



# 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.

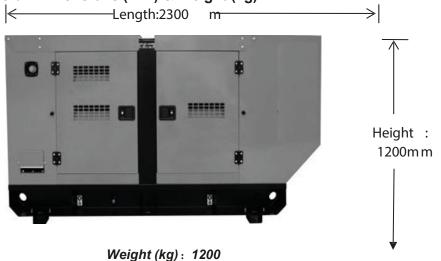
#### Prime Power:

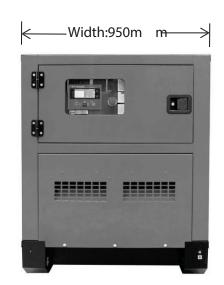
Available continuously at variable load in lieu of commercially purchased power for an unlimited number of hours per year in accordance with ISO8528-1, and an overload of 10% permitted for one hour in every twelve hours of operation in accordance with ISO 3046-1.

#### 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  $27\,^{\circ}$ C.

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







Standard and Optional Accessories

System	Standard •	Optional O	
Air Intake System	Standard air filter	○ Air prefilter	
All Ilitake System	Air filter overload alarm	○ Heavy air filter	
	● 50°C radiator	○ Antifreeze	
Cooling System	● Low water level alarm ①	○ Water jacket heater	
Cooling System	● Fan and belt guard		
	Discharge valve		
	Stainless steel bellow	O Stainless steel silencer	
Exhaust System	Residential silencer	Stainless steel exhaust pipe	
Zanadot Gyotom	Complete exhaust pipe		
	Rain cap		
	8 Hours integrated base fuel tank	○ 6 Hours double wall base fuel tank	
	Standard fuel filter	○ Fuel-water separator	
Fuel System	Fuel level gauge	Oil level sensor ② ③	
	Fuel filling cap	O Automatic fuel top up system ②	
	Fuel hose		
	Standard oil filter	Oil heater	
Lubrication System	Manual oil pump and drain	O Lube oil level indicator	
		Oil temperature indicator ②	
	Shunt or self excited	O PMG or AREP (Leroy-somer only)	
	Class H insulation	Alternator space heaters	
	H class temperature rise	PT100 winding temperature sensors	
	DELIXI MCCB	O Weaver AVR	
Alternator	<ul><li>Terminal connection lugs (L1, L2, L3,</li></ul>	Weaver prolapse transformer	
and Electric Switch	LN)	○ F class temperature rise	
		○ 4 Pole circuit breaker with leakage protection	
		○ Circuit breaker - 4 pole	
		O ABB MCCB	
		MCCB auxiliary contact and shunt tripping	
		Device	
	Intelligent 1.0 for 4 cylinders engine	O Panel lighting	
Control System	Intelligent 3.0 for 6 cylinders engine	_	
	Intelligent 5.0 for ECU engine	Ral:2011 Ral:9016 Ral:5002	
	67-72 db(A) @ 3 meters	○ Forklift holes	
	• 4mm -6mm Steel base	Enclosure color:	
	Transportation support leg		
	Single hook	Trailer for off road or on road	
Silent / Base	Power coating enclosure		
	Anti-vibration mounting between engine		
	/alternator and baseframe		
	Emergency stop mounted outside the		
	canopy		
	Standard color: Ral 3020	Landan and the state of the sta	
Ctart / Charge	<ul><li>Battery with bracket and cables</li><li>Engine battery charger</li></ul>	Low temperature starting batteries	
Start / Charge		Battery swtich	
	3A Mains charger	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:	Turbochanger& Aftercooler			
Displacement	3.9 🖡			
Bore * Stroke	102mm × 120mm			
NO. of cylinders	4			
Compression ratio	17.3:1			
Engine idle speed	950-1050 rpm			
Piston speed	7.2 m/s			
Air clearner type	Dry			
Exhaust System				
Maximum back pressure	10 kPa			
Exhaust pipe size normally acc	ceptable 75 mm			
Exhaust gas temperature	393-405 ℃			
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 s	size 76 mm			
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Lubrication System	
Oil capacity (high - low)	9.5 - 8.5 Litres
Maximum oil temperature	<b>121</b> ℃
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/hou
Fuel consumption at 100% standby powe	r 17.4 Litres/hou
Fuel consumption at 100% prime power	15.9 Litres/hou
Fuel consumption at 75% prime power	12.2 Litres/hou
Fuel consumption at 50% prime power	8.7 Litres/hou
Fuel consumption at 25% prime power	5.5 Litres/hou
Fuel tank capacity	8-12 hours
Cooling System	
Coolant capacity - engine only	8.3 Litres
Standard thermostat (modulating) range	83 - 95°C
Maximum top tank temperature	
- Standby power	104 ℃
- Prime power	<b>100</b> ℃
Electric System	
Electrical system voltage	24\
Battery	Maintenance-free
Connecting cables	Auailable
Thermal Data	
Radiated heat to ambient	To be decided
Heat rejection to coolant	To be decided
Heat rejection to exhaust	To be decided

## Alternator

Intake air flow

 $\begin{tabular}{lll} \textbf{General data} \\ \textbf{Leroy somer LSA 42.3L9} \\ \textbf{Excitation} \\ \begin{tabular}{lll} \textbf{Cos} \ \ensuremath{\mathcal{C}} = 0.8 \\ \textbf{Shunt / Brushless} \\ \ensuremath{\line N} \\ \ensuremath{\line N$ 

66 Litres/

#### 60Hz/1800R.P.M

Insulation class	Н
Bearing	Single
Altitude	≤ 1000 m