

Comparison

Valencia Generator vs Diesel Generator



Manufacture By

Valencia Energy & Power, Inc.

Diesel Generator

Model Number

O-300

D-300

Model Name

Omega

Standard

Custom Built Power Plant

Stationary Models

Yes

Yes

Mobile Capabilities

Yes

Yes

Marine Capabilities

Yes

Yes

Environment Impact

Renewable Energy

Yes

No

Environment Permit

Yes

Yes

Environment Licenses

No

Yes

Environmentally Sensitive Locations

Yes

No

Fuel Consumption

No

Yes / Diesel

Environmentally Damage to Extract Fuel

No

Yes / Well Drilling-Oil Refinery

Ground Vibration During Operation

No

Yes / Engine Piston Explosion

Air Pollution

No

Yes / Diesel Engine Emissions

Water Pollution

No

Yes / Poison Antifreeze

Water Consumption

No

Yes / Water Cooling

Toxic / Harmful Exhaust Emissions

No

Yes / Diesel Engine Exhaust

Noise Pollution

No

Yes / Diesel Engine Combustion

Toxic Waste

No

Yes / Carbon Deposits

Noise Levels

Open dB @ 3 meters

10

89

Closed dB @ 3 meters

3

76

Installation Options

Remote Installations (No Road Access)

Yes

Yes / Difficulty Fuel Transport

Remote Freezing Locations (No Road Access)

Yes

Yes / Difficulty Fuel Transport

Paralleling Installations Off Grid Power

Yes

Yes

Paralleling Installations Grid Connection

Yes

Yes

Single Operation

Yes

Yes

Marine Paralleling Operation

Yes

Yes

Earthquake Resistance

Yes

Yes

Under Ground / Roof Top Operation

Yes

Yes

Generator Specifications		
Rated Power: (KWH)	300 (KWH)	300 (KWH)
Rated Power: (KVA)	344	344
Standby Power (Self Sustained)	260 (KWH)	300 (KWH) Plus Externa Fuel
Continual Prime Output: (KWH) Plus Externa Fuel/Energy	210 (KWH)	275 (KWH)
Maximum Surge Output for 5 Seconds	450	300
Frequency:	50/60Hz	50/60Hz
Phase:	3 Phase	3 Phase
Standard Color	Black / White	Black / White
Optional Color	Green / Blue	Black / White
Reserve for Equipment Operation (Self Sustained)	30-KWH	DC Alternator
Rated Load For Prime Power 24/7-365 (Self Sustained)	180 KWH	275-KWH Plus Externa Fuel
Frequency Accuracy	0.50%	0.50%
Volt Accuracy	+/- 1.5%	+/- 1.5%
Voltage Regulator	Electronic	Electronic
Generator-end RPM	1800	1800
Synchronous Drip proof Self Excitation	4 - Pole	4 - Pole
Efficiency (Continual Operation)	98%	96%
Rotor Model	Two (2) Bearing	Single Bearing
Insulation System	Class H	Class H
HP Required for Full Output	500	415
Drive Motor Information		
Motor Category	Electric	Combustion
Motor Model	Industrial 3 Phases	6 Cylinder Inline
Drive Engine/Motor Type	3 Phase	Diesel
Drive Engine/Motor - HP- Displacement	30	415
Cooling	Air	Air / Liquid
Drive Engine/Motor RPM	1800	1800
Drive Transmission Output RPM to Fly Wheels	150	1800
Variable Speed Controller	Frequency Driver	Governor
Starting System (from DC batteries)	Yes	Yes
Energy Consumption	30 KWH	20 Gallons Fuel Per hour
Remote Control & Auto	Yes	Yes
Control Panel	Yes	Yes
Plus and Play Operations	Yes	Yes
Main Drive Fly Wheel Kinetic Energy		
Quantity Drive Fly Wheel	8	1
Each Fly Wheel Weight	375	89
Total Weight in Lbs.	1800 Lbs.	89 Lbs.
Fly Wheels RPM	30/55 -75/150	1800
Diameter of Each (In feet)	6 to 9 Ft	2.5 Ft
Horse Power Output	800 HP	415 HP
Dimensions "Enclosed" Model		
Length (FT)	40 Ft	16 Ft
Width (FT)	9	7
Height (FT)	10	9
Gross Weight (Lbs.)	35,000	9,453
Unit type	Commercial / Industrial	Commercial / Industrial

Operation Capacity / Consumption		
Fuel Tank Capacity (Non-UL)	0	206 US Gallon
Hours of Operation Capacity	8760 hrs.	10.3 hrs.
Oil Capacity (Gallons)	1	7
Coolant Capacity	Air	Mix Water/Antifreeze
Warranty		
Standby Power Warranty	5 years or 8,760	5 years or 750 Hours
Prime Power Warranty	8,760 Hours	750 Hours
Prime Power Warranty in Month	12 Months	1 Month
Warranty Specification (Prime Power)	70% Capacity	70% Capacity
Extended Coverage	25 Years / 219,000 Hours	24 Months / 17,520 Hours
One Year Operational Cost		
One Year Operational Consumption Gallons	0	175,200
One Year Consumption Operational Cost	0	\$350,400 @ \$2.00 Per Gallon
Maintenance Cost	\$8,760	\$12,000
Unit Cost	\$1,234,284	\$41,300
4 - Years Comparison Cost, Plus Units Cost & Maintenance	\$1,269,324	\$1,490,900
4 Years Carbon Credit Sales	61,210	0
Total Cost in 4 years	\$1,208,114.00	\$1,490,900
10 Years Comparison Cost, Plus Units Cost & Maintenance -	\$1,409,484	\$3,665,300
10 Years Carbon Credit Sales	\$153,027.00	0
Total Cost in 10 years	\$1,256,457.00	\$3,665,300
Tax & Government Insensitive	Yes	No
Depreciation	Yes	Yes
Additional Cost - Environment Licenses & Fines	No	Yes
World Bank Support for Large Power Projects Financing	Yes	No