

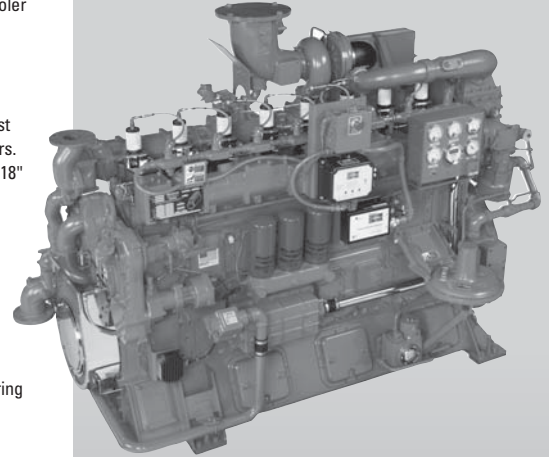


## STANDARD EQUIPMENT

- 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 600 for low fuel pressure.
- CONNECTING RODS** – Drop forged alloy steel, angle split, serrated joint, oil jet piston pin lubrication.
- 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.
- 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.
- FLYWHEEL HOUSING** – SAE #0, nodular iron housing. Provision for two magnetic pickups and vertical mounting pads.
- 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 local override of remote controls.
- INTERCOOLER** – Air-to-water.
- KNOCK DETECTION MODULE (KDM)** – Electronic detonation protection system. Includes engine mounted sensors, wiring and KDM. Meets CSA Class I, Division 2, Group D hazardous location requirements.
- 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.
- PISTONS** – Aluminum alloy, three ring, with patented high turbulence combustion bowl. Oil jet cooled with full floating piston pin. 11:1 compression ratio.
- TURBOCHARGER** – Exhaust driven, dry type with wastegate. For 1400 – 1800 rpm applications.

## VGF® Series Gas Engine

355-585 BHP (265-436 kWb)



Engine shown with options.

## Model H24GLD

Turbocharged and Intercooled,  
Lean Combustion Draw-Thru Carburetion  
Six Cylinder, Four Cycle Gas Fueled Engine

## SPECIFICATIONS

<b>Cylinders</b>	<b>Fuel Pressure Range</b>
Inline 8	8" WC - 5 psig
<b>Piston Displacement</b>	(According to regulator used,
1462 cu. in. (24 L)	0.02 - 0.34 bar)
<b>Bore &amp; Stroke</b>	<b>Starting System</b>
5.98" x 6.5"	150 psi max. air/
(152 x 165 mm)	gas
<b>Compression Ratio</b>	24V DC electric
11:1	
<b>Jacket Water</b>	<b>Dry Weight</b>
<b>System Capacity</b>	7500 lb. (3400 kg)
20 gal. (75 L)	
<b>Lube Oil Capacity</b>	
56 gal. (212 L)	
<b>Cooling Water Flow at</b>	<b>1500 rpm</b>   <b>1800 rpm</b>
Jacket Water gpm (l/m)	104 (394)   130 (492)
Aux. Water gpm (l/m)	25 (95)   35 (133)



## POWER RATINGS: H24GLD VGF SERIES GAS ENGINES

Model	I.C. Water Inlet Temp. °F (°C) (Tcra)	C.R.	Bore & Stroke in. (mm)	Displ. cu. in. (litres)	Brake Horsepower (kWb Output)									
					1200 rpm <sup>1</sup>		1400 rpm <sup>1</sup>		1500 rpm		1600 rpm		1800 rpm	
					I	C	I	C	I	C	I	C	I	C
F18GLD	130° (54°)	11:1	5.98 x 6.5 (152 x 165)	1462 (24)	395 (295)	355 (265)	455 (339)	415 (310)	490 (366)	445 (332)	520 (388)	475 (354)	585 (436)	530 (395)
F18GLD*	130° (54°)	11:1	5.98 x 6.5 (152 x 165)	1462 (24)	—	—	—	455 (339)	—	490 (366)	—	520 (388)	—	585 (436)

\*These power ratings require Price Book Code 1100, and are available continuously when applied per WKI® power and timing curve S7079-19. It is permissible to operate at up to 5% overload for two hours in each 24 hour period.

<sup>1</sup>NOTE: Low speed turbocharger required for operation at 1200 - 1400 rpm.

**Rating Standard:** All models: Ratings are based on ISO 3046/1-1995 with mechanical efficiency of 90% and auxiliary water temperature 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.

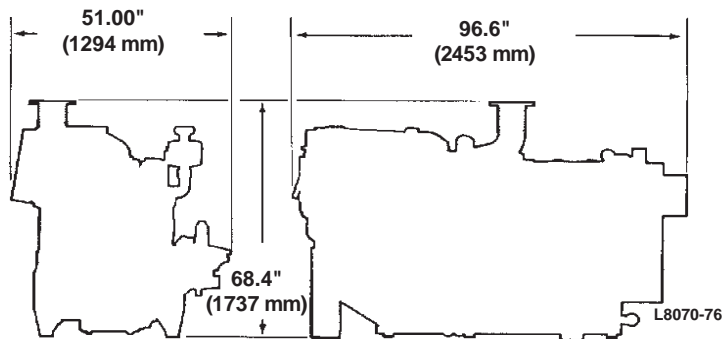
All natural gas engine ratings are based on a fuel of 900 Btu/ft<sup>3</sup> (35.3 MJ/nm<sup>3</sup>) SLHV, with a 91 WKI®. For conditions or fuels other than standard, consult the Dresser Waukesha Application Engineering Department.

## PERFORMANCE: H24GLD VGF SERIES GAS ENGINES

Settings	Intercooler Water Temperature	130° F (54° C)		175° F (79° C)	
		1800 rpm	1500 rpm	1800 rpm	1500 rpm
		<b>Low NO<sub>x</sub> Settings</b>	POWER bhp (kWb)	530 (395)	445 (332)
	BSFC Btu/bhp-hr (kJ/kWh)	7720 (10922)	7300 (10328)	7500 (10611)	7265 (10278)
	NO <sub>x</sub> grams/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	1.00 (400)	1.05 (420)	1.05 (420)	1.05 (420)
	CO grams/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	1.40 (560)	1.40 (560)	1.40 (560)	1.40 (560)
	NMHC grams/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	0.40 (160)	0.40 (160)	0.40 (160)	0.40 (160)
<b>Low Fuel Consumption Settings</b>	BSFC Btu/bhp-hr (kJ/kWh)	6985 (9882)	6765 (9571)	7205 (10194)	6965 (9854)
	NO <sub>x</sub> grams/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	2.00 (803)	2.33 (936)	1.70 (680)	2.15 (865)
	CO grams/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	1.75 (703)	1.52 (610)	1.30 (525)	1.25 (500)
	NMHC grams/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	0.75 (301)	0.65 (261)	0.30 (120)	0.32 (130)

### 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/ft<sup>3</sup> 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 (0.3 inches Hg / 1 kPa water vapor pressure).
- 4) Data will vary due to variations in site conditions. For conditions and/or fuels other than standard, consult the Dresser Waukesha Application Engineering Department.



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.

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