

# 16V-275GL + Fuel Flex

## Gas Engine with ESM<sup>®</sup>

Constant Torque Ratings

5,000 bhp (3,728 kWb) @ 1,000 rpm

### Technical Data

Cylinders	V16
Piston displacement	17,398 cu. in. (285 L)
Compression ratio	8:1
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	50 - 60 psi (3.4 - 4.1 bar)
Starting system	150 psi (10.3 bar)

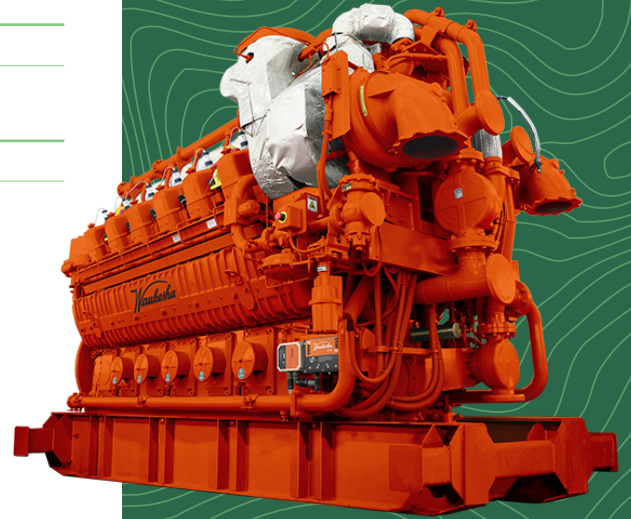
Dimensions l x w x h inch (mm)
237.4 (6,026) x 91.3 (2,320) x 126.4" (3,211)

Weights lb (kg)
65,320 (29,624)

INNIO's Waukesha<sup>®</sup> 275GL + represents the most advanced generation of high-horsepower engines designed for optimum performance in gas compression and other mechanical drive applications. A unique combination of robust construction and innovative technology, the 275GL + lean-burn engine delivers the fuel flexibility, reliability, power output, and emissions demanded by the oil and gas industry.

The 275GL + features Waukesha's ESM<sup>®</sup> 2 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.



Engine ships "ready to connect" with SkidIQ full skid monitoring system. SkidIQ is a cloud-based digital solution that integrates real-time engine analytics and compressor monitoring technology. The result is a unified platform that reduces operating expenses and emissions while enhancing uptime

A POWERFUL FUTURE

*Waukesha*

# 16V-275GL + Fuel Flex

## Technical Features

Feature	Description	Advantages
<b>Excellent fuel efficiency</b>	Optimized to achieve excellent fuel efficiency while running on a wide variety of field gases and load profiles.	Minimize fuel costs and maximize profits across the entire range of speed and load combinations.
<b>Single, closed-loop engine control system</b>	Waukesha's proven ESM 2 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 and automatically adjusts operating parameters to maintain desired NOx setting.
<b>Wide range of fuel flexibility</b>	Operation on a broad range of fuels with full power from 850-1,550 BTU/ft <sup>3</sup> and capability up to 2,300 BTU/ft <sup>3</sup> .	More power on more fuels means more profits without the additional costs associated with fuel treatment skids.
<b>High reliability with long maintenance intervals</b>	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 applications.

## Performance Data

Intercooler Water Temperature 130°F (54°C)		1000 RPM	
		0.3 NOx	0.5 NOx
Emissions	Power bhp (kWb)	5,000 (3,728)	
	BSFC (LHV) Btu/bhp-hr (kJ/kWh)	6,910 (10,383)	6,650 (9,992)
	WkI* (before derate)	50	50
	Altitude (before derate) ft (m)	4,500 (1,370)	6,500 (1,980)
	NOx g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	0.3 (121)	0.5 (202)
	CO g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	2.20 (890)	1.65 (668)
	NMHC g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	0.69 (279)	0.53 (214)
	THC g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	4.94 (2,000)	3.84 (1,555)
	Methane g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	4.24 (1,716)	3.31 (1,341)

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.

**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](http://www.waukeshaengine.com) or follow Waukesha engines on [LinkedIn](#).

IWK-123019-EN

© Copyright 2023 INNIO Waukesha Gas Engines Inc. Information provided is subject to change without notice. All values are design or typical values when measured under laboratory conditions. INNIO, Waukesha, 275GL and ESM are trademarks or registered trademarks of the INNIO Group, or one of its subsidiaries, in the United States and in other countries. All other trademarks and company names are property of their respective owners.

