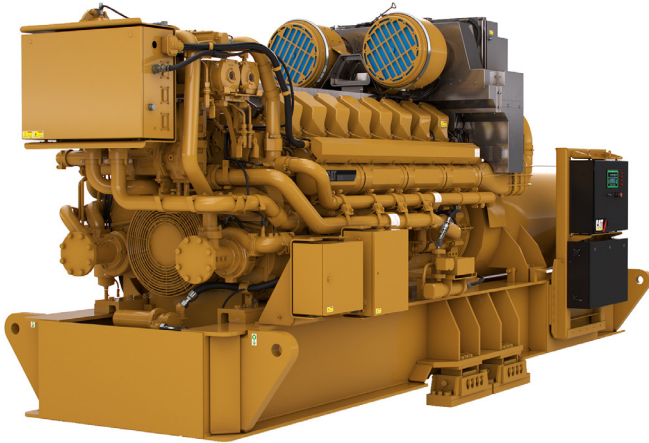


C175-16 OFFSHORE GENERATOR SET

IMO Tier II Emissions Certified

2200 ekW (2750 kVA) 60 Hz @ 1200 rpm



Cat® Engine Specifications V16, 4-Stroke-Cycle-Diesel

Emissions

IMO Tier II

Bore

175 mm (6.89 in)

Stroke

220 mm (8.66 in)

Displacement

85.0 L (5167 cu. in)

Aspiration

Turbocharged/2-stage
Aftercooled

Fuel System:

Common Rail/ EUI

Instrumentation:

LECP II/III

Engine Control:

Dual ADEM™ A5n

Oil Change Interval:

1000 hours

Voltage:

600V or 690V

FEATURES AND BENEFITS

Product Design

- Industry-leading power density for growing offshore power demands.
- Dual ADEM A5 redundant engine control
- Marine Society Certifications
- MCS type approval
- High pressure electronic unit injection maximize fuel efficiency, performance, while maintaining emission and standards

Engine Design

- Hydraulic Lash Adjustment (HLA) for reduced maintenance and optimum valve train performance
- Low smoke zero halogen wiring harness compliant with IEC 61892-3 Section 7.4.7.2
- Package design provides single-lift installation to reduce shipyard installation complexity

Custom Packaging

For any oil & gas 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.

Full Range of Attachments

A wide variety of factory-installed attachments are available to simplify packaging, saving time and effort.

Product Support Offered Through Global Cat Dealer Network

- More than 2,200 dealer outlets
- Cat factory trained dealer technicians service every aspect of your Oil & Gas engine
- Caterpillar parts and labor warranty
- Preventive maintenance agreements available for repair-before-failure options.
- S.O.SSM program matches your oil and coolant samples against Caterpillar set standards to determine:
 - Interval engine component condition
 - Presence of unwanted fluids
 - Presence of combustion by-products
 - Site-specific oil change interval

Over 90 years of Engine Manufacturing Experience

World-Class Manufacturing capability and process coupled with proven core engine designs assure reliability, quiet operation and many hours of productive life.

Website

For all your Oil & Gas power requirements, visit www.cat.com

LET'S DO THE WORK.™



STANDARD EQUIPMENT

Air Inlet System

- Aftercooler core, corrosion resistant (air side)
- Air cleaners--single or dual element
- Dual turbochargers
- Air shutoff

Cooling System

- Two-stage separate-circuit-aftercooler (SCAC)
- Jacket water (JW) circuit cooling system
- Gear-driven centrifugal pumps, one for each circuit – SCAC electronic thermostat, outlet-controlled with aftercooler inlet temperature sensing

Starting System

- Turbine air starter
- Dual electric starting motors

Generator

- Cat SR500 brushless permanent magnet
- 2-bearing, free standing arrangement
- 60 Hz, 600V or 690V

Electrical

- MCS certified Class I/Division 2
- Low Smoke Zero Halogen Wiring Harness

Exhaust System

- Dry gas tight exhaust manifolds with heat shields.
- Dual turbochargers with water-cooled, oil-lubricated bearings and heat shields
- Exhaust outlet: 305 mm (12 in) round flanged outlet, vertical orientation

Flywheel and Flywheel Housing

- Flywheel, SAE No. 00, 183 teeth
- Flywheel housing, SAE No. 00
- SAE standard rotation

Fuel System

- Cat common rail high-pressure fuel system with electronically controlled unit injectors
- Duplex primary fuel filter with water separator
- Duplex secondary fuel filters
- Electric fuel priming pump
- Gear-driven low pressure transfer pump
- Gear-driven high pressure fuel pump
- Double-walled high pressure fuel lines
- Fuel pressure, temperature, and leak detection sensors

Lube System

- Engine-driven, gear-type oil pump
- Integral lube oil cooler
- Front-mounted oil drain lines and valve
- Oil sampling valve
- Filler and dipstick
- Four-canister simplex oil filter
- Prelube pump — electric, air, or custom – Fumes disposal with crankcase breathers – Crankcase explosion relief valves

Large Engine Control Panel II (LECP II) -std

- Local Start/Stop/Throttle Control/ E-stop
- MCS Approved
- Remote Throttle ready
- Off/Local/Remote Switch
- Engine Parameters and Diagnostics
- Full Color 5.7" display (Touchscreen)
- J1939, Modbus TCP (Ethernet), and RTU (RS485) communication
- Switches
- Options:
 - MCS Approved Ethernet Switch
 - Telematics
 - Direct Rack

Large Engine Control Panel III (LECP III)-Optional

- Cat Alarm and Protection Panel
- MCS Approved
- Local Start/Stop/Throttle Control
- Remote Throttle Ready
- Off/Local/Remote Switch
- Provides Diagnostics
- Full color 5.7" display
- J1939, Modbus TCP (Ethernet), and RTU (RS485) communication
- Shutdowns (SDU 410): Coolant Temp, Oil Pressure, Overspeed, Estop and Oil Mist Detection
- Switches: Manual start, Crank override, Manual prelube, Crank inhibit
- Options:
 - MCS Approved Ethernet Switch
 - Telematics
 - OMD Override Switch
 - Red/Yellow Alarm Beacon
 - Direct Rack

C175-16 OFFSHORE GENERATOR SET

IMO Tier II Emissions Certified

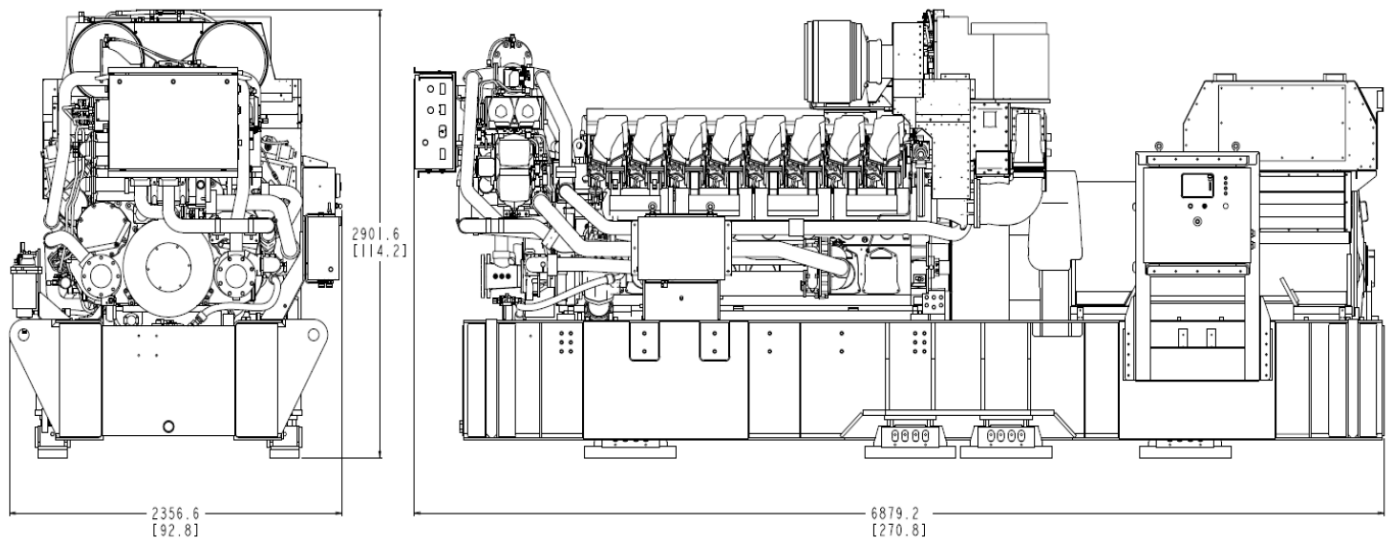
TECHNICAL INFORMATION

RATINGS	60 Hz	
	1200 rpm	
Rated Speed		
Engine Power	2316 kW	3105 bhp
Generator Set Rating ^{*)}	2200 kW	2750 kVA
Maximum ambient temperature without derate - engine only (250 M Altitude)	60 °C	140 °F
BSFC @ 100% Load	190 g/kWh	.312 lbs/bhp-hr
BSFC @ 75% Load	197.5 g/kWh	.325 lbs/bhp-hr
BSFC @ 50% Load	209.8 g/kWh	.345 lbs/bhp-hr
BSFC @ 25% Load	245.8 g/kWh	.404 lbs/bhp-hr
JW Heat Rejection @ rated	1112 kW	63,265 btu/min
SCAC Heat Rejection @ rated	230 kW	13,073 btu/min

*) Assumes 96 % efficiency and a power factor of 0.8 Continuous rating power. Dependent on generator type. Without Fan.

Package Dimensions		
Length (B)	6879 mm	270.8 in
Width (C)	2356.6 mm	92.8 in
Height (D)	2901.6 mm	114.2 in

^{*)} Dependent on generator type



Rating Definitions and Conditions

The corrected performance values shown for Cat engines will approximate the values obtained when the observed performance data is corrected to SAE J1349, ISO 3046-2, 8665m 2288, 9249, and 1585, EEC 80/1269 and DIN 70020 standard reference conditions.

Engines are equipped with standard accessories: lube oil, fuel pump, and jacket water pump. The power required to drive auxiliaries must be deducted from the gross output to arrive at the new power available for the external flywheel load. Typical auxiliaries include cooling fans, air compressors and charging alternators.

To find your nearest dealer, please visit:
www.cat.com

Subject to change without notice.
 LEHW0364-00

© 2019 Caterpillar All Rights Reserved

LET'S DO THE WORK.™

