

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 Abwasserverband AIZ, Austria

Energy source	Engine type	Electrical output	Thermal output	Commissioning
Sewage gas	2 x J312	1.27 MW	1.4 MW	2018, 2020

The Achenal-Inntal-Zillertal (AIZ) Wastewater Association, based in Strass im Zillertal, uses two sewage gas-fired Jenbacher J312 engines to run the combined heat and power (CHP) system at its wastewater treatment plant. The system has improved the plant's ecological footprint while contributing to the energy transition. The treatment plant cleans 28,270 cubic meters of wastewater per day.



J312 Abwasserverband Hall in Tirol – Fritzens, Austria

Energy source	Engine type	Electrical output	Thermal output	Commissioning
Sewage gas	2 x J312	1.27 MW	1.4 MW	2016, 2023

At the Fritzens wastewater treatment plant, two sewage gas-fueled Jenbacher J312 engines with a total capacity of more than 1.27 MW of electricity, providing for the plant's entire annual power demand. The heat generated by the engines is used to process food waste, thus producing additional energy for waste treatment.



J320 Wangdee Biogas power plant, Thailand

Energy source	Engine type	Electrical output	Commissioning
Biogas	4 x J320	4.27 MW	2015, 2021, 2023

Centered on four Jenbacher J320 engines running on biogas, the plant generates electricity using wastewater and solid waste from raw cassava root processing. The biogas power plant delivers 4.27 MW of output, which is more than enough to supply all of the processing plant's electricity needs. The facility can earn extra profits by selling excess power back to the local grid.



J320 Shandong Minhe Biological Technology Co., LTD, China

Energy source	Engine type	Electrical output	Thermal output	Commissioning
Biogas	3 x J320 1 x J620	6.2 MW	6.4 MW	2009, 2018

The 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.



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 l/min)		
	6.8 (1,200 l/min)		
	10.2 (1,800 l/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 40-foot	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

NO _x <	Type	1,500 l/min 50 Hz					1,800 l/min 60 Hz				
		Pel (kW) ¹	Pth (kW) ²	η _{el} (%) ¹	η _{th} (%) ²	η _{tot} (%)	Pel (kW) ¹	Pth (kW) ²	η _{el} (%) ¹	η _{th} (%) ²	η _{tot} (%)
500 mg/m ³ _N	J312	635	682	42.6	45.7	88.3					
	J312	635	664	43.1	45.0	88.1					
	J316	851	926	42.6	46.3	88.9					
	J316	851	901	43.1	45.6	88.7					
	J320	1,067	1,157	42.7	46.3	89.0					
	J320	1,067	1,127	43.2	45.6	88.9					
250 mg/m ³ _N	J312	635	694	41.6	45.4	87.0	635	789	39.1	48.7	87.8
	J312	635	684	42.2	45.4	87.6					
	J316	851	943	41.6	46.1	87.6	847	1,052	39.2	48.7	87.8
	J316	851	929	42.2	46.0	88.2					
	J320	1,067	1,178	41.7	46.0	87.7	1,062	1,313	39.3	48.6	87.9
	J320	1,067	1,161	42.3	46.1	88.4					

NO _x <	Type	1,500 l/min 50 Hz					1,800 l/min 60 Hz				
		Pel (kW) ¹	Pth (kW) ²	η _{el} (%) ¹	η _{th} (%) ²	η _{tot} (%)	Pel (kW) ¹	Pth (kW) ²	η _{el} (%) ¹	η _{th} (%) ²	η _{tot} (%)
500 mg/m ³ _N	J312	548	531	42.7	41.4	84.0					
	J312	635	649	41.9	42.8	84.7	635	752	39.7	47.1	86.8
	J316	851	883	41.9	43.5	85.4	847	1,003	39.8	47.1	86.9
	J320	1,067	1,103	42.0	43.4	85.4	1,062	1,252	39.9	47.0	86.9
250 mg/m ³ _N	J312	635	661	40.9	42.5	83.4	635	765	39.1	47.2	86.3
	J316	851	901	40.9	43.3	84.1	847	1,020	39.2	47.2	86.3
	J320	1,067	1,125	41.0	43.2	84.2	1,062	1,275	39.3	47.2	86.4

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.



Contact us:
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In general, "Ready for H₂" 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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