

PRODUCT SPECIFICATIONS FOR 735



ENGINE

Engine Model	Cat® C13
Bore	130 mm
Stroke	157 mm
Displacement	12.5 l
Peak Engine Torque Net (SAE J1349)	2165 N·m
Peak Engine Torque Speed	1200 r/min
Net Power - SAE J1349	316 kW
Emissions	The 735 meets Tier 4 Final and Stage V emission standards.
Peak Engine Torque Gross (SAE J1995)	2188 N·m
Note (3)	The net power advertised is the power available at the flywheel when the engine is equipped with alternator, air cleaner, muffler and fan at minimum speed.
No Engine De-rating Below	3810 m
Note (2)	The power ratings apply at rated speed of 1,800 rpm when tested under the conditions for the specified standard.
Net Power - ISO 14396	320 kW
Gross Power - SAE J1995	324 kW

Note (5) DEF used in Cat SCR systems must meet the requirements outlined in the International Organization for Standardization (ISO) standard 22241-1. ISO 22241-1 requirements are met by many brands of DEF, including those that carry the AdBlue or API certifications.

Note (4) Net power when the fan is at maximum speed is 254 kW (341 hp) per the SAE reference conditions.

Note (1) The references to Tier 4 Final/Stage V include U.S. EPA Tier 4 Final, EU Stage V, Japan 2014 (Tier 4 Final), and Korea Tier 4 Final emission standards.

**Engine Model - U.S.
EPA Tier 4 Final/EU
Stage V** Cat C13

WEIGHTS

Rated Payload 32 t

BODY CAPACITIES

Heaped (SAE 2:1) 20 m³

Struck 15.5 m³

Tailgate Heaped SAE 2:1 21.3 m³

Tailgate Struck 16.3 m³

TRANSMISSION

Forward - 1 8 km/h

Forward - 2 15 km/h

Forward - 3 23 km/h

Forward - 4 35 km/h

Forward - 5 48 km/h

Forward - 6	57 km/h
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Reverse - 1	9 km/h
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SOUND LEVELS

Interior Cab	72 dB(A)
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Note (2) Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/windows open) for extended periods or in noisy environments.

Note (1) The operator sound exposure Leq (equivalent sound pressure level) measured according to the work cycle procedures specified in ANSI/SAE J1166 OCT98 is 72 dB(A), for the cab offered by Caterpillar, when properly installed and maintained and tested with the doors and windows closed.

OPERATING WEIGHTS

Total - Loaded	57240 kg
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Front Axle - Empty	15480 kg
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Total - Rated Load	32000 kg
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Rear Axle - Loaded	18720 kg
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Rear Axle - Empty	4770 kg
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Center Axle - Empty	4990 kg
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Center Axle - Rated Load	13950 kg
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Front Axle - Loaded	19580 kg
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Total - Empty	25240 kg
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Front Axle - Rated Load	4100 kg
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Rear Axle - Rated Load	13950 kg
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Center Axle - Loaded

18940 kg

SERVICE REFILL CAPACITIES

Fuel Tank

412 l

Cooling System

83 l

Hydraulic System

110 l

Engine Crankcase

38 l

Transmission

56 l

Final Drives/Differential

125 l

Output Transfer Gear Box

25 l

DEF Tank

20 l

BODY HOIST

Raise Time

12 s

Lower Time

11 s

STEERING

Lock to Lock

4.75 seconds @ 60 rpm

STANDARDS

Brakes

ISO 3450 – 2011

Cab - FOPS

ISO 3449 Level II – 2005

Cab - ROPS

ISO 3471 – 2008

Steering

ISO 5010 – 2007

BODY PLATE

Type

High strength Brinell HB450 wear resistant steel

TURNING CIRCLE

Turning Dimensions - SAE Turning Radius 7470 mm

Turning Dimensions - Inside Radius 3793 mm

Turning Dimensions - Clearance Radius 8075 mm

Note Dimensions are for machines equipped with 750/65 R25 tires.

Turning Dimensions - Steer Angle - Left/Right 45°

Turning Dimensions - Aisle Width 5393 mm

OPTIMAL LOADER/TRUCK PASS MATCHING

Hydraulic Excavators: 5–6
336F/336F XE -
Passes

Note An optimum system match gives you a major productivity advantage. The 735 is an excellent match for the Cat 349F and 336F Hydraulic Excavators; and Cat 972M, 966M, 962M and 950M Wheel Loaders. Having matched loading and hauling tools results in increased production and lower system costs per unit of volume moved.

Hydraulic Excavators: 4–5
349F/349F XE -
Passes

Wheel Loaders: 3–4
972M/972M XE -
Passes

Wheel Loader: 962M - 4–5
Passes

Wheel Loader: 950M - 5
Passes

Wheel Loaders: 4
966M/966M XE -
Passes

BODY PLATE THICKNESS

Base Plate 13 mm

Front Plate 7 mm

Side Plates 11 mm

735 STANDARD EQUIPMENT

NOTE

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

OPERATOR ENVIRONMENT

Tilt and telescopic steering wheel

Adjustable air vents

Retractable belt: Operator seat and second seat

Glass windows:

- Front, laminated and tinted
- Sides and rear, toughened and tinted

Liquid Crystal Display (LCD):

- Alert indicator
- Selected gear and direction
- Speed or auto shift
- Review Operation and Maintenance Manual (OMM)
- Primary steering failure warning
- Seat belt warning
- Secondary steering failure warning
- Diesel Particulate Filter (DPF) regeneration filter
- Machine Security System (MSS)
- Secondary steering energy source engaged
- Hour meter
- Retarder active

Air conditioning with R134A refrigerant

Mirrors: extensive arrangement for improved visibility

Combined gear selection and hoist control lever

Seats:

- Operator: fully adjustable, air suspension
- Trainer: padded with lap belt

Sun visor

Windshield wiper and washer, two speed (rear)

Windshield wiper and washer, two speed, intermittent (front)

Windows opening side, tinted

Storage:

- Cup holder
- Flask receptacle
- Under seat storage
- Door pocket
- Behind operator seat storage
- Coat hook

Touchscreen display incorporating the rearview camera video feed

Secondary steering - electro hydraulic

Heater and defroster with four-speed fan

Machine operation monitoring system includes:

- Action lamp
- Engine oil pressure
- Primary steering system
- Left and right turn signal
- High beam
- Coolant temperature
- Tachometer
- Parking brake
- Fuel level
- Transmission oil temperature
- Brake system
- Transmission hold
- Hoist control
- Hydraulic system
- Charging system
- Retarder
- Transmission fault
- Traction control system
- Check engine lamp

CAT TECHNOLOGIES

Cat Detect with Stability Assist

[Product Link](#)

ELECTRICAL AND LIGHTING

Remote starting receptacle (cables not included)

Horn

Lighting systems:

- Cab interior
- Two head lamps
- Two width marker
- Two reversing
- Work light/cab access light
- Two stop/tail lights
- Front and rear direction indicators

Main disconnect switch

Electrical system: 24-volt, 10A 24- to 12-volt converter

Batteries (two) maintenance free

POWER TRAIN

Differentials: standard with automatic clutched inter- and cross-axle differential locks

Cat Clean Emission Module (CEM) and exhaust aftertreatment package

Cat C13 engine

Three axle, six-wheel drive

Retarder: engine compression brake

Dual circuit oil immersed, enclosed brakes – all wheels

Auto shift six-speed forward and one reverse transmission

SAFETY

Rearview camera

ROPS/FOPS cab

Reverse alarm

GUARDS

Radiator

Front dump body spill guard, integral part of fabricated body

Crankcase

Rear window

Axle

OTHER STANDARD EQUIPMENT

Tires, six 750/65 R25

Mud flaps: wheel arch and body mounted with transportation tiebacks

S·O·S sampling valves

Vandalism protection: lockable caps

Sound suppression (only standard in Europe)

735 OPTIONAL EQUIPMENT

NOTE

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

OPTIONAL EQUIPMENT

Engine block heater

Heated rearview motorized mirrors

Scissor tailgate

Ether start

Flashing LED beacon

Cold weather start attachment

Infrared glass – high ambient cab

Product Link Elite: PLE631 (satellite), PLE641 (cellular). Product Link is optional.

Bare chassis (no body) standard wheel base

Fuel additive – anti-waxing

Body liners

Bare chassis (no body) long wheel base

Four-point seat belt

Auto lube installation for automatic greasing of bearings

Cat Production Measurement payload monitoring system

Sound suppression (only standard in Europe)

Fast fuel fill

Heated/cooled seat

Roof mounted High Intensity Discharge (HID) work lights

Machine Security System (MSS)

Bluetooth radio stereo system

Exhaust heated body

Cold weather coolant -51° C (-60° F)

Window blinds

Wheel chocks