

# OFFSHORE POWER



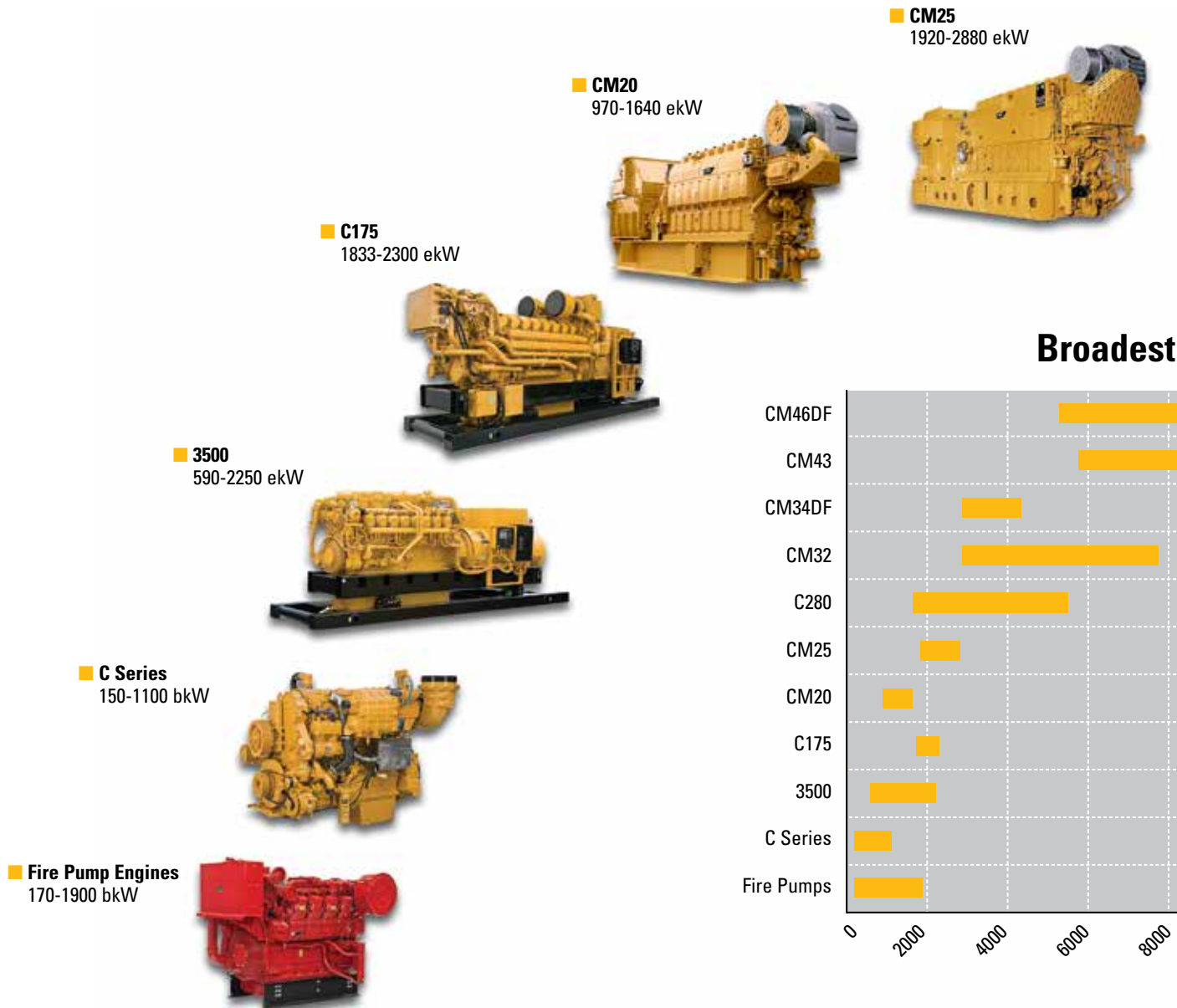
# YOUR OPERATION, CATERPILLAR SOLUTIONS

We listened to our customers, invested in research and development, and put 80 years of engine manufacturing experience to work. Integrating legendary products with the latest technology, we exceed our customers' expectations in safety, performance, and simple user interface.

Cat® engines and generator sets are widely known in the offshore oil and gas industry. With ratings capable of operating on MDO, LFO, HFO, crude oil, and dual fuel, we

supply offshore products for main and emergency power, essential services, and a wide range of fire pump and crane engines.

Caterpillar is committed to making sustainable progress possible. In addition to meeting global emission standards, the Caterpillar Production System ensures that products are manufactured in energy efficient facilities through processes that minimize energy intensity, use of resources, and waste generation.





# SINGLE-SOURCE SUPPORT

With more than 2,200 dealer outlets worldwide, technical sales and service support for all your power generation is just one call away.

- Worldwide dealer network with industry specialists that deliver sales service, technical support, parts, and service support
- Caterpillar warranty for all factory packaged components
- Condition monitoring available on all models for simplified asset management and maximized uptime
- Extensive pilot testing and test cell validation of every product
- Full range of factory-installed engine attachments allows customization and reduction in installation time
- Industry-leading one-year warranty on parts

Having a single point of contact for all your purchasing, maintenance, and repair needs reduces downtime. Caterpillar provides the power and support to keep your operation running.

■ **C280**  
1661-5500 ekW



■ **CM32**  
2910-7760 ekW



■ **CM34DF**  
2910-4370 ekW



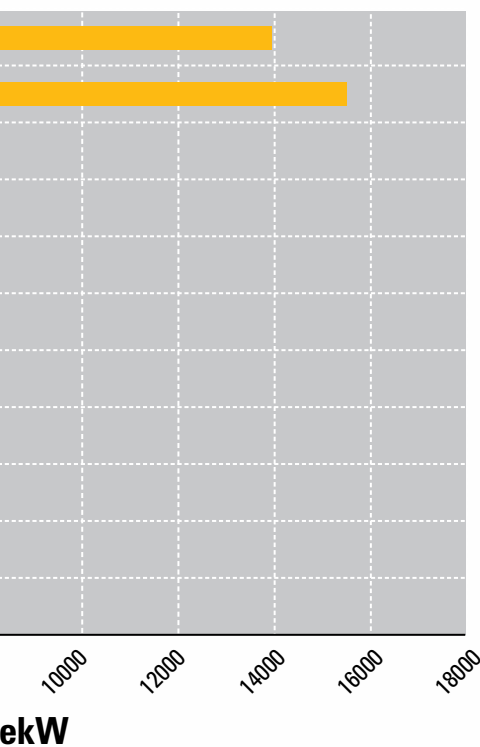
■ **CM43**  
5820-15520 ekW



■ **CM46DF**  
5240-13970 ekW



## Product Line



Contact your Cat dealer for additional offshore product offering.

# POWER FOR PRODUCTION APPLICATIONS

Essential services, emergency, crane, and fire pump power applications

Cat package solutions are available for any offshore production application.



## Essential Services Generator Sets

- Broad range of products for essential services on-board production platforms
- From high-speed 3500 and C175 to medium speed CM generator sets, these products fit a wide range of power nodes
- Hazardous location and customized products are available

## Emergency Generator Sets

- 3500 and C175 offshore generator sets are configured to meet the requirements for offshore emergency power
- Custom solutions are available to meet specific project specifications

## Crane Engines

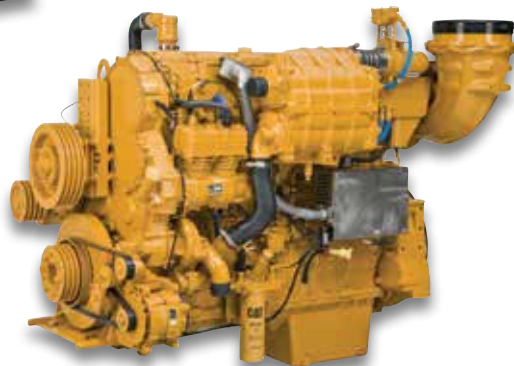
- The C series includes a wide range of engine ratings which meet IMO Tier II emission standards and are approved for offshore crane applications
- Certain ratings include additional emissions and hazardous locations certifications
- Comprehensive product line with ratings from 150 bkW to 1100 bkW

## Fire Pump Engines

- Wide range of MCS approved engines for fire water pump applications
- Ratings meet IMO Tier II emission standards
- Custom configurations to meet specific project requirements



**3508 B**  
Offshore Emergency Generator Set



**C15 ACERT™**  
Offshore Crane Engine



**9CM25C**  
Offshore Generator Set

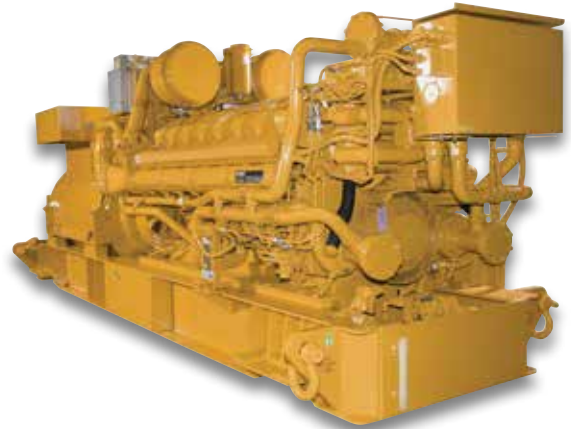
# DRILLING

## Generator sets for jackup and semi-submersible rigs

**3516C (HD)**



**C175-16**



### **A Legacy of Reliability and Durability**

- The 3516C (HD) offshore generator set is the market leader in the jackup industry
- Proven performance through decades of product application in offshore jackup rigs
- Long overhaul life proven in offshore applications

### **Making Your Investment Work Harder**

- Industry-leading power density for the growing offshore power demands
- C175-16 offshore generator sets are the ideal repower configuration for jackup rigs, allowing up to 20% more installed power than the 3516C (HD) in the same footprint
- Fully electronic generator set control optimizes performance and fuel efficiency while maintaining emissions compliance
- Cat Alarm and Protection System provides the latest technology in generator set control, protection, and operator interface

### **Sustainable Development**

- 3516C (HD) and C175-16 products meet IMO Tier II and EPA Marine Tier 2 emissions standards
- Ideal platforms for development of future IMO Tier III emissions compliance

### **A Low Cost of Doing Business**

- Serviceability designed to reduce maintenance downtime
- Specifically designed to meet the demands of the offshore environment



# DRILLING

## Generator sets for jackup rigs, semi-submersible rigs, and drillships

The 3600 engine is a proven product with an established fleet operating in offshore applications since 1988. C280 generator sets build on this foundation with new electronics for enhanced performance and simplified operator interface.



### Legendary Product, Unmatched Support

- Highest power density in its class
- MCS approved engines and electronics
- Meets IMO Tier II and EPA Marine Tier 2 emission standards
- Packages are easy to install and operate
- Established global Cat dealer network

### Driving Down Total Cost of Ownership

- Fuel consumption is optimized for load profile typical of drilling operations
- Engines are designed for extended overhaul lives

### Committed to Safety

- Generator sets are equipped with redundant ADEM™ A4 engine control and the Cat Alarm and Protection System
- Control system implements engine alarms, derate, and shutdown in the event of abnormal operation

### Fully Integrated Solutions

- Generator sets are designed, assembled, and tested by Caterpillar
- Fully integrated solutions certified from the factory
- Auxiliary systems integrated into the generator package for simplified installation and commissioning
- Full range of attachments available for factory installation to increase application flexibility
- Custom solutions provided by Caterpillar based on specific project requirements

### Improving Operational Efficiency

- Cat Alarm and Protection System features simple operator interface and troubleshooting
  - Plain text fault codes
  - Eleven user selectable languages
  - Industry-standard communications protocol
- Optional remote monitoring panels



**C 280 - 16**  
Offshore Generator Set

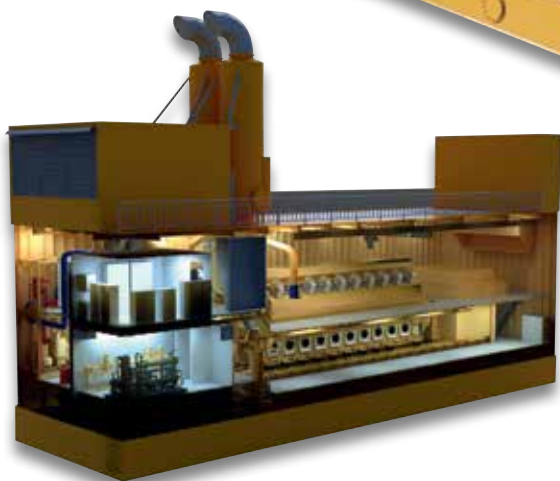


# DRILLING AND PRODUCTION

## Generator sets for semi-submersible rigs and drillships Offshore power generation modules for production platforms and FPSOs

Achieve the highest flexibility in your operation with the broad range of fuel alternatives in the medium speed CM engine family.

### 12 CM 32 C Offshore Generator Set



### Offshore Power Generation Module



### Making Your Investment Work Harder

- Ideal configuration for dynamically positioned semi-submersible rigs and drill ships
- CM34DF and CM46DF generator set models enable dual fuel operation with liquid and gaseous fuels to minimize operating cost and increase operation flexibility
- 25° tilt capability in all directions, validated through substantial testing
- Standard modular design allows for ease of installation and reduced complexity

### Integrated Solutions

- Offshore power generation modules are fully engineered package solutions for maximum performance and flexibility with easy installation
- High operational flexibility with fuel options that include LFO, crude oil, and dual fuel
- Dual fuel power generation modules provide high flexibility by dynamically blending liquid and gaseous fuels for maximum power at minimum operating cost

### Sustainable Development

- Meets IMO Tier II emission standards for offshore applications
- Optional FCT (Flexible Camshaft Technology) reduces overall NOx and soot emissions for lower overall environmental impact

### A Low Cost of Doing Business

- Years of proven component reliability and durability in the marine industry
- Assembled, tested, and validated as a package to minimize package vibration and maximize component life
- Large inspection openings allow for convenient access to core engine components for easier serviceability
- Core engine components designed for reconditioning and reuse at overhaul

# Caterpillar Global Petroleum

## AMERICAS

### Caterpillar Inc.

Global Petroleum  
13105 N.W. Freeway  
Suite 1100  
Houston, Texas 77040-6321  
Tel: (+1) 713-329-2207  
Fax: (+1) 713-895-4280

## RUSSIA

### Caterpillar Eurasia

82 Sadovnicheskaya Str.  
Moscow 113035, RF  
Tel: (+7-495) 213-3340  
Fax: (+7-495) 213-3372

## ASIA PACIFIC

### Caterpillar Asia Pte., Ltd.

Global Petroleum  
7 Tractor Road  
Singapore 627968  
Tel: (+65) 6828-7333  
Fax: (+65) 6828-7414

## CHINA

### Caterpillar Global Petroleum China

Room 1601 Caterpillar Tower  
No. 8 Wangjing Street  
Beijing 100102, P.R. China  
Tel: (+86-10) 5921-0521  
Fax: (+86-10) 5921-0022

## EUROPE, AFRICA, AND MIDDLE EAST

### Caterpillar Commercial Northern Europe Ltd.

Global Petroleum  
OTV House  
Wokingham Road, Rounds Hill  
Bracknell, Berkshire  
United Kingdom  
RG42 1NG  
Tel: (+44) 1344 782 920  
Mobile: (+44) 7717411938  
Fax: (+44) 1344 782 930

### Caterpillar Motoren GmbH & Co. KG

Global Petroleum  
Falckensteiner Str. 2  
D-24159 Kiel, Germany  
Tel: (+49) 431 3995 3004  
Fax: (+49) 431 3995 5004

**To learn more about offshore power from Caterpillar Global Petroleum,  
call your local Cat dealer or visit [www.catoilandgasinfo.com](http://www.catoilandgasinfo.com).**