



The Cat® C27 ACERT™ 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		
Minimum Power	597 kW	800 bhp
Maximum Power	858 kW	1150 bhp
Rated Speed	1800-2100 rpm	

Emission Standards	
Emissions	U.S. EPA Tier 2 Equivalent

General	
Engine Configuration	V-12, 4-Stroke-Cycle Diesel
Bore	137.2 mm (5.4 in)
Stroke	152.4 mm (6.0 in)
Displacement	27.03 L (1649.5 in <sup>3</sup> )
Aspiration	Turbocharged Aftercooled (TA)
Compression Ratio	16.5:1
Combustion System	Direct Injection
Rotation (from flywheel end)	Counterclockwise

Engine Dimensions (Approximate. Final dimensions dependent on selected options)	
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

#### Emissions



Meets U.S. EPA Tier 2 equivalent emission standards. Available using U.S. EPA Flexibility, and for other global regulated and non-regulated areas.

### **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.

### **Quality**

Every Cat engine is manufactured to stringent quality standards in order to assure customer satisfaction.

### **World-class Product Support Offered Through Global Cat Dealer Network**

- Scheduled maintenance, including SOSSM 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.