

Jenbacher type 2



50
over
years of power

Jenbacher gas engines

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 761 kW
Commissioning December 2002 (1st engine),
April 2005 (2nd engine)

Both J208 GS 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 405 kW
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.



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. Special gases (e.g., coal mine gas, coke gas, wood gas, pyrolysis 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 x 1,700 x 2,000
Cogeneration system	4,900 x 1,700 x 2,000
Container 20-foot (generator set)	6,100 x 2,500 x 2,800
Container 40-foot (cogeneration)	12,200 x 2,500 x 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) ²	η_{th} (%)	η_{tot} (%)	Pel (kW) ¹	η_{el} (%)	Pth (kW) ²	η_{th} (%)	η_{tot} (%)
500 mg/m ³ _N	208	299	38.2	400	50.9	89.0	335	37.2	407	45.2	82.4
	208	330	38.8	363	42.6	81.4					
250 mg/m ³ _N	208	294	37.6	401	51.3	88.9	335	35.9	418	44.8	80.6

Biogas

1,500 rpm | 50 Hz

1,800 rpm | 60 Hz

NOx <	Type	Pel (kW) ¹	η_{el} (%)	Pth (kW) ²	η_{th} (%)	η_{tot} (%)	Pel (kW) ¹	η_{el} (%)	Pth (kW) ²	η_{th} (%)	η_{tot} (%)
500 mg/m ³ _N	208 ³	330	38.8	395	46.4	85.2	335	36.3	402	43.5	79.8
	208	249	39.1	293	46.0	85.1					

1) Electrical output based on ISO standard output and standard reference conditions according to ISO 3046/-1991 and p.f. = 1.0 according to VDE 0530 REM with respective tolerance; minimum methane number 70 for natural gas

2) Total heat output with a tolerance of +/- 8%, exhaust gas outlet temperature 120°C, for biogas exhaust gas outlet temperature 180°C

3) Special version with higher compression ratio

All data according to full load and subject to technical development and modification.