

PRODUCT SPECIFICATIONS FOR 6030



GENERAL

Engine Output - SAE J1995	1230 kW
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Bucket Payload	30 t
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Operating Weight	294 t
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Note Specifications shown above apply to the highly regulated Face Shovel configuration. Backhoe and Frontless configurations are also available for all regions.

DIESEL ENGINE - HIGHLY REGULATED

Gross Power - SAE J1995	1230 kW
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Net Power - ISO 9249	1212 kW
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Net Power - SAE J1349	1149 kW
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Emissions	Meets U.S. EPA Tier 4 Final and EU Stage V emission standards
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DIESEL ENGINE - LESSER REGULATED

Gross Power - SAE J1995	1142 kW
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Net Power - SAE J1349	1063 kW
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Net Power - ISO 9249	1127 kW
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Emissions	Meets China Nonroad Stage III emission standards, equivalent to U.S. EPA Tier 2
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DIESEL ENGINES

Number of Cylinders - Each Engine	12
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Bore	137.7 mm
Stroke	152.4 mm
Displacement	27 l
Aspiration	Turbocharged and air-to-air aftercooled
Components (1)	Hydraulically driven radiator fan with electronically controlled fan speed
Components (2)	Micro processed engine management
Components (3)	Heavy-duty air filters
Components (4)	Two-stage fuel filter, including water separator
Components (5)	Additional high-capacity water separator
Emissions	Meets U.S. EPA Tier 4 Final and EU Stage V emission standards
Fuel Tank Capacity	5080 l

ELECTRICAL SYSTEM - DIESEL DRIVE

System Voltage	24V
Batteries in Series/Parallel Installation	4 x 210 Ah at 12V each; 420 Ah with 24V in total
Components (1)	Battery isolation relays
Components (2)	Emergency stop switches accessible from ground level and in engine module
Components (3)	14 LED high-brightness working flood lights
Components (4)	11 LED service lights

ELECTRICAL SYSTEM

Batteries

4 maintenance-free batteries

OPERATING WEIGHTS

6030 FS - Standard Track Pads 1000 mm

6030 FS - Operating Weight 298300 kg

6030 FS - Ground Pressure 22.2 N/cm²

6030 - Standard Track Pads 1000 mm

6030 - Operating Weight 299400 kg

6030 - Ground Pressure 22.3 N/cm²

Note

Other track pads available on request. Operating weights include: base machine, front attachment, standard track pads, standard rock bucket, and 100% fuel and lubricants.

HYDRAULIC SYSTEM WITH PUMP MANAGING SYSTEM

Hydraulic Tank Capacity - Approximately 2675 l

Total Volume of Hydraulic Oil - Approximately 3500 l

Main Pumps 4 x variable swash plate pumps

Main Pumps - Maximum Oil Flow - Diesel Version 4 x 552 L/min (4 x 146 gal/min)

Maximum Pressure - Attachment 310 bar

Maximum Pressure - Travel 360 bar

Swing Pumps 2 x reversible swash plate double pumps

Swing Pumps - Maximum Oil Flow - Diesel Version 4 x 197 L/min (4 x 52 gal/min)

Maximum Pressure - Swing Pumps 350 bar

HYDRAULIC OIL COOLING

Oil Flow of Cooling Pumps - Diesel Version 2 x 467 L/min (2 x 123 gal/min)

Diameter - Fan 1220 mm

SWING SYSTEM

Swing Drive 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 r/min

Swing Ring Triple-race roller bearing with sealed internal gearing

Maximum Swing Speed - AC Version 5 r/min

UNDERCARRIAGE

Travel Speed - 1st Stage - Maximum 1.4 km/h

Travel Speed - 2nd Stage - Maximum 2.7 km/h

Maximum Tractive Force 1602 kN

Gradeability - Travel Drives - Approximate 47 %

Track Pads - Each Side 44

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
Components (1)	All running surfaces of sprockets, idlers, rollers and pad links, as well as teeth contact areas of sprocket and pad links, are hardened
Components (2)	Cast double-grouser combined pad-links with bushings connected by hardened full floating pins
Components (3)	Fully hydraulic self-adjusting track tensioning system with membrane accumulator
Components (4)	Automatic hydraulic retarder valve to prevent over-speed on downhill travel
Components (5)	Acoustic travel alarm

OPERATOR'S CAB

Operator's Eye Level - Approximately	6.5 m
Internal Dimensions of Cab - Length	2200 mm
Internal Dimensions of Cab - Width	1600 mm
Internal Dimensions of Cab - Height	2150 mm
Components (1)	Under roof mounted heating ventilating and air conditioning system
Components (2)	External sun shields at side and rear windows

Components (3)	Robust instrument panel including large colored BCS screen with transreflective technology
Components (4)	Board Control System (BCS) electronic monitoring and data logging system for vital signs and service data of engines, hydraulic system and lubrication system
Components (5)	Hydraulically operated 45 degree access stairway
Components (6)	Emergency egress ladder with ladder cage
Components (7)	Switch in seat cushion to automatically neutralize the hydraulic controls when operator leaves the seat
Components (8)	Pneumatically cushioned and multi-adjustable comfort seat with lumbar support, seat heating, safety belt, head- and armrests
Components (9)	Roller blinds at all windows
Components (10)	Windshield with parallel intermittent wiper/washer
Components (11)	All-round safety glass, armored windshield and sliding side window
Components (12)	Operator Protective Guards (ISO 10262:1998 Level II)
Components (13)	Joystick controls integrated in independently adjustable seat consoles
Components (14)	Fold-away auxiliary seat with safety belt

AUTOMATIC LUBRICATION SYSTEM

Capacity - Grease Container	450 l
Type (1)	Dual-circuit system with hydraulically driven heavy-duty pump and electronic time relay control to adjust the pause/lube times
Type (2)	Connected to the lubrication system are the swing roller bearing with internal gearing and all pivot points of attachment, bucket and cylinders

Type (3)

Lubricated pinion for greasing of internal gearing of swing ring

Type (4)

System failures displayed by Board Control System

Type (5)

Grease filters between service station and container as well as directly behind grease pump

BUCKET

Bucket Capacity - Face Shovel (heaped 2:1)

16.5 m³

Bucket Capacity - Backhoe (heaped 1:1)

17 m³

DIGGING FORCES

Maximum Crowd Force

1298 kN

Maximum Tearout Force

944 kN

ATTACHMENTS

Shovel attachment with unique TriPower kinematics ensuring the following main features: (1)

Automatic roll-back limiter to prevent material spillage and kinematic assistance to hydraulic forces

Shovel attachment with unique TriPower kinematics ensuring the following main features: (2)

Horizontal automatic constant-angle bucket guidance and vertical automatic constant-angle bucket guidance

Shovel attachment with unique TriPower kinematics ensuring the following main features: (3)

Constant boom momentum throughout the whole lift arc and crowd force assistance

All buckets (FS and BH) are equipped with a wear package consisting of: (1)

Special liner material covering main wear areas inside and outside of bucket and lip shrouds between teeth

All buckets (FS and BH) are equipped with a wear package consisting of: (2)

Wing shrouds on side walls and heel shrouds at bottom edges

Type (1)

Catwalks with rails at booms

Type (2)

Special wear packages for highly abrasive materials on request

Type (3)

Pressure-free lowering of boom (FS and BH) and stick (FS) by means of a float valve

Type (4)

Welding procedures allow for internal counter-welding (double prep weld) wherever possible

Type (5)

Booms and sticks are stress-relieved after welding

Type (6)

Booms and sticks are torsion-resistant, welded box design of high-tensile steel with solid steel castings at pivot areas

6030 STANDARD EQUIPMENT

2 X CAT C27 ENGINES

AFTERTREATMENT SYSTEM (USED IN TIER 4 FINAL ONLY): -DIESEL OXIDATION CATALYST (DOC) -NOX REDUCTION SYSTEM (NRS) -NON-DEF SOLUTION

CAT POWERTRAIN

Air-to-Air After Cooling (ATAAC)

Turbocharger

Hydraulically driven radiator fan

Electronically controlled fan speed

Micro processed engine management

Cat CEM air filters

Two-stage fuel filter with series filtration

High-capacity water separator

Starting aid -- automatic ether

Exhaust manifold and turbo heat shields

24 V electric starter

Automatic engine idle shut down

Automatic fuel priming

HYDRAULICS

Pump managing system with: -- Electronic load limit control -- Flow on demand -- Automatic zero flow regulation -- Automatic engine RPM reduction -- Reduced oil flow at high hydraulic oil or engine temperature

Pressure cut - off for main pumps
Cat Hydraulic Hose assemblies
Cooling of pump transmission gear oil
Continuous hydraulic oil filtration
Close loop swing circuit
Pressure testing points
Full-flow high-pressure filters (100 μm), main pumps
High pressure filters (100 μm), closed swing circuit
Full-flow filters (10 μm), return circuit
Full-flow filters (10 μm), cooling return circuit
Pressure filters (40 μm and 6 μm), servo circuit
Transmission oil filters (40 μm)
Boom float valves (FS and BH)
Stick float valves (FS)

ELECTRICAL SYSTEM

Four maintenance-free batteries
Lockable battery isolator switch
Lockable starter isolator switch
14 LED high-brightness working flood lights
11 LED service lights
2 acoustic travel alarms -forward and reverse (counterweight, oil cooler)
2 electric horns (1 cab module, 1 oil cooler module)

UNDERCARRIAGE

HD tracks with cast double-grouser track pads
1000 mm (3 ft 3 in) wide track pads
HD fixed axle carrier and load rollers
HD fixed axle idlers
Automatic hydraulic retarder valve
Hinged travel motor covers
Hardened running surfaces of sprockets, idlers, rollers, pad links, teeth contact areas
Fully hydraulic self-adjusting track tensioning system with piston accumulators

AUTOMATIC LUBRICATION SYSTEM

Lubricated pinion in swing ring
Grease filters (200 μm)

OPERATOR ENVIRONMENT

Single HVAC system
Pneumatically cushioned and multiadjustable comfort seat with: -Seat heating -Lumbar support -2-point safety belt -Head and arm rests -Safety switch for automatic motion shutdown
Independently adjustable seat consoles with integrated joysticks
Electronic-Hydraulic Servo Control
FM/AM radio with USB and AUX input
Fold-away auxiliary seat with 2-point safety belt

Sliding side window

Parallel intermittent wiper/washer

Roller blinds at all windows

External sun shields at side and rear windows

Cat Board Control system: -305 mm (12 in) color touchscreen -On-screen documentation in .pdf -On-screen troubleshooting assistance -On-screen graphic charts of logged data -Fault memory of related conditions -

USB, LAN (TCP/IP) and CAN BUS interfaces for data export

Control and Monitoring Platform (CAMP)

45° stairway from engine bay to operator cab

Powered 45° access stairway

2 mirrors on LH side, 1 heated

Level indicators for length and crosswise inclination

Document storage

FRONT ATTACHMENT

Service access holes in boom and stick (FS and BH)

Boom and stick thermally stress relieved after welding

Catwalks with rails at boom (FS and BH)

Wear Package (as per bucket selection)

CAT TECHNOLOGY

Cat Product Link™ Elite (Cellular)

Cat MineStar™ Solutions Ready

SERVICE AND MAINTENANCE

Engine oil exchange interval -- 500 hours

Hydraulic oil change interval -10,000 hours

S·O·SSM sampling ports

Cat CEM air filters with precleaner dust ejection system

Retractable ground level service station with quick couplings for: -Diesel fuel -Engine coolant -left/right engines -Pump transmission gear oil -left/right engines -Engine oil -left/right engines -Hydraulic oil -Grease -Engine oil extension tanks

Cat battery charging connector

Indicator lights

Cat Electronic Technician service port

SAFETY AND SECURITY

Emergency stop switches: 1 in cab, 3 in engine module, 1 pull rope accessible from ground level and 1 on service station

Operator Protective Guard (Top Guard)

All-around safety glass

Armored windshield

Emergency egress ladder

MISCELLANEOUS

ISO or ANSI decals

6030 OPTIONAL EQUIPMENT

GENERAL

Export crating

Custom paint

SUPERSTRUCTURE

New C27 engines meet U.S. EPA Tier 4 Final and EU Stage V emission standards.

Oil change interval extension for engine oil up to 1,000 hours

Round container for a standard 200 L (53 gal) grease barrel (instead of 450 L (119 gal) square grease container)

Cold-weather package (400 V, 50 Hz or 208 V, 60 Hz)

CAB

Cab heating

Dual (redundancy) HVAC system

Camera monitoring system

Operator Protective Guard (Front Guard)

UNDERCARRIAGE

Track pad width 800 mm (2 ft 7 in) or 1200 mm (3 ft 11 in)

Undercarriage guard (belly plate)