

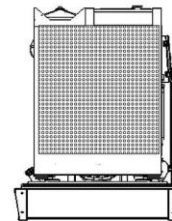
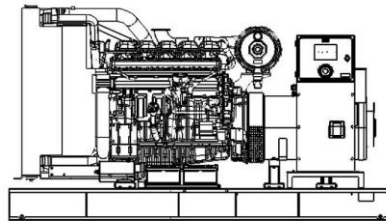
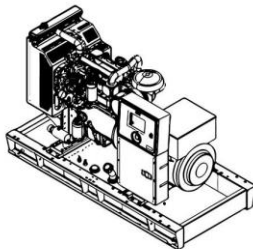
For illustration only

Output Power

Standby Power (ESP)	kVA	486
	kW	389
Prime Power (PRP)	kVA	427
	kW	341

Size

Size	W x L x H (mm)	Weight (kg)	Fuel Tank (lt)	Noise dB(A) @ 1m
Canopied	1650x4700x2250	3947	780	78
Open Skid	1650x3000x1970	3027	780	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

Prime Power

average of 70% load. Overloading isn't permissible. 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		DOOSAN
Model		P158LE
Cylinder Configuration		V TYPE
No of Cylinders		8
Displacement	lt	14,6
Bore	mm	128
Stroke	mm	142
Compression Ratio		15:01
Aspiration		<u>TURBOCHARGE-</u>
Governor Type		<u>INTERCOOLER</u>
		<u>ELECTRONIC</u>
Cooling System		WATER
Coolant Capacity	lt	88,5
Lubrication Oil Capacity	lt	35
Electrical System	VDC	24
Speed / Frequency 50 Hz	rpm	1500 rpm / 50 Hz
Engine Gross Power (Standby 50 Hz)	kW	414
Fuel Consumption %110 ESP 50 Hz	lt/h	102,9
Fuel Consumption %100 PRP 50 Hz	lt/h	89,3
Fuel Consumption %75 PRP 50 Hz	lt/h	65,1
Fuel Consumption %50 PRP 50 Hz	lt/h	43,9
Exhaust Outlet Temperature 50 Hz	°C	580
Exhaust Gas Flow 50 Hz	m3/min	78,3
Combustion Air Flow 50 Hz	m3/min	25,3

Cooling Air Flow 50 Hz	m3/min	410
Alternator		
Manufacturer		MARELLI/ LEROY SOMER/ STAMFORD
Model		MJB315MB4
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 <u>CosØ=0,8-1</u>
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	kVA	500
Efficiency	%	94

Standard Equipment

Engine

In Orkal 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 and also, have mechanic or electronic type governors.

Alternator

In products our company produces, 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, which is used in our company 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.

Orkal 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 Orkal, 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 integrated 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 temperature of generator set's equipment constant at a proper level.



Canopy Features

Our company 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, our company can also design tailor-made canopies with specific sound level or size upon customer requests.

Optional Equipment

Some Optional Equipment that our company 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,

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.



2ND OPTION

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 phase 3 wires, L1-L2

- 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 our company reserves the right to amend details and specifications without notice and all information given is subject to our company current condition of sales.

TBA: To Be Asked TBD: To Be Determined NA: Not Available N/A: Not Applicable TTDTJ486DW5A20180925EN

- 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

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