

Model: MPL1650(S)-2

Powered by Baudouin



Applicable Standards

- ISO 8528-5:2018
- GB/T2820.5-2009
- CE
- ISO 3046
- ISO 12944 (*SC only)

Environmental Conditions

- Ambient temperature: +5°C~+40°C (Rated Power)
- Maximal ambient temperature: 50°C
- Altitude: ≤1000m
- Anti-dust, anti-corrosion and ultra-silent

*Remark: If your conditions are different from the above, please contact our sales.

Factory Inspection

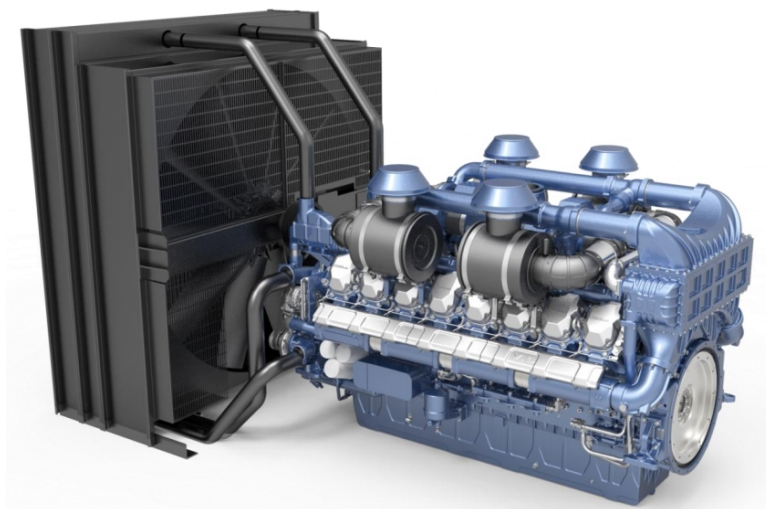
- Complete design and quality inspection
- 0%, 25%, 50%, 75%, 100%, 110% load test
- IP test
- Noise test
- Function test
- Protection test

General Information			Rated Power		
Frequency	Voltage	Prime Power	Standby Power		
Hz	V	kVA	kW	kVA	kW
50Hz	415V/240V	N/A	N/A	N/A	N/A
	400V/230V	N/A	N/A	N/A	N/A
	380V/220V	N/A	N/A	N/A	N/A
	220V/110V	N/A	N/A	N/A	N/A
60Hz Rated	480V/277V	1875	1500	2062.5	1650
	Rated 440V/254V	1875	1500	2062.5	1650
	400V/230V	N/A	N/A	N/A	N/A
	380V/220V	N/A	N/A	N/A	N/A
	220V/127V	N/A	N/A	N/A	N/A
	220V/110V	N/A	N/A	N/A	N/A
Power Factor		0.8 Lagging			
Engine		16M33G1650-6			
Rated Speed		1800 RPM (Unchangeable)			
Fuel Type		Grade No. 2D per ASTM D975			
Lube-oil Type		API Service CF Class SAE 15W-40			
Alternator		LYG 454E			
Noise Level		50Hz	60Hz		
Average Value @1m,75%load	OE Series dB(A)	N/A	120		
	SC Series dB(A)	N/A	TBA		
Fuel Consumption		50Hz	60Hz		
Load Ration	L/h@110%	N/A	435.4		
	L/h@100%	N/A	382.8		
	L/h@75%	N/A	282.9		
	L/h@50%	N/A	187.5		
Dimension and Weight		OE Series Open-type	SC Series Silent-type		
Length (L) mm		5800	6058		
Width (W) mm		2250	2438		
Height (H) mm		2560	2896		
Net. Weight (kg)		10800	15800		

Note: Specifications and illustrations are subject to revision without notice.



Engine Specifications



Engine model		16M33G1650-6	
Emission	N/A		
Number of cylinders	16		
Cylinder arrangement	At Vee		
Cycle	Four stroke		
Aspiration	Turbocharged and Aftercooled		
Bore x Stroke	150 x 185 mm		
Displacement	52.3 L		
Compression ratio	15 : 1		
Gross prime power /speed	N/A kWm/1500 rpm	1625 kWm/1800 rpm	
Gross standby power /speed	N/A kWm/1500 rpm	1785 kWm/1800 rpm	
Speed governor	ECU		
Cooling system	Liquid (water + 50% antifreeze)		
Steady State Stability Band at any Constant Load	≤ ±0.5%		
Total lubrication system capacity	175 L		
Coolant capacity (engine only)	130 L		
Starter motor	DC 24V		
Charge alternator	DC 24V 55Amps		
☒ Industrial silencer / ☐ Residential silencer / ☐ Critical silencer	☐ Spark arrestor		
☒ Heavy duty air filter / ☐ Single-core air filter	☒ -18°C start up battery / ☐ -45°C start up battery		
☒ Anti-vibration mount	☒ Flexible fuel connection hoses		
☐ Water-fuel separator / ☐ Multi-water-fuel separators	☐ Jacket water heater / ☐ Fuel jacket water heater		
☐ Coolant level sensor	☒ Coolant temperature sensor		
☒ Lube-oil pressure sensor	☐ Lube-oil temperature sensor		
☐ Lube-oil auto refilling meter	☐ Lube-oil auto refilling tank		
☐ Smoke temperature sensor	☐ Lube-oil manual pump		
☒ Replaceable fuel filter, oil filter	☐ Breath box		

Engine Derating Curves

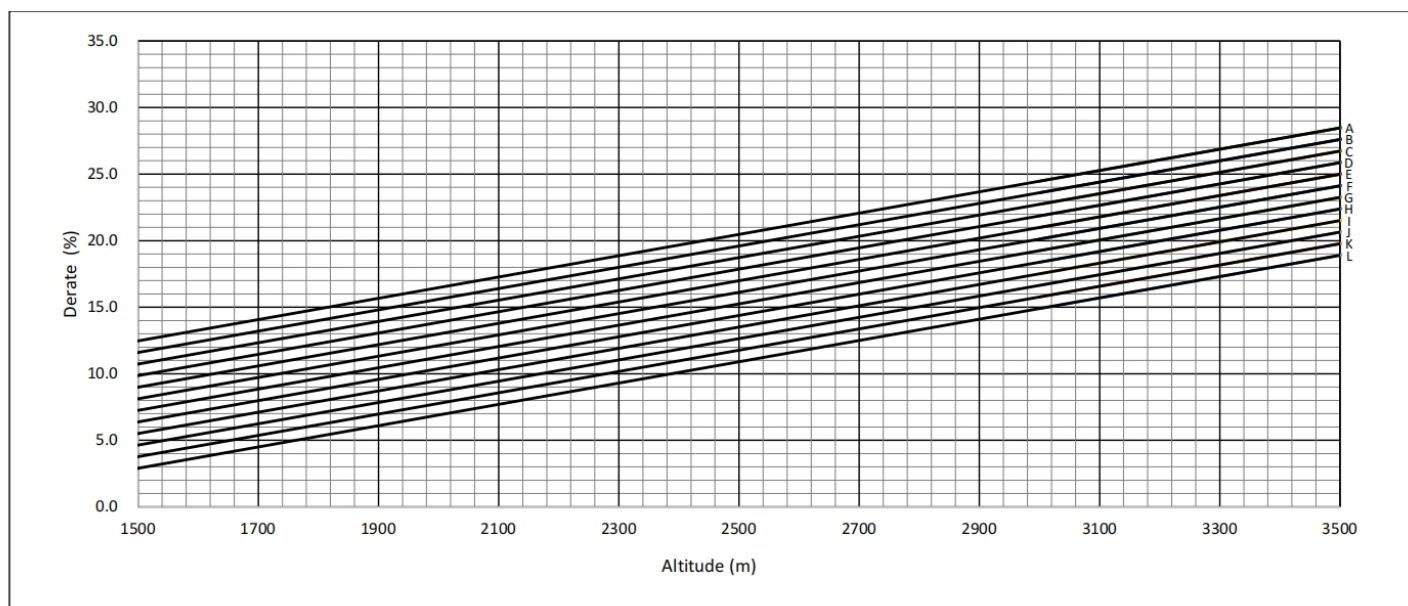
50Hz/1500RPM

N/A

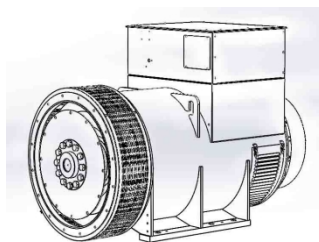
60Hz/1800RPM

Ambient Temperature (°C / °F)

A	B	C	D	E	F	G	H	I	J	K	L
55 / 131	50 / 122	45 / 113	40 / 104	35 / 95	30 / 86	25 / 77	20 / 68	15 / 59	10 / 50	5 / 41	0 / 32



Alternator Specifications



Alternator model	LYG454E-V01
Number of phase	3
Power factor (Cos Phi)	0.8
Poles	4
Winding leads	6
Insulation level	H class
Temperature rise	H class
Excitation	Brushless
AVR model	MX341B
Winding Pitch	5/6
IP rating	IP22
Bearing	Single bearing
Voltage regulator	±0.5%

☐Space heater

☐Air filter (5% derating)

☐Anti-harsh environment

☐RTD ☐STD

Alternator Ratings Table

Class-Temp Rise		Cont.H-125/40℃				Standby-163/27℃			
50Hz	Series Star(V)	380	400	415	440	380	400	415	440
	Output(kVA)	1845.0	1900.0	1900.0	1865.0	1975.0	2035.0	2035.0	1995.0
	Efficiency(%)	95.7	95.8	96.0	96.1	95.5	95.6	95.8	96.0
60Hz	Series Star(V)	416	440	460	480	416	440	460	480
	Output(kVA)	2070.0	2210.0	2255.0	2300.0	2215.0	2365.0	2415.0	2465.0
	Efficiency(%)	95.7	95.8	95.9	95.9	95.5	95.6	95.7	95.8

De-Rates

All values tabulated above are subject to the following reductions:

- 3% for every 500 meters by which the operating altitude exceeds 1000 meters above mean sea level
- 3% for every 5°C by which the operational ambient temperature exceeds 40°C
- For any other operating conditions impacting the cooling circuit please refer to applications

Note: Requirement for operating in an ambient exceeding 60°C and altitude exceeding 4000 meters must be referred to applications.

Alternator Operating Charts

400V@50Hz

TBA

480V@60Hz

TBA

One-step Load Acceptance

ISO 8528-5	50Hz		60Hz	
	50% sudden power increase	100% sudden power decrease	50% sudden power increase	100% sudden power decrease
Transient frequency difference (%)	TBA	TBA	TBA	TBA
Frequency recovery time (s)	TBA	TBA	TBA	TBA
Transient voltage deviation (%)	TBA	TBA	TBA	TBA
Voltage recovery time (s)	TBA	TBA	TBA	TBA

*All data comes from actual testing and is for reference only.

Control Panel

DSE 4520 MKII

Auto start and auto mains failure control module
(Alternator frequency & can speed sensing)



Key benefits

- Ultimate size to feature ratio.
- Automatically transfers between mains (utility) and generator.
- Hours counter provides accurate information for monitoring and maintenance periods.
- User-friendly set-up and button layout for ease of use.
- Multiple parameters are monitored simultaneously which are clearly displayed on the largest back-lit icon display in its class.
- The module can be configured to suit a wide range of applications.
- Compatible with a wide range of CAN engines including Tier 4.
- IP65 rating (with optional gasket) offers increased resistance to water ingress.

Key features

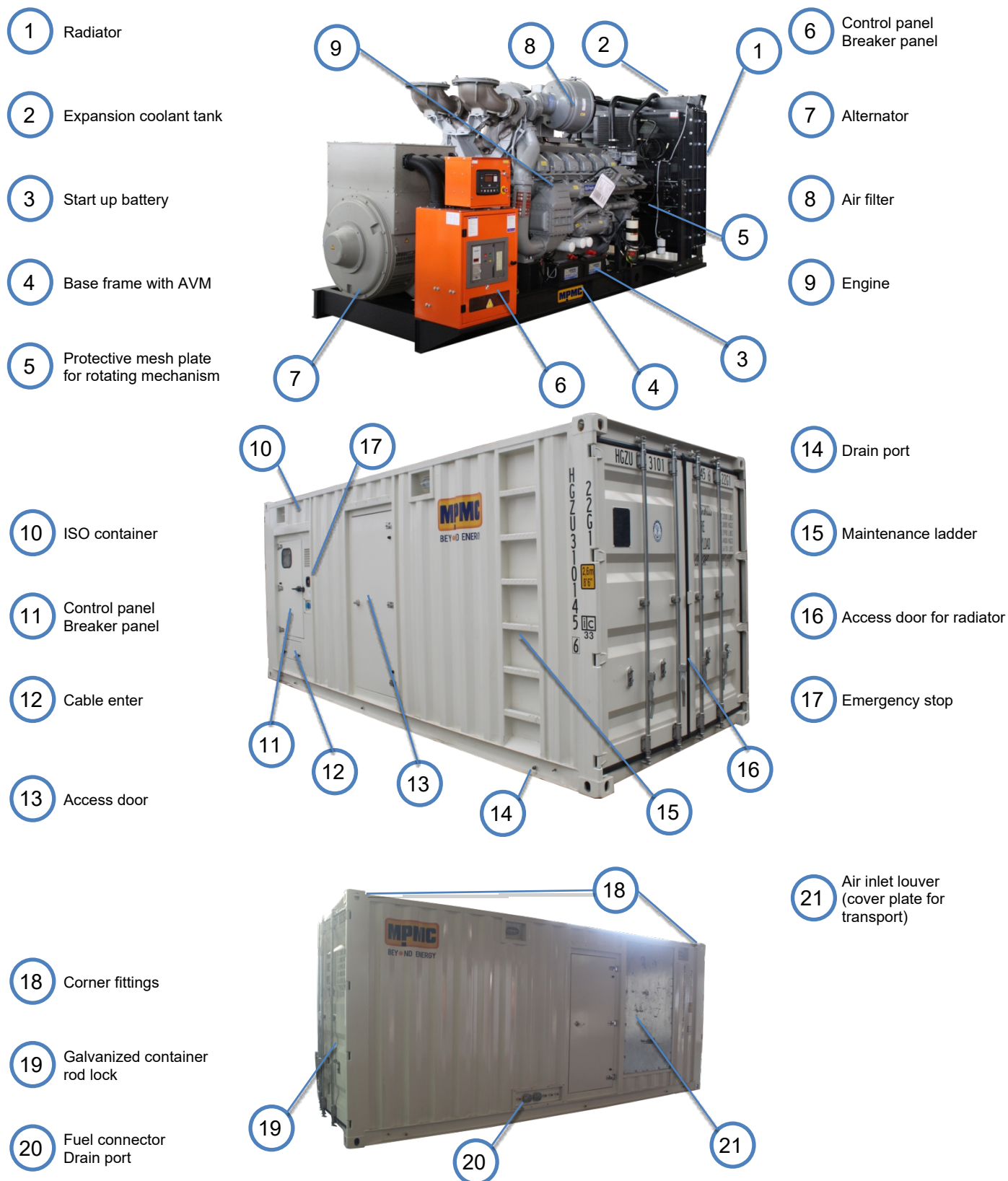
- Auto Start and AMF mode in one module.
- J1939-75 support and CAN alarm ignore function.
- Alternator frequency & CAN speed sensing in one variant.
- Largest back-lit icon display in its class.
- Heated display option.
- Real time clock provides accurate event logging.
- Fully configurable via the fascia or PC using USB communication.
- Extremely efficient power save mode.
- 3 phase generator sensing.
- 3 phase mains (utility) sensing
- Compatible with 600 V ph to ph nominal systems.
- Generator/load power monitoring (kW, kVA, kVar, PF).
- Accumulated power monitoring (kWh, kVAh, kVarh).
- Generator overload protection.
- Generator/load current monitoring and protection.
- Fuel and start outputs (configurable when using CAN).
- 4 configurable DC outputs.
- 3 configurable analogue/digital inputs
- 4 configurable digital inputs.
- Configurable staged loading outputs.
- 3 engine maintenance alarms.
- Engine speed protection.
- Engine hours counter.
- Engine pre-heat.
- Engine run-time scheduler.
- Engine idle control for starting & stopping.
- Tier 4 engine instrumentation screens.
- Battery voltage monitoring.
- Start on low battery voltage.
- Configurable remote start input.
- 1 alternative configuration.
- Comprehensive warning, electrical trip or shutdown protection upon fault condition.
- LCD alarm indication.
- Event log (50)

Expansion devices

□ N/A

Typical General Arrangement

Main Components on MPMC Standard Product



Generator Options

Basement :

- ☐ 6 hours fuel tank
- ☐ 8 hours fuel tank
- ☐ 12 hours fuel tank
- ☐ 24 hours fuel tank
- ☐ Bonded fuel tank
- ☐ Fuel leakage sensor
- ☒ Lifting points
- ☐ Forklift holes

Electrical system :

- ☒ CHINT Breaker / ☐ ABB Breaker / ☐ Schneider Breaker
- ☐ Others:
- ☒ Manual breaker / ☐ Motorized breaker
- ☒ 3P Breaker / ☐ 4P Breaker
- ☐ RCD

Silent Generator Only :

- ☐ Galvanized canopy
- ☐ Stainless steel canopy & hardware
- ☐ Sponge materials / ☒ Rock wool with mesh plate
- ☒ IP 21 / ☐ IP 22 / ☐ IP 23

- ☐ Drag holes
- ☒ Expansion joint
- ☐ Quick connector of external fuel pipe & tank
- ☐ Three-way valve
- ☐ Mechanical fuel level gauge
- ☐ Electronic fuel level sensor
- ☐ C-3 painting / ☒ C-4 painting / ☐ C-5 painting
- ☐ Others:

- ☐ MEN
- ☒ External AC charger
- ☐ Socket:
- ☐ Plug:

- ☒ Zinc alloy door lock
- ☒ Zinc alloy hinge
- ☒ Access door for radiator
- ☐ Aluminum canopy



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*All information in this document is substantially correct at time of printing and may be altered subsequently. Final weight and dimensions will depend on completed specification.