

# Diesel Powered Generating Sets S Range - 50Hz (3 Phase)



Standard Genset Features	Generator Set Performance	Generator Set Options
<ul style="list-style-type: none"> <li>• Cummins water cooled Diesel engine,</li> <li>• Oil filter, standard fuel filter</li> <li>• Lube-oil drain valve fitted</li> <li>• Electric starter &amp; Charge alternator 12V D.C.</li> <li>• Mechanical governor</li> <li>• Heavy duty air filter</li> <li>• Single bearing alternator, class H, IP23</li> <li>• Exciter/Voltage reg - Torque Match as std</li> <li>• Controller PCC 0301 with display unit</li> <li>• 3 pole MCB</li> <li>• Welded steel base frame with A/V mounting</li> <li>• FRP fuel tank ,100 ltr cap.</li> <li>• Tank capacity of min. 10 hours operation at</li> <li>• 70% standby load</li> <li>• Set mounted starting battery</li> <li>• Engine &amp; Alternator Munsell Jade Green</li> <li>• Radiator and Guarding black</li> <li>• Packing under plastic bag</li> <li>• Operation &amp; Maintenance manual</li> <li>• Standard set of labels</li> <li>• Soncap Certified</li> </ul>	<p><b>Voltage Regulation :</b> Maintains voltage output to within <math>\pm 1\%</math>.</p> <ul style="list-style-type: none"> <li>• At any power factor between 0.8 and 1.0.</li> <li>• At any variations from no load to full load. At any variations from Cold to Hot.</li> <li>• At speed droop variations up to 4.0%.</li> </ul> <p><b>Frequency Regulation</b></p> <ul style="list-style-type: none"> <li>• Isochronous under varying loads from no load to 100% full load when electronic governor is fitted.</li> <li>• Random Frequency Variation Will not exceed <math>\pm 0.25\%</math> of its mean value for constant loads – no load to full load.</li> </ul> <p><b>Waveform</b> Total voltage harmonic distortion on open circuit is less than 1.8%. With 3 Phase non distorting balanced linear load is less than 5.0%.</p> <p><b>Telephone Influence Factor (TIF) TIF less than 50.</b> THF to BS 4999 Part 40 less than 2%.</p> <p><b>Alternator Temperature Rise Class H insulation.</b></p> <p><b>Radio Interference</b> In compliance with BS EN 61000-6 and VDE levels G and N.</p>	<ul style="list-style-type: none"> <li>• PCC 1301 controller</li> <li>• Coolant heater 230V, 300W</li> <li>• Battery Charger ,12V 6 amps</li> <li>• Electronic Governor</li> <li>• Sound attenuated canopy,</li> <li>• 85 dB(A) at 1 meter</li> </ul> <p><b>Voltage Connections</b></p> <ul style="list-style-type: none"> <li>• 230/400V, 3 Phase</li> <li>• 240/415V, 3 Phase</li> <li>• 220/380V, 3 Phase</li> <li>• 127/220V, 3phase</li> </ul>

## Technical Data

Genset Model	ES 43 D5	ES 55 D5	ES 68 D5
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Prime Power Rating kVA/kW	40/32	50/40	62/50
Standby Rating kVA/kW	43/35	55/44	68/55
Standby Rating Current (Amps)	61	77	96
Specific Fuel Consumption (gms/bhp-hr) @ 100% Load	151	151	151
Model	S3.8G4	S3.8G6	S3.8G7
BHP (Prime power)	52	65	76
Cooling	Water cooled	Water cooled	Water cooled
Aspiration	Turbocharged	Turbocharged	Turbocharged, After cooled
No of Cylinders	4	4	4
RPM	1500	1500	1500
Bore (mm)	97	97	97
Stroke (mm)	128	128	128
Compression Ratio	17.5:1	17.5:1	17.5:1
Displacement (Itrs)	3.8	3.8	3.8
Fuel	Diesel ASTM No 2 Diesel	Diesel ASTM No 2 Diesel	Diesel ASTM No 2 Diesel
Governor	Mechanical A2	Mechanical A2	Mechanical A2
Starting System	12V Electrical	12V Electrical	12V Electrical
Lube Oil Specification	15W40	15W40	15W40
Lube Oil Sump Capacity (Itrs)	9	9	9
Coolant Capacity (Itrs)	11	11	11
Exhaust Pipe Size (mm)	75	75	75
Make (Brand)	Newage (Stamford)	Newage (Stamford)	Newage (Stamford)
Frame Size *	UC224C	UC224E	UC224F
Std Voltage	415 volts	415 volts	415 volts
RPM/Frequency	1500rpm/50Hz	1500rpm/50Hz	1500rpm/50Hz
No. Phases	3 phase	3 phase	3 phase
Power Factor	0.8 (lag)	0.8 (lag)	0.8 (lag)
Voltage Regulator (Max)	+/-1.0%	+/-1.0%	+/-1.0%
Class of Insulation	H	H	H
Recommended Cable size (Cu Armoured)	25 sq.mm (31/2 core)	35 sq.mm (31/2 core)	50 sq.mm (31/2 core)
Controller	PCC 0301	PCC 0301	PCC 0301
Battery	12V 120 AH	12V 120 AH	12V 120 AH

- **Prime Power (PRP)** is defined as being the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year. The permissible average power output over 24 hours of operation shall not exceed 70% of the PRP.
- **Emergency Standby Power Rating (ESP)** is defined as the maximum power available during a variable electrical power sequence, under the stated operating conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200 hours of operation per year. The permissible average power output over 24 hours of operation shall not exceed 70% of the ESP.
- **All ratings are based on the following reference conditions:**
  - Ambient temperature - 27oC - Altitude above sea level - 150 meters - Relative humidity - 60%

### Dimensions (mm)

Model	OPEN			ENCLOSED		
	ES 43 D5	ES 55 D5	ES 68 D5	ES 43 D5	ES 55 D5	ES 68 D5
<b>Length</b>	1800	1800	1830	2300	2300	2300
<b>Width</b>	730	730	800	1100	1100	1100
<b>Height</b>	1215	1215	1320	1650	1650	1650
<b>Weight (kgs.)</b>	750	800	850	1250	1300	1350