



**DESIGN SPECIFICATIONS**

High quality, reliable and complete power unit.  
 Compact design  
 Easy start and maintenance.  
 Every generating set is subject to a comprehensive test Programme which includes full load testing and checking and providing all control and safety shut down functions testing.  
 Fully engineered with a wide range of options and accessories, Canopy, soundproof canopy and on road trailer.



400 / 230 V - 50Hz			AC 39	AC 55	AC 66	AC 70	AC 90
Power Factor 0.8	Standby	kVA	39	55	66	70	90
	Prime	kVA	35	50	60	63	80

**Standby:** Continuous running at variable load for duration of an emergency. No overload is permitted on these ratings. In accordance with BS 5514, ISO 3046.

**Prime:** Continuous running at variable load for unlimited periods with 10% overload available for 1 hour in any 12 hour period. In accordance with ISO 8528, ISO 3046.

**ENGINE**

CUMMINS heavy duty diesel engine.  
 Four cycle, water cooled, turbo charged.  
 Mechanical governor control system. Electronic Governor on AC 90  
 Direct injection fuel system.  
 12 V.D.C.starter and charge alternator.  
 Replaceable cartridge type air filter,fuel filter and oil filter.  
 Cooling radiator and fan.  
 Flexible fuel connection hoses and sump oil drain valve.  
 Industrial capacity exhaust silencer and steel bellows.  
 Jacket water heater (automatic models).  
 Starter battery (with lead acid) including Rack and Cables.  
 Manual and circuit diagram documents.

**ALTERNATOR**

**Newage Stamford** brushless single bearing system, 4 Pole.  
 Insulation class H.  
 Standard degree of protection IP21 .  
 Self-exciting and self-regulating.  
 Stator windings with 2 /3 pitch for improved harmonics.  
 Impregnation with tropicalized epoxy varnished.  
 Solid State Automatic Voltage Regulator

**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 an intergral fuel tank.  
 The generating set can be lifted or carefully pushed / pulled by the base fra  
 Dial type fuel gauge and drain plug on the fuel tank.  
 Forklift pockets within base frame.

**CANOPY**

All canopy parts are designed with modular principles.  
 Without welding assembly.  
 To enable for lifting, easy maintenance and operation.  
 canopies are painted by electrostatic polyester powder paint.  
 Exhaust silencer is protected against environmental influences .  
 Emergency stop push button is installed outside of canopy .  
 Modular canopy can also be installed at a later date.  
 Easy maintenance and operation.  
 Easy lifting and moving.  
 Thermally insulated engine exhaust system.

**QUALITY STANDARDS**

The equipment meets the following standards: ISO 3046, VDE 0530, BS 4999, BS 5000, IEC 34-1. The generating set is manufactured by a full accredited ISO 9001 NQA

**CONTROL SYSTEMS**

Deep Sea Control, Supervision and Protection Panel Mounted on genset base frame. The control panel is equipped as follows;

**Auto Mains Failure Control Panel P300**

Control panel requirements.  
 Control with DSE 720 Features.  
 Static Battery Charger.  
 Emergency stop-push button.

**Generating Set Control Module DSE 720 Features**

Module is used to monitor a mains supply and automatically start a standby generator set.  
 Scrolling Digital LCD Panel.  
 Front panel configuration of timers and alarm trip points.  
 Easy push button control.  
 STOP / RESET - MANUAL - AUTO - TEST - START  
 LCD display scroll push button.

**Metering via LCD Display**

Generator Volt (F-N).	- Engine oil pressure.
Generator Ampere (L1, L2,	- Engine speed,
Generator Frequency (Hz).	- Engine hours run.
Mains Volts (F-F/F-N).	- Plant battery volt.
Engine temperature.	

**Alarms**

Over current.	- High engine temperature.
Over Speed.	- Low battery volt.
Under / Over mains volt.	- Charge fail.
Under / Over mains frequency.	- Start failure.
Low oil pressure.	- Emergency stop.

**LED Indications**

Mains available.	- Generator available.
Mains on load.	- Generator on load.

**Power Outlet-Terminal Board Mounted on the Genset Base Frame.**



**DSE 720**

## TECHNICAL DATA

### DIESEL GENERATING SETS 400 / 230 V - 50Hz

MODEL		AC39			AC55			AC66			AC70			AC90				
Power Pf. 0.8	Standby	KVA	39			55			66			70			90			
		Kw	31			44			52.8			56			72			
	Prime	Kva	35			50			60			63			80			
		Kw	28			40			48			50.4			64			
Engine Make		Cummins			Cummins			Cummins			Cummins			Cummins				
Model		4 B 3.3-G1			4 BT 3.3-G2			4 BT 3.9-G4			4 BT 3.9-G4			4 BT 3.9-G3				
Gross Engine Power Output		kWm		36		51		64		64		81		81				
(at rated rpm)		hp		48		68		85		85		108		108				
Aspiration and Cooling		Natural Aspiration			Turbo Charged			Turbo Charged			Turbo Charged			Turbo After Cooled				
Cubic Capacity		Litre		3.3		3.3		3.92		3.92		3.92		3.92				
Cylinders and Build		4 - In Line			4 - In Line			4 - In Line			4 - In Line			4 - In Line				
Engine Rated Speed		rpm		1500		1500		1500		1500		1500		1500				
Compression Ratio		18.2:1			17:01			16.5:1			16.5:1			16.5:1				
Bore and Stroke		mm x mm		95 x 115		95 x 115		102 x 120		102 x 120		102 x 120		102 x 120				
Governor Type		Mechanical			Mechanical			Mechanical			Mechanical			Mechanical				
Fuel Consumption		Load		1/2	3/4	Full	1/2	3/4	Full	1/2	3/4	Full	1/2	3/4	Full			
		L/h.		4.5	6.2	8.4	5.9	8.4	11.5	8	11	15	8	11	15	9	14	18
Fuel Tank Capacity		Litre		160			160			160			160					
Total Oil Capacity		Litre		7.5			8			11			11					
Coolant capacity (Engine and Radiator)		Litre		12			15			19.2			19.2					
Air Intake Engine		m <sup>3</sup> / min.		2.1			3			4.3			4.3					
Exhaust Gas Flow		m <sup>3</sup> / min.		6.5			8.2			11			11					
Exhaust Gas Temperature		°C		450			475			518			518					
Alternator Voltage regulation		Plus / Minus %1.5			Plus / Minus %1.5			Plus / Minus %1.5			Plus / Minus %1.5			Plus / Minus %1.5				

All Sets Come With Battery Charger and Engine Heater as Standard.

#### OPEN TYPES

Dimensions (Length x width x height)	m.	1.86 x 0.92 x 1.32					
Dry Weight	kg.	680	785	885	895	940	

#### SOUND ATTENUATED TYPES

		ASM 4					
Dimensions (Length x width x height)	m.	2.5 x 0.97 x 1.57					
Dry Weight	kg.	1070	1195	1245	1260	1340	

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

## OPTIONAL EQUIPMENTS

#### Engine

Electronic Governor  
Remote Radiator

#### Alternator

3 Pole Output Circuit Breaker  
Oversized Alternator  
Anti-Condensation Heater

#### Panel

Transfer Switch  
Auto Mains Failure  
Earth Fault



#### Accessories

Bulk Fuel Tank  
Automatic Fuel Filling Systems  
Fuel Water Separator  
Low Fuel Alarm  
Residential Silencer  
Trailer  
Tool-Kit for maintenance

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