JENBACHER

JENBACHER TYPE 3

Efficient, durable, and reliable

Long service intervals, maintenance-friendly engine design, and low fuel consumption support efficient operation in our Type 3 Jenbacher engines. Enhanced components prolong service life when operating on natural gas as well as on special 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 within the 400 to 1,100 kW power range due to its technical maturity and high degree of reliability.



Reference installations

J316 – AMCO Produce, Canada



To support its energy- and heat-intensive hydroponic production, AMCO Produce turned to a combined heat and power (CHP) solution centered on a single Jenbacher J316 engine powered by natural gas. Equipped with heat recovery systems, the new cogeneration plant delivers 2,900 MBTU/hr of power and 4,094 MBTU/hr of heat to meet the 100-acre greenhouse facility's baseload demand and complement its thermal demand.

Engine	1 x J316
Electrical output	2,900 MBTU/hr
Thermal output	4,094 MBTU/hr
Energy source	Natural gas
Commissioning	2021

J320 – Gasgreen Energía, Ecuador



In 2016, two of INNIO's Jenbacher J320 gensets began delivering 6,824 MBTU/hr of power running on renewable landfill gas from the Gasgreen Energía landfill site. Based on that success, three Jenbacher J420 were added in 2017. Today, the power plant delivers a combined 17,060 MBTU/hr of electricity to power more than 25,000 homes in Ecuador and annually saves 26 million cubic meters of landfill gas from being released into the environment.[1]

Engines	2 x J320, 3 x J420
Electrical output	17,060 MBTU/hr
Thermal output	-
Energy source	Landfill gas
Commissioning	2016, 2017

J320 – Shandong Minhe Biological Technology Co., Ltd, China



The Shandong Minhe Biological Technology farm's biogas power generation project uses chicken manure and sewage fermentation to produce biogas. Commissioned in 2009, the facility is powered by three Jenbacher J320 biogas-fueled engines, and a J620 biogas-fueled engine was added in 2018.

Engines	3 x J320, 1 x J620
Electrical output	21,155 MBTU/hr
Thermal output	22,520 MBTU/hr
Energy source	Biogas
Commissioning	2009, 2018

[1] emgirs.gob.ec/web2025/planta-de-generacion-de-energia

JENBACHER

Technical data

Configuration			V 70°
Bore (inch)			5.31
Stroke (inch)			6.69
Displacement/cylinder (cu.in)			148.5
Speed (rpm)			1,800 (60 Hz)
Mean piston speed (in/s)			402
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 (cu.in)	1,782	2,376	2,970

		Dimensions l x w x h (inch)
Generator set	J312	190 x 70 x 90
	J316	210 x 70 x 90
	J320	236 x 71 x 100
Cogeneration system	J312	190 x 90 x 90
	J316	210 x 90 x 90
	J320	236 x 87 x 90
Container[2] 40-foot	J312	480 x 100 x 105 – 200
	J316	480 x 100 x 105 – 200
	J320	480 x 100 x 105 – 200
		Weights empty (lbs)
Generator set	J312	18,740
	J316	22,490
	J320	29,770
Cogeneration system	J312	21,830
	J316	24,910
	J320	30,870

Outputs and efficiencies

Natural gas			1,800 rpm | 60 Hz			
NO_x <	**Type**	**Pel (kW)[3]**	**Pth (MBTU/hr)[4]**	**ηel (%)[3]**	**ηth (%)[4]**	**ηtot (%)**
1.0 g/bhp.hr	J312	635	2627	40.2	48.7	88.9
	J316	849	3505	40.3	48.7	89.0
	J320	1062	4382	40.3	48.7	89.0
0.6 g/bhpr	J312	635	2693	39.2	48.7	87.9
	J316	849	3590	39.3	48.7	87.9
	J320	1062	4480	39.3	48.6	87.9

Biogas			1,800 rpm | 60 Hz			
NO_x <	**Type**	**Pel (kW)[3]**	**Pth (MBTU/hr)[4]**	**ηel (%)[3]**	**ηth (%)[4]**	**ηtot (%)**
1.0 g/bhp.hr	J312	635	2566	39.8	47.1	86.9
	J316	849	3419	39.9	47.1	86.9
	J320	1062	4272	39.9	47.0	86.9
0.6 g/bhpr	J312	635	2610	39.2	47.2	86.3
	J316	849	3480	39.2	47.2	86.4
	J320	1062	4350	39.3	47.2	86.4

[2] The dimensions refer to the standard base models with horizontal exhaust silencer.
[3] Technical data according to ISO 3046
[4] 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. Additional engine versions available on request.

In general, "Ready for H_2" Jenbacher units can be converted to operate on up to 100% hydrogen in the future. Details on the cost and timeline for a future conversion may vary and need to be clarified individually.

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