LEISTUNG energie

Model: V440E5

Powered by VOLVO





Generator Specification

Service	PRP(1)	ESP(2)
Power (kVA)	400	440
Power (kW)	320	352
Rated speed (r.p.m)	1500	
Standard voltage (V)	400/230V	
Rated at power factor(cos phi)	0.8	

AGG Power gensets are compliant with ISO 9001 and CE standard, which include the following directives:

- 2006/42/EC Machinery safety.
- 2006/95/EC Low voltage
- EN 60204-1: 2006+A1: 2009, EN ISO 12100: 2010, EN ISO 13849-1: 2008, EN 12601 : 2010

(1) PRP (Prime Power):

According to ISO8528-1, prime power is the maximum power available during a variable power sequence, which may be run for an unlimited number of hours per year, between stated maintenance intervals. The permissible average power output during at 24 hours period shall not exceed 80% of the prime power. 10% overload available for governing purposes only.

(2) ESP (Standby Power):

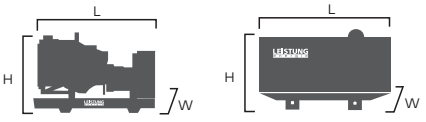
According to ISO 8528-1, It is defined as the maximum power available, under the agreed operating conditions, for which the generating set is capable of delivering for up to 500 hours of operation per year (of which no more than 300 hours for continuative use) with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. No overload capability is available.

Powers	ESP		PRP		Standby
Voltage (V)	KVA	KW	KVA	KW	Amps
415/240	440	352	400	320	612.1
400/230	440	352	400	320	635.1
380/220	440	352	400	320	668.5

Performance Data		
Model		V440E5
Engine brand		Volvo
Engine model		TAD1344GE
Speed control type		ECM
Phase		3
Control system		Digital
Starter motor voltage		24V
Frequency		50HZ
Engine speed (RPM)		1500
Fuel Consumption (L/H)	100% standby power	195
	100% prime power	193
	75% prime power	191
	50% prime power	194

Standard reference Conditions

Note: Standard reference condition 25°C[77°F] air inlet temp, 100m(328ft) A.S.L 30% relative humidity. Fuel consumption dat with diesel fuel with specific gravity of 0.85 and conforming to BS 2869: 1998, Class A2



Dimension and Weight		
Dimension	Open	Silent
Length (L)	2800mm	4050mm
Width (W)	1400mm	1700mm
Height (H)	2200mm	2320mm
Net Weight	REQ	REQ
Fuel Tank (L)	REQ	REQ

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Engine Specification: TAD1344GE

General data	
No. of cylinders	6
Cylinder arrangement	In-line
Cycle	4 stroke
Displacement	13 L
Bore	131 mm
Stroke	158 mm
Compression ratio	18.1:1
Dry weight-engine only	NA
Dry weight-include cooling system	NA
Wet weight-engine only	1325 kg
Wet weight-Genpac	1790 kg

Cooling system	
Heat rejection radiation from engine at	
- standby power	15 kW
- prime power	13 kW
Heat engine rejection to coolant at	
- standby power	155 kW
- prime power	143 kW
Fan power consumption	6 kW
Fan drive ratio	0.84:1
Coolant capacity-engine	20 L
Coolant capacity-std radiator	24 L
Coolant pump(drive/ratio)	1.43:1
Coolant flow with standard system	5 L/S
Minimum coolant flow	5 L/S
Max. out circuit restriction	39 kPA
Thermostat-start to open	82 ℃
Thermostat-fully open	92 ℃
Max. static pressure head	100 kPA
Min. static pressure head	70 kPA
Standard pressure cap setting	70 kPA
Max. top tank temp	107 ℃

Inlet / Exhaust Data	
Max. intake restriction	5 kPA
Heat rejection to exhaust	
- standby power	266 kW
- prime power	243 kW
Exhaust gas temp after turbine at	
- standby power	465 ℃
- prime power	440 ℃
Max. back pressure in exhaust line	9 kPA
Exhaust gas flow at:	
- standby power	67.5 m 3 /min
- prime power	63.5 m 3 /min

Fuel system	
System supply flow	120 L/H
Fuel supply line max. restriction	30 kPA
Fuel supply line max pressure	20 kPA
System return flow	18 L/H
Fuel return line max restriction	20 kPA
Max. allowable inlet fuel temp	50 ℃

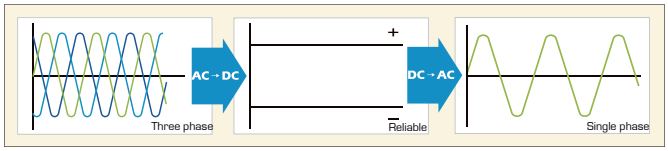
Lubrication system	
Oil consumption	
- standby power	0.04 L/H
- prime power	0.04 L/H
Oil system capacity-include filters	36 L
Oil sump capacity-max.	30 L
Oil sump capacity- min.	19 L
Oil change intervals	600 H
Oil pressure at rated speed	370-520 kPA
Lubrication oil temp in oil sump	130 ℃
Oil filter micro size	40μ

Electrical system	
Voltage	24 V
Alternator make/output	80 Amp
Starter motor	7 kW

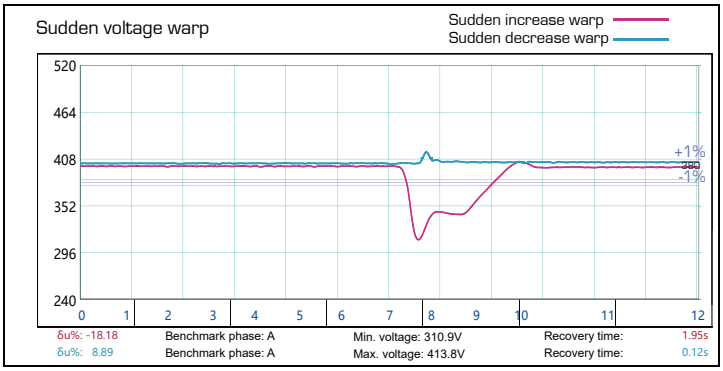
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Alternator Specification

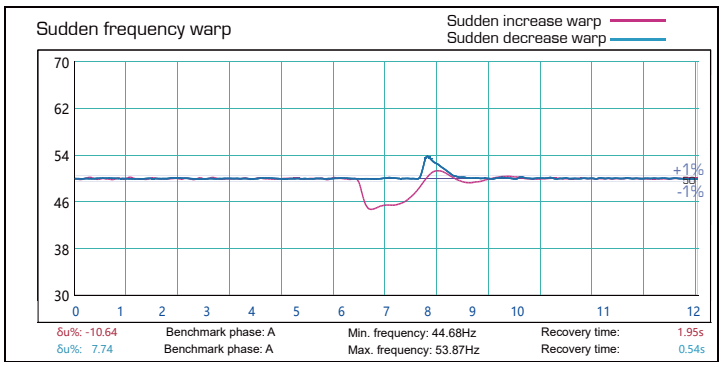
Alternator	
Number of phase	3
Power factor (Cos Phi)	0.8
Poles	4
Winding Connections (standard)	Star-serie
Terminals	12
Insulation type	H class
Winding Pitch	2/3
IP rating	IP23
Excitation system	Self-excited
Bearing	Single bearing
Coating	Vacuum impregnation
Voltage regulator	A.V.R
Couping	Flexible disc



Emergency voltage curve



Emergency frequency curve



Options

Engine	Alternator	Generator Sets	Fuel System
▪ Water Jacket Pre-heater ▪ Fuel heater	▪ Winding Temp measuring Instrument ▪ Alternator Pre-heater ▪ PMG ▪ Anti-damp and anti-corrosion treatment ▪ Anti-condensation heater ▪ Winding and bearing RTD	▪ Tools with the machine ▪ Extended range fuel tank ▪ Bunded fuel tank	▪ Low fuel level alarm ▪ Automatic fuel feeding system ▪ Fuel T-valves
Canopy	**Lub oil system**	**Cooling System**	**Control Panel**
▪ Rental type Canopy ▪ Trailer	▪ Oil Pre-heater ▪ Oil temp sensor	▪ Front heat protection	▪ Remote control panel ▪ ATS ▪ Synchronizing controller ▪ Adjustable earth leakage relay

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Control Panel

Configuration

- Emergency stop button
- Protection MCB
- Battery charger
- Integrated aviation plug
- ATS connection
- Digital control module

Features

- 3 phase generator set monitoring
- Support of engines equipped with electronic control unit
- Comprehensive diagnostic message
- Automatic or manual start/stop of the gensets
- Push buttons for simple control, lamp test
- Graphic back-lit LCD display
- Parameters adjustable via keyboard or PC
- Mains measurements（50HZ/60HZ）
- Generator measurements（50HZ/60HZ）
- Comprehensive shutdown or warning on fault condition
- 3 phase Generator protections
  - Over-/under voltage
  - Over-/under frequency
  - Current/voltage asymmetry
  - Over current/overload
- 3 phase AMF function
  - Over-/under frequency
  - Over-/under voltage
  - Voltage asymmetry
- Configurable analog inputs
- Battery voltage, engine speed (pick-up) measurement
- Configurable programmable binary inputs and outputs
- Warm-up and cooling functions
- Generator C.B. and Mains C.B. control with feedback and return timer
- RS232 interface
- Modem communication support
- Hours counter
- Sealed to Ip65
- Event log

Benefits

- Less wiring and components
- Integrated solution
- Less engineering and programming
- User friendly set-up and button layout
- Module can be configured to suit individual applications
- PC software for simplified configuration
- Wide range of communication capabilities

Operation conditions

- Operation temp: -20 ℃ to + 70 ℃
- Storage temp: -30 ℃ to + 80 ℃
- Operating humidity: 95% w/o condensation
- Vibration : 5-25Hz, ±1.6mm
  5-100Hz, a=4g
- Shocks: a= 500m/s²

Options

- Ethernet interface (Remote monitoring and control)
- GSM modem/wireless internet (Remote monitoring and control)
- RS232-RS485 Dual port interface
- Synchronizing control panel
- Distribution board with sockets kit and power busbar
- Battery trickle charge ammeter
- Earth leakage protection
- Earth fault protection
- Low fuel level alarm
- Low fuel level shutdown
- High fuel level alarm
- Fuel transfer system control
- Low coolant level shutdown
- High lube oil temp shutdown
- Overload via alarm switch on breaker
- Engine coolant heater controls
- Control panel heater
- Speed adjust switch
- Oil temp displayed on LCD screen
- Additional 8 inputs and outputs

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