



**MULTIPHASE
POWER**

Diesel Generator Set

MPL50P

Powered By Perkins



50 Hz / 1500 RPM

Perkins®



MULTIPHASE CORPORATION CO., LTD.

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MPL50P



MODEL	FREQUENCY / RPM	STANDBY POWER	PRIME POWER
MPL50P Powered by Perkins	50 Hz/1500 RPM	50 kVA	45 kVA
		40 kW	36 kW

- Model : MPLxxCS – S Suffix for silent type

General Technical Data	
Model	MPL50P
Engine	Perkins 1103A-33TG1
Standard Voltage	400/230V
Phase	3 Phase
Stamford Alternator	UCI224D or S1L2-N1
Leroy Somer Alternator	LSA42.3M7 or TAL-A42-F
Other Alternator	n/a
Speed Control Type	Mechanical
Controller Model	DSE7320
Generator Set Fuel Consumption (L/hr)	
Load-Standby Power (110%)	12
Load-Prime Power (100%)	10.7
Load-Prime Power (75%)	8.2
Load-Prime Power (50%)	5.7

Multiphase Power Generators are in conformity with certification ISO 9001/ ISO14001/ISO18001 and our gensets are compliant with CE Standard. Best quality of electricity, high starting and loading capacity according to ISO8528-5. Ambient conditions of reference according to ISO 8528-1:2018 normative: 1000 mbar, 25°C, 30% relative humidity.

Prime Power (PRP):

According to ISO 8528-1:2018, Prime power is the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year under the agreed operating conditions with the maintenance intervals and procedures being carried out as prescribed by the manufacturer. The permissible average power output (Ppp) over 24 h of operation shall not exceed 70 % of the PRP.

Emergency Standby Power (ESP):

According to ISO 8528-1:2018, Emergency standby power is the maximum power available during a variable electrical power sequence, under the stated operating conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200 h of operation per year with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. The permissible average power output over 24 h of operation shall not exceed 70 % of the ESP

Continuous Power (COP):

According to Standard ISO 8528-1:2018, this is the maximum power available for unlimited running hours a year between the maintenance times recommended by the manufacturer under the environmental conditions established by the same.

Generator Set Ratings						
Voltage	Phase	Standby Rating			Prime Rating	
		KVA	KW	AMPS	KVA	KW
415/240v	3	50	40	69.6	45	36
400/230v	3	50	40	72.2	45	36
380/220v	3	50	40	76.0	45	36

Operating Environmental Requirement

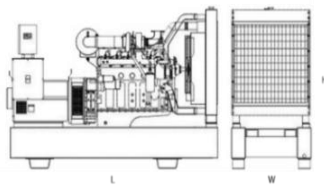
- Abmient Temperature : -25°C - 50°C (Heater must be included when in low temperature)
- Himidity: Less than 80%
- Altitude: Up to 1000meters (For higher altitude application, please consult with Our Team)

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DIMENSIONS

Weight And Dimensions	Open Type	Silent Type
Length (mm)	1950	2250
Width (mm)	730	1080
Height (mm)	1430	1725
Net Weight (kg)	900	1350
Fuel Tank Capacity (L)	180	185
Running Hours - 100% Load	16.8	17.3



DIESEL ENGINE SPECIFICATION

Manufacturer	Perkins	Engine Design	Standby Power	Prime Power
Engine Model	1103A-33TG1	Gross Engine Output (KW)	46.5	42.2
Cylinders No./Arrangement	3 / In-Line	Net Engine Output (KW)	45.6	41.3
Compression Ratio	17.25:1	Mean Piston Speed (m/s)		6.35
Cycle	Four Stroke	Engine Water Flow (L/min)		125.5
Aspiration Type	Turbocharged	Intake Air Flow (m³/min)	3.1	2.9
Bore x Stroke	105x127 mm	Exhaust Gas Flow (m³/min)	7.7	7
Displacement	3.3 L	Exhaust Gas Temp (°C)	537	492

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Diesel Engine Specifications		
Lubrication System	Lubricating oil capacity (L)	8.3
	Oil pressure-Relief Valve Opens (kPa)	415-470
	Normal Oil Temperature (°C)	125
Fuel System	Type Injection System	Direct
	Fuel injection pump	Rotary
	Nozzle opening pressure (MPa)	29
	Fuel lift pump Flow (L/h)	120-150
	Fuel lift pump Pressure (kPa)	30-75
	Maximum suction head (M)	20
Cooling System	Coolant Capacity - With Radiator (L)	10.2
	Max. Top Tank Temperature (°C)	110
	Thermostat operation range (°C)	82-93
Electrical System	Alternator	65 amps, 12 volts
	Starter Motor	3 kW, 12 volts
	Cold start recommendations 0 °C ~ -15 °C (CCA)	660
Exhaust System	Max. Back Pressure (kPa)	10

ALTERNATOR SPECIFICATION

Poles	4
Insulation	Class H
Protection Rating	IP23
Exciter System	Self-Excited, Brushless
AVR Regulation Range	±1%
Number Of Bearing	Single Bearing
Coupling System	Flexible Disc
Winding Pitch	2/3
Overspeed Protection	2250 R.P.M.

ALTERNATOR STANDARD FEATURES

- All models are brushless, rotating-field alternators
- Alternator meet the main international standard of IEC 60034, NEMA MG 1.32-33, BS 5000 Part 99, VDE 0530, ISO 8528/3
- The AVR voltage regulator provides superior short circuit capability
- Self-ventilated and dip proof construction
- Superior voltage waveform

Note: See Alternator Data Sheets for application data and ratings, efficiency curves, voltage dip with motor starting curves, and short circuit decrement curves

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CONTROL SYSTEM DATA (DSE7320)



Main Feature

The DSE7320 will also monitor the mains (utility) supply. The modules include USB, RS232 and RS485 ports as well as dedicated DSENet® terminals for system expansion.

Key Function

- 4-Line back-lit LCD text display
- Five key menu navigation
- Front panel editing with PIN protection
- Customisable status screens
- Power save mode
- Support for up to three remote display units
- 9 configurable inputs
- 8 configurable outputs
- Flexible sender inputs
- Configurable timers and alarms
- 3 configurable maintenance alarms
- Multiple date and time scheduler
- Configurable event log (250)
- Integral PLC editor
- Easy access diagnostic page
- CAN and Magnetic Pick-up/Alt. sensing
- Fuel usage monitor and low fuel alarms
- Charge alternator failure alarm
- Manual speed control (on compatible CAN engines)
- Manual fuel pump control
- Power monitoring (kWh, kVAR, kVAh, kVArh)
- Load switching (load shedding and dummy load outputs)
- Automatic load transfer (DSE7320)
- Backed up real time clock
- Start & stop capability via SMS messaging
- USB connectivity
- Tier 4 CAN engine support
- DSENet ® expansion compatible etc.

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OPTIONAL

Genset Optional Specifications	
Engine	Water Jacket Pre-Heater
	Oil Pre-Heater
	Fuel-Water Separator
Alternator	Winding and Bearing Temperature Detector (RTD)
	Anti-Condensation Heater (Space Heater)
	PMG / AREP
	Anti-Damp and Anti-Corrosion Treatment
Electrical System	ATS
	Remote Control and Monitoring
	Synchronizing System
	3/5 Pin sockets with RCBO protection
Fuel System	Bunded Double Wall Base Fuel Tank
	Extended To Larger Capacity Base Tank
	Free-stand Daily Fuel Tank
	Automatic Fuel Feeding System
	Fuel T-valves
Canopy	Trailer
	Rental Type Design

Optional Controller Model	
ComAp Controller for Single Genset Application	ComAp Nano MRS3
	ComAp AMF20
	ComAp AMF25
ComAp Controller for Multi Genset Application	ComAp IG200
	ComAp IG-NT
Deepsea Controller for Single Genset Application	DSE4520 MKII
	DSE6020 MKII
	DSE7320 MKII /DSE7420MKII
Deepsea Controller for Multi Genset Application	DSE8610 MKII
	DSE8810 MKII

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