



**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 250	ACQ 275	ACQ 350	AC 400	AC 440
Power Factor 0.8	Standby	kVA	250	275	350	400	440
	Prime	kVA	225	250	300	356	400

**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. Power ratings based on a 40° (104°F) ambient temperature reference.

**ENGINE**

CUMMINS heavy duty diesel engine.  
 Four cycle, water cooled, turbo charged.  
 Electronic Governor Control system.  
 Direct injection fuel system.  
 Replacement wet type cylinder liners.  
 24 Volt D.C.starter and charge alternator.  
 Replacement fuel filter, oil filter and dry element air filter  
 Cooling radiator and fan.  
 Starter battery (with lead acid) including Rack and Cables.  
 Flexible fuel connection hoses and manual sump oil drain valve.  
 Industrial capacity exhaust silencer and steel bellows.  
 Jacket water heater (at automatic models).  
 Operation manuals and circuit diagrams 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.

**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 .  
 Easy maintenance and operation.  
 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 P2020**  
 Control with DSE model 5220 module..  
 Static Battery Charger.  
 Emergency stop-push button.  
**Generating Set Control Module DSE 5220 Features**  
 Automatic controls generating set, start and shutdown.  
 Front Panel programming of the module settings.  
 Remote communication via RS 232 port or RS 485 2 "modbus" output.  
 Scrolling digital LCD display.  
 Event logging of shutdown alarms.  
 Monitoring AC mains supply.  
 Provides signal to change over switch gear.  
 Easy pushbutton control.  
 Stop / Reset - Auto - Manual - Test - Start.  
**Metering via LCD Display**  
 Generator Volt (F-F / F-N). - Engine oil pressure (PSI & Bar)  
 Generator Ampere (L1, L2, - Engine Temperature (°C & °F)  
 Generator Frequency (Hz). - Engine Speed RPM  
 Generator kVA - Engine hours run.  
 Generator kW - Plant battery volts.  
 Generator Cos φ - Mains Volts (F - F / F - N).  
 Mains frequency (Hz).

**Alarms**

Under / Over generator vol - Low coolant level  
 Under / Over generator freque ncy - Fail to start  
 Over current - fail to stop  
 Low oil pressure. - Emergency stop.  
 High engine temperature - Charge fail  
 Under / Over speed. - Low / High batteries volts.  
 Under / Over mains volts. - Can data fail.  
 Under / over mains frequency. - Can ECU fail.

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



**DSE 720**

## TECHNICAL DATA

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

MODEL		AC 250			ACQ275			ACQ350			AC 400			AC440					
Power	Standby	kVA	250			275			350			400			440				
		Kw	200			220			280			320			352				
Pf. 0.8	Prime	Kva	225			250			300			356			400				
		Kw	180			200			240			284			320				
Engine Make		Cummins			Cummins			Cummins			Cummins			Cummins					
Model		6 CTA 8.3 G 2			QLS9 - G3			QLS9 - G5			NTA 855 G4			NTA 855 G7					
Gross Engine Power Output		kWm			231			257			310			351			391		
(at rated rpm)		hp			310			345			415			470			525		
Aspiration and Cooling		Turbo Charged - Charge Cooled			Turbo Charged - Charge Cooled			Turbo Charged - Charge Cooled			Turbo After Cooled			Turbo After Cooled					
Cubic Capacity		Litre			8.3			8.8			8.8			14			14		
Cylinders and Build		6 - In Line			6 - In Line			6 - In Line			6 - In Line			6 - In Line					
Engine Rated Speed		rpm			1500			1500			1500			1500					
Compression Ratio		16.7:1			16.8:1			16.1:1			14.0:1			14.0:1					
Bore and Stroke		mm x mm			114 x 135			114 x 145			114 x 145			140 x 152			140 x 152		
Governor Type		Electronic			Electronic			Electronic			Electronic			Electronic					
Fuel Consumption		Load	1/2	3/4	Full	1/2	3/4	Full	1/2	3/4	Full	1/2	3/4	Full	1/2	3/4	Full		
			L/h.	25	38	51.8	34	49	59	31	46	63	39	57	76	45	65	88	
Fuel Tank Capacity		Litre			370			420			420			420					
Total Oil Capacity		Litre			23.8			26.5			26.5			38.6			36		
Coolant capacity (Engine and Radiatc		Litre			40			33			33			70			85		
Air Intake Engine		m3 / min.			15.3			19.5			20.5			24.5			31.5		
Exhaust Gas Flow		m3 / min.			41			32			32			67.6			84		
Exhaust Gas Temperature		0'C			565			585			560			524			553		
Alternator Voltage regulation		Plus / Minus %1			Plus / Minus %1			Plus / Minus %1			Plus / Minus %1			Plus / Minus %1					

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

#### OPEN TYPES

Dimensions (Length x width x height)	m.	2.4 x 1.13 x 1.73	3 x 1.15 x 1.9	3 x 1.15 x 1.9	3.23 x 1.1 x 2.2	3.23 x 1.1 x 2.2
Dry Weight	kg.	1960	2850	3180	3250	3280

#### SOUND ATTENUATED TYPES

		ASM 7	AK 70	AK 80
Dimensions (Length x width x height)	m.	4 x 1.21 x 2.05	4.55 x 1.46 x 2.27	4.9 x 1.55 x 2.52
Dry Weight	kg.	2700	4150	4540

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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