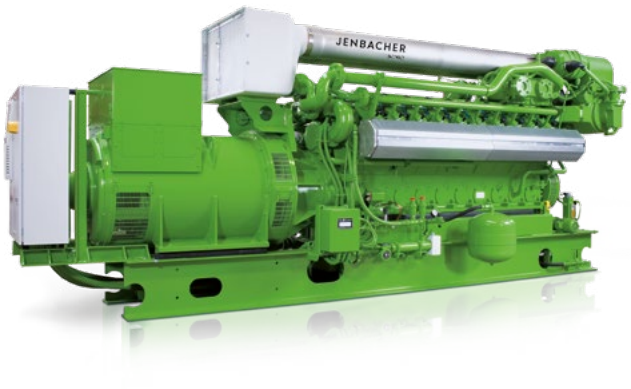
JENBACHER

JENBACHER TYPE 3

Efficient, durable, reliable

Long service intervals, maintenance-friendly engine design and low fuel consumption ensure maximum efficiency in our type 3 Jenbacher engines. Enhanced components prolong service life even when using non-pipeline gases, such as landfill gas. Our type 3 engines offer an outstanding service interval with up to 80,000 operating hours until the major overhaul. This engine type stands out in its 400 to 1,100 kW power range due to its technical maturity and high degree of reliability.



Reference installations

J312 & J320 Landfill Site in Durban, South Africa

Energy Source	Engine type	Electrical output	Commissioning
Landfill gas	1 x J312 1 x J320	526 kW 1,064 kW	2006

At the Durban Landfill, two containerized Jenbacher generator sets with a total electrical output of 1,590 kW generate electricity for the local municipal grid. Moreover, the use of landfill gas for power generation curbs environmental pollution and health problems associated with the escaping landfill gas.

J316 Combined Cooling, Heat & Power Plant at the Hospital in Beijing Qinghe, China

Energy Source	Engine type	Electrical output	Thermal output	Commissioning
Natural gas	2 x J316	1,670 kW	1,851 kW	2012

The Qinghe Hospital building and facility installed two J316 engines with a total electrical output of 1,670 kW. With a total efficiency of more than 70%, the J316 units improve the facility's energy supply security while also providing exhaust heat and hot water.

J320 Ensign Drilling Jonah Field in Wyoming, US

Energy Source	Engine type	Electrical output	Commissioning
Natural gas	24 x J320	24,168 kW	2011

In southwest Wyoming, a major gas producer has deployed 24 J320 engines to repower a drilling rig using natural gas instead of diesel. In the Jonah field, available site gas allows the producer to capture cost savings and reduce overall site emissions.

Technical data

Configuration	V 70°
Bore (mm)	135
Stroke (mm)	170
Displacement / cylinder (lit)	2.43
Speed (rpm)	1,500 (50 Hz) 1,200 / 1,800 (60 Hz)
Mean piston speed (m/s)	8.5 (1,500 1/min) 6.8 (1,200 1/min) 10.2 (1,800 1/min)
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	J312	J316	J320
No. of cylinders	12	16	20
Total displacement (lit)	29.2	38.9	48.7

		Dimensions l x w x h (mm)
Generator set	J312	4,700 x 1,800 x 2,300
	J316	5,200 x 1,800 x 2,300
	J320	5,700 x 1,700 x 2,300
Cogeneration system	J312	4,700 x 2,300 x 2,300
	J316	5,300 x 2,300 x 2,300
	J320	5,700 x 1,900 x 2,300
Container	J312	12,200 x 2,500 x 2,600
	J316	12,200 x 2,500 x 2,600
	J320	12,200 x 2,500 x 2,600

		Weights empty (kg)
Generator set	J312	8,100
	J316	10,100
	J320	13,900
Cogeneration system	J312	9,500
	J316	11,200
	J320	14,400

Outputs and efficiencies

Natural gas		**1.500 1/min | 50 Hz**					**1.800 1/min | 60 Hz**					**1.200 1/min | 60 Hz**				
NOx <	**Type**	**Pel (kW)[1]**	**Pt (kW)[2]**	**ηel (%)[1]**	**ηth (%)[2]**	**ηtot (%)**	**Pel (kW)[1]**	**Pt (kW)[2]**	**ηel (%)[1]**	**ηth (%)[2]**	**ηtot (%)**	**Pel (kW)[1]**	**Pt (kW)[2]**	**ηel (%)[1]**	**ηth (%)[2]**	**ηtot (%)**
500 mg/m³N	J312	393	508	39.6	51.2	90.8										
	J312	598	685	41.1	47.1	88.2										
	J312	635	739	40.8	47.4	88.2	635	813	39.0	50.0	89.0	473	539	40.7	46.4	87.1
	J316	851	991	40.7	47.3	88.0	847	1,084	39.1	50.0	89.1	634	720	40.9	46.5	87.4
	J320	999	1,130	41.4	47.0	88.1										
	J320	1,067	1,231	41.1	46.9	88.6	1,062	1,361	39.2	50.2	89.4	793	893	41.1	46.3	87.4
250 mg/m³N	J312	635	758	39.5	47.1	86.6	635	847	38.0	50.7	88.8	473	548	40.0	46.3	86.2
	J316	851	1,028	39.5	47.8	87.3	847	1,129	38.1	50.7	88.8	634	730	40.2	46.2	86.4
	J320	1,067	1,272	40.1	47.8	88.0	1,062	1,399	38.2	50.3	88.5	793	907	40.4	46.2	86.6

Biogas		**1.500 1/min | 50 Hz**					**1.800 1/min | 60 Hz**				
NOx <	**Type**	**Pel (kW)[1]**	**Pt (kW)[2]**	**ηel (%)[1]**	**ηth (%)[2]**	**ηtot (%)**	**Pel (kW)[1]**	**Pt (kW)[2]**	**ηel (%)[1]**	**ηth (%)[2]**	**ηtot (%)**
500 mg/m³N	J312	548	558	41.7	42.4	84.1					
	J312	635	711	40.2	45.0	85.2	635	804	38.5	48.7	87.2
	J316	851	940	40.3	44.5	84.7	847	1,072	38.5	48.7	87.2
	J320	733	746	41.7	42.5	84.2					
	J320	1,067	1,175	40.7	44.8	85.5	1,062	1,341	38.6	48.7	87.4
250 mg/m³N	J312	635	730	39.0	44.8	83.8	635	838	37.4	49.4	86.9
	J316	851	964	39.3	44.5	83.7	847	1,119	37.5	49.5	87.0
	J320	1,067	1,214	39.5	44.9	84.4	1,062	1,397	37.6	49.4	87.0

[1] Technical data according to ISO 3046
[2] Total heat output with a tolerance of +/- 8 %, exhaust gas outlet temperature 120°C, for biogas gas outlet temperature 180°C
All data according to full load and subject to technical development and modification.
Further engine versions available on request.

Find your local support online:
www.innio.com/en/company/providers

www.innio.com/en

I JB-1 22 003-EN

JENBACHER
INNIO