

# TJ1650PE5A

## 50 Hz Diesel Generator Sets



### Output Power

Standby Power (ESP)	kVA	1650
	kW	1320
Prime Power (ESP)	kVA	1500
	kW	1200

### Size

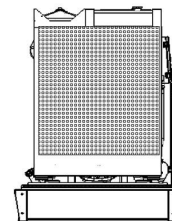
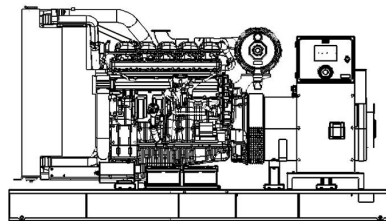
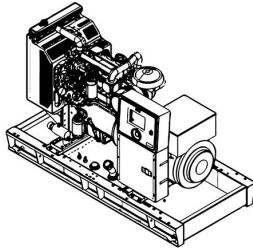
WxL xH  
(mm)

Weight  
(kg)

Fuel Tank  
(lt)

Noise dB(A)  
@1m

Canopied	2470 x 9145 x 3100	14720	YT2350H200x120	TBA
Open Skid	2250 x 5000 x 2420	9750	YT2500H120x140	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.

### Engine

Manufacturer		PERKINS
Model		4012-46TAG2A
No of Cylinders		12
Cylinder Configuration		V TYPE
Displacement	lt	45.842
Bore	mm	160
Stroke	mm	190
Compression Ratio		13:01
Aspiration		TURBOCHARGE-INTERCOOLER
Governor Type		ELECTRONIC
Cooling System		WATER
Coolant Capacity	lt	201
Lubrication Oil Capacity	lt	177
Electrical System	VDC	24
Speed / Frequency 50 Hz	rpm	1500 rpm / 50 Hz
Engine Gross Power (Standby 50 Hz)	kW	1459
Fuel Consumption 110 % 50 Hz	lt/h	335
Fuel Consumption 100 % 50 Hz	lt/h	301
Fuel Consumption 75 % 50 Hz	lt/h	237
Fuel Consumption 50 % 50 Hz	lt/h	162
Exhaust Outlet Temperature 50 Hz	°C	455
Exhaust Gas Flow 50 Hz	m <sup>3</sup> /dk	320
Combustion Air Flow 50 Hz	m <sup>3</sup> /dk	128
Cooling Air Flow 50 Hz	m <sup>3</sup> /dk	TBA

### Alternator

Manufacturer		MARELLI
Model		MJB450MB4
No of Phases		3
Power Factor		0,8
No of Bearings		SINGLE
No of Poles		4
No of Leads		6
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 (Standby) 400_50 Hz		1620
Efficiency (4/4_400 V_50 Hz)		95,9

### 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 standards, are being used. These engines with low fuel consumption, provide accurate speed setting and order, mount to the fuel pump, also have mechanic or 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. standards, 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 and Fuel Tank

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 chassis that are produce by Teksan, special solutions that design in accordance with customer desires, make transportation and positioning easier.

In less than 1600 kVA power generator sets, fuel tank is produced integratedly to the chassis. In more than 1600 kVA power generator sets, rectangular type fuel tank is provided with generator set separately. In all types of fuel tank have its level and indicator.

#### 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.



### Canopy Features

TEKSAN Standard Canopies' default features are as follows;

- Compatible with 2000/14/EC directives, certified noise emission level,
- 2 or 4 points transport possibility according to cabin size,
- Hidden exhaust inside the canopy,
- Emergency stop button located on the canopy,
- Improved air suction channel to ensure homogenous cooling in the canopy,
- Radiator air outlet and exhaust with designed towards above,
- Lid on cab that provides to be filled up water and antifreeze easily to the radiator,
- Amplified paint system against corrosion and rust,
- Improved performance in terms of sound insulation,
- Demounted parts that make transportation and maintenance easier,

As well as the standard range of canopies, TEKSAN can also design tailor made canopies with specific sound level or size upon customer requests.

### Optional Equipments

Some Optional Equipments that Teksan provides with Generator Sets;

- Medium voltage alternator,
- Remote radiator applications,
- Automatic fuel filling system,
- Fuel tank, 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.

### Control Panel Features-TJ 509-T

- The TJ-509T is a next generation genset control unit combining multi-functionality and wide communication possibilities together with a reliable and low cost design.
- The 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, Ethernet and GPRS.
- The PC and server based Rainbow Scada software allows monitoring and control of an unlimited number of gensets from a single central location.

### Functions

- AMF unit with uninterrupted transfer
- ATS unit with uninterrupted transfer
- Remote start controller
- Manual start controller
- Engine controller
- Remote display & control unit
- Waveform display of V & I
- Harmonic analysis of V & I
- CTs at genset or load side

### Communications

- SM-GPRS
- Web monitoring
- Web programming
- GSM-SMS
- e-mail
- USB Device
- RS-232
- J1939-CANBUS



### Topologies

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

- 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 Available N/A: Not Applicable TTDTJ1650PE5A1018EN