VOLVO 700KVA

700kVA Prime / **770kVA** Standby

Comprehensive Specification Sheet
Electrical and Mechanical Data

VOLVO PENTA

3ph

VOLVO 700KVA

700kVA Prime / **770kVA** Standby / **Three Phase**

FEATURES & BENEFITS

- 770kVA 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

Overview

Standby power	**770kVA**
Prime power	**700kVA**
Phase	**Three**
Dry weight	**7000kg**
Length	**4400mm**
Width	**1600mm**
Height	**2600mm**
Fuel tank capacity	**1000l**

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)
- 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	**TWD1645GE**
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)	**560kW**
Turbocharged/normally aspirated	**Turbocharged**
Cycle	**Four stroke**
Combustion system	**Direct injection**
Compression ratio	**16.8:1**
Fuel tank capacity	**1000l**
Fuel consumption 100%	**129 l/h**
Fuel consumption 75%	**97 l/h**
Fuel consumption 50%	**69 l/h**
Fuel consumption 25%	**36 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	**770kVA**
Prime power output	**700kVA**
Insulation class	**Class-H with circuit breaker protection**
Type	**Brushless**
Phase and connection	**Three phase/four wire**
AVR	**Included**
AVR model	**SX440**
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	**4400mm x 1600mm x 2600mm**
Dry weight	**7000kg**
ATS unit included	**Included**
Four-way protection system included	**Included**

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