



# Waukesha\* gas engines 275GL\* Series 16V 275GL+ Enginator\* generating system



Image is representative of engine model.

Constant Speed Ratings<sup>1</sup>  
50 Hz: 3605 kWe @ 1000 rpm  
60 Hz: 3215 kWe @ 900 rpm

Designed to demanding specifications of the gas compression industry, GE's Waukesha 275GL+ Enginator 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 best-in-class fuel flexibility, power output and emissions for unmatched performance.

The 275GL+ features Waukesha's ESM\* control, 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.

## technical data

Cylinders	V 16
Piston displacement	17398 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. (1040 L)
Fuel pressure range	150 psi (10.3 bar)
Starting system	45 - 60 psi (3.1 - 4.1 bar)

Dimensions l x w x h inch (mm)
356 (9054) x 101 (2565) x 140 (3556)
Weights lb (kg)
115,522 (52,400)

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## technical features

feature	description	advantages
<b>Single, closed-loop engine control system</b>	Waukesha's proven ESM* control integrates the following into a single, closed-loop system: <ul style="list-style-type: none"> <li>• Air/Fuel Ratio Control</li> <li>• Wastegate Control</li> <li>• Turbocharger Bypass Control</li> <li>• Ignition Timing</li> <li>• Knock Detection</li> <li>• Fault Monitoring</li> </ul>	Directly measures NOx emissions; adjusts operating parameters to prevent NOx emissions from exceeding 0.5 g/bhp-hr with limited manual intervention or setup
<b>Best-in-class fuel flexibility</b>	More power on more fuels, including full-load down to 600 Btu/ft <sup>3</sup> and operation up to 2300 Btu/ft <sup>3</sup>	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.
<b>Best-in-class fuel efficiency</b>	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
<b>High Temperature Capability</b>	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
<b>High reliability with long maintenance intervals</b>	Achieves up to 40,000 hours before top-end overhaul and 80,000 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 kW <sub>e</sub>	3605 <sup>1</sup>	3215 <sup>1</sup>
	BSFC (LHV) Btu/bhp-hr (kJ/kWh)	6523 (9228)	6411 (9071)
	NO <sub>x</sub> g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	0.5 (230)	0.5 (230)
	CO g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	1.6 (749)	1.5 (695)
	NMHC g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	0.84 (384)	0.83 (391)
	THC g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	5.6 (2563)	5.6 (2608)
	Methane g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	4.73 (2178)	4.73 (2217)
	Formaldehyde g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	0.18 (83)	0.18 (83)
	CO <sub>2</sub> g/bhp-hr (g/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	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 GE Power 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. Power rating requires option code 1080D

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