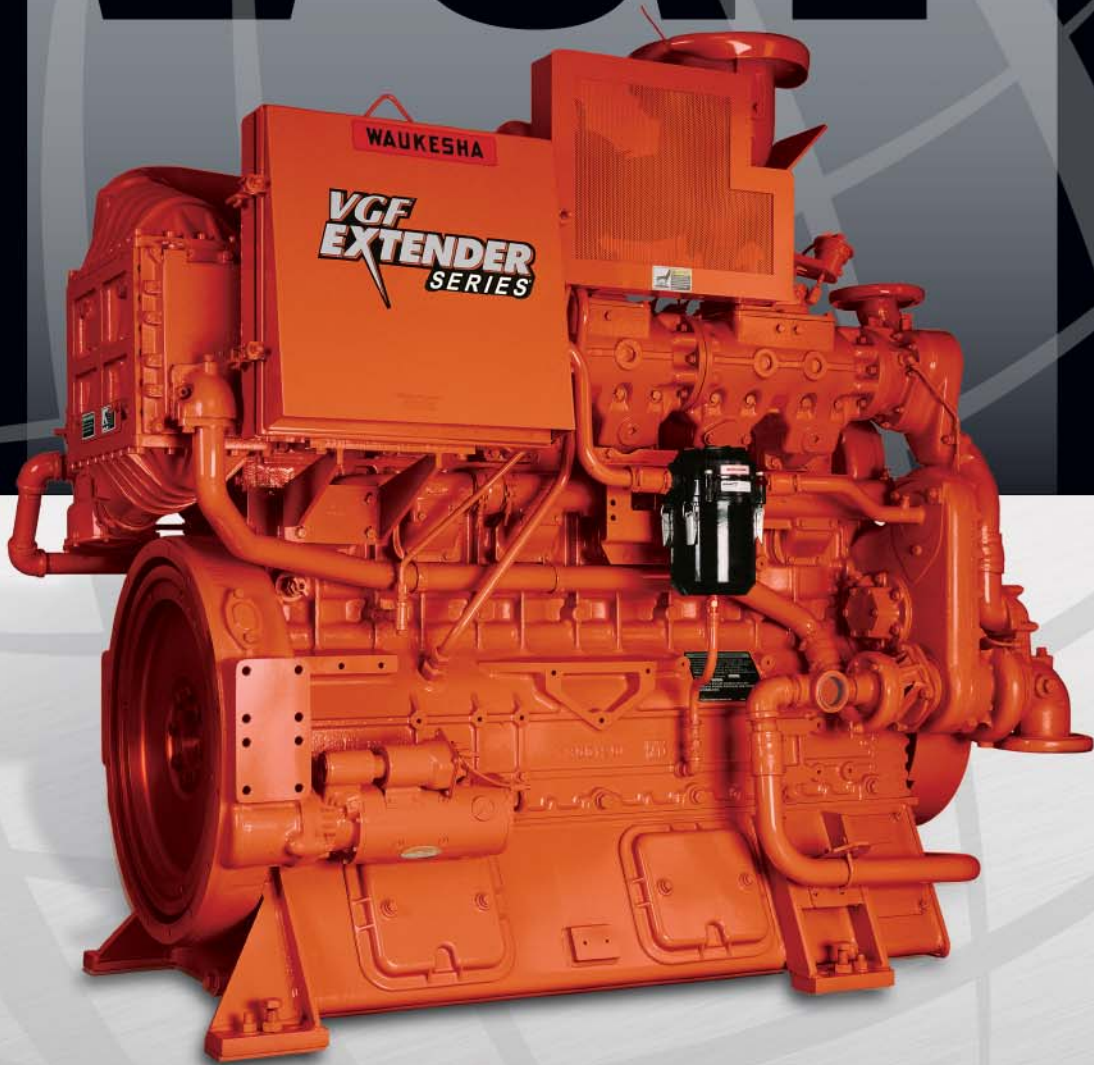


VGF



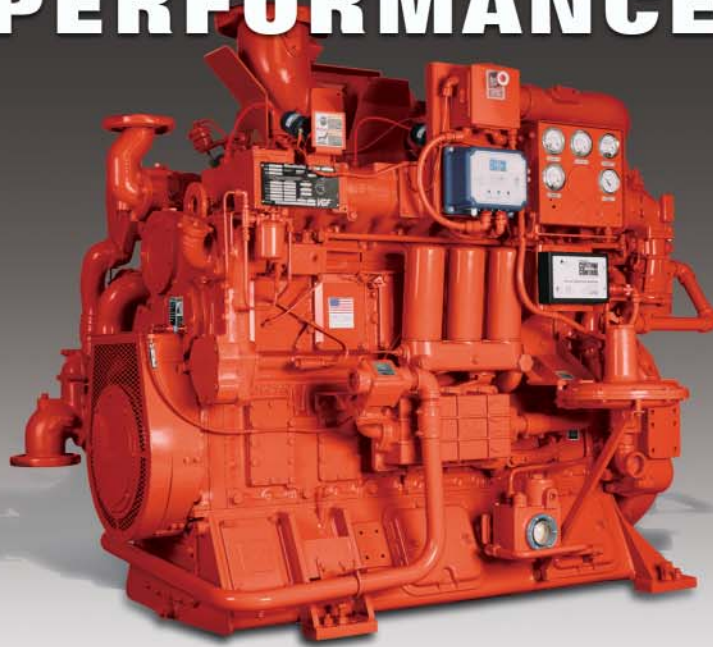
Waukesha

POWERING PERFORMANCE



Waukesha

PERFORMANCE.



Endurance Tested. Proven.

When enduring performance and optimal efficiency are equally demanded in an engine, the clear choice is the Waukesha VGF® Series.

For nearly two decades, the VGF line of engines has consistently performed under extreme conditions in a wide-range of applications – both in power generation and gas compression.

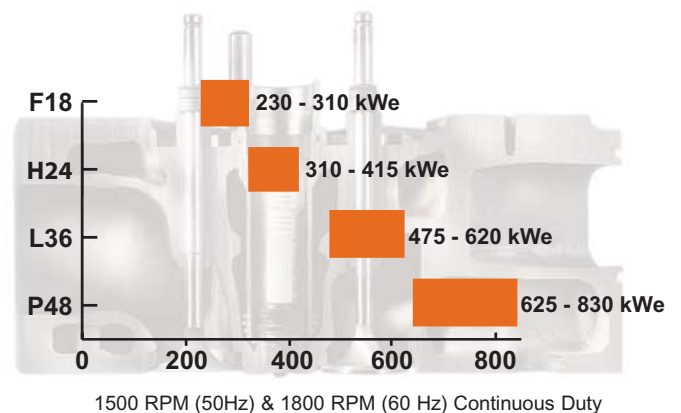
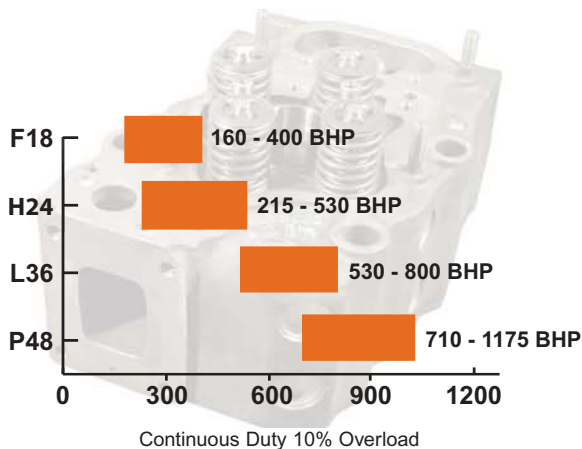
The VGF Series of high-speed engines are built with the durability expected from a medium-speed engine. Purposefully designed for a wide range of stationary, spark-ignited, gaseous fuel applications, the compact VGF engine has a high power-to-weight ratio operating up to 1800 RPM.

The foundation for exceptional long-term performance is attributed to the core VGF family design.

- Maintenance cost savings up to 39% over the nearest competitor.
- Unsurpassed fuel flexibility.
- Expansive choice of options earning VGF engines the distinction of market leader in versatility.

The Waukesha VGF line of engines. Exceptional life cycle. Cost efficient. Industrial strength.

Undeniable Power Output



DESIGNED FOR OPTIMAL

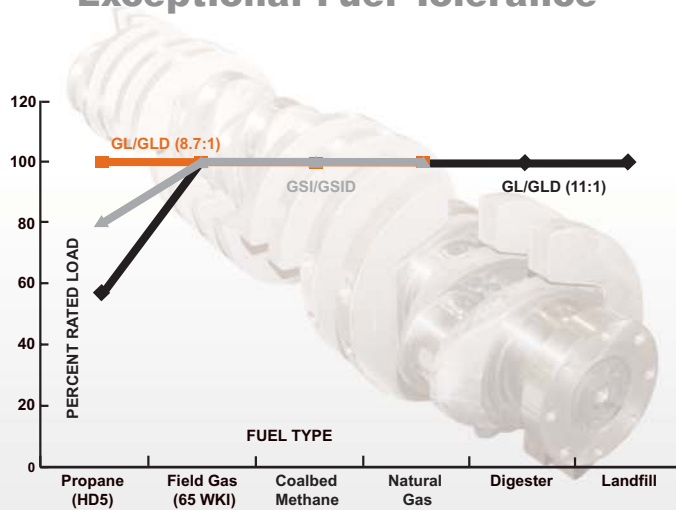
Whether it's a 6-, 8-, 12- or 16-cylinder VGF engine, Waukesha is committed to bringing the greatest versatility to each and every application by offering the widest variety of options in the industry. Options built upon the proven VGF Series design. Producing a line of engines that consistently delivers years of dependable operation.

■ **Fuel Flexibility.** The low compression ratio (LCR) option increases capability to maintain full power when running on fuels with a wide range of heating values. VGF engines operate efficiently on a wide BTU range of fuels, from 400 BTU landfill gas to 2300 BTU HD5 propane.

■ **Fuel Pressure Variances.** The VGF family can be configured as draw-through for low fuel pressure or blow-through for higher fuel pressure (0.5 to 45 psig).

■ **High Altitudes.** With an optional high-altitude turbocharger, VGF engines can operate up to 5,500 feet above sea level.

Exceptional Fuel Tolerance



Minimal Fuel Consumption

	1800 RPM	1500 RPM
VGF Model	BSFC (g/bhp-hr)	BSFC (g/bhp-hr)
GSI/GSID	7245	7105
GL/GLD (11:1)	6875	6685
GL (8.7:1)	7395	7050
GL (11:1) High Alt / Low Emissions	7360	-

Notes:
GL (11:1) High Alt / Low Emissions Option Only for Gas Compression Applications
BSFC - Brake Specific Fuel Consumption base on ISO 3046/1 standard reference conditions of 25°C (77°F) and 100 kPa (29.61 in Hg) with 0,+5% fuel tolerance.

Notes:
GL (11:1) High Alt / Low Emissions Option Only for Gas Compression Applications
Emissions data measurements are consistent with those described in EPA CFR 40 Part 89 Subpart D & E and ISO 8178-1 for measuring Nox, CO, NMHC, CH20.

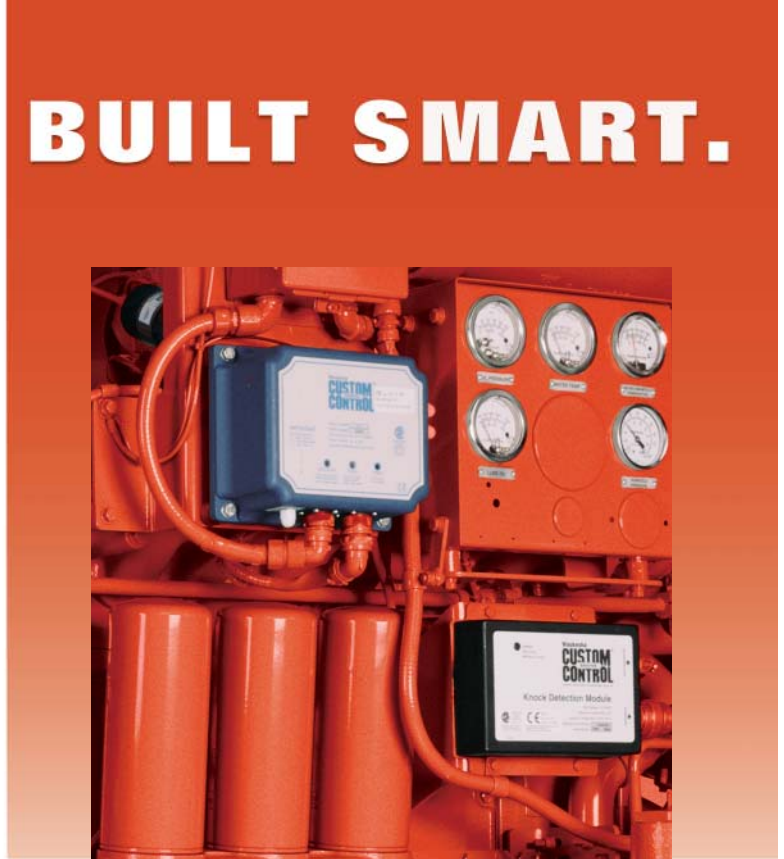


INSPIRED INC

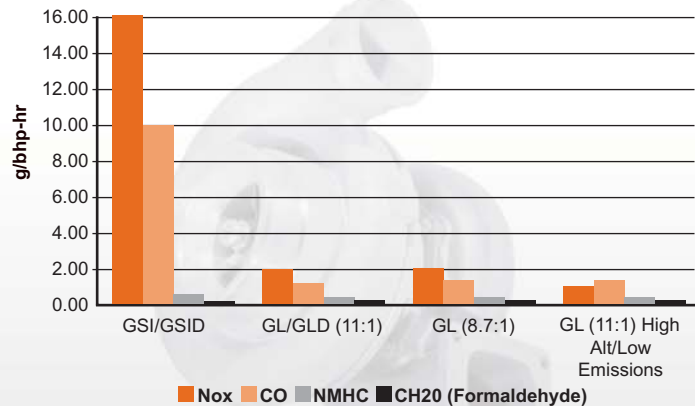
This is not a warmed over automotive engine trying to... Series was structurally designed from the inside out... whether in the most extreme destination or compact lo... built with industrial strength to handle continuous high rp... two decades in the field, the VGF line of engines is prov...

L VERSATILITY. BUILT SMART.

- **Low Emissions.** High compression ratio lean burn configuration VGF engines are capable of operating 1g/bhp-hr NOx emissions even at high altitudes. Lower emission levels can be reached with rich burn engines equipped with a 3-way catalyst.
- **Load Step Capabilities.** VGF engines have superior load step capabilities, allowing for optimal operation even when isolated from the utility or in stand-alone mode. The VGF Series' quick-loading characteristics, typically found only in diesel engines, avoid the time-consuming task of slow and gradual loading.
- **Co-generation Applications.** Operation with 210°F (99°C) jacket water temperature makes the VGF family well suited to many co-generation or Combined Heat and Power (CHP) applications.



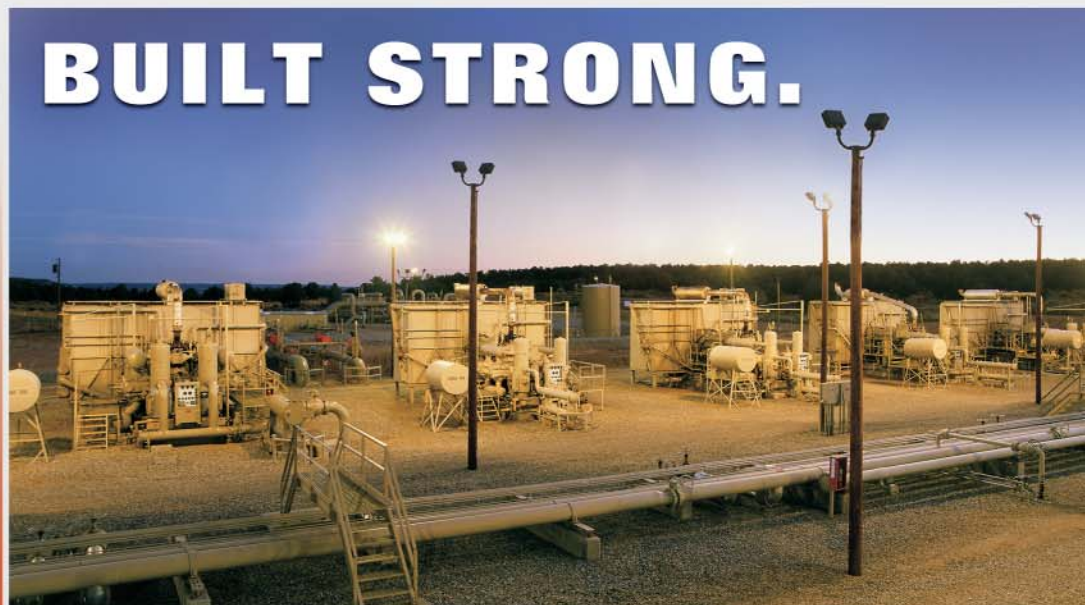
Low Emissions



GL (11:1) High Alt / Low Emissions Option Only for Gas Compression Applications
Emissions data measurements are consistent with those described in EPA CFR 40 Part 89 Subpart D & E and ISO 8178-1 for measuring Nox, CO, NMHC, CH20.

GENUINITY. BUILT STRONG.

to do an industrial job. The VGF
to deliver continuous output
location. And it's a Waukesha –
om to 1175 hp. Now with nearly
en in both design and durability.



More Profitability

Waukesha believes engines should operate with minimal interruption. That's why VGF engines need only quarterly maintenance – not monthly. This quarterly maintenance interval reduces cost and maximizes uptime.

The VGF Extender Package, a result of Waukesha's continuous design improvement efforts, is why the VGF line delivers this outstanding maintenance interval. The package is now standard on every new VGF engine. (Existing VGF models can be retrofitted.)

Long-lasting Waukesha spark plugs further extend service intervals by up to 62%. Spin-on oil filters, the preferred standard throughout the VGF line, simplify and speed up routine maintenance.

The result: A better operational bottom line.

Ease of Maintenance

The VGF Series simplifies maintenance procedures. The engine design allows easy access to the oil pump, main bearings and rod bearings – without the need to lower the oil pan. Commonality of parts between VGF models reduces the amount of inventory needed for servicing a fleet. Standard design features, such as independent heads, simplify and speed up maintenance work.

Maintenance Intervals	Waukesha GL/GLD
Breather Element	2,100
Spark Plugs	2,100
Air Cleaner Element	4,200
Lube Oil	2,100
Valve Adjustment Interval	2,100
Top End Overhaul	16,000
Major Overhaul	32,000

MAXIMUM UPTIME



Genuine Waukesha Parts

When your VGF engine needs servicing, use only Genuine Waukesha parts to provide the performance and uptime you expect. The same high quality Waukesha parts used to build the VGF engine are stocked and available at your local Waukesha Distributor.

Contact your Authorized Waukesha Distributor for your VGF service parts needs and also get details about the Certified Overhaul (with extended warranty) that is available for your VGF engine.



With documented proven performance and durability, the VGF line of engines is the clear choice.

- More uptime earning better profitability
- Maximum high speed continuous duty providing durable stationary power
- Built to last with reduced vibration designs
- Compact size means less packaging costs
- Fuel quality and pressure variance application options
- High power-to-weight ratio ensures long life and reduced operation costs
- Inline and V configurations have major component commonality
- Worldwide network of distributors who know and support gas engines

Waukesha Engine. The name synonymous with powering performance. Ingenious designs. Endurance tested.

For over a century, Waukesha engines have been built smarter to deliver maximum efficiency and longevity – even in the harshest environments. From remote oil fields in Khazakstan to critical power generation applications in Chicago, Waukesha spark-ignited, gaseous-fueled reciprocating engines are powering the way energy moves.

Waukesha engines are responsible for developing remote oil and gas resources, supplying bountiful water to communities, and lighting night skies.

Everyday, Waukesha engines are reshaping the quality of life around the world.

VGF



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Waukesha

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