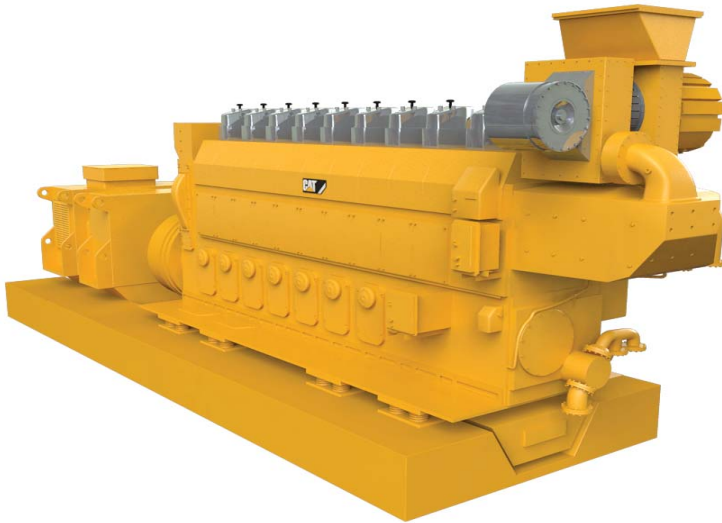


# Caterpillar Power Plants

# CM43

6CM43 • 7CM43 • 8CM43 • 9CM43 • 60Hz



## Engine Specifications

Engine Type.....	4-stroke engine
Cylinder configuration.....	In-line - 6, 7, 8, 9
Fuel type.....	LFO, CRO and HFO up to 700 cSt
Bore.....	430 mm (16.9 in)
Stroke.....	610 mm (24.0 in)
Cylinder displacement.....	88.6 L (5406 cu in)
Cylinder output.....	900 kW(1207 bhp)
Mean piston speed.....	10.5 m/s (34.4 ft/s)
Mean effective pressure.....	23.7 bar (344 psig)
Aspiration.....	Turbocharged and after-cooled
Engine rating.....	5,400-8,100 kWm
Generator set rating.....	5,238 -7,857 kWe

## Features

### Designed for Reliable Operation

- ▶ Intensive cooling of key components including exhaust valve seats, injector cooling integrated into lube oil system and high-efficiency turbocharger
- ▶ Capable of operation up to 700 cSt/50° C fuel quality according to CIMAC H55/K55

### Minimized Mechanical Wear

- ▶ Modular design
- ▶ State of the art material ensures long life of components

### Overall Economy

- ▶ High availability and long life
- ▶ Low fuel and oil consumption
- ▶ Low maintenance requirements

### Highest Quality Engine Parts

- ▶ Semi-dry wear resistant liners with calibration inserts
- ▶ Pistons with forged steel crown and aluminum skirt
- ▶ Inlet/Outlet valves with armored seats
- ▶ High efficiency turbo charger

### One-Piece Dry Engine Block

- ▶ High strength nodular cast iron with under slung crankshaft and free from cooling water

### Ease of Maintenance & Reliability

- ▶ Easily removable cylinder heads, quick removable fluid connections
- ▶ Split connecting rods to allow piston removal without disturbing the big end bearing
- ▶ High reliability, modular design and integral construction reduce the number of components by 40% over conventional designs

### Total Power Solutions

- ▶ Caterpillar® can develop, finance, design, build, test, maintain and operate medium speed reciprocating engine power plants and at the customer's option provide:
  - Power generation equipment
  - Engineered systems
  - Turnkey power plants
  - Contract power
  - Combined heat and power systems
  - Construction and installation services
  - Operation and maintenance services

### Worldwide Product Support

- ▶ With nearly 200 Cat dealers & 1500 facilities worldwide serving in excess of 200 countries, you're never far from the Caterpillar support you need.
- ▶ Customer Support Agreements offer back-to-back services including scheduled inspections, preventative maintenance and overhauls to full operations and maintenance.

# Caterpillar Power Plants

# CM43

6CM43 • 7CM43 • 8CM43 • 9CM43 • 60Hz

## Nominal Performance

	Engine Rating		Generator Set Rating		Speed rpm	Frequency Hz	Heat Rate				Specific Lube Oil Consumption	
	kWm	kWe	kVA				WBI		WBI		g/kWh	lb/kWh
							kJ/kWh	Btu/kWh	kJ/kWh	Btu/kWh		
6CM43	5,400	5,238	6,547		514	60	7,647	7,248	7,692	7,290	0.6	0.0012
7CM43	6,300	6,111	7,639		514	60	7,647	7,248	7,692	7,290	0.6	0.0012
8CM43	7,200	6,984	8,730		514	60	7,647	7,248	7,692	7,290	0.6	0.0012
9CM43	8,100	7,857	9,821		514	60	7,647	7,248	7,692	7,290	0.6	0.0012

## Rating Definitions and Conditions

Fuel type: Light fuel oil (LFO), crude oil (CRO) and heavy fuel oil (HFO) with fuel quality limit at 50° C according to CIMAC H55/K55.

Ratings: Based on ISO 3046/1 standard reference conditions.

Power output: May require adjustment for values other than ISO 3046/1 standard reference conditions.

Conditions output: Available for an unlimited time without varying load.

Generator efficiency of 97.0% based on 0.8 pf with medium voltage class generator; actual efficiency will depend on generator selection.

Fuel consumption: Based on ISO 3046/1 standard reference conditions of 25° C (77 F) and 100 kPa (29.61 in Hg), including engine-driven pumps, with 5% tolerance and LCV=42, 700 kJ/kg (18, 358 Btu/lb). Value based on measurement at the generator terminals.

Lube oil consumption: Tolerance on value of +/-0.3 g/kWh (0.0007-lb/kWh).

Lube oil consumption can only be demonstrated after 500 hours of operation.

FOR MORE INFORMATION Go to:

<http://www.cat.com/powerplants>

<http://www.catpowerplants.com>

	Engine Dimensions						Approximate Weight (Dry)			
	Height (H)		Width (W)		Length (L)		Engine		Generator	
	mm	in	mm	in	mm	in	kg	lb	kg	lb
6CM43	4,520	178	2,869	113	6,557	258	82,000	180,779	37,150	81,902
7CM43	4,520	178	2,869	113	7,287	287	97,000	213,848	40,900	90,169
8CM43	4,813	189	2,869	113	8,041	317	114,000	251,327	48,400	106,704
9CM43	4,813	189	2,869	113	8,771	345	123,000	271,169	48,000	105,822

Materials and specifications are subject to change without notice.

CAT, CATERPILLAR, their respective logos and "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. 112013

**CATERPILLAR**<sup>®</sup>  
TODAY'S WORK. TOMORROW'S WORLD.™