

BASE ENGINE

CONNECTING RODS – Drop forged alloy steel, angle split, serrated joint, oil jet piston pin lubrication.

CRANKCASE – Alloy cast iron, fully ribbed, integral with cylinder frame.

CRANKSHAFT – Drop forged alloy steel, dynamically balanced and fully counterweighted. Viscous vibration dampener.

CYLINDERS – Removable wet type liners of centrifugally cast alloy iron.

CYLINDER HEADS – Eight interchangeable, valve-in-head type, with two hard faced intake and two hard faced exhaust valves per cylinder. Replaceable intake and exhaust valve seats. Mechanical valve lifters with pivoted roller followers.

FLYWHEEL – With 150 tooth ring gear (for Delco electric and air/gas starters). Flywheel machined to accept SAE 620D, 18" (457 mm) diameter clutch, or SAE 927B-180 flywheel converter.

FLYWHEEL HOUSING – SAE #0, nodular iron housing. Provision for two magnetic pickups and vertical mounting pads.

PISTONS – Aluminum alloy, three ring, with patented high turbulence combustion bowl. Oil jet cooled with full floating piston pin. *High compression ratio (HCR) 11:1. Low compression ratio (LCR) 8.7:1.*

STANDARD ACCESSORIES

AIR CLEANER – Two stage, dry panel type with rain shield and service indicator. Engine mounted.

BARRING DEVICE – Manual.

BREATHER – Crankcase, closed type (mounted).

CARBURETOR – Single natural gas Impco 400 updraft.

COOLING SYSTEM – Jacket water: gear driven jacket water pump, thermostatically controlled, full flow bypass type with nominal 180° F (82° C) outlet temperature. Auxiliary water: gear driven pump supplies water to intercooler and oil cooler circuit.

EXHAUST SYSTEM – Water cooled exhaust manifold. Outlet flange for ANSI 8" 125# flange.

GOVERNOR – Woodward SG hydraulic with manual speed control.

IGNITION – Waukesha Custom Engine Control electronic ignition system with coils, cables and spark plugs. Non-shielded. 24V DC power required. Includes emergency stop/service engine protection switch for load override of remote controls.

KNOCK DETECTION MODULE (KDM) – Electronic detonation protection system. Includes engine mounted sensors, wiring and KDM. Meets CSA Class I, Group D, Division 2 hazardous location requirements. **Note:** KDM is available on engines equipped with HCR pistons only.

INTERCOOLER – Air-to-water.

LIFTING EYES – For engine only.

LUBRICATION SYSTEM – Gear type pump, full flow spin-on filters and industrial base type oil pan, 56 gallon (212 litres) capacity, including filters. Engine mounted plate type oil cooler.

MOUNTING – Base type oil pan.

PAINT – Oilfield orange.

TURBOCHARGER – Exhaust driven, dry type with wastegate. For 1400 – 1800 rpm applications.

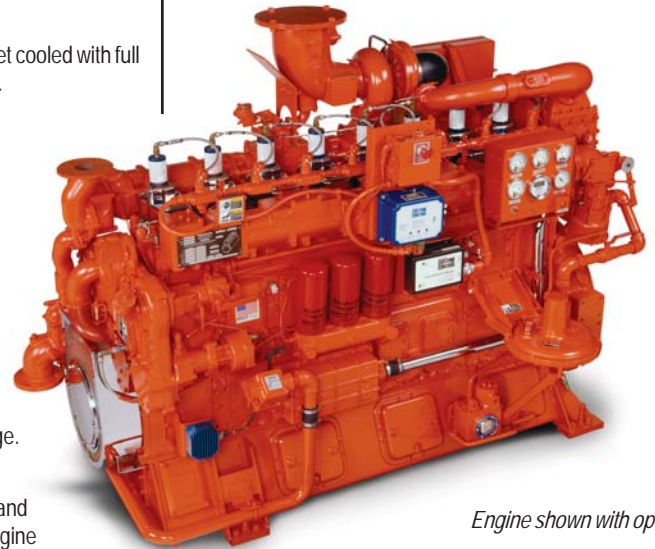


Waukesha

POWERING PERFORMANCE

H24GL

VGTM Series Gas Engine
355 - 585 BHP



Engine shown with options.

Model H24GL Turbocharged and Intercooled, Lean Combustion, Eight Cylinder, Four-Cycle Gas Engine

Specifications

Cylinders Inline 8	Lube Oil Capacity 56 gal. (212 L)
Piston Displacement 1462 cu. in. (24 L)	Fuel Pressure Range 25 - 50 psi (1.72 - 3.45 bar)
Bore & Stroke 5.98" x 6.5" (152 x 165 mm)	Starting System 150 psi max. air/gas 24V DC electric
Compression Ratio LCR 8.7:1, HCR 11:1	Dry Weight 7500 lb. (3400 kg)
Jacket Water System Capacity 20 gal. (75 L)	

Cooling Water Flow at	1500 rpm	1800 rpm
Jacket Water gpm (l/m)	103 (390)	130 (492)
Aux. Water gpm (l/m)	25 (95)	35 (133)



POWER RATINGS: H24GL VGF SERIES GAS ENGINES

Model	I.C. Water Inlet Temp.	C.R.	Bore & Stroke in. (mm)	Displ. cu. in. (litres)	Brake Horsepower									
					1200 rpm ¹		1400 rpm ¹		1500 rpm		1600 rpm		1800 rpm	
					I	C	I	C	I	C	I	C	I	C
H24GL	130° F (54° C)	11:1	5.98 x 6.5 (152 x 165)	1462 (24)	395	355	455	415	490	445	520	475	585	530
H24GL	130° F (54° C)	8.7:1	5.98 x 6.5 (152 x 165)	1462 (24)	—	—	—	415	—	445	—	475	—	530
H24GL*	130° F (54° C)	11:1	5.98 x 6.5 (152 x 165)	1462 (24)	—	—	—	455	—	490	—	520	—	585

¹Low speed turbocharger 1200 - 1400 rpm operation.

*These power ratings require Price Book Code 1100, and are available continuously when applied per WKI™ power and timing curve S7090-14. It is permissible to operate at up to 5% overload for two hours in each 24 hour period.

Rating Standard: All models; Ratings are based on ISO 3046/1-1995 with mechanical efficiency of 90% and Tcra (clause 10.1) as specified limited ±10° F (5° C). Ratings are also valid for SAE J1349, BS5514, DIN6271 and AP17B-11C standard atmospheric conditions.

Intermittent Power Rating: The highest load and speed which can be applied in variable speed mechanical system application only. Operation at this rating is limited to a maximum of 3500 hours per year.

ISO Standard Power/Continuous Power Rating: The highest load and speed which can be applied 24 hours a day, seven days a week, 365 days per year except for normal maintenance, it is permissible to operate the engine at up to 10% overload, or maximum load indicated by the intermittent rating, whichever is lower, for two hours in each 24 hour period.

Standby Power Rating: This rating applies to those systems used as a secondary source of electrical power. This rating is the output the system will produce continuously (no overload), 24 hours per day for the duration of the prime power source outage.

All natural gas engine ratings are based on a fuel of 900 Btu/ft³ (35.3 MJ/nm³) SLHV value, with a 91 WKI. For conditions or fuels other than standard, consult the Waukesha Engine Sales Engineering Department.

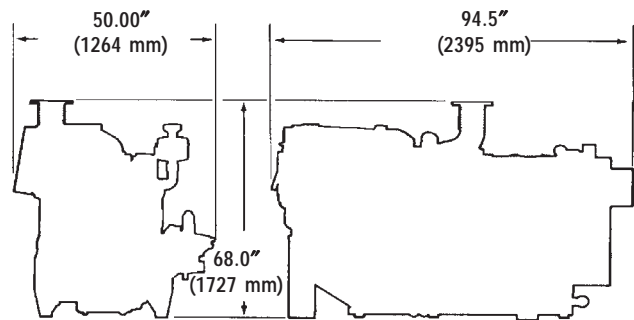
PERFORMANCE: H24GL VGF SERIES GAS ENGINES

HCR Piston 130° F (54° C) Intercooler Water Temp			
Low Fuel Consumption Settings	C.R. 11:1	1800 rpm	1500 rpm
	BSFC (Btu/bhp-hr)	6990	6790
	NOx (grams/bhp-hr)	2.00	2.45
	CO (grams/bhp-hr)	1.35	1.40
	NMHC (grams/bhp-hr)	0.25	0.30

LCR Piston 130° F (54° C) Intercooler Water Temp			
Low Fuel Consumption Settings	C.R. 8.7:1	1800 rpm	1500 rpm
	BSFC (Btu/bhp-hr)	7620	7155
	NOx (grams/bhp-hr)	1.80	2.40
	CO (grams/bhp-hr)	1.80	1.80
	NMHC (grams/bhp-hr)	0.35	0.40

NOTES:

- 1) Performance ratings are based on ISO 3046/1-1995 with mechanical efficiency of 90% and Tcra limited to ± 10° F.
- 2) Fuel consumptions based on ISO 3046/1-1995 with a + 5% tolerance for commercial quality natural gas having a 900 Btu/ft³ saturated low heat value.
- 3) Data based on standard conditions of 77° F (25° C) ambient temperature, 29.53 inches Hg (100kPa) barometric pressure, 30% relative humidity (1kPa /0.3 inches Hg water vapor pressure).
- 4) Data will vary due to variations in site conditions. For conditions and/or fuels other than standard, consult the Waukesha Engine Sales Engineering Department.



Waukesha

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Consult your local Waukesha Distributor 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.