

VHP® Series Five L7042GSI S5

With **ESM® 2** and **emPact Emission Control System**

1,500 BHP (1,119 kWb) @ 1,200 RPM



Technical Data

Cylinders	V12
Piston displacement	7,040 cu. in. (115 L)
Compression ratio	9.7:1
Bore & stroke	9.375" x 8.5" (238 x 216mm)
Jacket water system capacity	100 gal. (379 L)
Lube oil capacity	190 gal. (719 L)
Starting system	125 - 150 psi air/gas 24V electric

Dimensions l x w x h inch (mm)

147 (3,734) x 85 (2,159) x 97.83 (2,485)

Weights lb (kg)

24,250 (11,000)

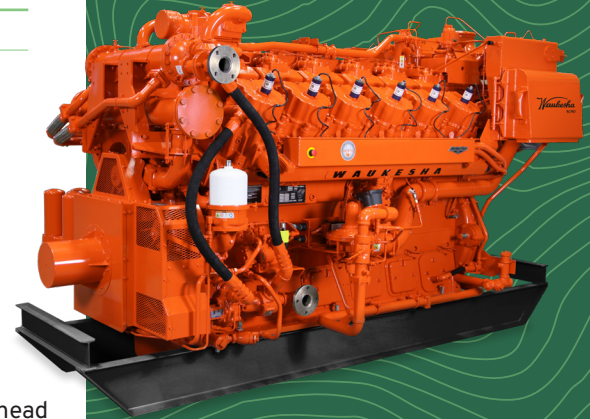
INNIO's Waukesha® VHP® Series Five rich-burn engines combine the most advanced technology available with the history and experience of the VHP platform. The L7042GSI S5 is the most flexible VHP ever, evidenced by the lack of a fuel derate, so it can achieve the full 1500 hp rating on fuels up to 2350 Btu/ft³ LHV with ambient temperatures up to 120 °F. Fuel consumption is reduced by more than 10%, while lifecycle costs are 20% lower than previous models.

Although Series Five engines are capable of higher power levels than previous versions, the stresses on the components have not increased. This is made possible by improved rich-burn combustion through

the Miller Cycle, an enhanced cylinder head design that reduces temperatures in key regions, and an optimized piston design.

Used previously on the P9394GSI engine, the Miller Cycle moves work from the piston to the turbocharger, reducing combustion and exhaust temperatures.

The improved cylinder head design reduces key internal temperatures by up to 40%, increasing reliability and extending the life of the head.



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



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Performance Data

Intercooler Water Temperature 130°F (54°C)		1200 RPM	1000 RPM
	Power bhp (kWb)	1,500 (1,119)	1,250 (932)
	BSFC (LHV) Btu/bhp-hr (kJ/kWh)	7,209 (10,199)	7,077 (10,012)
	Fuel Consumption Btu/hr x 1000 (kW)	10,810 (3,168)	8,889 (2,605)
Engine-Out Emissions	NOx g/bhp-hr (mg/Nm ³ @ 5% O ₂)	11.6 (4,875)	11.3 (4,835)
	CO g/bhp-hr (mg/Nm ³ @ 5% O ₂)	9.2 (3,867)	7.8 (3,340)
	NMHC g/bhp-hr (mg/Nm ³ @ 5% O ₂)	0.15 (63)	0.15 (63)
	THC g/bhp-hr (mg/Nm ³ @ 5% O ₂)	0.6 (252)	0.6 (252)
	Formaldehyde g/bhp-hr (mg/nm ³ @ 5% O ₂)	0.05 (19)	
Heat Balance	Heat to Jacket Water Btu/hr x 1000 (kW)	2,971 (871)	2,499 (732)
	Heat to Lube Oil Btu/hr x 1000 (kW)	502 (147)	380 (111)
	Heat to Intercooler Btu/hr x 1000 (kW)	315 (92)	224 (66)
	Heat to Radiation Btu/hr x 1000 (kW)	607 (178)	538 (158)
	Total Exhaust Heat Btu/hr x 1000 (kW)	2,863 (839)	2,269 (665)
Intake/Exhaust System	Induction Air Flow scfm (Nm ³ /hr)	1,929 (2,905)	1,588 (2,392)
	Exhaust Flow lb/hr (kg/hr)	9,378 (4,254)	7,723 (3,503)
	Exhaust Temperature °F (°C)	1,087 (586)	1,054 (568)

All data according to full load and subject to technical development and modification.

Data based on commercial quality natural gas, 100 °F ambient temperature and 850 ft elevation. Contact your local Waukesha representative for site specific technical data. Fuel consumption and BSFC data based on fuel LHV with a tolerance per ISO 3046/1 of -0/+5%. Heat balance and intake/exhaust data is nominal.

Consult your local Waukesha 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 or follow Waukesha engines on [LinkedIn](https://www.linkedin.com/company/waukeshaengine).

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