

GENERATING SET POWERED BY VOLVO PENTA

# SVP160 - GENSET



At 1500rpm Prime Power 121KWe/152KVA, Standby Power 133KWe/167KVA

At 1800rpm Prime Power 129KWe/161KVA, Standby Power 141KWe/177KVA TT

## Reliable & Powerful

The **SVP160** Genset is a powerful, reliable and economical diesel Generating Set. This combination is built on dependable Volvo Penta engine and Stamford (CGT) first class alternator.

## Durability & Low Noise

Designed for easiest, fastest, and most economical installation. Approved combinations with engines coupled to single bearing alternators produce a smooth vibration free operation and low noise. Engine-Alternator is mounted on rigid steel base frame using Volvo Original Rubber Cushion for optimal vibration isolation.

## Engine Low Exhaust Emission

The state of the art, high-tech injection and charging system with low internal losses contributes to excellent combustion and low fuel consumption. Complies with EPA/CARB Tier 2 and Tier 1 and TA-luft exhaust emission regulation.

## Alternator Control & Regulation

Continuous development of the automatic voltage regulators is to reach the ultimate reliability and control.

## Warranty

One year against all defects in material and / or workmanship, subject to the terms and conditions of the Manufacturer's warranty.

## Easy Service & Maintenance

Easily accessible service, maintenance points and terminals contribute to the ease of service of the genset.

## Maintained Performance

The standard genset may operate up to 1000m altitude and 40°C ambient air temperature without derating.

## General

### Engine

- Tropical cooling system (55°C)
- Mechanical governor
- Turbo charged
- Electrical stop solenoid, energized to run
- Emission controlled
- Low noise level

### Alternator

- 12 wire reconnectable stator / terminal arrangement
- 2/3 pitch windings avoid excessive neutral currents.
- Single bearing construction with dynamically balanced rotor and sealed for life bearings.
- Class "H" insulation with severe environmental protection as standard.
- Built to conform with all leading industrial and marine standards..

### General

- Digital controller with LCD display
- Auto Start
- 3 pole circuit breaker
- Stainless steel flexible
- Standard silencer
- Rigid steel base frame with lifting eyes
- Anti-vibration pads
- Fuel filter water separator
- Coolant "Ready Mix" (Volvo original)
- Oil VDS (Volvo original)

### Control Panel

- Deep Sea digital controller; (UK origin)
- Steel sheet enclosure with hinged and lockable cover
- Alternator mounted & fixed with anti-vibration rubber pads
- Emergency push button
- Readings: (LCD display)
- AC volts, AC currents, DC volts, frequency, rpm, hour counter
- Oil pressure, water temperature

### Protections:

- Low oil pressure, high water temperature
- DC alternator failure, over crank (Fail to start)
- Low coolant level
- Over/Under voltage, Over current



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## Features

<b>Engine</b>	<b>Volvo Penta</b>
Type	TAD731GE
Origin	Germany
No. of Cylinders	6
Configuration	In-line
SAE/Flexible coupling	2/11.5", New 2008 SAE3
Cycle	4-stroke
Bore, mm	108
Stroke, mm	130
Displacement, l	7.15
Compression ratio	18.0:1
Aspiration	Turbocharged
Injection	Mechanical
Starting	24V Electric
Alternator, amps	55/12V

<b>Alternator</b>	<b>Stamford</b>
Type	UCI274F
Origin	UK
Construction	single bearing
Insulation system	Class "H"
Temperature rise, °C	125
Excitation	Self excited
Voltage Regulator	AVRSX460
Protection	IP23
Rated power factor	0.8
Regulation	±1.5%
No. of Phases	3
No. of Poles	4
RPM	1500 1800
Frequency	50Hz 60Hz

Performances	1500rpm	1800rpm
Engine		
Efficiency		92%
Prime Power, KWm (hp)	132(179)	140 (190)
Standby Power, KWm (hp)	145 (197)	154 (209)

Alternator	1500rpm	1800rpm
Prime Power, KWe	128	145

Lubrication system	1500rpm	1800rpm
Oil consumption, l/hr:		
Prime power	0.09	0.09
Standby Power	0.10	0.10
Oil sump capacity, l		17
Oil system capacity include filters,		20

Fuel system	1500rpm	1800rpm
Specific fuel consumption at:		
Prime Power, Litre/h		
50%	16.13	17.74
75%	23.34	25.34
100%	30.97	33.33

Intake and exhaust system	1500rpm	1800rpm
Air consumption at Standby Power, m3/min	10.1	13.8
Heat rejection to exhaust at Standby Power, KW	131	135
Exhaust gas temperature after turbine at Standby Power, °C	540	480
Max allowable back-pressure in exhaust line, Kpa	5	7
Exhaust gas flow at Standby Power, m3/min	30.2	34.2

Cooling system	1500rpm	1800rpm
Heat rejection radiation from engine at Standby Power, KW	14	15
Heat rejection to coolant at Standby Power, KW	68	74
Cooling air flow, m3/min	2.8	3.2
Coolant capacity, l		24

Telephone interference	1500rpm	1800rpm
THF is better than		2%
TIF is better than		50

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### Circuit Breaker

3Pole series MCCB adjustable, amps	250
CT's	250/5
Steel sheet enclosure with bolted cover (European origin, ABB or equivalent)	

### Documentation

Engine instruction book-English
Warranty and service book- Multi-language
Alternator manual- English
Wiring diagram

### Dimensions and Weight

Length: 2.8m
Width: 0.9m
Height: 1.6m
Weight: 1500Kg

### Spare Parts Kit (Optional)

### (Genuine Volvo Penta)

Oil filter, full flow	1
Fuel filter	1
Air filter	1
Fan belt set	1
Alternator belt set	1

### International Standards

Engine confirm to ISO 9001: 2000, ISO 14001, ISO10054, ISO 3046, BS 5514, DIN 6271.  
 Alternator confirm to ISO 9001, ISO 14001, BS EN 60034, BS 5000, VDE 0530, NEMA MG1-32, IEC34 CSA C22.2-100, AS 1359, BS 6861-1, B En 61000-6-2:2001.

### Rating Guidelines

PRIME POWER rating to ISO Standard Power for continuous operation. It is applicable for supplying electrical power at variable load with 70% load factor for an unlimited number of hours as opposed to commercially purchased power. A 10% overload capability for governing purpose is available for this rating.

MAXIMUM STANDBY POWER rating corresponds to ISO Standard Fuel Stop Power. It is applicable for supplying standby electrical power at variable load in areas with well established electrical networks in the event of normal utility power failure. No overload capability is available for this rating.

1 hp = 1KW x 1.36

KWm = Kilo Watt mechanical, net with fan

KWe = Kilo Watt electrical = KWm\*gen.eff

KVA = Kilo Volt Ampere calculations based based on 0.8 power factor = KWe/0.8

### Optional Equipment

#### • Engine

- Coolant heater
- Manual oil drain pump
- Oversize batteries
- Upgrade to 24 Volt electrical system
- Electric governor
- Battery disconnect switch

#### • Alternator

- Permanent magnet generator (PMG)
- Upgrade to 3 phase sensing AVR
- Anti-condensation heater
- Quadrature droop kit
- Air inlet filters

#### • General

- Automatic transfer switch
- Battery charger
- Upgrade to 4 pole circuit breaker
- Fuel tank base frame integrated for 8 hours operation
- Fuel tank separate with customized capacity and shape
- Fuel level switch High / Low for alarm and control
- Fuel transfer pump Automatic / Manual
- Fuel tank air filter
- Residential grade silencer
- Weather protective and or acoustic enclosure.

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