TJ610LB-NG5A

50 Hz Natural Gas Generator Sets
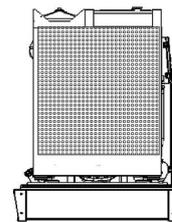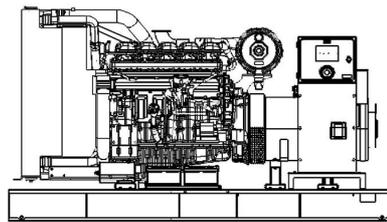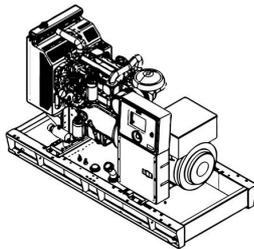
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Output Power		
Standby Power (ESP)	kVA	610
	kW	488
Prime Power (PRP)	kVA	610
	kW	488

Size	W x L x H (mm)	Weight (kg)	Fuel Tank (lt)	Noise dB(A) @ 1m
Canopied	TBAxTBAxTBA	TBA	TBA	TBA
Open Skid	TBAxTBAxTBA	TBA	TBA	TBA

Continuous Power

The maximum power which a generating set is capable of delivering continuously whilst supplying a constant electrical load. Average load can be 100%. The generator must not be overloaded.

Standby Power

The max power available during a variable electrical power sequence, under the stated operating conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200 hrs of operation per year under average of 70% load. Overloading isn't permissible.

Prime Power

The maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load. Average load should be 70%. The generator can be overloaded 10% for 1 hour per 12 hrs.

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Engine

Manufacturer		LIEBHERR
Model		G9512
Cylinder Configuration		V Tipi
No of Cylinders		12
Displacement	lt	25
Bore	mm	130
Stroke	mm	157
Compression Ratio		13.3:1
Aspiration		-
Governor Type		Elektronik
Cooling System		SU
Coolant Capacity	lt	65
Lubrication Oil Capacity	lt	90
Electrical System	VDC	24
Speed / Frequency 50 Hz	rpm	1500 rpm / 50 Hz
Engine Gross Power (Standby 50 Hz)	kW	-
Fuel Consumption %110 ESP 50 Hz	lt/h	-
Fuel Consumption %100 PRP 50 Hz	lt/h	129
Fuel Consumption %75 PRP 50 Hz	lt/h	107
Fuel Consumption %50 PRP 50 Hz	lt/h	79
Exhaust Outlet Temperature 50 Hz	°C	475
Exhaust Gas Flow 50 Hz	m3/min	2747
Combustion Air Flow 50 Hz	m3/min	2654
Cooling Air Flow 50 Hz	m3/min	-

Alternator

Manufacturer		MARELLI
Model		MJB355MA4
No of Phases		3
Power Factor		0,8
No of Bearings		SINGLE
No of Poles		4
No of Leads		12
Voltage Regulation (Steady State)		± %0,5 [In Steady State, Speed from (-%2) to (+%5) and CosØ=0,8-1]
Insulation Class		H
Degree of Protection		IP 23
Excitation System		AVR (Automatic Voltage Regulator), Brushless
Connection Type		STAR
Total Harmonic Content (No Load)		< %2
Frequency	Hz	50
Voltage Output 50 Hz	VAC	230 / 400
Rated Power 50 Hz	kVA	750
Efficiency	%	94,7

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Standard Equipments

Engine
In Teksan generator sets, leading engine brands that have state of the art technology and have compliance with ISO 8528, ISO 3046, BS 5514, DIN 6271 standarts, are being used. These engines with low fuel consumption, provide accurate speed setting and order, Gas mixing system , also have electronic type governors.

Alternator
In products Teksan produced, leading alternator brands of the world that have state of the art technology, high quality, productivity and durability, are being used. All alternators, which pass necessary test process and found appropriate according to EC 60034-1; CEI EN 60034-1; BS 4999-5000; VDE 0530, NF 51- 100,111; OVE M-10, NEMA MG 1.22. standarts, have bearing system that does not need maintenance, with electronic type voltage regulator providing voltage setting.

Control Panel
Standard control panel, that is used in Teksan generator sets, ensures comfortable and safe usage. All measured and statistical parameters, operating modes, notice and alarms and condition of generator, are monitored easily from the control panel. On the front of the panel's metal body has electronic control module and the emergency stop button and the panel's metal body is made of steel sheet and is painted with electrostatic powder paint.

Teksan offers panel design and solutions that comply with special requirements of customers as well as quality standard panels.

Chassis
Chassis is manufactured from steel that has features and durability for carrying burden of generator set. Thanks to its rigid structural design and anti-vibration mounts, it reduces vibration level to minimum. All chassis contain lifting lugs. Apart from chassises that are produce by Teksan, special solutions that design in accordance with customer desires, make transportation and positioning easier.

Cooling System
System, that consists of quality industrial - type radiator, expansion tank and cooler fan, keeps the temprature of generator set's equipments constant at a proper level.

Optional Equipments

Some Optional Equipments that Teksan provides with Generator Sets;
- Medium voltage alternator,
- Remote radiator applications,
- Automatic fuel filling system,
- Oil pan, dashboard, alternator, coil heaters,
- Alternator with double AVR and PMG,
- Synchronization systems,
- The generator output breaker,
- Grid-generator transfer switches,
- Accordance with the specific volume of demand-insulated cabins,
- Seismic solutions,
- Trailer,
- Remote monitoring.

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Control Panel Features – TJ-Gas

- TJ-Gas is a multifunctional control device which has wide communication topologies together with analog-digital input&output features that is specially developed for cogeneration packs and gas driven systems used for industrial purposes.
- Both the number of analog-digital input&output can be configured.
- Thanks to its AFR control, ignition system, engine knocking control system and monitoring features, TJ-Gas is a unique control device solution for cogeneration, trigeneration packs as well as gas generator sets.
- Wide range of gas engine ECUs are available on the device.
- The unit can control genset, mains and coupling circuit breakers through more than one bus systems. All operations such as loading, load-shedding, load-sharing and synchronization can be executed according to the nominal load of the system.
- It has ROCOF, VectorShift and genset differential protection functions.
- Thanks to its superior PLC interface, varieties of genset, cogeneration and trigeneration scenarios can be executed. Mimic diagram can be displayed on the screen panel. Also, some indicators can be monitored on the screen panel such as rpm, current, load, voltage and can be exported into excel. Thanks to the high capacity memory of the device, all indicators, failures and other essential data can be recorded during the operation.
- TJ-Gas device unit complies and mostly exceeds world's tightest safety, EMC,vibration and environmental standards for the industrial category.
- Software features are complete with easy firmware upgrade process through USB port. The Windows based PC software allows monitoring and programming through USB, RS-485, RS-232, Ethernet, GPRS, dynamic and static IP and cloud server (AirGate).
- The PC and server based Scada software allows monitoring and control of an unlimited number of gas gensets, cogeneration and trigeneration power packs from a single central location.

Topologies

- 2 phase 3 wires, L1-L2
- 2 phase 3 wires, L1-L3
- 3 phase 3 wires, 3 CTs
- 3 phase 3 wires, 2 CTs (L1-L2)
- 3 phase 3 wires, 2 CTs (L1-L3)
- 3 phase 4 wires, star
- 3 phase 4 wires, delta
- 1 phase 2 wires

Communications

- Modbus RS-485
- Modbus RS-232
- Ethernet
- Internet Cloud System
- GSM-GPRS-SMS
- Web Based Remote Monitoring e
- Web Based Programming
- Modbus TCP/IP
- USB Device
- J1939 CANBus
- E-Mail

Functions

- AMF unit with uninterrupted transfer
- Synchronization
- Circuit breaker control for mains, genset and coupling,
- Auto loading, load shedding and sharing (power management),
- AFR Control
- ROCOF, VectorShift and Differential Protection
- Remote Monitoing&Management
- Analog&Digital Input&Output Configuration

- Technical information and values are according to ISO8528, ISO3046,NEMA MG-1.22, IEC 600341, BS 4999-5000, VDE 0530 standards.
- Producing with ISO9001, ISO14001, OHSAS18001, TSE, CE standards.
- All information given in this leaflet is intended for general purposes only.
- Due to a policy continuous improvement Teksan reserves the right to amend details and specifications without notice and all information given is subject to the Teksan's current condition of sales.

TBA: To Be Asked TBD: To Be Determined NA: Not Avaliable N/A: Not Applicable TTDTJ610LB-NG5A20190422EN