

V228 gen sets—Dependable power generation for diverse applications



Seven enclosed gen sets providing continuous power to homes and businesses in Northern Iraq



Enclosed gen set providing back-up power for a resort on the Caribbean Island of St. Kitts



Unenclosed gen set for a water treatment plant in Indonesia

Flexible configurations

We provide gen sets in both fully enclosed and skid-mounted, unenclosed configurations, based on each customer's unique operating requirements. Self-contained portable units are equipped with generator switchgear, auxiliary load transformer, radiators, exhaust silencer, heavy-duty air filtration and gasketed doors.



Durable design & construction

V228 engines are engineered to meet the rigors of power generation in extreme environments, including:

- Continuous operation in desert conditions
- Uninterrupted operation during hurricane-force winds
- Heavy-duty cooling up to 50°C with no derate
- Flexible operation in island, load share, black start and utility-parallel modes

Easy installation & expansion

Our V228 diesel gen sets can be installed in most applications in just five steps. They contain all of the necessary equipment for stand-alone power generation. For more power, additional units can be linked by tuning a communication link to the master gen set and configuring the system through a touch display screen.

GE's V228 gen sets deliver dependable, cost-effective power from 1.2 to 3 Mwe—and voltage up to 13,800 kv—for utility, industrial, and oil and gas applications.

V228 Series generator set specifications

Model	8V228	12V228	16V228
Power (cont.) 50 Hz/1000 rpm	1,400 kWe	2,100 kWe	2,800 kWe
Power (cont.) 60 Hz/900 rpm	1,260 kWe	1,890 kWe	2,500 kWe
Power (cont.) 50 Hz/1000 rpm	max 1,535 kWe	max 2,300 kWe	max 3,080 kWe
Power (cont.) 60 Hz/900 rpm	max 1,380 kWe	max 2,080 kWe	max 2,770 kWe
Weight kg (w/enclosure) est.	50,000	60,000	70,000
Length	12,000 mm (472 in)	13,000 mm (512 in)	14,000 mm (551 in)
Height	3,600 mm (142 in)	3,600 mm (142 in)	3,600 mm (142 in)
Width	3,700 mm (146 in)	3,700 mm (146 in)	3,700 mm (146 in)
Engine			
Number of cylinders	8	12	16
Stroke cycle	4	4	4
Cylinder arrangement	45-degree V	45-degree V	45-degree V
Bore	228.6 mm (9 in.)	228.6 mm (9 in.)	228.6 mm (9 in.)
Stroke	266.7 mm (10.5 in.)	266.7 mm (10.5 in.)	266.7 mm (10.5 in.)
Compression ratio	15.7:1	15.7:1	15.7:1
Full Rated Speed	1050 rpm	1050 rpm	1050 rpm
Power Output at 1000 rpm			
Continuous	1395 kWe	2093 kWe	2790 kWe
Maximum	1534 kWe	2302 kWe	3069 kWe
Power Output at 900 rpm			
Continuous	1256 kWe	1883 kWe	2511 kWe
Maximum	1381 kWe	2072 kWe	2762 kWe
Engine Dimensions			
Height w/shallow pan	2258 mm (89 in)	2258 mm (89 in)	2258 mm (89 in)
Length	3222 mm (127 in)	4059 mm (160 in)	4896 mm (193 in)
Width	1725 mm (68 in)	1725 mm (68 in)	1725 mm (68 in)
Dry Weight	13,691 kg (30,185 lbs)	17,780 kg (39,200 lbs)	22,135 mm (48,800 lbs)

To learn more:

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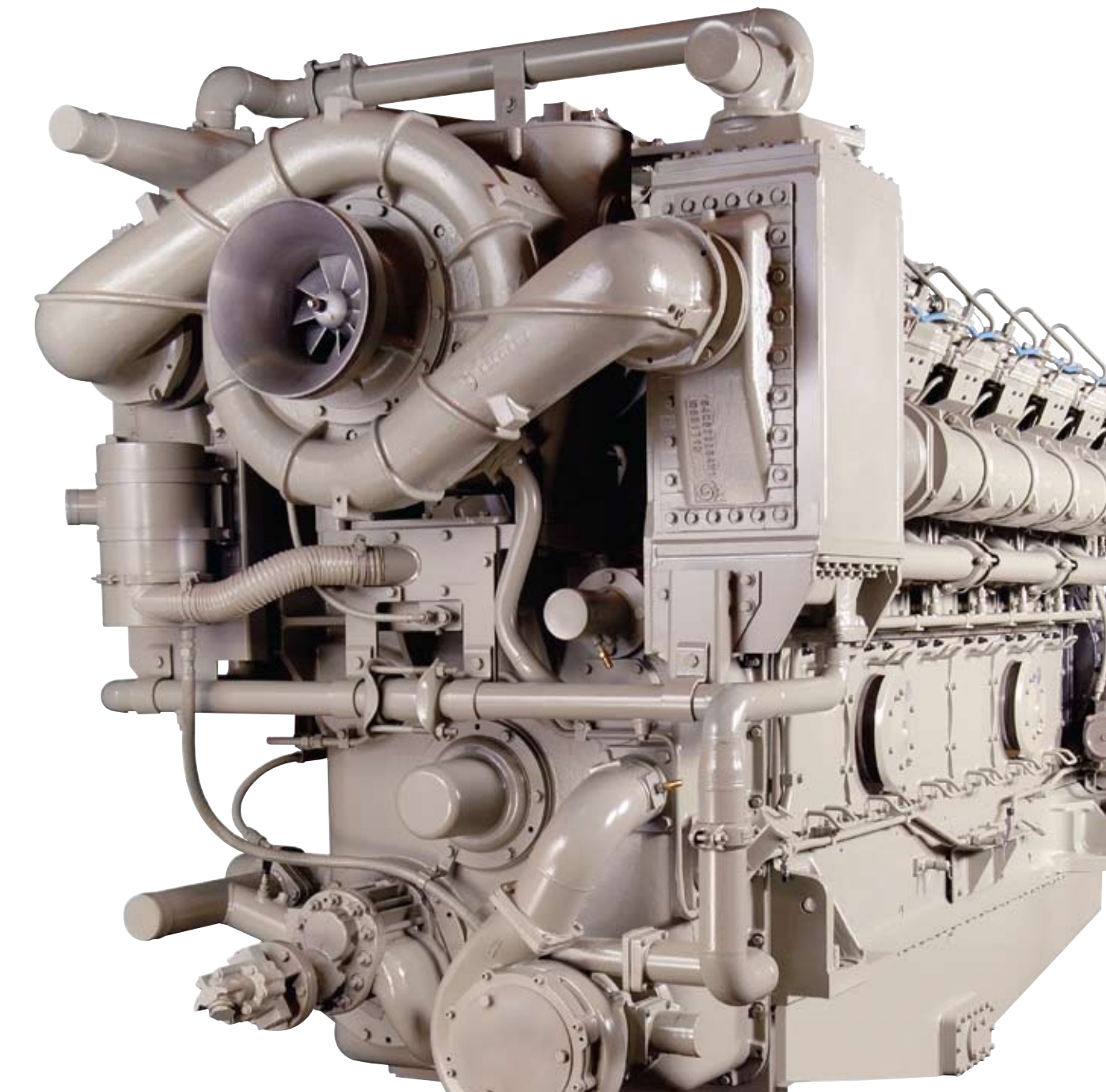
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Powerful advantages

GE's efficient V228 Series diesel generators



V228 engines—The medium-speed alternative to high-cost power

For dependability, fuel efficiency and life-cycle costs, GE's V228 medium-speed diesel engines are among the best in their class. Compared to high-speed diesel generators, the advantages are even more striking, including fuel savings of 3-5% and nearly double the mean time between maintenance in a typical power application. With operating efficiencies like these, payback on a V228 engine can come in as little as a year.

For continuous prime, peaking, black start and stand-by operations, V228 engines offer:

High Fuel & Lube Oil Efficiency

A high-capacity turbocharger, electronic fuel injection and efficient combustion management come together in V228 diesel engines to make fuel and lube oil consumption among the lowest in the industry.

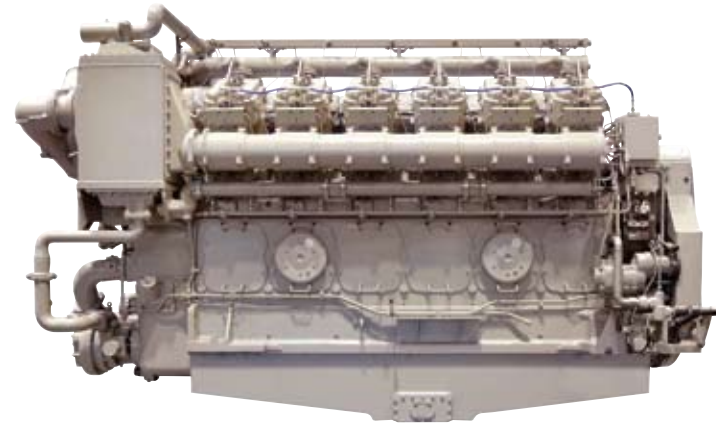
Extended Maintenance & Long Life

V228 engine components are designed to support extended maintenance intervals. With rugged construction and quality-assured parts, our engines can run cost-effectively for 20 years or more.

Proven Performance

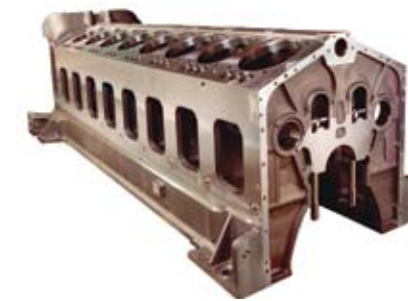
We're a leading maker of medium-speed engines—with more than 15,000 engines operating around the globe and more than 2,000 new units shipped each year. V228 engines are proven reliable, with more than 150 million hours of service in rigorous transportation and stationary applications.

GE's V228 diesel engines are available in 8-, 12- and 16-cylinder configurations, providing continuous power from 1395 kWe to 2790 kWe.



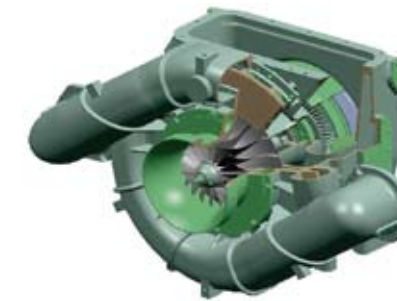
The easy-to-maintain engine

Modularized construction makes our V228 engines easier to maintain than conventional engine designs. Large doors on the engine mainframe provide access to bearings and other crankcase components, and the camshaft is arranged in individual sections for easy inspection and maintenance. The use of a sectional exhaust manifold and unified power assemblies simplifies component removal and replacement as well.



Sturdy Mainframe

The V228 mainframe features high-strength, single-piece, cast-iron construction. All water, fuel and exhaust piping is externally mounted, eliminating the potential for any internal contamination. Oil passages are cast into the frame to reduce the possibility of leaks. Ribbed cross members add to mainframe stiffness and lower vibration.



High-Performance Turbocharger

GE's expertise in gas turbine technology is reflected in an industry-leading design for performance in the V228's turbocharger. A high compression ratio improves efficiency across the load range, while dual modular pulse piping preserves exhaust pulse energy, maximizing thermal efficiency. The turbocharger's stainless dual exhaust pipe is designed for long life.

Fuel efficiency & emissions control

Electronic fuel injection (EFI) in the V228 reduces fuel consumption with precise, automatic control of the amount and timing of fuel delivered to each cylinder. Our EFI systems also ensure compliance with major emissions standards, including MARPOL, EPA Tier 1 and EPA Tier 2 standards. The performance of our EFI systems is being proven every day with more than 6,000 units now in reliable service.



Unitized Power Assembly

Higher peak firing pressures create greater stress on the head-to-liner seal. In the V228 power assembly, electron-beam welding of the steel liner to the forged head eliminates the upper liner seal. This one-piece design minimizes the effects of heat and stress and prevents leaks. The use of stainless steel valve seats, inconel exhaust, chromed intake valves and valve rotators extends overhaul intervals and component life.



High-Strength Pistons

Forged steel crowns on the engine's pistons and the use of forced-oil lubrication and cooling reduce heat for longer piston life. A three-ring arrangement, which distributes pressure more evenly, and a cut-back design decrease lube oil consumption. The piston crown is attached to an aluminum-alloy skirt that is lightweight and highly heat resistant. The master and articulated rods share a common journal, minimizing engine length while maximizing bearing width.



Heavy-Duty Crankshaft

The engine's one-piece crankshaft is forged from high-quality steel, nitride-hardened for long life. Journal surfaces are precision-ground, and bearing surfaces are force-fed with lubricating oil. Welded counterweights reduce stress for longer crankshaft life.

Tolerant Tri-Metal Main Bearings

The main bearings are oversized to reduce pressure and provide exceptional oil-wedge formation for low wear. A nickel barrier resists heat, while a lead tin overlay serves as a trap for particles and degraded oil.



V228 components

Designed for high reliability and low life-cycle costs