

Technical Specification PGPLS150

Generator Set Ratings

| 60Hz/1800 r.p.m-P.F.0.8 | | | | | Prime Power | Standby Power | Rated Current |
|-------------------------|--------------|-----------------------------------|-------------|----|-------------|---------------|---------------|
| Genset | Engine | Alternator | Voltage (V) | PH | kW/kVA | kW/kVA | Amps |
| PGPLS150 | 1106A-70TAG2 | LSA44.3L10 UCI274E TPA274S4 | 220/127 | 3 | 135/169 | 150/188 | 442.9 |
| | | LSA44.3L10 UCI274E TPA274S4 | 230/132 | 3 | 135/169 | 150/188 | 423.6 |

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.

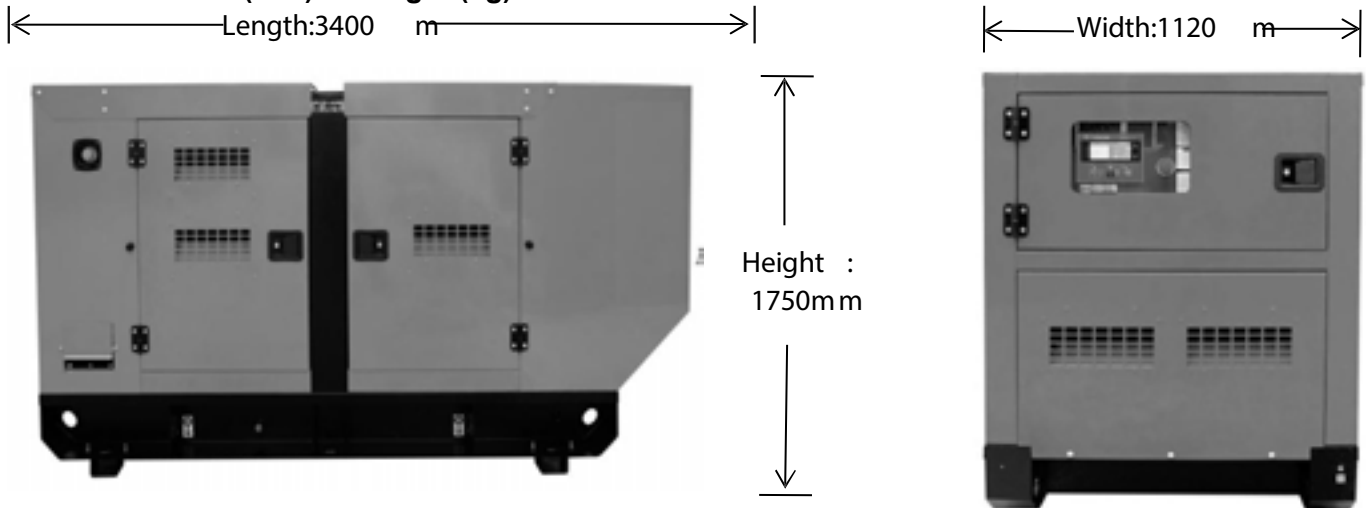
Prime Power:

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.

Overall Dimensions (mm) & Weight (kg)



Weight (kg) : 2450



Standard and Optional Accessories

| System | Standard ● | Optional ○ |
|---------------------------------------|--|--|
| Air Intake System | <ul style="list-style-type: none"> ● Standard air filter ● Air filter overload alarm | <ul style="list-style-type: none"> ○ Air prefilter ○ Heavy air filter |
| Cooling System | <ul style="list-style-type: none"> ● 50°C radiator ● Low water level alarm ① ● Fan and belt guard ● Discharge valve | <ul style="list-style-type: none"> ○ Antifreeze ○ Water jacket heater |
| Exhaust System | <ul style="list-style-type: none"> ● Stainless steel bellow ● Residential silencer ● Complete exhaust pipe ● Rain cap | <ul style="list-style-type: none"> ○ Stainless steel silencer ○ Stainless steel exhaust pipe |
| Fuel System | <ul style="list-style-type: none"> ● 8 Hours integrated base fuel tank ● Standard fuel filter ● Fuel level gauge ● Fuel filling cap ● Fuel hose | <ul style="list-style-type: none"> ○ 6 Hours double wall base fuel tank ○ Fuel-water separator ○ Oil level sensor ② ③ ○ Automatic fuel top up system ② |
| Lubrication System | <ul style="list-style-type: none"> ● Standard oil filter ● Manual oil pump and drain | <ul style="list-style-type: none"> ○ Oil heater ○ Lube oil level indicator ○ Oil temperature indicator ② |
| Alternator and Electric Switch | <ul style="list-style-type: none"> ● Shunt or self excited ● Class H insulation ● H class temperature rise ● DELIXI MCCB ● Terminal connection lugs (L1, L2, L3, LN) | <ul style="list-style-type: none"> ○ PMG or AREP (Leroy-somer only) ○ Alternator space heaters ○ PT100 winding temperature sensors ○ Weaver AVR ○ Weaver prolapse transformer ○ F class temperature rise ○ 4 Pole circuit breaker with leakage protection ○ Circuit breaker - 4 pole ○ ABB MCCB ○ MCCB auxiliary contact and shunt tripping device |
| Control System | <ul style="list-style-type: none"> ● Intelligent 1.0 for 4 cylinders engine ● Intelligent 3.0 for 6 cylinders engine ● Intelligent 5.0 for ECU engine | <ul style="list-style-type: none"> ○ Panel lighting <p>Ral:2011 ■ Ral:9016 □ Ral:5002 ■</p> |
| Silent / Base | <ul style="list-style-type: none"> ● 67-72 db(A) @ 3 meters ● 4mm -6mm Steel base ● Transportation support leg ● Single hook ● Power coating enclosure ● Anti-vibration mounting between engine /alternator and baseframe ● Emergency stop mounted outside the canopy ● Standard color: Ral 3020 | <ul style="list-style-type: none"> ○ Forklift holes ○ Enclosure color: ○ Trailer for off road or on road |
| Start / Charge | <ul style="list-style-type: none"> ● Battery with bracket and cables ● Engine battery charger ● 3A Mains charger | <ul style="list-style-type: none"> Low temperature starting batteries Battery switch High current charger (10A, 20A) |



Engine

| Engine specifications | | Lubrication system | |
|--|------------------------------------|--|------------------|
| Manufacture | Perkins | Total Lubrication system capacity | 16.5 Litres |
| Engine model | 1106A-70TAG2 | Minimum sump capacity | 12.4 Litres |
| Engine type | 4 stroke, In-line, 6-cylinder | Maximum sump capacity | 14.9 Litres |
| Engine speed | 1800 r.p.m | Max continuous oil temperature | 125°C |
| Prime power | 147 kW | Fuel system | |
| Standby power | 164 kW | Type of injection | Direct injection |
| Governor type | Mechanical | Fuel consumption at 100% standby power | 41.7 Litres/hour |
| Air intake way | Turbocharged and air charge cooled | Fuel consumption at 100% prime power | 38.2 Litres/hour |
| Displacement | 7.01L | Fuel consumption at 75% prime power | 29.1 Litres/hour |
| Cylinder bore * stroke | 105mm × 135mm | Fuel consumption at 50% prime power | 19.1 Litres/hour |
| NO. of cylinders | 6 | Fuel consumption at 25% prime power | 11 Litres/hour |
| Compression ratio | 16:1 | Fuel tank capacity | 8 hours |
| Brake mean effective pressure | 1477.9-1633.9 kPa | Cooling system | |
| Mean piston speed | 8.1 m/s | Total system capacity | 21 Litres |
| Combustion air flow | 15.12 m ³ /min | - Engine capacity | 9.5 Litres |
| Engine coolant flow | 170 Litres/min | Thermostat operation range | 82-93 °C |
| Exhaust system | | Maximum top tank temperature | 110°C |
| Exhaust gas flow | 31.87 m ³ /min | Shutdown switch setting | 118°C |
| Exhaust gas temperature | 407 °C | Electric system | |
| Maximum back pressure | 6 kPa | Electrical system voltage | 12 V |
| Aftertreatment exhaust outlet connection | 72 mm | Battery | Maintenance-free |
| Air intake system | | Connecting cables | Available |
| Maximum air intake restriction | | Energy balance | |
| - Clean filter | 2 kPa | Energy to coolant and lubricating oil | 75.3-81.6 kW |
| - Dirty filter | 3 kPa | Energy to exhaust | 113.9-123.2 kW |
| - Air filter type | Paper element | Energy to radiation | 11.3-12.3 kW |

Alternator

| General data | |
|--------------|-------------------|
| Power factor | Cos ϕ = 0.8 |
| Excitation | Shunt / Brushless |

60Hz/1800R.P.M

| | |
|------------------|----------|
| Insulation class | H |
| Bearing | Single |
| Altitude | ≤ 1000 m |

Ratings

| Brand | Alternator | Number of wires | AVR Model | PH | Voltage (V) | Prime Power | Standby Power |
|-------------|------------|-----------------|-----------|----|-------------|-------------|---------------|
| | | | | | | kW/kVA | kW/kVA |
| Leroy-somer | LSA44.3L10 | 12 | R250 | 3 | 220/127 | 138/172 | 151/189 |
| Stamford | UCI274E | | AS440 | | | 134/167.5 | |
| Leroy-somer | LSA44.3L10 | 12 | R250 | 3 | 230/132 | 144/180 | 158/198 |
| Stamford | UCI274E | | AS440 | | | 134/167.5 | |



ControlSystem



Intelligent 1.0 Intelligent 3.0 Intelligent 5.0

| | | Intelligent 1.0 | Intelligent 3.0 | Intelligent 5.0 |
|----------------------|-----------------------------|-----------------|-----------------|-----------------|
| Viewable parameters | Phase voltage | 3 | 3 | 3 |
| | Wire voltage | 3 | 3 | 3 |
| | Current | Instrument | 3 | 3 |
| | Frequency | ● | ● | ● |
| | Active power | × | ● | ● |
| | Reactive power | × | ● | ● |
| | Apparent power | × | ● | ● |
| | Power factor | × | ● | ● |
| | Electric energy metering | × | × | ● |
| Generator protection | Abnormal voltage | ● | ● | ● |
| | Over-current warning | × | ● | ● |
| | Over current protection | × | ● | ● |
| | Over Frequency protection | ● | ● | ● |
| | Short circuit protection | MCCB | MCCB+○ | MCCB+○ |
| Engine figure | Oil pressure | ● | ● | ● |
| | Water temperature | ● | ● | ● |
| | Fuel level | ○ | ○ | ○ |
| | Speed | ● | ● | ● |
| | Battery voltage | ● | ● | ● |
| | Elapsed time | ● | ● | ● |
| Engine protection | Low oil pressure warning | ● | ● | ● |
| | Low oil pressure protection | ● | ● | ● |
| | High temperature warning | ● | ● | ● |
| | High temperature protection | ● | ● | ● |
| | Overspeed warning | ● | ● | ● |
| | Overspeed protection | ● | ● | ● |
| | Charge fault | ● | ● | ● |
| Function | Remote start-stop | ● | ● | ● |
| | AMF | ● | ● | ● |
| | Programmable input | 3 | 7 | 7 |
| | Programmable output | 6 | 7 | 7 |
| | Port extension | USB | ○ | ○ |
| | Remote monitoring | × | ○ | ○ |
| | Communication port | × | ○ | ○ |
| | CAN | ● | ○ | ● |
| | Start/Stop time control | × | × | ● |
| | Maintenance tips | × | × | ● |



Controller

StandardParameters

- Gen phase voltage
- Generator frequency
- Engine speed
- Battery voltage
- Engine running hours counter
- Engine temperature
- Oil pressure



WarningandShutdownAlarms

- Low oil pressure
- High engine temperature
- Over speed
- Under speed
- Start failure
- Stop failure
- Emergency stop
- High/low battery voltage
- Aux. shutdown alarm
- Aux. Warning