



## IDJ50D

### IDEA DIESEL GENERATING SET TECHNICAL SPECIFICATIONS



ELECTRICAL			
FREQUENCY	VOLTAGE	PRIME	STAND-BY
50 Hz	400/230 V	45 kVA / 36 kW	50 kVA / 40 kW
60 Hz	440/255 V	50 kVA / 40 kW	55 kVA / 44 kW
Rated Speed	1500 RPM - 50 Hz / 1800 RPM - 60 Hz		
Phase	3		
Power Factor	0.8		

**Prime :** This rating is for the supply of continuous electrical power at variable load. There is no limitation on the annual hours in operation and 10% overload power can be supplied for 1 hour in 12.

**Stand-by :** This rating is for the supply of continuous electrical power at variable load , in the event of utility power failure.No overload is permitted.

WEIGHT AND DIMENSIONS				
		OPEN	CANOPY	
Length	mm	1830	2470	
Width	mm	900	900	
Height	mm	1300	1700	
Weight	kg	880	1095	
Sound Pressure (LpA) - 7 mt	dB	n/a	50 Hz	60 Hz
			65	68

## IDJ50D

ENGINE			
		50 Hz	60 Hz
Output Rating	kW	42	46
Manufacturer and Model		DHI K4100ZD1	
Fuel		Diesel	
Injection		Swirl	
Aspiration		Turbocharged	
Cylinders		4	
Bore and Stroke	mm	100 x 115	
Displacement	lt	3.61	
Cooling		Water	
Engine Oil Specification		SAE 15W40	
Compression Ratio		19:1	
Engine Oil Capacity	lt	14	
Coolant Capacity (incl.radiator)	lt	18	
Governor		Mechanical	
Air Filter		Dry element	
Fuel Consumption		50 Hz	60 Hz
100 % Load	lt/h	12.1	13.6
75 % Load	lt/h	9.1	10.2
50 % Load	lt/h	6.2	6.8

EXHAUST SYSTEM			
Maximum Temperature	°C	540	551
Exhaust Gas Flow	m <sup>3</sup> /min	7.7	9.5
Maximum Allowed Back Pressure	kPA	10	15
Exhaust Flange Size (Internal Dia.)	mm	60	

AIR SYSTEM			
Intake Air Flow	m <sup>3</sup> /min	3.5	3.9
Total Cooling Air Flow	m <sup>3</sup> /min	53	70

STARTING SYSTEM			
Starter Motor	kW	3	
Battery Capacity	Ah	60	
Auxiliary Voltage	V	12	

FUEL SYSTEM			
Diesel Specification		EN590	
Fuel Tank Capacity	lt	100	

ALTERNATOR			
Poles		4 pole	
Winding Connections		Star	
Insulation		Class H	
Enclosure		IP23	
Exciter System		Self regulating Brushless	
Voltage Regulator		AVR	
Steady State Voltage Regulation		± 1 %	
Bearing		Single bearing sealed	
Coupling		Flexible disc	
Cooling		Direct drive centrifugal blower fan	

## CONTROL PANEL - IDJ309

The IDJ309 is a comprehensive AMF unit for single genset standby or dual genset mutual standby operations. The unit provides a comprehensive set of digitally adjustable timers, threshold levels, input and output configurations, operating sequences and engine types. All programs may be modified via front panel pushbuttons, and do not require an external unit. Last 100 faults are stored in the event log file. The event log includes not only the date-time information, but also a comprehensive list of measured genset parameters at the time that the fault has occurred.



<b>CONTROL PANEL FEATURES</b>	
<b>Alarm and Shutdown functions</b>	
High Coolant Temperature	Alarm & Shutdown
Low Oil Pressure	Alarm & Shutdown
Battery High / Low Voltage	Alarm
Battery Charger Alternator Failure	Alarm
Overspeed / Underspeed	Alarm & Shutdown
Failure to Start	Alarm & Shutdown
Low Coolant Level	Alarm & Shutdown
Stop Fault	Alarm & Shutdown
Low Fuel Level	Alarm
Service Required	Alarm
Generator High / Low Voltage	Alarm & Shutdown
Generator High / Low Frequency	Alarm & Shutdown
Symmetry between Phases	Alarm & Shutdown
Over Current	Alarm & Shutdown
Rectifier Fail	Alarm
ECU failure	Alarm
<b>Measure and Monitor functions</b>	
Total Run Hour	Coolant Temperature
kW meter - Generator	Oil Pressure
Service Indicator	Fuel Level
Phase to Phase Voltage - Mains	Battery Voltage
Phase to Neutral Voltage - Mains	Engine RPM
Phase to Phase Voltage - Generator	Battery Charge Alternator Voltage
Phase to Neutral Voltage - Gen.	Frequency - Generator & Mains
Phase current - Generator	Power Factor - Generator
<b>Other functions</b>	
Events History	Programmable Timer
External Start Capability	Multi Lingual
Start Restriction Program	Lamp test
Mains Failure Start	Remote Monitoring
Test Run Start (On load & off Load)	Manual Override
RS 232 Serial Port	Remote Programming

GENERATOR FEATURES	STANDARD		OPTIONAL
	MANUAL	AUTOMATIC	
<b>ENGINE</b>			
Engine		●	X
Cooling Pack		●	X
Tropical Radiator		X	●
Heavy Duty Air Filter		X	●
Electronic Governor		X	●
High Coolant Temperature Sender		●	X
Low Oil Pressure Sender		●	X
Low Coolant Level Sender		●	X
Radiator Guards		●	X
Hot Component Guards		●	X
Manual Oil Drain Pump		X	●
Fuel Prefilter		X	●
Water Jacket Heater	X	●	● (Manual)
Industrial Silencer - Open Set		●	X
Residential Silencer - Open Set		X	●
Residential Silencer - Canopy		●	X
Cold start aid		X	●
Remote Radiator		X	●
Trailer		X	●
<b>ELECTRICS</b>			
Alternator		●	X
Circuit Breaker - 3 poles		X	●
Circuit Breaker - 4 poles		X	●
Battery Isolator		X	●
Earth Fault Protection		X	●
Anti condensation Heater		X	●
Optional Voltages		X	●
Class F insulation		X	●
External Stop Button - Canopy		●	X
GSM SMS message sending on fault		X	●
Battery Charger	X	●	● (Manual)
ATS Panel - 3 Poles	X	●	X
ATS Panel - 4 Poles	X	X	● (Automatic)
Synchronisation Panel	X	X	● (Automatic)

● - Available X - Not Available

## REFERENCE STANDARDS

IDEA Generating Sets are CE certified and conform to the following standards ;

- Power according to ISO 3046 and ISO 8528
- EN 12100 , EN 13857 , EN 60204
- 2006/42/CE Machinery Safety
- 2006/95/EC Low Voltage
- 2004/108/CE EMC
- Ambient reference conditions 1000 mbar, 25 °C, 30 % relative humidity ISO8528

All the information in this leaflet is intended for general purposes only. IDEA reserves the right to change the specifications without notice.

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