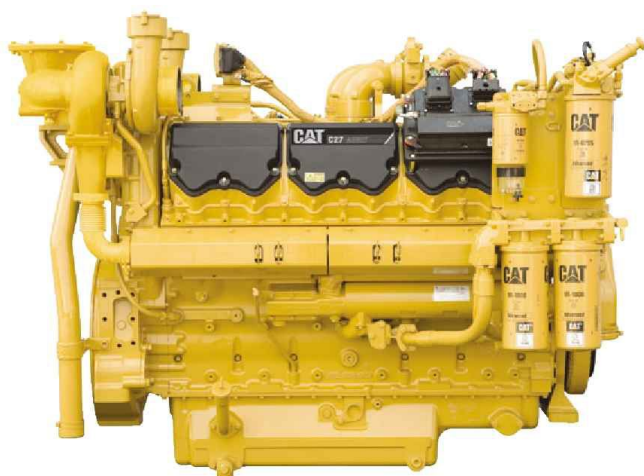




The Cat® C27 Industrial Diesel Engine is offered in ratings ranging from 597-858 kW (800-1150 bhp) @ 1800-2100 rpm. These ratings meet U.S. EPA Tier 2 equivalent emission standards. Industries and applications powered by these high powered engines include Bore/Drill Rigs, Chippers/Grinders, Construction, Cranes, Dredgers, Forestry, Hydraulic Power Units, Irrigation Equipment, Material Handling, Mobile Earthmoving Equipment, Paving Equipment, Pumps, Shovels/Draglines, Surface Hauling Equipment and Trenchers.

Specifications

Power Rating		
Maximum Power	858 kW	1150 HP
Maximum Torque	5255 Nm @ 1400 rpm	3876 lb-ft @ 1400 rpm
Minimum Power	597 kW	800 HP
Rated Speed	1800-2100 rpm	

Emission Standards	
Emissions	U.S. EPA Tier 2 Equivalent

General		
Engine Configuration	V-12, 4-Stroke-Cycle Diesel	
Bore	137 mm	5.4 in
Stroke	152 mm	6 in
Aspiration	Turbocharged Aftercooled (TA)	
Displacement	27.03 l	1649.5 in³
Compression Ratio	16.5:1	
Combustion System	Direct Injection	
Rotation from Flywheel End	Counterclockwise	

Engine Dimensions - Approximate		
Length	1917 mm	75.5 in
Width	1464 mm	57.6 in
Height	1319 mm	51.9 in
Weight - Net Dry - Basic Operating Engine Without Optional Attachments	2946 kg	6495 lb

Benefits and Features

Reliable, Quiet and Durable Power

World-class manufacturing capability and processes coupled with proven core engine designs assure reliability, quiet operation, and many hours of productive life.

Broad Application Range

Industry leading range of factory configurable ratings and options for agricultural, material handling, construction, mining, aircraft ground support, and other industrial applications.

Package Size

Exceptional power density enables standardization across numerous applications. Multiple installation options minimize total package size. Ideal for equipment with narrow engine compartments.

World-class Product Support Offered Through Global Cat Dealer Network

- Scheduled maintenance, including SOSM sample
- Customer Support Agreements (CSA)
- Caterpillar Extended Service Coverage (ESC)
- Superior dealer service network
- Extended dealer service network through the Cat Industrial Service Distributor (ISD) program

Standard Equipment

Air Inlet System

- Twin Turbocharged Aftercooled
- Air-to-Air Aftercooled

Control System

- Electronic governing, PTO speed control
- Programmable ratings
- Automatic altitude compensation
- Power compensation for fuel temperature
- Programmable low and high idle and total engine limit
- Electronic diagnostics and fault logging
- Engine monitoring system SAE J1939 broadcast and control
- ADEM™ A4 Electronic Control Unit (ECU)

Cooling System

- Thermostats and housing, vertical outlet
- Jacket water pump, centrifugal
- Water pump, inlet

Exhaust System

- Exhaust manifold, dry
- Optional exhaust outlet

Flywheels and Flywheel Housing

- SAE No. 1 flywheel housing

Fuel System

- MEUI injection

- Fuel filter, secondary (2 micron)
- ACERT™ Technology
- Fuel transfer pump
- Fuel priming pump

Lube System

- Crankcase breather
- Oil cooler
- Oil filler
- Lube oil filter
- Front sump oil pan
- Oil dipstick
- Gear driven oil pump

General

- Vibration damper
- Lifting eyes
- Cold start capability to -20° C (-4° F)
- Paint: Caterpillar yellow, with optional colors available at request

The International System of Units (SI) is used in this publication. CAT, CATERPILLAR, their respective logos, ADEM, EUI, S-O-S, "Caterpillar Yellow" and the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.



597 bkW (800 bhp) @ 2100 rpm

Rating Type: IND-A (CONTINUOUS) RATING

Emissions: U.S. EPA Tier 2 Nonroad Equivalent Emission
Standards (Not Currently EPA Certified)

C27 ACERT

DITA

597 bkW (800 bhp) @ 2100 rpm

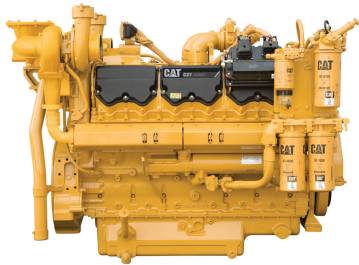


Image shown may not reflect actual configuration

	Metric	English
General Engine		
Power Rating	597 kW	800 hp
Number of Cylinders	12	
Bore	137 mm	5.4 in
Stroke	152 mm	6.0 in
Displacement	27.0 L	1649.0 cu in.
Compression Ratio	16.5 : 1	

RATING DEFINITIONS AND CONDITIONS

IND-A (CONTINUOUS) RATING:Continuous heavy duty service where the engine is operated at maximum power and speed up to 100% of the time without interruption or load cycling.

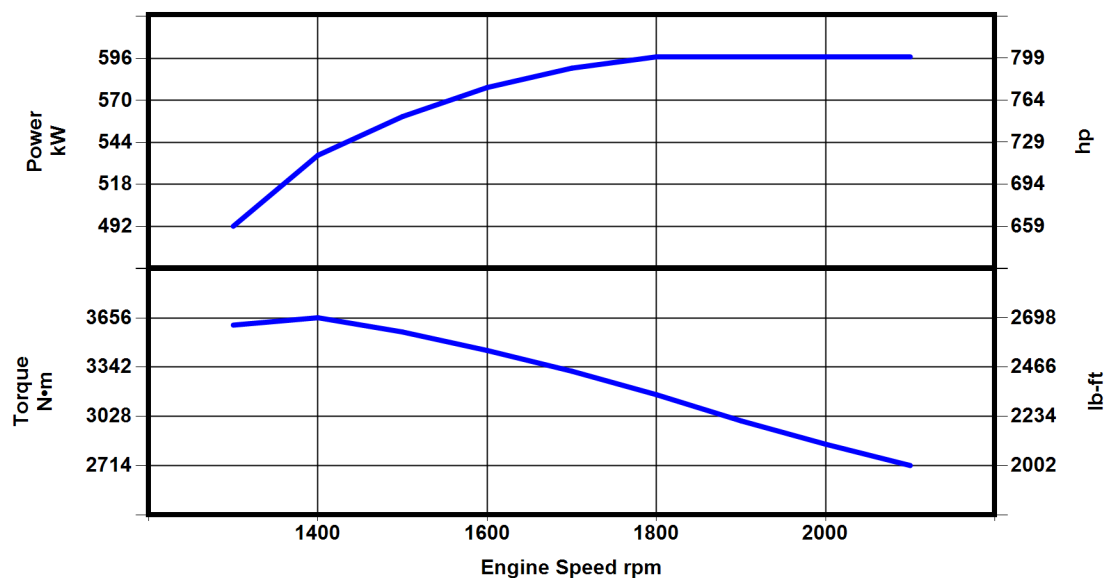
Diesel Engines — up to 7.1 liter All rating conditions are based on ISO/TR14396, inlet air standard conditions with a total barometric pressure of 100 kPa (29.5 in Hg), with a vapor pressure of 1 kPa (.295 in Hg), and 25°C (77°F). Performance measured using fuel to EPA specifications in 40 CFR Part 1065 and EU specifications in Directive 97/68/EC with a density of 0.845-0.850 kg/L @ 15°C (59°F) and fuel inlet temperature 40°C (104°F).

Diesel Engines — greater than 7.1 liter All rating conditions are based on SAE J1995, inlet air standard conditions of 99 kPa (29.31 in Hg) dry barometer and 25°C (77°F) temperature. Performance measured using a standard fuel with fuel gravity of 35° API having a lower heating value of 42,780 kJ/kg (18,390 btu/lb) when used at 29°C (84.2°F) with a density of 838.9 g/L.

597 bkW (800 bhp) @ 2100 rpm

Rating Type: IND-A (CONTINUOUS) RATING

Emissions: U.S. EPA Tier 2 Nonroad Equivalent Emission
Standards (Not Currently EPA Certified)



Engine Speed rpm	Engine Power bkW	Engine Power bhp	Torque N*m	Torque lb-ft
2100	597	800	2714	2002
2000	597	800	2850	2102
1900	597	800	2999	2212
1800	597	800	3166	2335
1700	590	792	3316	2446
1600	578	775	3448	2543
1500	560	751	3566	2630
1400	536	719	3657	2698
1300	492	659	3610	2663

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