

**GKV-550**

# **VOLVO 500KVA**

500kVA Prime / 550kVA Standby

Comprehensive Specification Sheet  
Electrical and Mechanical Data



**VOLVO  
PENTA**

3ph

# GKV-550 VOLVO 500KVA

500kVA Prime / 550kVA Standby / Three Phase

## FEATURES & BENEFITS

- 550kVA standby power at 230/400v @ 50Hz 1500rpm
- High-quality and reliable six-cylinder 16.12l turbocharged Volvo diesel engine
- Ideal for commercial and business applications
- Silent canopy which can stand outside with lockable doors
- Automatic changeover (ATS), maintenance free batteries and trickle charger included
- H-specification insulation, brushless alternator with AVR provides stable output
- High-temperature and oil pressure sensor to protect against engine damage
- Easy to use digital controller with auto/manual start options
- All sets undergo a comprehensive testing/pre-delivery inspection prior to delivery
- Peace of mind of earlier of one year/1000 hour warranty



## CANOPY

- Ventilation parts are designed with modular principles
- Weather resistant and lined with sound reducing foam
- All metal canopy parts are painted with powder paint
- Panel window
- Lockable doors on each side
- Easy maintenance and operation
- Easy lifting and moving
- Thermally insulated engine exhaust system
- Exterior emergency stop push button
- Sound attenuated

## CHASSIS

- The complete generator set is mounted as a whole on a heavy duty fabricated, steel base frame
- Steel chassis and anti-vibration pads
- Base frame design incorporates an integral fuel tank
- The generator can be lifted or carefully pushed/pulled by the base frame
- Dial type fuel gauge on the fuel tank

## CONTROL SYSTEM

Control supervision and protection panel is mounted on the genset base frame. The control panel is equipped as follows:

### AUTO MAINS FAILURE CONTROL PANEL

- Controller with Smartgen automatic transfer switch
- Smartgen HGM7220 electronic controller
- Emergency stop push button
- Static battery charger
- Four-pole electrically and mechanically interlocked ATS

### GENERATING SET CONTROL MODULE SMARTGEN HGM7220 FEATURES

- This module is used to monitor a mains supply and automatically start a standby generating set
- Shutdown alarms
- STOP/RESET-MANUAL-AUTO-TEST-START

### METERING VIA LCD DISPLAY

- Mains volts (L-L/L-N)
- Generator amps (L1, L2, L3)
- Generator frequency; generator (cos)
- Engine hours run; plant battery (volts)
- Engine oil pressure (psi and bar)

## Overview

Standby power	550kVA
Prime power	500kVA
Phase	Three
Dry weight	5500kg
Length	4200mm
Width	1500mm
Height	2350mm
Fuel tank capacity	900l

- Engine speed (rpm)
- Engine temperature (degrees C)

### AUTOMATIC SHUTDOWN AND FAULT CONDITIONS

- Under/over speed; fail to start
- High engine temperature; fail to stop
- Low oil pressure; charge fail
- Under/over generator volts
- Under/over generator frequency
- Emergency stop/start failure
- Under/over mains voltage
- Charge failure

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## TECHNICAL SPECIFICATIONS

\*All ratings are quoted at maximum ratings at sea level and derating will be applicable for altitude and power factor.

### Engine

Engine make	Volvo
Engine model	TAD1641GE
Displacement	16.12L
Cylinder bore/Stroke	144mm x 165mm
Fuel system	In-line fuel injection pump
Governor	Electrical
Cylinders	Six cylinders water cooled
Engine output power (1500rpm)	430kW
Turbocharged/normally aspirated	Turbocharged
Cycle	Four stroke
Combustion system	Direct injection
Compression ratio	16.5:1
Fuel tank capacity	900L
Fuel consumption 100%	101.9 l/h
Fuel consumption 75%	75.3 l/h
Fuel consumption 50%	50.9 l/h
Fuel consumption 25%	27.6 l/h
Oil type	CD-15W-40
Engine oil capacity	42L
Cooling method	Water-cooled radiator/fan
Coolant capacity (including radiator)	60L
Starter	24v DC charge alternator
Engine speed	1500rpm
Filters	Replaceable fuel filter/oil filter/dry element air filter
Battery	Maintenance-free battery including rack and cables
Silencer	Exhaust silencer

### Alternator

Alternator make	StromerPower
Standby power output	550kVA
Prime power output	500kVA
Insulation class	Class-H with circuit breaker protection
Type	Brushless
Phase and connection	Three phase/four wire
AVR	Included
AVR model	SX460
Voltage regulation	± 1%
Voltage	230/400v
Rated frequency	50Hz
Voltage regulate change	≤ ±10% UN
Phase change rate	± 1%
Power factor	0.8φ
Protection class	IP23 standard/screen protected/drip-proof
Stator	2/3 pitch
Rotor	Single bearing
Excitation	Self-exciting
Regulation	Self-regulating

### General

Structure type	Silent weather resistant enclosure
Dimensions Length x Width x Height	4200mm x 1500mm x 2350mm
Dry weight	5500kg
ATS unit included	Included
Four-way protection system included	Included