



Image is representative of engine model

Waukesha* gas engine VHP* Series Enginator* generating system VHP9500GL

1175 - 1625 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 | P9390GL, four cycle, overhead valve |
| Cylinders | V16 |
| Piston displacement | 9388 cu. in. (154 L) |
| Compression ratio | 10.5:1 |
| 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

*Trademark of General Electric Company

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 | 1625 | 1350 |
| | BSFC (LHV) Btu/bhp-hr (kJ/kWh) | 7181 (10163) | 6954 (9838) | 7080 (10022) | 6853 (9696) |
| | Fuel Consumption Btu/hr x 1000 (kW) | 14930 (4376) | 12010 (3520) | 16213 (4752) | 13048 (3825) |
| Heat Balance | Heat to Jacket Water Btu/hr x 1000 (kW) | 3605 (1057) | 2920 (856) | 3870 (1134) | 3135 (919) |
| | Heat to Lube Oil Btu/hr x 1000 (kW) | 672 (197) | 538 (158) | 699 (205) | 561 (164) |
| | Heat to Intercooler Btu/hr x 1000 (kW) | 1014 (297) | 699 (205) | 1154 (338) | 805 (236) |
| | Heat to Radiation Btu/hr x 1000 (kW) | 357 (105) | 332 (97) | 354 (104) | 333 (98) |
| | Total Exhaust Heat Btu/hr x 1000 (kW) | 4057 (1189) | 3166 (928) | 4370 (1281) | 3408 (999) |
| Intake/Exhaust System | Induction Air Flow scfm (Nm ³ /hr) | 4730 (7270) | 3855 (5925) | 5110 (7854) | 4150 (6379) |
| | Exhaust Flow lb/hr (kg/hr) | 21020 (9537) | 17135 (7775) | 22715 (10306) | 18435 (8364) |
| | Exhaust Temperature °F (°C) | 761 (405) | 725 (385) | 753 (401) | 729 (387) |

| | | Continuous Power | | Standby Power | |
|--|---|-------------------|-------------------|-------------------|-------------------|
| | | 60 Hz 1200 RPM | 50 Hz 1000 RPM | 60 Hz 1200 RPM | 50 Hz 1000 RPM |
| Intercooler Water Temperature 130°F (54°C) | | | | | |
| | Power kW (water connection cooling) | 1400 | 1175 | 1540 | 1295 |
| | BSFC (LHV) Btu/bhp-hr (kJ/kWh) | 7198 (10185) | 6947 (9830) | 7062 (9993) | 6751 (9555) |
| | Fuel Consumption Btu/hr x 1000 (kW) | 14252 (4176) | 11462 (3358) | 15324 (4491) | 12334 (3615) |
| Heat Balance | Heat to Jacket Water Btu/hr x 1000 (kW) | 3463 (1015) | 2808 (823) | 3675 (1077) | 2980 (873) |
| | Heat to Lube Oil Btu/hr x 1000 (kW) | 623 (183) | 507 (149) | 644 (189) | 526 (154) |
| | Heat to Intercooler Btu/hr x 1000 (kW) | 770 (226) | 518 (152) | 883 (259) | 605 (177) |
| | Heat to Radiation Btu/hr x 1000 (kW) | 395 (116) | 372 (109) | 355 (104) | 336 (98) |
| | Total Exhaust Heat Btu/hr x 1000 (kW) | 4237 (1242) | 3280 (961) | 4291 (1258) | 3312 (971) |
| Intake/Exhaust System | Induction Air Flow scfm (Nm ³ /hr) | 4890 (7516) | 3933 (6045) | 4840 (7439) | 3945 (6064) |
| | Exhaust Flow lb/hr (kg/hr) | 21220 (9625) | 17067 (7741) | 21515 (9762) | 17570 (7972) |
| | Exhaust Temperature °F (°C) | 762 (406) | 731 (389) | 755 (402) | 735 (391) |
| Emissions | NOx g/bhp-hr (mg/Nm ³ @ 5% O ₂) | 1.50 (607) | 1.50 (607) | 1.50 (607) | 1.50 (607) |
| | CO g/bhp-hr (mg/Nm ³ @ 5% O ₂) | 2.70 (1073) | 2.70 (1073) | 2.70 (1073) | 2.70 (1073) |
| | NMHC g/bhp-hr (mg/Nm ³ @ 5% O ₂) | 1.00 (405) | 1.00 (405) | 1.00 (405) | 1.00 (405) |
| | THC g/bhp-hr (mg/Nm ³ @ 5% O ₂) | 5.50 (2227) | 5.50 (2227) | 5.50 (2227) | 5.50 (2227) |

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_{cr} 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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