deliveries world-wide, the Cat 6030/6030 FS is our most popular and best-selling hydraulic mining shovel model. Along with the same advanced technology available on its larger Cat counterparts, the 6030/6030 FS provides the most powerful engine output in its class for added productivity and facilitates the mobility and flexibility you need from a 300 tonne machine. When optimally paired with our 777 or 785 Series mining trucks, you’ll experience the operational efficiency and productivity you’re looking for, supported by our unmatched Cat dealer network.

**Specifications**

### General Data

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating weight</td>
<td>294 tonnes 324 tons</td>
</tr>
<tr>
<td>Backhoe</td>
<td>296 tonnes 326 tons</td>
</tr>
<tr>
<td>Engine output SAE J1995</td>
<td>2 × Cat C27 ACERT 1140 kW 1,530 hp</td>
</tr>
<tr>
<td>Standard bucket capacity</td>
<td></td>
</tr>
<tr>
<td>Face Shovel (heaped 2:1)</td>
<td>16.5 m³ 21.6 yd³</td>
</tr>
<tr>
<td>Backhoe (heaped 1:1)</td>
<td>17.0 m³ 22.2 yd³</td>
</tr>
</tbody>
</table>

### Features

- TriPower shovel attachment
- Independent oil cooling system
- Spacious walk-through machine house
- 5-circuit hydraulic system
- On-board electronics system: Control and Monitoring Platform (CAMP)
- Board Control System (BCS III)
- Torque control in closed-loop swing circuit
- Automatic central lubrication system
- Xenon working lights

### Operating Weight

<table>
<thead>
<tr>
<th>Type</th>
<th>Track Pads</th>
<th>Weight</th>
<th>Ground Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face Shovel</td>
<td>Standard</td>
<td>1000 mm</td>
<td>22.0 N/cm²</td>
</tr>
<tr>
<td>Operating weight</td>
<td></td>
<td>293 800 kg</td>
<td>647,710 lb</td>
</tr>
<tr>
<td>Ground pressure</td>
<td></td>
<td>22.0 N/cm² 31.9 psi</td>
<td></td>
</tr>
</tbody>
</table>

- Additional track pads available on request

<table>
<thead>
<tr>
<th>Type</th>
<th>Track Pads</th>
<th>Weight</th>
<th>Ground Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backhoe</td>
<td>Standard</td>
<td>1000 mm</td>
<td>22.1 N/cm²</td>
</tr>
<tr>
<td>Operating weight</td>
<td></td>
<td>296 000 kg</td>
<td>652,560 lb</td>
</tr>
<tr>
<td>Ground pressure</td>
<td></td>
<td>22.1 N/cm² 32.1 psi</td>
<td></td>
</tr>
</tbody>
</table>

- Additional track pads available on request

### Diesel Engines

<table>
<thead>
<tr>
<th>Make and model</th>
<th>Total rated net power – ISO 3046/1 1140 kW 1,530 hp 1,800 min⁻¹ 1,800 min⁻¹</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total rated net power – SAE J1349 1140 kW 1,530 hp 1,800 min⁻¹ 1,800 min⁻¹</td>
</tr>
<tr>
<td></td>
<td>Total rated gross power – SAE J1995 1140 kW 1,530 hp 1,800 min⁻¹ 1,800 min⁻¹</td>
</tr>
<tr>
<td>Number of cylinders</td>
<td>12</td>
</tr>
<tr>
<td>Bore</td>
<td>137.7 mm 5.42 in</td>
</tr>
<tr>
<td>Stroke</td>
<td>152.4 mm 6.0 in</td>
</tr>
<tr>
<td>Displacement</td>
<td>27.0 L 1,648 in³</td>
</tr>
<tr>
<td>Aspiration</td>
<td>Turbocharged and charge air-cooled</td>
</tr>
<tr>
<td>Maximum altitude</td>
<td>1750 m 5,750 ft</td>
</tr>
<tr>
<td>at 15°C (59°F) – above sea-level</td>
<td>2 × 150A U.S. E.P.A. Flex</td>
</tr>
<tr>
<td>Alternators</td>
<td>5360 L 1,416 gal</td>
</tr>
<tr>
<td>Emission</td>
<td></td>
</tr>
<tr>
<td>Fuel tank capacity</td>
<td></td>
</tr>
</tbody>
</table>

- Hydraulically driven radiator fan with electronically controlled fan speed
- Micro processed engine management
- Heavy-duty air filters
- Two-stage fuel filter, including water separator
- Additional high-capacity water separator
### Electric Motor – 6030 AC/6030 AC FS

- **Type**: Squirrel cage induction motor
- **Output**: 1000 kW
- **Voltage**: 6.3 kV ± 10% (other on request)
- **Rated current** \( I_N \): 109A (at 6.3 kV)
- **Frequency**: 50 Hz (60 Hz on request)
- **Speed**: 1,500 min\(^{-1}\) (1,800 min\(^{-1}\) at 60 Hz)
- **Starting current**: 450% of \( I_N \) (253% of \( I_N \) optional)

- Custom-made electric motor with increased gap between rotor and stator to withstand severe mining conditions
- Power limit control by Pump Managing System

### Electrical System (diesel drive)

- **System voltage**: 24V
- **Batteries (12V each) in series/parallel installation**: 4 × 210 Ah, 420 Ah – 24V
- **Working spotlights**: 8 × high brightness Xenon lights

- Battery isolation relays
- Emergency stop switches accessible from ground level and in engine module

### Hydraulic System with Pump Managing System

- **Main pumps**: 4 × variable swash plate pumps
- **Maximum oil flow**
  - Diesel version: 4 × 552 L/min, 4 × 146 gal/min
  - AC version: 4 × 543 L/min, 4 × 143 gal/min
- **Maximum pressure, attachment**: 310 bar, 4,495 psi
- **Maximum pressure, travel**: 360 bar, 5,220 psi
- **Swing pumps**: 2 × reversible swash plate double pumps
- **Maximum oil flow**
  - Diesel version: 2 × 394 L/min, 2 × 104 gal/min
  - AC version: 2 × 426 L/min, 2 × 113 gal/min
- **Maximum pressure, swing pumps**: 350 bar, 5,080 psi

- Pump Managing System contains:
  - Electronic load limit control
  - Flow on demand from main pumps depending on joystick position
  - Automatic regulation of main pumps to zero flow without demand
  - Automatic RPM reduction of engine speed during working breaks
  - Reduced oil flow of main pumps at high hydraulic oil temperature or at high engine temperature
  - Pressure cut-off for main pumps
  - Cooling of pump transmission gear oil

### Oil flow of cooling pumps
- **Diesel version**: 2 × 467 L/min, 2 × 123 gal/min
- **AC version**: 2 × 459 L/min, 2 × 121 gal/min

- Cooling system is fully independent of all main circuits, i.e. controlled cooling capacity is available whenever engine is running
- Gear-type cooling pumps supplying high-volume, low-pressure oil to fans and aluminum coolers
- Variable axial piston pumps supplying low-volume, high-pressure oil to fans
- Fan speed is thermostatically controlled
- Extremely high cooling efficiency to ensure optimum oil temperature

### Swing System

- **Swing drives**: 2 compact planetary transmissions with axial piston motors
- **Parking brakes**: Wet multiple-disc brake, spring-loaded/hydraulically released
- **Maximum swing speed**
  - Diesel version: 4.6 rpm
  - AC version: 5.0 rpm
- **Swing ring**: Triple-race roller bearing with sealed internal gearing

- Closed-loop swing circuit with torque control
- Hydraulic braking of the swing motion by counteracting control
- All raceways of swing ring as well as grease bath for internal gearing supplied by automatic, central lubrication system

### Retractable Service Station

Retractable service station installed underneath the engine module and easily accessible from ground.

- Quick couplings for:
  - Diesel fuel
  - Engine coolant – left/right
  - Pump transmission gear oil – left/right
  - Engine oil – left/right
  - Hydraulic oil tank
  - Grease container
- Cat jump-start socket
- Indicator lights for fuel tanks left/right full and grease container full
Operator’s Cab

Operator’s eye level – approximately 6.5 m (21 ft 4 in)

Internal dimensions of cab
- Length: 2200 mm (7 ft 3 in)
- Width: 1600 mm (5 ft 3 in)
- Height: 2150 mm (7 ft 1 in)

- Pneumatically cushioned and multi-adjustable comfort seat with lumbar support, seat heating, safety belt, head- and armrests
- Switch in seat cushion to automatically neutralize the hydraulic controls when operator leaves the seat
- Joystick controls integrated in independently adjustable seat consoles
- Fold-away auxiliary seat with safety belt
- FOPS (rock guard; approved according to DIN ISO 3449) integrated into cab structure
- All-round safety glass, armored windshield and sliding side window
- Windshield with parallel intermittent wiper/washer
- Roller blind at windshield
- Board Control System (BCS III): Electronic monitoring, data logging and diagnostic system for vital signs and service data of engines, hydraulic and lubrication system, featuring:
  - Robust instrument panel including large (12 in) colored touch screen for intuitive handling
  - On-screen PDF documentation (e.g. operating instructions, technical handbook, spare parts catalog, electric circuit diagram)
  - On-screen trouble shooting assistance
  - Graphic charts of logged data
  - Fault memory with storage of related conditions
  - USB, Lan (TCP/IP) and CAN BUS interfaces for data export
- Machine access via retractable boarding ladder, hydraulically operated
- Emergency exit harness kit

Undercarriage

Travel speed (2 stages)
- 1st stage – maximum 1.4 km/h (0.87 mph)
- 2nd stage – maximum 2.7 km/h (1.68 mph)

Maximum tractive force 1637 kN (367,880 lbf)

Gradeability of travel drives – approximate 64%

Track pads (each side) 47
Bottom rollers (each side) 7
Support rollers (each side) 2 plus a skid plate in between

Travel drives (each side) 1 planetary transmission with 2 two-stage axial piston motors

Parking brakes Wet multiple disc brake, spring loaded/hydraulically released

- Cast double-grouser combined pad-links with bushings connected by hardened full floating pins
- All running surfaces of sprockets, idlers, rollers and pad links, as well as teeth contact areas of sprocket and pad links, are hardened
- Fully hydraulic self-adjusting track tensioning system with membrane accumulator
- Automatic hydraulic retarder valve to prevent over-speed on downhill travel
- Acoustic travel alarm

Automatic Lubrication System

Capacity of grease container 450 L (120 gal)

- Dual-circuit system with hydraulically driven heavy-duty pump and electronic time relay control to adjust the pause/lube times
- Connected to the lubrication system are the swing roller bearing with internal gearing and all pivot points of attachment, bucket and cylinders
- System failures displayed by Board Control System
- Grease filters (200 μm) between service station and container as well as directly behind grease pump

Attachments

- Booms and sticks are torsion-resistant, welded box design of high-tensile steel with solid steel castings at pivot areas
- Welding procedures allow for internal counter-welding (double prep weld) wherever possible
- Booms and sticks are stress-relieved after welding
- Catwalks with rails at boom (FS and BH)
- Pressure-free lowering of boom (FS and BH) and stick (FS) by means of a float valve
- Shovel attachment with unique TriPower kinematics ensuring the following main features:
  - Horizontal automatic constant-angle bucket guidance
  - Vertical automatic constant-angle bucket guidance
  - Automatic roll-back limiter to prevent material spillage
  - Kinematic assistance to hydraulic forces
  - Constant boom momentum throughout the whole lift arc
  - Crowd force assistance
- All buckets (FS and BH) are equipped with a wear package consisting of:
  - Special liner material covering main wear areas inside and outside of bucket
  - Lip shrouds between teeth
  - Wing shrouds on side walls
  - Heel shrouds at bottom edges
- Special wear packages for highly abrasive materials on request

Component Accessibility on Superstructure

1 Diesel engines
2 Gearboxes with hydraulic pumps
3 Engine radiators with hydraulically driven fan
4 Oil coolers
5 Hydraulic tank
6 Swing drives
7 Rotary distributor
8 Travel valves
9 Batteries
10 Operator’s seat
11 BCS tower
12 Auxiliary seat
6030/6030 FS Hydraulic Shovel

Dimensions (All dimensions are approximate. Dimensions and weights of AC machine differs slightly. Separate drawings, dimensions and weights can be provided upon request.)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6500 mm</td>
<td>21 ft 4 in</td>
</tr>
<tr>
<td>2</td>
<td>2150 mm</td>
<td>7 ft 1 in</td>
</tr>
<tr>
<td>3</td>
<td>4950 mm</td>
<td>16 ft 3 in</td>
</tr>
<tr>
<td>4</td>
<td>1940 mm</td>
<td>6 ft 4 in</td>
</tr>
<tr>
<td>5</td>
<td>880 mm</td>
<td>2 ft 11 in</td>
</tr>
<tr>
<td>6</td>
<td>5980 mm</td>
<td>19 ft 8 in</td>
</tr>
<tr>
<td>7</td>
<td>7630 mm</td>
<td>25 ft 0 in</td>
</tr>
<tr>
<td>8</td>
<td>6450 mm</td>
<td>21 ft 2 in</td>
</tr>
<tr>
<td>9</td>
<td>6310 mm</td>
<td>20 ft 8 in</td>
</tr>
<tr>
<td>10</td>
<td>7110 mm</td>
<td>25 ft 4 in</td>
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<tr>
<td>11</td>
<td>5300 mm</td>
<td>17 ft 5 in</td>
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<tr>
<td>12</td>
<td>1000 mm</td>
<td>3 ft 3 in</td>
</tr>
<tr>
<td>13</td>
<td>5800 mm</td>
<td>19 ft 0 in</td>
</tr>
<tr>
<td>14</td>
<td>7600 mm</td>
<td>24 ft 11 in</td>
</tr>
</tbody>
</table>

OPTIONAL EQUIPMENT

GENERAL
- Export crating
- Finishing as per end user’s corporate colors

SUPERSTRUCTURE
- Mechanical service crane on superstructure
- Hydraulic service crane on superstructure with auxiliary engine
- Folding access stairway, stairway angle approximately 45°
- Round container with a standard 200 L (53 gal) grease barrel (instead of 450 L (119 gal) grease container)
- Lubricated pinion for greasing of internal gearing of swing ring
- Various cold-weather packages

CAB
- Various heating and air-conditioning systems
- Roller blinds at all windows
- Outside-mounted sun shields

UNDERCARRIAGE
- Track pad width 800 mm (2 ft 7 in) or 1200 mm (3 ft 11 in)
- Automatic lubrication of rollers by central lube system
- Cover plate under carbody (belly plate)

ATTACHMENT
- Guards for shovel cylinders of FS attachment
- Xenon lighting on boom
- Special wear packages

Additional optional equipment available on request.