

DESING SPECIFICATIONS

- ✓ High quality, reliable, long life and complete power unit.
- ✓ Every generating set is subjected to a comprehensive test programme which includes full load testing and checking and proving of all control and safety shutdown functions testing.
- ✓ Fully engineered with a wide range of options and accessories; both electrical and mechanical, soundproof canopy and on road trailer.
- ✓ Easy start and maintenance possibility.
- ✓ Compact design:ES series DG sets are smaller and lighter than any other DG set in it's class.

DYNAMIC RANGE



230/400 V-50 Hz	Generator Set Model		ES17 D5	ES22 D5	ES28 D5	ES33 D5	ES43 D5	ES68 D5
Power Pf. 0,8	Standby	kVA	16,5	22	27,5	33	43	68
	Prime	kVA	15	20	25	30	40	62

Standby : Continuous running at variable load for duration of an emergency. No overload is permitted on these ratings.

Prime : Continuous running at variable load for unlimited periods with 10% overload available for 1 hour in any 12 hours period.

STANDARD GENSET SPECIFICATIONS

ENGINE

- CUMMINS, X and S series, 1500 rpm, diesel engines.
- Four stroke, water cooled, direct injection fuel system.
- Mechanical Governor Control System.
- Dual fuel filter.
- Full flow lub oil filter.
- Changeable cylinder liners.
- Dry type air cleaner.
- 12 V D.C. starter and charge alternator.
- Cooling radiator.
- Flexible fuel connection hoses.
- Industrial capacity exhaust silencer.
- Starter battery (with lead acid).
- Jacket water heater (automatic models).
- Operation manuals and circuit diagram documents.

ALTERNATOR

- Stamford Alternator from Newage.
- Screen protected and drip-proof, brushless type, revolving field, self-exciting, 4 poles, IP 23 Enclosure, single bearing system, self regulated through an automatic voltage regulator.

CANOPY

- Easy maintenance and operation are supplied by design.
- All metal canopy parts are painted by electrostatic powder paint.
- Emergency stop button is outside of canopy.

CHASSIS

- The complete generating set is mounted as whole on a heavy-duty fabricated, steel base frame. Antivibration pads are fixed between the engine/alternator feet and the base frame.
- Base frame design incorporates FRP fuel tank.

STANDARDS

- The equipment meets the following standards:
BS 4999/5000, ISO 8528, ISO 3046, BS5514, VDE 0530, IEC34-1

CONTROL SYSTEM

1- Standard Control Panel

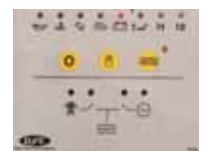
Control, supervision and protection panel is mounted on the genset. The Control panel is equipped as follows;

- Key start switch and push button.
- Voltmeter with phase selector switch.
- Ammeter with selector switch.
- Frequency meter.
- Hours run meter.
- Oil pressure gauge.
- Coolant temperature gauge.
- Battery charge lamp.
- MCB of suitable rating with overload and short circuit protection.
- a) Shutdown protections
 - High engine coolant temperature.
 - Low oil pressure.

2- Auto Mains Failure Panel

Additional equipment in accordance with Standard Control Panel

- Control with DSE 704 module.
- Static battery charger.
- Emergency stop push button.
- Mains / Generator, change - over contactors.



DSE 704

a) 704 Module Features

- Three phases mains sensing.
- Engine protection.
- Automatic engine starting and stopping.
- Stop / Reset - Manual - Automatic control push buttons.
- Micro-processor based design.
- Configurable via front panel.

b) Status and Fault conditions displayed by LED illumination:

- Fail to start, shutdown.
- High engine temperature.
- Overspeed, shutdown.
- Charge fail, warning.
- Low oil pressure, shutdown.
- Mains/Generator and their contactor status, indication.

TECHNICAL DATA

DIESEL GENERATOR SETS 230/400 V - 50 Hz										
GROUP	MODEL			ES17 D5	ES22 D5	ES28 D5	ES33 D5	ES43 D5	ES68 D5	
	Power Pf. 0,8	Prime	kVA	16,5	22	27.5	33	43	68	
		Standby	kW	13	17,6	22	26	35	54.5	
			kVA	15	20	25	30	40	62	
			kW	12	16	20	24	32	50	
DIESEL ENGINE	Engine Make			Cummins	Cummins	Cummins	Cummins	Cummins	Cummins	
	Model			X1,7 G1	X2,5 G1	X2,5 G2	S3,8 G2	S3,8 G4	S3,8 G7	
	Engine Output (at rated rpm)			kW HP	14,9 20	18,6 25	23,8 32	27 36	38 52	56 76
	Aspiration and Cooling			Natural	Natural	Natural	Natural	Turbocharged	Turbocharged & Aftercooled	
	Cubic Capacity			Litre	1,7	2,5	2,5	3,8	3,8	3,8
	Cylinders - Build				2 - in line	3 - in line	3 - in line	4 - in line	4 - in line	4 - in line
	Engine Speed			rpm	1500	1500	1500	1500	1500	1500
	Bore and Stroke			mmxmm	91,4 x 127	91,4 x 127	91,4 x 127	97 x 128	97 x 128	97 x 128
	Compression Ratio				18,5:1	18,5:1	18,5:1	17,5:1	17,5:1	17,5:1
	Governor				Mechanical"A2"	Mechanical"A2"	Mechanical"A2"	Mechanical"A2"	Mechanical"A2"	Mechanical"A2"
	Fuel Injection System				Direct	Direct	Direct	Direct	Direct	Direct
	Fuel Consumption at % 75 load			Lt/hr	2,8	3,5	4.5	5.6	7.5	10.3
	Fuel Tank Capacity			Litre	45	45	45	150	150	150
	Engine Oil Capacity			Litre	5	6,5	6,5	9	9	9
	Engine Water Capacity			Litre	6	7,5	7,5	11	11	11
Exhaust Pipe Diameter			mm	50	50	50	75	75	75	
ALTERNATOR	Make (brand)			Stamford	Stamford	Stamford	Stamford	Stamford	Stamford	
	No. Phases				3 phase	3 phase	3 phase	3 phase	3 phase	
	Class of Insulation				H	H	H	H	H	
	Voltage Regulation				± 1,5 %	± 1,5 %	± 1,5 %	± 1,5 %	± 1,5 %	

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Open Types











Dimensions (length x width x height)	mm	1200x730x1210	1400x730x1210	1400x730x1210	1800x760x1280	1800x760x1230	1800x760x1320
Dry Weight	kg	410	490	490	700	750	800

Sound Attenuated Types

Canopy Model		ASG 1			ASG 2		
Dimensions (length x width x height)	mm	2050x810x1280			2150x 970x1630		
Dry Weight	kg	720	755	790	1165	1215	1265

Manufacturer reserves the right to make changes in model, technical specifications, colour, equipment and accessories without prior notice.


OPTIONAL EQUIPMENTS

-  Fuel - water separator filter.
-  Remote radiator (except ES68 D5).
-  Manual fuel filling system.
-  Charge voltmeter.
-  Charge ammeter.
-  Auto Mains Failure & Transfer switch panel.
-  4 pole transfer switch panel.
-  Residential type silencer.
-  Enclosure, soundproof canopy.
-  Trailer.



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