

Output Power Rating		Prime		Standby**		
rpm	Frequency	Voltage	kVA	kW	kVA	kW
1500	50 Hz	400	9.0	7.2	9.9	7.9
1800	60 Hz	480	11.2	9.0	12.4	9.9

### Switch able speed 1500/1800 rpm

The above kW rating are at 0.8 pf

Guarantied within condition equivalent to those specification in ISO 8528-1,ISO 3046-1 and BS 5514-1.

\* Prime power rating of the generating set is where a variable load and unlimited hours usage are applied on the generating set with an average load factor of 80% of the prime rating over each 24 hours period.

Nothing that a 10% overload is available for 1 hour in every 12 hours operation

\*\* Standby power rating of the generating set is where a variable load limited to an annual usage up to 500 hours is applied, with 300 hours of which may be continous running. Noting that no overload is permitted

### Engine Technical Data

Engine Make and Model	Perkins 403D-11G
Cylinder	3 Vertical In-Line
Aspiration	Naturally Aspirated
Combustion System	Indirect Injection
Displacement	1.1 Liters
Governor	Mechanical
Emissions Regulation	EU stage IIIA & US EPA Tier 4
Electrical Starting System	12 Volt Starter Motor and 12 Volt 15 Amp Alternator DC Output

### Air System

Air Filter Type	Dry Element (Replaceable)		
Combustion Air Flow Cm/min(cfm)	Prime	50 Hz	60 Hz
		0.7 (24.72)	0.9 (31.78)
	Standby	0.7 (24.72)	0.9 (31.78)
Max Air Filter Intake Restriction	6.4 kpa	6.4 kpa	

### Fuel System

Fuel Filter Type	Split Element (Replaceable)		
Recommended Fuel	Class A2 Diesel		
Fuel Consumption l/hr(US gal/hr)	Engine Speed	1500 rpm	1800 rpm
	Standby	2.9 (0.77)	3.6 (0.95)
	Prime Power	2.6 (0.69)	3.0 (0.79)
	75% of Prime Power	2.0 (0.53)	2.3 (0.61)
	50% of Prime Power	1.5 (0.40)	1.7 (0.45)
Fuel Tank: Open / Close	97 L / 114 L		

### Lubrication System

Lube Oil	API-CH-4 or ACEA E5 SAE 15W40 (-10°C to 50°C Ambient Temperature)
Lube Oil Capacity	4.9 L
Oil Pan	3.4 L
Oil Filter Type	Spin-On Full Flow
Oil Cooling Method	N/A

### Cooling System

Coolant Capacity	5.2 L		
Cooling System	Mounted Radiator, Water Cooled		
Cooling Fan Air Flow m3/min (cfm)	40.2 (1419.65)	45.0 (1589.16)	
Heat Radiation to Room	Prime	50 Hz	60 Hz
		1.7 kW	2.6 kW
	Standby	2.5 kW	3.1 kW

### Exhaust system

Silencer	Grade	Industrial	
	Size	2"	
	QTY	1	
Exhaust gas flow m3/min (cfm)	Prime	1.66 (58.62)	2.21 (78.04)
	Standby	1.80 (63.56)	2.40 (84.75)
Max Allowable Backpressure	10.2 kpa		10.2 kpa
Exhaust Gas Max Temperature	Prime	50 Hz	60 Hz
		368°C	437°C
	Standby	420°C	515°C

Alternator Technical Data		Stamford / or L.S							
Model Number	BC1164B								
No. of Poles	4								
Number of terminals (leads)	12								
A.V.R & Excitation	SX 460								
Regulation	±								
Ingress Protection	IP-23								
Insulation Class	H								
TIF	<45								
THD at Full Load %	2.3 / 2								
THD at No Load %	2.6 / 2.6								
Cooling Air flow-@50 Hz m <sup>3</sup> / min (cfm)	3.3 (116.53)								
Cooling Air flow-@60 Hz m <sup>3</sup> / min (cfm)	4.0 (141.25)								
Output Voltage		50 Hz				60 Hz			
V		380	400	415	440	415	440	460	480
kVA		11	11	11	9	13.2	13.2	13.2	13.2
kW		8.8	8.8	8.8	7.2	10.6	10.6	10.6	10.6
Alternator Performance Data									
Reactance (f.l.c.l.f)	xd %	238.2	215	199.7	145.4	261.5	255.9	234.1	215
	xd' %	23.82	21.5	19.97	14.54	26.15	25.59	23.41	21.5
	xd'' %	16.84	15.2	14.12	10.28	18.49	18.09	16.55	15.2
Motor starting capacity based on 30% voltage dip and 0.8 pf (kVA)		22.1	26.7	33.0	-	18.3	24.2	27.9	33.0
Controller Features		DSE							
Controller Make and Model	Auto mains failure (AMF) applications including remote communication, user configuration and complete gen-set monitoring and protection. Ready for generators with 3 ph 4 wire / 3ph 3 wire/ Mono ph								
Engine Protection	* Oil Pressure * Coolant Temperature					* Fuel Level (Optional)			
Generator Protection	* Over / Under Voltage * Over / Under Frequency * Phases Frequency					* Over Current * Charging Alternator Fault			
Inputs and Outputs	* 3 No's Configurable Analog Inputs * 4 No's Binary Inputs					* 6 No's Binary Outputs * D+ Pre-Excitation Terminal			
Event and Performance Log	* Gen-set text Alarm Log * For More Features we can use High Controller					* Engine Hours History Log			
Gen-set Enclosure Specification (optional)									
Enclosure Type	Acoustic and Weatherproof								
Anticorrosive Protection	Polyester Powder Coated Galvanized Sheet								
Access Doors	4								
Drainage	Fuel and Water Drainage Provision								
Transportation	Tested Single Point Lifting Facility & Forklift Pockets								
Noise Level (@ Free-Field Conditions)	66 dBA @ 7 meter								
Water Fill	Radiator Water Filling Provision								
Cable Access	Cable Inlet and Outlet Provision								
Emergency stop	External Emergency Push Button								
Canopy RAL Color	RAL 2000								
Chassis RAL Color	RAL 9011								
Shipping Data									
Type	Length (mm)	Width (mm)	Height (mm)	Weight (kg)					
Open	1450	700	900	325					
Enclosed	1560	760	960	525					

**Notes:**

All Generators carry a one year or (1,000) hour's manufacturer's warranty