

16V-275GL +

Gas Engine for Power Generation

Constant Speed Ratings

50 Hz: 3,600 kWe @ 1,000 rpm

60 Hz: 3,200 kWe @ 900 rpm

Technical Data

Cylinders	V16
Piston displacement	17,398 cu. in. (285 L)
Compression ratio	9:1
Bore & stroke	10.83" x 11.81" (275 x 300 mm)
Jacket water system capacity	133 gal. (503 L)
Lube oil capacity	275 gal. (1,040 L)
Fuel pressure range	45 – 60 psi (3.1 – 4.1 bar)
Starting system	150 psi (10.3 bar)

Dimensions l x w x h inch (mm)

356 (9,054) x 101 (2,565) x 140 (3,556)

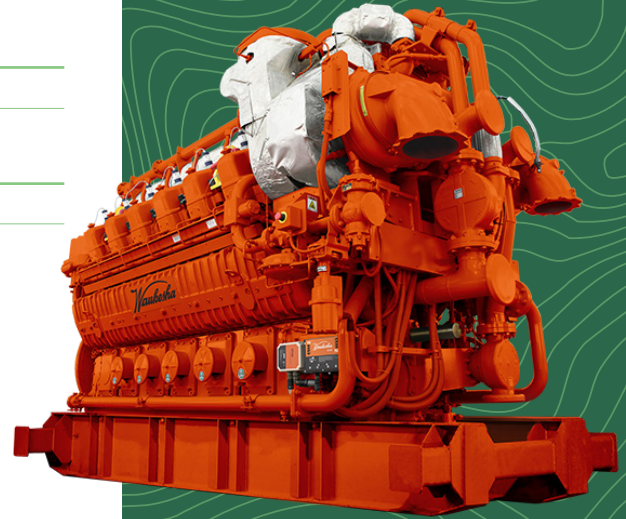
Weights lb (kg)

115,522 (52,400)

Designed to demanding specifications of the gas compression industry, INNIO's Waukesha® 275GL + engine is the right choice for rugged oilfield power generation and associated gas applications. A unique combination of robust construction and innovative technology, the 275GL + lean-burn engine delivers fuel flexibility, power output and emissions for unmatched performance.

The 275GL + features Waukesha's ESM® 2/ AFR2 control system, which integrates engine functionality into a single, closed-loop system with direct NOx measurement.

Key components such as the oil filters, oil cooler, pre-lube pump, and jacket water and auxiliary thermostats have been mounted on the engine, simplifying the packaging process and skid layout.



A POWERFUL FUTURE

Waukesha

16V-275GL +

Technical Features

Feature	Description	Advantages
Single, closed-loop engine control system	Waukesha's proven ESM 2 control integrates the following into a single, closed-loop system: <ul style="list-style-type: none"> • Air/Fuel Ratio Control • Wastegate Control • Turbocharger Bypass Control • Ignition Timing • Knock Detection • Fault Monitoring 	Directly measures NOx emissions; adjusts operating parameters to prevent NOx emissions from exceeding 0.3 g/BHP-hr with limited manual intervention or setup
Best-in-class fuel flexibility	More power on more fuels, including full-load down to 600 Btu/ft ³ and operation up to 2,300 Btu/ft ³	More power on more fuels means more profits without the additional costs associated with fuel treatment skids. The 275GL + can achieve full load down to 60% methane and 70% load on pure ethane.
Best-in-class fuel efficiency	Efficiency advantage at full speed and load; advantage increases at partial speeds and loads	Minimize fuel costs and maximize profits across the entire range of speed and load combinations
High Temperature Capability	Operation allowed in ambient temperatures up to 140 °F (60 °C) with 150 °F (65 °C) intercooler water	Ability to operate in high temperatures where other generator sets cannot. Minimizes air conditioning/cooling costs while maximizing power output
High reliability with long maintenance intervals	Achieves up to 36,000 hours before top-end overhaul and 72,000 hours before bottom end	With low lifecycle costs and the ability to run up to 5 years continuously before overhaul, the 275GL+ is the best choice for the most remote, rugged, and demanding power generation applications.

Performance Data

Intercooler Water Temperature 130°F (54°C)		50 Hz 1000 RPM	60 Hz 900 RPM
Emissions	Power kWe	3,600	3,200
	BSFC (LHV) Btu/bhp-hr (kJ/kWh)	6,523 (9,228)	6,411 (9,071)
	NOx g/bhp-hr (mg/Nm ³ @ 5% O ₂)	0.5 (230)	0.5 (230) ¹
	CO g/bhp-hr (mg/Nm ³ @ 5% O ₂)	1.6 (749)	1.5 (695)
	NMHC g/bhp-hr (mg/Nm ³ @ 5% O ₂)	0.84 (384)	0.83 (391)
	THC g/bhp-hr (mg/Nm ³ @ 5% O ₂)	5.6 (2,563)	5.6 (2,608)
	Methane g/bhp-hr (mg/Nm ³ @ 5% O ₂)	4.73 (2,178)	4.73 (2,217)
	Formaldehyde g/bhp-hr (mg/Nm ³ @ 5% O ₂)	0.18 (83)	0.18 (83)
	CO ₂ g/bhp-hr (g/Nm ³ @ 5% O ₂)	422 (194)	414 (194)

All information provided is subject to change without notice. All technical and performance data to be released via SAA - please contact Application Engineering.

Consult your local Waukesha gas engine representative for system application assistance. The manufacturer reserves the right to change or modify without notice, the design or equipment specifications as herein set forth without incurring any obligation either with respect to equipment previously sold or in the process of construction except where otherwise specifically guaranteed by the manufacturer.

1. 0.3g/BHP-hr NOx is also available (i.e. Fuel Flex)

Waukesha – an INNIO brand - INNIO's Waukesha engines are at the forefront of the energy transition, providing reliable and compliant energy solutions for distributed gas compression and power generation applications. The brand's rich and lean-burn engines, ranging from 335 hp to 5,000 hp, set an industry standard for low emissions, high reliability, and fuel flexibility.

Waukesha products are continuously upgraded to help operators stay emission-compliant without sacrificing operational excellence. These upgrades include new and remanufactured engines and parts, as well as conversion and modification kits, all of which are backed by OEM warranty and more than 115 years of engine expertise. Additionally, our Waukesha digital solutions include a collaborative solution with Detection Technologies for gas compression applications and INNIO's myPlant platform for power generation applications. Both solutions provide customers with enhanced monitoring and optimization capabilities, resulting in improved performance and reduced downtime.

We connect locally with our customers to enable a rapid response to their service needs, providing enhanced support through our broad network of distributors and solution providers with parts, services, and digital offerings. Waukesha engines are engineered in Waukesha, Wisconsin, U.S., and manufactured in Welland, Ontario, Canada. To learn more about the company's products and services, please visit INNIO's website at www.waukeshaengine.com or follow Waukesha engines on [LinkedIn](https://www.linkedin.com/company/waukeshaengine).

IWK-123020-EN

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