

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: Canopy, soundproof canopy and mobile units.



400 / 230 V - 50 Hz	Generating Set Model		ACQ 515	ACQ 550	AC 550	AC 650	AC 703	AC 825
Power Pf. 0,8	Standby	kVA	515	550	550	650	703	825
	Prime	kVA	460	500	500	590	638	750

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. Contact us for the other running periods. Power ratings based on a 40 °C (104 °F) ambient temperature reference.

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.
- Replaceable wet type cylinder liners.
- 4 Valves per cylinder.
- 24 V D.C. starter and charge alternator.
- Replaceable 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 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, flexible disc, 4 poles.
- Insulation class H.
- Standard degree of protection IP21.
- Self - exciting, self regulating.
- Stator windings with 2 / 3 pitch for improved harmonics.
- Impregnation with tropicalised epoxy varnish.
- 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.
- The generating set can be lifted or carefully pushed / pulled by the base frame.
- Dial type fuel gauge and drain plug on the fuel tank.
- Lifting eyes allow easy transportation by a crane.

CANOPY

- All canopy parts are designed with modular principles.
- Without welding assembly.
- Doors on each side.
- All metal canopy parts are painted by electrostatic polyester powder paint.
- Exhaust silencer manufactured from aluminium plated steel.
- Thermally insulated engine exhaust system.
- Emergency stop push button is installed on canopy.
- Easy lifting and moving.
- Easy maintenance and operation.

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:

Auto Mains Failure Control System P2020:

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

Control Module Features: DSE Model 5220

- 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.
- Monitoring AC mains supply.
- Provides signal to change over switchgear.
- Easy pushbutton control.

Stop / Reset - Auto - Manual - Test - Start.

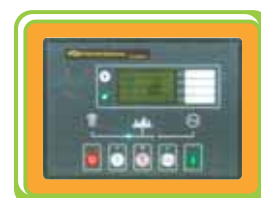
Metering via LCD Display:

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

Alarms:

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

2. Power Outlet Terminal Board Mounted on the Genset Base Frame.



DSE 5220

TECHNICAL DATA

DIESEL GENERATING SETS 400 / 230 V - 50 Hz

GROUP	MODEL			ACQ 515	ACQ 550	AC 550	AC 650	AC 703	AC 825										
	Power	Standby	kVA	515	550	550	650	703	825										
Pf. 0,8	Prime		kW	412	440	440	520	562	660										
			kVA	460	500	500	590	638	750										
		kW	368	400	400	472	510	600											
DIESEL ENGINE	Engine Make			Cummins	Cummins	Cummins	Cummins	Cummins	Cummins										
	Model			QSX 15 G6	QSX 15 G8	KTA 19 G4	KTA 19 G8	VTA 28 G5	VTA 28 G6										
	Gross Engine Power Output (at rated rpm)		kWm	459	500	504	575	612	722										
			hp	615	670	675	771	820	968										
	Air Cooling			Turbo - CAC*	Turbo - CAC*	Turbo AC*	Turbo AC*	Turbo AC*	Turbo AC*										
	Cubic Capacity			Litre	15	15	18,9	18,9	28	28									
	Cylinders and Build			6 - in line	6 - in line	6 - in line	6 - in line	12 - V 40°	12 - V 40°										
	Engine Rated Speed			rpm	1500	1500	1500	1500	1500										
	Bore and Stroke			mm. x mm.	137 x 169	137 x 169	159 x 159	159 x 159	140 x 152	140 x 152									
	Compression Ratio				17,0 : 1	17,0 : 1	13,9 : 1	13,9 : 1	13,1 : 1	13,1 : 1									
	Governor Type				Electronic	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.	51,3	74,3	95,9	54,7	78,7	103	57	82	107	60	95	120	73	104	140	82
	Fuel Tank Capacity			Litre	620	620	550	550	900	900									
	Total Oil Capacity			Litre	91	91	50	50	83	83									
	Coolant Capacity (raditor and engine)			Litre	90	90	92	135	176	176									
	Radiator Cooling Air			m ³ / min.	690	690	780	780	850	850									
	Air Intake Engine			m ³ / min.	33	36	35	40	53	55									
	Exhaust Gas Flow			m ³ / min.	83	82	96	107	123	132									
	Exhaust Gas Temperature			°C	515	526	557	549	507	489									
Heat Radiated to Ambient			kW	35	40	72	56	94	90										
Alternator Voltage Regulation				± 1 %	± 1 %	± 1 %	± 1 %	± 1 %	± 1 %										

* AC: Aftercooled. * CAC: Charge air cooled.

OPEN TYPE							
Dimensions (length x width x height)	m.	3,6 x 1,3 x 2,0	3,6 x 1,3 x 2,0	3,43 x 1,3 x 2,12	3,43 x 1,3 x 2,2	3,9 x 1,3 x 2,16	4,0 x 1,3 x 2,16
Dry weight	kg.	4485	4485	4230	4620	5590	5890

SOUND ATTENUATED TYPE		AK 80	AS 710				
Dimensions (length x width x height)	m.	4,9 x 1,51 x 2,52	5,54 x 1,66 x 2,63				
Fuel Tank Capacity	Litre	850	1080				
Dry Weight	kg.	5900	5900	5850	6200	7190	7480

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

OPTIONAL EQUIPMENTS

- Diesel Engine**
- Remote Radiator (except ACQ 515 and ACQ 550).
- Oil heater.
- Alternator**
- 3 pole output circuit breaker.
- Oversized alternator.
- Anti - condensation heater.
- Panel**
- Charge ammeter.
- Transfer switch 3 pole.
- Transfer switch 4 pole.
- Automatic synchronising and power control system.
- Earth fault, single set.
- Remote annunciator.



- Accessories**
- Bulk fuel tank.
- Automatic fuel filling system.
- Fuel water separator filter.
- Manual fuel filling system.
- Low fuel level alarm.
- Residential silencer.
- Enclosure container.
- Sound proof container.
- Trailer.
- Manual oil drain pump.
- Tool kit for maintenance.

AKSA makes its sound - attenuated generator sets' sound pressure level tests in accordance with directive 2000 / 14 / EC validation of the sound level test has been approved by the notified body Sztest.

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