

| 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 |
| FC281X-P | 1506A-E88TAG3 | LSA46.2L9 UCDI274J FPA31-2202 | 380/220 | 3 | 225/281 | 250/313 | 427.3 |
| | | LSA46.2L9 UCDI274K FPA27-20011 | 208/120 | 3 | 225/281 | 250/313 | 780.7 |
| | | LSA46.2L6 UCDI274J FPA27-20011 | 220/127 | 3 | 225/281 | 250/313 | 738.1 |
| | | LSA46.2L6 UCDI274J FPA27-20011 | 230/132 | 3 | 225/281 | 250/313 | 706.0 |
| | | LSA46.2L6 UCDI274J | 480/277 | 3 | 225/281 | 250/313 | 338.3 |

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.

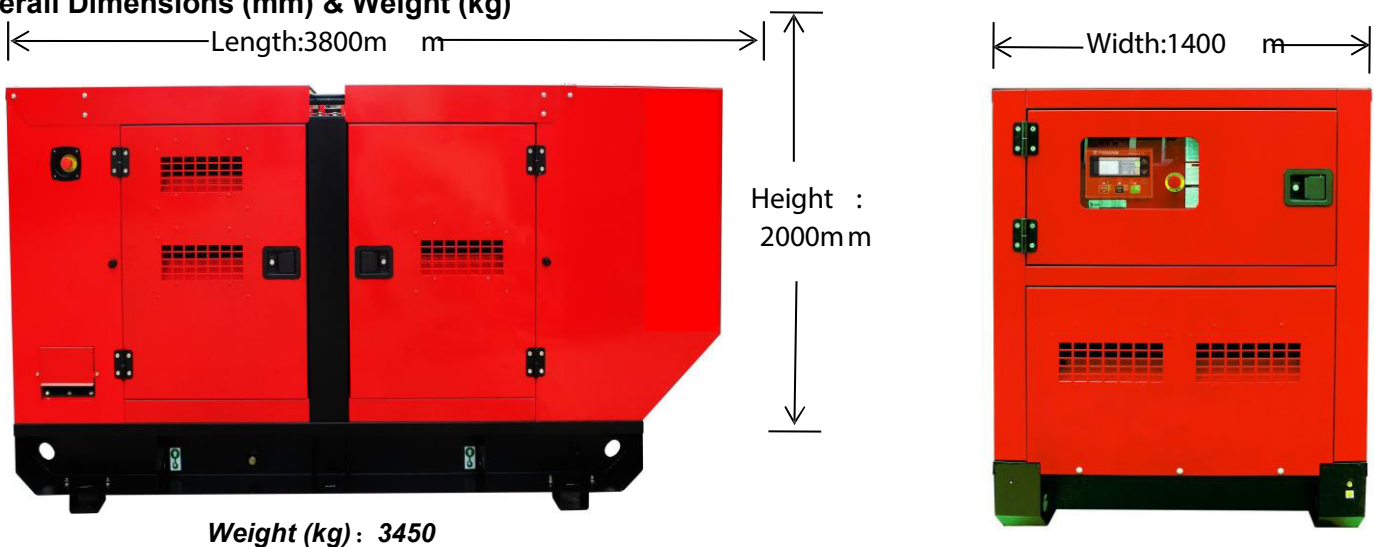
Prime Power:

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)



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"> ● Comap Nano Plus for 4 cylinders engine ● Comap IntelliLite AMF20 for 6 cylinders or ECU engine | <ul style="list-style-type: none"> ○ Panel lighting |
| 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) |

Remark:

- ① Not available for Perkins 400 series engines
- ② When you need the automatic oil top up system, you have to use the electrical oil level sensor.
- ③ You can choose either electrical oil level sensor or oil temperature sensor.

Engine

Engine specifications

| | |
|-------------------------------|---------------------------------------|
| Manufacture | Perkins |
| Engine model | 1506A-E88TAG3 |
| Engine type | 4 stroke, In-line, 6-cylinder |
| Engine speed | 1800 r.p.m |
| Prime power | 257 kW |
| Standby power | 284 kW |
| Governor type | Electronic |
| Air intake way | Air to air after cooled, turbocharged |
| Displacement | 8.8 L |
| Cylinder bore * stroke | 112mm x 149mm |
| NO. of cylinders | 6 |
| Compression ratio | 16.1:1 |
| Brake mean effective pressure | 2045-2250 kPa |
| Mean piston speed | 8.9 m/s |
| Combustion air flow | 18.6 m ³ /min |
| Noise level @7m | 73 dBA |

Exhaust system

| | |
|--|--------------------------|
| Exhaust gas flow | 45.3 m ³ /min |
| Exhaust gas temperature | 477 °C |
| Maximum back pressure | 10 kPa |
| Aftertreatment exhaust outlet connection | N/A |

Air intake system

| | |
|--------------------------------|-------------------|
| Maximum air intake restriction | |
| - Clean filter | 3.7 kPa |
| - Dirty filter | 6.2 kPa |
| - Air filter type | Dry paper element |

Lubrication system

| | |
|---|-----------|
| Total lubrication system capacity | 41 Litres |
| Sump capacity only | 36 Litres |
| Oil temperature (in sump) maximum | 120°C |
| Oil temperature (in sump) normal continuous | 115°C |

Fuel system

| | |
|--|------------------|
| Type of injection | Direct injection |
| Fuel consumption at 100% standby power | 69.8 Litres/hour |
| Fuel consumption at 100% prime power | 63.1 Litres/hour |
| Fuel consumption at 75% prime power | 47.5 Litres/hour |
| Fuel consumption at 50% prime power | 33.1 Litres/hour |
| Fuel consumption at 25% prime power | 18.9 Litres/hour |
| Fuel tank capacity | 6 hours |

Cooling system

| | |
|------------------------------|-------------|
| Total system capacity | 29.6 Litres |
| - Engine capacity | 13.9 Litres |
| - With radiator | 12.6 Litres |
| Thermostat operation range | 87-98 °C |
| Maximum top tank temperature | 107°C |

Electric system

| | |
|---------------------------|------------------|
| Electrical system voltage | 24 V |
| Battery | Maintenance-free |
| Connecting cables | Available |

Energy balance

| | |
|---------------------|------------|
| Energy to radiation | 12-12 kW |
| Energy to exhaust | 191-204 kW |
| Energy to coolant | 115-120 kW |

Alternator

60Hz/1800R.P.M

General data

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

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

Ratings

Prime Power Standby Power

| Brand | Alternator | Number of wires | AVR Model | PH | Voltage (V) | kW/kVA | kW/kVA |
|-------------|-------------|-----------------|-----------|----|-------------|-----------|-----------|
| Leroy-Somer | LSA46.2L9 | 12 | R250 | 3 | 380/220 | 237/296 | 261/326 |
| Stamford | UCDI274J | | AS440 | | | 240/300 | 260/325 |
| Tide | FPA31-2202 | | SX460 | | | 240/300 | 264/330 |
| Leroy-Somer | LSA46.2L9 | 12 | R250 | 3 | 208/120 | 253/316 | 278/348 |
| Stamford | UCDI274K | | AS440 | | | 232.8/291 | 249.6/312 |
| Tide | FPA27-20011 | | SX460 | | | 240/300 | 264/330 |
| Leroy-Somer | LSA46.2L6 | 12 | R250 | 3 | 220/127 | 231/289 | 254/317 |
| Stamford | UCDI274J | | AS440 | | | 224.8/281 | 244.8/306 |
| Tide | FPA27-20011 | | SX460 | | | 240/300 | 264/330 |
| Leroy-Somer | LSA46.2L6 | 12 | R250 | 3 | 230/132 | 236/295 | 262/328 |
| Stamford | UCDI274J | | AS440 | | | 235.2/294 | 255.2/319 |
| Tide | FPA27-20011 | | SX460 | | | 240/300 | 264/330 |
| Leroy-Somer | LSA46.2L6 | 12 | R250 | 3 | 480/277 | 240/300 | 270/337 |
| Stamford | UCDI274J | | AS440 | | | 240/300 | 260/325 |
| Tide | FPA27-20011 | | SX460 | | | 240/300 | 264/330 |

ControlSystem



Comap Nano Plus

Comap IntelliLite

Comap IntelliLite AMF25

| | | | | |
|-------------------------|-----------------------------|------------|--------|--------|
| 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 | × | × | ● |
| | Fault record | × | × | ● |
| Multi-language function | × | ● | ● | |

Remark: ● Standard

○ Optional

× NA

(Safety Installation: Detect - Control – Switch System)

POWERGEN offers not only a changeover switch but also an integrated mains detection and switch system for your 24 Hour Power Protection. The system enables automatic start-up and operation of the generating set in the event of a mains power failure, overvoltage or loss of phase; and also mains automatic re-transfer once it come back. The system has a wide application such as hospital, bank, telecom, air port, broadcasting station and hotels.

System Advantages

- Automatically transfer and re-transfer load from main power to gen-power without operator intervention.operation. (Both automatic and manual)
- ATS Controller (AMF function), seamless integration with Intelligent 5.0
- Available from 32 – 3200A, better protection for 4 pole switch.
- Available in standard, bypass isolation and service-entrance configurations.
- Configurable in open, closed and programmed transition operating modes.
- Designed to interface seamlessly with TIDE POWER generators and switchgear.
- Drip Proof IP23 Enclosure.
- Easy Installation: Wall-mounted & Floor standing
- Comes fully loaded with the technology to do the job.



| Rated Current | Breaker Type | | | |
|---------------|--------------|---------|-----|---------|
| | A | Chinese | ABB | Socomec |
| 32 | x | | B | x |
| 63 | A | | B | B |
| 80 | x | | x | B |
| 100 | A | | B | B |
| 125 | x | | B | B |
| 160 | B | | B | B |
| 200 | x | | B | x |
| 250 | C | | B | B |
| 300 | x | | x | x |
| 315 | x | | C | x |
| 400 | C | | C | C |
| 630 | C | | D | D |
| 800 | D | | D | D |
| 1000 | D | | D | D |
| 1250 | D | | D | D |
| 1600 | D | | D | E |
| 2000 | E | | E | E |
| 2500 | E | | E | E |
| 3200 | E | | x | E |

Dimensions : mm

A: 400x200x500

B: 500x300x650

C: 600x400x1200

D: 800x600x1400

E: 1000x800x1600



Controller

StandardParameters

- Gen phase voltage
- Generator frequency
- Engine speed
- Battery voltage
- Engine running hours count
- 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