



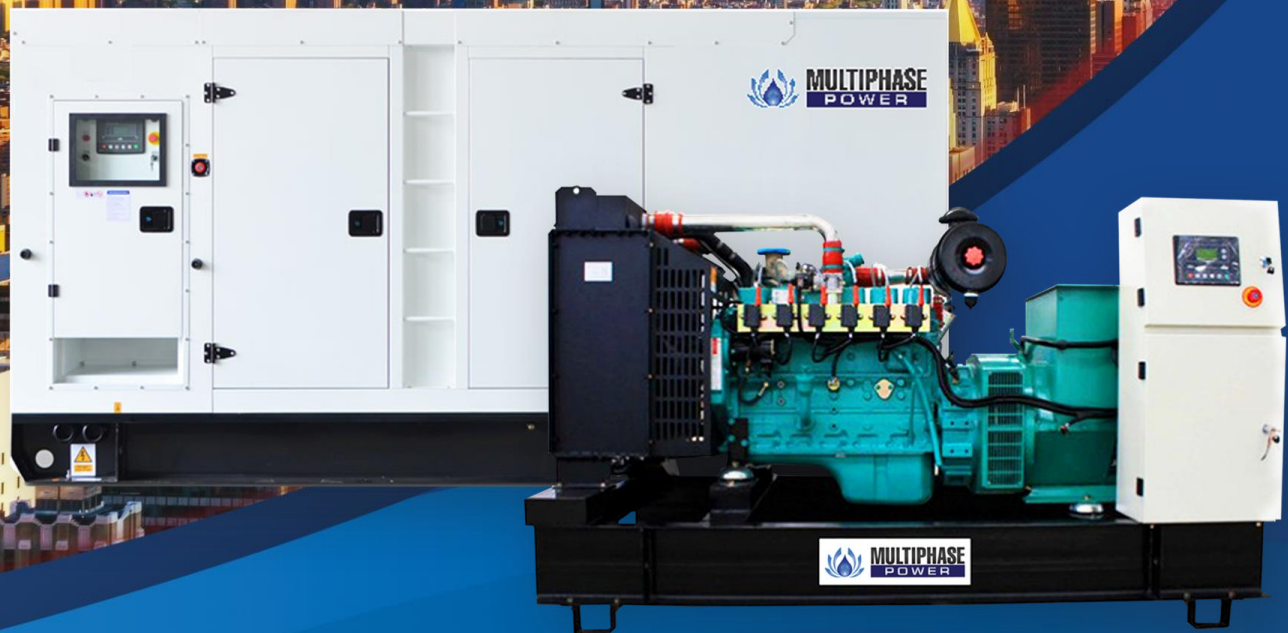
**MULTIPHASE  
POWER**

Diesel Generator Set

# MPL500C

Powered By Cummins

50 Hz / 1500 RPM



**MULTIPHASE CORPORATION CO., LTD.**

90 CW Tower, Room No.A2102, 21st Floor, Ratchadapisek Road,  
Kwaeng Huai Khwang, Khet Huai Khwang, Bangkok 10310

Tel: +66 02 168 3193-5 #109 Fax: +66 02 168 3192

Email: [marketing@multiphase-corp.com](mailto:marketing@multiphase-corp.com) Website: [www.multiphase-power.com](http://www.multiphase-power.com)

Facebook: [www.facebook.com/MultiphasePower](http://www.facebook.com/MultiphasePower) Line ID: @multiphasepower



# MPL500C



MODEL	FREQUENCY / RPM	STANDBY POWER	PRIME POWER
MPL500C Powered by Cummins	50 Hz/1500 RPM	500 kVA	475 kVA
		400 kW	380 kW

- Model : MPLxxCS – S Suffix for silent type

General Technical Data	
Model	MPL500C
Engine	Cummins QSZ13-G3
Standard Voltage	400/230V
Phase	3 Phase
Stamford Alternator	HCI544C or S5L1D-C41
Leroy Somer Alternator	LSA47.2M7 or TAL-A47-C
Other Alternator	n/a
Speed Control Type	Electronic
Controller Model	DSE7320
Generator Set Fuel Consumption (L/hr)	
Load-Standby Power (110%)	105.5
Load-Prime Power (100%)	101.0
Load-Prime Power (75%)	74.2
Load-Prime Power (50%)	48.9

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 continuous loads 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	500	400	695.6	475	380
400/230v	3	500	400	721.7	475	380
380/220v	3	500	400	759.7	475	380

#### Operating Environmental Requirement

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

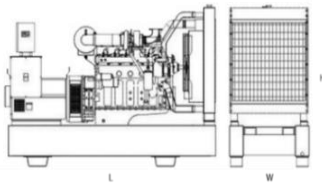
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## DIMENSIONS

Weight And Dimensions	Open Type	Silent Type
Length (mm)	3210	4350
Width (mm)	1410	1600
Height (mm)	2110	2260
Net Weight (kg)	3180	4400
Fuel Tank Capacity (L)	830	610
Running Hours - 100% Load	8.2	6.0



## DIESEL ENGINE SPECIFICATION

<b>Manufacturer</b>	Cummins	<b>Engine Design</b>	<b>Standby Power</b>	<b>Prime Power</b>
<b>Engine Model</b>	QSZ13-G3	<b>Engine Idle Speed (rpm)</b>	800-1000	800-1000
<b>Cylinders No./Arrangement</b>	6 / In-Line	<b>Gross Engine Output (KW)</b>	470	450
<b>Compression Ratio</b>	17:1	<b>Piston Speed (m/s)</b>	8.15	0
<b>Injection Type</b>	Direct	<b>Engine Water Flow (L/min)</b>	366	366
<b>Aspiration Type</b>	Turbocharged & Charge Aircooled	<b>Intake Air Flow (m<sup>3</sup>/min)</b>	30.3	29.7
<b>134</b>	130x163 mm	<b>Exhaust Gas Flow (kg/min)</b>	37.3	36.5
<b>Displacement</b>	13.0 L	<b>Exhaust Gas Temp (°C)</b>	547	530

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Diesel Engine Specifications		
Air Intake System	Max. Intake Air Restriction with Heavy Duty Air Cleaner	
	Dirty Element (kPa)	3.2
	Clean Element (kPa)	6.2
Lubrication System	Engine Oil Pressure for Engine Protection Devices	
	Idle Speed (Minimum) (kPa)	82.7
	Typical oil pressure range-warm engine (kPa)	270-276
	Max. Lube Oil flow (L/min)	7.57
	Total system capacity (L)	45.42
Fuel System	Type Injection System	
	Max. allowable restriction (kPa)	13.5
	Max. fuel drain restriction (total head) before (or without) check valve (kPa)	27
	Min. fuel tank venting requirement (L/s)	0.2
Cooling System	Coolant Capacity - Engine Only (L)	
	Min. operating block coolant temperature (°C)	71
	Max. coolant temperature - engine out (°C)	102
	Engine Coolant circuit thermostat opening temperature (°C)	82-94
	Min. Pressure Cap (kPa)	103
	Max. Coolant Friction Head External to Engine (kPa)	75
Electrical System	Cranking Motor (V)	
	Min. Recommended Battery Capacity – Cold Soak @-18 to 0-C (0°F CCA)	900
	Engine only reserve capacity (min)	270
Exhaust System	Max. Back Pressure (kPa)	
		13

## 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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