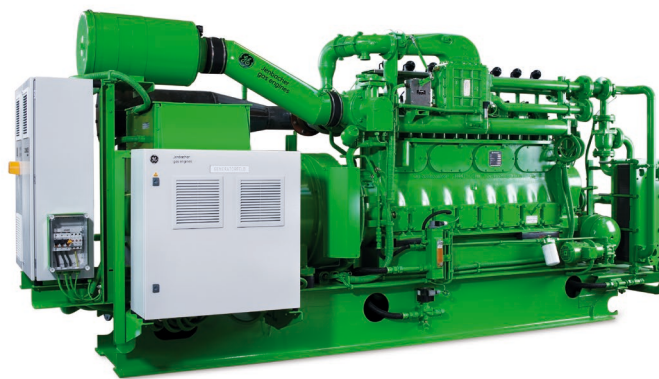


Jenbacher type 2



continuous development for 30 years

Introduced in 1976, the Jenbacher type 2 engine offers extremely high efficiency in the 250 to 350 kW power range. Its robust design and stationary engine concept result in excellent component durability and a service life of 60,000 operating hours before the first major overhaul. Optimized components and a proven control and monitoring concept give this engine outstanding reliability.

reference installations

model, plant

key technical data

description

J208 GS

**Sewage treatment
plant; Fritzens,
Austria**

Fuel Sewage gas
Engine type 2 x JMS 208 GS-B.LC
Electrical output 660 kW
Thermal output 2,598 MBTU/hr
Commissioning December 2002 (1st engine),
April 2005 (2nd engine)

Both J208 engines generate more than 3.3 MWh of electricity per year, which offsets the plant's electricity demand. In addition, the engine's heat is used for food waste processing and additional energy generation while benefiting the waste management operations.



J208 GS

**Biogas plant
Lamping;
Emstek, Germany**

Fuel Biogas
Engine type 1 x JMS 208 GS-B.L
Electrical output 330 kW
Thermal output 1,383 MBTU/hr
Commissioning December 2003

The gas engine runs on biogas produced from liquid manure and corn from the Lamping farm. The generated electricity is entirely fed into the public grid, and the produced heat is used for heating of the digester, housing and stables.



J208 GS

**Strass im Zillertal
Tirol, Austria**

Fuel Sewage gas
Engine type and number 1 x JMS 208 GS
..... 1 x JMS 312 GS
Electrical output 330 kW; 625 kW
Thermal output 420 kW; 724 kW
Commissioning April 2001 (1st engine),
June 2009 (2nd engine)

The shining star for energy efficiency in WWTPs. The engines provide electricity and heat for a facility that generates 120% of its energy demand. The excess power is fed into the local grid.



GE imagination at work

technical data

Configuration	In line
Bore (mm)	135
Stroke (mm)	145
Displacement/cylinder (lit)	2.08
Speed (rpm)	1,500 (50 Hz) 1,800 (60 Hz)
Mean piston speed (m/s)	7.3 (1,500 rpm) 8.7 (1,800 rpm)
Scope of supply	Generator set, cogeneration system, generator set/cogeneration in container
Applicable gas types	Natural gas, flare gas, propane, biogas, landfill gas, sewage gas.
Engine type	J208 GS
No. of cylinders	8
Total displacement (lit)	16.6

Dimensions l x w x h (mm)

Generator set	4,900 × 1,700 × 2,000
Cogeneration system	4,900 × 1,700 × 2,000
Container 20-foot (generator set)	6,100 × 2,500 × 2,800
Container 40-foot (cogeneration)	12,200 × 2,500 × 2,800

Weights empty (kg)

Generator set	4,900
Cogeneration system	5,600
Container 20-foot (generator set)	13,100
Container 40-foot (cogeneration)	17,000

outputs and efficiencies

Natural gas

1,500 rpm | 50 Hz

1,800 rpm | 60 Hz

NOx <	Type	Pel (kW) ¹	η _{el} (%)	Pth (kW)	η _{th} (%)	η _{tot} (%)	Pel (kW) ¹	η _{el} (%)	Pth (kW)	η _{th} (%)	η _{tot} (%)
500 mg/m ³ _N	208	300	38.2	400	50.9	89.1	335	37.2	407	45.2	82.4
	208	330	38.7	363	42.6	81.3					
250 mg/m ³ _N	208	294	37.6	401	51.3	88.9	335	35.9	418	44.8	80.7

Biogas

1,500 rpm | 50 Hz

1,800 rpm | 60 Hz

NOx <	Type	Pel (kW) ¹	η _{el} (%)	Pth (kW)	η _{th} (%)	η _{tot} (%)	Pel (kW) ¹	η _{el} (%)	Pth (kW)	η _{th} (%)	η _{tot} (%)
500 mg/m ³ _N	208	330	38.7	395	46.4	85.1	335	36.3	402	43.5	79.8
	208	248	38.9	293	46.0	84.9					

1) Total heat output with a tolerance of +/- 8%, exhaust gas outlet temperature 120°C, for biogas exhaust gas outlet temperature 180°C
All data according to full load and subject to technical development and modification.

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