



The C280-6 generator set incorporates years of proven success of the 3600 engine with the latest technology in electronics. The result is a fully integrated solution that is ideal for offshore operations. Ideal applications for the C280-6 offshore generator set are main power on-board drilling and production vessels and platforms. Complete package offerings are MCS type-approved and compliant with IMO Tier II emissions standards, making integration of the Cat C280-12 generator set into the vessel a simplified operation. Cat generator sets are backed by the worldwide network of Cat dealers ready to support your operation with technical support, service, parts, and warranty. Cat C280-6 offshore generator set. Ratings: 1661-1940 ekW (2076-2771 kVA) @ 50/60 Hz (1000/900 rpm). IMO Tier II emissions compliant.

### Specifications

Engine Specifications		
Minimum Rating	1730 ekW	2320 kV·A
Maximum Rating	2030 ekW	2722 kV·A
Emissions	IMO Tier 2 / EPA Marine Tier 2	
Oil Change Interval	1000 h	1000 h
Fuel System	EUI	
Bore	280 mm	11 in
Stroke	300 mm	11.8 in
Weight	41500 kg	91492 lb
Displacement	111 l	6773 in <sup>3</sup>
Engine Control	Electronic ADEM™ A3	
Aspiration	Turbocharged-Aftercooled	
Generator Set Control	Generator Monitoring System (GMS)	

Dimensions		
Width	1818 mm	71.6 in
Length	7441 mm	293 in
Height	2733 mm	107.6 in

Capacity for Liquids		
Lube Oil System - Refill	867 l	229 gal (US)
Cooling System - Engine	397 l	105 gal (US)

### Benefits and Features

#### Custom Packaging

For any petroleum application, trust Caterpillar to meet your project needs with custom factory generator sets and mechanical packages. Cat engines, generators, controls, radiators, and transmissions can be custom designed and matched in collaboration with our local dealers to create unique solutions. Custom packages are globally supported and are covered by a one year warranty after startup.

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### Full Range of Attachments

Large variety of factory-installed engine attachments increases application flexibility and reduces installation time. Testing • Every unit is full-load tested to ensure proper package performance • Full range of factory tests and reports are available including performance, torsional-vibration analysis, fuel consumption, engine, and generator special tests

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### Product Support Offered Through the Global Cat Dealer Network

More than 2,200 dealer outlets - Cat factory-trained dealer technicians service every aspect of your Cat petroleum product - Worldwide parts availability, service, and warranty - Preventive maintenance agreements available for repairbefore- failure options - SOSSM program matches your oil and coolant samples against Caterpillar set standards to determine: Internal engine component condition Presence of unwanted fluids Presence of combustion by-products Site-specific oil change interval

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### Over 80 Years of Engine Manufacturing Experience

• C280 engines incorporate over 20 years of proven component reliability and durability from 3600 engines • Large field population in offshore applications provides proven performance, reliability, durability, and established worldwide product support network

### Web Site

Visit [www.catoilandgasinfo.com](http://www.catoilandgasinfo.com) to learn more.

### Improved Fuel Efficiency

Electronic Unit Injection (EUI) fuel system provides optimized combustion at any load - Lower specific fuel consumption at part load - Reduced transient smoke and emissions

## Standard Equipment

### Product Consist

• The engine is a turbocharged, aftercooled, four-strokecycle- diesel, electronic unit injection engine with a 280 mm (11 in) bore by 300 mm (11.8 in) stroke. SAE standard rotation is counterclockwise as viewed from the rear of engine flywheel.

### Emissions Certifications

• GL and CCS approved IMO certificate – includes statement of compliance or Engine International Air Pollution Prevention (EIAPP) certificate, supplied by the Recognized Organization (RO) where available, and technical file to be kept on board per IMO regulations.

### Marine Certification Society type-approval

- ABS, BV, CCS, DnV, GL, LRS
- Spray shielding to meet SOLAS regulations for flammable fluids

### European Certifications

- Declaration of Incorporation for EU Machinery Safety
- Directive and EU Low Voltage Safety Directive

### Air Inlet System

- Fresh water aftercooler, corrosion resistant coated (air side)
- Air inlet shutoff
- Turbocharger, rear-mounted, oil lubricated

### Control System

- Single Cat ADEM A3 electronic engine control module with electronic unit injector fuel system, rigid wiring harness (10 amp 24V power required to drive electronic engine control modules)

### Cooling System

- Gear-driven jacket water (JW) pump
- Gear-driven separate-circuit aftercooler/oil cooler (AC/OC) pump
- Engine coolant water drains

### Exhaust System

- Dry, gas tight exhaust manifold

### Fuel System

- Distillate fuel (requires viscosity ranging from 1.4 cSt to 20 cSt at 38°C)
- Fuel pump, gear-driven
- Fuel transfer pump (mounted on left-hand side)
- Duplex fuel filters, rear-engine-mounted
- Electronically controlled unit injectors

### Lube system

- Centrifugal oil filters with single shutoff, service-side engine mounted on cylinder block inspection covers (includes installed oil lines and single shutoff valve), filters centrifuge bypass oil from the main lubricating oil pump (can be serviced with the engine running)
- Oil filler and dipstick
- Oil pressure regulating valve
- Dry engine-mounted sump system that gravity feeds into base assembly integral sump
- Engine-mounted duplex oil filter
- Intermittent air prelube
- Continuous electric prelube
- Redundant prelube with continuous electric prelube and intermittent air prelube backup
- Oil pan drain valves
- Electric continuous prelube pump
- Lube oil heater
- Oil pump - gear drive

### Protection System

- Crankcase explosion relief valves
- Alarm and shutdown during abnormal operation

### Instrumentation

- PLC-based system provides protection, monitoring, and control housed in a NEMA 4 (IP66) enclosure.

### General

- Service Literature

## Optional Equipment

### Air Inlet System

- 90° adapter and straight adapters for air inlet to turbocharger Air cleaners
- Air cleaners with Cat dry paper filter elements (approximately 99.9% efficient at filtering SAE fine dust)
- Soot filter

### Control System

- 4-20 mA load feedback signal
- Load sharing module
- Direct rack module

### Cooling System

- Separate Circuit Aftercooler (SCAC)
- Customer water connections
- Jacket water thermostats
- AC/OC thermostats
- Accessory module-mounted high volume expansion tank
- Jacket water heater
- Heat recovery connections and thermostats for use with water maker system
- ANSI connection adapters

### Exhaust System

- Exhaust manifold shields
- Vertical or 30° outboard exhaust orientation options
- Exhaust outlet expanders and weld flanges

### Fuel System

- Manual fuel priming pump
- Duplex primary fuel strainer
- Flexible fuel hose connections

### Lube System

- Dry engine-mounted sump system that gravity feeds into base assembly integral sump
- Engine-mounted duplex oil filter
- Intermittent air prelube

- Continuous electric prelube
- Redundant prelube with continuous electric prelube and intermittent air prelube backup
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- Lube oil heater

### Protection System

- Wiring meets MCS requirements
- Upgrade PLC monitor to industrial PC
- Upgrades AC/OC, JW and start air pressure from contactors to transducers
- Raw water/sea water pressure transducer
- Modbus communication
- Beacon and horn
- Single engine remote display monitor
- Emergency pump start signal
- Cabinet cooler
- Generator power monitoring
- Remote relay panel
- Turbocharger speed sensors
- Cylinder pressure relief valve
- Oil mist detector
- Flywheel and damper guards

### Mounting System

- Base assembly
- Vertically-restrained vibration isolators and weld plates

### Starting System

- Single turbine air starters
- Boost control valve for extremely cold ambient conditions
- Air start pressure reducing valves

### General

- Torsional couplings
- Mounting groups for engine, generator, and base
- Accessory module to mount attachments such as the expansion tank, heat exchanger, instrument panel and engine controls, annunciator panel, alarm and shutdown contactors, fuel strainer
- Flywheel
- Engine barring device options:
- One-year storage preservation
- Oceanic transportation shipping protection (shrink wrap and tarp)
- Engine testing – certified dynamometer test, fuel consumption test, rated speed performance test, overload test, minimum power setting, peak firing pressure test, turbo work cert and crankshaft work cert



- Standard and project-specific witness testing
- Spare parts kit

### Literature

- Project-specific installation drawings
- Electrical schematics and P&ID drawings

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