



Waukesha* gas engine VHP* Series Enginator* generating system VHP9500GSI/GSID

1175 - 1825 kW

GE's Waukesha VHP generator sets are built for efficiency, durability and longevity providing reliable power for continuous and intermittent power applications.

The 16 cylinder VHP 9500, with continuous rating of 1175 kWe at 50 Hz and 1400 kWe at 60 Hz, is suitable for prime power, cogeneration, peak shaving and standby power applications.

technical data

Waukesha engine	P9390GSI, four cycle, overhead valve
Cylinders	V16
Piston displacement	9388 cu. in. (154 L)
Compression ratio	8:1
Bore & stroke	9.375" x 8.5" (238 x 216 mm)
Jacket water system capacity	148 gal. (560 L)
Lube oil capacity	165 gal. (625 L)
Starting system	150 psi air

Dimensions l x w x h inch (mm)

Heat exchanger	290 (7370) x 92 (2340) x 130 (3300)
Water connection	265 (6730) x 87 (2210) x 130 (3300)

Weights lb (kg)

Heat exchanger	48250 (21040)
Water connection	46750 (21200)



imagination at work

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performance data

		Continuous Power		Standby Power	
		60 Hz 1200 RPM	50 Hz 1000 RPM	60 Hz 1200 RPM	50 Hz 1000 RPM
Intercooler Water Temperature 85°F (29°C)					
	Power kW (heat exchanger cooling)	1475	1225	1825	1520
	BSFC (LHV) Btu/bhp-hr (kJ/kWh)	7851 (11111)	7639 (10807)	7870 (11136)	7519 (10636)
	Fuel Consumption Btu/hr x 1000 (kW)	16323 (4784)	13193 (3867)	20233 (5930)	16112 (4721)
Heat Balance	Heat to Jacket Water Btu/hr x 1000 (kW)	5055 (1481)	4130 (1210)	6205 (1819)	4905 (1438)
	Heat to Lube Oil Btu/hr x 1000 (kW)	522 (153)	455 (133)	618 (181)	525 (154)
	Heat to Intercooler Btu/hr x 1000 (kW)	439 (129)	306 (90)	581 (170)	404 (118)
	Heat to Radiation Btu/hr x 1000 (kW)	818 (240)	735 (216)	859 (252)	775 (227)
	Total Exhaust Heat Btu/hr x 1000 (kW)	4250 (1325)	3475 (1018)	5920 (1734)	4445 (1303)
Intake/ Exhaust System	Induction Air Flow scfm (Nm ³ /hr)	2945 (4524)	2375 (3654)	3630 (5583)	2885 (4433)
	Exhaust Flow lb/hr (kg/hr)	13715 (6222)	11080 (5027)	16930 (7680)	13450 (6101)
	Exhaust Temperature °F (°C)	1177 (636)	1124 (607)	1247 (675)	1189 (643)

Intercooler Water Temperature 130°F (54°C)

	Power kW (water connection cooling)	1400	1175	1750	1450
	BSFC (LHV) Btu/bhp-hr (kJ/kWh)	7930 (11221)	7682 (10871)	7843 (11099)	7514 (10628)
	Fuel Consumption Btu/hr x 1000 (kW)	15701 (4601)	12675 (3714)	19333 (5667)	15366 (4502)
Heat Balance	Heat to Jacket Water Btu/hr x 1000 (kW)	4901 (1436)	4187 (1227)	5920 (1735)	4760 (1394)
	Heat to Lube Oil Btu/hr x 1000 (kW)	510 (150)	453 (133)	595 (174)	514 (151)
	Heat to Intercooler Btu/hr x 1000 (kW)	314 (92)	210 (61)	466 (136)	273 (80)
	Heat to Radiation Btu/hr x 1000 (kW)	715 (209)	638 (187)	846 (248)	777 (228)
	Total Exhaust Heat Btu/hr x 1000 (kW)	4527 (1327)	3404 (997)	5665 (1661)	4260 (1248)
Intake/ Exhaust System	Induction Air Flow scfm (Nm ³ /hr)	3081 (4735)	2520 (3872)	3505 (5384)	2745 (4222)
	Exhaust Flow lb/hr (kg/hr)	13713 (6220)	11216 (5086)	16320 (7403)	12810 (5810)
	Exhaust Temperature °F (°C)	1177 (636)	1109 (599)	1250 (677)	1192 (644)
Emissions	NOx g/bhp-hr (mg/Nm ³ @ 5% O ₂)	13.00 (4815)	13.00 (4815)	13.00 (4815)	13.00 (4815)
	CO g/bhp-hr (mg/Nm ³ @ 5% O ₂)	9.00 (3333)	9.00 (3333)	9.00 (3333)	9.00 (3333)
	NMHC g/bhp-hr (mg/Nm ³ @ 5% O ₂)	0.30 (111)	0.30 (111)	0.30 (111)	0.30 (111)
	THC g/bhp-hr (mg/Nm ³ @ 5% O ₂)	2.00 (741)	2.00 (741)	2.00 (741)	2.00 (741)

Rating Standard: The Waukesha Enginotor ratings are based on ISO 3046/1-1995 with an engine mechanical efficiency of 90% and auxiliary water temperature T_{cro} as specified limited to ±10°F (±5°C). Ratings also valid for ISO 8528 and DIN 6271, BS 5514 standard atmospheric conditions.

Continuous Power Rating: The highest electrical power output of the Enginotor available for an unlimited number of hours per year, less maintenance. It is permissible to operate the Enginotor with up to 10% overload 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 electrical power output of the Enginotor (no overload) 24 hours a day, for the duration of a power source outage.

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

Consult your local GE Power & Water's 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.



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