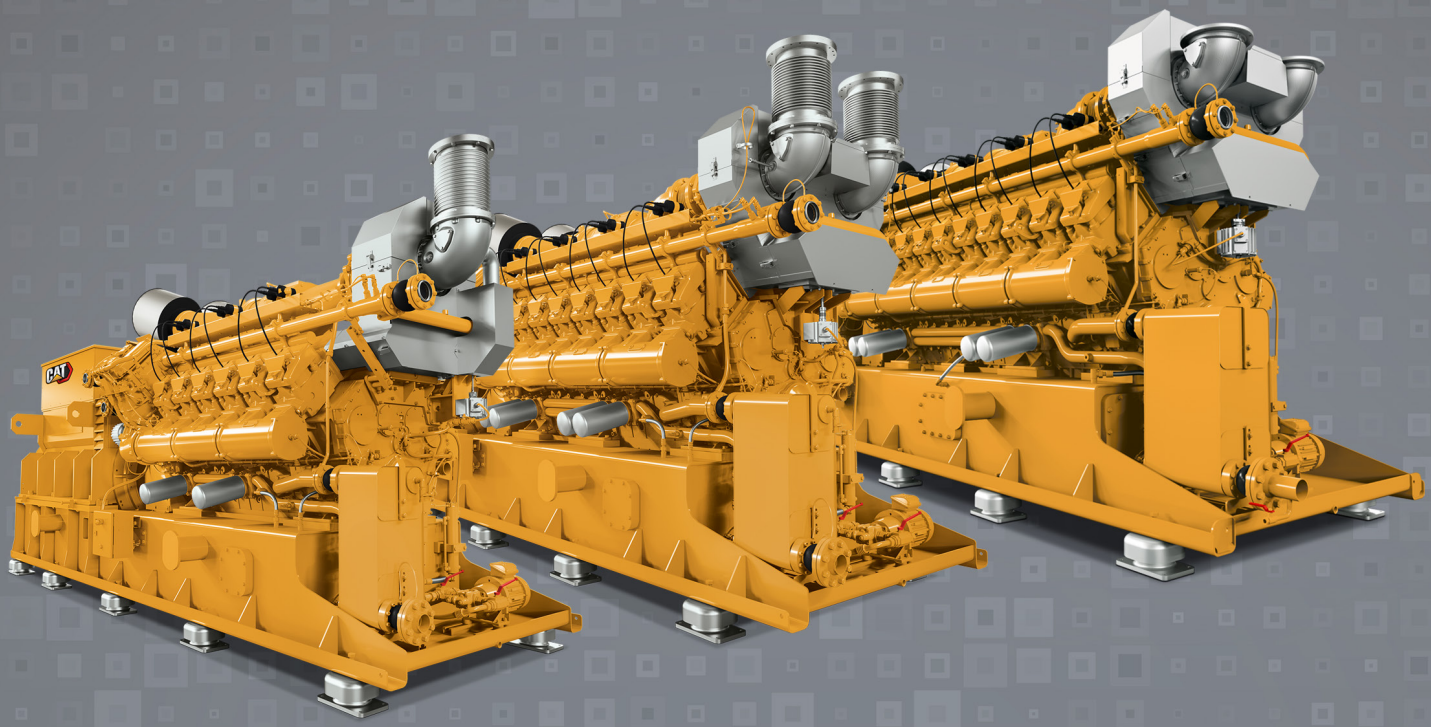


THE CG170B SERIES: 1,380 kW TO 2,300 kW

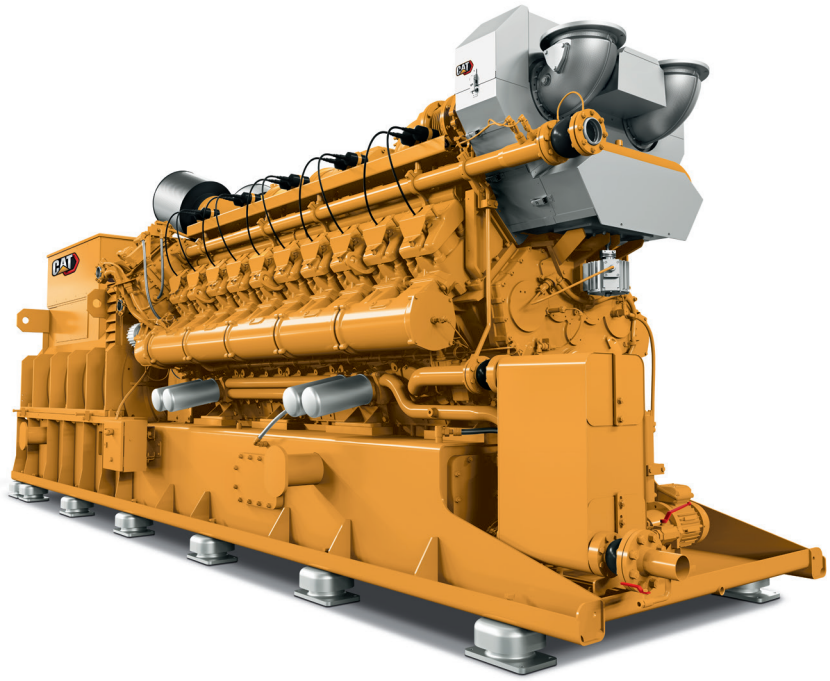
EFFICIENCY AT A NEW LEVEL

FLEXIBLE IN APPLICATION. CONSISTENT IN EFFICIENCY.

EFFICIENCY AT A NEW LEVEL.

Featuring a compact design, state-of-the-art components, and the flexibility to meet the demands of a wide range of applications, products in the Cat® CG170B gas generator range are truly talented.

Controlled by the smart and secure Total Plant & Energy Management (TPEM) system, the new CG170B series offers optimal efficiency and performance.



COST EFFECTIVE IN OPERATION

- High efficiency values, low oil consumption (0.15 g/kWh), and up to 80,000 oh (operating hours) until major overhaul delivers cost-effective operation and high profitability for the customer

FLEXIBILITY BY DESIGN – FUEL TYPE & APPLICATION

- Variants available for a multitude of applications including natural gas, biogas, landfill gas, and propane gas operation

IMPROVED RELIABILITY

- Reliable and proven core engine upgraded with state-of-the-art technologies
- Extended maintenance intervals

TPEM SYSTEM AS STANDARD

- Hardware and software for the engine and a holistic plant control
- Enables full power capability of the genset with maximum reliability, availability, performance, and usability

OPTIMUM EFFICIENCY

- Increased electrical efficiency – up to 45% (NG), up to 43.6% (BG)
- Increased electrical output up to 2,300 kW_{el}
- Optimal combination of efficiency and reliability

IMPROVED POWER DENSITY

- Compact design: The CG170B series delivers up to 18% more power from the same footprint as its predecessor

ONE GENSET, VARIOUS APPLICATIONS

Combined Heat and Power (CHP)

Utilities
District heating
Industrial
Hospitals
Airports
Greenhouses

Electrical Power

Energy services
Independent power producer
Utilities
Industrial

Biogas

Agriculture
Food industry
Sewage
Landfill

TECHNICAL DATA

PERFORMANCE DATA

ENGINE TYPE	CG170B-12	CG170B-16	CG170B-20	CG170B-20	CG170B-20
Bore/Stroke	170 mm/195 mm	170 mm/195 mm	170 mm/195 mm	170 mm/195 mm	170 mm/195 mm
Displacement	53 dm^3	71 dm^3	89 dm^3	89 dm^3	89 dm^3
Speed	1500 1/min	1500 1/min	1500 1/min	1500 1/min	1500 1/min
Mean Piston Speed	9.8 m/s	9.8 m/s	9.8 m/s	9.8 m/s	9.8 m/s
Mean Effective Pressure	21.5 bar	21.5 bar	21.5 bar	21.5 bar	21.5 bar
Length	5080 mm	6100 mm	6600 mm	6500 mm	6893 mm
Width	1710 mm	1710 mm	1710 mm	1710 mm	1706 mm
Height	2190 mm	2190 mm	2190 mm	2190 mm	2385 mm
Dry Weight Genset	12 900 kg	17 400 kg	21 400 kg	17 980 kg	16 965 kg

NATURAL GAS AND PROPANE GAS APPLICATIONS – POWER DATA 50 HZ

NO_x <= 500 mg/Nm^3 *

ENGINE TYPE	CG170B-12 P[1]	CG170B-12 R[2]	CG170B-16 P[1]	CG170B-16 R[2]	CG170B-20 P[1]	CG170B-20 R[2]	CG170B-20 PV[5]	CG170B-20 RV[6]
Electrical Power	1380 kW	1380 kW	1840 kW	1840 kW	2300 kW	2300 kW	2000 kW	2000 kW
Electrical Efficiency**	45.0%	44.0%	44.7%	44.0%	45.0%	44.0%	44.4%	43.7%
Thermal Efficiency**	42.3%	43.6%	42.6%	43.6%	42.3%	43.6%	43.3%	44.2%
Thermal Output*** ±8%	1296 kW	1369 kW	1755 kW	1824 kW	2164 kW	2281 kW	1949 kW	2026 kW
Major Overhaul	Up to 80,000 oh	Up to 80,000 oh	Up to 80,000 oh	Up to 80,000 oh	Up to 80,000 oh	Up to 80,000 oh	Up to 80,000 oh	Up to 80,000 oh
Lube Oil Consumption	0.15 g/kWh	0.15 g/kWh	0.15 g/kWh	0.15 g/kWh	0.15 g/kWh	0.15 g/kWh	0.15 g/kWh	0.15 g/kWh
Overall Efficiency	87.3%	87.6%	87.3%	87.6%	87.3%	87.6%	87.7%	87.9%

NO_x <= 250 mg/Nm^3 *

ENGINE TYPE	CG170B-12 P[1]	CG170B-12 R[2]	CG170B-16 P[1]	CG170B-16 R[2]	CG170B-20 P[1]	CG170B-20 R[2]	CG170B-20 Z[4]	CG170B-20 PV[5]	CG170B-20 RV[6]
Electrical Power	1380 kW	1380 kW	1840 kW	1840 kW	2300 kW	2300 kW	1880 kW	2000 kW	2000 kW
Electrical Efficiency**	43.9%	42.9%	43.6%	42.9%	44.0%	42.9%	41.8%	43.4%	42.6%
Thermal Efficiency**	43.2%	44.5%	43.5%	44.5%	43.1%	44.6%	45.9%	44.1%	45.2%
Thermal Output*** ±8%	1359 kW	1431 kW	1835 kW	1910 kW	2255 kW	2391 kW	2063 kW	2031 kW	2123 kW
Major Overhaul	Up to 80,000 oh	Up to 80,000 oh	Up to 80,000 oh	Up to 80,000 oh	Up to 80,000 oh	Up to 80,000 oh	Up to 80,000 oh	Up to 80,000 oh	Up to 80,000 oh
Lube Oil Consumption	0.15 g/kWh	0.15 g/kWh	0.15 g/kWh	0.15 g/kWh	0.15 g/kWh	0.15 g/kWh	0.15 g/kWh	0.15 g/kWh	0.15 g/kWh
Overall Efficiency	87.1%	87.4%	87.1%	87.4%	87.1%	87.5%	87.7%	87.5%	87.8%

BIO-, LANDFILL, AND SEWAGE GAS APPLICATIONS – POWER DATA 50 HZ

NO_x <= 500 mg/Nm^3 *

ENGINE TYPE	CG170B-12 X[3]	CG170B-16 X[3]	CG170B-20 X[3]	CG170B-20 XV[7]
Electrical Power	1380 kW	1840 kW	2300 kW	2000 kW
Electrical Efficiency**	43.6%	43.6%	43.6%	43.2%
Thermal Efficiency**	42.7%	42.7%	42.8%	43.5%
Thermal Output*** ±8%	1351 kW	1802 kW	2254 kW	2015 kW
Major Overhaul	Up to 64,000 oh	Up to 64,000 oh	Up to 64,000 oh	Up to 64,000 oh
Lube Oil Consumption	0.15 g/kWh	0.15 g/kWh	0.15 g/kWh	0.15 g/kWh
Overall Efficiency	86.3%	86.3%	86.4%	86.7%

NO_x <= 250 mg/Nm^3 *

ENGINE TYPE	CG170B-12 X[3]	CG170B-16 X[3]	CG170B-20 X[3]	CG170B-20 XV[7]
Electrical Power	1380 kW	1840 kW	2300 kW	2000 kW
Electrical Efficiency**	42.6%	42.6%	42.7%	42.2%
Thermal Efficiency**	43.4%	43.5%	43.5%	44.3%
Thermal Output*** ±8%	1407 kW	1878 kW	2346 kW	2097 kW
Major Overhaul	Up to 64,000 oh	Up to 64,000 oh	Up to 64,000 oh	Up to 64,000 oh
Lube Oil Consumption	0.15 g/kWh	0.15 g/kWh	0.15 g/kWh	0.15 g/kWh
Overall Efficiency	86.0%	86.1%	86.2%	86.5%

* 5% O_2 and dry exhaust gases

** According to ISO 3046-1 at U = 0.48 kV, cosphi = 1.0 for 50 Hz, a minimum methane number of MN 80 for natural gas (P, R), MN 34 for propane (Z) and MN 134 (sewage gas) for biogas applications.

*** Exhaust gas cooled to 120°C for natural gas and 150°C for biogas.

[1] = P = High Efficiency. Optimized for high electrical efficiency

[2] = R = High Response. Optimized for high total efficiency

[3] = Z = Propane. Optimized for operation with all biogases

[4] = X = Biogas. Optimized for operation with propane

[5] = PV = High Efficiency for Reqested Power. Optimized for high electrical efficiency at requested power

[6] = RV = High Response for Requested Power. Optimized for high total efficiency at requested power.

[7] = XV = Biogas for Requested Power. Optimized for operation with biogas at requested power

The values given in this data sheet are for information only and are not binding. The information given in the offer is authoritative.

TPEM. THE DOOR TO THE DIGITAL AGE.

With its comprehensive digital power plant control TPEM (Total Plant & Energy Management), Caterpillar redefines the control standard for energy solutions.

TPEM eliminates the need for additional control systems, as all power plant data for the genset and plant control are combined in one system. The optimum power plant control enables high economic efficiency provided from a single source.

- **ONE USER INTERFACE**
  > Complete power plant control and setup
- **CONNECTIVITY SOLUTIONS**
  > Remote plant control with free “TPEM Remote Client” software and extensive monitoring and analytics options with “Cat RAM“ subscription
- **SECURITY-ORIENTED TECHNOLOGY**
  > Safety chain for cogeneration plant monitoring [TÜV-certified]

SET UP

> **Custom-tailored technical solutions**
> **One integrated, flexible control system** for all electric power applications
> **Multiple functionalities for individual solutions**

OPTIMIZE

> **Data management and analysis** delivers information for optimizing the system
> **Life cycle history** enables the logging of and access to data throughout the life cycle of the genset and the peripherals

OPERATE

> **High efficiency** through optimal control
> **Enables remote management and monitoring**
> **Use the full genset potential with maximum reliability**

For more information and to contact your local Cat dealer, visit www.cat.com/catcg170b

LET’S DO THE WORK.™

LEXE1441-05