



# DEM 20D

**DEMMAANS  
DIESEL GENERATING SET  
TECHNICAL SPECIFICATIONS**







ELECTRICAL			
FREQUENCY	VOLTAGE	PRIME	STAND-BY
50 Hz	400/230 V	18 kVA / 14,5 kW	20 kVA / 16 kW
Rated Speed	1500 RPM		
Phase	3		
Power Factor	0,8		

WEIGHT AND DIMENSIONS			
		OPEN	CANOPY
Length	mm	1450	2100
Width	mm	900	900
Height	mm	1200	1450
Weight	kg	535	720

**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.

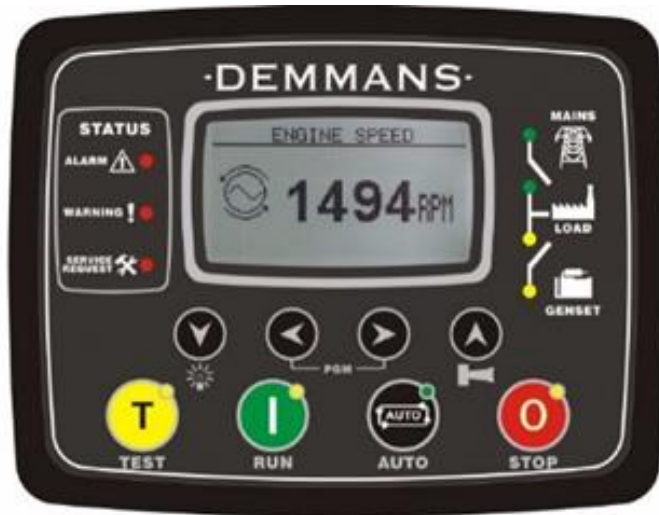
**Stand-by :** This rating is for the supply of continuous electrical power at variable load , in the event of utility power failure. No overload is permitted

ENGINE		
		50 Hz
Output Rating	kW	22
Manufacturer and Model		DHI 490D
Fuel		Diesel
Injection		Direct
Aspiration		Naturally Aspirated
Cylinders		4
Bore and Stroke	mm	90 x 100
Displacement	lt	2,54
Cooling		Water
Engine Oil Specification		SAE 15W40
Compression Ratio		19:1
Engine Oil Capacity	lt	5,5
Coolant Capacity (incl.radiator)	lt	15
Governor		Mechanical
Air Filter		Dry element
Fuel Consumption		50 Hz
100 % Load	lt/h	4,4
75 % Load	lt/h	3,2
50 % Load	lt/h	2,1
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



EXHAUST SYSTEM		
Maximum Temperature	°C	490
Exhaust Gas Flow	m³/min	2,9
Maximum Allowed Back Pressure	kPA	10,2
Exhaust Flange Size (Internal Dia.)	mm	60
AIR SYSTEM		
Intake Air Flow	m³/min	1,1
Total Cooling Air Flow	m³/min	25,2
STARTING SYSTEM		
Starter Motor	kW	3
Battery Capacity	Ah	60
Auxiliary Voltage	V	12
FUEL SYSTEM		
Diesel Specification		EN590
Fuel Tank Capacity	lt	67

## CONTROL PANEL - DMP500



The DMP500 is next generation genset control unit combining multi-functionality and wide communication possibilities together with a reliable and low cost design.

The unit complies and mostly exceeds world's tightest safety, EMC, vibration and environmental standards for the industrial category. Software features are complete with easy firmware upgrade process through USB port. The Windows based PC software allows monitoring and programming through USB, serial and GPRS.

### CONTROL PANEL FEATURES

#### Alarm and Shutdown functions

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

#### Measure and Monitor functions

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

#### Other functions

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
Allows SMS controls	Remote Programming
Fuel consumption counter	Magnetic Pick Up Input
Waveform display of voltage & current	Total Harmonic Distortion view
Programmable as an ATS controller	Manual "speed fine adjust" on selected ECUs
Standardized USB port for programming and communication	J1939-CANBUS for electrocally governed engines

GENERATOR FEATURES	STANDARD		OPTIONAL
ENGINE	MANUAL	AUTOMATIC	
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	•	

GENERATOR FEATURES	STANDARD		OPTIONAL
ENGINE	MANUAL	AUTOMATIC	
ELECTRICS			
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

**DEMMANS 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. DEMMANS reserves the right to change the specifications without notice.

### DEMMANS

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