

TECHNICAL DATA
PGCLS60



Generator Set Ratings

Brand	Alternator	Number of wires	AVR Model	PH	Voltage (V)	kW /kVA	kW /kVA
Leroy-somer	LSA42.3L9	12	R220	3	220/127	55.2/69	60.7/75.9
Cummins	4BTA3.9-G2						

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.

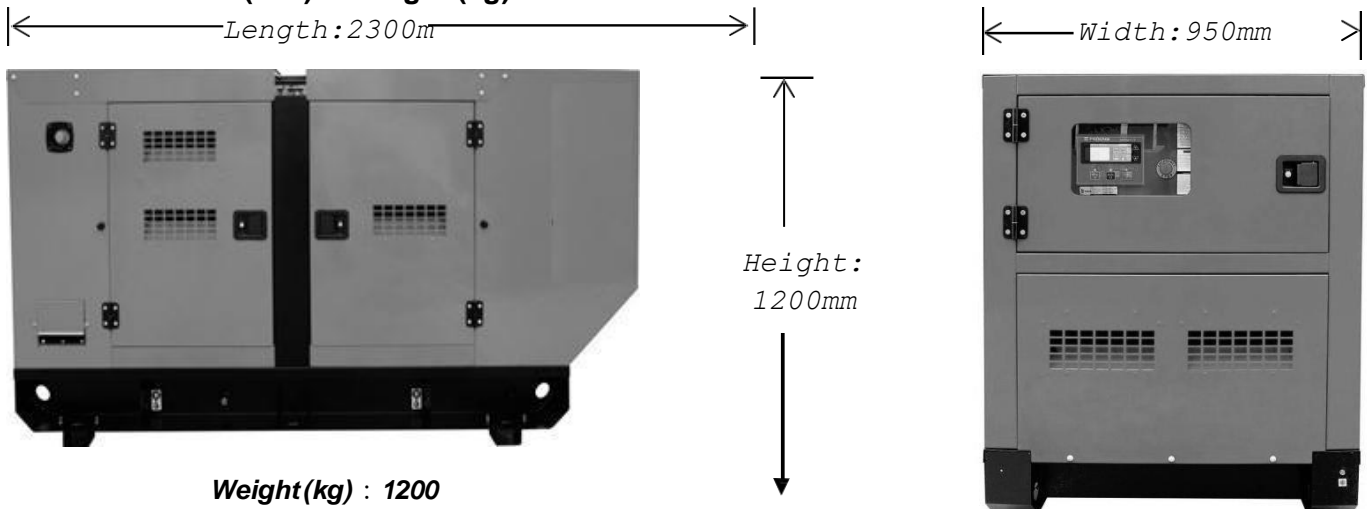
Prime Power:

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 ②③ ○ 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	
Manufacture	DCEC Cummins
Engine model	4BTA3.9-G2
Engine type	4 cycle, in-line
Engine speed	1800 r.p.m
Prime power	60kW /80hp
Standby power	66kW /88hp
Governor type	Electronic
Governor make / model	BYC A
Aspiration:	Turbocharger& Aftercooler
Displacement	3.9 L
Bore * Stroke	102mm x 120mm
NO. of cylinders	4
Compression ratio	17.3:1
Engine idle speed	950-1050 rpm
Piston speed	7.2 m/s
Air cleaner type	Dry
Exhaust System	
Maximum back pressure	10 kPa
Exhaust pipe size normally acceptable	75 mm
Exhaust gas temperature	393-405 °C
Exhaust gas flow	134 Litres/sec.
Air Intake System	
Maximum intake air restriction with heavy duty air cleaner	
- Dirty element	6.2 kPa
- Clean element	3.7 kPa
Recommended intake piping size	76 mm
Intake air flow	66 Litres/

Lubrication System	
Oil capacity (high - low)	9.5 - 8.5 Litre
Maximum oil temperature	121°C
Minimum required lube system capacity	
- Sump plus filters	10.9 Litres
Fuel System	
Type injection system	BYC A direct injection
Total drain flow (constant for all loads)	30 Litres/hour
Fuel consumption at 100% standby power	17.4 Litres/hour
Fuel consumption at 100% prime power	15.9 Litres/hour
Fuel consumption at 75% prime power	12.2 Litres/hour
Fuel consumption at 50% prime power	8.7 Litres/hour
Fuel consumption at 25% prime power	5.5 Litres/hour
Fuel tank capacity	8-12 hours
Cooling System	
Coolant capacity - engine only	8.3 Litre
Standard thermostat (modulating) range	83 - 95°C
Maximum top tank temperature	
- Standby power	104 °C
- Prime power	100 °C
Electric System	
Electrical system voltage	24V
Battery	Maintenance-free
Connecting cables	Available
Thermal Data	
Radiated heat to ambient	To be decided
Heat rejection to coolant	To be decided
Heat rejection to exhaust	To be decided

Alternator

60Hz/1800R.P.M

General data	
Leroy somer LSA 42.3L9	Cos ϕ = 0.8
Excitation	Shunt / Brushless

Insulation class	H
Bearing	Single
Altitude	≤ 1000 m