

## PGPL 275 /60Hz Technical Data



<b>Perkins</b> Engine: <b>1606A-E93TAG4</b> Electronic Governor	<b>Alternator</b> Leroy-somer: LSA46.2L9	<b>Generator</b> <b>Model:</b>	<b>PGPL 275 (Open)</b>
			<b>PGPL 275 (Silent)</b>

<b>60Hz</b> 1800 r.p.m	<b>3 Phase</b> 4 Wires	<b>Power Factor:</b> Cos $\Phi$ = 0.8	<b>Emissions</b> <b>Certification:</b>	N/A
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<b>RATINGS</b>	<b>Prime Power</b>		<b>Standby Power</b>		<b>Rated Current</b>
	<i>(PRP)</i>		<i>(LTP)</i>		<i>(A)</i>
Voltage (V)	kW	kVA	kW	kVA	Amps
480/277	250	313	275	344	375.9
440/254	250	313	275	344	410.1
<b>416/240</b>	<b>250</b>	<b>313</b>	<b>275</b>	<b>344</b>	<b>433.7</b>
240/138	250	313	275	344	751.8
220/127	250	313	275	344	820.1

### RATINGS:

All three Phase generator sets are rated at 0.8 power factor. All single-phase generator sets are rated at 0.8 or 1.0 power factor. **PowerGen** reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

### Prime Power:

Available continuously at variable load in lieu of commercially purchased power for an unlimited number of hours per year in accordance with ISO8528-1, and an overload of 10% permitted for one hour in every twelve hours of operation in accordance with ISO 3046-1.

### Standby Power:

Emergency Standby Power in variable load applications in accordance with ISO8528-1 in the event of a utility power failure. No overload available for this service as relevant alternators are peak continuous rated at 27°C.

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## ***Standard Features***

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- ▲ High efficient water cooled diesel engine
- ▲ Brushless alternators (Class H, with AVR.)
- ▲ Heavy duty rubber anti-vibration mountings
- ▲ 12/24V starter batteries and connecting cables
- ▲ Separate engine-drive battery charging alternator
- ▲ Industrial silencer for open type generator sets
- ▲ Residential silencer for open type generator sets
- ▲ Auto start / Digital Control Panel
- ▲ Wiring with IEC standard
- ▲ Factory Test Certificate
- ▲ Operation & Maintenance Manual & Diagrams
- ▲ Worldwide Product / Technical Support
- ▲ Radiator with cap and drain point.
- ▲ Fully guarded engine driven fan
- ▲ Circuit Breaker - 3 pole (MCCB)
- ▲ Base fuel tank for 6 - 8 hours running at 100% load
- ▲ Oil filter - Diesel filter - Air filter
- ▲ Fully welded steel baseframe with lifting and fork-lifting facilities.
- ▲ Sound proof & Weather protective enclosures for silent type generator sets.

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## ***Optional***

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- △ Automatic Transfer Switch (ATS)
- △ Water - fuel separator
- △ Water heater for severe cold weather
- △ Lub-oil heater for severe cold weather
- △ 50°C-60°C Radiator
- △ Dual wall fuel tank base
- △ Fuel level sensor
- △ Maintenance free battery
- △ Additional **CE Features** Selection
- △ Extra air filters for time-maintenance
- △ Extra diesel filters for time-maintenance
- △ Extra oil filters for time-maintenance
- △ Separated standing fuel tank
- △ Low coolant level sensor
- △ Full range of attachments and options available for alternator

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## ***Overall Dimensions (mm) & Weight (kg)***

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### ***Open Type***

***Length:***

2500

***Width:***

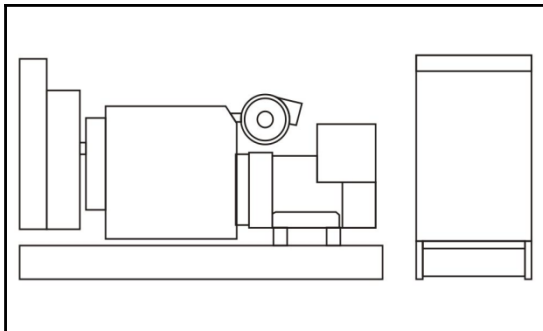
900

***Height:***

1650

***Weight:***

1650



### ***Silent Type***

***Length:***

3650

***Width:***

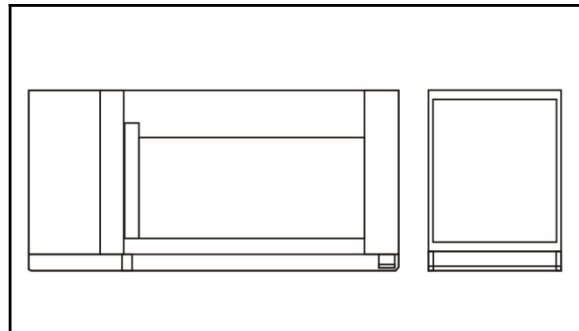
1150

***Height:***

2000

***Weight:***

3100



Dimension and design are subject to change without notice.

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## ***Warranty***

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The goods of PowerGen System are under warranty against defects in materials and workmanship for a period of 12 months or 1000 hours whichever come first from the date of delivery to the end user (except the damageable spare parts of genset caused by incorrect man-made operation), and that the aforementioned warranty for the same token is back up by the engine & alternator manufactures and their global distributors.

<b>General Performance</b>	
Manufacture	Perkins
Engine Model	1606A-E93TAG4
Engine Type	4 stroke, In-line, 6-cylinder
Engine Speed	1800 r.p.m
Prime Power	272kW/365hp
Standby Power	299kW/401hp
Governor Type	Electronic
Direction of Rotation	Clockwise, from the front
Air Intake Way	Air to air charged cooled, Turbocharged
Displacement	9.3 L
Cylinder Bore * Stroke	116.6mm × 146mm
NO. of Cylinders	6
Compression Ratio	17.2:1
Brake Mean Effective Pressure	2044-2237kPa
Mean Piston Speed	8.8 m/s
Combustion Air Flow	22.02 m <sup>3</sup> /min
Engine coolant flow	436 Litres/min

<b>Exhaust System</b>	
Exhaust Gas Flow	50.57 m <sup>3</sup> /min
Exhaust Gas Temperature	389°C
Maximum Back Pressure	10 kPa

<b>Induction System</b>	
Maximum Air Intake Restriction	
- Clean Filter	2.5 kPa
- Dirty Filter	6.22 kPa
- Air Filter Type	Dry

<b>Lubrication System</b>	
Total Lubrication System Capacity	
- Dry Engine with Filter	36 Litres
- Oil Change with Filter	33 Litres
Normal Oil Temperature (Sump)	121°C

<b>Fuel System</b>	
Type Of Injection	Direct Injection
Fuel Lift Pump-Flow/hour	180 Litres/hour
Fuel Consumption at 100% Standby power	75 Litres/hour
Fuel Consumption at 100% Prime power	69 Litres/hour
Fuel Consumption at 75% Prime power	54 Litres/hour
Fuel Consumption at 50% Prime power	39 Litres/hour
Fuel Tank Capacity	
- Open Type Genset	6 Hours at Full Load
- Silent Type Gensets	410 Litres

<b>Cooling System</b>	
Total System Capacity	30.9 Litres
Engine Only	11.8 Litres
Radiator	15.5 Litres
Thermostat Operation Range	86-96°C
Maximum Top Tank Temperature	107°C

<b>Electric System</b>	
Electrical System Voltage	24V
Battery	Maintenance-free
Connecting Cables	Available

<b>Energy balance</b>	
Energy to Coolant	137-145kW
Energy to Exhaust	175-193 kW
Energy to Radiation	22-23kW

## ***Alternator Specification***

<b>General Data</b>	
Manufacture / Brand	Leroy-somer
Model	LSA46.2L9
AVR Model	R250
Coupling / Bearing	Direct / Single Bearing
Phase	3 Phase
Power Factor	Cos $\phi$ = 0.8
Winding Pitch - Code	2/3 - (N <sup>o</sup> 6)
Drip Proof	IP 23
Excitation	shunt

<b>60HZ/1800R.P.M</b>	
Prime Output Power	253kW/316kVA
Standby Output Power	278kW/348kVA
Insulation Class	H
Voltage Regulation	± 0,5 %
Total harmonic TGH / THC no load <2.5% - on load <2.5%	
Wave Form : NEMA = TIF - (*)	< 50
Wave Form : I.E.C. = THF - (*)	< 2 %
Altitude	≤ 1000 m
Overspeed	2250 min-1