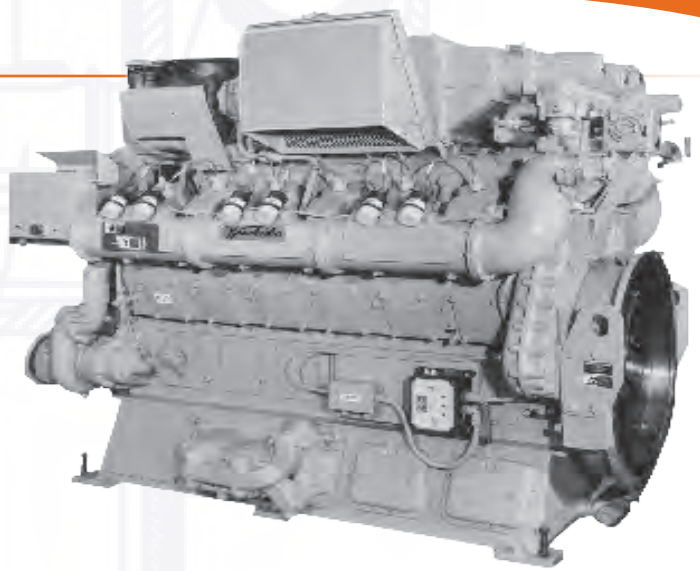
DRESSER Waukesha

P48GSI

VGF® Series Gas Engine
830 - 1175 BHP (620 - 880 kWb)

Specifications



Cylinders: V 16
Piston Displacement: 2924 cu. in. (48 L)
Bore & Stroke: 5.98” x 6.5” (152 x 165 mm)
Compression Ratio: 8.7:1
Jacket Water System Capacity: 58 gal. (219 L)
Lube Oil Capacity: 113 gal. (428 L)
Fuel Pressure Range: 25 - 50 psi (172 - 345 kPa)
Starting System: 150 psi max. air/gas 24V DC electric
Dry Weight: 14, 900 lb.(6759 kg)

Cooling Water Flow at	1500 rpm	1800 rpm
Jacket Water gpm (l/m)	278 (1054)	337 (1270)
Aux. Water gpm (l/m)	71 (269)	87 (329)

Standard Equipment

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

BARRING DEVICE – Manual.

BREATHER – Crankcase, closed type (mounted).

CARBURETOR – Two natural gas Impco 600 varifuel downdraft.

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. 4" ANSI flange connection. Auxiliary water: gear driven pump supplies water to intercooler and oil cooler circuit. 2" special companion flanges supplied.

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 – Sixteen 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.

EXHAUST SYSTEM – Water cooled exhaust manifolds. Single outlet flange for ANSI 10" 125# flange.

FLYWHEEL – With 165 tooth ring gear (for Delco electric and air/gas starters). Flywheel machined to accept SAE 620D–21, 21" (533 mm) diameter clutch, or SAE J927B–210 flywheel converter.

FLYWHEEL HOUSING – SAE #00, nodular iron housing. Provision for two magnetic pickups.

GOVERNOR – Woodward PSG hydraulic.

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 – Two pass, fin and tube, air–to–water.

LIFTING EYES – For engine only.

LUBRICATION SYSTEM – Gear type pump, replaceable spin on oil filters and industrial base type oil pan, 113 gallon (428 litres) capacity. Engine mounted shell and tube oil cooler, thermostatic valve for oil temperature control, and prelube pump. Customer supplied prelube pump motor frame size must conform to frame size 56C and “M” drive configuration.

MOUNTING – Base type oil pan.

PAINT – Oilfield orange.

PISTONS – Aluminum alloy, three ring, with deep central combustion bowl. Oil jet cooled with full floating piston pin. 8.7:1 compression ratio.

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

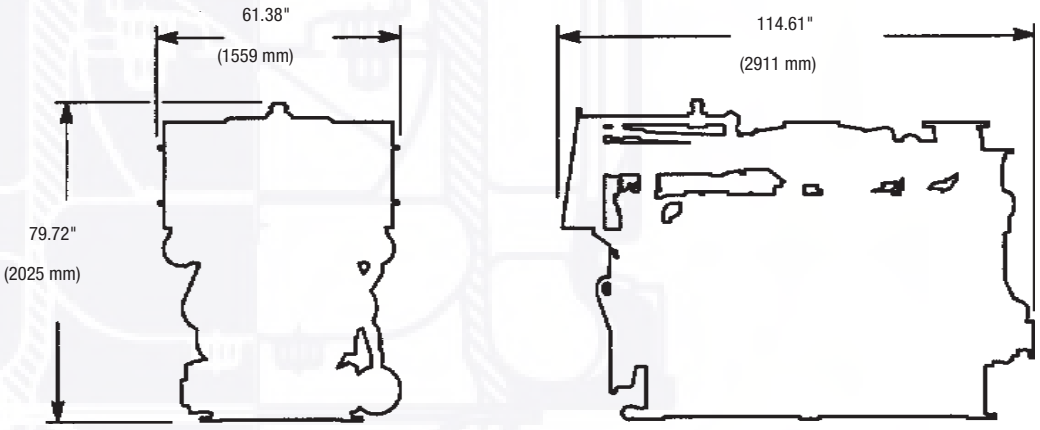
Diesel&Gas Service
111524, Россия, г. Москва,
Проезд Фрезер, д.2, стр.107
Телефон: +7 (495) 775 01 27
E-mail: info@dieselgass.ru

POWER RATINGS: P48GSI VGF Series Gas Engines

Model	I.C. Water Inlet Temp.	C.R.	Bore & Stroke in. (mm)	Displ. cu. in. (litres)	Brake Horsepower (kWb)							
					1800 RPM		1600 RPM		1500 RPM		1400 RPM	
					C	I	C	I	C	I	C	I
P48GSI	130° (54°)	8.7:1	5.98 x 6.5 (152 x 165)	2924 (48)	1065 (800)	1175 (880)	945 (705)	1040 (775)	885 (660)	975 (730)	830 (620)	910 (680)

		1800 rpm		1500 rpm	
		C	I	C	I
	Power bhp (kWb)	1065 (800)	1175 (880)	885 (660)	975 (730)
	BSFC Btu/bhp-hr (kJ/kW-hr)	7245 (10175)	7137 (10055)	7108 (10058)	7008 (9878)
	Fuel Consumption x 1000 Btu/hr (kW)	7716 (2261)	8386 (2458)	6291 (1844)	6833 (2003)
Emissions	NOx g/bhp-hr (mg/nm^3 @ 5% O_2)	16.00 (5926)	16.00 (5926)	16.00 (5926)	16.00 (5926)
Emissions	CO g/bhp-hr (mg/nm^3 @ 5% O_2)	8.00 (2963)	8.00 (2963)	8.00 (2963)	8.00 (2963)
Emissions	THC g/bhp-hr (mg/nm^3 @ 5% O_2)	1.50 (556)	1.50 (556)	1.50 (556)	1.50 (556)
Emissions	NMHC g/bhp-hr (mg/nm^3 @ 5% O_2)	0.25 (93)	0.25 (93)	0.25 (93)	0.25 (93)
Heat Balance	Heat to Jacket Water Btu/hr x 1000 (kW)	2438 (715)	2595 (761)	2034 (596)	2170 (637)
Heat Balance	Heat to Lube Oil Btu/hr x 1000 (kW)	385 (113)	396 (116)	315 (92)	326 (96)
Heat Balance	Heat to Intercooler Btu/hr x 1000 (kW)	164 (48)	196 (57)	110 (32)	134 (39)
Heat Balance	Heat to Radiation Btu/hr x 1000 (kW)	197 (58)	165 (48)	182 (53)	155 (45)
Heat Balance	Total Exhaust Heat Btu/hr x 1000 (kW)	2109 (618)	2295 (672)	1634 (479)	1810 (531)
Intake/ Exhaust System	Induction Air Flow scfm (Nm^3/hr)	1541 (2368)	1575 (2419)	1256 (1931)	1285 (1982)
Intake/ Exhaust System	Exhaust Flow lb/hr (kg/hr)	6858 (3111)	7335 (33290	5591 (2536)	6015 (2728)
Intake/ Exhaust System	Exhaust Temperature °F (°C)	1113 (601)	1111 (599)	1066 (574)	1072 (578)

Typical heat data is shown, however no guarantee is expressed or implied. Consult your Dresser Waukesha Application Engineering Department for system application assistance.
All natural gas engine ratings are based on a fuel of 900 Btu/ft^3 (35.3 MJ/nm^3) SLHV, with a 91 WKI®. For conditions or fuels other than standard, consult the Dresser Waukesha Application Engineering Department.
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).
Fuel consumption based on ISO3046/1-1995 with a tolerance of +5% for commercial quality natural gas having a 900 BTU/ft^3 (35.3 MJ/nm^3) SLHV.
Heat data based on fuel consumption +2%.
Heat rejection based on cooling exhaust temperature to 77°F (25°C).
Rating Standard: All models - Ratings are based on ISO 3046/1-1986 with mechanical efficiency of 90% and Tcra (clause 10.1) as specified above limited to ± 10° F (5° C). Ratings are also valid for SAE J1349, BS5514, DIN6271 and AP17B-11C standard atmospheric conditions.
C = ISO Standard Power/Continuous Power Rating: The highest load and speed which can be applied 24 hours per day, seven days per week, 365 days per year except for normal maintenance. It is permissible to operate the engine at up to 10% overload, or a maximum load indicated by the intermittent rating, whichever is lower, for two hours in every 24 hour period.
I = Intermittent Service Rating: The highest load and speed that can be applied in variable speed mechanical system application only. Operation at this rating is limited to a maximum of 3500 hours per year.



Diesel&Gas Service
111524, Россия, г. Москва,
Проезд Фрезер, д.2, стр.107
Телефон: +7 (495) 775 01 27
E-mail: info@dieselgass.ru