

**DESIGN SPECIFICATIONS**

- ✓ High quality, reliable and complete power unit
- ✓ Compact design
- ✓ Easy start and maintenance possibility
- ✓ Every generating set is subjected to a comprehensive test programme which includes full load testing and checking and providing of all control and safety shut down functions testing
- ✓ Full engineered with a wide range of options and accessories:
- ✓ Container or soundproof container and mobile units



231/400 V-50 Hz	Generating Set Model		ACQ 720	ACQ 830	ACQ 881
Power Pf. 0,8	Standby	kVA	720	830	880
	Prime	kVA	650	750	800

Standby: Continuous running at variable load for duration of an emergency. No overload is permitted on these ratings. In accordance with ISO 3046, BS 5514.  
 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, BS 5514.  
 Power ratings based on a 40 °C (104 °F) ambient temperature reference. Contact us for the other running periods.

**STANDARD GENSET SPECIFICATIONS**

**ENGINE**

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

**ALTERNATOR**

- Brushless, single bearing system, 4 poles
- Insulation class H
- Standart degree of protection IP21
- Self-exciting and self-regulating
- Solid state Automatic Voltage Regulator
- Impregnation with tropicalised epoxy varnish
- Stator windings with 2/3 pitch for improved harmonics

**CHASSIS**

- The complete generating set is mounted as whole on a heavy-duty steel base frame. Antivibration pads are fixed between the engine/alternator feet and the base frame
- The generating set can be lifted or carefully pushed / pulled by the base frame
- Lifting eyes allow easy transportation by a crain

**SILENT TYPE CONTAINER**

- 20' Container
- Sandwich mineral wool attenuation
- Large lockable doors
- Acoustic baffles for the air inlet and outlet
- Steel internal floor
- Residential silencer
- White paint finishing (RAL 9010)

**QUALITY STANDARDS**

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



**CONTROL SYSTEM**

Control supervision and protection panel is mounted on the genset base frame. The control panel is equipped as follows:

**Control Modules Common Features**

- Automatic controls generating set, start and shutdown
- Front panel programming of the module settings
- Remote communication via RS 232 port or RS 485 "modbus" output.
- Scrolling digital LCD display
- Event logging of shutdown alarms

**Common Metering via LCD display**

- Generator Volts (F-F / F-N)
- Generator Amperes (L1, L2, L3)
- Generator Frequency (Hz)
- Generator kVA
- Generator kW
- Generator Cos
- Engine oil pressure (PSI & Bar)
- Engine Temperature (°C & °F)
- Engine speed RPM
- Engine hours run
- Plant battery volts

**Common Alarms**

- Under / over generator volts
- Under / over generator frequency
- Over current
- Low oil pressure
- High engine temperature
- Under / over speed
- Low coolant level
- Fail to start
- Fail to stop
- Emergency Stop
- Charge fail
- Low / high battery volts

**1 - Auto Mains Failure Control System P 2020**

- Control with DSE model 5220 module
- Static battery charger
- Emergency stop push button

**Additional Features**

- Monitoring AC mains supply
- Provides signal to change over switch gear
- Easy push button control
- Stop / Reset - Auto - Manual - Test - Start

**Additional Metering**

- Mains volts (F-F / F-N)
- Mains Frequency (Hz)

**Additional Alarms**

- Under / over mains volts
- Under / over mains frequency
- Can data fail
- Can ECU fail

**2 - Auto Start Control System P 2010**

- Control with DSE model 5010 module
- Emergency stop push button

**Additional Features**

- Provides signal to load transfer
- Easy push button control
- Stop / Reset - Auto - Manual - Test - Start



DSE 5220



DSE 5210

## TECHNICAL DATA

### DIESEL GENERATING SETS 231/400 V - 50 Hz

GROUP	MODEL			ACQ 720			ACQ 830			ACQ 881		
	Power Pf. 0,8	Standby	kVA	720			830			880		
			kW	576			664			704		
	Prime	kVA	650			750			800			
		kW	520			600			640			
DIESEL ENGINE	Engine make			Cummins			Cummins			Cummins		
	Model			QSK 23 G1			QSK 23 G2			QSK 23 G3		
	Gross Engine Power Output		kWm	634			724			768		
	(at rated rpm)		hp	850			970			1030		
	Aspiration and Air Cooling			Turbo charged and After cooled			Turbo charged and After cooled			Turbo charged and After cooled		
	Cubic Capacity		Litres	23,15			23,15			23,15		
	Cylinders and Build			6 Inline			6 Inline			6 Inline		
	Engine Rated Speed		rpm	1500			1500			1500		
	Bore and Stroke		mmxmm	170x170			170x170			170x170		
	Compression Ratio			16,0:1			16,0:1			16,0:1		
	Governor			Electronic			Electronic			Electronic		
	Fuel Consumption		Load	1/2	3/4	Full	1/2	3/4	Full	1/2	3/4	Full
				L/h	71	102	134	79	117	151	85	121
	Fuel Tank Capacity		Litres	1000			1000			1000		
	Total Oil Capacity		Litres	103			103			103		
	Coolant Capacity (radiator and Engine)		Litres	150			150			150		
	Air Intake - Engine		m <sup>3</sup> /min	44			49			53		
	Exhaust Gas Flow		m <sup>3</sup> /min	129			140			148		
	Exhaust Gas Temperature		°C	563			550			532		
	Heat Radiated to Ambient		kW	71			67			71		
Engine derating - altitude			3.4% per 300m above 2500m			3.5% per 300m above 1200m			3.4% per 300m above 1200m			
Engine derating - temperature			20% per 10°C above 40°C			20% per 10°C above 40°C			20% per 10°C above 40°C			
Alternator Voltage Regulation			± 1 %			± 1 %			± 1 %			

AT.27.07/05/MAF.5085

#### Open Type
















Dimensions (length x width x height)	mm	4200x1700x2200	4200x1700x2200	4200x1700x2200
Dry weight	kg	5560	5590	5860

#### Sound Attenuated Type

Container Model	SC 20			
Dimensions (length x width x height)	mm	6058x2438x2591		
Dry Weight	kg	10240	10524	10540

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

## OPTIONAL EQUIPMENTS

-  Fuel-water separator filter
-  Automatic fuel filling system
-  Residential silencer
-  Enclosure or sound proof container
-  Low fuel level alarm
-  Charge voltmeter
-  Charge ammeter
-  Anti condensation heater for alternator
-  3 pole alternator circuit breaker (only for automatic models)
-  Automatic Synchronising and power control system
-  Tool Kit
-  Main fuel tank
-  Over sized alternator
-  Automatic transfer switch by contactor or motorized circuit breaker
-  Trailer



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