

# TJ45-RPE (400 VAC)

## 50 Hz Rental Generator



### Output Power

Standby Power (ESP)	kVA	50
	kW	40
Prime Power (PRP)	kVA	45
	kW	36

### Size

	W x L x H (mm)	Weight (kg)	Fuel Tank (lt)	Noise dB(A) @ 7m
Canopied	1130 x 2800 x 1690	1432	270	TBA
Open Skid	N/A	N/A	N/A	N/A



### 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		PERKINS
Model		1103A-33TG1
Cylinder Configuration		INLINE
No of Cylinders		3
Displacement	lt	3,3
Bore	mm	105
Stroke	mm	127
Compression Ratio		17,25:1
Aspiration		TURBOCHARGE
Governor Type		MECHANIC
Cooling System		WATER
Coolant Capacity	lt	10,2
Lubrication Oil Capacity	lt	7,9
Electrical System	VDC	12
Speed / Frequency 50 Hz	rpm	1500 rpm / 50 Hz
Engine Gross Power (Standby 50 Hz)	kW	46,5
Fuel Consumption %110 ESP 50 Hz	lt/h	12
Fuel Consumption %100 PRP 50 Hz	lt/h	10,7
Fuel Consumption %75 PRP 50 Hz	lt/h	8,2
Fuel Consumption %50 PRP 50 Hz	lt/h	5,7
Exhaust Outlet Temperature 50 Hz	°C	537
Exhaust Gas Flow 50 Hz	m3/min	7,7
Combustion Air Flow 50 Hz	m3/min	3,1
Cooling Air Flow 50 Hz	m3/min	53

### Alternator

No of Phases		3
Power Factor		0,8
No of Bearings		SINGLE
No of Poles		4
No of Leads		12
Insulation Class		H
Degree of Protection		IP 23
Excitation System		AVR (Automatic Voltage Regulator), Brushless

### Standard Equipments

#### Engine

Teksan generator sets are equipped with the world's leading state-of-the-art engine brands that comply with ISO 8528, ISO 3046, BS 5514, and DIN 6271 standards, have low fuel consumption, Stage 5 emission level in accordance with European emission standards, precise speed adjustment and regulation, fuel pump mounted, mechanical or electronic type governors.

#### Alternator

Teksan products use leading alternator brands that have passed all necessary tests, comply with IEC 60034-1; CEI EN 60034-1; BS 4999-5000; VDE 0530, NF 51-100,111; OVE M-10, NEMA MG 1.22. standards, have a maintenance-free bearing system, electronic type voltage regulator that provides precise voltage adjustment, state-of-the-art technology, and are preferred worldwide for their quality, high efficiency, and durability.

#### Control Panel

Standard control panels used in the Teksan generator sets allow for comfortable and safe operation. All measured and statistical parameters, operating modes, warnings and alarms, and the status of the generator can be easily monitored from the control panels. The metal body of the panel, which has an electronic control module and emergency stop button on the front side, is made of sheet steel and painted with electrostatic powder paint. Teksan produces high-quality standard panels and offers custom panel designs and solutions for its customers' unique requirements.

#### Chassis and Fuel Tank

It minimizes the vibration level thanks to its rigid structural design and anti-vibration mounts made of steel with a robustness that can carry the load of the generator set. All chassis include lifting eyebolts. There are forklift pockets on the special Rental Generator chassis produced entirely by Teksan. Integrated fuel tanks allow continuous operation for up to 40 hours at 75% load without the need for additional refueling.

#### Cooling System

The system consisting of a high-quality industrial-type radiator, expansion tank, and cooling fan ensures that the generator equipment remains constant at the appropriate temperature.

#### Socket Kit and Powerlocks

User-friendly electrical connection points that are in accordance with European standards, ensuring operationally fast installation and use.



### Canopy Features

**TEKSAN RENTAL SERIES** cabins standardly have the following features:

- Certified noise emission level in compliance with directives 2000/14/EC
- Forklift pockets for easy transportation and stacking
- Single point lifting system hidden inside the cabin
- Chassis design for easy trailer hitching
- Chassis towing eye which allows for movement by pulling with a rope
- 3-way valve and integrated quick coupling connections for fuel supply from external and internal fuel tanks as required
- Refueling system for external refueling
- Chassis-integrated fuel tank and overflow pool
- Electromechanical percent fuel level indicator
- Battery circuit breaker
- Sponge covered with anti-fouling film
- Emergency stop button on the cabin
- Aeroacoustic air pockets for optimized cooling performance and sound reduction
- Radiator air and exhaust designed upwards
- On-cab lid for easy filling of water and antifreeze into the radiator
- Easy Ad-Blue addition
- Reinforced paint system against corrosion and rust
- Improved sound insulation
- Easy transportation thanks to compact design

### Optional Equipments

The optional generator set equipment offered by Teksan includes but is not limited to the following:

- Automatic refueling system
- Double walled fuel tank
- Alternator with dual AVR and PMG
- Synchronization systems
- Generator output switch
- Mains-generator transfer panel (with automatic module)
- Trailer
- Remote monitoring

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### Control Panel Features: DSE-7310

- Configurable power-up mode
- MPU fail delay
- Enhanced graphical user interface
- Drag & drop advanced PLC editor
- MSC ID within PLC GenComm override
- 4-Line back-lit LCD text display
- Multiple Display Languages
- Five key menu navigation
- LCD alarm indication
- Heated display option available
- Customisable power-up text and images
- DSENet expansion compatibility
- Data logging facility
- Internal PLC editor
- Protections disable feature
- Fully configurable via PC using USB, RS232 & RS485 communication
- Front panel configuration with PIN protection
- Power save mode
- 3 phase generator sensing and protection
- Generator current and power monitoring (kW, kvar, kVA, pf)
- kW and kvar overload and reverse power alarms
- Over current protection
- Unbalanced load protection
- Independent earth fault protection
- Breaker control via fascia buttons
- Fuel and start outputs configurable when using CAN
- 6 configurable DC outputs
- 2 configurable volt-free relay outputs
- 6 configurable analogue/digital inputs
- Support for 0 V to 10 V & 4 mA to 20 mA sensors
- Configurable 5 stage dummy load and load shedding outputs
- CAN, MPU and alternator frequency speed sensing in one variant
- Real time clock
- Manual and automatic fuel pump control
- Engine pre-heat and post-heat functions
- Engine run-time scheduler
- Engine idle control for starting & stopping
- Fuel usage monitor and low fuel level alarms
- Simultaneous use of RS232 and RS485 communication ports
- True dual mutual standby using RS232 or RS485 for accurate engine hours balancing
- MODBUS RTU support with configurable MODBUS pages
- Advanced SMS messaging (additional external modem required)
- Start & stop capability via SMS messaging
- 3 configurable maintenance alarms
- Compatible with a wide range of CAN engines, including tier 4 engine Support
- Uses DSE Configuration Suite PC Software for simplified configuration
- Licence-free PC software
- IP65 rating (with supplied gasket) offers increased resistance to water ingress
- Modules can be integrated into building management systems (BMS) using MODBUS RTU



### Key Benefits

- Hours counter provides accurate information for monitoring and maintenance periods
- User-friendly set-up and button layout for ease of use
- Multiple parameters are monitored & displayed simultaneously for full visibility
- The module can be configured to suit a wide range of applications for user flexibility
- PLC editor allows user configurable functions to meet user specific application requirements

Monitoring an extensive number of engine parameters, the modules will display warnings, shutdown and engine status information on the back-lit LCD screen, illuminated LEDs, remote PC and via SMS text alerts (with external modem) Both modules are compatible with electronic (CAN) and non-electronic (magnetic pick-up/alternator sensing) engines and offer an extensive number of flexible inputs, outputs and extensive engine protections so the system can be easily adapted to meet the most demanding industry requirements

The extensive list of features includes enhanced event and performance monitoring, remote communications & PLC functionality. Dual mutual standby is now available on both the DSE7310 MKII using RS232 or RS485 communications. This provides for a simpler and more convenient installation with more advanced features such as true engine hours balancing

The modules can be easily configured using the DSE Configuration Suite PC software. Selected front panel editing is also available

- 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 TTDTJ45-RPE20240424EN