

DESIGN SPECIFICATIONS

- ✓ High quality, reliable, long life 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: Electrical, mechanical, soundproof canopy and mobile units



231/400 V-50 Hz	Generating Set Model		AC 115	AC 150	AC 160	AC 200
Power Pf. 0,8	Standby	kVA	115	150	160	200
	Prime	kVA	105	135	140	180

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 ambient temperature reference. 35 °C for AC 160

STANDARD GENSET SPECIFICATIONS

ENGINE

- CUMMINS heavy duty diesel engine
- Four cycle, water cooled, turbo charged
- Mechanical Governor Control System
- Electronic Governor on AC 160
- Direct injection fuel system
- Replaceable cylinder liners
- 12 Vdc 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 sump oil drain valve
- Industrial capacity exhaust silencer and steel bellow
- 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
- 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
- Base frame design incorporates an integral fuel tank
- 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
- Forklift pockets within base frame

CANOPY

- All canopy parts are designed with modular principles
- Without welding assembly
- All metal canopy parts are painted by electrostatic polyester powder paint
- Exhaust silencer is protected against environment influences
- Thermally insulated engine exhaust system
- Emergency stop push button is installed outside of 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 generator set is manufactured by a full accredited NQA ISO 9001.



CONTROL SYSTEMS

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

Common Instruments

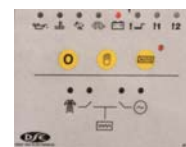
- 3 Ammeters
- 1 hours run meter
- 1 volt - frequency meter (by LED) and selector switch
- Engine oil pressure gauge
- Engine coolant temperature gauge
- Emergency stop push button

1 - Auto Start Control System - P500

- Control with DSE 704 module
- Static battery charger
- Thermally delayed over load protection
- Engine water heater control

a) DSE 704 Module Features

- Three phases mains sensing
- Engine protection
- Automatic engine starting and stopping
- Simple push-button controlled operation Off / Auto / Manual / Test / Program modes
- Micro processor based design
- Configurable via front panel
- Configurable timer settings
- Adjustable mains fail voltage level
- Mains / Generator, charge - over contactor control
- External remote start input



DSE 704

b) Status and fault conditions displayed by LED illumination:

- High engine temperature, shutdown
- Low oil pressure, shutdown
- Over speed, shutdown
- Charge alternator fault, warning
- Indications for mains / generator and their contactor status

2 - Manual Start Control Panel - ME 40

Control with DSE 701 Module

a) DSE 701 Module Features

- Engine supervision and protection
- Key switch Off / Manual start positions
- Manual start push button

a) Module Emergency LED's

- High engine temperature, shutdown
- Low oil pressure, shutdown
- Over speed, shutdown
- Charge failure, warning

2 - 1 Alternator Circuit Breaker (Manual Model)



DSE 701

TECHNICAL DATA

DIESEL GENERATING SETS 231/400 V - 50 Hz															
GROUP	MODEL			AC 115			AC 150			AC 160			AC 200		
	Power Pf. 0,8	Standby	kVA	115			150			160			200		
			kW	92			120			128			160		
		Prime	kVA	105			135			140			180		
kW	84			108			112			144					
DIESEL ENGINE	Engine make			Cummins			Cummins			Cummins			Cummins		
	Model			6 BT 5,9 G 6			6 CT 8,3 G 2			6 BTA 5,9 G 2			6 CTA 8,3G 2		
	Gross Engine Power Output (at rated rpm)		kW/m	107			135			145			180		
			hp	143			181			194			241		
	Air Cooling			Turbo charged			Turbo charged			Turbo After cooled			Turbo After cooled		
	Cubic Capacity		Litre	5,88			8,3			5,88			8,3		
	Cylinders and Build			6 - in line			6 - in line			6 - in line			6 - in line		
	Rated Engine Speed		rpm	1500			1500			1500			1500		
	Bore and Stroke		mmxmm	102 x 120			114 x 135			102 x 120			114 x 135		
	Compression Ratio			16,5:1			16,8:1			16,5:1			16,8:1		
	Governor Type			Mechanical			Mechanical			Electronic			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/hr	12	17,8	24	15	22	30	17	24	31	20	30	40
	Fuel Tank Capacity		Litre	220			370			220			370		
	Total Oil Capacity		Litre	14			23,8			16,41			23,8		
	Coolant Capacity (radiator and Engine)		Litre	23			36			25,61			36		
	Radiator Cooling Air		m³/min	90			210			138			186		
	Air Intake - Engine		m³/min	5,6			9,5			9			11,5		
	Exhaust Gas Flow		m³/min	17			25,3			25,2			30		
	Exhaust Gas Temperature		°C	577			521			591			536		
	Heat Radiated to Ambient		kW	14			18			22			24		
	Engine derating - altitude			4% per 300m above 1000m			4% per 300m above 1525m			4% per 300m above 1000m			4% per 300m above 1525m		
	Engine derating - temperature			2% per 11°C above 40°C			2% per 11°C above 40°C			15% per 10°C above 35°C			2% per 11°C above 40°C		
Alternator Voltage Regulation			± 1 %			± 1 %			± 1 %			± 1 %			

AT 27.07.05/IMP.5082

Open Type

Dimensions (length x width x height)	mm	2150x1000x1370	2310x1100x1600	2150x1000x1370	2310x1100x1600
Dry weight	kg	1140	1445	1350	1560

Sound Attenuated Type

		ASM5	ASM6	ASM5	ASM6
Canopy Model					
Dimensions (length x width x height)	mm	3100x1000x1690	3250x1100x1840	3100x1000x1690	3250x1100x1840
Weight	kg	1600	2115	1810	2175

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

OPTIONAL EQUIPMENTS

- Electronic governor control system (except AC 160)
- Fuel-water separator filter
- Automatic fuel filling system
- Engine oil heater
- Manual sump oil drain pump
- Residential silencer
- Low fuel level alarm
- Charge voltmeter
- Charge ammeter
- Anti condensation heater for alternator
- Main fuel tank
- 3 pole alternator circuit breaker (only for automatic models)
- 4 pole contactor
- Tool Kit
- Over sized alternator
- Automatic transfer switch by contactor or motorized circuit breaker



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