

Volvo 440kVA standby diesel generator



KEY SPECIFICATIONS

STANDBY POWER	440kVA
PRIME POWER	400kVA
PHASE	Three
DRY WEIGHT	4500kg
LENGTH	3900mm
WIDTH	1400mm
HEIGHT	1850mm
FUEL TANK CAPACITY	700L

FEATURES & BENEFITS

- Maximum 440kVA standby power at 230/400v @ 50Hz 1500rpm
- High quality and reliable six-cylinder 12.78l Volvo Penta diesel engine
- Ideal for business applications
- Silent canopy which can stand outside with lockable doors
- Automatic changeover (ATS), maintenance free batteries and trickle charger included
- Four-way protection system included
- H-specification insulation, brushless alternator with AVR provides stable output
- Easy to use digital controller with auto and 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
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STANDARD GENSET SPECIFICATIONS

ENGINE

Volvo heavy-duty diesel engine
Six cylinder equipped with piston cooling
Electronic governor control system
Replaceable wet type cylinder liners
24v DC starter and charge alternator
Replaceable fuel filter, oil filter and dry element air filter
Cooling radiator and fan
Fuel connection hoses and manual sump oil drain valve
Exhaust silencer
Maintenance free battery including rack and cables
Jacket water heater (as option)
Volvo engine manual

ALTERNATOR

Brushless, single bearing system, four poles
Insulation class H with circuit breaker protection
Standard degree of protection IP21
Self-exciting and self-regulating
AVR SX440 included
Screen protected and drip proof
Stator winding with 2/3 pitch for improved harmonics
Close voltage regulation

CHASSIS

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
Includes diesel level sensor information to the controller

CANOPY

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

*All ratings are quoted at maximum ratings at sea level and de rating will be applicable for altitude and power factor

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

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

GENERATING SET CONTROL MODULE HGM7220 FEATURES

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

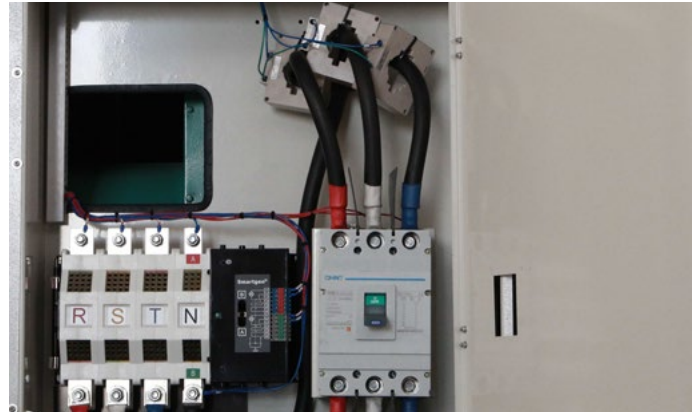
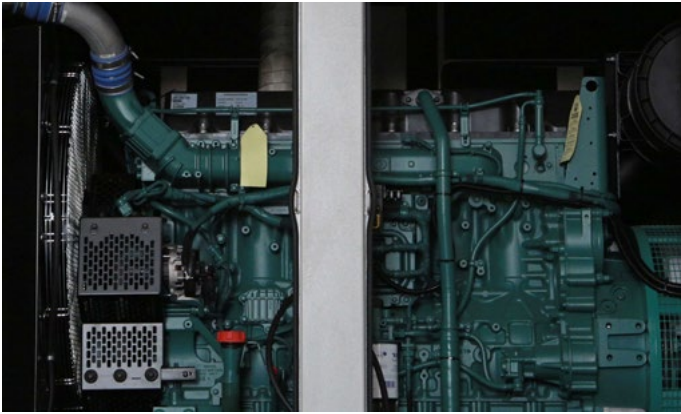
METERING VIA LCD DISPLAY

Generator volts (L-L/L-N); mains volts (L-L/L-N)
Generator amps (L1, L2, L3); generator (kVA and kW)
Generator frequency; generator (cos)
Engine hours run; plant battery (volts)
Engine oil pressure (psi and bar)
Engine speed (rpm)
GSM SMS signal
Engine temperature (°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; over current
Under/over generator frequency; emergency stop
Under/over mains frequency
Under/over mains voltage
Low/high battery volts

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SPECIFICATIONS TABLE

ENGINE SPECIFICATIONS

Engine make	Volvo
Diesel generator model	TAD1344GE
Displacement	12.78L
Cylinder bore/Stroke	131mm x 158mm
Fuel system	EMS2 governor
Cylinders	6
Cylinder arrangement	Vertical in-line
Engine output power	354kW
Turbocharged or normally aspirated	Turbocharged and intercooled
Cycle	Four stroke
Combustion system	Electronic unit injectors
Compression ratio	18.1:1
Fuel tank capacity	700l
Fuel consumption 100%	81.8 l/h
Fuel consumption 75%	62.3 l/h
Fuel consumption 50%	42.1 l/h
Fuel consumption 25%	23.1 l/h
Oil type	15W40
Oil capacity	30l
Cooling method	Radiator water-cooled
Coolant capacity (including radiator)	44l
Starter	24v DC
Governor system	Electronic
Engine speed	1500rpm

ALTERNATOR SPECIFICATIONS

Standby power output	440kVA
Prime power output	400kVA
Insulation class	H
Type	Brushless
Phase and connection	Three phase, four wire
AVR	Yes
AVR model	SX440
Voltage regulation	± 1%
Voltage	230/400v
Rated frequency	50Hz
Voltage regulate change	≤ ±10% UN
Phase change rate	± 1%
Power factor	0.8
Protection class	IP21
Stator	2/3 pitch
Rotor	Single bearing

GENERAL SPECIFICATIONS

Structure type	Silent weather resistant enclosure
Dimensions Length x Width x Height	3900mm x 1400mm x 1850mm
Dry weight	4500kg
ATS unit included	Yes