

# PRODUCT SPECIFICATIONS FOR 816



<b>Gross Power (SAE J1995:2014)</b>	212 kW
<b>Net Power (SAE J1349:2011)</b>	186 kW
<b>Net Power (ISO 9249:2007)</b>	186 kW
<b>Engine Model</b>	Cat C7.1
<b>Emissions</b>	Meets U.S. EPA Tier 4 Final/ EU Stage V/Japan 2014/ Korea Tier 4 Final emission standards
<b>Rated Speed</b>	2200 r/min
<b>Engine Power (ISO 14396:2002)</b>	205 kW
<b>Peak Torque - 1,400 rpm</b>	1223 N·m
<b>Torque Rise</b>	52%
<b>Bore</b>	105 mm
<b>Stroke</b>	135 mm
<b>Displacement</b>	7.01 l
<b>High Idle Speed</b>	2270 r/min
<b>Low Idle Speed</b>	800 r/min
<b>Maximum Altitude without Derating</b>	3000 m

**Note**

\*Net power advertised is the power available at the engine flywheel when the engine is equipped with a fan, air cleaner, clean emissions module and alternator.

**Engine Model**

Cat C7.1

**Emissions**

Brazil MAR-1 and China Nonroad Stage III, equivalent to Tier 3/EU Stage IIIA

**Rated Speed**

2200 r/min

**Net Power (SAE J1349:2011)**

186 kW

**Gross Power (SAE J1995:2014)**

213 kW

**Engine Power (ISO 14396:2002)**

205 kW

**Peak Torque - 1,400 rpm**

1016 N·m

**Torque Rise**

26%

**Bore**

105 mm

**Stroke**

135 mm

**Displacement**

7.01 l

**High Idle Speed**

2270 r/min

**Low Idle Speed**

800 r/min

**Maximum Altitude without Derating**

3000 m

**Note**

\*Net power advertised is the power available at the engine flywheel when the engine is equipped with a fan, air cleaner, clean emissions module and alternator.

**Operating Weight**

26052 kg

**Operating Weight**

25760 kg

**Transmission Type**

Cat Planetary Power Shift

**Travel Speeds - Forward - First**

6.7 km/h

**Travel Speeds - Forward - Second**

12 km/h

**Travel Speeds - Reverse - First**

7.7 km/h

**Travel Speeds - Reverse - Second**

12 km/h

**Lift/Tilt System - Circuit**

Pilot operated LS valve with EH

**Lift/Tilt System**

Variable displacement piston

**Maximum Flow at 2,200 rpm**

89 l/min

**Relief Valve Setting - Lift/Tilt**

22000 kPa

**Pilot System**

Open center, fixed displacement gear

**Pilot Relief Valve Setting**

21000 kPa

<b>Steering System - Circuit</b>	Pilot, Load Sensing
<b>Steering System - Pump</b>	Piston – Variable Displacement
<b>Maximum Flow at 2,200 rpm</b>	147 l/min
<b>Relief Valve Setting - Steering</b>	27600 kPa
<b>Total Steering Angle</b>	84
<b>Steering Cycle Times - High Idle</b>	3 s
<b>Steering Cycle Times - Low Idle</b>	8.2 s
<b>Fuel Tank</b>	500 l
<b>Diesel Exhaust Fluid Tank*</b>	16 l
<b>Cooling Systems - Tier 4 Final/EU Stage V</b>	81 l
<b>Cooling System - Tier 3/Stage IIIA Equivalent</b>	73 l
<b>Engine Crankcase</b>	20 l
<b>Transmission</b>	56 l
<b>Differential - Final Drives - Front</b>	43 l
<b>Differential - Final Drives - Rear</b>	43 l
<b>Hydraulic System - Implement/Steering</b>	175 l

**Hydraulic Tank Only**

75 l

**Note**

All non-road Tier 4 Final and Stage V diesel engines are required to use: – Ultra Low Sulfur Diesel (ULSD) fuels containing 15 ppm for the EPA, 10 ppm for the EU (mg/kg) sulfur or less. Biodiesel blends up to B20 are acceptable when blended with 15 ppm (mg/kg) sulfur or less ULSD and when the biodiesel feedstock meets ASTM D7467 specifications. – Cat DEO-ULS™ or oils that meet the Cat ECF-3, API CJ-4, and ACEA E9 specifications are required. – Diesel Exhaust Fluid (DEF) that meets all requirements defined in ISO 22241-1.

**Front**

Planetary – Fixed

**Rear**

Planetary – Oscillating

**Oscillation Angle**

±6°

**Service Brakes**

Single Disc Wet (Enclosed) 2 WHL

**Parking Brake**

Drum and Shoe, Spring Applied, Hydraulic Released

**Operator Sound Level (ISO 6396)**

70 dB(A)

**Machine Sound Level (ISO 6395)**

111 dB(A)

**Operator Sound Level (ISO 6396)**

70 dB(A)

**Machine Sound Level (ISO 6395)**

109 dB(A)

**Operator Sound Level (ISO 6396)**

70 dB(A)

**Machine Sound Level (ISO 6395)**

112 dB(A)

<b>Operator Sound Level (ISO 6396)</b>	70 dB(A)
<b>Height - Top of Beacon</b>	4368 mm
<b>Height to Top of Air Conditioning Condenser</b>	4161 mm
<b>Height - Cab Roof</b>	3878 mm
<b>Height - Top of Exhaust Pipe</b>	3547 mm
<b>Height - Top of Hood</b>	2770 mm
<b>Height to Top of Rear Compactor Guard</b>	2499 mm
<b>Ground Clearance to Hitch</b>	519 mm
<b>Ground Clearance to Bottom of Bumper</b>	818 mm
<b>Centerline of Rear Axle to Bumper</b>	1990 mm
<b>Centerline of Rear Axle to Rear Compactor Guard</b>	2614 mm
<b>Hitch to Centerline of Front Axle</b>	1675 mm
<b>Wheel Base</b>	3350 mm
<b>Width over Front Striker Bars</b>	3000 mm
<b>Width over Rear Striker Bars</b>	3036 mm
<b>Width over Platform</b>	3140 mm
<b>Width over Drums</b>	3338 mm

<b>Overall Machine Length with Straight Blade</b>	7806 mm
<b>Capacity</b>	10 m <sup>3</sup>
<b>Height</b>	1961 mm
<b>Height of Cutting Edge</b>	990 mm
<b>Turning Radius - Inside Corner of Blade</b>	2910 mm
<b>Combination Tips (Weight Group)</b>	6148 kg
<b>Plus Tips - Weight (Group)</b>	6342 kg
<b>Paddle Tips - Weight (Group)</b>	5954 kg
<b>Chopper Tips (Weight Group)</b>	5733 kg
<b>Outside Diameter</b>	1717 mm
<b>Drum Diameter</b>	1400 mm
<b>Drum Width</b>	1016 mm
<b>Feet Per Row</b>	5
<b>Feet Per Wheel</b>	20
<b>Replaceable</b>	Weld On
<b>Width Over Drums</b>	3338 mm
<b>Tip Height</b>	159 mm





# 816 STANDARD EQUIPMENT

## NOTE

Standard and optional equipment may vary. Consult your Cat dealer for details.

## POWER TRAIN

Advanced Productivity Electronic Control Shifting (APECS)

Air to air aftercooler

Brakes, full hydraulic, enclosed, wet multiple disc service brakes

Cat clean emission module (Tier 4 Final/Stage V only)

Electro-hydraulic parking brake

Electronic Clutch Pressure Control (ECPC)

Engine, Cat C7.1 (configured for two emissions options): – Tier 4 Final/Stage V – Tier 3/EU Stage IIIA equivalent

Engine driven cooling fan (suction)

Fuel priming pump (electric)

Fuel to air cooler

Ground level engine shutoff

Muffler (under hood) (Tier 3/Stage IIIA equivalent only)

Radiator, unit core

Starting aid (ether)

Throttle lock

Transmission, planetary with 2F/2R speed range control

Torque converter

## ELECTRICAL

Alarm, back-up

Alternator (150 amp)

Batteries, maintenance free

Electrical system (24 volt)

Ground level lockable master disconnect switch

Light, warning unswitched (LED strobe)

Lighting system (front and rear)

Starter, electric

Starting receptacle for emergency start

## OPERATOR ENVIRONMENT

12-volt power port for mobile phone or laptop connection

AccuGrade™ mapping (ready)

Air conditioner with roof mounted condenser

Cab, sound-suppressed pressurized

Camera, rear vision

Coat and hard hat hooks

Finger tip shifting controls

Flip-up armrest

Heater and defroster

Horn, electric

Hydraulic controls – floor mounted

Implement hydraulic lockout

Instrumentation, gauges: – DEF fluid level (Tier 4 Final/Stage V only) – Engine coolant temperature – Fuel level – Hydraulic oil temperature – Speedometer/tachometer – Torque converter temperature

Instrumentation, warning indicators: – Action alert system, three categories – Brake oil pressure – Electrical system, low voltage – Engine failure malfunction alert and action lamp – Parking brake status

Internal four-post rollover protective structure (ROPS/FOPS)

Light, (dome) cab

Lunch box and beverage holders

Mirror, internal (panoramic)

Mirrors, heated rearview (externally mounted)

Radio, CB ready

Radio ready for entertainment: – Antenna – Speakers – Converter (12-volt 10-15 amp)

Seat belt with minder, retractable, 76 mm (3") wide

STIC control system with lockout

Sun visor, front

Tinted glass

Transmission gear (indicator)

Vital Information Management System (VIMS): – Graphical information display – External data port –

Customizable operator profiles – Event indicator light on rear grill

Wet-arm wipers/washers (front and rear): – Intermittent wipers (front and rear)

Seat, Cat Premium Plus (Leather)

## **GUARDS**

Guards, axle (front and rear)

Guard, cab window

Guards, crankcase and power train, hinged

Guard, driveshaft

Guard, radiator

Striker bars

## **FLUIDS**

Antifreeze, premixed 50% concentration extended life (-34° C/-29° F)

## **OTHER STANDARD EQUIPMENT**

DEF tank fill gauge (Tier 4 Final/Stage V only)

Doors, service access (locking)

Ecology drains for engine, radiator, transmission, hydraulic tank

Engine, crankcase, 500 hour interval with CJ-4 oil

Emergency egress

Fire suppression ready

Fuel tank, 500 L (132 gal)

Hitch, drawbar with pin

Hoses, Cat XT™

Hydraulic, engine, and transmission oil coolers

Oil change system, high speed

Oil sampling valves  
Steering, load sensing  
Total hydraulic filtration system  
Vandalism protection caplocks  
Venturi stack

## **STANDARD ATTACHMENTS – OPERATOR ENVIRONMENT**

Glass (window): – rubber-mounted glass  
Horn group (standard)  
Horn group (trumpet)  
Lights – cab: – Standard or LED  
Mirrors – cab: – Standard or heated  
Precleaner – cab: – Standard or powered  
Seat – cab: – Standard or heated and ventilated

## **STANDARD ATTACHMENTS – POWER TRAIN**

Axles: – Axle arrangement (no spin front) – Axle arrangement (no spin rear) – Axle arrangement (no spin front and rear)

## **STANDARD ATTACHMENTS – SPECIAL ARRANGEMENTS**

Engine precleaners: – Turbine or dual stage

## **STANDARD ATTACHMENTS – BLADES**

Dozer Arrangement – Standard (No Blade)

Dozer Arrangement – Straight Blade

Dozer Arrangement – Tilt (No Blade)

## **STANDARD ATTACHMENTS – TECHNOLOGY PRODUCTS**

Product Link: – GSM, satellite

## **STANDARD ATTACHMENTS – WHEELS AND CLEANER BARS**

Wheels and tips: – Wheel arrangement (6.25" plus tip) – Wheel arrangement (6.25" paddle tip) – Wheel arrangement (6.25" plus and paddle) – Wheels, chopper

Bar group – cleaner (cleaner fingers and striker bar)





## **816 OPTIONAL EQUIPMENT**

### **NOTE**

Standard and optional equipment may vary. Consult your Cat dealer for details.

### **OPERATOR ENVIRONMENT**

Radio, AM/FM/AUX/USB/BLUETOOTH

### **FLUIDS**

Antifreeze, -50° C (-58° F)

### **SPECIAL ARRANGEMENTS**

Engine: - Sound suppression

### **STARTING AIDS**

Heater, engine coolant, 120V

Heater, engine coolant, 240V

### **MISCELLANEOUS**

Film (ANSI) (Tier 4 Final/Stage V only)

EU certification (Tier 4 Final/Stage V only)

Plate - year of manufacture (Tier 3/EU Stage IIIA equivalent only)

