POWER RATINGS

130°F (54°C)
I.C. Water Inlet Temperature

Natural Gas Fueled Continuous Duty Engines

Engine Family	Model	C.R. (compression ratio)	800 rpm bhp kWb	900 rpm bhp kWb	1000 rpm bhp kWb	1200 rpm bhp kWb	1500 rpm bhp kWb	1600 rpm bhp kWb	1800 rpm bhp kWb
ATGL™	16V-AT27GL	9:1	**3600** 2686	**4050** 3020	**4500** 3356				
	12V-AT27GL	9:1	**2508** 1871	**2820** 2104	**3130** 2335				
	8L-AT27GL	9:1	**1670** 1246	**1880** 1405	**2090** 1560				
VHP™	P9390GSI	8:1	**1314** 980	**1478** 1102	**1642** 1224	**1970** 1469			
	P9390GL	10.5:1	**1314** 980	**1478** 1102	**1642** 1224	**1970** 1469			
	P9390G	10:1	**976** 738	**1090** 813	**1194** 890	**1366** 1019			
	P9390G	8:1	**900** 671	**998** 744	**1081** 806	**1216** 907			
	L7044GSI	8:1	**1120** 836	**1260** 940	**1400** 1044	**1680** 1253			
	L7042GSI	8:1	**985** 735	**1108** 826	**1232** 919	**1478** 1102			
	L7042GL	10.5:1	**985** 735	**1108** 826	**1232** 919	**1478** 1102			
	L7042G	10:1	**732** 546	**818** 610	**896** 668	**1024** 764			
	L7042G	8:1	**675** 503	**748** 558	**810** 604	**912** 680			
	L5794GSI	8.2:1	**920** 686	**1035** 772	**1150** 858	**1380** 1029			
	L5790GSI	8.2:1	**810** 604	**911** 679	**1013** 755	**1215** 906			
	L5794LT	10.2:1	— —	— —	**1205** 899	**1445** 1078			
	L5774LT	10.2:1	— —	— —	**1040** 776	**1250** 933			
	L5790GL	10:1	**810** 604	**911** 679	**1013** 755	**1215** 906			
	F3524GSI	8:1	**560** 418	**630** 470	**700** 522	**840** 627			
	F3521GSI	8:1	**492** 367	**554** 413	**615** 459	**738** 550			
	F3521GL	10.5:1	**492** 367	**554** 413	**615** 459	**738** 550			
	F2895GSI	8.2:1	**405** 302	**455** 339	**506** 377	**607** 453			
	F2895GL	10:1	**405** 302	**455** 339	**506** 377	**607** 453			
VGF™	P48GSID	8.7:1					**885** 660	**945** 705	**1065** 800
	P48GL/GLD	11:1					**885** 660	**945** 705	**1065** 800
	L36GSID	8.7:1					**670** 500	**710** 530	**800** 600
	L36GL/GLD	11:1					**670** 500	**710** 530	**800** 600
	H24GSID	8.7:1					**445** 330	**475** 355	**530** 400
	H24GL/GLD	11:1/8.7:1					**445** 330	**475** 355	**530** 400
	F18GSID	8.7:1					**335** 250	**355** 265	**400** 300
	F18GL/GLD	11:1/8.7:1					**335** 250	**355** 265	**400** 300
VSG™	F11GSI/GSID	10:1					**208** 155	**222** 165	**250** 186
	F11G	10:1					**112** 84	**120** 90	**135** 101

* For intermittent, reduced speed or alternate fuel power ratings, see Power Ratings Bulletin 1079 or consult Waukesha Engine, Dresser, Inc.

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Waukesha Engine ISO 9001 CERTIFIED

For a Distributor contact, visit our website at:
www.waukeshaengine.dresser.com

Basic FORMULAS

°F = (°C x 1.8) + 32 **°C** = $\frac{(°F-32)}{1.8}$

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

BMEP $_{(bar)}$ = $\frac{kWb \times 1200}{RPM \times Displacement\ (litres)}$

PREFIX Designations

Number of cylinders except ATGL which states actual number of cylinders.)

P = 16 **H** = 8
L = 12 **F** = 6

SUFFIX Designations

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

DISPLACEMENT

	cu. in.	litres
ATGL		
16V-AT27GL	17398	285
12V-AT27GL	13048	214
8L-AT27GL	8699	143
VHP		
P9390	9388	154
L7042/L7044	7040	116
L5790/L5794	5788	95
F3521/F3524	3520	58
F2895	2894	47
VGF		
P48	2924	48
L36	2193	36
H24	1462	24
F18	1096	18
VSG		
F11	673	11

DRESSER
Waukesha
WAUKESHA ENGINE
DRESSER, INC.

Form M4146 1/02

Application Guidelines for Altitude and Temperature

Adjustments to Engine Systems for Natural Gas Fuels

			ISO Standard/ Continuous	Intermittent/ Standby
Turbocharged and Intercooled				
VS11G/GSI/GSID	Altitude:	Deduct 2% for each **1000 ft.** (305 m) above:	**3000 ft.** 914 m	**1500 ft.** 457 m
	Temp.:	Deduct 1% for each **10°F** (5.5°C) above:	**100°F** 38°C	**100°F** 38°C
All VGF GL/GLD/GSID	Altitude:	Deduct 2% for each **1000 ft.** (305 m) above: *(except GL LCR)*	**1500 ft.** 457 m	**1500 ft** 457 m
		Deduct 6% for each **1000 ft.** (305 m) above: *(F18GL LCR only)*	**5000 ft.** 1524 m	**5000 ft.** 1524 m
		Deduct 5% for each **1000 ft.** (305 m) above: *(H24GL LCR only)*	**3500 ft.** 1067 m	**3500 ft.** 1067 m
	Temp.:	Deduct 1% for each **10°F** (5.5°C) above:	**100°F** 38°C	**100°F** 38°C
VHP F2895/F3521/L5790/ L7042/P9390 GSI	Altitude:	Deduct 2% for each **1000 ft.** (305 m) above:	**6000 ft.** 1828 m	**1500 ft.** 457 m
	Temp.:	Deduct 1% for each **10°F** (5.5°C) above:	**100°F** 38°C	**100°F** 38°C
VHP F3524/L5794/ L7044 GSI*	Altitude:	Deduct 2% for each **1000 ft.** (305 m) above:	**8000 ft.** 2438 m	**4000 ft.** 1219 m
	Temp.:	Deduct 1% for each **10°F** (5.5°C) above:	**100°F** 38°C	**100°F** 38°C
VHP GL	Altitude:	Deduct 2% for each **1000 ft.** (305 m) above:	**1500 ft.** 457 m	**1500 ft.** 457 m
	Temp.:	Deduct 1% for each **10°F** (5.5°C) above:	**100°F** 38°C	**85°F** 29°C
VHP L5774LT**	Altitude:	Deduct 2.4% for each **1000 ft.** (305 m) above:	**5000 ft.** 1524 m	— —
	Temp.:	Deduct 2.4% for each **10°F** (5.5°C) above:	**100°F** 38°C	— —
VHP L5794LT	Altitude:	Deduct 2.4% for each **1000 ft.** (305 m) above:	**5000 ft.** 1524 m	**1500 ft.** 457 m
	Temp.:	Deduct 2.4% for each **10°F** (5.5°C) above:	**100°F** 38°C	**85°F** 29°C
8L-AT27GL 12V-AT27GL	Altitude:	Deduct 3.3% for each **1000 ft.** (305 m) above:	**3000 ft.** 914 m	**800 ft.** 244 m
	Temp.:	Deduct 2% for each **10°F** (5.5°C) above:	**100°F** 38°C	**100°F** 38°C
16V-AT27GL Compressor (900 and 1000 rpm only***)	Altitude:	Deduct 4% for each **1000 ft.** (305 m) above:	**6000 ft.** 1828 m	**6000 ft.** 1828 m
	Temp.:	Deduct 2% for each **10°F** (5.5°C) above:	**100°F** 38°C	**100°F** 38°C
16V-AT27GL EPG 900 rpm	Altitude:	Contact Waukesha Sales Engineering above:	**1000 ft.** 1828 m	— —
	Temp.:	Contact Waukesha Sales Engineering above:	**100°F** 38°C	— —
16V-AT27GL EPG 1000 rpm	Altitude:	Deduct 4.1% for each **1000 ft.** (305 m) above:	**1000 ft.** 305 m	**1000 ft.** 305 m
	Temp.:	Deduct 3.4% for each **10°F** (5.5°C) above:	**100°F** 38°C	**100°F** 38°C
Naturally Aspirated				
All VHP/VGF/VSG G	Altitude:	Deduct 3% for each **1000 ft.** (305 m) above:	**1500 ft.** 457 m	**500 ft.** 152 m
	Temp.:	Deduct 1% for each **10°F** (5.5°C) above:	**100°F** 38°C	**85°F** 29°C

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.

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

**The VHP3604GSI, VHP5904GSI, and VHP7104GSI models are limited to 180° F maximum jacket water temperature.*
***The L5774LT is rated for 130° F intercooler water temperature only.*
****For speeds other than 900 and 1000 rpm, consult the Waukesha Engine Sales Engineering Department.*

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° 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 ratings are based on 900 BTU/ft^3 (35.38 MJ/m^3 [25, V(0; 101.325)]) SLHV, 91 WKI™ value 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 refererence 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.

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

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. This rating may reduce the lifecycle intervals.

Peak Shaving Application Ratings (kWe) VHP Models Only: This rating is based on the number of horsepower hours available per year in a constant speed application at site conditions. These ratings allow 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.