

SDEC 20KVA

20kVA Prime / 22kVA Standby / Single Phase

Comprehensive Specification Sheet
Electrical and Mechanical Data



1ph

SDEC 20KVA

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FEATURES & BENEFITS

- 22kVA standby power at 230/400v @ 50Hz 1500rpm
- High-quality and reliable four-cylinder 2.7l SDEC diesel engine
- Ideal for small business and residential applications
- Sound attenuated 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 HGM4020N electronic controller
- Emergency stop push button
- Static battery charger
- Four-pole electrically and mechanically interlocked ATS

GENERATING SET CONTROL MODULE SMARTGEN HGM4020N 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	22kVA
Prime power	20kVA
Phase	Single
Dry weight	740kg
Length	1950mm
Width	930mm
Height	1050mm
Fuel tank capacity	160l

- 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	SDEC
Engine model	4Z2.7-G21
Displacement	2.7L
Cylinder bore/Stroke	90mm x 105mm
Fuel system	In-line fuel injection pump
Governor	Electronic Control Unit Pump
Cylinders	Four (4) in line cylinders water cooled
Engine output power (1500rpm)	22kW
Turbocharged/normally aspirated	Naturally aspirated
Cycle	Four stroke
Combustion system	Direct injection
Compression ratio	18:1
Fuel tank capacity	160L
Fuel consumption 100%	5.9 l/h
Fuel consumption 75%	4.5 l/h
Fuel consumption 50%	3.2 l/h
Fuel consumption 25%	2.1 l/h
Oil type	15W-40
Engine oil capacity	6-7L
Cooling method	Water-cooled radiator/fan
Coolant capacity	6.4L
Starter	12v 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	22kVA
Prime power output	20kVA
Insulation class	Class-H with circuit breaker protection
Type	Brushless
Phase and connection	Single phase/two wire
AVR	Included
AVR model	SX460F
Voltage regulation	± 1%
Voltage	400v
Rated frequency	50Hz / 1500RPM
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 (mm) Length x Width x Height	1950x930x1050
Dry weight	740kg
ATS unit included	Included
Four-way protection system included	Included