



Your Power Specialist for
Critical Applications

WZS POWERGEN SDN BHD (1089628-H)

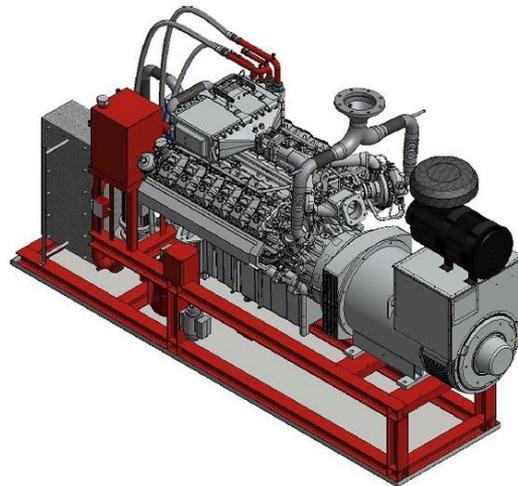
Lot 1890, Jalan KPB 9,
Kawasan Perindustrian Balakong 43300 Seri Kembangan
Selangor D.E., Malaysia
Tel: 8962 2228 Fax: 8961 0997

Fact Sheet

WZS-SG-SEDA POWER Module

Biogas / Landfill Gas / Syngas

WZS Model	Power ekW	Power kVA	Frequency Hz	Length m	Width m	Height m	Weight t	Module Foot Print open type m2	Module Foot Print close type m2
WZS-SG-60	63	78	50	1.20	0.50	0.41	0.64	0.52	7.381
WZS-SG-100	101	127	50	1.20	0.50	0.41	1.03	0.85	7.381
WZS-SG-120	120	150	50	1.20	0.50	0.41	1.22	1.00	7.381
WZS-SG-200	203	253	50	1.26	0.55	0.69	2.07	1.70	7.381
WZS-SG-244	244	305	50	1.51	0.66	0.83	2.49	2.04	7.381
WZS-SG-350	350	438	50	2.17	0.95	1.32	3.57	2.93	7.381
WZS-SG-387	387	484	50	2.40	1.05	1.32	3.95	3.24	7.381
WZS-SG-415	415	518	50	2.57	1.12	1.41	4.23	3.47	7.381
WZS-SG-500	500	625	50	3.10	1.35	1.70	5.10	4.19	14.762
WZS-SG-1000	1000	1250	50	12.00	2.43	2.65	14.50	8.370	29.160
WZS-SG-1500	1500	1875	50	12.00	4.86	2.65	21.70	12.555	43.922
WZS-SG-2000	2000	2500	50	12.00	4.86	2.65	29.00	16.740	58.320
WZS-SG-2500	2500	3125	50	12.00	7.29	2.65	36.20	20.925	73.082
WZS-SG-3000	3000	3750	50	12.00	7.29	2.65	43.50	25.110	87.480
WZS-SG-3500	3500	4375	50	12.00	9.72	2.65	50.70	29.295	102.242
WZS-SG-4000	4000	5000	50	12.00	9.72	2.65	58.00	33.480	116.640
WZS-SG-4500	4500	5625	50	12.00	12.15	2.65	65.20	37.665	131.402
WZS-SG-5000	5000	6250	50	12.00	12.15	2.65	72.50	41.850	145.800



Engine:

MAN Germany
Natural gas & special gas (derated)
Ambient design temperature: 38°C

Emission

EU Stage II

Mode Of Operation:

Continuous/Prime Power
Island/Parallel/Feed to Grid Operation

Starting System:

Starter motor: 24 V, 7 kW
Starting battery: 24 V, 143 Ah

Air:

Air Ratio: $\lambda=1.63$
Inlet filter and silencer / outlet silencer

Gas Control System:

Zero pressure regulator
Gas management system with exhaust temperature sensing, engine speed pick-up, etc.
Speed governor CAN-bus interface to genset control panel, variable air/gas mixer, anti-knocking system (opt)
Gas supply temperature: below 40°C

Supercharging

Exhaust turbocharger with water-cooled turbine housing.
Pressure-lubricated bearings and water-cooled bearing pedestal

Exhaust:

Muffler inside container

Lubrication

Pressure lubrication by gear-driven pump
Exchangeable lube-oil filter in full flow and lube oil cooler integrated in engine coolant circuit

Cooling:

Coolant circulated by electrical water pump with temperature control, attached on electrical radiator
Free air flow for container venting
Extra container venting fan for safety (opt)

Coupling

Highly flexibly coupled with bell house, no alignment needed after transportation.

Technical interfaces:

Fully incorporated plug and play interfaces

Control Panel:

Customized function in communication with engine governor, AVR & gas control, other container apparatus

PLC function

- Engine start/stop control
- Engine lube oil Priming
- Monitoring and safety system (engine speed, temperatures, pressures, etc)
- Auto Main Failure & Black Start.
- Alarm/trip/shunt-down for over speed/over current/ short circuit/high cooling temperature/high exhaust back-pressure/low oil pressure/gas leakage

Load sharing control (synchronization) and remote control are optional

Electric Distribution:

Integrated MCC and MCB
Transformer 110 DC

UPS:

UPS System with batteries and charger

UPS Backup Time: 1 hr
Voltage: 110V DC
No. Of Cells: 12

Container:

Self-supporting structure
4 points lifting (ISO CSC container)
Easy commissioning on site
Noise: 70dB(A) at 7m

Doors:

Easy for service and commissioning
Passages for technical operation provided

Structure of the panels:

Three-layer structure of panels:
1° layer - external plate, pre-painted
2° layer - mineral wool, density 100 kg/m³
3° layer - stretched plate for protection
All materials are according to class 1 fire reaction.

Painting:

The standard color of the panels is white.
The painting treatment of the structure is made by the application of:

- a - layer of epoxy primer, 40 μ m min. thickness;
- b- layer of polyurethane enamel, 40 μ m min. thickness.

The painting and the SA 2.5 sand blasting processes are carried out with automatic machines.

Lighting System (220V):

2 x plastic ceiling fittings with 60W incandescent lamps
2 x lamps completed with emergency kit (1.30 h)
2 x diverters
2 x double socket

Explosion Proof (Optional)

Gas detection sensors inside and outside container
Auto shut-down & Ex-proof ventilation fan

Container Size:

ISO CSC
Monolithic structure, chain inclination: 60°
