

# PRODUCT SPECIFICATIONS FOR 796 AC



## ENGINE

<b>Gross Power - SAE J1995</b>	2610 kW
<b>Engine Model</b>	Cat® C175-16
<b>Net Power - SAE J1349</b>	2539 kW
<b>Rated Speed</b>	1800 r/min
<b>Emissions Rating</b>	Fuel Optimized
<b>Bore</b>	175 mm
<b>Stroke</b>	220 mm
<b>Displacement</b>	85 l
<b>Note (1)</b>	Net Power advertised is the power available at the flywheel when the engine is equipped with air intake system, exhaust system, and alternator.
<b>Note (2)</b>	U.S. EPA Tier 4 Final / EU Stage V available for applicable markets.
<b>Note (3)</b>	Additional fuel optimized selectable power ratings: 2312 kW / 3,100 hp

## WEIGHTS - APPROXIMATE

<b>Nominal Rated Payload</b>	327 t
<b>Rated Gross Machine Weight</b>	576072 kg
<b>Chassis Weight</b>	203398 kg
<b>Body Weight Range</b>	38 833 – 42 907 kg (85,611 – 94,594 lb)

**Note (1)** Consult your tire manufacturer for maximum tire load.

**Note (2)** Chassis weight with full fuel and fluids, standard & mandatory attachments, hoist, body mounting group, rims, and tires.

**Note (3)** Refer to Cat Mining Truck 10/10/20 Overload Policy (AEXQ0250) for maximum gross machine weight limitations

## WEIGHT DISTRIBUTIONS - APPROXIMATE

**Front Axle - Empty** 47 %

**Rear Axle - Empty** 53 %

**Front Axle - Loaded** 33 %

**Rear Axle - Loaded** 67 %

**Note** Weight distributions optimized with Cat body.

## AC DRIVE SYSTEM

**Total Reduction Ratio** 35:01:00

**Top Speed - Loaded** 64 km/h

**Generator/Alternator** Cat brushless, engine mounted, dual bearing

**Controls** Cat IGBT Inverter Technology, air cooled, pressurized cabinet with filtration

**Wheel Motor** Cat AC induction, rear axle mounted

**Cooling System** Cat variable speed, hydraulically driven cooling system

## TIRES

**Standard Tires** 59/80 R63

**Rims** 44" x 63"

**Note (1)** Quick Change Rims optional.

**Note (2)** Caterpillar recommends the customer evaluate all job conditions and consult tire manufacturer for proper tire selection and TKPH (TMPH) capabilities.

## BRAKING SYSTEM

**Service Brakes** Four-Corner, Wet Disc, Oil Cooled, Hydraulically Actuated

**Front Wet Disc Brake Surface Area** 131473 cm<sup>2</sup>

**Rear - Wet Disc Brake Surface Area** 198388 cm<sup>2</sup>

**Standards** Service and Secondary: ISO 3450:2011

**Parking Brake** Four-corner, Multi-disc, Spring Applied, Hydraulically Released

**Load Brake** Rear service brakes

**Dynamic Retarding Power - Continuous** 4086 kW

**Note** Anti-Lock Brake System (ABS) optional with CMD package

## CAPACITY - HE BODY - 100% FILL FACTOR

**Struck** 97-153 m<sup>3</sup> (127-200 yd<sup>3</sup>)

**Heaped (SAE 2:1)** 186-237 m<sup>3</sup> (243-310 yd<sup>3</sup>)

**Note** Consult your local Cat dealer for body recommendations.

## BODY HOISTS

**Type** Twin, two-stage hydraulic cylinders with snubbing valve.

**Pump Flow - High Idle** 964 l/min

**Relief Valve Setting - Raise** 20884 kPa

**Body Raise Time - High Idle** 21 s

**Body Lower Time - Float** 22 s

**Body Power Down- High Idle** 17.5 s

**Note (1)** Twin, two-stage hydraulic cylinders mounted outside main frame; double-acting cylinders in both stages.

**Note (2)** Power raise in both stages; power down capability in both stages.

**Note (3)** Automatic body-lower modulation reduces impact on frame.

## SUSPENSION

**Type** Self-contained nitrogen/oil cylinders, pin-to-pin mounting, top & bottom double shear clevis attachments

**Effective Cylinder Stroke - Front** 102.1 ml

**Effective Cylinder Stroke - Rear** 50.5 mm

**Rear axle - Oscillation** +/- 5.32 degrees

## SERVICE REFILL CAPACITIES

**Fuel Tank** 4922 l

**Fuel Tank (Tier 4)** 4542 l

**Diesel Exhaust Fluid Tank** 378 l

**Cooling System** 799 l

**Crankcase** 310 l

**Front Wheels - Each** 28 l

**Final Drive - Each** 254 l

**Hydraulic Tank** 1121 l

**Hydraulic System - Including Tank** 1458 l

**Grease Tank** 41 kg

**Note (1)** DEF Tank only available for U.S. EPA Tier 4 Final / EU Stage V engine option

## CAB

**Air Conditioning** HFC - 134A refrigerant: 21,600 Btu/h

**Heater / Defroster** 24600 Btu/h

**Note** Ambient capabilities down to -15C (5F) for heater/defroster and up to 50C (122F) for air conditioning.

**ROPS Standards (1)** ROPS (Rollover Protective Structure) meets ISO 3471:2008 for Operator and ISO 13459:2012 for Trainer.

**FOPS Standards** FOPS (Falling Objects Protective Structure) meets ISO 3449:2005 Level II for Operator and ISO 13459:2012 Level II for Trainer.

## SOUND

**Sound Standards** The operator sound pressure level, 75 dB(A), measured according to ISO 6394:2008 and ISO 6396:2008.

## STEERING

**Steer Angle** 39 °

**Turning Diameter - Front** 32.4 m

**Steering Standards**

Steering Standards: ISO 5010:2007

**Note**

Turning Diameter (ISO 7457:1997)

**DIMENSIONS (APPROXIMATE)**

<b>Height - Top of ROPS</b>	6720 mm
<b>Overall Length</b>	15679 mm
<b>Wheel Base</b>	6674 mm
<b>Rear Axle - Tail</b>	4898 mm
<b>Dump Clearance - Empty</b>	1744 mm
<b>Loading Height - Empty</b>	7271 mm
<b>Overall Height - Body Raised</b>	14890 mm
<b>Centerline Front Tire Width</b>	7028 mm
<b>Front Axle Clearance - Loaded</b>	855 mm
<b>Overall Canopy Width (with rock deflectors)</b>	10103 mm
<b>Outside Body/Canopy Width (without rock deflectors)</b>	9639 mm
<b>Inside Body Width</b>	8973 mm
<b>Front Canopy Height - Empty</b>	7928 mm
<b>Rear Axle Clearance - Loaded</b>	854 mm
<b>Centerline of Rear Dual Tire Width</b>	5943 mm
<b>Overall Tire Width - Empty</b>	9226 mm

## 796 AC STANDARD EQUIPMENT

### POWER TRAIN

Cat® C175-16 Diesel Engine: 2610 kW (3,500 hp) Fuel Optimized , U.S. EPA Tier 2 equivalent (available for applicable markets)

Cat® C175-16 Diesel Engine: 2610 kW (3,500 hp) U.S. EPA Tier 4 Final / EU Stage V (available for applicable markets)

C175-16 Diesel Engine

- Turbocharging (4) / Aftercooled (ATAAC)
- Centrifugal oil filter
- Self-cleaning oil filter
- Charging Alternator (225 amp), brushless
- Pre-lubrication/engine
- Air cleaner with precleaner (4)
- Multi-point oil pressure sensing
- Exhaust - Muffler, Right Side Exit

Braking system:

- Electric dynamic retarding with blended low speed
- Oil-cooled, Multi-disc (front and rear) - Service, Parking, Secondary
- Load Brake (rear axle only)
- Extended Life Brake Disc Material
- Automatic Retarder Control (ARC)
- Brake Release Motor (towing)

Cat® AC Drivetrain:

- AC generator
- AC induction motors
- IGBT motor control
- Radial retarding grid with AC motor control
- Programmable top speed
- TorqueBoost technology
- Traction control system

Directional Shift Management:

- Body-up reverse neutralizer
- Body-up shift inhibitor
- Reverse shift inhibitor
- Neutral coast inhibitor
- Neutral start inhibitor

Additional Features:

- Rear axle continuous lubrication and filtration
- Rear axle continuous oil cooling

### OPERATION AND CONTROLS

Integrated ROPS/FOPS cab, insulated/sound suppressed  
Seat, operator, air suspension, adjustable, heated/cooled

Seat, trainer, air suspension, adjustable  
Seatbelt, trainer, two point  
Steering wheel, tilt, telescopic, horn  
Horn, electric  
Directional shift lever  
Single Pedal Retarding & oil-cooled brake control  
Automatic Retard Control (ARC) toggle switch  
Load brake switch  
Windshield with tinted/safety glass  
Window, electric powered, operator/passenger  
Windshield Wipers (2), intermittent control and washer  
Visor (2)  
Storage rear of seats  
Cup holder (2)  
Dome courtesy light  
Entertainment radio ready with speakers and wiring harnesses  
Converter, 12V  
12V DC power supply (1)  
Mirrors, standard (Left-Flat, Right-Convex)  
Fixed access ladder, left hand ground access  
HVAC:  
- Pressurized, filtered environment  
- Air conditioner  
- Heater/defroster  
Metric or English gauges:  
- Speedometer  
- Tachometer  
- Electric hour meter  
- Fuel level  
- DEF level (U.S. EPA Tier 4 Final / EU Stage V engines only)  
- Hydraulic oil temperature  
- Engine coolant temperature  
Service & Information:  
- Diagnostic connection port  
- Electric engine control fault indicator  
- Alarm, Park brake / open operator door  
- Third party telematics port  
- VIMS message center advisor

## **ELECTRICAL**

Audible Alarm, backup  
Electrical system, 24V with fuses and breakers  
Batteries, 12V (8) 90 amp hour  
Ground level Battery charge receptacle



Lighting, signals/service:

- Headlights (4 low beam, 4 high beam), LED
- Backup and marker/hazard, LED
- Directional signals (front and rear), LED
- Front stair access/service deck, LED
- Stop/tail lights, LED
- Engine compartment, LED
- Inverter energy warning lights, LED

Payload indicator, red/green

Payload, digital display

## **ADDITIONAL FEATURES AND EQUIPMENT**

Accumulators (Steering & Brake) – Australian and Canadian certified

Automatic lubrication system

Rotating component guards

Mud Flaps

Tow hooks and pins (front)

Tow pin (rear) (empty truck only)

44 x 63 rims, six position (6)

Fueling:

- 4922 L (1,300 gal) fuel tank (Fuel optimized engines only)
- 4543 L (1,200 gal) fuel tank (U.S. EPA Tier 4 Final / EU Stage V engines only)
- 379 L (100 gallon) DEF tank (U.S. EPA Tier 4 Final / EU Stage V engines only)
- Fuel filter with water separator
- 210 GPM Fast fill fuel system (Left and Right)

Service:

- Engine service platforms (2)
- ANSI or ISO service instructions
- S•O•S<sup>SM</sup> sample points (hydraulic oil, engine coolant, engine oil)
- Ground level machine lockout (battery)
- Ground level engine shut-down
- Drivetrain lockout
- Engine start lockout
- Auxiliary "buddy" dumping quick connect
- Auxiliary steering quick connect (towing)

## **CAT® TECHNOLOGY PRODUCTS**

Cat® MineStar™ Detect (Radar and Camera) System

Cat® Product Link™ Elite (Cellular)

## **DUMP BODY**

High Efficiency (HE) body, 186-237 m<sup>3</sup> (243-310 yd<sup>3</sup>)

- HE Body Mounting Group
- Rock ejectors (chain)

## **ANTIFREEZE**

Cat Extended Life Coolant (ELC) protects to -35° C (-30° F)

## **796 AC OPTIONAL EQUIPMENT**

### **POWER TRAIN**

Cat® C175-16 Diesel Engine: 2312 kW (3,100 hp) power setting (Fuel optimized / U.S. EPA Tier 2 equiv. engines only)

Cat® C175-16 Diesel Engine: 2050 kW (2,750 hp) power setting (Fuel optimized & U.S. EPA Tier 4 Final / EU Stage V engines)

Body heat exhaust

### **OPERATION AND CONTROLS**

Throttle lock

Timer, engine shutdown

Heated mirrors (Left and Right)

Powered access ladder, left hand ground access

Language monitors: English, Spanish, Italian, Portuguese, Dutch, Norwegian, Swedish, Estonian, Latin, Lithuanian, Slovakian, Slovenian, Greek, Romanian, Russian, Polish, Czech, Hungarian, Icelandic, Finnish, Danish, Thai, Indonesian, Vietnam, Malaysian, Chinese

### **ELECTRICAL**

Lighting, signals/service:

- Fog lights, LED

- Work lights, LED

- Side profile lights, LED

- Dump body marker/stop lights, LED

Retarding indicator light, multi-color, cab exterior

### **ADDITIONAL FEATURES AND EQUIPMENT**

Fueling: 300 GPM Fast fill fuel system (Left and Right)

Portable fire extinguisher

Front bumper single-point center tow

Wheel chocks (ANSI and ISO)

44 x 63 rims, quick change (2 quick change, 4 standard)

Service:

- Inverter platform (rear access)

- Service Center, fast-fill

### **CAT® TECHNOLOGY PRODUCTS**

Cat® MineStar™ Detect (Camera Only) System

Cat® Product Link™ Elite (Satellite)

Cat® MineStar™ Health

Cat® MineStar™ Fleet

Cat® MineStar™ Terrain

Cat® MineStar™ Command-Ready

Cat® MineStar™ Command  
Cat® Trolley Assist Attachment

## **DUMP BODY**

HE rock box liner  
HE canopy rock deflectors  
HE rear tire rock deflectors  
HE impact liner

## **ANTIFREEZE**

Antifreeze/coolant protects to -50° C (-58° F)