

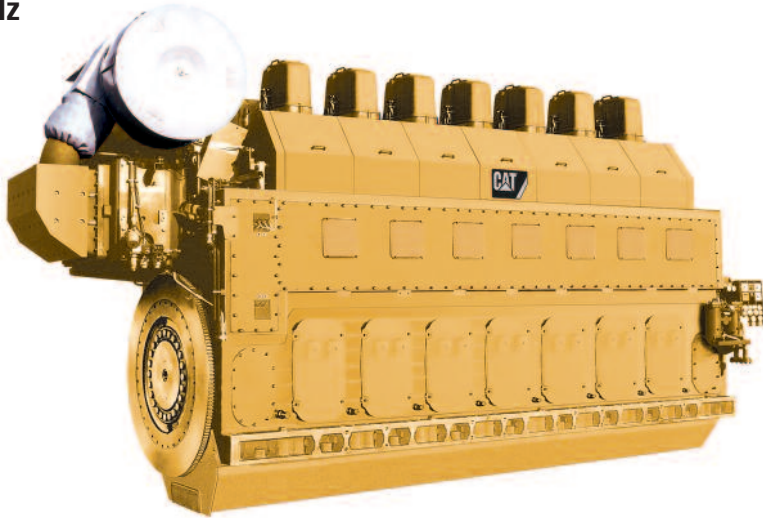
# CM43

## DIESEL ENGINE GENERATOR SET

5240–7860 kWe

514 rpm

60 Hz



### FEATURES

#### Designed for Reliable Operation

- Design includes 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 ensure 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 turbocharger

#### One-Piece Dry Engine Block

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

#### Ease of Maintenance and 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

### ENGINE

- Engine type: 4-stroke cycle diesel 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
- Compression ratio: 15.5:1
- Engine rating: 5400–8100 kW
- Generator set rating: 5240–7860 kWe

### Total Power Solutions

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

### Worldwide Product Support

- With nearly 200 Cat® dealers and 1,500 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, preventive maintenance and overhauls to full operations and maintenance

# CM43

## DIESEL ENGINE GENERATOR SET

### NOMINAL PERFORMANCE

	ENGINE RATING		GENERATOR SET RATING		SPEED	FREQUENCY	HEAT RATE		SPECIFIC LUBE OIL CONSUMPTION	
	kWm	kWe	kVA	kVA			rpm	Hz	kJ/kWh	Btu/kWh
6CM43	5,400	5,240	6,550	6,550	514	60	7,748	7,343	0.6	0.0013
7CM43	6,300	6,110	7,638	7,638	514	60	7,748	7,343	0.6	0.0013
8CM43	7,200	6,980	8,725	8,725	514	60	7,748	7,343	0.6	0.0013
9CM43	8,100	7,860	9,825	9,825	514	60	7,748	7,343	0.6	0.0013

### 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 ISO3046/1 standard reference conditions.

Power output: May require adjustment for values other than ISO3046/1 standard reference conditions.

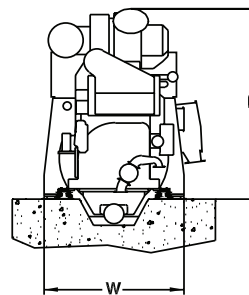
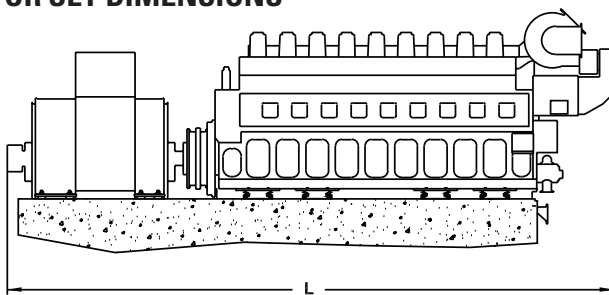
Continuous output: Available for an unlimited time without varying load.

Generator efficiency: 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 ISO3046/1 standard reference conditions of 25° C (77° F) and 100 kPa (29.61 in Hg), excluding 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.

### GENERATOR SET DIMENSIONS



FOR MORE INFORMATION  
 Email: [cat-powerplants@cat.com](mailto:cat-powerplants@cat.com)  
 Internet: <http://www.cat.com/powerplants>

	GENERATOR SET DIMENSIONS						APPROXIMATE WEIGHT (DRY)			
	HEIGHT (H)		WIDTH (W)		LENGTH (L)		ENGINE		GENERATOR	
	mm	in	mm	in	mm	in	kg	lb	kg	lb
6CM43	4,732	186	3,450	136	12,783	503	94,720	208,822	37,150	81,902
7CM43	4,732	186	3,450	136	13,507	532	107,750	237,548	40,900	90,169
8CM43	4,732	186	3,450	136	14,231	560	115,570	255,185	48,400	106,704
9CM43	4,732	186	3,450	136	14,955	589	126,000	277,782	48,000	105,822