



**MULTIPHASE  
POWER**

Diesel Generator Set

# MPY20C

Powered By Cummins

50 Hz / 1500 RPM



**MULTIPHASE CORPORATION CO., LTD.**

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# MPY20C



MODEL	FREQUENCY / RPM	STANDBY POWER	PRIME POWER
MPY20C Powered by Cummins	50 Hz/1500 RPM	16 kW	15 kW
		20 kVA	18 kVA

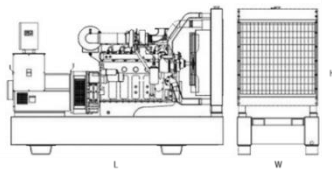
- Available for voltages 400/230V, 480/277V, 380/220V, 440/254V, 416/240V, 220/127V, 208/120V
- All datas based on ISO 3046, altitude 100m (328ft), barometric pressure 100kPa (29.53 inHg), air temperature 25 °C (77 °F), relative humidity 30%.
- Diesel generators comply with standards : ISO8528, ISO14000, ISO3046, GB755, BS5000, VDE0530, IEC34-1
- Model : MPYxxCS – S Suffix for silent type

## GENERAL CHARACTERISTICS

Model	MPY20C
Engine	Cummins 4B3.9-G2
Alternator	Leroy Somer TAL-A40-F
Voltage (V)	400/230
Current (A)	26
Connection	3 Phase, 4W/Y
Frequency	50 Hz
Engine Speed (RPM)	1500
Rated Power Factor	0.8
Controller Model	DSE7320

## DIMENSIONS

DIMENSIONS	OPEN TYPE	SILENT TYPE
Length (L)	1800 mm	2600 mm
Width (W)	850 mm	1100 mm
Height (H)	1330 mm	1290 mm
Net Weight (KG)	730 kg	1050 kg



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## STANDARD CONFIGURATION

Engine	Cummins, including air filters, fuel filters, oil filter, starting motor and charging alternator etc.
Alternator	Leroy Somer brushless AC alternator
Radiator	50 °C, fan protective shroud
Base Frame	≤ 550 KW : base mounted fuel tank, anti-vibration pads, battery holder > 550 KW : channel steel base frame, anti-vibration pads, battery holder
Circuit Breaker	ABB BREAKER
Control System	DEEP SEA 7320
Start Battery	Dry charged battery, available for 6 times starts under standard condition; connection cables.
Installation Accessories	Bellow, Elbow and Flange, Exhaust Silencer, etc.
Documents	Electric drawing, Operation & Maintenance Manual, Certification etc.

## OPTIONAL CONFIGURATION

Engine Accessories	<ul style="list-style-type: none"> <li>• Heavy-Duty Air Filter</li> <li>• Coolant Heater</li> <li>• Lube Oil Heater</li> <li>• Fuel and Water Separator</li> </ul>
Alternator and Accessories	<ul style="list-style-type: none"> <li>• Stamford or Leroy Somer or Others</li> </ul>
Cooling System	<ul style="list-style-type: none"> <li>• High Voltage ___ kV</li> <li>• 50 °C Radiator</li> <li>• Heat Exchanger + Water Cooling Tower + External Water Circulation Pumping System</li> <li>• Remote Horizontal Water Tank System</li> </ul>
Control System	<ul style="list-style-type: none"> <li>• AMF</li> <li>• Parallel</li> <li>• Practical Type in Low Temperature Environment</li> <li>• Control Screen Heater</li> <li>• Other</li> </ul>
Circuit Breaker	<ul style="list-style-type: none"> <li>• ¾ Poles</li> <li>• Fixed/Handcart Type</li> <li>• Electric Mechanism</li> </ul>
Automatic Transfer Switch	<ul style="list-style-type: none"> <li>• ATS Cabinet</li> </ul>
Start Battery	<ul style="list-style-type: none"> <li>• Nickel-Cadmium Battery</li> <li>• Maintenance-Free Battery</li> <li>• Power Charger and Selector</li> <li>• Charging Current Meter</li> </ul>
External Fuel Tank	<ul style="list-style-type: none"> <li>• 500 L, 1000 L, 1500 L, 2000 L, 2500L, 3000L, 4000L, 5000L</li> </ul>

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## ENGINE DATA

Engine Model	Cummins 4B3.9-G2
Engine Power	27 kW.
Aspiration	Naturally Aspirated
Displacement (L)	3.9
Type	In-Line
Bore x Stroke (mm)	102 x 120
No. of Cylinders	4
Compression Ratio	18.0 : 1
Governor Type	Electronic Governor
Rated Speed (RPM)	1500
Prime Power Fuel Consumption (L/h)	6.7
Standby Power Fuel Consumption (L/h)	7.5
Fuel	ASTM D975 No.2-D or BS2869 1998 Class A1, A2
Injection System	BYC A
Lube Oil Capacity (L)	10.9
Lube	API CF-4 15W40
Max. Temperature (°C)	121
Coolant Capacity (L)	19
Max. Top Tank Temp. (°C)	110
Std. Thermostat (Modulating) Range (°C)	83-95
Fan Drive Method	Shaft Drive
Cooling Fan Air Flow (m <sup>3</sup> /min)	210
Combustion Air Flow (m <sup>3</sup> /min)	1.968/1.974
Maximum Air Intake Restriction (kPa)	3.7
Exhaust Gas Flow (m <sup>3</sup> /min)	4.08/4.26
Max. Back Pressure (kPa)	10
Exhaust Gas Temp (°C)	≤ 410
Exhaust Pipe Size (mm)	φ 76
Start Mode	DC24V Electric Start
Battery	2 x 120 Ah

## ALTERNATOR DATA

Alternator Model	Leroy Somer TAL-A40-F	Rate Power	17.6/22 kW/kVA
PF.	0.8	Voltage	400/230 V
Phase	3	Frequency	50 Hz.
Connection	3P 4W/Y	Bearing	1
Winding Pitch	2/3	Protection Class	IP23
Insulation Class	H	Efficiency	84.2%
Tel. Influence	TIF < 50	Voltage Regulation	±1.0%
Harmonic Coefficient	THF < 2%	AVR	R120
Voltage Adjust Scope	≥±5%	Excitation System	SHUNT

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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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