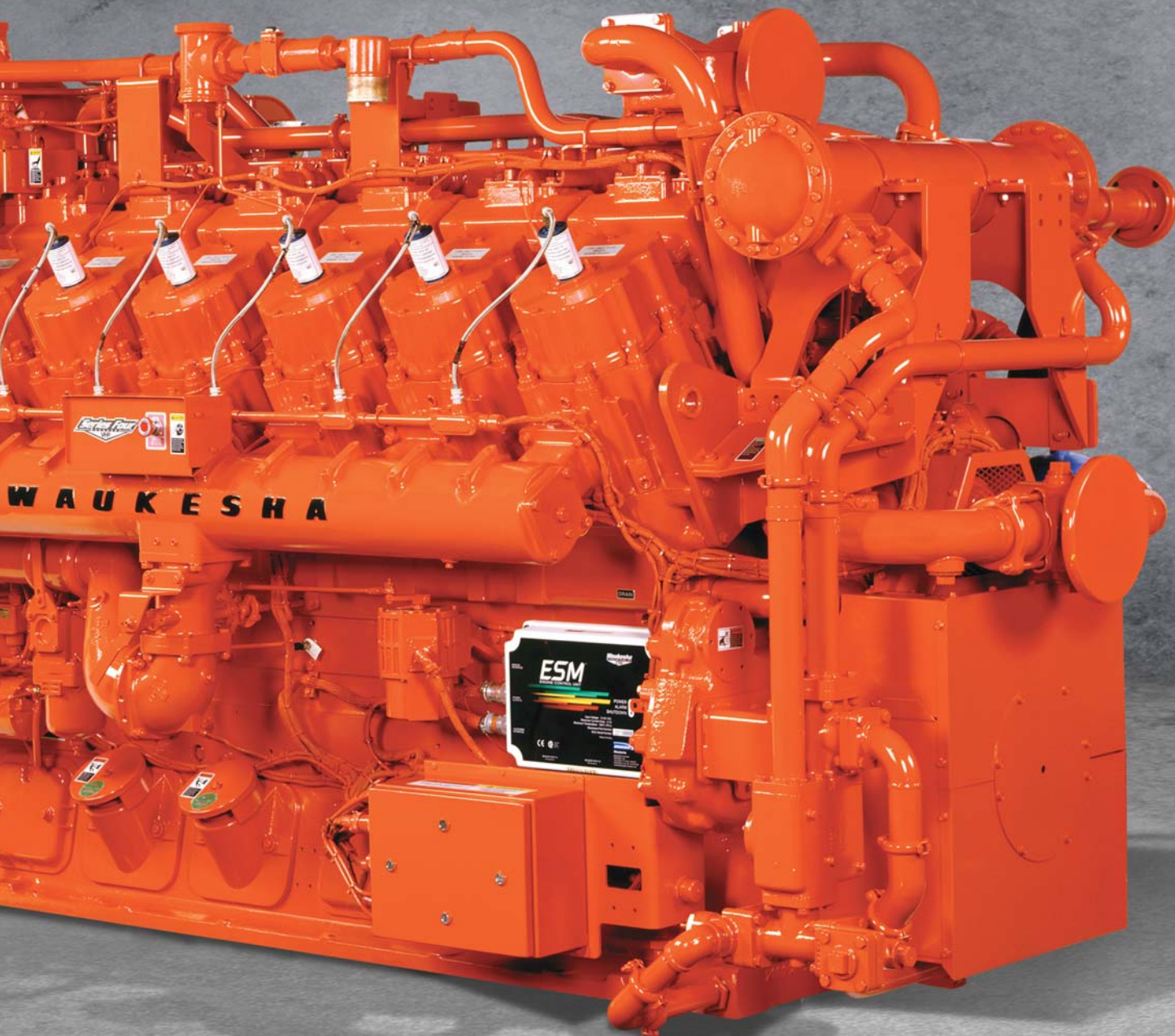




WAUKESHA ENGINE
Power Ratings

Waukesha Engine manufactures spark ignited gaseous fueled engines and Enginator® systems for gas compression, electric power generation, cogeneration and mechanical drive applications — ranging in output from 100 to 4800 bhp (75-3250 kW).

Waukesha Engine's many years of experience have shown that natural gas engines can power or drive just about anything. Waukesha offers a full line of heavy-duty, gaseous-fueled engines that can be put to work in a variety of markets including gas compression, electric power generation, cogeneration, and general mechanical drive applications (pumps, air compressors, chillers, blowers).

With decades of experience in engine technology together with excellent engineering skills, Waukesha has found cost-effective solutions for many customer needs.

Customers recognize that Waukesha engines can power all types of equipment and do it more cost effectively.

Waukesha manufactures engines in the United States (Waukesha, Wisconsin) and in Europe (Appingedam, The Netherlands). Both manufacturing facilities are certified by the world's leading registrar, Lloyd's Register Quality Assurance (LQRA), to the ISO 9001 Quality Management Standard.

Regional sales offices stand ready to serve our customers, distributors, and OEMs.

With a global distribution network, Waukesha services all major marketing areas. Waukesha distributors are on call 24 hours a day, with the parts and service personnel to provide quick responsive solutions to customers' needs.

Waukesha Engine has found solutions to almost any customer concern and need.

Our innovative product design improvements keep pace with customers' ever-increasing standards. From demands for higher loads and speeds, to simple, long-term reliability, Waukesha understands those needs and continues to design, build, and service the best engines in the marketplace.

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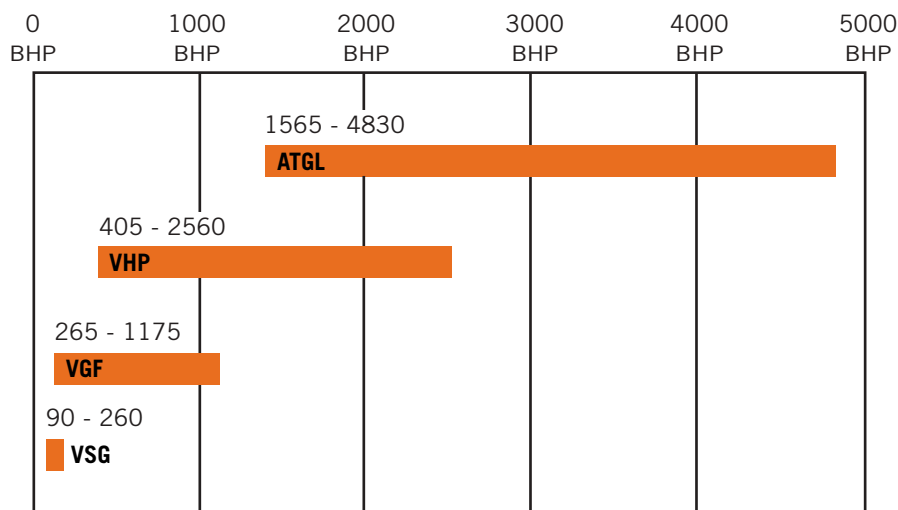
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This Power Ratings Bulletin supersedes all Power Ratings Bulletins prior to December, 2003.

Waukesha, Enginator, VHP, VGF, ATGL, VSG, Modulator, WKI, Engenius and ESM are trademarks/registered trademarks of Waukesha Engine, Dresser, Inc.

Waukesha Engine Family Ranges



Product Designations

Engine Series

Waukesha manufactures four engine families — the **ATGL**, **VHP**, **VGf**, and **VSG**.

Prefix Designations

The prefix attached to an engine model indicates the number of cylinders (except ATGL which states actual number): **P = 16**, **L = 12**, **H = 8**, **F = 6**.

- VHP **L7042GL** engine is a 12 cylinder engine
- VGf **P48 GL** is a 16 cylinder engine
- **16V**-AT27GL is a 16 cylinder engine

Numeric Designations

The numeric designation in each engine model name indicates the displacement of the engine model in either English units of cubic inches or metric units of liters.

- The **VHP** series show a **displacement in cubic inches**. For example: the **VHP L7042GL** indicates a displacement of **7,040 in³**.
- The **VGf** and **VSG** series show a **displacement in liters**. For example: the **VGf P48GL** indicates a displacement of **48 liters**.
- The **VSG F11G** indicates a displacement of **11 liters**.
- The **ATGL** series is designated by a **numeric indicative of the bore size in millimeters**. For example: the “**27**” of the **16V-AT27GL** indicates a **275 millimeter bore**.

Suffix Designations

- G = Naturally aspirated
- GSI = Turbocharged, intercooled
- GSID = Turbocharged, intercooled, draw-thru
- LT = Lean combustion turbulence
- LTD = Lean combustion turbulence, draw-thru
- GL = Turbocharged, intercooled, lean burn
- GLD = Turbocharged, intercooled, lean burn, draw-thru

Other Waukesha Engine Products

Waukesha Power Systems Enginator® Series

The Enginator is a Waukesha Engine registered trademark of an engine generator set packaged by Waukesha Power Systems. WPS also designs and assembles Engomatic® panels (switchgear control systems).

Waukesha Power Systems Modulator Series

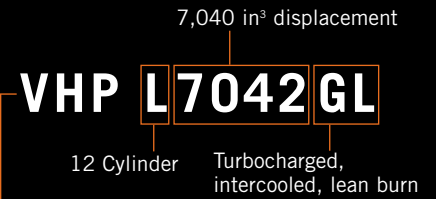
Waukesha's Modulator is a self-contained power plant designed to provide on-site power generation anywhere power is needed. The preassembled unit is powered by Waukesha's reliable VGf or VHP Series Enginators.

Custom Engine Controls (CEC) Series

- AFM** = Air/Fuel Module
- DSM** = Detonation Sensing Module
- IM** = Ignition Module
- TCM** = Turbocharger Control Module
- KDM** = Knock Detection Module

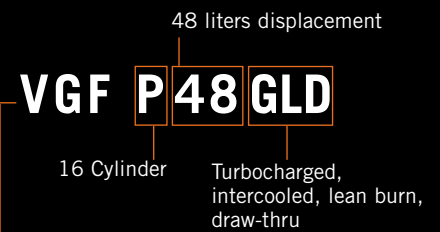
Waukesha Engenius™ Series

- ESM®** = Engine System Manager



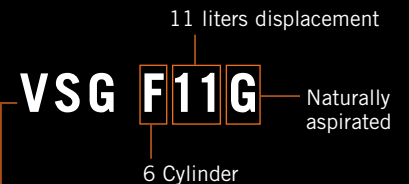
VHP Engine Series Models

P9390G, GSI, GL;
L7044GSI;
L7042G, GSI, GL, GLD;
L5774LT
L5794GSI, LT;
L5790GSI, GL, GLD;
F3524GSI;
F3521GSI, GL, GLD;
F2895GSI, GL, GLD



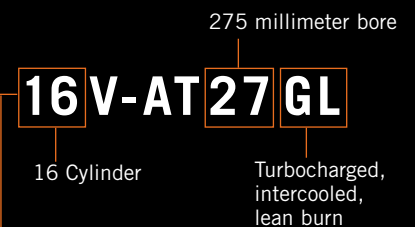
VGf Engine Series Models

P48GL, GLD, GSID;
L36GL, GLD, GSID;
H24GL, GLD, GSID;
F18GL, GLD, GSID



VSG Engine Series Models

F11G, GSI, GSID



ATGL Engine Series Models

16V-AT27GL
12V-AT27GL
8L-AT27GL

BASIC FORMULAS

English

$$^{\circ}\text{F} = (\text{Degrees C} \times 1.8) + 32$$

$$\text{Torque lb-ft} = \frac{5250 \times \text{BHP}}{\text{rpm}}$$

$$\text{BMEP (psi)} = \frac{792,000 \times \text{BHP}}{\text{Displacement (cubic inches)} \times \text{rpm}}$$

$$\text{BHP} = \frac{\text{BMEP} \times \text{Displacement (cubic inches)} \times \text{rpm}}{792,000}$$

Metric

$$^{\circ}\text{C} = \frac{(\text{Degrees F} - 32)}{1.8}$$

$$\text{Torque (N•m)} = \frac{\text{kW}_b \times 9550}{\text{rpm}}$$

$$\text{BMEP (bar)} = \frac{\text{kW}_b \times 1200}{\text{Displacement (liters)} \times \text{rpm}}$$

$$\text{kW}_b = \frac{\text{BMEP (bar)} \times \text{Displacement (liters)} \times \text{rpm}}{1200}$$

Displacement

$$\text{Displacement} = \frac{\pi D^2}{4} \times S \times C = 0.7854 D^2 SC$$

Where: Displacement = cubic inch.

D = Bore Dia. in. C = No. of cyl.

S = Stroke in. p = 3.1416

Piston Speed

$$\text{Piston Speed} = P = \frac{NS}{6} \quad \text{Where: } P = \text{Ft. per Min.}$$

N = rpm
S = Stroke in

Formulas To Determine kW, KVA, Reactive KVA, BHP And Amperes (for three phase AC)

$$\text{KVA} = \frac{1.73 \times \text{Volts} \times \text{Amps}}{1000}$$

$$\text{kW} = \text{KVA} \times \text{PF}$$

$$\text{kW}_e = \text{kW}_B \times \text{Eff}$$

$$\text{BHP} = \frac{1.73 \times \text{Volts} \times \text{Amps} \times \text{PF}}{.746 \times 1000 \times \text{Eff}}$$

$$\text{BHP} = \frac{\text{kW}}{.746 \times \text{Eff}}$$

$$\text{AMPS} = \frac{\text{BHP} \times .746 \times 1000 \times \text{Eff}}{1.73 \times \text{Volts} \times \text{PF}}$$

$$\text{AMPS} = \frac{\text{kW} \times 1000}{1.73 \times \text{Volts} \times \text{PF}}$$

$$\text{AMPS} = \frac{\text{KVA} \times 1000}{1.73 \times \text{Volts}}$$

$$\text{Reactive KVA} = \text{KVA} \times \sqrt{1 - \text{PF}^2}$$

BORE & STROKE/
DISPLACEMENT CHART

Model	Displacement	Bore/Stroke
ATGL VEE-16 16V-AT27GL <i>English</i> <i>Metric</i>	17,398 in ³ (285 L)	10.83 x 11.81" (275 x 300 mm)
ATGL VEE-12 12V-AT27GL <i>English</i> <i>Metric</i>	13,048 in ³ (214 L)	10.83 x 11.81" (275 x 300 mm)
ATGL IN-LINE 8 8L-AT27GL <i>English</i> <i>Metric</i>	8699 in ³ (143 L)	10.83 x 11.81" (275 x 300 mm)
VHP VEE-16 P9390 <i>English</i> <i>Metric</i>	9388 in ³ (154 L)	9.375 x 8.5" (238 x 216 mm)
VHP VEE-12 L7042/L7044 <i>English</i> <i>Metric</i>	7040 in ³ (116 L)	9.375 x 8.5" (238 x 216 mm)
VHP VEE-12 L5790/L5794/ L5774 <i>English</i> <i>Metric</i>	5788 in ³ (95 L)	8.5 x 8.5" (216 x 216 mm)
VHP IN-LINE 6 F3521/F3524 <i>English</i> <i>Metric</i>	3520 in ³ (58 L)	9.375 x 8.5" (238 x 216 mm)
VHP IN-LINE 6 F2895 <i>English</i> <i>Metric</i>	2894 in ³ (47 L)	8.5 x 8.5" (216 x 216 mm)
VGf VEE-16 P48 <i>English</i> <i>Metric</i>	2924 in ³ (48 L)	5.98 x 6.5" (152 x 165 mm)
VGf VEE-12 L36 <i>English</i> <i>Metric</i>	2193 in ³ (36 L)	5.98 x 6.5" (152 x 165 mm)
VGf IN-LINE 8 H24 <i>English</i> <i>Metric</i>	1462 in ³ (24 L)	5.98 x 6.5" (152 x 165 mm)
VGf IN-LINE 6 F18 <i>English</i> <i>Metric</i>	1096 in ³ (18 L)	5.98 x 6.5" (152 x 165 mm)
VSG IN-LINE 6 F11 <i>English</i> <i>Metric</i>	673 in ³ (11 L)	5.5 x 5.71" (127 x 145 mm)

**NATURAL GAS FUELED
CONTINUOUS DUTY**

Gas Compression and Mechanical Drives

CONTINUOUS DUTY

Engine Family

Model

ATGL™

16V-AT27GL
16V-AT27GL
12V-AT27GL
12V-AT27GL
8L-AT27GL
8L-AT27GL

VHP™

¹ Engine available with draw-thru carburetion with the same ratings.

² Refer to pages 12 and 13 for VHP GL engines equipped with draw-thru carburetion (low fuel pressure system).

P9390GSI
P9390GSI
P9390GL
P9390GL
P9390G
P9390G

L7044GSI
L7042GSI¹
L7042GSI¹
L7042GL²
L7042GL²
L7042G
L7042G

L5794GSI
L5790GSI
L5790GSI
L5794LT
L5794LT
L5774LT
L5790GL
L5790GL

F3524GSI
F3521GSI
F3521GSI
F3521GL
F3521GL

F2895GSI
F2895GSI
F2895GL
F2895GL

VGF™

³ These power ratings require pricebook option Code 1100 (176 BMEP) and DSM. They 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.

⁴ Low speed turbocharger required for operation at 1200 - 1400 rpm on Inline engines and from 1200 - 1600 rpm on Vee engines.

P48GSI/GSID
P48GL/GLD
P48GL³/GLD³

L36GSI/GSID
L36GL/GLD
L36GL³/GLD³

H24GSI/GSID
H24GL/GLD
H24GL
H24GL³/GLD³

F18GSI/GSID
F18GL/GLD
F18GL
F18GL³/GLD³

VSG™

F11GSI/GSID
F11GSI/GSID
F11G

Continuous Duty

I.C. Water Temp. (Tcr)	C.R. (compression ratio)	800 rpm	900 rpm	1000 rpm	1200 rpm	1400 rpm	1500 rpm	1600 rpm	1800 rpm
°F °C		bhp kWb	bhp kWb	bhp kWb	bhp kWb	bhp kWb	bhp kWb	bhp kWb	bhp kWb
90° 32°	9:1	3600 2686	4050 3020	4500 3356	— —	— —	— —	— —	— —
130° 54°	9:1	3600 2686	4050 3020	4500 3356	— —	— —	— —	— —	— —
90° 32°	9:1	2640 1967	2970 2216	3295 2458	— —	— —	— —	— —	— —
130° 54°	9:1	2508 1871	2820 2104	3130 2335	— —	— —	— —	— —	— —
90° 32°	9:1	1760 1312	1980 1477	2200 1641	— —	— —	— —	— —	— —
130° 54°	9:1	1670 1246	1880 1405	2090 1560	— —	— —	— —	— —	— —
85° 29°	8:1	1375 1025	1547 1154	1719 1282	2063 1538	— —	— —	— —	— —
130° 54°	8:1	1314 980	1478 1102	1642 1224	1970 1469	— —	— —	— —	— —
85° 29°	10.5:1	1375 1025	1547 1154	1719 1282	2063 1538	— —	— —	— —	— —
130° 54°	10.5:1	1314 980	1478 1102	1642 1224	1970 1469	— —	— —	— —	— —
— —	10:1	976 738	1090 813	1194 890	1366 1019	— —	— —	— —	— —
— —	8:1	900 671	998 744	1081 806	1216 907	— —	— —	— —	— —
130° 54°	8:1	1120 836	1260 940	1400 1044	1680 1253	— —	— —	— —	— —
85° 29°	8:1	1031 769	1160 865	1289 961	1547 1154	— —	— —	— —	— —
130° 54°	8:1	985 735	1108 826	1232 919	1478 1102	— —	— —	— —	— —
85° 29°	10.5:1	1031 769	1160 865	1289 961	1547 1154	— —	— —	— —	— —
130° 54°	10.5:1	985 735	1108 826	1232 919	1478 1102	— —	— —	— —	— —
— —	10:1	732 546	818 610	896 668	1024 764	— —	— —	— —	— —
— —	8:1	675 503	748 558	810 604	912 680	— —	— —	— —	— —
130° 54°	8.2:1	920 686	1035 772	1150 858	1380 1029	— —	— —	— —	— —
85° 29°	8.2:1	848 632	954 711	1060 790	1272 949	— —	— —	— —	— —
130° 54°	8.2:1	810 604	911 679	1013 755	1215 906	— —	— —	— —	— —
85° 29°	10.2:1	— —	— —	1265 944	1515 1130	— —	— —	— —	— —
130° 54°	10.2:1	— —	— —	1205 899	1445 1078	— —	— —	— —	— —
130° 54°	10.2:1	— —	— —	1040 776	1250 933	— —	— —	— —	— —
85° 29°	10:1	848 632	954 711	1060 790	1272 949	— —	— —	— —	— —
130° 54°	10:1	810 604	911 679	1013 755	1215 906	— —	— —	— —	— —
130° 54°	8:1	560 418	630 470	700 522	840 627	— —	— —	— —	— —
85° 29°	8:1	516 385	580 433	644 480	773 577	— —	— —	— —	— —
130° 54°	8:1	492 367	554 413	615 459	738 550	— —	— —	— —	— —
85° 29°	10.5:1	516 385	580 433	644 480	773 577	— —	— —	— —	— —
130° 54°	10.5:1	492 367	554 413	615 459	738 550	— —	— —	— —	— —
85° 29°	8.2:1	424 316	477 356	530 395	636 474	— —	— —	— —	— —
130° 54°	8.2:1	405 302	455 339	506 377	607 453	— —	— —	— —	— —
85° 29°	10:1	424 316	477 356	530 395	636 474	— —	— —	— —	— —
130° 54°	10:1	405 302	455 339	506 377	607 453	— —	— —	— —	— —
130° 54°	8.6:1	— —	— —	— —	— —	830 620	885 660	945 705	1065 800
130° 54°	11:1	— —	— —	— —	710 ⁴ 530 ⁴	830 ⁴ 620 ⁴	885 ⁴ 660 ⁴	945 ⁴ 705 ⁴	1065 800
130° 54°	11:1	— —	— —	— —	— —	910 680 ⁴	975 730 ⁴	1040 775 ⁴	1175 880
130° 54°	8.6:1	— —	— —	— —	— —	620 460	670 500	710 530	800 600
130° 54°	11:1	— —	— —	— —	530 ⁴ 400 ⁴	620 ⁴ 460 ⁴	670 ⁴ 500 ⁴	710 ⁴ 530 ⁴	800 600
130° 54°	11:1	— —	— —	— —	— —	685 510 ⁴	735 550 ⁴	780 580 ⁴	880 660
130° 54°	8.6:1	— —	— —	— —	— —	415 310	445 330	475 355	530 400
130° 54°	11:1	— —	— —	— —	355 ⁴ 265 ⁴	415 ⁴ 310 ⁴	445 330	475 355	530 400
130° 54°	8.7:1	— —	— —	— —	— —	415 310	445 330	475 355	530 400
130° 54°	11:1	— —	— —	— —	— —	455 340	490 365	520 390	585 440
130° 54°	8.6:1	— —	— —	— —	— —	310 230	335 250	355 265	400 300
130° 54°	11:1	— —	— —	— —	265 ⁴ 220 ⁴	310 ⁴ 230 ⁴	335 250	355 265	400 300
130° 54°	8.7:1	— —	— —	— —	— —	310 230	335 250	355 265	400 300
130° 54°	11:1	— —	— —	— —	— —	340 255	365 275	390 290	440 330
85° 29°	10:1	— —	— —	— —	166 124	194 145	208 155	222 165	250 186
130° 54°	10:1	— —	— —	— —	166 124	194 145	208 155	222 165	250 186
— —	10:1	— —	— —	— —	90 67	105 78	112 84	120 90	135 101

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 the maximum load indicated by the intermittent rating, whichever is lower, for two hours in every 24 hour period.

**NATURAL GAS FUELED
INTERMITTENT DUTY**

Mechanical Drives

INTERMITTENT DUTY

Engine Family

Model

ATGL™

16V-AT27GL
16V-AT27GL
12V-AT27GL
12V-AT27GL
8L-AT27GL
8L-AT27GL

VHP™

¹ Engine available with draw-thru carburetion with the same ratings.

² Refer to pages 12 and 13 for VHP GL engines equipped with draw-thru carburetion (low fuel pressure system).

P9390GSI
P9390GSI
P9390GL
P9390GL
P9390G
P9390G

L7044GSI
L7042GSI¹
L7042GSI¹
L7042GL²
L7042GL²
L7042G
L7042G

L5794GSI
L5790GSI¹
L5790GSI¹
L5794LT²
L5794LT²
L5790GL²
L5790GL²

F3524GSI
F3521GSI¹
F3521GSI¹
F3521GL²
F3521GL²

F2895GSI¹
F2895GSI¹
F2895GL²
F2895GL²

VGf™

⁴ Low speed turbocharger required for operation at 1200 - 1400 rpm on Inline engines or from 1200 - 1600 rpm on Vee engines.

P48GSI/GSID
P48GL/GLD

L36GSI/GSID
L36GL/GLD

H24GSI/GSID
H24GL/GLD

F18GSI/GSID
F18GL/GLD

VSG™

F11GSI/GSID
F11GSI/GSID
F11G

Intermittent Duty

I.C. Water Temp. (Tcra)	C.R. (compression ratio)	800 rpm	900 rpm	1000 rpm	1200 rpm	1400 rpm	1500 rpm	1600 rpm	1800 rpm
°F °C		bhp kWb	bhp kWb	bhp kWb	bhp kWb	bhp kWb	bhp kWb	bhp kWb	bhp kWb
90° 32°	9:1	— —	4350 3244	4830 3602	— —	— —	— —	— —	— —
130° 54°	9:1	— —	4130 3080	4590 3423	— —	— —	— —	— —	— —
90° 32°	9:1	— —	3267 2437	3625 2704	— —	— —	— —	— —	— —
130° 54°	9:1	— —	3102 2314	3443 2569	— —	— —	— —	— —	— —
90° 32°	9:1	— —	2178 1625	2420 1809	— —	— —	— —	— —	— —
130° 54°	9:1	— —	2068 1546	2299 1716	— —	— —	— —	— —	— —
85° 29°	8:1	1707 1273	1920 1432	2134 1591	2560 1909	— —	— —	— —	— —
130° 54°	8:1	1631 1216	1835 1368	2039 1520	2447 1825	— —	— —	— —	— —
85° 29°	10.5:1	1513 1128	1702 1269	1891 1410	2270 1693	— —	— —	— —	— —
130° 54°	10.5:1	1445 1078	1626 1213	1806 1347	2167 1616	— —	— —	— —	— —
— —	10:1	1098 819	1227 915	1344 1002	1536 1145	— —	— —	— —	— —
— —	8:1	1013 755	1122 837	1216 907	1368 1020	— —	— —	— —	— —
130° 54°	8:1	1120 836	1260 940	1400 1044	1680 1253	— —	— —	— —	— —
85° 29°	8:1	1280 954	1440 1074	1600 1193	1920 1432	— —	— —	— —	— —
130° 54°	8:1	1223 912	1376 1026	1528 1139	1834 1368	— —	— —	— —	— —
85° 29°	10.5:1	1134 846	1276 952	1418 1057	1702 1269	— —	— —	— —	— —
130° 54°	10.5:1	1084 808	1219 909	1355 1010	1626 1213	— —	— —	— —	— —
— —	10:1	824 614	920 686	1008 752	1152 859	— —	— —	— —	— —
— —	8:1	760 567	842 628	912 680	1026 765	— —	— —	— —	— —
130° 54°	8.2:1	920 686	1035 772	1150 858	1380 1029	— —	— —	— —	— —
85° 29°	8.2:1	1052 784	1184 883	1315 981	1579 1177	— —	— —	— —	— —
130° 54°	8.2:1	1005 749	1131 843	1257 937	1508 1125	— —	— —	— —	— —
85° 29°	10.2:1	— —	— —	1315 981	1580 1178	— —	— —	— —	— —
130° 54°	10.2:1	— —	— —	1315 981	1580 1178	— —	— —	— —	— —
85° 29°	10:1	933 696	1049 782	1166 869	1399 1043	— —	— —	— —	— —
130° 54°	10:1	891 664	1002 747	1114 831	1337 997	— —	— —	— —	— —
130° 54°	8:1	560 418	630 470	700 522	840 627	— —	— —	— —	— —
85° 29°	8:1	640 477	720 537	800 597	960 716	— —	— —	— —	— —
130° 54°	8:1	611 456	688 513	764 570	917 684	— —	— —	— —	— —
85° 29°	10.5:1	568 424	638 476	708 528	850 634	— —	— —	— —	— —
130° 54°	10.5:1	541 403	598 446	677 505	812 606	— —	— —	— —	— —
85° 29°	8.2:1	526 392	592 441	658 491	789 588	— —	— —	— —	— —
130° 54°	8.2:1	503 375	566 422	628 468	754 562	— —	— —	— —	— —
85° 29°	10:1	466 347	525 391	583 435	700 522	— —	— —	— —	— —
130° 54°	10:1	446 333	501 374	557 415	668 498	— —	— —	— —	— —
130° 54°	8.6:1	— —	— —	— —	— —	910 680	975 730	1040 775	1175 880
130° 54°	11:1	— —	— —	— —	785 ⁴ 585 ⁴	910 ⁴ 680 ⁴	975 ⁴ 730 ⁴	1040 ⁴ 775 ⁴	1175 880
130° 54°	8.6:1	— —	— —	— —	— —	685 510	735 550	780 580	880 660
130° 54°	11:1	— —	— —	— —	585 ⁴ 440 ⁴	685 ⁴ 510 ⁴	735 ⁴ 550 ⁴	780 ⁴ 580 ⁴	880 660
130° 54°	8.6:1	— —	— —	— —	— —	455 340	490 365	520 390	585 440
130° 54°	11:1	— —	— —	— —	395 ⁴ 290 ⁴	455 ⁴ 340 ⁴	490 365	520 390	585 440
130° 54°	8.6:1	— —	— —	— —	— —	340 255	365 275	390 290	440 330
130° 54°	11:1	— —	— —	— —	295 ⁴ 220 ⁴	340 ⁴ 255 ⁴	365 275	390 290	440 330
85° 29°	10:1	— —	— —	— —	173 129	202 151	217 162	231 172	260 194
130° 54°	10:1	— —	— —	— —	166 124	194 145	208 155	222 165	250 186
— —	10:1	— —	— —	— —	100 75	117 87	125 93	133 99	150 112

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

NOTE: For continuous duty power ratings for mechanical drives, please see pages 4 and 5.

Power Generation

130°F 54°C (T_{cra})
Intercooler Water Temperature

Engine Family

Model

ATGL™

[‡]10% overload not available.

16V-AT27GL
12V-AT27GL
8L-AT27GL

Engine Family

Model

VHP™

[‡]5% overload allowed.

^{*}No overload allowed.

VHP9500GSI
VHP9500GL
VHP7104GSI
VHP7104GSID
VHP7100GSI
VHP7100GSID
VHP7100GL
VHP5904LT
VHP5904LTD
VHP9500G
VHP5904GSI
VHP5904GSID
VHP5900GSI
VHP5900GSID
VHP5900GL
VHP7100G
VHP3604GSI
VHP3604GSID
VHP3600GSI
VHP3600GSID
VHP3600GL
VHP2900GSI
VHP2900GSID
VHP2900GL

Engine Family

Model

VGf™

[‡] These power ratings require pricebook option Code 1100 (176 BMEP) and DSM. They are available continuously when applied per WKJ™ Power and Timing Curve S7079-19. It is permissible to operate at up to 5% overload for two hours in each 24 hour period.

VGf48GL
VGf48GLD
VGf48GLD/2
VGf48GSI/GSID
VGf36GL
VGf36GLD
VGf36GLD/2
VGf36GSI/GSID
VGf24GL
VGf24GLD
VGf24GLD/2
VGf24GSI/GSID
VGf18GL
VGf18GLD
VGf18GLD/2
VGf18GSI/GSID

Engine Family

Model

VSG™

VS11GSI
VS11GSID
VS11G

Remote Radiator Cooling (kWe)					Engines Only (kWb)		
60Hz			50Hz			60Hz	50Hz
Continuous	Peak Shave*	Standby	Continuous	Standby		Continuous	Continuous
900 rpm	900 rpm	900 rpm	1000 rpm	1000 rpm	Model	900 rpm	1000 rpm
2960 ⁵	2960	2960	3250 ⁵	3250	16V-AT27GL	3020	3356
2000	2140	2200	2220	2440	12V-AT27GL	2104	2335
1330	1425	1460	1480	1630	8L-AT27GL	1405	1560
1200 rpm	1200 rpm	1200 rpm	1000 rpm	1000 rpm	Model	1200 rpm	1000 rpm
1400	1500	1750	1175	1450	P9390GSI	1469	1224
1400	1490	1540	1175	1295	P9390GL	1469	1224
1200	1250	1300	1100 ⁷	1100	L7044GSI	1253	1147
1200	1250	1300	1100 ⁷	1100	L7044GSID	1253	1147
1050	1180	1300	875	1075	L7042GSI	1102	919
1050	1180	1300	875	1075	L7042GSID	1102	919
1050	1100	1155	875	965	L7042GL	1102	919
1025	1080	1125	900 ⁶	940	L5794LT	1078	943
1025	1025	1025	900	900	L5794LTD	1078	943
975	975	1075	850	950	P9390G	1019	890
980	1035	1060	900 ⁷	900	L5794GSI	1029	943
980	1035	1060	900 ⁷	900	L5794GSID	1029	943
865	970	1060	720	880	L5790GSI	906	755
865	970	1060	720	880	L5790GSID	906	755
865	910	955	720	795	L5790GL	906	755
725	725	810	635	710	L7042G	764	668
600	630	650	540 ⁷	540	F3524GSI	627	573
600	630	650	540 ⁷	540	F3524GSID	627	573
525	585	650	435	535	F3521GSI	550	459
525	585	650	435	535	F3521GSID	550	459
525	550	580	435	480	F3521GL	550	459
425	485	525	350	440	F2895GSI	453	377
425	485	525	350	440	F2895GSID	453	377
425	455	470	350	385	F2895GL	453	377
1800 rpm	1800 rpm	1800 rpm	1500 rpm	1500 rpm	Model	1800 rpm	1500 rpm
830 ³	830 ³	860	685 ³	715	P48GL	880	730
830 ³	830 ³	860	685 ³	715	P48GLD	880	730
—	—	—	—	—	P48GLD/2	—	830
750	750	825	625	685	P48GSI/GSID	800	660
620 ³	620 ³	645	515 ³	535	L36GL	660	550
620 ³	620 ³	645	515 ³	535	L36GLD	660	550
—	—	—	—	—	L36GLD/2	—	620
560	560	620	475	515	L36GSI/GSID	600	500
415 ³	415 ³	425	340 ³	355	H24GL	440	365
415 ³	415 ³	425	340 ³	355	H24GLD	440	365
—	—	—	—	—	H24GLD/2	—	414
375	375	410	310	340	H24GSI/GSID	400	330
310 ³	310 ³	315	250 ³	260	F18GL	330	275
310 ³	310 ³	315	250 ³	260	F18GLD	330	275
—	—	—	—	—	F18GLD/2	—	310
280	280	310	230	255	F18GSI/GSID	300	250
1800 rpm	1800 rpm	1800 rpm	1500 rpm	1500 rpm	Model	1800 rpm	1500 rpm
150	150	180	125	150	VS11GSI	186	155
150	150	180	125	150	VS11GSID	186	155
90	90	100	75	80	VS11G	101	84

Generator Standby Power Rating (kWe): 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.

***Peak Shave:** These ratings are based on 3400 hours per year at ISO Standard reference conditions. Peak shaving and standby ratings may reduce lifecycle intervals.

NOTE: kWe output is based on 0.8 Power Factor Enginator® efficiency.

ENGINATOR® UNIT MOUNTED RADIATOR COOLING

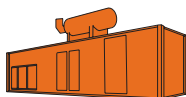
130°F 54°C (T_{cra}) I.C. Water Temp.



Engine Family	Model	60Hz		50Hz	
		Continuous (kWe)	Standby (kWe)	Continuous (kWe)	Standby (kWe)
VHP™ ⁷ No overload allowed.	VHP7104GSI/GSID	1200 rpm	1200 rpm	1000 rpm	1000 rpm
	VHP7100GSI/GSID	1150	1260	1050 ⁷	1050
	VHP7100GL	1000	1260	840	1050
	VHP5904LT	1025	1130	845	930
	VHP5904LTD ⁷	990	1090	825	900
	VHP9500G	990	1090	825	825
	VHP5904GSI/GSID	950	1065	820	930
	VHP5900GSI/GSID	940	1030	860 ⁷	860
	VHP5900GL	835	1050	690	860
	VHP7100G	835	920	690	760
	VHP3604GSI/GSID	700	800	610	685
	VHP3600GSI/GSID	560	615	500 ⁷	500
	VHP3600GL	500	625	410	515
	VHP2900GSI/GSID	500	550	410	450
	VHP2900GL	400	505	335	415
	VHP2900GL	400	450	335	370
Engine Family	Model	1800 rpm	1800 rpm	1500 rpm	1500 rpm
VGF™ ³ These power ratings require price-book option Code 1100 (176 BMEP) and DSM. They 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.	VGF48GL/GLD	808 ³	825	670 ³	700
	VGF48GSID	730	800	610	650
	VGF36GL/GLD	590 ³	625	500 ³	525
	VGF36GSID	530	600	450	490
	VGF24GL/GLD	388 ³	405	330 ³	350
	VGF24GSID	350	400	300	325
	VGF18GL/GLD	294 ³	300	245 ³	250
	VGF18GSID	265	300	220	240
	VS11GSI	140	175	120	145
VSG™	VS11GSID	140	175	120	145
	VS11G	80	90	65	75

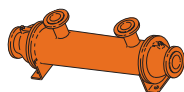
For Power Unit ratings, please contact the Waukesha Sales Engineering.

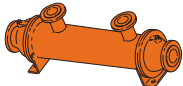
MODULATOR™ SYSTEMS CONTINUOUS DUTY



Waukesha's Modulators are self-contained power plants with radiator cooled Enginators individually packaged in ISO shipping containers.

Engine Family	Model	60Hz	50Hz
		1800 rpm	1500 rpm
VGF™ ³ These power ratings require price-book option Code 1100 (176 BMEP) and DSM. They 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.	VGF18GL/GLD ³	290	240
	VGF18GSID	265	220
	VGF24GL/GLD ³	380	315
	VGF24GSID	340	285
	VGF36GL/GLD ³	575	475
	VGF36GSID	515	430
	VGF48GL/GLD ³	750	625
	VGF48GSID	680	565
Engine Family	Model	1200 rpm	1000 rpm
VHP™	VHP5904GSID	920	840
	VHP5904LTD	965	840



		60Hz		50Hz	
		Continuous (kWe)	Standby (kWe)	Continuous (kWe)	Standby (kWe)
Engine Family	Model	900 rpm	900 rpm	1000 rpm	1000 rpm
ATGL™ 90°F (32°C) I.C. Water Temp. ⁵ 10% overload not available	16V-AT27GL	2960 ⁵	3100	3250 ⁵	3430
	12V-AT27GL	2100	2310	2340	2570
	8L-AT27GL	1400	1540	1550	1710
Engine Family	Model	1200 rpm	1200 rpm	1000 rpm	1000 rpm
VHP™ 85°F (29°C) I.C. Water Temp. ⁶ 5% overload allowed ⁷ No overload allowed. ⁸ 130°F (54°C) Intercooler Water Temperature	VHP9500GSI	1475	1825	1225	1520
	VHP9500GL	1475	1625	1225	1350
	VHP7104GSI/GSID⁸	1200	1310	1100 ⁷	1100
	VHP7100GSI/GSID	1100	1350	920	1125
	VHP7100GL	1100	1210	920	1015
	VHP5904LT	1075	1120	900 ⁶	925
	VHP5904LTD⁷	1075	1075	900	900
	VHP5904GSI/GSID⁸	980	1080	900 ⁷	900
	VHP9500G	975	1075	850	950
	VHP5900GSI/GSID	900	1125	750	925
	VHP5900GL	900	990	750	825
	VHP7100G	725	810	635	710
	VHP3604GSI/GSID	600	650	540 ⁷	540
	VHP3600GSI/GSID	550	675	450	560
	VHP3600GL	550	600	450	495
	VHP2900GSI/GSID	450	550	375	450
	VHP2900GL	450	495	375	415
	Engine Family	Model	1800 rpm	1800 rpm	1500 rpm
VGf™ 130°F (54°C) I.C. Water Temp. ³ These power ratings require pricebook option Code 1100 (176 BMEP) and DSM. They 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.	VGf48GL/GLD	830 ³	860	685 ³	720
	VGf48GSID	750	825	625	690
	VGf36GL/GLD	615 ³	645	515 ³	535
	VGf36GSID	560	620	475	515
	VGf24GL/GLD	406 ³	425	340 ³	360
	VGf24GSID	375	410	310	350
	VGf18GL/GLD	305 ³	315	250 ³	260
	VGf18GSID	280	310	240	255
Engine Family	Model	1800 rpm	1800 rpm	1500 rpm	1500 rpm
VSG™ 85°F (29°C) I.C. Water Temp.	VS11GSI	160	180	135	150
	VS11GSID	160	180	135	150
	VS11G	90	100	75	80



LOW BTU FUELED
CONTINUOUS DUTY

Alternative Fuels

- Bio-Gas
- Landfill
- Digester

Engine Family

Model

VHP™

⁷ No overload allowed.

⁹ VHP Naturally Aspirated Engine ratings based on 600 Btu/ft³ (23.58 MJ/m³), saturated low heat (net calorific value).

¹⁰ Draw-thru carburetion

P9390GSI
P9390GL
P9390G⁹
P9390G⁹

L7042GSI
L7042GL^{10, 7}
L7042GL
L7042G¹¹
L7042G¹¹

L5794LT¹⁰
L5790GSI
L5790GL¹⁰
L5790GL

F3521GSI¹⁰
F3521GL¹⁰
F3521GL

F2895GSI¹⁰
F2895GL¹⁰
F2895GL

VGf™

⁴ Low speed turbo required for operation at 1200 - 1400 rpm on Inline and from 1200 - 1600 rpm on Vee engines.

¹¹ Engine operation using 400 - 500 Btu/ft³ (15.7 - 19.7 MJ/m³) fuel requires 175°F (80°C) ICW.

P48GLD¹¹

L36GLD¹¹

H24GLD¹¹

F18GLD¹¹

VSG™

F11GSI/GSID
F11G

Continuous Duty

I.C. Water Temp. (Tcra)	C.R. (compression ratio)	900 rpm			1000 rpm			1200 rpm			1500 rpm			1800 rpm		
°F °C		bhp	kWb	kWe*	bhp	kWb	kWe*	bhp	kWb	kWe*	bhp	kWb	kWe*	bhp	kWb	kWe*
130° 54°	8:1	1478	1102	1047	1642	1224	1163	1970	1469	1400	—	—	—	—	—	—
130° 54°	10.5:1	1478	1102	1047	1642	1224	1163	1970	1469	1400	—	—	—	—	—	—
— —	10:1	932	695	660	1021	761	723	1168	871	827	—	—	—	—	—	—
— —	8:1	853	636	604	924	689	655	1040	776	737	—	—	—	—	—	—
130° 54°	8:1	1108	826	785	1232	919	873	1478	1102	1050	—	—	—	—	—	—
130° 54°	10.5:1	—	—	—	1280	954	900	1408	1050	1000	—	—	—	—	—	—
130° 54°	10.5:1	1108	826	785	1232	919	873	1478	1102	1050	—	—	—	—	—	—
— —	10:1	699	521	495	766	571	542	876	653	620	—	—	—	—	—	—
— —	8:1	640	477	453	693	517	491	780	582	553	—	—	—	—	—	—
130° 54°	10.2:1	—	—	—	1270	947	900	1445	1078	1025	—	—	—	—	—	—
130° 54°	8.2:1	911	679	645	1013	755	717	1215	906	865	—	—	—	—	—	—
130° 54°	10:1	—	—	—	1012	755	717	1052	785	746	—	—	—	—	—	—
130° 54°	10:1	911	679	645	1013	755	717	1215	906	861	—	—	—	—	—	—
130° 54°	8:1	554	413	392	615	459	436	738	550	525	—	—	—	—	—	—
130° 54°	10.5:1	554	413	392	615	459	436	640	477	—	—	—	—	—	—	—
130° 54°	10.5:1	554	413	392	615	459	436	738	551	523	—	—	—	—	—	—
130° 54°	8.2:1	455	339	322	506	377	358	607	453	425	—	—	—	—	—	—
130° 54°	10:1	455	339	322	506	377	358	526	392	—	—	—	—	—	—	—
130° 54°	10:1	455	339	322	506	377	358	607	453	430	—	—	—	—	—	—
130° 54°	11:1	—	—	—	—	—	—	710 ⁴	530 ⁴	500	885	660	625	1060	800	750
130° 54°	11:1	—	—	—	—	—	—	530 ⁴	400 ⁴	375	670	500	475	800	600	560
130° 54°	11:1	—	—	—	—	—	—	355 ⁴	265 ⁴	250	445	330	310	530	400	375
130° 54°	11:1	—	—	—	—	—	—	265 ⁴	200 ⁴	185	335	250	230	400	300	280
130° 54°	10:1	—	—	—	—	—	—	166	124	115	208	155	144	250	186	150
— —	10:1	—	—	—	—	—	—	84	63	59	106	79	73	127	95	88

NOTE: Low Btu (calorific value) fueled engines operate on fuel with 400 Btu/ft³ (15.7 MJ/m³) or greater, saturated low heat (net calorific value), and are equipped with special low Btu (calorific value) fuel system.

NOTE: VGF GLD - Gas lean combustion with draw-thru carburetion. Minimum regulated gas supply pressure is 8" H2O (12.44 mbar)

NOTE: VSG G - Ratings based on 600 Btu/ft³ (23.58 MJ/m³), saturated low heat (net calorific value).

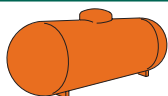
NOTE: For complete information regarding operation on Low Btu Fuel, see the S3955 series (latest version) Technical Data Sheets. See Price Book for proper hardware requirements.

NOTE: For low Btu Intermittent Duty application ratings, consult the Waukesha Sales Engineering.

NOTE: Generator efficiencies are typical values. Please consult with your packager.

*kWe ratings are based on Waukesha Power Systems generator efficiencies.

Continuous Duty



VHP™

NOTE: No overload
allowed.

		I.C. Water Temp. (Tcra)	C.R. (compression ratio)	900 rpm	1000 rpm	1200 rpm	1500 rpm	1800 rpm
	Model	°F °C		bhp kWb	bhp kWb	bhp kWb	bhp kWb	bhp kWb
VHP™	P9390GSI	85° 29°	8:1	1237 923	1327 990	1479 1103	— —	— —
	P9390GSI	130° 54°	8:1	1162 867	1244 928	1379 1029	— —	— —
	P9390GL	85° 29°	10.5:1	1237 923	1374 1025	1649 1230	— —	— —
	P9390GL	130° 54°	10.5:1	1184 883	1315 981	1578 1177	— —	— —
	P9390G	— —	8:1	1066 795	1164 868	1303 972	— —	— —
	L7044GSI	130° 54°	8:1	944 704	1049 782	1259 939	— —	— —
	L7042GSI	85° 29°	8:1	928 692	996 743	1109 827	— —	— —
	L7042GSI	130° 54°	8:1	871 650	933 696	1035 772	— —	— —
	L7042GL	85° 29°	10.5:1	928 692	1031 769	1237 923	— —	— —
	L7042GL	130° 54°	10.5:1	888 662	987 736	1184 883	— —	— —
	L7042G	— —	8:1	800 597	873 651	978 730	— —	— —
	L5794GSI	130° 54°	8.2:1	868 647	965 719	1158 863	— —	— —
	L5790GSI	85° 29°	8.2:1	763 569	819 611	912 680	— —	— —
	L5790GSI	130° 54°	8.2:1	717 535	767 572	851 635	— —	— —
	L5790GL	85° 29°	10:1	763 569	847 632	1016 758	— —	— —
	L5790GL	130° 54°	10:1	729 544	811 605	973 726	— —	— —
	F3524GSI	130° 54°	10.5:1	472 352	524 391	629 469	— —	— —
	F3521GSI	85° 29°	8:1	464 346	497 371	555 414	— —	— —
	F3521GSI	130° 54°	8:1	436 325	466 348	517 386	— —	— —
	F3521GL	85° 29°	10.5:1	464 346	516 385	619 462	— —	— —
	F3521GL	130° 54°	10.5:1	444 331	493 368	592 442	— —	— —
	F2895GSI	85° 29°	8.2:1	381 284	409 305	456 340	— —	— —
	F2895GSI	130° 54°	8.2:1	358 267	383 286	425 317	— —	— —
	F2895GL	85° 29°	10:1	381 285	424 316	509 379	— —	— —
	F2895GL	130° 54°	10:1	365 272	406 303	487 363	— —	— —
VGF™	P48GSID	130° 54°	8.7:1	— —	— —	— —	712 528	848 640
	P48GL/GLD	130° 54°	11:1	— —	— —	— —	496 370	604 450
	L36GSID	130° 54°	8.7:1	— —	— —	— —	528 400	640 512
	L36GL/GLD	130° 54°	11:1	— —	— —	— —	376 280	442 330
	H24GSID	130° 54°	8.7:1	— —	— —	— —	356 264	424 320
	H24GL/GLD	130° 54°	11:1	— —	— —	— —	248 185	302 225
	H24GL	130° 54°	8.7:1	— —	— —	— —	445 330	530 400
	F18GSID	130° 54°	8.7:1	— —	— —	— —	264 200	320 256
	F18GL/GLD	130° 54°	11:1	— —	— —	— —	188 140	221 165
	F18GL	130° 54°	8.7:1	— —	— —	— —	335 250	400 300
VSG™	F11GSI	85° 29°	10:1	— —	— —	102 76	127 95	153 114
	F11GSI	130° 54°	10:1	— —	— —	102 76	127 95	153 114
	F11G	— —	10:1	— —	— —	101 75	123 92	150 112

NOTE: These engines have HD-5 propane as a secondary fuel option: VHP-GL Series, VHP-GSI Series, VSG-GSI Series.

Adjustments To Engine And Enginator Systems For High Altitude And High Temperature^{12, 15} For Natural Gas, Low BTU and HD-5 Propane Fuels

		Turbocharged and Intercooled	Continuous/ Prime Power*	Intermittent/ Standby
All VSG	Altitude: Temperature ¹⁷ :	Deduct 2% for each 1000 ft. (305 m) above: Deduct 1% for each 10°F (5.5°C) above:	3000 ft. 914 m 100°F 38°C	1500 ft. 457 m 100°F 38°C
VSG F11 (Generator Standby Power Rating)	Altitude: Temperature ¹⁷ :	Deduct 4% for each 1000 ft. (305 m) above: Deduct 2% for each 10°F (5.5°C) above:	— — — —	1000 ft. 305 m 90°F 32°C
VSG GSI ¹⁶ Propane	Altitude: Temperature ¹⁷ : Jacket Water Temp.:	Deduct 2% for each 1000 ft. (305 m) above: Deduct 1% for each 10°F (5.5°C) above: Deduct 2.5% for each 10°F (5.5°C) above:	— — — — — —	1500 ft. 457 m 85°F 29°C 180°F 82°C
All VGF GL/GLD/GSI/GSID	Altitude: Altitude: Altitude: Temperature ¹⁷ :	Deduct 2% for each 1000 ft. (305 m) above: (except GL LCR) Deduct 6% for each 1000 ft. (305 m) above: (F18GL LCR only) Deduct 5% for each 1000 ft. (305 m) above: (H24GL LCR only) Deduct 1% for each 10°F (5.5°C) above:	1500 ft. 457 m 5000 ft. 1524 m 3500 ft. 1067 m 100°F 38°C	1500 ft. 457 m 5000 ft. 1524 m 3500 ft. 1067 m 100°F 38°C
VGF F18GL/H24GL/L36GL Code 1105 ¹⁸	Altitude: Temperature ¹⁷ :	Deduct 8% for each 1000 ft. (305 m) above: Deduct 3% for each 10°F (5.5°C) above:	5500 ft. 1676 m 100°F 38°C	— — — —
VGF GL (Generator Standby Power Rating)	Altitude: Temperature ¹⁷ :	Deduct 3% for each 1000 ft. (305 m) above: Deduct 1.5% for each 10°F (5.5°C) above:	— — — —	1500 ft. 457 m 100°F 38°C
All VGF GSID and All VGF GL/GLD with HCR Propane ¹⁶	Altitude: Temperature ¹⁷ : Jacket Water Temp.:	Deduct 2% for each 1000 ft. (305 m) above: Deduct 1% for each 10°F (5.5°C) above: Deduct 2.5% for each 10°F (5.5°C) above: [210°F (99°C) maximum Jacket Water Temperature for GSID]	5000 ft. 1524 m 100°F 38°C 180°F 82°C	— — — — — —
All VGF GL with LCR only Propane ¹⁶	Altitude: Temperature ¹⁷ : Jacket Water Temp.: Intercooler Water Temp.	Deduct 6% for each 1000 ft. (305 m) above: (F18GL LCR only) Deduct 5% for each 1000 ft. (305 m) above: (H24GL LCR only) Deduct 1% for each 10°F (5.5°C) above: Retard spark timing 2° above: [210°F (99°C) maximum Jacket Water Temperature for GL with LCR] Retard spark timing 2° for each 10°F (5.5°C) above:	5000 ft. 1524 m 3500 ft. 1067 m 100°F 38°C 180°F 82°C 130°F 54°C	— — — — — — — — — —
VHP F2895/F3521/L5790 L7042/P9390GSI	Altitude: Temperature ¹⁷ :	Deduct 2% for each 1000 ft. (305 m) above: Deduct 1% for each 10°F (5.5°C) above:	6000 ft. 1828 m 100°F 38°C	1500 ft. 457 m 100°F 38°C
VHP F3524/L5794/L7044GSI ¹³	Altitude: Temperature ¹⁷ :	Deduct 2% for each 1000 ft. (305 m) above: Deduct 1% for each 10°F (5.5°C) above:	8000 ft. 2438 m 100°F 38°C	4000 ft. 1219 m 100°F 38°C
VHP GL	Altitude: Temperature ¹⁷ :	Deduct 2% for each 1000 ft. (305 m) above: Deduct 1% for each 10°F (5.5°C) above:	1500 ft. 457 m 100°F 38°C	1500 ft. 457 m 85°F 29°C
VHP L5774LT ¹⁴	Altitude: Temperature ¹⁷ :	Deduct 2.4% for each 1000 ft. (305 m) above: Deduct 2.4% for each 10°F (5.5°C) above:	5000 ft. 1524 m 100°F 38°C	— — — —
VHP L5794LT	Altitude: Temperature ¹⁷ :	Deduct 2.4% for each 1000 ft. (305 m) above: Deduct 2.4% for each 10°F (5.5°C) above:	5000 ft. 1524 m 100°F 38°C	1500 ft. 457 m 85°F 29°C
VHP F2895/F3521/L5790/L7042GL with Low Fuel Pressure System Option	Altitude: Temperature ¹⁷ :	Deduct 2% for each 1000 ft. (305 m) above: Deduct 4% for each 10°F (5.5°C) above:	1500 ft. 457 m 100°F 38°C	1500 ft. 457 m 85°F 29°C
VHP F2895/F3521/L5790/L7042GSI with Low Fuel Pressure System Option	Altitude: Temperature ¹⁷ :	Deduct 2% for each 1000 ft. (305 m) above: Deduct 4% for each 10°F (5.5°C) above:	3000 ft. 914 m 100°F 38°C	1500 ft. 457 m 85°F 29°C
VHP F3524/L5794/L7044GSI with Low Fuel Pressure System Option	Altitude: Temperature ¹⁷ :	Deduct 2% for each 1000 ft. (305 m) above: Deduct 4% for each 10°F (5.5°C) above:	3000 ft. 914 m 100°F 38°C	1500 ft. 457 m 85°F 29°C
VHP L5794LT with Low Fuel Pressure System Option	Altitude: Temperature ¹⁷ :	Deduct 4.8% for each 1000 ft. (305 m) above: Deduct 4.8% for each 10°F (5.5°C) above:	1500 ft. 457 m 100°F 38°C	1500 ft. 457 m 85°F 29°C
VHP GSI and GL HD-5/Propane (Including 3524/5794/7044GSI ¹³)	Altitude: Altitude: Altitude: Temperature ¹⁷ : Jacket Water Temp.:	Deduct 2% for each 1000 ft. (305 m) above (GL only): Deduct 2% for each 1000 ft. (305 m) above (GSI only): Deduct 2% for each 1000 ft. (305 m) above (Series Four GSI only): Deduct 1% for each 10°F (5.5°C) above: Deduct 2.5% for each 10°F (5.5°C) above:	1500 ft. 457 m 6000 ft. 1828 m 8000 ft. 2438 m 100°F 38°C 180°F 82°C	— — — — — — — — — —
8L-AT27GL 12V-AT27GL	Altitude: Temperature ¹⁷ :	Deduct 3.3% for each 1000 ft. (305 m) above: Deduct 2% for each 10°F (5.5°C) above:	3000 ft. 914 m 100°F 38°C	800 ft. 244 m 100°F 38°C
16V-AT27GL	Altitude: Temperature ¹⁷ :	Deduct 4% for each 1000 ft. (305 m) above: Deduct 2% for each 10°F (5.5°C) above:	6000 ft. 1828 m 100°F 38°C	6000 ft. 1828 m 100°F 38°C
16V-AT27GL EPG	Altitude: Temperature ¹⁷ :	Contact Waukesha Sales Engineering above: Contact Waukesha Sales Engineering above:	1000 ft. 305 m 100°F 38°C	800 ft. 244 m 100°F 38°C
		Naturally Aspirated		
All VHP, VGF and VSG Natural Gas	Altitude: Temperature ¹⁷ :	Deduct 3% for each 1000 ft. (305 m) above: Deduct 1% for each 10°F (5.5°C) above:	1500 ft. 457 m 100°F 38°C	500 ft. 152 m 85°F 29°C
All VHP, VGF, VSG HD-5/Propane	Altitude: Temperature ¹⁷ : Jacket Water Temp.:	Deduct 3% for each 1000 ft. (305 m) above: Deduct 5.5% for each 10°F (5.5°C) above: Deduct 2.5% for each 10°F (5.5°C) above:	1500 ft. 457 m 100°F 38°C 180°F 82°C	— — — — — —

NOTES:

Rating Standard: All models: Ratings conform to ISO 3046/1 (latest version) with a mechanical efficiency of 90% and auxiliary water temperature, Tcra, as specified in the Power Rating Chart, Bulletin 1079 (latest version) limited to ±10° F (±5.5° C). Ratings are also valid for SAE J1349, BS 5514, DIN 6271 and API 7B-11C standard atmospheric reference conditions.

Fuel Standard: All natural gas engine ratings are based on 900 BTU/ft³ (35.38 MJ/m³ [25, V(0; 101.325)]) SLHv, 91 WKJ™ minimum, commercial quality natural gas. Refer to S-7884-7 (latest version) for full gaseous fuel specifications.

ISO Standard Power (Continuous Power Rating): The highest load and speed that can be applied 24 hours per day, seven days per week, 365 days per year except for normal maintenance at ISO standard ambient reference conditions. At ISO standard ambient reference conditions, it is permissible to operate the engine at up to 110% of the ISO Standard Power or the maximum power indicated by the intermittent rating, whichever is lower, for two hours in every 24 hour period.

ISO Service Power (Site Continuous Power Rating): The highest load and speed that can be applied 24 hours per day, seven days per week, 365 days per year except for normal maintenance at the operating and ambient conditions of the site application. Unless otherwise stated, it is permissible to operate the engine at up to 110% of the ISO Service Power (see the Overload Power definition) or the intermittent power rating available at the site operating and ambient conditions, whichever is lower, for two hours in every 24 hour period.

Overload Power: The power that an engine is permitted to supply, with a duration and frequency of use depending upon the service application, at stated ambient conditions, immediately after operating at its ISO Service Power rating. Unless otherwise stated, it is permissible to operate the engine at up to 110% of the ISO Service Power or the intermittent power rating available at the site operating and ambient conditions, whichever is lower, for two hours in every 24 hour period. For situations without a defined intermittent power, the allowable 10% overload power is reduced from ISO standard ambient reference conditions by the applicable rating adjustments listed in the Intermittent/Standby Power column.

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

Generator Continuous Power Rating (kW_e): 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. Unless otherwise stated, it is permissible to operate the engine at up to 110% of the generator continuous power rating for two hours in every 24 hour period.

Generator Standby Power Rating (kW_e): This rating applies to those systems used as a secondary source of electrical power. This rating is the output the system will produce continuously 24 hours per day for the duration of the prime power source outage. No overload is allowed. This rating may reduce the lifecycle intervals.

Generator Peak Shaving Application Rating (kW_e) For VHP Models Only: This rating is based on the number of horsepower-hours available per year in a constant speed application at site conditions. This rating allows for limited engine operation above the published ISO Standard Power rating for VHP models only. This rating class requires a Special Application Approval. Contact Waukesha's Sales Engineering Department. This rating may reduce the lifecycle intervals.

12 These altitude and temperature adjustments are meant to be a guide only and cannot be applied without limit. Contact Waukesha's Sales Engineering Department for additional information.

13 The F3524GSI, L5794GSI, and L7044GSI models are limited to 180°F maximum jacket water temperature.

14 The L5774LT is rated for 130°F intercooler water temperature only.

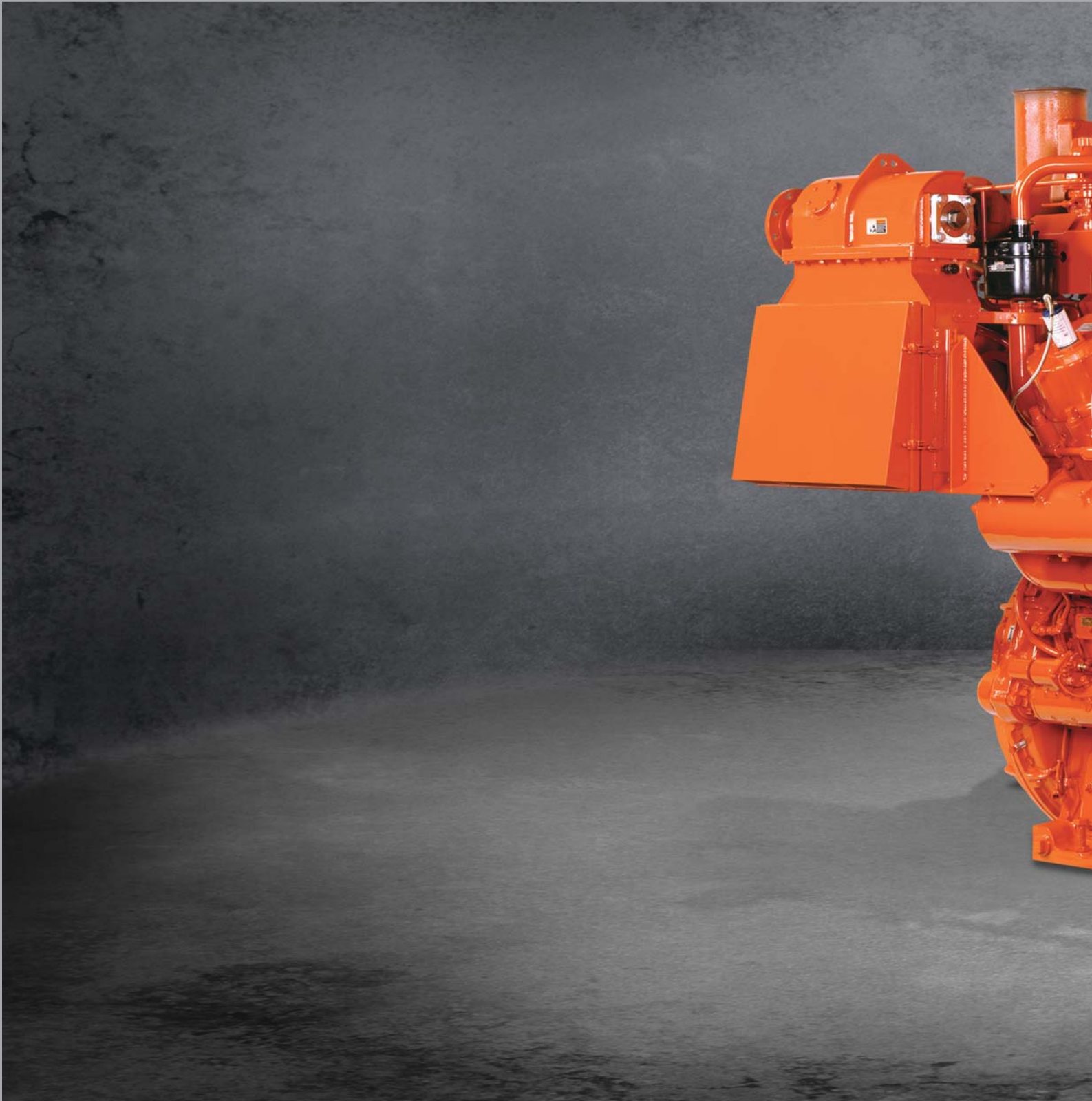
15 Unless otherwise specified, overload power is available for two hours in every 24 hour period at a level specified in the Notes section (above) or on a Special Application Approval.

16 For complete information regarding operation on propane and other fuels, including proper ignition timing, see the most current, model specific S-07079 series Technical Data Sheets.

17 Temperature is defined as the engine combustion air inlet temperature.

18 Gas compression application only. Applies to 160 BMEP rating.

*For Peak Shaving derates, contact the Waukesha Sales Engineering Department.



Waukesha



BULLETIN NO. 1079 - 20M 01/04

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